Product datasheet

Specifications



three-Phase Voltage control relay 200…240Vac, 2 C/O

Local distributor code:

403002993 RM22TR31

EAN Code: 3606480792182

Main

Range of product	Harmony Control Relays
Relay type	Control relay
Product or component type	3-phase control relay
Relay name	RM22TR
Relay monitored parameters	Phase sequence Phase failure detection Overvoltage and undervoltage detection
Control type	With test button
Contacts type and composition	2 C/O

Complementary

[Us] rated supply voltage	, self-powered
Supply voltage limits	160…288 V AC
Supply frequency	50...60 Hz +/- 10 %
Power consumption in VA	10 VA at 240 V AC 60 Hz
Measurement range	200...240 V voltage AC
Voltage detection threshold	< 100 V AC
Maximum measuring cycle	150 ms measurement cycle as true rms value
Threshold adjustment voltage	2...20 % of Un selected
Setting accuracy of the switching threshold	+/- 10 % of the full scale
Repeat accuracy	+/- 0.5 % for input and measurement circuit +/- 3 % for 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	<= 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 at 5 V DC

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
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 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
Standards	IEC 60255-1
Product certifications	CSA CCC EAC RCM CE GL UL
Ambient air temperature for storage	-40…70 °C -40…70 °C
Ambient air temperature for operation	-20…50 °C at 60 Hz -20…60 °C at 50 Hz AC/DC
Relative humidity	93…97 % at 25…55 °C conforming to IEC 60068-2-30
Vibration resistance	0.075 mm (f= 10…58.1 Hz) not in operation conforming to IEC 60068-2-6 1 gn (f= 10…58.1 Hz) not in operation conforming to IEC 60068-2-6 0.035 mm (f= 58.1…150 Hz) in operation conforming to IEC 60068-2-6 0.5 gn (f= 58.1…150 Hz) in operation conforming to IEC 60068-2-6
Shock resistance	15 gn (duration = 11 ms) for not in operation conforming to IEC 60068-2-27 5 gn (duration = 11 ms) for in operation conforming to IEC 60068-2-27
IP degree of protection	IP20 (terminals) conforming to IEC 60529 IP40 (housing) conforming to IEC 60529 IP50 (front panel) conforming to IEC 60529
Pollution degree	3 conforming to IEC 60664-1 3 conforming to UL 508
Overvoltage category	III conforming to IEC 60664-1 III conforming to UL 508
Dielectric test voltage	2.5 kV, 1 min AC 50 Hz conforming to IEC 60255-27
Insulation resistance	> 100 MOhm at 500 V DC conforming to 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	0.6…1 N.m conforming to IEC 60947-1
Housing material	Polycarbonate
Local signalling	LED (yellow) relay ON LED (green) power ON
Mounting support	35 mm DIN rail conforming to IEC 60715
Reliability data	MTTFd = 388.1 years B10d = 350000

Height	90 mm 88.9 mm
Width	22.5 mm 22.9 mm
Depth	73 mm 73.7 mm
Net weight	0.095 kg 0.10 kg

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	8.2 cm
Package 1 Width	9.5 cm
Package 1 Length	2.6 cm
Package 1 Weight	101.0 g
Unit Type of Package 2	S02
Number of Units in Package 2	40
Package 2 Height	15 cm
Package 2 Width	30 cm
Package 2 Length	40 cm
Package 2 Weight	4.495 kg
Unit Type of Package 3	PAL
Number of Units in Package 3	640
Package 3 Height	50.0 cm
Package 3 Width	60.0 cm
Package 3 Length	80.0 cm
Package 3 Weight	86.18 kg

Logistical informations

Country of origin	ID

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	**71 kg CO2 eq.**
Carbon footprint of the manufacturing phase [A1 to A3]	**2 kg CO2 eq.**
Carbon footprint of the distribution phase [A4]	**0 kg CO2 eq.**
Carbon footprint of the installation phase [A5]	**0 kg CO2 eq.**
Carbon footprint of the use phase [B2, B3, B4, B6]	**69 kg CO2 eq.**
Carbon footprint of the end-of-life phase [C1 to C4]	**0.1 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	**3c095d35-159c-493c-8604-58788d456aa9**
EU RoHS Directive	Compliant By Exemption
REACh Regulation	Reference contains Substances of Very High Concern above the threshold

