Electronic thermostats, remote sensor, IP69K enclosure in PA66 and PC

Type	Operation	Contact	Measurement	Ranges °C	Models
Control	**Electronic**	**SPNO or SPNC**	**Remote**	+500°C / -35°C	**Y2T2** **Y2T3**
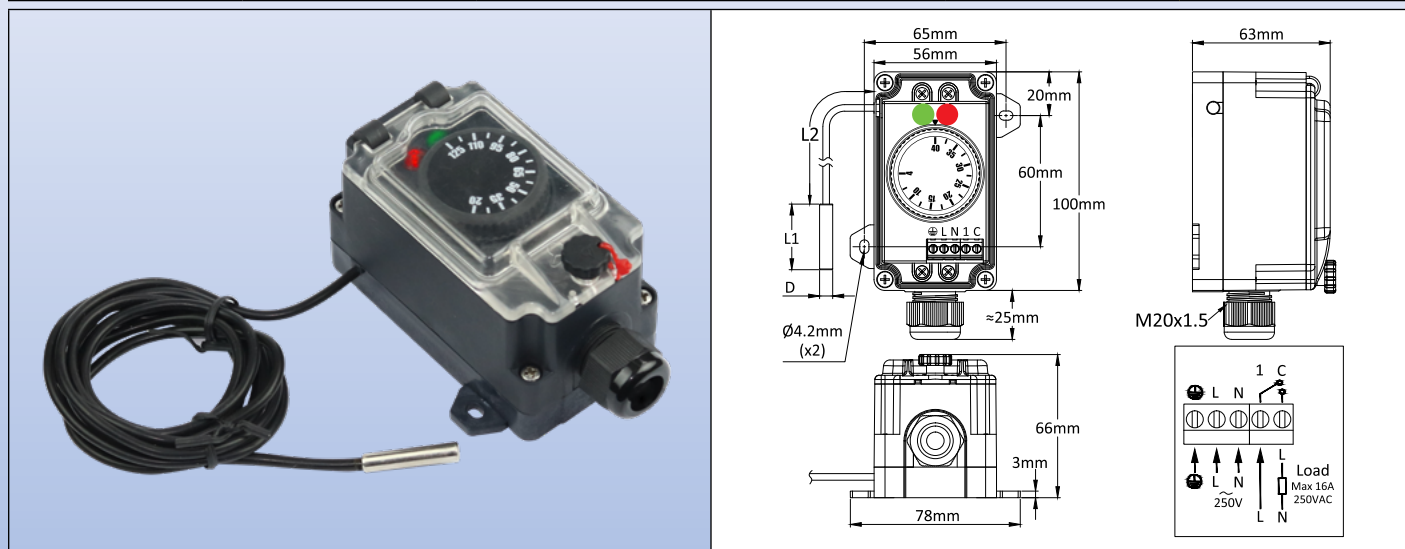
Applications:

- **Equipment requesting the highest resistance to water ingress.**
- **The transparent cover allows to visualize the set point and the 2 pilot lights.**
- **Very small differential.**
- **Ultra compact enclosure**

Temperature control with reduced differential, on-off action, in usual industrial applications and environments, not hazardous areas.

Use of electronic sensor allows measurement at long distances, which is not possible with bulb and capillary types.

Housing: Protection class IP69K upon EN60529 and DIN40050-9 (high pressure hot water, totally dust tight). Body in black PA66, fiber glass reinforced. Hinged transparent polycarbonate window, with gasket. It can be unscrewed by hand, and has holes for safety seals. IK10 shocks proof. UV resistant.

Set point adjustment: By °C printed knob. All types have an adjustable rotation limit system located inside the knob that allows reducing the set point adjustment span. °F printed knobs available as an option.

Operation: Microprocessor electronic thermostat.

Sensing element: NTC or Pt100 sensor, 2m standard cable length. Others lengths on request.

Pilot lights: One pilot light visualizes the thermostat contact output position. The second visualizes the power supply input.

Set point adjustment ranges: -35-35°C (-30+95°F); 0-10°C (32-50°F); 4-40°C (40-105°F); 30-90°C (85-195°F); 30-110°C (85-230°F); 20-125°C (68-260°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).

Differential: Differential is preset at the minimum value, but can be increased with a potentiometer located under the set point adjustment knob.

Cable input and output: one M20 cable glands, black PA66.

Electrical connections: Inside, on screw terminal. Electronic control power supply in 220-250V.

Earthing: Internal screw terminal.

Mounting: Wall mounting, by 2 legs with holes for screws dia. 4mm, 60 × 65mm distance.

Identification: Identification label on backside

Contact: SPST. 16A (2.6), 250VAC. Open or close on temperature rise. Model with contact closing on temperature rise is used for refrigeration. Version with contact opening on temperature rise is used for heating.

Electrical life: >100,000 cycles.

Minimum storage temperature: -35°C (-30°F)

Maximum ambient temperature: 60°C (140°F)

For more technical information see 2PE2N6 thermostat technical data sheet.

