

Zelio Control - measurement and control relays

Voltage control relays with memory, self-powered, model RM 84 872

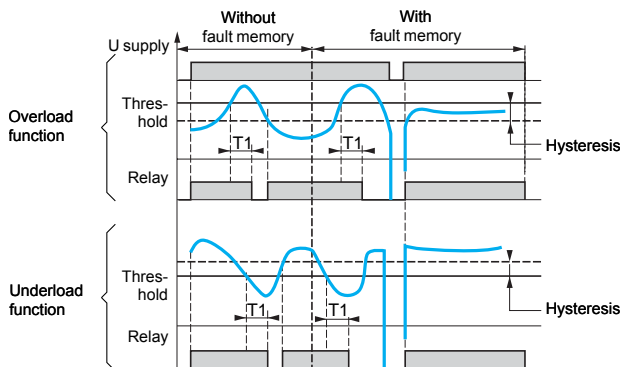
- Simple to install, these threshold relays check their own supply voltage level.
- RM4 84 872 04● : Select "Overvoltage" or "Undervoltage" mode and the memory function by means of dip switches, then set the delay on crossing threshold T1.
- RM4 84 872 05● : set the required high and low voltage thresholds and the delay on crossing threshold T1.

Operating principle

Overvoltage-undervoltage control with memory

Two operating modes are available :

- a.c. / d.c. voltage control without memory,
- a.c. / d.c. voltage control with memory (see previous page).

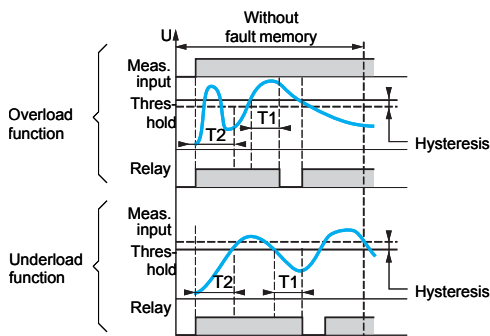


Threshold without memory

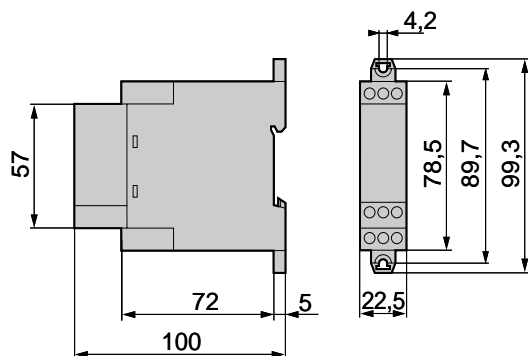
The window threshold relay controls an electrical voltage which acts as its own power supply (simplified wiring). When the value of the controlled voltage, a.c. or d.c., goes outside the window, the output relay de-energises at the end of a time delay T1 which can be set on the front panel between 0.1 and 3 s.

It re-energises when the voltage returns within the window and stays between the upper and lower thresholds displayed by two potentiometers on the front panel. A fixed hysteresis ensures bounce-free relay switching around the thresholds.

Note : time delay T1 on crossing the upper and lower thresholds provides immunity to transients, so preventing spurious triggering of the output relay.



Dimensions



Zelio Control - measurement and control relays

Voltage control relays with memory,
self-powered, model RM 84 872

References



RM 84 872 0●●

Type	Voltage to be measured	Reference	Weight kg
With memory	~ or --- 20...80 V	RM 84 872 046	0.100
	~ or --- 65...260 V	RM 84 872 047	0.100
Without memory	~ or --- 20...80 V	RM 84 872 056	0.100
	~ or --- 65...260 V	RM 84 872 057	0.100

Supply characteristics

Relay type		RM 84 872 04●	RM 84 872 05●
Supply voltage Un	V	~ or --- 20...80, ~ or --- 65...260	
Operating range	V	15...150, 50...275	
Maximum consumption	~ 260 V	VA	6,7
	~ 80 V	VA	2
	--- 260 V	W	2
	--- 80 V	W	0,8

Output characteristics

Output relay		1 cadmium-free C/O contact	
Rated current	A	8	
Switching current	V	~ 250	
Maximum voltage	V	~ 440	
Rated breaking capacity	VA	2000	
Minimum breaking current	mA	100 at --- 12 V	
Electrical life	AC-12	10 ⁵ operating cycles at 8 A at ~ 250 V	
Mechanical life		2 x 10 ⁷ operating cycles	
Time delay	On crossing the threshold T1	s	0.1...3 ± 10 %
Delay on pick-up		ms	500

Input characteristics

Relay type		Measures its own supply voltage	
Measurement range	V	20...80 or 65...260 depending on model	
Frequency of the signal measured	Hz	50...60 ± 1	
Hysteresis		Adjustable 5...20 %	Fixed 5 %
Threshold setting accuracy		± 10 %	
Repeat accuracy	With constant parameters	± 0.3 %	
Temperature drift		± 0.5 % per °C	

Other characteristics

Temperature	Operation	°C	- 20...+ 50
	Storage	°C	- 40...+ 70
Relative humidity	Without condensation		95 %
Enclosure material			Self-extinguishing
Degree of protection	Conforming to IEC 60529		Enclosure : IP 40D, terminal block : IP 20
Connection	Flexible cable w/o cable end	mm ²	1 x 4 or 2 x 2.5
	Flexible cable with cable end	mm ²	2 x 1.5
Tightening torque		N.m	1
Dielectric strength	Conforming to IEC 60255-5	kV	2.5 kV for 1 min at 1 mA 50 Hz
Creepage distance and clearance	Conforming to IEC 60664-1	kV	4 kV/3
Vibration resistance	Conforming to IEC 60068-2-6		a = 0.35 mm

Immunity to electromagnetic interference (EMC) (application class 2 conforming to EN 61812-1)

Electrostatic discharge	Conforming to IEC/EN 61000-4-2		Level 3 (6 kV contact, 8 kV air)
Electromagnetic fields	Conforming to IEC/EN 61000-4-3		Level 3 (10 V/m)
Fast transients	Conforming to IEC/EN 61000-4-4		Level 3 (2 kV)
Shock waves	Conforming to IEC/EN 61000-4-5		Level 3 (2 kV)
Radio frequencies	Conforming to IEC/EN 61000-4-6		Level 3 (10 V rms)
Voltage dips and breaks	Conforming to IEC/EN 61000-4-11		30 % for 10 ms, 60 % for 100 ms and 1 s, > 95 % for 5 s and 10 ms
Damped oscillatory wave at 1 MHz	Conforming to IEC 61255-22-1		Class III
Radiated and conducted emissions			Class B