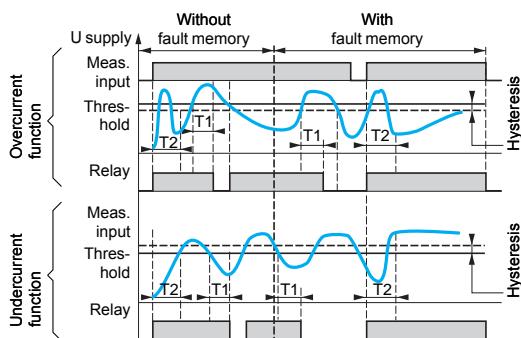


- Space savings, accurate measurement and optimised functions to improve the safety of your electrical installation.
- Control: select "Overcurrent" or "Undercurrent" mode by means of a dip switch on the underside of the unit.
- Safety: in the same way, choose whether or not to activate the fault memory function and set the threshold crossing delay T1 and the inhibit time delay T2.
- a.c./d.c. mode is detected automatically.
- Accuracy: 3 products enable you to choose the best product for greater measuring accuracy, provided by a microprocessor.



During the time delays, the yellow LED flashes at a frequency of 1 Hz.

Operating principle

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

When the value of the controlled current, either a.c. or d.c., reaches the threshold displayed on the front panel, the output relay changes state at the end of time delay T1.

It instantly returns to the initial state when the current drops below the hysteresis threshold, or when the power supply is disconnected.

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

The output relay changes state at the end of time delay T1 and remains latched in this position. To reset it, the memory function must be reactivated by disconnecting the auxiliary supply.

Overcurrent function

The time delay on energisation T2 prevents current peaks due to motor starting. The delay on upward crossing of threshold T1 provides immunity to transients and other interference, thereby preventing spurious triggering of the output relay.

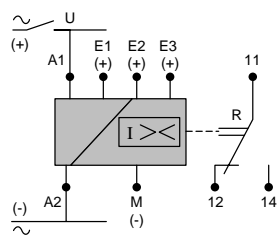
Undercurrent function

The time delay on energisation T2 prevents the occurrence of current troughs. The delay on downward crossing of threshold T1 provides immunity to random dips, thereby preventing spurious triggering of the output relay.

Note : In "undercurrent" mode, the absolute value of the hysteresis cannot be greater than the measurement range maximum.

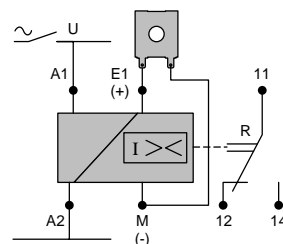
Connection schemes

RM 84 871 02●, RM 84 871 03●



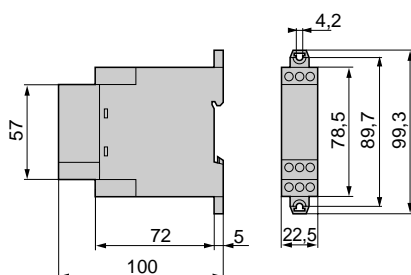
A1 - A2 : Supply

RM 84 871 044



A1 - A2 : Supply

Dimensions



References



RM 84 871 0●●

Current control relay

Measurement range	Supply voltage	Reference	Weight kg
2...500 mA	~ 24 V	RM 84 871 021	0.150
	~ 120 V	RM 84 871 023	0.150
	~ 230 V	RM 84 871 024	0.150
0.1...10 A	~ 24 V	RM 84 871 031	0.150
	~ 120 V	RM 84 871 033	0.150
	~ 230 V	RM 84 871 034	0.150
10...100 A with current transformer	~ 230 V	RM 84 871 044	0.150

Accessories

Description	Reference	Weight kg
Current transformer	RM 26 852 304	0.065

Auxiliary supply characteristics

Relay type		RM 84 871 021 RM 84 871 023 RM 84 871 024	RM 84 871 031 RM 84 871 033 RM 84 871 034	RM 84 871 044
Supply voltage Un	V	24, 120, 230 50/60 Hz (galvanic isolation by transformer)		230 50/60 Hz
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 ⁵ 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 energisation T2	s	1...20 ± 10 %

Input characteristics

Measurement range	mA	2...500	–	–					
	A	–	0.1...10	10...100, with current transformer					
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	E1-M	
	Sensitivity	mA	2...20	10...100	50...500	–	–	–	–
		A	–	–	–	0.1...1	0.5...5	1...10	10...100
	Input resistance	kΩ	5	1	0.2	0.1	0.2	0.01	4

Other characteristics

Temperature	°C	Operation: -20...+50, storage: -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	mm ²	Flexible cable without cable end: 1 x 4 or 2 x 2.5, flexible cable with cable end: 2 x 1.5	
Tightening torque	N.m	1	
Dielectric strength	Conforming to IEC 60255-5	kV	2.5 for 1 min at 1 mA 50 Hz
Creepage distance and clearance	Conforming to IEC 60664-1	kV	4kV/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