

RM35TF30

multifunction phase control relay RM35-T -
range 194..528 V AC



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	RM35TF
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	194...528 V AC

Complementary

Reset time	≤ 1500 ms for at 480 V
Maximum switching voltage	250 V DC 250 V AC
Minimum switching current	10 mA at 5 V DC
Maximum switching current	5 A DC 5 A AC
[Us] rated supply voltage	220...480 V AC
Supply voltage limits	194...528 V AC 3 phases
Control circuit voltage limits	- 12 %, + 10 % U_n
Power consumption in VA	≤ 22 VA 400 V AC 50 Hz
Voltage detection threshold	< 194 V
Control circuit frequency	50...60 Hz +/- 10 %
Output contacts	2 C/O
Nominal output current	5 A
Hysteresis	2 %
Delay at power up	≤ 650 ms
Measuring cycle	≤ 140 ms measurement cycle as true rms value
Threshold adjustment voltage	+2...+10 % in the range 480 V AC +2...+20 % in the range 220...440 V AC -12...-2 % in the range 220 V AC 2...20 % of U_n selected -20...-2 % in the range 380...480 V AC
Voltage range	480 V phase to phase 440 V phase to phase 415 V phase to phase 400 V phase to phase 380 V phase to phase 220 V phase to phase
Adjustment of asymmetry threshold	5...15 % of U_n selected
Measurement accuracy	+/- 10 % of the full scale value
Repeat accuracy	0.5 % for input and measurement circuit 0.3 % for time delay
Measurement error	0.05 %/°C with temperature variation < 1 % over the whole range with voltage variation
Response time	< 200 ms in the event of a fault

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric Industries SAS nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

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 60664-1 > 500 MOhm at 500 V DC conforming to IEC 60255-5
[Ui] rated insulation voltage	400 V conforming to IEC 60664-1
Supply frequency	50/60 Hz +/- 10 %
Operating position	Any position without
Electrical connection	2 conductors cable 0.5...2.5 mm ² AWG20...AWG14 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 1 conductor cable 0.5...4 mm ² AWG20...AWG11 solid without cable end conforming to IEC 60947-1 1 conductor cable 0.2...2.5 mm ² AWG24...AWG12 flexible with 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 yellow for relay ON 1 LED yellow for fault 1 LED green for power 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	DC-13 conforming to IEC 60947-5-1 DC-12 conforming to IEC 60947-5-1 AC-15 conforming to IEC 60947-5-1 AC-14 conforming to IEC 60947-5-1 AC-13 conforming to IEC 60947-5-1 AC-12 conforming to IEC 60947-5-1
Width	35 mm
Product weight	0.13 kg

Environment

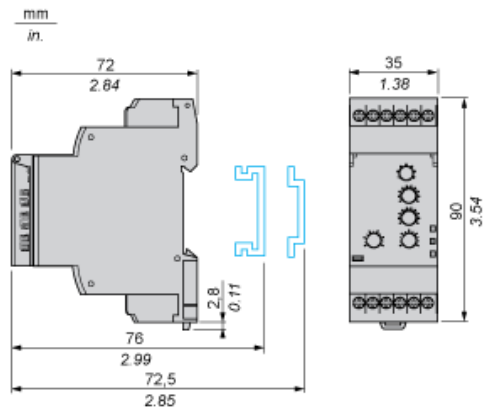
Electromagnetic compatibility	Immunity for industrial environments conforming to EN/IEC 61000-6-2 Emission standard for residential, commercial and light-industrial environments conforming to EN/IEC 61000-6-3 Emission standard for industrial environments conforming to EN/IEC 61000-6-4
Standards	EN/IEC 60255-1
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	1 gn (f = 57.6...150 Hz) conforming to IEC 60068-2-6/IEC 60255-21-1 0.35 mm (f = 5...57.6 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	IP30 (casing) conforming to IEC 60529 IP20 (terminals) conforming to IEC 60529
Pollution degree	3 conforming to IEC 60664-1
Dielectric test voltage	2 kV 1 min AC 50 Hz
Non-dissipating shock wave	4 kV

Contractual warranty

Period	18 months
--------	-----------

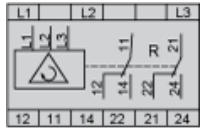
Multifunction 3-Phase Supply Control Relays

Dimensions and Mounting



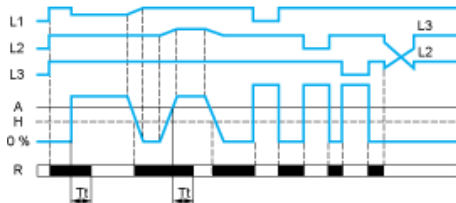
Multifunction 3-Phase Supply Control Relays

Wiring Diagram



Function Diagrams

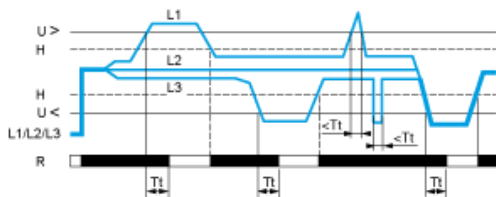
Phase Sequence Control, Phase Failure Detection (U measured < 0.7 x nominal supply voltage) and Asymmetry Detection



- 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
- R Output relay

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
- R Output relay

Relay status: black color = energized.

The overvoltage and undervoltage thresholds in window mode are adjustable from 2...20% of Un (nominal supply voltage):

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