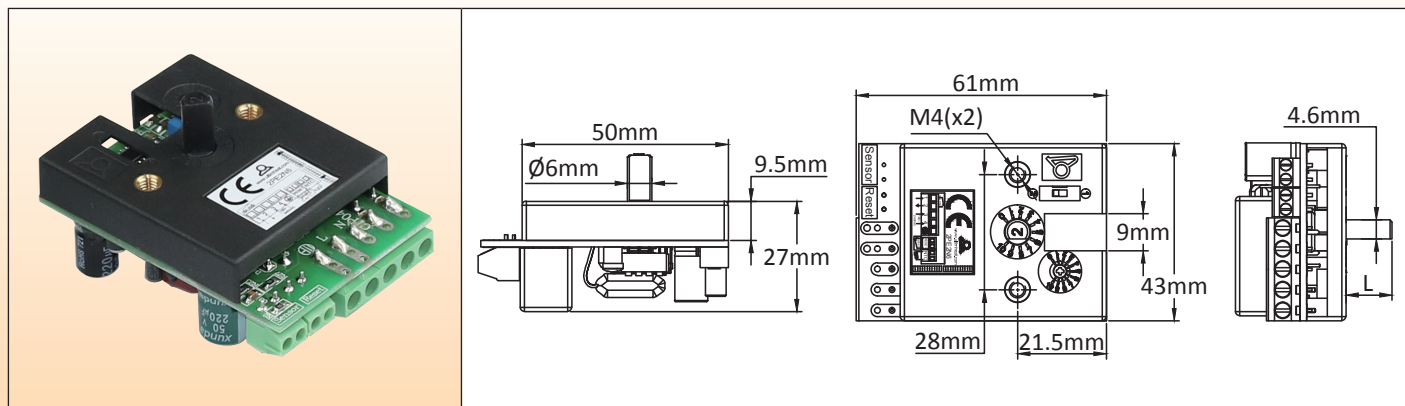


# Electronic thermostat, multi range, control and manual reset action, for incorporation, NTC sensor

## Type: 2PE2N6



### Main features

This electronic thermostat for incorporation has been designed to replace electromechanical thermostats. It is mounted with two screws M4 at the same distance 28 mm, uses a 6mm dia. shaft with 4.6mm flat with the same length, and its rotation angle is 230°. Therefore temperature ranges are quite the same as the bulb and capillary thermostats. Its electrical rating (16A) is identical.

It additionally features adjustable temperature differential, and heating or cooling relay output setting, and control or manual reset action can be set.

**Action:** On-Off.

**Size:** 60 x 43 x 23 mm.

**Temperature sensor:** NTC thermistor, 10Kohms @25°C, B(25-50)= 3380.

**Temperature ranges setting:** Temperature range selection is made by dip switch on the printed circuit. 230° angulation set span.

**Temperature ranges:** -35+35°C (-30+95°F); 0-10°C (32-50°F); 4-40°C (40-105°F); 30-90°C (85-190°F); 30-110°C (85-230°F); 20-125°C (68-260°F).

**Temperature differential:** Adjustable, by potentiometer with front access, from 0.25°C to 2.5°C (0.4 to 4°F) for temperature ranges 0-10°C (32-50°F) and 4-40°C (40-105°F) and 0.5 to 5.5°C (0.9 to 10°F) for other temperature ranges.

**Accuracy:** +/-1% of scale (NTC sensor tolerances not included).

**Control or manual reset selection:** can be selected with a miniature dip switch on the circuit.

**Power supply:** 180 to 240V, 50Hz or 60Hz.

**Relay output:** SPNO, 16A250V resistive, 100000 cycles.

**Relay action:** Heating or cooling, open or close on temperature rise output relay action can be selected by a dip switch with access from front side.

**Ambient:** -20+50°C, 10-85% RH.

**Power:** <2W.

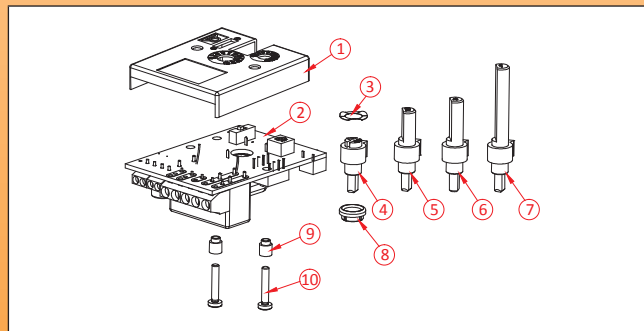
**Electrical connections:**

- Power supply and power relay: 2.5 mm² screw terminal block.

