Motion Controller

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

For combination with:
DC-Micromotors

Series MCDC 3006

		MCDC 3006 S	
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}	6	A
Max. peak output current	I_{max}	10	A
Total standby current	I_{el}	0,06	A
Speed range		5 ... 30 000	min^{-1}
Scanning rate	N	100	µs
External encoder resolution		≤ 65 535	inc./rev.
Input/output (partially free configurable)		5	
Program memory: [2]			
– memory size		3,3	kWord
– Number of instructions		ca. 1 000	instructions
Operating temperature range		– 40 ... + 85	°C
Housing material		zinc, black coated	
Weight		160	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		
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 min^{-1}	
	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 9 “5. In”:				
– digital input	R_{In}	22		kΩ
Connection 10 “4. In”:				
– digital input	R_{In}	22		kΩ

For notes on technical data and lifetime performance refer to “Technical Information”.
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Connection information				
Connection 11-12 “Ch A”, “Ch B”:				
Encoder input	CH A		encoder channel A	
	CH B		encoder channel B	
Integrated pullup resistance + 5V		*R*	2,2	kΩ
		f	≤ 400	kHz
Connection 13 “Ucc”:				
Output voltage for external use [1]		U_{Out}	5	V
Load current		I_{Out}	≤ 60	mA
Connection 14 “SGND”:				
Signal GND			signal ground	
Connection 15-16 “Mot +”, “Mot -”:				
Motor connection	Mot +		Motor +	
	Mot –		Motor –	
		U_{Out}	0 … U_B	V DC
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

D-SUB-connector information		
Connection D-SUB-connector:	**RS232**	**CAN**
Pin 2	RxD	CAN-L
Pin 3	TxD	GND
Pin 5	GND	-
Pin 7	-	CAN-H

Options

- Separate power supply (Option no.: 3085)

Accessories

To view our large range of accessory parts, please refer to the “Accessories” chapter.

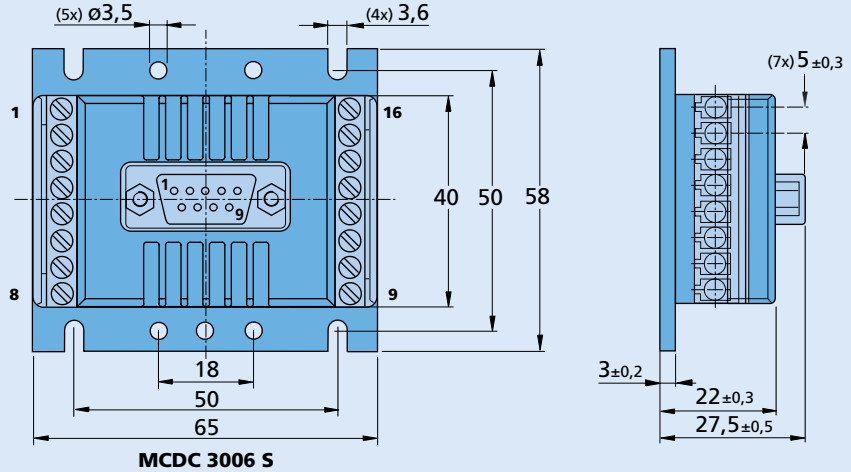
Full product description

- Example:

  MCDC 3006 S RS (RS232)
  MCDC 3006 S CF (CANopen with FAULHABER CAN)
  MCDC 3006 S CO (CANopen CiA)

Dimensional drawing and connection information MCDC 3006 S

Scale reduced



MCDC 3006 S

Supply connection

No.	Function
1	TxD / CAN_H
2	RxD / CAN_L
3	AGND
4	Fault
5	AnIn
6	U_B
7	GND
8	3. In

Motor connection

No.	Function
9	5. In
10	4. In
11	Ch A
12	Ch B
13	Ucc
14	SGND
15	Mot +
16	Mot –