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CE 0948

COSTRUZIONI MECCANICHE ELETTRICHE

Instructions and maintenance rules for:

Float level indicators CLR

CLR20, CLR22

STANDARD FEATURES

CLR is a sensor for the detection of level thresholds on any type of liquid, whose operating principle is based on a permanent magnet (encapsulated inside the float) and frictionless reed contacts. Available in **CLR20** and **CLR22** versions.

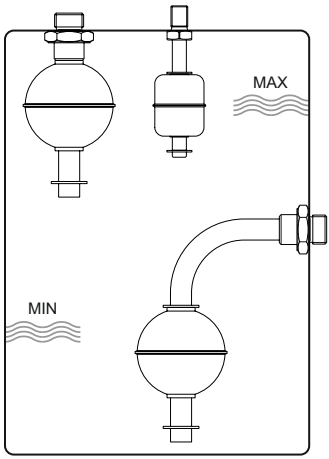
	CLR20	CLR22
Signal output:	SPST (alternatively, NO or NC contact)	
⚠ RESISTIVE LOADS ONLY — MAX switch power:	80 VA	70 VA
MAX switch voltage:	250V AC/DC	300V AC/DC
MAX switch current:	1,3A	1,5A
Connection to process:	G 3/8 (BSPP)	G 1/8 (BSPP)
Cable size:	2x1mm² (AWG17) / 150° / L=600mm	2x0,34mm² (AWG22) / 80° / L=600mm
Process temperature:	-20 ... +70°C (14 ... 158°F)	
MAX pressure:	15 bar	
Materials:	float EN 1.4571 (AISI 316Ti), body EN 1.4401 (AISI 316)	
Minimum fluid density:	0,7 Kg/dm³	

SAFETY RULES

All the operations described in this documentation must be carried out only by qualified personnel, authorized by the plant manager, applying the appropriate safety precautions to reduce risk of fire, electric shock or injury.
Operational safety of the appliance is only guaranteed if used in compliance with regulations, in accordance with the instructions for use and any additional instructions. Arbitrary transformations or modifications are strictly prohibited. In case of improper use, the appliance can be a source of dangers associated with the specific application, or damage to the plant, following incorrect assembly or adjustment.
Check that the power supply system complies with the regulations, with built-in automatic protection switch.
Any inspection, cleaning, maintenance, change or replacement of parts must be carried out with the indicator unpowered and plug disconnected from the power supply.

INSTALLATION

Before installation, carry out a visual check of the equipment to make sure that it has not suffered any damage during transport or storage. If the control reveals anomalies, the product must be sent to the manufacturer to restore efficiency.
The instrument must be installed inside the tank, in a vertical position (A) with a maximum error of ± 30 degrees, or in a horizontal position (C) for the curved version only. Make sure that there are no external magnetic fields that could alter the operation of the reed.



Vertical and lateral installation examples

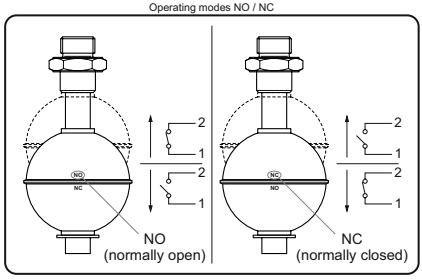
ELECTRICAL CONNECTION

Disconnect the power supply before proceeding with the electrical connection of the device. For voltages above 50V, make sure that the indicator is grounded correctly.
In the case of tanks of insulating material, always connect the indicator body to the ground with a suitable eyelet (* not supplied) screwed under the external nut. The **CLR20** is also available with M12 connector (for voltages up to 150V).

OPERATION

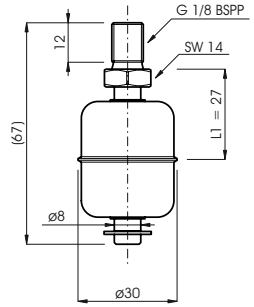
The rising level of a liquid causes the float to rise, which runs vertically guided by the body of the indicator. When the permanent magnet, encapsulated in the float, comes in the proximity of the reed contact, it causes it to close by switching the state of the signal circuit.
The indicator does not require external power sources. To reverse the operating mode, remove the stop ring at the end and reverse the float.
The indication stamped on the sphere towards the threaded end indicates the operating mode: NC = closed circuit in the absence of liquid; NO = open circuit in the absence of liquid.

