

## 3 pole rod thermostats, temperature control

| Enclosure                  | Type    | Operation  | Contact | Measurement                | Ranges °C | Models                       |
|----------------------------|---------|------------|---------|----------------------------|-----------|------------------------------|
| IP65 IK10                  | Control | Mechanical | 3PST    | Rod                        |           | <b>Y1S8C</b><br><b>Y1R8C</b> |
| Material                   |         |            |         |                            |           |                              |
| Aluminum                   |         |            |         |                            |           |                              |
|                            |         |            |         |                            |           |                              |
| Y1S8C: External adjustment |         |            |         | Y1R8C: Internal adjustment |           |                              |

### Applications

These **liquid expansion** rod thermostats can be installed inside pockets as immersion thermostats in pipelines and containers, and to control temperature in air ducts, in usual industrial application and environment, on 3 phase heating circuits (Not suitable for hazardous areas).

- Internal adjustment is convenient for products that must not be frequently adjusted.

- **Insensitivity to strong vibrations**

**Housing:** Aluminum, IP65, IK10. Grey RAL7032 epoxy painting. Stainless steel captive cover screws. Captive aluminum lid.

**Set point adjustment ranges:** -35+35°C (-30+95°F); -10+40°C (15-105°F); 4-40°C (40-105°F); 0-60°C (32-140°F); 0-90°C (32-195°F); 30-90°C (85-195°F); 30-110°C (85-230°F); 50-200°C (120-390°F); 50-300°C (120-570°F); 100-400°C (210-750°F).

**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. Types with external adjustment have a transparent window. This device allows seeing the pilot light and the knob position. °F values are available in option.

**Action:** Temperature control, On-Off action

**Sensing element:** Liquid expansion rod. This rod has a non-temperature sensing zone named dead zone which allows thermal insulation crossing. An increased diameter under the thermostat head allows mounting pockets, coolers or brackets (See pockets in the accessories section)

**Electrical connections:** Inside, on screw terminal connection block

**Earthing:** External screw terminal.

**Cable input and output:** Two M20 cable gland, Black PA66.

**Identification:** Metallic identification label, riveted.

**Contact:** 3PST, open on temperature rise

**Electrical rating, resistive loads:**

16A 250V, 50 ~60Hz: >100000 cycles,

20A 250V, 50 ~60Hz: ≥50000 cycles,

10A 400V, 50 ~60Hz: ≥50000 cycles.

**Minimum Storage temperature:** -35°C (-30°F)

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

For more technical information see 8C thermostat technical data sheet.



