

Product data sheet

Specifications



3-phase control relay, Harmony Control Relays, 8A, 2CO, 380...480V AC

RM22TR33

Product availability: Stock - Normally stocked in distribution facility

Main

Range of Product	Harmony Control Relays
Relay Type	Control relay
Product or Component Type	3-phase control relay
Phase	3 phase
Relay name	RM22TR
Relay monitored parameters	Overvoltage and undervoltage detection Phase sequence Phase failure detection
Time delay type	Adjustable 0.1...30 s, +/- 10 % of the full scale value Tt- time delay upon fault
Switching capacity in VA	2000 VA
Measurement range	380...480 V voltage AC
Contacts type and composition	2 C/O

Complementary

Reset time	1500 ms at maximum voltage
Maximum switching voltage	250 V AC
Minimum switching current	10 mA 5 V DC
Maximum switching current	8 A AC
[Us] Rated Supply Voltage	AC/DC
Supply voltage limits	304...576 V AC
operating limits	- 20 % + 20 % Un
Power consumption in VA	15 VA 480 V AC 60 Hz
Voltage detection threshold	< 100 V AC
supply voltage frequency	50...60 Hz +/- 10 %
Output contacts	2 C/O
nominal output current	8 A
Setting accuracy of the switching threshold	+/- 10 % of the full scale
Switching threshold drift	<= 0.05 % per degree centigrade depending permissible ambient air temperature <= 1 % within the supply voltage range
Setting accuracy of time delay	10 P
Time delay drift	<= 0.05 % per degree centigrade depending permissible ambient air temperature <= 1 % within the supply voltage range
Hysteresis	2 % fixed selectable

Price is "List Price" and may be subject to a trade discount – check with your local distributor or retailer for actual price.

Power on Delay	650 ms
Maximum measuring cycle	150 ms measurement cycle as true rms value
Threshold adjustment voltage	2...20 % of Un selected
Voltage range	380...480 V phase to phase
Repeat accuracy	+/- 0.5 % input and measurement circuit +/- 3 % time delay
Measurement error	< 1 % over the whole range with voltage variation < 0.05 %/°C with temperature variation
Response time	<= 300 ms
Overvoltage category	III conforming to IEC 60664-1 III conforming to UL 508
Insulation resistance	> 100 MOhm 500 V DC IEC 60255-27
Connections - terminals	Screw terminals, 2 x 0.5...2 x 2.5 mm ² 20 AWG...14 AWG) solid without cable end Screw terminals, 2 x 0.2...2 x 1.5 mm ² 24 AWG...16 AWG) flexible with cable end Screw terminals, 1 x 0.5...1 x 3.3 mm ² 20 AWG...12 AWG) solid without cable end Screw terminals, 1 x 0.2...1 x 2.5 mm ² 24 AWG...14 AWG) flexible with cable end
Tightening torque	5.3...8.9 lbf.in (0.6...1 N.m) IEC 60947-1
Housing material	Polycarbonate
Status LED	LED (Yellow) relay ON LED (Green) power ON
Mounting support	35 mm DIN rail conforming to IEC 60715
Electrical durability	100000 cycles
Mechanical durability	10000000 cycles
Utilisation category	AC-15 IEC 60947-5-1 DC-13 IEC 60947-5-1 AC-1 IEC 60947-4-1 DC-1 IEC 60947-4-1
[Un] rated nominal voltage	, self-powered
Safety reliability data	MTTFd = 388.1 years B10d = 350000
Contacts material	Cadmium free
Control Type	With test button
Width	0.9 in (22.5 mm)
Height	3.5 in (90 mm)
Depth	2.9 in (73 mm)
Product Weight	0.209 lb(US) (0.095 kg)

