Product datasheet

Specifications

three-phase network control relay RM4-T - range 198 V

RM4TR33

Discontinued on: Jun 8, 2022 AD

Discontinued

Main

Range of product	Harmony Relay
Relay type	Control relay
Product or component type	Industrial measurement and control relays
Relay name	RM4-T
Relay monitored parameters	Overvoltage and undervoltage detection Phase failure detection Phase sequence
Time delay type	Adjustable 0.1...10 s
Output contacts	2 C/O
Contacts type and composition	2 C/O
Poles description	3P
Product specific application	For 3-phase supply

Complementary

[Ie] rated operational current	2 A at 70 °C 24 V DC-13 conforming to IEC 60947-5-1/1991 2 A at 70 °C 24 V DC-13 conforming to VDE 0660 3 A at 70 °C 115 V AC-15 conforming to IEC 60947-5-1/1991 3 A at 70 °C 115 V AC-15 conforming to VDE 0660 3 A at 70 °C 24 V AC-15 conforming to IEC 60947-5-1/1991 3 A at 70 °C 24 V AC-15 conforming to VDE 0660 3 A at 70 °C 250 V AC-15 conforming to IEC 60947-5-1/1991 3 A at 70 °C 250 V AC-15 conforming to VDE 0660 0.1 A at 70 °C 250 V DC-13 conforming to IEC 60947-5-1/1991 0.1 A at 70 °C 250 V DC-13 conforming to VDE 0660 0.3 A at 70 °C 115 V DC-13 conforming to IEC 60947-5-1/1991 0.3 A at 70 °C 115 V DC-13 conforming to VDE 0660
Maximum switching voltage	440 V AC
Control threshold undervoltage	198 V
Control threshold overvoltage	242 V
Setting accuracy of the switching threshold	+/-3 %
Switching threshold drift	<= 0.06 % per degree centigrade depending permissible ambient air temperature <= 0.5 % within the measuring range
Setting accuracy of time delay	10 P
Time delay drift	<= 0.07 % per degree centigrade depending on the rated operational temperature <= 0.5 % within the measuring range
Hysteresis	5 % fixed of de-energisation threshold
delay at power up	650 ms

Maximum measuring cycle	80 ms
[Ui] rated insulation voltage	500 V conforming to IEC
Supply frequency	50/60 Hz +/- 5 %
Operating position	Any position without derating
Connections - terminals	Screw terminals, 2 x 1.5 mm²flexible with cable end Screw terminals, 2 x 2.5 mm²flexible without cable end
Tightening torque	0.6…1.1 N.m
Mechanical durability	30000000 cycles
[Ith] conventional free air thermal current	8 A
Switching capacity in mA	10 mA at 12 V
Switching voltage	250 V AC
Contacts material	90/10 silver nickel contacts
Number of cables	2
Height	78 mm
Width	22.5 mm
Depth	80 mm
Terminals description ISO n°1	(25-26-28)OC (15-16-18)OC (L1-L2-L3)CO
Output relay state	Tripped, fault present
9 mm pitches	2.5
Net weight	0.11 kg

Environment

Electromagnetic compatibility	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 Resistance to electrostatic discharge - test level: 6 kV (contact) conforming to IEC 61000-4-2 level 3 Resistance to electrostatic discharge - test level: 8 kV (air) conforming to IEC 61000-4-2 level 3
Standards	IEC 60255-6
Product certifications	CSA UL GL
Marking	CE
Directives	89/336/EEC - electromagnetic compatibility 73/23/EEC - low voltage directive
Ambient air temperature for storage	-40…85 °C
Ambient air temperature for operation	-20…65 °C
Relative humidity	15…85 % 3K3 conforming to IEC 60721-3-3
Vibration resistance	0.35 ms (f= 10…55 Hz) conforming to IEC 60068-2-6
Shock resistance	15 gn for 11 ms conforming to IEC 60068-2-27
IP degree of protection	IP20 (terminals) conforming to IEC 60529 IP50 (casing) conforming to IEC 60529
Pollution degree	3 conforming to IEC 60664-1

Overvoltage category	III conforming to IEC 60664-1
Dielectric test voltage	2.5 kV
Non-dissipating shock wave	4.8 kV
Resistance to electrostatic discharge	6 kV contact conforming to IEC 61000-4-2 level 3 8 kV air conforming to IEC 61000-4-2 level 3
Resistance to electromagnetic fields	10 V/m conforming to IEC 61000-4-3 level 3
Resistance to fast transients	2 kV conforming to IEC 61000-4-4 level 3
Disturbance radiated/conducted	CISPR 22 - class A CISPR 11 group 1 - class A

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	2.7 cm
Package 1 Width	8.2 cm
Package 1 Length	8.5 cm
Package 1 Weight	133 g

