Product data sheet

Specifications

3-phase control relay, Harmony Control Relays, 5A , 2NO, 24..240V AC DC

RM35TM250MW

Product availability: Non-Stock - Not normally stocked in distribution facility

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)
Measurement range	208...480 V AC 15...3100 Ohm
Time delay type	Without
Output contacts	2 NO
nominal output current	5 A
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
Reset time	10000 ms output
Maximum switching voltage	250 V AC 250 V DC
Switching capacity in VA	1250 VA
Minimum switching current	10 mA 5 V DC
Maximum switching current	5 A AC 5 A DC
Power consumption in VA	0…4 VA 24...240 V AC
Maximum power consumption in W	0.5 W DC
Control circuit frequency	50...60 Hz +/- 10 %
Resistance across terminals	602 mOhm
Measurement voltage limits	176…528 V AC
delay at power up	500 ms

Price is “List Price” and may be subject to a trade discount – check with your local distributor or retailer for actual price.

Voltage range	176...528 V
Response time	> 50 ms (input Y1 (contact Y1-T1) and push-button)
[Uc] control circuit voltage	<= 3.6 V 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 temperature sensor 68 °F (20 °C)
Tripping threshold	3100 Ohm +/- 10 % temperature control circuit
Reset threshold	1650 Ohm +/- 10 % temperature control circuit
Insulation resistance	> 500 MOhm 500 V DC between supply and relay output IEC 60255-5 > 500 MOhm 500 V DC between measurement and relay output IEC 60664-1 > 1 MOhm 500 V DC between supply and measurement IEC 60255-5 > 500 MOhm 500 V DC between supply and relay output IEC 60664-1 > 500 MOhm 500 V DC between measurement and relay output IEC 60255-5 > 1 MOhm 500 V DC between supply and measurement IEC 60664-1
[Ui] rated insulation voltage	400 V IEC 60664-1
Supply frequency	50/60 Hz +/- 10 %
Operating position	Any position without derating
Connections - terminals	Screw terminals, 1 x 0.5...1 x 4 mm² AWG 20...AWG 11) solid without cable end Screw terminals, 2 x 0.5...2 x 2.5 mm² AWG 20...AWG 14) solid without cable end Screw terminals, 1 x 0.2...1 x 2.5 mm² AWG 24...AWG 12) flexible with cable end Screw terminals, 2 x 0.2...2 x 1.5 mm² AWG 24...AWG 16) flexible with cable end
Tightening torque	5.3…8.9 lbf.in (0.6…1 N.m) IEC 60947-1
Housing material	Self-extinguishing plastic
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
Electrical durability	10000 cycles
Mechanical durability	30000000 cycles
Operating rate	<= 360 operations/hour full load
Utilisation category	AC-12 IEC 60947-5-1 AC-13 IEC 60947-5-1 AC-14 IEC 60947-5-1 AC-15 IEC 60947-5-1 DC-12 IEC 60947-5-1 DC-13 IEC 60947-5-1
Width	1.4 in (35 mm)
Product Weight	0.29 lb(US) (0.13 kg)
Control Type	With test button

Environment

Immunity to microbreaks	20 ms 20.4 V
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…158 °F (-40…70 °C)
Ambient air temperature for operation	-4…122 °F (-20…50 °C)
Relative humidity	95 % 131 °F (55 °C) IEC 60068-2-30
Vibration resistance	0.35 mm (f= 5…57.6 Hz) conforming to IEC 60068-2-6 1 gn (f= 57.6…150 Hz) conforming to IEC 60255-21-1
Shock resistance	15 gn 11 ms IEC 60255-21-1
IP degree of protection	IP20 IEC 60529 terminals) IP30 IEC 60529 casing)
Pollution degree	3 IEC 60664-1
Overvoltage category	III conforming to IEC 60664-1
Dielectric test voltage	2 kV AC 50 Hz, 1 min
Non-dissipating shock wave	4 kV

Ordering and shipping details

Category	US10CP222380
Discount Schedule	0CP2
GTIN	3389119405270
Returnability	Yes
Country of origin	ID

Packing Units

Unit Type of Package 1	PCE
Nbr. of units in pkg.	1
Package 1 Height	3.15 in (8.000 cm)
Package 1 Width	1.77 in (4.500 cm)
Package 1 Length	3.74 in (9.500 cm)
Package weight(Lbs)	4.586 oz (130.000 g)
Unit Type of Package 2	S03
Number of Units in Package 2	48
Package 2 Height	11.81 in (30.000 cm)
Package 2 Width	11.81 in (30.000 cm)
Package 2 Length	15.75 in (40.000 cm)
Package 2 Weight	15.364 lb(US) (6.969 kg)

