NEW

Motion Controller

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

For combination with:
Brushless DC-Servomotors
with absolute encoder

Series MCBL 3003 AES

		MCBL 3003 P AES	
Power supply	U_B	12 ... 30	V DC
PWM switching frequency	f_{PWM}	78,12	kHz
Efficiency	η	95	%
Max. continuous output current [1]	I_{dauer}	3	A
Max. peak output current	I_{max}	10	A
Total standby current	I_{el}	0,06	A
Speed range		5 ... 30 000	rpm
Scanning rate	N	100	µs
Encoder resolution with AES encoder		≤ 4 096	inc./rev.
Resolution with external encoder		≤ 65 535	inc./rev.
Input/output (partially free configurable)		3	
Program memory: [2]			
– memory size		3,3	kWord
– Number of instructions		ca. 1 000	instructions
Operating temperature range		– 40 ... + 85	°C
Housing material		without housing	
Weight		18	g

[1] at 22°C ambient temperature
[2] Only for version with serial interface

Connection information					
Connection communication:					
Interface			RS232	CAN	
Communication profile			Faulhaber - ASCII	CANopen	
Max. transfer speed rate RS232			115 200		baud
Max. transfer speed rate CAN				1	Mbit/s
Connection 3 "AGND":					
– analog ground			analog GND		
– digital input	external encoder		channel B		
		R_{In}	10		kΩ
		f	≤ 400		kHz
Connection 4 "Fault":					
– digital input		R_{In}	100		kΩ
– digital output (open collector)		U	≤ U_B		V
		I	≤ 30		mA
		clear	switched to GND		
		set	high-impedance		
	fault output	no error	switched to GND		
		error	high-impedance		
	signal output	f	≤ 2		kHz
		resolution	1...32		inc./rev.
Connection 5 "AnIn":			"AGND" as GND		
– analog input	set speed value	U_{In}	± 10		V
– digital input	PWM set speed value	f	100 ... 2 000		Hz
		T	50% ≙ 0 rpm		
	external encoder		channel A		
		f	≤ 400		kHz
	step frequency input	f	≤ 400		kHz
		R_{In}	5		kΩ
Connection 6 "U_B":		U_B	12 ... 30		V DC
Connection 7 "GND":			ground		
Connection 8 "3. In":					
– digital input		R_{In}	22		kΩ
– electronic supply voltage		U_{EL}	12 ... 30		V DC

Connection information

Connection 9-11 „DATA, $\overline{CS}$, CLK ":				
	DATA	U_{In}	≤ 5	V
	$\overline{CS}$	U_{Out}	0 ... 5	V
	CLK	U_{Out}	0 ... 5	
Connection 12 "U_{CC}":				
Output voltage for external use [1]		U_{Out}	5	V DC
Load current		I_{Out}	≤ 60	mA
Connection 13 "SGND":				
Signal GND			Signal ground	
Connection 14-16 „Motor A, B, C":				
Motor connection	Motor A		Phase A	
	Motor B		Phase B	
	Motor C		Phase C	
		U_{Out}	0 ... U_B	V
PWM switching frequency		f_{PWM}	78,12	kHz

[1] E.g. encoder

The signal level (PLC or TTL) of the digital inputs can be set over the interface (see operating instruction manual).
Standard (PLC): Low 0...7V / High 12,5V...U_B, TTL: Low 0...0,5V / High 3,5V...U_B

Options

- Separate power supply (Option no.: 3085)

Full product description

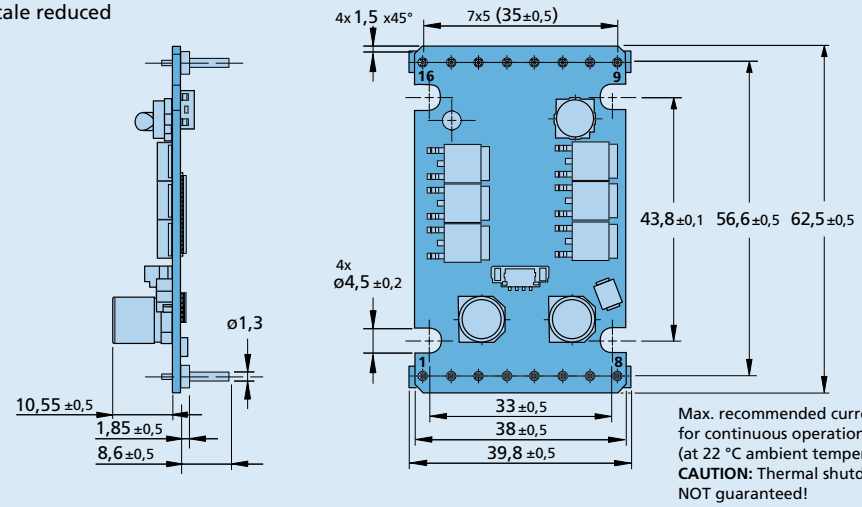
- Example:

  MCBL 3003 P AES RS (RS232)

  MCBL 3003 P AES CF (CANopen with Faulhaber CAN)

Dimensional drawing and connection information for MCBL 3003 P AES

Scale reduced



Max. recommended current for continuous operation: 3A (at 22 °C ambient temperature)
CAUTION: Thermal shutdown is NOT guaranteed!

Connection

Pin	Function
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 / DATA
10	Sensor B / $\overline{CS}$
11	Sensor C / CLK
12	U_{CC}
13	SGND
14	Motor A
15	Motor B
16	Motor C