

# LRM

## Technical data

Power supply:	24, 115, 230 Vac
Power consumption:	5 VA max.
Analog Outputs:	0÷10V on min 3Kohm 4÷20mA on max 500ohm
Digital outputs:	4 change-over contacts
Hysteresis:	1% o 2 % selectable
Contact rating:	3A 250Vca
Display:	green led - supply red led - threshold
Storage temperature:	-30÷+80 °C
Working temperature:	-10÷+50 °C
Mechanical protection:	IP00
Version:	DIN rail standard mounting
Weight:	0,3 Kg
Dimensions:	76,7x205 deep 60

825B018A

# LRM

## Reed relay probes converter

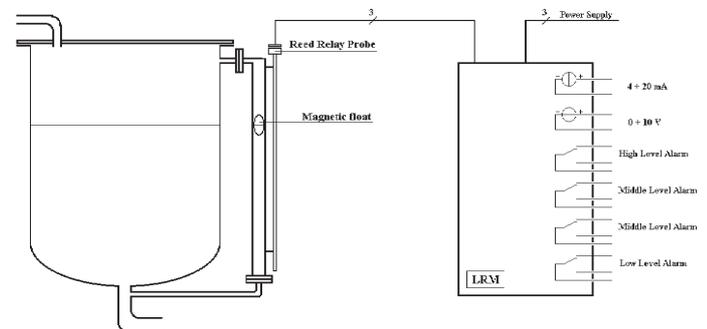
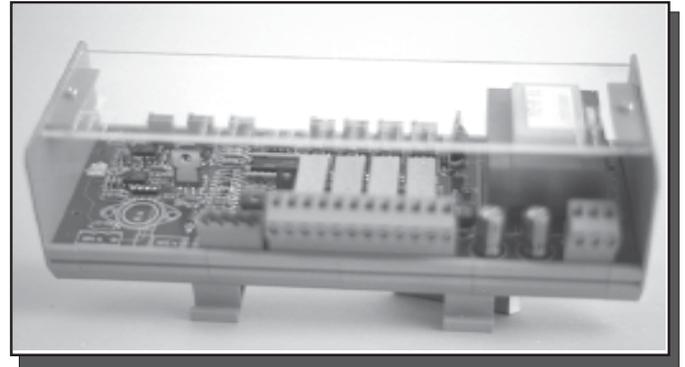


fig.2

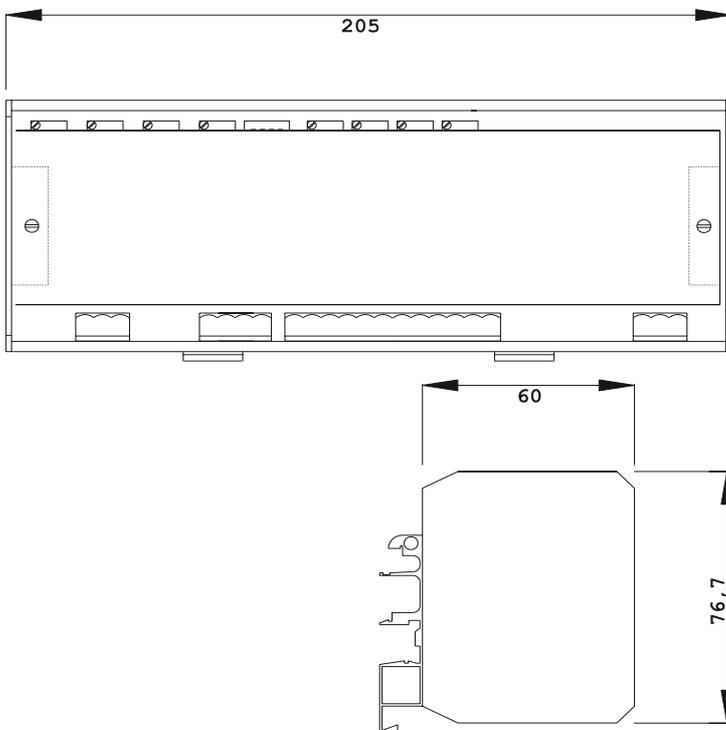


fig.1



## LRM General

The level measurement is based on the magnetic field generated from a magnet poked into a float, that swim in the surface of the liquid to be measured (fig.2). The float is forced to move up and down of a pipe (depends to the level), and the relevant field influence the reed-contact internally to the pipe changing the internal resistance. The changing of the internal resistance is due to the position of the float because the reed contact can short circuit a part of the resistance inside in a pipe function of its position.

