MC 3001 S RS/CO

V3.0, 4-Quadrant PWM
with RS232 or CANopen interface

MC 3001 S RS/CO

Values at 22°C		MC 3001 S RS/CO DC/BL/LM	
Power supply	U_P	6 ... 30	V DC
PWM switching frequency	f_{PWM}	100	kHz
Efficiency electronic	η	95	%
Max. continuous output current	I_{cont}	1.4	A
Max. peak output current [1]	I_{max}	5	A
Standby current for electronic (@ U_P =24V)	I_{el}	0.04	A
Operating temperature range		-40 ... +85	°C
Mass		45	g

[1] I_{cont} =2.1A @ U_{mot}=12V, I_{cont}=1.3A @ U_{mot}=24V
[2] S2 mode for max. 2s

Interfaces	MC 3001 S RS/CO
Configuration from Motion Manager 6.7	RS232 / CANopen / USB
Fieldbus	RS232 / CANopen

Basic features

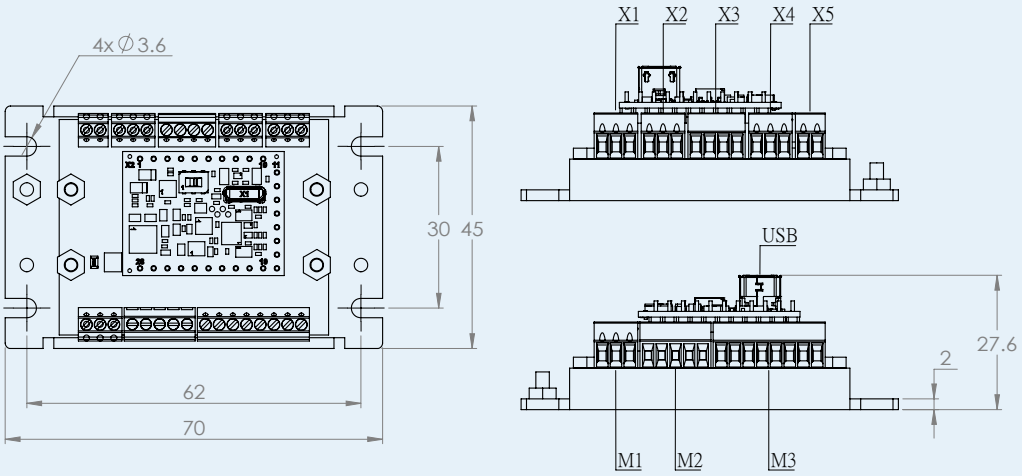
- Control of brushless, DC- and linear motors
- Supported sensor systems: absolute encoders, incremental encoders (optical or magnetic), Hall sensors (digital or analog), tachometers
- Positioning resolution when using analog Hall sensors as position encoder: 4096 increments per revolution
- 3 digital inputs, 2 digital outputs, 2 analog inputs, flexible configuration
- Setpoint specification via fieldbus, quadrature signal, pulse and direction or analog inputs
- Optional stand-alone operation via application programs in all interface versions

Range of functions

Operating modes	PP, PV, PT, CSP, CSV, CST and homing acc. to IEC 61800-7-201 or IEC 61800-7-301 as well as position-, speed- and torque control via analog setpoint or voltage controller
Speed range for brushless motors with number of pole pairs 1	0 min^{-1} ... 30 000 min^{-1} with sinusoidal commutation (optionally to 60 000 min^{-1} with block commutation)
Application programs	Max. 8 application programs (BASIC), one of which is an autostart function
Additional functions	Touch-probe input, connection of a second incremental encoder, control of a holding brake
Indicator	LEDs for displaying the operating state Trace as recorder (scope function) or logger
Motor types	DC, BL - and linear motors

Dimensional drawing (version STD)

