

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Visit our website - *Click HERE*

Rexroth
Bosch Group

Rexroth ECODRIVE Cs Drive Controllers MGP 01VRS

296551
Edition 01

Parameter Description



Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Title

ECODRIVE Cs
Drive Controllers

Type of Documentation Parameter Description: MGP 01VRS

Document Typecode DOK-ECODR3-MGP-01VRS**-PA01-EN-P

Internal File Reference

Box 74-01V-EN
Base: MGP-01VRS
120-1000-B356-01/EN

Purpose of Documentation

This documentation serves:
for parameterization of the drive controller

Record of Revisions

Description	Release Date	Notes
DOK-ECODR3-MGP-01VRS**-PA01-EN-P	06. 2003	First Release

Copyright © 2003 Bosch Rexroth AG

Copying this document, giving it to others and the use or communication of the contents thereof without express authority, are forbidden. Offenders are liable for the payment of damages. All rights are reserved in the event of the grant of a patent or the registration of a utility model or design (DIN 34-1).

Validity

The specified data is for product description purposes only and may not be deemed to be guaranteed unless expressly confirmed in the contract. All rights are reserved with respect to the content of this documentation and the availability of the product.

Published by

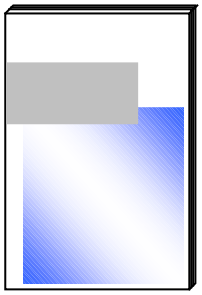
Bosch Rexroth AG
Bgm.-Dr.-Nebel-Str. 2 • D-97816 Lohr a. Main
Telephone +49 (0)93 52/40-0 • Tx 68 94 21 • Fax +49 (0)93 52/40-48 85
http://www.boschrexroth.com/
Dept. EDY1 (ah/hp)

Note

This document has been printed on chlorine-free bleached paper.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

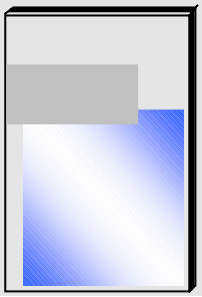
Summary of Documentation - Overview



Functional Description:

Description of all implemented Function based on SERCOS-Parameters

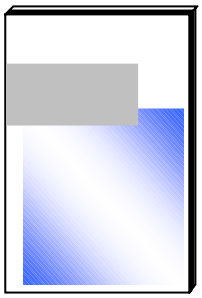
Order designation:
DOK-ECODR3-MGP-01VRS**-FK01-EN-P



Parameter Description:

A description of all parameters used in the firmware

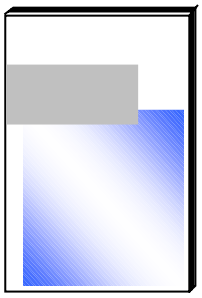
Order designation:
DOK-ECODR3-MGP-01VRS**-PA01-EN-P



Troubleshooting Guide:

-Explanation of the diagnostic states
-How to proceed when eliminating faults

Order designation:
DOK-ECODR3-MGP-01VRS**-WA01-EN-P



Firmware Version Notes:

Description of new and changed functions in terms of the derivatives:
FWA-ECODR3-MGP-01VRS-MS

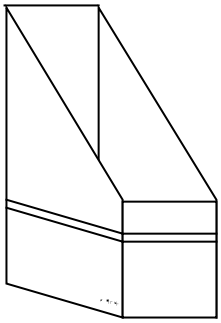
Order designation:
DOK-ECODR3-***-**VRS**-FV01-EN-P



CD: DRIVEHELP

Collection of Windows help systems which contains documentation on firmware types

Order designation:
DOK-GENERL-DRIVEHELP**-GExx-MS-D0600



Order designation
DOK-ECODR3-MGP-01VRS**-7201-EN-P

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Notes

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Contents

1 General Information 1

Document Structure 1
Definitions 2

2 Standard Parameters 2-1

S-0-0000, Dummy parameter 2-1
S-0-0001, NC Cycle time (TNcyc) 2-1
S-0-0002, SERCOS Cycle time (TScyc) 2-2
S-0-0003, Minimum AT transmit starting time (T1min) 2-2
S-0-0004, Transmit/receive transition time (TATMT) 2-3
S-0-0005, Minimum feedback acquisition time (T4min) 2-3
S-0-0006, AT Transmission starting time (T1) 2-4
S-0-0007, Feedback acquisition starting time (T4) 2-5
S-0-0008, Command valid time (T3) 2-5
S-0-0009, Beginning address in master data telegram 2-6
S-0-0010, Length of master data telegram 2-6
S-0-0011, Class 1 diagnostics 2-7
S-0-0012, Class 2 diagnostics 2-8
S-0-0013, Class 3 diagnostics 2-9
S-0-0014, Interface status 2-10
S-0-0015, Telegram type parameter 2-11
S-0-0016, Custom amplifier telegram configuration list 2-13
S-0-0017, IDN-list of all operation data 2-13
S-0-0018, IDN-list of operation data for CP2 2-14
S-0-0019, IDN-list of operation data for CP3 2-14
S-0-0021, IDN-list of invalid op. data for comm. Ph. 2 2-15
S-0-0022, IDN-list of invalid op. data for comm. Ph. 3 2-15
S-0-0024, Config. list of the master data telegram 2-16
S-0-0025, IDN-list of all procedure commands 2-17
S-0-0026, Configuration list signal status word 2-17
S-0-0027, Configuration list signal control word 2-18
S-0-0028, MST error counter 2-18
S-0-0029, MDT error counter 2-19
S-0-0030, Manufacturer version 2-20
S-0-0032, Primary mode of operation 2-21
S-0-0033, Secondary operating mode 1 2-22
S-0-0034, Secondary operating mode 2 2-23
S-0-0035, Secondary operating mode 3 2-24

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0036, Velocity command value 2-25
S-0-0037, Additive velocity command value 2-25
S-0-0040, Velocity feedback value 2-26
S-0-0041, Homing velocity 2-27
S-0-0042, Homing acceleration 2-27
S-0-0043, Velocity polarity parameter 2-28
S-0-0044, Velocity data scaling type 2-29
S-0-0045, Velocity data scaling factor 2-30
S-0-0046, Velocity data scaling exponent 2-31
S-0-0047, Position command value 2-31
S-0-0048, Position command value additional 2-32
S-0-0049, Positive position limit value 2-32
S-0-0050, Negative position limit value 2-33
S-0-0051, Position feedback 1 value 2-34
S-0-0052, Reference distance 1 2-35
S-0-0055, Position polarities 2-35
S-0-0057, Position window 2-37
S-0-0076, Position data scaling type 2-38
S-0-0077, Linear position data scaling factor 2-40
S-0-0078, Linear position data scaling exponent 2-41
S-0-0079, Rotational position resolution 2-42
S-0-0080, Torque/force command value 2-43
S-0-0081, Additive torque/force command value 2-44
S-0-0084, Torque/Force feedback value 2-45
S-0-0085, Torque/Force polarity parameter 2-46
S-0-0086, Torque/Force data scaling type 2-47
S-0-0088, Receive to receive recovery time (TMTSG) 2-47
S-0-0089, MDT Transmit starting time (T2) 2-48
S-0-0090, Command value transmit time (TMTSG) 2-48
S-0-0091, Bipolar velocity limit value 2-49
S-0-0092, Bipolar torque/force limit value 2-49
S-0-0093, Torque/force data scaling factor 2-50
S-0-0094, Torque/force data scaling exponent 2-50
S-0-0095, Diagnostic message 2-51
S-0-0096, Slave arrangement (SLKN) 2-51
S-0-0097, Mask class 2 diagnostic 2-52
S-0-0098, Mask class 3 diagnostic 2-53
S-0-0099, C500 Reset class 1 diagnostic 2-54
S-0-0100, Velocity loop proportional gain 2-55
S-0-0101, Velocity loop integral action time 2-56
S-0-0103, Modulo value 2-57
S-0-0104, Position loop Kv-factor 2-57
S-0-0106, Current loop proportional gain 1 2-58
S-0-0107, Current loop integral action time 1 2-59
S-0-0108, Feedrate override 2-60
S-0-0109, Motor peak current 2-61

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0110, Amplifier peak current 2-61
S-0-0111, Motor current at standstill 2-62
S-0-0112, Amplifier nominal current 2-63
S-0-0113, Maximum motor speed (nmax) 2-63
S-0-0116, Feedback 1 Resolution 2-64
S-0-0121, Input revolutions of load gear 2-64
S-0-0122, Output revolutions of load gear 2-65
S-0-0123, Feed constant 2-66
S-0-0124, Standstill window 2-67
S-0-0125, Velocity threshold nx 2-68
S-0-0127, C100 Communication phase 3 transition check 2-68
S-0-0128, C200 Communication phase 4 transition check 2-69
S-0-0130, Probe value 1 positive edge 2-70
S-0-0131, Probe value 1 negative edge 2-70
S-0-0132, Probe value 2 positive edge 2-71
S-0-0133, Probe value 2 negative edge 2-71
S-0-0134, Master control word 2-72
S-0-0135, Drive status word 2-73
S-0-0138, Bipolar acceleration limit value 2-74
S-0-0139, D700 Command Parking axis 2-75
S-0-0140, Controller type 2-76
S-0-0141, Motor type 2-76
S-0-0142, Application type 2-77
S-0-0143, Sercos interface version 2-78
S-0-0144, Signal status word 2-79
S-0-0145, Signal control word 2-80
S-0-0147, Homing parameter 2-81
S-0-0148, C600 Drive controlled homing procedure command 2-82
S-0-0149, D400 Positive stop drive procedure command 2-83
S-0-0150, Reference offset 1 2-84
S-0-0157, Velocity window 2-84
S-0-0159, Monitoring window 2-85
S-0-0160, Acceleration data scaling type 2-86
S-0-0161, Acceleration data scaling factor 2-88
S-0-0162, Acceleration data scaling exponent 2-88
S-0-0169, Probe control parameter 2-89
S-0-0170, Probing cycle procedure command 2-90
S-0-0173, Marker position A 2-91
S-0-0177, Absolute distance 1 2-92
S-0-0179, Measurement value status 2-93
S-0-0182, Manufacturer class 3 diagnostics 2-94
S-0-0183, Velocity synchronization window 2-95
S-0-0185, Length of the configurable data record in the AT 2-96
S-0-0186, Length of the configurable data record in the MDT 2-96
S-0-0187, List of configurable data in the AT 2-97
S-0-0188, List of configurable data in the MDT 2-98

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0189, Following error 2-99
S-0-0191, D600 Cancel reference point procedure command 2-100
S-0-0192, IDN-list of backup operation data 2-100
S-0-0193, Positioning Jerk 2-101
S-0-0228, Position synchronization window 2-102
S-0-0236, Master drive 1 revs 2-102
S-0-0237, Slave drive 1 revs 2-103
S-0-0256, Multiplication 1 2-104
S-0-0258, Target position 2-104
S-0-0259, Positioning Velocity 2-105
S-0-0260, Positioning Acceleration 2-106
S-0-0262, C700 Load defaults procedure command 2-106
S-0-0265, Language selection 2-107
S-0-0267, Password 2-108
S-0-0269, Parameter buffer mode 2-108
S-0-0277, Position feedback 1 type 2-109
S-0-0278, Maximum travel range 2-110
S-0-0279, IDN-list of password-protected operation data 2-111
S-0-0282, Positioning command value 2-111
S-0-0292, List of all operating modes 2-112
S-0-0298, Reference cam shift 2-114
S-0-0299, Home switch offset 2-115
S-0-0301, Allocation of real-time control Bit 1 2-116
S-0-0303, Allocation of real-time control Bit 2 2-116
S-0-0305, Allocation of real-time status Bit 1 2-117
S-0-0307, Allocation of real-time status Bit 2 2-118
S-0-0310, Overload warning 2-118
S-0-0311, Amplifier overtemperature warning 2-119
S-0-0312, Motor overtemperature warning 2-120
S-0-0315, Positioning speed > n_limit 2-120
S-0-0323, Target position beyond position limits 2-121
S-0-0328, Assign list signal status word 2-122
S-0-0329, Assign list signal control word 2-122
S-0-0330, Message 'n_actual = n_command' 2-123
S-0-0331, Status 'n_actual = 0' 2-124
S-0-0332, Message 'n_actual < nx' 2-124
S-0-0334, Message 'T >= T_limit' 2-125
S-0-0336, Message In position 2-125
S-0-0342, Target position reached 2-126
S-0-0346, Positioning command strobe 2-126
S-0-0347, Speed deviation 2-127
S-0-0348, Acceleration feedforward gain 2-128
S-0-0349, Jerk limit bipolar 2-129
S-0-0359, Positioning Deceleration 2-130
S-0-0360, MDT Data container A 2-130
S-0-0362, List index, MDT data container A 2-131

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0364, AT Data container A 2-132
S-0-0366, List index, AT data container A 2-132
S-0-0368, Addressing for data container A 2-133
S-0-0370, Configuration list for MDT data container 2-134
S-0-0371, Configuration list for the AT data container 2-134
S-0-0375, List of diagnostic numbers 2-135
S-0-0378, Encoder 1, absolute range 2-136
S-0-0382, Intermediate bus power 2-136
S-0-0390, Diagnostic message number 2-137
S-0-0393, Command value mode 2-138
S-0-0399, IDN list of configurable data in the signal control word 2-140
S-0-0400, Home switch 2-141
S-0-0401, Probe 1 2-142
S-0-0402, Probe 2 2-142
S-0-0403, Position feedback value status 2-143
S-0-0405, Probe 1 enable 2-144
S-0-0406, Probe 2 enable 2-145
S-0-0409, Probe 1 positive latched 2-146
S-0-0410, Probe 1 negative latched 2-147
S-0-0411, Probe 2 positive latched 2-148
S-0-0412, Probe 2 negative latched 2-149
S-0-0419, Positioning command acknowledgment 2-150
S-7-0100, Velocity loop proportional gain 2-150
S-7-0101, Velocity loop integral action time 2-151
S-7-0104, Position loop Kv-factor 2-152
S-7-0106, Current loop proportional gain 1 2-152
S-7-0107, Current loop integral action time 1 2-153
S-7-0109, Motor peak current 2-153
S-7-0111, Motor current at standstill 2-154
S-7-0113, Maximum motor speed (nmax) 2-154
S-7-0116, Feedback 1 Resolution 2-155
S-7-0141, Motor type 2-155
S-7-0177, Absolute distance 1 2-156

3 Product Specific Parameters 3-1

P-0-0004, Velocity loop smoothing time constant 3-1
P-0-0008, Activation E-Stop function 3-2
P-0-0009, Error message number 3-3
P-0-0010, Excessive position command value 3-4
P-0-0011, Last valid position command value 3-5
P-0-0012, C300 Command Set absolute measuring 3-6
P-0-0014, D500 Command determine marker position 3-7
P-0-0015, Memory address 3-7
P-0-0016, Content of memory address 3-8
P-0-0018, Number of pole pairs/pole pair distance 3-8
P-0-0019, Position start value 3-9

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0021, List of scope data 1 ... 3-9
P-0-0022, List of scope data 2 ... 3-10
P-0-0023, Signal select scope channel 1 ... 3-10
P-0-0024, Signal select scope channel 2 ... 3-12
P-0-0025, Trigger source ... 3-14
P-0-0026, Trigger signal selection ... 3-15
P-0-0027, Trigger level for position data ... 3-16
P-0-0028, Trigger level for velocity data ... 3-17
P-0-0029, Trigger level for torque/force data ... 3-17
P-0-0030, Trigger edge ... 3-18
P-0-0031, Timebase ... 3-18
P-0-0032, Size of memory ... 3-19
P-0-0033, Number of samples after trigger ... 3-20
P-0-0034, Position command additional actual value ... 3-21
P-0-0035, Delay from trigger to start ... 3-21
P-0-0036, Trigger control word ... 3-22
P-0-0037, Trigger status word ... 3-23
P-0-0051, Torque/force constant ... 3-24
P-0-0053, Master axis position ... 3-24
P-0-0060, Filter time constant additional pos. command ... 3-25
P-0-0061, Angle offset begin of profile ... 3-26
P-0-0072, Cam shaft profile 1 ... 3-26
P-0-0074, Feedback 1 type ... 3-27
P-0-0081, Parallel I/O output 1 ... 3-27
P-0-0082, Parallel I/O input 1 ... 3-28
P-0-0083, Gear ratio fine adjust ... 3-28
P-0-0085, Dynamic angle offset ... 3-29
P-0-0088, Control word for synchronous operation modes ... 3-30
P-0-0089, Status word for synchronous operating modes ... 3-31
P-0-0090, Travel limit parameter ... 3-32
P-0-0092, Cam shaft profile 2 ... 3-33
P-0-0093, Cam shaft distance ... 3-33
P-0-0094, Cam shaft switch angle ... 3-34
P-0-0096, Distance to move in error situation ... 3-34
P-0-0097, Absolute encoder monitoring window ... 3-35
P-0-0098, Max. model deviation ... 3-36
P-0-0099, Position command smoothing time constant ... 3-37
P-0-0108, Master drive polarity ... 3-37
P-0-0109, Torque/force peak limit ... 3-38
P-0-0117, NC reaction on error ... 3-39
P-0-0118, Power off on error ... 3-39
P-0-0119, Best possible deceleration ... 3-41
P-0-0124, Assignment IDN -> Digital output ... 3-42
P-0-0125, Assignment digital input -> IDN ... 3-43
P-0-0126, Maximum braking time ... 3-44
P-0-0127, Overload warning ... 3-45

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0131, Signal select position switch 3-45
P-0-0132, Switch on threshold position switch 3-46
P-0-0133, Switch off threshold position switch 3-47
P-0-0134, Position switch lead times 3-47
P-0-0135, Status position switch 3-48
P-0-0141, Thermal drive load 3-49
P-0-0142, Synchronization acceleration 3-49
P-0-0143, Synchronization velocity 3-50
P-0-0144, Cam shaft distance switch angle 3-51
P-0-0145, Expanded trigger level 3-51
P-0-0146, Expanded trigger address 3-52
P-0-0147, Expanded signal K1 address 3-53
P-0-0148, Expanded signal K2 address 3-53
P-0-0149, List of selectable signals for oscilloscope function 3-54
P-0-0150, Number of valid samples for oscilloscope function 3-55
P-0-0151, Synchronization init window for modulo format 3-55
P-0-0153, Optimum distance home switch - reference mark 3-56
P-0-0154, Synchronization direction 3-57
P-0-0155, Synchronization mode 3-58
P-0-0156, Electric gear input revolutions 3-59
P-0-0157, Electric gear output revolutions 3-59
P-0-0158, Angle offset change rate 3-60
P-0-0159, Slave drive feed travel 3-61
P-0-0162, D900 Command Automatic control loop adjust 3-61
P-0-0163, Damping factor for autom. control loop adjust 3-62
P-0-0164, Application for autom. control loop adjust 3-63
P-0-0165, Selection for autom. control loop adjust 3-64
P-0-0166, Lower position limit for autom. control loop adjust 3-65
P-0-0167, Upper position limit for autom. control loop adjust 3-66
P-0-0168, Maximum acceleration 3-67
P-0-0169, Travel distance for autom. control loop adjust 3-67
P-0-0176, Torque/Force command smoothing time constant 3-68
P-0-0177, Absolute encoder buffer 1 3-69
P-0-0180, Rejection frequency velocity loop 3-69
P-0-0181, Rejection bandwidth velocity loop 3-70
P-0-0187, Position command processing mode 3-71
P-0-0190, Operating hours control section 3-72
P-0-0191, Operating hours power section 3-72
P-0-0192, Error memory, diagnosis number 3-73
P-0-0193, Error memory, operating hours control section 3-74
P-0-0200, Signal select probe 1 3-75
P-0-0201, Signal select probe 2 3-75
P-0-0202, Difference of probe values 1 3-76
P-0-0203, Difference of probe values 2 3-76
P-0-0204, Start position for active probe 3-77
P-0-0205, End position for active probe 3-77

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0210, Analog input 1 3-78
P-0-0211, Analog input 2 3-78
P-0-0212, Analog inputs, IDN list of assignable parameters 3-79
P-0-0213, Analog input 1, assignment 3-80
P-0-0214, Analog input 1, scaling per 10V full scale 3-81
P-0-0215, Analog input 2, assignment 3-81
P-0-0216, Analog input 2, scaling per 10V full scale 3-82
P-0-0217, Analog input 1, offset 3-83
P-0-0218, Analog input 2, offset 3-83
P-0-0222, State of travel range limit inputs 3-84
P-0-0223, Status Input E-Stop 3-85
P-0-0435, List of configurable data dig. Inputs 3-85
P-0-0436, List of configurable data dig. Outputs 3-86
P-0-0502, Encoder emulation, resolution 3-87
P-0-0503, Marker pulse offset 3-88
P-0-0508, Commutation offset 3-88
P-0-0510, Moment of inertia of the rotor 3-89
P-0-0520, Hardware code 3-89
P-0-0523, Commutation, probe value 3-90
P-0-0524, D300 Commutation setting command 3-90
P-0-0525, Type of motor brake 3-91
P-0-0526, Brake control delay 3-92
P-0-0538, Motor function parameter 1 3-93
P-0-0539, Brake status 3-94
P-0-0540, Torque of motor brake 3-95
P-0-0541, B200 Brake check command 3-96
P-0-0542, B100 Command Release motor holding brake 3-96
P-0-0543, B400 Command Apply motor holding brake 3-97
P-0-0544, B500 Command Abrasion of the motor holding brake 3-97
P-0-0560, Commutation adjustment current 3-98
P-0-0562, Commutation setting periodic time 3-99
P-0-0612, Setting absolute measuring, control word 3-99
P-0-0640, Cooling type 3-100
P-0-1201, Ramp 1 pitch 3-101
P-0-1202, Final speed of ramp 1 3-102
P-0-1203, Ramp 2 pitch 3-103
P-0-1211, Deceleration ramp 1 3-104
P-0-1213, Deceleration ramp 2 3-104
P-0-1222, Velocity command filter 3-105
P-0-4000, Current-zero-trim phase U 3-106
P-0-4001, Current-zero-trim phase V 3-106
P-0-4002, Current-amplify-trim phase U 3-107
P-0-4003, Current-amplify-trim phase V 3-107
P-0-4006, Process block target position 3-108
P-0-4007, Process block velocity 3-109
P-0-4008, Process block acceleration 3-109

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-4009, Process block jerk ... 3-110
P-0-4010, Load inertia ... 3-111
P-0-4011, Switching frequency ... 3-111
P-0-4014, Motor type ... 3-112
P-0-4015, Intermediate DC bus voltage ... 3-113
P-0-4019, Process block mode ... 3-113
P-0-4020, Encoder emulation type ... 3-114
P-0-4021, Baud rate RS-232/485 ... 3-115
P-0-4022, Drive address ... 3-115
P-0-4023, C400 Communication phase 2 transition ... 3-116
P-0-4024, Test status ... 3-117
P-0-4026, Process block selection ... 3-117
P-0-4030, Jog velocity ... 3-118
P-0-4035, Trim-current ... 3-118
P-0-4044, Brake resistor load ... 3-119
P-0-4045, Active permanent current ... 3-119
P-0-4046, Active peak current ... 3-120
P-0-4047, Motor inductance ... 3-121
P-0-4048, Stator resistance ... 3-121
P-0-4050, Delay answer RS-232/485 ... 3-122
P-0-4051, Process block acknowledgment ... 3-123
P-0-4052, Positioning block, last accepted ... 3-123
P-0-4053, Intermediate DC bus voltage gain adjust ... 3-124
P-0-4056, Jog inputs ... 3-124
P-0-4057, Positioning block, input linked blocks ... 3-125
P-0-4058, Amplifier type data ... 3-125
P-0-4059, Brake resistor data ... 3-126
P-0-4060, Process block control word ... 3-127
P-0-4063, Process block deceleration ... 3-127
P-0-4073, CANopen event mask ... 3-128
P-0-4074, Field bus data format ... 3-129
P-0-4075, Field bus watchdog time ... 3-130
P-0-4076, Field bus container object ... 3-131
P-0-4077, Field bus control word ... 3-131
P-0-4078, Field bus status word ... 3-132
P-0-4079, Field bus baudrate ... 3-133
P-0-4080, Real-time input object structure ... 3-133
P-0-4081, Real-time output object structure ... 3-134
P-0-4082, Length of real-time data channel In ... 3-135
P-0-4083, Length of parameter channel in DP ... 3-135
P-0-4084, Profile type ... 3-136
P-0-4085, Field bus version ... 3-136
P-0-4086, Command communication status ... 3-137
P-0-4087, Length of real-time data channel Out ... 3-138
P-0-4088, Serial number ... 3-139
P-0-4089, Production index ... 3-139

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-4094, C800 Command Base-parameter load 3-140
P-7-0004, Velocity loop smoothing time constant 3-140
P-7-0018, Number of pole pairs/pole pair distance 3-141
P-7-0051, Torque/force constant 3-141
P-7-0300, Encoder data 1 3-142
P-7-0301, Encoder data 2 3-142
P-7-0302, Encoder data 3 3-143
P-7-0510, Moment of inertia of the rotor 3-143
P-7-0513, Feedback type 1 3-144
P-7-0540, Torque of motor brake 3-144
P-7-0554, Serial number of motor 3-145
P-7-4047, Motor inductance 3-146
P-7-4048, Stator resistance 3-146

4 Index 4-1

5 Service & Support 5-1

5.1 Helpdesk 5-1
5.2 Service-Hotline 5-1
5.3 Internet 5-1
5.4 Vor der Kontaktaufnahme... - Before contacting us... 5-1
5.5 Kundenbetreuungsstellen - Sales & Service Facilities 5-2

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

1 General Information

Document Structure

All standard and product specific parameters are listed in this documentation in a numerically ascending order.
This documentation supplements the feature description and represents a complete description of all parameters used in the drive firmware.

The description of the individual parameters is divided into two subsections:

1) General description
This section contains the feature or meaning of the parameter and tips for setting parameters.

2) Description of attributes
The characteristic values or features listed here help to classify the parameter. They are necessary for a complete description of the parameter. However, they are not required to get a general idea of the meaning of the parameter.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Definitions

The following abbreviations are used:

Data length:
2-byte - the data length for the operating data is 2 bytes.
4-byte - the data length for the operating data is 4 bytes.
1-byte variable - this is a piece of operating data of variable length (list). The length of a data unit is 1 byte.
2-byte variable - this is a piece of operating data of variable length (list). The length of a data unit is 2 bytes.
4-byte variable - this is a piece of operating data of variable length (list). The length of a data unit is 4 bytes.

Format:
BIN - the display format for the operating data should be binary.
HEX - the display format for the operating data should be hexadecimal.
DEC_OV - The display format for the operating data should be decimal without a sign.
DEC_MV - The display format for the operating data should be decimal with a sign.
ASCII - the operating data is an ASCII string.
IDN - the operating data is an ID number (IDN).

Editability:
No - the operating data cannot be edited.
P2 - The operating data can only be edited in communications phase 2.
P23 - The operating data can only be edited in communications phases 2 and 3.
P234 - The operating data can be edited in any communications phase.
P3 - The operating data can only be edited in communications phase 3.
P4 - The operating data can only be edited in communications phase 4.

Memory:
fixed - the operating data is programmed in the drive (fixed value).
no - The operating data is not buffered in the drive; the value is undefined after the drive controller is switched on.
Param. EE - The operating data is buffered in E²prom of the programming module (DSM).
Ampl. EE - The operating data is buffered in E²prom of the drive controller.
Feedb. EE - The operating data is buffered in the E²prom of the motor feedback data memory (only in MHD- and MKD motors).

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Validity check:
no - the operating data is not checked for validity.
Phase2 - the operating data is checked in the "Communications phase 3 transition check" command.
Phase3 - the operating data is checked in the "Communications phase 4 transition check" command.

Extreme value check:
no - the operating data is not checked for its extreme values when it is written to.
yes - the operating data is checked for its extreme values when it is written to.

Combination check:
no - the operating data is not checked (bitwise) for a valid combination with other parameter values when it is written to.
yes - The operating data is checked (bitwise) for a valid combination with other parameter values when it is written to.

Cyc. transmittable:
no - The operating data cannot be configured as cyclical data in the master data telegram or in the drive telegram.
AT - The operating data can be configured as cyclical data in the drive telegram.
MDT - The operating data can be configured as cyclical data in the master data telegram.

Default Value:
The default value indicates the value of the parameter loaded into fixed memory with the current version of firmware installed on the drive following the PL program load command and prior to user edits or loading saved parameter files.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Notes

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

2 Standard Parameters

S-0-0000, Dummy parameter

This parameter serves as a wild card, it does not have any function. Data can be cyclically written to this parameter and it can be cyclically read.
Examples of use:

- Fill up **S-0-0370, Configuration list for MDT data container** with wild cards.
- Measure dead time for data write and reading via bus.

S-0-0000 - Attributes

Para. Name:	**DE**	Dummy-Parameter		
	EN	Dummy parameter		
	FR	Paramètre fictif		
	ES	Parámetro ficticio		
	IT	Parametro fittizio		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	-
Format:		HEX	**Validity check:**	no
Unit:			**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

S-0-0001, NC Cycle time (TNcyc)

The NC cycle time indicates the time intervals between new command values being made available by the numerical control.

The NC cycle time must be an integral multiple of **S-0-0002, SERCOS Cycle time (Tscyc)**.

$$T_{Ncyc} = T_{Scyc} \bullet j, \quad \text{where } j = 1,2,3...$$

S-0-0001 - Attributes

Para. Name:	**DE**	NC-Zykluszeit (TNcyc)		
	EN	NC Cycle time (TNcyc)		
	FR	Durée de cycle de la commande numérique (TNcyc)		
	ES	Tiempo de ciclo NC (TNcyc)		
	IT	Tempo Ciclo NC (TNcyc)		
Function:		Parameter	**Editability:**	P2
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase2
Unit:		us	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		2000 / 65000		
Default value:		2000	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0002, SERCOS Cycle time (TScyc)

The interface cycle time indicates the time intervals for the cyclical data transfer. The interface cycle times are set to
2 ms, ... to 65 ms in increments of 1ms.

S-0-0002 - Attributes

Para. Name:	**DE**	SERCOS-Zykluszeit (TScyc)		
	EN	SERCOS Cycle time (TScyc)		
	FR	Durée de cycle de transmission SERCOS (TScyc)		
	ES	Tiempo de ciclo SERCOS (TScyc)		
	IT	Tempo Ciclo SERCOS (TScyc)		
Function:		Parameter	**Editability:**	P2
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase2
Unit:		us	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		2000 / 65000		
Default value:		2000	**Cyc. transmittable:**	no

S-0-0003, Minimum AT transmit starting time (T1min)

The slave uses this parameter value to indicate the minimum time requirement between the end of the received master synchronization telegram and the transmission of the drive telegram.
The time $T1_{min}$ is read in communications phase 2 by the master to calculate the time to send the drive telegram T1 **S-0-0006, AT Transmission starting time (T1)**.

Note: This parameter is only relevant for devices with SERCOS interface.

See also the functional description: "Configuration of the Telegram Send and Receive Times".

S-0-0003 - Attributes

Para. Name:	**DE**	Sende-Reaktionszeit AT (T1min)		
	EN	Minimum AT transmit starting time (T1min)		
	FR	Temps de réaction à l'émission AT (T1min)		
	ES	Tiempo de reacción de emision AT (T1min)		
	IT	Tempo di Partenza Trasmissione mini. AT (T1min)		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	no
Unit:		us	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0004, Transmit/receive transition time (TATMT)

This parameter indicates the time required for the slave to switch to reception of the master data telegram after sending its drive telegram.
The transmission/reception transition time is read in communications phase 2 by the master to calculate the time to send the master data telegram T2 **S-0-0089, MDT Transmit starting time (T2)**.

Note: This parameter is only relevant for devices with SERCOS interface.

See also the functional description: "Configuration of the telegram send and receive times".

S-0-0004 - Attributes

Para. Name:	**DE**	Umschaltzeit Senden-Empfangen (TATMT)		
	EN	Transmit/receive transition time (TATMT)		
	FR	Temps de transition entre transmission et réception (TATMT)		
	ES	Tiempo de conmutación emisión-recepción (TATMT)		
	IT	Tempo di Transizione Trasmis./Ricez. (TATMT)		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	no
Unit:		us	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

S-0-0005, Minimum feedback acquisition time (T4min)

This is the minimum time requirement between feedback-value acquisition and the end of the master synchronization telegram. This value is indicated by the drive in such a manner that the current feedback values can be transmitted to the numerical control in the next drive telegram.

S-0-0005 - Attributes

Para. Name:	**DE**	Mindestzeit Istwerterfassung (T4min)		
	EN	Minimum feedback acquisition time (T4min)		
	FR	Temps min. d'acquisition des données retour (T4min)		
	ES	Tiempo mínimo registro de valor real (T4min)		
	IT	Tempo di Acquisizione Feedback minimo (T4min)		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	constant
Format:		DEC_OV	**Validity check:**	no
Unit:		us	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0006, AT Transmission starting time (T1)

The transmission starting time determines when the slave must send its drive telegram in communications phases 3 and 4, after the end of the master synchronization telegram.
This parameter is transmitted from the master to the slave in communications phase 2 and is active from communications phase 3 on.
The transmission time drive telegram must be set equal to or greater than the transmission reaction time **S-0-0003, Minimum AT transmit starting time (T1min)**.
The following must apply: **T1min ≤ T1**

Note: This parameter is only relevant for devices with SERCOS interface.

See also the functional description: "Configuration of the Telegram Send and Receive Times".

S-0-0006 - Attributes

Para. Name:	**DE**	Sendezeitpunkt Antriebs-Telegramm (T1)
	EN	AT Transmission starting time (T1)
	FR	Temps de départ de transmission de l'AT (T1)
	ES	Punto temporal de emision telegrama de accionamiento (T1)
	IT	Tempo di Partenza Trasmissione AT (T1)

Function:	Parameter	**Editability:**	P2
Data length:	2Byte	**Memory:**	-
Format:	DEC_OV	**Validity check:**	Phase2
Unit:	us	**Extreme value check:**	yes
Decimal places:	0	**Combination check:**	no
Input min/max:	- / -		
Default value:	-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0007, Feedback acquisition starting time (T4)

This is the feedback acquisition starting time set by the master after the end of the master synchronization telegram. Thus, the master can set the same feedback acquisition starting time for all drives that work together. This guarantees synchronized feedback-value acquisition among the affected drives. Also, the cyclically transferred command values are processed at time T4.

S-0-0007 - Attributes

Para. Name:	**DE**	Messzeitpunkt Istwerte (T4)		
	EN	Feedback acquisition starting time (T4)		
	FR	Temps de départ d'acquisition des données actuelles (T4)		
	ES	Punto temporal de medición valores reales (T4)		
	IT	Tempo di Part. Acquisizione Feedback (T4)		
Function:		Parameter	**Editability:**	P2
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase2
Unit:		us	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		11 / 65000		
Default value:		1500	**Cyc. transmittable:**	no

S-0-0008, Command valid time (T3)

The "command valid time" indicates the time after which the drive may access new command values.
Thus, the master can set the same "command valid time" for all drives that work together. The drive activates the "command valid time" beginning with communications phase 3.

S-0-0008 - Attributes

Para. Name:	**DE**	Zeitpunkt für Sollwert gültig (T3)		
	EN	Command valid time (T3)		
	FR	Temps pour consigne valide (T3)		
	ES	Punto temporal para valor nominal valido (T3)		
	IT	Tempo di Comando Valido (T3)		
Function:		Parameter	**Editability:**	P2
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase2
Unit:		us	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		0 / 65000		
Default value:		1000	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0009, Beginning address in master data telegram

This parameter displays the start address of a drive's data record in the Master Data Telegram, expressed as a byte position. It begins with 1 for the first data byte after the address field in the MDT. The start address of the drive's data record in the MDT is transmitted to each drive by the master in communications phase 2. The address is activated beginning with communications phase 3.

Note: This parameter is only relevant for devices with SERCOS interface.

See also the functional description: "Configuration of the Telegram Send and Receive Times".

S-0-0009 - Attributes

Para. Name:	**DE**	Anfangsadresse im Master-Daten-Telegramm		
	EN	Beginning address in master data telegram		
	FR	Adresse de départ dans le MDT		
	ES	Dirección inicial en telegrama de datos maestro		
	IT	Indirizzo iniziale del Telegramma Dati Master		
Function:		Parameter	**Editability:**	P2
Data length:		2Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	Phase2
Unit:		--	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

S-0-0010, Length of master data telegram

The length of the Master Data Telegram, expressed in bytes, contains the data records of all the drives. The MDT length is transmitted by the master to all drives in communications phase 2. It is activated by the master and slave beginning with communications phase 3.

See also the functional description: "Configuration of the Telegram Send and Receive Times".

S-0-0010 - Attributes

Para. Name:	**DE**	Länge Master-Daten-Telegramm		
	EN	Length of master data telegram		
	FR	Longueur du MDT		
	ES	Longitud telegrama de datos maestro		
	IT	Lunghezza del Telegramma Dati Master		
Function:		Parameter	**Editability:**	P2
Data length:		2Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	Phase2
Unit:		Byte	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0011, Class 1 diagnostics

Function: Drive lock

A Class 1 diagnostic error situation discovered by the drive leads to

- the drive's error response, as described in the functional description under "Error".
- setting the static error bits to 1 for Class 1 (**S-0-0135, Drive status word**)

The drive resets the error bit back to 0 only if

- there are no errors pending in C1D
- and command **S-0-0099, C500 Reset C1D** has been started.

Parameter structure:

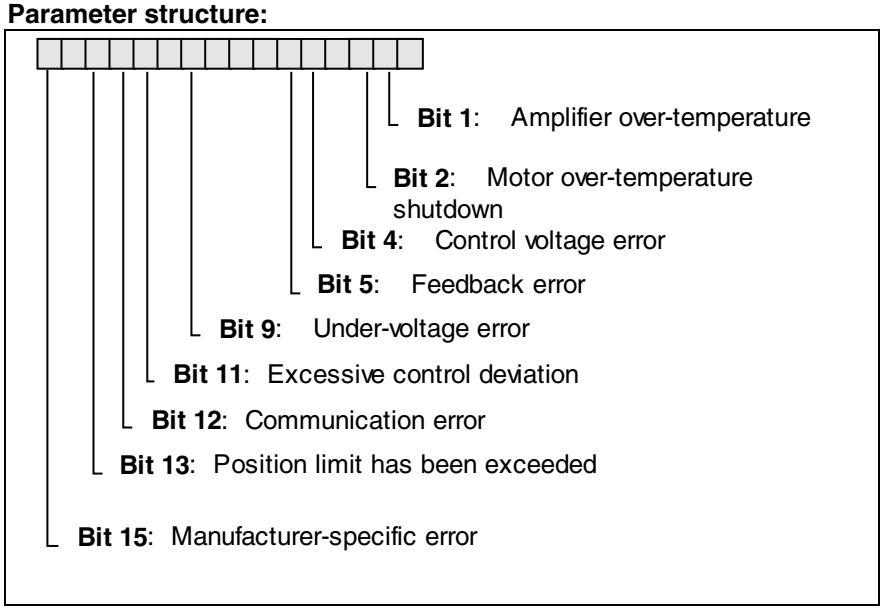


Fig. 2-1: S-0-0011, Class 1 diagnostics

See also the functional description: "S-0-0011, Class 1 diagnostics".

S-0-0011 - Attributes

Para. Name:	**DE**	Zustandsklasse 1		
	EN	Class 1 diagnostics		
	FR	Diagnostic de classe 1 (C1D)		
	ES	Diagnosticos clase 1		
	IT	Diagnostica Classe 1		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	no
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0012, Class 2 diagnostics

If a warning of class 2 diagnostics is activated or deactivated in the drive, this causes the change bit (**S-0-0135, Drive status word**, bit 12) for class 2 diagnostics to be set. The change bit (**S-0-0135, Drive status word**, bit 12) is not cleared by the drive until parameter **S-0-0012, Class 2 diagnostics** is read.

Note: The warning bit (bit 12) in S-0-0135 resp. P-0-4078 is cleared in the case of devices with field bus interface as soon as the condition for the warning is no longer present. In the case of devices with SERCOS interface, the warning bit (=change bit) is not cleared until parameter S-0-0012 has been read.

Parameter structure:

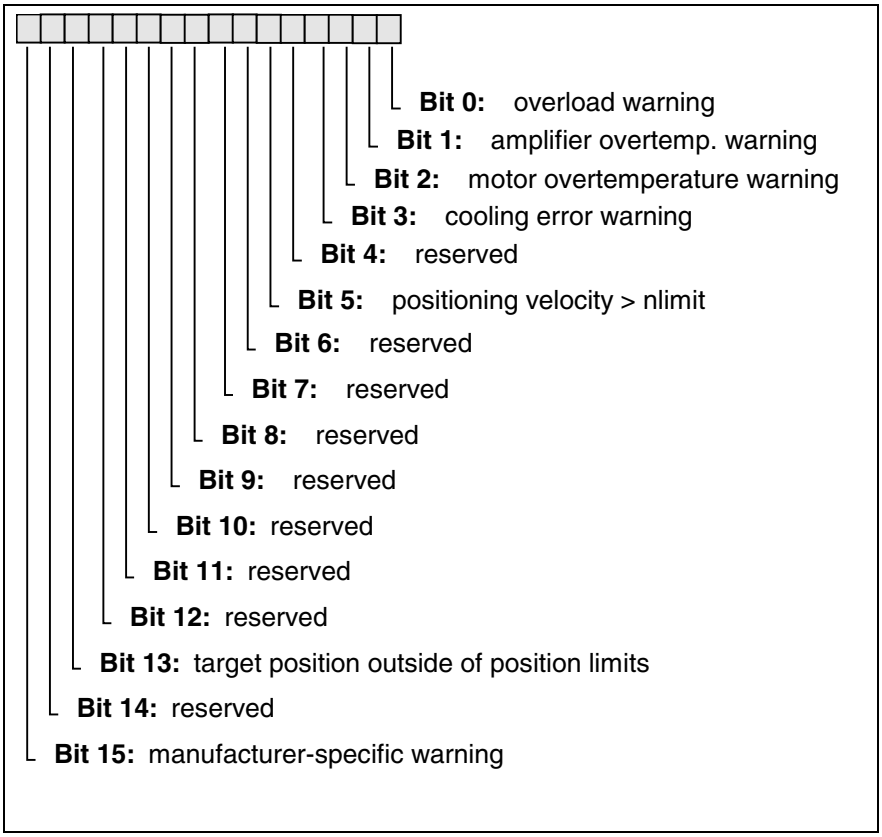


Fig. 2-2: S-0-0012, Class 2 diagnostics

See also Functional Description "S-0-0012, Class 2 diagnostics"

S-0-0012 - Attributes

Para. Name:	**DE**	Zustandsklasse 2
	EN	Class 2 diagnostics
	FR	Diagnostic de classe 2 (C2D)
	ES	Diagnosticos clase 2
	IT	Diagnostica Classe 2

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Function:	Parameter	**Editability:**	no
Data length:	2Byte	**Memory:**	no
Format:	BIN	**Validity check:**	no
Unit:	--	**Extreme value check:**	no
Decimal places:	0	**Combination check:**	no
Input min/max:	--- / ---		
Default value:	---	**Cyc. transmittable:**	no

S-0-0013, Class 3 diagnostics

Function: operating status messages
If a class 3 diagnostics message is activated or deactivated in the drive, then the change bit (**S-0-0135, Drive status word**, bit 11) is set for class 3 diagnostics.
The change bit (**S-0-0135, Drive status word**, bit 11) is not cleared by the drive until the **S-0-0013, Class 3 diagnostics** parameter is read.

Note: The message bit (bit 11) in S-0-0135 resp. P-0-4078 is cleared in the case of devices with field bus interface as soon as the condition for the message is no longer present. In the case of devices with SERCOS interface, the warning bit (=change bit) is not cleared until parameter S-0-0012 has been read.

Parameter structure:

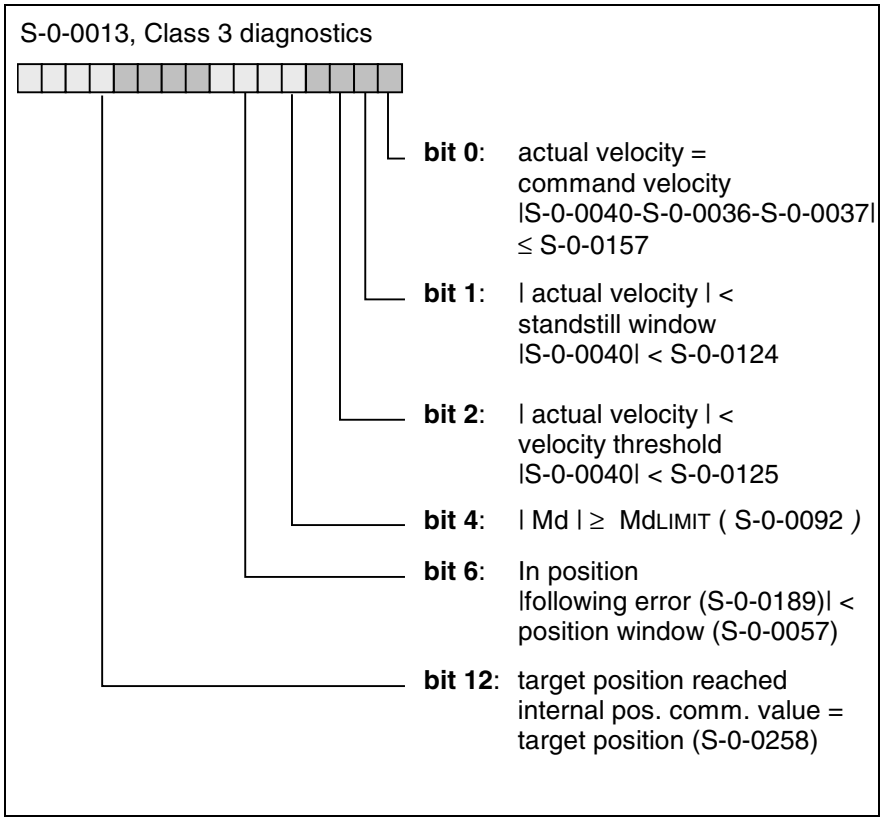


Fig. 2-3: S-0-0013, Class 3 diagnostics

See also Functional Description "S-0-0013, Class 3 diagnostics"

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0013 - Attributes

Para. Name:	**DE**	Zustandsklasse 3		
	EN	Class 3 diagnostics		
	FR	Diagnostic de classe 3 (C3D)		
	ES	Diagnosticos clase 3		
	IT	Diagnostica Classe 3		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	no
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

S-0-0014, Interface status

In the three least significant bits (0, 1, 2), the current communication phase can be requested:

0010b: The drive is in **parameter mode.**
0100b: The drive is in **operation mode**.

If an interface error occurs, then

- one of the **bits 4 to 15** in **S-0-0014, Interface status** is set (bit in 4 to 15 = 1 => error pending)
- and bit 12 in S-0-0011, Class 1 diagnostics is set.

The communications error bits are not cleared by the drive until

- the relevant interface error is no longer pending
- and command S-0-0099, C500 Reset class 1 diagnostic was started.

Parameter structure:

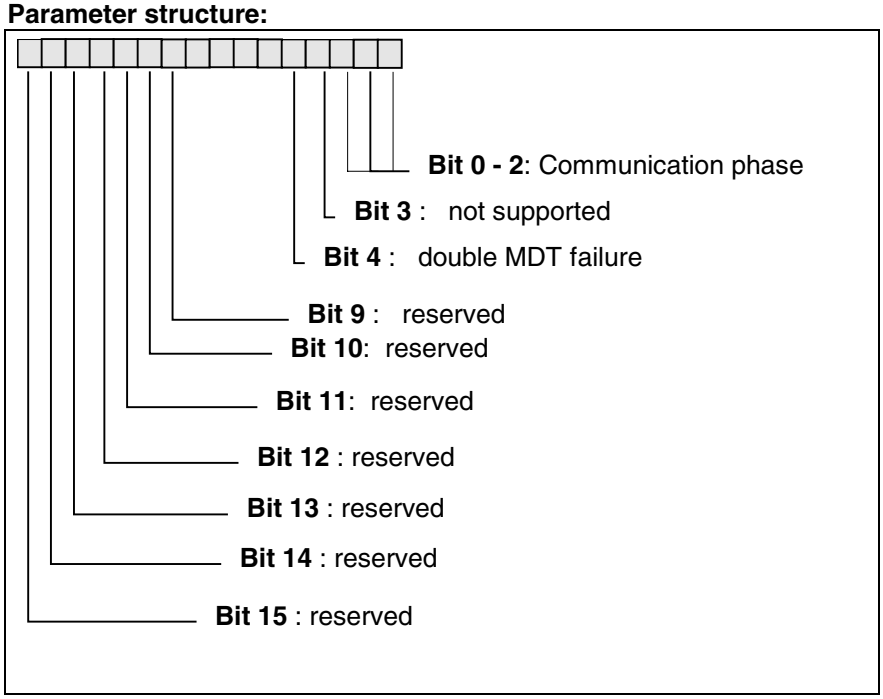


Fig. 2-4: S-0-0014, Interface status

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0014 - Attributes

Para. Name:	**DE**	Schnittstellen-Status		
	EN	Interface status		
	FR	Etat d'interface		
	ES	Estado de interfaces		
	IT	Stato Interfaccia		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	no
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

S-0-0015, Telegram type parameter

In this parameter, you can choose between priority telegrams and the configured telegram. The telegram type that is selected will be activated in the master and slave only from communications phase 3 on.

Note: This parameter is only relevant for devices with SERCOS interface.

Parameter structure:

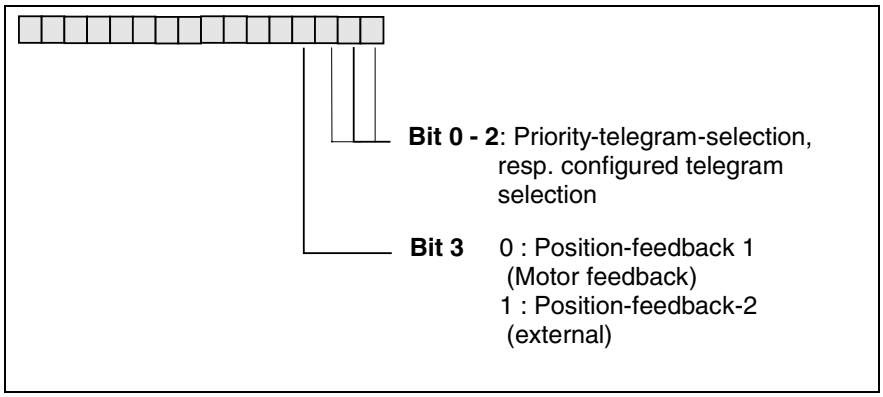


Fig. 2-5: S-0-0015, Telegram type parameter

Note: Only the bits indicated here are supported by the software.

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Telegrams:

Bit 0-2:		MDT:	AT:
0	PT 0	No cyclical data	No cyclical data
1	PT 1	**DF1**: S-0-0080 Torque command	No cyclical data
2	PT 2	**DF1**: S-0-0036, Velocity command value	**DF1**: S-0-0040 Velocity feedback value
3	PT 3	**DF1**: S-0-0036, Velocity command value	**DF1**: S-0-0051/S-0-0053 Position feedback value 1
4	PT 4	**DF1**: S-0-0047, Position command value	**DF1**: S-0-0051/S-0-0053 Position feedback value 1
5	PT 5	**DF1**: S-0-0047, Position command value **DF2**: S-0-0036, Velocity command value	**DF1**: S-0-0051/S-0-0053 Position feedback value 1 **DF2**: S-0-0040 Velocity feedback value
6	PT 6	**DF1**: S-0-0036, Velocity command value	No cyclical data
7	Configurable telegram		

Fig. 2-6: Supported bits

where PT : Priority telegram
DF1/2: Data field 1/2

See also the functional description: "Configuration of Telegram Contents"

S-0-0015 - Attributes

Para. Name:	**DE**	Telegrammarten-Parameter		
	EN	Telegram type parameter		
	FR	Paramètre de type de télégramme		
	ES	Parámetros de tipo de telegrama		
	IT	Parametri Tipo Telegramma		
Function:		Parameter	**Editability:**	P2
Data length:		2Byte	**Memory:**	-
Format:		BIN	**Validity check:**	Phase2
Unit:		--	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0016, Custom amplifier telegram configuration list

If a configured telegram is set in **S-0-0015, Telegram type parameter**, then this list will be used for application-specific configuration of the data record in the AT.
The list can contain only operating data that are listed in the parameter **S-0-0187, List of configurable data in the AT**.

Note: This parameter is only relevant for devices with SERCOS interface.

See also the functional description: "Configuration of Telegram Contents"

S-0-0016 - Attributes

Para. Name:	**DE**	Konfig.-Liste Antriebs-Telegramm		
	EN	Custom amplifier telegram configuration list		
	FR	Liste de configuration d'AT		
	ES	Telegrama de accionamiento lista de config.		
	IT	Configurazione personalizzata Telegramma		
Function:		Parameter	**Editability:**	P2
Data length:		2Byte var.	**Memory:**	Param. EE
Format:		IDN	**Validity check:**	Phase2
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		0	**Cyc. transmittable:**	no

S-0-0017, IDN-list of all operation data

The ID numbers for all parameters with operation data available in the drive are accessible in this IDN list.
See also the functional description: "Parameter"

S-0-0017 - Attributes

Para. Name:	**DE**	IDN-Liste aller Betriebsdaten		
	EN	IDN-list of all operation data		
	FR	Liste IDN de toutes les données d'exploitation		
	ES	Lista IDN de todos los datos operacionales		
	IT	Elenco IDN di tutti i dati operativi		
Function:		Parameter	**Editability:**	no
Data length:		2Byte var.	**Memory:**	constant
Format:		IDN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0018, IDN-list of operation data for CP2

The IDN-list contains the ID numbers of all parameters that the drive checks in the transition command for phase 3. Only when the data of the listed ID numbers are correct, can the transmission command be positively acknowledged and the transition to communications phase 3 allowed.

See also the functional description: "IDN List of Parameters"

S-0-0018 - Attributes

Para. Name:	**DE**	IDN-Liste Betriebsdaten Kommunikationsphase 2		
	EN	IDN-list of operation data for CP2		
	FR	Liste IDN des données d'exploitation relatives à CP2		
	ES	Lista IDN de datos operacionales fase de comunicación 2		
	IT	Elenco IDN di tutti i dati oper. per fase di comunicaz. 2		
Function:		Parameter	**Editability:**	no
Data length:		2Byte var.	**Memory:**	constant
Format:		IDN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

S-0-0019, IDN-list of operation data for CP3

The IDN-list contains the ID numbers of all parameters that the drive checks in the transition command for phase 4. Only when the data of the listed ID numbers are correct, can the transmission command be positively acknowledged, and the transition to communications phase 4 allowed.

See also the functional description: "IDN List of Parameters"

S-0-0019 - Attributes

Para. Name:	**DE**	IDN-Liste Betriebsdaten Kommunikationsphase 3		
	EN	IDN-list of operation data for CP3		
	FR	Liste IDN des données d'exploitation relatives à CP3		
	ES	Lista IDN de datos operacionales para fase de comunicación 3		
	IT	Elenco IDN di tutti i dati oper. per fase di comunicaz. 3		
Function:		Parameter	**Editability:**	no
Data length:		2Byte var.	**Memory:**	constant
Format:		IDN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0021, IDN-list of invalid op. data for comm. Ph. 2

Before the drive executes a switch from phase 2 to phase 3, it must complete the corresponding command **S-0-0127, C100 Communication phase 3 transition check** that allows it to check if the communications parameters are complete and accurate.
If the drive identifies one or more IDNs as invalid, it will write the operating data that is still needed or is invalid to this IDN list. This will be displayed to the drive by command error diagnostic message **C101 Invalid communication parameter (S-0-0021)**.

See also the functional description: "IDN List of Parameters"

S-0-0021 - Attributes

Para. Name:	**DE**	IDN-Liste ungültige Betriebsdaten Phase 2
	EN	IDN-list of invalid op. data for comm. Ph. 2
	FR	Liste des IDN-données d'exploitation invalides phase 2
	ES	Lista IDN de datos de servicio no validos fase 2
	IT	Lista IDN dei Dati oper. invalidi per Comm. in Fase 2

Function:	Parameter	**Editability:**	no
Data length:	2Byte var.	**Memory:**	no
Format:	IDN	**Validity check:**	no
Unit:	--	**Extreme value check:**	no
Decimal places:	0	**Combination check:**	no
Input min/max:	--- / ---		
Default value:	---	**Cyc. transmittable:**	no

S-0-0022, IDN-list of invalid op. data for comm. Ph. 3

Before the drive executes a switch from phase 3 to phase 4 it must complete the corresponding command **S-0-0128, C200 Communication phase 4 transition check** that allows it to check parameters for the following conditions:

- Validity of the parameter
- The parameter value is found within the valid input range.
- Compatibility with other parameters.

If the result of a parameter check is negative, this operating data will be entered in the ID No. (IDN) list.
The drive then responds to the transition command with the communications error diagnostic messages

- C201 Invalid Parameter(s) (->S-0-0022) or
- C202 Parameter limit error (->S-0-0022) or
- C203 Parameter calculation error (->S-0-0022)

See also the functional description: "IDN List of Parameters"

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0022 - Attributes

Para. Name:	**DE**	IDN-Liste ungültige Betriebsdaten Phase 3		
	EN	IDN-list of invalid op. data for comm. Ph. 3		
	FR	IDN-Liste données d'exploitation invalides phase 3		
	ES	Lista IDN de datos de servicio no validos fase 3		
	IT	Lista IDN dei Dati oper. invalidi per Comm. in Fase 3		
Function:		Parameter	**Editability:**	no
Data length:		2Byte var.	**Memory:**	no
Format:		IDN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

S-0-0024, Config. list of the master data telegram

If the configured telegram is set in **S-0-0015, Telegram type parameter**, the configurable data record in the MDT will be configured application-specifically using this list.
The list may only contain such operating data that are listed in parameter **S-0-0188, List of configurable data in the MDT**.

Note: This parameter is only relevant for devices with SERCOS interface.

See also Functional Description "Configuration of Telegram Contents"

S-0-0024 - Attributes

Para. Name:	**DE**	Konfig.-Liste Master-Daten-Telegramm		
	EN	Config. list of the master data telegram		
	FR	Liste de configuration du MDT		
	ES	Lista de configuración del MDT		
	IT	Lista Config. del Telegramma Dati Master		
Function:		Parameter	**Editability:**	P2
Data length:		2Byte var.	**Memory:**	Param. EE
Format:		IDN	**Validity check:**	Phase2
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		0	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0025, IDN-list of all procedure commands

The data of the IDN-list contains the ident-numbers of all commands in the drive controller.
See also the functional description: "Commands"

S-0-0025 - Attributes

Para. Name:	**DE**	IDN-Liste aller Kommandos		
	EN	IDN-list of all procedure commands		
	FR	Liste IDN de toutes les instructions		
	ES	Lista IDN de todos los comandos		
	IT	Elenco IDN di tutti i comandi		
Function:		Parameter	**Editability:**	no
Data length:		2Byte var.	**Memory:**	constant
Format:		IDN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		---	**Cyc. transmittable:**	no

S-0-0026, Configuration list signal status word

The IDNs of those signals or bits contained in the signal status word (**S-0-0144**) are stored in the data of this parameter.
The order of the IDNs in the configuration list defines the bit numbering starting with the LSB in the signal status word; i.e. the first IDN in **S-0-0026** defines bit 0 in the **S-0-0144, Signal status word** parameter, the second IDN in **S-0-0026** defines bit 1 in the **S-0-0144, Signal status word** parameter, etc.

Note: In the case of Ecodrive Cs, the functionality of the configurable signal status word can be used for configuring the existing digital outputs (see also P-0-0124).

See also Functional Description "Configurable Signal Status Word"
See also Functional Description "Digital outputs"

S-0-0026 - Attributes

Para. Name:	**DE**	Konfigurations-Liste Signal-Statuswort		
	EN	Configuration list signal status word		
	FR	Liste de configuration pour mot d'état de signal		
	ES	Lista de configuración palabra de estado de señal		
	IT	Lista di Configurazione Parole di Stato Segnali		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte var.	**Memory:**	Param. EE
Format:		IDN	**Validity check:**	P3-4
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		-- / --		
Default value:		Defaultliste	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0027, Configuration list signal control word

The IDNs of those signals or bits contained in the signal control word (**S-0-0145**) are stored in the data of this parameter.
The order of the IDNs in the configuration list defines the bit numbering starting with the LSB in the signal control word; i.e. the first IDN in **S-0-0027** defines bit 0 in the **S-0-0145, Signal control word** parameter, the second IDN in **S-0-0027** defines bit 1 in the **S-0-0145, Signal control word** parameter, etc.

Note: In the case of Ecodrive Cs, the functionality of the configurable signal control word can be used for configuring the existing digital inputs (see also P-0-0125).

See also Functional Description "Configurable Signal Control Word"
See also Functional Description "Digital inputs"

S-0-0027 - Attributes

Para. Name:	**DE**	Konfigurations-Liste Signal-Steuerwort
	EN	Configuration list signal control word
	FR	Liste de configuration pour mot de contrôle de signal
	ES	Lista de configuración palabra de mando de señal
	IT	Lista di Configurazione Parole di Controllo Segnali

Function:	Parameter	**Editability:**	P234
Data length:	2Byte var.	**Memory:**	-
Format:	IDN	**Validity check:**	P3-4
Unit:	--	**Extreme value check:**	no
Decimal places:	0	**Combination check:**	no
Input min/max:	- / -		
Default value:	Defaultliste	**Cyc. transmittable:**	-

S-0-0028, MST error counter

The "MST error counter" counts all invalid Master Synchronization Telegrams in communication phases 3 and 4.
If two MSTs fail in immediate succession, the **F401 Double MST failure shutdown** error is generated and the drive is switched back to communication phase 0.
The "MST error counter" has a limit stop at [(2^16)-1]. This means that during a highly distorted transmission the "MST error counter" will show the value 65535 after a long time.

Note: In the case of field bus drives, the telegram is not called MST telegram but SYNC telegram!

See also Functional Description "Error Count for Telegram Interrupts"

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0028 - Attributes

Para. Name:	**DE**	Fehlerzähler MST		
	EN	MST error counter		
	FR	Compteur de MST défectueux		
	ES	Contador de errores MST		
	IT	Contatore errori MST		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	-
Format:		DEC_0V	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

S-0-0029, MDT error counter

This parameter counts all invalid Master Data Telegrams in communications phases 3 and 4. If two MDTs fail in direct succession, then error **F402 Double MST error shutdown** will be generated.
The MDT error counter has a limit stop at (2^16) - 1. This means that during a highly distorted transfer the MDT error count will show a value of 65535 after a long time.

See also the functional description: "Error Count for Telegram Interrupts".

S-0-0029 - Attributes

Para. Name:	**DE**	Fehlerzähler MDT		
	EN	MDT error counter		
	FR	Compteur de MDT défectueux		
	ES	Contador de errores MDT		
	IT	Contatore errori MDT		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	no
Format:		DEC_OV	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0030, Manufacturer version

The version of the drive firmware can be read from this parameter as plain text. The structure of the manufacturer version is defined as follows:

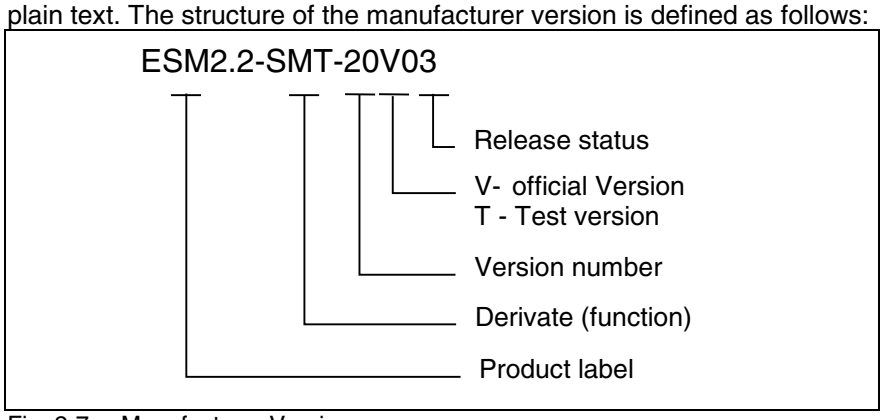


Fig. 2-7: Manufacturer Version

See also the functional description: "System Overview"

S-0-0030 - Attributes

Para. Name:	**DE**	Hersteller-Version		
	EN	Manufacturer version		
	FR	Version du fabriquant		
	ES	Version de fabricante		
	IT	Versione Costruttore		
Function:		Parameter	**Editability:**	no
Data length:		1Byte var.	**Memory:**	constant
Format:		ASCII	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0032, Primary mode of operation

The primary mode of operation set in S-0-0032 is activated in the drive, if:

- the primary mode of operation 1 was selected in **S-0-0134, Master control word** (or **P-0-4077, Field bus control word**) (bit 8 = 0 and bit 9 = 0)
- and the drive is in the "AF" (drive enable) status.

Note: In the case of field bus drives, free selection of the operating mode via bits 8 and 9 in P-0-4077, Field bus control word is only possible in the freely configurable profile type!

Depending on the respective device range and the master communication there is a restriction to the possible operating modes. The possible operating modes are listed in parameter S-0-0292. (see **S-0-0292, List of all operating modes**)

Note: In the case of devices without field bus or SERCOS it is only possible to operate the devices in the primary mode of operation (S-0-0032). For these devices the secondary operating mode 1 is fixed to jog mode and activated via the jogging inputs. The same applies to SERCOS and field bus devices with inactive bus interface.

See also Functional Description "Setting the Operating Mode Parameters"

S-0-0032 - Attributes

Para. Name:	**DE**	Hauptbetriebsart		
	EN	Primary mode of operation		
	FR	Mode de fonctionnement primaire		
	ES	Tipo de servicio principal		
	IT	Modo operativo primario		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	Param. EE
Format:		BIN	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	yes
Input min/max:		--- / ---		
Default value:		111011b	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0033, Secondary operating mode 1

The secondary operating mode 1 set in S-0-0033 is activated in the drive, if:

- the secondary operating mode 1 was selected in **S-0-0134, Master control word** (or **P-0-4077, Field bus control word**) (bit 8 = 1 and bit 9 = 0)
- and the drive is in the "AF" (drive enable) status.

Note: In the case of field bus drives, free selection of the operating mode via bits 8 and 9 in P-0-4077, Field bus control word is only possible in the freely configurable profile type!

With regard to the possible operating modes:
See also S-0-0292, List of all operating modes
See also Functional Description "Setting the Operating Mode Parameters"

S-0-0033 - Attributes

Para. Name:	**DE**	Nebenbetriebsart 1		
	EN	Secondary operating mode 1		
	FR	Mode de fonctionnement secondaire 1		
	ES	Tipo de servicio secundario 1		
	IT	Modo operativo secundario 1		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	Param. EE
Format:		BIN	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	yes
Input min/max:		--- / ---		
Default value:		1100000000011011b	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0034, Secondary operating mode 2

The secondary operating mode 2 set in S-0-0034 is activated in the drive, if:

- the secondary operating mode 2 was selected in **S-0-0134, Master control word** (or **P-0-4077, Field bus control word**) (bit 8 = 0 and **bit 9 = 1**)
- and the drive is in the "AF" (drive enable) status.

Note: In the case of field bus drives, free selection of the operating mode via bits 8 and 9 in P-0-4077, Field bus control word is only possible in the freely configurable profile type!

With regard to the possible operating modes:

- See also **S-0-0292, List of all operating modes**
- See also Functional Description "Setting the Operating Mode Parameters"

S-0-0034 - Attributes

Para. Name:	**DE**	Nebenbetriebsart 2
	EN	Secondary operating mode 2
	FR	Mode de fonctionnement secondaire 2
	ES	Tipo de servicio secundario 2
	IT	Modo operativo secondario 2

Function:	Parameter	**Editability:**	P23
Data length:	2Byte	**Memory:**	Param. EE
Format:	BIN	**Validity check:**	Phase3
Unit:	--	**Extreme value check:**	no
Decimal places:	0	**Combination check:**	yes
Input min/max:	--- / ---		
Default value:	0010b	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0035, Secondary operating mode 3

The secondary operating mode 3 set in S-0-0035 is activated in the drive, if:

- the secondary operating mode 3 was selected in S-0-0134, Master control word (or P-0-4077, Field bus control word) (bit 8 = 1 and bit 9 = 1)
- and the drive is in the "AF" (drive enable) status.

Note: In the case of field bus drives, free selection of the operating mode via bits 8 and 9 in P-0-4077, Field bus control word is only possible in the freely configurable profile type!

With regard to the possible operating modes:
See also S-0-0292, List of all operating modes
See also Functional Description "Setting the Operating Mode Parameters"

S-0-0035 - Attributes

Para. Name:	**DE**	Nebenbetriebsart 3		
	EN	Secondary operating mode 3		
	FR	Mode de fonctionnement secondaire 3		
	ES	Tipo de servicio secundario 3		
	IT	Modo operativo secondario 2		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	Param. EE
Format:		BIN	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	yes
Input min/max:		--- / ---		
Default value:		11011b	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0036, Velocity command value

This parameter is used to set the velocity command value. This together with **S-0-0037, Additive velocity command value** determines the effective velocity command value for the drive.

Note: In the position control operating modes, this parameter displays the output signal of the position controller.