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### Main references\*

| Temperature range °C (°F) | Reference with external adjustment | Reference with internal adjustment | Rod length* (L, mm) | Rod diameter (D, mm) | Temperature sensing length (mm) | Differential °C (°F) | Max temperature on rod °C (°F) |
|---------------------------|------------------------------------|------------------------------------|---------------------|----------------------|---------------------------------|----------------------|--------------------------------|
| -35+35°C (-30+95°F)       | Y1S8C5035AO1023J                   | Y1R8C5035AO1023J                   | 230                 | 10                   | 140                             | 1.6±1°C (2.9±2°F)    | 60°C (140°F)                   |
| -35+35°C (-30+95°F)       | Y1S8C5035AO1030J                   | Y1R8C5035AO1030J                   | 300                 | 10                   | 140                             | 1.6±1°C (2.9±2°F)    | 60°C (140°F)                   |
| -10+40°C (15-105°F)       | Y1S8C0040AO1023J                   | Y1R8C0040AO1023J                   | 230                 | 10                   | 140                             | 1.5±1°C (2.7±2°F)    | 70°C (158°F)                   |
| -10+40°C (15-105°F)       | Y1S8C0040AO1030J                   | Y1R8C0040AO1030J                   | 300                 | 10                   | 140                             | 1.5±1°C (2.7±2°F)    | 70°C (158°F)                   |
| 4-40°C (40-105°F)         | Y1S8C4040AO1023J                   | Y1R8C4040AO1023J                   | 230                 | 10                   | 140                             | 1±0.5°C (1.8±1°F)    | 70°C (158°F)                   |
| 4-40°C (40-105°F)         | Y1S8C4040AO1030J                   | Y1R8C4040AO1030J                   | 300                 | 10                   | 140                             | 1±0.5°C (1.8±1°F)    | 70°C (158°F)                   |
| 4-40°C (40-105°F)         | Y1S8C4040AO1045J                   | Y1R8C4040AO1045J                   | 450                 | 10                   | 140                             | 1±0.5°C (1.8±1°F)    | 70°C (158°F)                   |
| 0-60°C (32-140°F)         | Y1S8C0060AO1023J                   | Y1R8C0060AO1023J                   | 230                 | 10                   | 87                              | 2.5±1°C (4.5±1.8°F)  | 80°C (176°F)                   |
| 0-60°C (32-140°F)         | Y1S8C0060AO1030J                   | Y1R8C0060AO1030J                   | 300                 | 10                   | 87                              | 2.5±1°C (4.5±1.8°F)  | 80°C (176°F)                   |
| 0-60°C (32-140°F)         | Y1S8C0060AO1045J                   | Y1R8C0060AO1045J                   | 450                 | 10                   | 87                              | 2.5±1°C (4.5±1.8°F)  | 80°C (176°F)                   |
| 0-60°C (32-140°F)         | Y1S8C0060AO1060J                   | Y1R8C0060AO1060J                   | 600                 | 10                   | 87                              | 2.5±1°C (4.5±1.8°F)  | 80°C (176°F)                   |
| 0-90°C (32-195°F)         | Y1S8C0090AO1023J                   | Y1R8C0090AO1023J                   | 230                 | 10                   | 87                              | 2.5±1°C (4.5±1.8°F)  | 120°C (250°F)                  |
| 0-90°C (32-195°F)         | Y1S8C0090AO1030J                   | Y1R8C0090AO1030J                   | 300                 | 10                   | 87                              | 2.5±1°C (4.5±1.8°F)  | 120°C (250°F)                  |
| 0-90°C (32-195°F)         | Y1S8C0090AO1045J                   | Y1R8C0090AO1045J                   | 450                 | 10                   | 87                              | 2.5±1°C (4.5±1.8°F)  | 120°C (250°F)                  |
| 0-90°C (32-195°F)         | Y1S8C0090AO1060J                   | Y1R8C0090AO1060J                   | 600                 | 10                   | 87                              | 2.5±1°C (4.5±1.8°F)  | 120°C (250°F)                  |
| 30-90°C (85-195°F)        | Y1S8C3090AO1023J                   | Y1R8C3090AO1023J                   | 230                 | 10                   | 87                              | 2.5±1°C (4.5±1.8°F)  | 120°C (250°F)                  |
| 30-90°C (85-195°F)        | Y1S8C3090AO1030J                   | Y1R8C3090AO1030J                   | 300                 | 10                   | 87                              | 2.5±1°C (4.5±1.8°F)  | 120°C (250°F)                  |
| 30-90°C (85-195°F)        | Y1S8C3090AO1045J                   | Y1R8C3090AO1045J                   | 450                 | 10                   | 87                              | 2.5±1°C (4.5±1.8°F)  | 120°C (250°F)                  |
| 30-90°C (85-195°F)        | Y1S8C3090AO1060J                   | Y1R8C3090AO1060J                   | 600                 | 10                   | 87                              | 2.5±1°C (4.5±1.8°F)  | 120°C (250°F)                  |
| 30-110°C (85-230°F)       | Y1S8C3110AO1023J                   | Y1R8C3110AO1023J                   | 230                 | 10                   | 83                              | 2.5±1°C (4.5±1.8°F)  | 140°C (284°F)                  |
