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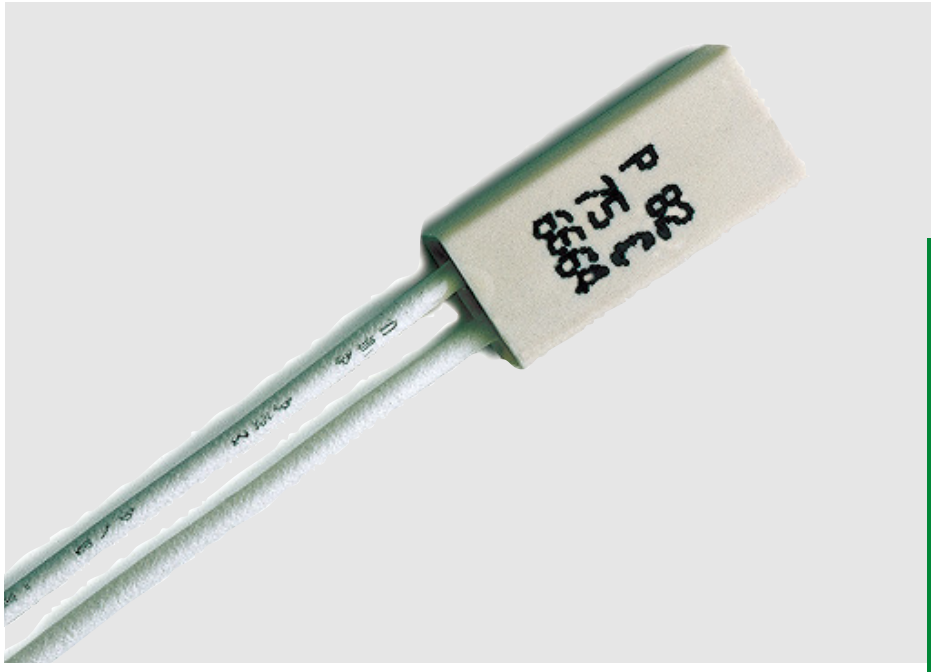
ERMEC
Distribución de componentes eléctricos y electrónicos

Limitor
Temperature, Current, Time under Control

Temperature detector P



- → very compact size
- → mould-proof housing
- → excellent thermal conduction characteristics due to homogenous constructional size
- → good temperature sensitivity
- → fast response time

Area of Application

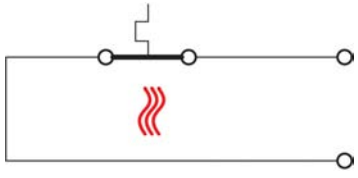
The temperature detector P is used wherever protection against overtemperature is required. Specific applications include: protection of primary windings in transformers, winding protection in small electric motors, and general temperature protection of small electric equipments.

Function

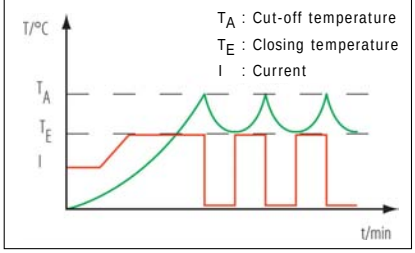
The temperature detector P operates independent from any current supply. Temperature detection is effected by means of a bimetal disk which was first dimensioned in accordance with the required cut-off temperature T_A. When this fixed cut-off temperature T_A is reached, this bimetal disk will snap over, breaking a contact system and thereby interrupting the electric circuit of the device to be protected.

After cooling down and reaching the closing temperature T_E, the bimetal disk will automatically return into its original position and thus make the contact. The electric circuit is closed again.

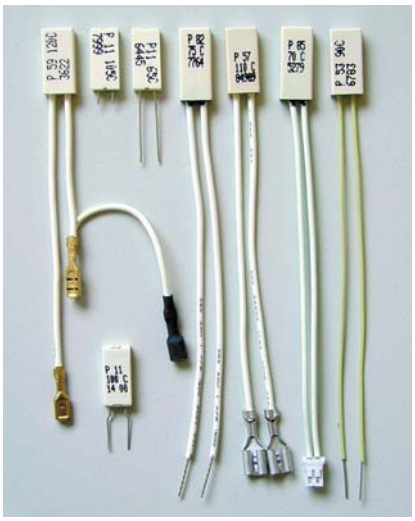
Circuit diagram



Functional diagram



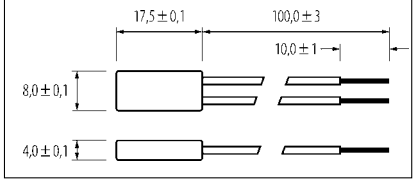
Configuration examples



Technical Specifications Temperature detector P

Breaking capacity:	250 V; 2,5 (1,6) A / 50 Hz
Min. current:	20 mA
Switching temperature:	40°C – 150°C, (±5 or ±10), in 5 Kelvin steps
Max. breaking capicity:	2,5 A cos Φ 1,00 / 250 V, 150°C, 10000 cycles 4,0 A cos Φ 0,45 / 250 V, 135°C, 2000 cycles
Switching differential:	10 K ... 60 K depending on the cut-off temperature
Type of action:	2.B (max. drift ±5 K)
max. ambient temperature:	160°C / 200°C, 1 minute
Approvals:	VDE (EN 60730) UL 2111, conform to RoHS

Dimensions P8



alternativ:

P5 housing type:
L 4,0 x **W** 8,0 x **H** 16,0

P1 housing type:
L 3,5 x **W** 7,0 x **H** 15,0

Technical Data

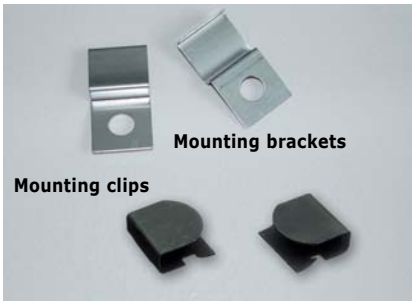
The housing of this switch consists of a single part bag housing which is closed at its end by resin (P8 housing type); this makes the switch mould-proof. This mould-proof switch may thus also be used in "tough" environments subject to the detrimental influences of humidity or dirt. Alternative housing types: unsealed version (P5) or plate bar version (P1). All housing types are voltage-free. Due to its constructional size the P switch is one of the most compact thermostats available. This ensures a very fast response rate.

Its rectangular homogenous constructional size provides excellent thermal conduction characteristics. The housing is resistant against temperatures (permanent temperature: 160°C), with a temporary increase in temperature up to 200°C max. being permissible for a short period only.

The standard version is equipped with 100 mm long (length of stripped isolation: 10 mm) insulated leads or wire connection (AWG 24).

Special leads or wire (larger diameter to AWG 22) or different lengths available on request.

Accessories



Type reference P switch (temperature detector with automatic reset function)

P 8 X - XXX - XX - XXX

- Length of leads/wires: Standard = 100 mm
- temperature tolerance in K: (± 5/10 K)
- Cut-off temperature in °C: 40,45,50...150°C
- Connection type: 2 = insulated leads; 3 = insulated wires; ... ; 8 = sealed housing

Example for type reference:

P 8 2 – 125 – 05 – 100

temperature detector

insulated lead (standard AWG 24)

125°C cut-off temperature

tolerance ±5 K

100 mm lead length
(10 mm stripped length)

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