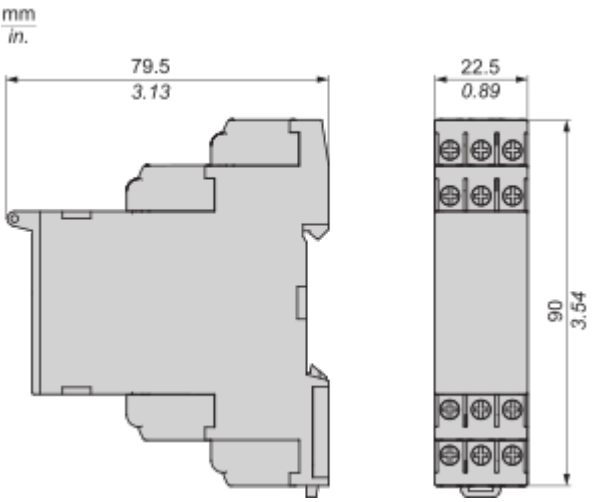
Use Again

Repack and remanufacture

Recyclability potential, in %	**17**
End of life manual availability	End of Life Information
Take-back	**No**

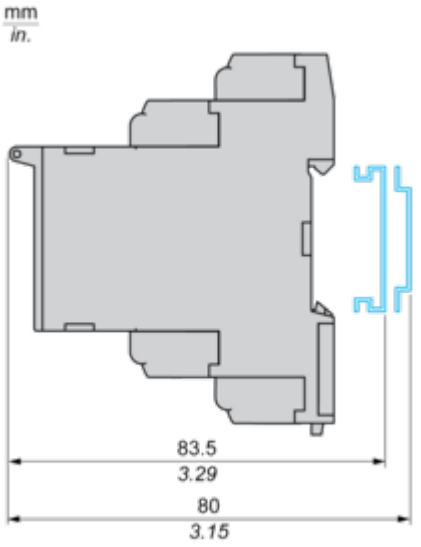
Dimensions Drawings

Dimensions



Mounting and Clearance

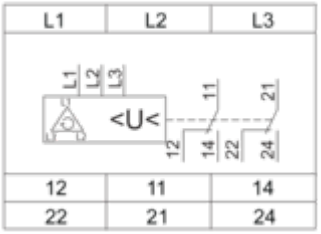
Rail Mounting



Connections and Schema

3-Phase Voltage Control Relay

Wiring Diagram

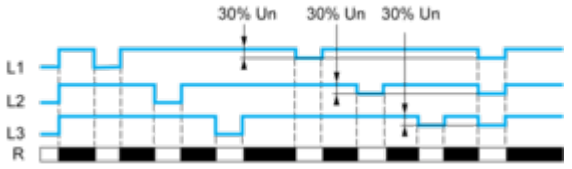


L1,L2,L3 : Supply to be monitored
11-14,12 : 1st C/O contact of output relay
21-24,22 : 2nd C/O contact of output relay

