Product data sheet

Specifications



current control relay, Harmony Control Relays, 4mA...1 A, 2CO, 24...240V AC DC

RM22JA31MR

Product availability: Stock - Normally stocked in distribution facility

Main

Range of Product	Harmony Control Relays
Relay Type	Current control relay
Product or Component Type	Current control relay
Relay name	RM22JA
Relay monitored parameters	Overcurrent or undercurrent detection Overcurrent or undercurrent in window mode
Control Type	With test button
Contacts type and composition	2 C/O

Complementary

[Us] rated supply voltage	24...240 V AC/DC 50/60 Hz, non self-powered
Supply voltage limits	20.4…264 V AC/DC
Maximum power consumption in VA	3.5 VA
Maximum power consumption in W	1.5 W DC
Measurement range	4 mA...1 A current AC/DC 50/60 Hz
Maximum measuring cycle	100 ms measurement cycle as true rms value
Hysteresis	5…50 % adjustable threshold setting 3 % fixed full scale for window mode
Setting accuracy of the switching threshold	+/- 10 % of the full scale
Repeat accuracy	+/- 0.5 % input and measurement circuit +/- 0.2 % time delay
Measurement error	< 1 % over the whole range with voltage variation 0.05 %/°C with temperature variation
Time delay type	Adjustable 0.1...30 s, +/- 10 % of the full scale value Tt- time delay upon fault
Setting accuracy of time delay	10 %
Reset time	1500 ms at maximum voltage
Response time	<= 500 ms
Power on Delay	300 ms
Output contacts	2 C/O
nominal output current	8 A
Maximum switching voltage	250 V AC
Switching capacity in VA	2000 VA
Minimum switching current	10 mA 5 V DC

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

Maximum switching current	8 A AC
Electrical durability	100000 cycles
Mechanical durability	10000000 cycles
operating voltage tolerance	- 15 % + 10 % Un
Resistance across terminals	2.5 Ohm E1-M terminals 0.5 Ohm E2-M terminals 0.1 Ohm E3-M terminals
Threshold setting	10...100 %
Insulation	Between supply and measurement
Contacts material	Cadmium free

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 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
Standards	IEC 60255-1
Product Certifications	CSA CE EAC CCC GL RCM UL
Ambient Air Temperature for Storage	-40…158 °F (-40…70 °C) -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
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
Overvoltage category	III conforming to IEC 60664-1
Dielectric test voltage	2.5 kV AC 50 Hz, 1 min IEC 60255-27
Insulation resistance	> 100 MOhm 500 V DC IEC 60255-27
Connections - terminals	Screw terminals, 2 x 0.5...2 x 2.5 mm² 20 AWG...14 AWG) solid without cable end Screw terminals, 2 x 0.2...2 x 1.5 mm² 24 AWG...16 AWG) flexible with cable end Screw terminals, 1 x 0.5...1 x 3.3 mm² 20 AWG...12 AWG) solid without cable end Screw terminals, 1 x 0.2...1 x 2.5 mm² 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

Local signalling	LED (yellow) for relay ON LED (green) for power ON
Mounting support	35 mm DIN rail conforming to IEC 60715
Reliability data	MTTFd = 296.8 years B10d = 270000
Height	3.5 in (90 mm) 3.5 in (88.9 mm)
Width	0.9 in (22.5 mm) 0.9 in (22.9 mm)
Depth	2.9 in (73 mm) 2.9 in (73.7 mm)
Net Weight	0.24 lb(US) (0.11 kg) 0.24 lb(US) (0.11 kg)

Ordering and shipping details

Category	US10CP222380
Discount Schedule	0CP2
GTIN	3606480792298
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 (2.6 cm)
Package 1 Width	3.2 in (8.2 cm)
Package 1 Length	3.7 in (9.5 cm)
Package weight(Lbs)	4.3 oz (121.0 g)
Unit Type of Package 2	S02
Number of Units in Package 2	40
Package 2 Height	5.9 in (15 cm)
Package 2 Width	11.8 in (30 cm)
Package 2 Length	15.7 in (40 cm)
Package 2 Weight	11.678 lb(US) (5.297 kg)
Unit Type of Package 3	P06
Number of Units in Package 3	640
Package 3 Height	19.7 in (50.0 cm)
Package 3 Width	31.5 in (80.0 cm)
Package 3 Length	23.6 in (60.0 cm)
Package 3 Weight	204.10 lb(US) (92.58 kg)