See also the functional description: "Operating Mode: Velocity Control"

S-0-0036 - Attributes

Para. Name:	**DE**	Geschwindigkeits-Sollwert
	EN	Velocity command value
	FR	Valeur de consigne de vitesse
	ES	Valor nominal de velocidad
	IT	Valore di Velocità comandata

Function:	Parameter	**Editability:**	P234
Data length:	4Byte	**Memory:**	no
Format:	DEC_MV	**Validity check:**	no
Unit:	S-0-0044	**Extreme value check:**	yes
Decimal places:	S-0-0045/S-0-0046	**Combination check:**	no
Input min/max:	S-0-0044 / S-0-0044		
Default value:	---	**Cyc. transmittable:**	MDT

S-0-0037, Additive velocity command value

The additive velocity command value is added to the **S-0-0036, Velocity command value** in the drive.

See also the functional description: "Operating Mode: Velocity Control"

S-0-0037 - Attributes

Para. Name:	**DE**	Geschwindigkeits-Sollwert additiv
	EN	Additive velocity command value
	FR	Valeur de consigne supplémentaire de vitesse
	ES	Valor nominal adicional de velocidad
	IT	Comando di Velocità addizzionale

Function:	Parameter	**Editability:**	P234
Data length:	4Byte	**Memory:**	no
Format:	DEC_MV	**Validity check:**	no
Unit:	S-0-0044	**Extreme value check:**	yes
Decimal places:	S-0-0045/S-0-0046	**Combination check:**	no
Input min/max:	S-0-0044 / S-0-0044		
Default value:	---	**Cyc. transmittable:**	MDT

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0040, Velocity feedback value

The velocity feedback value can be transmitted from the drive controller to the control unit

- cyclically
- or acyclically (e.g. service channel in SERCOS)

Note: Bit 7 in the **P-0-0538, Motor function parameter 1** can activate a filter for the velocity feedback value. The time constant is 8 ms.

See also Functional Description "Preparations for Setting the Velocity Controller"

S-0-0040 - Attributes

Para. Name:	**DE**	Geschwindigkeits-Istwert		
	EN	Velocity feedback value		
	FR	Valeur de retour de vitesse		
	ES	Valor real de velocidad		
	IT	Feedback di Velocità		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	no
Format:		DEC_MV	**Validity check:**	no
Unit:		S-0-0044	**Extreme value check:**	no
Decimal places:		S-0-0045/S-0-0046	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	AT

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0041, Homing velocity

The product of **S-0-0041, Homing velocity** and **S-0-0108, Feedrate override** determines the velocity for the **S-0-0148, C600 Drive controlled homing procedure** command.
If, in the case of an absolute encoder, the command "Drive controlled homing procedure" is initiated, then the drive will proceed with this velocity to the reference point (home position) that was determined with the **P-0-0012, C300 Set absolute measurement** command.

See also the functional description: "Drive-Controlled Homing".

S-0-0041 - Attributes

Para. Name:	**DE**	Referenzfahr-Geschwindigkeit
	EN	Homing velocity
	FR	Vitesse de prise d'origine
	ES	Velocidad de puesta a cero
	IT	Velocità per Azzeramento

Function:	Parameter	**Editability:**	P234
Data length:	4Byte	**Memory:**	Param. EE
Format:	DEC_OV	**Validity check:**	Phase3
Unit:	S-0-0044	**Extreme value check:**	yes
Decimal places:	S-0-0045/S-0-0046	**Combination check:**	no
Input min/max:	0 / S-0-0044		
Default value:	100000	**Cyc. transmittable:**	no

S-0-0042, Homing acceleration

This parameter indicates the acceleration value at which the drive executes the command **S-0-0148, C600 Drive controlled homing procedure command**.

See also the functional description: "Drive-Controlled Homing".

S-0-0042 - Attributes

Para. Name:	**DE**	Referenzfahr-Beschleunigung
	EN	Homing acceleration
	FR	Accélération de prise d'origine
	ES	Aceleración de puesta a cero
	IT	Accellerazione per Azzeramento

Function:	Parameter	**Editability:**	P234
Data length:	4Byte	**Memory:**	Param. EE
Format:	DEC_OV	**Validity check:**	Phase3
Unit:	S-0-0160	**Extreme value check:**	yes
Decimal places:	S-0-0161/S-0-0162	**Combination check:**	no
Input min/max:	0 / S-0-0160		
Default value:	100000	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0043, Velocity polarity parameter

In this parameter it is possible to change, related to the application, the polarities of the velocity data. The polarities aren't changed inside but outside (at the input and output) of the controlled system.

The following applies to rotary motors:

Clockwise rotation with view to the motor shaft is given in the case of positive velocity command value and positive polarity.

Parameter structure:

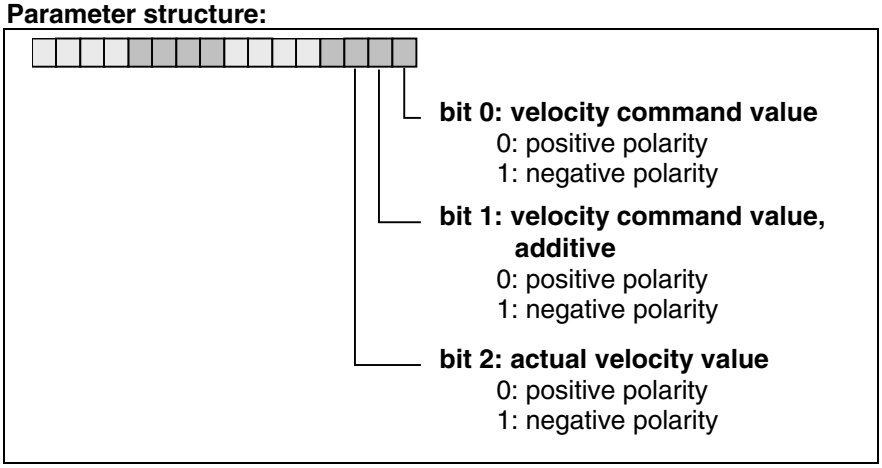


Fig. 2-8: S-0-0043, Velocity polarity parameter

Note: Bits 1 and 2 are copies of bit 0. Only changes in bit 0 are effective. It is impossible to have different settings for the individual bits!

See also Functional Description "Command Polarities and Actual Value Polarities"

S-0-0043 - Attributes

Para. Name:	**DE**	Geschwindigkeits-Polaritäten-Parameter		
	EN	Velocity polarity parameter		
	FR	Paramètre de polarité de vitesse		
	ES	Parámetros de polaridad de velocidad		
	IT	Parametro Direzione Velocità		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	Param. EE
Format:		BIN	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		0 / 7		
Default value:		0	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0044, Velocity data scaling type

Various scaling types can be defined for the velocity data in the drive.
Examples: RPM → rotary
mm/min → linear

Structure of the parameter:

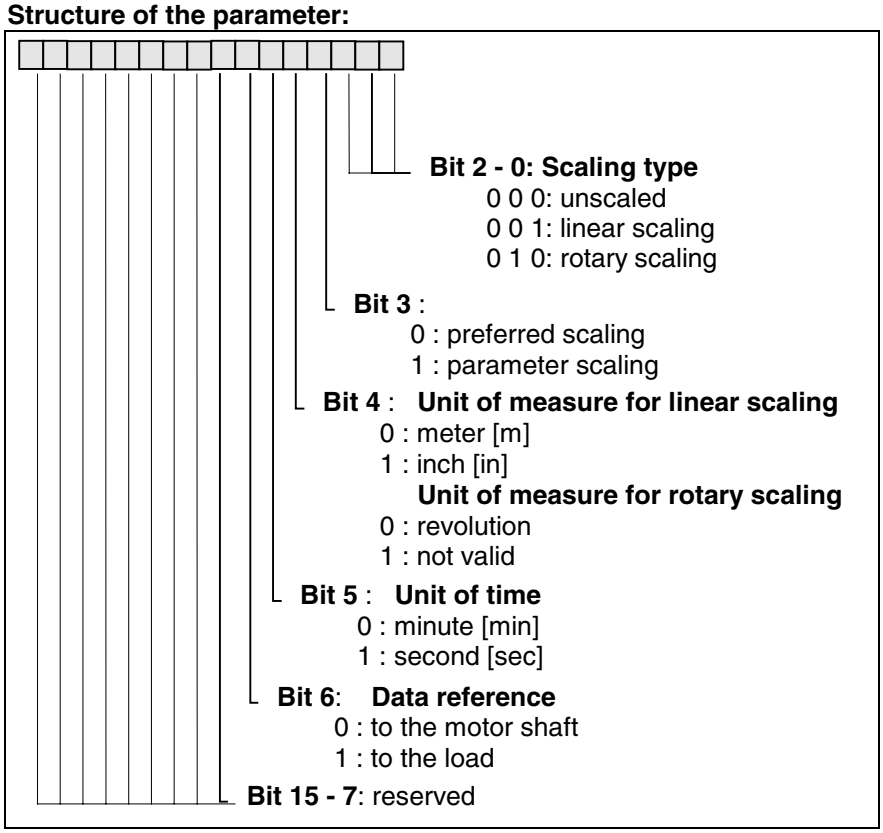


Fig. 2-9: S-0-0044, Velocity Data Scaling Type

In bit 3 it is possible to select between preferred and parameter scaling.
Preferred scaling:
The following parameters are predefined in this case and cannot be changed:

- S-0-0045, Scaling factor for velocity data
- S-0-0046, Scaling exponents for velocity data

Scaling with parameter scaling means that the above parameter must be set (see section: "Preferred Scaling - Parameter Scaling").

See also functional description: "Velocity Data Display Format"

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0044 - Attributes

Para. Name:	**DE**	Wichtungsart für Geschwindigkeitsdaten		
	EN	Velocity data scaling type		
	FR	Type de calibrage pour données de vitesse		
	ES	Tipo de escala de datos de velocidad		
	IT	Tipo di Scala per Dati di Velocità		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	Param. EE
Format:		BIN	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	yes
Input min/max:		--- / ---		
Default value:		1010b	**Cyc. transmittable:**	no

S-0-0045, Velocity data scaling factor

This parameter defines the scaling factor for all velocity data in the drive. If preferred scaling is set with **S-0-0044, Velocity data scaling type**, this parameter will be set to 1.

See also the functional description: "Velocity Data Display Format"

S-0-0045 - Attributes

Para. Name:	**DE**	Wichtungs-Faktor für Geschwindigkeitsdaten		
	EN	Velocity data scaling factor		
	FR	Facteur de calibrage pour données de vitesse		
	ES	Factor de escala para datos de velocidad		
	IT	Fattore di Scala per Dati Velocità		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		1 / 65535		
Default value:		1	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0046, Velocity data scaling exponent

The scaling exponent for all velocity data in the drive is determined in this parameter.

See also functional description: "Velocity Data Display Format".

S-0-0046 - Attributes

Para. Name:	**DE**	Wichtungs-Exponent für Geschwindigkeitsdaten		
	EN	Velocity data scaling exponent		
	FR	Exposant de calibrage pour données de vitesse		
	ES	Exponente de escala para datos de velocidad		
	IT	Esponente per Dati Velocità		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_MV	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		-32 / 32		
Default value:		-4	**Cyc. transmittable:**	no

S-0-0047, Position command value

Parameter S-0-0047 must be configured in the real time channel (master -> slave) in "cyclical position control" mode.

S-0-0047 - Attributes

Para. Name:	**DE**	Lage-Sollwert		
	EN	Position command value		
	FR	Valeur de consigne de position		
	ES	Valor nominal de posición		
	IT	Valore di Posizione comandata		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	no
Format:		DEC_MV	**Validity check:**	no
Unit:		S-0-0076	**Extreme value check:**	yes
Decimal places:		S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:		S-0-0076 / S-0-0076		
Default value:		---	**Cyc. transmittable:**	MDT

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0048, Position command value additional

If a synchronization operating mode with position control is selected, then the additional position command value is added to the **S-0-0047, Position Command Value** in the drive. This is used to establish a position offset between the master axis encoder and the slave axis.

S-0-0048 - Attributes

Para. Name:	**DE**	Lagesollwert additiv
	EN	Position command value additional
	FR	Valeur de consigne supplémentaire de position
	ES	Valor nominal de posición adicional
	IT	Valore di Posizione comandata addizionale

Function:	Parameter	**Editability:**	P234
Data length:	4Byte	**Memory:**	-
Format:	DEC_MV	**Validity check:**	no
Unit:	S-0-0076	**Extreme value check:**	no
Decimal places:	S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:	- / -		
Default value:	-	**Cyc. transmittable:**	-

S-0-0049, Positive position limit value

The positive position limit value describes the maximum extent of travel in the positive direction.

Activation The position limit value is active only when all position data refers to the homing point, i.e., the drive is homed (bit 0 is set to 1 in parameter **S-0-0403, Position feedback value status**).
The position limit values can be switched off using bit 4 in **S-0-0055, Position polarity parameter**.

Warning If a **S-0-0258, Target position** beyond the positive position limit value is set for the drive, then the drive sets warning bit 13 in **S-0-0012, Class 2 diagnostic** and generates the warning **E253 Target position out of travel range**.
If the positive position limit value is exceeded, the drive sets error bit 13 in **S-0-0011, Class 1 diagnostic**.

See also the functional description: "Axis Limit Values".

S-0-0049 - Attributes

Para. Name:	**DE**	Lage-Grenzwert positiv
	EN	Positive position limit value
	FR	Limite de position positive
	ES	Valor limite de posición positivo
	IT	Limite positivo di Posizione

Function:	Parameter	**Editability:**	P234
Data length:	4Byte	**Memory:**	Param. EE
Format:	DEC_MV	**Validity check:**	Phase3
Unit:	S-0-0076	**Extreme value check:**	yes
Decimal places:	S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:	S-0-0076 / S-0-0076		
Default value:	1000000	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0050, Negative position limit value

The negative position limit value describes the maximum extent of travel in the negative direction.

Activation The position limit value is active only when all position data refers to the homing point, i.e. the drive is homed (bit 0 is set to 1 in parameter **S-0-0403, Position feedback value status**). The position limit values can be switched off using bit 4 in **S-0-0055, Position polarity parameter**.

Warning If a target position beyond the negative position limit value is set for the drive, then the drive sets warning bit 13 in **S-0-0012, Class 2 diagnostic** and generates the warning **E253 Target position out of travel range**.
If the negative position limit value is exceeded, the drive will set error bit 13 in **S-0-0011, Class 1 diagnostics**.

See also the functional description: "Axis Limit Values".

S-0-0050 - Attributes

Para. Name:	**DE**	Lage-Grenzwert negativ		
	EN	Negative position limit value		
	FR	Limite de position négative		
	ES	Valor limite de posición negativo		
	IT	Limite negativo di Posizione		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_MV	**Validity check:**	Phase3
Unit:		S-0-0076	**Extreme value check:**	yes
Decimal places:		S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:		S-0-0076 / S-0-0076		
Default value:		-1000000	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0051, Position feedback 1 value

Position feedback value 1 represents the current position of the motor encoder. The initialization of the position feedback happens during the execution of **S-0-0128, C200 Communication phase 4 transition check**; that means, the feedback positions are only initialized after successful execution of the command.
If an absolute encoder is present, the value in **S-0-0051, Position Feedback 1 Value** then shows the absolute position referred to the machine's zero-point, provided that during the initial start-up the command **P-0-0012, C300 Command Set absolute measurement** has been executed once.
Otherwise, the initialization value depends on whether the parameter **P-0-0019, Position start value** has been written to during the phase progression or whether the motor feedback is an absolute encoder.

See also the functional description: "Setting the Measurement System".

S-0-0051 - Attributes

Para. Name:	**DE**	Lage-Istwert Geber 1		
	EN	Position feedback 1 value		
	FR	Valeur de retour de position codeur 1		
	ES	Valor real de posición 1		
	IT	Valore di Posizione di Feedback 1		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	no
Format:		DEC_MV	**Validity check:**	no
Unit:		S-0-0076	**Extreme value check:**	no
Decimal places:		S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	AT

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0052, Reference distance 1

This parameter displays the distance between the machine zero-point and the homing point for the motor measurement system (Position feedback value 1). The parameter is used for the execution of the commands **S-0-0148, C600 Drive controlled homing procedure command** and **P-0-0012, C300 Command Set absolute measurement**.
During the command **S-0-0148, C600 Drive controlled homing procedure command**, the distance between the homing point and the machine zero-point is written there. If homing is done with run to the homing point, the drive goes to the homing point, and **S-0-0051, Position feedback 1 value** contains the value of **S-0-0052, Reference distance 1**.
For the command **P-0-0012, C300 Command Set absolute measurement**, the desired value for **S-0-0051, Position feedback 1 value** is written there. After successful execution of 'Setting absolute measurement', **S-0-0051, Position feedback 1 value** shows the value of **S-0-0052, Reference distance 1**.

See also the functional description: "Drive-Controlled Homing".

S-0-0052 - Attributes

Para. Name:	**DE**	Referenzmaß 1		
	EN	Reference distance 1		
	FR	Mesure de référence 1		
	ES	Medida de referencia valor de posición 1		
	IT	Distanza di Riferimento 1		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_MV	**Validity check:**	Phase3
Unit:		S-0-0076	**Extreme value check:**	yes
Decimal places:		S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:		S-0-0076 / S-0-0076		
Default value:		0	**Cyc. transmittable:**	no

S-0-0055, Position polarities

By means of this parameter it is possible to invert the polarities of the indicated position data. These polarities are changed outside of the controlled system, i.e. at the input and output of the controlled system.

Note: The position polarity must be determined with the initial commissioning of an axis before establishing the machine zero point for the measuring systems, because a change in the polarity causes different actual position values.

The following applies to rotary motors:
"Clockwise turn of the motor" = motor shaft turns clockwise (view to motor shaft) in the case of positive position command value difference and positive polarity.

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Parameter structure:

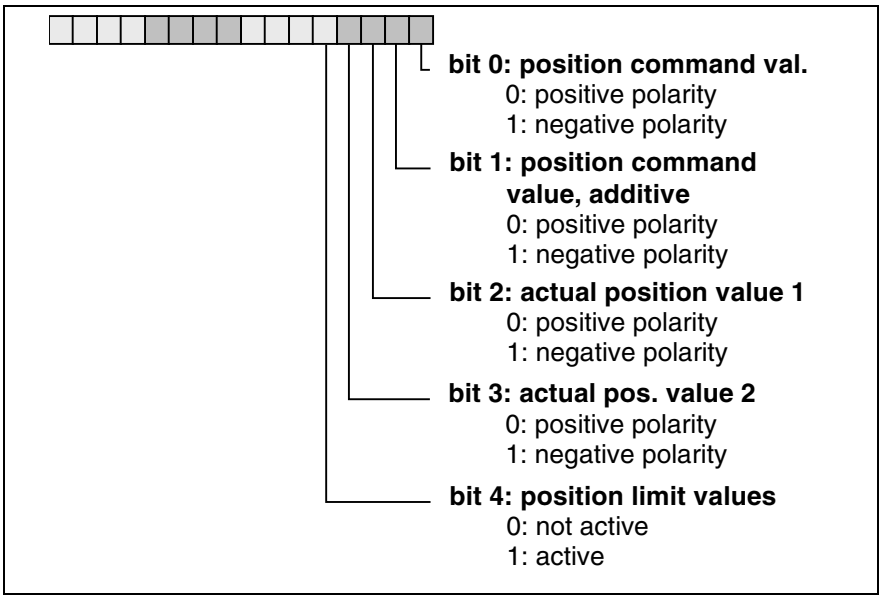


Fig. 2-10: S-0-0055, Position polarities

Note: Only the bits mentioned here are supported by the firmware. Bits 0...3 cannot be set in different ways. The drive therefore sets Bits 1...3 to the value of bit 0!

See also functional description "Command Polarities and Actual Value Polarities"

S-0-0055 - Attributes

Para. Name:	**DE**	Lage-Polaritäten		
	EN	Position polarities		
	FR	Polarités de position		
	ES	Polaridades de posición		
	IT	Direzioni di Posizionamento		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	Param. EE
Format:		BIN	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		0 / 31		
Default value:		0	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0057, Position window

The parameter **S-0-0057, Position window** is used for the following functions:

- Status "In Position"
  (**S-0-0013, Class 3 Diagnostics**, Bit 6 = 1)
  |Following error (S-0-0189)| < Position window (S-0-0057)
- Status "In_Target_Position"
  (**S-0-0182, Manufacturer class 3 diagnostics**, Bit 10 = 1)
  |Target pos. - act.pos. feedback value| < Position window (S-0-0057)
- Status "Final position reached"
  (S-0-0182, Manufacturer class 3 diagnostics, Bit 12 = 1)
  (|Target - act.pos. feedback value| < S-0-0057, Position window)
  && Last process block done
- Status "ITP"= In_Target_Position
  (S-0-0182, Manufacturer class 3 diagnostics, Bit 6 = 1)
  |Target - act.pos.| < Position window (S-0-0057)
  && |following error| < Position window
  && |act. speed| < Standstill window (S-0-0124)
- During the execution of the command **S-0-0148, C600 Drive controlled homing procedure command** the drive reports completion of the command, when the internal command generator has reached its target value and the difference between this value and the actual position is smaller than the position window.
- As a hysteresis window for the position limits. I.e., when the drive has gone beyond the limit, the travel range is additionally limited by the position window.
- If position limit values are active, positioning is executed to the position limit value positioning windows when the operating mode is "jogging".
- Target positions within the window are run to over the shortest path regardles of what is set in S-0-0393.

See also the functional description: "S-0-0182, Manufacturer class 3 diagnostics".

S-0-0057 - Attributes

Para. Name:	**DE**	Positionierfenster
	EN	Position window
	FR	Fenêtre de positionnement
	ES	Ventana de posicionamiento
	IT	Finestra di Posizionamento

Function:	Parameter	**Editability:**	P234
Data length:	4Byte	**Memory:**	Param. EE
Format:	DEC_MV	**Validity check:**	Phase3
Unit:	S-0-0076	**Extreme value check:**	yes
Decimal places:	S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:	0 / S-0-0076		
Default value:	1000	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0076, Position data scaling type

The position data scaling type determines in which format the position data is communicated between the drive and control or MMI. When position parameters (e.g. **S-0-0051, Position feedback 1 value**) are read, the drive displays them with the selected scaling. The scaling selection is usually pre-set by the control.

The following settings can be made:
Structure of the parameter:

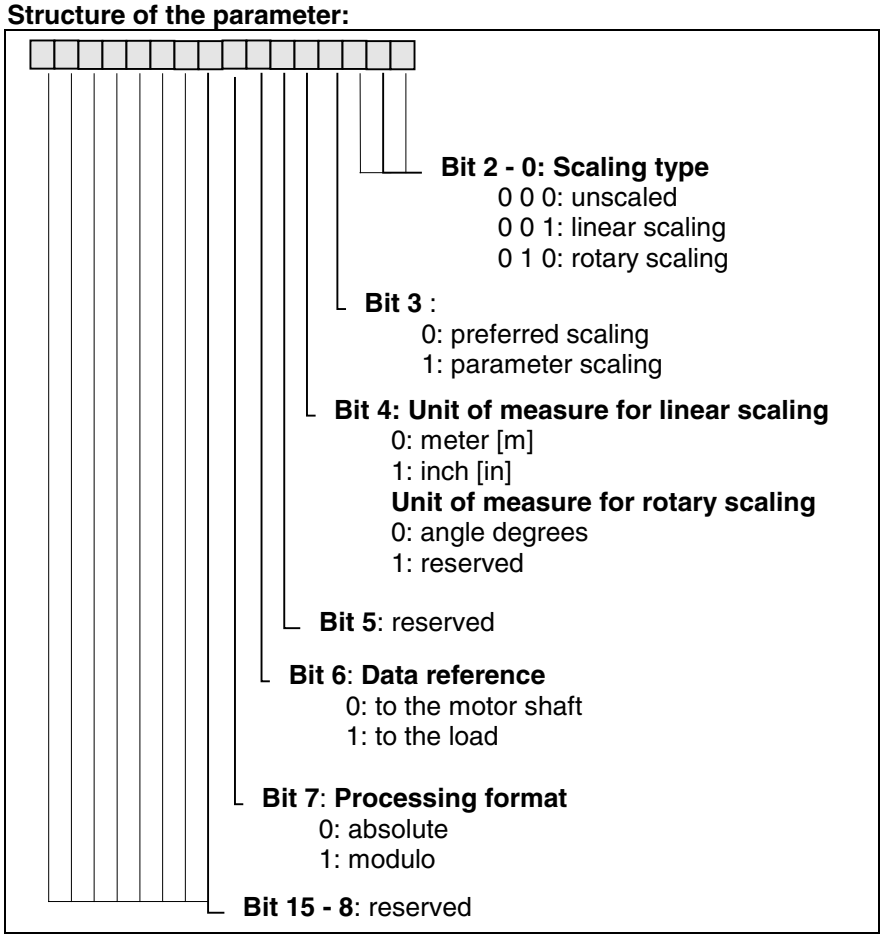


Fig. 2-11: S-0-0076, Position data scaling type

In bit 3 the selection between preferred and parameter scaling can be set.
Preferred scaling:

The following parameters are predefined and cannot be changed:

- S-0-0077, Linear position data scaling factor,
- S-0-0078, Linear position data scaling exponent
- S-0-0079, Rotational position resolution

Parameter scaling means that these parameter must be set for scaling (see section: Preferred Scaling - Parameter Scaling").

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Note:	Only the bits mentioned here are supported by the firmware. 1) See also **S-0-0045, Velocity data scaling factor**. 2) See also the example **S-0-0077, Linear position data scaling factor**.

See also the functional description: "Display Format of Position Data".

S-0-0076 - Attributes

Para. Name:	**DE**	Wichtungsart für Lagedaten		
	EN	Position data scaling type		
	FR	Type de calibrage pour données de position		
	ES	Tipo de escala para datos de posición		
	IT	Tipo di Scala per Dati Posizionamento		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	Param. EE
Format:		BIN	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	yes
Input min/max:		--- / ---		
Default value:		1010b	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0077, Linear position data scaling factor

When linear scaling is selected, the parameter **S-0-0077, Linear position data scaling factor** together with **S-0-0078, Linear position data scaling exponent** and the selection of the physical unit m (meters) or inch in S-0-0076, determine in which unit the present position parameters in the drive are displayed.
If "preferred scaling“ is chosen in **S-0-0076, Position data scaling type** (bit 3 = 0), the values in S-0-0077 and S-0-0078 are set by the drive.
If "parameter scaling“ is chosen in **S-0-0076, Position data scaling type** (bit 3 = 1), the settings in S-0-0077 and S-0-0078 are used.

Example for the display of position data for linear scaling:
Physical position of the motor feedback equals 0.12 m (meters).
A) Selected scaling = linear preferred scaling (S-0-0077 = 1, S-0-0078 = -7). For **S-0-0051, Position feedback 1 value** the value is 1200000 (with meter unit and 7 places after the decimal).

B) Selected scaling = linear parameter scaling (S-0-0077 = 3, S-0-0078 = -7). For **S-0-0051, Position feedback 1 value** the value is 400000 (with meter unit and 7 places after the decimal).

See also the functional description: "Display Format of Position Data".

S-0-0077 - Attributes

Para. Name:	**DE**	Wichtungs-Faktor transl. Lagedaten		
	EN	Linear position data scaling factor		
	FR	Facteur de calibrage pour données de posit. lin.		
	ES	Factor de escala datos de posición lineales		
	IT	Fattore di Scala per Posizionamenti lineare		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		1 / 65535		
Default value:		1	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0078, Linear position data scaling exponent

When linear scaling is selected (S-0-0076, bits 0..2 = 001), the parameter **S-0-0078, Linear position data scaling exponent** together with **S-0-0077, Linear position data scaling factor** and the selection of the physical unit m (meters) or inch in S-0-0076, determine in which unit the present position parameters in the drive are displayed.
If "preferred scaling“ is chosen in **S-0-0076, Position data scaling type** (bit 3 = 0), the values in S-0-0077 and S-0-0078 are set by the drive.
If "parameter scaling“ is chosen in **S-0-0076, Position data scaling type** (bit 3 = 1), the settings in S-0-0077 and S-0-0078 are used.

Example for the display of position data for linear scaling:
Physical position of the motor feedback equals 0.12 m (meters).
A) Selected scaling = linear preferred scaling (S-0-0077 = 1, S-0-0078 = -7). For **S-0-0051, Position feedback 1 value** the value is 1200000 (with meter unit and 7 places after the decimal).

B) Selected scaling = linear parameter scaling (S-0-0077 = 1, S-0-0078 = -6). For **S-0-0051, Position feedback 1 value** the value is 120000 (with meter unit and 6 places after the decimal).

See also the functional description: "Display Format of Position Data".

S-0-0078 - Attributes

Para. Name:	**DE**	Wichtungs-Exponent transl. Lagedaten		
	EN	Linear position data scaling exponent		
	FR	Exposant de calibrage pour données de posit. lin.		
	ES	Exponente de escala datos de posición lineales		
	IT	Esponente per Dati Posizionamento lineare		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_MV	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		-32768 / 32768		
Default value:		-7	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0079, Rotational position resolution

If rotary position scaling is selected, the LSB valence for all position data will be set in this parameter.
The valence of the LSB in the drive's position data results in

$$\text{LSB valence} = \frac{1 \text{ Revolution}}{\text{Rotational position resolution}}$$

where bit 6 of **S-0-0076, Position data scaling type** selects whether the LSB valence refers to one motor revolution or one load revolution.
If you work with preferred rotary scaling, the value in **S-0-0079, Rotational position resolution** is fixed at 3 600 000. Thus, the LSB bit of all rotary position data is fixed at 0.0001 degrees of angle.

See also the functional description: "Display Format of Position Data".

S-0-0079 - Attributes

Para. Name:	**DE**	Rotations-Lageauflösung
	EN	Rotational position resolution
	FR	Résolution de position rotationnelle
	ES	Resolución de posición de rotación
	IT	Risoluzione per Posizionamenti circolari

Function:	Parameter	**Editability:**	P23
Data length:	4Byte	**Memory:**	Param. EE
Format:	DEC_OV	**Validity check:**	Phase3
Unit:	--	**Extreme value check:**	yes
Decimal places:	0	**Combination check:**	no
Input min/max:	1 / 4294967295		
Default value:	3600000	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0080, Torque/force command value

The torque command values are transferred by the control system to the drive when in torque control mode.
If the velocity controller is active, the torque required for the corresponding velocity can be derived from this parameter.
The evaluation depends upon the scaling of torque and force data and on parameter **P-0-0640, Cooling type**. At present, only the percentage-based scaling is supported.
The date corresponds to the current command value in respect to the motor current at standstill (S-0-0111) * cooling type factor (P-0-0640).

100% = motor current at standstill (S - 0 - 0111) * cooling type factor (P - 0 - 0640)

The value can be converted to a torque or force value by multiplying the command current by the torque/force constant (P-0-0051).

See also functional description: "Torque Control".

S-0-0080 - Attributes

Para. Name:	**DE**	Drehmoment/Kraft-Sollwert		
	EN	Torque/force command value		
	FR	Valeur de consigne de couple/force		
	ES	Valor nominal de par de giro/fuerza		
	IT	Comando Coppia/Forza		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	no
Format:		DEC_MV	**Validity check:**	no
Unit:		S-0-0086	**Extreme value check:**	yes
Decimal places:		S-0-0086	**Combination check:**	no
Input min/max:		S-0-0109/110 / S-0-0109/110		
Default value:		---	**Cyc. transmittable:**	MDT

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0081, Additive torque/force command value

In the operating mode torque control, **S-0-0081, Additive Torque/Force command** is added to **S-0-0080, Torque/Force command** in the drive.

In operating modes with active velocity controller, **S-0-0081, Additive Torque/Force command** is added to the output of the velocity controller in the drive. Therefore, the torque required for the respective velocity is displayed in **S-0-0080, Torque/Force command**, as it is when S-0-0081 is not used.

The scaling of the data corresponds to that of **S-0-0080, Torque/Force command**.

See also the functional description: "Operating Mode: Torque Control"
See also the functional description: "Operating Mode: Velocity Control"

S-0-0081 - Attributes

Para. Name:	**DE**	Drehmoment/Kraft-Sollwert additiv
	EN	Additive torque/force command value
	FR	Valeur de consigne supplémentaire de couple/force
	ES	Valor nominal adicional de par de giro/fuerza
	IT	Comando Coppia/Forza addizzionale

Function:	Parameter	**Editability:**	P234
Data length:	2Byte	**Memory:**	-
Format:	DEC_MV	**Validity check:**	no
Unit:	S-0-0086	**Extreme value check:**	yes
Decimal places:	S-0-0086	**Combination check:**	no
Input min/max:	- / -		
Default value:	-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0084, Torque/Force feedback value

The current torque/force feedback value can be derived from this parameter.
The shown value depends on the torque/force scaling as well as parameter P-0-0640, Cooling type. At present, only the percentage-based scaling is supported. The data value corresponds to the measured feedback current, where 100% is equal to the motor current at standstill, S-0-0111 * cooling type factor (P-0-0640). The value can be converted to a torque or force value by multiplying the command current by the torque/force constant P-0-0051.

S-0-0084 - Attributes

Para. Name:	**DE**	Drehmoment/Kraft-Istwert		
	EN	Torque/Force feedback value		
	FR	Valeur de retour de couple/force		
	ES	Par de giro/valor de retroalimentación de fuerza		
	IT	Valore di Feedback Coppia/Forza		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	no
Format:		DEC_MV	**Validity check:**	no
Unit:		S-0-0086	**Extreme value check:**	no
Decimal places:		S-0-0086	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	AT

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0085, Torque/Force polarity parameter

The polarities for the given torque data as related to the application can be switched in this parameter.
Polarities are switched externally, at the input and output of a control system rather than inside the system.
The following applies to rotary (turning) motors:
The motor will turn in a clockwise direction (facing the motor shaft) with a positive torque command value and positive polarity.
The following applies to linear motors:
The positive direction is used when the primary part is moving toward the linear motor power cable side

Structure of the parameter:

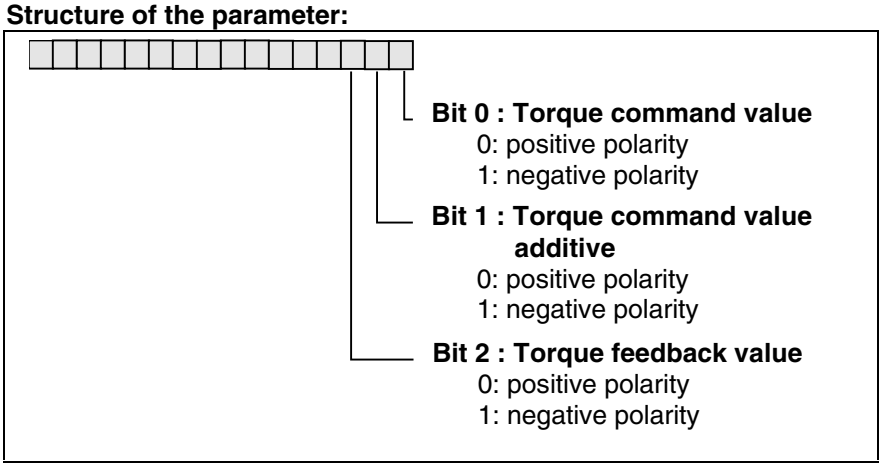


Fig. 2-12: S-0-0085, Torque/force polarity parameter

Note: If bit 0 is changed, then bits 1 - 2 will also be set to the value of bit 0 by the drive.

See also the functional description: "Command Polarities and Actual Value Polarities".

S-0-0085 - Attributes

Para. Name:	**DE**	Drehmoment/Kraft-Polaritäten-Parameter		
	EN	Torque/Force polarity parameter		
	FR	Paramètre de polarité de couple/force		
	ES	Par de giro/fuerza parámetro de polaridad		
	IT	Polarità Coppia/Forza		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	Param. EE
Format:		BIN	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		0 / 7		
Default value:		0	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0086, Torque/Force data scaling type

At present, only the percentage-based scaling for torque/force data is supported.
The following applies:

100% = motor current at standstill (S - 0 - 0111) * cooling type factor (P - 0 - 0640)

See also the functional description: "Adjustable Scaling for Position, Velocity, and Acceleration Data".

S-0-0086 - Attributes

Para. Name:	**DE**	Wichtungsart für Drehmoment/Kraftdaten		
	EN	Torque/Force data scaling type		
	FR	Type de calibrage pour données de couple/force		
	ES	Par de giro/fuerza tipo de escala de datos		
	IT	Tipo di Scala per Dati Coppia/Forza		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	Param. EE
Format:		BIN	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	yes
Input min/max:		--- / ---		
Default value:		0	**Cyc. transmittable:**	no

S-0-0088, Receive to receive recovery time (TMTSG)

This parameter defines the time needed for the slave to switch to readiness for the next master synchronization telegram after receiving a master data telegram. The parameter is read by the control system in phase 2 to calculate the time slot parameters.

Note: This parameter is only relevant for devices with SERCOS drives.

See also the functional description: "Configuration of the Telegram Send and Receive Times"

S-0-0088 - Attributes

Para. Name:	**DE**	TMTSY Erholzeit Empfangen-Empfangen		
	EN	Receive to receive recovery time (TMTSG)		
	FR	Temps de récupération entre deux réceptions (TMTSY)		
	ES	TMTSY Tiempo de recuperación recepción-recepción		
	IT	Tempo di Recupero Ricettore a Ricettore (TMTSG)		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	no
Unit:		us	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0089, MDT Transmit starting time (T2)

This is the transmit starting time for the Master Data Telegram after the end of a master synchronization telegram. The value is transmitted from the master to the slave in communication phase 2 and is activated in phase 3.

Note: This parameter only takes effect for SERCOS drives!

See also Functional Description "Configuration of the Telegram Send and Receive Times"

S-0-0089 - Attributes

Para. Name:	**DE**	T2 Sendezeitpunkt MDT		
	EN	MDT Transmit starting time (T2)		
	FR	Temps du départ de transmission du MDT (T2)		
	ES	T2 Punto temporal de emision MDT		
	IT	MDT Tempo Partenza Trasmissione (T2)		
Function:		Parameter	**Editability:**	P2
Data length:		2Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	Phase2
Unit:		us	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

S-0-0090, Command value transmit time (TMTSG)

This is the time required by the slave to make available the command values for the drive after reception of the Master Data Telegram.

Note: This parameter only takes effect for SERCOS drives!

See also Functional Description "Configuration of the Telegram Send and Receive Times"

S-0-0090 - Attributes

Para. Name:	**DE**	TMTSG Kopierzeit Sollwerte		
	EN	Command value transmit time (TMTSG)		
	FR	TMTSG Temps de recopie de consigne		
	ES	TMTSG Tiempo de copia valores nominales		
	IT	Tempo di Trasmissione Valore comandato (TMTSG)		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	no
Unit:		us	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0091, Bipolar velocity limit value

The "bipolar velocity limit value" describes the maximum permissible velocity, symmetrical in both directions.
The max. input value is determined by the parameter **S-0-0113, Maximum motor speed (n_{max})**. The entered value generates the maximum value for all other speed parameters.

See also the functional description: "Limiting Velocity"

S-0-0091 - Attributes

Para. Name:	**DE**	Geschwindigkeits-Grenzwert bipolar		
	EN	Bipolar velocity limit value		
	FR	Limite de vitesse bipolaire		
	ES	Valor limite de velocidad bipolar		
	IT	Valore di Velocità Limite		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		S-0-0044	**Extreme value check:**	yes
Decimal places:		S-0-0045/S-0-0046	**Combination check:**	no
Input min/max:		0 / S-0-0113		
Default value:		1000000	**Cyc. transmittable:**	MDT

S-0-0092, Bipolar torque/force limit value

This parameter describes the maximum torque symmetrically permitted in both directions (accelerating, braking).
The evaluation refers to the percentage of the motor current at standstill:

100% = motor current at standstill (S - 0 - 0111) * cooling type factor (P - 0 - 0640)

Note: The maximum torque also depends on parameters **P-0-0006, Overload factor** and **P-0-4011, Switching frequency**.

See also functional description: "Torque/Force Limiting".
See also parameter description: "**P-0-0640, Cooling type**".

S-0-0092 - Attributes

Para. Name:	**DE**	Drehmoment/Kraft-Grenzwert bipolar		
	EN	Bipolar torque/force limit value		
	FR	Limite de couple/force bipolaire		
	ES	Valor limite par de giro/fuerza bipolar		
	IT	Valore di Coppia/Forza Limite		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_MV	**Validity check:**	Phase3
Unit:		S-0-0086	**Extreme value check:**	yes
Decimal places:		S-0-0086	**Combination check:**	no
Input min/max:		S-0-0109/110 / S-0-0109/110		
Default value:		4000	**Cyc. transmittable:**	MDT

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0093, Torque/force data scaling factor

The scaling factor for all torque/force data in the drive is set in this parameter.
The parameter has no meaning at the present time, because only percentage-based scaling can be set for torque and force data. Therefore, only the value 1 is suitable.

See also the functional description: "Adjustable Scaling for Position, Velocity, and Acceleration Data".

S-0-0093 - Attributes

Para. Name:	**DE**	Wichtungs-Faktor für Drehmoment/Kraftdaten		
	EN	Torque/force data scaling factor		
	FR	Facteur de calibrage pour données de couple/force		
	ES	Factor de escala para datos par de giro/fuerza		
	IT	Fattore di Scala per Dati Coppia/Forza		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		1 / 1		
Default value:		1	**Cyc. transmittable:**	no

S-0-0094, Torque/force data scaling exponent

The scaling exponent for all torque/force data in the drive is set in this parameter.
The parameter has no meaning at the present time, because only percentage-based scaling can be set for torque and force data.

See also the functional description: "Adjustable Scaling for Position, Velocity, and Acceleration Data".

S-0-0094 - Attributes

Para. Name:	**DE**	Wichtungs-Exponent für Drehmoment/Kraftdaten		
	EN	Torque/force data scaling exponent		
	FR	Exposant de calibrage pour données de couple/force		
	ES	Exponente de escala para datos de par de giro/fuerza		
	IT	Esponente per Dati Coppia/Forza		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_MV	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		-1 / -1		
Default value:		-1	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0095, Diagnostic message

The operating status for the drive that is relevant at the moment can be read in **text** form in this parameter.
The respective diagnostic message number from **S-0-0390, Diagnostic Message Number** will appear in front of this parameter.
Example: "A010 Drive Halt"

See also the functional description: "Diagnostic Message"

S-0-0095 - Attributes

Para. Name:	**DE**	Diagnose		
	EN	Diagnostic message		
	FR	Message de diagnostic		
	ES	Diagnostico		
	IT	Messaggio di Diagnosi		
Function:		Parameter	**Editability:**	no
Data length:		1Byte var.	**Memory:**	no
Format:		ASCII	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

S-0-0096, Slave arrangement (SLKN)

For SERCOS: During initialization, the master must know which drives are available under which slave numbers in order to execute an optimal automatic time slot calculation.
The master uses this information to detect the address of the connected slave.

Example for address 3:

	Highbyte	Lowbyte
Contents S-0-0096	03	03

See also the functional description: "Setting the Drive Address of the SERCOS Interface"

S-0-0096 - Attributes

Para. Name:	**DE**	Slavekennung (SLKN)		
	EN	Slave arrangement (SLKN)		
	FR	Reconnaissance d'esclave (SLKN)		
	ES	Disposición de esclavo (SLKN)		
	IT	Preparazione Slave (SLKN)		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	constant
Format:		HEX	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0097, Mask class 2 diagnostic

This Parameter can mask out pre-warnings in the **S-0-0012, Class 2 diagnostics** concerning their effect on the change bit in the drive status. When the masked pre-warnings change, the Class 2 diagnostic change bit will be set in the drive status.
The mask has no effect on the operating data of the Class 2 diagnostics.
Moreover, this parameter can mask pre-warnings in the **S-0-0012, Class 2 diagnostics** concerning their effect on the warning output.

Note:	A warning masked out by this mask will only be displayed in the data of the Class 2 diagnostics, but will not lead to setting the warning output.

See also the functional description: "Change bit of class 2 and 3 diagnostics in the drive status word".

S-0-0097 - Attributes

Para. Name:	**DE**	Maske Zustandsklasse 2		
	EN	Mask class 2 diagnostic		
	FR	Diagnostic de classe 2, masque		
	ES	Máscara diagnostico clase 2		
	IT	Maschera Diagnosi Classe 2		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	Param. EE
Format:		BIN	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		0	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0098, Mask class 3 diagnostic

This parameter can be used to mask messages in the **S-0-0013, Class 3 diagnostics** in the drive status according to their effect on the change bit. When the masked early messages change, the Class 3 diagnostics change bit will be set in the drive status. The mask has no effect on the operating data of the Class 3 diagnostics. Moreover, this parameter can mask messages in the **S-0-0013, Class 3 diagnostics** concerning their effect on the warning output.

Note: A message masked out by this mask will only be displayed in the data of the Class 3 diagnostics.

See also the functional description: "Change bit of class 2 and 3 diagnostics in the drive status word".

S-0-0098 - Attributes

Para. Name:	**DE**	Maske Zustandsklasse 3		
	EN	Mask class 3 diagnostic		
	FR	Diagnostic de classe 3, masque		
	ES	Máscara diagnostico clase 3		
	IT	Maschera Diagnosi Classe 3		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	Param. EE
Format:		BIN	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		0	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0099, C500 Reset class 1 diagnostic

Command to **reset errors**, after the cause has been cleared.
This command can be started with

- the S1 key on the drive controller or
- by writing to the parameter S-0-0099, C5 Reset class 1 diagnostic

When starting the command via the parameter S-0-0099, all errors in the drive are cleared, and the drive will switch to the "ready for operation" status if no further error remains.
If the command is started with the S1 key, only one error is deleted at a time. If the drive has stored several errors (up to 4 errors), the diagnostic message that corresponds to each error will appear sequentially every time the S1 key is pressed again.

See also the function description: "Clearing Errors".

S-0-0099 - Attributes

Para. Name:	**DE**	C500 Reset Zustandsklasse 1
	EN	C500 Reset class 1 diagnostic
	FR	C500 Remise à zéro pour diagnostic de classe 1
	ES	C500 Reset diagnostico clase 1
	IT	C500 Cancellare Errori Classe 1

Function:	Command	**Editability:**	P234
Data length:	2Byte	**Memory:**	no
Format:	BIN	**Validity check:**	no
Unit:	--	**Extreme value check:**	no
Decimal places:	0	**Combination check:**	no
Input min/max:	--- / ---		
Default value:	---	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0100, Velocity loop proportional gain

This parameter contains the value for the proportional gain of the velocity loop which was designed as a PI-controller.

Motor type	Unit
rotary motor	mAsec / rad

Fig. 2-13: Unit for the velocity loop proportional gain

Note: The "Load defaults procedure" command allows loading a default value for this parameter!

See also Functional Description "Setting the Velocity Controller"

S-0-0100 - Attributes

Para. Name:	**DE**	Geschwindigkeitsregler-Proportionalverstärkung		
	EN	Velocity loop proportional gain		
	FR	Gain proportionnel de la boucle de vitesse		
	ES	Amplificación proporcional de regulador de velocidad		
	IT	Guadagno proporzionale Anello di Velocità		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		P-0-4014	**Extreme value check:**	yes
Decimal places:		3	**Combination check:**	no
Input min/max:		0 / 6553.5		
Default value:		10	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0101, Velocity loop integral action time

The velocity controller forms a current command value from the difference between the velocity command value and the velocity feedback value (= speed regulation deviation).
This current command value consists of a proportional component and an integral component. The velocity loop integral action time corresponds to the time in which the integral component of the current command value is increasing on the value of the proportional component.

Definition of the integral action time

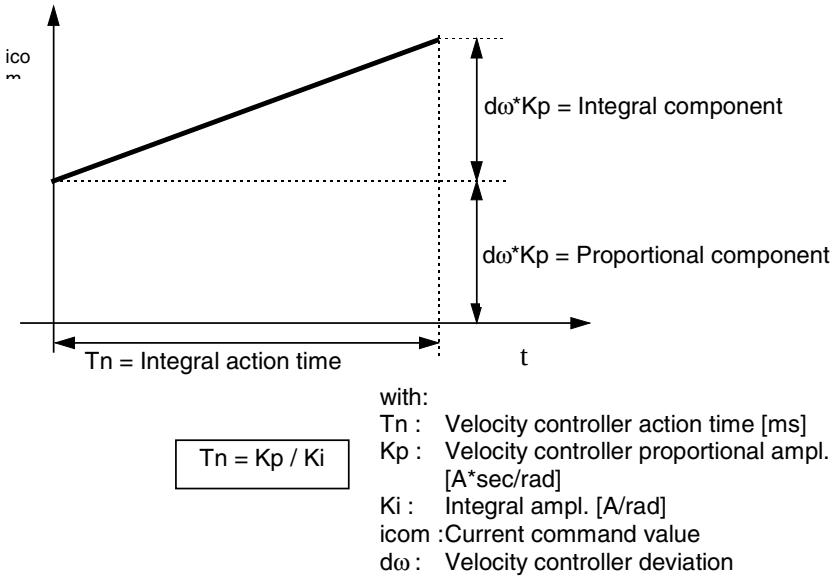


Fig. 2-14: Integral action time

The value of the time base for which the integral component is equal to the proportional component is described as integral action time. This represents the time that a pure I-controller would need until the controller output variable is equal to the output variable of a P-controller at time t=0. The integral gain component is disabled with an input value of 0.

See also the functional description: "Setting the Velocity Controller".

S-0-0101 - Attributes

Para. Name:	**DE**	Geschwindigkeitsregler-Nachstellzeit		
	EN	Velocity loop integral action time		
	FR	Temps d'action intégral de la boucle de vitesse		
	ES	Tiempo de reajuste de regulador de velocidad		
	IT	Tempo Integrazione Anello di Velocità		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		ms	**Extreme value check:**	yes
Decimal places:		1	**Combination check:**	no
Input min/max:		0 / 3276.7		
Default value:		100	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0103, Modulo value

When the modulo format is set (parameter **S-0-0076, Position data scaling type** bit 7), the modulo value determines at which numeric value the position data roll over (overflow) to 0.

See also parameter "**S-0-0393, Command value mode**"
See also the functional description: "Modulo Feature" and "Modulo Processing-Limiting Conditions".

S-0-0103 - Attributes

Para. Name:	**DE**	Modulowert		
	EN	Modulo value		
	FR	Valeur modulo		
	ES	Valor de modulo		
	IT	Valore Modulo		
Function:		Parameter	**Editability:**	P23
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_MV	**Validity check:**	Phase3
Unit:		S-0-0076	**Extreme value check:**	yes
Decimal places:		S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:		0 / S-0-0076		
Default value:		3600000	**Cyc. transmittable:**	no

S-0-0104, Position loop Kv-factor

This parameter contains the value for the proportional gain of the position controller.
It is possible to load a default value for the controller parameters using the command "Basic load". Motors with feedback memory, e.g. MKD, have appropriate values for all controller settings in their feedback. These are loaded after the initial connection (display UL) or with the command "Basic load“.

See also the functional description: "Setting the position controller".

S-0-0104 - Attributes

Para. Name:	**DE**	Lageregler Kv-Faktor		
	EN	Position loop Kv-factor		
	FR	Gain proportionnel de la boucle de position, Kv		
	ES	Regulador de posición factor Kv		
	IT	Fattore Kv Anello di Posizione		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		1000/min	**Extreme value check:**	yes
Decimal places:		2	**Combination check:**	no
Input min/max:		0 / 655.35		
Default value:		100	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0106, Current loop proportional gain 1

The current controller proportional gain is fixed for every motor-drive combination.
It depends on the type of the motor and may not be changed. It is loaded from the motor feedback after the initial connection (display UL) or using the command "Basic load".

Note:	The values of the current controller set at the factory should not be altered!

See also function description: "Setting the Current Controller".

S-0-0106 - Attributes

Para. Name:	**DE**	Stromregler-Proportionalverstärkung 1
	EN	Current loop proportional gain 1
	FR	Gain proportionnel de la boucle de courant 1
	ES	Amplificación proporcional 1 regulador de corriente
	IT	Guadagno proporzionale 1 Regolatore di Corrente

Function:	Parameter	**Editability:**	P234
Data length:	4Byte	**Memory:**	Param. EE
Format:	DEC_OV	**Validity check:**	Phase3
Unit:	V/A	**Extreme value check:**	yes
Decimal places:	2	**Combination check:**	no
Input min/max:	0 / 655.35		
Default value:	100	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0107, Current loop integral action time 1

The current loop integral action time is fixed for every motor-drive combination.
It depends on the type of the motor. The factory setting may not be changed. The basic setup for all controllers is loaded after the initial connection (display UL) or with the command "Basic load“. For motors without feedback memory, you can take the value from the motor’s data sheet.

See also function description: "Setting the Current Controller".

S-0-0107 - Attributes

Para. Name:	**DE**	Stromregler-Nachstellzeit 1		
	EN	Current loop integral action time 1		
	FR	Temps d'action intégral de la boucle de courant 1		
	ES	Tiempo de reajuste de regulador de corriente 1		
	IT	Tempo Integrazione 1 Anello di Corrente		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		ms	**Extreme value check:**	yes
Decimal places:		1	**Combination check:**	no
Input min/max:		0 / 6553.5		
Default value:		100	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0108, Feedrate override

The feedrate override acts on drive-controlled operation modes and motion commands, like

- command S-0-0148, C600 Drive controlled homing procedure command
- operating modes "Drive internal interpolation", "Relative drive internal interpolation" and "Positioning block mode"
- "Jog mode"
- automatic control loop setting

Note: It is possible that not all operating modes and commands have been implemented in the firmware versions.

The feedrate override has a multiplying effect on the parameters

- S-0-0041, Homing velocity
- S-0-0259, Positioning velocity
- Positioning block velocities
- Jog velocity

Note: In drives with analog interface, an analog input can be configured for the feedrate override. (See documentation "Project planning manual" for the description of the analog interface.)

See also the functional description: "Drive-Controlled Homing".

S-0-0108 - Attributes

Para. Name:	**DE**	Feedrate-Override		
	EN	Feedrate override		
	FR	Atténuateur d'avance		
	ES	Override de alimentación		
	IT	Riduzione Velocità Avanzamento		
Function:		Parameter	**Editability:**	P4
Data length:		2Byte	**Memory:**	no
Format:		DEC_OV	**Validity check:**	no
Unit:		%	**Extreme value check:**	no
Decimal places:		2	**Combination check:**	no
Input min/max:		0 / 655.35		
Default value:		---	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0109, Motor peak current

Specifies the maximum current, which may flow through the motor for a short period without damaging it.

Note: If the motor's peak current is less than the amplifier's peak current, the maximum output current will be automatically limited to the motor's peak current.

This value is stored in the motor feedback for MHD, MKD and MKE motors and will be uploaded from there when the amplifier is turned on for the first time. For other motor types, the value must be taken from the data sheet.

See also the functional description: "Current Limit".

S-0-0109 - Attributes

Para. Name:	**DE**	Spitzenstrom Motor		
	EN	Motor peak current		
	FR	Courant crête du moteur		
	ES	Corriente punta de motor		
	IT	Corrente di Picco Motore		
Function:		Parameter	**Editability:**	P23
Data length:		4Byte	**Memory:**	Param.-E²prom
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		A	**Extreme value check:**	yes
Decimal places:		3	**Combination check:**	no
Input min/max:		0.001 / 500.000		
Default value:		1000	**Cyc. transmittable:**	no

S-0-0110, Amplifier peak current

Peak current available from the drive controller. The value will be set by the drive itself. This current is only available for short durations.

See also the functional description: "Current Limit".

S-0-0110 - Attributes

Para. Name:	**DE**	Spitzenstrom Verstärker		
	EN	Amplifier peak current		
	FR	Courant crête du variateur		
	ES	Corriente punta amplificador		
	IT	Corrente di Picco Azionamento		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	Verst. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		A	**Extreme value check:**	yes
Decimal places:		3	**Combination check:**	no
Input min/max:		0.001 / 500.000		
Default value:		---	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0111, Motor current at standstill

The motor current at standstill is the current from which the motor continuously generates the standstill torque according to the motor data sheet.
This value is stored in motor feedback for MHD, MKD and MKE motors and will be loaded from there when the drive controller is turned on for the first time. For other types of motors, this value must be taken from the data sheet.

100% Force/Torque value ≙
S-0-0111 • P-0-0640 • P-0-0051

S-0-0111, Motor current at standstill
P-0-0640, Factor for cooling type
P-0-0051, Torque constant

Note: All torque/force data refer to this motor current at standstill x Factor for cooling type (P-0-0640) = 100 % .

See also the functional description: "Motor Feedback-Data Memory"

S-0-0111 - Attributes

Para. Name:	**DE**	Stillstandsstrom Motor		
	EN	Motor current at standstill		
	FR	Courant du moteur à l'arrêt		
	ES	Corriente de parada motor		
	IT	Corrente Motore con Asse fermo		
Function:		Parameter	**Editability:**	P23
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		A	**Extreme value check:**	yes
Decimal places:		3	**Combination check:**	no
Input min/max:		0.001 / 500.000		
Default value:		1000	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0112, Amplifier nominal current

Allowable continuous current output for the drive controller. The value will be set by the drive itself.

See also the functional description: "Current Limit"

S-0-0112 - Attributes

Para. Name:	**DE**	Nennstrom Verstärker		
	EN	Amplifier nominal current		
	FR	Courant nominal variateur		
	ES	Corriente nominal amplificador		
	IT	Corrente nominale Azionamento		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	Verst. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		A	**Extreme value check:**	yes
Decimal places:		3	**Combination check:**	no
Input min/max:		0.001 / 500.000		
Default value:		---	**Cyc. transmittable:**	no

S-0-0113, Maximum motor speed (nmax)

The maximum speed of the motor mustn't be exceeded. It has a limiting effect on the **S-0-0091, Bipolar velocity limit value** parameter.
In the case of MHD, MKD, MKE and MSM motors, this value is stored in the motor feedback and is loaded from the feedback when the controller is switched on for the first time. In the case of other types of motors, this value must be taken from the motor data sheet.

Note: In torque control, exceeding the maximum velocity by 12.5% causes torque disable and the **F879 Velocity limit S-0-0091 exceeded** error message.

See also Functional Description "Limiting Velocity"

S-0-0113 - Attributes

Para. Name:	**DE**	Maximal-Geschwindigkeit des Motors		
	EN	Maximum motor speed (nmax)		
	FR	Vitesse maximale du moteur		
	ES	Velocidad máxima del motor		
	IT	Velocità massima Motore (nmax)		
Function:		Parameter	**Editability:**	P23
Data length:		4Byte	**Memory:**	Param.-E²prom
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		P-0-4014	**Extreme value check:**	yes
Decimal places:		P-0-4014	**Combination check:**	no
Input min/max:		0 / 214738.3647		
Default value:		1000000	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0116, Feedback 1 Resolution

Depending on parameter **P-0-4014, Motor type** (rotary or linear motor), the resolution of the motor encoder is indicated by **S-0-0116, Resolution of motor feedback**.
This value contains the number of lines or cycles per motor revolution for rotary motors, or the segment spacing per mm for linear motors. For motors with resolver feedback, the number of the resolver pole pairs is stored here.

See also the functional description: "Motor Encoder Resolution".

S-0-0116 - Attributes

Para. Name:	**DE**	Geber 1 Auflösung		
	EN	Feedback 1 Resolution		
	FR	Résolution codeur 1		
	ES	Resolución encoder 1		
	IT	Risoluzione Feedback 1		
Function:		Parameter	**Editability:**	P23
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		P-0-4014	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		256	**Cyc. transmittable:**	no

S-0-0121, Input revolutions of load gear

A mechanical gear is often employed between the motor and the load.
The **gear ratio** is defined by:

$$\frac{\text{S-0-0122, Output revolutions of load gear}}{\text{S-0-0121, Input revolutions of load gear}}$$

Fig. 2-15: Gear ratio

See also functional description: "Transmission Ratio"“ and "Modulo Processing-Limiting Conditions".

Example:
5 motor revolutions result in 2 output gear revolutions.

⇒ S-0-0121 : 5
S-0-0122 : 2

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0121 - Attributes

Para. Name:	**DE**	Lastgetriebe-Eingangsumdrehungen		
	EN	Input revolutions of load gear		
	FR	Nombre de tours d'entrée d'engrenages de charge		
	ES	Giros de entrada de engranaje de carga		
	IT	N di Giri in Ingresso al Riduttore		
Function:		Parameter	**Editability:**	P23
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		Rev	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		1 / 4294967295		
Default value:		1	**Cyc. transmittable:**	no

S-0-0122, Output revolutions of load gear

A mechanical gear is often employed between the motor and the load. The gear ratio is defined by:

$$\frac{\text{S-0-0122, Output revolutions of load gear}}{\text{S-0-0121, Input revolutions of load gear}}$$

Fig. 2-16: Gear ratio

See also functional description: "Transmission Ratio" and "Modulo Processing-Limiting Conditions".

Example:

5 motor revolutions result in 2 output gear revolutions.

⇒ S-0-0121 : 5
S-0-0122 : 2

S-0-0122 - Attributes

Para. Name:	**DE**	Lastgetriebe-Ausgangsumdrehungen		
	EN	Output revolutions of load gear		
	FR	Nombre de tours de sortie d'engrenages de charge		
	ES	Giros de salida de engranaje de carga		
	IT	N di Giri in Uscita del Riduttore		
Function:		Parameter	**Editability:**	P23
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		Rev	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		1 / 4294967295		
Default value:		1	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0123, Feed constant

This parameter describes the conversion from rotary to linear motion. It is defined as the linear displacement of the load during one revolution of the gear drive shaft.

Characteristic value:

Ball screw:	Rack and pinion:
Feed constant = pitch of screw (typical value 10.00 mm)	Feed constant = effective pitch diameter of the pinion • π = effective circumference of the pinion

Fig. 2-17: Characteristic values of the feed constant

Note: The unit is dependent on bit 4 in **S-0-0076, Position data scaling type**.

Note that: S-0-0076 bit 4 = 0 → mm/rev

S-0-0076 bit 4 = 1 → inch/rev

See also the functional description: "Feed Constant".

S-0-0123 - Attributes

Para. Name:	**DE**	Vorschubkonstante		
	EN	Feed constant		
	FR	Constante d'avance		
	ES	Constante de avance		
	IT	Costante di Avanzamento		
Function:		Parameter	**Editability:**	P23
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		S-0-0076	**Extreme value check:**	no
Decimal places:		5	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		100000	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0124, Standstill window

The motor is considered at standstill when the velocity feedback value (S-0-0040) is below the parameterized threshold level in S-0-0124.
Bit 1 of the **S-0-0013, Class 3 diagnostics** is set during standstill.

The standstill window also works:

- if termination or interruption of a drive control command is acknowledged when the drive is at a standstill
- with drive-controlled homing, the feedback and command values are not switched until the drive is at a standstill
- with command value processing. When switching operating modes, the command value processing is initialized with velocity =0, if the velocity feedback value is smaller than the standstill window.

See also the functional description: "S-0-0182, Manufacturer class 3 diagnostics"

S-0-0124 - Attributes

Para. Name:	**DE**	Stillstandsfenster		
	EN	Standstill window		
	FR	Fenêtre d'arrêt		
	ES	Ventana de parada		
	IT	Finestra di monitorizzazione Asse fermo		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_MV	**Validity check:**	Phase3
Unit:		S-0-0044	**Extreme value check:**	yes
Decimal places:		S-0-0045/S-0-0046	**Combination check:**	no
Input min/max:		0 / S-0-0044		
Default value:		100000	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0125, Velocity threshold nx

If the **S-0-0040, Velocity feedback value** falls below the value of the parameter **S-0-0125, Velocity threshold nx**, the drive sets the message $n_{actual} < nx$ (Bit 2 in **S-0-0013, Class 3 Diagnostics**).

See also the functional description: "S-0-0013, Class 3 diagnostics".

S-0-0125 - Attributes

Para. Name:	**DE**	Geschwindigkeits-Schwelle nx		
	EN	Velocity threshold nx		
	FR	Seuil de vitesse nx		
	ES	Umbral de velocidad nx		
	IT	Soglia di velocità nx		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	Prog.-Modul
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		S-0-0044	**Extreme value check:**	yes
Decimal places:		S-0-0045/S-0-0046	**Combination check:**	no
Input min/max:		0 / S-0-0044		
Default value:		10000000	**Cyc. transmittable:**	no

S-0-0127, C100 Communication phase 3 transition check

The command "C100 Communication phase 3 transition check" is used to switch from the parameter mode to the operating mode.
If invalid parameters are present, then

- the drive completes the command with an error message
- and the invalid parameters are entered in parameter **S-0-0021, IDN list of invalid operating data phase 2**.

Using commands

- S-0-0127, C100 communications phase 3 transition check
- S-0-0128, C200 communications phase 4 transition check

makes it possible, to switch from parameterization into operating mode.

Note: The execution of the command with an inactive (P-0-4086 = xx1b) command communications (SERCOS or fieldbus) still allows a transition from parameterization into operating mode.

See also Function description: "Position Command Value Monitoring"

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0127 - Attributes

Para. Name:	**DE**	C100 Umschaltvorbereitung auf Komm.-Phase 3		
	EN	C100 Communication phase 3 transition check		
	FR	C100 Préparation transition phase de comm. 3		
	ES	C100 Comprobación de conmutación a fase 3		
	IT	C100 Check Transizione Fase di Comunicazione 3		
Function:		Command	**Editability:**	P2
Data length:		2Byte	**Memory:**	no
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

S-0-0128, C200 Communication phase 4 transition check

When the command "C200 Communication phase 4 transition check" is executed, all parameters will be checked for validity and limit value violations.
If any invalid parameters or any limit values have been violated,

- the drive would end the command with an error message and
- the invalid parameter entered in parameter S-0-0022, IDN list of invalid operating data phase 3.

Using commands

- S-0-0127, C100 communications phase 3 transition check
- S-0-0128, C200 communications phase 4 transition check

makes it possible, to switch from parameterization into operating mode.

Note: The execution of the command with an inactive (P-0-4086 = xx1b) command communications (SERCOS or fieldbus) still allows a transition from parameterization into operating mode.

See also Function description: "Checks in the Transition Commands".

S-0-0128 - Attributes

Para. Name:	**DE**	C200 Umschaltvorbereitung auf Komm.-Phase 4		
	EN	C200 Communication phase 4 transition check		
	FR	C200 Préparation transition phase de comm. 4		
	ES	C200 comprobación de conmutación a fase 4		
	IT	C200 Check Transizione Fase di Comunicazione 4		
Function:		Command	**Editability:**	P3
Data length:		2Byte	**Memory:**	no
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0130, Probe value 1 positive edge

The drive uses the positive edge of the input signal from **S-0-0401, Probe 1**, to store the instantaneous value of the selected signal in this parameter.
The signal to be measured is determined by parameters **P-0-0200, Signal select probe 1** and **S-0-0169, Probe control parameter**.

See also the functional description: "Probe Input Feature".

S-0-0130 - Attributes

Para. Name:	**DE**	Messwert 1 positive Flanke		
	EN	Probe value 1 positive edge		
	FR	Mesure sonde 1 flanc positif		
	ES	Valor de medición 1 flanco positivo		
	IT	Valore misurato 1 fianco positivo		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	no
Format:		DEC_MV	**Validity check:**	no
Unit:		S-0-0076/P-0-0200	**Extreme value check:**	no
Decimal places:		S-0-0076/P-0-0200	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	AT

S-0-0131, Probe value 1 negative edge

The drive uses the negative edge of the input signal from **S-0-0401, Probe 1**, to store the instantaneous value of the selected signal in this parameter.
The signal to be measured is determined by parameters **P-0-0200, Signal select probe 1** and **S-0-0169, Probe control parameter**.

See also the functional description: "Probe Input Feature".

S-0-0131 - Attributes

Para. Name:	**DE**	Messwert 1 negative Flanke		
	EN	Probe value 1 negative edge		
	FR	Mesure sonde 1 flanc négatif		
	ES	Valor de medición 1 flanco negativo		
	IT	Valore misurato 1 fianco negativo		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	no
Format:		DEC_MV	**Validity check:**	no
Unit:		S-0-0076/P-0-0200	**Extreme value check:**	no
Decimal places:		S-0-0076/P-0-0200	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	AT

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0132, Probe value 2 positive edge

The drive uses the positive edge of the input signal from **S-0-0402, Probe 2**, to store the instantaneous value of the selected signal in this parameter.
The signal to be measured is determined by parameters **P-0-0201, Signal select probe 2** and **S-0-0169, Probe control parameter**.

See also the functional description: "Probe Input Feature".

S-0-0132 - Attributes

Para. Name:	**DE**	Messwert 2 positive Flanke		
	EN	Probe value 2 positive edge		
	FR	Mesure sonde 2 flanc positif		
	ES	Valor de medición 2 flanco positivo		
	IT	Valore misurato 2 fianco positivo		
Function:		Parameter	**Editability:**	-
Data length:		4Byte	**Memory:**	no
Format:		DEC_MV	**Validity check:**	no
Unit:		S-0-0076/P-0-0201	**Extreme value check:**	no
Decimal places:		S-0-0076/P-0-0201	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	AT

S-0-0133, Probe value 2 negative edge

The drive uses the negative edge of the input signal from **S-0-0402, Probe 2**, to store the instantaneous value of the selected signal in this parameter.
The signal to be measured is determined by parameters **P-0-0201, Signal select probe 2** and **S-0-0169, Probe control parameter**.

See also the functional description: "Probe Input Feature".

S-0-0133 - Attributes

Para. Name:	**DE**	Messwert 2 negative Flanke		
	EN	Probe value 2 negative edge		
	FR	Mesure sonde 2 flanc négatif		
	ES	Valor de medición 2 flanco negativo		
	IT	Valore misurato 2 negativo		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	no
Format:		DEC_MV	**Validity check:**	no
Unit:		S-0-0076/P-0-0201	**Extreme value check:**	no
Decimal places:		S-0-0076/P-0-0201	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	AT

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0134, Master control word

The master control word is cyclically transmitted from the communications card (e.g., PBK2.1) to the controller card (EBC) with the command communication (SERCOS or fieldbus) is active (P-0-4086 = x1xb). Significant control information is defined herein such as

- drive ON and drive enable,
- drive halt,
- interpolator cycle and
- command operating mode.