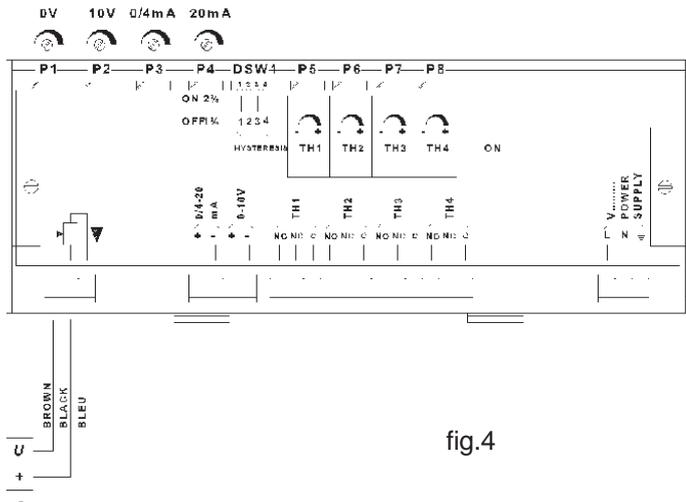
## LRM Electrical connections

The diagram of the electric connections has shown in figure 4.

Minimum section of the cables: 0.5 mm<sup>2</sup>

Maximum length of the cables: 250 m

The cables of connection must have separate run from the cables of power.



## LRM 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.

## LRM Factory test certificate

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

LRM ..... serial n. ....  
satisfy technical characteristics as write in TECHNICAL DATA  
and it is conform to the internal procedures

Quality control Manager

Date of manufacture:



GESINT S.r.l.  
Via Perosi, 5  
20010 Bareggio (MI)  
Tel. 02/9014633 - 335/6282615  
Fax. 02/90362295  
e-mail: [info@gesintsrl.it](mailto:info@gesintsrl.it)  
[WWW.GESINTSRL.IT](http://WWW.GESINTSRL.IT)

## LRM Calibration

The measure range specified in the ordering code represent the maximum limit to which the device could work; by changing the gain the measure range specified could be reduced to one half. Standard calibration ( 0÷10V, 4÷20mA) is achieved by only regulating the output voltage; the output current is set automatically. If a different calibration for the voltage and current is required you can act on the corresponding trimmers, shown on the card, to achieve it.

The 4 thresholds are totally independent and adjustable within all the level range.

The hysteresis of the thresholds could be equal to 1% or 2% of the bottom scale value and it is selectable by setting a dip-switch.

### 0÷10V 4÷20mA calibration.

This is the standard calibration. If your measure range is equal to that specified in the ordering code then the device don't require any calibration. If you want a different measure range you must act as follows:

- measure the output voltage with a good voltmeter;
- set the liquid level in the tank to 0% and, acting on the trimmer P0, set the output voltage to 0V. Automatically the output current is set to 4mA;
- set the liquid level in the tank to 100% and, acting on the trimmer P10, set the output voltage to 10V. Automatically the output current is set to 20mA.

### Particular calibrations.

If you want a different calibration for the output current you must proceed as follows:

- measure the output voltage with a good voltmeter and the output current with a good amperometer;
- set the liquid level in the tank to 0%. Acting on the trimmer P0 set the output voltage to 0V. Acting on the trimmer P0/4 set the output current to the minimum value (for example 0mA);
- set the liquid level in the tank to 100%. Acting on the trimmer P10 set the output voltage to 10V. Acting on the trimmer P20 set the output current to the maximum value (for example 20mA).

### Note

The current calibration depends on the voltage calibration so you must first regulate the voltage trimmers and then the current trimmers. If you don't want a wrong calibration you must follow the instructions scrupulously.

### Thresholds calibration.

The calibration of the thresholds is performed in the following way:

- set the liquid level in the tank to the alarm level;
- starting from minimum, turn slowly the trimmer of the threshold to be calibrate until to get the desexcitation of the relay; at this point turn the trimmer toward the minimum until to get the excitation of the relay. The trimmer must be positioned between the two points that determine the relay release.

### Hysteresis calibration.

The hysteresis threshold could be equal to 1% or 2%. The standard setting is 2%; if you want a more precise threshold the hysteresis could be led to 1% by setting the deep-switch on the OFF position.

