

RM35TF30

Zelio, 3 phase supply control relay, range 220 to 480 VAC, sequence, phase failure, phase imbalance, voltage



Main

Range of Product	Harmony Control Relays
Product or Component Type	3-phase control relay
Relay Type	Multifunction control relay
Product Specific Application	For 3-phase supply
Relay name	RM35TF
Relay monitored parameters	Undervoltage and overvoltage in window mode Phase sequence Phase failure detection Asymmetry
Time delay	Adjustable 0.1...10 s, +/- 10 % of the full scale value
Switching capacity in VA	1250 VA
Measurement range	220...480 V voltage AC
Contacts type and composition	2 C/O
[Uc] control circuit voltage	220...480 V

Complementary

Reset time	1500 ms at 480 V
Maximum switching voltage	250 V AC 250 V DC
Minimum switching current	10 mA 5 V DC
Maximum switching current	5 A AC 5 A DC
Supply voltage limits	194...528 V AC, 3 phase
Control circuit voltage limits	- 12 % + 10 % Un
Power consumption in VA	0...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
Measurement voltage limits	176...528 V AC
Hysteresis	2 %
Delay at power up	650 ms
Maximum measuring cycle	140 ms measurement cycle as true rms value
Threshold adjustment voltage	-20...-2 % in the range 380...480 V AC 2...20 % of Un selected -12...-2 % in the range 220 V AC +2...+20 % in the range 220...440 V AC +2...+10 % in the range 480 V AC
Voltage range	220...480 V phase to phase
Adjustment of asymmetry threshold	5...15 % of Un selected
Repeat accuracy	0.3 % time delay 0.5 % input and measurement circuit
Measurement error	< 1 % over the whole range with voltage variation 0.05 %/°C with temperature variation
Response time	< 200 ms (in the event of a fault)

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Marking	CE
Overvoltage category	III IEC 60664-1
Insulation resistance	> 500 MOhm 500 V DC IEC 60255-5 > 500 MOhm 500 V DC IEC 60664-1
[Ui] rated insulation voltage	400 V IEC 60664-1
Supply frequency	50/60 Hz +/- 10 %
Operating position	Any position without derating
Connections - terminals	Screw terminals, 1 x 0.5...1 x 4 mm ² AWG 20...AWG 11) solid without cable end Screw terminals, 2 x 0.5...2 x 2.5 mm ² AWG 20...AWG 14) solid without cable end Screw terminals, 1 x 0.2...1 x 2.5 mm ² AWG 24...AWG 12) flexible with cable end Screw terminals, 2 x 0.2...2 x 1.5 mm ² AWG 24...AWG 16) flexible with cable end
Tightening torque	5.31...8.85 lbf.in (0.6...1 N.m) IEC 60947-1
Housing material	Self-extinguishing plastic
Local signalling	For power ON LED (green) For relay ON LED (yellow) For fault LED (yellow)
Mounting support	35 mm symmetrical DIN rail conforming to IEC 60715
Electrical durability	100000 cycles
Mechanical durability	30000000 cycles
Operating rate	<= 360 operations/hour full load
Utilisation category	AC-12 IEC 60947-5-1 AC-13 IEC 60947-5-1 AC-14 IEC 60947-5-1 AC-15 IEC 60947-5-1 DC-12 IEC 60947-5-1 DC-13 IEC 60947-5-1
Safety reliability data	MTTFd = 399.5 years B10d = 360000
Width	1.38 in (35 mm)
Net Weight	0.29 lb(US) (0.13 kg)

Environment

Electromagnetic compatibility	Emission standard for industrial environments conforming to IEC 61000-6-4 Emission standard for residential, commercial and light-industrial environments conforming to IEC 61000-6-3 Immunity for industrial environments conforming to IEC 61000-6-2
Standards	IEC 60255-1
Product Certifications	GL[RETURN]JUL[RETURN]CSA[RETURN]GOST[RETURN]C-tick
Directives	89/336/EEC - electromagnetic compatibility 73/23/EEC - low voltage directive
Ambient Air Temperature for Storage	-40...158 °F (-40...70 °C)
Ambient air temperature for operation	-4...122 °F (-20...50 °C)
Relative humidity	95 % 131 °F (55 °C) IEC 60068-2-30
Vibration resistance	0.35 mm 5...57.6 Hz)IEC 60068-2-6 1 gn 57.6...150 Hz)IEC 60255-21-1
Shock resistance	15 gn 11 ms IEC 60255-21-1
IP degree of protection	IP20 IEC 60529 terminals) IP30 IEC 60529 casing)
Pollution degree	3 IEC 60664-1
Dielectric test voltage	2 kV AC 50 Hz, 1 min
Non-dissipating shock wave	4 kV

