PI current regulator
Type MPZ-1-24 = SGH-PI

for activating proportional control solenoids for the operation of closed loop circuits.

The PI current regulator is used for activating proportional control solenoids.

In conjunction with a proportional pressure regulator, it is thus possible to achieve remote control and infinite adjustment of pressure by electrical means.

Through operation in a closed loop circuit, the accuracy of the proportional pressure regulator is significantly increased.

Adaptation to the closed control loop is made possible by the "Volume" potentiometer.

There is, in addition, a (linear) ramp up, ramp down facility. Both ramps may be independently adjusted.

The current regulator detects faults and indicates diagnostic options via a flashing red LED.

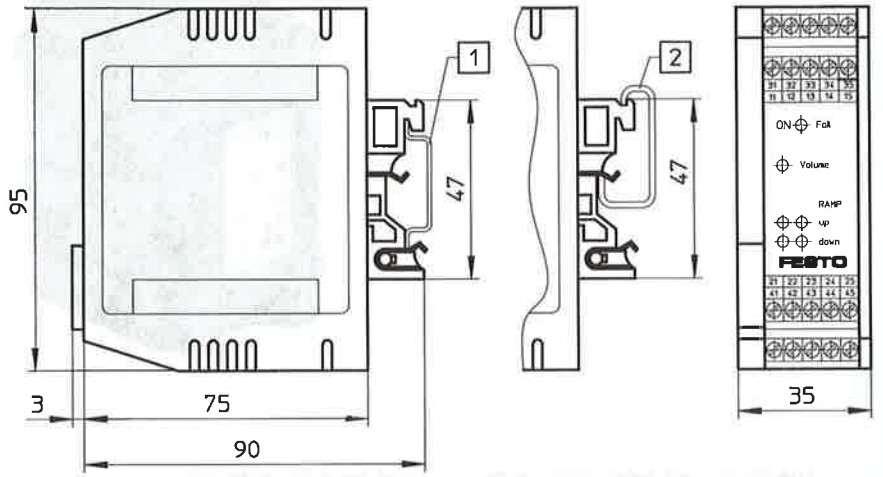
The PI current regulator can be mounted on a G- or H-rail.

Accessories:
Standard socket for connection to the control solenoid, see sheet 2.594
Order code 34 583 MSSD-C

For G- and H-rails, see sheet 6.440

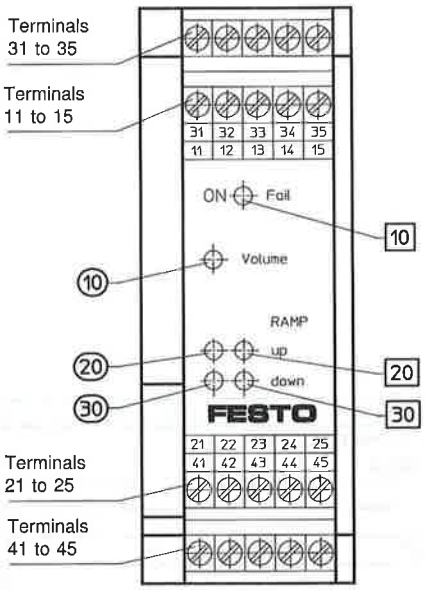
Order code Part No./Type	36 102 MPZ-1-24 = SGH-PI
Design	Microprocessor controlled PI controller and current regulator capable of fault detection and with linear ramps
Mounting	H-rail (35 mm) or G-rail
Mounting position	Any
Connection	Screwed terminals for cables up to 2.5 mm^2
Operating voltage	20 to 30 V DC
Residual ripple	Max. 10% within the operating voltage
Output current for control solenoid	0 to 1 A
Power consumption	20 W with 1 A output current
Output for supplying reference value generators	10 V ± 5%, 5 mA, short circuit proof (VDE 1607/15)
Hum frequency	50 Hz
Setpoint value input Actual value input	0 to +10 V (+3%) 0 to 20 mA (+3%) 4 to 20 mA (+3%) } to be connected alternatively
Ramp function	0,1 to 10 s/V (+5%) 0,1 to 10 s/2 mA (+5%) 0,1 to 10 s/1,6 mA (+5%) } adjustable
Input resistance, actual value Setpoint value	≥ 100 kΩ with voltage setpoint values ≈ 500 Ω with current setpoint values ≥ 100 kΩ with voltage setpoint values ≈ 500 Ω with current setpoint values
Safety	Short circuit proof (Terminals 41, 42 and 22, 24). Protection against incorrect polarity of operating voltage. Restriction of the output current. Protection against negative setpoint voltages.
Displays	LED green: ready for operation; LED yellow: ramp active; LED red: fault
Ambient temperature	0 to +60 °C
Degree of protection	IP 20 (DIN 40050)
Weight	0.210 kg

Type MPZ-1-24 = SGH-PI



1 H-rail to DIN EN 50022
2 G-rail to DIN EN 50035

Control elements and connections



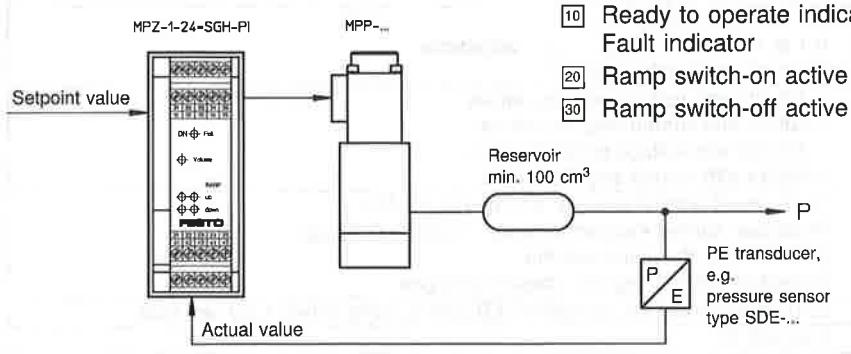
Terminals

11	Control line	0 V
12	Setpoint value current	I_{ref}
13		
14	Screening	PE
15	Signal output	w ∓ x
21	Earth	
22	Control line	0 V
23	Control line	V_{ref} = 0...10 V
24	Control line	+10 V
25	Screening	PE
31	Control line	0 V
32	Control line	V_x
33	Actual value current	I_x
34	Control line	$+V_{op}$
35	Signal output	FAIL
41	Solenoid supply line	–
42	Solenoid supply line	+
43	Voltage supply	–
44	Earth	
45	Voltage supply	+

Potentiometers, adjustable

⑩	Combined PI parameters	Volume
⑳	Ramp switch-on	Ramp up
㉚	Ramp switch-off	Ramp down

Closed loop connection



Displays

10	Ready to operate indicator	LED green
	Fault indicator	LED red
20	Ramp switch-on active	LED yellow
30	Ramp switch-off active	LED yellow