



# LC 12

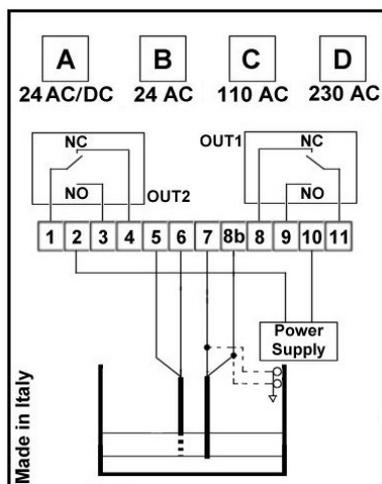
Conductivity level switch  
with cable connection alarm



## Technical data

Power supply:	24 VAC/DC 110-230 VAC
Models:	LC12 R
Power consumption:	2VA / 1,8W max
Electrode voltage:	5 VAC max
Electrode current:	0,1 mA max
Sensibility:	0 – 70 K $\Omega$ (adjustable)
Minimum conductivity:	15 $\mu$ S
Storage temperature:	from -30 to +80°C
Working temperature:	from -20 to +60°C
Relative humidity:	from 0 to 85%, no condensate
Output:	2 SPDT relays
Contact rating:	7A @ 250 VAC (resistive load) 3A @ 230 VAC (single-phase motor)
Switching time:	8 msec Max
Release time:	3 msec Max
Visual signalling:	Green LED → Power supply Red LED (OUT2) → Level threshold Yellow LED (OUT1) → Cable Alarm
Switching delay:	0,3 sec from N.C. to N.O. 1,5 sec from N.O. to N.C.
Protection:	IP20
Installation:	35 mm DIN rail
Dimensions:	90(H) x 35(L) x 60(P) mm

## Electrical connections and applications



LC12 level switch needs two metal electrodes for working. First electrode have to be connected at terminal (5) and (6), while the second electrode have to be connected at terminal (7) and (8b). If you are using a metallic tank, it is possible to use only one electrode at terminal (5) and (6), connecting metal structure at terminal (7) and (8b).

## General

LC12 sense liquid level detecting conductivity between two electrodes installed in a tank to control. When liquid reaches electrodes, a current flows between them causing instrument intervention. The voltage between electrodes is alternate, to avoid electrolysis phenomenal in liquid and electrodes corrosion. Include a safety circuit that constantly check the state of electrical connections to electrodes.

## Operation and calibration

When electrode is uncovered, relay is energized and so the red LED on front will be lighted. When liquid reaches electrode, the relay and red LED state will change.

**In case one of the connection to electrodes will interrupt, safety relay OUT1 will de-energize and yellow LED will unlit, causing contemporaneous de-energize of relay OUT2, to avoid any damages to process.**

If you need to calibrate the sensibility, put the sensibility trimmer to minimum and liquid level to reach contact with the electrode. Then turn the trimmer until relay state will change. In order to have a sensibility margin, turn again the trimmer for 10-15% rotation toward maximum.

For a correct installation in the cabinet board, the instrument must be about 1cm far from other instruments.

## Warranty

The warranty is valid for 12 months from purchase, and expires if instrument is improperly used or not correctly installed on system.



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