DTA

Motor thermistor relay

Description

DTA71 and DTA72 are precise Motor thermistor monitoring relays.
They can monitor up to 6 motor temperatures through the motor internal temperature.
PTCs are connected in series when multiple motors are monitored.
DTA71 features 1 output, AUTO reset and no TEST switch.
DTA72 features, besides the 2 outputs, the TEST switch and the local or remote manual RESET.
It can also be configured as AUTO.
The bi-colour front LED, through colours and blinks, indicates Power ON, PTC failures, alarms and when it is ready for RESET.

Benefits

- **High operating safety.** The thresholds are determined by the Motor 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.
- **One or two outputs.** It is possible to select the 1 or 2 outputs version. The 2 ouputs version provides, besides interrupting the the Motor supply, the addition signal for a lamp, PC or PLC.
- **Low profile DIN rail mounting**. These devices can be mounted on classic din rail in a cabinets or in a electrical panel, The 60mm height allows installation in many applications.
- **Bi-colour front LED.** These devices indicate alarms for temperature and PTC.

Applications

This product is extremely suitable for pumps 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.

DTA71

Monitor thermistor relay

Main features

- 1 SPDT relay output.
- 35mm low profile DIN enclosure.
- Screw terminals
- CE & UL approved.

Main functions

- Motor thermistor monitoring.
- Up to 6 motors monitored.
- Auto reset.
- Multifunction LED.
- PTC short/open detection.

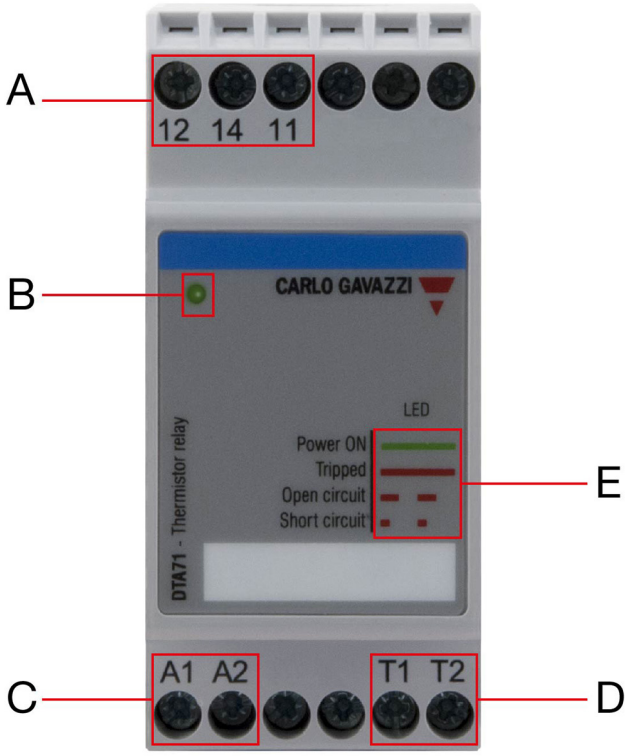
Description

DTA71 is a Motor thermistor monitoring relay.
It can monitor up to 6 motor temperatures through the motor internal PTC.
PTCs are connected in series when multiple motors are monitored.
DTA71 features 1 SPDT Electromechanical output, AUTO reset and no TEST push button.
The bi-colour front LED, through colours and blinks, indicates power ON, PTC failures and alarms.

Applications

This product is extremely suitable for pumps 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

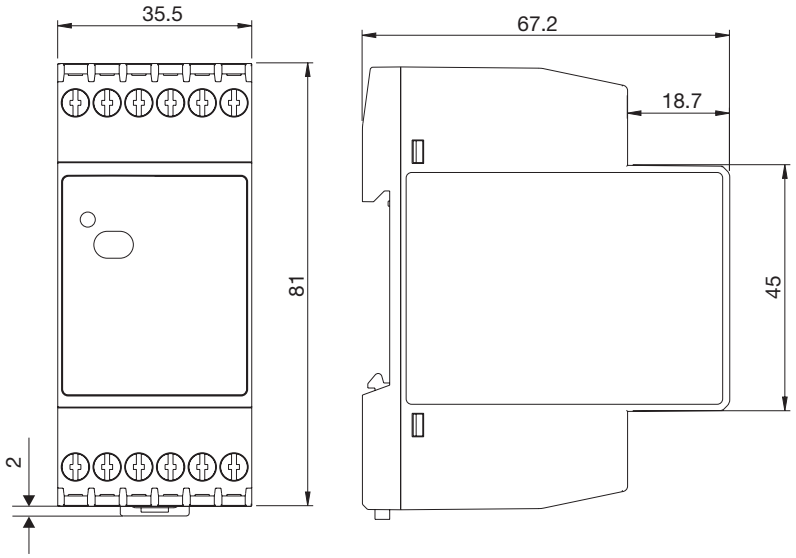


Elelment	Component
A	Output terminals
B	LED Green ON steady: no alarm Red ON steady: over-temperature alarm Fast Red blinking: open circuit PTC Slow Red blinking: short-circuit
C	Power Supply terminals A1 (+ or L) A2 (- or N)
D	PTC input Up to 6 PTCs in series can be connected
E	LED Key table