Note: The contents of **S-0-0134, Master control word** in fieldbus drives depends on **P-0-4077, Fieldbus control word**. Parameter **S-0-0134, Master control word** in this case only supports diagnostics.

Parameter structure:

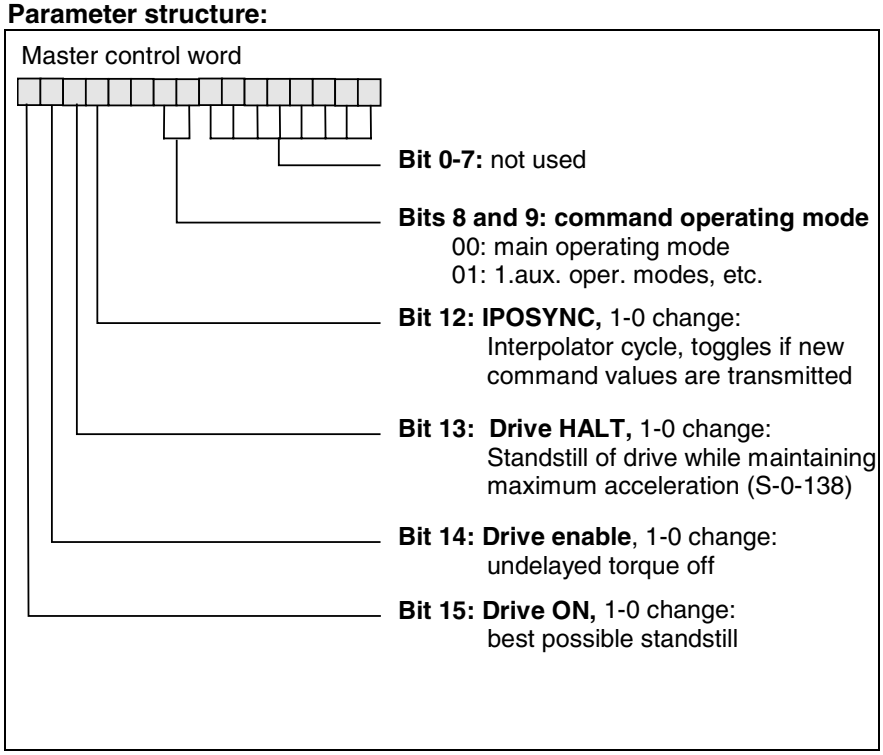


Fig. 2.18: Structure of S-0-0134, Master control word

S-0-0134 - Attributes

Para. Name:	**DE**	Master-Steuerwort
	EN	Master control word
	FR	Mot de contrôle maître
	ES	Palabra de mando maestro
	IT	Parole di Controllo Master

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Function:	Parameter	**Editability:**	no
Data length:	2Byte	**Memory:**	no
Format:	BIN	**Validity check:**	no
Unit:	--	**Extreme value check:**	no
Decimal places:	0	**Combination check:**	no
Input min/max:	--- / ---		
Default value:	---	**Cyc. transmittable:**	no

S-0-0135, Drive status word

The drive status word lists all important **status information** such as

- control and power sections ready to operate
- drive lock, error in C1D
- change bit status classes 2 and 3
- change bit command
- current operating mode

of the drive.

Note: The contents of **S-0-0135** in fieldbus drives depend on the state of the controller. The actual status information of the fieldbus is in parameter **P-0-4078, Fieldbus status word**. Parameter **S-0-0135, Drive status word** only supports diagnostics.

Parameter structure:

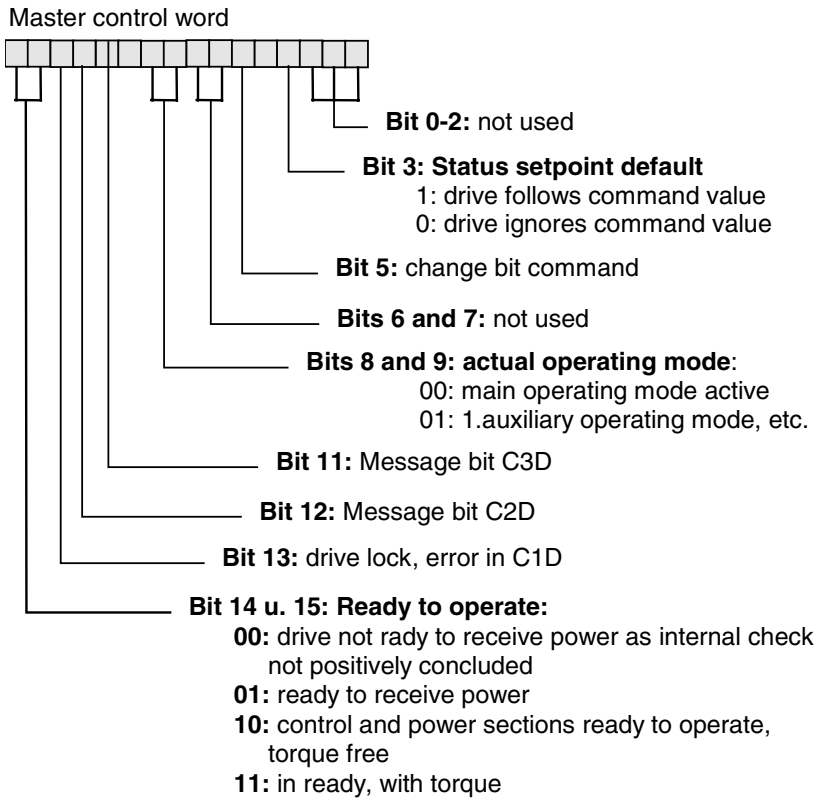


Fig. 2.19: Structure of S-0-0135, Drive status word

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0135 - Attributes

Para. Name:	**DE**	Antriebs-Status		
	EN	Drive status word		
	FR	Etat entraînement		
	ES	Estado de accionamiento		
	IT	Parole di Stato Azionamento		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	no
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

S-0-0138, Bipolar acceleration limit value

The bipolar acceleration limit value describes the maximum permissible acceleration, symmetrical in both directions (acceleration and deceleration).
The drive decelerates at this deceleration to the velocity = 0 when the function "Drive stop" is executed, if the previously active operation mode was without drive internal command generation.
Operation modes without drive internal command generation are

- Position control
- Angular synchronization
- Stepper motor operation

and others.

See also the functional description: "Drive Halt".

S-0-0138 - Attributes

Para. Name:	**DE**	Beschleunigung bipolar		
	EN	Bipolar acceleration limit value		
	FR	Accélération bipolaire		
	ES	Aceleración bipolar		
	IT	Accellerazione bipolare		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_MV	**Validity check:**	Phase3
Unit:		S-0-0160	**Extreme value check:**	yes
Decimal places:		S-0-0161/S-0-0162	**Combination check:**	no
Input min/max:		0 / S-0-0160/278		
Default value:		100000	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0139, D700 Command Parking axis

Setting and enabling the command Parking Axis switches off all the monitoring functions related to the measurement system.
This affects position control, feedback monitoring and the monitoring of the position window (S-0-0057). When the command is active, the drive does not report any errors of class 1 diagnostics. The Position feedback value status (S-0-0403) is cleared by the drive. The command is acknowledged positive, when the mentioned monitors are switched off. Clearing the command switches all the mentioned monitors on again. To refer the position feedback values to the reference point again, the drive must go to the reference again.

Structure of the parameter:

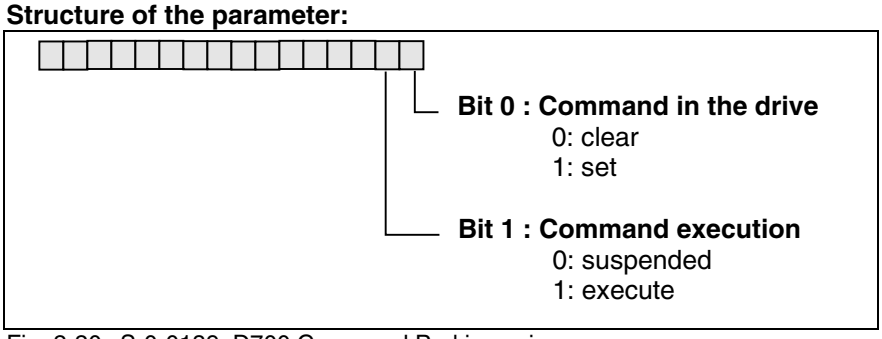


Fig. 2-20: S-0-0139, D700 Command Parking axis

See also the functional description: "Command Parking Axis".

S-0-0139 - Attributes

Para. Name:	**DE**	D700 Kommando Parkende Achse		
	EN	D700 Command Parking axis		
	FR	D700 Instruction Stationnement axe		
	ES	D700 Comando eje estacionada		
	IT	D700 Comando Stazionamento Asse		
Function:		Command	**Editability:**	P2
Data length:		2Byte	**Memory:**	no
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0140, Controller type

The manufacturer device type is contained in the operating data of the controller type in the form of a text.

Examples:

HDS02.1-W100-D	(DIAX04)
DKC02.1-008-7	(ECODRIVE Cs)
DKC01.1-040-7	(ECODRIVE03)

See also Functional Description "Drive Controllers and Motors"

S-0-0140 - Attributes

Para. Name:	**DE**	Regelgerätetyp		
	EN	Controller type		
	FR	Type de variateur		
	ES	Tipo de regulador		
	IT	Tipo Azionamento		
Function:		Parameter	**Editability:**	no
Data length:		1Byte var.	**Memory:**	Verst. EE
Format:		ASCII	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

S-0-0141, Motor type

This parameter contains the motor type of the connected motor in the form of a text. During the "load defaults" procedure (possible with MHD, MKD, MKE and MSM motors) the content of the parameter is overwritten by the S-7-0141 parameter.

Note: The diagnostic message **F208 UL The motor type has changed.** is based on the comparison of **S-0-0141** and **S-7-0141**. The motor type only has to be entered in the case of motors without feedback data memory.
(→ Not required in the case of MSM, MKD, MHD, ...)

Examples:

MSM 020B-0300-NN-C0-CG1
MKD 071B-061-KP1-BN
MKE 096B-047-GG0-KN

See also Functional Description "Drive Controllers and Motors"

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0141 - Attributes

Para. Name:	**DE**	Motor-Typ		
	EN	Motor type		
	FR	Type de moteur		
	ES	Tipo de motor		
	IT	Tipo Motore		
Function:		Parameter	**Editability:**	P23
Data length:		1Byte var.	**Memory:**	Param. EE
Format:		ASCII	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		Default_Motor	**Cyc. transmittable:**	no

S-0-0142, Application type

A descriptive name text for the drive can be stored in this parameter (e.g., swivel axis). It has no functional significance.

See also the functional description: "Systemoverview"

S-0-0142 - Attributes

Para. Name:	**DE**	Anwendungsart		
	EN	Application type		
	FR	Type d'application		
	ES	Tipo de aplicación		
	IT	Tipo applicazione		
Function:		Parameter	**Editability:**	P234
Data length:		1Byte var.	**Memory:**	Param. EE
Format:		ASCII	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		Default	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0143, Sercos interface version

The version of the SERCOS interface specifications is found in the operating data.

Current valid settings:

V	V 01.01:	V 01.02:
SERCOS specification German 01.00:	SERCOS English specification	SERCOS update German/English
Version 5/90	Version 4/91	Version 9/91

Fig. 2-21: S-0-0143, Version of the SERCOS interface specification

See also the functional description: "Overview of SERCOS Communication".

S-0-0143 - Attributes

Para. Name:	**DE**	Sercos-Interface Version
	EN	Sercos interface version
	FR	Version d'interface SERCOS
	ES	Version de Interface Sercos
	IT	Versione del Interfaccia Sercos

Function:	Parameter	**Editability:**	no
Data length:	1Byte var.	**Memory:**	-
Format:	ASCII	**Validity check:**	no
Unit:	--	**Extreme value check:**	no
Decimal places:	0	**Combination check:**	no
Input min/max:	- / -		
Default value:	-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0144, Signal status word

By means of the "configurable signal status word" functionality it is possible to collect any status bits in the drive in a parameter in order to

- transmit them from the drive to the control unit in real time
  → The S-0-0144 parameter must be transmitted in the form of a cyclic data from the slave to the master!
- or to assign them to the digital outputs.
  → The S-0-0144 parameter must be assigned to the digital outputs!

The bits in the signal status word can be freely defined via the parameters

- S-0-0026, Configuration list signal status word (= selection of respective parameter IDN)
- S-0-0328, Assign list signal status word (= selection of the respective bit number)

Note: If the drive has a parallel interface (DKC01.3), bits 0-9 are directly mapped to the digital outputs.

See also Functional Description "Configurable Signal Status Word"

S-0-0144 - Attributes

Para. Name:	**DE**	Signal-Statuswort		
	EN	Signal status word		
	FR	Mot d'état de signal		
	ES	Palabra de estado de señal		
	IT	Parole stato del segnale		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	no
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	AT

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0145, Signal control word

By means of the "configurable signal control word" functionality it is possible to collect any control bits in the drive in a parameter in order to

- transmit them from the control unit to the drive in real time
  (To do this, the signal control word must be transmitted in the form of a cyclic data from the master to the slave!)
- or to assign them to the digital inputs.
  (To do this, S-0-0145 must be assigned to the digital inputs via the P-0-0125 parameter!)

The bits in the signal control word can be freely defined via the parameters

- S-0-0027, Configuration list signal control word
  (= selection of respective parameter IDN)
- S-0-0329, Assign list signal control word
  (= selection of the respective bit number)

Note: If the drive has a parallel interface (DKC01.3), the digital inputs of the EAK are mapped to bits 0-9 of S-0-0145.

See also Functional Description "Configurable Signal Control Word"

S-0-0145 - Attributes

Para. Name:	**DE**	Signal-Steuerwort
	EN	Signal control word
	FR	Mot de contrôle de signal
	ES	Palabra de mando de señal
	IT	Parole di Controllo Segnali

Function:	Parameter	**Editability:**	P234
Data length:	2Byte	**Memory:**	-
Format:	BIN	**Validity check:**	no
Unit:		**Extreme value check:**	no
Decimal places:	0	**Combination check:**	no
Input min/max:	- / -		
Default value:	-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0147, Homing parameter

In this parameter the selection for the command "Drive-controlled homing procedure" command (**S-0-0148**) is made with regard to the installation of the facility, NC and drive.

Parameter structure:

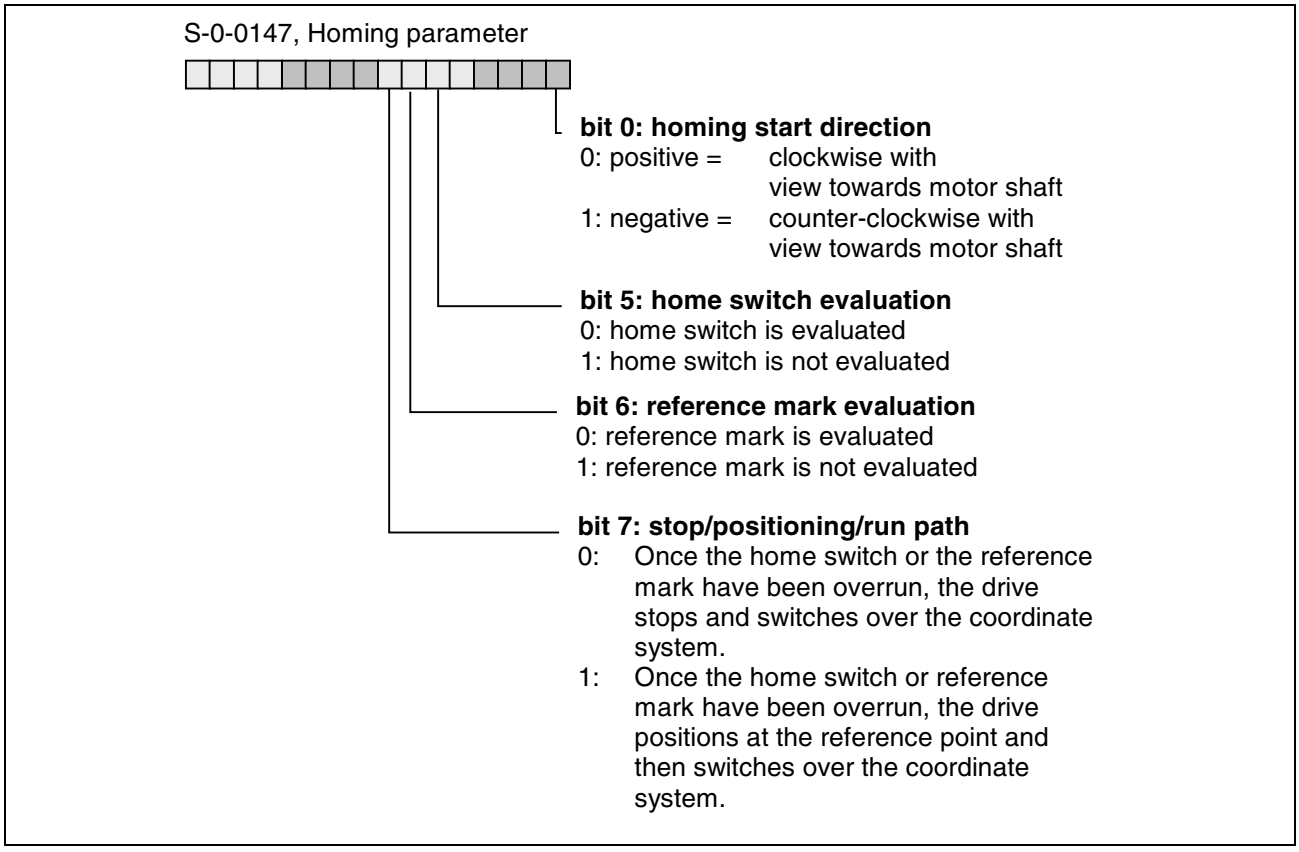


Fig. 2-22: S-0-0147, Homing parameter

See also Functional Description "Drive-Controlled Homing"

S-0-0147 - Attributes

Para. Name:	**DE**	Referenzfahr-Parameter		
	EN	Homing parameter		
	FR	Paramètre de prise d'origine		
	ES	Parámetro de puesta a cero		
	IT	Parametro Azzeramento		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	Param. EE
Format:		BIN	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	yes
Input min/max:		--- / ---		
Default value:		0010 0000b	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0148, C600 Drive controlled homing procedure command

When this command is set and enabled, the drive switches automatically into internal position control and accelerates using the **S-0-0041, Homing acceleration** to the **S-0-0042, Homing velocity** as long as it is in operating status AF.
Bit 0 in **S-0-0403, Position feedback value status** will be deleted at first. As long as the command is active, changes in the cyclic position command values will be ignored. The process for the homing procedure can be specified with **S-0-0147, Homing parameter**. After the command has been properly executed (drive is at standstill and position feedback value is related to the homing position), the drive sets bit 0 in parameter **S-0-0403, Position feedback value status**.
The parameter **S-0-0403, Position feedback value status** reflects the signal "In_Reference“.

See also the functional description: "Drive-Controlled Homing"

S-0-0148 - Attributes

Para. Name:	**DE**	C600 Kommando Antriebsgeführtes Referenzieren
	EN	C600 Drive controlled homing procedure command
	FR	C600 Instruction Prise d'origine pilotée par entraînement
	ES	C600 Comando puesta a cero por accionamiento
	IT	C600 Comando Azzeramento comandato per l'azionamento

Function:	Command	**Editability:**	P4
Data length:	2Byte	**Memory:**	no
Format:	BIN	**Validity check:**	no
Unit:	--	**Extreme value check:**	no
Decimal places:	0	**Combination check:**	no
Input min/max:	--- / ---		
Default value:	---	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0149, D400 Positive stop drive procedure command

When this command is set and enabled, all controller monitoring which would otherwise result in an class 1 diagnostic error message when the drive is blocked by a positive stop will be turned off.

Parameter structure:

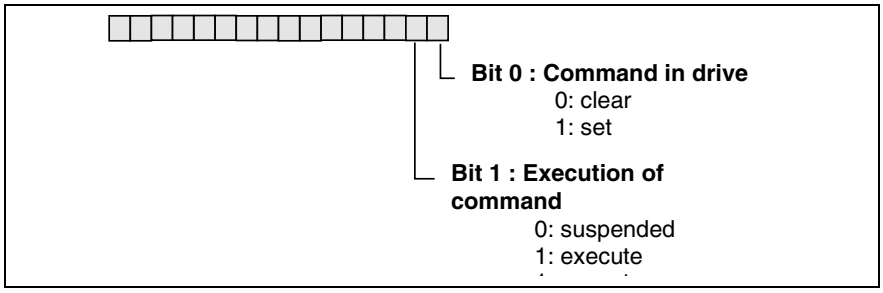


Fig. 2-23: S-0-0149, D400 Positive stop drive procedure command

See also the functional description: "Positive stop drive procedure".

S-0-0149 - Attributes

Para. Name:	**DE**	D400 Kommando Fahren auf Festanschlag
	EN	D400 Positive stop drive procedure command
	FR	D400 Instruction Déplacement contre obstacle fixe
	ES	D400 Comando Desplazamiento hasta tope fijo
	IT	D400 Comando Funzionamento su battuta fissa

Function:	Command	**Editability:**	P4
Data length:	2Byte	**Memory:**	-
Format:	BIN	**Validity check:**	no
Unit:	--	**Extreme value check:**	no
Decimal places:	0	**Combination check:**	no
Input min/max:	- / -		
Default value:	-	**Cyc. transmittable:**	-

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0150, Reference offset 1

This parameter describes the distance between the position encoder home reference marker 1 and **S-0-0052, Reference distance 1**.
The parameter makes it possible to shift the reference point in relation to the reference marker to be detected. If bit 7 in **S-0-0147, Homing parameter** is set to 1, then, during execution of the command **S-0-0148, C600 Drive controlled homing procedure command**, the drive goes to the reference point shifted from the reference mark by the value **S-0-0150, Reference Offset 1**.

See also the functional description: "Drive-Controlled Homing".

S-0-0150 - Attributes

Para. Name:	**DE**	Referenzmaß Offset 1		
	EN	Reference offset 1		
	FR	Mesure de référence 1, décalage		
	ES	Medición de referencia offset 1		
	IT	Azzeramento Offset 1 (Feedback Motore)		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_MV	**Validity check:**	Phase3
Unit:		S-0-0076	**Extreme value check:**	yes
Decimal places:		S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:		S-0-0076 / S-0-0076		
Default value:		0	**Cyc. transmittable:**	no

S-0-0157, Velocity window

The Velocity window refers to the absolute value of the **S-0-0036, Velocity Command Value**.
If the velocity feedback value, in comparison with the velocity command value, is within the calculated velocity window, then the drive sets the bit 0 in **S-0-0013, Class 3 diagnostics** (Message "n_actual = n_command").

See also the functional description: "S-0-0013, Class 3 diagnostics"

S-0-0157 - Attributes

Para. Name:	**DE**	Geschwindigkeits-Fenster		
	EN	Velocity window		
	FR	Fenêtre de vitesse		
	ES	Ventana de velocidad		
	IT	Finestra Velocità		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	Prog.-Modul
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		S-0-0044	**Extreme value check:**	yes
Decimal places:		S-0-0045/S-0-0046	**Combination check:**	no
Input min/max:		0 / S-0-0044		
Default value:		1000000	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0159, Monitoring window

When an operating mode with internal position control is activated in the drive, the position loop is monitored. Therefore, a model value for the actual position is calculated and compared with the real actual position.
The maximum tolerated deviation between the measured and calculated position feedback value is set with the help of the parameter **S-0-0159, Monitoring window**. If the position deviation exceeds the monitoring window, then the drive sets the error **F228 Excessive deviation** in the class 1 diagnostics. The greatest deviation that occurs will always be stored in parameter **P-0-0098, Max. model deviation**.

See also the functional description: "Position Control Loop Monitoring"

S-0-0159 - Attributes

Para. Name:	**DE**	Überwachungsfenster		
	EN	Monitoring window		
	FR	Fenêtre de monitorage		
	ES	Ventana de control		
	IT	Finestra di monitoraggio		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_MV	**Validity check:**	Phase3
Unit:		S-0-0076	**Extreme value check:**	yes
Decimal places:		S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:		0 / S-0-0076		
Default value:		1000000	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0160, Acceleration data scaling type

Various scaling types can be set as described below for the acceleration data in the drive as defined by the bit values of this parameter.

Structure of the parameter:

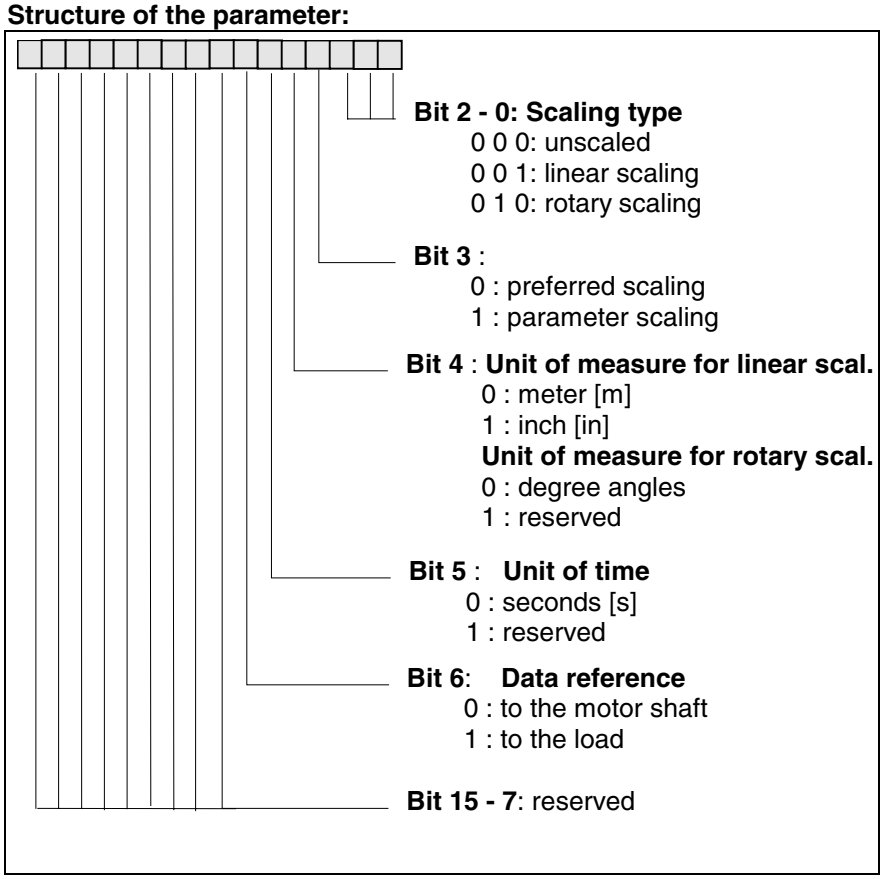


Fig. 2-24: S-0-0160, Acceleration Data Scaling Type

In bit 3 it is possible to select between preferred and parameter scaling.

Preferred scaling:

With preferred scaling, the following parameters are predefined and cannot be changed:

- S-0-0161, Acceleration data scaling factor
- S-0-0162, Acceleration data scaling exponent

Scaling with parameter scaling means that these parameters must be set (See section: "Preferred Scaling - Parameter Scaling").

Note:	Only the bits named here are supported by the product.

See also: **S-0-0044, Velocity data scaling type**"

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Example Suppose that loadside, linear scaling with acceleration units in M/s² is desired. The scaling on the drive should be set as follows:

Parameter		Value
S-0-0160, Acceleration data scaling type		1001001
Bit 2…0 = 001	linear scaling	
Bit 3 = 1	parameter scaling	
Bit 4 = 0	dimensional unit in meters (m)	
Bit 5 = 0	time unit in seconds (s)	
Bit 6 = 1	data referenced at load	
S-0-0161, Acceleration data scaling factor		1
S-0-0162, Acceleration data scaling exponent		-6

Now suppose that the decimal value +1234567 is stored in the relevant acceleration data register. The value will be interpreted and displayed as $+1234567x10^{-3}$ mm/s^2

- or -

as the value would be displayed in the IDN lists, +1234.567 mm/s² with respect to the load.

Note that the least significant decimal value is determined by the scaling exponent, in this example, as 10^{-6} m/s^2 or 10^{-3} mm/s^2.

See also functional description: "Velocity Data Display Format"

S-0-0160 - Attributes

Para. Name:	**DE**	Wichtungsart für Beschleunigungsdaten		
	EN	Acceleration data scaling type		
	FR	Type de calibrage pour données d'accélération		
	ES	Tipo de escala para datos de aceleración		
	IT	Tipo di Scala per Dati Accellerazione		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	Param. EE
Format:		BIN	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	yes
Input min/max:		--- / ---		
Default value:		0100 0010b	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0161, Acceleration data scaling factor

When parameter scaling is set in **S-0-0160, Acceleration data scaling type**, the scaling factor for all of the acceleration data in the drive is determined by this parameter.

See also the functional description: "Velocity Data Display Format".

S-0-0161 - Attributes

Para. Name:	**DE**	Wichtungs-Faktor für Beschleunigungsdaten		
	EN	Acceleration data scaling factor		
	FR	Facteur de calibrage pour données d'accélération		
	ES	Factor de escala para datos de aceleración		
	IT	Fattore di Scala per Dati Accellerazione		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		1 / 65535		
Default value:		1	**Cyc. transmittable:**	no

S-0-0162, Acceleration data scaling exponent

If parameter scaling is set in **S-0-0160, Acceleration data scaling type** the scaling exponent with sign for all acceleration data in the drive is determined in this parameter.

See also the functional description: "Velocity Data Display Format".

S-0-0162 - Attributes

Para. Name:	**DE**	Wichtungs-Exponent für Beschleunigungsdaten		
	EN	Acceleration data scaling exponent		
	FR	Exposant de calibrage pour données d'accélération		
	ES	Exponente de escala para datos de aceleración		
	IT	Esponente per Dati Accellerazione		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_MV	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		-32768 / 32768		
Default value:		-3	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0169, Probe control parameter

This parameter determines whether one or both probe inputs "probe 1" and "probe 2" are active and which edge (positive/negative) is to trigger the probe data storage.

Parameter structure:

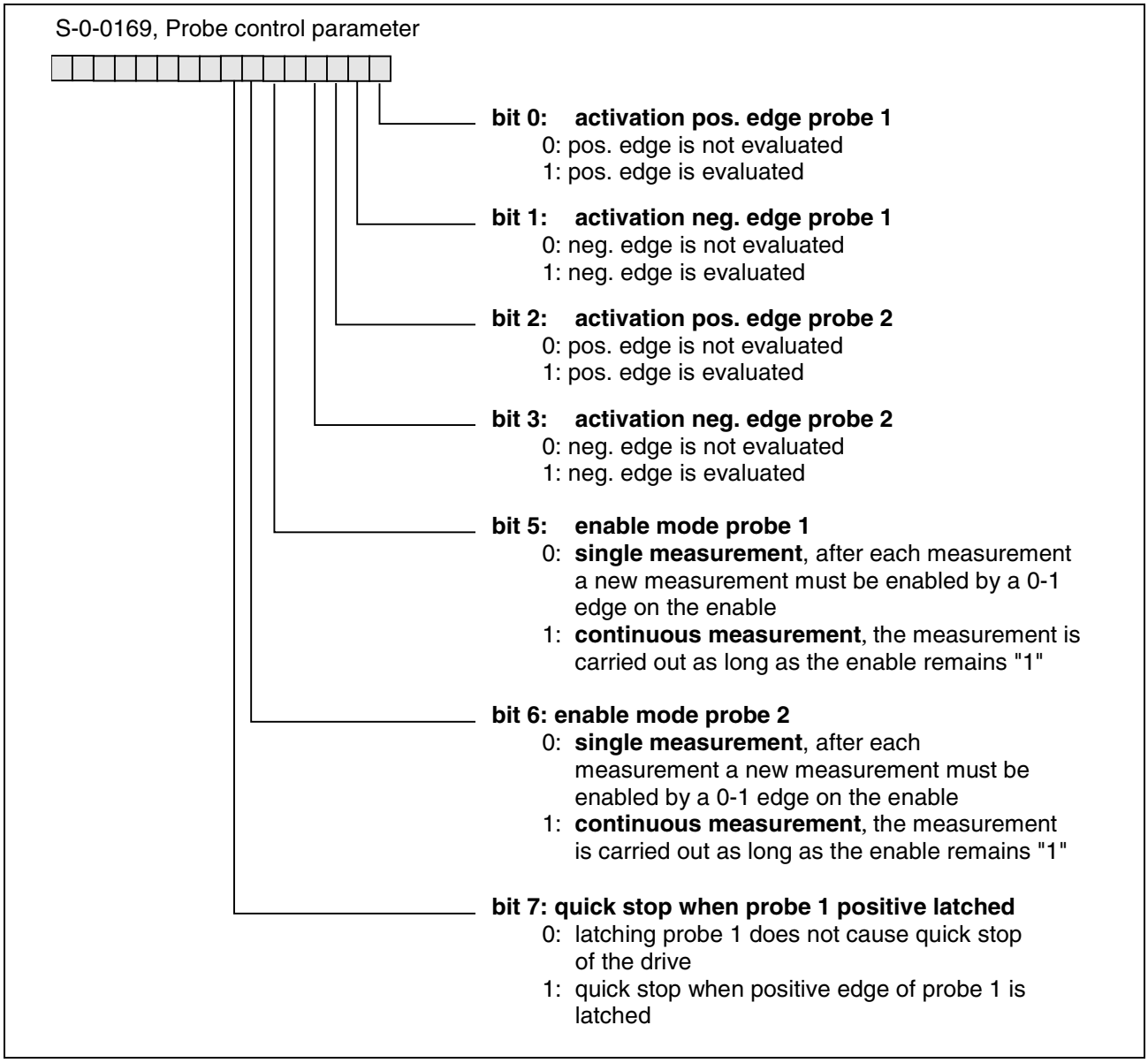


Fig. 2-25: S-0-0169, Messtaster-Steuerparameter

Note: Only the bits mentioned here are supported by the software.

See also Functional Description "Probe Input Feature"

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0169 - Attributes

Para. Name:	**DE**	Messtaster-Steuerparameter		
	EN	Probe control parameter		
	FR	Paramètre de contrôle de la sonde		
	ES	Parámetros de mando de control de muestra		
	IT	Tastatore di misura, parametro di controllo		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	Param. EE
Format:		BIN	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	yes
Input min/max:		--- / ---		
Default value:		0	**Cyc. transmittable:**	no

S-0-0170, Probing cycle procedure command

By setting and enabling the command "probing cycle procedure," the drive reacts to the following:

- S-0-0405, Probe 1 enable / S-0-0406, Probe 2 enable and
- S-0-0401, Probe 1, / S-0-0402, Probe 2.

as is programmed in **S-0-0169, Probe control parameter**.
The NC can perform multiple measurements while this command is active. If the NC no longer wants new measurements, it clears the command.

Parameter structure:

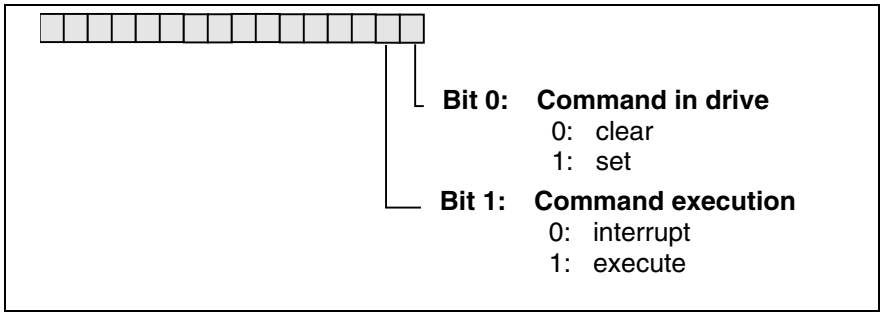


Fig. 2-26: S-0-0170, Probing cycle procedure command

Note: With bit 0, moreover, the monitoring of the external 24 V is activated.

See also the functional description: "Probe Input Feature".

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0170 - Attributes

Para. Name:	**DE**	Kommando Messtasterzyklus		
	EN	Probing cycle procedure command		
	FR	Instruction Cycle mesure de sonde		
	ES	Comando ciclo de teclas de medición		
	IT	Comando per procedura di tastatore di misura		
Function:		Parameter	**Editability:**	P4
Data length:		2Byte	**Memory:**	no
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

S-0-0173, Marker position A

During the drive controlled homing with an incremental measuring system, the position of the reference marker (zero pulse) is stored in this parameter. This position feedback value still refers to the "old“ coordinate system (before switching the coordinate system with the homing procedure).
Furthermore, the recognition of the reference mark can be activated by the command **P-0-0014, D500 Command determine marker position**. Then, as soon as the next reference pulse comes from the feedback, the appropriate position value is stored in this parameter, and the command gets a positive acknowledge.

See also the functional description: "Command - detect marker position"

S-0-0173 - Attributes

Para. Name:	**DE**	Markerposition A		
	EN	Marker position A		
	FR	Position du marqueur A		
	ES	Posición de marcador A		
	IT	Posizione marker A		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	no
Format:		DEC_MV	**Validity check:**	no
Unit:		S-0-0076	**Extreme value check:**	no
Decimal places:		S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	AT

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0177, Absolute distance 1

This parameter is used for the homing procedure of a distance coded motor feedback. It describes the offset between the zero point of the motor feedback (position of the 1st reference marker of the motor encoder) and the machine's zero-point.
Determining the right value for this parameter can be done in two steps. First, write the value 0 into S-0-0177 and proceed with the command **S-0-0148, C600 Drive controlled homing procedure command**. The position feedback value 1 in S-0-0051 then shows the actual position in reference to the motor feedback zero point.
Then, when you jog the axis to the machine's zero point, input the value of S-0-0051 indicated there into S-0-0177 with inverted sign (+ ↔ -). After another homing, the value in S-0-0051 displays the position in reference to the motor feedback's zero point.

See also the functional description: "Drive-Controlled Homing"

S-0-0177 - Attributes

Para. Name:	**DE**	Absolutmaß-Offset 1		
	EN	Absolute distance 1		
	FR	Décalage absolu 1		
	ES	Distancia absoluta 1		
	IT	Offset 1 per Dimensionamenti assoluti (Feedback Motore)		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_MV	**Validity check:**	Phase3
Unit:		S-0-0076	**Extreme value check:**	yes
Decimal places:		S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:		S-0-0076 / S-0-0076		
Default value:		0	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0179, Measurement value status

If the drive stores one or more measured values during the active command probe cycle (S-0-0170) then it simultaneously sets the relevant bit in the measured value cycle.
If Probe 1 enable (S-0-0405) is cleared by the control, then the drive clears bits 0 and 1 in the probe status. If Probe 2 enable (S-0-0406) is cleared by the control, then the drive clears bits 2 and 3 in the probe status. The drive clears all bits if the command probe cycle (S-0-0170) is cleared by the control.

Parameter structure:

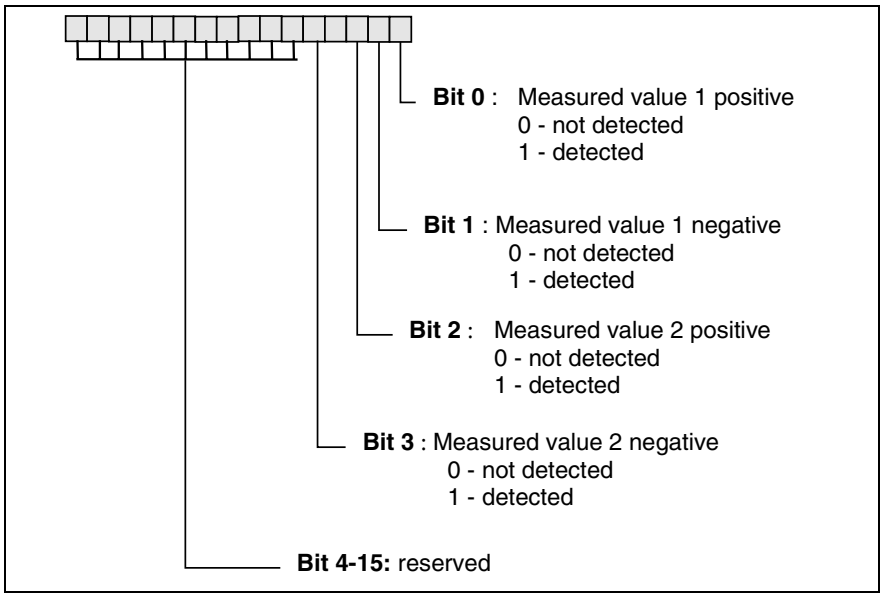


Fig. 2-27: S-0-0179, Measurement value status

S-0-0179 - Attributes

Para. Name:	**DE**	Messwert-Status		
	EN	Measurement value status		
	FR	Etat de valeurs mesurées		
	ES	Estado de valores de medición		
	IT	Stato valore misurato		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	-
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	AT

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0182, Manufacturer class 3 diagnostics

Different messages regarding operating states will be stored in this parameter every 8 ms. If the status of a message changes, this is not signaled by a change bit.

Parameter structure:

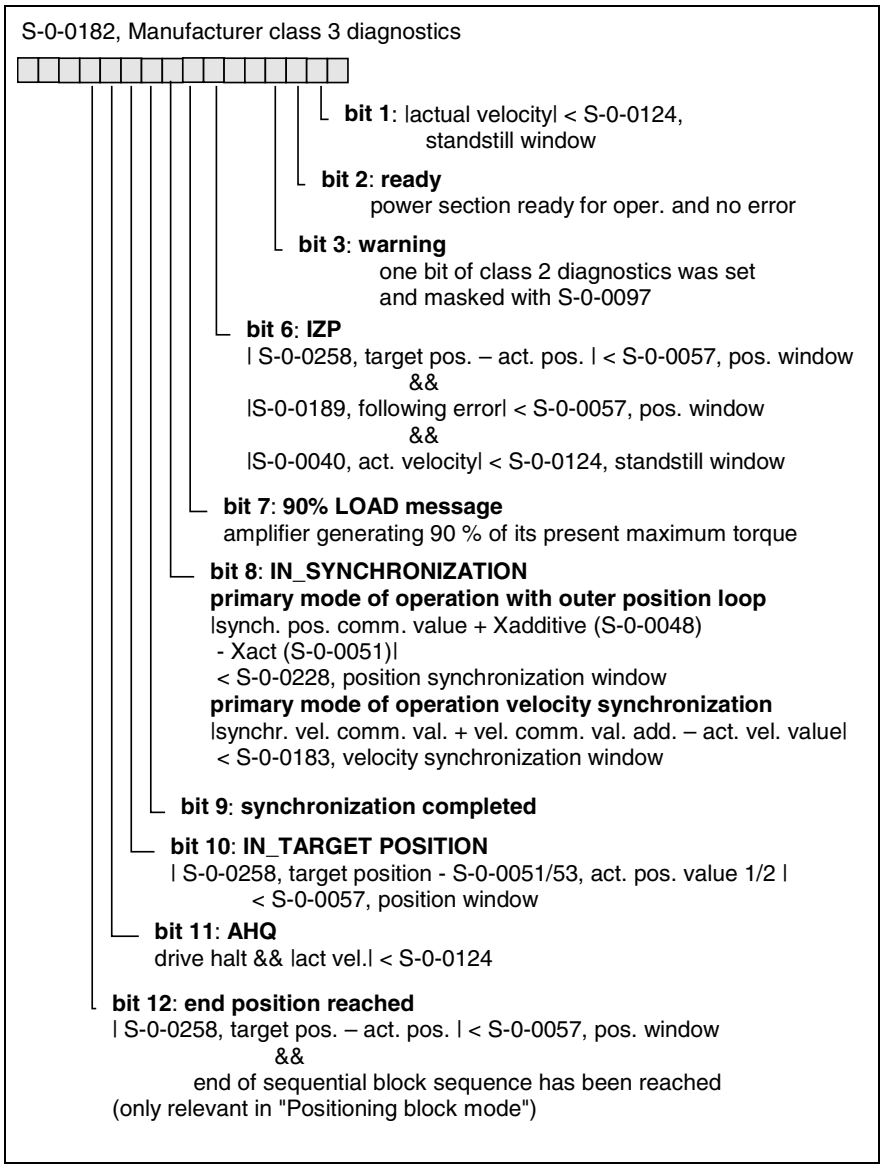


Fig. 2-28: S-0-0182, Manufacturer class 3 diagnostics

See also Functional Description "S-0-0182, Manufacturer class 3 diagnostics"

S-0-0182 - Attributes

Para. Name:	**DE**	Hersteller-Zustandsklasse 3
	EN	Manufacturer class 3 diagnostics
	FR	Diagnostic de classe 3 spéc. au fabriquant
	ES	Diagnostico fabricante clase 3
	IT	Diagnostica Classe 3 definita dal Costruttore

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Function:	Parameter	**Editability:**	no
Data length:	2Byte	**Memory:**	no
Format:	BIN	**Validity check:**	no
Unit:	--	**Extreme value check:**	no
Decimal places:	0	**Combination check:**	no
Input min/max:	--- / ---		
Default value:	---	**Cyc. transmittable:**	AT

S-0-0183, Velocity synchronization window

If during the operating mode "velocity synchronization" the difference between velocity command value and feedback value is smaller than the synchronization window, then bit 8 in the **S-0-0182, Manufacturer Class 3 Diagnostics** will be set.

The following applies:

Bit 8 = 1, if $| dX_{Synch} + dX_{Additive} - dX_{Feedback} | < S\text{-}0\text{-}0183$

with
- $dX_{Feedback}$: Velocity feedback value
- dX_{Synch}: Synchronized velocity command value, produced from actual master axis velocity
- $dX_{Additive}$: Additive velocity command value, S-0-0037

See also the functional description: "Dynamic synchronization in the velocity synchronization operating mode"

S-0-0183 - Attributes

Para. Name:	**DE**	Synchronlauffenster Geschwindigkeit
	EN	Velocity synchronization window
	FR	Fenêtre de vitesse de synchronisation
	ES	Velocidad ventana de sincronización
	IT	Finestra di Sincronizzazione di Velocità

Function:	Parameter	**Editability:**	P234
Data length:	4Byte	**Memory:**	-
Format:	DEC_MV	**Validity check:**	Phase3
Unit:	S-0-0044	**Extreme value check:**	yes
Decimal places:	S-0-0045/S-0-0046	**Combination check:**	no
Input min/max:	- / -		
Default value:	-	**Cyc. transmittable:**	-

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0185, Length of the configurable data record in the AT

In the operating data of the parameter with this parameter, the drive indicates the maximum length in bytes which it can process in the configurable

- Sercos: data block of drive telegram (S-0-0016).
- Feldbus: real time channel from drive to motor can be processed.

Note: In the actual version of the firmware, the number of data in the AT equals 16 bytes.

See also the functional description: "Configuration of Telegram Contents".

S-0-0185 - Attributes

Para. Name:	**DE**	Länge des konfigurierbaren Datensatzes im AT
	EN	Length of the configurable data record in the AT
	FR	Longueur du registre de données configurables dans l'AT
	ES	Longitud del registro de datos configurable en el AT
	IT	Lunghezza del record di dati configurabile in AT

Function:	Parameter	**Editability:**	no
Data length:	2Byte	**Memory:**	constant
Format:	DEC_OV	**Validity check:**	no
Unit:	Byte	**Extreme value check:**	no
Decimal places:	0	**Combination check:**	no
Input min/max:	--- / ---		
Default value:	---	**Cyc. transmittable:**	no

S-0-0186, Length of the configurable data record in the MDT

In the operating data of the parameter with this ID number, the drive indicates the maximum length in bytes which it can process in the configurable data record of the .

Note: In the actual version of the firmware, the number of data in the AT equals 16 bytes.

See also the functional description: "Configuration of Telegram Contents".

S-0-0186 - Attributes

Para. Name:	**DE**	Länge des konfigurierbaren Datensatzes im MDT
	EN	Length of the configurable data record in the MDT
	FR	Longueur du registre de données configurables dans le MDT
	ES	Longitud del registro de datos configurable en el MDT
	IT	Lunghezza del record di dati configurabile in MDT

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Function:	Parameter	**Editability:**	no
Data length:	2Byte	**Memory:**	constant
Format:	DEC_OV	**Validity check:**	no
Unit:	Byte	**Extreme value check:**	no
Decimal places:	0	**Combination check:**	no
Input min/max:	--- / ---		
Default value:	---	**Cyc. transmittable:**	no

S-0-0187, List of configurable data in the AT

This list contains the ID numbers of the operating data which can be configured in real time data channel from slave to master in list P-0-4080, process data input description

- S-0-0012, Class 2 diagnostics
- S-0-0013, Class 3 diagnostics
- S-0-0040, Velocity feedback value
- S-0-0051, Position feedback 1 value
- S-0-0053, Position feedback 2 value
- S-0-0080, Torque/Force command
- S-0-0084, Torque/Force feedback value
- S-0-0130, Probe value 1 positive edge
- S-0-0131, Probe value 1 negative edge
- S-0-0132, Probe value 2 positive edge
- S-0-0133, Probe value 2 negative edge
- S-0-0144, Signal status word
- S-0-0173, Marker position A
- S-0-0179, Measurement value status
- S-0-0182, Manufacturer class 3 diagnostics
- S-0-0189, Following error
- S-0-0364, AT Data container A
- S-0-0368, Addressing for data container A
- S-0-0390, Diagnostic message number
- P-0-0135, Status position switch
- P-0-0202, Difference probe values 1
- P-0-0203, Difference probe values 2
- P-0-0210, Analog input 1
- P-0-0211, Analog input 2
- P-0-0222, State of Travel range limit inputs
- P-0-0223, Status Input E-Stop function
- P-0-4051, Process block acquittance
- P-0-4076, Fieldbus container object
- P-0-4078, Fieldbus status word
- P-0-4086, Command communication status

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0187 - Attributes

Para. Name:	**DE**	Liste der konfigurierbaren Daten im AT
	EN	List of configurable data in the AT
	FR	Liste des IDN de données configurables dans l'AT
	ES	Lista de los datos configurables en el AT
	IT	Lista dei Dati configurabili in AT

Function:	Parameter	**Editability:**	no
Data length:	2Byte var.	**Memory:**	constant
Format:	IDN	**Validity check:**	no
Unit:	--	**Extreme value check:**	no
Decimal places:	0	**Combination check:**	no
Input min/max:	--- / ---		
Default value:	---	**Cyc. transmittable:**	no

S-0-0188, List of configurable data in the MDT

This list contains the ID numbers of the operating data which can be configured in real time data channel from master to slave in list P-0-4081, process data output description.

- S-0-0036, Velocity command value
- S-0-0037, Additive velocity command value
- S-0-0047, Position command value
- S-0-0080, Torque/Force command
- S-0-0091, Bipolar velocity limit value
- S-0-0092, Bipolar torque/force limit value
- S-0-0108, Feedrate override
- S-0-0145, Signal control word
- S-0-0193, Positioning Jerk
- S-0-0258, Target position
- S-0-0259, Positioning Velocity
- S-0-0260, Positioning Acceleration
- S-0-0282, Travel distance
- S-0-0346, Setup flag for relative command values
- S-0-0360, MDT Data container A
- S-0-0362, List index, MDT data container A
- S-0-0366, List index, AT data container A
- S-0-0368, Addressing for data container A
- S-0-0393, Command value mode

- P-0-0132, Switch on threshold position switch
- P-0-0133, Switch off threshold position switch
- P-0-0139, Analog output 1
- P-0-0140, Analog output 2
- P-0-4006, Process block target position
- P-0-4007, Process block velocity
- P-0-4008, Process block acceleration
- P-0-4009, Process block jerk
- P-0-4019, Process block mode

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

- P-0-4026, Process block selection
- P-0-4030, Jog velocity
- P-0-4056, Jog inputs
- P-0-4060, Process block control word
- P-0-4076, Fieldbus container object
- P-0-4077, Fieldbus control word

S-0-0188 - Attributes

Para. Name:	**DE**	Liste der konfigurierbaren Daten im MDT		
	EN	List of configurable data in the MDT		
	FR	Liste des IDN de données configurables dans le MDT		
	ES	Lista de los datos configurables en el MDT		
	IT	Lista dei Dati configurabili in MDT		
Function:		Parameter	**Editability:**	no
Data length:		2Byte var.	**Memory:**	constant
Format:		IDN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

S-0-0189, Following error

To this parameter, the drive writes the current difference between the position command and the position feedback value (**S-0-0051, Position feedback 1 value** or **S-0-0053, Position feedback 2 value**).

Note: If position control has not been activated, the value of the parameter is set to "0".

See also functional description: "Determining the position controller setting".

S-0-0189 - Attributes

Para. Name:	**DE**	Schleppabstand		
	EN	Following error		
	FR	Ecart de poursuite		
	ES	Error de seguimiento		
	IT	Distanza di Inseguimento		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	no
Format:		DEC_OV	**Validity check:**	no
Unit:		S-0-0076	**Extreme value check:**	no
Decimal places:		S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	AT

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0191, D600 Cancel reference point procedure command

Setting and enabling the command Cancel reference point clears the reference of the encoder defined by **S-0-0147, Homing Parameter**. The position feedback value status (bit 0 in S-0-0403) is cleared as well.
The command is correctly completed in the drive, when the bit "Position feedback value status“ has been set to 0 and the position value of the active feedback no longer refers to the machine’s zero point (= no longer referenced).

Parameter structure:

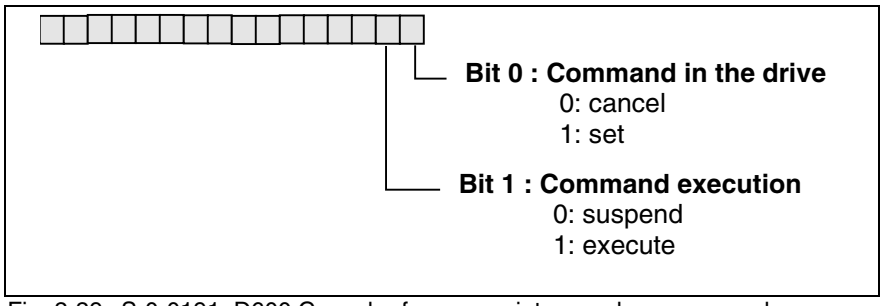


Fig. 2-29: S-0-0191, D600 Cancel reference point procedure command

See also the functional description: "Drive-Controlled Homing"

S-0-0191 - Attributes

Para. Name:	**DE**	D600 Kommando Referenzbezug löschen		
	EN	D600 Cancel reference point procedure command		
	FR	D600 Instruction Annullation de l'origine		
	ES	D600 Comando Borrar referencia		
	IT	D600 Comando Annullamento riferimento		
Function:		Command	**Editability:**	P234
Data length:		2Byte	**Memory:**	no
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

S-0-0192, IDN-list of backup operation data

The ID numbers for all operating data that must be loaded in the drive for proper operation are kept in this IDN list. Generally these are the parameters which are stored in the programming module.
The control system should use this IDN list to create a backup copy of the drive parameters. If a customer password has been activated with the parameter **S-0-0267, Password**, all parameters contained in **S-0-0192, IDN List of backup operation data** are write protected.
See also the functional description: "IDN List of Parameters".

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0192 - Attributes

Para. Name:	**DE**	IDN-Liste der zu sichernden Betriebsdaten		
	EN	IDN-list of backup operation data		
	FR	Liste des IDN des données d'exploitation de sauvegarde		
	ES	Lista IDN de los datos de servicio de seguridad		
	IT	Lista IDN dei Dati operativi salvati		
Function:		Parameter	**Editability:**	no
Data length:		2Byte var.	**Memory:**	constant
Format:		IDN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

S-0-0193, Positioning Jerk

The positioning jerk limits the acceleration change per time in the operating modes

- Drive internal interpolation,
- Relative drive internal interpolation and
- Jog mode.

Note: With the value 0, the jerk filter is off.

See also the functional description: "Functional principle Drive Internal Interpolation"

S-0-0193 - Attributes

Para. Name:	**DE**	Positionier-Ruck		
	EN	Positioning Jerk		
	FR	Jerk de positionnement		
	ES	Posicionamiento agitación		
	IT	Jerk per Posizionamento		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		S-0-0160	**Extreme value check:**	yes
Decimal places:		S-0-0161/S-0-0162	**Combination check:**	no
Input min/max:		0 / 4000000.000		
Default value:		0	**Cyc. transmittable:**	MDT

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0228, Position synchronization window

If the difference between the position command value and the feedback value is smaller than the synchronization window during the parameterized synchronization operating mode with underlying position control, then bit 8 in the **S-0-0182, Manufacturer Class 3 Status** will be set.

The following applies:

Bit 8 = 1, if $| X_{Synch} + X_{Additive} - X_{Feedback} | < S\text{-}0\text{-}0228$

with
- $X_{Feedback}$: Position feedback value S-0-0051 or S-0-0053
- X_{Synch}: Synchronized position command value, compiled from the actual master axis position
- $X_{Additive}$: Additive position command value, S-0-0048

See also functional description: "Dynamic synchronization in the phase synchronization operating mode"

S-0-0228 - Attributes

Para. Name:	**DE**	Synchronlauffenster Lage		
	EN	Position synchronization window		
	FR	Fenêtre de position de synchronisation		
	ES	Posición ventana de sincronización		
	IT	Finestra di Sincronizzazione di Posizione		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	-
Format:		DEC_MV	**Validity check:**	Phase3
Unit:		S-0-0076	**Extreme value check:**	yes
Decimal places:		S-0-0077/S-0-0078	**Combination check:**	-
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

S-0-0236, Master drive 1 revs.

The gear ratio between the master drive 1 and the slave drive is calculated as follows:

$$\text{Gear ratio} = \frac{\text{Slave drive 1 revolutions (S-0-0237)}}{\text{Master drive 1 revolutions (S-0-0236)}}$$

Abb. 2-30: Gear Ratio

Note: The Master Drive 1 Revolutions (S-0-0236) need integer input.

See also the functional description: "Operating mode: Velocity synchronization with virtual master axis"

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0236 - Attributes

Para. Name:	**DE**	Leitantrieb 1 Umdrehungen		
	EN	Master drive 1 revs.		
	FR	Rotations entraînement guide 1		
	ES	Rotaciones accionamiento conductor 1		
	IT	Rotazione Master 1		
Function:		Parameter	**Editability:**	P23
Data length:		4Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	-
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

S-0-0237, Slave drive 1 revs.

The gear ratio between the master drive 1 and the slave drive is calculated as follows:

$$\text{Gear ratio} = \frac{\text{Slave drive 1 revolutions (S-0-0237)}}{\text{Master drive 1 revolutions (S-0-0236)}}$$

Abb. 2-31: Gear Ratio

Note: The Slave Drive 1 Revolutions (S-0-0237) need integer input.

See also the functional description: "Operating mode: Velocity synchronization with virtual master axis"

S-0-0237 - Attributes

Para. Name:	**DE**	Folgeantrieb 1 Umdrehungen		
	EN	Slave drive 1 revs.		
	FR	Rotations entraînement suiveur 1		
	ES	Rotaciones accionamiento esclavo 1		
	IT	Rotazione Slave 1		
Function:		Parameter	**Editability:**	P23
Data length:		4Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	-
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0256, Multiplication 1

The parameter **S-0-0256, Multiplication 1** determines, with which factor the signals of the motor feedback are multiplied in the drive.
The multiplication 1 depends on the parameters **S-0-0278, Maximum travel range** and **S-0-0116, Feedback 1 Resolution**. If there is an optional encoder, the **S-0-0257, Multiplication 2** is taken into account as well. The internal resolution for the motor encoder in the drive is calculated as follows:

S - 0 - 0116, Feedback 1 Resolution * S - 0 - 0256, Multiplication 1

Fig. 2-32: Internal resolution for the motor encoder

See also the functional description: "Setting the drive-internal position data format"

S-0-0256 - Attributes

Para. Name:	**DE**	Vervielfachung 1		
	EN	Multiplication 1		
	FR	Multiplication 1		
	ES	Multiplicación 1		
	IT	Multiplicazione 1		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	no
Format:		DEC_OV	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		1	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

S-0-0258, Target position

The target position is assigned to the drive as a command value by the controller in the operating modes with drive-controlled interpolation. The drive moves to the target position taking into account **S-0-0259, Positioning Velocity**, **S-0-0260, Positioning Acceleration** and **S-0-0193, Positioning Jerk**

Note: In the operating mode "Position control with positioning interface" (process blocks), the target position of the current position block will be copied to parameter **S-0-0258, target position**.

See also the functional description: "Functional principle Drive Internal Interpolation"

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0258 - Attributes

Para. Name:	**DE**	Zielposition		
	EN	Target position		
	FR	Position cible		
	ES	Posición objeto		
	IT	Posizione da raggiungere		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	no
Format:		DEC_MV	**Validity check:**	no
Unit:		S-0-0076	**Extreme value check:**	yes
Decimal places:		S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:		S-0-0076 / S-0-0076		
Default value:		---	**Cyc. transmittable:**	MDT

S-0-0259, Positioning Velocity

Using the positioning velocity

- it is possible in operating mode with drive-internal interpolation to run to **S-0-0258, target position** and
- to limit velocity if "run with limited speed" is switched on in positioning block mode or
- to set the effective speed with an automatic control loop setting.

See also the functional description: "Operating Mode: Drive Internal Interpolation".

S-0-0259 - Attributes

Para. Name:	**DE**	Positionier-Geschwindigkeit		
	EN	Positioning Velocity		
	FR	Vitesse de positionnement		
	ES	Velocidad de posicionamiento		
	IT	Velocità di Posizionamento		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		S-0-0044	**Extreme value check:**	yes
Decimal places:		S-0-0045/S-0-0046	**Combination check:**	no
Input min/max:		0 / S-0-0044		
Default value:		100000	**Cyc. transmittable:**	MDT

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0260, Positioning Acceleration

Positioning acceleration is used in the "Drive internal interpolation" operating mode to accelerate up to the **S-0-0259, Positioning velocity**. The acceleration active in control loop settings and in the "Jog" operating mode is also set with this parameter.

See also the functional description: "Functional principle Drive Internal Interpolation"

S-0-0260 - Attributes

Para. Name:	**DE**	Positionier-Beschleunigung		
	EN	Positioning Acceleration		
	FR	Accélération de positionnement		
	ES	Aceleración de posicionamiento		
	IT	Accellerazione di Posizionamento		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		S-0-0160	**Extreme value check:**	yes
Decimal places:		S-0-0161/S-0-0162	**Combination check:**	no
Input min/max:		0 / S-0-0160/278		
Default value:		100000	**Cyc. transmittable:**	MDT

S-0-0262, C700 Load defaults procedure command

When this command is set and enabled, the default parameters in the motor feedback for current, velocity and position control loop settings will be loaded and activated. These default parameters are not optimized for the specific application. They establish a stable control loop status.



ATTENTION

When this command is executed, parameters that have already been optimized may be overwritten.

See also Function description: "Load Default Feature"

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0262 - Attributes

Para. Name:	**DE**	C700 Kommando Urladen		
	EN	C700 Load defaults procedure command		
	FR	C700 Instruction Chargement initial		
	ES	C700 Comando carga base		
	IT	C700 Comando Caricamento Base		
Function:		Command	**Editability:**	P234
Data length:		2Byte	**Memory:**	no
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

S-0-0265, Language selection

All parameter names, units and diagnostic warning messages within the drive controller are stored in several languages. This parameter determines the output language for the text.

- 0: German
- 1: English
- 2: French
- 3: Spanish
- 4: Italian

See also the functional description: "Language Selection".

S-0-0265 - Attributes

Para. Name:	**DE**	Sprach-Umschaltung		
	EN	Language selection		
	FR	Sélection de langue		
	ES	Cambio de idioma		
	IT	Selezione di Lingua		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		0 / 4		
Default value:		0	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0267, Password

With this parameter, a customer password can be activated. This is used to lock the writeablility of all important parameters specific for the axis. The parameters which are locked by activating the customer password, can be seen in the parameter **S-0-0192, IDN-List of backup operation data**. Rexroth Indramat reserves the right of having a master password. The password "007" is set at the factory. This password permits write access to the parameters. Moreover, the parameter can unlock service capabilities.

See also the functional description: "Password".

S-0-0267 - Attributes

Para. Name:	**DE**	Passwort		
	EN	Password		
	FR	Mot de passe		
	ES	Contraseña		
	IT	Parole Chiave		
Function:		Parameter	**Editability:**	P234
Data length:		1Byte var.	**Memory:**	no
Format:		ASCII	**Validity check:**	no
Unit:			**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

S-0-0269, Parameter buffer mode

Note: Parameter S-0-0269 is not significant as all parameters are stored in a non-volatile memory (NOVRAM)!

S-0-0269 - Attributes

Para. Name:	**DE**	Speicherungsmodus		
	EN	Parameter buffer mode		
	FR	Mode d'enregistrement		
	ES	Modo de buffer		
	IT	Buffer Modo Parametri		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	no
Format:		DEC_OV	**Validity check:**	no
Unit:		--	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		0 / 1		
Default value:		---	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0277, Position feedback 1 type

This parameter defines the essential properties of encoder 1.

Parameter structure:

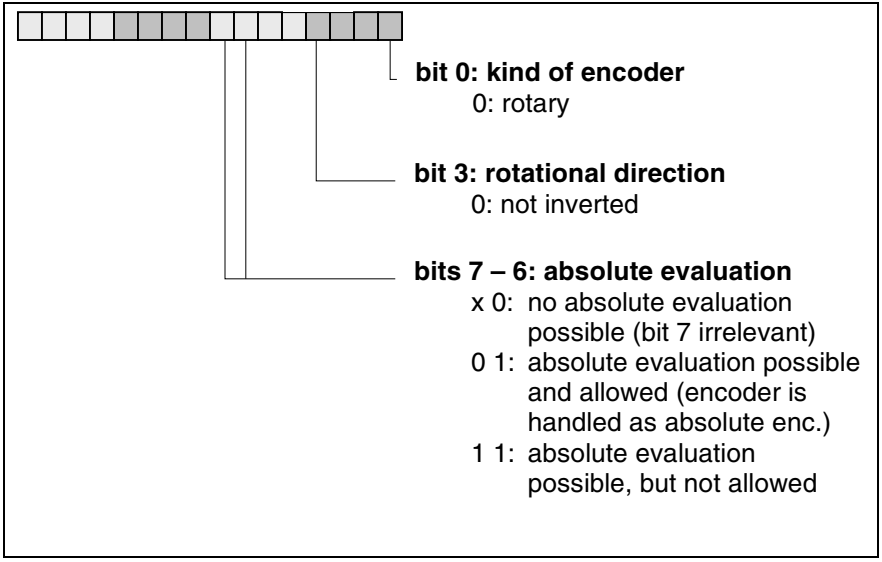


Fig. 2-33: S-0-0277, Position feedback 1 type

Annotation:

- If the connected motor has a motor feedback data memory (MHD, MKD, MKE or MSM), then bits 0, 1 and 3 are cleared.
- Depending on the absolute encoder range and the maximum travel range or modulo value, bit 6 is either set or cleared.

Note: If a motor with absolute encoder is used without the required absolute encoder battery, it is possible to achieve, by setting bit 7, that the absolute encoder is used and that there aren't any absolute encoder specific errors (e.g. F248) generated.

See also Functional Description "Other Motor Encoder Characteristics"

S-0-0277 - Attributes

Para. Name:	**DE**	Lagegeberart 1
	EN	Position feedback 1 type
	FR	Type codeur 1
	ES	Tipo de encoder de posición 1
	IT	Tipo di Feedback Posizione 1

Function:	Parameter	**Editability:**	P23
Data length:	2Byte	**Memory:**	Param. EE
Format:	BIN	**Validity check:**	Phase3
Unit:	--	**Extreme value check:**	no
Decimal places:	0	**Combination check:**	yes
Input min/max:	--- / ---		
Default value:	0	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0278, Maximum travel range

The **S-0-0278, Maximum travel range** parameter defines the maximum possible mechanical travel distance of the machine. Depending on the selected scaling, modulo format or absolute format (see also **S-0-0076, Position data scaling type**), the input is a unipolar or bipolar value.
The **S-0-0278, Maximum travel range** parameter affects the **S-0-0256, Multiplication 1** parameter and therefore the internal position resolution in the drive. Moreover, the limits for velocity and acceleration of the drive-internal position command generator are influenced by the maximum travel range. Among others, the maximum input values for **S-0-0259, Positioning Velocity** and **S-0-0260, Positioning Acceleration** depend on the value in S-0-0278.

Note:	The greater the parameterized maximum travel range, the smaller the multiplication and the drive-internal position resolution and the higher the limits of the acceleration and velocity data.

Additionally, the parameter **S-0-0278, Maximum travel range** affects bit 6 "absolute evaluation possible“ in the respective parameter **S-0-0277, Position feedback 1 type**. If the parameterized maximum travel range is greater than the range of the encoder used that can be displayed in absolute form, bit 6 for "absolute evaluation possible“ is reset. Contrariwise, bit 6 is set as soon as the maximum travel range is detected to be smaller than the range of the encoder that can be displayed in absolute form.

See also Functional Description "Setting the drive-internal position data format"

S-0-0278 - Attributes

Para. Name:	**DE**	Maximaler Verfahrbereich		
	EN	Maximum travel range		
	FR	Champs de déplacement max.		
	ES	Campo máximo de desplazamiento		
	IT	Campo corsa max.		
Function:		Parameter	**Editability:**	P23
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_MV	**Validity check:**	Phase3
Unit:		S-0-0076	**Extreme value check:**	no
Decimal places:		S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:		0 / 214748.3647		
Default value:		2147483647	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0279, IDN-list of password-protected operation data

The parameters in the IDN list are write protected with a user password (**S-0-0267, Password)**.
The user can select those parameters to be protected by editing the parameters. The state of the parameters at delivery corresponds to the contents of parameter **S-0-0279, IDN-list of backup operation data**.

