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Find the *Etel DSMAX2* at our website: ***Click HERE***

POSITION CONTROLLERS
600 VDC POSITION CONTROLLERS
DSC2V

The DSC2V is dedicated to high power application with current up to 80 Arms and 600 VDC bus. It includes multi-axis controllers capabilities, dual encoder feedback and safety feature to succeed in a wide range of direct drive requirements.

Key points:

- Single-axis controller
- Housed format only
- Up to 80 Arms power output
- 400 VAC or 600 VDC power input
- 24 kHz fast position loop
- Direct interpolation of analog encoder (8192)
- Analog (incremental or absolute (EnDat2.1)) or TTL encoder
- Single or dual encoder feedback
- Multi-axis controllers capabilities (µ-master mode)
- Multi-axis 100 Mbps fast communication



DSC2Vx74



DSC2Vx64

	DSC2Vx64	DSC2Vx74
Max. full load current (Arms) / Max. overload current (Arms)	20/40	40/80
AC voltage (VAC)	400	
DC bus voltage (VDC)	600	

Motion Control

Current and position loop sampling time: 41.6 µsec (24 kHz)
Motion profiles: Trapezoidal / S-curve / Sine / Look-up table / Interpolated (with DSMAX motion controller)
µ-master mode: one DSC2V is used as a TEB master and control up to 30 other axes

Feedback Interface

Digital Hall effect sensor
TTL encoder
Incremental analog encoder (1 Vptp)
Absolute encoder EnDat 2.1

Inputs/Outputs

6 digital Inputs and 4 digital Outputs (opto-isolated)
1 analog Input (12-bit)
Additional Inputs and Outputs with DSO-HIO optional board: 8 digital Inputs and 8 digital Outputs (opto-isolated) as well as 4 analog Inputs (14-bit) and 4 analog Outputs (12-bit).

Communication

RS232 serial bus for communication with PC
Turbo-ETEL-Bus: Multi-axis fast bus 100 Mbps

Motion Control Software

ComET: Windows application for commissioning, auto-tuning, programming and monitoring graphical interface software
Programming: 6 commands / ms - 8000 lines
EDI: Set of libraries for advanced programming

Fieldbus

CAN*, PROFIBUS*, SERCOS and MACRO optional boards
(*page 26)

Dimensions (HxWxD)

