MNR 7

Magnetic float level controller

INSTRUCTION MANUAL

BAMO MESURES
22, Rue de la Voie des Bans - Z.I. de la Gare - 95100 ARGENTEUIL
Tél : (+33) 01 30 25 83 20 - Web : www.bamo.fr
Fax : (+33) 01 34 10 16 05 - E-mail : info@bamo.fr

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MNR 7
19-12-2008 550 M1 01 E

MES
550-01/1

Safety precaution

Magnetic float switches which are installed into containers whose liquid content or metal walls may be touched by persons may only be operated with safety low-voltage in accordance with the standards.

RECOMMENDATIONS

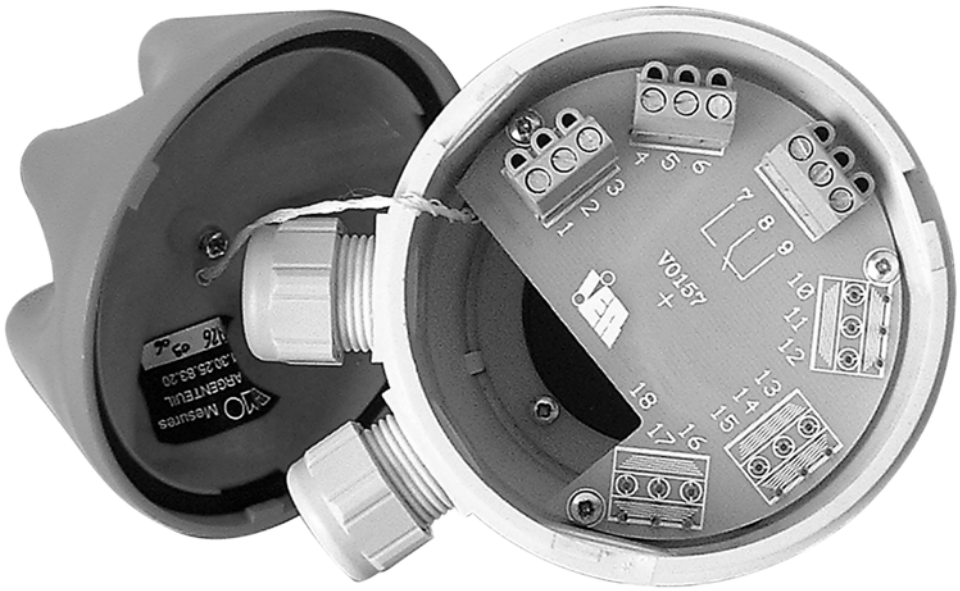
Consider the switching power of the Reed contacts and protect them when necessary. The relay ES2001 *(our data sheet 250)* is designed to protect the Reed contacts with a low voltage for the detection loop. The use and mounting of these devices must be out of magnetic induction field. Fit the instruments with non magnetic connections *(stainless steel or composite materials)*.
Any ferrous parts or made of ferro-alloys parts must be distant of 10 cm as a minimum from the Reed contacts. Liquids in contact with the instrument should be chemically compatible with the construction materials of all wetted parts. Media must be of low viscosity. Contamination such as clots of fat, crystallised materials, the formation of deposits with sticky media, solid particulates and magnetic metal chips result in interference.
MNR7 level controllers are suitable for automation ON/OFF of pumps and solenoid valves, low and high alarm signals, automatic tank filling up or draining, etc. Switches are mounted in the guide tube; they are actuated by the magnet built in the float, to allow 1 to 4 level detections within the application.

MOUNTING

Magnetic float switches may only be installed vertically, above the tank, its axis at 90° of angle with the liquid surface. The float can be removed for installation. The retaining nut (and the blocking ring if any) at the bottom of the stem must be removed to this end. The flange fitting version allow a removal and mounting without dismantling the float. Please observe that the word “TOP” must always appear at the top of the float during assembly. The lettering “TOP”, which appears on stainless steel float spheres, must not be upside-down. Once mounted above the tank, check the correct function of the contacts with a multimeter, and then proceed to wiring.

WIRING

Each screw connector corresponds to one of the contact. On the PCB, the status on the drawing corresponds to the float position under the Reed contact and out of the area of actuation of this contact.



Always check after wiring that cable glands are well water tight screwed and the head housing perfectly closed. This is to prevent condensation that causes short circuits on the contacts. The output cable may be orientated by turning around the head *(on 350° angle)*. Firmly maintain the process connection to rotate the head.