Environment

Immunity to microbreaks	10 ms
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Electromagnetic compatibility	Immunity for residential, commercial and light-industrial environments conforming to IEC 61000-6-1 Immunity for industrial environments conforming to IEC 61000-6-2 Emission standard for residential, commercial and light-industrial environments conforming to IEC 61000-6-3 Emission standard for industrial environments conforming to IEC 61000-6-4 Electrostatic discharge - test level: 6 kV level 3 (contact discharge) conforming to IEC 61000-4-2 Electrostatic discharge - test level: 8 kV level 3 (air discharge) conforming to IEC 61000-4-2 Radiated radio-frequency electromagnetic field immunity test - test level: 10 V/m level 3 conforming to IEC 61000-4-3 Electrical fast transient/burst immunity test - test level: 4 kV level 4 (direct) conforming to IEC 61000-4-4 Electrical fast transient/burst immunity test - test level: 2 kV level 4 (capacitive coupling) conforming to IEC 61000-4-4 Conducted and radiated emissions class B group 1 conforming to CISPR 11 Conducted and radiated emissions class B conforming to CISPR 22
Standards	IEC 60255-1
Product Certifications	GL CSA RCM CE EAC CCC UL
Ambient Air Temperature for Storage	-40...158 °F (-40...70 °C)
Ambient air temperature for operation	-4...122 °F (-20...50 °C) 60 Hz -4...140 °F (-20...60 °C) 50 Hz AC/DC
Relative humidity	93...97 % 77...131 °F (25...55 °C) IEC 60068-2-30
Vibration resistance	0.075 mm 10...58.1 Hz) not in operation IEC 60068-2-6 1 gn 10...58.1 Hz) not in operation IEC 60068-2-6 0.035 mm 58.1...150 Hz) in operation IEC 60068-2-6 0.5 gn 58.1...150 Hz) in operation IEC 60068-2-6
Shock resistance	15 gn 11 ms) not in operation IEC 60068-2-27 5 gn 11 ms) in operation IEC 60068-2-27
IP degree of protection	IP20 IEC 60529 terminals) IP40 IEC 60529 housing) IP50 IEC 60529 front panel)
Pollution degree	3 IEC 60664-1 3 UL 508
Dielectric test voltage	2.5 kV AC 50 Hz, 1 min IEC 60255-27

Ordering and shipping details

Category	US10CP222380
Discount Schedule	0CP2
GTIN	3606480792199
Returnability	Yes
Country of origin	ID

Packing Units

Unit Type of Package 1	PCE
Nbr. of units in pkg.	1
Package 1 Height	1.220 in (3.100 cm)
Package 1 Width	3.465 in (8.800 cm)
Package 1 Length	3.937 in (10.000 cm)

Package weight(Lbs)	3.739 oz (106.000 g)
Unit Type of Package 2	S02
Number of Units in Package 2	40
Package 2 Height	5.906 in (15.000 cm)
Package 2 Width	11.811 in (30.000 cm)
Package 2 Length	15.748 in (40.000 cm)
Package 2 Weight	10.344 lb(US) (4.692 kg)
Unit Type of Package 3	P06
Number of Units in Package 3	640
Package 3 Height	29.528 in (75.000 cm)
Package 3 Width	23.622 in (60.000 cm)
Package 3 Length	31.496 in (80.000 cm)
Package 3 Weight	178.707 lb(US) (81.060 kg)

Contractual warranty

Warranty (in months)	18
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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 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	2 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	93 kg CO2 eq.
Carbon footprint of the end-of-life phase [C1 to C4]	0.1 kg CO2 eq.

Use Better



Materials and Substances

Packaging made with recycled cardboard	Yes
Packaging without single use plastic	Yes
SCIP Number	3c095d35-159c-493c-8604-58788d456aa9
EU RoHS Directive	Compliant By Exemption
REACH Regulation	Reference contains Substances of Very High Concern above the threshold
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

Use Longer



Lifetime extension

Repair	No
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Use Again

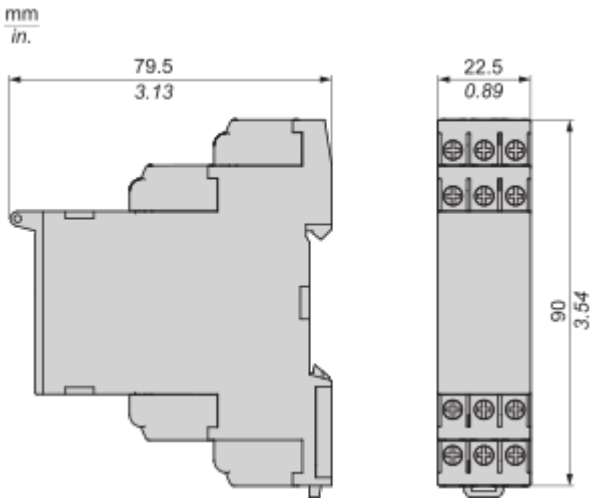


Repack and remanufacture

Take-back	No
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Dimensions Drawings

