

Motion Controllers

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

MC 5010 S

Values at 22°C	MC 5010 S
Power supply electronic	U_p 12 ... 50
Power supply motor	U_{mot} 0 ... 50
PWM switching frequency	f_{PWM} 100
Efficiency electronic	η 97
Max. continuous output current	I_{cont} 10
Max. peak output current ¹⁾	I_{max} 30
Standby current for electronic (at $U_p=24V$)	RS / CO: 0,06 ET: 0,07
Operating temperature range	-40 ... +85
Housing material	aluminium, powder-coated
Mass	RS / CO: 230 ET: 270

¹⁾ S2 mode for max. 3s

Interfaces	MC 5010 S RS	MC 5010 S CO	MC 5010 S ET
Configuration from Motion Manager 6.0	RS232 / USB RS232	CANopen / USB CANopen	RS232 / USB EtherCAT

Basic features

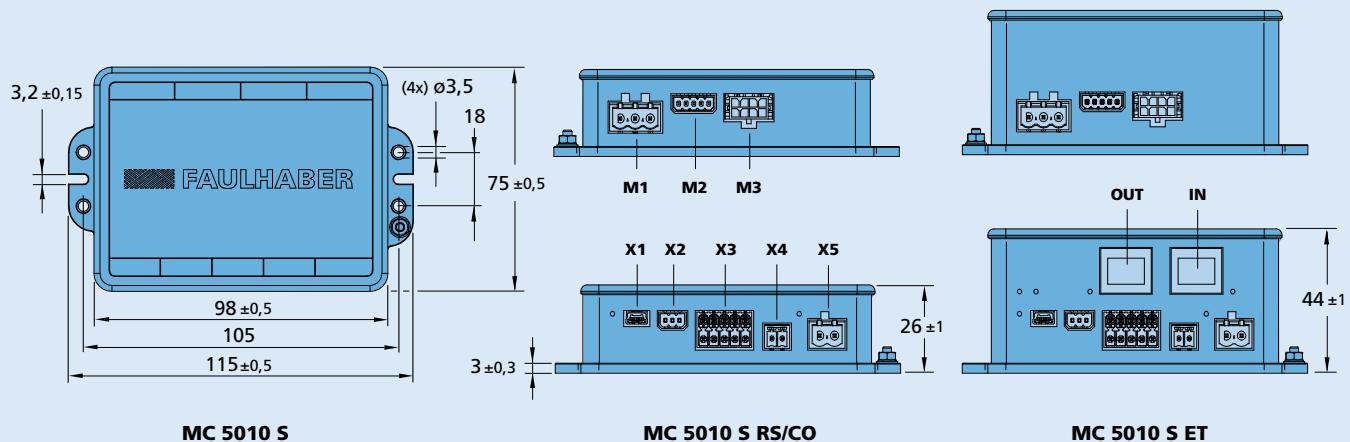
- Control of brushless, DC- and linear motors
- Supported sensor systems: absolute encoders (AES or SSI), incremental encoders (optical or magnetic), Hall sensors (digital or analog), tachometers
- Positioning resolution when using analog Hall sensors as position encoder: 4096 increments per revolution
- 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
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 5010 S
MC 5010 S RS/CO
MC 5010 S ET
Options and connection information

 Example product designation: **MC 5010 S RS**

Option	Type	Description	Connection
			Name Function Input/Output Description
6419	Encoder combination	Integrated terminating resistor for combination with absolute encoder AES-4096L	X1 Configuration interface X2 Fieldbus X3 Input/Output X4 Electronic power supply X5 Motor power supply
			M1 Motor phases M2 Hall sensors M3 Encoder
			IN Fieldbus OUT Fieldbus
			IN Fieldbus OUT Fieldbus
			Note: For details on the connection assignment, see device manual for the MC 5010.

Product combination

DC-Motors	Brushless DC-Motors	Cables / Accessories
3242 ... CR	2264 ... BP4	An extensive range of accessories is available for the products of the MC 5010 and MC 5005 controller series.
3257 ... CR	3242 ... BX4	
3272 ... CR	3268 ... BX4	
3863 ... CR	3274 ... BP4	
3890 ... CR	3564 ... B	
	4490 ... B	Included here are connection cables for controller and motor supply, sensors and interfaces, connector sets for motor- and supply side as well as mechanical components for optional top hat rail mounting.
	4490 ... BS	
		To view our large range of accessory parts, please refer to the „Accessories“ chapter.