

# Motion Controllers

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

## MC 3603 S

Values at 22°C		MC 3603 S	
Power supply electronic	$U_P$	6 ... 36	V DC
Power supply motor	$U_{mot}$	0 ... 36	V DC
PWM switching frequency	$f_{PWM}$	100	kHz
Efficiency electronic	$\eta$	95	%
Max. continuous output current	$I_{cont}$	3	A
Max. peak output current <sup>1)</sup>	$I_{max}$	9	A
Standby current for electronic (@ $U_P=24V$ )	$I_{el}$	RS / CO: 0,05 ET: 0,08	A
Operating temperature range		-40 ... +85	°C
Mass		RS / CO: 45 ET: 68	g

<sup>1)</sup> S2 mode for max. 5s

Interfaces	MC 3603 S RS/CO	MC 3603 S ET
Configuration from Motion Manager 6.7	RS232 / USB	RS232 / USB
Fieldbus	RS232 / CANopen	EtherCAT


### Basic features

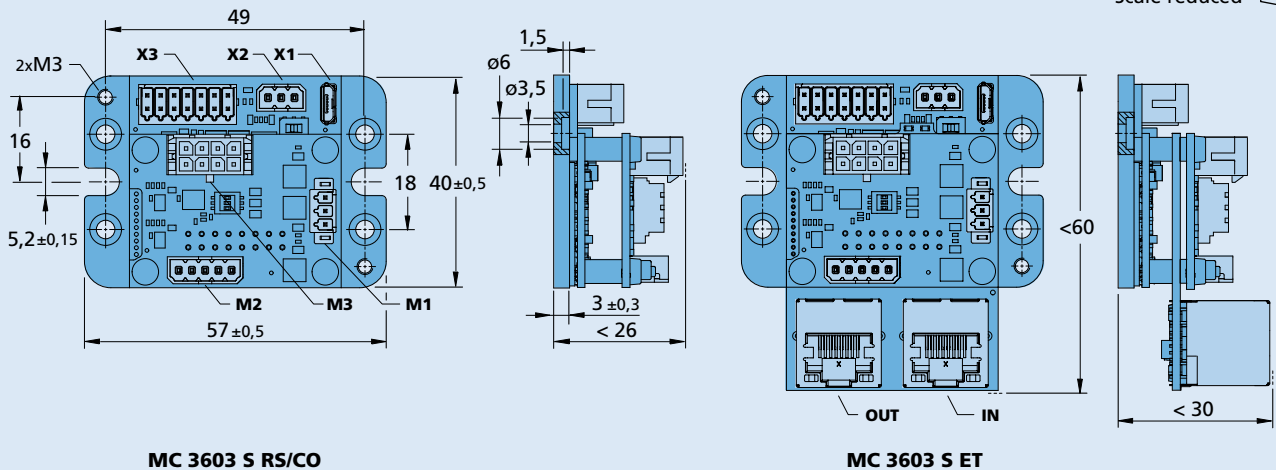
- Control of brushless, DC- and linear motors
- Supported sensor systems: absolute encoders, incremental encoders (optical or magnetic), Hall sensors (digital or analog), tachometers
- Positioning resolution when using analog Hall sensors as position encoder: 4096 increments per revolution
- 3 digital 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 <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

Scale reduced 



MC 3603 S RS/CO

MC 3603 S ET

### Options and connection information

Example product designation: **MC 3603 S ET 6889**

Option	Type	Description	Connection	
			Function	Description
6889	Encoder combination	For DC-Motors with Encoder IE2, IEH2, IEH3, IEH3L	<b>X1</b>	USB configuration interface USB micro connector
6890	Encoder combination	For DC-Motors with Encoder IE3, IER3, IERS3, IE3L, IER3L, IERS3L	<b>X2</b>	Fieldbus RS 232 or CANopen
			<b>X3</b>	Input/Output Motor and electronic power supply, analog and digital input/output
			<b>M1</b>	Motor phases Brushless or DC-Motors
			<b>M2</b>	Hall sensors Digital or analog
			<b>M3</b>	Encoder Absolute or incremental
			<b>IN</b>	Fieldbus EtherCAT IN
			<b>OUT</b>	Fieldbus EtherCAT OUT
<p><b>Note:</b> For details on the connection assignment, see device manual for the MC 3603. For details on Encoder connections and functions see device manual MC 3603.</p>				

### Product combination

DC-Motors	Brushless DC-Motors	Linear DC-Servomotors	Cables / Accessories
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 2657 ... CR 2657 ... CXR 2668 ... CR 3242 ... CR	3257 ... CR  1218 ... B 1226 ... B 1628 ... B 1645 ... BHS 1660 ... BHT 2036 ... B 2057 ... B 2214 ... BXT H 2232 ... BX4 2250 ... BX4 2444 ... B 3056 ... B 3216 ... BXT H 3242 ... BX4 3268 ... BX4 4221 ... BXT H	LM 1247 ... 11 LM 1483 ... 11 LM 2070 ... 11	<p>An extensive range of accessories is available for the products of the MC 3603 controller series.</p> <p>Furthermore, connection cables are available for controller and motor supply, sensors and interfaces as well as connector sets for the motor and supply side.</p> <p>To view our large range of accessory parts, please refer to the „Accessories“ chapter.</p>