

# Product data sheet

Specifications



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

RM22TU23

**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	Undervoltage detection Phase sequence Phase failure detection
Time delay type	Without
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
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.

Run-up delay at power-up	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
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
Mounting position	Any position
Connections - terminals	Screw terminals, 2 x 0.5...2 x 2.5 mm <sup>2</sup> AWG 20...AWG 14) solid without cable end Screw terminals, 2 x 0.2...2 x 1.5 mm <sup>2</sup> AWG 24...AWG 16) flexible with cable end Screw terminals, 1 x 0.5...1 x 3.3 mm <sup>2</sup> AWG 20...AWG 12) solid without cable end Screw terminals, 1 x 0.2...1 x 2.5 mm <sup>2</sup> AWG 24...AWG 14) flexible with cable end
Tightening torque	5.3...8.9 lbf.in (0.6...1 N.m) IEC 60947-1
Housing material	Self-extinguishing plastic
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)
Product Weight	0.20 lb(US) (0.09 kg)

## Environment

Immunity to microbreaks	10 ms
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<b>Electromagnetic compatibility</b>	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 Surge immunity test - test level: 4 kV level 4 (common mode) conforming to IEC 61000-4-5 Surge immunity test - test level: 2 kV level 4 (differential mode) conforming to IEC 61000-4-5 Conducted and radiated emissions class B group 1 conforming to CISPR 11 Conducted and radiated emissions class B conforming to CISPR 22
<b>Standards</b>	IEC 60255-1
<b>Product Certifications</b>	CSA RCM UL GL CE CCC EAC
<b>Ambient Air Temperature for Storage</b>	-40...158 °F (-40...70 °C)
<b>Ambient air temperature for operation</b>	-4...122 °F (-20...50 °C) 60 Hz -4...140 °F (-20...60 °C) 50 Hz AC/DC
<b>Relative humidity</b>	93...97 % 77...131 °F (25...55 °C) IEC 60068-2-30
<b>Vibration resistance</b>	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
<b>Shock resistance</b>	15 gn 11 ms) not in operation IEC 60068-2-27 5 gn 11 ms) in operation IEC 60068-2-27
<b>IP degree of protection</b>	IP20 IEC 60529 terminals) IP40 IEC 60529 housing) IP50 IEC 60529 front panel)
<b>Pollution degree</b>	3 IEC 60664-1 3 UL 508
<b>Dielectric test voltage</b>	2.5 kV AC 50 Hz, 1 min IEC 60255-27

## Ordering and shipping details

<b>Category</b>	US10CP222380
<b>Discount Schedule</b>	OCP2
<b>GTIN</b>	3606480792175
<b>Returnability</b>	Yes
<b>Country of origin</b>	ID

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Nbr. of units in pkg.</b>	1
<b>Package 1 Height</b>	1.02 in (2.6 cm)

Package 1 Width	3.23 in (8.2 cm)
Package 1 Length	3.74 in (9.5 cm)
Package weight(Lbs)	3.6 oz (103.0 g)
Unit Type of Package 2	S02
Number of Units in Package 2	40
Package 2 Height	5.91 in (15.0 cm)
Package 2 Width	11.81 in (30.0 cm)
Package 2 Length	15.75 in (40.0 cm)
Package 2 Weight	10.265 lb(US) (4.656 kg)
Unit Type of Package 3	P06
Number of Units in Package 3	640
Package 3 Height	29.53 in (75.0 cm)
Package 3 Width	23.62 in (60.0 cm)
Package 3 Length	31.50 in (80.0 cm)
Package 3 Weight	182.975 lb(US) (82.996 kg)



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

Carbon footprint (kg CO2 eq, Total Life cycle)