DSC2Vx64	DSC2Vx74
440 x 85 x 280 mm	440 x 118 x 280 mm

DSC2V 1 7 4 - 1 1 1 X - 000

Family Product
DSC2V 600 VDC Position Controller

Encoder type

Analog (1 Vptp) or absolute (EnDat 2.1) or/and TTL	1

Power output

20 Arms/40 Arms (1s)	6
40 Arms/80 Arms (1s)	7

Assembly

Housed format	4

Standard option

1	Not UL recognized
2	UL recognized

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POSITION CONTROLLERS
400 VDC POSITION CONTROLLERS
DSC2P / DSCDP

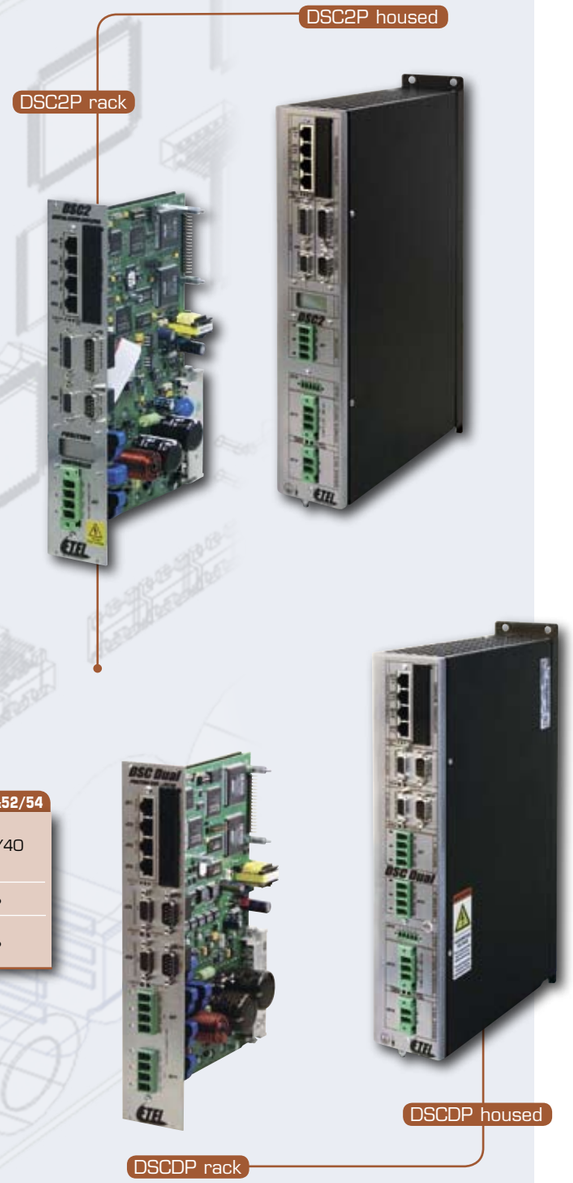
The DSC2P and DSCDP are ideal to control direct drive motors for both standard and high-performance applications. They are available as a single or dual-axis controller in rack and housed formats.

Key points:

- Single and dual-axis controller
- Rack and housed formats
- Up to 40 Arms power output
- 400 VDC power input (rack format)
- 84-280 VAC power input (housed format)
- Up to 24 kHz fast position loop
- Analog (incremental or absolute (EnDat2.1)) or TTL encoder
- Direct interpolation of analog encoder (8192)
- Housed formats with power stage relay and optional motor's short-circuit relay
- Multi-axis controllers capabilities (DSC2P used in µ-master mode)
- Multi-axis 100 Mbps fast communication

Reference	DSC2Px11	DSC2Px21/24	DSC2Px31	DSC2Px32/34	DSC2Px41	DSC2Px42/44	DSC2Px52/54
Max. full load current (Arms) / Max. overload current (Arms)	3.75/3.75	3.75/7.5	5/15	7.5/15	10/30	15/30	15/40
Rack format (400 VDC)	•	•	•	•	•	•	•
Housed format (84-280 VAC)		•		•		•	•

Reference	DSCDPx21/24	DSCDPx31	DSCDPx32/34
Max. full load current (Arms) / Max. overload current (Arms)	3/7.5	3.5/15	7/15
Rack format (400 VDC)	•	•	•
Housed format (84-280 VAC)	•		•



Motion Control
Current and position loop sampling time:
DSC2P: 41.6 µsec
DSCDP: 55.5 µsec
Motion profiles: Trapezoidal / S-curve / Sine / Look-up table / Interpolated (with DSMAX motion controller)
µ-master mode: one DSC2P is used as a TEB master and control up to 30 other axes

Feedback Interface
Digital Hall effect sensor (only DSC2P)
TTL encoder
Incremental analog encoder (1 Vptp)
Absolute encoder EnDat 2.1

Inputs/Outputs
DSC2P: 6 digital Inputs and 4 digital Outputs (opto-isolated)
1 analog Input (12-bit)
DSCDP: 4 digital Inputs and 2 digital Outputs (per motor) (opto-isolated)
Additional Inputs and Outputs with DSO-HIO optional board: 8 digital Inputs and 8 digital Outputs (opto-isolated) as well as 4 analog Inputs (14-bit) and 4 analog Outputs (12-bit)

Communication
RS232 serial bus for communication with PC
Turbo-ETEL-Bus: Multi-axis fast bus 100 Mbps

Motion Control Software
ComET: Windows application for commissioning, auto-tuning, programming and monitoring graphical interface software.
Programming: 6 (DSC2P), 2 (DSCDP) commands / ms - 8000 lines
EDI: Set of libraries for advanced programming

