RM35TM250MW

Modular motor voltage and temperature control relay, 5 A, 2 NO, 24..240 V AC/DC





Main

Range of product	Zelio Control
Product or component type	Modular measurement and control relays
Relay type	Motor temperature control relay
Product specific application	For 3-phase supply
Relay name	RM35TM
Relay monitored parameters	Phase failure detection Phase sequence Test/Reset button Motor temperature via PTC probe Selection (with or without memory)
Time delay	Fixed 0.3 s
Switching capacity in VA	1250 VA
Measurement range	208480 V voltage AC 020 Ohm short-circuit detection

Complementary

Complementary		
Reset time	10000 ms output	
Maximum switching voltage	250 V AC 250 V DC	
Minimum switching current	10 mA 5 V DC	
Maximum switching current	5 A AC 5 A DC	
Supply voltage limits	20.4264 V AC 20.4264 V DC	
Power consumption in VA	04 VA 24240 V AC	
Power consumption	0.5 W DC	
Control circuit frequency	5060 Hz +/- 10 %	
Resistance across terminals	602 mOhm	
Output contacts	2 NO	
Nominal output current	5 A	
Measurement voltage limits	176528 V AC	
Delay at power up	500 ms	
Voltage range	176528 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	
Marking	CE	
Overvoltage category	III IEC 60664-1	
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 0.51 x 4 mm² AWG 20AWG 11) solid without cable en- Screw terminals, 2 x 0.52 x 2.5 mm² AWG 20AWG 14) solid without cable end Screw terminals, 1 x 0.21 x 2.5 mm² AWG 24AWG 12) flexible with cable en- Screw terminals, 2 x 0.22 x 1.5 mm² AWG 24AWG 16) flexible with cable en-	
Tightening torque	5.318.85 lbf.in (0.61 N.m) IEC 60947-1	
Housing material	Self-extinguishing plastic	
Local signalling	LED (green) for power ON Phase of relay (R2) LED yellow) Temperature of relay (R1) LED yellow)	
Mounting support	35 mm symmetrical DIN rail EN/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	
Maximum Width	1.38 in (35 mm)	
Net Weight	0.29 lb(US) (0.13 kg)	

Environment

Immunity to microbreaks	20 ms 20.4 V	
Electromagnetic compatibility	Emission standard for industrial environments EN/IEC 61000-6-4 Emission standard for residential, commercial and light-industrial environments EN/IEC 61000-6-3 Immunity for industrial environments EN/IEC 61000-6-2	
Standards	EN/IEC 60255-6 IEC 60034-11-2	
Product certifications	CSA C-tick GOST UL GL	
Directives	73/23/EEC - low voltage directive 89/336/EEC - electromagnetic compatibility	
Ambient air temperature for storage	-40158 °F (-4070 °C)	
Ambient air temperature for operation	-4122 °F (-2050 °C)	
Relative humidity	95 % 131 °F (55 °C) IEC 60068-2-30	
Vibration resistance	0.35 mm 557.6 Hz)IEC 60068-2-6 1 gn 57.6150 Hz)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 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	22380 - RELAYS-MEASUREMENT (RM17-RM35)	
Discount Schedule	CP2	
GTIN	00785901869498	
Nbr. of units in pkg.	1	
Package weight(Lbs)	0.29 lb(US) (0.13 kg)	
Returnability	No	
Country of origin	ID	

Packing Units

Package 1 Height	0.780 dm	
Package 1 width	0.450 dm	
Package 1 Length	0.970 dm	

Offer Sustainability

Sustainable offer status	Green Premium product	
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	
REACh Regulation	☑ REACh Declaration	
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)	
Mercury free	Yes	
RoHS exemption information	€Yes	
China RoHS Regulation	☐ China RoHS Declaration	
Environmental Disclosure	Product Environmental Profile	
Circularity Profile	End Of Life Information	
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.	

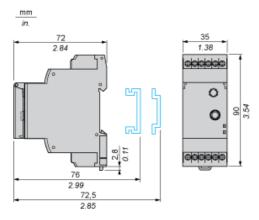
Contractual warranty

Contractual warranty			
Warranty	18 months		

RM35TM250MW

3-Phase Supply and Motor Temperature Control Relays

Dimensions and Mounting

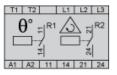


Product data sheet Connections and Schema

RM35TM250MW

3-Phase Supply and Motor Temperature Control Relays

Wiring Diagram

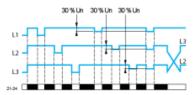


Product data sheet Technical Description

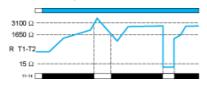
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Function Diagrams

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.

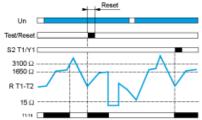
NOTE: The temperature control relay can take up to 6 PTC (positive temperature coefficient) probes wired in series between terminals T1 and T2.

Function Diagrams

Motor Temperature Control via PTC Probe

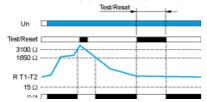
As soon as the temperature returns to the correct value, the relay can be unlocked (reset), either by pressing the "Test/Reset" button (for at least 200 ms), or by closing a volt-free contact (for at least 200 ms) between terminal Y1 and T1 (without a parallel load). When a fault is detected, the "temperature"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

With memory ("Memory" mode)

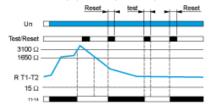


Use of the "Test/Reset" Button

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.