

Type MV

Horizontally-Mounted:
Trimod Proportional Switches

92 x 92mm
Flange

Up to 482°F
Temperature

Stainless steel
Wetted Parts



ABOUT TYPES M, MV, FM Trimod Proportional Switches

The M type units are for pneumatic proportional control applications. Equipped with a pneumatic control valve which converts the supply pressure of 20 psig to an output signal of 2.9 psig to 14.5 psig, proportional to changes in the liquid level. Also available with all parts in stainless steel.

Application Examples:

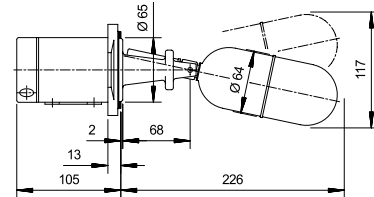
- Shipbuilding
- Refrigeration
- Chemical Engineering
- Food Industry
- Pulp and Paper
- Drinking Water Supply
- Sewage Treatment

For more information about our complete line of horizontally-mounted liquid level switches, visit our web site at:
<http://www.granzow.com/liquidlevelcontrols/horizontal/>

Type M 01 04 - For pneumatic proportional control applications

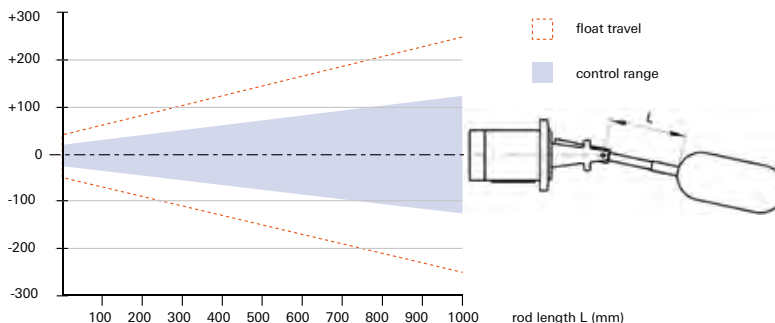
Equipped with a pneumatic control valve which converts the supply pressure of 1.4 bar to an output signal of 0.2 to 1 bar (Option: 7 to 15 psi), proportional to changes in the liquid level.

Nominal pressure	PN 25, max. 25 bar up to 250°C
Operating temperature	1 to 250°C
Ambient temperature	1 to 80°C
Density of liquid	min. 0.7 kg/dm ³
Control range	see table below
Control connections	G 1/8" (BSPP) inside thread
Control pressure	1.4 bar
Output signal	0.2 to 1 bar
Linearity	±5% (of full scale output)
Air flow	3.5 to 6.0 NI/min. (can be increased by using external booster valve)
Air consumption	max. 0.4 Nm ³ /h
Wetside material	Stainless steel (CrNiMo)
Flange material	Stainless steel (CrNiMo)
Housing material	Sea water resistant die cast aluminium
Counterflange	see page 38
Weight	approx. 1.7 kg
Air quality	class 3, ISO 8571 (max. particle size 5 µm, max. particle density 5 mg/m ³)



For operation at higher control pressure up to max. 10 bar

Control pressure in bar	Output signal in bar		Control range P max. / P min.
	min.	max.	
2	0.25	1.5	6
4	0.6	3.1	5.17
6	1.1	4.8	4.36
8	1.8	6.5	3.61
10	2.5	8.3	3.32



Control range

The normal control range is 30 mm, i.e. +15 mm/-15 mm from the centre line, measured in water at 20°C. With the float in the central position, the output is 0.6 bar. The control range can be increased by lengthening the float arm (see graph left).

**Type 5M 01 04 - For critical environments or high temperatures.
All parts stainless steel.**

As M 01 04, but housing also in stainless steel (CrNiMo) and therefore, highly corrosion resistant and suitable for operating temperatures up to 300°C. Weight approximately 2.2 kg.

Type MV 01 04 - For moist control air

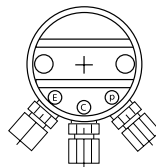
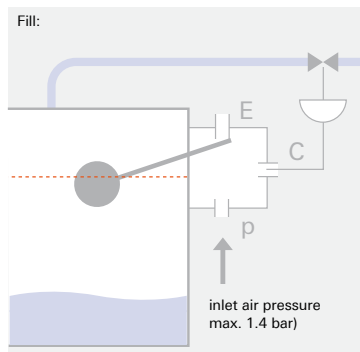
As M 01 04, but with drain valve for condensate removal.

Type FM 01 04 - For hazardous applications

As M 01 04, but functionally tested. Approved as a safety device for overflow protection. With declaration of conformity for use in explosion proof areas.

Type FMV 01 04 - For moist control air in hazardous applications

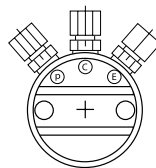
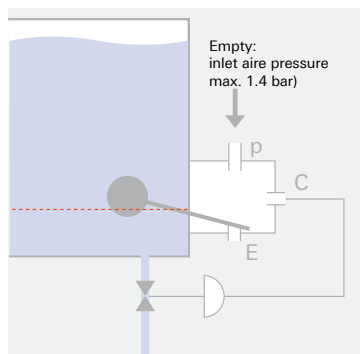
As FM 01 04, but with drain valve for condensate removal.
With declaration of conformity for use in explosion proof areas.



A

Control function

The standard air connection configuration is shown here. When filling, the output signal is decreasing proportionally to the rising level. The reverse function is obtained by turning the switch housing 180°C (see drawing B). This can be accomplished without interrupting the process.



B