

# Bảng thông số sản phẩm

Thông số kỹ thuật



## 3-phase control relay, Harmony Control Relays, 8A, 2CO, overvoltage and undervoltage detection, 200~240V AC

RM22TR31

### Main

Range of product	Harmony Control Relays
Relay type	Control relay
product or component type	3-phase control relay
Network number of phases	3 phases
Relay name	RM22TR
Relay monitored parameters	Phase sequence Phase failure detection Overvoltage and undervoltage 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	200...240 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 at 5 V DC
Maximum switching current	8 A AC
[Us] rated supply voltage	AC/DC
Supply voltage limits	160...288 V AC
operating limits	- 20 % + 20 % Un
Power consumption in VA	10 VA at 240 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 of selectable
Run-up delay at power-up	650 ms

<b>Maximum measuring cycle</b>	150 ms measurement cycle as true rms value
<b>Threshold adjustment voltage</b>	2...20 % of Un selected
<b>Voltage range</b>	200...240 V phase to phase
<b>Repeat accuracy</b>	+/- 0.5 % for input and measurement circuit +/- 3 % 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>	<= 300 ms
<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>Mounting position</b>	Any position
<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>Status LED</b>	LED (yellow) relay ON LED (green) 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>Utilisation category</b>	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
<b>[Un] rated nominal voltage</b>	, self-powered
<b>Safety reliability data</b>	MTTFd = 388.1 years B10d = 350000
<b>Contacts material</b>	Cadmium free
<b>Control type</b>	With test button
<b>Width</b>	22.5 mm
<b>net weight</b>	0.09 kg

## Environment

<b>Immunity to microbreaks</b>	10 ms
--------------------------------	-------

<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>
--------------------------------------	---

<b>Standards</b>	IEC 60255-1
<b>Product certifications</b>	<p>CSA</p> <p>CCC</p> <p>EAC</p> <p>RCM</p> <p>CE</p> <p>GL</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 AC/DC</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>	8.2 cm
<b>Package 1 Width</b>	9.5 cm
<b>Package 1 Length</b>	2.6 cm
<b>Package 1 Weight</b>	101.0 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>	4.495 kg
<b>Unit Type of Package 3</b>	PAL
<b>Number of Units in Package 3</b>	640
<b>Package 3 Height</b>	50.0 cm
<b>Package 3 Width</b>	60.0 cm
<b>Package 3 Length</b>	80.0 cm
<b>Package 3 Weight</b>	86.18 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](#)

**Circularity Profile** [End of Life Information](#)

# Bảng thông số sản phẩm

# RM22TR31

Dimensions Drawings

## Dimensions

---

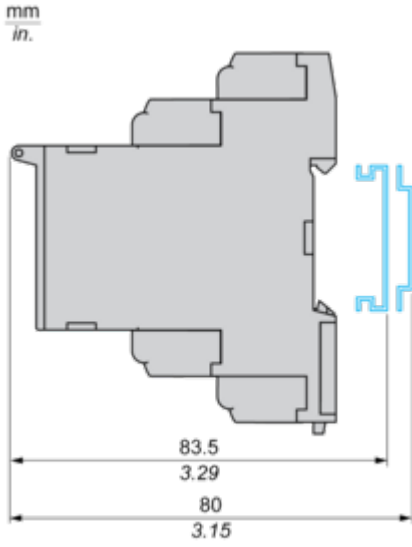


Mounting and Clearance

**Mounting and Clearance**

---

**Rail Mounting**

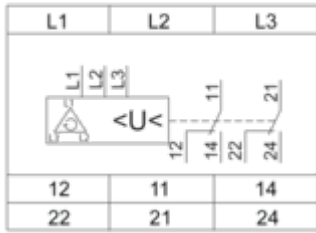


## Connections and Schema

### 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

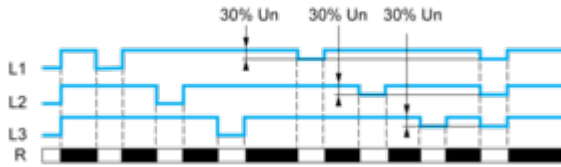


## Technical Description

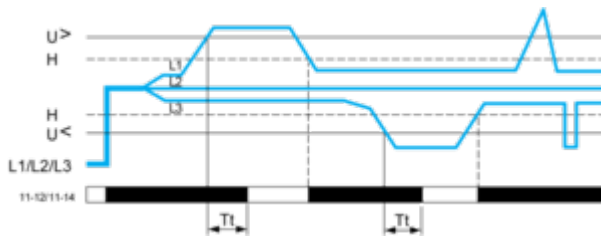
### Function Diagrams

---

#### Phase Failure Detection (U measured < 0.7 x nominal supply voltage)



#### Control of Overvoltage and Undervoltage



#### Legend

**Un** Nominal supply voltage

**R** Output relay

**Tt** 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.