Zelio Control - measurement and control relays

Liquid level control relays (low and high sensitivity), model RM 84 870

- *Regulation of two thresholds:*
  - *minimum,*
  - *maximum.*
- *Emptying control*
- *Probes with a.c. current flowing through them.*
- *Sensitivity adjustment potentiometer on front panel of the device.*
- *Sensitivity adjustable from:*
  - *250 kΩ to 5 kΩ (low sensitivity),*
  - *50 kΩ to 1 MΩ (high sensitivity).*

Operating principle

Control of maximum and/or minimum levels of conductive liquids (tap water, sea water, waste water, chemical solutions, coffee ...).

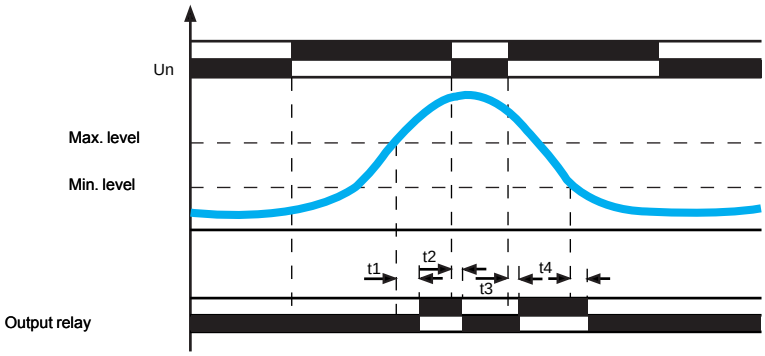
The operating principle is based on measurement of the apparent resistance of the liquid between two submerged probes. When this value is less than the threshold setting on the front panel of the device, the output relay changes state. To avoid electrolytic phenomena, an a.c. current runs across the probes.

Applications in the food-processing, chemical industries, etc.

Regulation of two levels, minimum/maximum

The output relay changes state when the level of the liquid reaches the maximum level probe, with the minimum level probe submerged. It returns to its initial state when the minimum level probe is no longer in contact with the liquid.

Emptying control



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References

RM 84 870 131

Emptying control relays (low and high sensitivity)

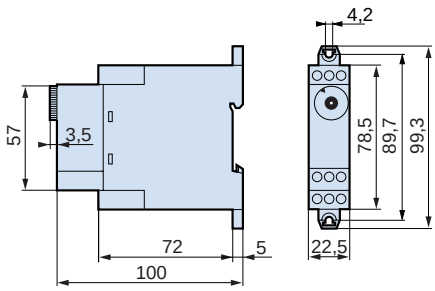
Voltage	Sensitivity	Reference	Weight kg
∼ 24 V	250 Ω…5 kΩ	**RM 84 870 121**	0.150
	50 kΩ…1 MΩ	**RM 84 870 131**	0.150

Note : the probe cable (maximum length 100 metres) needs not be screened, but it is inadvisable to fit it in parallel with the power supply cables.
If a screened cable is used, do not exceed the capacities indicated.

Characteristics

Relay type			**RE 84 870 121**	**RE 84 870 131**
Supply voltage		**V**	∼ 24 (50/60 Hz)	
Supply range			± 15 % of Un - 15…+ 10 % if other products are mounted on the same rail	
Maximum power consumption		**VA**	3	
Sensitivity adjustment			250 kΩ…5 kΩ	50 kΩ…1 MΩ
Measurement accuracy (at maximum sensitivity)			± 30 %	± 30 %
Maximum electrode voltage		**V**	∼ 24 (50/60 Hz)	∼ 24 (50/60 Hz)
Maximum electrode current			3 mA (50/60 Hz)	50 µA (50/60 Hz)
Maximum cable capacity		**nF**	100	1
Initialisation time	(t3)	**ms**	650	650
Response time	High level (t1)	**ms**	600	600
	Low level (t4)		300 ms	2 seconds
Output relay (to meet AC-1 requirements, resistive load)			1 C/O contact, cadmium-free, 8 A/ ∼ 250 V	
Galvanic isolation via transformer (4 kV, 8 mm creepage distance)			Class II VDE 0551	
Isolation of contacts and electrodes from the supply 1 min/1 mA/50 Hz (IEC 60 225-5)		**kV**	∼ 2.5	
Creepage distance and clearance	Conforming to IEC 60664-1	**kV**	4kV/2	
Ambient air temperature	Operation	**°C**	- 20…+ 60	
	Storage	**°C**	- 30…+ 70	
Degree of protection	Enclosure		IP 50	
	Terminal block		IP 20	
Enclosure material			Self-extinguishing Pc	
Product certifications			c UL us, CSA	

Dimensions



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