

# Product data sheet

Specifications



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

RM35TF30

## Main

Range of product	Harmony Control Relays
Relay type	Multifunction control relay
Product or component type	3-phase control relay
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 type	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
Product specific application	For 3-phase supply

## Complementary

[Us] rated supply 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

<b>Threshold adjustment voltage</b>	2...20 % of Un selected -12...-2 % in the range 220 V AC +2...+10 % in the range 480 V AC
<b>Voltage range</b>	220...480 V phase to phase
<b>Adjustment of asymmetry threshold</b>	5...15 % of Un selected
<b>Repeat accuracy</b>	0.3 % for time delay 0.5 % for input and measurement circuit
<b>Measurement error</b>	< 1 % over the whole range with voltage variation 0.05 %/°C with temperature variation
<b>Response time</b>	< 200 ms (in the event of a fault)
<b>Insulation resistance</b>	> 500 MOhm at 500 V DC conforming to IEC 60255-5 > 500 MOhm at 500 V DC conforming to IEC 60664-1
<b>[UI] rated insulation voltage</b>	400 V conforming to IEC 60664-1
<b>Supply frequency</b>	50/60 Hz +/- 10 %
<b>Operating position</b>	Any position without derating
<b>Connections - terminals</b>	Screw terminals, 1 x 0.5...1 x 4 mm <sup>2</sup> (AWG 20...AWG 11) solid without cable end Screw terminals, 2 x 0.5...2 x 2.5 mm <sup>2</sup> (AWG 20...AWG 14) solid without cable end Screw terminals, 1 x 0.2...1 x 2.5 mm <sup>2</sup> (AWG 24...AWG 12) flexible with cable end Screw terminals, 2 x 0.2...2 x 1.5 mm <sup>2</sup> (AWG 24...AWG 16) flexible with cable end
<b>Tightening torque</b>	0.6...1 N.m conforming to IEC 60947-1
<b>Housing material</b>	Self-extinguishing plastic
<b>Local signalling</b>	LED (green) for power ON LED (yellow) for relay ON LED (yellow) for fault
<b>Mounting support</b>	35 mm symmetrical DIN rail conforming to IEC 60715
<b>Electrical durability</b>	100000 cycles
<b>Mechanical durability</b>	30000000 cycles
<b>Operating rate</b>	<= 360 operations/hour full load
<b>Utilisation category</b>	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
<b>Safety reliability data</b>	MTTFd = 399.5 years B10d = 360000
<b>Width</b>	35 mm
<b>Net weight</b>	0.13 kg
<b>Control type</b>	Without test button

## Environment

<b>Electromagnetic compatibility</b>	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
<b>Standards</b>	IEC 60255-1
<b>Product certifications</b>	GL UL CSA GOST C-Tick
<b>Marking</b>	CE

<b>Directives</b>	89/336/EEC - electromagnetic compatibility 73/23/EEC - low voltage directive
<b>Ambient air temperature for storage</b>	-40...70 °C
<b>Ambient air temperature for operation</b>	-20...50 °C
<b>Relative humidity</b>	95 % at 55 °C conforming to IEC 60068-2-30
<b>Vibration resistance</b>	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
<b>Shock resistance</b>	15 gn for 11 ms conforming to IEC 60255-21-1
<b>IP degree of protection</b>	IP20 (terminals) conforming to IEC 60529 IP30 (casing) conforming to IEC 60529
<b>Pollution degree</b>	3 conforming to IEC 60664-1
<b>Overvoltage category</b>	III conforming to IEC 60664-1
<b>Dielectric test voltage</b>	2 kV, 1 min AC 50 Hz
<b>Non-dissipating shock wave</b>	4 kV

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1
<b>Package 1 Height</b>	4.800 cm
<b>Package 1 Width</b>	7.800 cm
<b>Package 1 Length</b>	9.700 cm
<b>Package 1 Weight</b>	129.000 g
<b>Unit Type of Package 2</b>	S03
<b>Number of Units in Package 2</b>	48
<b>Package 2 Height</b>	30.000 cm
<b>Package 2 Width</b>	30.000 cm
<b>Package 2 Length</b>	40.000 cm
<b>Package 2 Weight</b>	7.070 kg
<b>Unit Type of Package 3</b>	P06
<b>Number of Units in Package 3</b>	384
<b>Package 3 Height</b>	75.000 cm
<b>Package 3 Width</b>	60.000 cm
<b>Package 3 Length</b>	80.000 cm
<b>Package 3 Weight</b>	64.124 kg

