

Product data sheet

Specifications



three-phase network control relay RM4-T - range 200..500 V

RM4TG20

⚠ Discontinued on: Dec 31, 2016

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Main

Range Of Product	Harmony Relay
Relay Type	Control relay
Product Or Component Type	Industrial measurement and control relays
Product Specific Application	For 3-phase supply
Relay Name	RM4-T
Relay Monitored Parameters	Phase failure detection Phase sequence
Time Delay	Without
Contacts Type And Composition	2 C/O
Poles Description	3P

Complementary

Maximum Switching Voltage	440 V AC
Output Contacts	2 C/O
Setting Accuracy Of Time Delay	10 P
Delay At Power Up	650 ms
Maximum Measuring Cycle	80 ms
Marking	CE
Overvoltage Category	III conforming to IEC 60664-1
[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 mm ² flexible with cable end Screw terminals, 2 x 2.5 mm ² flexible without cable end
Tightening Torque	0.6...1.1 N.m
Mechanical Durability	30000000 cycles
[Ith] Conventional Free Air Thermal Current	8 A

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

[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
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	(L1-L2-L3)CO (15-16-18)OC (25-26-28)OC ALT
Output Relay State	Tripped, fault present
9 Mm Pitches	2.5
Net Weight	0.11 kg
Terminals Description Iso N°2	(11-12-14)OC ALT (L1-L2-L3)CO (21-22-24)OC

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	EN/IEC 60255-6
Product Certifications	GL UL CSA
Directives	73/23/EEC - low voltage directive 89/336/EEC - electromagnetic compatibility
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

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 11 group 1 - class A CISPR 22 - class A

Packing Units

Unit Type Of Package 1	PCE
Number Of Units In Package 1	1

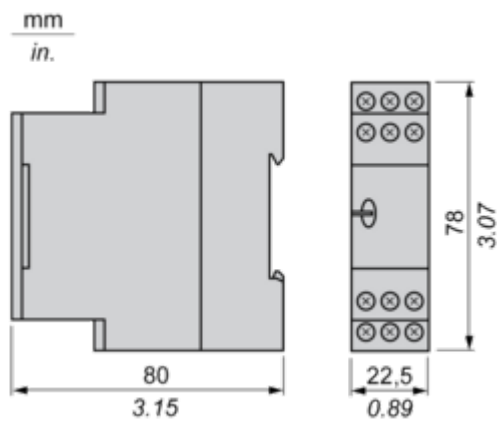
Contractual warranty

Warranty	18 months
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Dimensions Drawings