Scale reduced mm

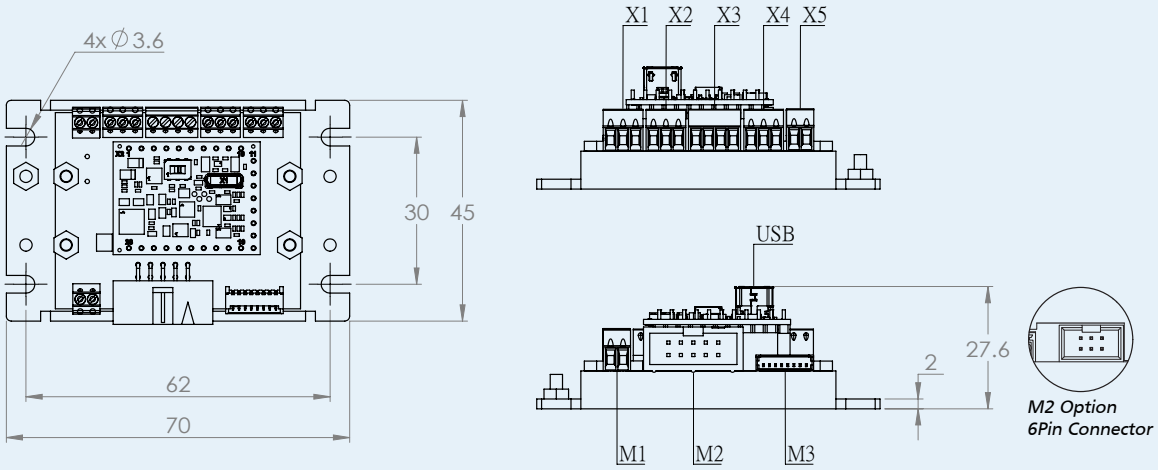


Connection information

Designation	Function
M1(Motor)	Connection of the motor phases
M2(Sensor)	Connection of the Hall sensors
M3(Encoder)	Connection of an incremental encoder with or without line driver
	Alternatively an absolute encoder can be connected with or without line driver
USB	Connection of the USB communication
X1(COM)	Interface connection RS-232 / CANopen
X2(Analog IN)	Analog inputs for external circuits
X3(Digital IN)	Digital inputs for external circuits
X4(Digital OUT)	Digital outputs for external circuits
X5(U_P)	Power supply

Dimensional drawing (version A1 - DC Brushed Servomotor)

Scale reduced mm



Connection information

Designation	Function
M1(Motor)	Connection of the motor phases
M2(Encoder)	Connection of an encoder IE2/IEH2/IE3/IE3-L/IEH3/IEH3-L/HEM3
M3(Encoder)	Connection of an encoder IEP3
USB	Connection of the USB communication
X1(COM)	Interface connection RS-232 / CANopen
X2(Analog IN)	Analog inputs for external circuits
X3(Digital IN)	Digital inputs for external circuits
X4(Digital OUT)	Digital outputs for external circuits
X5(U_P)	Power supply

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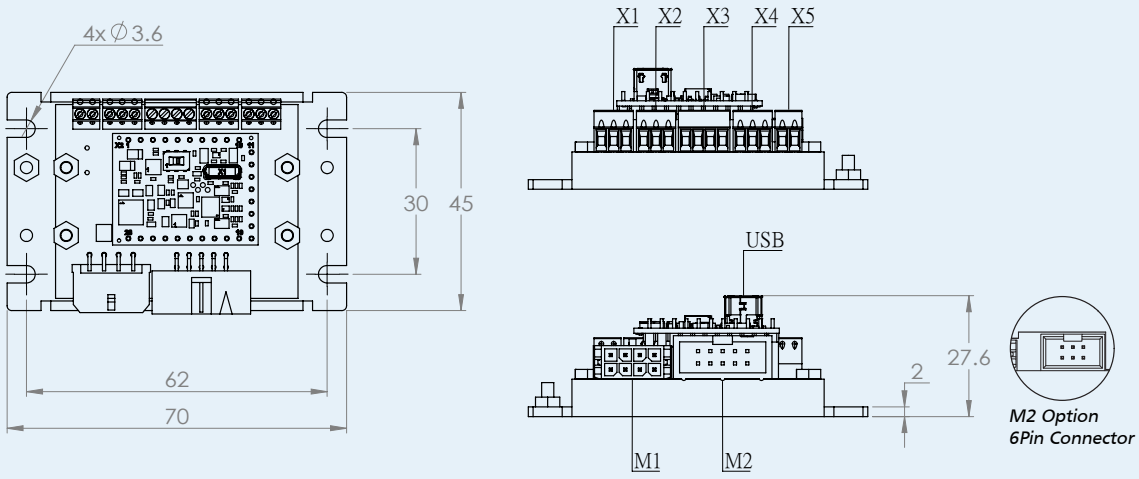
Dimensional drawing (version B1 - DC Brushless Servomotor) (Linear DC Servmotor-01)