Contractual warranty

Warranty (in months)	18

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	**44 kg CO2 eq.**
Carbon footprint of the manufacturing phase [A1 to A3]	**3 kg CO2 eq.**
Carbon footprint of the distribution phase [A4]	**0.1 kg CO2 eq.**
Carbon footprint of the installation phase [A5]	**0 kg CO2 eq.**
Carbon footprint of the use phase [B2, B3, B4, B6]	**41 kg CO2 eq.**
Carbon footprint of the end-of-life phase [C1 to C4]	**0.3 kg CO2 eq.**
Environmental Disclosure	**Product Environmental Profile**

Use Better

Materials and Substances

Packaging made with recycled cardboard	**Yes**
Packaging without single use plastic	**Yes**
SCIP Number	**5e3fdf99-611b-4d07-ad17-6eba84ab488b**
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**

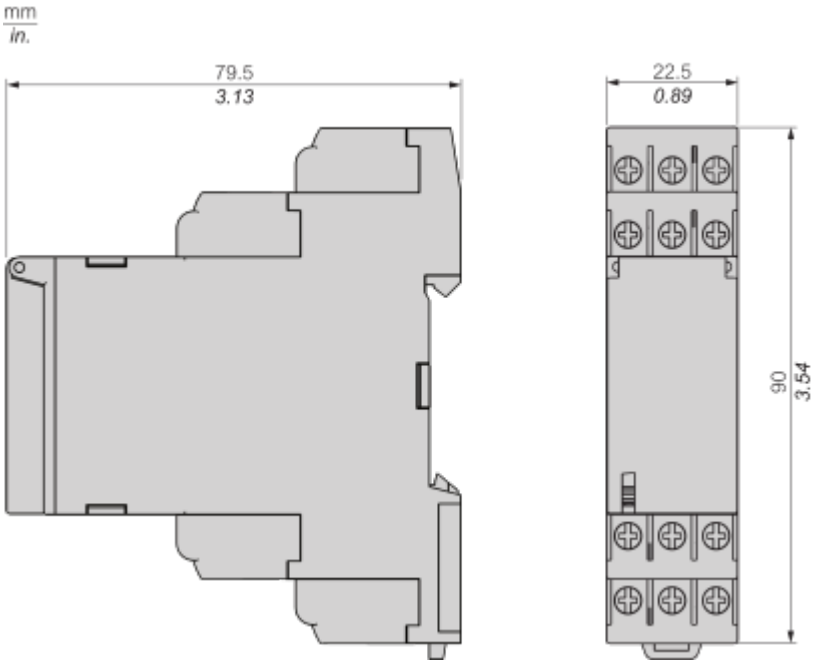
Use Again

Repack and remanufacture

Recyclability potential, in %	**18**
Circularity Profile	**End of Life Information**
Take-back	**No**

