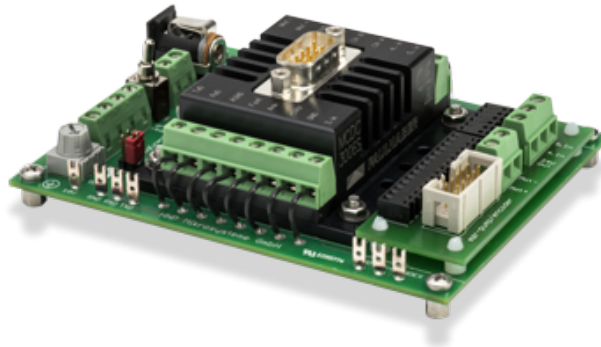


## Product information

### S-HD · Controller



#### Description

The controller S-HD is recommended for high requirements in control of discrete dosage and continuous delivery tasks in combination with mzp-pumps of the modular series with high resolution encoder. The 16-bit microcontroller allows speed and position control for highly accurate dosage. The compact design on a PCB offers flexible installation. Process control link can be established via a RS-232 interface. Motor speed or flow rate can be set either by an analog input (0-10 V) or a potentiometer mounted on the PCB. For the three digital inputs there is a screw terminal. Programs for dosage control can be saved in the memory.

#### Advantages

- High quality pump controller for continuous delivery and discrete dosage
- For pumps of the modular pump series with high resolution encoder
- Powerful 16-bit microcontroller
- Programming of controller with Windows® software »Motion Manager«
- Potentiometer for speed set
- Analog input 0-10 V
- 3 digital inputs, 1 input is equipped with a switch
- 1 digital output, programmable as input
- Two colored LED status indicator
- EEPROM memory
- RS-232 interface

## Technical data

Weight	approx. 185g
Input # 1 (speed)	0 - 10 V
Voltage	DIN 45323 socket, screw terminal
Serial interface	RS-232, SUB-D plug, 9-pole
Protection class	IP 20
Controller	PI controller, speed and position control
Supply voltage	24 V DC (12 – 30 V)
Pump connector	screw terminal; pin headers 10-pole
Error output (input # 2)	Open collector max. UB / 30 mA no error: connected to GND as input: low 0...0.5 V / high 4 V...UB
Program memory	7936 bytes
Remarks	subject to technical changes
Digital inputs # 3, 4, 5	low 0...0.5 V / high 4...30 V
Dimensions (L x W x H)	112 x 85 x 36 mm
Velocity range	1 - 6000 rpm

### Notice

Even if single parameters are within the indicated performance range of technical data, certain parameter combinations may not be achievable. Single parameters may exceed their indicated performance range under adequate circumstances. For detailed evaluation please contact HNP Mikrosysteme. Actual performance may vary. Specifications are subject to change without notice.

## Patents and trademarks

Micro annular gear pumps (and housings) are protected by assigned patents: EP 1 354 135 B1; US 7,698,818 B2; DE 10 2011 001 041 B4; CN 103 348 141 B; US 10,012,220 B2; CN 103 732 921 B; US 9,404,492 B2; US 6,520,757 B1.

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