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.

Find the *Parker / Compumotor AR-08AE* at our website: *Click HERE*

Aries Series



High-Power, Compact Digital Servo Drives

With its “plug in and spin” design, the Aries family of compact digital servo drives requires no setup. Users simply attach any Parker “smart encoder” motor and the drive automatically configures. Available in seven versions (100, 200, 400, 750, 1300, 2000 and 3000 Watts), the Aries family gives users a robust and cost-effective digital servo product – users only pay for the level of performance they need. Unlike the competition, the Aries family is designed with open architecture in mind, so it can also be configured for use with any manufacturer’s motion controller and servo motor.

The Aries comes standard as a torque-only amplifier but is software selectable to run in velocity mode. An optional step-and-direction version is also available for users replacing stepper systems or not wanting to change their current step-and-direction command interface.

Additional benefits can be gained when the Aries servo drive is used with Parker’s ACR9000 multi-axis controller. The Drive Talk feature allows access to the Aries drive parameters from the ACR9000 controller for advanced control, display and diagnostics. Using the high-speed SSI interface, the ACR9000 can take advantage of the absolute positioning capabilities and extremely high resolution (131,072 counts/rev) of a motor equipped with a Heidenhein EnDat absolute encoder.

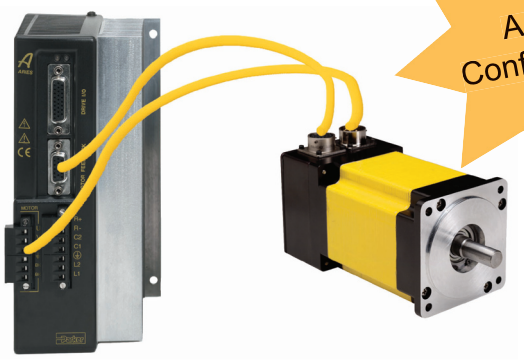
Aries Features

- Plug in and spin – no set up required; drive auto-configures when used with Parker’s “smart encoder” motor
- Drive Talk – ACR9000 controller can access all drive parameters
- Auto-tuning available
- Optimized for Parker’s brushless rotary and linear servo motors
- Supported feedback devices include Smart encoder, quadrature encoder, Heidenhain EnDat absolute encoder and resolver
- 7 versions available: 100, 200, 400, 750, 1300, 2000 and 3000 Watts
- Standard high-density D-sub connectors for easy connectivity to any system
- 120/240 VAC input with required 120/240 VAC keep alive circuitry
- CE (EMC & LVD), UL compliant
- Compact design
- Brake relay
- Optional velocity and step-and-direction signal inputs



Drive Talk

Access the Aries drive from the ACR9000 controller



Parker Automation
Parker Hannifin Corporation
Electromechanical Automation Division
parkermotion.com

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

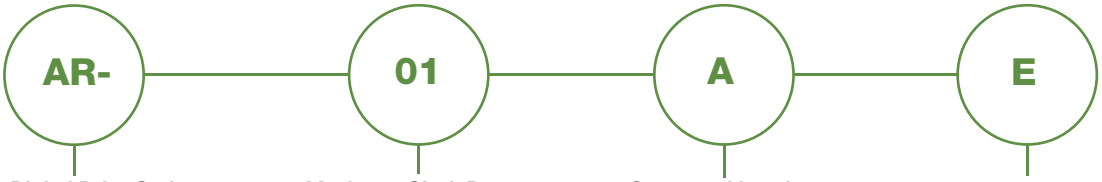
Aries Specifications

Specifications	AR-01	AR-02	AR-04	AR-08
Motor Output Power				
Shaft Power @ Continuous Current	100 Watts*	200 Watts*	400 Watts*	750 Watts*
Shaft Power @ Peak Current	300 Watts*	600 Watts*	1200 Watts*	2250 Watts*
Drive Output Power				
Continuous Current (RMS)	1 Amp	1.75 Amps	3 Amps	4.5 Amps
Peak Current (RMS)	3 Amps	5.25 Amps	9 Amps	13.5 Amps
Bus Voltage	170/340 VDC			
PWM	16 or 32 kHz, motor dependent			
Drive Input Voltage	120/240 VAC, 1ø, 50/60 Hz			