- Temperature sensor: 1.5 mm² screw terminal block.

- Manual reset: 1.5 mm² screw terminal block.

**Adjustment shaft:** The thermostat is shipped with a dia. 6mm with 4.6 mm flat shaft, length 11 mm, assembled. Included is also a set of: one 15mm shaft, one 28 mm shaft and one screw driver adjustment shaft.



- 1: Cover
- 2: Printed circuit
- 3: Elastic washer
- 4: Screw driver shaft
- 5: 11 mm shaft fitted in standard
- 6: 15 mm shaft
- 7: 28 mm shaft
- 8: Shaft bearing
- 9: Plastic spacer
- 10: Cover screws, (unscrew to change shaft length)

**Standards:** Comply with LVD and EMC (CE certificate by TÜV), upon the following standards:  
 EN55014-1: 2006+A1+A2;  
 EN55014-2: 1997+A1+A2;  
 EN61000-3-2:2014;  
 EN61000-3-3: 2013;  
 EN60730-1:2011;  
 EN60730-2-9: 2010, and ROHS compliance certificate.

Reference: 2PE2N6

### Parameters adjustment

Front side	Backside
<p>1: Selecting the temperature control function or manual reset (* the white square represents the lever of the slide switch)</p> <p>2: Differential adjustment</p>	<p>1, 2, 3: Selection of temperature ranges *</p> <p>4: Selection of heating control or cooling control *</p> <p>5: Offset adjustment</p> <p>6: Connection block for the NTC sensor</p> <p>7: Connection block for the manual reset switch if this function is selected</p> <p>8: Power supply of the electronic card</p> <p>9: Relay contact 16A 250V (* the white square represents the lever of the slide switch)</p>



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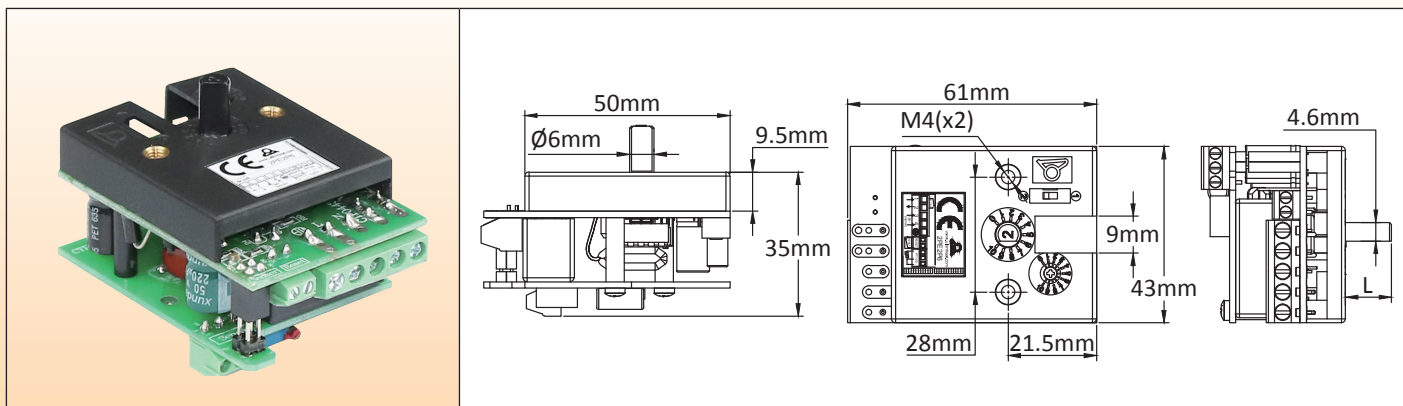
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Drawing 3D (.stp)

# Electronic thermostat, multi range, control and manual reset action, for incorporation, Pt100 sensor

## Type: 2PE2P6



### Main features

This electronic thermostat for incorporation has been designed to replace electromechanical thermostats. It is mounted with two screws M4 at the same distance 28 mm, uses a 6mm dia. shaft with 4.6mm flat with the same length, and its rotation angle is 230°. Therefore temperature ranges are quite the same as the bulb and capillary thermostats. Its electrical rating (16A) is identical.

