

Motion Controllers

V2.5, 4-Quadrant PWM
with RS232 or CAN interface

MCBL 3002 F

Values at 22°C

| | MCBL 3002 F |
|------------------------------------------------|-----------------------|
| Power supply electronic | U_B/U_{EL} 8 ... 30 |
| Power supply motor ¹⁾ | $-/U_B$ 0 ... 30 |
| PWM switching frequency | f_{PWM} 78,12 |
| Efficiency electronic | η 95 |
| Max. continuous output current | I_{cont} 2 |
| Max. peak output current ²⁾ | I_{max} 3 |
| Standby current for electronic (at $U_B=24V$) | I_{el} 0,04 |
| Operating temperature range | -25 ... +85 |
| Housing material | Hotmelt |
| Mass | 13 |

¹⁾ Only available for option 3085 (separate power supply)

²⁾ S2 mode for max. 5s

| Interfaces | MCBL 3002 F RS | MCBL 3002 F CO |
|------------|-------------------|----------------|
| Interface | RS232 | CAN (CiA) |
| Protocol | FAULHABER - ASCII | CANopen |

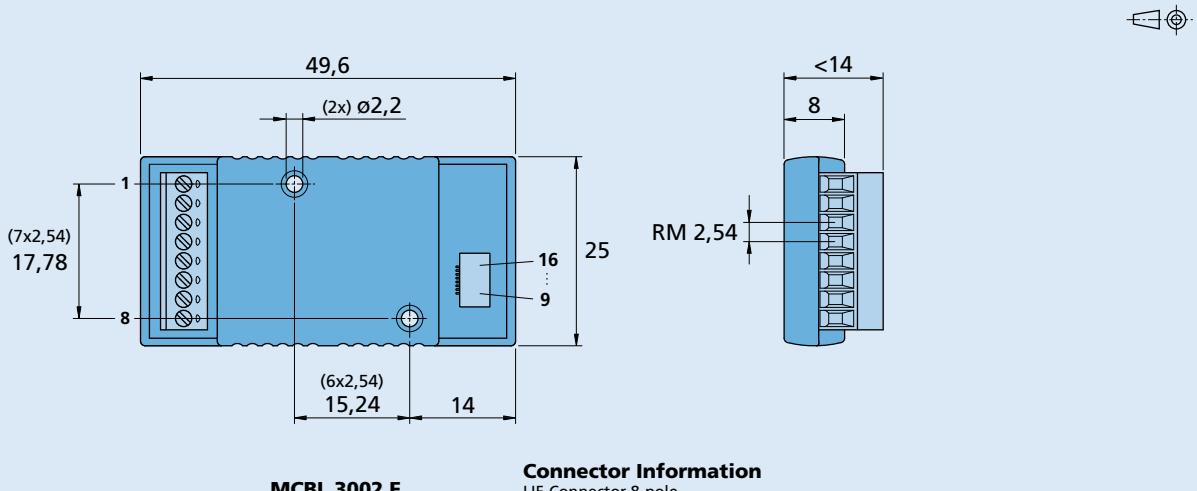
Basic features

- Supported sensor systems: analog Hall sensors
- Positioning resolution when using analog Hall sensors as position encoder: 3000 increments per revolution
- Max. 3 digital inputs, max. 1 digital output, 1 analog input.
Not all I/Os available depending on wiring
- Setpoint specification via fieldbus, quadrature signal, pulse and direction or analog inputs
- Optional stand-alone operation via application programs with the RS232 interface version

Range of functions

| | |
|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating modes (RS Versions) | Position, speed and torque control with setpoint specification via interface or analog. Position control with Gearing Mode or stepper motor operation. Operation as Servo Amplifier in voltage controller mode |
| Operating modes (CO Version) | Profile Position Mode (PP), Profile Velocity Mode (PV), Homing Mode. Cyclic Synchronous Position Mode (CSP) acc. to IEC 61800-7-201 or IEC 61800-7-301. |
| Speed range for brushless motors with number of pole pairs 1 | 5 min ⁻¹ ... 30 000 min ⁻¹ (with sinus commutation) |
| Application programs | Available in versions with RS232 interface |
| Additional functions | Overload protection for electronics and motor, self-protection from overheating, over-voltage protection in generator mode. |
| Indicator | Trace as logger |
| Motor types | Brushless DC-motors with analog Hall sensors and number of pole pairs 1 or 2 |

Dimensional drawing



Options and connection information

Example product designation: **MCBL 3002 E RS 3085**

| Example product designation: MC2E-0002-F-12-0002 | | | Connection | |
|--------------------------------------------------|--------|-------------------------------------------------|------------|-------------|
| Option | Type | Description | No. | Function |
| 3085 | Supply | Separate power supply for motor and electronics | 1 | TxD / CAN_H |
| | | | 2 | RxD / CAN_L |
| | | | 3 | AGND |
| | | | 4 | Fault |
| | | | 5 | AnIn |
| | | | 6 | U_B |
| | | | 7 | GND |
| | | | 8 | 3. In |
| | | | 9 | Sensor A |
| | | | 10 | Sensor B |
| | | | 11 | Sensor C |
| | | | 12 | U_{cc} |
| | | | 13 | SGND |
| | | | 14 | Motor A |
| | | | 15 | Motor B |
| | | | 16 | Motor C |

Product combination

| Brushless DC-Motors | Cables / Accessories | | |
|---------------------|----------------------------------------------------------------------------------------|--|--|
| 0620 ... B | To view our large range of accessory parts, please refer to the „Accessories“ chapter. | | |