

# Motion Controllers

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

## MCDC 3006 S

| Values at 22°C                                 |              | MCDC 3006 S        |      |
|--|--------------|--------------------|------|
| Power supply electronic                        | $U_B/U_{EL}$ | 12 ... 30          | V DC |
| Power supply motor <sup>1)</sup>               | $-/U_B$      | 0 ... 30           | V DC |
| PWM switching frequency                        | $f_{PWM}$    | 78,12              | kHz  |
| Efficiency electronic                          | $\eta$       | 95                 | %    |
| Max. continuous output current                 | $I_{cont}$   | 6                  | A    |
| Max. peak output current <sup>2)</sup>         | $I_{max}$    | 10                 | A    |
| Standby current for electronic (at $U_B=24V$ ) | $I_{el}$     | 0,06               | A    |
| Operating temperature range                    |              | -40 ... +85        | °C   |
| Housing material                               |              | zinc, black coated |      |
| Mass   |              | 160                | g    |

<sup>1)</sup> Only available for option 3085 (separate power supply)

<sup>2)</sup> S2 mode for max. 9s

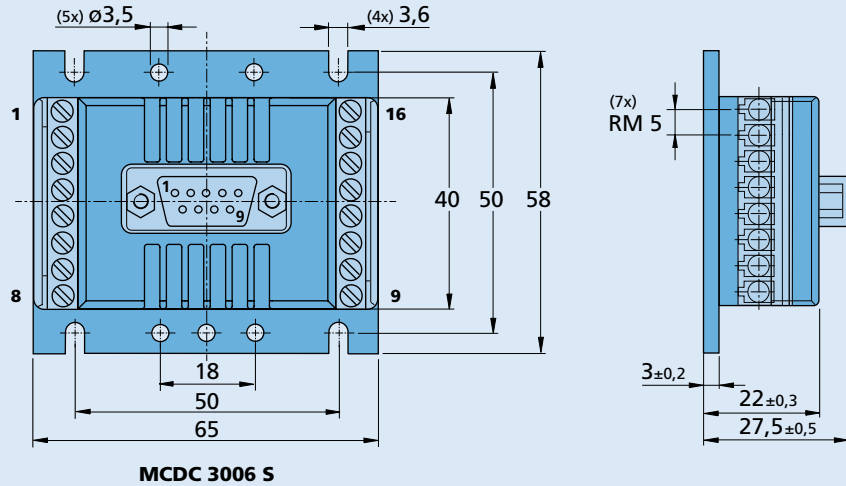
| Interfaces | MCDC 3006 S RS    | MCDC 3006 S CO |
|------------|-------------------|----------------|
| Interface  | RS232             | CAN (CiA)      |
| Protocol   | FAULHABER - ASCII | CANopen        |

### Basic features

- Operation of brushed DC-Micromotors
- Supported sensor systems: incremental encoders
- Positioning resolution per revolution depending on the used encoder type
- Max. 5 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                   | 5 min <sup>-1</sup> ... 30 000 min <sup>-1</sup>   |
| 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                   | Brushed DC-Micromotors with incremental encoders   |

**Dimensional drawing**

**MCDC 3006 S**
**Options and connection information**

 Example product designation: **MCDC 3006 S RS 3085**

| Option | Type   | Description                                     | Connection             |                     |
|--------|--------|---|------------------------|---------------------|
| 3085   | Supply | Separate power supply for motor and electronics | <b>No. Function</b>    | <b>No. Function</b> |
|        |        |   | 1 TxD / CAN_H          | 9 5. In             |
|        |        |   | 2 RxD / CAN_L          | 10 4. In            |
|        |        |   | 3 AGND                 | 11 Ch A             |
|        |        |   | 4 Fault                | 12 Ch B             |
|        |        |   | 5 AnIn                 | 13 U <sub>cc</sub>  |
|        |        |   | 6 U <sub>B</sub>       | 14 SGND             |
|        |        |   | 7 GND                  | 15 Mot +            |
|        |        |   | 8 3. In                | 16 Mot -            |
|        |        |   | <b>D-SUB connector</b> |                     |
|        |        |   | <b>RS-232</b>          |                     |
|        |        |   | <b>No. Function</b>    | <b>CAN</b>          |
|        |        |   | 2 RxD                  | 2 CAN_L             |
|        |        |   | 3 TxD                  | 3 GND               |
|        |        |   | 5 GND                  | 5 -                 |
|        |        |   | 7 -                    | 7 CAN_H             |

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

**Product combination**

| DC-Motors   | Cables / Accessories   |
|---|--|
| 1741 ... CXR<br>2224 ... SR<br>2230 ... S<br>2232 ... SR<br>2233 ... S<br>2237 ... CXR<br>2342 ... CR<br>2642 ... CR<br>2642 ... CXR<br>2657 ... CR<br>2657 ... CXR<br>2668 ... CR<br>3242 ... CR<br>3257 ... CR<br>3272 ... CR<br>3863 ... CR<br>3890 ... CR | To view our large range of accessory parts, please refer to the „Accessories“ chapter. |