Operating modes NO / NC



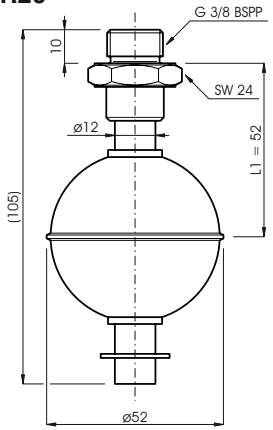
REFERENCE FIGURES

CLR22



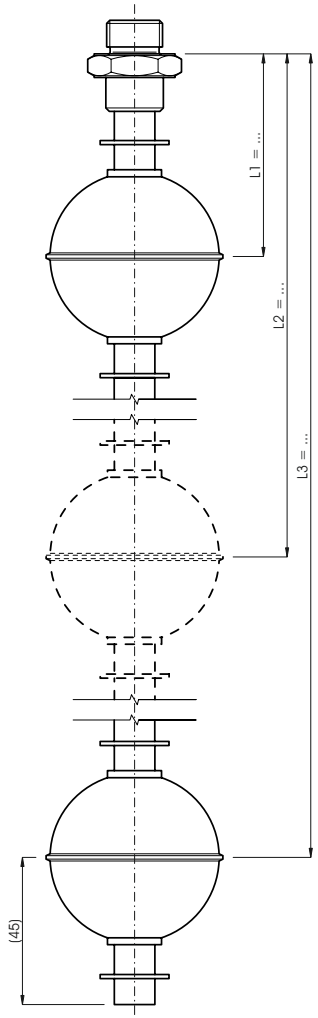
L MAX = 1000 mm

CLR20



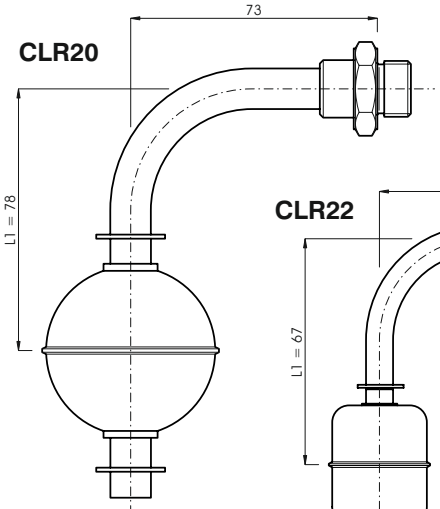
L MAX = 2000 mm

3 levels example

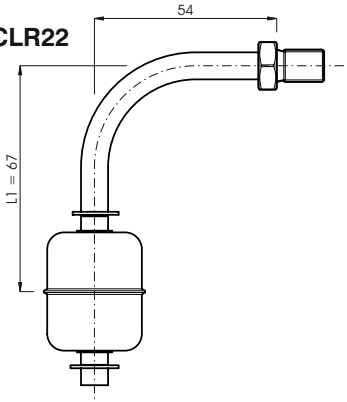


Please note: max 2 levels for **CLR22**

CLR20



CLR22



Curved version

MAINTENANCE

Periodically check that there are no solid deposits (e.g. limescale) on the central rod of the indicator body that could obstruct the movement of the float. The electrical components inside the indicator do not require any maintenance.

WARRANTY

CAMLogic, in addition to the terms of the supply contract, guarantees its products for a period of twenty-four (24) months from the date of shipment. This warranty is expressed only in the repair or replacement free of charge of parts that, after careful examination by the Manufacturer, turn out to be defective.

Warranty, excluding all liability for direct or indirect damage, is considered to be restricted to only defects in materials and has no effect if the parts returned turn out to have been anyhow dismantled, tampered with or repaired by anyone other than the Manufacturer.

Warranty likewise excludes damage deriving from negligence, carelessness, bad or improper use of the level gauge, or from bad handling by the operator and faulty installation. Warranty is moreover forfeit if non-genuine spare parts have been used.

A returned level gauge, even if under warranty, must be shipped carriage free.