Contractual warranty

Warranty	18 months

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

Carbon footprint (kg CO2 eq, Total Life cycle)	**29**
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	**Pro-active compliance (Product out of EU RoHS legal scope)**
California proposition 65	**WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov**

Use Again

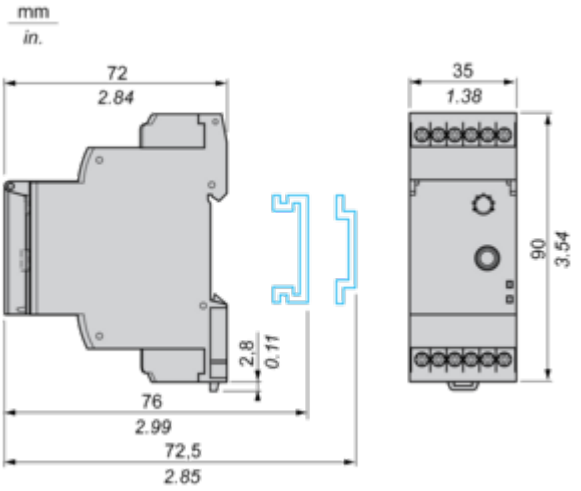
Repack and remanufacture

Circularity Profile	**End of Life Information**
Take-back	**No**

Dimensions Drawings

3-Phase Supply and Motor Temperature Control Relays

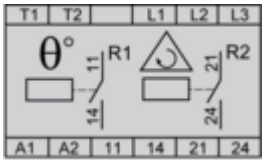
Dimensions and Mounting



Connections and Schema

3-Phase Supply and Motor Temperature Control Relays

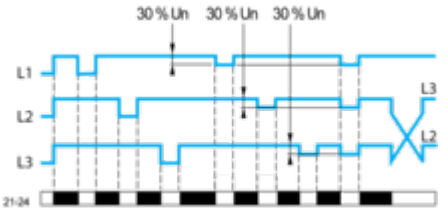
Wiring Diagram



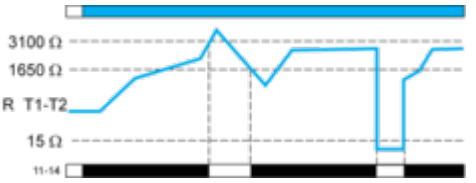
Technical Description

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.

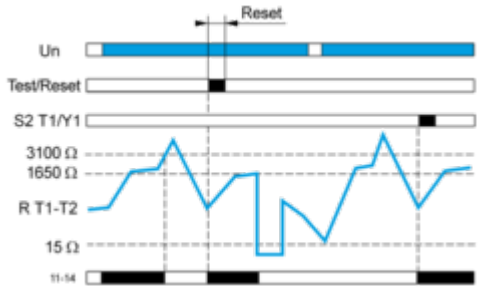
NOTE: The temperature control relay can take up to 6 PTC (positive temperature coefficient) probes wired in series between terminals T1 and T2.

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.

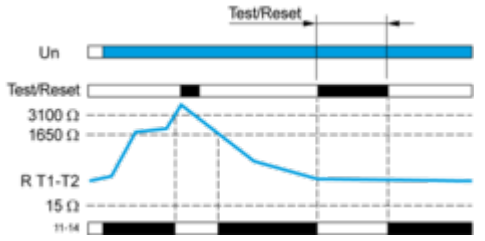
With memory ("Memory" mode)



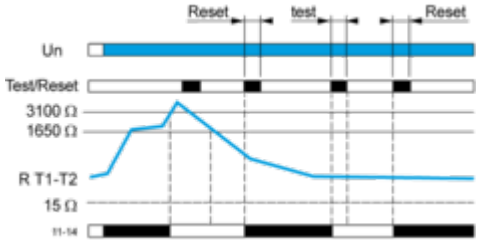
Use of the “Test/Reset” Button

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)

