

# Bảng thông số sản phẩm

Thông số kỹ thuật



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

RM22JA31MR

## 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
time delay	Adjustable 0.1...30 s, +/- 10 % of the full scale value Tt- time delay upon fault
Switching capacity in VA	2000 VA
Minimum switching current	10 mA at 5 V DC
Maximum switching current	8 A AC
Maximum power consumption in VA	3.5 VA
Measurement range	4 mA...1 A current AC/DC 50/60 Hz
Utilisation category	AC-15 conforming to IEC 60947-5-1 DC-13 conforming to IEC 60947-5-1 AC-1 conforming to IEC 60947-4-1 DC-1 conforming to IEC 60947-4-1
Contacts type and composition	2 C/O

## Complementary

Reset time	1500 ms at maximum voltage
Maximum switching voltage	250 V AC
Supply voltage limits	20.4...264 V AC/DC
operating voltage tolerance	- 15 % + 10 % Un
Maximum power consumption in W	1.5 W DC
Resistance across terminals	2.5 Ohm at E1-M terminals 0.5 Ohm at E2-M terminals 0.1 Ohm at E3-M terminals
Output contacts	2 C/O
Nominal output current	8 A
Maximum measuring cycle	100 ms measurement cycle as true rms value
Internal input resistance	0.5 Ohm 2.5 Ohm 0.1 Ohm
Setting accuracy of the switching threshold	+/- 10 % of the full scale

<b>Switching threshold drift</b>	<= 0.05 % per degree centigrade depending permissible ambient air temperature <= 1 % within the supply voltage range
<b>Setting accuracy of time delay</b>	10 P
<b>Time delay drift</b>	<= 0.05 % per degree centigrade depending permissible ambient air temperature <= 1 % within the supply voltage range
<b>Hysteresis</b>	5...50 % adjustable of threshold setting 3 % fixed of full scale for window mode
<b>delay at power up</b>	0.3 s
<b>Repeat accuracy</b>	+/- 0.5 % for input and measurement circuit +/- 0.2 % for time delay
<b>Measurement error</b>	< 1 % over the whole range with voltage variation 0.05 %/°C with temperature variation
<b>Response time</b>	<= 500 ms
<b>Threshold setting</b>	10...100 %
<b>Overvoltage category</b>	III conforming to IEC 60664-1 III conforming to UL 508
<b>Insulation resistance</b>	> 100 MOhm at 500 V DC conforming to IEC 60255-27
<b>Insulation</b>	Between supply and measurement
<b>Connections - terminals</b>	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
<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 (yellow) for relay ON LED (green) for power ON
<b>Mounting support</b>	35 mm DIN rail conforming to IEC 60715
<b>Electrical durability</b>	100000 cycles
<b>Mechanical durability</b>	10000000 cycles
<b>[Un] rated nominal voltage</b>	24...240 V AC/DC 50/60 Hz, non self-powered
<b>Safety reliability data</b>	MTTFd = 296.8 years B10d = 270000
<b>Contacts material</b>	Cadmium free
<b>Width</b>	22.5 mm
<b>Control type</b>	With test button
<b>net weight</b>	0.11 kg

## Environment

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

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1
<b>Package 1 Height</b>	2.6 cm
<b>Package 1 Width</b>	8.2 cm
<b>Package 1 Length</b>	9.5 cm
<b>Package 1 Weight</b>	121.0 g
<b>Unit Type of Package 2</b>	S02
<b>Number of Units in Package 2</b>	40
<b>Package 2 Height</b>	15.0 cm
<b>Package 2 Width</b>	30.0 cm

<b>Package 2 Length</b>	40.0 cm
<b>Package 2 Weight</b>	5.297 kg
<b>Unit Type of Package 3</b>	P06
<b>Number of Units in Package 3</b>	640
<b>Package 3 Height</b>	50.0 cm
<b>Package 3 Width</b>	80.0 cm
<b>Package 3 Length</b>	60.0 cm
<b>Package 3 Weight</b>	92.58 kg

## Bền vững

Nhãn **Green Premium™** là cam kết của Schneider Electric trong việc cung cấp sản phẩm với hiệu suất môi trường tốt nhất. Green Premium cam kết tuân thủ các quy định mới nhất, minh bạch về tác động môi trường, cũng như các sản phẩm tuần hoàn và CO<sub>2</sub> thấp.