MAINTENANCE

When after a while the float moves with difficulty, proceed to depose it in order to clean the float and the stem. .

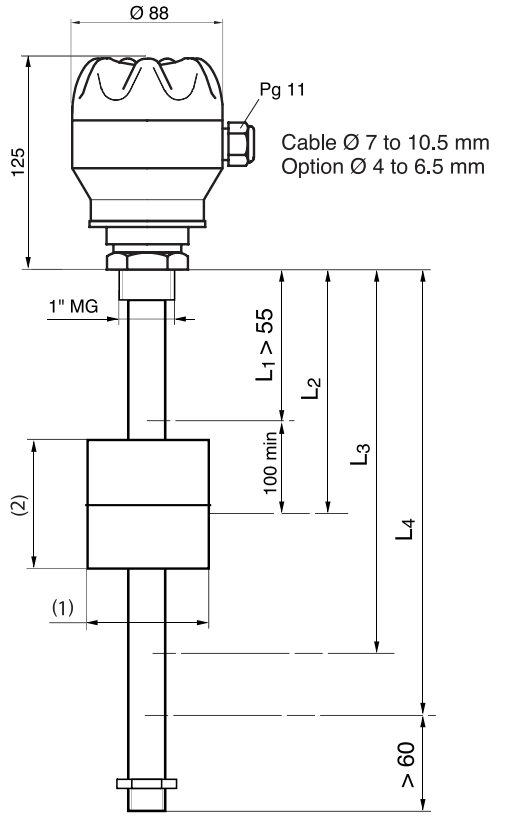
TECHNICAL FEATURES

REFERENCE	MNR 7 / PVC	MNR 7 / PPH	MNR 7 / PVDF	MNR 7 / PVC	MNR 7 / PPH	MNR 7 / PVDF
Code *(acc. to contacts number)*	550 10**1…4**	550 20**1…4**	550 30**1…4**	550 12**1…4**	550 22**1…4**	550 32**1…4**
Housing	PBT *Head fiber glass reinforced* – IP 65					
Guiding tube	PVC	PPH	PVDF	PVC	PPH	PVDF
Float material	PPH		PVDF	PPH		PVDF
Float Diameter **(1)**	52 mm		78 mm	52 mm		78 mm
Float height **(2)**	72 mm		70 mm	72 mm		70 mm
Process connection	BSP 1" MG			BSP 2" MG		
Option*: flange PN 10	DN 100 (550 120)	DN 100 (550 220)	DN 100 (550 320)			
Maximum length	2 500 mm					
Minimum length	250 mm					
Minimum specific weight	0,75 g /L					
Pressure higher limit	1 bar at 20 °C					
Temperature limits	0 … +60 °C	0 … +80 °C	0 … +110 °C	0 … +60 °C	0 … +80 °C	0 … +110 °C
Contact code number	550 050					
Switching power capacity	60 VA					
Distance between 2 contacts	100 mm					
Accuracy	± 2 mm					
Hysteresis	8 mm					
Upper dead zone	55 mm					
Lower dead zone	60 mm					

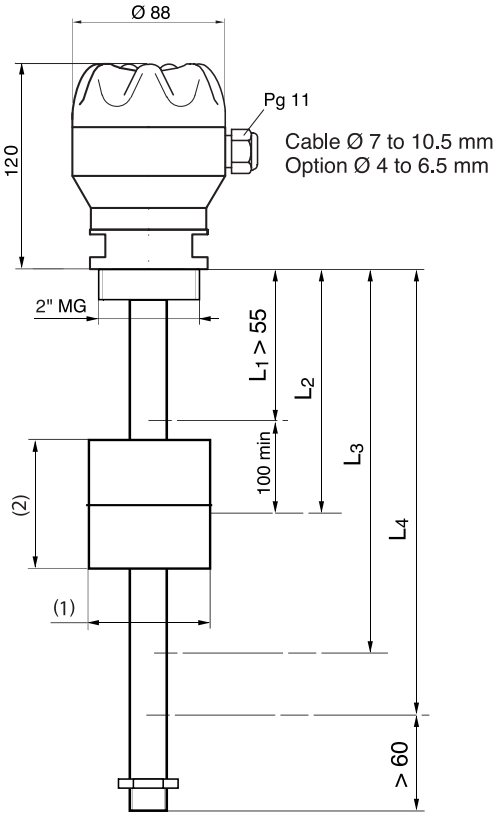
*: The flange DN 100 (option), allows an installation without float disassembling.

(1) & (2)

Please, see details for each models



Version raccord 1”



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