See also functional description: "Password"

S-0-0279 - Attributes

Para. Name:	**DE**	IDN-Liste der passwortgeschützten Betriebsdaten		
	EN	IDN-list of password-protected operation data		
	FR	Liste IDN des paramètres protégés par mot de passe		
	ES	Lista IDN de datos operacionales protegidos por contraseña		
	IT	Elenco IDN dei dati operativi protetti da parole chiave		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte var.	**Memory:**	Param.-E²prom
Format:		IDN	**Validity check:**	no
Unit:			**Extreme value check:**	no
Decimal places:		-	**Combination check:**	no
Input min/max:		-- / --		
Default value:		S-0-0192	**Cyc. transmittable:**	no

S-0-0282, Positioning command value

The positioning setpoint is given to the drive by the control in operating mode "Positioning default". Bit 3 in parameter **S-0-0393, Command value mode** fixes whether the positioning setpoint is to be processed in a relative or absolute manner.
A change in the status of parameter **S-0-0346, Positioning command strobe** causes the drive to add a relative positioning setpoint to the target position. An absolute one describes the target position of the internal interpolator directly. The resulting target position is displayed in both cases in parameter **S-0-0258, Target position**.

Also see function description: "Positioning default".

S-0-0282 - Attributes

Para. Name:	**DE**	Positionier-Sollwert		
	EN	Positioning command value		
	FR	Consigne de positionnement		
	ES	Valor nominal de posicionamiento		
	IT	Valore nominale di posizionamento		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	-
Format:		DEC_MV	**Validity check:**	no
Unit:		S-0-0076	**Extreme value check:**	yes
Decimal places:		S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0292, List of all operating modes

This list contains all operating modes that the drive supports.
The following list contains the coding of the operating modes supported by the firmware as they can be entered in the parameters S-0-0032...35 (primary and secondary modes of operation).

Content S-0-0292 (DKC 02.3 and DKC03.3):

Bit list	Meaning	Notes
0000,0000,0000,0001	torque control	
0000,0000,0000,0002	speed control	
0000,0000,0000,0010	velocity control	
0000,0000,0000,x011	position control with encoder 1	only with SERCOS
0000,0000,0001,x011	drive-internal interpolation, encoder 1	
0000,0010,0001,x011	drive-controlled positioning, encoder 1	
1100,0000,0001,1011	jog mode	
0000,0000,0011,x011	positioning block mode, encoder 1	
1010,0000,0000,0010	velocity synchronization, virtual master axis	only with SERCOS
1001,0000,0000,x011	phase synchronization, encoder 1, virtual master axis	only with SERCOS
1000,1000,0000,x011	cam shaft, encoder 1, virtual master axis	only with SERCOS

Fig. 2-34: : Operating modes supported by FWA-MGP01VRS

Content S-0-0292 (DKC10.3-012-3):

Bit list	Meaning	Notes
0000,0000,0000,0001	torque control	
0000,0000,0000,0002	speed control	
0x000B	cycl. position control with encoder 1	
0000,0000,0000,x011	position control with encoder 1	only with SERCOS
0000,0000,0001,x011	drive-internal interpolation, encoder 1	
0000,0010,0001,x011	drive-controlled positioning, encoder 1	
1100,0000,0001,1011	jog mode	
0000,0000,0011,x011	positioning block mode, encoder 1	

Fig. 2-35: Operating modes supported by FWA-MGP01VRS

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

With bit 3 (in S-0-0032) it is possible to select whether position control is run laglessly or with lag error.

bit 3 = 0	position control with lag error
bit 3 = 1	lagless position control

Note: If the master communication card (DKC10.3) is not available, only a reduced number of the above operating modes can be used.

See also Functional Description "Operating Modes"

S-0-0292 - Attributes

Para. Name:	**DE**	Liste der unterstützten Betriebsarten
	EN	List of all operating modes
	FR	Liste de tous les modes de fonctionnement
	ES	Lista de todos los modos de operación
	IT	Lista di tutti i Modi operativi

Function:	Parameter	**Editability:**	no
Data length:	2Byte var.	**Memory:**	constant
Format:	HEX	**Validity check:**	no
Unit:	--	**Extreme value check:**	no
Decimal places:	0	**Combination check:**	no
Input min/max:	-- / --		
Default value:	---	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0298, Reference cam shift

For the drive controlled homing, if there is more than one reference marker in the travel range of the axis during homing, it is necessary to evaluate a reference switch. In this case, the 0->1 rising edge of the zero switch specifies the relevant reference marker.
To do this, the distance between zero switch and reference marker may not be below a certain value, because otherwise the reference marker is ambiguous. Therefore, the drive monitors the distance. If the distance is outside the allowed range, the command **S-0-0148, C600 Drive controlled homing procedure command** ends up with the error **C602 Distance zero switch - reference marker wrong**.
In this case, this parameter shows the distance, by which the zero switch must be shifted, to get the optimal distance.

You can either

- input the value in the parameter **S-0-0299, Home switch offset** to shift the active zero switch (virtually) referred to the real one, or
- shift the zero switch mechanically by the value displayed in S-0-0298.

If the distance between zero switch and reference marker is within the allowed range, then **S-0-0298, Reference cam shift by**.. displays a 0.

See also the functional description: "Drive-Controlled Homing"

S-0-0298 - Attributes

Para. Name:	**DE**	Verschiebung des Referenznockens		
	EN	Reference cam shift		
	FR	Décalage de la came d'origine		
	ES	Desplazamiento de la leva de referencia		
	IT	Sfasamento camma di riferimento		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	no
Format:		DEC_MV	**Validity check:**	no
Unit:		S-0-0076	**Extreme value check:**	no
Decimal places:		S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0299, Home switch offset

For the drive controlled homing, if there is more than one reference marker in the travel range of the axis during homing, it is necessary to evaluate a reference switch. In this case, the 0->1 rising edge of the zero switch specifies the relevant reference marker.
To do this, the distance between zero switch and reference marker may not be below a certain value, because otherwise the reference marker is ambiguous. Therefore, the drive monitors the distance. If the distance is outside the allowed range, the command **S-0-0148, C600 Drive controlled homing procedure command** ends up with the error **C602 Distance zero switch - reference marker wrong**. In this case, the parameter **S-0-0298, Reference cam shift** shows the distance, by which the zero switch must be shifted, to get the optimal distance.
You can either

- input the value in the parameter **S-0-0299, Home switch offset** to shift the active zero switch (virtually) referred to the real one, or
- shift the zero switch mechanically by the value displayed in S-0-0298.

If the distance between zero switch and reference marker is good, then S-0-0298, Reference cam shift by.. displays a 0.

See also the functional description: "Drive-Controlled Homing"

S-0-0299 - Attributes

Para. Name:	**DE**	Referenzschalter-Offset		
	EN	Home switch offset		
	FR	Décalage contact origine		
	ES	Offset de interruptor de referencia		
	IT	Offset FC di Zero		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_MV	**Validity check:**	Phase3
Unit:		S-0-0076	**Extreme value check:**	yes
Decimal places:		S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:		S-0-0076 / S-0-0076		
Default value:		0	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0301, Allocation of real-time control Bit 1

Note: The real-time control bits can only be used in conjunction with SERCOS interface!

In order to allocate a signal to the real-time control bit 1, the IDN of the signal is written to the operating data of the allocation for the real-time control bit 1.
When such an allocation is made the allocated signal (bit 0) is influenced by the real-time control bit 1 (= part of the master control word). If the parameterized IDN is not available, the drive reacts with the service channel error message "IDN not available".
If the programmed IDN is available but cannot be written in phase 4, the drive reacts with the error message "Data not correct".

See also Functional Description "Real-Time Control and Status Bits"

S-0-0301 - Attributes

Para. Name:	**DE**	Zuweisung Echtzeitsteuerbit 1		
	EN	Allocation of real-time control Bit 1		
	FR	Allocation bit contrôle temps réel 1		
	ES	Asignación bit de mando tiempo real 1		
	IT	Allocazione del Real Time Control Bit 1		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

S-0-0303, Allocation of real-time control Bit 2

Note: The real-time control bits can only be used in conjunction with SERCOS interface!

In order to allocate a signal to the real-time control bit 2, the IDN of the signal is written to the operating data of the allocation for the real-time control bit 2. When such an allocation is made the allocated signal (bit 0) is influenced by the real-time control bit 2 (= part of the master control word).

See also Functional Description "Real-Time Control and Status Bits"

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0303 - Attributes

Para. Name:	**DE**	Zuweisung Echtzeitsteuerbit 2		
	EN	Allocation of real-time control Bit 2		
	FR	Allocation bit contrôle temps réel 2		
	ES	Asignación bit de mando tiempo real 2		
	IT	Allocazione del Real Time Control Bit 2		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

S-0-0305, Allocation of real-time status Bit 1

Note: The real-time status bits can only be used in conjunction with SERCOS interface!

In order to allocate a signal to the real-time status bit 1, the IDN of the signal is written to the operating data of the allocation for the real-time status bit 1.
When such an allocation is made the allocated signal (bit 0) afterwards appears in the real-time status bit 1 (= part of the drive status word). If the programmed IDN is not available, the drive reacts with the service channel error message "IDN not available".

See also Functional Description "Real-Time Control and Status Bits"

S-0-0305 - Attributes

Para. Name:	**DE**	Zuweisung Echtzeitstatusbit 1		
	EN	Allocation of real-time status Bit 1		
	FR	Allocation bit état temps réel 1		
	ES	Asignación bit de estado tiempo real 1		
	IT	Allocazione del Real Time Status Bit 1		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0307, Allocation of real-time status Bit 2

Note: The real-time status bits can only be used in conjunction with SERCOS interface!

In order to allocate a signal to the real-time status bit 2, the IDN of the signal is written to the operating data of the allocation for the real-time status bit 2. When such an allocation is made the allocated signal (bit 0) afterwards appears in the real-time status bit 2 (= part of the drive status word).

See also Functional Description "Real-Time Control and Status Bits"

S-0-0307 - Attributes

Para. Name:	**DE**	Zuweisung Echtzeitstatusbit 2		
	EN	Allocation of real-time status Bit 2		
	FR	Allocation bit état temps réel 2		
	ES	Asignación bit de estado tiempo real 2		
	IT	Allocazione del Real Time Status Bit 2		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

S-0-0310, Overload warning

This parameter defines an ident number for the overload warning.
The purpose is to be able to assign the overload warning to a real time status bit. The overload warning is defined as a bit in the Class 2 diagnostics and is set dependent from the load integral limit. Only the bit 0 is defined.

Structure of the parameter:

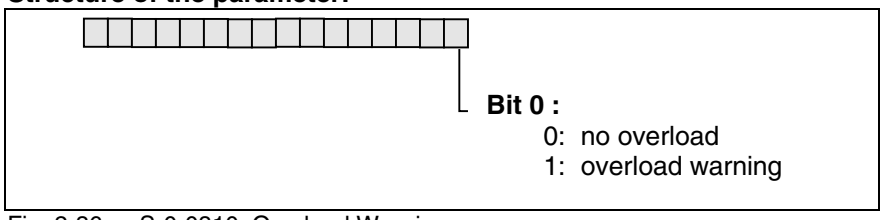


Fig. 2-36: S-0-0310, Overload Warning

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0310 - Attributes

Para. Name:	**DE**	Überlast Warnung		
	EN	Overload warning		
	FR	Alerte surcharge		
	ES	Aviso sobrecarga		
	IT	Preallarme Sovracarica		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	-
Format:		BIN	**Validity check:**	no
Unit:			**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

S-0-0311, Amplifier overtemperature warning

This parameter defines an ident number for the amplifier overtemperature warning. The purpose is to be able to assign the amplifier overtemperature warning to a real time status bit. The amplifier overtemperature warning is defined as a bit in the Class 2 diagnostics and is set dependent from the amplifier temperature warning threshold. Only the bit 0 is defined.

Structure of the parameter:

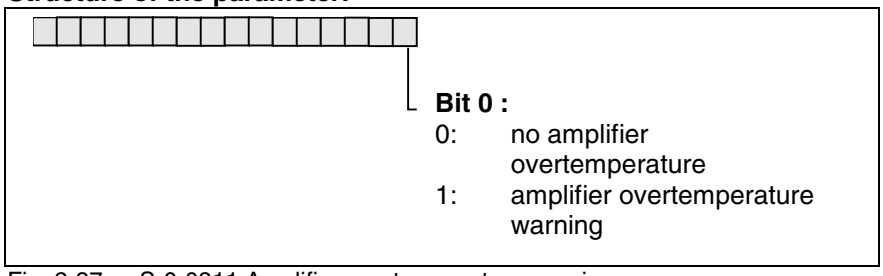


Fig. 2-37: S-0-0311 Amplifier overtemperature warning

S-0-0311 - Attributes

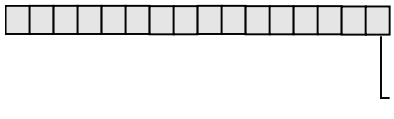
Para. Name:	**DE**	Verstärker-Übertemperatur-Warnung		
	EN	Amplifier overtemperature warning		
	FR	Alerte surchauffe ampli		
	ES	Aviso de sobretemperatura del amplificador		
	IT	Avvertenza sovratemperatura amplificatore		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	-
Format:		BIN	**Validity check:**	no
Unit:			**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0312, Motor overtemperature warning

This parameter defines an ident number for the motor overtemperature warning. The purpose is to be able to assign the motor overtemperature warning to a real time status bit. The motor overtemperature warning is defined as a bit in the Class 2 diagnostics and is set dependent from the motor temperature warning threshold. Only the bit 0 is defined.

Structure of the parameter:



Bit 0 :
0: no motor overtemperature
1: motor overtemperature warning

Fig. 2-38: S-0-0312 Motor overtemperature warning

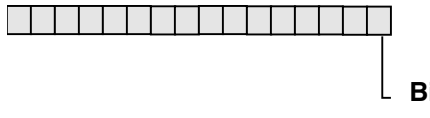
S-0-0312 - Attributes

Para. Name:	**DE**	Motor-Übertemperatur-Warnung		
	EN	Motor overtemperature warning		
	FR	Alerte surchauffe moteur		
	ES	Aviso sobretemperatura motor		
	IT	Preallarme Sovratemperature Motore		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	-
Format:		BIN	**Validity check:**	no
Unit:			**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

S-0-0315, Positioning speed > n_limit

This parameter defines an ident number for the warning "Positioning speed > n_limit". The purpose is to be able to assign the warning to a real time status bit. The warning "Positioning speed > n_limit" is defined as a bit in the Class 2 diagnostics and is set, when the positioning velocity is outside the velocity limits. Only the bit 0 is defined.

Structure of the parameter:



Bit 0 :
0: Positioning speed < n_limit
1: Positioning speed > n_limit

Fig. 2-39: S-0-0315 Positioning speed > n_limit

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0315 - Attributes

Para. Name:	**DE**	Positioniergeschwindigkeit > n_Grenz
	EN	Positioning speed > n_limit
	FR	Vitesse de positionnement > n_limite
	ES	Velocidad posicionamiento > n_limit
	IT	Velocità Posizionamento > n_limite

Function:	Parameter	**Editability:**	no
Data length:	2Byte	**Memory:**	-
Format:	BIN	**Validity check:**	no
Unit:		**Extreme value check:**	no
Decimal places:	0	**Combination check:**	no
Input min/max:	- / -		
Default value:	-	**Cyc. transmittable:**	-

S-0-0323, Target position beyond position limits

This parameter defines an ident number for the warning "Target position beyond position limits". The purpose is to be able to assign the warning to a real time status bit. The warning "Target position beyond position limits" is defined as a bit in the Class 2 diagnostics and is set, when the given target position is outside the position limits, positive or negative.

Note: If the actual position value exceeds a position limit, the bit for "Position limit exceeded" in the Class 1 diagnostics is set.

Structure of the parameter:

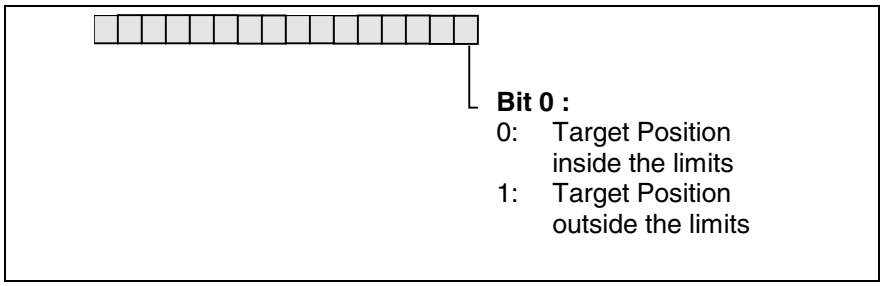


Fig. 2-40: S-0-0323 Target position beyond position limits

S-0-0323 - Attributes

Para. Name:	**DE**	Zielposition außerhalb der Lagegrenzwerte
	EN	Target position beyond position limits
	FR	Position cible hors limites de pos.
	ES	Posición objeto fuera de limites
	IT	Posizione da raggiungere fuori dai Limiti

Function:	Parameter	**Editability:**	no
Data length:	2Byte	**Memory:**	-
Format:	BIN	**Validity check:**	no
Unit:		**Extreme value check:**	no
Decimal places:	0	**Combination check:**	no
Input min/max:	- / -		
Default value:	-	**Cyc. transmittable:**	-

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0328, Assign list signal status word

The signal status word (S-0-0144) is configured with the parameters **S-0-0026, Configuration list signal status word** and **S-0-0328, Assign list signal status word**.
These parameters have variable length with data elements of 16 bits. In the parameter **S-0-0026, Configuration list signal status word**, the **ident number** of the parameters is set, which contains the original bit (source). The parameter **S-0-0328, Assign list signal status word** determines, which **bit** in the data is copied into the signal status word. The position in the respective configuration list determines, to which position in the signal status word the chosen bit is copied.

See also the functional description: "Configurable Signal Status Word".

S-0-0328 - Attributes

Para. Name:	**DE**	Zuweisungsliste Signal-Statuswort		
	EN	Assign list signal status word		
	FR	Liste d'assignations pour mot d'état des signaux		
	ES	Lista de asignaciones palabra de estado de señal		
	IT	Elenco delle assegnazioni parole di stato del segnale		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte var.	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	P3-4
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		0	**Cyc. transmittable:**	no

S-0-0329, Assign list signal control word

The signal control word (S-0-0145) is configured with the parameters **S-0-0027, Configuration list signal control word** and **S-0-0329, Assign list signal control word**. These parameters have variable length with data elements of 16 bits.
In the Parameter **S-0-0027, Configuration list signal control word**, the **ident number** of the parameter is set which contains the bit to manupulate (target). In the Parameter **S-0-0329, Assign list signal control word**, it is set which **bit** in the data of that ident number is manipulated by the signal control word. The position in the respective configuration list determines the bit assignment in the signal control word.

See also the functional description: "Configurable Signal Control Word".

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0329 - Attributes

Para. Name:	**DE**	Zuweisungsliste Signal-Steuerwort		
	EN	Assign list signal control word		
	FR	Liste d'assignations pour mot de contrôle des signaux		
	ES	Lista de asignaciones palabra de mando de señal		
	IT	Elenco delle assegnazioni parole di controllo segnale		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte var.	**Memory:**	-
Format:		DEC_OV	**Validity check:**	P3-4
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

S-0-0330, Message ’n_actual = n_command’

This parameter defines an ident number for the message ’n_actual = n_command’.
This message is defined as a bit in the class 3 diagnostics. It is set when the actual velocity **S-0-0040, Velocity feedback value** is within the **S-0-0157, Velocity window**, referring to the sum of **S-0-0036, Velocity command value** and **S-0-0037, Additive velocity command value**. Only the bit 0 is defined in the operation data.

See also functional description: "**S-0-0013, Class 3 diagnostics**".

S-0-0330 - Attributes

Para. Name:	**DE**	Meldung n_ist = n_soll		
	EN	Message 'n_actual = n_command'		
	FR	Message vitesse de consigne atteinte		
	ES	Mensaje n_real = n_nominal		
	IT	Messaggio n_reale = n_nominale		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	-
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0331, Status ’n_actual = 0’

This parameter sets an ident number for the status ‘n_actual = 0’.
The status ‘n_actual = 0’ is defined as a bit in the class 3 diagnostics and is set when the velocity actual value is found within the **S-0-0124, Standstill window**. Only bit 0 is defined in the operating data. The output signal "Standstill" corresponds to this bit.

See also the functional description "**S-0-0013, Class 3 diagnostics**".

S-0-0331 - Attributes

Para. Name:	**DE**	Meldung n_ist = 0		
	EN	Status ’n_actual = 0’		
	FR	Etat 'vitesse réelle = 0'		
	ES	Mensaje n_real = 0		
	IT	Messaggio n_reale = 0		
Function:		Parameter	**Editability:**	-
Data length:		2Byte	**Memory:**	-
Format:		BIN	**Validity check:**	nicht
Unit:		--	**Extreme value check:**	-
Decimal places:		0	**Combination check:**	-
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

S-0-0332, Message ’n_actual < nx’

This parameter defines an ident number for the message ’n_actua < nx’. This message is defined as a bit in the class 3 diagnostics. It is set when the actual velocity **S-0-0040** is below the velocity threshold nx **S-0-0125**. Only bit 0 is defined in the operating data.

See also the functional description "**S-0-0013, Class 3 diagnostics**".

S-0-0332 - Attributes

Para. Name:	**DE**	Meldung n_ist < nx		
	EN	Message 'n_actual < nx'		
	FR	Etat vitesse réelle < nx		
	ES	Mensaje n_real < nx		
	IT	Stato Velocità reale < nx		
Function:		Parameter	**Editability:**	-
Data length:		2Byte	**Memory:**	-
Format:		BIN	**Validity check:**	nicht
Unit:		--	**Extreme value check:**	-
Decimal places:		0	**Combination check:**	-
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0334, Message ’T >= T_limit’

This parameter defines an ident number for the message ’T >= T_limit’. This message is defined as a bit in the class 3 diagnostics. It is set when the torque **S-0-0084** is greater than the bipolar torque limit **S-0-0092**. Only bit 0 is defined in the operating data.

See also the functional description "**S-0-0013, Class 3 diagnostics**".

S-0-0334 - Attributes

Para. Name:	**DE**	Meldung Md >= Mdgrenz		
	EN	Message ’T >= T_limit’		
	FR	Etat ’couple >= couple_lim’		
	ES	Mensaje par >= par_límite		
	IT	Messaggio coppia >= coppia limite		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	-
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

S-0-0336, Message In position

This parameter defines an ident number for the message ‘In position’. The message ‘In Position’ (S-0-0336 bit 0=1) is defined as a bit in the class 3 diagnostics(S-0013 bit 6), if: Following error (S-0-0189) <Position window (S-0-0057) During the spindle positioning command, the message is set as soon as the spindle is in position.

See also the functional description: "S-0-0013, Class 3 diagnostics".

S-0-0336 - Attributes

Para. Name:	**DE**	Meldung In-Position		
	EN	Message In position		
	FR	Message ’en position’		
	ES	Mensaje En posición		
	IT	Messaggio In posizione		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	-
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0342, Target position reached

This parameter defines an ident number for the message ‘target position reached’. The message ‘target position reached’ is defined as a bit in the class 3 diagnostics. It is set when the position command value S-0-0047 given by the drive internal interpolator is equal to the target position S-0-0258. Only bit 0 is defined in the operating data.

See functional description: "S-0-0182, Manufacturer class 3 diagnostics"

S-0-0342 - Attributes

Para. Name:	**DE**	Zielposition erreicht		
	EN	Target position reached		
	FR	Position cible atteinte		
	ES	Posición de destino alcanzada		
	IT	Posizione di destinazione raggiunta		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	-
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

S-0-0346, Positioning command strobe

Parameter **S-0-0346, Positioning command strobe** supports the acceptance of the setpoints into operating mode "Drive controlled positioning" and "Process block mode".

Operating mode	Setpoints
Drive controlled positioning	S-0-0282, Positioning command value
Process block mode	P-0-4026, Process block selection

Fig. 2-41: Operating modes and relevant setpoints

Toggling bit 0 of S-0-0346 means that the relevant setpoint will be assumed.

Note: In operating mode "Drive controlled positioning“ the contents of **S-0-0282, Positioning command value** are process in terms of S-0-0393 (Bit 3) as either an absolute target position or as a relative traversing path. The acceptance of the setpoint is then confirmed with **S-0-0419, Positioning command acknowledge**.

See also, function description: "Operating Mode: Drive Controlled Positioning".

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0346 - Attributes

Para. Name:	**DE**	Positioniersollwert-Übernahme		
	EN	Positioning command strobe		
	FR	Drapeau pour prise de consignes de position relatives		
	ES	Aceptación de valor nominal de posicionamiento		
	IT	Rilevamento valore nominale di posizionamento		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	no
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		0 / 1		
Default value:		---	**Cyc. transmittable:**	MDT

S-0-0347, Speed deviation

Parameter S-0-0347 indicates the difference between the velocity command value and the velocity feedback value in the velocity controller.

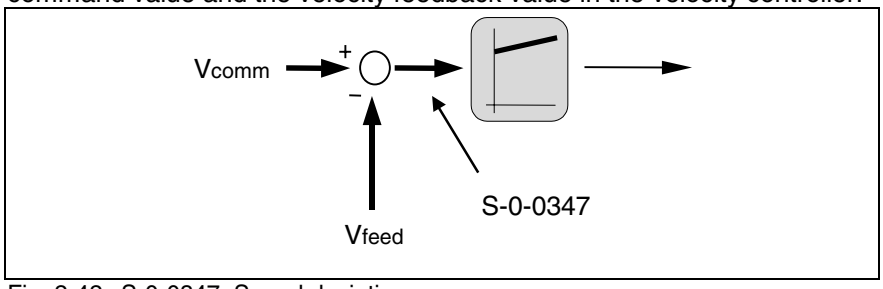


Fig. 2-42: S-0-0347, Speed deviation

See also the functional description: "Velocity Controller".

S-0-0347 - Attributes

Para. Name:	**DE**	Geschwindigkeits-Regelabweichung		
	EN	Speed deviation		
	FR	Ecart de vitesse		
	ES	Desviación de velocidad		
	IT	Scostamento di velocità		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	no
Format:		DEC_MV	**Validity check:**	no
Unit:		S-0-0044	**Extreme value check:**	no
Decimal places:		S-0-0045/S-0-0046	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0348, Acceleration feedforward gain

The acceleration feedforward helps to reduce the following error during the acceleration in operation modes without following error. To do this, the current acceleration command value is multiplied by the "acceleration feedforward gain" and added to the current command value of the velocity controller.

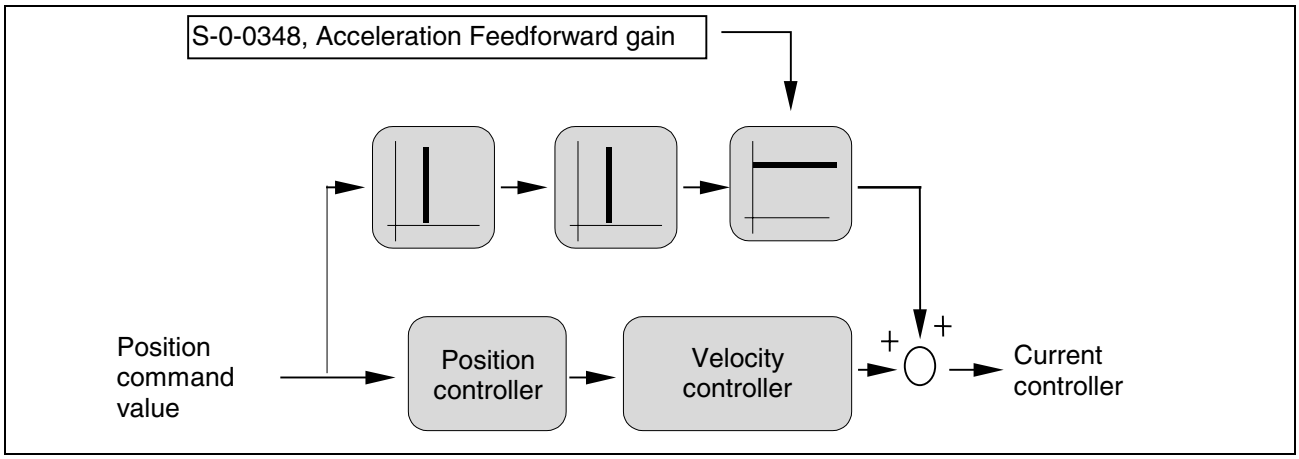


Fig. 2-43: Acceleration feedforward

Activation:
Writing a value greater than 0 to the parameter activates the acceleration feedforward.

Note: The controller functions as well without feedforward! (The standard value equals 0.) Acceleration feedforward is only possible in lagless modes (without following error).

Comparison between the different types of feedforward
The **velocity feedforward** is activated by selecting an operating mode without **lag** (following error). This creates (from the point of view of the position controller) a **feedforward of 1st order** (prop. to velocity). This means that at constant speed, the position deviation is 0. A lag results, nevertheless, during acceleration and deceleration.
The **acceleration feedforward** is activated by entering more than 0 for this parameter. It creates (from the point of view of the position controller), a **feedforward of 2nd order** (prop. to acceleration). The position deviation is 0 as long as the correct gain is set and the acceleration is constant.

Correct input value:

$$S\text{-}0\text{-}0348 = \frac{\text{moment of inertia } \left(\text{kgm}^2\right)}{\text{torque constant } (\text{Nm/A})} * 1000$$

The moment of inertia is the total sum of the rotor and the reflected load inertia.
The factor 1000 is needed for unit mA.
Fig. 2-44: Acceleration feedforward prop. gain

See also the functional description: "Basic Drive Functions - Control Loop Settings - Setting the Acceleration Feed Forward"

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0348 - Attributes

Para. Name:	**DE**	Verstärkung Beschleunigungsvorsteuerung		
	EN	Acceleration feedforward gain		
	FR	Anticipation d'accélération, gain		
	ES	Ganancia de anticipación de aceleración		
	IT	Preregolazione accellerazione		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		P-0-4014	**Extreme value check:**	yes
Decimal places:		1	**Combination check:**	no
Input min/max:		0 / 6553.5		
Default value:		0	**Cyc. transmittable:**	no

S-0-0349, Jerk limit bipolar

The Jerk limit bipolar limits the **acceleration change per time** during "Drive Halt" and with commands that generate their own position command values.

See also the functional description: "Drive Halt", "Drive-Controlled Homing"",

S-0-0349 - Attributes

Para. Name:	**DE**	Ruck-Grenzwert bipolar		
	EN	Jerk limit bipolar		
	FR	Limite de Jerk bipolaire		
	ES	Límite de sacudida bipolar		
	IT	Limite scossa bipolare		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		S-0-0160	**Extreme value check:**	yes
Decimal places:		1	**Combination check:**	no
Input min/max:		0 / 4000000.000		
Default value:		0	**Cyc. transmittable:**	MDT

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0359, Positioning Deceleration

This parameter specifies the maximum decel in operating modes "Drive-internal interpolation" and "Drive-controlled positioning".
If parameter **S-0-0359, Positioning Deceleration** equals zero, then the drive uses parameter **S-0-0260, Positioning Acceleration** for decel.



CAUTION

Property damage caused by faults in the controls of motors and moving parts!

⇒ If the accel value is also equal to zero, then the drive can no longer decel. The specified target will never be reached or it will be overrun. Always set the decel value to > 0!

Also see the function descriptions:

- "Operating Mode: Drive Internal Interpolation"
- "Operating Mode: Drive Controlled Positioning"

S-0-0359 - Attributes

Para. Name:	**DE**	Positionier-Verzögerung		
	EN	Positioning Deceleration		
	FR	Décélération de positionnement		
	ES	Deceleración de posicionamiento		
	IT	Decellerazione di Posizionamento		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	P3-4
Unit:		S-0-0160	**Extreme value check:**	yes
Decimal places:		S-0-0161, S-0-0162	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

S-0-0360, MDT Data container A

In the parameter S-0-0360, MDT Data container A, the master transfers the data of the target parameter which has been addressed via the "Addressing for data container A" parameters (S-0-0368 with S-0-0371).
If a target parameter with 2 byte data is addressed, only the low word of **S-0-0360, MDT Data container A** is used. **To be able to use the data container, you must enter the p**arameter S-0-0360 into the list of cyclical data in parameter S-0-0024 during phase 2.

Note:	**The** parameter **S-0-0360, MDT Data container A** is not writable via the asynchronous data channel.

See also the functional description: "Multiplex Channel".

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0360 - Attributes

Para. Name:	**DE**	MDT-Datencontainer A		
	EN	MDT Data container A		
	FR	Récipient de dates A pour MDT		
	ES	Contenedor de datos A para MDT		
	IT	Contenitore di Dati A per MDT		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	MDT

S-0-0362, List index, MDT data container A

The parameter S-0-0362, List index, MDT data container A contains the list index, which gives access to singular list elements configured in **S-0-0370, Configuration list MDT data container**.
This gives the possibility in the multiplex channel to write single elements in a list with the index as a pointer. **The parameter S-0-0362, List index, MDT data container A** can, as required, be configured in the Master data telegram (**MDT**) or written to via the **asynchronous data channel** or another interface.

Note: **The p**arameter becomes only active when a list parameter is addressed in **S-0-0368, Addressing Data container A**.

See also the functional description: "Multiplex Channel".

S-0-0362 - Attributes

Para. Name:	**DE**	Listenindex, MDT-Datencontainer A		
	EN	List index, MDT data container A		
	FR	Index de liste, récipient de dates A pour MDT		
	ES	Indice lista, contenedor de datos A para MDT		
	IT	Index Lista, Contenitore di Dati A per MDT		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	-
Format:		HEX	**Validity check:**	no
Unit:			**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	AT & MDT

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0364, AT Data container A

In the parameter S-0-0364, AT Data container A, the drive copies the data of the source parameter which has been addressed via the "Addressing for data container A" (S-0-0368 with S-0-0371).
If a source parameter with 2 byte data is addressed, only the low word is copied into **S-0-0364, AT Data container A**. To **be able to use the data container, you must enter the p**arameter S-0-0364 into the list of cyclical in parameter S-0-0016 during phase 2.

Note:	The parameter **S-0-0364** is not writable via the asynchronous data channel.

See also the functional description: "Multiplex Channel".

S-0-0364 - Attributes

Para. Name:	**DE**	AT-Datencontainer A		
	EN	AT Data container A		
	FR	Récipient de dates A pour AT		
	ES	Contenedor de datos A para AT		
	IT	Contenitore di Dati A per AT		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	AT

S-0-0366, List index, AT data container A

The parameter S-0-0366, List index, AT data container A contains the list index, which gives access to singular list elements configured in **S-0-0371, Configuration list AT data container**.
This gives the possibility in the multiplex channel to write single elements in a list with the index as a pointer. **The parameter S-0-0366, List index, AT data container A** can, as required, be configured in the Master data telegram (**MDT**) or written to via the **asynchronous data channel** or another interface.

Note:	The parameter becomes only active when a list parameter is addressed in **S-0-0368, Addressing Data container A**.

See also the functional description: "Multiplex Channel".

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0366 - Attributes

Para. Name:	**DE**	Listenindex, AT-Datencontainer A		
	EN	List index, AT data container A		
	FR	Index de liste, récipient de dates A pour AT		
	ES	Indice lista, contenedor de datos A para AT		
	IT	Index Lista, Contenitore di Dati A per AT		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	-
Format:		HEX	**Validity check:**	no
Unit:			**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	MDT

S-0-0368, Addressing for data container A

The parameter S-0-0368, Addressing for data container A contains the indices for the access to the two parameter lists S-0-0370, Configuration list MDT data container and S-0-0371, Configuration list AT-data container.
The content of the two data containers S-0-0360 and S-0-0364 is defined here. Only the bits 0..7 (for MDT) and 8..15 (for AT) are used for the addressing; the other bits are truncated.

Note:	If an index greater than the number of elements in the respective lis**t** is set, the warning **E4/08 Invalid Addressing MDT-data container A** or, respectively, E4/09, Invalid Addressing AT-data container A **is** generated.

Note:	The parameter **S-0-0368, Addressing data container A** can be configured in the Master data telegram (**MDT)**, or written to via the asynchronous data channel or another interface, as needed.

See also the functional description: "Multiplex Channel".

S-0-0368 - Attributes

Para. Name:	**DE**	Adressierung Datencontainer A		
	EN	Addressing for data container A		
	FR	Index pour conteneur de données A		
	ES	Dirección para contenedor de datos A		
	IT	Indirizzo per contenitore dati A		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	-
Format:		HEX	**Validity check:**	-
Unit:		--	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	AT & MDT

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0370, Configuration list for MDT data container

In the parameter **S-0-0370, Configuration list MDT-data container**, those ident numbers (IDN) are entered, which are transferred, depending from the index in **S-0-0368, Addressing for data container A**, low byte, in the **S-0-0360, MDT Data container A**. Writing to S-0-0370 is only possible in communication phase 2
In this procedure, the following **checks** are done :

- Check, whether the input IDN exists; if not, the async. channel error message "0x1001, Ident number non-existent“ is generated.
- Check, whether the input IDN is present in the parameter **S-0-0188, IDN list of configurable data in the MDT**; if not, the async. channel error message "0x7008, data not correct“ is generated.

Note: **A maximum of** 32 ident numbers is configurable in **S-0-0370**.

See also the functional description: "Multiplex Channel"

S-0-0370 - Attributes

Para. Name:	**DE**	Konfigurationsliste MDT-Datencontainer		
	EN	Configuration list for MDT data container		
	FR	Liste de config. pour conteneur de données MDT		
	ES	Lista de config. para contenedor de datos MDT		
	IT	Elenco di configuraz. per contenitore dati MDT		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte var.	**Memory:**	-
Format:		IDN	**Validity check:**	-
Unit:		--	**Extreme value check:**	-
Decimal places:		0	**Combination check:**	-
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

S-0-0371, Configuration list for the AT data container

In the parameter **S-0-0371, Configuration list AT-data container**, those ident numbers (IDN) are entered, which are transferred, depending from the index in **S-0-0368, Addressing for data container A**, high byte, in the **S-0-0364, AT Data container A**. Writing to S-0-0371 is only possible in communication phase 2.
In this procedure, the following **checks** are done :

- Check, whether the input IDN exists; if not, the async. channel error message "0x1001, Ident number non-existent“ is generated.
- Check, whether the input IDN is present in the parameter **S-0-0187, IDN list of configurable data in the AT**; if not, the async. channel error message "0x7008, data not correct“ is generated.

Note A maximum of 32 ident numbers is configurable in **S-0-0371, Configuration list AT data container**.

See also the functional description: "Multiplex Channel"

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0371 - Attributes

Para. Name:	**DE**	Konfigurationsliste AT-Datencontainer		
	EN	Configuration list for the AT data container		
	FR	Liste de config. pour conteneur de données AT		
	ES	Lista de config. para contenedor de datos AT		
	IT	Elenco di configuraz. per contenitore dati AT		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte var.	**Memory:**	-
Format:		IDN	**Validity check:**	-
Unit:		--	**Extreme value check:**	-
Decimal places:		0	**Combination check:**	-
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

S-0-0375, List of diagnostic numbers

The drive enters every change of the parameter **S-0-0390 Diagnostic number** in this list. The list is organized as a circular buffer; there is place for 50 numbers. When the list is read, the 1st element of the parameter shows the last displayed diagnostic number.

See also the functional description: "List of diagnostic numbers"

S-0-0375 - Attributes

Para. Name:	**DE**	Liste Diagnosenummern		
	EN	List of diagnostic numbers		
	FR	Liste des numéros de diagnostic		
	ES	Lista de numeros de diagnostico		
	IT	Lista di Numeri Diagnosi		
Function:		Parameter	**Editability:**	no
Data length:		2Byte var.	**Memory:**	no
Format:		HEX	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0378, Encoder 1, absolute range

Parameter **S-0-0378 Absolute encoder 1, range** defines the range in which the encoder selected in **P-0-0074, Feedback type 1** can generate the position information absolutely.

See also Function Description: "Absolute encoder range and absolute encoder evaluation"

S-0-0378 - Attributes

Para. Name:	**DE**	Absolutbereich Geber 1		
	EN	Encoder 1, absolute range		
	FR	Codeur absolu 1, champs		
	ES	Encoder absoluto 1, campo		
	IT	Encoder assoluto 1, campo		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	no
Format:		DEC_OV	**Validity check:**	no
Unit:		S-0-0076	**Extreme value check:**	no
Decimal places:		S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:		0 / 2147483647		
Default value:		---	**Cyc. transmittable:**	no

S-0-0382, Intermediate bus power

Display of the DC-bus power in kW.

S-0-0382 - Attributes

Para. Name:	**DE**	Zwischenkreisleistung		
	EN	Intermediate bus power		
	FR	Puissance circuit interméd.		
	ES	Potencia de circuito intermedio		
	IT	Potenza sul Bus DC		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	no
Format:		DEC_MV	**Validity check:**	no
Unit:		kW	**Extreme value check:**	no
Decimal places:		3	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0390, Diagnostic message number

In the parameter Diagnostic message number, the same number is stored as can be seen in the seven segment display. This makes it possible for the control to generate its own diagnostics according to the diagnostic message number (for example in languages which are not stored as diagnostics in the drive).

Example:

Diagnostic Message:	"F822 Motor encoder failure: signal too small" in parameter S-0-0095
Seven Segment Display:	changing "F8" <=> "22"
Diagnostic message number:	"F822(hex)" in parameter S-0-0390

See also the functional description: "Diagnostic Message Number"

S-0-0390 - Attributes

Para. Name:	**DE**	Diagnose-Nummer		
	EN	Diagnostic message number		
	FR	Numéro message diagnostic		
	ES	Numero de diagnostico		
	IT	Numero Messaggio Diagnosi		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	no
Format:		HEX	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	AT

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0393, Command value mode

Structure of the parameter:

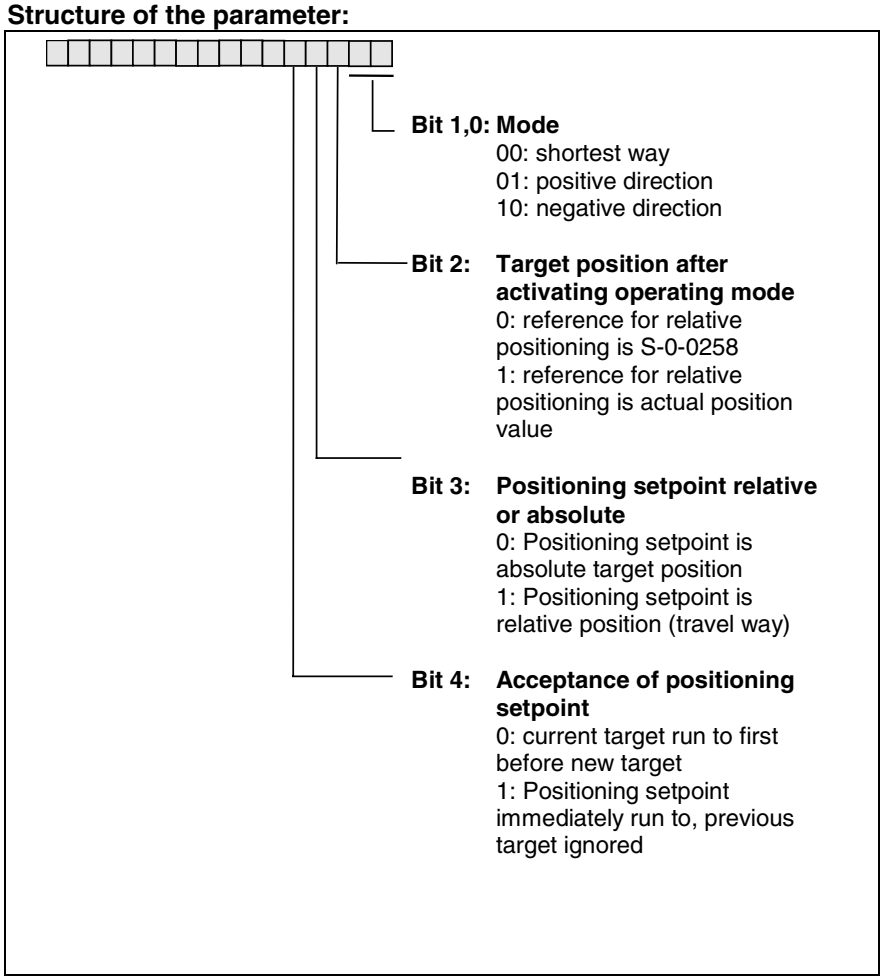


Fig. 2-45: Structure of the parameter S-0-0393

Description of bits 0 and 1

Given an activated modulo function, the interpretation of the position setpoints (such as **S-0-0047, Position command value**, **S-0-0282, Positioning command value** and **S-0-0258, Target position**) depends on the mode set.

See function description: "Determining the Feedback Interface of the Motor Feedback"

Description of bit 2

Bit 2 = 0:
In operating mode "Drive controlled positioning" and the parametrization of **S-0-0393, Command value mode**, Bit 2=0, the drive relates the traversing path (relative positioning setpoint) to the value in parameter **S-0-0258, Target position**. This means that the interruption of a positioning procedure (e.g., in the event of a failure) does not lead to the loss of the sequential dimensional reference, i.e., the remainder of the path is always completed.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Bit 2 = 1:
In operating mode "Drive controlled positioning" and the parametrization of **S-0-0393, Command value mode**, Bit 2=1, the drive relates the traversing path (relative positioning setpoint) to the actual position. Parameter **S-0-0258, Target position** is set to the actual position, i.e., an interruption during the positioning procedure, e.g., in the event of a failure, means that the drive initially remains at the actual position value.
After a status change in parameter **S-0-0346, Positioning command strobe** the sequential dimensional reference is lost.

Description of bit 3

Bit 3 = 0:
Parameter **S-0-0282, Positioning command value** works as if it were an absolute target position.
Bit 3 = 1:
Parameter **S-0-0282, Positioning command value** works as if it were a relative target position (travel path).

Description of bit 4

Bit 4 = 0: ("Running the positioning setpoint")
Parameter **S-0-0282, Positioning command value** is not directly accepted in the case of a status change in parameter **S-0-0346, Positioning command strobe**, but rather the previously set target position is run to. As soon as the drive sets the message "Target position reached" (Bit 12 of **S-0-0013, Class 3 diagnostics**), the drive sets the next target position. If the acceptance of the target position is successful, then the acknowledgement of the acceptance signal is generated.

Bit 4 = 1: ("Immediate acceptance of the positioning command value")
Parameter **S-0-0282, Positioning command value** is immediately accepted given a status change of parameter **S-0-0346, Positioning command strobe**. The previously set target position is ignored and the new target position is immediately run to.

See also the function description: "Processing Command Values in Modulo Format, Shortest Path - Direction Selection".

S-0-0393 - Attributes

Para. Name:	**DE**	Sollwertmodus		
	EN	Command value mode		
	FR	Mode de consigne		
	ES	Modo de valor nominal		
	IT	Modo per Valori comandati		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	Param.-E²prom
Format:		BIN	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		0 / 2		
Default value:		0	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0399, IDN list of configurable data in the signal control word

To configure the signal control word, you must enter the ident numbers of the parameters in the "Assign list signal control word". In the parameter **S-0-0399 IDN list of configurable data in the signal control word**, you can read which parameters can be entered there.

Contents S-0-0399:

- S-0-0000, Zero-Parameter to switch off
- S-0-0139, D700 Command Parking axis
- S-0-0148, C600 Drive controlled homing procedure command
- S-0-0149, D400 Positive stop drive procedure command
- S-0-0152, C900 Position spindle command
- S-0-0169, Probe control parameter
- S-0-0170, Probing cycle procedure command
- S-0-0191, D600 Cancel reference point procedure command
- S-0-0346, Setup flag for relative command values
- S-0-0393, Command value mode
- S-0-0405, Probe 1 enable
- S-0-0406, Probe 2 enable

- P-0-0012, C300 Command ’Set absolute measurement’
- P-0-0014, D500 Command determine marker position
- P-0-0036, Trigger control word
- P-0-0220, D800 Command Measuring wheel operation mode
- P-0-4026, Process block selection
- P-0-4056, Jog inputs
- P-0-4060, Process block control word

See also the functional description: "Configuring the Signal Control Word"

S-0-0399 - Attributes

Para. Name:	**DE**	IDN-Liste der konfigurierbaren Daten im Signal-Steuerwort		
	EN	IDN list of configurable data in the signal control word		
	FR	Liste IDN des dates configurables dans mot de contr. signaux		
	ES	Lista IDN de datos configurables en palabra de mando señales		
	IT	Lista IDN Dati configurabili nella Parole di Contr. Segnali		
Function:		Parameter	**Editability:**	no
Data length:		2Byte var.	**Memory:**	-
Format:		IDN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		-	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0400, Home switch

This parameter is used to assign an ID number to the home switch (external signal).

Application:

The IDN (and thus the feedback status of the home switch) can be assigned to a real-time status bit.

Structure of the parameter:

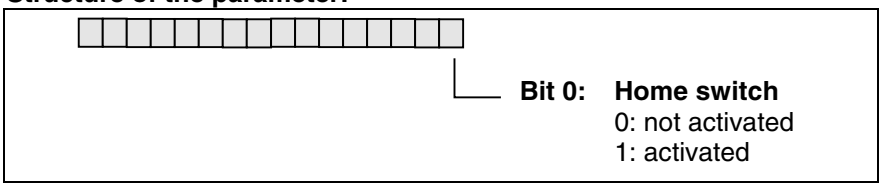


Fig. 2-46: S-0-0400, Home switch

See also the functional description: "Evaluation of the Home Switch"

S-0-0400 - Attributes

Para. Name:	**DE**	Referenzschalter		
	EN	Home switch		
	FR	Contact d'origine		
	ES	Interruptor de referencia		
	IT	FC di Zero		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	no
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0401, Probe 1

This parameter is used to assign an ID number to Probe 1 (external signal). This makes it possible to assign Probe 1 to a real-time status bit, for example.
The signal Probe 1 is only scanned by the drive and considered valid if the **S-0-0170, Probing cycle procedure command** is active and **S-0-0405, Probe 1 enable** is present.

Parameter structure:

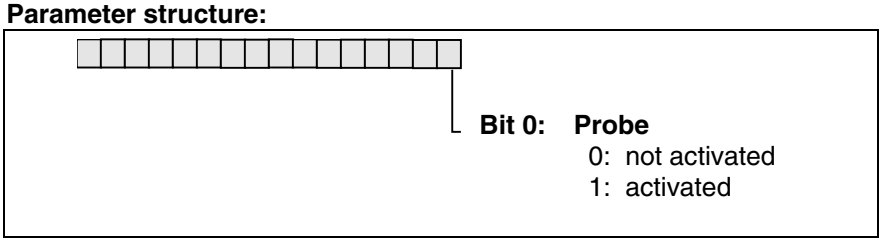


Fig. 2-47: S-0-0401, Probe 1

See also the functional description: "Probe Input Feature".

S-0-0401 - Attributes

Para. Name:	**DE**	Messtaster 1		
	EN	Probe 1		
	FR	Sonde de mesure 1		
	ES	Teclas de medición 1		
	IT	Tastatore di misura 1		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	no
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

S-0-0402, Probe 2

This parameter is used to assign an ID number to Probe 2 (external signal). This makes it possible to assign Probe 2 to a real-time status bit, for example.
The signal Probe 2 is only scanned by the drive and considered valid if the **S-0-0170, Probing cycle procedure command** is active and **S-0-0406, Probe 2 enable** is present.

Parameter structure:

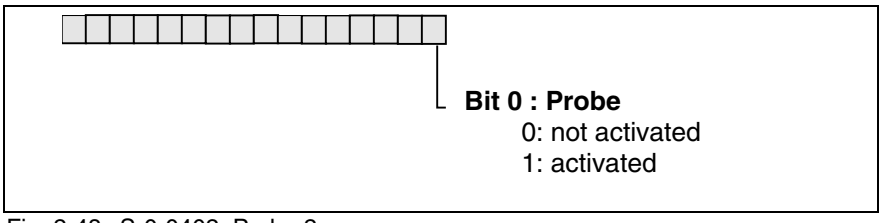


Fig. 2-48: S-0-0402, Probe 2

See also the functional description: "Probe Input Feature".

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0402 - Attributes

Para. Name:	**DE**	Messtaster 2		
	EN	Probe 2		
	FR	Sonde de mesure 2		
	ES	Teclas de medición 2		
	IT	Tastatore di misura 2		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	no
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

S-0-0403, Position feedback value status

Bit 0 of this parameter will be set by the drive when the actual position value as the determined by bit 3 of S**-0-0147, Homing Parameter** is fixed in reference to the machine's zero point (= homed).
When the drive carries out the commands **S-0-0148, C600 Drive controlled homing procedure command** or **P-0-0012, C300 Command Set absolute measuring**, the bit will be reset when they are started and then set again once the respective command has been successfully completed. The actual position value status bit corresponds to the "In reference" signal. In the case of devices with SERCOS interface, the actual position value status can be assigned to a real-time status bit and thus be continuously communicated to the NC in the drive status word (see **S-0-0305, Allocation of real-time status bit 1**).

Parameter structure:

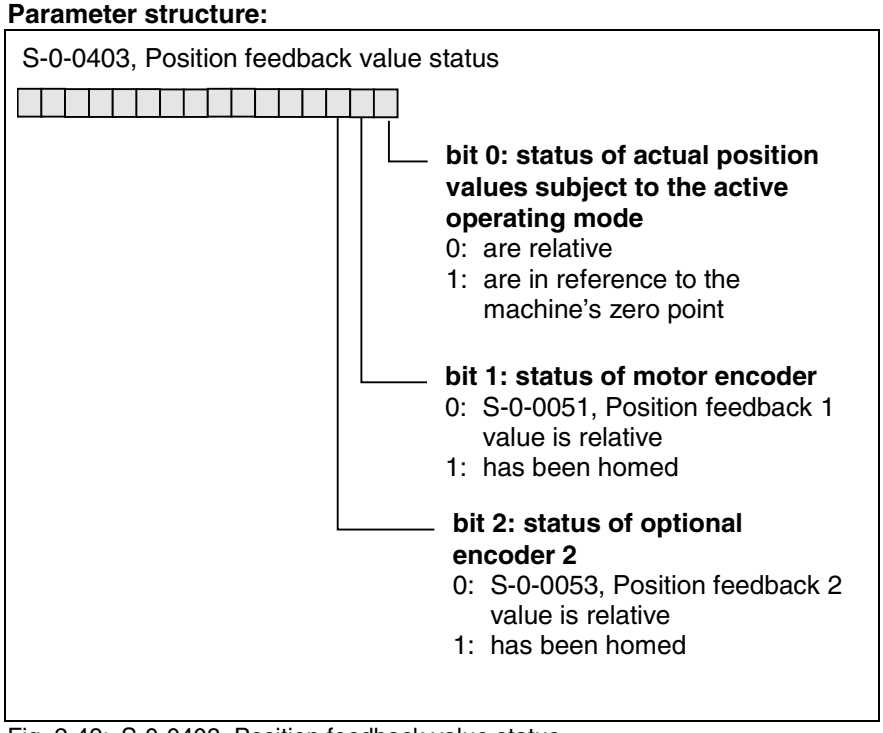


Fig. 2-49: S-0-0403, Position feedback value status

See also Functional Description "Drive-Controlled Homing"

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0403 - Attributes

Para. Name:	**DE**	Status Lageistwerte		
	EN	Position feedback value status		
	FR	Etat des valeurs de retour de position		
	ES	Estado valores reales de posición		
	IT	Stato del Feedback di Posizione		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	no
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

S-0-0405, Probe 1 enable

This parameter is used to enable a probe input.
Changing this signal from 0 to 1 activates the trigger mechanism for evaluating the positive and/or negative slope of the probe signal.
The probe 1 enable can be assigned to a real-time control bit and thus be communicated to the master control word in the drive.

Parameter structure:

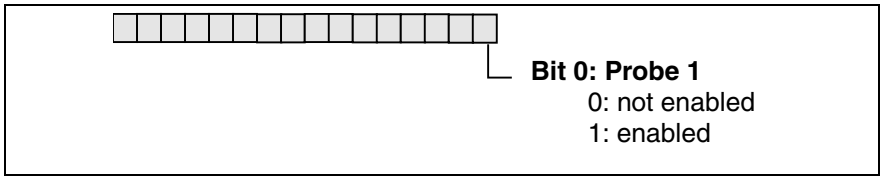


Fig. 2-50: S-0-0405, Probe 1 enable

See also the functional description: "Probe Input Feature".

S-0-0405 - Attributes

Para. Name:	**DE**	Messtaster 1 Freigabe		
	EN	Probe 1 enable		
	FR	Validation de la sonde 1		
	ES	Desbloqueo de teclas de medición 1		
	IT	Tastatore di misura 1 abilitato		
Function:		Parameter	**Editability:**	P4
Data length:		2Byte	**Memory:**	no
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0406, Probe 2 enable

This parameter is used to enable a probe input.
Changing this signal from 0 to 1 activates the trigger mechanism for evaluating the positive and/or negative slope of the probe signal.
The probe 2 enable can be assigned to a real-time control bit and thus be communicated to the drive in the master control word.

Parameter structure:

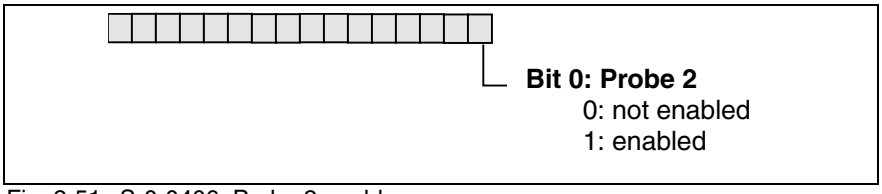


Fig. 2-51: S-0-0406, Probe 2 enable

See also the functional description: "Probe Input Feature".

S-0-0406 - Attributes

Para. Name:	**DE**	Messtaster 2 Freigabe
	EN	Probe 2 enable
	FR	Validation de la sonde 2
	ES	Desbloqueo de teclas de medición 2
	IT	Tastatore di misura 2 abilitato

Function:	Parameter	**Editability:**	P4
Data length:	2Byte	**Memory:**	no
Format:	BIN	**Validity check:**	no
Unit:	--	**Extreme value check:**	no
Decimal places:	0	**Combination check:**	no
Input min/max:	--- / ---		
Default value:	---	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0409, Probe 1 positive latched

Bit 0 in this parameter will be set by the drive if

- the S-0-0170, Probing cycle procedure command is active,
- bit 0 in S-0-0169, Probe control parameter is set,
- S-0-0405, Probe 1 enable is present and
- the positive edge of **S-0-0401, Probe 1** is recognized.

The drive simultaneously stores the value of the selected signal in **S-0-0130, Probe value 1 positive edge**. The drive clears the bit if the NC clears the **S-0-0170, Probing cycle procedure command** or if **S-0-0405, Probe 1 enable** has been set from 1 to 0. The parameter "Probe 1 positive latched" can be assigned to a real-time status bit and thus be continuously communicated to the NC in the drive status word.

Parameter structure:

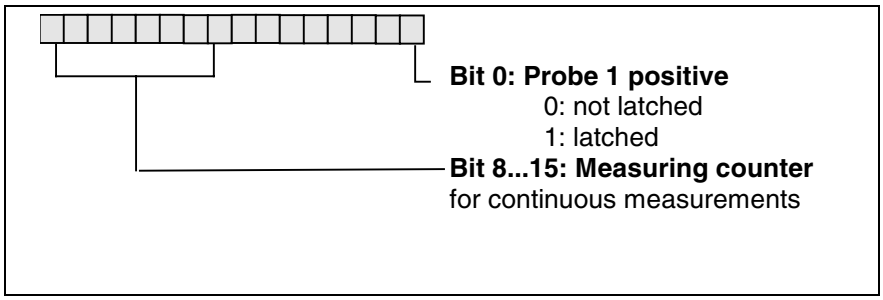


Fig. 2-52: S-0-0409, Probe 1 positive latched

See also the functional description: "Probe Input Feature".

S-0-0409 - Attributes

Para. Name:	**DE**	Messtaster 1 positiv erfasst
	EN	Probe 1 positive latched
	FR	Sonde 1 déclenchée sur front montant
	ES	Teclas de medición 1 bloqueado positivo
	IT	Tastatore di misura 1 positivo rilevato

Function:	Parameter	**Editability:**	no
Data length:	2Byte	**Memory:**	no
Format:	BIN	**Validity check:**	no
Unit:	--	**Extreme value check:**	no
Decimal places:	0	**Combination check:**	no
Input min/max:	--- / ---		
Default value:	---	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0410, Probe 1 negative latched

Bit 0 in this parameter will be set by the drive if

- the S-0-0170, Probing cycle procedure command is active,
- bit 1 in S-0-0169, Probe control parameter is set,
- S-0-0405, Probe 1 enable is present and
- the negative edge of **S-0-0401, Probe 1** is recognized.

The drive simultaneously stores the value of the selected signal in **S-0-0131, Probe value 1 negative edge**. The drive clears the bit if the NC clears the **S-0-0170, Probing cycle procedure command** or if **S-0-0405, Probe 1 enable** has been set from 1 to 0. The parameter "Probe 1 positive latched" can be assigned to a real-time status bit and thus be continuously communicated to the NC in the drive status word.

Parameter structure:

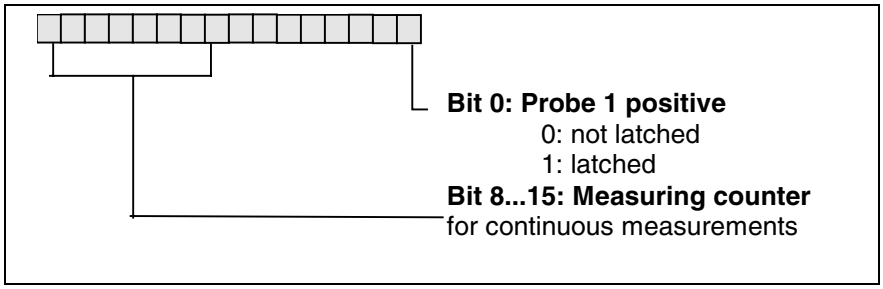


Fig. 2-53: S-0-0409, Probe 1 positive latched

See also the functional description: "Probe Input Feature".

S-0-0410 - Attributes

Para. Name:	**DE**	Messtaster 1 negativ erfasst		
	EN	Probe 1 negative latched		
	FR	Sonde 1 déclenchée sur front descendant		
	ES	Teclas de medición 1 bloqueado negativo		
	IT	Tastatore di misura 1 negativo rilevato		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	no
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0411, Probe 2 positive latched

Bit 0 in this parameter will be set by the drive if

- the S-0-0170, Probing cycle procedure command is active,
- bit 3 in S-0-0169, Probe control parameter is set,
- S-0-0406, Probe 2 enable is present, and
- the positive edge of **S-0-0402, Probe 2** is recognized.

The drive simultaneously stores the value of the selected signal in **S-0-0132, Probe value 2 positive edge**.
The drive clears the bit if the NC clears the **S-0-0170, Probing cycle procedure command** or if **S-0-0406, Probe 2 enable** has been set from 1 to 0. The parameter "Probe 2 positive latched" can be assigned to a real-time status bit and thus be continuously communicated to the NC in the drive status word.

Parameter structure:

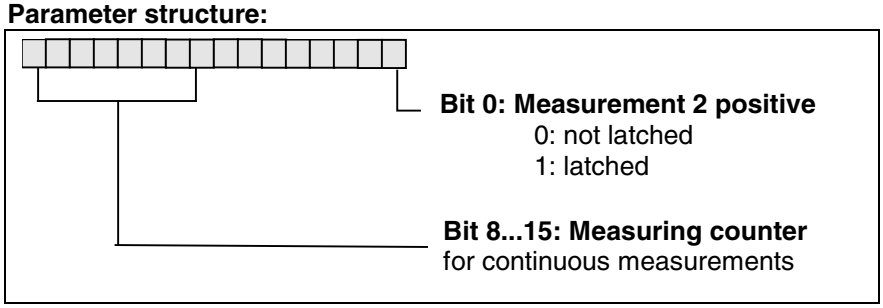


Fig. 2-54: S-0-0411, Probe 2 positive latched

See also the functional description: "Probe Input Feature".

S-0-0411 - Attributes

Para. Name:	**DE**	Messtaster 2 positiv erfasst		
	EN	Probe 2 positive latched		
	FR	Sonde 2 déclenchée sur front montant		
	ES	Teclas de medición 2 bloqueado positivo		
	IT	Tastatore di misura 2 positivo rilevato		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	no
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0412, Probe 2 negative latched

Bit 0 in this parameter will be set by the drive if

- the S-0-0170, Probing cycle procedure command is active,
- bit 3 in S-0-0169, Probe control parameter is set,
- S-0-0406, Probe 2 enable is present, and
- the negative edge of **S-0-0402, Probe 2** is recognized.

The drive simultaneously stores the value of the selected signal in **S-0-0133, Probe value 2 negative edge**. The drive clears the bit if the NC clears the **S-0-0170, Probing cycle procedure command** or if **S-0-0406, Probe 2 enable** is set from 1 to 0. The parameter "probe 2 negative latched" can be assigned to a real-time status bit and thus be continuously communicated to the NC in the drive status word.

Parameter structure:

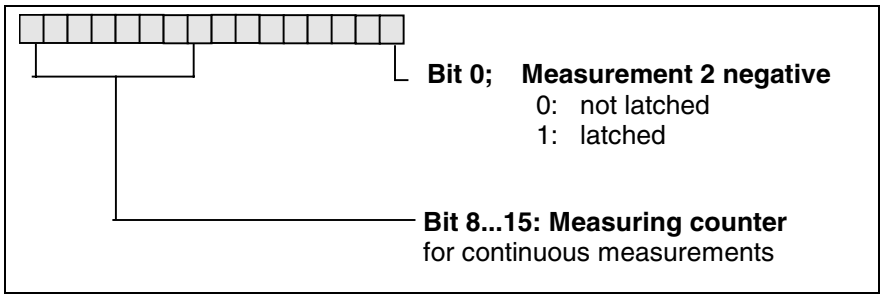


Fig. 2-55: S-0-0412, Probe 2 negative latched

See also the functional description: "Probe Input Feature".

S-0-0412 - Attributes

Para. Name:	**DE**	Messtaster 2 negativ erfasst		
	EN	Probe 2 negative latched		
	FR	Sonde 2 déclenchée sur front descendant		
	ES	Teclas de medición 2 bloqueado negativo		
	IT	Tastatore di misura 2 negativo rilevato		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	no
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-0-0419, Positioning command acknowledgment

This parameter supports operating mode "Drive-controlled positioning" to acknowledge the positioning command strobe.
The acknowledgement of the assumption takes place at the time the new value in **S-0-0282, Positioning command value** is accepted in parameter **S-0-0258, Target Position** and thus at the point in time that the internal position setpoint generator is assumed. If parameter **S-0-0393, Command value mode** bit 4=0, then the acknowledgement does not take place until the drive runs to the previous positioning setting and the message "target position reached" has been set.

See also function description: "Operating Mode: Drive Controlled Positioning".

S-0-0419 - Attributes

Para. Name:	**DE**	Positioniersollwert-Quittung		
	EN	Positioning command acknowledgment		
	FR	Acquittement de consignes de position		
	ES	Confirmación valor nominal de posicionamiento		
	IT	Conferma valore nominale di posizionamento		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	-
Format:		BIN	**Validity check:**	no
Unit:			**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

S-7-0100, Velocity loop proportional gain

This parameter contains the default value for the velocity loop proportional gain.
This value comes from the feedback data memory. With the Basic Load procedure, the S-7-xxxx parameters are copied into the S-0-xxxx parameters.

Note:	**S-0-0100** and **S-7-0100** have different units/dimensions, e.g. for rotatory action As/rad vs. mAs/rad. The number of places after the decimal also differs.

See also the functional description "Setting the Velocity Controller" and the parameter description for **S-0-0100**.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-7-0100 - Attributes

Para. Name:	**DE**	Geschwindigkeitsregler-Proportionalverstärkung		
	EN	Velocity loop proportional gain		
	FR	Gain proportionnel de la boucle de vitesse		
	ES	Amplificación proporcional de regulador de velocidad		
	IT	Guadagno proporzionale Anello di Velocità		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		mAs/rad	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

S-7-0101, Velocity loop integral action time

This parameter contains the default value for the integral action time of the integrator in the velocity controller.

Note: This value comes from the feedback data memory. During the load defaults procedure, the S-7-xxxx parameters are copied to the S-0-xxxx parameters.

See also Functional Description "Setting the Velocity Controller"
See also Parameter Description "S-0-0101, Velocity loop integral action time"

S-7-0101 - Attributes

Para. Name:	**DE**	Geschwindigkeitsregler-Nachstellzeit		
	EN	Velocity loop integral action time		
	FR	Temps d'action intégral de la boucle de vitesse		
	ES	Tiempo de reajuste de regulador de velocidad		
	IT	Tempo Integrazione Anello di Velocità		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		ms	**Extreme value check:**	yes
Decimal places:		1	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-7-0104, Position loop Kv-factor

This parameter contains the default value for the proportional gain of the position controller.
This value comes from the feedback data memory. With the Basic Load procedure, the S-7-xxxx parameters are copied into the S-0-xxxx parameters.
See also the functional description "Setting the position controller" and the parameter description for S-0-0104.

