

Technical data

Power supply:	24VAC/DC switching
Power consumption:	2VA / 1,8W max
Input signal:	Potentiometric
Reed probe voltage:	5 Vdc
Analogue output:	0/4-20mA or 0/2-10V
Output impedance:	Max 750Ω (mA) or Min 1KΩ (V)
Relay output:	1 SPDT relay
Mechanical life:	min. 10 ⁷ cycles
Electrical life:	N.O. @ 3A 250VAC : 5x10 ⁴ N.C. @ 2A 250VAC : 2x10 ⁵
Contact rating:	3A @ 30 VDC (resistive load) 3A @ 250 VAC (resistive load)
Programming:	2 push buttons
Protection:	IP20
Storage temperature:	from -30 to +80°C
Working temperature:	from -20 to +60°C
Relative humidity:	from 0 to 85%, no condensate
Installation:	35 mm DIN rail
Electrical connection:	Removable terminal board
Dimensions:	90(H) x 35(L) x 60(P) mm

CE mark according to *Directive 89/336/CEE*, complies with the following harmonised regulations: *EN50081-1, EN 50082-2, EN55022, EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-11* and *Low Voltage Directive 73/23/CEE* and subsequent modifications.

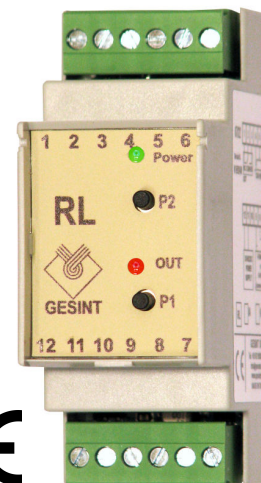
Warranty

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



RL

Level transmitter for reed probe



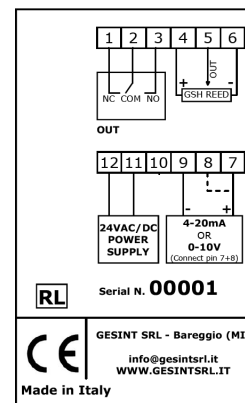
RL transmitter convert the level measure from a GSH reed probe and a magnetic float in a 4-20mA or 0-10Vdc analog output signal. The output signal of the instruments is proportional to the distance between minimum and maximum point set during calibration.

The transmitter is supplied with 1 relay output that can be used as level threshold or alarm.

Digital calibrations and settings with 2 push buttons.



Electrical connection



It is recommended to use a connection cable of at least 0,5mmq section and a maximum length of 100mt. Connection cables must have separate run from power cables.

If the reed probe is installed upside-down, that is with the output connector near the minimum level, the connection polarity (PIN 4 and 6) must be inverted to obtain an output matching the level measured.

In order to use voltage output (0-10V) pin 7 and 8 must be connected together.

RL Serial N. **00001**

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LED signalling

GREEN LED (Power):

- ON: transmitter is powered and working
- Fast blinking: programming mode
- Slow blinking: empty or invalid data in eeprom, transmitter need to be calibrated (both output and level)

RED LED (Out1 - Out2):

- ON: active level threshold
- Blinking: programming mode

0-100% level calibration

In order to access the 2 programming buttons, pull up the front cover of the transmitter. Then connect a reference multimeter to the analogue output pins.

- 1) Press **P1** button for at least 3 seconds, until **GREEN** led start blinking, and **RED** leds blink alternatively.
- 2) Set fluid level at minimum and wait until value on multimeter is stabilized. Then press and release **P1** button.
- 3) Now only one of the two **RED** leds is blinking. Set fluid level at maximum and wait until value on multimeter is stabilized. Then press and release **P2** button.
- 4) **RED** leds are now blinking together. Press both **P1** and **P2** and release them so that transmitter writes in memory the data acquired.

It is possible to acquire only of the two level settings, by pressing **P1** button for minimum level or **P2** button for maximum level and then confirm by pressing both **P1** and **P2**.

Relay settings

It is possible to use the relay output as level threshold or alarm in case the reed probe is not sensing the magnetic float.

In order to access the 2 programming buttons, pull up the front cover of the transmitter. Then connect a reference multimeter to the analogue output pins.

- 1) Press **P2** button for at least 3 seconds, until **GREEN** led start blinking, and **RED** leds blink alternatively.
- 2) - **Use relay as level threshold:** Set fluid at the desired level and wait until value on multimeter is stabilized. Now press and release **P1**.
- **Use relay as alarm:** press and release **P2**.
- 3) To store acquired relay setting press and release both **P1** and **P2**.

Is it possible to disable relay on the transmitter by executing only step 1) and 3).

4-20mA or 0-10V output calibration

During manufacturing and factory testing, the transmitter is calibrated for 4-20mA or 0-10V output using precise instruments. This calibration should be executed only if a different output type or range is needed.

During this calibration phase, relay output will be activated for diagnostic purpose. It is recommended to disconnect wires from pin 1, 2 and 3.

In order to access the 2 programming buttons, pull up the front cover of the transmitter. Then connect a reference multimeter to the analogue output pins.

- 1) While transmitter is powered off, keep pressed both **P1** and **P2** buttons and then power on.
- 2) Keep both buttons pressed for at least 3 seconds, until **GREEN** led start blinking: now it's possible to release them.
- 3) **RED** led below P1 is now on, indicating the output calibration corresponding to the minimum level.
- 4) Press **P2** for increase and **P1** for decrease the output value, until you read on multimeter the needed value (ex. 0,0Vdc or 4,0mA).
- 5) Now press both **P1** and **P2** and release them.
- 6) **OUT RED** led is now on, indicating the output calibration corresponding to the maximum level.
- 7) Press **P2** for increase and **P1** for decrease the output value, until you read on multimeter the needed value (ex. 10,0Vdc or 20,0mA).
- 8) Now press both **P1** and **P2** and release them.
- 9) Both **RED** led remain on for a few seconds while data are stored in the transmitter.
- 10) Transmitter reset itself and start working.