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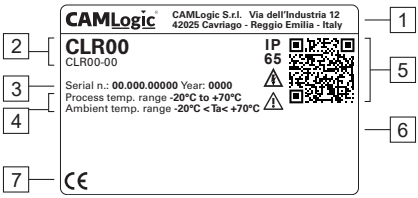
UK CA CE 0948

COSTRUZIONI MECCANICHE ELETTRICHE

Operating and maintenance instructions for float level indicator series CLR

PRODUCT IDENTIFICATION

The **CLR** series float level indicators are used for the detection of level thresholds on any type of liquid. They are available in two versions, **CLR20** and **CLR22**, with up to 3 or 2 floats, respectively, for detecting several different levels of the desired fluid. The device is identified by the label on the side of the case, the characteristics of which are given below:



1. Manufacturer information
2. Product model and reference code for the specific configuration
3. Serial number and year of production
4. Ambient and process temperature range
5. QR code leading to the specific configuration and IP rating
6. Usage warnings
7. Conformities and certification symbols

Tampering with the label voids certifications and warranty.

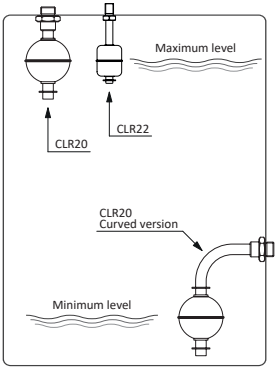
PRODUCT CHARACTERISTICS

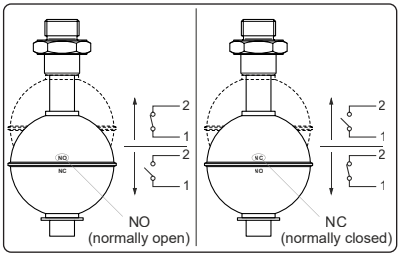
	CLR20	CLR22
Materials:	float in stainless steel AISI 316Ti / EN 1.4571, body in stainless steel AISI 316 / EN 1.4401	
Connection to process:	G 3/8 (BSPP)	G 1/8 (BSPP)
Float diameter:	52 mm	30 mm
MAX switch power:	80 VA	70 VA
MAX switch voltage:	250V AC/DC	300V AC/DC
Max switch current:	1,3 A	1,5 A
Cable size:	2x0,75mm² (AWG18) / 70° / L=600mm	2x0,34² (AWG22) / 80° / L=600mm
Signal output:	SPST (alternatively, NO or NC contact)	
Process temperature:	-10 ... +70°C (14 ... 158°F) standard / -40° ÷ +120°C (-40° ... +248°F) with silicon cable	
Ambient temperature:	-10 ... +70°C (14 ... 158°F) standard / -40° ÷ +120°C (-40° ... +248°F) with silicon cable	
Protection rating:	IP 67 (dust-tight, protected against the effects of immersion in water)	
Minimum fluid density:	0,7 Kg/dm³	
Max pressure:	15 bar (217,5 psi)	

⚠ RESISTIVE LOADS ONLY

INSTALLATION

The instrument must be installed inside the tank, in a vertical position with a maximum error of ± 30 degrees, or in a horizontal position for the curved version only.
Make sure that there are no external magnetic fields that could alter the operation of the instrument. The rising level of a liquid causes the float to rise, which runs vertically guided by the body of the indicator. When the float is pushed upwards by the liquid, its movement causes the signal to switch.
To change the operating mode of the instrument, remove the lower retaining ring, then remove the float and turn it upside down. Finally, insert it back down the tube and fit the retaining ring back into its seat.
The standard indicator is supplied with the float positioned to give a NO signal, which, when the float is inverted, becomes NC. The CLR20 comes with the letters NO and NC printed on its float, however those are not present on the smaller float of the CLR22.



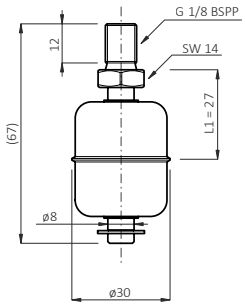


WIRING

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).