Ordering and shipping details

Category	22380-RELAYS-MEASUREMENT (RM17-RM35)
Discount Schedule	CP2
GTIN	3389119405263
Returnability	Yes
Country of origin	ID

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	1.89 in (4.800 cm)
Package 1 Width	3.07 in (7.800 cm)
Package 1 Length	3.82 in (9.700 cm)
Package 1 Weight	4.69 oz (133.000 g)
Unit Type of Package 2	S03
Number of Units in Package 2	48
Package 2 Height	11.81 in (30.000 cm)
Package 2 Width	11.81 in (30.000 cm)
Package 2 Length	15.75 in (40.000 cm)
Package 2 Weight	15.59 lb(US) (7.070 kg)
Unit Type of Package 3	P06
Number of Units in Package 3	384
Package 3 Height	29.53 in (75.000 cm)
Package 3 Width	23.62 in (60.000 cm)
Package 3 Length	31.50 in (80.000 cm)
Package 3 Weight	141.37 lb(US) (64.124 kg)

Offer Sustainability

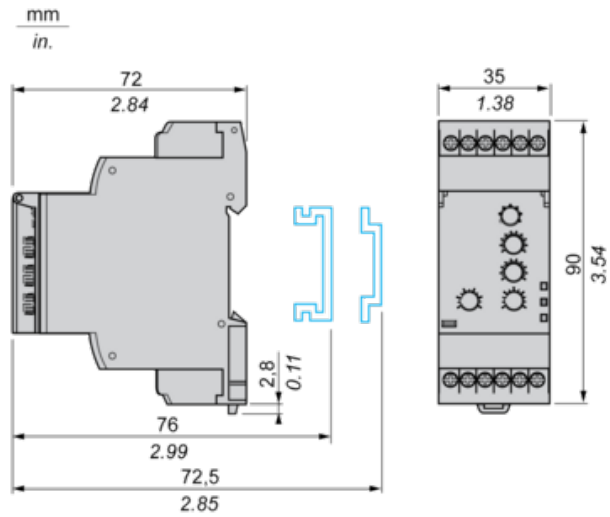
Sustainable offer status	Green Premium product
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov
REACH Regulation	REACH Declaration
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
Mercury free	Yes
China RoHS Regulation	China RoHS Declaration
RoHS exemption information	Yes
Environmental Disclosure	Product Environmental Profile
Circularity Profile	End Of Life Information

Contractual warranty

Warranty	18 months
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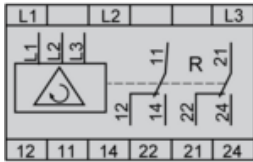
Multifunction 3-Phase Supply Control Relays

Dimensions and Mounting



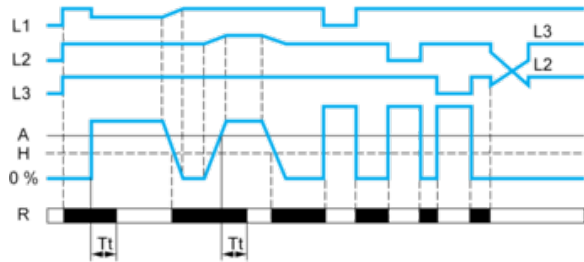
Multifunction 3-Phase Supply Control Relays

Wiring Diagram

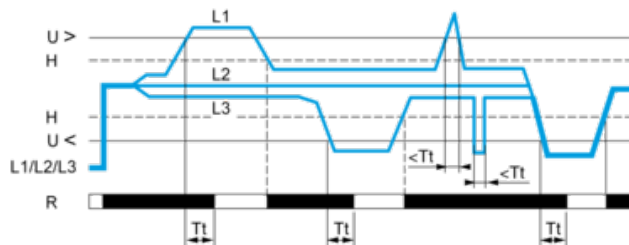


Function Diagrams

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



Control of Overvoltage and Undervoltage in Window Mode



Legend

- A Asymmetry threshold
- Tt Time delay after crossing of threshold
- H Hysteresis
- U> Overvoltage threshold
- U< Undervoltage threshold
- L1, L2, L3 Phases of the supply voltage monitored
- R Output relay
- Relay status: black color = energized.