

Zelio Control - measurement and control relays

Phase sequence and loss of phase
control relays, model RM 84 873

- Control:
 - phase sequence,
 - loss of one or more phases,
 - undervoltage.
- Senses its own supply voltage.
- Potentiometer for adjustment of mains power.
- Time delay in the event of a fault adjustable : 0.2 to 10 s.
- Relay output: 2 C/O contacts, 8 A.
- Power-on and relay state indication by 2 LEDs.

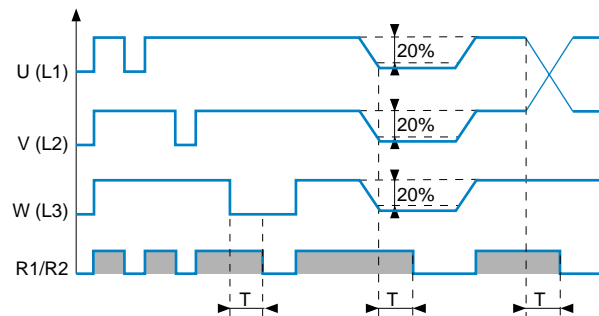
Operating principle

On a 3-phase supply, this relay simultaneously monitors phase sequence, loss of a phase with a maximum regeneration rate of 70 % of the voltage indicated by a potentiometer on the front panel and symmetrical voltage drop on the 3 phases of less than 20 % of the preset value.

When the 3 phases are in sequence, the output relay is energised and this is indicated by a yellow LED.

The output relay de-energises (LED off) after a time delay T, adjustable between 0.2 and 10 s on the front panel, if one of the following faults occurs:

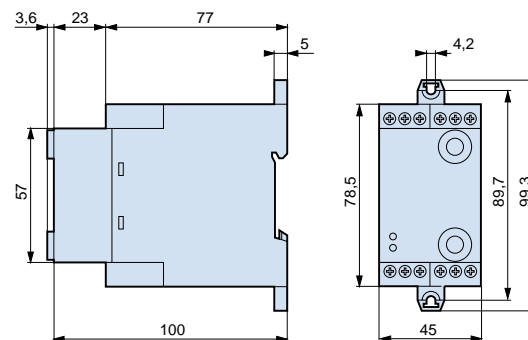
- reversed direction of phase rotation,
- absence of one or more phases,
- voltage drop.



Note :

Time delay T is not operational during loss of L1 and L2. It operates during loss of L3, phase inversion or voltage drop. Its purpose is to avoid spurious triggering of the output relays during transient states, notably during motor starting.

Dimensions



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References



RM 84 873 010

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Voltage	Setting range V	Reference	Weight kg
3 x ~ 230 V	~ 180...260	RM 84 873 010	0.350
3 x ~ 400 V	~ 320...460	RM 84 873 012	0.350
3 x ~ 480 V	~ 380...550	RM 84 873 015	0.350
3 x ~ 575 V	~ 460...660	RM 84 873 016	0.350

Technical characteristics

Supply		Self-powered, terminals L1-L2
Operating range		0.7...1.2 x Un
Frequency	Hz	50/60
Maximum consumption	VA	6
Immunity to microbreaks	ms	10
Delay on pick-up	ms	500
Creepage distance and clearance	Conforming to IEC 60664-1 kV	4kV/3

Input characteristics

Measurement input resistance	kΩ	1 at Un
Regeneration rate		max. 70 % of the threshold setting
Undervoltage detection (symmetrical drop)		~ 20 % of the threshold setting
Threshold setting accuracy		± 10 %

Output characteristics

Output type		2 C/O contacts, AgCdO
Breaking capacity		~ 2000 VA, --- 80 W
Maximum breaking current	A	~ / --- 8
Minimum breaking current	mA	~ / --- 100
Maximum switching voltage	V	~ / --- 250
Electrical life		2000 VA - 10 ⁵ operating cycles
	AC-15	Cos φ = 0.3 - 6000 operating cycles
	DC-13	L/R = 300 ms - 6000 operating cycles
Time delay in the event of a fault	s	0.2...10 Max : 10...15

Other characteristics

Indication	Power on Relay		Green LED Yellow LED
Enclosure			Self-extinguishing PC
Terminals	Without cable end With cable end Tightening torque	mm ² mm ² Nm	2 x 2.5 2 x 1.5 0.6 max
Temperature limits	Operation Storage	°C °C	- 20...+ 60 - 30...+ 70
Relative humidity			93 % without condensation
Vibration	Amplitude Frequency	mm Hz	0.35 10...55
Insulation resistance	Conforming to IEC 60664-1	MΩ	> 100 at 500 V
Dielectric strength		kV	3 at 1 mA for 1 minute/50 Hz
Product certifications			c UL us, CSA