



### Main

Range of product	Zelio Control
Product or component type	Industrial measurement and control relays
Relay type	Control relay
Product specific application	For 3-phase supply
Relay name	RM4-T
Relay monitored parameters	Phase failure detection Phase sequence
Time delay	Without
Measurement range	198...484 V
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
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
Connections - terminals	Screw terminals 2 x 1.5 mm <sup>2</sup> , flexible cable with cable end Screw terminals 2 x 2.5 mm <sup>2</sup> , flexible cable without cable end
Tightening torque	0.6...1.1 N.m
Mechanical durability	<= 30000000 cycles
[I <sub>th</sub> ] conventional free air thermal current	8 A
[I <sub>e</sub> ] 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

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

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	(15-16-18)OC (25-26-28)OC (L1-L2-L3)CO ALT
Output relay state	Tripped, fault present
9 mm pitches	2.5
Product weight	0.11 kg
Terminals description ISO n°2	(11-12-14)OC (21-22-24)OC (L1-L2-L3)CO ALT

## 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	CSA GL UL
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
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

## Contractual warranty

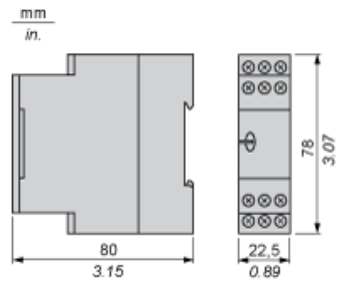
Warranty period	18 months
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3-phase Supply Control Relays

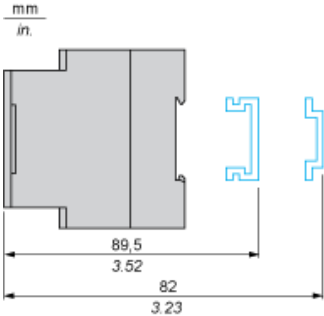
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Dimensions

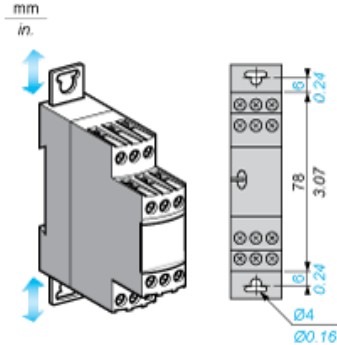


3-phase Supply Control Relays

Rail mounting

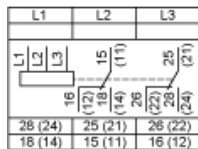


Screw fixing



3-Phase Supply Control Relays

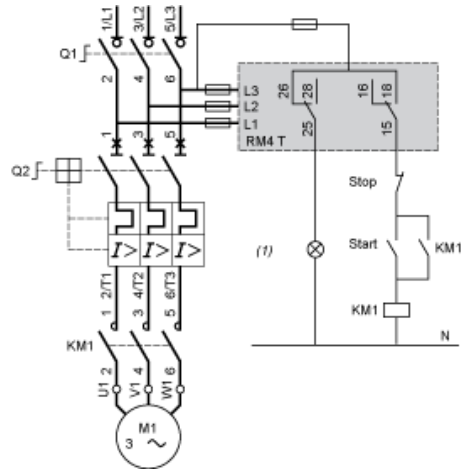
Wiring Diagram



L1, L2, L3 Supply to be monitored  
 15(11)-18(14), 15(11)-16(12) the output relay  
 25(21)-28(24), 25(21)-26(22) the output relay

## Application Scheme

### Example

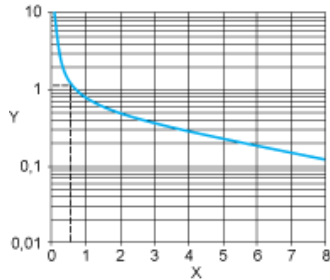


(1) Fault

Electrical Durability and Load Limit Curves

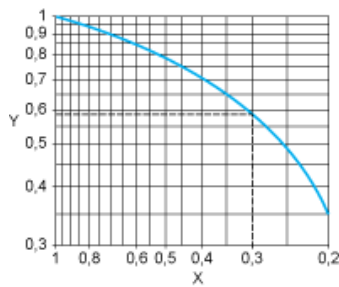
AC Load

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



X Current broken in A  
Y Millions of operating cycles

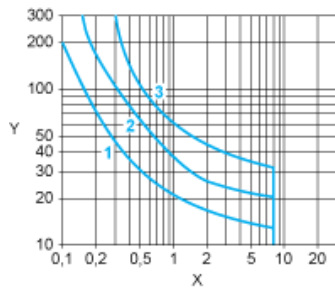
Curve 2: Reduction factor k for inductive loads (applies to values taken from durability Curve 1)



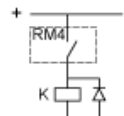
X Power factor on breaking ( $\cos \varphi$ )  
Y Reduction factor K

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



RM4TG20 is replaced by:

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### Electrical RM22TG20

three-Phase control relay 183...528Vac, 2 C/O

Qty 1

Reason for Substitution: End of life | Substitution date: 05 July 2016

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