

High performance series

Console drive module m zr[®]-S05 / m zr[®]-S05 E

Laboratory and industrial production



- **Compact chassis**
diecast small aluminum chassis, powder coated
- **Easy handling**
local/remote operation via front control panel or rear external connectors
- **Adapted Windows[®]-based software**
parameter set
- **High precision**
repeatability CV <1 % at low volumes
- **Comfortable interfaces**
serial RS-232, analog 0-10 V
- **Microcontroller-based drive**
DC-servomotor and digital control

The console drive module m zr-S05 can be used for versatile dispensing tasks in the low flow rate range together with all standard high performance m zr-pumps. The microcontroller-based drive enables precise local pump control with a 10-turn potentiometer.

Speed and operating time can be shown on the digital display. The pump can be alternatively remotely controlled with an external analog 0–10 V signal or by a PC. In order to set all operating parameters including calibration, ramp, step, speed,

dispense or pause times and flow direction, an adapted software is included. The high quality stable diecast aluminum chassis is powder coated and offers a reliable protection of the control elements. A power supply 115/230 V AC is included.

Applications

- Laboratory
- Assembly
- Packaging

Technical data

Chassis	diecast aluminum chassis, powder coated
Speed adjusting	10-turn potentiometer
Drive speed range	1 – 6000 rpm
Display	rpm or operating time
Pump integration	pump heads m zr-2900 and m zr-4600 are mounted directly into the chassis m zr-7205 pump and console module are connected with a cable
Drive	DC-servomotor, 24 V DC, 44 W
Control	integrated 16-bit microcontroller
Voltage	24 V DC, DIN 45323 socket
Analog interface	0–10 V, DIN 45321 socket, 5-pole
Serial interface	RS-232, SUB-D plug, 9-pole
Memory	7936 bytes
Supply	external power supply 115/230 V AC
Protective class	IP 41
Measurements (L x B x H)	174 x 112 x 92 mm
Weight	approx. 1.5 kg

Subject to technical changes.

Contact

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Operation

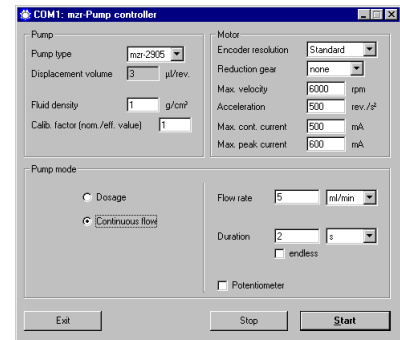
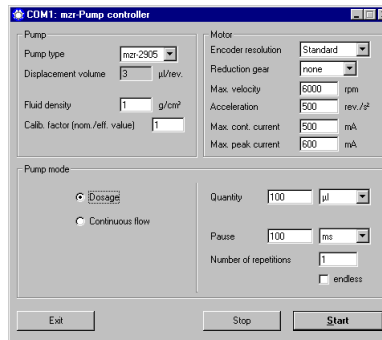


The front panel features an on/off switch and a fine tuning potentiometer for manual flow rate control. The pump head with the drive are either mounted inside the module or connected with a cable to the panel host connector.



A switch enables to select local or remote control with the front potentiometer, the rear 0–10 V external signal or RS-232 for either a PC or a SPC.

Software



The included software »mzi-Pump controller« allows calibration, programming of volumes, flow rates, pause times, cycle numbers and operating times and setting of drive parameters. Displacement volume and flow rates can be selected for standard mzi-pumps. Simple dispensing tasks can be programmed.

Item number

67 05 02 00

console drive module mzi-S05 (*without pump head*) for pump heads mzi-2900 and mzi-4600, null-modem cable, external power supply, software, »mzi-pump controller«

10 01 01 00

pump head mzi-2900, high performance series, smallest dosage volume 0.5 µl, flow 0.003–18 ml/min, 0–30 bar (0–435 psi) with oil, fluid connection 1/4" -28 UNF

10 02 01 00

pump head mzi-4600, high performance series, smallest dosage volume 2 µl, flow 0.012–72 ml/min, 0–50 bar (0–725 psi) with oil, fluid connection 1/4" -28 UNF

67 05 02 01

console drive module mzi-S05E (*without pump*) for pump mzi-7205, null-modem cable, external power supply, software, »mzi-pump controller«

10 03 01 06

pump mzi-7205 S, smallest dosage volume 5 µl, flow 0.048–288 ml/min, 0–40 bar (0–580 psi), lateral fluid connection 1/8" NPT internal thread

10 03 01 07

pump mzi-7205 F, smallest dosage volume 5 µl, flow 0.048–288 ml/min, 0–40 bar (0–580 psi), frontal fluid connection 1/8" NPT internal thread

Micro annular gear pumps (and housings) are protected by assigned patents: DE 198 43 161 C2, EP 1115979 B1, US 6,520,757 B1, EP 852674 B1, US 6,179,596 B1, EP 1354135, US 7,698,818 B2. Patents pending: EP 1807546, DE 10 2009 020 942.5-24, DE 10 2011 001 041.6. In the US, Europe and Japan additional patents are pending. mzi®, MoDoS®, µ-Clamp® are registered German trademarks of HNP Mikrosysteme GmbH. Microsoft®, Windows® are registered trademarks of Microsoft Corporation in the USA and in the other countries.