



Main

Range of product	Zelio Control
Product or component type	Modular measurement and control relays
Relay type	Multifunction control relay
Product specific application	For 3-phase supply
Relay name	RM17TE
Relay monitored parameters	Asymmetry Phase failure detection Phase sequence Undervoltage and overvoltage in window mode
Time delay	Adjustable 0.1...10 s, 10 %
Switching capacity in VA	1250 VA
Measurement range	183...528 V AC

Complementary

Reset time	1500 ms for time delay
Maximum switching voltage	250 V AC 250 V DC
Minimum switching current	10 mA at 5 V DC
Maximum switching current	5 A AC 5 A DC
[Us] rated supply voltage	208...480 V AC 3 phases
Supply voltage limits	183...528 V AC
Control circuit voltage limits	- 12 %, + 10 % Un
Power consumption	<= 1.8 VA AC
Control circuit frequency	50...60 Hz +/- 10 %
Output contacts	1 C/O
Nominal output current	5 A
Hysteresis	2 %
Run up delay at power up	0.5 s time delay
Measuring cycle	<= 150 ms measurement cycle as true rms value
Threshold adjustment voltage	+2...+17 % in the range 480 V AC -2...-12 % in the range 208 V AC -2...-17 % in the range 220 V AC 2...20 % of Un selected
Voltage range	208 V phase to phase 220 V phase to phase 380 V phase to phase 400 V phase to phase 415 V phase to phase 440 V phase to phase 480 V phase to phase
Adjustment of asymmetry threshold	5...15 % of Un selected
Measurement accuracy	+/- 10 % of the full scale value
Repeat accuracy	0.5 % for input and measurement circuit 3 % for time delay
Measurement error	< 0.05 %/°C with temperature variation < 1 % over the whole range with voltage variation
Phase failure sensitivity	0.7 Un
Response time	< 200 ms in the event of a fault

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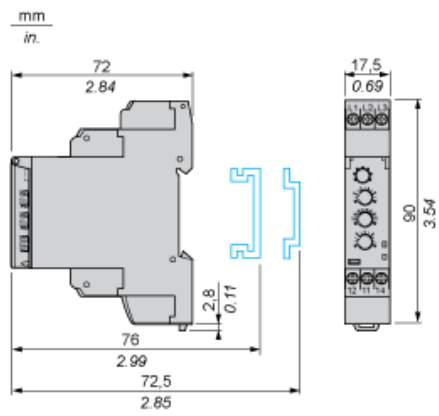
Marking	CE : 73/23/EEC CE : EMC 89/336/EEC
Overvoltage category	III conforming to IEC 60664-1
Insulation resistance	> 500 MOhm at 500 V DC conforming to IEC 60255-5 > 500 MOhm at 500 V DC conforming to IEC 60664-1
[Ui] rated insulation voltage	400 V conforming to IEC 60664-1
Supply frequency	50/60 Hz +/- 10 %
Operating position	Any position without
Electrical connection	1 conductor cable 0.2...2.5 mm ² AWG24...AWG12 flexible with cable end conforming to IEC 60947-1 1 conductor cable 0.5...4 mm ² AWG20...AWG11 solid without cable end conforming to IEC 60947-1 2 conductors cable 0.2...1.5 mm ² AWG24...AWG16 flexible with cable end conforming to IEC 60947-1 2 conductors cable 0.5...2.5 mm ² AWG20...AWG14 solid without cable end conforming to IEC 60947-1
Tightening torque	0.6...1 N.m conforming to IEC 60947-1
Housing material	Self-extinguishing plastic
Status LED	1 LED green for power ON 1 LED yellow for relay ON
Mounting support	35 mm symmetrical DIN rail conforming to EN/IEC 60715
Electrical durability	100000 cycles
Mechanical durability	30000000 cycles
Operating rate	<= 360 operations/hour under full load
Utilisation category	AC-12 conforming to IEC 60947-5-1 AC-13 conforming to IEC 60947-5-1 AC-14 conforming to IEC 60947-5-1 AC-15 conforming to IEC 60947-5-1 DC-12 conforming to IEC 60947-5-1 DC-13 conforming to IEC 60947-5-1
Width	17.5 mm
Product weight	0.13 kg

