

## Motion controller for bipolar stepper motors with additional encoder input



### KEY ADVANTAGES

#### Plug and play

Ethernet interface available.

#### Compact Industrial Design

Rigid and compact design for industrial use.

#### Wide product range

Available from 1 channel to 4 channels.

#### Designed for both open loop / close loop

Suitable for wide range of applications.

#### User-friendly web interface

No software installation is necessary with high configurability.



**MTDV series** are a compact robust designed motion controllers for bipolar stepper motors with winding currents up to 1.2A working at 24V DC.

### SPECIFICATIONS

#### Electrical specifications

User interface <sup>1</sup>	Ethernet (TCP/IP)	
Connectors	1x RJ45	
	1x USB Type A	
	2x Terminal blocks	
	3x DB15HD female	
Status LEDS	Ethernet activity LED, RGB LED for each motor status	
DC power supply	(V)	24
Max power consumption	(W)	96
Protections	ESD, polarity inversion, overvoltage, undervoltage, output overcurrent, shorted output, open output, overtemperature	

#### Motor parameter

Number of motors	3	
Type	Bipolar stepper	
RMS winding current	(mA)	20 to 1250 (adj)
Peak winding voltage	(V)	24 (PWM)

#### Encoder Parameter

Number of encoders	3	
DC power supply	(V)	5
Type	Linear/rotary, incremental	
Output signal	A, B, Z (index)	
Encoder interface	RS422	

#### Functions

Control type	Closed-loop, open-loop	
Motion mode	Positioning mode (relative and absolute) with 2 stage velocity ramp	
Special Features <sup>2</sup>	Advanced motor drive with StealthChop™ and 256x SpreadCycle™, extremely silent operation, adjustable RUN and HOLD currents for optimized power consumption, advanced positioning control in closed-loop operation, motor homing based on encoder reference or limit switch, reduced EMI noise	
Configuration software	Integrated web interface (Ethernet), Ethernet DLL library (USB and RS485 to be developed upon request)	
Automatic position saving	Yes	
Non volatile memory	Yes	

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**Mechanical specifications**

Width	(mm)	78.0
Length <sup>3</sup>	(mm)	80.0
Height <sup>3</sup>	(mm)	84.0
Mass	(g)	410
Mounting		DIN rail

<sup>1</sup> USB and RS485 interface could be implemented upon request.  
<sup>2</sup> StealthChop™ and SpreadCycle™ are property of their respective owners.  
<sup>3</sup> Excluding DIN rail mount

**RECOMMENDED CABLES**

Opto Engineering suggesting using the following cables:

- **CBMT002**, 15 wires cable, DB15HD Male to DB15HD Female connector, 2 m
- **CBETH003**, Ethernet cable, CAT6, industrial level, high flexible cable with screw, 5 m

**Environment Specification**

Operating temperature	(°C)	10-40
Storage temperature	(°C)	0-50
Operating relative humidity	(%)	20-85, non condensing
IP rating		IP20
Installation		Indoor use only

**COMPATIBLE PRODUCTS**

Full list of compatible products available [here](#).



A wide selection of innovative machine vision components.

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