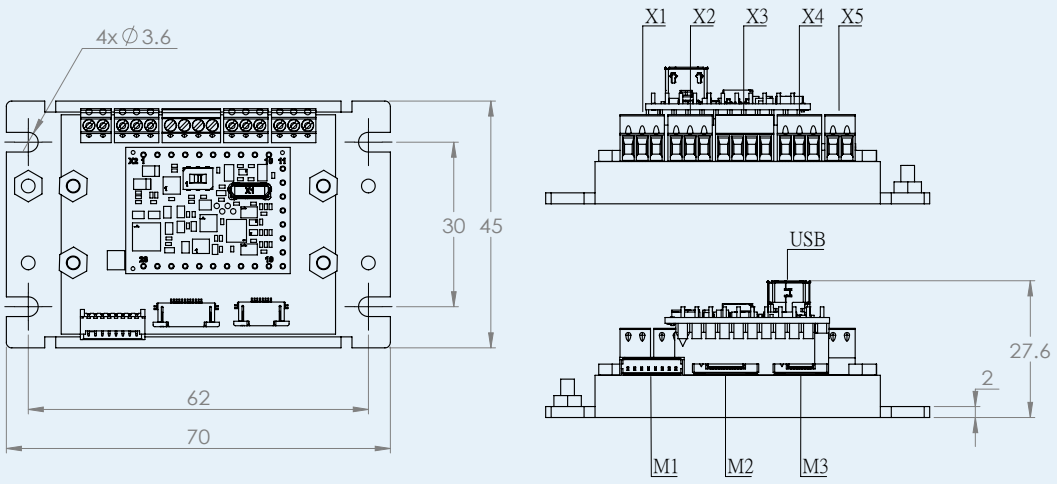
Scale reduced mm



Connection information	
Designation	Function
M1(Motor+Sensor)	Connection of the motor phases and Hall sensors 1218/1226/3692/K1155/K1855/LM-01
M2(Motor+Sensor+Encoder)	Connection of an encoder IE3/IE3-L/IEF3/IEF3-L/IERS3/IERS3-L/IER3/IER3-L/AES-4096L
USB	Connection of the USB communication
X1(COM)	Interface connection RS-232 / CANopen
X2(Analog IN)	Analog inputs for external circuits
X3(Digital IN)	Digital inputs for external circuits
X4(Digital OUT)	Digital outputs for external circuits
X5(U_P)	Power supply

Dimensional drawing (version B2 - DC Brushless Servomotor) (Linear DC Servmotor-01)

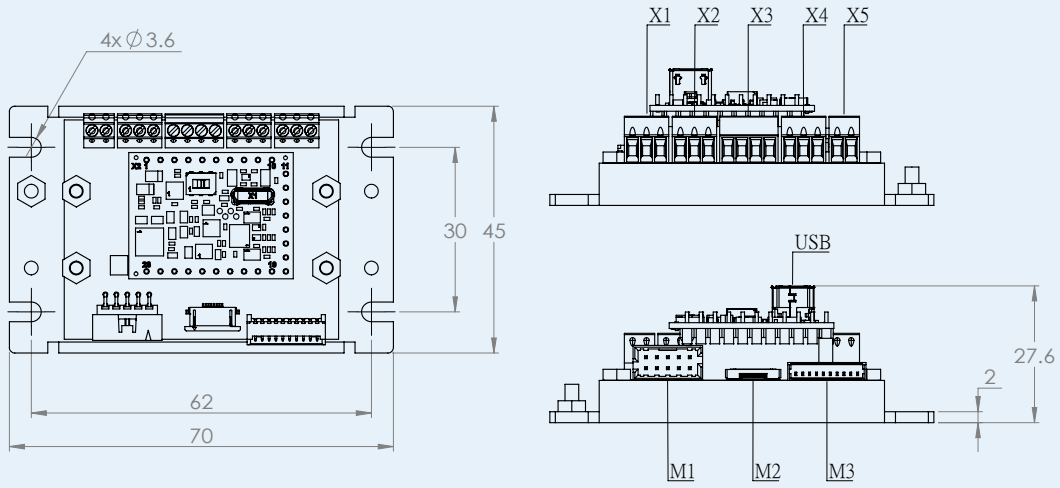
Scale reduced mm



Connection information	
Designation	Function
M1(Motor+Sensor)	Connection of the motor phases and Hall sensors 1218/1226/K1855
M2(Motor+Sensor+Encoder)	Connection of the motor phases , the Hall sensors and the encoder IEM3
M3(Motor+AESM)	Connection of the motor phases and the encorder AESM
USB	Connection of the USB communication
X1(COM)	Interface connection RS-232 / CANopen
X2(Analog IN)	Analog inputs for external circuits
X3(Digital IN)	Digital inputs for external circuits
X4(Digital OUT)	Digital outputs for external circuits
X5(U_P)	Power supply

Dimensional drawing (version C - Linear DC Servomotor-11C)

Scale reduced mm



Connection information

Designation	Function
M1(Motor+Sensor)	Connection of the motor phases and Hall sensors LM-11C
M2(Motor+Sensor)	Connection of the motor phases and Hall sensors LM0830-01
M3(Encoder)	Connection of an incremental encoder with or without line driver(second encoder)
USB	Connection of the USB communication
X1(COM)	Interface connection RS-232 / CANopen
X2(Analog IN)	Analog inputs for external circuits
X3(Digital IN)	Digital inputs for external circuits
X4(Digital OUT)	Digital outputs for external circuits
X5(U_P)	Power supply

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