S-7-0104 - Attributes

Para. Name:	**DE**	Lageregler Kv-Faktor		
	EN	Position loop Kv-factor		
	FR	Gain proportionnel de la boucle de position, Kv		
	ES	Regulador de posición factor Kv		
	IT	Fattore Kv Anello di Posizione		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		1000/min	**Extreme value check:**	yes
Decimal places:		2	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

S-7-0106, Current loop proportional gain 1

This parameter contains the appropriate value of the proportional gain of the current controller for the connected motor.
This value comes from the feedback data memory. During the load defaults procedure, the S-7-xxxx parameters are copied to the S-0-xxxx parameters.

Note:	You mustn't change the values for the current controller that have been set at the factory.

See also Functional Description "Setting the Current Controller"
See also Parameter Description "S-0-0106, Current loop proportional gain 1"

S-7-0106 - Attributes

Para. Name:	**DE**	Stromregler-Proportionalverstärkung 1		
	EN	Current loop proportional gain 1		
	FR	Gain proportionnel de la boucle de courant 1		
	ES	Amplificación proporcional 1 regulador de corriente		
	IT	Guadagno proporzionale 1 Regolatore di Corrente		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		V/A	**Extreme value check:**	yes
Decimal places:		2	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-7-0107, Current loop integral action time 1

This parameter contains the appropriate value for the integral action time of the integrator in the current controller with the connected motor.
This value comes from the feedback data memory. With the Basic Load procedure, the S-7-xxxx parameters are copied into the S-0-xxxx parameters.

Note: Do not alter the values for the current controller set at the factory.

See also function description "Setting the Current Controller" and the parameter description for S-0-0107.

S-7-0107 - Attributes

Para. Name:	**DE**	Stromregler-Nachstellzeit 1		
	EN	Current loop integral action time 1		
	FR	Temps d'action intégral de la boucle de courant 1		
	ES	Tiempo de reajuste de regulador de corriente 1		
	IT	Tempo Integrazione 1 Anello di Corrente		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		ms	**Extreme value check:**	yes
Decimal places:		1	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

S-7-0109, Motor peak current

Value in the feedback memory which specifies the maximum current which may flow in the motor for a short period without damaging it.
For MHD, MKD and MKE motors, the value will be copied into the active parameter **S-0-0109, Motor peak current** when the amplifier is turned on.

See also the functional description "Setting the Current Controller" and the parameter description for S-0-0109.

S-7-0109 - Attributes

Para. Name:	**DE**	Spitzenstrom Motor		
	EN	Motor peak current		
	FR	Courant crête du moteur		
	ES	Corriente punta de motor		
	IT	Corrente di Picco Motore		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	Feedb. EE
Format:		DEC_OV	**Validity check:**	no
Unit:		A	**Extreme value check:**	no
Decimal places:		3	**Combination check:**	no
Input min/max:		0.001 / 500.000		
Default value:		---	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-7-0111, Motor current at standstill

Value in the feedback memory for the current which can continuously flow in the motor without damaging it.
For MHD, MKD and MKE motors, the value will be copied into the active parameter **S-0-0111, Motor current** at standstill when the amplifier is turned on.

See also the functional description: "Motor Feedback-Data Memory"

S-7-0111 - Attributes

Para. Name:	**DE**	Stillstandsstrom Motor		
	EN	Motor current at standstill		
	FR	Courant du moteur à l'arrêt		
	ES	Corriente de parada motor		
	IT	Corrente Motore con Asse fermo		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	Feedb. EE
Format:		DEC_OV	**Validity check:**	no
Unit:		A	**Extreme value check:**	no
Decimal places:		3	**Combination check:**	no
Input min/max:		0.001 / 500.000		
Default value:		---	**Cyc. transmittable:**	no

S-7-0113, Maximum motor speed (nmax)

Value in the feedback memory for the maximum possible motor speed.
For MHD, MKD and MKE motors, the value will be copied into the active parameter **S-0-0113, Maximum motor speed (n_{max})** when the amplifier is turned on.

See also the functional description: "Limiting Velocity".

S-7-0113 - Attributes

Para. Name:	**DE**	Maximal-Geschwindigkeit des Motors		
	EN	Maximum motor speed (nmax)		
	FR	Vitesse maximale du moteur		
	ES	Velocidad máxima del motor		
	IT	Velocità massima Motore (nmax)		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	Feedb. EE
Format:		DEC_OV	**Validity check:**	no
Unit:		U/min	**Extreme value check:**	yes
Decimal places:		4	**Combination check:**	no
Input min/max:		0 / 214738.3647		
Default value:		---	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-7-0116, Feedback 1 Resolution

Value in the feedback memory for resolution of the motor encoder.
For MHD, MKD and MKE motors, the value will be copied into the active parameter **S-0-0116, Feedback 1 Resolution** when the amplifier is turned on.

See also the functional description: "Motor Encoder Resolution".

S-7-0116 - Attributes

Para. Name:	**DE**	Geber 1 Auflösung		
	EN	Feedback 1 Resolution		
	FR	Résolution codeur 1		
	ES	Resolución encoder 1		
	IT	Risoluzione Feedback 1		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	Feedb. EE
Format:		DEC_OV	**Validity check:**	no
Unit:		Zyklen/Umdr	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

S-7-0141, Motor type

Text for the motor type available in the feedback data memory.
During the "load defaults" procedure (possible with MHD, MKD, MKE and MSM motors) the content of the parameter is copied to the S-0-0141 parameter.

Note: The **F208 UL The motor type has changed.** diagnostic message is based on the comparison of **S-0-0141** and **S-7-0141**.

Examples:

MSM 020B-0300-NN-C0-CG1
MKD 071B-061-KP1-BN
MKE 096B-047-GG0-KN

See also Functional Description "Drive Controllers and Motors"

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

S-7-0141 - Attributes

Para. Name:	**DE**	Motor-Typ		
	EN	Motor type		
	FR	Type de moteur		
	ES	Tipo de motor		
	IT	Tipo Motore		
Function:		Parameter	**Editability:**	no
Data length:		1Byte var.	**Memory:**	Feedb. EE
Format:		ASCII	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		-	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

S-7-0177, Absolute distance 1

This parameter is used for the homing procedure of an absolute motor feedback. It describes the offset between the zero point of the motor feedback and the machine's zero-point.

S-7-0177 - Attributes

Para. Name:	**DE**	Absolutgeber-Offset 1		
	EN	Absolute distance 1		
	FR	Décalage absolu 1		
	ES	Distancia absoluta 1		
	IT	Offset 1 per Dimensionamenti assoluti (Feedback Motore)		
Function:		Parameter	**Editability:**	P23
Data length:		4Byte	**Memory:**	Feedback-E²prom
Format:		DEC_MV	**Validity check:**	no
Unit:			**Extreme value check:**	no
Decimal places:		-	**Combination check:**	no
Input min/max:		-- / --		
Default value:		--	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

3 Product Specific Parameters

P-0-0004, Velocity loop smoothing time constant

The time constant that can be activated in this parameter affects the output of the velocity loop controller. It can be used to suppress quantization effects and limit the bandwidth of the velocity loop controller. The limit frequency is derived from smoothing time constant T resulting from the relationship

$$f_g = \frac{1}{2 \cdot \pi \cdot \mathrm{T}}$$

Note: Inputting the minimum input value turns the filter off.

See also the functional description: "Setting the Velocity Controller"

P-0-0004 - Attributes

Para. Name:	**DE**	Drehzahlregler-Glättungszeitkonstante		
	EN	Velocity loop smoothing time constant		
	FR	Temps de filtrage boucle de vitesse		
	ES	Tiempo de alisamiento n.d.r.		
	IT	Tempo di Smorzamento nell'Anello di Velocità		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		us	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		500 / 65500		
Default value:		500	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0008, Activation E-Stop function

Parameter P-0-0008 is used for activating the E-Stop input and selecting a reaction for the shutdown of the drive.

Note: The E-Stop input can only be used after having been configured!
(see also configurable signal control word and configurable signal control word digital inputs)

Parameter structure:

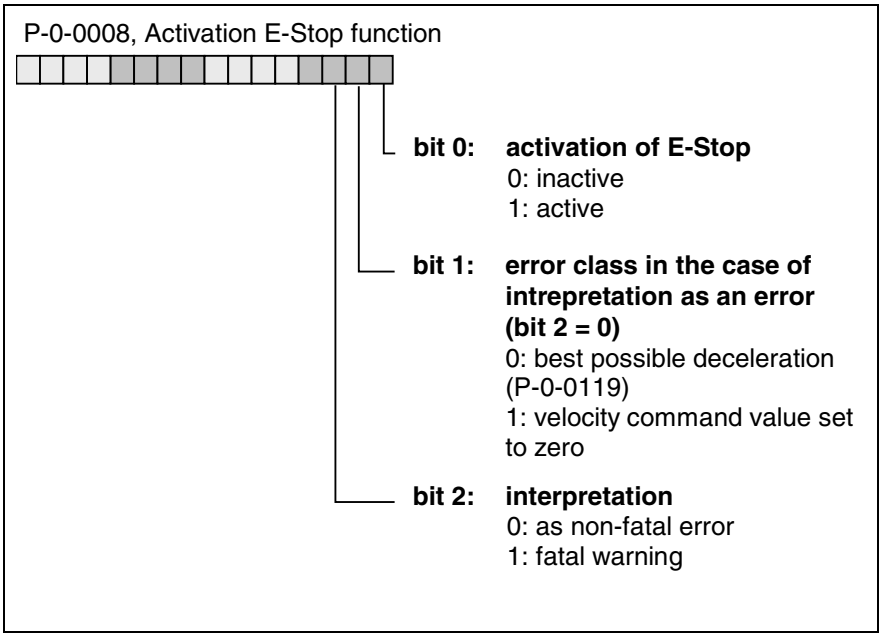


Fig. 3-1: P-0-0008, Activation E-Stop function

Note: The input is always "0-active", i.e. 0 V on the input means it is active!

See also Functional Description "Activation and Polarity of the E-Stop Input"

P-0-0008 - Attributes

Para. Name:	**DE**	Aktivierung E-Stop-Funktion		
	EN	Activation E-Stop function		
	FR	Activation fonction Arrêt d'urgence		
	ES	Activación función parada de emergencia		
	IT	Attivazione della Funzione E-Stop		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	Param. EE
Format:		BIN	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	yes
Input min/max:		--- / ---		
Default value:		0	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0009, Error message number

If the drive identifies a class 1 diagnostic error, then a bit gets set in parameter **S-0-0011, Class 1 diagnostics**. Bit 13 is set in the operation status word for ''Error in class 1 diagnostic''.

Additionally, for a precise diagnosis,

- the diagnosis number is displayed in the 7-segment display and stored in parameter **S-0-0390, Diagnostic message number,**
- the plain text diagnosis is stored in parameter **S-0-0095, Diagnostic message**
- and the relevant error number is stored in parameter **P-0-0009, Error message number**.

If no error is pending, then the value of parameter **P-0-0009 Error message number** is 0.

Example for a diagnosis:
S-0-0390 F822 (hex)
P-0-0009: 822 (decimal)
S-0-0095: F822 Motor encoder failure: signal too small
7-segment display: Changing between "F8" and "22"

See also the functional description: "Error Number"

P-0-0009 - Attributes

Para. Name:	**DE**	Fehler-Nummer		
	EN	Error message number		
	FR	Numéro erreur		
	ES	Error numero		
	IT	Numero Messaggio Errore		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	no
Format:		DEC_OV	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0010, Excessive position command value

In position control mode (S-0-0032...35 = 0x0003, 0x0004, 0x000B or 0x000C), the NC sets position commands at constant intervals (all **S-0-0001, NC Cycle time (TNcyc)**). Within the drive, the difference of two sequential position commands are monitored for excessive values, i.e., the position commands must satisfy:

$$\frac{X_{Soll}(k) - X_{Soll}(k-1)}{S-0-0001} \leq S-0-0091$$

whereby:

$X_{soll}(k)$ = NC position command in current cycle
$X_{soll}(k-1)$ = NC position command in previous cycle
S-0-0091, Bipolar velocity limit value
S-0-0001, NC Cycle time (TNcyc)

Fig. 3-2: Monitoring of the position command for excessive values for in the position control mode

If the above condition is violated, then error **F237, Excessive position command difference** is triggered and the drive decelerates as set in parameter **P-0-0119, Best possible deceleration**. The error triggering excessive position command value ($X_{soll}(k)$) is stored in parameter **P-0-0010, Excessive position command value**, the last valid position command ($X_{soll}(k-1)$) in parameter **P-0-0011, Last valid position command value**.

See also the functional description: "Position Command Value Monitoring"

P-0-0010 - Attributes

Para. Name:	**DE**	Exzessiver Lagesollwert		
	EN	Excessive position command value		
	FR	Consigne de position excessive		
	ES	Valor nominal de posición excesivo		
	IT	Posizione comandata eccessiva		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	no
Format:		DEC_MV	**Validity check:**	no
Unit:		S-0-0076	**Extreme value check:**	no
Decimal places:		S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0011, Last valid position command value

In position control mode (S-0-0032...35 = 0x0003, 0x0004, 0x000B or 0x000C), the NC sets position commands at constant intervals (every **S-0-0001, NC Cycle time TNcyc**). The difference of two sequential position commands is monitored for excessive value. The position command values must satisfy the following relation:

$$\frac{X_{soll}(k) - X_{soll}(k-1)}{S-0-0001} \leq S-0-0091$$

whereby:

$X_{soll}(k)$ = NC-position command in current cycle
$X_{soll}(k-1)$ = NC-position command in previous cycle
S-0-0091, Bipolar velocity limit value
S-0-0001, NC Cycle time (TNcyc)

Fig. 3-3: Monitoring of the position command for excessive values in the position control mode

If the above condition is violated, then error **F237, Excessive position command difference** is triggered, and the drive decelerates as set in parameter **P-0-0119, Best possible declaration**. The error triggering excessive position command value $X_{Com}(k)$ is stored in parameter **P-0-0010, Excessive position command value**, the last valid position command $X_{Com}(k-1)$ in parameter **P-0-0011, Last valid position command value**.

See also the functional description: "Position Command Value Monitoring"

P-0-0011 - Attributes

Para. Name:	**DE**	Letzter gültiger Lagesollwert		
	EN	Last valid position command value		
	FR	Dernière consigne de position valable		
	ES	Valor nominal de posición ultimo valido		
	IT	Ultima Posizione comandata valida		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	no
Format:		DEC_MV	**Validity check:**	no
Unit:		S-0-0076	**Extreme value check:**	no
Decimal places:		S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0012, C300 Command Set absolute measuring

When an absolute measuring system is started for the first time, the drive will indicate a random feedback value that is not referenced to the machine zero-point.
The position feedback of this measuring system can be set to the desired value with the command "Set absolute measurement". After the "Set absolute measurement" command is executed, the position feedback value of the measurement-supplied encoder will contain a defined reference to the machine zero-point. Thereafter, the value of parameter **S-0-0403, Position feedback value status** is 1. The corresponding bit in the parameter **S-0-0403, Position feedback status** is set for the selected encoder.

All information will be available after reset because all necessary data from the absolute measurement system is buffered in feedback data memory or in parameter data memory. The position feedback value permanently retains its reference to the machine zero-point.
Parameter P-0-0012 can be used to execute this function.

See also the functional description: "Set Absolute Measuring"

P-0-0012 - Attributes

Para. Name:	**DE**	C300 Kommando Absolutmaß setzen		
	EN	C300 Command Set absolute measuring		
	FR	C300 Instruction Calage d'origine absolue		
	ES	C300 Comando Fijar medición absoluta		
	IT	C300 Comando Impostazione misura assoluta		
Function:		Command	**Editability:**	P4
Data length:		2Byte	**Memory:**	no
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0014, D500 Command determine marker position

The command **P-0-0014, D500 Command determine marker position** is used to check the detection of the reference marker of an incremental measuring system. If there is an incremental measuring system and the command has been activated, then once the reference mark is detected, the actual position of the measuring system is stored in parameter **S-0-0173, Marker position A**. It is then signalled that the command is completed. Given 2 measuring systems, the bit 3 in **S-0-0147, Homing parameter** determines which measuring system is used.

See also the functional description: "Command - detect marker position"

P-0-0014 - Attributes

Para. Name:	**DE**	D500 Kommando Markerposition ermitteln		
	EN	D500 Command determine marker position		
	FR	D500 Instruction Détermination position marqueur		
	ES	D500 Comando Determinar posición de marcador		
	IT	D500 Comando Determinazione posizione marker		
Function:		Command	**Editability:**	P4
Data length:		2Byte	**Memory:**	no
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		0 / 3		
Default value:		0	**Cyc. transmittable:**	no

P-0-0015, Memory address

This parameter can be used to select a memory address in the drive for test purposes. The content will be displayed in the parameter **P-0-0016, Content of memory address**.

P-0-0015 - Attributes

Para. Name:	**DE**	Speicheradresse		
	EN	Memory address		
	FR	Adresse mémoire		
	ES	Dirección de memoria		
	IT	Indirizzo Memoria		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	Param. EE
Format:		HEX	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		0 / 0x1000000		
Default value:		0x8000	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0016, Content of memory address

This parameter displays the contents of the memory address set in parameter **P-0-0015, Memory address** (only for test purposes).

P-0-0016 - Attributes

Para. Name:	**DE**	Inhalt der Speicheradresse		
	EN	Content of memory address		
	FR	Contenu de l'adresse mémoire		
	ES	Contenido de la dirección de memoria		
	IT	Contenuto del Indirizzo di Memoria		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	no
Format:		HEX	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

P-0-0018, Number of pole pairs/pole pair distance

The number of pole pairs per motor revolution is indicated on parameter P-0-0018. This value is stored in the motor feedback data memory and in the case of MSM motors is automatically read from this data memory.

See also Functional Description "Motor Feedback-Data Memory"

P-0-0018 - Attributes

Para. Name:	**DE**	Polpaarzahl/Polpaarweite		
	EN	Number of pole pairs/pole pair distance		
	FR	Nombre de paires de pôles/distance polaire		
	ES	Numero de par de polo/espacio de par de polo		
	IT	Numero di Coppie/Distanza Poli		
Function:		Parameter	**Editability:**	P23
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		P-0-4014	**Extreme value check:**	no
Decimal places:		P-0-4014	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		3	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0019, Position start value

The position start value sets a defined initialization value for position feedback values 1 and 2 in non-absolute measurement systems. During initialization of the position feedback value with command **S-0-0128, C200 Communication phase 4 transition check**, the drive checks whether the position start value has been written in communications phase 2 or 3. Only then will position feedback values 1 and 2 be set to that value. The position start value is used only for non-absolute encoders.
To preset the actual position value of the drive, the parameter **P-0-0019, Position start value** is used.

See also the functional description: "Actual Feedback Values of Non-Absolute Measurement Systems After Initialization"

P-0-0019 - Attributes

Para. Name:	**DE**	Lageanfangswert		
	EN	Position start value		
	FR	Position à la mise sous tension		
	ES	Valor inicial de posición		
	IT	Valore di Posizione di Partenza		
Function:		Parameter	**Editability:**	P23
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_MV	**Validity check:**	no
Unit:		S-0-0076	**Extreme value check:**	no
Decimal places:		S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:		-2147483648 / 2147483647		
Default value:		0	**Cyc. transmittable:**	no

P-0-0021, List of scope data 1

The measured values of channel 1 of the oscilloscope feature are stored in chronological sequence in parameter **P-0-0021, List of scope data 1** (the oldest scope value is the first element of the list).

See also the functional description: "Oscilloscope Feature"

P-0-0021 - Attributes

Para. Name:	**DE**	Messwertliste 1		
	EN	List of scope data 1		
	FR	Liste des valeurs mesurées 1		
	ES	Lista de valor de medición 1		
	IT	Lista Misure 1		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	no
Format:		P-0-0023	**Validity check:**	no
Unit:		P-0-0023	**Extreme value check:**	no
Decimal places:		P-0-0023	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0022, List of scope data 2

The measured values of channel 2 of the oscilloscope feature are stored in chronological sequence in parameter **P-0-0022, List of scope data 2** (the oldest scope value is the first element of the list).

See also the functional description: "Oscilloscope Feature"

P-0-0022 - Attributes

Para. Name:	**DE**	Messwertliste 2
	EN	List of scope data 2
	FR	Liste des valeurs mesurées 2
	ES	Lista de valor de medición 2
	IT	Lista Misure 2

Function:	Parameter	**Editability:**	no
Data length:	4Byte	**Memory:**	no
Format:	P-0-0024	**Validity check:**	no
Unit:	P-0-0024	**Extreme value check:**	no
Decimal places:	P-0-0024	**Combination check:**	no
Input min/max:	--- / ---		
Default value:	---	**Cyc. transmittable:**	no

P-0-0023, Signal select scope channel 1

The parameter P-0-0023 defines the signal that is to be recorded by channel 1.

The following predefined signals are available:

Number	Signal selection	Unit of the measured value list
0 x 00	channel not activated	---
0 x 02	velocity value, parameter S-0-0040	depending on velocity scaling
0 x 03	velocity deviation (S-0-0347)	depending on velocity scaling
0 x 04	following distance, parameter S-0-0189	depending on position scaling
0 x 05	torque/force command value parameter S-0-0080	percent
0 x 06	position feedback 1 value S-0-0051	depending on position scaling
0 x 08	position command value	depending on position scaling

Fig. 3-4: P-0-0023, Signal selection 1 of oscilloscope feature

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

0x8001	sine signal motor	
0x8002	cosine signal motor	
Ox8003	sine signal external encoder	
0x8004	cosine signal external encoder	
0x8005	position command value difference	degrees
0x8006	DC bus power	kW
0x8007	DC bus power absolute	kW
0x8008	actual current "active current"	percent
0x8009	actual current "wattless current"	percent
0x800A	thermal load	percent
0x800B	motor temperature	°C
0x800C	magnetizing/command current	A
0x800D	speed at speed controller input	rpm
0x800E	braking resistor load	percent
0x8015	synch. position command value Xsynch	degrees
0x8016	synch. speed	rpm
0x8017	active master axis position	degrees

Fig. 3-5: Predefined signal list of internal signals

Expanded oscilloscope recording feature:
Apart from the fixed signal selection, you also have the possibility to record any memory address of the drive. To do this, set bit 12 = 1. Bit 13 defines the data length of any given memory signal.

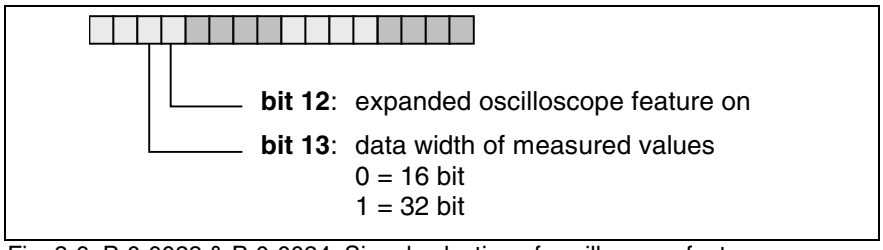


Fig. 3-6: P-0-0023 & P-0-0024, Signal selection of oscilloscope feature

See also Functional Description "Oscilloscope Feature"

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0023 - Attributes

Para. Name:	**DE**	Signalauswahl 1 Oszilloskop-Funktion		
	EN	Signal select scope channel 1		
	FR	Fonction oscilloscope, sélection signal 1		
	ES	Selección de señal 1 función de osciloscopio		
	IT	Segnale Selezionato Canale 1		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	Param. EE
Format:		HEX	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		--	**Combination check:**	no
Input min/max:		0 / 0xffff		
Default value:		0	**Cyc. transmittable:**	no

P-0-0024, Signal select scope channel 2

The parameter P-0-0024 defines the signal that is to be recorded by channel 2. The following fixed signals are available:

Number	Signal selection	Unit of the measured value list
0 x 00	channel not activated	---
0 x 02	velocity value, parameter S-0-0040	depending on velocity scaling
0 x 03	velocity deviation (S-0-0347)	depending on velocity scaling
0 x 04	following distance, parameter S-0-0189	depending on position scaling
0 x 05	torque/force command value parameter S-0-0080	percent
0 x 06	position feedback 1 value S-0-0051	depending on position scaling
0 x 08	position command value	depending on position scaling

Fig. 3-7: P-0-0024, Signal selection 2 of oscilloscope feature

0x8001	sine signal motor	
0x8002	cosine signal motor	
Ox8003	sine signal external encoder	
0x8004	cosine signal external encoder	
0x8005	position command value difference	degrees
0x8006	DC bus power	kW
0x8007	DC bus power absolute	kW
0x8008	actual current "active current"	percent
0x8009	actual current "wattless current"	percent
0x800A	thermal load	percent
0x800B	motor temperature	°C

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

0x800C	magnetizing/command current	A
0x800D	speed at speed controller input	rpm
0x800E	braking resistor load	percent
0x8015	synch. position command value Xsynch	degrees
0x8016	synch. speed	rpm
0x8017	active master axis position	degrees

Fig. 3-8: Predefined signal list of internal signals

Expanded oscilloscope recording feature:
Apart from the fixed signal selection, you also have the possibility to record any memory address of the drive. To do this, set bit 12 = 1. Bit 13 defines the data length of any given memory signal.

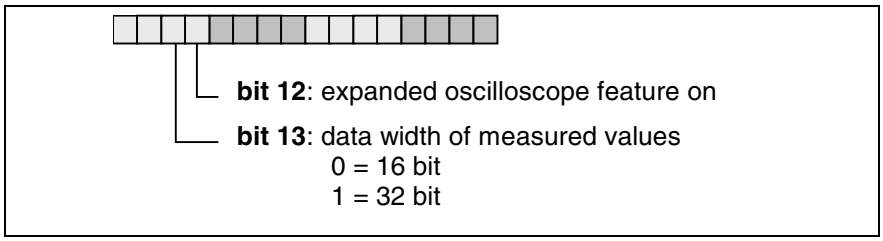


Fig. 3-9: P-0-0023 & P-0-0024, Signal selection of oscilloscope feature

See also the functional description: "Oscilloscope Feature"

P-0-0024 - Attributes

Para. Name:	**DE**	Signalauswahl 2 Oszilloskop-Funktion
	EN	Signal select scope channel 2
	FR	Fonction oscilloscope, sélection signal 2
	ES	Selección de señal 2 función de osciloscopio
	IT	Segnale Selezionato Canale 2

Function:	Parameter	**Editability:**	P234
Data length:	2Byte	**Memory:**	Param. EE
Format:	HEX	**Validity check:**	Phase3
Unit:	--	**Extreme value check:**	no
Decimal places:	--	**Combination check:**	no
Input min/max:	0 / 0xffff		
Default value:	0	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0025, Trigger source

Parameter **P-0-0025, Trigger source** defines the source that releases the trigger signal. You can choose between:

- an external trigger or
- an internal trigger

External trigger (P-0-0025 = 0x01)
If the external trigger is selected, then the trigger will be released by bit 0 of **P-0-0036, Trigger control word**.

Internal trigger (P-0-0025 = 0x02)
If the internal trigger is selected, then the parameterized trigger signal will be monitored for the trigger condition, and the trigger will be released as soon as the condition is met (drive-internal triggering).

See also the functional description: "Oscilloscope Feature"

P-0-0025 - Attributes

Para. Name:	**DE**	Triggerquelle Oszilloskop-Funktion		
	EN	Trigger source		
	FR	Source de déclenchement pour fonction oscilloscope		
	ES	Origen de trigger osciloscopio		
	IT	Sorgente Trigger		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		1 / 2		
Default value:		2	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0026, Trigger signal selection

By means of parameter **P-0-0026, Trigger signal selection of oscilloscope feature** it is possible, given an internal trigger source (**P-0-0025, Trigger source of oscilloscope feature** = 2), to define the signal that is monitored with regard to the parameterized trigger condition. The following predefined signals are available:

Trigger signal number	Trigger signal	Associated trigger level
0 x 00	not defined	not defined
0 x 02	actual velocity value, parameter S-0-0040	velocity data (P-0-0028)
0 x 03	velocity deviation	velocity data (P-0-0028)
0 x 04	following distance, parameter S-0-0189	position data (P-0-0027)
0 x 05	torque command value, parameter S-0-0080	torque data (P-0-0029)
0 x 06	position feedback 1 value S-0-0051	depending on position scaling
0 x 08	position command value	depending on position scaling

Fig. 3-10: P-0-0026, Trigger signal selection of oscilloscope feature

0x8001	sine signal motor	
0x8002	cosine signal motor	
Ox8003	sine signal external encoder	
0x8004	cosine signal external encoder	
0x8005	position command value difference	degrees
0x8006	DC bus power	kW
0x8007	DC bus power absolute	kW
0x8008	actual current "active current"	percent
0x8009	actual current "wattless current"	percent
0x800A	thermal load	percent
0x800B	motor temperature	°C
0x800C	magnetizing/command current	A
0x800D	speed at speed controller input	rpm
0x800E	braking resistor load	percent
0x8015	synch. position command value Xsynch	degrees
0x8016	synch. speed	rpm
0x8017	active master axis position	degrees

Fig. 3-11: Predefined trigger signal list of internal signals

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

In addition, it is possible to define expanded trigger signals by setting bit 12.

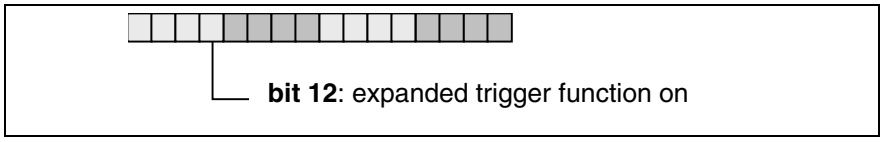


Fig. 3-12: P-0-0026, Trigger signal selection of oscilloscope feature

See also Functional Description "Oscilloscope Feature"

P-0-0026 - Attributes

Para. Name:	**DE**	Triggersignalauswahl Oszilloskop-Funktion		
	EN	Trigger signal selection		
	FR	Fonction oscilloscope, sélection signal de déclenc.		
	ES	Selección de señal de trigger función osciloscopio		
	IT	Segnale di Trigger selezionato		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	Param. EE
Format:		HEX	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	yes
Decimal places:		--	**Combination check:**	no
Input min/max:		0 / 0x5		
Default value:		1	**Cyc. transmittable:**	no

P-0-0027, Trigger level for position data

If **P-0-0026, Trigger signal selection** = "1" or "4", then parameter **P-0-0027, Trigger Level for position data** determines the position value at which the trigger will be released as long as the correct edge has been recognized.

See also the functional description: "Oscilloscope Feature"

P-0-0027 - Attributes

Para. Name:	**DE**	Triggerschwelle für Lagedaten		
	EN	Trigger level for position data		
	FR	Seuil de déclenchement données de position		
	ES	Umbral de trigger para datos de posición		
	IT	Livello di Trigger per Dati di Posizione		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_MV	**Validity check:**	Phase3
Unit:		S-0-0076	**Extreme value check:**	yes
Decimal places:		S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:		S-0-0076 / S-0-0076		
Default value:		0	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0028, Trigger level for velocity data

If **P-0-0026, Trigger signal selection** = "2" or "3" then parameter **P-0-0028, Trigger Level for velocity data** determines the velocity feedback value at which the trigger will be released as long as the correct edge has been recognized.

See also the functional description: "Oscilloscope Feature"

P-0-0028 - Attributes

Para. Name:	**DE**	Triggerschwelle für Geschwindigkeitsdaten		
	EN	Trigger level for velocity data		
	FR	Seuil de déclenchement données de vitesse		
	ES	Umbral de trigger para datos de velocidad		
	IT	Livello di Trigger per Dati di Velocità		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_MV	**Validity check:**	Phase3
Unit:		S-0-0044	**Extreme value check:**	yes
Decimal places:		S-0-0045/S-0-0046	**Combination check:**	no
Input min/max:		S-0-0044 / S-0-0044		
Default value:		0	**Cyc. transmittable:**	no

P-0-0029, Trigger level for torque/force data

If **P-0-0026, Trigger signal selection** = “5", then Parameter **P-0-0029, Trigger level for torque/force data** determines the torque/force value at which the trigger will be released as long as the correct edge has been recognized.

See also the functional description: "Oscilloscope Feature"

P-0-0029 - Attributes

Para. Name:	**DE**	Triggerschwelle für Drehmoment/Kraftdaten		
	EN	Trigger level for torque/force data		
	FR	Seuil de déclenchement données de couple/force		
	ES	Umbral de trigger para datos de par/fuerza		
	IT	Livello di Trigger per Dati Coppia/Forza		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_MV	**Validity check:**	Phase3
Unit:		%	**Extreme value check:**	yes
Decimal places:		1	**Combination check:**	no
Input min/max:		S-0-0086 / S-0-0086		
Default value:		0	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0030, Trigger edge

Parameter **P-0-0030 Trigger edge** defines the signal change with which a trigger event can be released.

Number	Trigger edge
1	Triggering on the positive edge of the trigger signal
2	Triggering on the negative edge of the trigger signal
3	Triggering on both the positive edge and negative edge of the trigger signal
4	Triggering if the trigger signal equals the trigger level

Fig. 3-13: Selection of trigger edges

See also the functional description: "Oscilloscope Feature"

P-0-0030 - Attributes

Para. Name:	**DE**	Triggerflanke		
	EN	Trigger edge		
	FR	Front de déclenchement		
	ES	Lado de trigger		
	IT	Fronte di Trigger		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		1 / 4		
Default value:		3	**Cyc. transmittable:**	no

P-0-0031, Timebase

The Timebase defines the time intervals in which the probe values of the selected signals of the oscilloscope feature are sampled. Possible time intervals range from 250 µs (resp. 500 µs) to 100 ms.

Note that in general:

Recording duration = Time resolution • Size of memory [µs]

See also the functional description: "Oscilloscope Feature"

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0031 - Attributes

Para. Name:	**DE**	Zeitauflösung		
	EN	Timebase		
	FR	Base de temps		
	ES	Resolución de tiempo		
	IT	Base dei Tempi		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		us	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		500 / 100000		
Default value:		500	**Cyc. transmittable:**	no

P-0-0032, Size of memory

The size of memory determines the number of recorded probe values per measurement. A maximum of 512 probe values can be recorded per channel.

The memory size and time resolution together determine the recording duration. The minimum recording duration is 128 ms, and the maximum duration is 51.2 s.

Note that in general:

Recording duration = Time resolution • Size of memory [µs]

See also the functional description: "Oscilloscope Feature"

P-0-0032 - Attributes

Para. Name:	**DE**	Speichertiefe		
	EN	Size of memory		
	FR	Taille mémoire		
	ES	Tamaño de memoria		
	IT	Dimensione Memoria		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		2 / 512		
Default value:		512	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0033, Number of samples after trigger

Parameter P-0-0033 defines the number of probe values, or samples, that will be entered in the probe value list after the trigger event. In this way it is possible to set a parameter to define a trigger delay. Parameter P-0-0033 is used to do this.

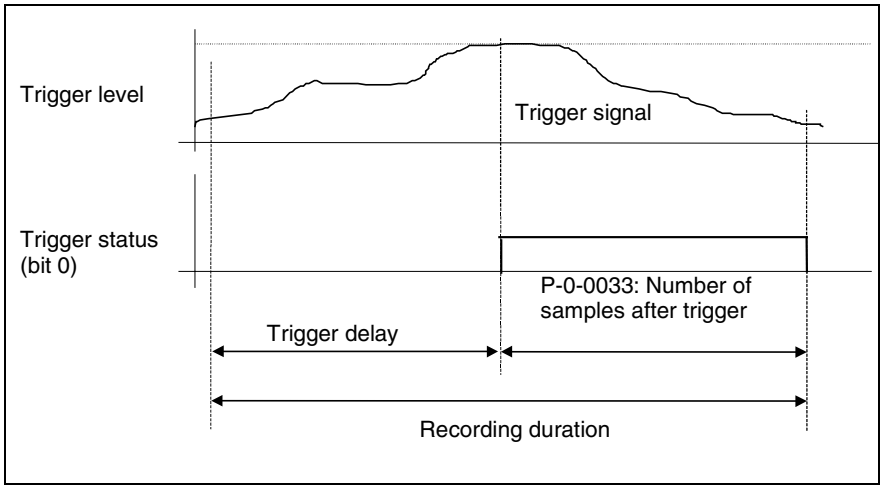


Fig. 3-14: Triggering

See also the functional description: "Oscilloscope Feature"

P-0-0033 - Attributes

Para. Name:	**DE**	Anzahl der Messwerte nach Triggerereignis		
	EN	Number of samples after trigger		
	FR	Nombre de mesures après déclenchement		
	ES	Numero de muestras despues de trigger		
	IT	Numero di Campionamenti dopo Trigger		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		0 / 512		
Default value:		0	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0034, Position command additional actual value

This parameter is used as the starting value for synchronization in a synchronization operating mode with underlying position control.
It contains the difference between the position feedback value and the synchronous position command value generated from the master axis position.

P-0-0034 - Attributes

Para. Name:	**DE**	Lagesollwert additiv Istwert		
	EN	Position command additional actual value		
	FR	Consigne de position additive, valeur actuelle		
	ES	Valor nominal de posición valor real		
	IT	Comando di Posizione Addizzionale		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	-
Format:		DEC_MV	**Validity check:**	no
Unit:		S-0-0076	**Extreme value check:**	no
Decimal places:		S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

P-0-0035, Delay from trigger to start

Parameter P-0-0035 indicates the number of cycles between the trigger event (internal) and the release of the trigger (bit 0 trigger control word) with external triggering.

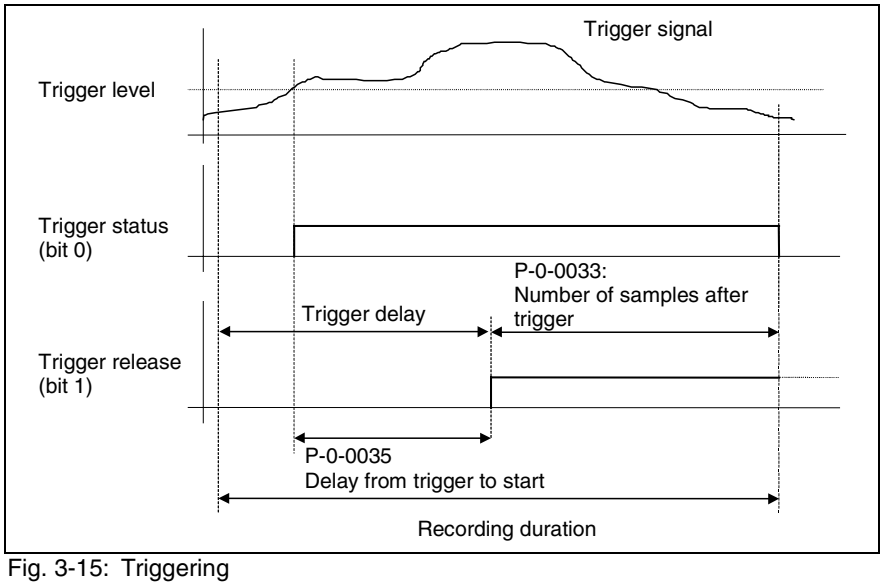


Fig. 3-15: Triggering

Since there is a delay between the transmission of the trigger event by the control system and the release of the trigger, the delay is measured by the drive and stored in parameter **P-0-0035, Delay from trigger to start**. A time-correct display of signals is ensured by using this parameter for visualizing the probe values.

See also the functional description: "Oscilloscope Feature"

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0035 - Attributes

Para. Name:	**DE**	Triggersteuerversatz
	EN	Delay from trigger to start
	FR	Délai de déclenchement
	ES	Retardo de mando de trigger
	IT	Ritardo del Trigger dopo Start

Function:	Parameter	**Editability:**	no
Data length:	2Byte	**Memory:**	no
Format:	DEC_OV	**Validity check:**	no
Unit:	--	**Extreme value check:**	no
Decimal places:	0	**Combination check:**	no
Input min/max:	--- / ---		
Default value:	---	**Cyc. transmittable:**	no

P-0-0036, Trigger control word

Parameter P-0-0036 controls the oscilloscope function.

- Bit 2 activates the function, i.e., the lists of scope data are filled with the selected data.
- Bit 1 activates trigger monitoring.
- Bit 0 can release a trigger event. If a valid edge is recognized, the probe-value memory will be completed as specified by parameter **P-0-0033, Number of samples after the trigger**, and the oscilloscope function will be deactivated by resetting bits 1 and 2 in the trigger control word.

Parameter structure:

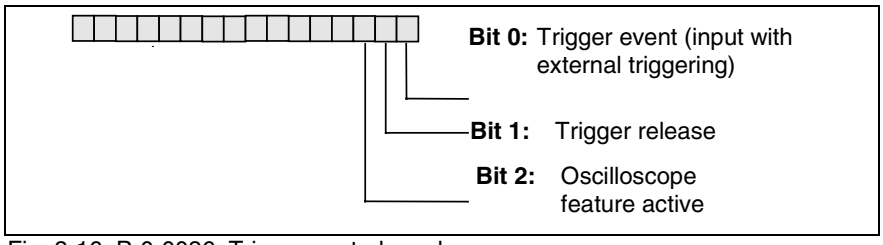


Fig. 3-16: P-0-0036, Trigger control word

See also the functional description: "Oscilloscope Feature"

P-0-0036 - Attributes

Para. Name:	**DE**	Triggersteuerwort
	EN	Trigger control word
	FR	Mot de contrôle déclenchement
	ES	Palabra de mando de trigger
	IT	Controllo Trigger

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Function:	Parameter	**Editability:**	P234
Data length:	2Byte	**Memory:**	no
Format:	HEX	**Validity check:**	no
Unit:	--	**Extreme value check:**	no
Decimal places:	--	**Combination check:**	no
Input min/max:	--- / ---		
Default value:	---	**Cyc. transmittable:**	no

P-0-0037, Trigger status word

Status messages for the oscilloscope function.
The parameter P-0-0037 offers various pieces of information about the current status of the oscilloscope function.

Parameter structure:

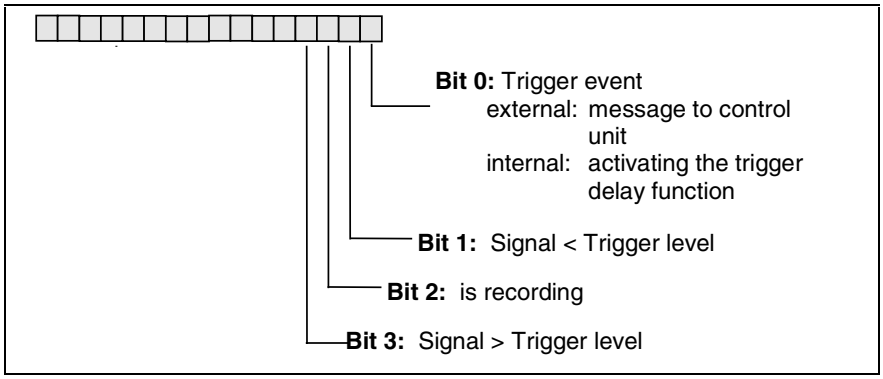


Fig. 3-17: P-0-0037, Trigger status word

See also the functional description: "Oscilloscope Feature"

P-0-0037 - Attributes

Para. Name:	**DE**	Triggerstatuswort
	EN	Trigger status word
	FR	Mot d'état déclenchement
	ES	Palabra de estado de trigger
	IT	Stato Trigger

Function:	Parameter	**Editability:**	no
Data length:	2Byte	**Memory:**	no
Format:	HEX	**Validity check:**	no
Unit:	--	**Extreme value check:**	no
Decimal places:	--	**Combination check:**	no
Input min/max:	--- / ---		
Default value:	---	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0051, Torque/force constant

The torque/force constant determines what drive torque or force the motor will deliver at a specific effective current.
For synchronous motors, this value depends entirely on the design of the motor.
In asynchronous motors, this value is valid as long as the motor is not operated in the field-weakening range.
For MHD, MKD and MKE motors, this parameter is stored in the feedback data memory and cannot be changed.

MA [Nm, N] = (P-0-0051)•(S-0-0111)•(S-0-0080)•(P-0-0640)

where:

MA	=	Drive torque
P-0-0051	=	Torque/force constant, [Nm/A] or [N/A]
S-0-0111	=	Motor current at standstill [A]
S-0-0080	=	Torque/force command [%]
P-0-0640	=	Cooling type

Fig. 3-18: Drive torque

See also the functional description: "Motor Feedback-Data Memory"

P-0-0051 - Attributes

Para. Name:	**DE**	Drehmoment/Kraft-Konstante		
	EN	Torque/force constant		
	FR	Constante de couple/force		
	ES	Constante de par/fuerza		
	IT	Costante di Coppia/Forza		
Function:		Parameter	**Editability:**	P23
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	no
Unit:		P-0-4014	**Extreme value check:**	no
Decimal places:		2	**Combination check:**	no
Input min/max:		0.01 / 655.35		
Default value:		0	**Cyc. transmittable:**	no

P-0-0053, Master axis position

The Master drive position is either

- determined in the drive by evaluating the master drive encoder (operation with real master axis), or
- given cyclically from the NC in equidistant time intervals (virtual master axis).

This parameter serves as the command value default for the control drive in the following operating modes:

- Velocity synchronization
- Phase synchronization
- Electronic cam shaft
- Electronic pattern ctrl

See also the functional description: "Operating mode: Electronic cam shaft with virtual master axis"

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0053 - Attributes

Para. Name:	**DE**	Leitachsposition		
	EN	Master axis position		
	FR	Position axe guide		
	ES	Posición eje conductor		
	IT	Posizione Master		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	no
Unit:		Incr	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

P-0-0060, Filter time constant additional pos. command

If the **P-0-0155, Synchronization mode** is set, then the dynamic synchronization will be switched off after the absolute synchronization is reached for the first time. Changes to the **S-0-0048, Position command value additional** will be smoothed with a 1st order filter. The time constant of the filter can be set with this parameter.

See also the functional description: "Dynamic synchronization in the phase synchronization operating mode"

P-0-0060 - Attributes

Para. Name:	**DE**	Filterzeitkonstante Lagesollwert additiv		
	EN	Filter time constant additional pos. command		
	FR	Temps de filtrage consigne de pos. addit.		
	ES	Tiempo de filtro valor nominal posición adicional		
	IT	Tempo di Filtro su Comandi add. di Avanzamento		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		ms	**Extreme value check:**	yes
Decimal places:		2	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0061, Angle offset begin of profile

The profile (table) will be shifted by this angle in relation to the master drive position. The offset is used in the cam shaft or pattern ctrl operating modes.

P-0-0061 - Attributes

Para. Name:	**DE**	Winkelverschiebung Tabellenanfang		
	EN	Angle offset begin of profile		
	FR	Début de table de décalage angulaire		
	ES	Desplazamiento de fase inicio de tabla		
	IT	Offset del Angolo per Inizio Profili		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	-
Format:		DEC_MV	**Validity check:**	Phase3
Unit:		Deg	**Extreme value check:**	yes
Decimal places:		4	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

P-0-0072, Cam shaft profile 1

This parameter contains a table with 1024 elements with tab(φ) support points for the cam shaft profile. The distance between the support points dφ is derived from the number of elements:

$$d\varphi = 360° / 1024 = 0.35°$$

The first element in the table is the support point for φ = 0°. The last element of the table is the support point for φ = 360° - dφ.

See also the functional description: "Operating mode: Electronic cam shaft with virtual master axis"

P-0-0072 - Attributes

Para. Name:	**DE**	Kurvenscheibe Tabelle 1		
	EN	Cam shaft profile 1		
	FR	Tableau de profil came 1		
	ES	Perfil disco de leva tabla 1		
	IT	Tabella Profilo Camma 1		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte var.	**Memory:**	-
Format:		DEC_MV	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	yes
Decimal places:		6	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0074, Feedback 1 type

The encoder type for the motor encoder is determined in parameter P-0-0074.

Note: In the case of MSM motors, this parameter is only used for displaying the encoder type used (P-0-0074 = 15!).

P-0-0074	Interface connector	Measuring system
15	X4	digital servo feedback with serial data transfer

Fig. 3-19: Measuring systems – connection and selection

See also Functional Description "Determining the Feedback Interface of the Motor Feedback"

P-0-0074 - Attributes

Para. Name:	**DE**	Geber-Typ 1		
	EN	Feedback 1 type		
	FR	Type de codeur 1		
	ES	Tipo de encoder 1		
	IT	Tipo di Feedback 1		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	yes
Input min/max:		--- / --		
Default value:		1	**Cyc. transmittable:**	no

P-0-0081, Parallel I/O output 1

Parameter **P-0-0081, Parallel I/O Output 1** displays the parallel outputs of the DEA 4.1 module. By means of this parameter the outputs of this module can be addressed.

See also the functional description: "Digital Input/Output"

P-0-0081 - Attributes

Para. Name:	**DE**	Paralleler Ausgang 1		
	EN	Parallel I/O output 1		
	FR	Sortie parallèle 1		
	ES	Salida paralela 1		
	IT	Uscita parallela 1		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	-
Format:		HEX	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0082, Parallel I/O input 1

Parameter **P-0-0082, Parallel I/O input 1** displays the parallel inputs of the DEA 4.1 module. By means of this parameter the inputs of this module can be read.

See also the functional description: "Digital Input/Output"

P-0-0082 - Attributes

Para. Name:	**DE**	Paralleler Eingang 1		
	EN	Parallel I/O input 1		
	FR	Entrée parallèle 1		
	ES	Entrada paralela 1		
	IT	Ingressi paralleli 1		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	-
Format:		HEX	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

P-0-0083, Gear ratio fine adjust

The transmission ratio of the electronic gearbox is changed by this percent value.

See also the functional description: "Operating mode: Velocity synchronization with virtual master axis"

P-0-0083 - Attributes

Para. Name:	**DE**	Feinabgleich Getriebeübersetzung		
	EN	Gear ratio fine adjust		
	FR	Ajustement fin rapport de réduction		
	ES	Ajuste fino de la reducción de engranaje		
	IT	Regolazione fina rapporto riduttore		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	-
Format:		DEC_MV	**Validity check:**	no
Unit:		%	**Extreme value check:**	yes
Decimal places:		6	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0085, Dynamic angle offset

With this parameter, the effective master axis position can be offset dynamically as shown in the following equation:

$$\varphi_{\text{Master axis, effective}} = \varphi_{\text{Master}} + \frac{n_{\text{Master axis}}}{\text{Position control KV}} \cdot \text{dynamic angle offset}$$

Fig. 3-20: Offset of the effective master axis position

This function is available in the **cam shaft** operating mode.

The following graph shows the offset position command value and feedback value when P-0-0085 = 100 %:

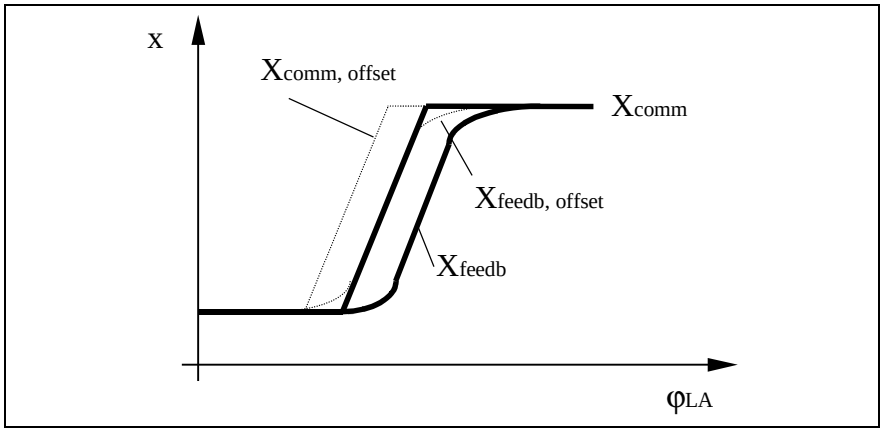


Fig. 3-21: Offset position command value and feedback value when P-0-0085 = 100%

P-0-0085 - Attributes

Para. Name:	**DE**	Dynamische Winkelverschiebung
	EN	Dynamic angle offset
	FR	Décalage angulaire dynamique
	ES	Desplazamiento angular dinamico
	IT	Offset angulario dinamico

Function:	Parameter	**Editability:**	P234
Data length:	2Byte	**Memory:**	-
Format:	DEC_MV	**Validity check:**	no
Unit:	%	**Extreme value check:**	yes
Decimal places:	0	**Combination check:**	no
Input min/max:	- / -		
Default value:	-	**Cyc. transmittable:**	-

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0088, Control word for synchronous operation modes

An active cam profile of a drive can be selected in this parameter.

Parameter structure:

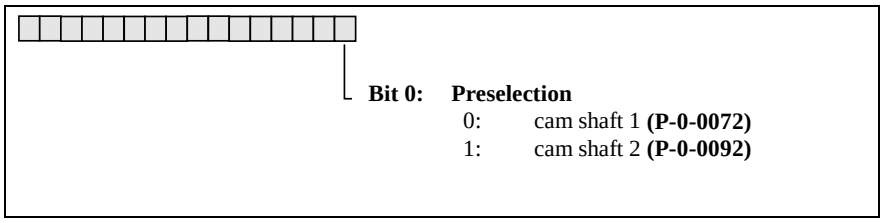


Fig. 3-22: P-0-0088, Cam shaft control

The drive will make a preselection if the master drive position goes beyond the **P-0-0094, Cam shaft switch angle**.

See also the functional description: "Operating mode: Electronic cam shaft with virtual master axis"

P-0-0088 - Attributes

Para. Name:	**DE**	Steuerwort Synchronbetriebsarten
	EN	Control word for synchronous operation modes
	FR	Mot de contrôle pour modes d'opération avec synchronisation
	ES	Palabra de mando para modos de operación sincronizados
	IT	Parola di controllo per modi di operazione sincronizzati

Function:	Parameter	**Editability:**	P234
Data length:	2Byte	**Memory:**	-
Format:	BIN	**Validity check:**	no
Unit:	--	**Extreme value check:**	no
Decimal places:	0	**Combination check:**	no
Input min/max:	- / -		
Default value:	-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0089, Status word for synchronous operating modes

The drive indicates the active cam profile with this parameter.

Parameter structure:

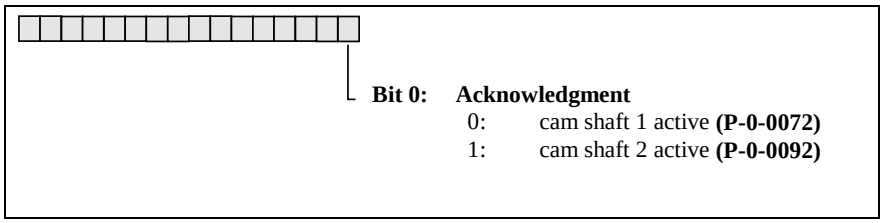


Fig. 3-23: P-0-0089, Cam Shaft Status

See also the functional description: "Operating mode: Electronic cam shaft with virtual master axis"

P-0-0089 - Attributes

Para. Name:	**DE**	Statuswort Synchronbetriebsarten		
	EN	Status word for synchronous operating modes		
	FR	Mot d'état pour modes d'opération avec synchronisation		
	ES	Palabra de estado para modos de operación sincronizados		
	IT	Parola di stato per modi di operazione sincronizzati		
Function:		Parameter	**Editability:**	-
Data length:		2Byte	**Memory:**	-
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0090, Travel limit parameter

Parameter P-0-0090 activates the travel limit switches. In addition, the inputs can be inverted in this parameter (0V on input Limit+/- ⇨ travel range exceeded).

Parameter structure:

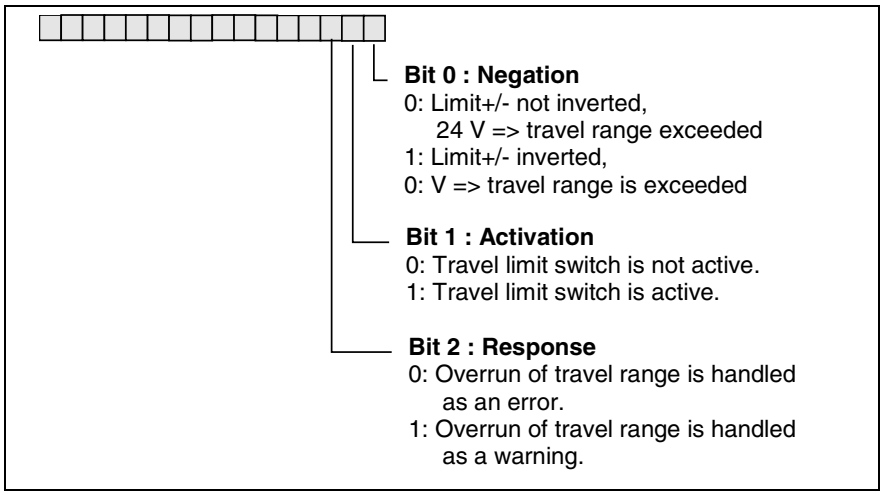


Fig. 3-24: P-0-0090, Travel limit parameter

See also the functional description: "Travel Range Limits"

P-0-0090 - Attributes

Para. Name:	**DE**	Fahrbereichsgrenzschalter-Parameter		
	EN	Travel limit parameter		
	FR	Paramètres de butées hardware		
	ES	Parámetro limite de desplazamiento		
	IT	Parametro Limite Percorso		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	Param. EE
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		0 / 7		
Default value:		0	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0092, Cam shaft profile 2

This parameter contains a table with 1024 elements with tab(φ) data points for the cam shaft profile.
The distance between the data points dφ is derived from the number of elements:

$$d\varphi = 360° / 1024 = 0.35°$$

The first element in the table is the data point for φ = 0°. The last element of the table is the data point for φ = 360° - dφ.

See also the functional description: "Operating mode: Electronic cam shaft with virtual master axis"

P-0-0092 - Attributes

Para. Name:	**DE**	Kurvenscheibe Tabelle 2		
	EN	Cam shaft profile 2		
	FR	Tableau de profil came 2		
	ES	Perfil disco de leva tabla 2		
	IT	Tabella Profilo Camma 2		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte var.	**Memory:**	-
Format:		DEC_MV	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	yes
Decimal places:		6	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

P-0-0093, Cam shaft distance

This parameter determines the factor with which the cam profile will be multiplied.

See also the functional description: "Operating mode: Electronic cam shaft with virtual master axis"

P-0-0093 - Attributes

Para. Name:	**DE**	Kurvenscheibe Hub		
	EN	Cam shaft distance		
	FR	Course de la came		
	ES	Disco de leva carrera		
	IT	Distanza Camma		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	-
Format:		DEC_MV	**Validity check:**	Phase3
Unit:		S-0-0076	**Extreme value check:**	yes
Decimal places:		S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0094, Cam shaft switch angle

If the Master-drive position passes this angle in a positive or negative direction, then a switch will be made to the cam-profile table that was preselected by the parameter **P-0-0088, Cam Shaft Control**.
Parameter **P-0-0089, Cam Shaft Status** will be set to the activated cam-profile table.
When the control drive is first initialized, the cam profile set in **P-0-0088** will be activated. Parameter **P-0-0089** also will be set.

See also the functional description: "Operating mode: Electronic cam shaft with virtual master axis"

P-0-0094 - Attributes

Para. Name:	**DE**	Umschaltwinkel Kurvenscheibe		
	EN	Cam shaft switch angle		
	FR	Angle de commutation came		
	ES	Angulo de conmutación disco de leva		
	IT	Angolo di Commutazione Camma		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	-
Format:		DEC_MV	**Validity check:**	Phase3
Unit:		Deg	**Extreme value check:**	yes
Decimal places:		4	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

P-0-0096, Distance to move in error situation

By inputting a 3 in parameter **P-0-0119, Best possible declaration**, the reaction "return motion“ can be set.
A switch into best possible standstill takes place and the drive traverses the path from the current feedback position value to the value parametrized here (the qualifying sign is noted).

The following parameters are used as limiting factors:

- S-0-0091, Bipolar velocity limit value,
- S-0-0138, Bipolar acceleration limit value and
- S-0-0349, Jerk limit bipolar

It is necessary to parametrize a sufficiently sized value in **P-0-0126, Maximum braking time** to give the drive enough time to traverse the specified path.
If the position limit values are active, then the drive keeps the return motion from travelling over them. The drive then stops at the **S-0-0057, Position window** at the respective position limit value.

See also the functional description: "Return motion".

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0096 - Attributes

Para. Name:	**DE**	Verfahrweg im Fehlerfall		
	EN	Distance to move in error situation		
	FR	Longueur de course en cas de défaut		
	ES	Recorrido de desplazamiento en caso de error		
	IT	Distanza Movimento in Caso di Errore		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_MV	**Validity check:**	Phase3
Unit:		S-0-0076	**Extreme value check:**	yes
Decimal places:		S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:		S-0-0076 / S-0-0076		
Default value:		0	**Cyc. transmittable:**	no

P-0-0097, Absolute encoder monitoring window

During **S-0-0128, C200 Communication phase 4 transition check,** the absolute encoder monitoring compares the position saved during the last powering down with the current absolute feedback.
If the difference is greater than the value set in parameter **P-0-0097, Absolute encoder monitoring** window, the error message **F276 Absolute encoder out of allowed window** will be generated. This can happen when the axis has been **moved with the power off**, or after changing the motor.

Note: If a 0 is parametrized in parameter **P-0-0097, Absolute encoder monitoring window**, the absolute encoder monitor is deactivated.

As a standard value, 0.1 motor revolution (= 36 degrees in reference to the motor shaft) can be programmed if the axis has an electrically released brake or electrically activated braking mechanism.

See also the functional description: "Absolute Encoder Monitoring".

P-0-0097 - Attributes

Para. Name:	**DE**	Absolutgeber-Überwachungsfenster		
	EN	Absolute encoder monitoring window		
	FR	Fenêtre de monitorage du codeur absolu		
	ES	Ventana de control de encoder absoluto		
	IT	Finestra di monitoraggio del encoder assoluto		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_MV	**Validity check:**	Phase3
Unit:		S-0-0076	**Extreme value check:**	yes
Decimal places:		S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:		0 / S-0-0076		
Default value:		3000	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0098, Max. model deviation

The maximum model deviation is the maximum deviation between the real position feedback value and the model position feedback value calculated by the drive. his parameter can be read out by the user to help set the parameter for **S-0-0159, Monitoring window**.

Two cases must be distinguished for determining the model position feedback value:

1. Position control with following (lag) error

In this operating mode, the controlled system is simulated by a model.
The maximum deviation between the calculated position feedback module value and the real position feedback value is stored in the parameter P-0-0098.

2. Position control without following (lag) error

In this operating mode, the position command value is compared to the position feedback value. The maximum deviation encountered is stored in P-0-0098.

Note: This parameter can be write accessed so that it can be set back to 0, for example.

See also the functional description: "Position Control Loop Monitoring".

P-0-0098 - Attributes

Para. Name:	**DE**	Max. Modellabweichung		
	EN	Max. model deviation		
	FR	Ecart max. au modèle		
	ES	Desviación máx. del modelo		
	IT	Scostamento mass. da modello		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	no
Format:		DEC_MV	**Validity check:**	no
Unit:		S-0-0076	**Extreme value check:**	yes
Decimal places:		S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:		0 / S-0-0076		
Default value:		---	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0099, Position command smoothing time constant

The position command smoothing time constant determines the maximum jerk possible in operation modes with closed loop position control.
The maximum jerk is determined by:

$$\text{max. jerk} = \frac{\text{2nd derivative of the position command values}}{\textbf{P-0-0099 Position command value smoothing filter time constant}}$$

Fig. 3-25: Max. jerk

If you don't want to activate a filter, set P-0-0099 >= S-0-0001, NC Cycle time (TNcyc) (greater or equal).

See also the functional description: "Command value processing: Position Control".

P-0-0099 - Attributes

Para. Name:	**DE**	Lagesollwert-Glättungsfilter-Zeitkonstante		
	EN	Position command smoothing time constant		
	FR	Temps de filtrage consigne de pos.		
	ES	Tiempo de alisamiento posición comando		
	IT	Tempo per Smorzamento Comandi Posiz.		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		ms	**Extreme value check:**	yes
Decimal places:		2	**Combination check:**	no
Input min/max:		0 / 655.35		
Default value:		0	**Cyc. transmittable:**	no

P-0-0108, Master drive polarity

This parameter can invert master drive position polarity. This means that an inverted, electronic gearbox can be implemented.

Parameter structure:

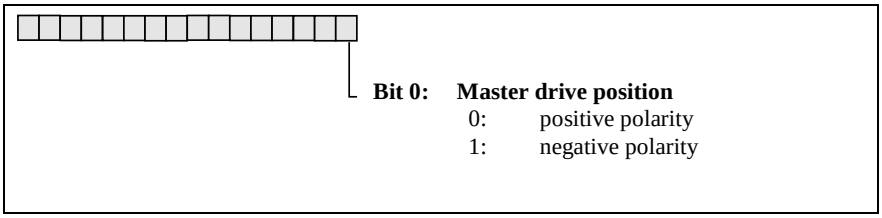


Fig.: 3-26: P-0.0108, Master Drive Polarity

See also the functional description:
- "Operating mode: Velocity synchronization with virtual master axis"
- "Operating mode: Phase synchronization with virtual master axis"

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0108 - Attributes

Para. Name:	**DE**	Polarität Leitantrieb		
	EN	Master drive polarity		
	FR	Polarité entraînement guide		
	ES	Polaridad accionamiento conductor		
	IT	Polarità Master		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

P-0-0109, Torque/force peak limit

The maximum peak torque of a drive can be limited in a manner suitable to an application with the use of parameter **P-0-0109, Torque/ force peak limit**. In other words, the parameter ensures that the max. torque specific to the application is not exceeded even if **S-0-0092, Bipolar torque/force limit value** is set exceedingly high.

See function description: "Torque/Force Limiting"“.

P-0-0109 - Attributes

Para. Name:	**DE**	Spitzendrehmoment/-Kraft-Begrenzung		
	EN	Torque/force peak limit		
	FR	Limitation couple/force crête		
	ES	Limite par/fuerza punta		
	IT	Limitazione Picco Coppia/Forza		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		S-0-0086	**Extreme value check:**	yes
Decimal places:		S-0-0086	**Combination check:**	no
Input min/max:		0 / S-0-0086		
Default value:		5000	**Cyc. transmittable:**	no

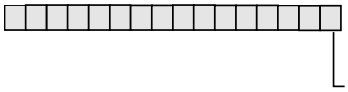
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0117, NC reaction on error

This parameter allows the NC 30 seconds to bring the drive controller to a coordinated deceleration in an error situation if the parameter is set with a "1“. The drive follows the command for this period. The drive reacts with the preset **P-0-0119, Best possible deceleration**.

Note: This feature only works for non-fatal errors!

Parameter structure:



Bit 0: Activation
0: instant control drive reaction to non-fatal errors with "best possible standstill"
1: reaction to non-fatal errors delayed 30s.

Fig. 3-27: P-0-0117, NC reaction on error

See also the functional description: "NC Response in Error Situation"

P-0-0117 - Attributes

Para. Name:	**DE**	Aktivierung NC-Reaktion im Fehlerfall		
	EN	NC reaction on error		
	FR	Activation réaction CN en cas de défaut		
	ES	Activación reaccion NC en caso de error		
	IT	Reazione in Presenza Errore NC		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		0 / 1		
Default value:		0	**Cyc. transmittable:**	no

P-0-0118, Power off on error

This parameter allows variable behavior in case the power is switched off with subsequent error reaction.
In addition, there are the following possibilities of setting:

- condition for power on (bit 1)
- reaction to undervoltage (bit 3)
- automatic clearing of undervoltage (bit 4)
- undervoltage as fatal warning (bit 5)

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Parameter structure:

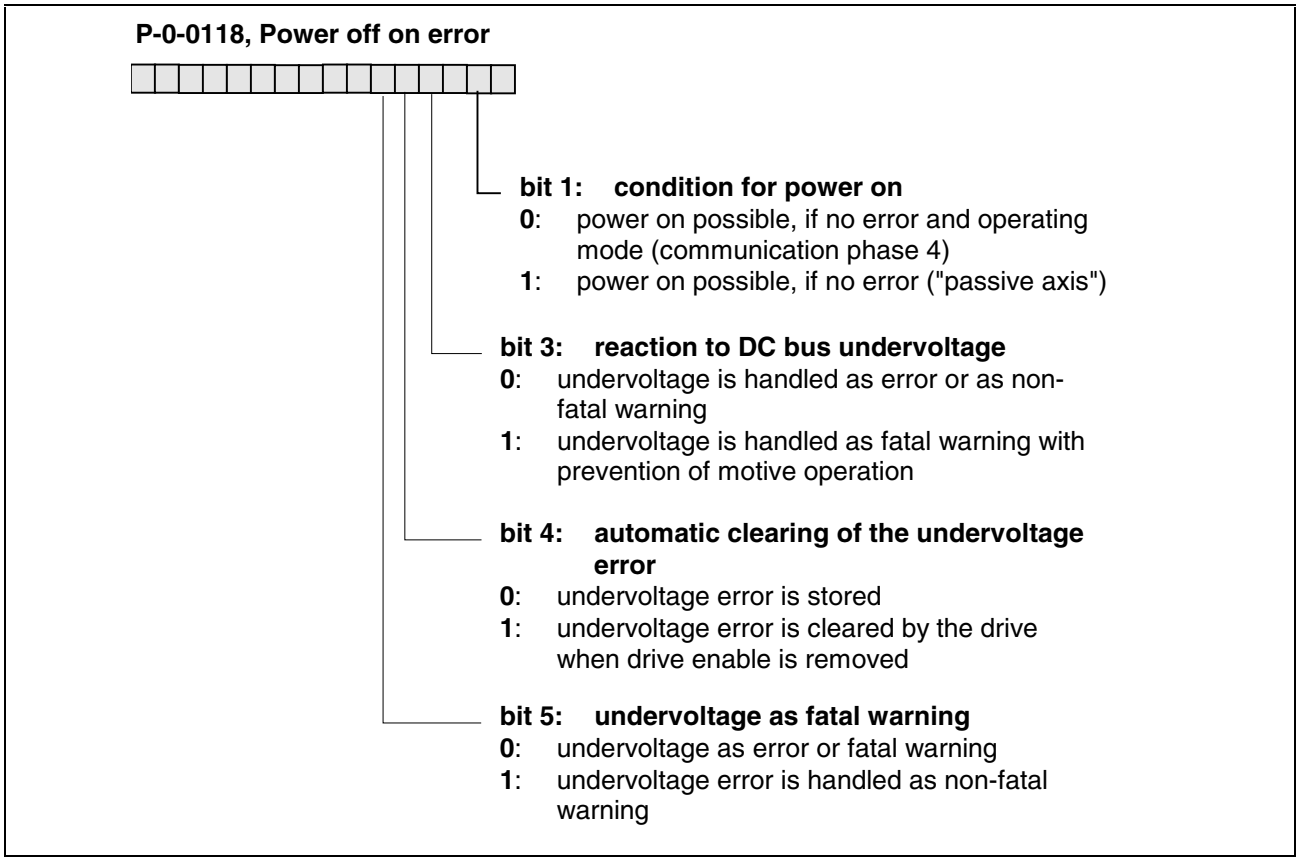


Fig. 3-28: P-0-0118, Power off on error

See also Functional Description "Power off on error"

P-0-0118 - Attributes

Para. Name:	**DE**	Leistungsabschaltung im Fehlerfall		
	EN	Power off on error		
	FR	Mise hors tension en cas de défaut		
	ES	Desconexion de potencia en caso de error		
	IT	Spegnimento Potenza in Caso di Errore		
Function:		Parameter	**Editability:**	P23
Data length:		--	**Memory:**	Param. EE
Format:		BIN	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	yes
Decimal places:		--	**Combination check:**	no
Input min/max:		0 / 31		
Default value:		10001b	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0119, Best possible deceleration

This parameter specifies the type of braking to standstill for the drive in the event of

- a non-fatal error
- an interface error
- a phase regression
- switching off the drive enable signal

P-0-0119	Reaction type
0	**Velocity command value set to zero** The motor brakes in regard to the torque limit value. The Braking time is set in parameter P-0-0126. As soon as the braking time elapses, the motor holding brake is activated. If the velocity has previously fallen below 10 rpm (rotational motors) or below 10 mm/min (linear motors), then the motor holding brake will be engaged immediately. 150 milliseconds after the mechanical brake is set, the motor is torque free.
1	**Switch to torque-free state**
2	**Velocity command to zero with command ramp and filter** The ramp, i.e. the maximum acceleration, is set via **P-0-1201, Ramp 1 pitch**, the jerk filter via **P-0-1222, Velocity command filter**.
3	**Return motion** The drive generates a position command profile for traversing the set "path on error" in which case a relative path is activated which is defined with **P-0-0096, Distance to move in error situation**, **S-0-0091, Bipolar Velocity Limit Value**, **S-0-0138, Bipolar acceleration limit value** and **S-0-0349, Jerk Limit bipolar**.

