



Hot Spot 6 Temperature Relay

The Hot Spot 6 protector is a temperature trip relay accepting up to six inputs from resistance temperature detector (RTD) elements and provides one user adjustable trip point which can be used to initiate alarms, cooling or shutdown when the monitored temperature exceeds the set limit. The relay is ideally suited for the protection of electric motor windings, transformers, generator windings and bearing temperature.

Operation

RTD temperature sensors are often fitted inside electric motors to detect hot spots in the windings or bearings. RTD sensors are popular because they offer a good accuracy for a reasonable price. The same sensors can be used inside transformers, generator sets, gas turbines or as part of a process control system. Hot spots can be caused by many conditions, such as overloads, over voltage, unbalanced supply, worn bearings, ineffective cooling, poor ventilation, shorted turns, insulation breakdown, single phasing etc.

The Hot Spot 6 protector continuously monitors the six RTD temperature sensors, and offers a user adjustable setpoint and relay contacts. This can be used to raise alarms, switch on cooling systems or shut down the effected equipment. The highest of the six temperatures is indicated with a red LED. This temperature is compared with the user adjustable setpoint. When the measured temperature exceeds the setpoint, the relay will de-energize, and the red LED illuminates to indicate the trip condition. When the temperature drops below the setpoint, the relay will reset to the energized condition, and a green LED will illuminate to indicate 'Safe' condition.

Features

- Up to 6 RTD inputs
- Adjustable setpoint
- Internal differential
- LED trip indication
- Automatic reset
- Single pole relay contacts

Benefits

- Unbalanced supply protection
- Sustained overload protection
- Single phasing protection
- Blocked ventilation protection
- Protection against ineffective cooling
- Protection of bearing temperature

Applications

- Switchgear
- Distribution systems
- Generator sets
- Control panels
- Process control
- Motor monitoring
- Transformers
- Overload protection

Approvals

- UL recognized

Product Codes

Relay	Protection	ANSI No.	Catalog No.
6 RTD inputs	1 setpoint	49	256-PCC

When ordering please supply the following information:

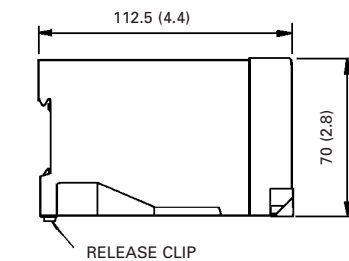
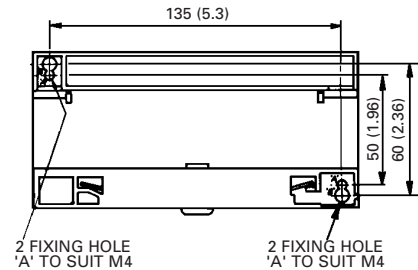
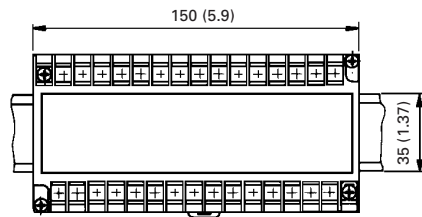
- System voltage, frequency and required options.
- The type of temperature sensor being used, e.g. Platinum PT100.
- The maximum temperature or meter scale, e.g. 100% = 1mA = 150°C
- The setpoint adjustment range, e.g. 0°C to 150°C.

250 Series DIN Rail and Wall Mounted Relays



Dimensions

Model 256

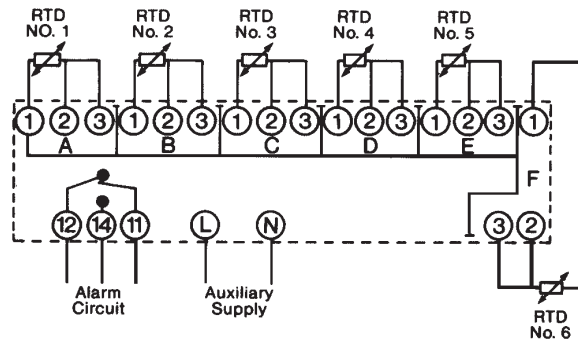


Specification – Hot Spot 6 Temperature Relay

Input	Up to 6 resistance temperature detectors (RTD). Either 10Ω copper or 100Ω platinum minimum span 100°C
Nominal Voltage	AC: 110V, 120V, 220V, 230V, or 240V ± 20% DC: Consult Factory
System Frequency	50/60Hz
Voltage Burden	6VA maximum
Overload	1.2 x rating continuously
Set Point Repeatability	Within 1°C
Differential (Hysteresis)	4°C of nominal
Trip Level Adjustment	100°C (eg: 50 to 150°C, 100 to 200°C etc)
Time Delay	Typically 250ms
AC Auxiliary Supply Voltage	100V, 110V, 120V, 208V, 220V, 240V, 480V, ±20%
DC Auxiliary Supply Voltage	12V, 24V, 48V, 110V or 125V, ±15%. Max ripple 15%
Auxiliary Voltage Burden	4VA (max)
Output Relay	Single pole change over
Relay Contact Rating	AC: 240V 5A, non inductive DC: 24V, 5A resistive
Relay Mechanical Life	0.2 million operations at rated loads
Relay Reset	Automatic
Operating Temperature	0°C to +60°C (0°C to +40°C for UL models)
Storage Temperature	-20°C to + 70°C
Temperature Co-efficient	0.05% per °C
Interference Immunity	Electrical stress surge withstand and non-function to ANSI/IEEE C37 90a
Enclosure Style	DIN rail with wall mounting facility
Material	Flame retardant polycarbonate/ABS
Enclosure Integrity	IP50
Compliant With	EMC, LVD, Safety Standard IEC 414 UL File No: E113067 recognized up to 600V
Dimensions	150mm (5.9") wide x 70mm (2.8") high x 112mm (4.4") deep
Weight	1.0kg approx.

Connections

256-PCC



When used for less than 6 RTD inputs the unused terminals 1, 2 & 3 must be linked together.