Fieldbus
CAN*, PROFIBUS*, SERCOS and MACRO optional boards
(*page 26)

Dimensions (HxWxD)

Rack format	10 F	261.8 (6 U) x 50.6 x 164 mm
	14 F	261.8 (6 U) x 70.8 x 164 mm
Housed format		376 x 72 x 224 mm

DSCDP 3 2 1 / DSC2P 1 2 1 - 1 1 1 X - 000

Family Product
DSCDP 400 VDC Position Controller

Encoder type

Analog (1 Vptp) or TTL	1
Analog (1 Vptp) or absolute (EnDat 2.1) or TTL	3

Power output

3 Arms/7.5 Arms (1s)	2
3.5 Arms (10 F rack) or 7 Arms (14 F rack or housed) /15 Arms (1s)	3

Assembly

Rack format 10 F	1
Rack format 14 F	2
Housed format	4

Assembly

Rack format 10 F	1
Rack format 14 F	2
Housed format	4

Power outpout

3.75 Arms (rack)	1
3.75 Arms/7.5 Arms (1s)	2
5 Arms (10 F rack) or 7.5 Arms (14 F rack and housed) / 15 Arms (1s)	3
10 Arms (10 F rack) or 15 Arms (14 F rack and housed) / 30 Arms (1s)	4
15 Arms / 40 Arms (0.5 s)	5

Encoder type

Analog (1 Vptp) or absolute (EnDat 2.1) or TTL	1

Family Product
DSC2P 400 VDC Position Controller

Standard option

1	Not UL recognized
2	UL recognized

Auxiliary supply input

1	120-340 VDC
2	24-55 VDC (rack) / 24 VDC (housed)

Relay option

1	Without relay (rack)
3	With power stage relay (housed)
4	With motor's short-circuit relay and power stage relay (housed)