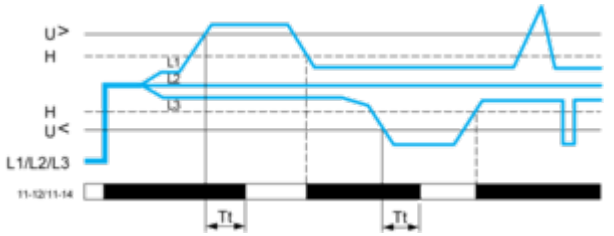
Technical Description

Function Diagrams

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



Control of Overvoltage and Undervoltage

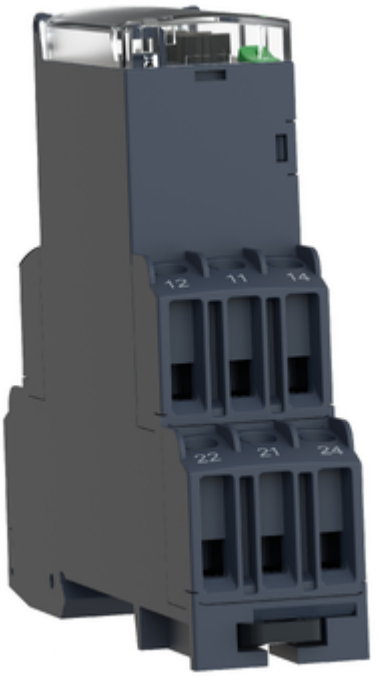


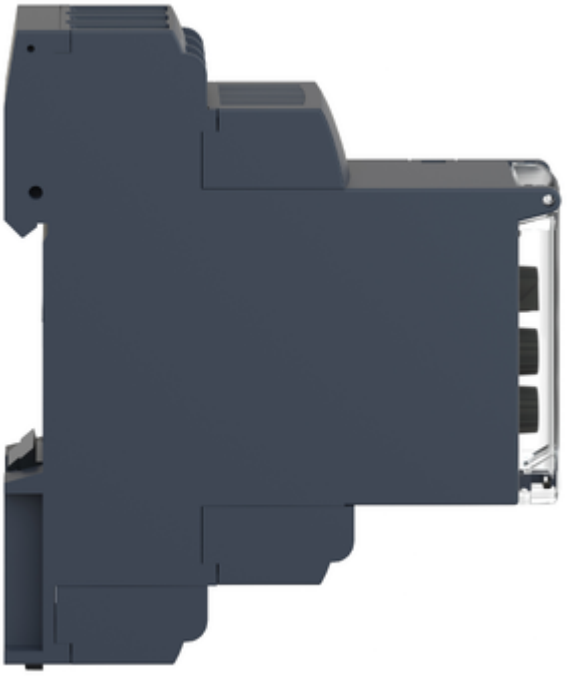
Legend

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.

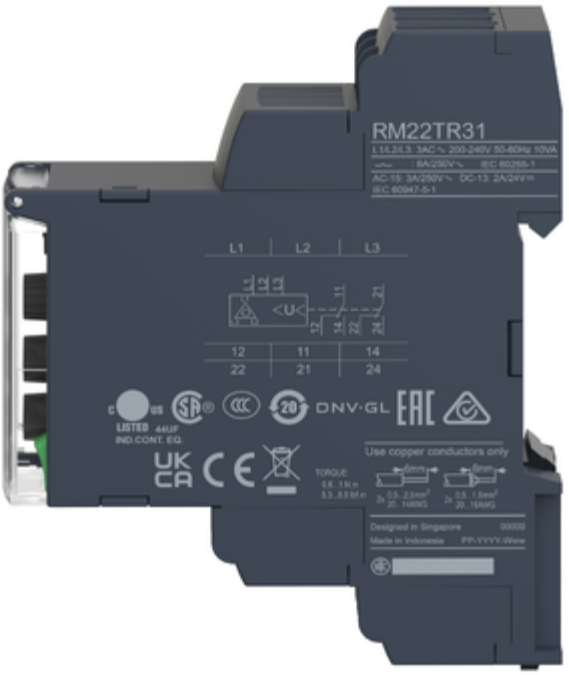
Image of product / Alternate images

Alternative

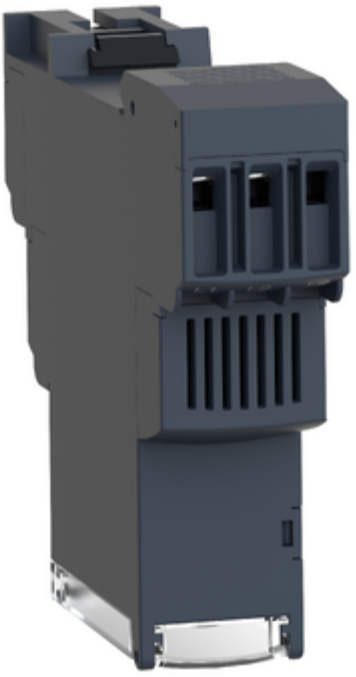




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L1
L2
L3
ON DELAY
T1
T2
T3
DIAGNOSTIC
Schneider Electric
12
11
14
22
21
24

Image of product in real life situation

