

Product datasheet

Specifications



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

RM35TF30

Main

| | |
|-------------------------------|---|
| Range of product | Harmony Control Relays |
| Relay type | Multifunction control relay |
| Product or component type | 3-phase 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 |
| Measurement range | 220...480 V AC |
| time delay | Adjustable 0.1...10 s, +/- 10 % of the full scale value Tt- time delay upon fault |
| Output contacts | 2 C/O |
| Nominal output current | 5 A |
| Contacts type and composition | 2 C/O |
| [Uc] control circuit voltage | 220...480 V |

Complementary

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|--------------------------------|--|
| [Un] rated nominal voltage | , self-powered |
| Supply voltage limits | 194...528 V AC, 3 phases |
| Reset time | 1500 ms at 480 V |
| Maximum switching voltage | 250 V AC 250 V DC |
| Switching capacity in VA | 1250 VA |
| Minimum switching current | 10 mA at 5 V DC |
| Maximum switching current | 5 A AC 5 A DC |
| Control circuit voltage limits | - 12 % + 10 % Un |
| Power consumption in VA | 0...22 VA at 400 V AC 50 Hz |
| Voltage detection threshold | < 194 V |
| Control circuit frequency | 50...60 Hz +/- 10 % |
| 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 |

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|--|--|
| Threshold adjustment voltage | 2...20 % of Un selected -12...-2 % in the range 220 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 % for time delay 0.5 % for 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) |
| 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 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 | 0.6...1 N.m conforming to IEC 60947-1 |
| Housing material | Self-extinguishing plastic |
| Local signalling | LED (green) for power ON LED (yellow) for relay ON LED (yellow) for fault |
| 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 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 |
| Safety reliability data | MTTFd = 399.5 years B10d = 360000 |
| Width | 35 mm |
| Net weight | 0.13 kg |
| Control type | Without test button |

Environment

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|--------------------------------------|--|
| 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 UL CSA GOST C-Tick |
| Marking | CE |

| | |
|--|--|
| Directives | 89/336/EEC - electromagnetic compatibility 73/23/EEC - low voltage directive |
| 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 1 gn (f= 57.6...150 Hz) conforming to 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 |
| Overvoltage category | III conforming to IEC 60664-1 |
| Dielectric test voltage | 2 kV, 1 min AC 50 Hz |
| Non-dissipating shock wave | 4 kV |

Packing Units

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|-------------------------------------|-----------|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Height | 4.800 cm |
| Package 1 Width | 7.800 cm |
| Package 1 Length | 9.700 cm |
| Package 1 Weight | 133.000 g |
| Unit Type of Package 2 | S03 |
| Number of Units in Package 2 | 48 |
| Package 2 Height | 30.000 cm |
| Package 2 Width | 30.000 cm |
| Package 2 Length | 40.000 cm |
| Package 2 Weight | 7.070 kg |
| Unit Type of Package 3 | P06 |
| Number of Units in Package 3 | 384 |
| Package 3 Height | 75.000 cm |
| Package 3 Width | 60.000 cm |
| Package 3 Length | 80.000 cm |
| Package 3 Weight | 64.124 kg |

Contractual warranty

| | |
|-----------------|-----------|
| Warranty | 12 months |
|-----------------|-----------|

Sustainability

Green Premium™ label is Schneider Electric's commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO₂ products.

Guide to assessing product sustainability is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

[Learn more about Green Premium >](#)

[Guide to assess a product's sustainability >](#)



Transparency

Well-being performance

 Mercury Free

Reach Regulation

[REACH Declaration](#)

Eu Rohs Directive

Pro-active compliance (Product out of EU RoHS legal scope)

China Rohs Regulation

[China RoHS declaration](#)

Environmental Disclosure

[Product Environmental Profile](#)

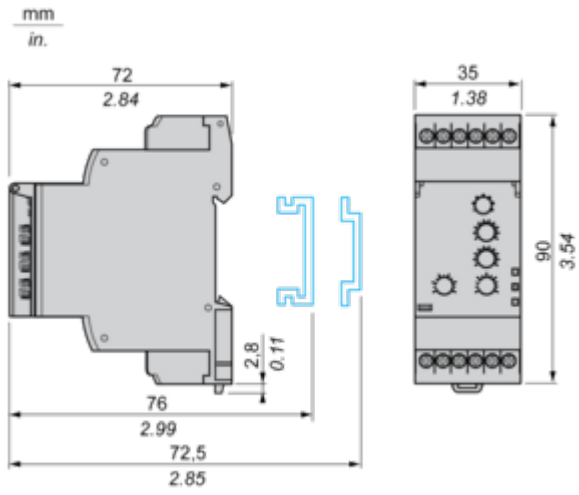
Circularity Profile

[End of Life Information](#)

