Product datasheet

Specifications



motor voltage and temperature control relay - RM35-T - 24..240 V AC/DC - 2 NO

Local distributor code:

389834984 RM35TM250MW

EAN Code: 3389119405270

Main

Range of product	Harmony Control Relays
Relay type	Motor temperature control relay
Product or component type	Motor temperature control relay
Relay name	RM35TM
Relay monitored parameters	Phase failure detection Phase sequence Test/reset button Motor temperature via PTC probe Selection (with or without memory)
Control type	With test button
Contacts type and composition	2 NO
[Uc] control circuit voltage	24...240 V
Product specific application	For 3-phase supply

Complementary

[Us] rated supply voltage	24...240 V AC/DC 50/60 Hz, non self-powered
Supply voltage limits	20.4…264 V AC 20.4…264 V DC
Supply frequency	50/60 Hz +/- 10 %
Power consumption in VA	0…4 VA at 24...240 V AC
Measurement range	208...480 V AC 15...3100 Ohm
Measurement voltage limits	176…528 V AC
Time delay type	Without
Reset time	10000 ms output
Response time	> 50 ms (input Y1 (contact Y1-T1) and push-button)
Output contacts	2 NO
nominal output current	5 A
Maximum switching voltage	250 V AC
Switching capacity in VA	1250 VA
Minimum switching current	10 mA at 5 V DC
Maximum switching current	5 A AC 5 A DC
Electrical durability	100000 cycles
Mechanical durability	30000000 cycles

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

Control circuit frequency	50...60 Hz +/- 10 %
Resistance across terminals	602 kOhm
[Uc] control circuit voltage	<= 3.6 V of temperature control circuit (T1-T2 terminals open)
Short-circuit current	0.007 A temperature sensing circuit (T1-T2 terminals short circuited)
Maximum resistance	1500 Ohm for temperature sensor at 20 °C
Tripping threshold	3100 Ohm +/- 10 % for temperature control circuit
Reset threshold	1650 Ohm +/- 10 % for temperature control circuit
Maximum power consumption in W	0.5 W DC

Environment

Electromagnetic compatibility	Emission standard for industrial environments conforming to IEC 61000-6-4 Emission standard for residential, commercial and light-industrial environments conforming to IEC 61000-6-3 Immunity for industrial environments conforming to IEC 61000-6-2
Standards	IEC 60255-6 IEC 60034-11-2
Product certifications	CSA C-Tick GOST UL GL
Marking	CE
Directives	73/23/EEC - low voltage directive 89/336/EEC - electromagnetic compatibility
Ambient air temperature for storage	-40…70 °C -40…70 °C
Ambient air temperature for operation	-20…50 °C
Relative humidity	95 % at 55 °C conforming to IEC 60068-2-30
IP degree of protection	IP20 (terminals) conforming to IEC 60529 IP30 (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 kV, 1 min AC 50 Hz
Insulation resistance	> 500 MOhm at 500 V DC between supply and relay output conforming to IEC 60255-5
[Ui] rated insulation voltage	400 V conforming to IEC 60664-1
Operating position	Any position without derating
Connections - terminals	Screw terminals, 1 x 0.5...1 x 4 mm² (20 AWG...11 AWG) solid without cable end Screw terminals, 2 x 0.5...2 x 2.5 mm² (20 AWG...14 AWG) solid without cable end Screw terminals, 1 x 0.2...1 x 2.5 mm² (24 AWG...12 AWG) flexible with cable end Screw terminals, 2 x 0.2...2 x 1.5 mm² (24 AWG...16 AWG) flexible with cable end
Tightening torque	0.6…1 N.m conforming to IEC 60947-1
Housing material	Polycarbonate
Local signalling	LED (green) for power ON LED (yellow) for phase of relay (R2) LED (yellow) for temperature of relay (R1)
Mounting support	35 mm symmetrical DIN rail conforming to IEC 60715
Height	90 mm 88.9 mm

Width	35 mm 35.6 mm
Depth	72 mm 71.1 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	8.000 cm
Package 1 Width	4.500 cm
Package 1 Length	9.500 cm
Package 1 Weight	130.000 g
Unit Type of Package 2	S03
Number of Units in Package 2	48
Package 2 Height	30.000 cm
Package 2 Width	30.000 cm
Package 2 Length	40.000 cm
Package 2 Weight	6.969 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	**29 kg CO2 eq.**
Carbon footprint of the manufacturing phase [A1 to A3]	**9 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]	**20 kg CO2 eq.**
Carbon footprint of the end-of-life phase [C1 to C4]	**0.2 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**
EU RoHS Directive	Compliant By Exemption
REACh Regulation	Reference contains Substances of Very High Concern above the threshold

Use Again

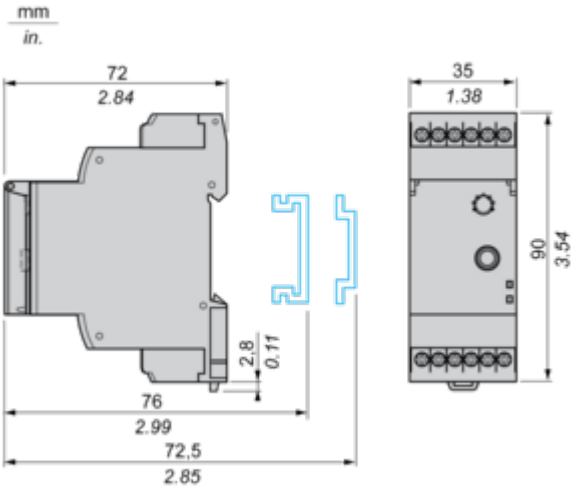
Repack and remanufacture

Recyclability potential, in %	**8**
End of life manual availability	End of Life Information
Take-back	**No**