Specifications	AR-13	AR-20	AR-30
Motor Output Power			
Shaft Power @ Continuous Current	1300 Watts*	2000 Watts*	3000 Watts*
Shaft Power @ Peak Current	3900 Watts*	6000 Watts*	9000 Watts*
Drive Output Power			
Continuous Current (RMS)	6.3 Amp	10 Amps	16 Amps
Peak Current (RMS)	14.2 Amps	30 Amps	48 Amps
Bus Voltage	170/340 VDC	340 VDC	340 VDC
PWM	16 or 32 kHz, motor dep.	16 kHz	16 kHz
Drive Input Voltage	120/240 VAC, 1 or 3 ph, 50/60 Hz	240 VAC, 1 or 3 ph, 50/60 Hz	240 VAC, 3 phase, 50/60 Hz

Performance	
Servo Update	62.5 µ seconds
Accuracy	± 1 encoder count; encoder dependent
Commutation	Sinusoidal
Inputs	
Command	14-bit resolution ADC, ± 10 V (torque/velocity control)
	Step and direction, 2 MHz max (position control)
Enable/Reset	5-24 VDC
Encoder	5 MHz (pre-quadrature); RS-422 compatible differential input
Resolver	12-bit A to D input (gives 4096 counts/rev), absolute accuracy 11 arc-min
Outputs	
Fault	5-24 VDC
Brake	Solid state, normally open; 1 Amp @ 24 VDC max
Encoder Out	RS-422 compatible differential driver; 5 MHz max. output frequency (pre-quadrature)
Communications	
Type	RS-232 (3-wire)/RS-485 (2-wire) ASCII
Baud Rate	Fixed at 9600
Multi-drop	Up to 99 units (RS485 only)
Drive talk	RS-485 (2 wire)
Standards	UL, cUL, CE(LVD), CE(EMC)
Environmental	
Temperature	0-45° C (32-113° F) except AR-13_E 0-40° C (32-104° F)
Humidity	0-95% non-condensing
Shock/Vibration	15g, 11 msec half sine / 10-2000 Hz @ 2g
Weight - lbs (kg)	
AR-01_E	1.68 (0.76)
AR-02_E	1.90 (0.86)
AR-04_E	2.54 (1.15)
AR-08_E	2.82 (1.28)
AR-13_E	3.60 (1.63)
AR-20_E	7.35 (3.33)
AR-30_E	7.40 (3.36)

* @ 240 VAC



Aries Digital Drive Series

Example AR-01AE

Maximum Shaft Power

01 - 100 Watts
02 - 200 Watts
04 - 400 Watts
08 - 750 Watts
13 - 1300 Watts
20 - 2000 Watts
30 - 3000 Watts

Command Interface

A - Analog ± 10 V
S - Step and direction

Motor Feedback

E - Encoder, smart encoder, Heidenhain EnDat
R - Resolver

Parker Automation
Parker Hannifin Corporation
Electromechanical Automation Division
parkermotion.com

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

Motor Speed-Torque Performance Curves

Please refer to www.parkermotion.com for motor/drive performance curves. The Aries drive is compatible with the following Parker motor series:

Rotary Motors	MPP Series, BE Series, SM Series
Linear Motors	Trilogy linear motors and actuators, LXR linear stages

Cables & Accessories

Aries Drive to Controller

Drive	Controller	Cable
AR-__-A__	ACR Controller (RBC Breakout on ACR9000)	71-021599-04
AR-__-A__	6K Controller	71-021600-04

