

DTA71



Motor thermistor relay



Benefits

- **High operating safety.** The thresholds are determined by the Motor internal PTC. Beyond the specified temperature the output stops the motor/s.
- **Save time and costs.** There is no need to connect other additional and expensive controllers.
- **Ensure continuous production process in your plant.** This type of controller allows limitation of false alarms which may be the cause of useless interruptions of production systems when comparing with other electrical measures (i.e. current or power).
- **Bi-colour front LED.** It provides indications about alarm status and alarm discrimination.

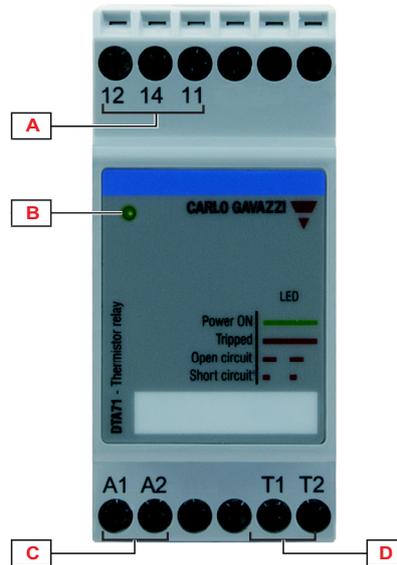
Description

DTA71 is a motor thermistor monitoring relay. Through the motor internal PTC or PTCs the DTA detects when one or more motor windings are exceeding the maximum operating winding temperature. The PTC type installed in the motor is different according to the motor insulation temperature. The temperature triggering threshold is determined by the PTC Type. The relay is equipped with 1 SPDT relay output and AUTO reset.

Applications

This product is extremely suitable for pumps temperature monitoring. It can be useful in all applications where motors are used especially where overloads are frequent and may cause motor damages: pumping stations, water treatment, conveyors, material handling, HVAC, chillers. etc.

Structure

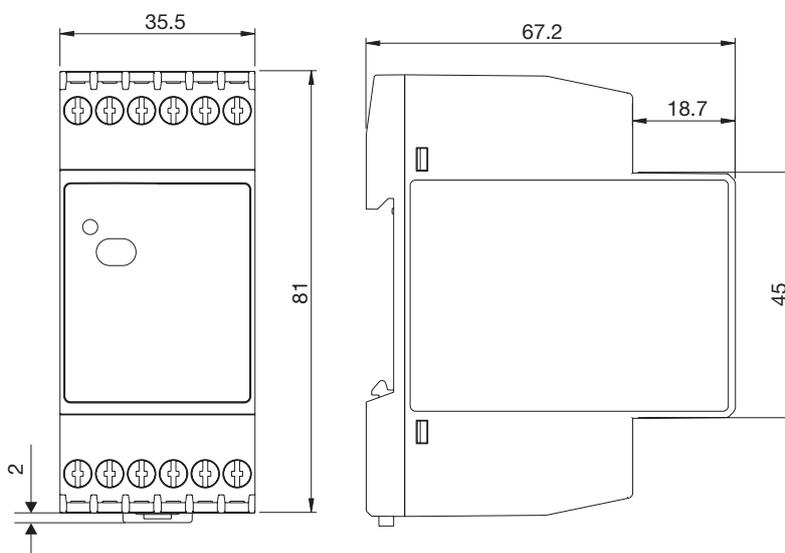


Element	Component	Function
A	Output terminals	SPDT electromechanical relay contacts output
B	Information LED	Green ON steady: no alarm Red ON steady: over-temperature alarm Fast Red blinking: open circuit PTC Slow Red blinking: short-circuit
C	Power Supply terminals	A1 (+ or L) A2 (- or N)
D	PTC input	Up to 6 PTCs in series can be connected

Features

General

Material	PA66 or Noryl
Assembly	DIN rail mounting (According to EN 50022)
Protection degree	IP20
Weight	150 g
Terminals	Screw terminals. AWG30 to AWG12 (0.06 mm ² to 3.3 mm ²) stranded or solid



Power supply

Power supply	24 to 240 VAC/DC (18 to 265 VAC/DC), 50 to 60 Hz (45 to 65 Hz) or DC
Consumption	3 VA (AC supply) / 1.5W (DC supply)

Environmental

Working temperature	-25° C to 60° C (-13° F to 140° F)
Storage temperature	-40° C to 80° C (-40° F to 176° F)
Relative humidity	5-95% non condensing
Pollution degree	2
Operating max altitude	2000 m amsl (6560ft)
Salinity	No saline environment
UV resistance	No UV exposure

Compatibility and conformity

Standard compliance	EN60255-6
Approvals	 (UL508, CSA 22.2)
CE Marking	L.V. Directive EN60947-5-1, EMC Directive EN 60947-8

Inputs

Measuring ranges	
Resistance measuring	Input from a series of 1 to 6 PTC according to EN44081 or IEC34-11-2
Cable length	Max. 600m (wire 1.5mm ²) or 200m (wire 0.5mm ²)

Alarm detection	
Over-temperature trip	> 3600 Ω
Over-temperature reset	< 1580 Ω
Short-circuit protection	14 Ω (reset 16 Ω)
Open circuit detection	20 k Ω (reset < 18 k Ω)
Switching frequency	< 1Hz
Refresh time	500 ms

Outputs

Type	SPDT electromechanical relay
Logic	De-energised on alarm
Contact rating	NEMA B 300 240 Vac AC1 8 A @ 250 Vac DC12 5 A @ 24 Vdc AC15 2.5 A @ 250 Vac DC13 2.5 A @ 24 Vdc