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Main references
References with SPNC, open on temperature rise contact, for heating control

Temperature adjustment ranges °C (°F)	Lowest differential °C (°F)	Temperature sensor type	Reference of the sensor connected in standard	References*
-35+35°C (-30+95°F)	0.5~0.8°C (0.9~1.4°F)	NTC (10KOhms @25°C)	TNR60030C20001F6	Y2T2GD035035NP2J
0-10°C (32-50°F)	0.25~0.33°C (0.4~0.6°F)	NTC (10KOhms @25°C)	TNR60030C20001F6	Y2T2GD000010NP2J
4-40°C (40-105°F)	0.25~0.33°C (0.4~0.6°F)	NTC (10KOhms @25°C)	TNR60030C20001F6	Y2T2GD004040NP2J
30-90°C (85-195°F)	0.5~0.8°C (0.9~1.4°F)	NTC (10KOhms @25°C)	TNR60030C20001F6	Y2T2GD030090NP2J
30-110°C (85-230°F)	0.5~0.8°C (0.9~1.4°F)	NTC (10KOhms @25°C)	TNR60030C20001F6	Y2T2GD030110NP2J
20-125°C (68-260°F)	0.5~0.8°C (0.9~1.4°F)	NTC (10KOhms @25°C)	TNR60030C20001F6	Y2T2GD020125NP2J
30-110°C (85-230°F)	0.5~0.8°C (0.9~1.4°F)	Pt100	TSR50030I2000BK6	Y2T3GD030110PP2J
50-200°C (120-390°F)	0.5~0.8°C (0.9~1.4°F)	Pt100	TSR50030I2000BK6	Y2T3GD050200PP2J
50-300°C (120-570°F)	1~1.3°C (1.8~2.3°F)	Pt100	TSS40050I2000BK6	Y2T3GD050300RF2J
100-400°C (210-750°F)	1~1.3°C (1.8~2.3°F)	Pt100	TSS40050I2000BK6	Y2T3GD0A0400RF2J
100-500°C (210-930°F)	1~1.3°C (1.8~2.3°F)	Pt100	TSS40050I2000BK6**	Y2T3GD0A0500RF2J**

References with SPNO, close on temperature rise contact, for cooling or fan control

Temperature adjustment ranges °C (°F)	Lowest differential °C (°F)	Temperature sensor type	Reference of the sensor connected in standard	Reference*
-35+35°C (-30+95°F)	0.5~0.8°C (0.9~1.4°F)	NTC (10KOhms @25°C)	TNR60030C20001F6	Y2T2GC035035NP2J
0-10°C (32-50°F)	0.25~0.33°C (0.4~0.6°F)	NTC (10KOhms @25°C)	TNR60030C20001F6	Y2T2GC000010NP2J
4-40°C (40-105°F)	0.25~0.33°C (0.4~0.6°F)	NTC (10KOhms @25°C)	TNR60030C20001F6	Y2T2GC004040NP2J
30-90°C (85-195°F)	0.5~0.8°C (0.9~1.4°F)	NTC (10KOhms @25°C)	TNR60030C20001F6	Y2T2GC030090NP2J
30-110°C (85-230°F)	0.5~0.8°C (0.9~1.4°F)	NTC (10KOhms @25°C)	TNR60030C20001F6	Y2T2GC030110NP2J
20-125°C (68-260°F)	0.5~0.8°C (0.9~1.4°F)	NTC (10KOhms @25°C)	TNR60030C20001F6	Y2T2GC020125NP2J
30-110°C (85-230°F)	0.5~0.8°C (0.9~1.4°F)	Pt100	TSR50030I2000BK6	Y2T3GC030110PP2J
50-200°C (120-390°F)	0.5~0.8°C (0.9~1.4°F)	Pt100	TSR50030I2000BK6	Y2T3GC050200PP2J
50-300°C (120-570°F)	1~1.3°C (1.8~2.3°F)	Pt100	TSS40050I2000BK6	Y2T3GC050300RF2J
100-400°C (210-750°F)	1~1.3°C (1.8~2.3°F)	Pt100	TSS40050I2000BK6	Y2T3GC0A0400RF2J
100-500°C (210-930°F)	1~1.3°C (1.8~2.3°F)	Pt100	TSS40050I2000BK6**	Y2T3GC0A0500RF2J**

°F printing: replace last character (J) by K
*Character 15 gives the sensor cable length (2=2m, 3=3m, 4= 4m)
** Maximum temperature on sensor probe 450°C

Standard temperature sensors incorporated inside controls
(References provided hereunder allow to purchase them separately)

NTC Thermistor	Pt100, 3 wires, 200°C	Pt100, 3 wires, 400°C
Value: 10Kohms @25°C, B= 3380 **Accuracy:** +/-1% on R25 e+/-1% on B **Temperature range:** -20°C+120°C **Probe:** Nickel plated copper, 6 × 30mm **Cable:** 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)	**Accuracy and tolerances:** Class B, ±0.3°C @ 0°C. (±0.12 Ω @ 0°C). **Temperature range:** -50°C, +200°C **Probe:** Stainless Steel 304, dia. 5mm × 30mm **Cable:** 3 × AWG24, FEP insulation, + metal braid + FEP, T 200°C, dia. 3mm, standard length 2m. Character 10 in the reference provides sensor cable length in meters (2=2m, 3= 3m, 4=4m)	**Accuracy and tolerances:** Class B, ±0.3°C @ 0°C. (±0.12 Ω @ 0°C). **Probe temperature range:** -50°C, +400°C **Probe:** Stainless Steel 304, dia. 4mm × 500mm **Cable:** 3 × AWG24, FEP insulation, + metal braid + FEP, T 200°C, dia. 2.7mm, standard length 2m. Character 10 in the reference provides sensor cable length in meters (2=2m, 3= 3m, 4=4m)
Reference: TNR60030C20001F6	**Reference:** TSR50030I2000BK6	**Reference:** TSS40050I2000BK6