Fig. 3-29: Deceleration mode for the drive

The drive enable can be set again, at the earliest, after the operation of the error reaction.

See also the functional description: "Best Possible Deceleration".

P-0-0119 - Attributes

Para. Name:	**DE**	Bestmögliche Stillsetzung		
	EN	Best possible deceleration		
	FR	Arrêt au plus vite		
	ES	La mejor parada posible		
	IT	Decellerazione massima		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		0 / 3		
Default value:		0	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0124, Assignment IDN -> Digital output

This parameter determines which parameter data are written to which digital output.

Parameter structure:

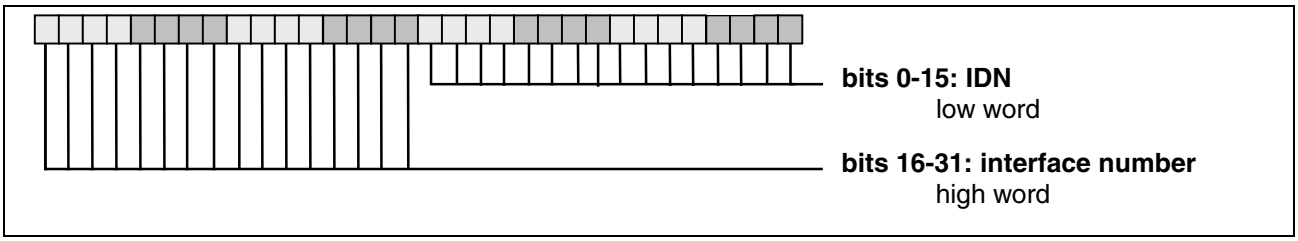


Fig. 3-30: P-0-0124, Assignment IDN -> Digital output

The parameter is a 4-byte parameter which is divided into the following sections:

- **bit 0…15**: IDN of the **parameter to be assigned**
- **bit16…31**: number of the **digital interface**
  (3 dig. outputs available for Ecodrive Cs)

Example:
output of S-0-0144, configurable signal status word, at the digital outputs of the controller
→ **P-0-0124** = 0000 0000 0000 0000 / 0000 0000 1001 0000
"**0**" / **S-0-0144**

See also Functional Description "Digital Input/Output"
See also Project Planning Manual "Digital outputs"

P-0-0124 - Attributes

Para. Name:	**DE**	Zuweisung Identnummer -> Digitaler Ausgang		
	EN	Assignment IDN -> Digital output		
	FR	Assignation IDN -> Sortie digitale		
	ES	Asignación número ident -> salida digital		
	IT	Assegnazione IDN -> Uscite digitale		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	-
Format:		HEX	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		--	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0125, Assignment digital input -> IDN

This parameter can be used to assign an input of the DEA plug-in card to the value of a parameter.
The input status of the DEA is written to the corresponding parameter.

Parameter structure:

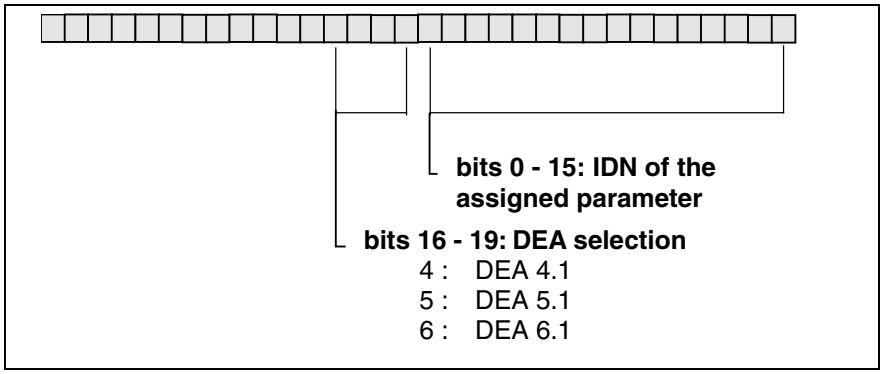


Fig. 3-31: P-0-0125, Assignment digital input -> IDN

Note: If an IDN is assigned to a DEA using parameter P-0-0125, the operating data of the assigned IDN will be cyclically overwritten by the respective DEA input.

See also Functional Description "Digital Input/Output"

P-0-0125 - Attributes

Para. Name:	**DE**	Zuweisung digitaler Eingang -> Identnummer		
	EN	Assignment digital input -> IDN		
	FR	Assignation entrée DEA -> IDN		
	ES	Asignación entrada DEA -> Numero de ident		
	IT	Assegnazione Ingressi DEA -> IDN		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	-
Format:		HEX	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		--	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0126, Maximum braking time

The maximum braking time for the drive is set in this parameter.
The value should always be set higher then the time needed, to decelerate the shaft from maximum velocity to zero using the error reaction "Velocity command value set to zero".

The velocity command value is switched to zero if **P-0-0119, Best possible deceleration** is set to 0 and either

- The drive enable (RF) is removed
- The drive is switched to parameter mode with RF switched on
- A drive error is recognized that still allows a reaction from the drive (all non-fatal errors)
- In the case of separately supplied devices, a drive connected to the same supply module reports an error to that module, so that the intermediate voltage is switched off.

See also functional description: "Motor Holding Brake"

P-0-0126 - Attributes

Para. Name:	**DE**	Maximale Bremszeit		
	EN	Maximum braking time		
	FR	Temps de freinage max.		
	ES	Tiempo máx. de frenado		
	IT	Tempo massimo di Frenata		
Function:		Parameter	**Editability:**	P23
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		ms	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		500 / 100000		
Default value:		5000	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0127, Overload warning

To protect the power stage, the temperature is calculated with a temperature model for the transistor output stage. If the temperature exceeds 125°C, then the torque-producing command current will be limited.
To avoid an unexpected disruption of the torque from the drive, a warning threshold can be set in this parameter.
If the thermal load rises above the set value, warning **E261 Continuous current limiting prewarning** will be generated.
If 100% is entered, this warning will be deactivated, because then the message **E257 Continuous current limit active** will be generated instead.

See also the functional description: "Current Limit".

P-0-0127 - Attributes

Para. Name:	**DE**	Überlastwarnung		
	EN	Overload warning		
	FR	Alerte surcharge		
	ES	Umbral de aviso de sobrecarga		
	IT	Avvertenza sovraccarico		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		%	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		00000 / 100		
Default value:		8090	**Cyc. transmittable:**	no

P-0-0131, Signal select position switch

This parameter is used to activate and to select the signal for the position switch.
The following values can be entered in the parameter:

P-0-0131	Function
0	The position switch has not been activated.
1	The position switch has been activated; the reference value is **S-0-0051, Position feedback 1 value**

Fig 3-32: Activation and signal selection for the position switch

See also Functional Description "Programmable Limit Switch"

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0131 - Attributes

Para. Name:	**DE**	Nockenschaltwerk-Signalauswahl		
	EN	Signal select position switch		
	FR	Boîte à cames, Sélection de signal		
	ES	Señal seleccionar interruptor de posición		
	IT	Selezione Segnale Interr. di Posizione		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		0 / 2		
Default value:		1	**Cyc. transmittable:**	-

P-0-0132, Switch on threshold position switch

This parameter list can be used to set the switch-on positions for the programmable limit switch.
It consists of **16 elements**, where element 1 is allocated for the position switch bit 1, element 2 is allocated for bit 2, and so forth.

See also the functional description: "Programmable Limit Switch"

P-0-0132 - Attributes

Para. Name:	**DE**	Nockenschaltwerk-Einschaltschwelle		
	EN	Switch on threshold position switch		
	FR	Boîte à cames, seuil d'enclenchement		
	ES	Conectar en umbral interruptor de posición		
	IT	Attivazione Interr. Mantenimento Posizione		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte var.	**Memory:**	Param.-E²prom
Format:		DEC_MV	**Validity check:**	Phase3
Unit:		S-0-0076	**Extreme value check:**	yes
Decimal places:		S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:		S-0-0076 / S-0-0076		
Default value:		-	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0133, Switch off threshold position switch

This parameter list can be used to set the switch-off positions for the programmable limit switch.

It consists of **16 elements**, where element 1 is allocated for the position switch bit 1, element 2 is allocated for bit 2, and so forth.

See also the functional description: "Programmable Limit Switch".

P-0-0133 - Attributes

Para. Name:	**DE**	Nockenschaltwerk-Ausschaltschwelle		
	EN	Switch off threshold position switch		
	FR	Boîte à cames, seuil d' extinction		
	ES	Desconectar en umbral interruptor de posición		
	IT	Disattivazione Interr. Mantenimento Posizione		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte var.	**Memory:**	Param.-E²prom
Format:		DEC_MV	**Validity check:**	Phase3
Unit:		S-0-0076	**Extreme value check:**	yes
Decimal places:		S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:		S-0-0076 / S-0-0076		
Default value:		-	**Cyc. transmittable:**	no

P-0-0134, Position switch lead times

By parameterizing a rate time, a time delay can be compensated for an external, position-driven switch element. In that way, a theoretical adjustment value can be calculated from the rate time and the current drive velocity for the on- and off-switch Positions.
The programmable limit switch switches by the rate time before reaching the trigger position.

Note: The velocity must remain constant in the range between the theoretical and actual on-switch or off-switch threshold.

See also the functional description: "Programmable Limit Switch"

P-0-0134 - Attributes

Para. Name:	**DE**	Nockenschaltwerk-Vorhaltezeiten		
	EN	Position switch lead times		
	FR	Boîte à cames, temps d'anticipation		
	ES	Tiempos de anticipación del conmutador de levas		
	IT	Tempi d'azione derivativa controller camma		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte var.	**Memory:**	-
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		ms	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		- / 32767		
Default value:		-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0135, Status position switch

The state of the programmable limit switch bits is displayed in this parameter.

Parameter structure with 16 switches:

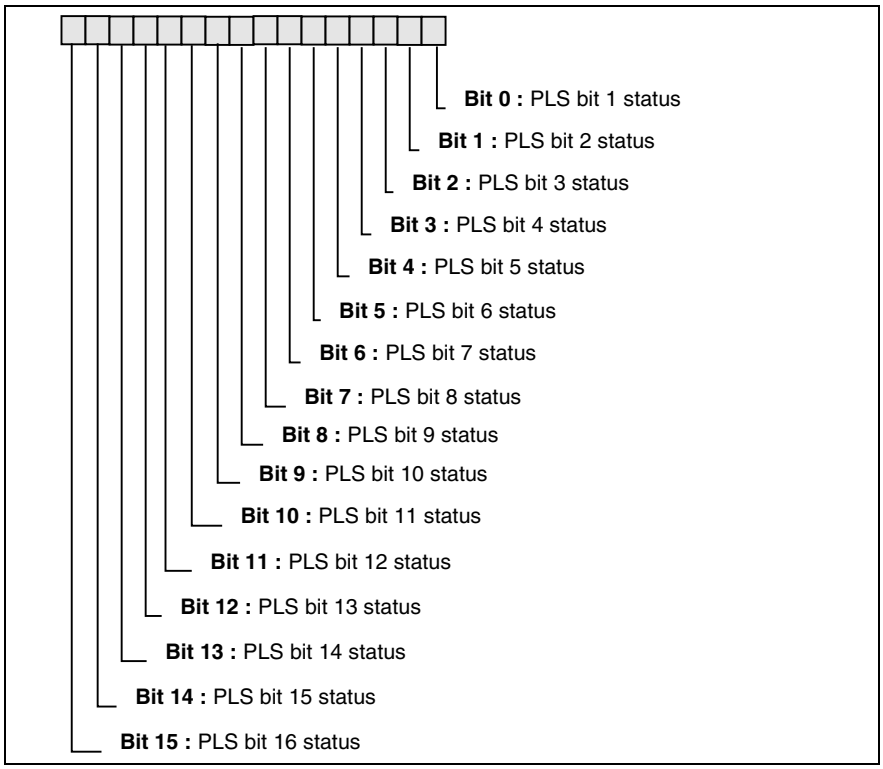


Fig. 3-33: P-0-0135, Position switches' status word

See also the functional description: "Programmable Limit Switch".

P-0-0135 - Attributes

Para. Name:	**DE**	Nockenschaltwerk-Statuswort		
	EN	Status position switch		
	FR	Boîte à cames, mot d'état		
	ES	Interruptor de posición, palabra de estado		
	IT	Stato Interr. di Posizione		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	-
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		--	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0141, Thermal drive load

The parameter P-0-0141, Thermal drive load is for diagnostic purposes. In this parameter, 0% corresponds to a chip over-temperature of 0 Kelvin, 100% corresponds to the maximum chip over-temperature. The thermal load should not exceed a value of 80% for the applied operating cycles if the drive is set up correctly.
It typically takes about 10 minutes to warm up a drive controller end stage to its final temperature. To check the thermal load of a drive during installation without having to run operating cycles during this period of time, the drive controller load can be preset with 80%. This can happen by writing an arbitrary value to the parameter **P-0-0141, Thermal drive load**.

See also the functional description: "Current Limit"

P-0-0141 - Attributes

Para. Name:	**DE**	Thermische Regelgeräte-Auslastung		
	EN	Thermal drive load		
	FR	Charge thermique variateur		
	ES	Descarga termica de reguladores		
	IT	Carico termico Azionamento		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	no
Format:		DEC_OV	**Validity check:**	no
Unit:		%	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		00000 / 100		
Default value:		---	**Cyc. transmittable:**	no

P-0-0142, Synchronization acceleration

Acceleration or deceleration with which the synchronous velocity is reached in dynamic synchronization (ramp up and lock on).

Acceleration and delay is performed with the synchronization acceleration in the second step of dynamic synchronization (ramp up and lock on). This affects device operating modes with underlying position control. When running an angle offset, the slave drive is accelerated or decelerated with the synchronization acceleration.

This is only operational in the operating modes with electronic gear:

- velocity synchronization
- phase synchronization
- curve pattern disk (cam plate)
- pattern transmission

See also the functional description:
- "Operating mode: Velocity synchronization with virtual master axis"
- "Operating mode: Phase synchronization with virtual master axis"

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0142 - Attributes

Para. Name:	**DE**	Aufsynchronisier-Beschleunigung		
	EN	Synchronization acceleration		
	FR	Accélération de synchronisation		
	ES	Aceleración de sincronización		
	IT	Accellerazione di Sincronizzazione		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		S-0-0160	**Extreme value check:**	yes
Decimal places:		S-0-0161/S-0-0162	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

P-0-0143, Synchronization velocity

The velocity with which the distance (angle difference) to absolute synchronization is done in dynamic synchronization (ramp up and lock on).

This is only operative in the operating modes with **electronic gear**:

- phase synchronization
- curve pattern disk (cam plate)
- pattern transmission

See also the functional description: "Operating mode: Phase synchronization with virtual master axis"

P-0-0143 - Attributes

Para. Name:	**DE**	Aufsynchronisier-Geschwindigkeit		
	EN	Synchronization velocity		
	FR	Vitesse de synchronisation		
	ES	Velocidad de sincronización		
	IT	Velocità di Sincronizzazione		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		S-0-0044	**Extreme value check:**	yes
Decimal places:		S-0-0045/S-0-0046	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0144, Cam shaft distance switch angle

A new value for the **P-0-0093, Cam Shaft Distance** will become active only when the table access angle passes the cam shaft switch angle. The angle for the table access is formed out of the following parameters:

- P-0-0053, Master drive position
- P-0-0061, Angle offset begin of profile
- P-0-0085, Dynamical angle offset
- P-0-0108, Master drive polarity
- P-0-0156, Master drive gear input revolutions
- P-0-0157, Master drive gear output revolutions
- P-0-0158, Angle offset change rate

This works only in the curve pattern disk (Cam profile) operating mode.

See also the functional description: "Operating mode: Electronic cam shaft with virtual master axis".

P-0-0144 - Attributes

Para. Name:	**DE**	Umschaltwinkel Kurvenscheibe Hub		
	EN	Cam shaft distance switch angle		
	FR	Angle de commutation profil de came course		
	ES	Angulo de conmutación distancia disco de leva		
	IT	Distanza Angolo di Commutazione Camma		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		Deg	**Extreme value check:**	yes
Decimal places:		4	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

P-0-0145, Expanded trigger level

This parameter is for service purposes only.
If bit 12, Expanded trigger level is selected using parameter **P-0-0026, Trigger signal selection**, then an address can be selected with parameter P-0-0145 that is monitored for the threshold parameter value.
Parameter structure:

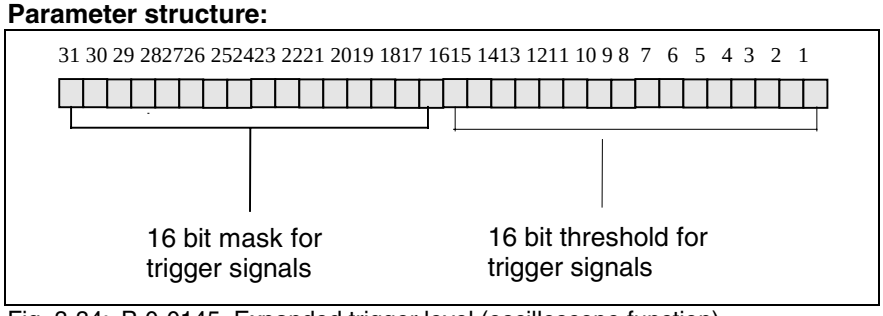


Fig. 3-34: P-0-0145, Expanded trigger level (oscilloscope function)

See also the functional description: "Oscilloscope Feature".

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0145 - Attributes

Para. Name:	**DE**	Triggerschwelle erw.Oszilloskopfunktion		
	EN	Expanded trigger level		
	FR	Seuil de déclenchement fonction oscill. élargie		
	ES	Umbral de trigger función ampliada de osciloscopio		
	IT	Superamento Soglia Fronte di Trigger		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	Param. EE
Format:		HEX	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		--	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		0	**Cyc. transmittable:**	no

P-0-0146, Expanded trigger address

This parameter is for service purposes only.
If bit 12 Expanded trigger level is selected in using parameter **P-0-0026, Trigger signal selection**, then an address can be selected with parameter P-0-0146 that is monitored for the threshold parameter value.

Parameter structure:

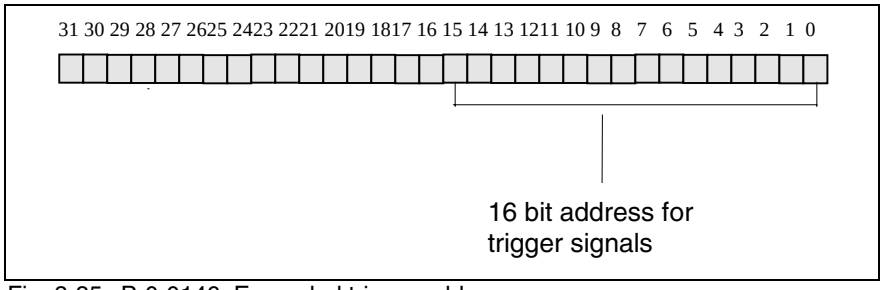


Fig. 3-35: P-0-0146, Expanded trigger address

The 16-bit value of the trigger edge is monitored. Before, the trigger signal is ANDed with the mask for trigger signals.

See also the functional description: "Oscilloscope Feature".

P-0-0146 - Attributes

Para. Name:	**DE**	Triggersignaladresse erw. Oszilloskopfunktion		
	EN	Expanded trigger address		
	FR	Adresse déclenchement fonction ocilloscope élargie		
	ES	Dirección de trigger función de osciloscopio ampliada		
	IT	Indirizzo segnale trigger funzione oscilloscopio ampl.		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	Param. EE
Format:		HEX	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		--	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		0	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0147, Expanded signal K1 address

If an expanded signal selection is made with parameters **P-0-0023, Signal select scope channel 1** and **P-0-0024, Signal select scope channel 2**, then an address to be recorded can be chosen in the drive with parameter P-0-0147.

See also the functional description: "Oscilloscope Feature".

P-0-0147 - Attributes

Para. Name:	**DE**	Signaladresse K1 erw. Oszilloskopfunktion		
	EN	Expanded signal K1 address		
	FR	Adresse signal K1 fonction oscill. élargie		
	ES	Dirección de señal K1 función de osciloscopio ampliada		
	IT	Indirizzo Segnale K1		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	Param. EE
Format:		HEX	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		--	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		0	**Cyc. transmittable:**	no

P-0-0148, Expanded signal K2 address

If an expanded signal selection is chosen with parameters **P-0-0023, Signal select scope channel 1** and **P-0-0024, Signal select scope channel 2**, then an address to be recorded can be chosen in the drive with parameter P-0-0148.

See also the functional description: "Oscilloscope Feature".

P-0-0148 - Attributes

Para. Name:	**DE**	Signaladresse K2 erw. Oszilloskopfunktion		
	EN	Expanded signal K2 address		
	FR	Adresse signal K2 fonction oscill. élargie		
	ES	Dirección de señal K2 función de osciloscopio ampliada		
	IT	Indirizzo Segnale K2		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	Param. EE
Format:		HEX	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		--	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		0	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0149, List of selectable signals for oscilloscope function

By means of the P-0-0149 parameter the control unit can read drive-supported fixed signals. This enables a user interface to process a signal selection menu using the information contained in the drive with regard to the parameters listed below.

List entry	ID number of
1	S-0-0051
2	S-0-0040
3	S-0-0347
4	S-0-0189
5	S-0-0080
6	S-0-0051
7	S-0-0053
8	S-0-0047
9	P-0-0147
10	P-0-0148

Fig. 3-36: P-0-0149, List of selectable signals for oscilloscope function

See also Functional Description "Oscilloscope Feature"

P-0-0149 - Attributes

Para. Name:	**DE**	Signalauswahlliste für Oszilloskopfunktion		
	EN	List of selectable signals for oscilloscope function		
	FR	Liste sélection signaux pour fonction oscilloscope		
	ES	Lista de selección de señal para función de osciloscopio		
	IT	Lista dei Segnali validi per Funzione Oscilloscopio		
Function:		Parameter	**Editability:**	no
Data length:		2Byte var.	**Memory:**	constant
Format:		IDN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0150, Number of valid samples for oscilloscope function

If the oscilloscope function is activated then the signal to be recorded is continuously fed to a value memory. If triggering occurs, then the recording procedure is stored and the value list can be read out. The oldest measured value is the first element of this list, the newest value the last.
If triggering occurs before the memory is completely filled, then a number of values at the start of the list are invalid. The number of valid values before triggering is available in parameter **P-0-0150, Number of valid samples for oscilloscope function**.

See also the functional description: "Oscilloscope Feature".

P-0-0150 - Attributes

Para. Name:	**DE**	Anzahl gültiger Messwerte für Oszilloskopfunktion
	EN	Number of valid samples for oscilloscope function
	FR	Nombre de mesures valides pour fonction oscilloscope
	ES	Numero valores de medición validos para función osciloscopio
	IT	Numero dei Campionamenti validi per Funz. Oscill.

Function:	Parameter	**Editability:**	no
Data length:	2Byte	**Memory:**	no
Format:	DEC_OV	**Validity check:**	no
Unit:	--	**Extreme value check:**	no
Decimal places:	0	**Combination check:**	no
Input min/max:	--- / ---		
Default value:	---	**Cyc. transmittable:**	no

P-0-0151, Synchronization init window for modulo format

The second step of dynamic synchronization (ramp up and lock on) establishes a path that must be crossed to reach absolute synchronization.
If positioning difference exceeds "synchronization window in modulo format P-0-0151“, then the synchronization direction is determined by parameter „command value in modulo format“ (S-0-0393). If the position difference is smaller than the the value in „seynchronization window in modulo format“, then synchronization may take place in a direction counter to the oneset in parameter S-0-0393.
In synchronization window parameter, the position difference as it releates to the following drive is entered, within which the rotational direction may deviate from the one set for synchronization.

See also the functional description: "Operating mode: Phase synchronization with virtual master axis"

P-0-0151 - Attributes

Para. Name:	**DE**	Aufsynchronisierfenster bei Modulo-Format
	EN	Synchronization init window for modulo format
	FR	Fenêtre de sync. pour format modulo
	ES	Ventana de sincronización en formato de modulo
	IT	Inizializzazione Sincronizzazione per Formato Modulo

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Function:	Parameter	**Editability:**	P234
Data length:	4Byte	**Memory:**	-
Format:	S-0-0076	**Validity check:**	Phase3
Unit:	S-0-0076	**Extreme value check:**	yes
Decimal places:	S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:	- / -		
Default value:	-	**Cyc. transmittable:**	-

P-0-0153, Optimum distance home switch - reference mark

During the "**Drive-controlled homing procedure**" command the distance between the home switch edge and the reference mark is monitored with the home switch and the reference mark evaluation having been activated. The optimum distance provided for reference marks with equal distances is half the reference mark distance. The optimum distance has to be entered in the **P-0-0153, Optimum distance home switch-reference mark** parameter in accordance with the table below.

Encoder type	P-0-0153	Function
rotary	0	The distance home switch-reference mark is monitored. The optimum distance is calculated internally and is 1/2 encoder revolution in the case of DSF or incr. rotary encoders, respectively 1/2 encoder revolution / **S-0-0116, Feedback -1 Resolution** in the case of resolvers.
rotary	x	The distance home switch-reference mark is monitored. Half the reference mark distance has to be entered in **P-0-0153, Optimum distance home switch-reference mark**.

Fig. 3-37: Distance monitoring home switch-reference mark

See also Functional Description "Drive-Controlled Homing"

P-0-0153 - Attributes

Para. Name:	**DE**	Optimaler Abstand Referenzschalter-Referenzmarke
	EN	Optimum distance home switch - reference mark
	FR	Distance optimale entre contact d'origine et marque de réf.
	ES	Distancia óptima marca de puesta a cero
	IT	Distanza ottimale Camma di Zero

Function:	Parameter	**Editability:**	P234
Data length:	4Byte	**Memory:**	Param. EE
Format:	S-0-0076	**Validity check:**	Phase3
Unit:	S-0-0076	**Extreme value check:**	yes
Decimal places:	S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:	S-0-0076 / S-0-0076		
Default value:	0	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0154, Synchronization direction

The second step of dynamic synchronization (ramp up and lock on) establishes a path that must be crossed to reach absolute synchronization.
With rotary axes, the drive can move in a positive or negative direction.
The synchronization direction determines the direction for the drive.

P-0-0154	Function
0	shortest path
1	clockwise
2	anti-clockwise

Fig. 3-38: synchronization direction

If the shortest path to absolute synchronization is smaller than the **P-0-0151, Synchronization Init Window for Modulo Format**, then the shortest path will be taken and the preset synchronization direction will be ignored.

This parameter is only operative in the operating modes

- phase synchronization
- cam shaft (curve pattern disk)
- pattern transmission

See also the functional description: "Dynamic synchronization in the phase synchronization operating mode"

P-0-0154 - Attributes

Para. Name:	**DE**	Aufsynchronisier-Richtung		
	EN	Synchronization direction		
	FR	Sens de synchronisation		
	ES	Sincronización dirección		
	IT	Direzione di Sincronismo		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0155, Synchronization mode

The drive will start the dynamic synchronization automatically after one of the following operating modes is activated:

- phase synchronization or
- cam shaft.

The **S-0-0047, Position Command Values** will be generated by the drive until the absolute synchronization (**S-0-0047** = Xsynch + **S-0-0048**) is reached. The **P-0-0142, Synchronization Acceleration** and **P-0-0143, Synchronization Velocity** will be taken into consideration.

Synchronization mode bit 0 =1
If synchronization mode 1 is set, then parameters **P-0-0142** and **P-0-0143** will be inoperative after absolute synchronization is reached.
The following changes of the **S-0-0048, Position Command Value Additional** will then be smoothed through a filter of the first order. The time constant for the filter will be set with the parameter **P-0-0060, Filter Time Constant** Additional Position Command Value.

Synchronization mode bit 0 =0
If synchronization mode 0 is selected, a path will be created after every change of the position command value based on the equation

Path = Xsynch + **S-0-0048** – **S-0-0047**,

and the path will be taken with regard to the synchronization acceleration and velocity.

Synchronization mode bit 1 =1: relative angle synchronous axis
When activating the "Angle synchronization" mode or "Cam mode", the drive initializes parameter **S-0-0048, Position Command Value Additional** so that no movement is needed. The drive is thus relatively angle synchronous.

Synchronization mode bit 1 =0: absolute angle synchronous axis

See also the functional description: "Dynamic synchronization in the phase synchronization operating mode"

P-0-0155 - Attributes

Para. Name:	**DE**	Aufsynchronisier-Modus		
	EN	Synchronization mode		
	FR	Mode de synchronisation		
	ES	Sincronización modo		
	IT	Modo di Sincronizzazione		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	-
Format:		BIN	**Validity check:**	Phase3
Unit:			**Extreme value check:**	no
Decimal places:		--	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0156, Electric gear input revolutions

This parameter determines together with the parameter P-0-0157 Master drive gear output revolutions the master drive gear.
A master axis position (P-0-0053) sent to the drive will be multiplied with the master drive gear transmission ratio before the processing, and will then be limited to the standardized range of 2^20.

The master axis position and therefore also this parameter are only active in the **operation modes**

- speed synchronization
- angular synchronization
- cam shaft
- pattern control

P-0-0156 - Attributes

Para. Name:	**DE**	Elektronisches Getriebe Eingangsumdrehungen
	EN	Electric gear input revolutions
	FR	Transmission de l'axe guide, tours entrée
	ES	Revoluciones de entrada del engranaje maestro
	IT	N. di giri in ingresso trasmissione asse guida

Function:	Parameter	**Editability:**	P234
Data length:	2Byte	**Memory:**	-
Format:	DEC_OV	**Validity check:**	Phase3
Unit:	--	**Extreme value check:**	no
Decimal places:	0	**Combination check:**	no
Input min/max:	- / -		
Default value:	-	**Cyc. transmittable:**	-

P-0-0157, Electric gear output revolutions

This parameter determines together with the parameter P-0-0156 Master drive gear input revolutions the master drive gear.
A master axis position (P-0-0053) sent to the drive will be multiplied with the master drive gear transmission ratio before the processing, and will then be limited to the standardized range of 2^20.

The master axis position and therefore also this parameter are only active in the **operation modes**

- speed synchronization
- angular synchronization
- cam shaft
- pattern control

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0157 - Attributes

Para. Name:	**DE**	Elektronisches Getriebe Ausgangsumdrehungen		
	EN	Electric gear output revolutions		
	FR	Transmission de l'axe guide, tours sortie		
	ES	Revoluciones de salida del engranaje maestro		
	IT	N. di giri in uscita trasmissione asse guida		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

P-0-0158, Angle offset change rate

In the operation modes Cam shaft and Pattern control, **P-0-0061, Angle Offset Begin of Profile** affects the access angle to the table. If this angular shift should be changed in a greater range, with the given increment in the active table, then a slow approach towards the new value must be done, because every change means a jump in the position command.
A new value for the parameter P-0-0061, Angle Offset Begin of Profile does not become active immediately. Outgoing from the actualn value, a ramp shaped approach to the new value is done.
The approach is made on the shortest way.
The slope of the ramp is determined with the parameter P-0-0158, Phase offset velocity.

P-0-0158 - Attributes

Para. Name:	**DE**	Änderungsgeschwindigkeit Winkelverschiebung		
	EN	Angle offset change rate		
	FR	Vitesse du changement pour décalage angulaire		
	ES	Velocidad de modificación desplazamiento angular		
	IT	Velocità Cambiamento angulario		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		Rpm	**Extreme value check:**	yes
Decimal places:		2	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0159, Slave drive feed travel

During the **linear angle synchronization**, the slave axis performs **one feed per revolution of the master axis**. The parameter P-0-0159, Slave drive feed travel together with the parameter **S-0-0236, Master drive 1 revs.** determines the distance to go per revolution of the master axis.
It will then automatically be taken instead of S-0-0237, Slave drive 1 revs. to calculate the electronic gear factor and the modulo value, as far as the position scaling is parametrized as linear and modulo.
When the position data refer to the load, the S-0-0103, Modulo value calculated by the drive is the quotient of P-0-0159, Slave drive feed travel and S-0-0236, Master drive 1 revs.

P-0-0159 - Attributes

Para. Name:	**DE**	Vorschubweg Folgeantrieb		
	EN	Slave drive feed travel		
	FR	Longueur de course entraînement consécutif		
	ES	Recorrido de avance del accionamiento esclavo		
	IT	Percorso di avanzamento azionamento sequenziale		
Function:		Parameter	**Editability:**	P23
Data length:		4Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		S-0-0076	**Extreme value check:**	yes
Decimal places:		4	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

P-0-0162, D900 Command Automatic control loop adjust

Starting this command executes an automatic control loop setting in the drive as soon as the drive is in the loop with command start.



WARNING

This can effect an immediate motion if **drive enable** and **drive start** are applied to the drive.

The drive now conducts autonomous motions within the travel range defined by both limits.

All pre-settings affecting the command, such as **P-0-0163, damping factor for automatic control loop settings, P-0-0164, application for autom. control loop setting, S-0-0092, bipolar torque/force limit value** and **S-0-0259, positioning speed** must also first be set.

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Note: **Errors can occur during the execution of a command. These are signalled with messages.**

- D901 Start requires drive enable
- D902 Motor feedback data not valid
- D903 Inertia detection failed
- D904 Gain adjustment failed
- D905 Travel range invalid, P-0-0166 & P-0-0167
- D906 Travel range exceeded

See also the functional description: "Automatic Control Loop Settings".

P-0-0162 - Attributes

Para. Name:	**DE**	D900 Kommando Automatische Regelkreiseinstellung		
	EN	D900 Command Automatic control loop adjust		
	FR	D900 Instruction Réglage automatique de l'asservissement		
	ES	D900 Comando Ajuste automático del bucle de mando		
	IT	D900 Comando Regolaz. automatica del circuito di regolazione		
Function:		Command	**Editability:**	P4
Data length:		2Byte	**Memory:**	no
Format:		BIN	**Validity check:**	no
Unit:			**Extreme value check:**	no
Decimal places:		--	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	no

P-0-0163, Damping factor for autom. control loop adjust

By varying P-0-0163, the user has the option to influence control loop dynamics set by the automatic control loop setting.

Note: **P-0-0163 = 20 ⇒ least dynamic**
P-0-0163 = 0.5 ⇒ max. dynamic

See also the functional description: "Automatic Control Loop Settings".

P-0-0163 - Attributes

Para. Name:	**DE**	Dämpfungsfaktor für autom. Reglereinstellung		
	EN	Damping factor for autom. control loop adjust		
	FR	Facteur dynamique pour réglage autom. de l'asservissement		
	ES	Coeficiente de atenuación para ajuste autom. del regulador		
	IT	Coefficiente di attenuazione per regolaz. autom. Regolatore		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	Param.-E²prom
Format:		DEC_OV	**Validity check:**	-
Unit:		--	**Extreme value check:**	yes
Decimal places:		1	**Combination check:**	no
Input min/max:		0.5 / 20		
Default value:		2.5	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0164, Application for autom. control loop adjust

In order to take control strategies related to an application into consideration with the automatic control loop settings, the user receives a **selection list** from which the desired application can be selected.
This offers, e.g., the option to completely switch the I-gain off, for example.
The information below relates to the velocity loop.

P-0-0164	Application	I-gain	P-gain
0	tool machine ⇨ good load rigidity	with	normal
1	nipple machine ⇨ short settling times	without, Tn = 0ms	high
2	simultaneously running separation device ⇨ rel. undynam. control loop setting	without, Tn = 0ms	normal
3	Drum feeder ⇨ very high load inertia	with	high
4	Handling axis ⇨ possible oscillation	with	small

Fig. 3-39: Application-dependent velocity loop setting

Note: Indramat will expand this table according to the needs.

The **default value** is set for a **machine tool**.

See also the functional description: "Automatic Control Loop Settings".

P-0-0164 - Attributes

Para. Name:	**DE**	Applikation für autom. Reglereinstellung		
	EN	Application for autom. control loop adjust		
	FR	Application pour réglage autom. de l'asservissement		
	ES	Aplicación ajuste automatico del regulador		
	IT	Applicazione per Regolazione automatica		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	Param.-E²prom
Format:		DEV_OV	**Validity check:**	nicht
Unit:			**Extreme value check:**	-
Decimal places:		0	**Combination check:**	-
Input min/max:		0 / 4		
Default value:		0	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0165, Selection for autom. control loop adjust

By selecting the corresponding bit, you can **select** (bit = 1) or **deselect** (bit = 0) any partial functionality of the automatic control loop setting.
The following table describes the possibilities for selection.

Parameter structure:

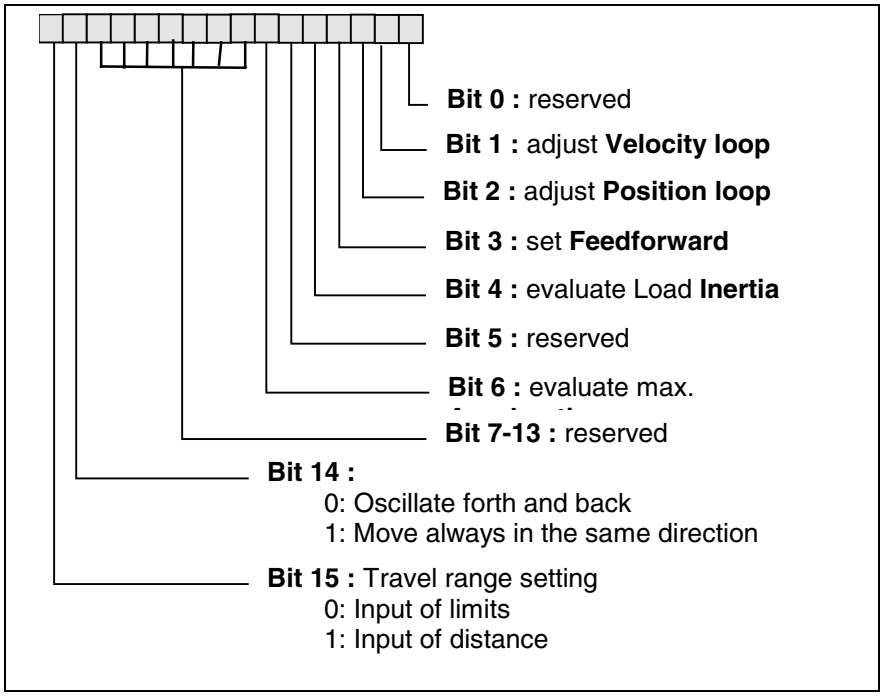


Fig. 3-40: Selection parameter for autom. control loop setting

Example:
The default setting (P-0-0165 = 0000 0000 0001 0110) means:

- **Load inertia is evaluated.**
- **Velocity loop is adjusted.**
- **Position loop is adjusted.**

See also the functional description: "Automatic Control Loop Settings".

P-0-0165 - Attributes

Para. Name:	**DE**	Wahlparameter für autom. Reglereinstellung
	EN	Selection for autom. control loop adjust
	FR	Paramètre de sélection pour réglage autom. asservissement
	ES	Parámetro de selección para ajuste de regulador automatico
	IT	Parametro di Scelta per Regolazione automatica

Function:	Parameter	**Editability:**	P234
Data length:	2Byte	**Memory:**	Param.-E²prom
Format:	BIN	**Validity check:**	P3-4
Unit:	--	**Extreme value check:**	yes
Decimal places:	0	**Combination check:**	yes
Input min/max:	0 / 0xFFFF		
Default value:	0x0016	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0166, Lower position limit for autom. control loop adjust

The allowed range, within which the axis may move during the automatic control loop adjust with the command P-0-0162, is defined by

- a lower position limit **P-0-0166** and
- an upper position limit **P-0-0167**.

These two limits can either be

- input directly
- or they are calculated internally, based on a defined travel distance P-0-0169, taking into account the actual position at the start of the command D9 (P-0-0165, bit 12 = 1).

Note: At the start of the command D9, a check is run of the travel range defined by both parameters P-0-0166 and P-0-0167.

See also functional description: "Automatic Control Loop Settings"
See also diagnostic description **D905 wrong position range**
See also diagnostic description **D906 position range exceeded**

P-0-0166 - Attributes

Para. Name:	**DE**	Untere Grenze für autom. Regelkreiseinstellung		
	EN	Lower position limit for autom. control loop adjust		
	FR	Position lim. inférieure pour réglage autom. asservissement		
	ES	Posición limite inferior para ajuste de regulador automatico		
	IT	Posizione limite inferiore per Regolazione automatica		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	Param.-E²prom
Format:		DEC_MV	**Validity check:**	no
Unit:		S-0-0076	**Extreme value check:**	yes
Decimal places:		S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:		S-0-0076 / S-0-0076		
Default value:		0	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0167, Upper position limit for autom. control loop adjust

The allowed range, within which the axis may move during the automatic control loop adjust with the command P-0-0162, is defined by

- a lower position limit **P-0-0166** and
- an upper position limit **P-0-0167**.

These two limits can either be

- input directly
- or they are calculated internally, based on a defined travel distance P-0-0169, taking into account the actual position at the start of the command D9 (P-0-0165, bit 12 = 1).

Note: At the start of the command D9, a check is run of the travel range defined by both parameters P-0-0166 and P-0-0167.

See also functional description: "Automatic Control Loop Settings"
See also diagnostic description **D905 wrong position range**
See also diagnostic description **D906 position range exceeded**

P-0-0167 - Attributes

Para. Name:	**DE**	Obere Grenze für autom. Regelkreiseinstellung		
	EN	Upper position limit for autom. control loop adjust		
	FR	Position lim. supérieure pour réglage autom. asservissement		
	ES	Posición limite superior para ajuste de regulador automatico		
	IT	Posizione limite superiore per Regolazione automatica		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	Param.-E²prom
Format:		DEC_MV	**Validity check:**	no
Unit:		S-0-0076	**Extreme value check:**	yes
Decimal places:		S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:		S-0-0076 / S-0-0076		
Default value:		0	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0168, Maximum acceleration

This parameter holds the maximum possible acceleration found during the automatic control loop setting, if the function is selected in the P-0-0165, Selection for autom. control loop adjust (P-0-0165, Bit 6 = 1).
The value is, in a first approximation, inversely proportional to the total inertia (motor + load) of the drive and directly proportional to the peak torque or force of the drive.

Note: P-0-0168 serves as **initial value** for a later setting of **the positioning block accelerations**.

See also the functional description: "Automatic Control Loop Settings".

P-0-0168 - Attributes

Para. Name:	**DE**	Max. parametrierbare Beschleunigung		
	EN	Maximum acceleration		
	FR	Accélération max. parametrable		
	ES	Máx. Aceleración		
	IT	Max. Accellerazione parametri		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	Param.-E²prom
Format:		DEC_OV	**Validity check:**	no
Unit:		S-0-0160	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		0	**Cyc. transmittable:**	no

P-0-0169, Travel distance for autom. control loop adjust

The allowed range, within which the axis may move during the automatic control loop adjust with the command P-0-0162, is defined by

- a lower position limit **P-0-0166** and
- an upper position limit **P-0-0167**.

These two limits can either be

- input directly (P-0-0165, Bit12 = 0)
- or they are calculated internally, based on a defined travel distance P-0-0169, taking into account the actual position at the start of the command D9 (P-0-0165, bit 12 = 1).
- P-0-0166 = Start position - P-0-0169 / 2
- P-0-0167 = Start position + P-0-0169 / 2

Note: At the start of the command D9, a check is run of the travel range defined by both parameters P-0-0166 and P-0-0167.

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0169 - Attributes

Para. Name:	**DE**	Verfahrweg für autom. Reglereinstellung		
	EN	Travel distance for autom. control loop adjust		
	FR	Longueur de course pour réglage autom. asservissement		
	ES	Recorrido de desplazamiento para ajuste de regulador autom.		
	IT	Distanza Movimento per Regolazione automatica		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	Param.-E²prom
Format:		DEC_OV	**Validity check:**	P3-4
Unit:		S-0-0076	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		0 / S-0-0076		
Default value:		0	**Cyc. transmittable:**	no

P-0-0176, Torque/Force command smoothing time constant

The parameter **P-0-0176, Torque/force command smoothing time constant** is only active during the operation mode Torque control.
During torque control, the time constant input here is used to filter the command value given by **S-0-0080, Torque/Force command** via a low **pass filter**. This can smoothen acceleration jumps in successive command values.

See also the functional description: "Operating Mode: Torque Control".

P-0-0176 - Attributes

Para. Name:	**DE**	Drehmoment/Kraft-Sollwert Glättungszeitkonstante		
	EN	Torque/Force command smoothing time constant		
	FR	Temps de filtrage pour consigne de couple/force		
	ES	Tiempo de alisamiento para comando par/fuerza		
	IT	Tempo di Smorzamento per Coppia/Forza comandata		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	P3-4
Unit:		ms	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		0 / 1000		
Default value:		0	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0177, Absolute encoder buffer 1

All the data that the absolute encoder needs for position initialization is stored in this parameter.

See also the functional description: "Supplementary Settings for Absolute Measuring Systems".

P-0-0177 - Attributes

Para. Name:	**DE**	Absolutgeber-Puffer 1		
	EN	Absolute encoder buffer 1		
	FR	Tampon codeur absolu 1		
	ES	Buffer de encoder absoluto 1		
	IT	Buffer Encoder assoluto 1		
Function:		Parameter	**Editability:**	P23
Data length:		4Byte var.	**Memory:**	-
Format:		HEX	**Validity check:**	no
Unit:			**Extreme value check:**	no
Decimal places:		-	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

P-0-0180, Rejection frequency velocity loop

To suppress the mechanical resonance frequency, a band filter can be activated at the output of the velocity controller .It is parametrized with parameters **P-0-0180, Rejection frequency velocity loop** and **P-0-0181, Rejection bandwidth velocity loop**.
P-0-0180, Rejection frequency velocity loop indicates the most attenuated frequency.

See also the functional description: "Filtering oscillations from mechanical resonance".

P-0-0180 - Attributes

Para. Name:	**DE**	Sperrfrequenz Geschwindigkeitsregler		
	EN	Rejection frequency velocity loop		
	FR	Fréquence d'arrêt, boucle de vitesse		
	ES	Frecuencia de bloqueo del regulador de velocidad		
	IT	Frequenza di blocco regolatore di velocità		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		Hz	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		50 / 950		
Default value:		900	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0181, Rejection bandwidth velocity loop

To supress the mechanical resonance frequency, a band filter can be activated at the output of the velocity controller. It is parametrized with parameters

- P-0-0180, Rejection frequency velocity loop and
- P-0-0181, Rejection bandwidth velocity loop.

P-0-0181, Rejection bandwidth velocity loop sets the frequency range for the rejection frequency with an attenuation smaller than -3dB.

Example:

P-0-0180 = 500 Hz,
P-0-0181 = 200 Hz;
then: attenuation < -3dB in range of 400..600 Hz.

Parameter content	Effect of P-0-0181
-1	low pass filter with time constant P-0-0004
0	filter is off
>0	bandwidth of suppression (notch) filter

Fig. 3-41: P-0-0181, Rejection bandwidth velocity loop

See also the functional description: "Filtering oscillations from mechanical resonance".

P-0-0181 - Attributes

Para. Name:	**DE**	Bandbreite Sperrfilter Geschwindigkeitsregler		
	EN	Rejection bandwidth velocity loop		
	FR	Gamme de bande à supprimer, boucle de vitesse		
	ES	Ancho de banda a eliminar regulador de velocidad		
	IT	Larghezza Banda da sopprimere, Anello di Velocità		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		Hz	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		-1 / 500		
Default value:		0	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0187, Position command processing mode

Parameter Structure:

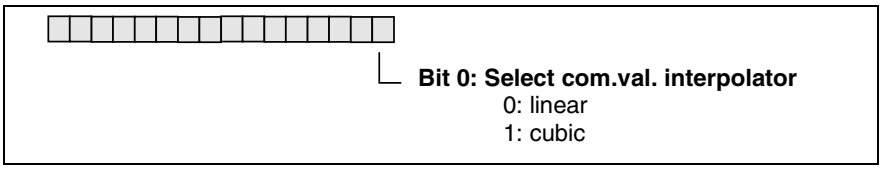


Fig. 3-42: Structure of parameter P-0-0187

Description of bit 0: Selecting command value interpolator
For a jerk-free motion in position control mode, the position command values transmitted via the command value channel are interpolated. Using bit 0 of parameter **P-0-0187 Position command processing mode** it is possible to select either a linear or cubic interpolator. The use of the cubic interpolator is generally recommended unless the timing behaviour of the linear interpolator is required (see individual description below).
The default setting is the linear interpolator.

Bit 0 = 0: Linear interpolator
The linear interpolator generates interim values that are on a straight connection between two position command values. As two position command values are needed for interpolation, the drive achieves the command position of a command cycle as per the default.

Bit 0 = 1: Cubic interpolator
Using four command values, the cubic interpolator determines a polynomial of the third order that supports the generation of interim values. To do so and in contrast to a linear interpolator, an additional and new position command value is required. This is why the drive needs two command value cycles to reach the command value position.

The maximum value of the NC cycle time for a cubic interpolator equals a maximum of (Parameter S-0-0001) 20ms.

P-0-0187 - Attributes

Para. Name:	**DE**	Modus der Lagesollwertverarbeitung		
	EN	Position command processing mode		
	FR	Traitement des consignes de position		
	ES	Modo de tratamiento de los valores nominales de posición		
	IT	Modo di elaborazione valori nominali di posizione		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	Param.-E²prom
Format:		BIN	**Validity check:**	P3-4
Unit:			**Extreme value check:**	no
Decimal places:		-	**Combination check:**	yes
Input min/max:		- / -		
Default value:		0	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0190, Operating hours control section

The operating hours of the control section are displayed here. With this parameter, the entire on time of control electronics since installation of the unit can be displayed. If a class 1 error occurs, the contents of this parameter at that time is first stored in **P-0-0193, Error recorder, operating hours control section**.

See also the functional description: "Error memory and operating hour counter".

P-0-0190 - Attributes

Para. Name:	**DE**	Betriebsstunden Steuerteil		
	EN	Operating hours control section		
	FR	Heures de fonctionnement commande		
	ES	Horas de funcionamiento de la sección de control		
	IT	Ore di funzionamento della parte di controllo		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	Verst. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		h	**Extreme value check:**	no
Decimal places:		4	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

P-0-0191, Operating hours power section

With this parameter, the entire on time of power electronics since installation of the unit can be displayed. This is the time over which the drive was operated with drive enable on.

See also the functional description: "Error memory and operating hour counter".

P-0-0191 - Attributes

Para. Name:	**DE**	Betriebsstunden Leistungsteil		
	EN	Operating hours power section		
	FR	Heures de fonctionnnement puissance		
	ES	Horas de funcionamiento de la sección de potencia		
	IT	Ore di funzionamento della parte di potenza		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	Verst. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		h	**Extreme value check:**	no
Decimal places:		4	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0192, Error memory, diagnosis number

If the drive reports a class 1 error (C1D), a bit is set in **S-0-0011, Class 1 diagnostics** C1D. In the drive status word Bit 13 for "Error C1D“ is set. Additionally, for a precise diagnosis,

- the diagnosis number is shown in the 7- segment display and stored in **S-0-0390, Diagnostic message number**,
- the plain text diagnosis is stored in **S-0-0095, Diagnostic message**,
- and the relevant error number in **P-0-0009, Error message number**.

When the error is cleared, then the diagnosis number of the error displayed **in S-0-0390, Diagnostic message number** is stored in **P-0-0192, Error recorder diagnosis number**. This parameter shows the diagnosis numbers of the last 19 errors in chronological order in the form of a stack memory. The last cleared error is on top.
The status of **P-0-0190, Operating hours control section** at the time the error was deleted is stored in **P-0-0193, Error recorder, operating hours control section**.

See also the functional description: "Error memory and operating hour counter".

P-0-0192 - Attributes

Para. Name:	**DE**	Fehlerspeicher Diagnosenummer		
	EN	Error memory, diagnosis number		
	FR	Mémoire d'erreurs, numéro de diagnostic		
	ES	Memoria de errores, número de diagnóstico		
	IT	Memoria errori, numero diagnosi		
Function:		Parameter	**Editability:**	no
Data length:		2Byte var.	**Memory:**	Verst. EE
Format:		HEX	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		--	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0193, Error memory, operating hours control section

If the drive reports a class 1 error (C1D), then a bit is set in **S-0-0011, Class 1 diagnostics** C1D. Bit 13 for "Error C1D“ is set in the drive status word.
Additionally, for a precise diagnosis,

- the diagnosis number is shown in the 7-segment display and stored in **S-0-0390, Diagnostic message number**,
- the clear text diagnosis is stored in **S-0-0095, Diagnostic message**,
- and the relevant error number in **P-0-0009, Error message number**.

When the error is reset, then the status of **P-0-0190, Operating hours control section** at the time the error was detected is stored in **P-0-0193, Error recorder, operating hours control section**. This parameter shows the diagnosis numbers of the last 19 errors in chronological order. The first position is the counter value of the last error to occur.
The status of **P-0-0192, Error recorder diagnosis number** at the time the error was deleted is stored in **S-0-0390, Diagnostic message number**.

See also the functional description: "Error memory and operating hour counter".

P-0-0193 - Attributes

Para. Name:	**DE**	Fehlerspeicher Betriebsstunden Steuerteil		
	EN	Error memory, operating hours control section		
	FR	Mémoire d'erreurs, heures de fonctionnement commande		
	ES	Memoria de errores, horas de funcionamiento parte de control		
	IT	Memoria errori, ore di funzionamento parte di controllo		
Function:		Parameter	**Editability:**	no
Data length:		4Byte var.	**Memory:**	Verst. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	no
Decimal places:		4	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0200, Signal select probe 1

By means of this parameter it is possible to select which variable is used for the probe 1 input.

At present, it is possible to select the following signals:

P-0-0200	Selected signal
0	actual position value 1
1	time measurement in us

Fig. 3-43: P-0-0200, Signal select probe 1

See also Functional Description "Probe Input Feature"

P-0-0200 - Attributes

Para. Name:	**DE**	Signal-Auswahl Messtaster 1		
	EN	Signal select probe 1		
	FR	Sélection signal pour sonde 1		
	ES	Selección de señal muestra 1		
	IT	Selezione segnale Tastatore di misura 1		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	no
Unit:		--	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		0 / 4		
Default value:		0	**Cyc. transmittable:**	no

P-0-0201, Signal select probe 2

By means of this parameter it is possible to select which variable is used for the probe 2 input.

At present, it is possible to select the following signals:

P-0-0201	Selected signal
0	actual position value 1
1	time measurement in us

Fig. 3-44: P-0-0201, Signal select probe 2

See also Functional Description "Probe Input Feature"

P-0-0201 - Attributes

Para. Name:	**DE**	Signal-Auswahl Messtaster 2
	EN	Signal select probe 2
	FR	Sélection signal pour sonde 2
	ES	Selección de señal muestra 2
	IT	Selezione segnale Tastatore di misura 2

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Function:	Parameter	**Editability:**	P234
Data length:	2Byte	**Memory:**	Param. EE
Format:	DEC_OV	**Validity check:**	no
Unit:	--	**Extreme value check:**	yes
Decimal places:	0	**Combination check:**	no
Input min/max:	0 / 2		
Default value:	0	**Cyc. transmittable:**	no

P-0-0202, Difference of probe values 1

The difference between the **S-0-0130, Probe value 1 positive edge** and the **S-0-0131, Probe value 1 negative edge** of probe 1 is stored in this parameter. The value is always recalculated when a new positive or negative probe value is latched.

See also the functional description: "Probe Input Feature".

P-0-0202 - Attributes

Para. Name:	**DE**	Differenz Messwerte 1
	EN	Difference of probe values 1
	FR	Différence mesure 1
	ES	Diferencia valores de medición 1
	IT	Differenza Valori Misurati 1

Function:	Parameter	**Editability:**	no
Data length:	4Byte	**Memory:**	no
Format:	DEC_MV	**Validity check:**	no
Unit:	S-0-0076/P-0-0200	**Extreme value check:**	no
Decimal places:	S-0-0076/P-0-0200	**Combination check:**	no
Input min/max:	--- / ---		
Default value:	---	**Cyc. transmittable:**	AT

P-0-0203, Difference of probe values 2

The difference between the **S-0-0132, Probe value 2 positive edge** and the **S-0-0131, Probe value 2 negative edge** of probe 2 is stored in this parameter. The value is always recalculated when a new positive or negative probe value is latched.

See also the functional description: "Probe Input Feature".

P-0-0203 - Attributes

Para. Name:	**DE**	Differenz Messwerte 2
	EN	Difference of probe values 2
	FR	Différence mesure 2
	ES	Diferencia valores de medición 2
	IT	Differenza Valori Misurati 2

Function:	Parameter	**Editability:**	no
Data length:	4Byte	**Memory:**	no
Format:	DEC_MV	**Validity check:**	no
Unit:	S-0-0076/P-0-0200	**Extreme value check:**	no
Decimal places:	S-0-0076/P-0-0200	**Combination check:**	no
Input min/max:	--- / ---		
Default value:	---	**Cyc. transmittable:**	AT

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0204, Start position for active probe

Probe 1 has the option to ignore the edge of the measuring signal at the probe 1 input.
Using **P-0-0204, Start position for active probe** and **P-0-0205, End position for active probe** opens a window. Only those positions within this window are latched.
To activate this functions one of selection numbers 3 in the signal select for probe 1 (P-0-0200) (act. Pos. Values 1 or 2 with activated window) or 4 (lead axis position with active window) is set.

P-0-0204 - Attributes

Para. Name:	**DE**	Startposition Messtasterfunktion aktiv		
	EN	Start position for active probe		
	FR	Position de départ pour sonde active		
	ES	Posición inicial para sonda activa		
	IT	Posizione iniziale per tastatore di misura attiva		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	-
Format:		DEC_MV	**Validity check:**	Phase3
Unit:		S-0-0076/P-0-0200	**Extreme value check:**	no
Decimal places:		S-0-0076/P-0-0200	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

P-0-0205, End position for active probe

Probe 1 has the option to ignore the edge of the measuring signal at the probe 1 input.
Using **P-0-0204, Start position for active probe** and **P-0-0205, End position for active probe** opens a window. Only those positions within this window are latched.
To activate this functions one of selection numbers 3 in the signal select for probe 1 (P-0-0200) (act. Pos. Values 1 or 2 with activated window) or 4 (lead axis position with active window) is set.

P-0-0205 - Attributes

Para. Name:	**DE**	Endposition Messtasterfunktion aktiv		
	EN	End position for active probe		
	FR	Position finale pour sonde active		
	ES	Posición final para sonda activa		
	IT	Posizione finale per tastatore di misura attiva		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	-
Format:		DEC_MV	**Validity check:**	Phase3
Unit:		S-0-0076/P-0-0200	**Extreme value check:**	no
Decimal places:		S-0-0076/P-0-0200	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0210, Analog input 1

This parameter displays the analog voltage applied at the analog channel 1 in volts with 3 decimal places.

See also the functional description: "Analog Inputs".

P-0-0210 - Attributes

Para. Name:	**DE**	Analog-Eingang 1		
	EN	Analog input 1		
	FR	Entrée analogique 1		
	ES	Entrada analogica 1		
	IT	Ingresso analogico 1		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	-
Format:		DEC_MV	**Validity check:**	no
Unit:		V	**Extreme value check:**	no
Decimal places:		3	**Combination check:**	yes
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

P-0-0211, Analog input 2

This parameter displays the analog voltage applied at the analog channel 2 in volts with 3 decimal places.

See also the functional description: "Analog Inputs".

P-0-0211 - Attributes

Para. Name:	**DE**	Analog-Eingang 2		
	EN	Analog input 2		
	FR	Entrée analogique 2		
	ES	Entrada analogica 2		
	IT	Ingresso analogico 2		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	-
Format:		DEC_MV	**Validity check:**	no
Unit:		V	**Extreme value check:**	no
Decimal places:		3	**Combination check:**	yes
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0212, Analog inputs, IDN list of assignable parameters

The digitized values of the two analog inputs are stored in the parameters **P-0-0210, Analog input 1** and **P-0-0211, Analog input 2**. These parameters can then be assigned to other drive parameters, i.e. cyclically copied, by means of adjustable scaling. The parameters allowed for assignment are listed in **P-0-0212, Analog inputs, IDN list of assignable parameters**.

Content of P-0-0212:

- S-0-0000, Dummy parameter
- S-0-0036, Velocity command value
- S-0-0037, Additive velocity command value
- S-0-0047, Position command value
- S-0-0080, Torque/force command value
- S-0-0091, Bipolar velocity limit value
- S-0-0092, Bipolar torque/force limit value
- S-0-0108, Feedrate override
- S-0-0258, Target position
- P-0-0083, Gear ratio fine adjust
- P-0-0156, Electric gear input revolutions
- P-0-0157, Electric gear output revolutions

P-0-0212 - Attributes

Para. Name:	**DE**	Analog-Eingänge, IDN-Liste der zuweisbaren Parameter		
	EN	Analog inputs, IDN list of assignable parameters		
	FR	Entrées analogiques, liste des param.s pouvant être assignés		
	ES	Entradas analógicas, lista IDN de parámetros asignables		
	IT	Ingressi analogichi, Lista dei parametri assegnabili		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	-
Format:		IDN	**Validity check:**	no
Unit:		--	**Extreme value check:**	--
Decimal places:		--	**Combination check:**	--
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0213, Analog input 1, assignment

The digitalized values of both analog inputs are stored in **P-0-0210, Analog input 1** and **P-0-0211, Analog input 2**. These can be allocated via settable scaling to other drive parameters or cyclically copied.
To copy cyclically the analog input 1 to a drive parameter, the ID no. of this parameter must be entered.
If the ID no. entered in **P-0-0213, Analog input 1, assignment** not in **P-0-0212, Analog inputs, IDN list of assignable parameters**, then the service channel error message "data not correct“ is generated.

Note: If the allocation is to be deleted, enter the ID no. S-0-0000.

See also the functional description: "Analog Inputs".

P-0-0213 - Attributes

Para. Name:	**DE**	Analog-Eingang 1, Zuweisung		
	EN	Analog input 1, assignment		
	FR	Entrée analogique 1, assignation		
	ES	Entrada analógica 1, asignación		
	IT	Ingresso analogico 1, assegnazione		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	-
Format:		IDN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		--	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0214, Analog input 1, scaling per 10V full scale

The digitalized values of both analog inputs module are stored in the parameters **P-0-0210, Analog input 1** and **P-0-0211, Analog input 2**. These can be assigned to other drive parameters via settable scalings, i.e., copied.
If analog input 1 is cyclically copied to a drive parameter, i.e., an ID no. Has been entered in **P-0-0213, Analog input 1, assignment**, then avalue of 10V of the analog voltage in terms of the assigned parameter is entered.
The unit and the number of decimal places of **P-0-0214, Analog input 1, scaling per 10V full scale** correspond to those of **P-0-0213, Analog input 1, assignment**.When inputting **P-0-0213, Analog input 1, assignment**, both unit and decimal places of **P-0-0214, Analog input 1, scaling per 10V full scale** are switched appropriately.

See also the functional description: "Analog Inputs".

P-0-0214 - Attributes

Para. Name:	**DE**	Analog-Eingang 1, Bewertung pro 10V		
	EN	Analog input 1, scaling per 10V full scale		
	FR	Entrée analogique 1, calibrage pour 10V		
	ES	Entrada analógica 1, calibrado para 10V		
	IT	Ingresso analogico 1, valutazione per 10V		
Function:		Parameter	**Editability:**	P23
Data length:		4Byte	**Memory:**	-
Format:		---	**Validity check:**	no
Unit:		---	**Extreme value check:**	no
Decimal places:		---	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

P-0-0215, Analog input 2, assignment

The digitalized values of both analog inputs are stored in **P-0-0210, Analog input 1** and **P-0-0211, Analog input 2**. These can be allocated via settable scaling to other drive parameters or cyclically copied.
To copy cyclically the analog input 2 to a drive parameter, the ID no. of this parameter must be entered. If the ID no. Entered in **P-0-0213, Analog input 2, assignment** not in **P-0-0212, Analog inputs, IDN list of assignable parameters**, then the service channel error message "data not correct“ is generated.

Note: If the allocation is to be deleted, enter the ID no. S-0-0000.

See also the functional description: "Analog Inputs".

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0215 - Attributes

Para. Name:	**DE**	Analog-Eingang 2, Zuweisung		
	EN	Analog input 2, assignment		
	FR	Entrée analogique 2, assignation		
	ES	Entrada analógica 2, asignación		
	IT	Ingresso analogico 2, assegnazione		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	-
Format:		IDN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		---	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

P-0-0216, Analog input 2, scaling per 10V full scale

The digitalized values of both analog inputs are stored in the parameters **P-0-0210, Analog input 1** and **P-0-0211, Analog input 2**. These can be assigned to other drive parameters via settable scalings, i.e., copied.
If analog input 1 is cyclically copied to a drive parameter, i.e., an ID no. Has been entered in **P-0-0215, Analog input 2, assignment**, then avalue of 10V of the analog voltage in terms of the assigned parameter is entered.
The unit and the number of decimal places of **P-0-0216, Analog input 2, scaling per 10V full scale** correspond to those of **P-0-0215, Analog input 2, assignment**. When inputting **P-0-0215, Analog input 2, assignment**, both unit and decimal places of **P-0-0216, Analog input 2, scaling per 10V full scale** are switched appropriately.

See also the functional description: "Analog Inputs".

P-0-0216 - Attributes

Para. Name:	**DE**	Analog-Eingang 2, Bewertung pro 10V		
	EN	Analog input 2, scaling per 10V full scale		
	FR	Entrée analogique 2, calibrage pour 10V		
	ES	Entrada analógica 2, calibrado para 10V		
	IT	Ingresso analogico 2, valutazione per 10V		
Function:		Parameter	**Editability:**	P23
Data length:		4Byte	**Memory:**	-
Format:		---	**Validity check:**	no
Unit:		---	**Extreme value check:**	no
Decimal places:		---	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0217, Analog input 1, offset

The analog channels can be processed with a DC offset. It has the unit millivolt, and this value is subtracted from the analog value.

See also the functional description: "Analog Inputs".

P-0-0217 - Attributes

Para. Name:	**DE**	Analog-Eingang 1, Offset		
	EN	Analog input 1, offset		
	FR	Entrée analogique 1, décalage		
	ES	Entrada analógica 1, offset		
	IT	Ingresso analogico 1, Offset		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	-
Format:		DEC_MV	**Validity check:**	Phase3
Unit:		V	**Extreme value check:**	yes
Decimal places:		3	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

P-0-0218, Analog input 2, offset

The analog channels can be processed with a DC offset. It has the unit millivolt, and this value is subtracted from the analog value.

See also the functional description: "Analog Inputs".

