NEW

FAULHABER

Motion Controllers

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

MC 3001 B

Values at 22°C		MC 3001 B	
Power supply electronic	U_P	6 ... 30	V DC
Power supply motor	U_{mot}	6 ... 30	V DC
PWM switching frequency	f_{PWM}	100	kHz
Efficiency electronic	η	95	%
Max. continuous output current [1]	I_{cont}	1	A
Max. peak output current [2]	I_{max}	5	A
Standby current for electronic (@ U_P=24V)	I_{el}	0,04	A
Operating temperature range		-40 ... +85	°C
Mass		2	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 B 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 positi-on 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

For notes on technical data and lifetime performance refer to “Technical Information”.

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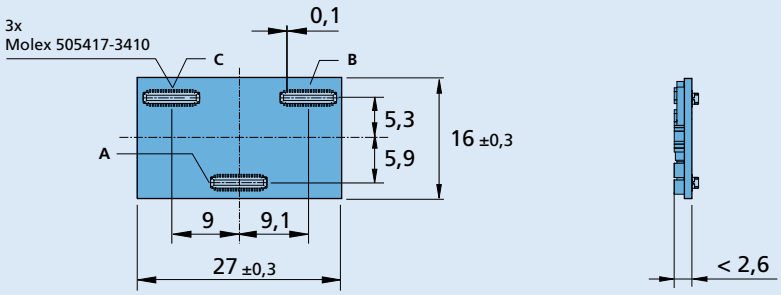
Dimensional drawing



MC 3001 B RS/CO

Options and connection information

Example product designation: **MC 3001 B RS/CO**

Option	Type	Description

Connection

Name	Function	Description
A,B,C	Micro board to board connector	Analog and digital input/output, motor and eletronic power supply, fieldbus, motor phases, sensors

Motherboard MB1 MC 3001 combination	Part No.:
for BL/DC motors in general, including hall sensors and/or encoder	6500.01802
for DC motors plus encoder IE2, IEH2, IEH3(L)	6500.01807
for DC motors plus encoder IE3(L), IER3(L), IERS3(L)	6500.01808
for DC motors plus encoder PA2-100, HEM3	6500.01809
for BL motors plus encoder AESM, IEM3	6500.01810
for BL/DC motors plus encoder PA2-50, HXM3	6500.01811

Note: For details on the connection assignment, see device manual for the MC 3001.
For details on Motherboard connections and functions see device manual MC 3001.

Product combination

DC-Motors

0615 ... S
0816 ... SR
1016 ... SR
1024 ... SR
1224 ... SR
1319 ... SR
1331 ... SR
1336 ... CXR
1516 ... SR
1524 ... SR
1717 ... SR
1724 ... SR
1727 ... CXR
1741 ... CXR
2224 ... SR
2232 ... SR
2237 ... CXR
2342 ... CR
2642 ... CR
2642 ... CXR

Brushless DC-Motors

0620 ... B
0824 ... B
1028 ... B
1218 ... B
1226 ... B
1628 ... B
2036 ... B
2214 ... BXT H
2232 ... BX4
2250 ... BX4
2250 ... BX4 S
2444 ... B
3056 ... B

Linear DC-Servomotors

LM 0830 ... 01
LM 1247 ... 11
LM 1483 ... 11
LM 2070 ... 11

Cables / Accessories

To view our large range of accessory parts, please refer to the „Accessories“ chapter.

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