Dimensions Drawings

3-Phase Supply and Motor Temperature Control Relays

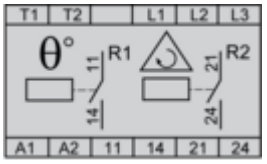
Dimensions and Mounting



Connections and Schema

3-Phase Supply and Motor Temperature Control Relays

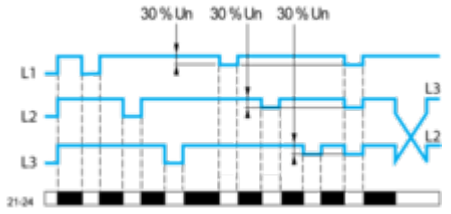
Wiring Diagram



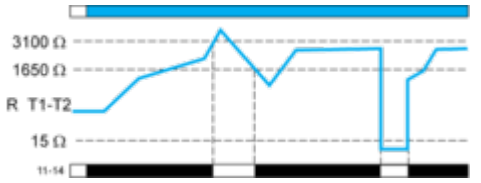
Technical Description

Function Diagrams

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



Motor Temperature Control via PTC Probe



Legend

Un Nominal 3-phase supply voltage
R T1-T2 Resistance between terminals T1 and T2
11-14 R1 output relay connections
Relay status: black color = energized.

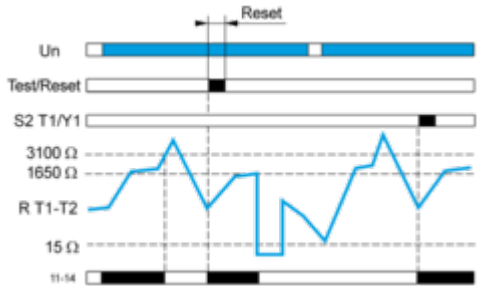
NOTE: The temperature control relay can take up to 6 PTC (positive temperature coefficient) probes wired in series between terminals T1 and T2.

Function Diagrams

Motor Temperature Control via PTC Probe

As soon as the temperature returns to the correct value, the relay can be unlocked (reset), either by pressing the “Test/Reset” button (for at least 200 ms), or by closing a volt-free contact (for at least 200 ms) between terminal Y1 and T1 (without a parallel load). When a fault is detected, the “temperature” output relay locks in the open position, even if the “Test/Reset” button is pressed.

With memory ("Memory" mode)



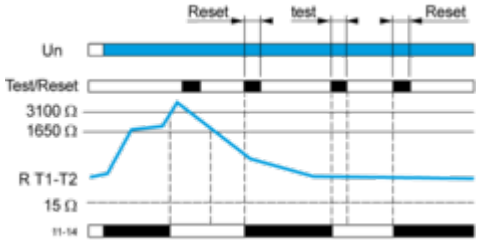
Use of the “Test/Reset” Button

When the temperature is normal, pressing the “Test/Reset” button simulates overheating, the “temperature” output relay contact is open.

Without memory ("No Memory" mode).



With memory ("Memory" mode)



Legend

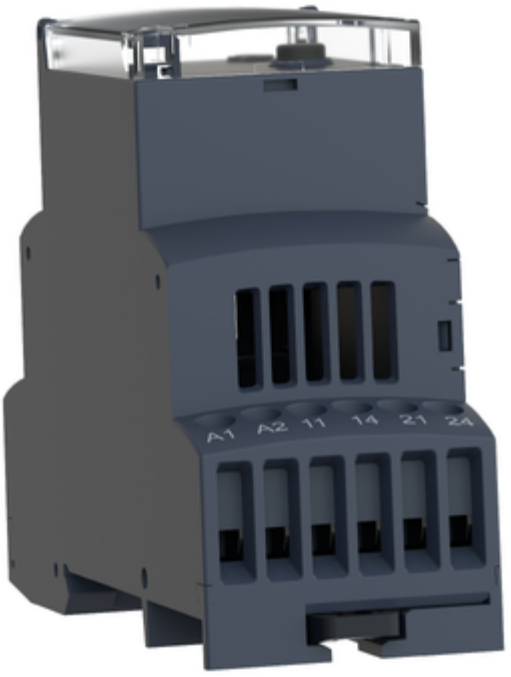
Un Nominal 3-phase supply voltage
R T1-T2 Resistance between terminals T1 and T2
11-14 R1 output relay connections
Relay status: black color = energized.
In "Memory" mode, “fault” indication is locked and the button must be released then pressed again to reset the function. When a fault has been detected and the temperature has returned to normal, the “temperature” control relay can be unlocked (reset) by pressing the “Test/Reset” button.

Image of product / Alternate images

Alternative






A1
A2
11
14
21
24


RM35TM250MW
T1
T2
Y1
L1
L2
L3
PTC DIN 44081
A1
A2
11
14
21
24
Use copper conductors only


T1 T2 Y1 L1 L2 L3
RM35TM250MW
Memory
No Memory
Test / Reset
Schneider Electric
A1 A2 11 14 21 24