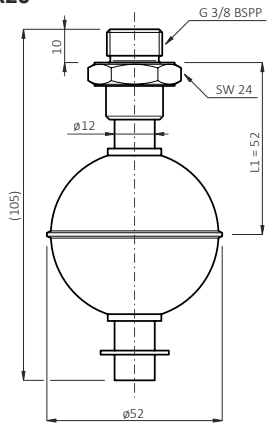
REFERENCE FIGURES

CLR22



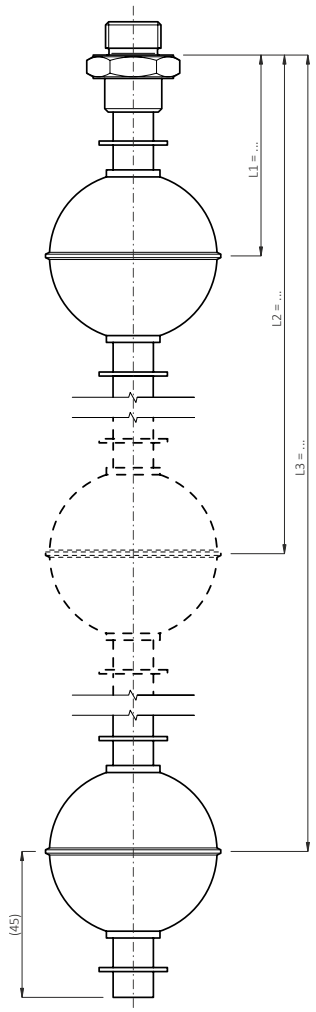
L MAX = 1500 mm

CLR20



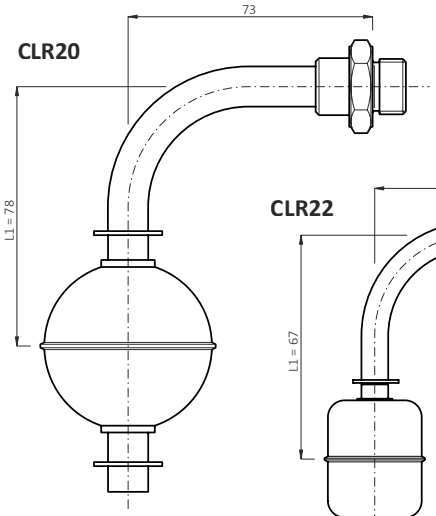
L MAX = 2000 mm

3 levels example

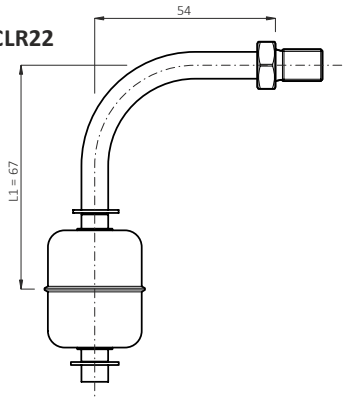


Please note: max 2 levels for **CLR22**

CLR20



CLR22



Curved version

SAFETY WARNINGS

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.
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.

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.

REPAIRS

The CLR level sensors can only be repaired by the manufacturer CAMLogic or following instructions from the manufacturer.
In case of doubts concerning malfunctions or repairs, contact the manufacturer:
CAMLogic S.r.l. - Via dell'Industria 12-12/A - 42025 Cavriago - Italy (camlogic@camlogic.it - www.camlogic.it).

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 indicator, even if under warranty, must be shipped carriage free.

CLR20 Learn more about the product and find drawings of each model on our website. CLR22

Symbol	Reference	Description
	IEC 60417-6042 (2010-11)	Caution: risk of electric shock
	ISO 7000-0434B (2004-01)	Caution: if the instrument is used in a manner not specified by the manufacturer, the protection offered by the equipment may be impaired.

Please note: the printed version of this manual may not reflect the most recent changes.
Please always refer to the updated digital version available on the official CAMLogic website: www.camlogic.it