It additionally features adjustable temperature differential, and heating or cooling relay output setting, and control or manual reset action can be set.

**Action:** On-Off .

**Size:** 61 x 43 x 35 mm.

**Temperature sensor:** Pt100.

**Temperature ranges setting:** Temperature range selection is made by dip switch on the printed circuit. 230° angulation set span.

**Temperature ranges:** 30-110°C (85-230°F); 50-200°C (120-390°F); 50-300°C (120-570°F); 100-400°C (210-750°F); 100-500°C (210-930°F).

**Temperature differential:** Adjustable, by potentiometer with front access, from 0.5°C to 5.5°C (0.9 to 10°F) for temperature ranges 30-110°C (85-230°F); and 50-200°C (120-390°F), and 1 to 10°C (1.8 to 18°F) for other temperature ranges.

**Accuracy:** +/-1% of scale (Pt100 sensor tolerances not included).

**Control or manual reset selection:** can be selected with a miniature dip switch on the circuit.

**Power supply:** 180 to 240V, 50Hz or 60Hz.

**Relay output:** SPNO, 16A250V resistive, 100000 cycles.

**Relay action:** Heating or cooling, open or close on temperature rise output relay action can be selected by a dip switch with access from front side.

**Ambient:** -20+50°C, 10-85% RH.

**Power:** <2W

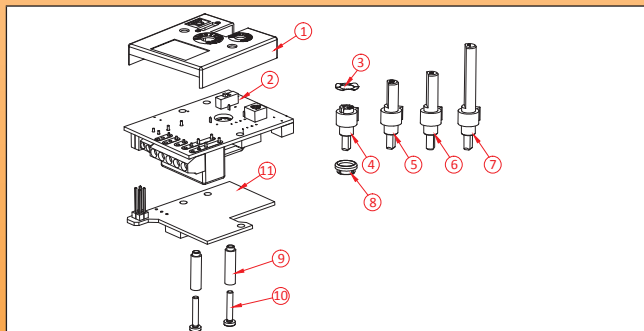
**Electrical connections:**

- Power supply and power relay: 2.5 mm² screw terminal block.

- Temperature sensor: 1.5 mm² screw terminal block.

- Manual reset: 1.5 mm² screw terminal block.

**Adjustment shaft:** The thermostat is shipped with a dia. 6mm with 4.6 mm flat shaft, length 11 mm, assembled. Included is also a set of: one 15mm shaft, one 28 mm shaft and one screw driver adjustment shaft.



- 1: Cover
- 2: Main printed circuit board
- 3: Elastic washer
- 4: Screw driver shaft
- 5: 11 mm shaft fitted in standard
- 6: 15 mm shaft
- 7: 28 mm shaft
- 8: Shaft bearing
- 9: Plastic spacer
- 10: Cover screws, (unscrew to change shaft length)
- 11: Pt100 input printed circuit board

**Standards:** Comply with LVD and EMC (CE certificate by TÜV), upon the following standards:  
EN55014-1:2006+A1+A2;  
EN55014-2: 1997+A1+A2;  
N61000-3-2:2014;  
EN61000-3-3:2013;  
EN60730-1:2011;  
EN60730-2-9:2010, and ROHS compliance certificate.

Reference: 2PE2P6

### Parameters adjustment

Front side	Backside
<p>1: Selecting the temperature control function or manual reset (* the white square represents the lever of the slide switch) 2: Differential adjustment (* the white square represents the lever of the slide switch)</p>	<p>1, 2, 3: Selection of temperature ranges * 4: Selection of heating control or cooling control * 5: Offset adjustment 6: Connection block for the PT100 sensor 7: Connection block for the manual reset switch if this function is selected 8: Power supply of the electronic card 9: Relay contact 16A 250V (* the white square represents the lever of the slide switch)</p>



