

Motion Controllers

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

MCBL 3003 P AES

Values at 22°C		MCBL 3003 P AES	
Power supply electronic	U_B/U_{EL}	12 ... 30	V DC
Power supply motor ¹⁾	$-U_B$	0 ... 30	V DC
PWM switching frequency	f_{PWM}	78,12	kHz
Efficiency electronic	η	95	%
Max. continuous output current	I_{cont}	3	A
Max. peak output current ²⁾	I_{max}	10	A
Standby current for electronic (at $U_B=24V$)	I_{el}	0,06	A
Operating temperature range		-40 ... +85	°C
Mass		18	g

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

²⁾ S2 mode for max. 2s

Interfaces	MCBL 3003 P AES RS	MCBL 3003 P AES CO
Interface	RS232	CAN (CiA)
Protocol	FAULHABER - ASCII	CANopen

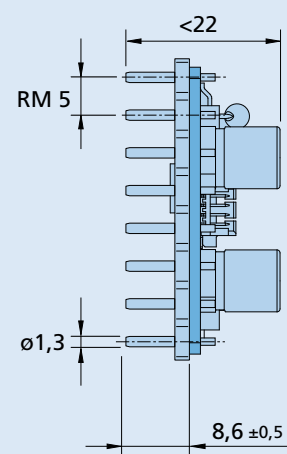
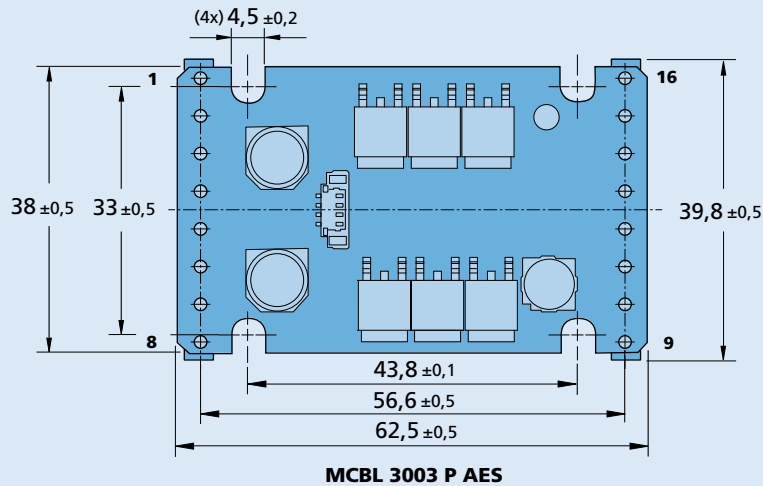
Basic features

- Supported sensor systems: single-turn absolute encoders
- Positioning resolution when using absolute encoders as position encoder: 4096 steps 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.
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 absolute encoders and number of pole pairs 1 or 2

Dimensional drawing



Options and connection information

Example product designation: **MCBL 3003 P AES RS 3085**

Option	Type	Description	Connection	
			No. Function	No. Function
3085	Supply	Separate power supply for motor and electronics	1 TxD / CAN_H	9 Sensor A / DATA
			2 RxD / CAN_L	10 Sensor B / $\overline{CS}$
			3 AGND	11 Sensor C / CLK
			4 Fault	12 U_{CC}
			5 AnIn	13 SGND
			6 U_B	14 Motor A
			7 GND	15 Motor B
			8 3. In	16 Motor C

Max. recommended current for continuous operation:
3A (at 22 °C ambient temperature)

CAUTION: Thermal shutdown is NOT guaranteed!

Note: For details on the connection assignment, see device manual MC.

Product combination

Brushless DC-Motors	Cables / Accessories		
0824 ... B 1028 ... B 2232 ... BX4 2250 ... BX4 3242 ... BX4 3268 ... BX4	To view our large range of accessory parts, please refer to the „Accessories“ chapter.		