Aries Drive to Motor

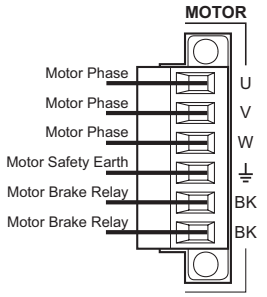
Drive	Motor	Power Cable	Feedback Cable
AR-01 – AR-08	PS or Option 5 connection motors	P-1A1-xx	F-1A1-xx
AR-13 – AR-30	PS or Option 5 connection motors	P-3B1-xx	F-1A1-xx

Aries Accessories

Part Number	Description
71-021609-01	Aries RS-232/485 serial communication dongle
VM26-PM	26-pin screw terminal breakout for drive I/O connector
VM15-PM	15-pin screw terminal breakout for feedback connector

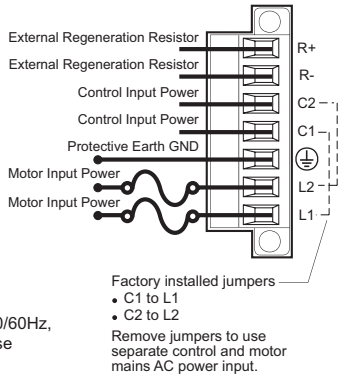
AR-01 – AR-13

Output Power Connector



120/240 VAC, 50/60Hz, Single phase

Mains Power Connector

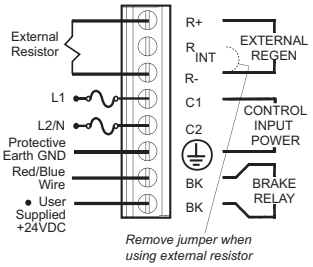


Factory installed jumpers
- C1 to L1
- C2 to L2

Remove jumpers to use separate control and motor mains AC power input.

AR-20 and AR-30

Control Connector

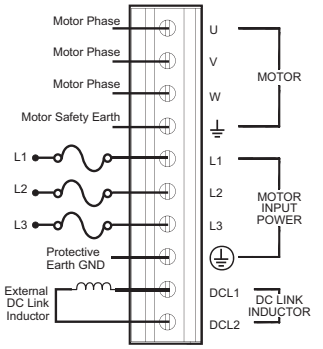


Remove jumper when using external resistor

Factory installed jumpers
- R_{INT} to R-
- C1 to L1
- C2 to L2
- DCL1 to DCL2

Remove jumpers to use separate control and motor mains AC power input.

Power/Motor Connector



240 VAC, 50/60Hz, Single and three phase

Drive I/O Connector

Signal	Pin	Signal	Pin
ENABLE+	1	DIRECTION+	12
ENABLE-	21	DIRECTION-	13
DGND	2	AIN+	14
ENC A+	3	AIN-	15
ENC A-	4	DGND	17
ENC B+	5	RESET+	18
ENC B-	6	RESET-	23
ENC Z+	7	DGND	19
ENC Z-	8	DGND	20
FAULT+	9	DGND	22
FAULT-	16	DGND	24
STEP+	10	RS-232Rx/RS-485+	25
STEP-	11	RS-232Tx/RS-485-	26

Encoder Feedback

Signal	Pin
ENC Z+/DATA+	1
ENC Z-/DATA-	2
DGND	3
+5 VDC (250mA max)	4
+5 VDC (250mA max)	5
DGND	6
ENC A-/SIN-	7
ENC A+/SIN+	8
Hall 1/SCLK+	9
Thermal+	10
Thermal-	15
ENC B/COS-	10
ENC B+/COS+	12
Hall 2/SCLK-	13
Hall 3	14

Resolver Feedback

Signal	Pin
No Connection	1
No Connection	2
Thermal-	3
Reference+	4
Reference-	15
No Connection	5
Thermal-	6
Thermal+	10
SIN-	7
SIN+	8
No Connection	9
COS-	11
COS+	12
No Connection	13
No Connection	14

NOTE: A box surrounding the pins indicates that twisted-pair wiring is required.