| 30-110°C (85-230°F)       | Y1S8C3110AO1030J                   | Y1R8C3110AO1030J                   | 300                 | 10                   | 83                              | 2.5±1°C (4.5±1.8°F)  | 140°C (284°F)                  |
| 30-110°C (85-230°F)       | Y1S8C3110AO1045J                   | Y1R8C3110AO1045J                   | 450                 | 10                   | 83                              | 2.5±1°C (4.5±1.8°F)  | 140°C (284°F)                  |
| 30-110°C (85-230°F)       | Y1S8C3110AO1060J                   | Y1R8C3110AO1060J                   | 600                 | 10                   | 83                              | 2.5±1°C (4.5±1.8°F)  | 140°C (284°F)                  |
| 50-200°C (120-390°F)      | Y1S8C5200AO1023J                   | Y1R8C5200AO1023J                   | 230                 | 10                   | 59                              | 4±2°C (7±3.6°F)      | 230°C (446°F)                  |
| 50-200°C (120-390°F)      | Y1S8C5200AO1030J                   | Y1R8C5200AO1030J                   | 300                 | 10                   | 59                              | 4±2°C (7±3.6°F)      | 230°C (446°F)                  |
| 50-200°C (120-390°F)      | Y1S8C5200AO1045J                   | Y1R8C5200AO1045J                   | 450                 | 10                   | 59                              | 4±2°C (7±3.6°F)      | 230°C (446°F)                  |
| 50-200°C (120-390°F)      | Y1S8C5200AO1060J                   | Y1R8C5200AO1060J                   | 600                 | 10                   | 59                              | 4±2°C (7±3.6°F)      | 230°C (446°F)                  |
| 50-300°C (120-570°F)      | Y1S8C5300AO0823J                   | Y1R8C5300AO0823J                   | 230                 | 8                    | 165                             | 10±2°C (18±3.6°F)    | 330°C (626°F)                  |
| 50-300°C (120-570°F)      | Y1S8C5300AO0830J                   | Y1R8C5300AO0830J                   | 300                 | 8                    | 165                             | 10±2°C (18±3.6°F)    | 330°C (626°F)                  |
| 50-300°C (120-570°F)      | Y1S8C5300AO0845J                   | Y1R8C5300AO0845J                   | 450                 | 8                    | 165                             | 10±2°C (18±3.6°F)    | 330°C (626°F)                  |
| 50-300°C (120-570°F)      | Y1S8C5300AO0860J                   | Y1R8C5300AO0860J                   | 600                 | 8                    | 165                             | 10±2°C (18±3.6°F)    | 330°C (626°F)                  |
| 100-400°C (210-750°F)     | Y1S8CA400AO0823J                   | Y1R8CA400AO0823J                   | 230                 | 8                    | 165                             | 10±2°C (18±3.6°F)    | 430°C (800°F)                  |
| 100-400°C (210-750°F)     | Y1S8CA400AO0830J                   | Y1R8CA400AO0830J                   | 300                 | 8                    | 165                             | 10±2°C (18±3.6°F)    | 430°C (800°F)                  |
| 100-400°C (210-750°F)     | Y1S8CA400AO0845J                   | Y1R8CA400AO0845J                   | 450                 | 8                    | 165                             | 10±2°C (18±3.6°F)    | 430°C (800°F)                  |
| 100-400°C (210-750°F)     | Y1S8CA400AO0860J                   | Y1R8CA400AO0860J                   | 600                 | 8                    | 165                             | 10±2°C (18±3.6°F)    | 430°C (800°F)                  |
| 100-500°C (210-930°F)     | Y1S8CA500AN0830J                   | Y1R8CA500AN0830J                   | 300                 | 8                    | 250                             | 10±2°C (18±3.6°F)    | 550°C (1000°F)                 |
| 100-500°C (210-930°F)     | Y1S8CA500AN0845J                   | Y1R8CA500AN0845J                   | 450                 | 8                    | 250                             | 10±2°C (18±3.6°F)    | 550°C (1000°F)                 |
| 100-500°C (210-930°F)     | Y1S8CA500AN0860J                   | Y1R8CA500AN0860J                   | 600                 | 8                    | 250                             | 10±2°C (18±3.6°F)    | 550°C (1000°F)                 |

\*F printing: replace last character (J) by K

\*Above 200°C we recommend to use a rod cooler reference 66RF07015 or 66RF0701F12 between the rod and the enclosure (see accessories). Caution: This cooler reduces the usable rod length of 70mm

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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Cat2-2-6-17

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## Knob printings

| °C Printing |          |           |           |           |
|-------------|----------|-----------|-----------|-----------|
| -35+35°C    | -10+40°C | 4-40°C    | 0-60°C    | 0-90°C    |
|             |          |           |           |           |
| 30-90°C     | 30-110°C | 50-200°C  | 50-300°C  | 100-400°C |
|             |          |           |           |           |
| °F Printing |          |           |           |           |
| -30+95°F    | 15-105°F | 40-105°F  | 32-140°F  | 32-195°F  |
|             |          |           |           |           |
| 85-195°F    | 85-230°F | 120-390°F | 120-570°F | 210-750°F |
|             |          |           |           |           |

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