MC 3001 C4 RS/CO

V3.0, 4-Quadrant PWM
with RS422 or RS232 or CANopen interface

MC 3001 C4 RS/CO

Values at 22°C		MC 3001 C4 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		75	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 C4 RS/CO
Configuration from Motion Manager 6.7	RS232 / CANopen / USB
Fieldbus	RS422 / 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

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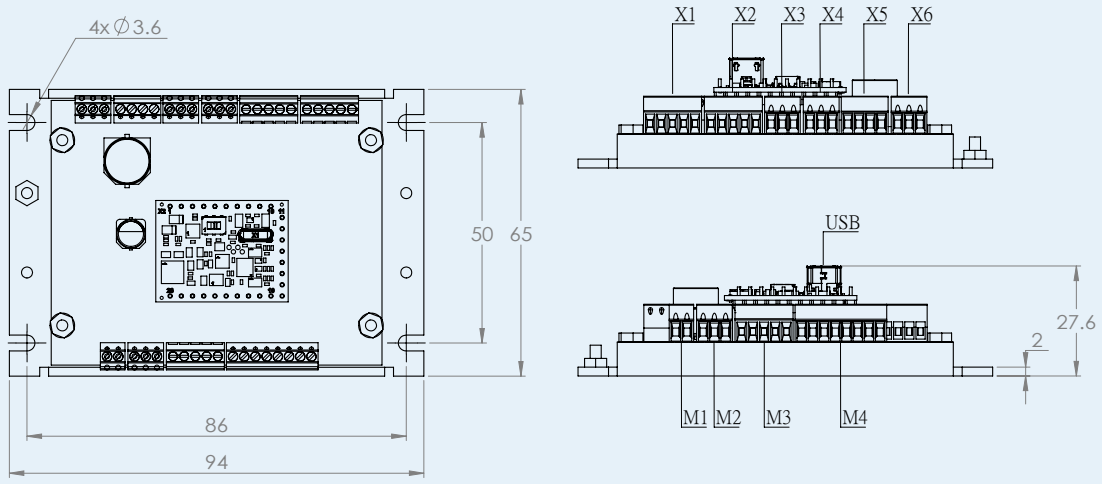
Dimensional drawing (version STD)

Scale reduced mm

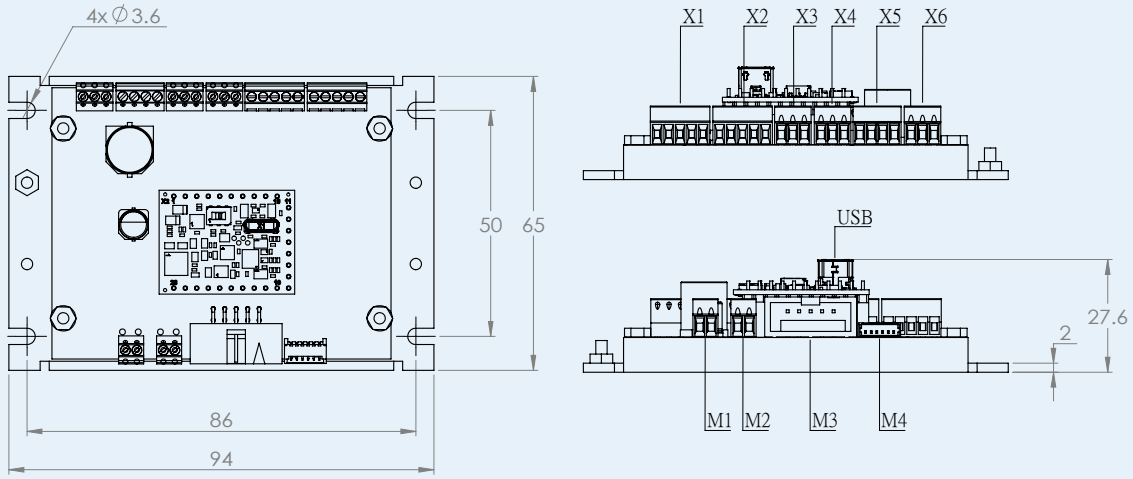


Connection information

Designation	Function
M1(UP)	Power supply
M2(Motor)	Connection of the motor phases
M3(Sensor)	Connection of the Hall sensors
M4(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/X2	Connection of the RS-422 communication
X3(COM)(Optional)	Interface connection RS-232 / CANopen
X4(Analog IN)	Analog inputs for external circuits
X5(Digital IN)	Digital inputs for external circuits
X6(Digital OUT)	Digital outputs for external circuits

Dimensional drawing (version A - DC Brushed Servomotor)

Scale reduced mm



Connection information

Designation	Function
M1(UP)	Power supply
M2(Motor)	Connection of the motor phases
M3/(M4 Optional)(Encoder)	Connection of an encoder IE2/IEH2/IEH3-L/IE3/IE3-L
USB	Connection of the USB communication
X1/X2	Connection of the RS-422 communication
X3(COM)(Optional)	Interface connection RS-232 / CANopen
X4(Analog IN)	Analog inputs for external circuits
X5(Digital IN)	Digital inputs for external circuits
X6(Digital OUT)	Digital outputs for external circuits