Environment

Immunity to microbreaks	10 ms
Electromagnetic compatibility	Emission standard for industrial environments conforming to EN/IEC 61000-6-4 Emission standard for residential, commercial and light-industrial environments conforming to EN/IEC 61000-6-3 Immunity for industrial environments conforming to EN/IEC 61000-6-2
Standards	EN/IEC 60255-6
Product certifications	CSA C-Tick GL GOST UL
Ambient air temperature for storage	-40...70 °C
Ambient air temperature for operation	-20...50 °C
Relative humidity	95 % at 55 °C conforming to IEC 60068-2-30
Vibration resistance	0.35 mm (f = 5...57.6 Hz conforming to IEC 60068-2-6/IEC 60255-21-1 1 gn (f = 57.6...150 Hz conforming to IEC 60068-2-6/IEC 60255-21-1
Shock resistance	15 gn for 11 ms conforming to IEC 60255-21-1
IP degree of protection	IP20 (terminals) conforming to IEC 60529 IP30 (casing) conforming to IEC 60529
Pollution degree	3 conforming to IEC 60664-1
Dielectric test voltage	2 kV 1 min AC 50 Hz conforming to IEC 60255-5 2 kV 1 min AC 50 Hz conforming to IEC 60664-1
Non-dissipating shock wave	4 kV conforming to IEC 60255-5 4 kV conforming to IEC 60664-1 4 kV conforming to IEC 61000-4-5
RoHS EUR status	Compliant
RoHS EUR conformity date	0701

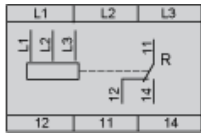
Multifunction 3-Phase Supply Control Relays

Dimensions and Mounting



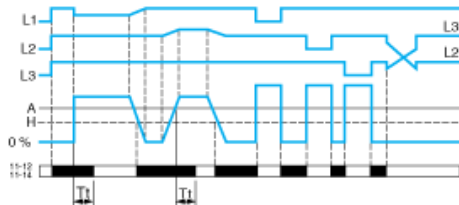
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Wiring Diagram



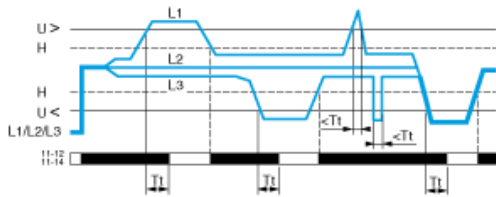
Function Diagrams

Phase Sequence Control, Phase Failure Detection ($U_{\text{measured}} < 0.7 \times \text{nominal supply voltage}$) and Asymmetry Detection



- Tt Time delay after crossing of threshold (adjustable on front panel)
 - L1, Phases of the supply voltage monitored
 - L2,
 - L3
 - A Asymmetry threshold (adjustable from 5...15% of the nominal supply voltage)
 - H Hysteresis
 - 11-12 Output relay connections (refer to Connections and Schema)
 - 11-14
- Relay status: black color = energized.

Control of Overvoltage and Undervoltage in Window Mode



- Tt Time delay after crossing of threshold (adjustable on front panel)
 - H Hysteresis
 - U> Overvoltage threshold
 - U< Undervoltage threshold
 - L1, Phases of the supply voltage monitored
 - L2,
 - L3
 - 11-12 Output relay connections (refer to Connections and Schema)
 - 11-14
- Relay status: black color = energized.

The overvoltage and undervoltage threshold in window mode is adjustable from 2...20% of U_n :

U_n	208 V	220 V	380, 400, 415, 440 V	480 V	
Voltage threshold (%)	<	- 12...- 2	- 17...- 2	- 20...- 2	- 20...- 2
>	+ 2...+ 20	+ 2...+ 20	+ 2...+ 20	+ 2...+ 10	