P-0-0218 - Attributes

Para. Name:	**DE**	Analog-Eingang 2, Offset		
	EN	Analog input 2, offset		
	FR	Entrée analogique 2, décalage		
	ES	Entrada analógica 2, offset		
	IT	Ingresso analogico 2, Offset		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	-
Format:		DEC_MV	**Validity check:**	Phase3
Unit:		V	**Extreme value check:**	yes
Decimal places:		3	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0222, State of travel range limit inputs

This parameter displays the inputs of the travel range limit switches. The parameter is used for diagnostic purposes of the limit switches.

The structure is as follows :

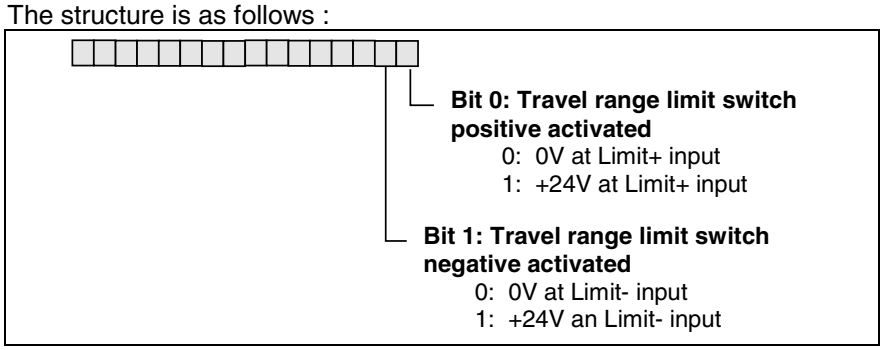


Fig. 3-45:Structure P-0-0222, Travel range limit inputs

See also the functional description: "Travel Zone Limit Switch Monitoring"

P-0-0222 - Attributes

Para. Name:	**DE**	Status Fahrbereichsgrenzschalter-Eingänge		
	EN	State of travel range limit inputs		
	FR	Etat entrées fin de course		
	ES	Estado entradas fin de curso		
	IT	Stato Ingressi Finecorsa		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	no
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		--	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0223, Status Input E-Stop

This Parameter shows the state of the emergency stop input. The parameter can be used to read back the E-Stop input or for display in a set-up program.

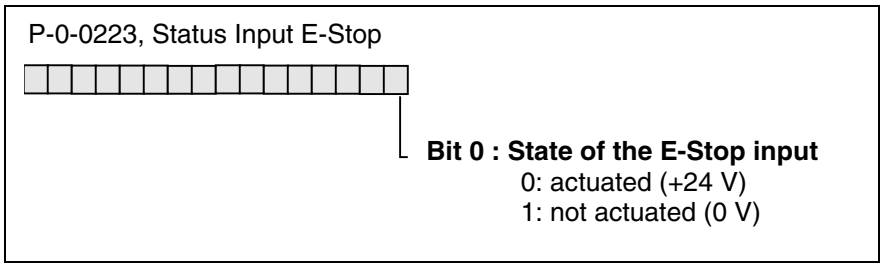


Fig. 3-46: Structure of the parameter P-0-0223, Status Input E-Stop

For normal operation of the drive, the hardware input must be actuated with 24V.

See also the functional description: "Emergency stop feature"

P-0-0223 - Attributes

Para. Name:	**DE**	Status E-Stopp-Eingang		
	EN	Status Input E-Stop		
	FR	Etat entrée Arrêt d'urgence		
	ES	Estado entrada parada de emergencia		
	IT	Stato Ingresso E-Stop		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	-
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	AT

P-0-0435, List of configurable data dig. Inputs

The digital inputs are displayed in the parameters P-0-0111 and/or P-0-0113. These parameters can be mapped to other parameters. The assignment is made with parameter P-0-0125. The digital inputs can be assigned to the following parameters.

- S-0-0000, Dummy-Parameter
- S-0-0145, Signal control word
- S-0-0346, Positioning command strobe
- S-0-0393, Command value mode
- S-0-0405, Probe 1 enable
- S-0-0406, Probe 2 enable
- P-0-0036, Trigger control word
- P-0-0082, Parallel I/O input 1
- P-0-0088, Control word for synchronous operation modes

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0435 - Attributes

Para. Name:	**DE**	Liste der konfigurierbaren Daten dig. Eingänge		
	EN	List of configurable data dig. Inputs		
	FR	Liste des données configurables entrées digitales		
	ES	Lista de los datos configurables entradas digitales		
	IT	Elenco dei dati configurabili entrate digitali		
Function:		Parameter	**Editability:**	no
Data length:		2Byte var.	**Memory:**	-
Format:		IDN	**Validity check:**	no
Unit:			**Extreme value check:**	no
Decimal places:		-	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

P-0-0436, List of configurable data dig. Outputs

The digital outputs are displayed in the parameters **P-0-0110** and/or **P-0-0112**. These parameters can be written by other parameters. The assignment is realized with parameter **P-0-0124**.

The following parameters can be assigned to the digital outputs:

- S-0-0000, Dummy-Parameter
- S-0-0011, Class 1 diagnostics
- S-0-0012, Class 2 diagnostics
- S-0-0013, Class 3 diagnostics
- S-0-0134, Master control word
- S-0-0135, Drive status word
- S-0-0144, Signal status word
- S-0-0182, Manufacturer class 3 diagnostics
- S-0-0400, Home switch
- S-0-0401, Probe 1
- S-0-0402, Probe 2
- S-0-0403, Position feedback value status
- S-0-0405, Probe 1 enable
- S-0-0406, Probe 2 enable
- S-0-0409, Probe 1 positive latched
- S-0-0410, Probe 1 negative latched
- S-0-0411, Probe 2 positive latched
- S-0-0412, Probe 2 negative latched
- S-0-0419, Positioning command acknowledgment
- P-0-0036, Trigger control word
- P-0-0037, Trigger status word
- P-0-0081, Parallel I/O output 1
- P-0-0089, Status word for synchronous operating modes
- P-0-0135, Status position switch
- P-0-0222, State of travel range limit inputs
- P-0-0223, Status Input E-Stop

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

- P-0-0539, Brake status
- P-0-4051, Process block acknowledgment
- P-0-4052, Positioning block, last accepted

P-0-0436 - Attributes

Para. Name:	**DE**	Liste der konfigurierbaren Daten dig. Ausgänge		
	EN	List of configurable data dig. Outputs		
	FR	Liste des données configurables sorties digitales		
	ES	Lista de los datos configurables salidas digitales		
	IT	Elenco dei dati configurabili uscite digitali		
Function:		Parameter	**Editability:**	no
Data length:		2Byte var.	**Memory:**	-
Format:		IDN	**Validity check:**	no
Unit:			**Extreme value check:**	no
Decimal places:		-	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

P-0-0502, Encoder emulation, resolution

IGS Emulation
If incremental encoder emulatoin is selected in **P-0-4020, Encoder emulation type** (**IGS**), then the number of lines of the simulated incremental encoder can be entered here.
Allowed values with IGS emulation are: **1 - 65536**

Note: **It must be noted that the maximum output frequency of** 1 MHz is not exceeded!

SSI Emulation
If absolute encoder emulation (SSI) is set in **P-0-4020, Encoder emulation type**, then the bit width of the SSI position to be generated must be entered.
Allowed values with SSI emulation are: **8 - 24**

See also function description: "Activating Encoder Emulation"

P-0-0502 - Attributes

Para. Name:	**DE**	Geber-Emulation Auflösung		
	EN	Encoder emulation, resolution		
	FR	Emulation codeur, résolution		
	ES	Emulación de encoder, resolución		
	IT	Emulazione Encoder, Risoluzione		
Function:		Parameter	**Editability:**	P23
Data length:		4Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	no
Unit:		Cycles/Rev	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0503, Marker pulse offset

With this parameter, the position of the reference pulse (zero pulse) of the emulated incremental encoder output can be shifted within one (electr. or mech.) turn.
See also functional description: "Encoder Emulation".

P-0-0503 - Attributes

Para. Name:	**DE**	Referenzimpuls-Offset		
	EN	Marker pulse offset		
	FR	Décalage du top 0 pour emul. codeur incr.		
	ES	Desviación impulso de referencia		
	IT	Offset Impulso di Zero		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		Deg	**Extreme value check:**	yes
Decimal places:		4	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

P-0-0508, Commutation offset

In the case of synchronous motors, this parameter indicates the offset between the initial value of the motor encoder and the absolute electrical angle between stator current and rotor flux vector.

Note: In the case of motors with motor feedback data memory (e.g. MSM), the commutation offset is stored in this parameter and must therefore not be entered.

P-0-0508 - Attributes

Para. Name:	**DE**	Kommutierungs-Offset		
	EN	Commutation offset		
	FR	Offset de commutation		
	ES	Offset de conmutación		
	IT	Offset di Commutazione		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		0 / 65535		
Default value:		0	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0510, Moment of inertia of the rotor

This parameter indicates the moment of inertia of the rotor without load and is stored in the feedback of case of motors with feedback memory (e.g. MSM or MKD).

See also Functional Description "Motor Feedback-Data Memory"

P-0-0510 - Attributes

Para. Name:	**DE**	Rotor-Trägheitsmoment		
	EN	Moment of inertia of the rotor		
	FR	Couple d'inertie du rotor		
	ES	Par de inercia de rotor		
	IT	Coppia di Inerzia del Rotore		
Function:		Parameter	**Editability:**	P23
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		P-0-4014	**Extreme value check:**	no
Decimal places:		5	**Combination check:**	no
Input min/max:		1 / 10000000		
Default value:		0	**Cyc. transmittable:**	no

P-0-0520, Hardware code

Parameter for identification of the hardware.
The parameter is determined during the manufacturing stage and cannot be changed.

P-0-0520 - Attributes

Para. Name:	**DE**	Hardware-Kennung		
	EN	Hardware code		
	FR	Code hardware		
	ES	Numero de hardware		
	IT	Numero Hardware		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	Verst.-E²prom
Format:		DEC_OV	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0523, Commutation, probe value

If the commutation offset for linear synchronous motors is to be determined with the **P-0-0524, D300 Commutation setting command** parameter, the setting probe value has to be entered in the **P-0-0523, Commutation, probe value** parameter.

See also Functional Description "Determining the commutation offset"

P-0-0523 - Attributes

Para. Name:	**DE**	Kommutierungseinstellung Messwert		
	EN	Commutation, probe value		
	FR	Mesure réglage de commutation		
	ES	Ajuste de conmutación, valor de medición		
	IT	Commutazione, Valore di Probe		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	no
Format:		DEC_OV	**Validity check:**	no
Unit:		S-0-0076	**Extreme value check:**	yes
Decimal places:		S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:		-2147483648 / 2147483647		
Default value:		---	**Cyc. transmittable:**	no

P-0-0524, D300 Commutation setting command

For synchronous kit motors and synchronous linear motors it is necessary to set the commutation offset during the initial commissioning. The appropriate command can be activated under the following **conditions**:

- operating mode = torque control
- torque command value = 0
- drive enable = 1 for rotary synchronous kit motors
- drive enable = 0 for synchronous linear motors

After starting the command the drive, in the case of rotary motors, automatically moves a short distance forward and backward, thereby determining the commutation offset.
In the case of linear motors, the commutation offset that is entered in the **P-0-0523, Commutation, probe value** parameter is determined by measuring the distance between primary and secondary part of the motor.
The command is cancelled by removing drive enable.
For other synchronous motors with incorporated feedback, e.g. MKD, the commutation offset is determined at the Bosch Rexroth works, and the customer cannot execute the command any more.

See also Functional Description "Determining the commutation offset"

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0524 - Attributes

Para. Name:	**DE**	D300 Kommando Kommutierungseinstellung
	EN	D300 Commutation setting command
	FR	D300 Instruction Réglage de commutation
	ES	D300 Comando ajuste de conmutación
	IT	D300 Comando Regolazione di commutazione

Function:	Command	**Editability:**	no
Data length:	2Byte	**Memory:**	no
Format:	BIN	**Validity check:**	no
Unit:	--	**Extreme value check:**	no
Decimal places:	--	**Combination check:**	no
Input min/max:	--- / ---		
Default value:	---	**Cyc. transmittable:**	no

P-0-0525, Type of motor brake

When using a holding brake this parameter determines whether it is a self-holding or a self-releasing brake. If you use an **MHD, MKE, MKD or MSM** motor, the holding brake, if available, is self-holding. Bit 0 then is automatically set to 0. If you use other motor types this bit has to be entered during commissioning.

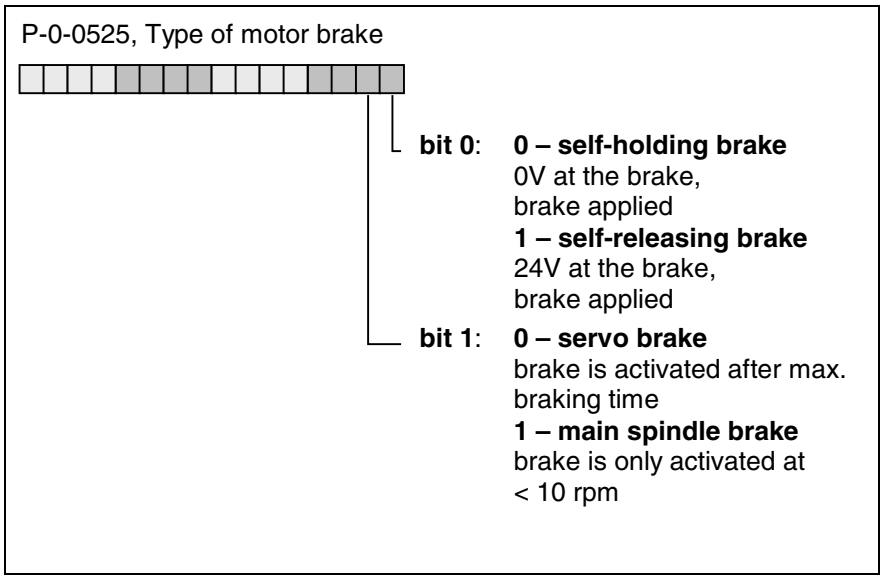


Fig. 3-47: Setting the motor brake type

See also Functional Description "Motor Holding Brake"

P-0-0525 - Attributes

Para. Name:	**DE**	Haltebremsen-Typ
	EN	Type of motor brake
	FR	Type de frein
	ES	Tipo de freno
	IT	Tipo di Freno

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Function:	Parameter	**Editability:**	P23
Data length:	2Byte	**Memory:**	Param. EE
Format:	BIN	**Validity check:**	Phase3
Unit:	--	**Extreme value check:**	yes
Decimal places:	--	**Combination check:**	no
Input min/max:	0 / 1		
Default value:	0	**Cyc. transmittable:**	no

P-0-0526, Brake control delay

When using a holding brake, in this parameter it is necessary to enter the maximum delay between the activation of the brake and the time the brake has developed its full force. This guarantees that the drive still is in control as long as the brake does not take its full effect.
When using an MHD, MKD, MKE or MSM motor this value is automatically entered.

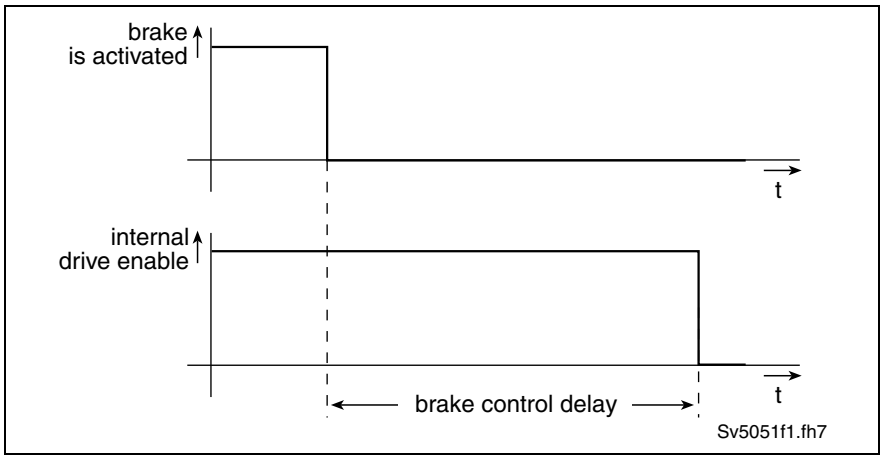


Fig. 3-48: Brake control delay

See also Functional Description "Motor Holding Brake"

P-0-0526 - Attributes

Para. Name:	**DE**	Haltebremsen-Verzugszeit
	EN	Brake control delay
	FR	Délai frein
	ES	Retardo de freno
	IT	Ritardo Freno

Function:	Parameter	**Editability:**	P23
Data length:	4Byte	**Memory:**	Param. EE
Format:	DEC_OV	**Validity check:**	Phase3
Unit:	ms	**Extreme value check:**	yes
Decimal places:	0	**Combination check:**	no
Input min/max:	0 / 100000		
Default value:	100	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0538, Motor function parameter 1

Structure:

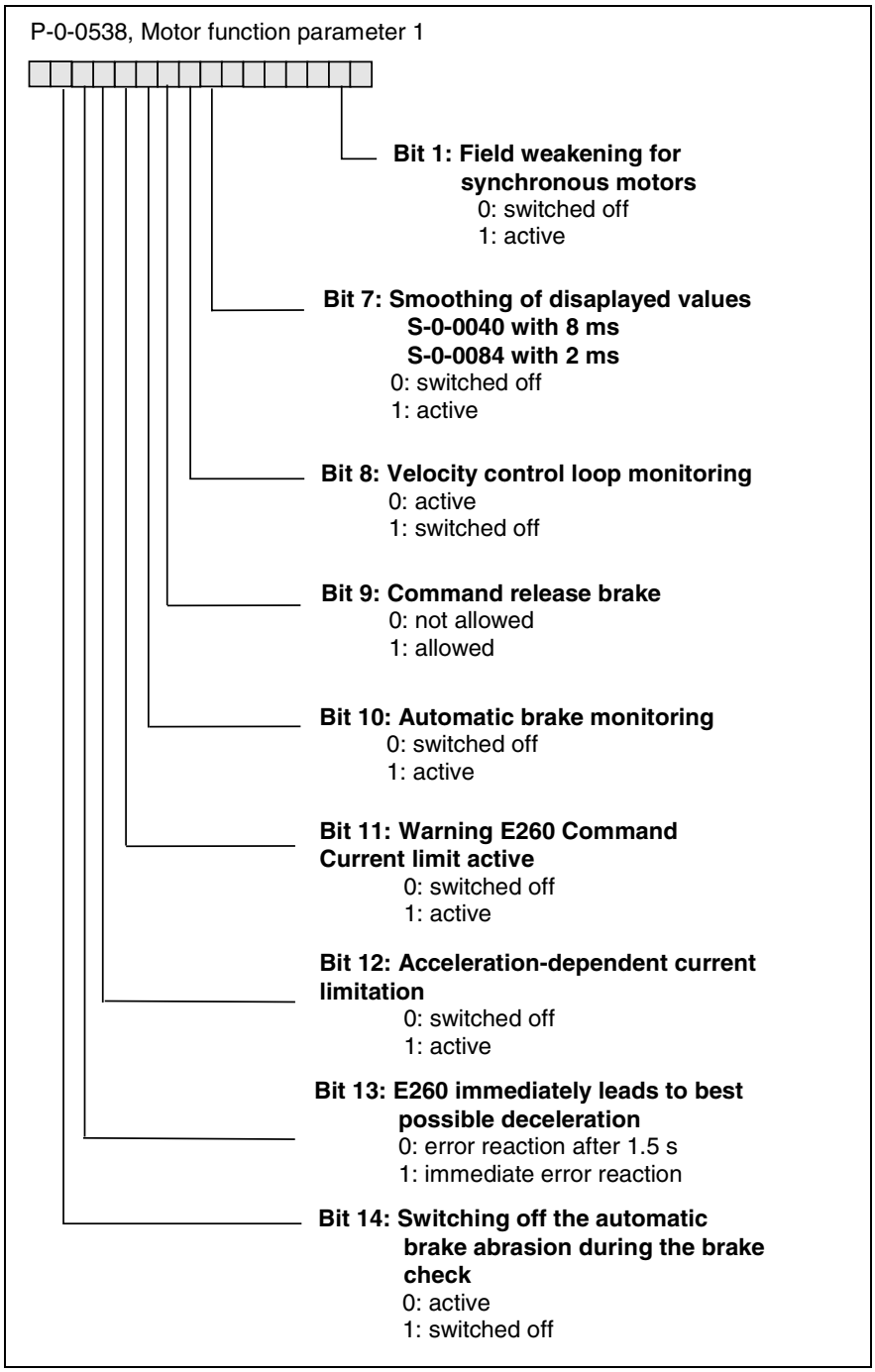


Fig. 3-49: P-0-0538, Motor function parameter

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com



DANGER

Mortal injuries caused by unintentional axis movements!

⇒ If the velocity control loop monitoring function is switched off, carefully control the preset velocity command values, in order to avoid unintentional axis movements.

⇒ With active brake monitoring function, the drive will move by some degrees when the controller enable is switched on.

⇒ When you release the motor holding brake, the axis can move.

See also Functional Description "Velocity Control Loop Monitoring"
See also Functional Description "Asynchronous Motors", subchapter "Field Weakening for Synchronous Motors"
See also Functional Description "Motor Holding Brake"

P-0-0538 - Attributes

Para. Name:	**DE**	Motorfunktionsparameter 1
	EN	Motor function parameter 1
	FR	Paramètre de fonctions 1 moteur
	ES	Parámetro de funciones 1 de motor
	IT	Parametro funzioni motore 1

Function:	Parameter	**Editability:**	P23
Data length:	2Byte	**Memory:**	Param. EE
Format:	BIN	**Validity check:**	Phase3
Unit:	---	**Extreme value check:**	no
Decimal places:	--	**Combination check:**	yes
Input min/max:	--- / ---		
Default value:	0	**Cyc. transmittable:**	no

P-0-0539, Brake status

Parameter **P-0-0539, Brake status** includes the possibility to realize brake control via the digital output (cf. P-0-0124) and to monitor an external brake.

Bit 0: 1: brake activated
0: brake not activated
Bit 1: 1: brake function ok after brake check
0: it was impossible to test brake function successfully
Bit 2: 1: brake successfully released
0: brake not released successfully
Bit 3: 1: abrasion of brake successful
0: abrasion of brake not successful

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0539 - Attributes

Para. Name:	**DE**	Bremsenstatus		
	EN	Brake status		
	FR	Etat du frein		
	ES	Estado de freno		
	IT	Stato di Freno		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	-
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

P-0-0540, Torque of motor brake

The nominal torque of the holding brake is entered here. This torque is checked for upon activation of the motor holding brake monitor.
If a motor is connected in which the brake torque has been saved in its feedback data memory, then the value is copied out of the motor into this parameter. Given a motor without parameter **P-7-0540, Torque of brake** then the torque to be checked can be entered in **P-0-0540**.

P-0-0540 - Attributes

Para. Name:	**DE**	Moment der Motorhaltebremse		
	EN	Torque of motor brake		
	FR	Couple du frein		
	ES	Par de freno		
	IT	Coppia del Freno		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	P3-4
Unit:		Nm	**Extreme value check:**	no
Decimal places:		1	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0541, B200 Brake check command

This command starts the check of the motor holding brake.
On activation of the command, it is checked at first, whether a torque smaller than the nominal torque of the brake can achieve a movement. If this is not the case, the motor holding brake is locked.
The error „F269 Error during release of the motor holding brake“ is output.
If a movement is possible, the motor generates the nominal brake torque with locked brake.
If the motor does not move, the brake is OK. If it moves, the drive tries to reach the holding torque of the brake again by bedding in the brake. After the bedding in procedure, the holding torque is tested again. If the nominal torque is not reached another time, the command error „B203 Brake torque too low“ is output.

See also the functional description: "Motor Holding Brake".

P-0-0541 - Attributes

Para. Name:	**DE**	B200 Kommando Bremsenüberwachung
	EN	B200 Brake check command
	FR	B200 Instruction Vérification frein
	ES	B200 Comando Vigilancia freno
	IT	B200 Comando Esagio Freno

Function:	Command	**Editability:**	P4
Data length:	2Byte	**Memory:**	-
Format:	BIN	**Validity check:**	-
Unit:	---	**Extreme value check:**	-
Decimal places:	0	**Combination check:**	-
Input min/max:	- / -		
Default value:	-	**Cyc. transmittable:**	-

P-0-0542, B100 Command Release motor holding brake

The command is used to release the motor holding brake when the drive enable is switched off.
The command must be enabled via the motor function parameter P-0-0538, bit 7, before activating it.
When activating the command, the motor holding brake is opened and stays open until the command is finished or until the brake is closed by another switching off the drive enable.

See also the functional description: "Motor Holding Brake".

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0542 - Attributes

Para. Name:	**DE**	B100 Kommando Öffnen der Motorhaltebremse
	EN	B100 Command Release motor holding brake
	FR	B100 Instruction Lâcher frein
	ES	B100 Comando Abrir del freno de motor
	IT	B100 Comando Sblocco Freno

Function:	Command	**Editability:**	P4
Data length:	2Byte	**Memory:**	-
Format:	BIN	**Validity check:**	no
Unit:	--	**Extreme value check:**	no
Decimal places:	0	**Combination check:**	no
Input min/max:	- / -		
Default value:	-	**Cyc. transmittable:**	-

P-0-0543, B400 Command Apply motor holding brake

This command is used to apply the motor holding brake when drive enable was set.
When activating the command, the motor holding brake is applied and remains applied until the command is completed.

See also Functional Description "Motor Holding Brake"

P-0-0543 - Attributes

Para. Name:	**DE**	B400 Kommando Schließen der Motorhaltebremse
	EN	B400 Command Apply motor holding brake
	FR	
	ES	
	IT	

Function:	Command	**Editability:**	P4
Data length:	2Byte	**Memory:**	-
Format:	BIN	**Validity check:**	no
Unit:	--	**Extreme value check:**	no
Decimal places:	0	**Combination check:**	no
Input min/max:	- / -		
Default value:	-	**Cyc. transmittable:**	-

P-0-0544, B500 Command Abrasion of the motor holding brake

This command is used for abrasion of the motor holding brake.
When activating the command, the drive is ramped with the possibly defined ramps to a velocity of +/- 100 rpm. Thereafter the motor holding brake applies for 40 ms. The drive then is ramped down to speed 0 and stops until the command is completed.
With the **S-0-0393, Command value mode** parameter it is possible to define the sense of rotation of the axis during the abrasion process.

See also Functional Description "Motor Holding Brake"

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0544 - Attributes

Para. Name:	**DE**	B500 Kommando Bremse einschleifen
	EN	B500 Command Abrasion of the motor holding brake
	FR	
	ES	
	IT	

Function:	Command	**Editability:**	P4
Data length:	2Byte	**Memory:**	-
Format:	BIN	**Validity check:**	no
Unit:	---	**Extreme value check:**	no
Decimal places:	-	**Combination check:**	no
Input min/max:	- / -		
Default value:	-	**Cyc. transmittable:**	-

P-0-0560, Commutation adjustment current

The parameter commutation adjustment current contains the current value with which the automatic commutation adjustment is performed. The value is displayed as a percentage of the motor current at standstill.
If the automatic commutation adjustment aborts with the error "Commutation adjustment not possible", you can change the value so that the automatic commutation adjustment runs successfully.
If the value represents a current greater than the motor peak current, the value is set to 100 % when the automatic commutation adjustment is started.
One input or displayed value is used for a first try to adjust the commutation. If the commutation could not be adjusted with this value, the firmware will change the value and start another try; depending on the circumstances, this might happen several times.

See also the functional description: "Determining commutation offset".

P-0-0560 - Attributes

Para. Name:	**DE**	Kommutierungseinstellung Strom
	EN	Commutation adjustment current
	FR	Réglage de commutation, courant
	ES	Ajuste de conmutación, corriente
	IT	Regolazione di commutazione corrente

Function:	Parameter	**Editability:**	P234
Data length:	2Byte	**Memory:**	Param.-E²prom
Format:	DEC_OV	**Validity check:**	no
Unit:	%	**Extreme value check:**	yes
Decimal places:	3	**Combination check:**	no
Input min/max:	26 / 200		
Default value:	100	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0562, Commutation setting periodic time

The **P-0-0562, Commutation setting periodic time** parameter contains the period of the stimulus for the automatic commutation setting.
If the automatic commutation setting is cancelled with the error "Commutation setting not possible", you can change the value so that the automatic commutation setting runs successfully. Find a value which is not within the range of a mechanical resonance point, if possible.
One input or displayed value is used for a first try to set the commutation. If it was impossible to set the commutation with this value, the firmware will change the value and start another try; depending on the circumstances, this might happen several times.

See also Functional Description "Asynchronous Motors"

P-0-0562 - Attributes

Para. Name:	**DE**	Kommutierungseinstellung Periodendauer		
	EN	Commutation setting periodic time		
	FR	Réglage de commutation, période		
	ES	Ajuste de conmutación, duración de período		
	IT	Regolazione di commutazione periodo		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	Param.-E²prom
Format:		DEC_OV	**Validity check:**	no
Unit:		ms	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		4 / 64		
Default value:		4	**Cyc. transmittable:**	no

P-0-0612, Setting absolute measuring, control word

This parameter sets proceedings for the **P-0-0012, Command Set absolute measurement**.

Parameter structure:

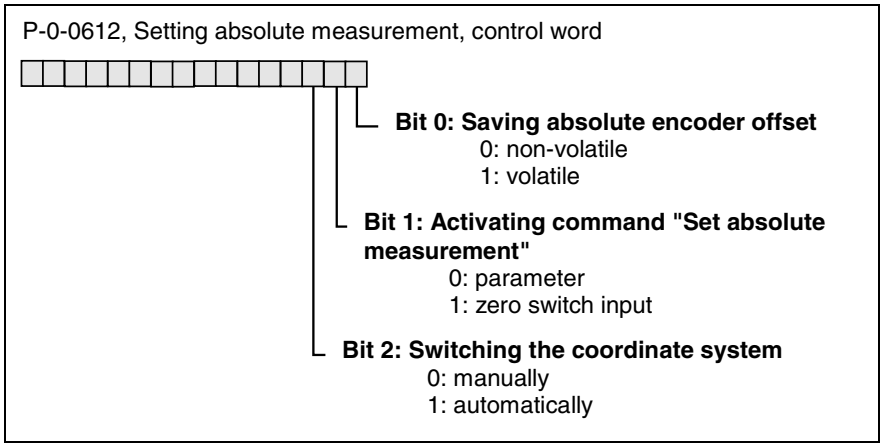


Fig. 3-50: P-0-0612, Setting absolute measurement, control word

See also the functional description: "Set Absolute Measuring".

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-0612 - Attributes

Para. Name:	**DE**	Absolutmaß setzen, Steuerwort		
	EN	Setting absolute measuring, control word		
	FR	Calage d'origine absolue, mot de contrôle		
	ES	Fijar medición absoluta, palabra de mando		
	IT	Impostazione misura assoluta, Controllo		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	-
Format:		BIN	**Validity check:**	no
Unit:		---	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		0 / 7		
Default value:		-	**Cyc. transmittable:**	-

P-0-0640, Cooling type

At their delivery, Rexroth motors of the MSM series are equipped for different cooling types. Depending on the application it is possible to mount a blower or a water cooling system. If a blower or a water cooling system have been mounted, the following has to be observed:
The value for the motor current at standstill stored in parameter S-0-0111 was determined for the mentioned motors without cooling. It is the current that causes the continuous torque in the case of motor standstill. The motor current at standstill is stored in the memory of the motor feedback and is loaded to the drive with the load defaults procedure command.
The scaling of the torque/force parameters is fixed to percentage-based scaling in the drive. 100% normally correspond to the torque or the force that a current of the intensity of the motor current at standstill produces. "Normally" because this statement only applies to MSM motors when they are not cooled/ventilated. When the motors are cooled/ventilated their continuous current increases so that the following applies:

- When cooling with a blower a torque/force value of 150% and
- with a water cooling system a torque/force value of 190% correspond to the continuous torque.

By means of parameter P-0-0640 it is possible to adjust the display of the torque/force values in such a way that the display of 100% torque/force value also corresponds to the continuous torque (at standstill) in the case of ventilated or water-cooled motors of the mentioned series.

Cooling type	Parameter value	Factor
non-ventilated	0	1.0
ventilated	1	1.5

Fig. 3-51: Adjusting the display of the torque/force values in the case of cooled MSM motors

For calculating the torque or the force of the motor the following always applies independent of the motor type:

$$\text{torque/force value} = S-0-0111 * \text{factor of } P-0-0640 * P-0-0051$$

Fig. 3-52: Torque

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Parameters that display a percentage-based torque/force value are, among others:

- S-0-0080, Torque/Force command
- S-0-0084, Torque/Force feedback value
- S-0-0092, Bipolar torque/force limit value
- P-0-0109, Torque/force peak limit

P-0-0640 - Attributes

Para. Name:	**DE**	Kühlart		
	EN	Cooling type		
	FR	Type de refroidissement		
	ES	Tipo de refrigeración		
	IT	Tipo di Raffreddamento		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	P3-4
Unit:			**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

P-0-1201, Ramp 1 pitch

The parameter **P-0-1201, Ramp 1 pitch** takes effect in

- operating mode "Velocity control",
- given the error reaction "Velocity command to zero with command ramp and filter", if **P-0-1211, Deceleration ramp 1** is equal to zero and
- with "Drive halt", if **P-0-1211, Deceleration ramp 1** is equal to zero.

With the accel entered here the previously effective velocity setpoint is set to the new one. As long as the velocity at the ramp is smaller than the value in parameter **P-0-1202, Final speed of ramp 1 then** parameter **P-0-1201, Ramp 1 pitch** works.
If the relevant decel parameter P-0-1211 is zero, then parameter **P-0-1201, Ramp 1 pitch** also works during decel.

Note: With the value in the parameter **P-0-1201, Ramp 1 pitch** = 0, the ramp is not active.

See also the functional description: "Operating Mode: Velocity Control", "Velocity command value to zero with filter and ramp" and "Drive Halt".

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-1201 - Attributes

Para. Name:	**DE**	Steigung Rampe 1		
	EN	Ramp 1 pitch		
	FR	Montée Rampe 1		
	ES	Rampa de velocidad		
	IT	Velocità Rampa 1		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		S-0-0160	**Extreme value check:**	yes
Decimal places:		S-0-0161/S-0-0162	**Combination check:**	no
Input min/max:		0 / 2147483647		
Default value:		0	**Cyc. transmittable:**	no

P-0-1202, Final speed of ramp 1

At the speed in the parameter **P-0-1202, Final speed of ramp1**, the slope of the drive internal speed command ramp changes from **P-0-1201, Ramp 1 pitch** to **P-0-1203, Ramp 2 pitch** (acceleration) respectively from Ramp 2 pitch to Ramp 1 pitch (retardation).
See also the functional description: "Velocity command value to zero with filter and ramp".

P-0-1202 - Attributes

Para. Name:	**DE**	Endgeschwindigkeit Rampe 1		
	EN	Final speed of ramp 1		
	FR	Rampe 1, vitesse finale		
	ES	Velocidad final de la rampa 1		
	IT	Velocità finale rampa 1		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		S-0-0044	**Extreme value check:**	yes
Decimal places:		S-0-0045/S-0-0046	**Combination check:**	no
Input min/max:		S-0-0044 / S-0-0044		
Default value:		0	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-1203, Ramp 2 pitch

The parameter **P-0-1203, Ramp 2 pitch** takes effect in

- operating mode "Velocity control",
- given the error reaction "Velocity command to zero with command ramp and filter", if **P-0-1213, Deceleration ramp 2** is equal to zero and
- with "Drive halt", if **P-0-1213, Deceleration ramp 2** is equal to zero.

With the accel entered here the previously effective velocity setpoint is set to the new one. As long as the velocity at the ramp is smaller than the value in parameter **P-0-1202, Final speed of ramp 1 then** parameter **P-0-1203, Ramp 2 pitch** works.
If the relevant decel parameter P-0-1213 is zero, then parameter **P-0-1203, Ramp 2 pitch** also works during decel.

Note: With the value in the parameter **P-0-1203, Ramp 2 pitch** = 0, the ramp 2 is not active.

See also the functional description: "Operating Mode: Velocity Control", "Velocity command value to zero with filter and ramp" and "Drive Halt".

P-0-1203 - Attributes

Para. Name:	**DE**	Steigung Rampe 2		
	EN	Ramp 2 pitch		
	FR	Montée Rampe 2		
	ES	Rampa de velocidad 2		
	IT	Velocità Rampa 2		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		S-0-0160	**Extreme value check:**	yes
Decimal places:		S-0-0161/S-0-0162	**Combination check:**	no
Input min/max:		0 / 2147483647		
Default value:		0	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-1211, Deceleration ramp 1

The parameter **P-0-1211, Deceleration ramp 1** takes effect in

- operating mode "Velocity control",
- in the event of error reaction "Velocity command value equals zero with filter and ramp" and
- with "Drive halt".

With the decel entered here, the last effective velocity setpoint is used to decel to the new velocity setpoint. As long as the velocity at ramp output is smaller than the value in parameter **P-0-1202, Final speed of ramp 1**, then parameter **P-0-1211, Deceleration ramp 1** remains effective.

Note: If the value in **P-0-1211, Deceleration ramp 1** = 0, then parameter **P-0-1201, Ramp 1 pitch** is always effect during decel. If the value in parameter **P-0-1201, Ramp 1 pitch** = 0, then ramp 1 is not active.

See also the functional description: "Operating Mode: Velocity Control", "Velocity command value to zero with filter and ramp" and "Drive Halt".

P-0-1211 - Attributes

Para. Name:	**DE**	Verzögerungsrampe 1		
	EN	Deceleration ramp 1		
	FR	Decélération rampe 1		
	ES	Rampa de deceleración 1		
	IT	Decellerazione Rampa 1		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	P3-4
Unit:		S-0-0160	**Extreme value check:**	yes
Decimal places:		S-0-0161/S-0-0162	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

P-0-1213, Deceleration ramp 2

The parameter **P-0-1213, Deceleration ramp 2** takes effect in

- operating mode "velocity control",
- in the event of error reaction "Velocity command value equals zero with filter and ramp" and with
- "Drive halt".

The deceleration entered here is used to decel to the new velocity setpoint from the previous velocity setpoint. As long as the velocity at ramp output is greater than the value in parameter **P-0-1202, Final speed of ramp 1**, then parameter **P-0-1213, Deceleration ramp 2** is effective.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Note:	If the value in **P-0-1213, Deceleration ramp 2** = 0, then parameter **P-0-1203, Ramp 2 pitch** is also effective with deceleration. If the value in parameter **P-0-1203, Ramp 2 pitch** = 0, then ramp 2 is not active.

See also the functional description: "Operating Mode: Velocity Control", "Velocity command value to zero with filter and ramp" and "Drive Halt".

P-0-1213 - Attributes

Para. Name:	**DE**	Verzögerungsrampe 2		
	EN	Deceleration ramp 2		
	FR	Decélération rampe 2		
	ES	Rampa de deceleración 2		
	IT	Decellerazione Rampa 2		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	P3-4
Unit:		S-0-0160	**Extreme value check:**	yes
Decimal places:		S-0-0161, S-0-0162	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

P-0-1222, Velocity command filter

The parameter **P-0-1222, Velocity command filter** works

- in the Velocity control operating mode and
- during the error response "Velocity command value zero-switch with ramp and filter."

The time constant entered here is used in the velocity control operating mode to pass the value in **S-0-0036, Velocity command value** which is limited to the acceleration set in **P-0-1201, Ramp 1 pitch**, through a low-pass filter. This serves to smooth abrupt changes in acceleration over the course of command value changes.

The resulting velocity command value results from the sum of the sloped and filtered value in **S-0-0036, Velocity command value** and the direct value in **S-0-0037, Additive velocity command value**.

When error response "Velocity command value, to zero with ramp and filter" is executed, velocity proceeds from the current feedback velocity to 0, using the effective velocity command value with the deceleration specified by the parameter in **P-0-1201, Ramp 1 pitch**. It is also passed through the deep low filter specified by **P-0-1222, Velocity command filter**.

See also the functional description: "Velocity command value to zero with filter and ramp".

P-0-1222 - Attributes

Para. Name:	**DE**	Geschwindigkeits-Sollwert-Filter
	EN	Velocity command filter
	FR	Filtrage de consigne vitesse
	ES	Filtro para valor de consigna de velocidad
	IT	Filtro per valore nominale della velocità

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Function:	Parameter	**Editability:**	P234
Data length:	2Byte	**Memory:**	Param. EE
Format:	DEC_OV	**Validity check:**	Phase3
Unit:	ms	**Extreme value check:**	yes
Decimal places:	0	**Combination check:**	no
Input min/max:	0 / 32767		
Default value:	0	**Cyc. transmittable:**	no

P-0-4000, Current-zero-trim phase U

This parameter serves to display the determined result of the zero-trim procedure for the current feedback sensor of phase U.

P-0-4000 - Attributes

Para. Name:	**DE**	Strommess-Nullabgleich Phase U
	EN	Current-zero-trim phase U
	FR	Réglage courant nul phase U
	ES	Compensación cero de medición de corriente fase U
	IT	Regolazione Corrente 0 Fase U

Function:	Parameter	**Editability:**	no
Data length:	2Byte	**Memory:**	no
Format:	DEC_MV	**Validity check:**	no
Unit:	%	**Extreme value check:**	yes
Decimal places:	2	**Combination check:**	no
Input min/max:	0 / 10000		
Default value:	---	**Cyc. transmittable:**	no

P-0-4001, Current-zero-trim phase V

This parameter serves to display the determined result of the zero-trim procedure for the current feedback sensor of phase V.

P-0-4001 - Attributes

Para. Name:	**DE**	Strommess-Nullabgleich Phase V
	EN	Current-zero-trim phase V
	FR	Réglage courant nul phase V
	ES	Compensación cero de medición de corriente fase V
	IT	Regolazione Corrente 0 Fase V

Function:	Parameter	**Editability:**	no
Data length:	2Byte	**Memory:**	no
Format:	DEC_MV	**Validity check:**	no
Unit:	%	**Extreme value check:**	yes
Decimal places:	2	**Combination check:**	no
Input min/max:	0 / 10000		
Default value:	---	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-4002, Current-amplify-trim phase U

For trimming of the current sensor regarding its gain error, this parameter is determined in the test area for the Indramat drive controllers.

P-0-4002 - Attributes

Para. Name:	**DE**	Strommess-Verst.abgleich Phase U		
	EN	Current-amplify-trim phase U		
	FR	Réglage amplification courant phase U		
	ES	Compensación de amplif. de medición de corriente fase U		
	IT	Regolaz. Aplif. Corrente Fase U		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	Verst. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	yes
Decimal places:		4	**Combination check:**	no
Input min/max:		0 / 65535		
Default value:		---	**Cyc. transmittable:**	no

P-0-4003, Current-amplify-trim phase V

For trimming of the current sensor regarding its gain error, this parameter is determined in the test area for the Indramat drive controllers.

P-0-4003 - Attributes

Para. Name:	**DE**	Strommess-Verst.abgleich Phase V		
	EN	Current-amplify-trim phase V		
	FR	Réglage amplification courant phase V		
	ES	Compensación de amplif. de medición de corriente fase V		
	IT	Regolaz. Amplif. Corrente Fase V		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	Verst. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	yes
Decimal places:		4	**Combination check:**	no
Input min/max:		0 / 65535		
Default value:		---	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-4006, Process block target position

List of the target positions for the block-controlled operation (positioning interface). You can input a maximum of 64 position values, the first element specifying the target position of the process block 0, the second element specifying the target position of the process block 1, etc.
The number of the target positions must always be greater than or equal to the number of the operational process blocks.

Note: When a process block is selected for which there isn't any target position available, the "Selected process block is not programmed" warning is output.

See also Functional Description "Positioning Block Mode"

P-0-4006 - Attributes

Para. Name:	**DE**	Positioniersatz Zielposition		
	EN	Process block target position		
	FR	Bloc de positionnement, Position cible		
	ES	Bloque de posicionamiento, posición objeto		
	IT	Blocco Posizionamento, Posizione da raggiungere		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte var.	**Memory:**	Prog.-Modul
Format:		DEC_MV	**Validity check:**	P3-4
Unit:		S-0-0076	**Extreme value check:**	yes
Decimal places:		S-0-0077/S-0-0078	**Combination check:**	no
Input min/max:		S-0-0076 / S-0-0076		
Default value:		Defaultliste	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-4007, Process block velocity

List of the process block velocities for the block operated function (positioning interface). You can input a maximum of **64** velocities, whereby the first element specifies the maximum velocity of the process block 0, the second element specifies the maximum velocity of the process block 1, and so on.
The number of the process block velocities must always be greater or equal to the number of operational process blocks. If a process block is selected of which there is no process block velocity, then the warning "non-programmed process block" will be given.

See also the function description: "Positioning Block Mode".

P-0-4007 - Attributes

Para. Name:	**DE**	Positioniersatz Geschwindigkeit
	EN	Process block velocity
	FR	Bloc de positionnement, Vitesse
	ES	Bloque de posicionamiento, velocidad
	IT	Blocco Posizionamento, Velocità

Function:	Parameter	**Editability:**	P234
Data length:	4Byte var.	**Memory:**	Prog.-Modul
Format:	DEC_MV	**Validity check:**	P3-4
Unit:	S-0-0044	**Extreme value check:**	yes
Decimal places:	S-0-0045/S-0-0046	**Combination check:**	no
Input min/max:	S-0-0044 / S-0-0044		
Default value:	Defaultliste	**Cyc. transmittable:**	no

P-0-4008, Process block acceleration

List of the accelerations for the block operated function. You can input a maximum of **64** acceleration values, whereby the first element specifies the maximum acceleration of the process block 0, the second element specifies the maximum acceleration of the process block 1, and so on.
The number of acceleration values must always be greater or equal to the number of used operation process blocks. If a process block is selected of which there is no acceleration, then the warning "unprogrammed Process block" will be given.

Note: If a process block is selected for which there is no acceleration available, the warning "unprogrammed process block" is output.

See also the function description: "Positioning Block Mode".

P-0-4008 - Attributes

Para. Name:	**DE**	Positioniersatz Beschleunigung
	EN	Process block acceleration
	FR	Bloc de positionnement, Accélération
	ES	Bloque de posicionamiento, aceleración
	IT	Blocco Posizionamento, Accellerazione

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Function:	Parameter	**Editability:**	P234
Data length:	4Byte var.	**Memory:**	Prog.-Modul
Format:	DEC_MV	**Validity check:**	P3-4
Unit:	S-0-0160	**Extreme value check:**	yes
Decimal places:	S-0-0161/S-0-0162	**Combination check:**	no
Input min/max:	S-0-0160 / S-0-0160		
Default value:	Defaultliste	**Cyc. transmittable:**	no

P-0-4009, Process block jerk

List of the jerk limit values for the block operated function (positioning interface). You can input a maximum of **64** jerk limit values, whereby the first element specifies the jerk limit value of the process block 0, the second element specifies the jerk value of the process block 1, and so on. The number of the jerk limit values must be greater or equal to the number of operation process blocks. If a process block is selected of which there is no jerk value, then the warning „non-programmed process block" will be given.
With an input of **0**, the jerk limit can be turned **off**.

See also the function description: "Positioning Block Mode".

P-0-4009 - Attributes

Para. Name:	**DE**	Positioniersatz Ruck
	EN	Process block jerk
	FR	Bloc de positionnement, Jerk
	ES	Bloque de posicionamiento, sacudida
	IT	Blocco Posizionamento, Jerk

Function:	Parameter	**Editability:**	P234
Data length:	4Byte var.	**Memory:**	Prog.-Modul
Format:	DEC_MV	**Validity check:**	P3-4
Unit:	S-0-0160	**Extreme value check:**	no
Decimal places:	S-0-0161/S-0-0162	**Combination check:**	no
Input min/max:	- / -		
Default value:	Defaultliste	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-4010, Load inertia

The load moment of inertia determined with the automatic control loop setting is entered in this parameter, without **P-0-0510, rotor moment of inertia**. The knowledge of the load inertia is important when optimizing the velocity control loop.

Note: The inertia relates to the motor and is rotary in nature.

See also the functional description:"Automatic Control Loop Settings".

P-0-4010 - Attributes

Para. Name:	**DE**	Last-Trägheitsmoment		
	EN	Load inertia		
	FR	Couple d'inertie de la charge		
	ES	Par de inercia de carga		
	IT	Inerzia Carico		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	Param.-E²prom
Format:		DEC_OV	**Validity check:**	no
Unit:		P-0-4014	**Extreme value check:**	yes
Decimal places:		6	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	no

P-0-4011, Switching frequency

This parameter is used to set the switching frequency of the pulse width modulation controller to **4 kHz or 8 kHz**.

See also the functional description: "Current Limit".

P-0-4011 - Attributes

Para. Name:	**DE**	Schaltfrequenz		
	EN	Switching frequency		
	FR	Fréquence de coupure		
	ES	Frecuencia de conmutación		
	IT	Frequenza di Modulazione		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		kHz	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	yes
Input min/max:		4 / 8		
Default value:		4	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-4014, Motor type

This parameter displays the connected motor type.
The firmware supports the following motor types:

- **P-0-4014** = 12: **MSM**

This implies the following units and decimal places for the following parameters:

Parameter	Unit	Decimal places
S-0-0113	rpm	4
S-0-0116	dp/rev	0
S-0-0348	mAs²/rad	1
P-0-0018	number of pole pairs	0
P-0-0051	Nm/A	2
P-0-0510	kg/m²	5
P-0-4010	kg/m²	6

Fig. 3-53: Switching units and decimal places

See also Functional Description "Setting of the Motor Type through P-0-4014, Motor Type"

P-0-4014 - Attributes

Para. Name:	**DE**	Motorart		
	EN	Motor type		
	FR	Type de moteur		
	ES	Tipo de motor		
	IT	Tipo Motore		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	Param.-E²prom
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		--	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		1 / 7		
Default value:		1	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-4015, Intermediate DC bus voltage

This parameter supports the display of the currently measured DC bus voltage.

P-0-4015 - Attributes

Para. Name:	**DE**	Zwischenkreisspannung		
	EN	Intermediate DC bus voltage		
	FR	Tension du circuit intermédiaire CD		
	ES	Tensión de circuito intermedio		
	IT	Tensione sul Bus DC		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	Verst. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		V	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		0 / 1000		
Default value:		---	**Cyc. transmittable:**	no

P-0-4019, Process block mode

Setup of the process block mode for each separate process block. The first element of this list specifies the mode of the process block 0, the second specifies the mode of the process block 1, and so on.

process block mode	Setup value
Absolute process block	101 h
relative process block without res. path storage	2 h
relative process block with res. path storage	102 h
Movement in positive direction	104 h
Movement in negative direction	108 h
following block at target position without halt (mode 1)	1x h
following block at target position without halt (mode 2)	2x h
following block at target position with halt	4x h
following block with transition at switching signal	8x h

Fig. 3-54: Selectable process block modes

The number of the process block modes must always be greater or equal to the number of operational process blocks. If a process block is selected of which there is no process mode, then the warning „non-programmed process block" will be given.

See also the functional description: "Positioning Block Mode".

P-0-4019 - Attributes

Para. Name:	**DE**	Positioniersatz-Modus
	EN	Process block mode
	FR	Bloc de positionnement, Mode
	ES	Bloque de posicionamiento, Modo
	IT	Blocco Posizionamento, Modo

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Function:	Parameter	**Editability:**	P234
Data length:	2Byte var.	**Memory:**	Prog.-Modul
Format:	HEX	**Validity check:**	P3-4
Unit:	--	**Extreme value check:**	-
Decimal places:	--	**Combination check:**	no
Input min/max:	- / -		
Default value:	Defaultliste	**Cyc. transmittable:**	no

P-0-4020, Encoder emulation type

The parameter gives the choice

- between **incremental or absolute** feedback position output as well as
- the **source** of the signal to emulate.

The following table shows the possible combinations:

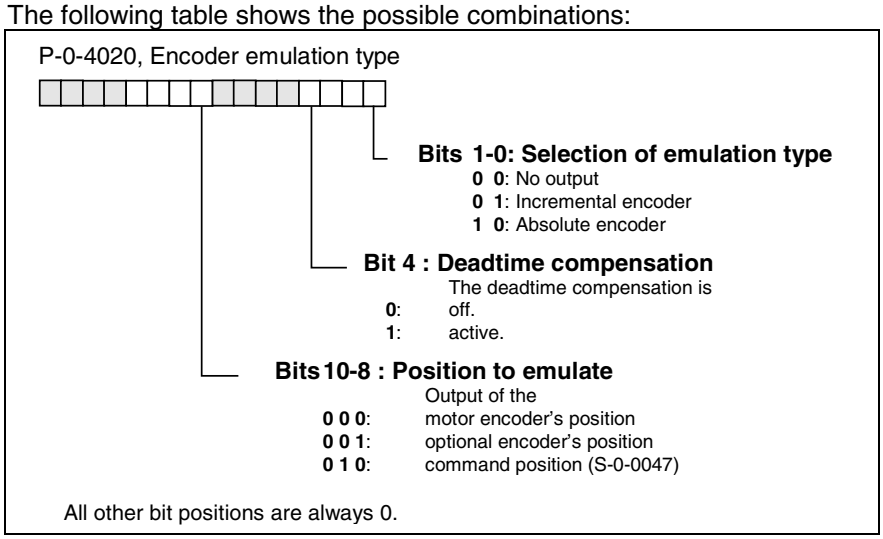


Fig. 3-55: Parameter P-0-4020, Encoder Emulation Type

See also the functional description:"Encoder Emulation".

P-0-4020 - Attributes

Para. Name:	**DE**	Geberemulationsart
	EN	Encoder emulation type
	FR	Type d'émulation codeur
	ES	Tipo de emulación de encoder
	IT	Tipo di Emulazione Encoder

Function:	Parameter	**Editability:**	P23
Data length:	2Byte	**Memory:**	-
Format:	DEC_OV	**Validity check:**	P3-4
Unit:	--	**Extreme value check:**	yes
Decimal places:	0	**Combination check:**	-
Input min/max:	- / -		
Default value:	-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-4021, Baud rate RS-232/485

Various baud rates (transmission speeds) can be set for communications via the serial interfaces.

Baud rate [Baud]	Setting in parameter P-0-4021
9600	0
19200	1

Fig. 3-56: Settable baud rates



ATTENTION

All participants on the bus must be set to the same baud rate.

Note: Do not change the baud rate in the list of all parameters in *DriveTop*. Doing so would lock out all further communications in *DriveTop* versions < 3.

See also the functional description: "Serial Communication".

P-0-4021 - Attributes

Para. Name:	**DE**	Baud-Rate RS-232/485		
	EN	Baud rate RS-232/485		
	FR	Baud-Rate RS-232/485		
	ES	Frecuencia de baudios RS-232/485		
	IT	Baud Rate RS-232/485		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	Param.-E²prom
Format:		DEC_OV	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		0 / 3		
Default value:		0	**Cyc. transmittable:**	no

P-0-4022, Drive address

When communicating via RS485 interface with more than one drive, every drive must have a different address, so that only the addressed drive responds.

Note: If you enter the into the communication parameter P-0-4022 the value 256, it's the address switches which determine the device address (1…99) for the serial communication (RSKO + SIS) and not the value 256.

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com



ATTENTION

If you set the address via the serial interface instead of the switches, only one drive may be connected at a time. Only as soon as the addresses are set, you can connect the entire bus.

See also the functional description: "Serial Communication".

P-0-4022 - Attributes

Para. Name:	**DE**	Antriebsadresse		
	EN	Drive address		
	FR	Adresse entraînement		
	ES	Dirección de accionamiento		
	IT	Indirizzo Azionamento		
Function:		Parameter	**Editability:**	P23
Data length:		2Byte	**Memory:**	Param. EE
Format:		DEC_OV	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		0 / 256		
Default value:		256	**Cyc. transmittable:**	no

P-0-4023, C400 Communication phase 2 transition

Switching command **from drive mode** or from phase 3 (P3) **to parameter mode**, Phase 2 (P2).
The command can only be processed when the **drive enable** is **off**.
See also the functional description: "Parametrization Mode - Operating Mode".

P-0-4023 - Attributes

Para. Name:	**DE**	C400 Umschaltung auf Komm.-Phase 2		
	EN	C400 Communication phase 2 transition		
	FR	C400 Passage en phase 2		
	ES	C400 Conmutación a fase 2		
	IT	C400 Comando Selezione Modo Parametri		
Function:		Command	**Editability:**	P234
Data length:		2Byte	**Memory:**	no
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		--	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		0	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-4024, Test status

Gives information about the product advancement in the factory.

P-0-4024 - Attributes

Para. Name:	**DE**	Prüfstatus		
	EN	Test status		
	FR	Etat de test		
	ES	Estado de prueba		
	IT	Stato Test		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	Verst.-E²prom
Format:		HEX	**Validity check:**	nicht
Unit:		--	**Extreme value check:**	no
Decimal places:		--	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	no

P-0-4026, Process block selection

This parameter allows selecting the positioning block to be traveled. The content of **P-0-4026, Process block selection** can be influenced or changed in the following ways:

- In the case of the **I/O mode** (P-0-4084=0xFF8x), the lowest 6 bits of P-0-4026 are configured in **P-0-4077, Field bus control word**!
- With the respective configuration of the **digital inputs** it is also possible to select the positioning block via these inputs.
- In the case of **SERCOS devices** and **field bus devices** (in the freely configurable profile type) it is possible to cyclically configure P-0-4026, Process block selection.
- P-0-4026, Process block selection can be changed via the **serial interface**, too.

See also Functional Description "Positioning Block Mode"

P-0-4026 - Attributes

Para. Name:	**DE**	Positioniersatz Auswahl		
	EN	Process block selection		
	FR	Sélection du bloc de déplacement		
	ES	Selección de bloque de posicionamiento		
	IT	Selezione Blocco Posizionamento		
Function:		Parameter	**Editability:**	yes
Data length:		2Byte	**Memory:**	no
Format:		DEC_OV	**Validity check:**	no
Unit:		--	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		0 / 63		
Default value:		-	**Cyc. transmittable:**	MDT

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-4030, Jog velocity

Limit value for the velocity during movement via the jog input. The value must be smaller than that in parameter **S-0-0091, Bipolar Velocity Limit** value.
The velocity of the motion will also be controlled by **S-0-0108, feed rate override** and - during motion with limited velocity - the maximum **Positioning speed (S-0-0259)**.

See also the functional description: "Operating Mode: Jogging".

P-0-4030 - Attributes

Para. Name:	**DE**	Tipp-Geschwindigkeit		
	EN	Jog velocity		
	FR	Vitesse de Jog		
	ES	Velocidad de impulsos		
	IT	Velocità manuale		
Function:		Parameter	**Editability:**	P234
Data length:		4Byte	**Memory:**	Prog.-Modul
Format:		DEC_MV	**Validity check:**	P3-4
Unit:		S-0-0044	**Extreme value check:**	yes
Decimal places:		S-0-0045/S-0-0046	**Combination check:**	no
Input min/max:		S-0-0044 / S-0-0044		
Default value:		100000	**Cyc. transmittable:**	no

P-0-4035, Trim-current

In this parameter, the current value is stored with which the current measurement of the drive control is precisely adjusted in the factory. This eliminates systematical errors in the current measurement. The value has no meaning to the user and cannot be changed.

P-0-4035 - Attributes

Para. Name:	**DE**	Abgleichstrom		
	EN	Trim-current		
	FR	Courant pour le calibrage		
	ES	Corriente para calibrar		
	IT	Corrente per calibrare		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	Verst. EE
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		A	**Extreme value check:**	yes
Decimal places:		3	**Combination check:**	no
Input min/max:		1 / 500000		
Default value:		---	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-4044, Brake resistor load

With this parameter, you can read the average power dissipated in the braking resistance.
100% means here that the damping resistance is charged with its **continuous rated power**. For a safe operation, the load should be less than 80% . The value is very much smoothened (filtered).
In order to ensure if a processing cycle does not overload the braking resistance, the analog signal „bleeder load" must be considered.

P-0-4044 - Attributes

Para. Name:	**DE**	Bremswiderstand Auslastung		
	EN	Brake resistor load		
	FR	Résistance de freinage, charge		
	ES	Resistencia de frenado, carga		
	IT	Resistenza di Freno, Carico		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	no
Format:		DEC_OV	**Validity check:**	no
Unit:		%	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	no

P-0-4045, Active permanent current

This parameter shows how much current the drive can supply in the actual combination in continual operation. Multiplying with the **P-0-0051, torque constant** of the motor yields the continual operational torque.
With this current, the device is not overloaded. It is also the current to which the current limit reduces.
This parameter is calculated by the drive control during switching to the operating mode and is not changeable.

Determining this limit is influenced by the following current and torque limitations and settings:

- S-0-0111, Motor current at standstill
- S-0-0112, Amplifier nominal current
- P-0-4058, Amplifier type data
- S-0-0092, Bipolar torque/force limit value

Note: The continuous current at standstill of the motor is the value that the percentage specifications refers to: it corresponds to 100%.

See also the functional description: "Current Limit".

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-4045 - Attributes

Para. Name:	**DE**	Wirksamer Dauerstrom		
	EN	Active permanent current		
	FR	Courant permanent actuel		
	ES	Corriente continua activa		
	IT	Corrente continuativa attiva		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	no
Format:		DEC_OV	**Validity check:**	no
Unit:		A	**Extreme value check:**	no
Decimal places:		3	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

P-0-4046, Active peak current

This parameter shows how much current the drive can supply in the actual combination **momentarily** (0.4 s). Multiplying with the **P-0-0051, torque constant** of the motor yields the momentary operation torque (i.e. for acceleration operations).
This parameter is calculated and preset by the drive control during switching to the operating mode. The dynamic current limiting reduces this value according to the load of the amplifier.
Determining this limit is influenced by the following current and torque limitations and settings:

ID-Nr.	Name	Unit
S-0-0109	Motor peak current	A
S-0-0110	Amplifier peak current	A
P-0-4058	Amplifier type data	
S-0-0092	Torque limit bipolar	%
P-0-0109	Torque/force peak limit	%
P-0-4004	Magnetizing current	A

Fig. 3-57: Active peak current, dependencies

See also the functional description: "Current Limit".

P-0-4046 - Attributes

Para. Name:	**DE**	Wirksamer Spitzenstrom		
	EN	Active peak current		
	FR	Courant crête actuel		
	ES	Corriente punta activa		
	IT	Corrente di Picco attiva		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	no
Format:		DEC_OV	**Validity check:**	no
Unit:		A	**Extreme value check:**	no
Decimal places:		3	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-4047, Motor inductance

Inductance of the motor, measured between two terminals (phase to phase).
The parameter is set at the factory and cannot be changed.

P-0-4047 - Attributes

Para. Name:	**DE**	Motor-Induktivität		
	EN	Motor inductance		
	FR	Inductance moteur		
	ES	Inductividad de motor		
	IT	Induttanza Motore		
Function:		Parameter	**Editability:**	-
Data length:		2Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	-
Unit:		mH	**Extreme value check:**	-
Decimal places:		2	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

P-0-4048, Stator resistance

Stator resistance of the motor, measured between two connection clamps.
The parameter is set at the factory and cannot be changed.

P-0-4048 - Attributes

Para. Name:	**DE**	Motor-Wicklungs-Widerstand		
	EN	Stator resistance		
	FR	Résistance bobine moteur		
	ES	Resistencia de estator		
	IT	Resistenza Statore		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	Feedback-E²prom
Format:		DEC_OV	**Validity check:**	-
Unit:		Ohm	**Extreme value check:**	-
Decimal places:		3	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-4050, Delay answer RS-232/485

The RS-485 interface (bus capable) works in half duplex mode. The same pair of wires is used for both directions. The transmission direction must be switched during the data exchange. In oder to allow the connected devices (PC or PLC) a sufficient time to switch between transmitting and receiving on their side, the answer time of the drive can be set via this parameter.
Parameter P-0-4050 defines the minimal time in ms that must pass after the last symbol of a telegram is received over the serial interface and before the first symbol of the response may be sent. For RS-232 operation, this parameter is not necessary.
The required response delay time is dependent on the Master/PC used. At shipping, the value for the answer delay is set to a value which satisfies most PCs.

Note: **If communication** problems arise, for example "TIMEOUT" message in "DriveTop", then set the answer delay gradually to higher values, until the problems are gone. For safety, multiply the found limit value with the factor 1.5 and input it as answer delay.

See also the functional description: "Serial Communication".

P-0-4050 - Attributes

Para. Name:	**DE**	Antwortverzögerung RS-232/485
	EN	Delay answer RS-232/485
	FR	Délai de réponse RS-232/485
	ES	Retardo de respuesta RS-232/485
	IT	Ritardo su Risposta RS-232/485

Function:	Parameter	**Editability:**	P234
Data length:	2Byte	**Memory:**	Prog.-Modul
Format:	DEC_OV	**Validity check:**	P3-4
Unit:	ms	**Extreme value check:**	yes
Decimal places:	0	**Combination check:**	no
Input min/max:	1 / 200		
Default value:	1	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-4051, Process block acknowledgment

This parameter reflects the positioning command selection acquittance. It is also accessible in the hardware signals provided for this purpose.
At **Drive_Start = 0** (Drive Halt) the acquittance displays the preselected positioning command, **inverted** (complement), if controller enable = 1.
At **Drive_Start = 1** acquittance displays the current positioning command, and is **not inverted**, if it was accepted.

See also functional description "Positioning Block Mode".

P-0-4051 - Attributes

Para. Name:	**DE**	Positioniersatz Quittung		
	EN	Process block acknowledgment		
	FR	Acquittement bloc de déplacement		
	ES	Confirmación de bloque de posicionamiento		
	IT	Conferma blocco di posizionamento		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	no
Format:		DEC_OV	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	AT

P-0-4052, Positioning block, last accepted

This parameter stores the number of the last accepted positioning process block. This last process block number is also available after switching off and back on as the positioning block selection acquittance, as long as the drive enable has not been given.

See also the functional description "Positioning Block Mode".

P-0-4052 - Attributes

Para. Name:	**DE**	Positioniersatz, letzter angenommener		
	EN	Positioning block, last accepted		
	FR	Dernier bloc de positionnement accepté		
	ES	Ultimo bloque de posicionamiento aceptado		
	IT	Ultimo blocco di posizionamento accettato		
Function:		Parameter	**Editability:**	P2
Data length:		2Byte	**Memory:**	Prog.-Modul
Format:		DEC_OV	**Validity check:**	P3-4
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-4053, Intermediate DC bus voltage gain adjust

The **measurement of the DC bus voltage** must be adjusted during the fabrication. The correction factor found during the adjustment process is stored permanently in the parameter P-0-4053.

P-0-4053 - Attributes

Para. Name:	**DE**	Zwischenkreisspannung Verstärkungsabgleich
	EN	Intermediate DC bus voltage gain adjust
	FR	Tension boucle intermédiaire, calibrage amplification
	ES	Tensión del circuito intermedio, ajuste de ganancia
	IT	Tensione circuito intermedio, compensazione di guadagno

Function:	Parameter	**Editability:**	no
Data length:	2Byte	**Memory:**	Verst.-E²prom
Format:	DEC_OV	**Validity check:**	Phase3
Unit:	--	**Extreme value check:**	yes
Decimal places:	4	**Combination check:**	no
Input min/max:	1 / 20000		
Default value:	-	**Cyc. transmittable:**	no

P-0-4056, Jog inputs

This parameter shows the hardware inputs for jogging.
Bit 0 reflects the state of the Jog+ bit.
Bit 1 reflects the state of the Jog- bit.
Depending on the interface of the device, the bits come from hardware inputs or from a field bus.

Parameter P-0-4056	Inputs	Effect
00	Jog+ and Jog- = 0	no Jog direction selected
01	Jog+ = log. 1, Jog- = 0	positive Jog direction selected
10 binary	Jog+ = 0, Jog- = log. 1	negative Jog direction selected
11 binary	Jog+ and Jog- = log. 1	not allowed (Halt)

Fig. 3-58: Meaning of the Jog inputs

See also the functional description "Operating Mode: Jogging".

P-0-4056 - Attributes

Para. Name:	**DE**	Tipp-Eingänge
	EN	Jog inputs
	FR	Entrées de jog
	ES	Entradas de impulsos
	IT	Ingressi per Jog manuale

Function:	Parameter	**Editability:**	P234
Data length:	2Byte	**Memory:**	no
Format:	BIN	**Validity check:**	no
Unit:	--	**Extreme value check:**	no
Decimal places:	0	**Combination check:**	no
Input min/max:	0 / 3		
Default value:	-	**Cyc. transmittable:**	MDT

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-4057, Positioning block, input linked blocks

This parameter shows the hardware inputs for the operation with linked positioning process blocks.
Bit 0 reflects the state of the link block cam 1. 24V at the input means 1 in the bit 0.
Bit 1 reflects the state of the link block cam 2. 24V at the input means 1 in the bit 1.

Parameter P-0-4056	Meaning
0000000000000000	link block cam 1 and link block cam 2 = 0V
0000000000000001	link block cam 1 = 24V link block cam 2 = 0V
0000000000000010	link block cam 1 = 0V link block cam 2 = 24V
0000000000000011	link block cam 1 = 24V link block cam 2 = 24V

Fig. 3-59: Meaning of the Input for linked blocks

See also functional description:"Positioning Block Mode".

P-0-4057 - Attributes

Para. Name:	**DE**	Positioniersatz Folge-Eingänge
	EN	Positioning block, input linked blocks
	FR	Entrées pour blocs de positionnnement consécutifs
	ES	Bloque de posicionamiento, entradas secuenciales
	IT	Blocco di posiz., ingressi in sequenza

Function:	Parameter	**Editability:**	no
Data length:	2Byte	**Memory:**	no
Format:	BIN	**Validity check:**	no
Unit:	--	**Extreme value check:**	no
Decimal places:	--	**Combination check:**	no
Input min/max:	- / -		
Default value:	-	**Cyc. transmittable:**	no

P-0-4058, Amplifier type data

In order to be able to determined amplifier load the firmware must know the physical features of the amplifier.

