

**NEW**

# Motion Controller

## Sine Controller

For combination with  
Micro Brushless DC-Motor:  
0206

### Series MCBL 07002

		MCBL 07002	
Supply voltage	$V_s$	6,5 – 7,5	V DC
Current consumption	max. current $I_s$	400	mA
Analog inputs (all except AUXin; $V_s = 7V$ )	Digital input level (TTL-level)	low: 0 – 0,8 high: 2,4 – 5,0	V
	Analog input level	0 ÷ 5,0	V
	Input resistance	> 500	$\Omega$
AUXin	Input level	low: 0 – 0,5 high: 4 – 10	V
	max. input frequency	200	kHz
	Input resistance	> 2 200	$\Omega$
Output signals	Speed	0 ... 120 000	rpm
	Deviation from defined values	$\pm 0,5$	%
	Voltage range $V_{eff}$	2,4	V
Current meter	Range	50 – 900	mA
	max. error	20	%
Interface	RS232 – Level ( $V_s = 7V$ )	low: -8 ... -5 high: 5 ... 8	V
	Baud rate (No Parity, 1 Stop bit)	9 600	baud
Temperature range:	– in service (freely ventilated)	0 ... + 30	$^{\circ}C$
	– in storage	0 ... + 60	$^{\circ}C$
Weight		190	g

**Note:** The Motion Controller is supplied with detailed operating instruction manual for installation and start-up.

#### General description

The motion controller MCBL 07002 is available with housing, control switches and complete interface.

The controller is designed for laboratory and experimental application. It can be used universally and is suitable especially for running the brushless DC-micromotor 0206 ... B.

The three-phase sine signal allows an extreme smooth motion of the motor. The controller can also be applied to any other three-phase micromotors.

The motor is driven in open-loop mode i. e. there is no feedback signal to the controller.

Different operation modes result in a high flexibility of MCBL 07002.

With the integrated serial interface the drive system can be connected to a PC or SPC and can be operated. All parameters are selectable over this programmable interface. The values are saved in the controller and are available after the re-start.

#### Features:

- Enormous speed range, from 20 to 120 000 rpm with fine resolution
- Speed or position control
- Multiple voltage-controlled inputs to adjust speed, acceleration ramps and output voltage
- Non-volatile memory: all parameters such as speed, drive mode, target position etc. can be stored as required and are immediately available again after power-off
- The processing performance is achieved by using a powerful 24 MHz microcontroller
- Dynamic current control with adjustable current limiting
- Effective operation by compensation of the Back-E.M.F.
- Open loop
- Easy operation with Motion Manager software

### Motion Manager Software

Programming made easy - with the new FAULHABER Motion Manager 2.

The new FAULHABER Motion Manager 2 - for Windows 95/98/NT/ME/2000/XP - simplifies operation and configuration.

The software supports a huge ASCII command set and allows the user to perform an online analysis of the operating data.

The FAULHABER Motion Manager 2 is available for download from the internet at [www.faulhaber.com](http://www.faulhaber.com) or upon request.

#### Operation modes:

- Speed control by analogous voltages or pulse signals
- Stepper mode
- Velocity control and ramping profiles
- Positioning

#### Options:

RS232 Multiplexer Board to operate multiple drive systems under one host RS232 interface

### Versions

#### Module version:

Additional to the MCBL 07002 with housing the module version MCBL 05002 with very small dimensions is available. This version is provided with the same functionality and can be integrated individually in other electronics and applications with its DIL28 IC socket.

A separate datasheet with technical information of the MCBL 05002 is available upon request.

#### Starter-Kit:

The motion controller MCBL 07002 is also available pre-assembled with the brushless DC-micromotor 0206...B and the microplanetary gearhead 02/1 in a special demo case.

### Dimensional drawing

