

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	rpm
Scanning rate	N	100	μ s
External encoder resolution		$\leq 65\,535$	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	$^{\circ}$ C
Housing material		zinc, black coated	
Weight		160	g

¹⁾ at 22 $^{\circ}$ 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		channel B	
external encoder	R_{in}	10	k Ω
	f	≤ 400	kHz
Connection 4 "Fault":			
– digital input	R_{in}	100	k Ω
– digital output (open collector)	U	$\leq U_B$	V
	I	≤ 30	mA
	clear	switched to GND	
	set	high-impedance	
fault output	no error	switched to GND	
	error	high-impedance	
Connection 5 "AnIn":			
– analog input	set speed value	U_{in}	"AGND" as GND
– digital input	PWM set speed value	f	± 10
		T	100 ... 2 000
	external encoder		50% \pm 0 rpm
		f	channel A
	step frequency input	f	≤ 400
		R_{in}	≤ 400
			5 k Ω
Connection 6 "UB":			
	U_B	12 ... 30	V DC
Connection 7 "GND":			
		ground	
Connection 8 "3. In":			
– digital input	R_{in}	22	k Ω
– electronic supply voltage	U_{EL}	12 ... 30	V DC
Connection 9 "5. In":			
– digital input	R_{in}	22	k Ω
Connection 10 "4. In":			
– digital input	R_{in}	22	k Ω

Connection information

Connection 11-12 "Ch A", "Ch B":			
Encoder input	CH A CH B		encoder channel A encoder channel B
Integrated pullup resistance + 5V	R f	2,2 ≤ 400	kΩ 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 + Mot -		Motor + Motor -
PWM switching frequency	U _{Out} f _{PWM}	0 ... U _B 78,12	V DC 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

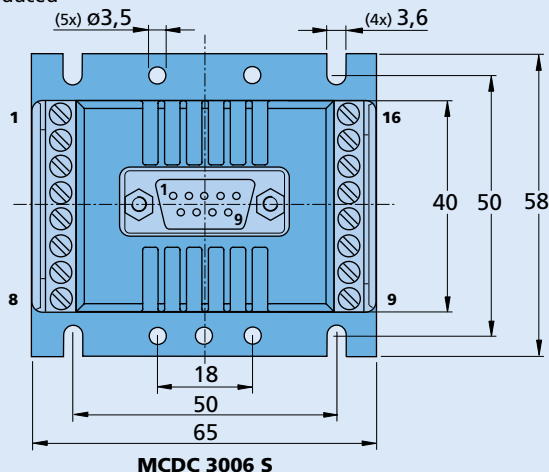
- 6501.00128: USB-CAN-Adapter (only for version with CAN interface)
- 6501.00131: USB-RS232 Adapter (only for version with serial interface)
- 6501.00063: Adapter for motors with IE2 Encoder
- 6501.00064: Adapter for motors with HEDL Encoder

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



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	U _{cc}
14	SGND
15	Mot +
16	Mot -