

Product data sheet

Specifications



voltage control relay, Harmony Control Relays, 8A, 2CO, overvoltage or undervoltage detection, 15...500V AC DC, 24...240V AC DC

RM22UA33MR

Product availability: Stock - Normally stocked in distribution facility

Main

Range of Product	Harmony Control Relays
Relay Type	Voltage control relay
Product or Component Type	Voltage control relay
Phase	1 phase
Supply circuit type	DC
Relay name	RM22UA
Relay monitored parameters	Undervoltage and overvoltage in window mode Overvoltage or undervoltage detection
time delay	Adjustable 0.1...30 s, +/- 10 % of the full scale value Tt- time delay upon fault
Switching capacity in VA	2000 VA
Measurement range	15...500 V AC/DC
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
Supply voltage limits	20.4...264 V AC/DC
Power consumption in VA	3.5 VA AC
Maximum power consumption in W	1.5 W DC
Immunity to microbreaks	10 ms
Resistance across terminals	150 kOhm E2-M terminals 300 kOhm E1-M terminals 500 kOhm E3-M terminals
Output contacts	2 C/O
nominal output current	8 A
Hysteresis	3 % fixed full scale for window mode 5...50 % adjustable threshold setting
delay at power up	600 ms
Maximum measuring cycle	100 ms measurement cycle as true rms value

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

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

Repeat accuracy	+/- 0.5 % input and measurement circuit +/- 2 % time delay
Measurement error	< 1 % over the whole range with voltage variation 0.05 %/°C with temperature variation
Response time	<= 500 ms
Insulation resistance	> 100 MOhm 500 V DC
Overvoltage category	III conforming to IEC 60664-1
Insulation	Between supply and measurement
Connections - terminals	Screw terminals, 2 x 0.5...2 x 2.5 mm² AWG 20...AWG 14) solid without cable end Screw terminals, 2 x 0.2...2 x 1.5 mm² AWG 24...AWG 16) flexible with cable end Screw terminals, 1 x 0.5...1 x 3.3 mm² AWG 20...AWG 12) solid without cable end Screw terminals, 1 x 0.2...1 x 2.5 mm² 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
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	24...240 V AC/DC 50/60 Hz, non self-powered
Safety reliability data	MTTFd = 308.2 years B10d = 290000
Contacts material	Cadmium free
Control Type	With test button
Width	0.9 in (22.5 mm)
Product Weight	0.24 lb(US) (0.11 kg)

Environment

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 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
Ambient air temperature for operation	-4...122 °F (-20...50 °C) 60 Hz -4...140 °F (-20...60 °C) 50 Hz
Standards	IEC 60255-1

Product Certifications	RCM UL EAC CSA CE GL CCC
Ambient Air Temperature for Storage	-40...158 °F (-40...70 °C)
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
Dielectric test voltage	2.5 kV AC 50 Hz, 1 min IEC 60255-27

Ordering and shipping details

Category	US10CP222380
Discount Schedule	0CP2
GTIN	3606480792250
Returnability	Yes
Country of origin	ID

Packing Units

Unit Type of Package 1	PCE
Nbr. of units in pkg.	1
Package 1 Height	1.02 in (2.600 cm)
Package 1 Width	3.23 in (8.200 cm)
Package 1 Length	3.74 in (9.500 cm)
Package weight(Lbs)	4.303 oz (122.000 g)
Unit Type of Package 2	S02
Number of Units in Package 2	40
Package 2 Height	5.91 in (15.000 cm)
Package 2 Width	11.81 in (30.000 cm)
Package 2 Length	15.75 in (40.000 cm)
Package 2 Weight	11.883 lb(US) (5.390 kg)

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	
Carbon footprint (kg CO2 eq, Total Life cycle)	44
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)
SCIP Number	5e3fdf99-611b-4d07-ad17-6eba84ab488b
REACH Regulation	REACH Declaration
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	
Circularity Profile	End of Life Information
Take-back	No

Dimensions Drawings

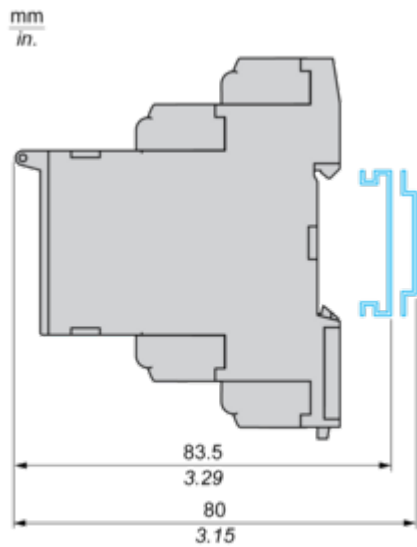
Dimensions



Mounting and Clearance

Mounting and Clearance

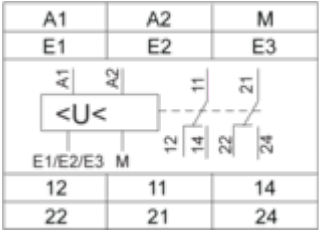
Rail Mounting



Connections and Schema

Voltage Measurement Relay

Wiring Diagram



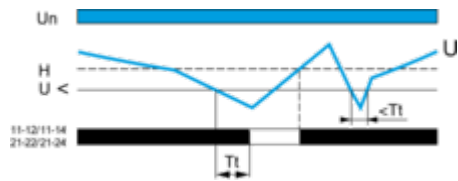
- A1,A2 : Supply voltage
- E1,E2,E3,M : Voltages to be measured
- 11-14,12 : 1st C/O contact of output relay
- 21-24,22 : 2nd C/O contact of output relay

