



|                      |                      |                         |  |
|----------------------|----------------------|-------------------------|--|
| EAN code             |                      |                         |  |
| TC-0: 8595188110075  | TZ-0: 8595188110591  | Pt100-3: 8595188136136  |  |
| TC-3: 8595188110617  | TZ-3: 8595188110600  | Pt100-6: 8595188136143  |  |
| TC-6: 8595188110082  | TZ-6: 8595188110594  | Pt100-12: 8595188136150 |  |
| TC-12: 8595188110099 | TZ-12: 8595188110587 |                         |  |

- Thermister temperature sensors are made of Negative Temperature Coefficient (NTC) embedded in a PVC or metal sleeve with a thermally-conductive sealer.
- **Sensor TC**
  - lead-in cable to sensor TC is made of wire CYSY 2D x 0.5 mm/0.02".
- **Sensor TZ**
  - cable VO3SS-F 2D x 0.5 mm/0.02" with silicone insulation for use in high temperature applications.
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- **Sensor Pt100**
  - shielded silicon 2x 0.22 mm<sup>2</sup> (AWG 21), shielding connected with a case.
- temperature sensors can be connected directly to the terminal block
- cable lengths can not be changed, connected or modified.

| Technical parameters   | TC                                      | TZ                    | Pt100                                      |
|------------------------|---|-----------------------|--|
| Range:                 | -20 to +80 °C                           | -40°C to +125 °C      | -30°C to +200 °C                           |
| Scanning element:      | NTC 12K                                 | NTC 12K               | Pt100                                      |
| Tolerance:             | ±(0.15 °C + 0.002[t])                   | ±(0.15 °C + 0.002[t]) | ±(0.3 °C + 0.005[t])                       |
| In air/in water:       | (τ0.5) ≤ 18 s                           | (τ65) 62 s/8 s        | (τ0.5) -/7 s                               |
| In air/in water:       | (τ0.9) ≤ 48 s                           | (τ95) 216 s/23 s      | (τ0.9) -/19 s                              |
| Cable material:        | PVC unshielded, 2x 0.25 mm <sup>2</sup> | PVC                   | shielded silicone 2 x 0.22 mm <sup>2</sup> |
| Terminal material:     | polyamid                                | stainless steel       | copper                                     |
| Protection degree:     | IP67                                    | IP67                  | IP67                                       |
| Electrical strength:   | 2500 VAC                                | 2500 VAC              | 2500 VAC                                   |
| Insulation resistance: | > 200 MΩ at 500 VDC                     | > 200 MΩ at 500 VDC   | > 200 MΩ at 500 VDC                        |

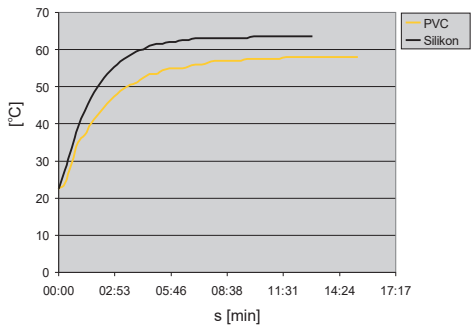
Resistive values of sensors in dependance on temperature

| Temperature (°C) | Sensor NTC (kΩ) | Sensor Pt100 (Ω) |
|------------------|-----------------|------------------|
| 20               | 14.7            | 107.8            |
| 30               | 9.8             | 111.7            |
| 40               | 6.6             | 115.5            |
| 50               | 4.6             | 119.4            |
| 60               | 3.2             | 123.2            |
| 70               | 2.3             | 127.1            |

Tolerance of sensor NTC 12 kΩ is ± 5% by 25 °C/77 °F. Long-term resistance stability by sensor Pt100 is 0.05% (10 000 hours).

| Types of temperature sensors: | TC-0   | TZ-0   | -        |
|-------------------------------|--------|--------|----------|
| - length:                     | 100 mm | 110 mm | -        |
| - weight:                     | 5 g    | 4.5 g  | -        |
|                               | TC-3   | TZ-3   | Pt100-3  |
| - length:                     | 3 m    | 3      | 3 m      |
| - weight:                     | 70 g   | 106 g  | 68 g     |
|                               | TC-6   | TZ-6   | Pt100-6  |
| - length:                     | 6 m    | 6 m    | 6 m      |
| - weight:                     | 130 g  | 216 g  | 149 g    |
|                               | TC-12  | TZ-12  | Pt100-12 |
| - length:                     | 12 m   | 12 m   | 12 m     |
| - weight:                     | 250 g  | 418 g  | 249 g    |

Diagramm of sensor warm up via air



PVC -reaction to water temperature from 22.5 °C to 58°C. Silicone - reaction to water temperature from 22.5°C to 63.5°C.

τ65 (95): time, which sensor needs to heat up on 65 (95) % of ambient temperature of environment, in which is located.

Sensor photo Drawing

TC



TZ



Pt100

