

- Space savings, accurate measurement and optimised functions to improve the safety of your electrical installation.
- These relays allow you to ensure that your equipment is working under correct conditions, by checking their supply voltage.
- Control: select "Overvoltage" or "Undervoltage" mode by means of a dip switch.
- Safety: in the same way, choose whether or not to activate the fault memory function and the delay on threshold crossing.
- Accuracy: 2 products for greater measuring accuracy, provided by a microprocessor.

Operating principle

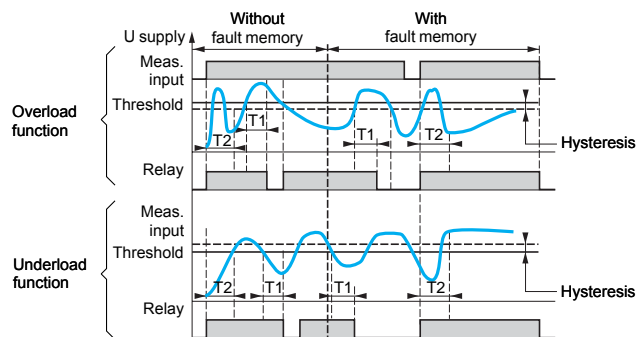
Control of a.c. / d.c. voltage without memory

When the value of the controlled voltage, a.c. or d.c., reaches the threshold U_e displayed on the front panel, the output relay changes state at the end of a time delay T_1 , which can be set on the front panel to between 0.1 and 3 s.

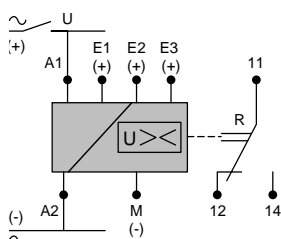
As soon as the voltage drops below 5 to 50% of the threshold (hysteresis), the output relay instantly changes state again. Changing the hysteresis on the front panel does not therefore modify the value of the preset threshold.

Control of a.c. / d.c. voltage with memory

When the value of the controlled voltage, a.c. or d.c., reaches the U_e threshold displayed on the front panel, the output relay changes state at the end of a time delay T_1 , which can be set on the front panel to between 0.1 and 3 s, and remains latched in this position.

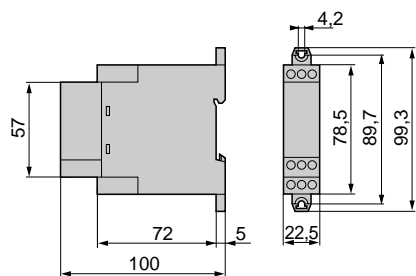


Connection schemes

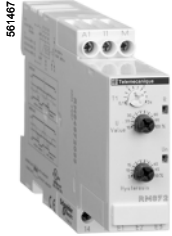


A1 - A2 : Supply

Dimensions



References



RM 84 872 03●

Measurement range	Supply voltage	Reference	Weight kg
0.2...60 V	~ 24 V	RM 84 872 021	0.120
	~ 120 V	RM 84 872 023	0.120
	~ 230 V	RM 84 872 024	0.120
15...600 V	~ 24 V	RM 84 872 031	0.120
	~ 120 V	RM 84 872 033	0.120
	~ 230 V	RM 84 872 034	0.120

Auxiliary supply characteristics

Relay type		RM 84 872 02●	RM 84 872 03●
Supply voltage Un	V	24, 120, 230 50/60 Hz (galvanic isolation by transformer)	
Operating range		0.8...1.15 Un	
Average consumption	VA	3	

Output characteristics

Output relay		1 cadmium-free C/O contact	
Rated current	A	8	
Switching voltage	V	~ 250	
Maximum voltage	V	~ 440	
Rated breaking capacity	VA	2000	
Minimum breaking current	mA	100 at ~ 12 V	
Electrical life	AC-12	10 ⁹ operating cycles at 8 A at ~ 250 V	
Mechanical life		2 x 10 ⁷ operating cycles	
Time delay	On crossing threshold T1	s	0.1...3 ± 10 %
	On crossing threshold T2	s	1...20 ± 10 %
Delay on pick-up	ms	500	

Input characteristics

Measurement range	V	0.2...60	15...600					
Frequency of the measured signal	Hz	40...500						
Adjustable hysteresis		5...50 % of the threshold setting						
Threshold value		10...100 % of the range						
Threshold setting accuracy		± 10 %						
Measurement ranges	Inputs	E1-M	E2-M	E3-M	E1-M	E2-M	E3-M	
	Sensitivity	V	0.2...2	1...10	6...60	15...150	30...300	60...600
	Input resistance	kΩ	2	10	60	100	300	600

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 = 0.035 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