

# MNR 7

## Stainless steel Magnetic float level controller



## INSTRUCTIONS MANUAL

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550 M1 02 E

**MES**

**550-02/1**

**Safety precautions:** 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 ES 2001 (*our data sheet 250-02*) 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.

## APPLICATIONS

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 into the float, to allow 1 to 4 level detections.

## 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.

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.

## CARACTERISTIQUES TECHNIQUES

Housing:	PBT Head fibre glass reinforced – IP 65
Guiding Tube:	Stainless steel DIN 1.4404 (AISI 316 L)
Float material:	Stainless steel DIN 1.4571 (AISI 316Ti)
Float diameter:	91 mm
Float height:	110 mm
Process connection:	BSP 1"
Flange PN 10 (Option*):	DN 100 (Code number 550 420)
Maximum length:	3 000 mm
Minimum length:	250 mm
Minimum specific weight:	750 g/L
Pressure higher limit:	25 bar
Temperature limits:	-20...+110°C
Contact, code number:	550 050
Switching power capacity:	60 VA
Minimum distance:	100 mm ( <i>between 2 contacts</i> )
Accuracy:	±2 mm