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POSITION CONTROLLERS

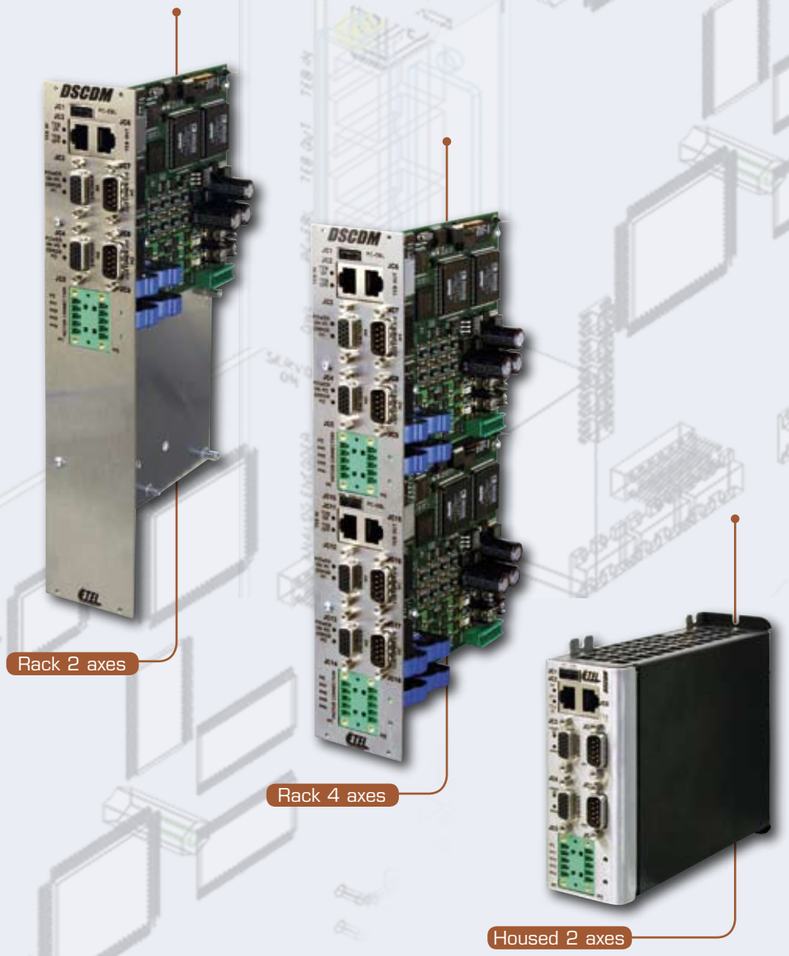
48 VDC POSITION CONTROLLERS DSCDM

The DSCDM is a direct drive position controller for applications requiring lower power output. This controller is ideal for cost-sensitive applications and its small size allows the user to fulfill the most compact machine configurations. For example, one 10 F rack unit can control 4 motors.

Key points:

- Dual-axis controller
- Rack and housed formats
- Very compact controller with up to 4 axes in a single rack unit
- Up to 10 Arms power output
- 24 kHz fast position loop
- Analog (incremental or absolute (EnDat2.1)) or TTL encoder
- Direct interpolation of analog encoder (8192)
- Fast capture of position
- Stepper in open loop
- Multi-axis 100 Mbps fast communication

	DSCDM33x	DSCDM34x
Max. full load current (Arms) / Max. overload current (Arms)	2.5/5	5/10
Power supply input (VDC)	15 to 48	



Motion Control

Current and position loop sampling time 55.5 µsec (18 kHz)
Motion profiles: Trapezoidal / S-curve / Sine / Look-up table / Interpolated (with DSMAX motion controller)

Feedback Interface

Digital Hall effect sensor
TTL encoder
Incremental analog encoder (1 Vptp)
Absolute encoder EnDat 2.1

Inputs/Outputs

3 digital Inputs/Outputs opto-isolated selectable (per motor)

Communication

RS232 serial bus for communication with PC
Turbo-ETEL-Bus: Multi-axis fast bus 100 Mbps

Motion Control Software

ComET: Windows application for commissioning, auto-tuning, programming and monitoring graphical interface software
Programming: 2 commands / ms - 8000 lines
EDI: Set of libraries for advanced programming

Dimensions (HxWxD)

Housed format	Rack format
142 x 49 x 166.5 mm	261.8 (6 U) x 50.6 (10 F) x 164 mm

DSCDM 3 3 1 - 1 1 1 X - 000

Family Product
DSCDM 48 VDC Position Controller

Encoder type

Analog (1Vptp) or absolute (EnDat 2.1) or TTL	3

Power output

2.5 Arms/5 Arms (4 s)	3
5 Arms/10 Arms (2 s)	4

Assembly

Rack format	1
Housed format	2
Rack format without front panel to be used with DSCDMxx4	3
Rack format with a front panel to be used with DSCDMxx3	4

Standard option

1	Not UL recognized
2	UL recognized

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POSITION CONTROLLERS
LINEAR POSITION CONTROLLERS
DSCDL

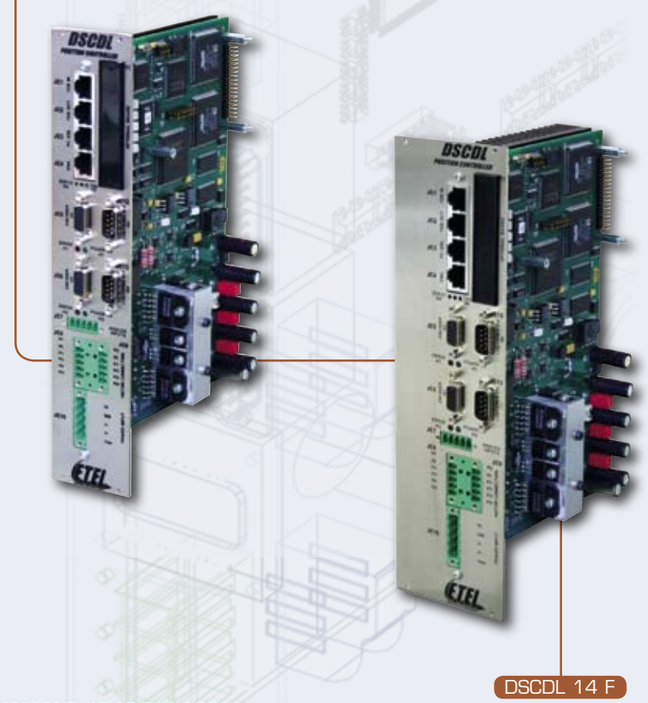
The DSCDL is a dual linear amplifier. This position controller is designed for motion control applications with high level of performance where position stability is a key point.