## Contractual warranty

<b>Warranty</b>	18 months
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## Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)

### Environmental footprint

Total lifecycle Carbon footprint 95

Environmental Disclosure [Product Environmental Profile](#)

## Use Better

### Materials and Substances

Packaging made with recycled cardboard Yes

Packaging without single use plastic Yes

[EU RoHS Directive](#)

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

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](http://www.P65Warnings.ca.gov)

## Use Again

### Repack and remanufacture

End of life manual availability [End of Life Information](#)

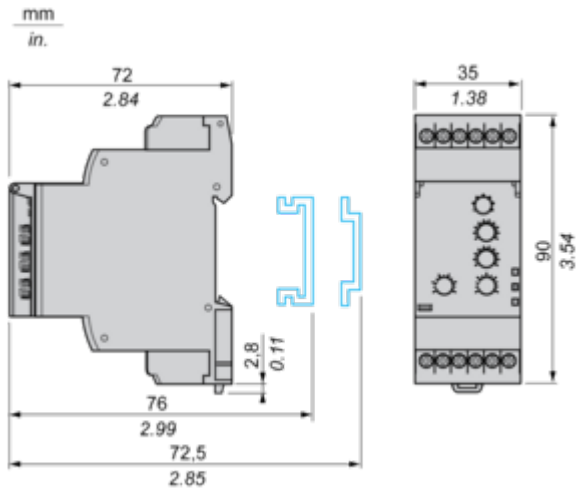
Take-back No

Dimensions Drawings

Multifunction 3-Phase Supply Control Relays

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Dimensions and Mounting

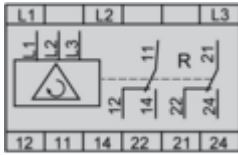


Connections and Schema

Multifunction 3-Phase Supply Control Relays

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Wiring Diagram

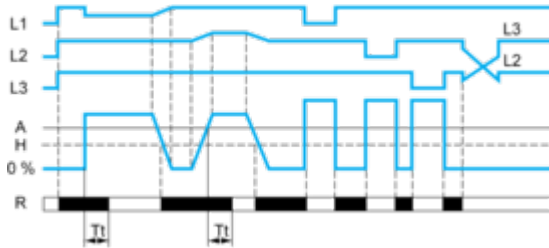


Technical Description

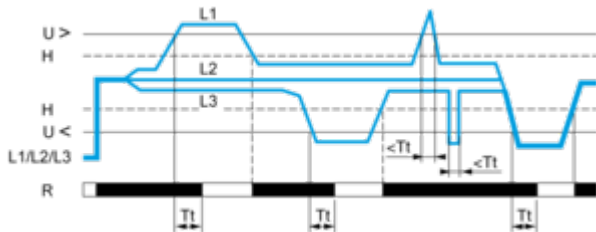
Function Diagrams

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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

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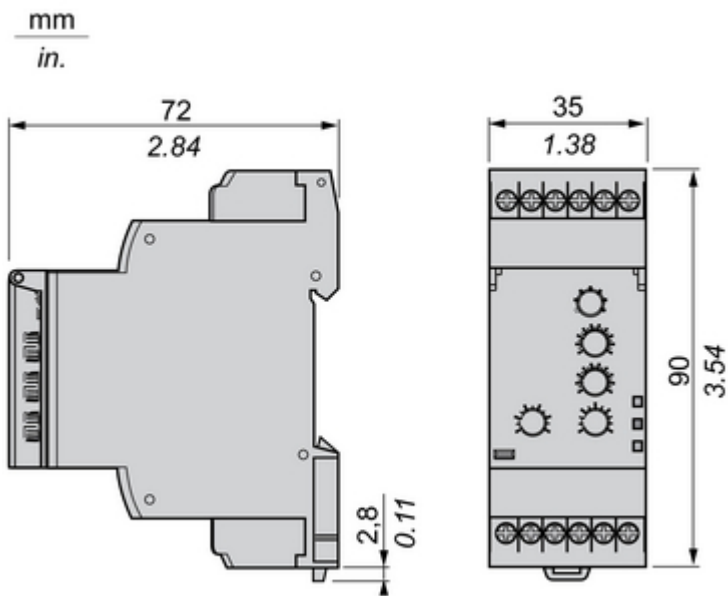


Image of product / Alternate images

Alternative

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