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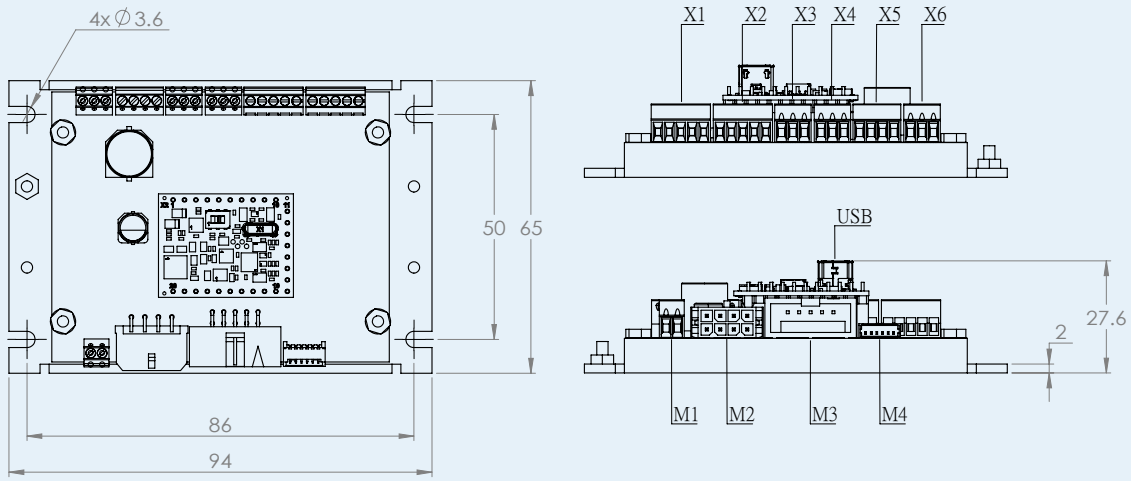
Dimensional drawing (version B1 - DC Brushless Servomotor) (Linear DC Servmotor-01)

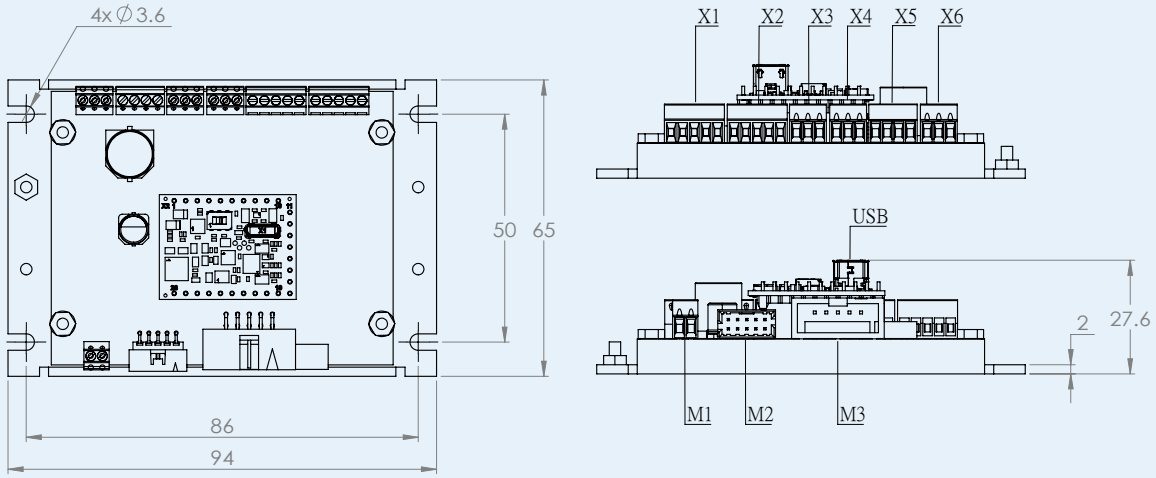
Scale reduced mm



Connection information	
Designation	Function
M1(UP)	Power supply
M2(Motor+Sensor)	Connection of the motor phases and the Hall sensors (3692/K1155/LM-01)
M3/(M4 Optional)(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/X2	Connection of the RS-422 communication
X3(COM)(Optional)	Interface connection RS-232 / CANopen
X4(Analog IN)	Analog inputs for external circuits
X5(Digital IN)	Digital inputs for external circuits
X6(Digital OUT)	Digital outputs for external circuits

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

Scale reduced mm



Connection information	
Designation	Function
M1(UP)	Power supply
M2(Motor+Sensor)	Connection of the motor phases and Hall sensors LM-11C
M3(Encoder)	Connection of an incremental encoder with or without line driver (second encoder)
USB	Connection of the USB communication
X1/X2	Connection of the RS-422 communication
X3(COM)(Optional)	Interface connection RS-232 / CANopen
X4(Analog IN)	Analog inputs for external circuits
X5(Digital IN)	Digital inputs for external circuits
X6(Digital OUT)	Digital outputs for external circuits