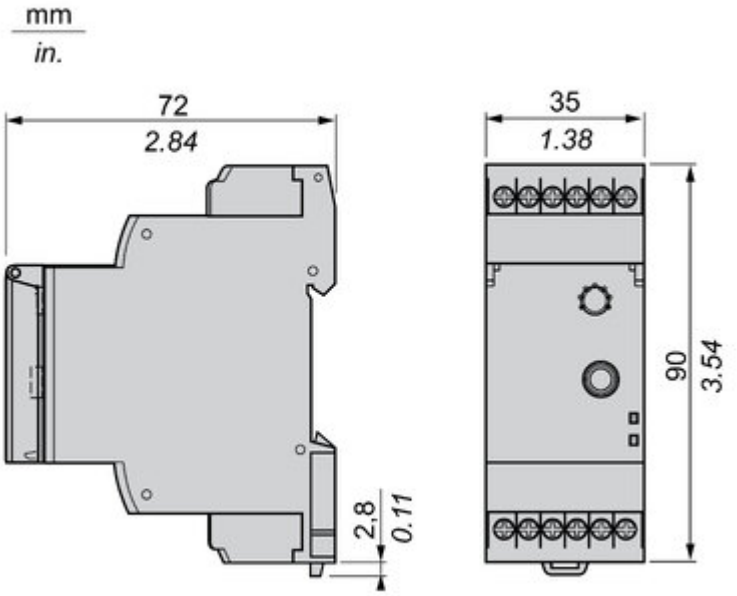


Legend

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.

Technical Illustration

Dimensions



Offer Marketing Illustration

Product benefits / Features

Offer Marketing Illustration

Product benefits / Features

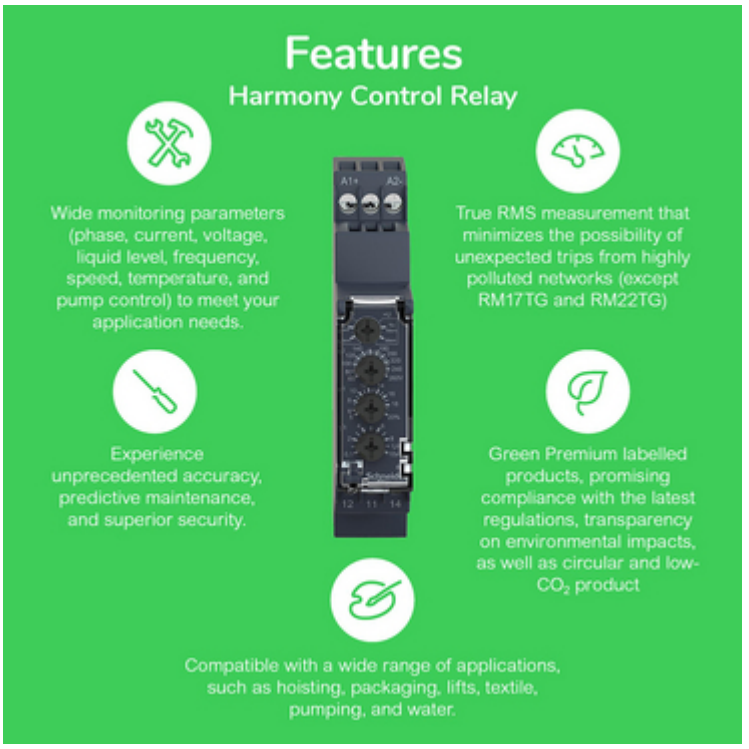
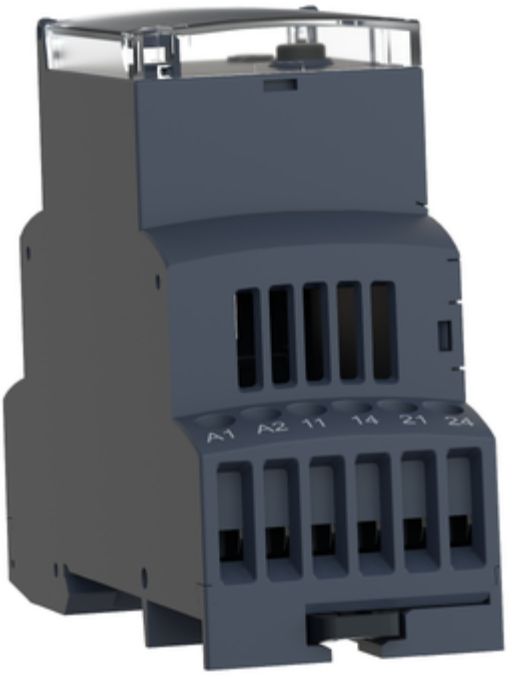


Image of product / Alternate images

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