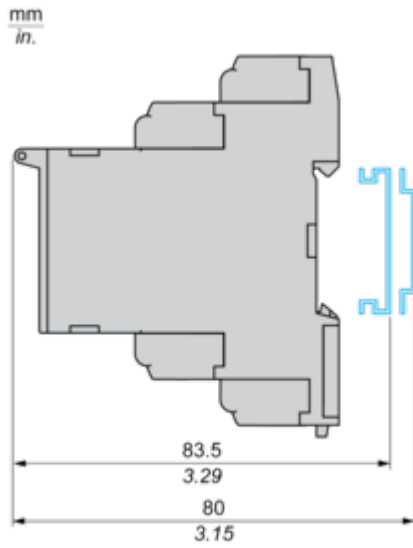
Dimensions



Mounting and Clearance

Mounting and Clearance

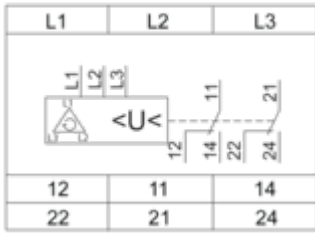
Rail Mounting



Connections and Schema

3-Phase Voltage Control Relay

Wiring Diagram

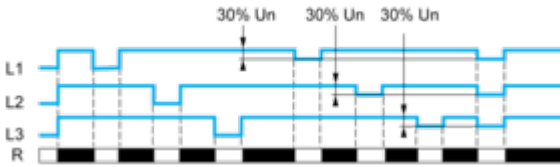


- L1,L2,L3 : Supply to be monitored
- 11-14,12 : 1st C/O contact of output relay
- 21-24,22 : 2nd C/O contact of output relay

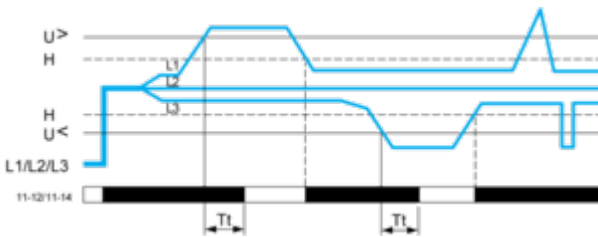
Technical Description

Function Diagrams

Phase Failure Detection ($U_{\text{measured}} < 0.7 \times \text{nominal supply voltage}$)



Control of Overvoltage and Undervoltage

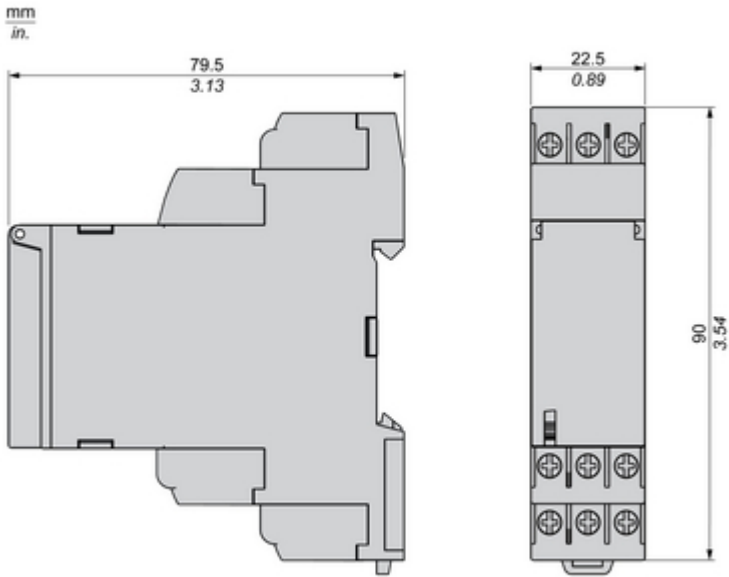


Legend

- U_n Nominal supply voltage
- R Output relay
- T_t Overvoltage and undervoltage threshold delay (adjustable on front panel from 0.3 to 30 s)
- H Hysteresis
- $U >$ Overvoltage threshold
- $U <$ Undervoltage threshold
- L1, L2, L3 Phases of the supply voltage monitored
- 11-12, 11-14 R1 output relay connections
- 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.

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

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

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



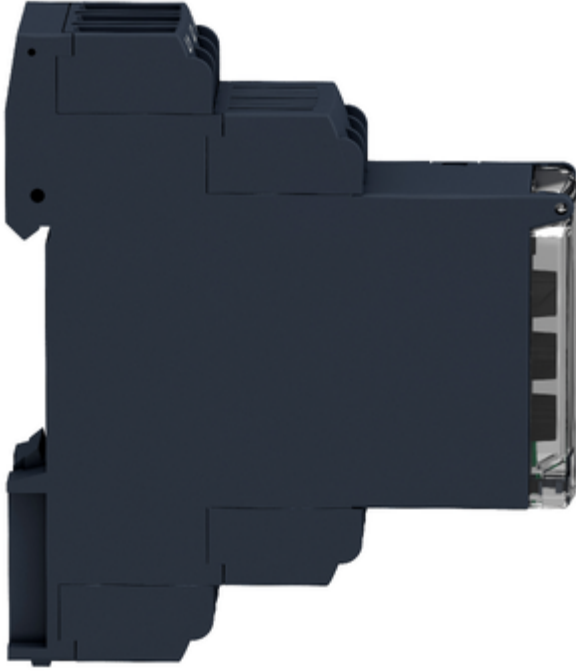




Image of product in real life situation