71

## 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)

SCIP Number 3c095d35-159c-493c-8604-58788d456aa9

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 Again

### Repack and remanufacture

Take-back No

## Dimensions Drawings

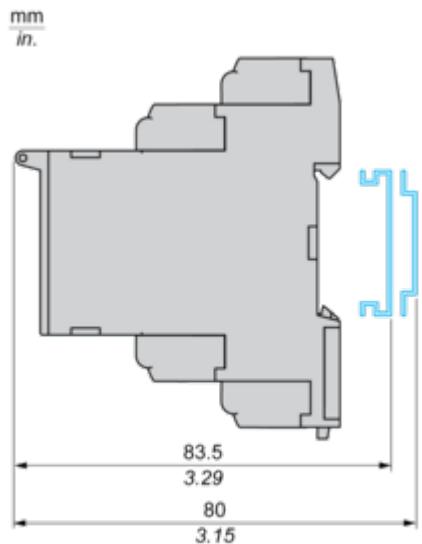
## Dimensions



## Mounting and Clearance

Mounting and Clearance

## Rail Mounting



## Connections and Schema

3-Phase Undervoltage Control Relay

## Wiring Diagram



L1,L2,L3 : Supply to be monitored

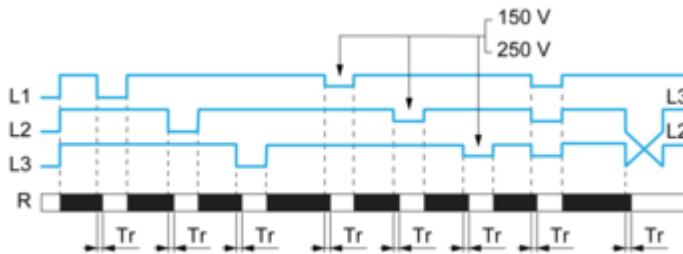
11-14,12 : 1st C/O contact of output relay

21-24,22 : 2nd C/O contact of output relay

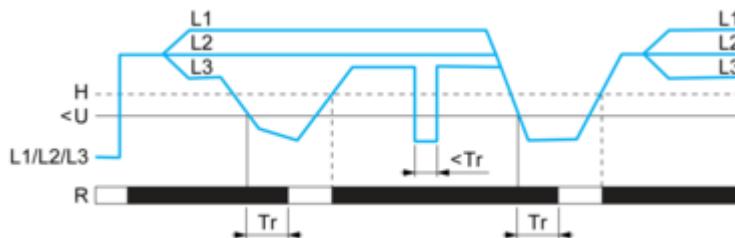
## Technical Description

Function Diagrams

## Phase Sequence Control and Phase failure Detection



## Undervoltage Control



## Legend

Tr : Response time after cross the threshold

U< : Undervoltage threshold

L1, L2, L3 : Phases of the supply voltage monitored

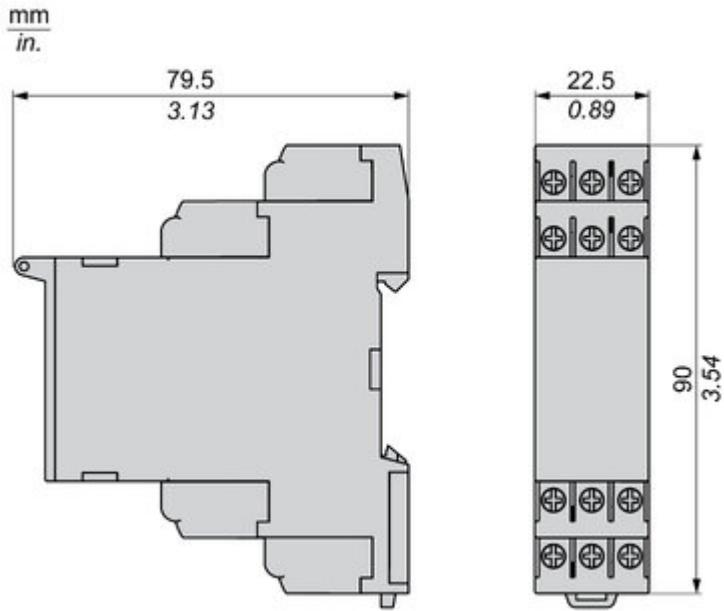
R : Relay output 11-12/11-14, 21-22/21-24

H : Hysteresis

Relay status : black color = energized.