Features

General

Material	PA66 or Noryl
Assembly	DIN rail mounting (According to EN 50022)
Protection grade	IP20
Weight	150 g
Terminals	Screw terminals. AWG30 to AWG12 (0.06mm² to 3.3 mm²)stranded or solid



Power Supply

Power supply	18 to 265 Vac/Vdc: 45 to 65 Hz, or dc
Consumption	2.5VA (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
Salinity	No saline environment
UV resistance	No UV exposure

Compatibility and conformity

Standard compliance	EN60255-6
Approvals	UL 508, 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 16Ω)
Open circuit detection	20 kΩ (reset < 18kΩ)
Switching frequency	< 1Hz
Refresh time	500 ms

Outputs

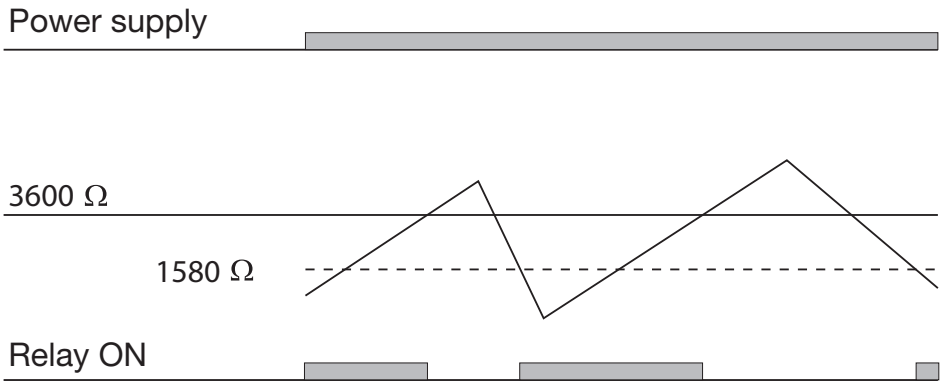
Type	SPDT electromechanical relay
Logic	De-energized on alarm
Contact rating	NEMA B 300 240 Vac AC1 8 A @ 250 Vac DC12 5 A @ 24 Vdc AC15 2.5 A @ 250 Vac DC13 2.5 A @ 24 Vdc

Insulation

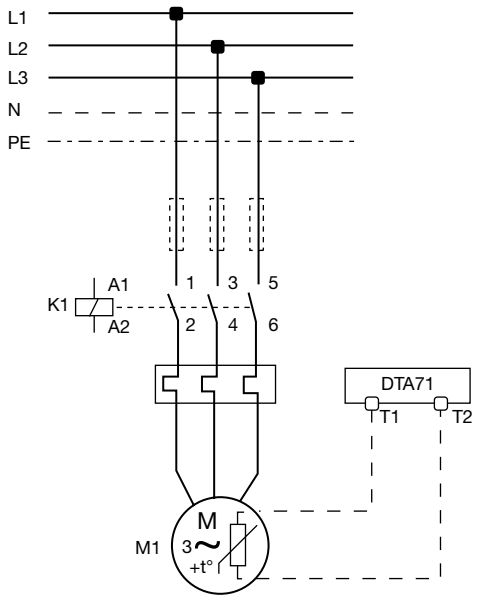
	Basic Insulation
Inputs to output	2.5KVrms, 4KV impulse 1.2/50us
Inputs to supply	2.5KVrms, 4KV impulse 1.2/50us
Output to supply	2.5KVrms, 4KV impulse 1.2/50us

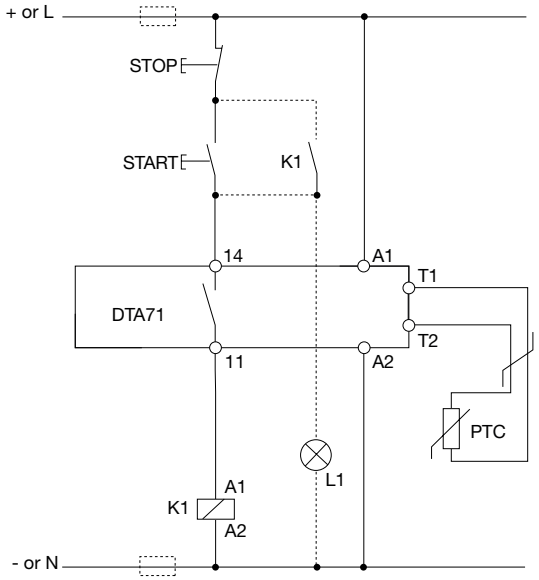
Operating diagram

When the temperature of one of the PTCs in series is exceeded the Output relay is de-energized. The LED is ON red.
When the normal temperature is restored the output relay is energized again. The LED is ON green.


Power supply
3600 Ω
1580 Ω
Relay ON

Connection Diagrams





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

References

Further reading

Information	Document	Where to find it
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Order code

DTA71CM24

CARLO GAVAZZI compatible components

Purpose	Component name/code	Notes
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