Dimensions Drawings

Multifunction 3-Phase Supply Control Relays

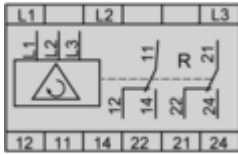
Dimensions and Mounting



Connections and Schema

Multifunction 3-Phase Supply Control Relays

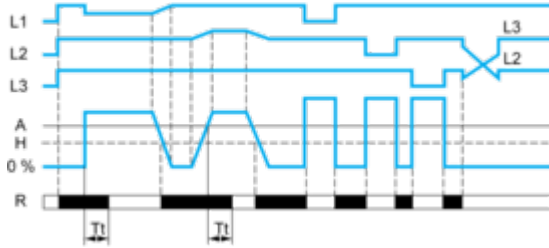
Wiring Diagram



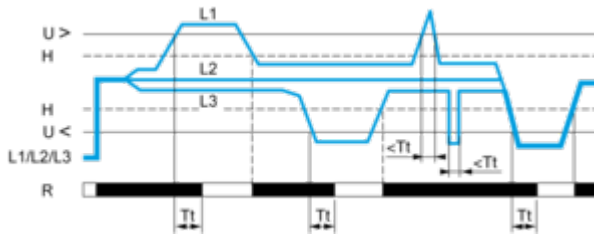
Technical Description

Function Diagrams

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



Control of Overvoltage and Undervoltage in Window Mode

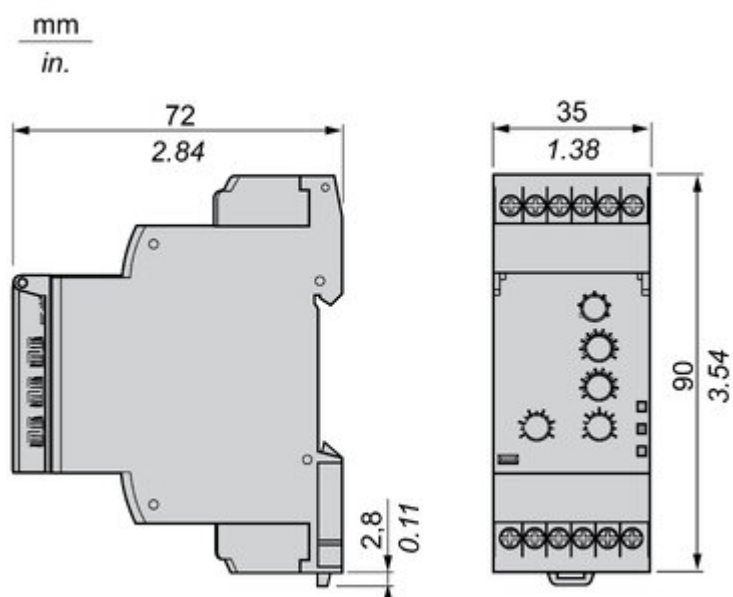


Legend

- A Asymmetry thershold
- 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.

Technical Illustration

Dimensions




Offer Marketing Illustration


Product benefits / Features

Features


Harmony Control Relay




Wide monitoring parameters (phase, current, voltage, liquid level, frequency, speed, temperature, and pump control) to meet your application needs.




True RMS measurement that minimizes the possibility of unexpected trips from highly polluted networks (except RM17TG and RM22TG)






Experience unprecedented accuracy, predictive maintenance, and superior security.



Green Premium labelled products, promising compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO₂ product



Compatible with a wide range of applications, such as hoisting, packaging, lifts, textile, pumping, and water.

Offer Marketing Illustration

Product benefits / Features

Technical Benefits

Harmony Control Relay

Compliant with IEC 60255-1 standard, and a wide array of product certifications such as UL, CE, CSA, EAC.

Different product width to meet your needs:
17.5 mm/0.69 in.,
22.5 mm/0.88 in.,
35 mm/1.38 in.

Diagnostic button to check downstream circuit immediately, shorten the commission and troubleshooting time

Dust and unintended human intervention avoided thanks to the IP50 lead-sealable settings protection cover.

A Dial-Pointer LED indicator that enhances ease of operation in difficult environments such as dusty or low-light conditions

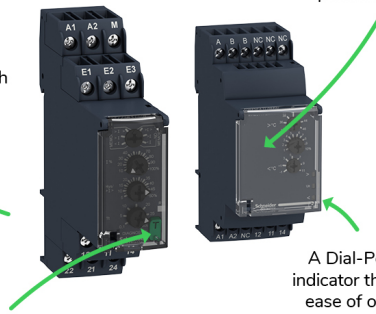


Image of product / Alternate images

Alternative