## Technical Illustration

## Dimensions

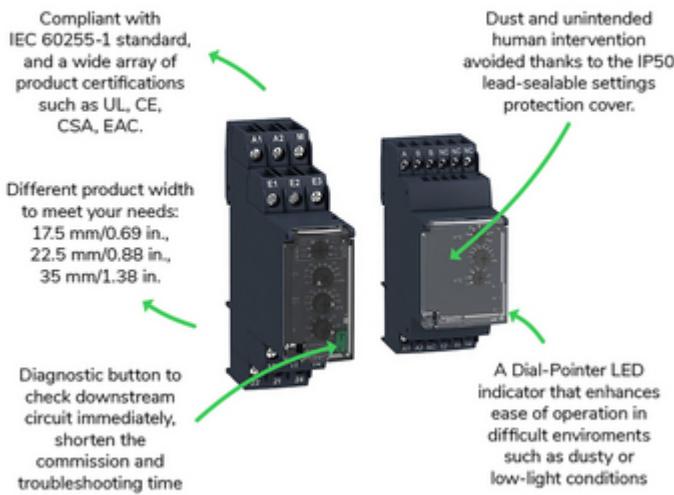


## Offer Marketing Illustration

## Product benefits / Features

## Technical Benefits

## Harmony Control Relay



## 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.

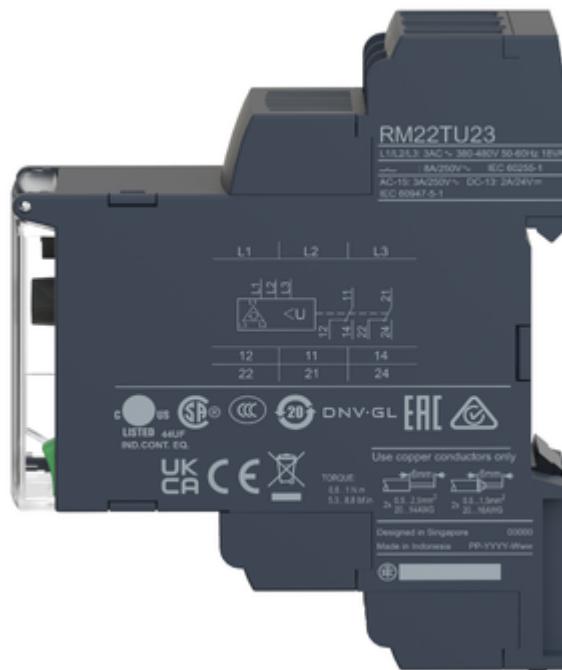
**Green Premium** labelled products, promising compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO<sub>2</sub> product

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

Image of product / Alternate images

Alternative

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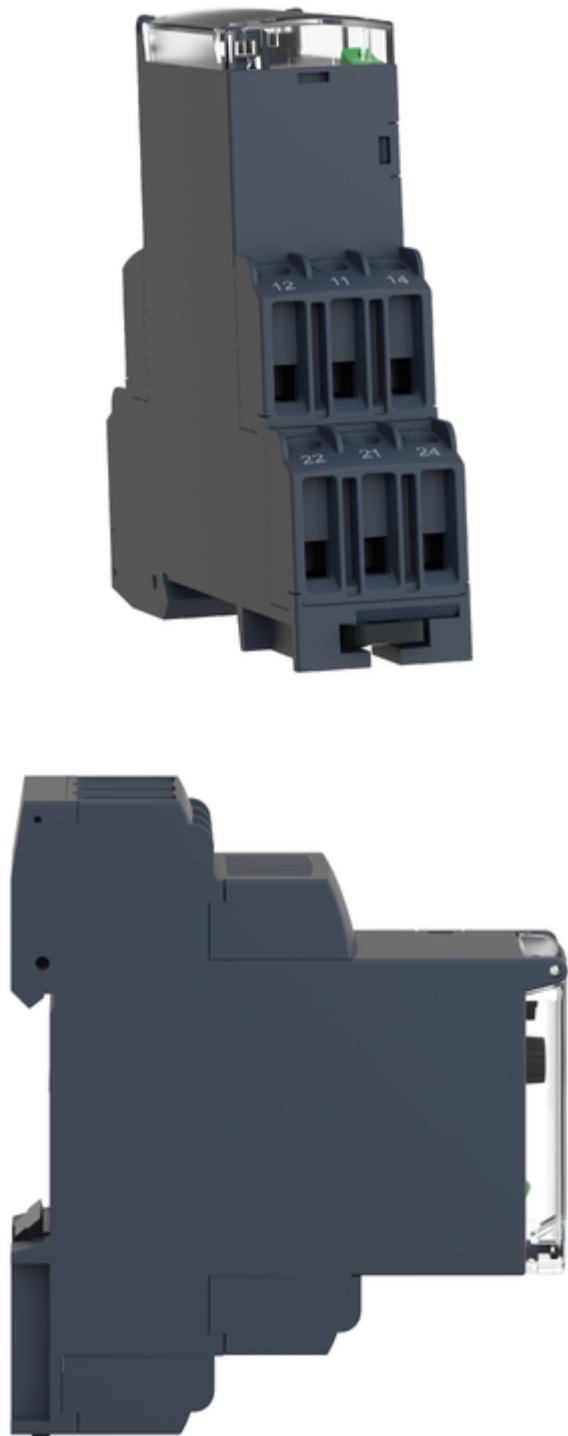




Image of product in real life situation