Key points:

- Dual-axis controller
- Rack format only
- Linear power stage for very high stability
- Linear output for ultimate position control (nanometer level)
- 24 kHz position loop
- 72 kHz current loop
- Analog (incremental or absolute (EnDat2.1)) or TTL encoder
- Direct interpolation of analog encoder (65536)
- Multi-axis 100 Mbps fast communication

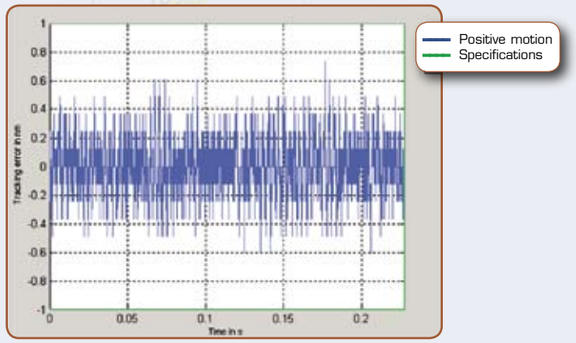
	DSCDL331	DCSDL332
Max. full load current (Arms) / Max. overload current (Arms)	1.2/2.8	2.4/3.6
Power supply input (VDC)	± 36	

DSCDL 10 F



DSCDL 14 F

EXAMPLE OF ULTRA HIGH POSITION CONTROL CAPABILITY



Motion Control

Sampling time:
– Current loop: 13.8 µsec (72 kHz)
– Position loop: 55.5 µsec (18 kHz)
Motion profiles: Trapezoidal / S-curve / Sine / Look-up table / Interpolated (with DSMAX motion controller)

Feedback Interface

TTL encoder
Incremental analog encoder (1 Vptp)
Absolute encoder EnDat 2.1

Inputs/Outputs

4 Digital Inputs and 2 Digital Outputs (per motor) (opto-isolated)
1 Analog Input (per motor) opto-isolated (16-bit)
Additional Inputs and Outputs with DSO-HIO optional board: 8 digital Inputs and 8 digital Outputs (opto-isolated) as well as 4 analog Inputs (14-bit) and 4 analog Outputs (12-bit).

Communication

RS232 serial bus for communication with PC
TEB: Multi-axis fast bus 100 Mbps

Motion Control Software

ComET: Windows application for commissioning, auto-tuning, programming and monitoring graphical interface software.
Programming: 2 commands / ms - 8000 lines
EDI: Set of libraries for advanced programming

Dimensions (HxWxD)

DSCDL331	DSCDL332
261.8 (6 U) x 50.6 (10 F) x 164 mm	261.8 (6 U) x 70.8 (14 F) x 164 mm

DSCDL 3 3 1 - 1 3 1 X - 000

Family Product
DSCDL Linear Position Controller

Encoder type

Analog (1 Vptp) or absolute (EnDat 2.1) or TTL	3

Power output

1.2 Arms/2.8 Arms (1s) (rack 10 F) 2.4 Arms/3.6 Arms (1s) (rack 14 F)	3

Assembly

Rack format 10 F	1
Rack format 14 F	2

Standard option

1	Not UL recognized
2	UL recognized

Power supply input

3	± 36 VDC

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