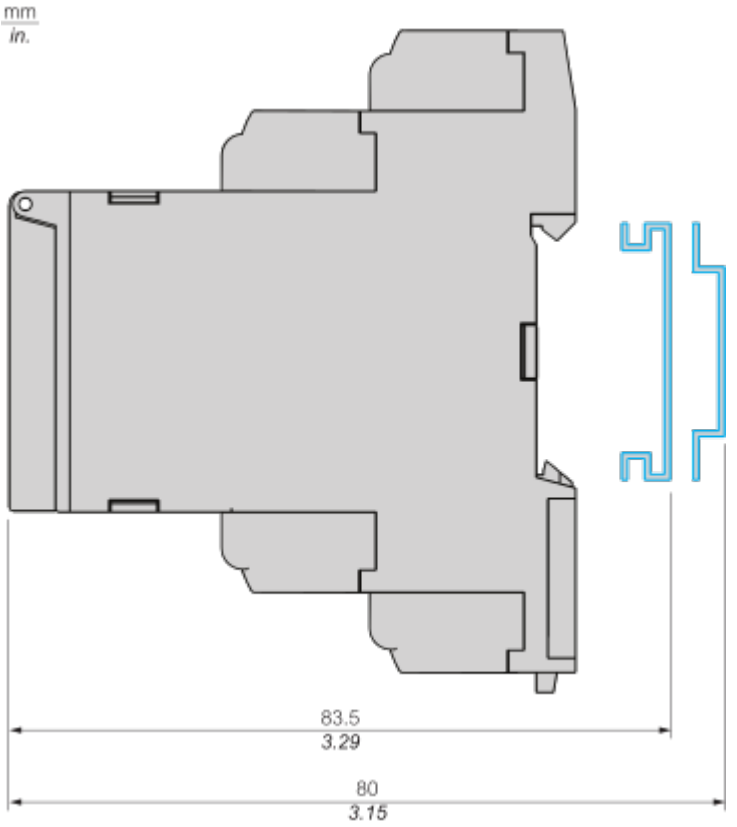
Dimensions Drawings

Dimensions



Mounting and Clearance

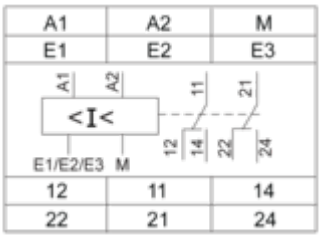
Rail Mounting



Connections and Schema

Current Measurement Relay

Wiring Diagram



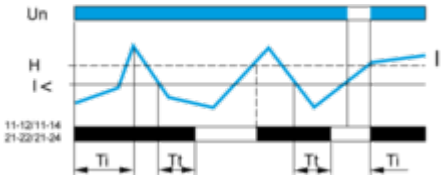
A1,A2 : Supply voltage
E1,E2,E3,M : Currents to be measured
11-14,12 : 1st C/O contact of output relay
21-24,22 : 2nd C/O contact of output relay

Technical Description

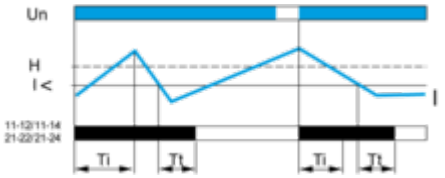
Function Diagrams

Undercurrent Detection

Without memory ("No Memory" mode)

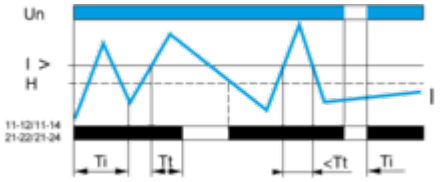


With memory ("Memory" mode)

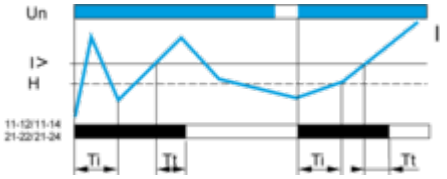


Overcurrent Detection

Without memory ("No Memory" mode)



With memory ("Memory" mode)



Legend

Ti Starting inhibition time delay
Tt Time delay after crossing of threshold
Un Supply voltage
I Monitored current
H Hysteresis
I> Overcurrent threshold
I< Undercurrent 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.

Image of product / Alternate images

Alternative

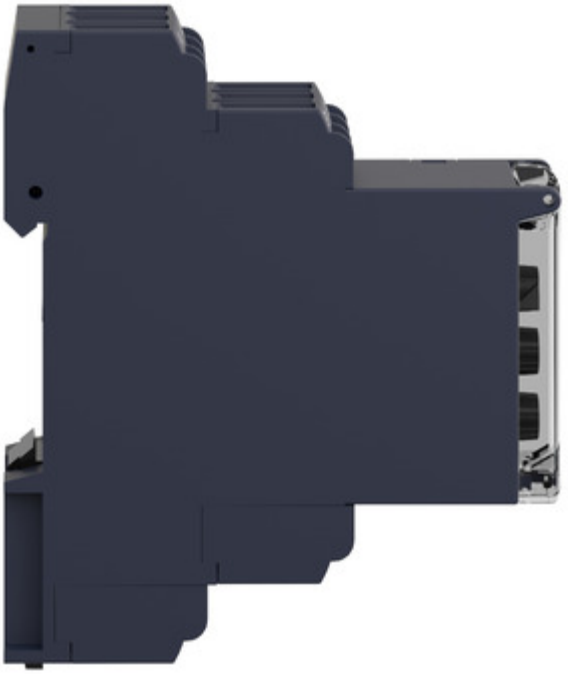





12
11
14
22
21
24




A1
A2
M
E1
E2
E3
12
11
14
22
21
24
Schneider




RM22JA31MR
A1 A2 M
E1 E2 E3
E1/E2/E3 M
12 11 14
22 21 24
DNV·GL
Use copper conductors only
Telemecanique

Image of product in real life situation