**Hướng dẫn đánh giá tính bền vững của sản phẩm** là tài liệu kỹ thuật phổ thông giúp làm rõ các tiêu chuẩn nhãn sinh thái toàn cầu và cách diễn giải việc khai báo môi trường.

[Tìm hiểu thêm về Green Premium >](#)

[Hướng dẫn đánh giá về sự bền vững của sản phẩm >](#)



Minh bạch [RoHS/REACH](#)

## Hiệu suất sức khỏe

Mercury Free

RoHS Exemption Information [Yes](#)

## Chứng nhận & Tiêu chuẩn

Reach Regulation

[REACH Declaration](#)

Eu RoHS Directive

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

China RoHS Regulation

[China RoHS declaration](#)

Environmental Disclosure

[Product Environmental Profile](#)

Weee

The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

Circularity Profile

[End of Life Information](#)

# Bảng thông số sản phẩm

# RM22JA31MR

## Dimensions Drawings

### Dimensions

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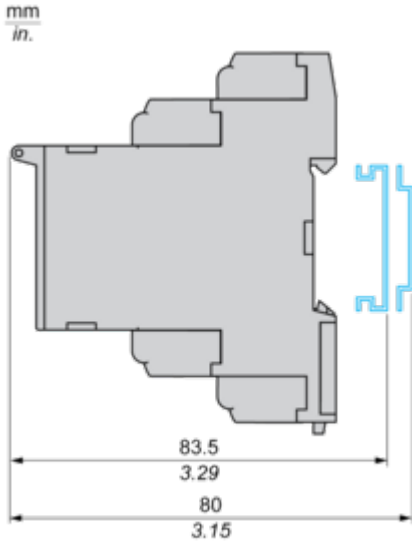


Mounting and Clearance

**Mounting and Clearance**

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**Rail Mounting**

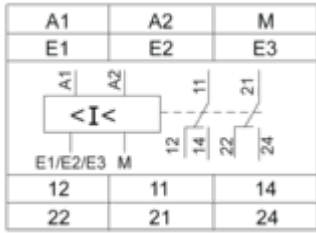


## Connections and Schema

### Current Measurement Relay

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#### 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

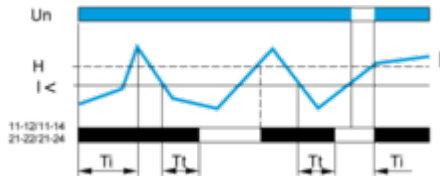


## Technical Description

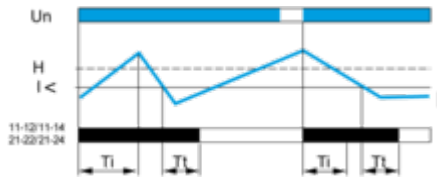
### Function Diagrams

#### Undercurrent Detection

Without memory ("No Memory" mode)

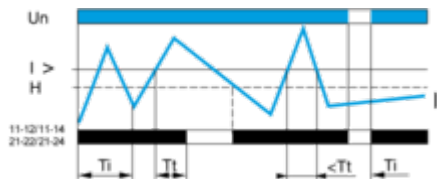


With memory ("Memory" mode)

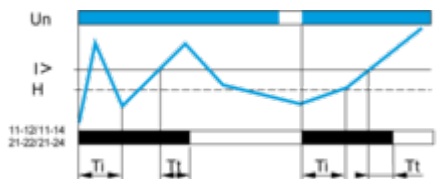


#### Overcurrent Detection

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.