

NEW

Motion Controller

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

For combination with:
Brushless DC-Servomotors
with analog Hall sensors

Series MCBL 3003

		MCBL 3003 P	
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	200	μs
Encoder resolution with linear Hall Sensors		≤ 3 000	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...255		inc./rev.
Connection 5 "AnIn":				
– 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 „Sensor A, B, C“:

Hall sensor input	Sensor A		Hall sensor A	
	Sensor B		Hall sensor B	
	Sensor C		Hall sensor C	
		U_{In}	≤ 5	V

Connection 12 “Ucc”:

Output voltage for external use ¹⁾	U_{Out}	5	V DC
Load current	I_{Out}	≤ 60	mA

Connection 13 “SGND”:

Signal GND		Signal ground	
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Connection 14-16 „Motor A, B, C“:

Motor connection	Motor A		Phase A	
	Motor B		Phase B	
	Motor C		Phase C	
		U_{Out}	$0 \dots U_B$	V
PWM switching frequency	f_{PWM}	78,12	kHz	

¹⁾ E.g. Hall sensor

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

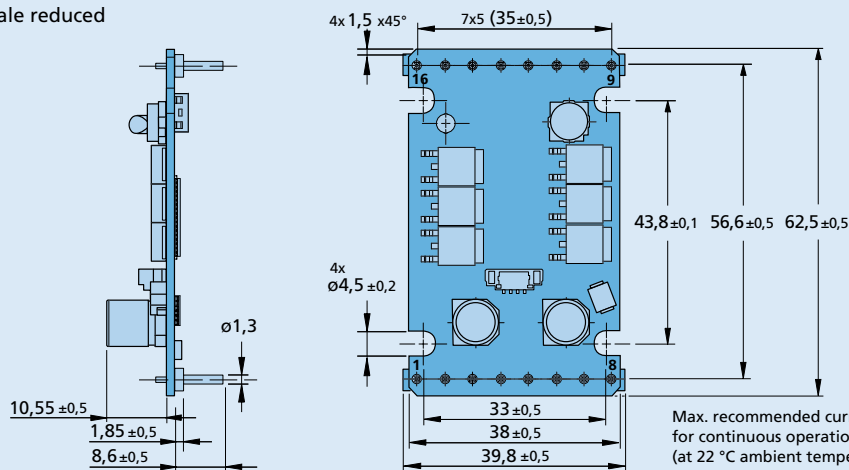
- Example:

MCBL 3003 P RS (RS232)

MCBL 3003 P CF (CANopen with Faulhaber CAN)

Dimensional drawing and connection information for MCBL 3003 P

 Scale reduced


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
10	Sensor B
11	Sensor C
12	Ucc
13	SGND
14	Motor A
15	Motor B
16	Motor C

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