

# RAL12

Technical data

Power supply:	24-115-230 Vac.
Power consumption:	3 VA max.
Electrode voltage:	11 Vac max
Electrode current:	1,5 mA max
Sensibility:	0 ÷ 47Kohm
Adjustment range:	470Kohm ÷ 47Kohm
Adjustment range (S):	21microS ÷ 2100microS
Storage temperature:	-30 ÷ +80 °C
Working temperature:	-10 ÷ +50 °C
Output:	1 change-over contact + 1 N.O.
Contact rating:	3A 250Vac (resistive load)
Sensibility adjustment:	trimmer
Display:	green led = supply yellow led = safety red led =level threshold

# RAL12

825B044B

Conductivity level switch with safety alarm



fig.1

## RAL12 General

RAL12 unit works as resistive level switch. Internal circuits detect constantly the electrical connection to the electrodes. If a bad electrode connection happens the safety relay becomes de-energized giving the alarm. The above control avoid to damage the process if something happens on the wiring of the electrodes.



## RAL12 Application

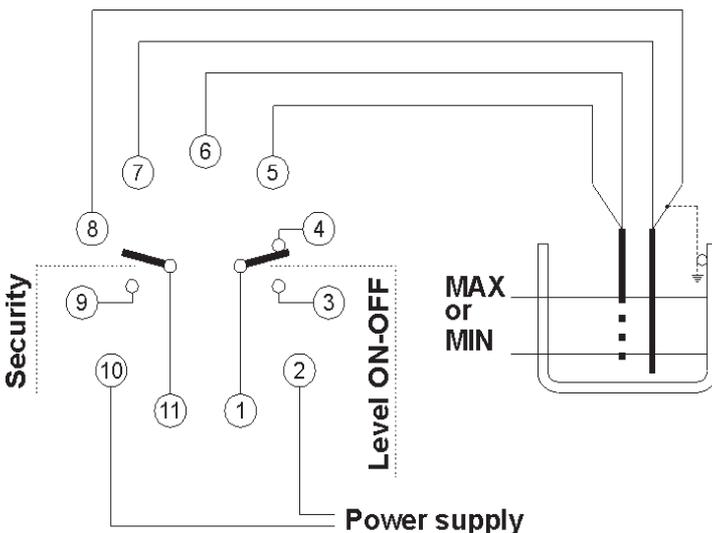


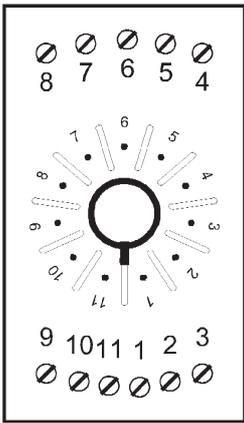
fig.2

When RAL12 is used with a single control point it operates as a minimum or maximum switch-point.

To works properly as a single control point need two electrodes, if the tank is metallic, one electrode can be substituted from the tank wall as a reference electrode consequently, for a double control point need three electrodes, but using the metallic wall of the tank as a reference electrodes, only two electrodes are requested. The electrode must installed in a vertical position.

The safety relay is energized during normal working, if one of the four wires is cutted, than safety relay change in de-energized condition and the yellow LED switch off.

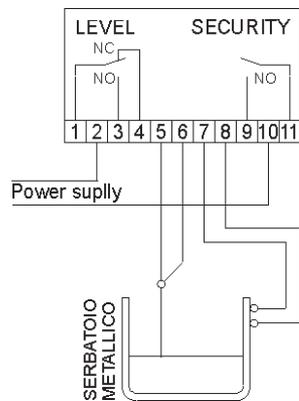
## RAL12 Electrical connections



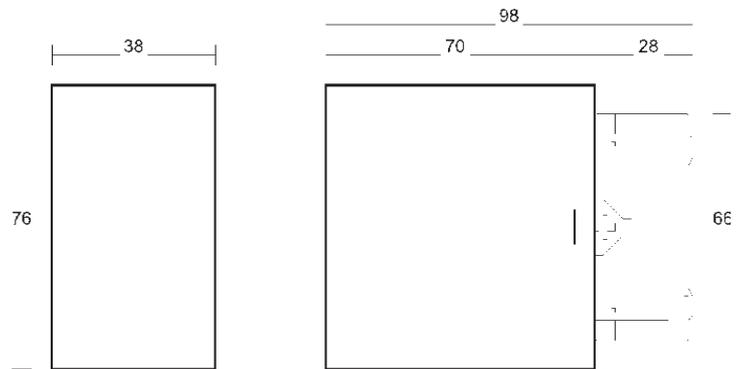
The electrical connection is made with the undecal socket. The socket is designed to be fixed in the din-rail. The suggested wires are from 0,5 to 1mm<sup>2</sup>.

ATTENTION! Look to the lateral label the RAL12 main supply voltage.

24Vac   
  115Vac   
  230Vac



## RAL12 Mechanical installation

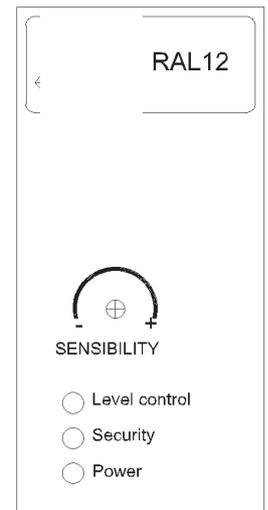


## RAL12 Calibration

In absence of alarm (normal condition) the level relay is energized. It become de-energized when MAX level is detected, safety condition is detected (one or more of the four electrode wires are cutted) or power supply switch off

Normally no sensibility adjustment is required, but if it needs, to calibrate the sensibility do the following steps:

- put the sensibility trimmer to minimum (-)
- increase the level until to reach the active electrode and turn the trimmer until the relay becomes de-energized (red LED off)
- in order to have a sensibility margin turn again for 10-15% the trimmer toward maximum (+)



## RAL12 Warranty

The warranty expires when damages they have provoked from the use not quite or from not correct installations. The warranty is valid for a period of 12 months from the acquisition behind presentation of the manual present of installation. All the reparations in warranty will have realised beside our establishment in Rodano (MI), the costs of dismounting and reinstalling of the device and the costs of transport will be paid by the customer.

## RAL12 Factory test certificate

In conformity to the production and check procedures I certify the equipment:

RAL12 ..... serial n. ....  
 satisfy technical characteristics as write in TECHNICAL DATA  
 and it is conform to the internal procedures  
 Quality control Manager

.....  
 Date of manufacture:



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