Parker Automation
Parker Hannifin Corporation
Electromechanical Automation Division
parkermotion.com

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

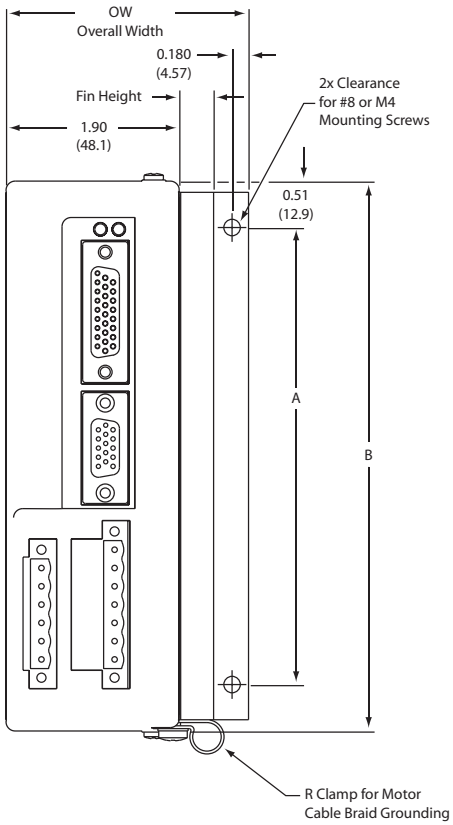
Aries Dimensions

Drive Dimensions

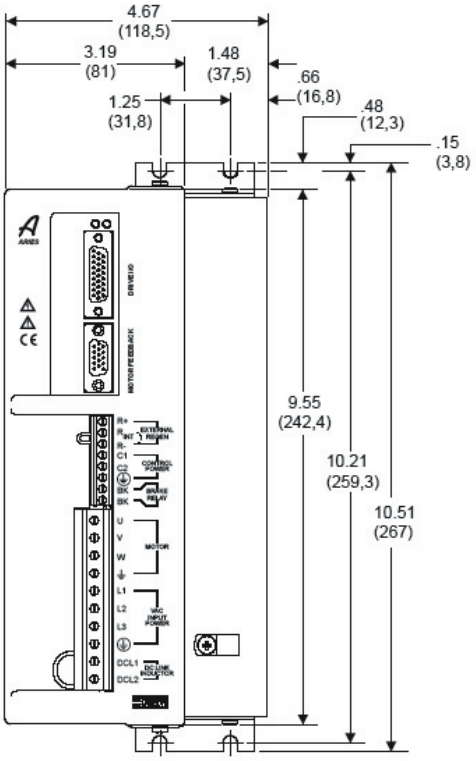
Drive	A- in (mm)	B- in (mm)	Fin Height in (mm)	Overall Width (OW) in (mm)
AR-01	5.00 (127)	6.02 (153)	0.010 (0.25)	2.29 (58.2)
AR-02	5.00 (127)	6.02 (153)	0.375 (9.5)	2.65 (67.3)
AR-04	6.00 (152)	7.02 (178)	0.625 (15.9)	2.90 (73.7)
AR-08	6.00 (152)	7.02 (178)	1.000 (25.4)	3.28 (83.3)
AR-13	6.00 (152)	7.02 (178)	2.00 (50.8)	4.28 (108.7)
AR-20 & 30	-	-	1.48 (37.5)	4.67 (118.5)

Drive	Overall Depth in (mm)	Overall Depth with Cables in (mm)
AR-01	5.05 (128)	7.60 (193)
AR-02	5.05 (128)	7.60 (193)
AR-04	5.05 (128)	7.60 (193)
AR-08	5.05 (128)	7.60 (193)
AR-13	5.05 (128)	7.60 (193)
AR-20 & 30	6.72 (171)	9.27 (235.5)

AR-01 – AR-13



AR-20 and AR-30



Parker Hannifin Corporation
Electromechanical Automation Division
parkermotion.com

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