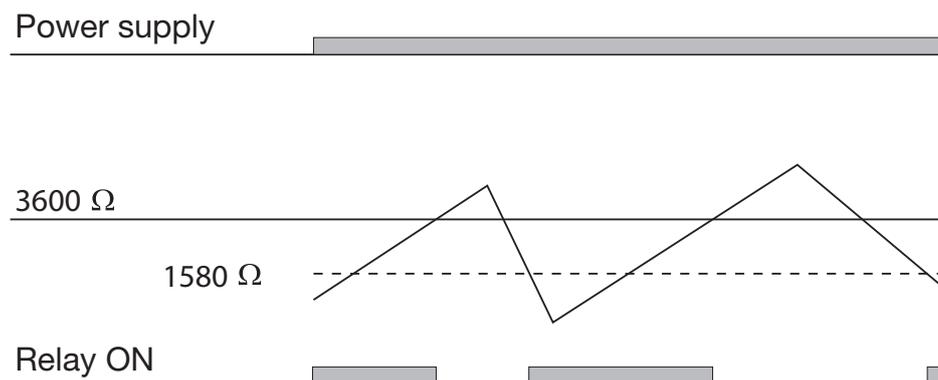
Insulation

Basic Insulation	
Inputs to output	2.5KVrms, 4KV impulse 1.2/50us
Inputs to supply	2.5KVrms, 4KV impulse 1.2/50us
Output to supply	2.5KVrms, 4KV impulse 1.2/50us

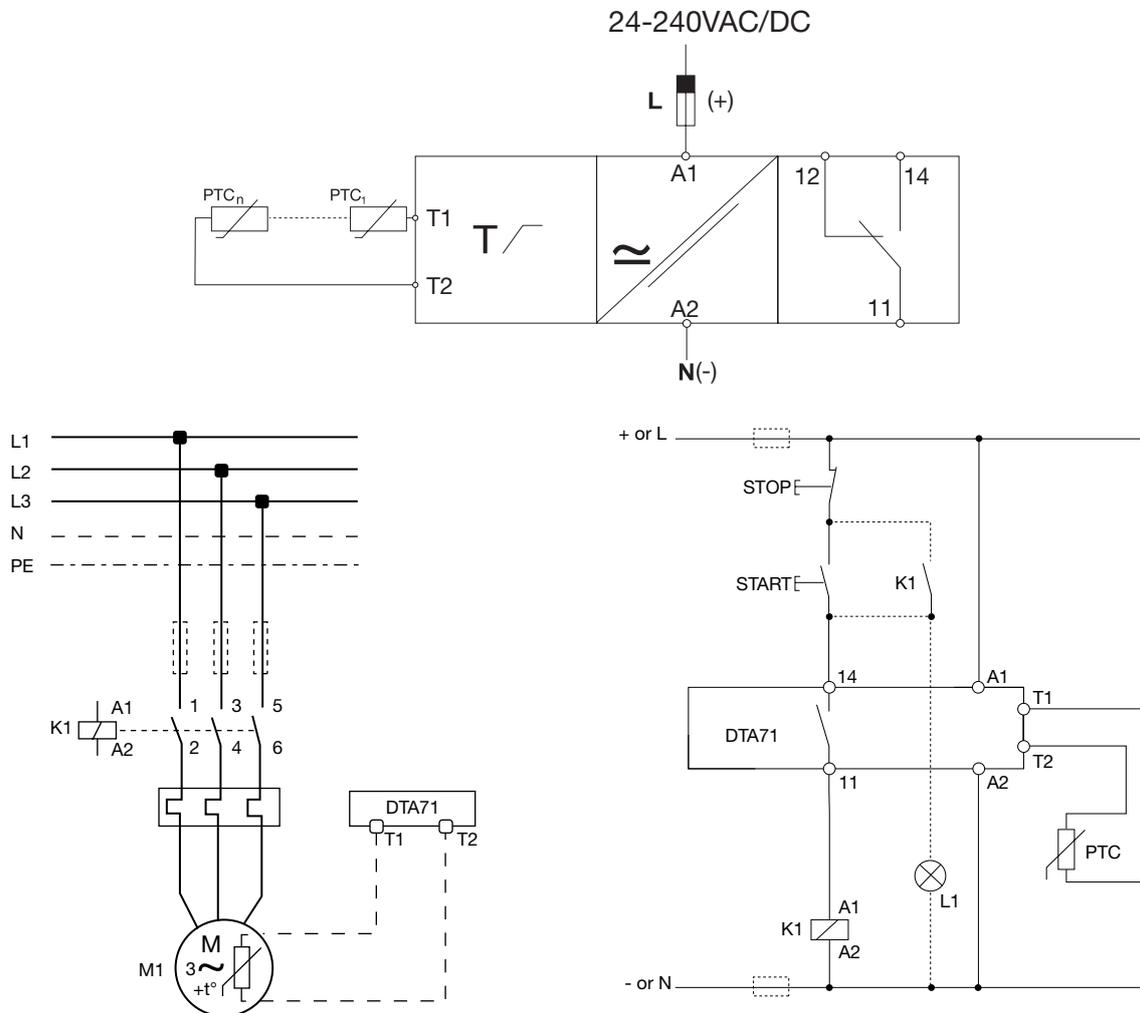
Operating diagram

When the temperature of one of the PTCs in series is exceeded the output relay is de-energised. The LED is ON red.

When the motor normal temperature is restored the output relay is energised again. The LED is ON green.



Connection Diagrams



Code	Description
K1	Main contactor
START	Machine start pushbutton
STOP	Machine stop pushbutton
L1	Green Lamp (OK)

References

Order code



DTA71CM24



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