3-phase Supply Control Relays

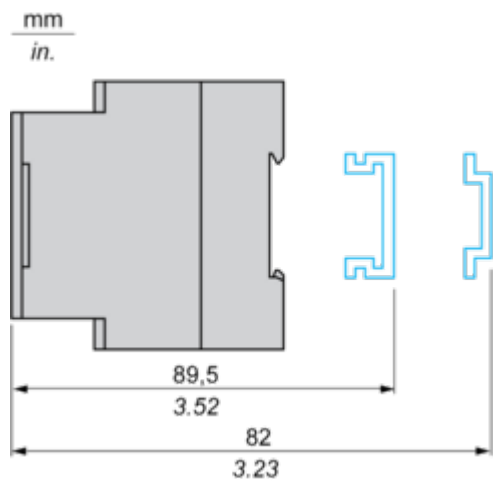
Dimensions



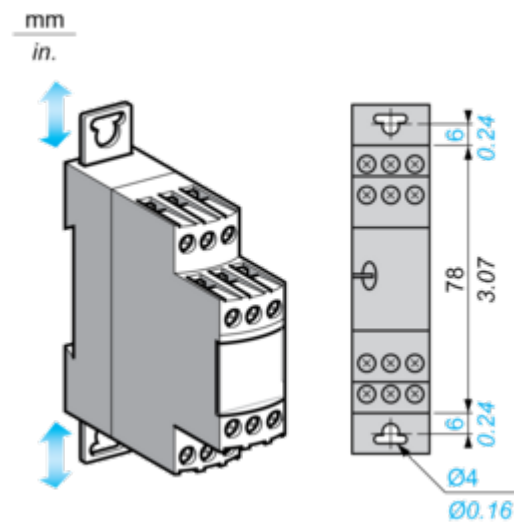
Mounting and Clearance

3-phase Supply Control Relays

Rail mounting



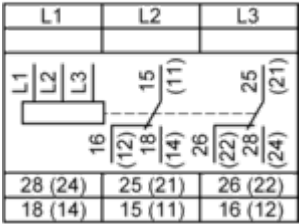
Screw fixing



Connections and Schema

3-Phase Supply Control Relays

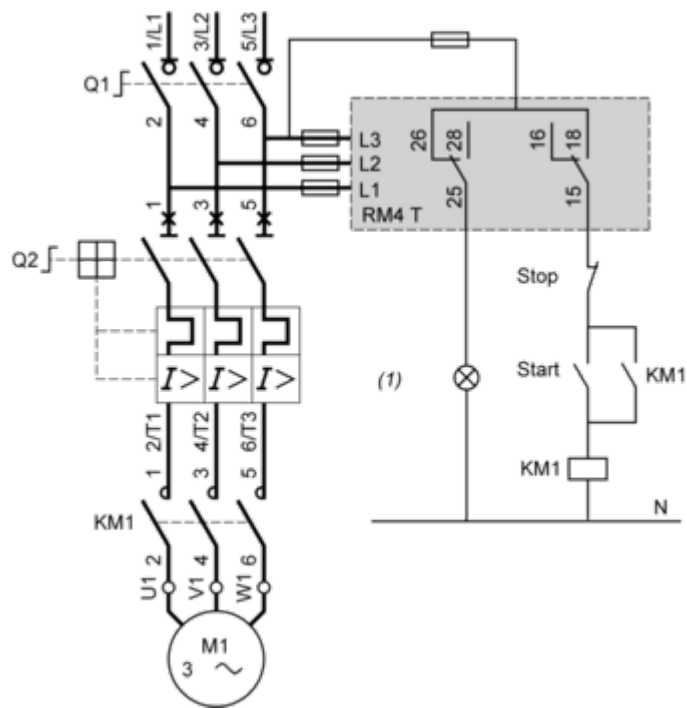
Wiring Diagram



L1, L2, L3 Supply to be monitored
15(11)-18(14), 15(11)-16(12) 1st C/O contact of the output relay
25(21)-28(24), 25(21)-26(22) 2nd C/O contact of the output relay

Application Scheme

Example



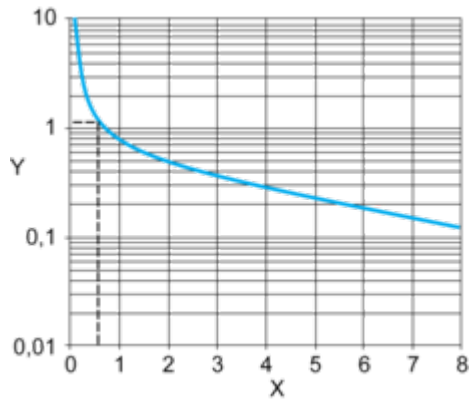
(1) Fault

Performance Curves

Electrical Durability and Load Limit Curves

AC Load

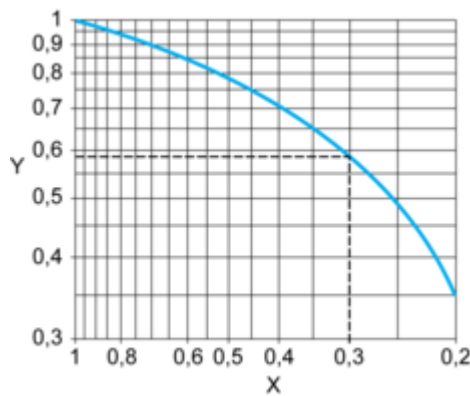
Curve 1: Electrical durability of contacts on resistive load in millions of operating cycles



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)

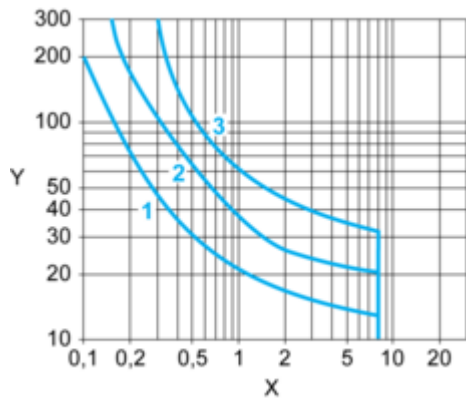


X Power factor on breaking (cos φ)

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

