

MC 5004 C ET AEMT

V3.0, 4-Quadrant PWM
with EtherCAT interface
for multi-turn encoder AEMT-12/16 L

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| Values at 22°C | | MC 5004 C ET AEMT | BL |
|---|------------|-------------------|------|
| Power supply electronic | U_P | 12 ... 50 | V DC |
| PWM switching frequency | f_{PWM} | 100 | kHz |
| Efficiency electronic | η | 95 | % |
| Max. continuous output current | I_{cont} | 4 | A |
| Max. peak output current ¹⁾ | I_{max} | 12 | A |
| Standby current for electronic (@ $U_P = 24V$) | I_{el} | 0.07 | A |
| Operating temperature range | | -40 ... +85 | °C |
| Mass | | 165 | g |

¹⁾S2 mode for max. 2s

| Interfaces | MC 5004 C ET AEMT |
|---|-------------------------|
| Configuration from Motion Manager 6.7 Fieldbus | RS232 / USB EtherCAT |

Basic features

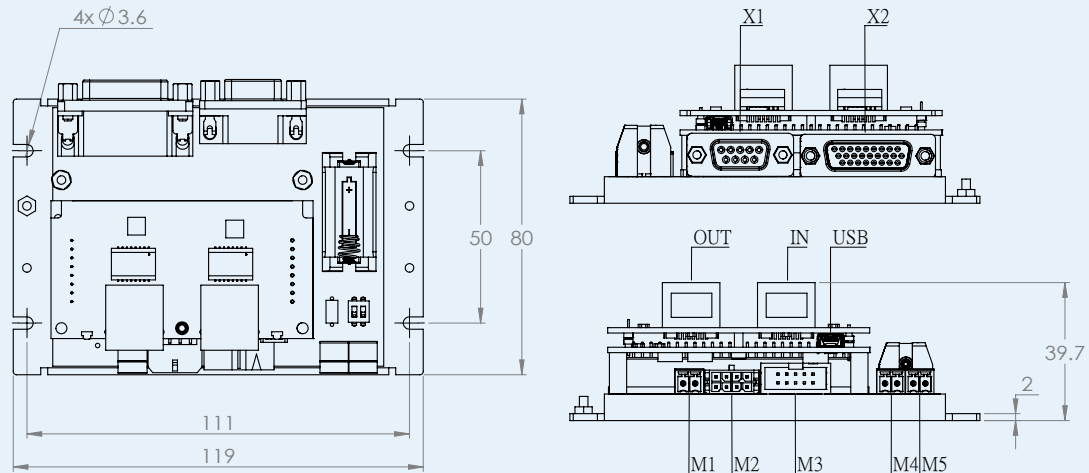
- Control of brushless motors
- Supported sensor systems: Multi-turn absolute encoders, Hall sensors (digital)
- 8 digital inputs, 3 digital outputs, 2 analog inputs, flexible configuration
- Setpoint specification via fieldbus, quadrature signal, pulse and direction or analog inputs
- Optional stand-alone operation via application programs in all interface versions
- If the power supply fails or is switched off, the AEMT-12/16L multi-turn encoder automatically switches to a battery mode with greatly reduced energy consumption.
- In combination with a suitable backup battery board ensures that the multi-turn functionality of the encoder is temporarily maintained.
- In addition to the buffer function, the board also contains a preset connection for resetting the revolution counter when commissioning or during maintenance work.
- For details on the functionality, see the technical manual of the AEMT-12/16 .
- NOTE: The battery is included in the delivery contents of the board. Recommended battery types: SL-350, ER 14259, LS 14250.

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 | Brushless motors |

Dimensional drawing (version B - DC Brushless Servomotor)

Scale reduced mm



Connection information

| Designation | Function |
|---------------------|---|
| M1(U _p) | Power supply |
| M2(Motor+Sensor) | Connection of the motor phases and the Hall sensors |
| M3(Encoder) | Connection of an encoder AEMT-12/16 L |
| M4(Preset) | Preset input for external circuits |
| M5(Battery) | Connection of battery |
| USB | Connection of the USB communication |
| X1(COM) | Interface connection RS-232 |
| X2(I/O) | Inputs or outputs for external circuits |
| IN/OUT | Connection of EtherCAT communication |

Scale reduced mm