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 >

Use Longer

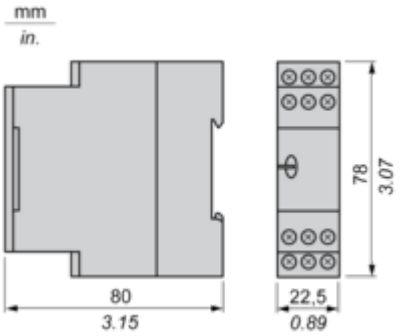
Lifetime extension

Repair	No

Dimensions Drawings

3-phase Supply Control Relays

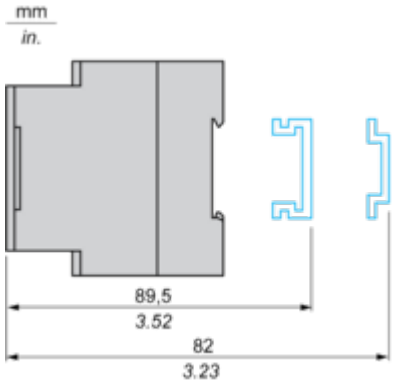
Dimensions



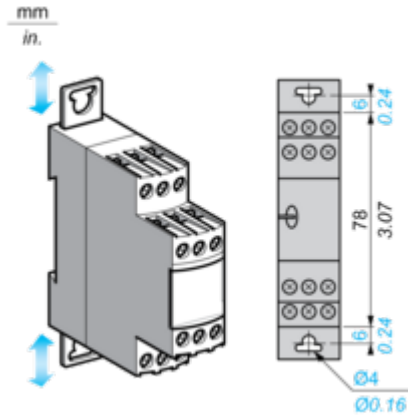
Mounting and Clearance

3-phase Supply Control Relays

Rail mounting



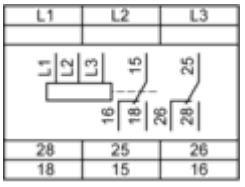
Screw fixing



Connections and Schema

3-Phase Supply Control Relays

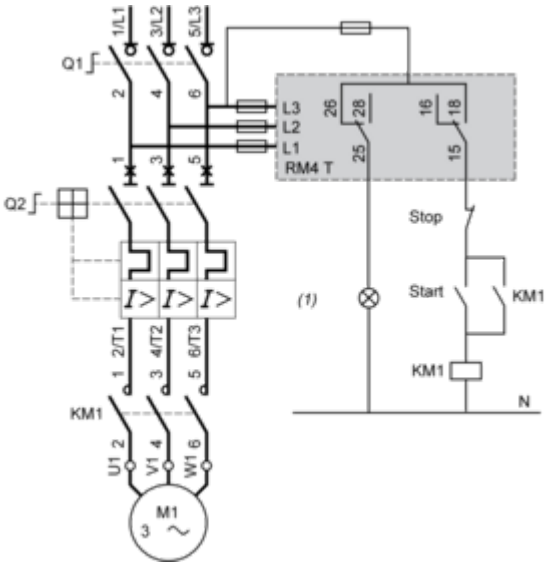
Wiring Diagram



L1, L2, L3 Supply to be monitored
15-18, 15-16 1st C/O contact of the output relay
25-28, 25-26 2nd C/O contact of the output relay

Application Scheme

Example



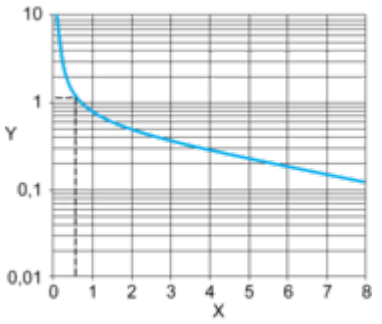
(1) Fault

Performance Curves

Electrical Durability and Load Limit Curves

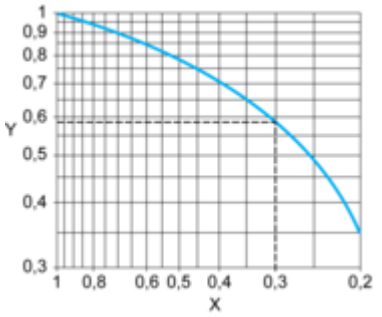
AC Load

Curve 1: Electrical durability of contacts on resistive load in millions of operating cycles



X Current broken in A
Y Millions of operating cycles

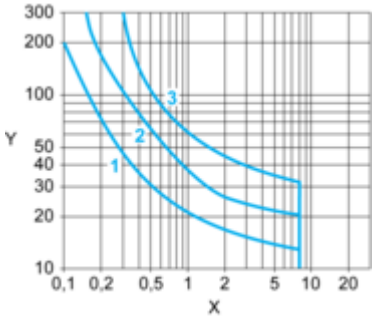
Curve 2: Reduction factor k for inductive loads (applies to values taken from durability Curve 1)



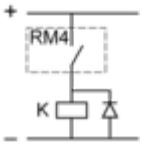
X Power factor on breaking (cos φ)
Y Reduction factor K

DC Load

Load limit curve



X Current in A
Y Voltage in V
1 L/R = 20 ms
2 L/R with load protection diode
3 Resistive load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RM4
K
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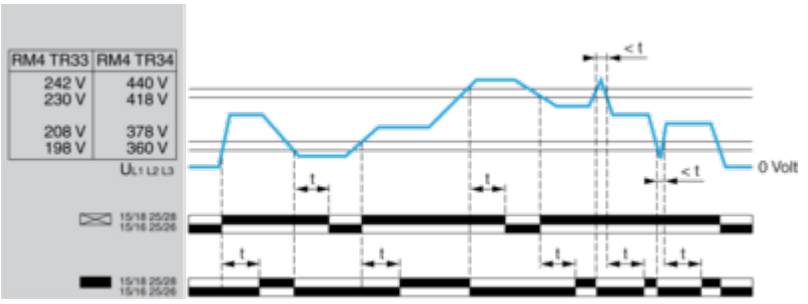
Technical Description

Function Diagram

Overvoltage and Undervoltage Detection

Functions "Fault detection delayed" or "Fault detection extended" (by switch selector)



Legend

t Time delay
U 3-phase supply voltage monitored
15/18, 15/16; 25/28, 25/26 Output relays connections
Relay status: black color = energized.