Technical Description

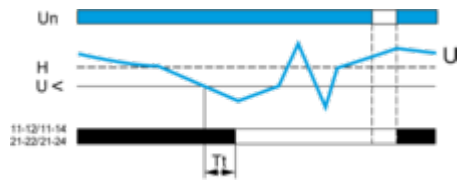
Function Diagrams

Undervoltage Control

Without memory ("No Memory" mode)

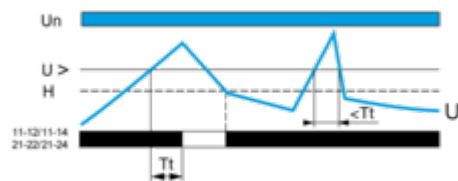


With memory ("Memory" mode)

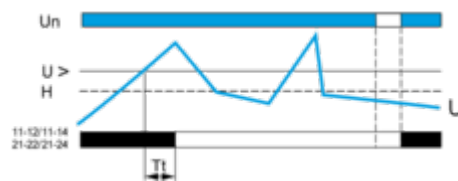


Overvoltage Control

Without memory ("No Memory" mode)



With memory ("Memory" mode)



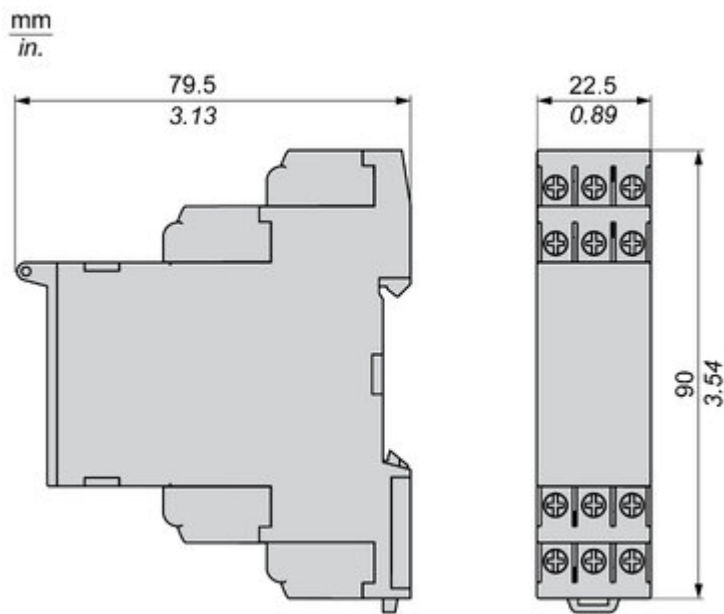
Legend

- Tt Time delay after crossing of threshold
- Un Nominal supply voltage
- U Monitored supply voltage
- H Hysteresis
- U> Overvoltage threshold
- U< Undervoltage threshold
- 11-12/11-14, 21-22/21-24 Output relay connections
- Relay status: black color = energized.

NOTE: In "Memory" mode, the relay opens when crossing of the threshold is detected and then stays in that position. The power supply voltage must be switched off to reset the product.

Technical Illustration

Dimensions



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



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.



Experience unprecedented accuracy, predictive maintenance, and superior security.



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





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



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

Image of product / Alternate images

Alternative

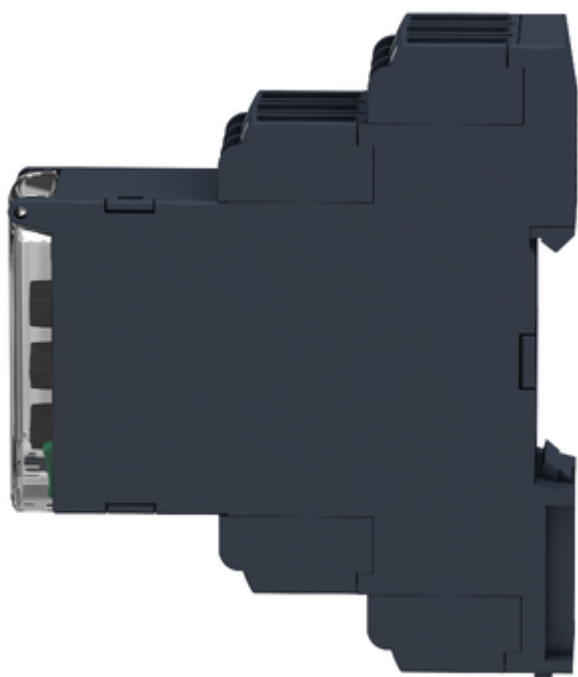






Image of product in real life situation