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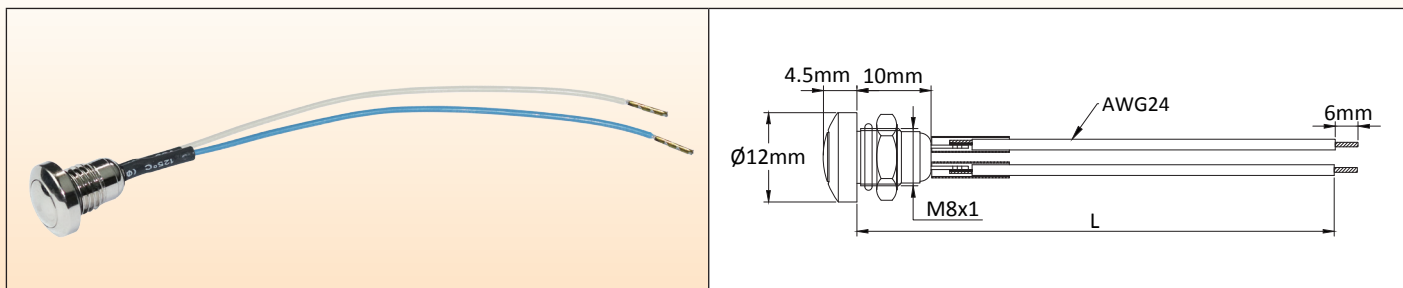


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## Manual reset switch



Wired switch for manual reset. Needs a 8 mm dia. hole in the mounting board. Wires length 100 mm. Other length on request.

Reference: 2PMR100

## 66MZ Soft grip printed knobs references

°C Printing

-35+35°C	0-10°C	4-40°C	30-90°C	30-110°C
66MZ006-350357FW	66MZ0060000107FW	66MZ0060040407FW	66MZ0060300901FW	66MZ0060301101FW
20-125°C	50-200°C	50-300°C	100-400°C	100-500°C
66MZ0060201257FW	66MZ0060502001FW	66MZ0060503001FW	66MZ0061004007FW	66MZ0061005007FW

°F Printing

-31+95	32-50	39-104	86-194	86-230
66MZ006-350357FX	66MZ0060000107FX	66MZ0060040407FX	66MZ0060300901FX	66MZ006031101FX
68-257	122-392	122-512	210-750	210-930
66MZ0060201257FX	66MZ0060502001FX	66MZ0060503001FX	66MZ0061004007FX	66MZ0061005007FX

# Accessories for 2PE2N6 and 2PE2P6

(Must be ordered separately, not included in the electronic thermostat)

P2

## Knobs and bezels

Dimensions				
References	66MZ.....	66EN1	66EN3	66EN2
Material	PC + Santoprene	Black ABS-	Chrome plated ABS-	Stainless steel-

Many other knobs are available, see last section of catalogue 1

## Standard temperature sensors

NTC Thermistor	Pt100, 3 wires, 200°C	Pt100, 3 wires, 400°C
<p><b>Value:</b> 10Kohms @ 25°C, B= 3380</p> <p><b>Accuracy:</b> +/-1% on R25 e+/-1% on B</p> <p><b>Temperature range:</b> -20°C+120°C</p> <p><b>Probe:</b> Nickel plated copper, 6x30mm</p> <p><b>Cable:</b> AWG24, FEP + silicone insulation, dia. 3.3mm, standard length 2m. Character 10 in the reference provides sensor cable length in meters (2=2m, 3= 3m, 4=4m)</p>	<p><b>Accuracy and tolerances:</b> Class B, <math>\pm 0.3^{\circ}\text{C}</math> @ <math>0^{\circ}\text{C}</math>. (<math>\pm 0.12 \Omega</math> @ <math>0^{\circ}\text{C}</math>).</p> <p><b>Temperature range:</b> -50°C, +200°C</p> <p><b>Probe:</b> Stainless Steel 304, dia. 5mm x 30 mm</p> <p><b>Cable:</b> 3 x AWG24, FEP insulation, + metal braid + FEP, T 200°C, dia. 3 mm, standard length 2m. Character 10 in the reference provides sensor cable length in meters (2=2m, 3= 3m, 4=4m)</p>	<p><b>Accuracy and tolerances:</b> Class B, <math>\pm 0.3^{\circ}\text{C}</math> @ <math>0^{\circ}\text{C}</math>. (<math>\pm 0.12 \Omega</math> @ <math>0^{\circ}\text{C}</math>).</p> <p><b>Probe temperature range:</b> -50°C, +400°C</p> <p><b>Probe:</b> Stainless Steel 304, dia. 4mm x 500 mm</p> <p><b>Cable:</b> 3 x AWG24, FEP insulation, + metal braid + FEP, T 200°C, dia. 2.7 mm, standard length 2m. Character 10 in the reference provides sensor cable length in meters (2=2m, 3= 3m, 4=4m)</p>
Reference: TNR60030C20001F6	Reference: TSR50030I2000BK6	Reference: TSS40500I2000BK6

Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice



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