

## Motion Controllers

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

### MC 3001 P

Values at 22°C		MC 3001 P	
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	$\eta$	95	%
Max. continuous output current <sup>1)</sup>	$I_{cont}$	1,4	A
Max. peak output current <sup>2)</sup>	$I_{max}$	5	A
Standby current for electronic (@ $U_P=24V$ )	$I_{el}$	0,04	A
Operating temperature range		-40 ... +85	°C
Mass		5	g

<sup>1)</sup>  $I_{cont} = 2,4A @ U_{mot} = 12V$ ,  $I_{cont} = 1,7A @ U_{mot} = 24V$

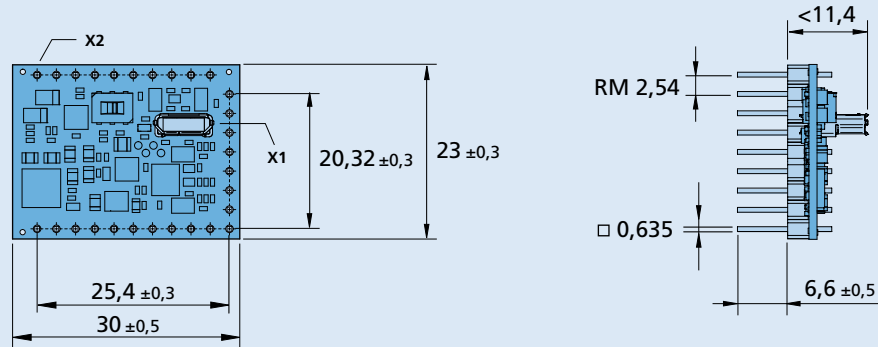
<sup>2)</sup> S2 mode for max. 2s

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

Basic features	
<ul style="list-style-type: none"> <li>■ Control of brushless, DC- and linear motors</li> <li>■ Supported sensor systems: absolute encoders, incremental encoders (optical or magnetic), Hall sensors (digital or analog), tachometers</li> <li>■ Positioning resolution when using analog Hall sensors as position encoder: 4096 increments per revolution</li> </ul>	<ul style="list-style-type: none"> <li>■ 3 digital inputs, 2 digital outputs, 2 analog inputs, flexible configuration</li> <li>■ Setpoint specification via fieldbus, quadrature signal, pulse and direction or analog inputs</li> <li>■ Optional stand-alone operation via application programs in all interface versions</li> </ul>

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 <sup>-1</sup> ... 30 000 min <sup>-1</sup> with sinusoidal commutation (optionally to 60 000 min <sup>-1</sup> 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



**MC 3001 P RS/CO**

### Options and connection information

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

Option	Type	Description	Connection		
			Name	Function	Description
			<b>X1</b>	USB	USB micro connector
			<b>X2</b>	Input/Output	Motor and electronic power supply, fieldbus, analog and digital input/output, motor phases, sensors.
			<b>Motherboard MB1 MC 3001 combination</b> for BL/DC motors in general, including hall sensors and/or encoder for DC motors plus encoder IE2, IEH2, IEH3(L) for DC motors plus encoder IE3(L), IER3(L), IERS3(L) for DC motors plus encoder PA2-100, HEM3 for BL motors plus encoder AESM, IEM3 for BL/DC motors plus encoder PA2-50, HXM3		<b>Part No.:</b> 6500.01802 6500.01807 6500.01808 6500.01809 6500.01810 6500.01811
			<b>Note:</b> 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	Brushless DC-Motors	Linear DC-Servomotors	Cables / Accessories
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 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	LM 0830 ... 01 LM 1247 ... 11 LM 1483 ... 11 LM 2070 ... 11	To view our large range of accessory parts, please refer to the „Accessories“ chapter.