Characteristics:
- transient thermal resistance
- continuous amplifier load
- thermal capacity

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-4058 - Attributes

Para. Name:	**DE**	Verstärker-Kenndaten		
	EN	Amplifier type data		
	FR	Données du type d'ampli		
	ES	Datos característicos del amplificador		
	IT	Dati caratteristici amplificatore		
Function:		Parameter	**Editability:**	Passw.
Data length:		4Byte var.	**Memory:**	Verst.-E²prom
Format:		HEX	**Validity check:**	no
Unit:			**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	no

P-0-4059, Brake resistor data

To make the evaluation of the braking resistor (bleeder) load possibel, the firmware must know the physical properties of the braking resistor.

Technical data:

- Braking resistor peak power
- Braking resistor continuous power
- Max. allowed energy pulse, assuming that the pulse duration is so short, that no energy can be cooled down.

P-0-4059 - Attributes

Para. Name:	**DE**	Bremswiderstand Kenndaten		
	EN	Brake resistor data		
	FR	Résistance de freinage, données caract.		
	ES	Datos característicos de la resistencia de frenado		
	IT	Dati caratteristici resistenza del freno		
Function:		Parameter	**Editability:**	Passw.
Data length:		4Byte var.	**Memory:**	Verst.-E²prom
Format:		DEC_OV	**Validity check:**	P3-4
Unit:		--	**Extreme value check:**	no
Decimal places:		-	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-4060, Process block control word

This parameter contains relevant settings for the operation mode with process blocks. The parameter has the following structure :

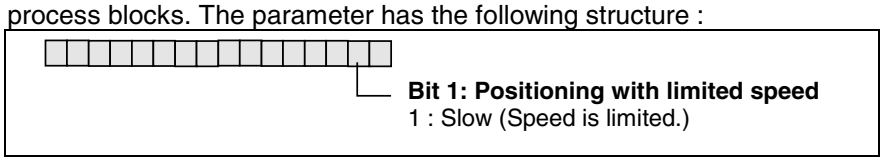


Fig. 3-60: Structure P-0-4060, Process block control word

See also the functional description:"Positioning Block Mode".

P-0-4060 - Attributes

Para. Name:	**DE**	Positioniersatz Steuerwort		
	EN	Process block control word		
	FR	Blocs de déplacement, mot de contrôle		
	ES	Bloque de posicionamiento, palabra de mando		
	IT	Blocco Posizionamento, Controllo		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	Prog.-Modul
Format:		BIN	**Validity check:**	P3-4
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	yes
Input min/max:		0 / 3		
Default value:		1	**Cyc. transmittable:**	no

P-0-4063, Process block deceleration

List of decels for operating mode "Positioning block mode". Up to 64 decel values can be entered. The first list element determines the maximum decel of positioning block 0, the second the maximum decel of block 1 and so on.
The number of decel values must always be greater than or equal to the number of positioning blocks used. If positioning blocks are selected which have a decel of zero, then the relevant accel value (P-0-4008) is used. If a positioning block is selected for which no decel is pending, a warning like "non-programmable positioning block" is generated.

See also "Positioning Block Mode".

P-0-4063 - Attributes

Para. Name:	**DE**	Positioniersatz Verzögerung
	EN	Process block deceleration
	FR	Bloc de positionnement, décélération
	ES	Bloque de posicionamiento, deceleración
	IT	Blocco Posizionamento, Decellerazione

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Function:	Parameter	**Editability:**	P234
Data length:	4Byte var.	**Memory:**	Param.-E²prom
Format:	DEC_MV	**Validity check:**	P3-4
Unit:	S-0-0076	**Extreme value check:**	yes
Decimal places:	S-0-0161/S-0-0162	**Combination check:**	-
Input min/max:	0 / 32767		
Default value:	0	**Cyc. transmittable:**	no

P-0-4073, CANopen event mask

Parameter **P-0-4073, CANopen event mask** is needed to use the independent event-controlled sending of process data. The real time data must be masked in this case (compare contents of P-0-4080). Event-controlled means that the participant (drive) only sends the actual values to the master if the masked process data (even single bits) has been changed.
The event mask is a field of words that contains a word mask for each word of the process data channel (PDO). If a bit has been set in the mask, then the relevant bit of the process data is monitored for change.

Note: If the 1st PDO only has six words, then the 7th relates to the 1st words of the 2nd PDO, for example.

Example:

PDO	Word	P-0-4080	P-0-4073	Definition
1	1	P-0-4078	1111 1100 1111 1111	All bits except bit 8 and 9 of P-0-4078 are watched for changes
1	2	S-0-0144	1111 1111 1111 1111	All bits of S-0-0144 are watched for changes
1	3	S-0-0051	0000 0000 0000 0000	Bits not monitored
1	4	S-0-0051	0000 0000 0000 0000	Bits not monitored
1	5	S-0-0040	1111 1111 1111 1111	All bits monitored
1	6	S-0-0040	1111 1111 1111 1111	All bits monitored
2	1	S-0-0390	0000 0000 0000 0000	Bits not monitored
2	:	:	:	:

Fig. 3-61: Example of CANopen event mask

Note: The event mask is only relevant for an independent sending of data, i.e., without a request from the master! At delivery, all bits are in P-0-4073=0, so that the drive only sends actual values to the master upon request!

See also the functional description: "Command communications with CANopen"

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-4073 - Attributes

Para. Name:	**DE**	CANopen-Ereignismaske		
	EN	CANopen event mask		
	FR	Fenêtre d'évènement CANopen		
	ES			
	IT	Maschera evento CANopen		
Function:		Parameter	**Editability:**	P2
Data length:		2Byte var.	**Memory:**	-
Format:		BIN	**Validity check:**	no
Unit:			**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

P-0-4074, Field bus data format

Since most fieldbus master circuits have no information about the data format of the slave, then they can only translate the standard format of the fieldbus to the internal data format. This means that generally only data words are correctly translated from the bus format to the internal format. Using parameter **P-0-4074, Fieldbus data format** it becomes possible to change, as needed, individual words into double words or bytes into byte arrays. This expedites the work of the PLC programmer.

Bit0=1 Bit0=1 means that the words are reversed to double words on the bus.
Example: the sequence...

Byte1	Byte2	Byte3	Byte4

- ...then equals the following sequence on the bus:

Byte3	Byte4	Byte1	Byte2

Bit1=1 Bit1=1 means that sequential bytes in a byte array are reversed. (Byte arrays can only be used in an acyclic channel.)
Example: The sequence ...

Byte1	Byte2	Byte3	Byte4

- ...then equals the following sequence on the bus:

Byte2	Byte1	Byte4	Byte3

-

P-0-4074 - Attributes

Para. Name:	**DE**	Feldbus-Datenformat
	EN	Field bus data format
	FR	Format des données du bus de terrain
	ES	
	IT	Formato dei dati bus di campo

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Function:	Parameter	**Editability:**	P23
Data length:	2Byte	**Memory:**	-
Format:	HEX	**Validity check:**	no
Unit:		**Extreme value check:**	yes
Decimal places:	0	**Combination check:**	no
Input min/max:	- / -		
Default value:	-	**Cyc. transmittable:**	-

P-0-4075, Field bus watchdog time

Parameter **P-0-4075, Fieldbus watchdog time** supports the setting of the monitoring time for the process data.

Note: At present the monitoring time for the process data can only be set with Interbus.

After each exchange of process data the time is restarted. At the end of this time, the error reaction set in the drive with parameter **P-0-0119, Best possible deceleration** is initiated.

Note: The value 65535 means that the monitor is off!

P-0-4075 - Attributes

Para. Name:	**DE**	Feldbus-Watchdogzeit
	EN	Field bus watchdog time
	FR	Temps watchdog du bus
	ES	Tiempo watchdog del bus
	IT	Tempo Watchdog del Bus

Function:	Parameter	**Editability:**	P2
Data length:	2Byte	**Memory:**	-
Format:	DEC_OV	**Validity check:**	no
Unit:	ms	**Extreme value check:**	yes
Decimal places:	0	**Combination check:**	no
Input min/max:	- / -		
Default value:	-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-4076, Field bus container object

Parameter P-0-4076 supports configuration of the process data channel in P-0-4080/P-0-4081. With fieldbusses that only support the same length of I/O data, this object must be used to fill up the shorter channel. With the Profibus/DP this object must be used to define the parameter channel.

see also: "**P-0-04080,Pos. corr., prec. corr. start position**"
see also: "**P-0-04081,Pos. corr., prec. corr. start position**"

P-0-4076 - Attributes

Para. Name:	**DE**	Feldbus-Platzhalterobjekt		
	EN	Field bus container object		
	FR	Conteneur pour bus de terrain		
	ES			
	IT	Carattere jolly bus di campo		
Function:		Parameter	**Editability:**	P234
Data length:		2Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	no
Unit:			**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

P-0-4077, Field bus control word

Parameter P-0-4077 supports the display of the control word transmitted via the fieldbus in the real time channel.
In this control word all the important **control information** of the profile is stored (e.g., IO mode, DriveCom Profile22,..)

- drive enable
- start/stop
- jog
- clear error.

Note: **P-0-4077,Fieldbus control word** is evaluated in terms of the fieldbus profile selected with P-0-4084. Parameter **P-0-4077, Fieldbus control word** only supports diagnostics.

See also function description: "Profile Types"

P-0-4077 - Attributes

Para. Name:	**DE**	Feldbus-Steuerwort
	EN	Field bus control word
	FR	Mot de contrôle bus
	ES	Palabra de mando del bus
	IT	Parole di Controllo Bus

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Function:	Parameter	**Editability:**	no
Data length:	2Byte	**Memory:**	-
Format:	BIN	**Validity check:**	no
Unit:		**Extreme value check:**	no
Decimal places:	0	**Combination check:**	no
Input min/max:	- / -		
Default value:	-	**Cyc. transmittable:**	-

P-0-4078, Field bus status word

Parameter P-0-4078 supports the display of the status word transmitted via the fieldbus in the real time channel.
In this status word there is all important **status information** of the relevant profile (e.g., I/O mode, DriveCom Profile22,..)

- control and power section ready to operate
- drive error in C1D
- and so on.

Note: **P-0-4078,Fieldbus control word** is evaluated in terms of the fieldbus profile selected with P-0-4084. Parameter **P-0-4077, Fieldbus control word** only supports diagnostics.

See also function description: "Profile Types".

P-0-4078 - Attributes

Para. Name:	**DE**	Feldbus-Statuswort		
	EN	Field bus status word		
	FR	Mot d'état bus		
	ES	Palabra de estado del bus		
	IT	Parole di Stato Bus		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	-
Format:		BIN	**Validity check:**	no
Unit:			**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-4079, Field bus baudrate

Here, you can set the desired baudrate (bit rate) in steps of 0.1 kBaud, if the used fieldbus does not provide an automatic baudrate detection. If the chosen baudrate is not allowed, an appropriate standard baudrate for the fieldbus will be used. The actually used value will be written back into this parameter and can be read out for diagnostic purposes, e.g. with DriveTop.

P-0-4079 - Attributes

Para. Name:	**DE**	Feldbus-Baudrate
	EN	Field bus baudrate
	FR	Baud-rate du bus
	ES	Frecuencia de baudios del bus
	IT	Baud-Rate del Bus

Function:	Parameter	**Editability:**	P2
Data length:	4Byte	**Memory:**	-
Format:	DEC_OV	**Validity check:**	no
Unit:	kBaud	**Extreme value check:**	yes
Decimal places:	1	**Combination check:**	no
Input min/max:	- / -		
Default value:	-	**Cyc. transmittable:**	-

P-0-4080, Real-time input object structure

This parameter illustrates structure and thus the number of words and their assignment with objects (indices) for the process input data (from slave to master).
The user can read existing structures via the FMS read and write services, and by inputting a new structure fix a new process input data configuration.
The master can use this configuration to be informed about the position of the individual objects on the bus.

Note: For both the process input and output data it applies that changes in word lengths always lead to changes in data stored in the master for the slave. This is why changes in lengths in the DP channel do not become effective until there has been a renewed powering up of the drive or with transition from phase 2 to 3.

P-0-4080 - Attributes

Para. Name:	**DE**	Prozessdaten-Eingangsbeschreibung
	EN	Real-time input object structure
	FR	Entrée temps réel, description des données
	ES	
	IT	Descrizione ingresso dati di processo

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Function:	Parameter	**Editability:**	P2
Data length:	2Byte var.	**Memory:**	-
Format:	IDN	**Validity check:**	P2-3
Unit:	--	**Extreme value check:**	no
Decimal places:	0	**Combination check:**	no
Input min/max:	- / -		
Default value:	-	**Cyc. transmittable:**	-

P-0-4081, Real-time output object structure

This parameter illustrates the structure and thus the number of words and their assignment with objects (indices) for the process output data (from master to slave).
The user can read the existing structure via the FMS read and write services, and by setting a new structure fix a new process output data configuration.
The master can use this configuration to be informed about the position of the individual objects on the bus.

Note: For both the process output and output data it applies that changes in word lengths always lead to changes in data stored in the master for the slave. This is why changes in lengths in the DP channel do not become effective until there has been a renewed powering up of the drive or with transition from phase 2 to 3.

P-0-4081 - Attributes

Para. Name:	**DE**	Prozessdaten-Ausgangsbeschreibung		
	EN	Real-time output object structure		
	FR	Sortie temps réel, description des données		
	ES			
	IT	Descrizione uscita dati di processo		
Function:		Parameter	**Editability:**	P2
Data length:		2Byte var.	**Memory:**	-
Format:		IDN	**Validity check:**	P2-3
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-4082, Length of real-time data channel In

Description:
This parameter specifies the number of bytes of the process data channel. This length also contains the length of an eventually present parameter channel. The steps are in word limits, i.e., allowable values are 2, 4, 6,.... 32

P-0-4082 - Attributes

Para. Name:	**DE**	Länge zyklischer Datenkanal-In		
	EN	Length of real-time data channel In		
	FR	Longueur du canal de données cyclique IN		
	ES			
	IT	Lunghezza canale dati ciclico in		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	P2-3
Unit:		Byte	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

P-0-4083, Length of parameter channel in DP

Description:
The number of bytes of the parameter channel are specified in this parameter. The steps are in word limits, i.e., allowable values are 0,2, 4, 6,.... 12.

P-0-4083 - Attributes

Para. Name:	**DE**	Länge des Parameterkanals		
	EN	Length of parameter channel in DP		
	FR	Longueur du canal pour paramètres dans DP		
	ES	Longitud del canal de parámetros en el DP		
	IT	Lunghezza del canale di parametri		
Function:		Parameter	**Editability:**	P2
Data length:		2Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	P2-3
Unit:		Byte	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-4084, Profile type

The fieldbus connection for the ECODRIVE 03/ECODRIVE Cs allows the operation of the drive controller in different operating modes.
The mode to be selected must be valid at runup of the drive. A change is possible in phase 2 of the drive controller, but does not become effective until after a renewed powering up of the drive.

Operating mode	Setting
Positioning per DRIVECOM Profile 22	**0x0001**
I/O mode, compatible with ECODRIVE 01	**0xFF80**

Fig. 3-62: Programmable operating modes

P-0-4084 - Attributes

Para. Name:	**DE**	Profiltyp		
	EN	Profile type		
	FR	Type de profil		
	ES			
	IT	Tipo di Profilo		
Function:		Parameter	**Editability:**	P2
Data length:		2Byte	**Memory:**	-
Format:		HEX	**Validity check:**	P2-3
Unit:		--	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	-
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

P-0-4085, Field bus version

The **fieldbus firmware version** can be read from this parameter as plain text. The **structure** of the **firmware version** is defined as follows:

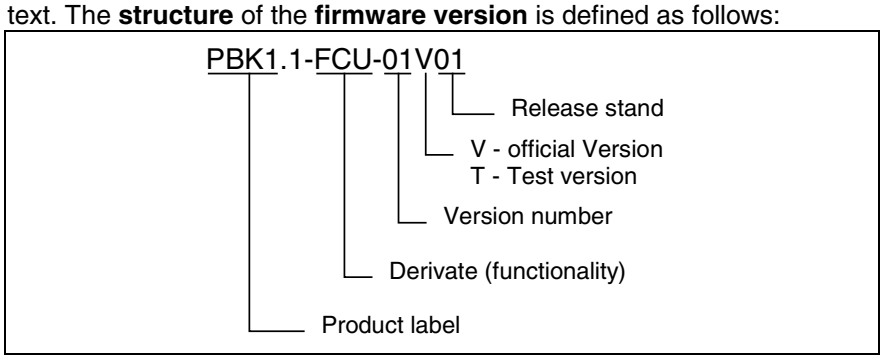


Fig. 3-63: Fieldbus version

Examples:

PBK1.1-FCU-01V01
PBK2.1-FCU-01V02

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-4085 - Attributes

Para. Name:	**DE**	Feldbus-Version
	EN	Field bus version
	FR	Version du bus de terrain
	ES	Versión del bus de campo
	IT	Versione del bus di campo

Function:	Parameter	**Editability:**	no
Data length:	1Byte var.	**Memory:**	-
Format:	ASCII	**Validity check:**	no
Unit:	--	**Extreme value check:**	no
Decimal places:	-	**Combination check:**	no
Input min/max:	- / -		
Default value:	-	**Cyc. transmittable:**	-

P-0-4086, Command communication status

Command communications (SERCOS, Profibus, ..) uses this parameter to inform the drive about important control information on handling communication phase transitions and for enabling hardware inputs for drive enable and drive halt.

Note: **The user cannot write access this p**arameter. It only supports diagnostics.

Parameter structure:

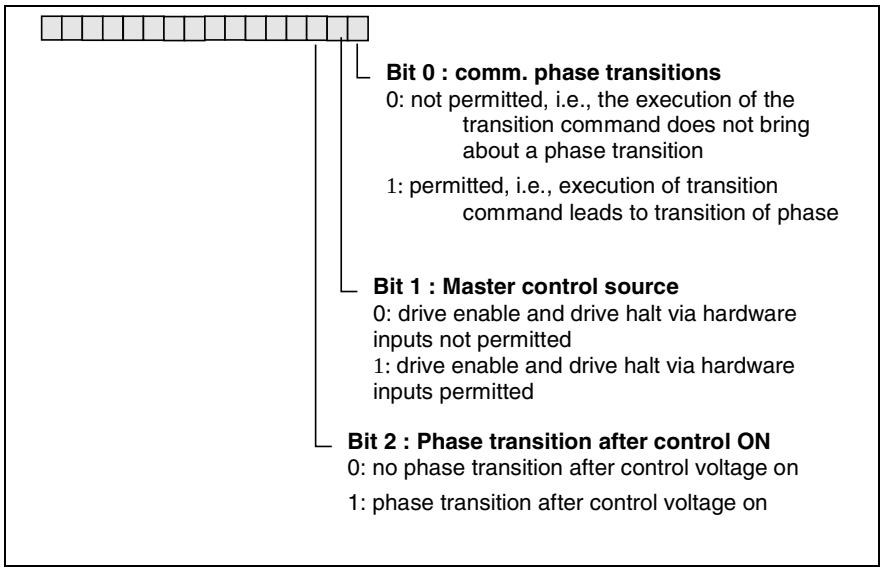


Fig. 3-64: P-0-4086, Command communication status

P-0-4086 - Attributes

Para. Name:	**DE**	Führungskommunikation Status
	EN	Command communication status
	FR	Etat communication maître
	ES	Estado de comunicación master
	IT	Stato di Communicazione Master

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Function:	Parameter	**Editability:**	no
Data length:	2Byte	**Memory:**	no
Format:	BIN	**Validity check:**	no
Unit:		**Extreme value check:**	no
Decimal places:	0	**Combination check:**	no
Input min/max:	- / -		
Default value:	-	**Cyc. transmittable:**	no

P-0-4087, Length of real-time data channel Out

The number of bytes of the process data channel from Master → Slave is indicated in this parameter.
This length contains the length of any existing parameter channel, too.
The graduation is specified in word limits, i.e. allowed values are 2, 4, 6 through to 32.

Note: For communication via Interbus is absolutely necessary, due to the bus structure (shift register), that P-0-4082 = P-0-4087.

See also Functional Descriptions
- "Length of the process data channel PD in ECODRIVE03",
- "Number and length of PDO in ECODRIVE03",
- "Setting the length of the PD channel in the ECODRIVE03" and
- "Number and length of polled I/O in DKC06.3".

P-0-4087 - Attributes

Para. Name:	**DE**	Länge zyklischer Datenkanal-Out		
	EN	Length of real-time data channel Out		
	FR	Longueur du canal de données cyclique OUT		
	ES			
	IT	Lunghezza del canale dati ciclico out		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	no
Unit:		Byte	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-4088, Serial number

The unit's serial number is stored in this parameter. The serial number is made up of a combination of material and continuous serial numbers.
In the event servicing is necessary, then material and serial numbers can be read here.
Serial number structure:
SN <6 place material number>-<6 place serial number>

Example: SN 276813-10021

P-0-4088 - Attributes

Para. Name:	**DE**	Seriennummer		
	EN	Serial number		
	FR	Numéro de série		
	ES	Número de serie		
	IT	Numero di serie		
Function:		Parameter	**Editability:**	Passw.
Data length:		1Byte var.	**Memory:**	Verst.-E²prom
Format:		ASCII	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		--	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	no

P-0-4089, Production index

Description:
The finishing index of the drive controller is stored here. In the event servicing becomes necessary, the serial number can be read out for diagnostic purposes.

Example: **A01**

P-0-4089 - Attributes

Para. Name:	**DE**	Fertigungsindex		
	EN	Production index		
	FR	Index de production		
	ES	Indice de producción		
	IT	Indice di produzione		
Function:		Parameter	**Editability:**	Passw.
Data length:		1Byte var.	**Memory:**	Verst.-E²prom
Format:		ASCII	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		-	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-0-4094, C800 Command Base-parameter load

With the execution of this command, all parameters in **S-0-0192, IDN list of backup operation data** are set to their base values.
If the firmware in the programming. module is replaced with another version and the parameter memory is incompatible, then error **F209 PL Load parameter default values** is generated. "**PL**" appears on the display. (At this time, the SERCOS. interface is not yet active.)
Afterwards, execute the command by pressing the S1 button.

See also the functional description: "Basic parameter block".

P-0-4094 - Attributes

Para. Name:	**DE**	C800 Kommando Basisparameter laden		
	EN	C800 Command Base-parameter load		
	FR	C800 Instruction Chargement des paramètres de base		
	ES	C800 Comando Cargar parámetros de base		
	IT	C800 Comando Caricamento parametri di base		
Function:		Command	**Editability:**	P23
Data length:		2Byte	**Memory:**	no
Format:		BIN	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		--	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

P-7-0004, Velocity loop smoothing time constant

The time constant that can be activated in this parameter acts on the velocity loop controller.
This is the default value from the feedback data memory. With the Basic Load procedure, the P-7-parameters are copied into the P-0-parameters.

See also the parameter description for P-0-0004.

P-7-0004 - Attributes

Para. Name:	**DE**	Drehzahlregler-Glättungszeitkonstante		
	EN	Velocity loop smoothing time constant		
	FR	Temps de filtrage boucle de vitesse		
	ES	Tiempo de alisamiento n.d.r.		
	IT	Tempo di Smorzamento nell'Anello di Velocità		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	Phase3
Unit:		us	**Extreme value check:**	yes
Decimal places:		0	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-7-0018, Number of pole pairs/pole pair distance

For motors with feedback data memory, e.g. MKD, this parameter shows the value stored there for the number of pole pairs of the motor.

P-7-0018 - Attributes

Para. Name:	**DE**	Polpaarzahl/Polpaarweite		
	EN	Number of pole pairs/pole pair distance		
	FR	Nombre de paires de pôles/distance polaire		
	ES	Número de pares de polos/distancia del par de polos		
	IT	Numero coppia di poli/distanza coppia di poli		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	Feedb. EE
Format:		DEC_OV	**Validity check:**	-
Unit:		P-0-4014	**Extreme value check:**	no
Decimal places:		P-0-4014	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

P-7-0051, Torque/force constant

The Torque/Force constant indicates, how much torque or force the motor delivers at a certain real current.
For motors with feedback data memory, e.g. MKD, this parameter shows the value stored there for the torque constant of the motor.

P-7-0051 - Attributes

Para. Name:	**DE**	Drehmoment/Kraft-Konstante		
	EN	Torque/force constant		
	FR	Constante de couple/force		
	ES	Constante de par/fuerza		
	IT	Costante di Coppia/Forza		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	Feedb. EE
Format:		DEC_OV	**Validity check:**	no
Unit:		P-0-4014	**Extreme value check:**	no
Decimal places:		2	**Combination check:**	no
Input min/max:		1 / 65535		
Default value:		---	**Cyc. transmittable:**	no

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-7-0300, Encoder data 1

The encoder data contain the raw data of the Panasonic encoder. These data are internally converted to a parameter structure format and mapped to the respective parameters.
These parameters are:
S-7-0111, Motor current at standstill
S-7-0113, Maximum motor speed (nmax)
P-7-0051, Torque/force constant
P-7-0510, Moment of inertia of the rotor
P-7-4047, Motor inductance
P-7-4048, Stator resistance

P-7-0300 - Attributes

Para. Name:	**DE**	Geberdaten 1		
	EN	Encoder data 1		
	FR			
	ES			
	IT			
Function:		Parameter	**Editability:**	no
Data length:		2Byte var.	**Memory:**	Feedback-E²prom
Format:		HEX	**Validity check:**	P3-4
Unit:			**Extreme value check:**	-
Decimal places:		-	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	no

P-7-0301, Encoder data 2

The encoder data contain the raw data of the Panasonic encoder. These data are internally converted to a parameter structure format and mapped to the **S-7-0141, Motor type** parameter.

P-7-0301 - Attributes

Para. Name:	**DE**	Geberdaten 2		
	EN	Encoder data 2		
	FR			
	ES			
	IT			
Function:		Parameter	**Editability:**	no
Data length:		2Byte var.	**Memory:**	Feedback-E²prom
Format:		HEX	**Validity check:**	P3-4
Unit:			**Extreme value check:**	-
Decimal places:		-	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-7-0302, Encoder data 3

The encoder data contain the raw data of the Panasonic encoder. These data are internally converted to a parameter structure format and mapped to the respective parameters.
These parameters are:

- S-7-0109, Motor peak current
- S-7-0111, Motor current at standstill
- P-7-0018, Number of pole pairs/pole pair distance
- P-7-0051, Torque/force constant
- P-7-0510, Moment of inertia of the rotor
- P-7-4047, Motor inductance
- P-7-4048, Stator resistance

P-7-0302 - Attributes

Para. Name:	**DE**	Geberdaten 3		
	EN	Encoder data 3		
	FR			
	ES			
	IT			
Function:		Parameter	**Editability:**	no
Data length:		2Byte var.	**Memory:**	-
Format:		HEX	**Validity check:**	P3-4
Unit:			**Extreme value check:**	-
Decimal places:		-	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

P-7-0510, Moment of inertia of the rotor

For motors with feedback data memory, e.g. MKD, this parameter shows the value stored there for the moment of inertia of the motor's rotor.

P-7-0510 - Attributes

Para. Name:	**DE**	Rotor-Trägheitsmoment		
	EN	Moment of inertia of the rotor		
	FR	Couple d'inertie du rotor		
	ES	Par de inercia de rotor		
	IT	Coppia di Inerzia del Rotore		
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	Feedb. EE
Format:		DEC_OV	**Validity check:**	no
Unit:		kgm^2	**Extreme value check:**	no
Decimal places:		5	**Combination check:**	no
Input min/max:		1 / 10000000		
Default value:		---	**Cyc. transmittable:**	no

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-7-0513, Feedback type 1

For feedbacks with data memory, e.g. motor feedbacks of MKD or MHD motors, this parameter shows the value stored there for the kind and type of the feedback.
This table shows common feedback types

Value in P-7-0513, feedback type (decimal)	Type
0	Singleturn-Resolver (one resolver cycle absolut range)
16	Multiturn-Resolver (65536 resolver cycles absolut range)
3 oder 4	Singleturn-DSF/HSF (one encoder revolution absolut range)
19 oder 20	Multiturn-DSF/HSF (4096 encoder revolutions absolut range)
16385	Absolut linear scale with Endat-Interface
49153	Singleturn-Code-Encoder with Endat-Interface (one encoder revolution absolut range)
57345	Multiturn-Code-Encoder with Endat-Interface (4096 encoder revolutions absolut range)

P-7-0513 - Attributes

Para. Name:	**DE**	Feedback-Typ 1		
	EN	Feedback type 1		
	FR	Type de feedback 1		
	ES	Tipo de retroalimentación 1		
	IT	Tipo di Feedback 1		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	Feedb. EE
Format:		DEC_OV	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		0	**Combination check:**	no
Input min/max:		--- / ---		
Default value:		---	**Cyc. transmittable:**	no

P-7-0540, Torque of motor brake

For motors with feedback data memory the nominal torque of the motor brake can be read in this parameter. This torque is checked when the monitoring function of the motor brakes is activated.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-7-0540 - Attributes

Para. Name:	**DE**	Moment der Motorhaltebremse		
	EN	Torque of motor brake		
	FR	Couple du frein		
	ES	Par de freno		
	IT	Coppia del Freno		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	P3-4
Unit:		Nm	**Extreme value check:**	no
Decimal places:		1	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

P-7-0554, Serial number of motor

This parameter is not used with the incremental encoder.

This parameter is used to check the absolute position.
When the **P-0-0012, C300 Command Set absolute measuring** command is executed, the drive copies the serial number of the motor from the feedback data memory to this parameter.
When the controller is switched on, the serial number in the feedback data memory is compared to the serial number in parameter P-7-0554. If these numbers differ, the drive clears the position status and generates the **F276 Absolute encoder out of allowed window** error message.

P-7-0554 - Attributes

Para. Name:	**DE**	Seriennummer Motor		
	EN	Serial number of motor		
	FR			
	ES			
	IT			
Function:		Parameter	**Editability:**	no
Data length:		4Byte	**Memory:**	Param.-E²prom
Format:		HEX	**Validity check:**	no
Unit:		--	**Extreme value check:**	no
Decimal places:		-	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Rexroth Bosch Group
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

P-7-4047, Motor inductance

Inductance of the motor, measured between two terminals.
This is the value from the feedback data memory. During Basic Load, the P-7 parameters are copied into the P-0 parameters.
The parameter is set at the factory and cannot be changed.

P-7-4047 - Attributes

Para. Name:	**DE**	Motor-Induktivität		
	EN	Motor inductance		
	FR	Inductance moteur		
	ES	Inductividad de motor		
	IT	Induttanza Motore		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	Feedback-E²prom
Format:		DEC_OV	**Validity check:**	no
Unit:		mH	**Extreme value check:**	no
Decimal places:		2	**Combination check:**	no
Input min/max:		0 / 655.35		
Default value:		---	**Cyc. transmittable:**	no

P-7-4048, Stator resistance

Stator resistance of the motor, measured between two connection clamps.
This is the value from the feedback data memory. During Basic Load, the P-7 parameters are copied into the P-0 parameters.
The parameter is set at the factory and cannot be changed.

P-7-4048 - Attributes

Para. Name:	**DE**	Motor-Wicklungs-Widerstand		
	EN	Stator resistance		
	FR	Résistance bobine moteur		
	ES	Resistencia de estator		
	IT	Resistenza Statore		
Function:		Parameter	**Editability:**	no
Data length:		2Byte	**Memory:**	-
Format:		DEC_OV	**Validity check:**	-
Unit:		Ohm	**Extreme value check:**	-
Decimal places:		3	**Combination check:**	no
Input min/max:		- / -		
Default value:		-	**Cyc. transmittable:**	-

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

4 Index

A

Absolute distance 1 2-92, 2-156
Absolute encoder buffer 1 69
Absolute encoder monitoring window 35
Acceleration data scaling exponent 2-88
Acceleration data scaling factor 2-88
Acceleration data scaling type 2-86
Acceleration feedforward gain 2-128
Activation E-Stop function 2
Active peak current 120
Active permanent current 119
Additive torque/force command value 2-44
Additive velocity command value 2-25
Addressing for data container A 2-133
Allocation of real-time control Bit 1 2-116
Allocation of real-time control Bit 2 2-116
Allocation of real-time status Bit 1 2-117
Allocation of real-time status Bit 2 2-118
Amplifier nominal current 2-63
Amplifier overtemperature warning 2-119
Amplifier peak current 2-61
Amplifier type data 125
Analog input 1 78
Analog input 1, assignment 80
Analog input 1, offset 83
Analog input 1, scaling per 10V full scale 81
Analog input 2 78
Analog input 2, assignment 81
Analog input 2, offset 83
Analog input 2, scaling per 10V full scale 82
Analog inputs, IDN list of assignable parameters 79
angle between stator current and rotor flux vector 88
Angle offset begin of profile 26
Angle offset change rate 60
Application for autom. control loop adjust 63
Application type 2-77
Assign list signal control word 2-122
Assign list signal status word 2-122
Assignment digital input -> IDN 43
Assignment IDN -> Digital output 42
AT Data container A 2-132
AT Transmission starting time (T1) 2-4

B

B100 Command Release motor holding brake 96
B200 Brake check command 96
B400 Command Apply motor holding brake 97
B500 Command Abrasion of the motor holding brake 97
Baud rate RS-232/485 115
Beginning address in master data telegram 2-6
Best possible deceleration 41
Bipolar acceleration limit value 2-74
Bipolar torque/force limit value 2-49
Bipolar velocity limit value 2-49
blower 100
Brake control delay 92
Brake resistor data 126
Brake resistor load 119
Brake status 94

C

C100 Communication phase 3 transition check 2-68

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

C200 Communication phase 4 transition check 2-69
C300 Command Set absolute measuring 6
C400 Communication phase 2 transition 116
C500 Reset class 1 diagnostic 2-54
C600 Drive controlled homing procedure command 2-82
C700 Load defaults procedure command 2-106
C800 Command Base-parameter load 140
Cam shaft distance 33
Cam shaft distance switch angle 51
Cam shaft profile 1 26
Cam shaft profile 2 33
Cam shaft switch angle 34
CANopen event mask 128
Class 1 diagnostics 2-7
Class 2 diagnostics 2-8
Class 3 diagnostics 2-9
Command communication status 137
Command valid time (T3) 2-5
Command value mode 2-138
Command value transmit time (TMTSG) 2-48
Commutation adjustment current 98
Commutation offset 88
Commutation setting periodic time 99
Commutation, probe value 90
Config. list of the master data telegram 2-16
Configuration list for MDT data container 2-134
Configuration list for the AT data container 2-134
Configuration list signal control word 2-18
Configuration list signal status word 2-17
Content of memory address 8
Control word for synchronous operation modes 30
Controller type 2-76
Cooling type 100
Current loop integral action time 1 2-59, 2-153
Current loop proportional gain 1 2-58, 2-152
Current-amplify-trim phase U 107
Current-amplify-trim phase V 107
Current-zero-trim phase U 106
Current-zero-trim phase V 106
Custom amplifier telegram configuration list 2-13

D

D300 Commutation setting command 90
D400 Positive stop drive procedure command 2-83
D500 Command determine marker position 7
D600 Cancel reference point procedure command 2-100
D700 Command Parking axis 2-75
D900 Command Automatic control loop adjust 61
Damping factor for autom. control loop adjust 62
Deceleration ramp 1 104
Deceleration ramp 2 104
Delay answer RS-232/485 122
Delay from trigger to start 21
Diagnostic message 2-51
Diagnostic message number 2-137
Difference of probe values 1 76
Difference of probe values 2 76
Distance to move in error situation 34
Drive address 115
Drive status word 2-73
  structure 131, 132
  Structure 2-73
  Structure 2-73
Dummy parameter 2-1
Dynamic angle offset 29

E

Electric gear input revolutions 59

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Electric gear output revolutions 59
Encoder 1, absolute range 2-136
Encoder data 1 142
Encoder data 2 142
Encoder data 3 143
Encoder emulation type 114
Encoder emulation, resolution 87
End position for active probe 77
Error memory, diagnosis number 73
Error memory, operating hours control section 74
Error message number 3
error reaction 39
E-Stop input 2
Excessive position command value 4
expanded oscilloscope recording feature 11
Expanded signal K1 address 53
Expanded signal K2 address 53
Expanded trigger address 52
Expanded trigger level 51

F

Feed constant 2-66
Feedback 1 Resolution 2-64, 2-155
Feedback 1 type 27
Feedback acquisition starting time (T4) 2-5
Feedback type 1 144
Feedrate override 2-60
Field bus baudrate 133
Field bus container object 131
Field bus control word 131
Field bus data format 129
Field bus status word 132
Field bus version 136
Field bus watchdog time 130
Filter time constant additional pos. command 25
Final speed of ramp 1 102
Following error 2-99

G

Gear ratio fine adjust 28

H

Hardware code 89
home switch 56
Home switch 2-141
Home switch offset 2-115
Homing acceleration 2-27
Homing parameter 2-81
Homing velocity 2-27

I

IDN 2-18
IDN list of configurable data in the signal control word 2-140
IDN-list of all operation data 2-13
IDN-list of all procedure commands 2-17
IDN-list of backup operation data 2-100
IDN-list of invalid op. data for comm. Ph. 2 2-15
IDN-list of invalid op. data for comm. Ph. 3 2-15
IDN-list of operation data for CP2 2-14
IDN-list of operation data for CP3 2-14
IDN-list of password-protected operation data 2-111
Input revolutions of load gear 2-64
Interface status 2-10
Intermediate bus power 2-136
Intermediate DC bus voltage 113

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Intermediate DC bus voltage gain adjust 124

J

Jerk limit bipolar 2-129
Jog inputs 124
Jog velocity 118

L

Language selection 2-107
Last valid position command value 5
Length of master data telegram 2-6
Length of parameter channel in DP 135
Length of real-time data channel In 135
Length of real-time data channel Out 138
Length of the configurable data record in the AT 2-96
Length of the configurable data record in the MDT 2-96
Linear position data scaling exponent 2-41
Linear position data scaling factor 2-40
List index, AT data container A 2-132
List index, MDT data container A 2-131
List of all operating modes 2-112
List of configurable data dig. Inputs 85
List of configurable data dig. Outputs 86
List of configurable data in the AT 2-97
List of configurable data in the MDT 2-98
List of diagnostic numbers 2-135
List of scope data 1 9
List of scope data 2 10
List of selectable signals for oscilloscope function 54
Load inertia 111
Lower position limit for autom. control loop adjust 65
LSB 2-18

M

Manufacturer class 3 diagnostics 2-94
Manufacturer version 2-20
Marker position A 2-91
Marker pulse offset 88
Mask class 2 diagnostic 2-52
Mask class 3 diagnostic 2-53
Master axis position 24
Master control word 2-72
Master drive 1 revs. 2-102
Master drive polarity 37
Max. model deviation 36
Maximum acceleration 67
Maximum braking time 44
Maximum motor speed (nmax) 2-63, 2-154
Maximum travel range 2-110
MDT Data container A 2-130
MDT error counter 2-19
MDT Transmit starting time (T2) 2-48
Measurement value status 2-93
Memory address 7
Message In position 2-125
Message 'n_actual < nx' 2-124
Message 'n_actual = n_command' 2-123
Message 'T >= T_limit' 2-125
Minimum AT transmit starting time (T1min) 2-2
Minimum feedback acquisition time (T4min) 2-3
Modulo value 2-57
moment of inertia 89
Moment of inertia of the rotor 89, 143
Monitoring window 2-85
motor current at standstill 100
Motor current at standstill 2-62, 2-154
motor feedback data memory 8

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Motor function parameter 1 93
Motor inductance 121, 146
Motor overtemperature warning 2-120
Motor peak current 2-61, 2-153
Motor type 2-76, 2-155, 112
MST error counter 2-18
Multiplication 1 2-104

N

NC Cycle time (TNcyc) 2-1
NC reaction on error 39
Negative position limit value 2-33
Number of pole pairs/pole pair distance 8, 141
Number of samples after trigger 20
Number of valid samples for oscilloscope function 55

O

Operating hours control section 72
Operating hours power section 72
Optimum distance home switch - reference mark 56
Output revolutions of load gear 2-65
Overload warning 2-118, 45

P

Parallel I/O input 1 28
Parallel I/O output 1 27
Parameter buffer mode 2-108
Password 2-108
pole pairs 8
Position command additional actual value 21
Position command processing mode 71
Position command smoothing time constant 37
Position command value 2-31
Position command value additional 2-32
Position data scaling type 2-38
Position feedback 1 type 2-109
Position feedback 1 value 2-34
Position feedback value status 2-143
Position loop Kv-factor 2-57, 2-152
Position polarities 2-35
Position start value 9
Position switch lead times 47
Position synchronization window 2-102
Position Synchronization Window 2-102
Position window 2-37
Positioning Acceleration 2-106
Positioning block, input linked blocks 125
Positioning block, last accepted 123
Positioning command acknowledgment 2-150
Positioning command strobe 2-126
Positioning command value 2-111
Positioning Deceleration 2-130
Positioning Jerk 2-101
Positioning speed > n_limit 2-120
Positioning Velocity 2-105
Positive position limit value 2-32
power off 39
Power off on error 39
Primary mode of operation 2-21
Probe 1 2-142
Probe 1 enable 2-144
Probe 1 negative latched 2-147
Probe 1 positive latched 2-146
Probe 2 2-142
Probe 2 enable 2-145
Probe 2 negative latched 2-149
Probe 2 positive latched 2-148

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Probe control parameter 2-89
Probe value 1 negative edge 2-70
Probe value 1 positive edge 2-70
Probe value 2 negative edge 2-71
Probe value 2 positive edge 2-71
Probing cycle procedure command 2-90
Process block acceleration 109
Process block acknowledgment 123
Process block control word 127
Process block deceleration 127
Process block jerk 110
Process block mode 113
Process block selection 117
Process block target position 108
Process block velocity 109
Production index 139
Profile type 136

R

Ramp 1 pitch 101
Ramp 2 pitch 103
Real-time input object structure 133
Real-time output object structure 134
Receive to receive recovery time (TMTSG) 2-47
Reference cam shift 2-114
Reference distance 1 2-35
reference mark 56
Reference offset 1 2-84
Rejection bandwidth velocity loop 70
Rejection frequency velocity loop 69
Rotational position resolution 2-42

S

Secondary operating mode 1 2-22
Secondary operating mode 2 2-23
Secondary operating mode 3 2-24
Selection for autom. control loop adjust 64
SERCOS Cycle time (TScyc) 2-2
Sercos interface version 2-78
SERCOS-Interface
drive status word 132
SERCOSinterface drive status word 132
Serial number 139
Serial number of motor 145
Setting absolute measuring, control word 99
shutdown of the drive 2
Signal control word 2-80
Signal select position switch 45
Signal select probe 1 75
Signal select probe 2 75
Signal select scope channel 1 10
Signal select scope channel 2 12
Signal status word 2-79
Size of memory 19
Slave arrangement (SLKN) 2-51
Slave drive 1 revs. 2-103
Slave drive feed travel 61
Speed deviation 2-127
Standstill window 2-67
Start position for active probe 77
State of travel range limit inputs 84
Stator resistance 121, 146
Status Input E-Stop 85
Status 'n_actual = 0' 2-124
Status position switch 48
Status word for synchronous operating modes 31
Switch off threshold position switch 47
Switch on threshold position switch 46

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Switching frequency 111
Synchronization acceleration 49
Synchronization direction 57
Synchronization init window for modulo format 55
Synchronization mode 58
Synchronization velocity 50

T

Target position 2-104
Target position beyond position limits 2-121
Target position reached 2-126
Telegram type parameter 2-11
Test status 117
Thermal drive load 49
Timebase 18
Torque of motor brake 95, 144
Torque/Force command smoothing time constant 68
Torque/force command value 2-43
Torque/force constant 24, 141
Torque/force data scaling exponent 2-50
Torque/force data scaling factor 2-50
Torque/Force data scaling type 2-47
Torque/Force feedback value 2-45
Torque/force peak limit 38
Torque/Force polarity parameter 2-46
Transmit/receive transition time (TATMT) 2-3
Travel distance for autom. control loop adjust 67
Travel limit parameter 32
Trigger control word 22
Trigger edge 18
Trigger level for position data 16
Trigger level for torque/force data 17
Trigger level for velocity data 17
Trigger signal selection 15
trigger signals 16
Trigger source 14
Trigger status word 23
Trim-current 118
Type of motor brake 91

U

Upper position limit for autom. control loop adjust 66

V

Velocity command filter 105
Velocity command value 2-25
Velocity data scaling exponent 2-31
Velocity data scaling factor 2-30
Velocity data scaling type 2-29
Velocity feedback value 2-26
Velocity loop integral action time 2-56, 2-151
Velocity loop proportional gain 2-55, 2-150
Velocity loop smoothing time constant 1, 140
Velocity polarity parameter 2-28
Velocity synchronization window 2-95
Velocity threshold nx 2-68
Velocity window 2-84

W

water cooling system 100

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Notes

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

5 Service & Support

5.1 Helpdesk

Unser Kundendienst-Helpdesk im Hauptwerk Lohr am Main steht Ihnen mit Rat und Tat zur Seite. Sie erreichen uns

Our service helpdesk at our headquarters in Lohr am Main, Germany can assist you in all kinds of inquiries. Contact us

- telefonisch - by phone: **49 (0) 9352 40 50 60**
  über Service Call Entry Center - via Service Call Entry Center
  Mo-Fr 07:00-18:00 Mo-Fr 7:00 am - 6:00 pm
- per Fax - by fax: **+49 (0) 9352 40 49 41**
- per e-Mail - by e-mail: **service@boschrexroth.de**

5.2 Service-Hotline

Außerhalb der Helpdesk-Zeiten ist der Service direkt ansprechbar unter

After helpdesk hours, contact our service department directly at

+49 (0) 171 333 88 26

oder - or **+49 (0) 172 660 04 06**

5.3 Internet

Unter **www.boschrexroth.de** finden Sie ergänzende Hinweise zu Service, Reparatur und Training sowie die **aktuellen** Adressen *) unserer auf den folgenden Seiten aufgeführten Vertriebs- und Servicebüros.

Verkaufsniederlassungen
Niederlassungen mit Kundendienst

Außerhalb Deutschlands nehmen Sie bitte zuerst Kontakt mit unserem für Sie nächstgelegenen Ansprechpartner auf.

*) Die Angaben in der vorliegenden Dokumentation können seit Drucklegung überholt sein.

At **www.boschrexroth.de** you may find additional notes about service, repairs and training in the Internet, as well as the **actual** addresses *) of our sales- and service facilities figuring on the following pages.

sales agencies
offices providing service

Please contact our sales / service office in your area first.

*) Data in the present documentation may have become obsolete since printing.

5.4 Vor der Kontaktaufnahme... - Before contacting us...

Wir können Ihnen schnell und effizient helfen wenn Sie folgende Informationen bereithalten:

1. detaillierte Beschreibung der Störung und der Umstände.
2. Angaben auf dem Typenschild der betreffenden Produkte, insbesondere Typenschlüssel und Seriennummern.
3. Tel.-/Faxnummern und e-Mail-Adresse, unter denen Sie für Rückfragen zu erreichen sind.

For quick and efficient help, please have the following information ready:

1. Detailed description of the failure and circumstances.
2. Information on the type plate of the affected products, especially type codes and serial numbers.
3. Your phone/fax numbers and e-mail address, so we can contact you in case of questions.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

5.5 Kundenbetreuungsstellen - Sales & Service Facilities

Deutschland – Germany

vom Ausland: (0) nach Landeskennziffer weglassen!
from abroad: don't dial (0) after country code!

Vertriebsgebiet Mitte Germany Centre	**SERVICE** **CALL ENTRY CENTER** **MO – FR** **von 07:00 - 18:00 Uhr** from 7 am – 6 pm	**SERVICE** **HOTLINE** **MO – FR** **von 17:00 - 07:00 Uhr** from 5 pm - 7 am **+ SA / SO**	**SERVICE** **ERSATZTEILE / SPARES** verlängerte Ansprechzeit - extended office time - ♦ nur an Werktagen - only on working days - ♦ von 07:00 - 18:00 Uhr - from 7 am - 6 pm -
Rexroth Indramat GmbH Bgm.-Dr.-Nebel-Str. 2 / Postf. 1357 97816 Lohr am Main / 97803 Lohr **Kompetenz-Zentrum Europa** Tel.: +49 (0)9352 40-0 Fax: +49 (0)9352 40-4885	**Tel. +49 (0) 9352 40 50 60** service@boschrexroth.de	**Tel.: +49 (0)172 660 04 06** **oder / or** **Tel.: +49 (0)171 333 88 26**	**Tel. +49 (0) 9352 40 42 22**
Vertriebsgebiet Süd Germany South	Vertriebsgebiet West Germany West	Gebiet Südwest Germany South-West	Gebiet Südwest Germany South-West
Rexroth Indramat GmbH Landshuter Allee 8-10 80637 München Tel.: +49 (0)89 127 14-0 Fax: +49 (0)89 127 14-490	Bosch Rexroth AG Regionalzentrum West Borsigstrasse 15 40880 Ratingen Tel.: +49 (0)2102 409-0 Fax: +49 (0)2102 409-406	Bosch Rexroth AG Service-Regionalzentrum Süd-West Siemensstr.1 70736 Fellbach Tel.: +49 (0)711 51046–0 Fax: +49 (0)711 51046–248	Bosch Rexroth AG Regionalzentrum Südwest Ringstrasse 70 / Postfach 1144 70736 Fellbach / 70701 Fellbach Tel.: +49 (0)711 57 61–100 Fax: +49 (0)711 57 61–125
Vertriebsgebiet Nord Germany North	Vertriebsgebiet Mitte Germany Centre	Vertriebsgebiet Ost Germany East	Vertriebsgebiet Ost Germany East
Bosch Rexroth AG Walsroder Str. 93 30853 Langenhagen Tel.: +49 (0) 511 72 66 57-0 Service: +49 (0) 511 72 66 57-256 Fax: +49 (0) 511 72 66 57-93 Service: +49 (0) 511 72 66 57-95	Bosch Rexroth AG Regionalzentrum Mitte Waldecker Straße 13 64546 Mörfelden-Walldorf Tel.: +49 (0) 61 05 702-3 Fax: +49 (0) 61 05 702-444	Bosch Rexroth AG Beckerstraße 31 09120 Chemnitz Tel.: +49 (0)371 35 55-0 Fax: +49 (0)371 35 55-333	Bosch Rexroth AG Regionalzentrum Ost Walter-Köhn-Str. 4d 04356 Leipzig Tel.: +49 (0)341 25 61-0 Fax: +49 (0)341 25 61-111

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Europa (West) - Europe (West)

vom Ausland: (0) nach Landeskennziffer weglassen, Italien: 0 nach Landeskennziffer mitwählen
from abroad: don't dial (0) after country code, Italy: dial 0 after country code

Austria - Österreich	Austria – Österreich	Belgium - Belgien	Denmark - Dänemark
Bosch Rexroth GmbH Bereich Indramat Stachegasse 13 1120 Wien Tel.: +43 (0)1 985 25 40 Fax: +43 (0)1 985 25 40-93	Bosch Rexroth GmbH Gesch.ber. Rexroth Indramat Industriepark 18 4061 Pasching Tel.: +43 (0)7221 605-0 Fax: +43 (0)7221 605-21	Bosch Rexroth AG Electric Drives & Controls Industrielaan 8 1740 Ternat Tel.: +32 (0)2 5830719 - service: +32 (0)2 5830717 Fax: +32 (0)2 5830731 indramat@boschrexroth.be	BEC A/S Zinkvej 6 8900 Randers Tel.: +45 (0)87 11 90 60 Fax: +45 (0)87 11 90 61
Great Britain – Großbritannien	**Finland - Finnland**	**France - Frankreich**	**France - Frankreich**
Bosch Rexroth Ltd. Rexroth Indramat Division Broadway Lane, South Cerney Cirencester, Glos GL7 5UH Tel.: +44 (0)1285 863000 Fax: +44 (0)1285 863030 sales@boschrexroth.co.uk service@boschrexroth.co.uk	Bosch Rexroth Oy Rexroth Indramat division Ansatie 6 017 40 Vantaa Tel.: +358 (0)9 84 91-11 Fax: +358 (0)9 84 91-13 60	Bosch Rexroth SAS Division Rexroth Indramat Avenue de la Trentaine (BP. 74) 77503 Chelles Cedex Tel.: +33 (0)164 72-70 00 Fax: +33 (0)164 72-63 00 **Hotline:** +33 (0)608 33 43 28	Bosch Rexroth SAS Division Rexroth Indramat ZI de Thibaud, 20 bd. Thibaud (BP. 1751) 31084 Toulouse Tel.: +33 (0)5 61 43 61 87 Fax: +33 (0)5 61 43 94 12
France - Frankreich	**Italy - Italien**	**Italy - Italien**	**Italy - Italien**
Bosch Rexroth SAS Division Rexroth Indramat 91, Bd. Irène Joliot-Curie 69634 Vénissieux – Cedex Tel.: +33 (0)4 78 78 53 65 Fax: +33 (0)4 78 78 53 62	Bosch Rexroth S.p.A. Via G. Di Vittoria, 1 20063 Cernusco S/N.MI Tel.: +39 02 92 365 1 +39 02 92 365 326 Fax: +39 02 92 365 500 +39 02 92 365 516378	Bosch Rexroth S.p.A. Via Paolo Veronesi, 250 10148 Torino Tel.: +39 011 224 88 11 Fax: +39 011 224 88 30	Bosch Rexroth S.p.A. Via del Progresso, 16 (Zona Ind.) 35020 Padova Tel.: +39 049 8 70 13 70 Fax: +39 049 8 70 13 77
Italy - Italien	**Italy - Italien**	**Netherlands – Niederlande/Holland**	**Netherlands - Niederlande/Holland**
Bosch Rexroth S.p.A. Via Mascia, 1 80053 Castellamare di Stabia NA Tel.: +39 081 8 71 57 00 Fax: +39 081 8 71 68 85	Bosch Rexroth S.p.A. Viale Oriani, 38/A 40137 Bologna Tel.: +39 051 34 14 14 Fax: +39 051 34 14 22	Bosch Rexroth B.V. Kruisbroeksestraat 1 (P.O. Box 32) 5281 RV Boxtel Tel.: +31 (0)411 65 19 51 Fax: +31 (0)411 65 14 83 www.boschrexroth.nl	Bosch Rexroth Services B.V. Technical Services Kruisbroeksestraat 1 (P.O. Box 32) 5281 RV Boxtel Tel.: +31 (0)411 65 19 51 Fax: +31 (0)411 67 78 14 services@boschrexroth.nl
Norway - Norwegen	**Spain - Spanien**	**Spain – Spanien**	**Sweden - Schweden**
Bosch Rexroth AS Rexroth Indramat Division Berghagan 1 or: Box 3007 1405 Ski-Langhus 1402 Ski Tel.: +47 (0)64 86 41 00 Fax: +47 (0)64 86 90 62 jul.ruud@rexroth.no	Bosch Rexroth S.A. Divisiòn Rexroth Indramat Centro Industrial Santiga Obradors s/n 08130 Santa Perpetua de Mogoda Barcelona Tel.: +34 9 37 47 94 00 Fax: +34 9 37 47 94 01	Goimendi S.A. División Rexroth Indramat Parque Empresarial Zuatzu C/ Francisco Grandmontagne no.2 20018 San Sebastian Tel.: +34 9 43 31 84 21 - service: +34 9 43 31 84 56 Fax: +34 9 43 31 84 27 - service: +34 9 43 31 84 60 sat.indramat@goimendi.es	Rexroth Mecman Svenska AB Rexroth Indramat Division - Varuvägen 7 (Service: Konsumentvägen 4, Älfsjö) 125 81 Stockholm Tel.: +46 (0)8 727 92 00 Fax: +46 (0)8 647 32 77
Sweden - Schweden	**Switzerland West - Schweiz West**	**Switzerland East - Schweiz Ost**	
Rexroth Mecman Svenska AB Indramat Support Ekvändan 7 254 67 Helsingborg Tel.: +46 (0) 42 38 88 -50 Fax: +46 (0) 42 38 88 -74	Bosch Rexroth Suisse SA Département Rexroth Indramat Rue du village 1 1020 Renens Tel.: +41 (0)21 632 84 20 Fax: +41 (0)21 632 84 21	Bosch Rexroth Schweiz AG Geschäftsbereich Indramat Hemrietstrasse 2 8863 Buttikon Tel. +41 (0) 55 46 46 111 Fax +41 (0) 55 46 46 222	

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Europa (Ost) - Europe (East)

vom Ausland: (0) nach Landeskennziffer weglassen
from abroad: don't dial (0) after country code

Czech Republic - Tschechien Bosch -Rexroth, spol.s.r.o. Hviezdoslavova 5 627 00 Brno Tel.: +420 (0)5 48 126 358 Fax: +420 (0)5 48 126 112	Czech Republic - Tschechien DEL a.s. Strojírenská 38 591 01 Zdar nad Sázavou Tel.: +420 566 64 3144 Fax: +420 566 62 1657	Hungary - Ungarn Bosch Rexroth Kft. Angol utca 34 1149 Budapest Tel.: +36 (1) 422 3200 Fax: +36 (1) 422 3201	Poland – Polen Bosch Rexroth Sp.zo.o. ul. Staszica 1 05-800 Pruszków Tel.: +48 22 738 18 00 – service: +48 22 738 18 46 Fax: +48 22 758 87 35 – service: +48 22 738 18 42
Poland – Polen Bosch Rexroth Sp.zo.o. Biuro Poznan ul. Dabrowskiego 81/85 60-529 Poznan Tel.: +48 061 847 64 62 /-63 Fax: +48 061 847 64 02	Romania - Rumänien East Electric S.R.L. B-dul Basarabie, nr.250, sector 3 73429 Bucuresti Tel./Fax:: +40 (0)21 255 35 07 +40 (0)21 255 77 13 Fax: +40 (0)21 725 61 21 est@mb.roknet.ro	Romania - Rumänien Bosch Rexroth Sp.zo.o. Str. Drobety nr. 4-10, app. 14 70258 Bucuresti, Sector 2 Tel.: +40 (0)1 210 48 25 +40 (0)1 210 29 50 Fax: +40 (0)1 210 29 52	Russia - Russland Bosch Rexroth OOO Wjatskaja ul. 27/15 127015 Moskau Tel.: +7-095-785 74 78 +7-095 785 74 79 Fax: +7 095 785 74 77 laura.kanina@boschrexroth.ru
Russia - Russland ELMIS 10, Internationalnaya 246640 Gomel, Belarus Tel.: +375/ 232 53 42 70 +375/ 232 53 21 69 Fax: +375/ 232 53 37 69 elmis_ltd@yahoo.com	Turkey - Türkei Bosch Rexroth Otomasyon San & Tic. A..S. Fevzi Cakmak Cad No. 3 34630 Sefaköy Istanbul Tel.: +90 212 541 60 70 Fax: +90 212 599 34 07	Slowenia - Slowenien DOMEL Otoki 21 64 228 Zelezniki Tel.: +386 5 5117 152 Fax: +386 5 5117 225 brane.ozebek@domel.si	

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Africa, Asia, Australia – incl. Pacific Rim

Australia - Australien AIMS - Australian Industrial Machinery Services Pty. Ltd. 28 Westside Drive Laverton North Vic 3026 Melbourne Tel.: +61 3 93 243 321 Fax: +61 3 93 243 329 Hotline: +61 4 19 369 195 terryobrien@aimservices.com.au	Australia - Australien Bosch Rexroth Pty. Ltd. No. 7, Endeavour Way Braeside Victoria, 31 95 Melbourne Tel.: +61 3 95 80 39 33 Fax: +61 3 95 80 17 33 mel@rexroth.com.au	China Shanghai Bosch Rexroth Hydraulics & Automation Ltd. Waigaoqiao, Free Trade Zone No.122, Fu Te Dong Yi Road Shanghai 200131 - P.R.China Tel.: +86 21 58 66 30 30 Fax: +86 21 58 66 55 23 richard.yang_sh@boschrexroth.com.cn gf.zhu_sh@boschrexroth.com.cn	China Shanghai Bosch Rexroth Hydraulics & Automation Ltd. 4/f, Marine Tower No.1, Pudong Avenue Shanghai 200120 - P.R.China Tel: +86 21 68 86 15 88 Fax: +86 21 58 40 65 77
China Bosch Rexroth China Ltd. 15/F China World Trade Center 1, Jianguomenwai Avenue Beijing 100004, P.R.China Tel.: +86 10 65 05 03 80 Fax: +86 10 65 05 03 79	China Bosch Rexroth China Ltd. Guangzhou Repres. Office Room 1014-1016, Metro Plaza, Tian He District, 183 Tian He Bei Rd Guangzhou 510075, P.R.China Tel.: +86 20 8755-0030 +86 20 8755-0011 Fax: +86 20 8755-2387	China Bosch Rexroth (China) Ltd. A-5F., 123 Lian Shan Street Sha He Kou District Dalian 116 023, P.R.China Tel.: +86 411 46 78 930 Fax: +86 411 46 78 932	China Melchers GmbH BRC-SE, Tightening & Press-fit 13 Floor Est Ocean Centre No.588 Yanan Rd. East 65 Yanan Rd. West Shanghai 200001 Tel.: +86 21 6352 8848 Fax: +86 21 6351 3138
Hongkong Bosch Rexroth (China) Ltd. 6th Floor, Yeung Yiu Chung No.6 Ind Bldg. 19 Cheung Shun Street Cheung Sha Wan, Kowloon, Hongkong Tel.: +852 22 62 51 00 Fax: +852 27 41 33 44 alexis.siu@boschrexroth.com.hk	India - Indien Bosch Rexroth (India) Ltd. Rexroth Indramat Division Plot. A-58, TTC Industrial Area Thane Turbhe Midc Road Mahape Village Navi Mumbai - 400 701 Tel.: +91 22 7 61 46 22 Fax: +91 22 7 68 15 31	India - Indien Bosch Rexroth (India) Ltd. Rexroth Indramat Division Plot. 96, Phase III Peenya Industrial Area Bangalore - 560058 Tel.: +91 80 41 70 211 Fax: +91 80 83 94 345 mohanvelu.t@boschrexroth.co.in	India - Indien Bosch Rexroth (India) Ltd. 1st Floor, S-10 Green Park ext. Market New Delhi – 110016 Tel.: +91 1 16 56 68 88 Fax: +91 1 16 56 68 87
Indonesia - Indonesien PT. Rexroth Wijayakusuma Building # 202, Cilandak Commercial Estate Jl. Cilandak KKO, Jakarta 12560 Tel.: +62 21 7891169 (5 lines) Fax: +62 21 7891170 - 71	Japan Bosch Rexroth Automation Corp. Service Center Japan Yutakagaoka 1810, Meito-ku, NAGOYA 465-0035, Japan Tel.: +81 52 777 88 41 +81 52 777 88 53 +81 52 777 88 79 Fax: +81 52 777 89 01	Japan Bosch Rexroth Automation Corp. Rexroth Indramat Division 1F, I.R. Building Nakamachidai 4-26-44, Tsuzuki-ku YOKOHAMA 224-0041, Japan Tel.: +81 45 942 72 10 Fax: +81 45 942 03 41	Korea Bosch Rexroth-Korea Ltd. Electric Drives and Controls Bongwoo Bldg. 7FL, 31-7, 1Ga Jangchoong-dong, Jung-gu Seoul, 100-391 Tel.: +82 234 061 813 Fax: +82 222 641 295
Korea Bosch Rexroth-Korea Ltd. 1515-14 Dadae-Dong, Saha-Ku Rexroth Indramat Division Pusan Metropolitan City, 604-050 Tel.: +82 51 26 00 741 Fax: +82 51 26 00 747 gyhan@rexrothkorea.co.kr	Malaysia Bosch Rexroth Sdn.Bhd. 11, Jalan U8/82, Seksyen U8 40150 Shah Alam Selangor, Malaysia Tel.: +60 3 78 44 80 00 Fax: +60 3 78 45 48 00 hockhwa@hotmail.com rexroth1@tm.net.my	Singapore - Singapur Bosch Rexroth Pte Ltd 15D Tuas Road Singapore 638520 Tel.: +65 68 61 87 33 Fax: +65 68 61 18 25 sanjay.nemade@boschrexroth.com.sg	South Africa - Südafrika TECTRA Automation (Pty) Ltd. 71 Watt Street, Meadowdale Edenvale 1609 Tel.: +27 11 971 94 00 Fax: +27 11 971 94 40 Hotline: +27 82 903 29 23 georgv@tectra.co.za
Taiwan Rexroth Uchida Co., Ltd. No.17, Alley 24, Lane 737 Cheng Bei 1 Rd., Yungkang Tainan Hsien Tel.: +886 6 25 36 565 Fax: +886 6 25 34 754 indra.charlie@msa.hinet.net	Thailand NC Advance Technology Co. Ltd. 59/76 Moo 9 Ramintra road 34 Tharang, Bangkhen, Bangkok 10230 Tel.: +66 2 943 70 62 +66 2 943 71 21 Fax: +66 2 509 23 62 sonkawin@hotmail.com		

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Nordamerika – North America

USA Headquarters - Hauptniederlassung Bosch Rexroth Corporation Rexroth Indramat Division 5150 Prairie Stone Parkway Hoffman Estates, IL 60192-3707 Tel.: +1 847 6 45 36 00 Fax: +1 847 6 45 62 01 servicebrc@boschrexroth-us.com repairbrc@boschrexroth-us.com	USA Central Region - Mitte Bosch Rexroth Corporation Rexroth Indramat Division Central Region Technical Center 1701 Harmon Road Auburn Hills, MI 48326 Tel.: +1 248 3 93 33 30 Fax: +1 248 3 93 29 06	USA Southeast Region - Südwest Bosch Rexroth Corporation Rexroth Indramat Division Southeastern Technical Center 3625 Swiftwater Park Drive Suwanee, Georgia 30124 Tel.: +1 770 9 32 32 00 Fax: +1 770 9 32 19 03	USA SERVICE-HOTLINE - 7 days x 24hrs - **+1-800-860-1055**
USA East Region – Ost Bosch Rexroth Corporation Rexroth Indramat Division Charlotte Regional Sales Office 14001 South Lakes Drive Charlotte, North Carolina 28273 Tel.: +1 704 5 83 97 62 +1 704 5 83 14 86	USA Northeast Region – Nordost Bosch Rexroth Corporation Rexroth Indramat Division Northeastern Technical Center 99 Rainbow Road East Granby, Connecticut 06026 Tel.: +1 860 8 44 83 77 Fax: +1 860 8 44 85 95	USA West Region – West Bosch Rexroth Corporation 7901 Stoneridge Drive, Suite 220 Pleasant Hill, California 94588 Tel.: +1 925 227 10 84 Fax: +1 925 227 10 81	
Canada East - Kanada Ost Bosch Rexroth Canada Corporation Burlington Division 3426 Mainway Drive Burlington, Ontario Canada L7M 1A8 Tel.: +1 905 335 55 11 Fax: +1 905 335-41 84 michael.moro@boschrexroth.ca	Canada West - Kanada West Bosch Rexroth Canada Corporation 5345 Goring St. Burnaby, British Columbia Canada V7J 1R1 Tel. +1 604 205-5777 Fax +1 604 205-6944 david.gunby@boschrexroth.ca	Mexico Bosch Rexroth Mexico S.A. de C.V. Calle Neptuno 72 Unidad Ind. Vallejo 07700 Mexico, D.F. Tel.: +52 5 754 17 11 +52 5 754 36 84 +52 5 754 12 60 Fax: +52 5 754 50 73 +52 5 752 59 43 mariofelipe.hernandez@boschrexroth.com.mx	Mexico Bosch Rexroth S.A. de C.V. Calle Argentina No 3913 Fracc. las Torres 64930 Monterrey, N.L. Tel.: +52 8 333 88 34...36 +52 8 349 80 91...93 Fax: +52 8 346 78 71 mario.quiroga@boschrexroth.com.mx

Südamerika – South America

Argentina - Argentinien Bosch Rexroth S.A.I.C. "The Drive & Control Company" Acassusso 48 41/47 1605 Munro Provincia de Buenos Aires Tel.: +54 11 4756 01 40 Fax: +54 11 4756 01 36 victor.jabif@boschrexroth.com.ar	Argentina - Argentinien NAKASE Servicio Tecnico CNC Calle 49, No. 5764/66 B1653AOX Villa Balester Provincia de Buenos Aires Tel.: +54 11 4768 36 43 Fax: +54 11 4768 24 13 nakase@usa.net nakase@nakase.com gerencia@nakase.com (Service)	Brazil - Brasilien Bosch Rexroth Ltda. Av. Tégula, 888 Ponte Alta, Atibaia SP CEP 12942-440 Tel.: +55 11 4414 56 92 +55 11 4414 56 84 Fax sales: +55 11 4414 57 07 Fax serv.: +55 11 4414 56 86 alexandre.wittwer@rexroth.com.br	Brazil - Brasilien Bosch Rexroth Ltda. R. Dr.Humberto Pinheiro Vieira, 100 Distrito Industrial [Caixa Postal 1273] 89220-390 Joinville - SC Tel./Fax: +55 47 473 58 33 Mobil: +55 47 9974 6645 prochnow@zaz.com.br
Columbia - Kolumbien Reflutec de Colombia Ltda. Calle 37 No. 22-31 Santafé de Bogotá, D.C. Colombia Tel.: +57 1 368 82 67 +57 1 368 02 59 Fax: +57 1 268 97 37 reflutec@neutel.com.co reflutec@007mundo.com			

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Rexroth
Bosch Group

Bosch Rexroth AG
Electric Drives and Controls
Bgm.-Dr.-Nebel-Str. 2
97816 Lohr a. Main, Germany
info@boschrexroth.de
www.boschrexroth.de

296551

Printed in Germany
DOK-ECODR3-MGP-01VRS**-PA01-EN-P

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP