



|          |               |           |               |
|----------|---------------|-----------|---------------|
| EAN code |               |           |               |
| TC-0:    | 8595188110075 | TZ-0:     | 8595188140591 |
| TC-3:    | 8595188110617 | TZ-3:     | 8595188110600 |
| TC-6:    | 8595188110082 | TZ-6:     | 8595188110594 |
| TC-12:   | 8595188110099 | TZ-12:    | 8595188110587 |
|          |               | Pt100-3:  | 8595188136136 |
|          |               | Pt100-6:  | 8595188136143 |
|          |               | Pt100-12: | 8595188136150 |

| Technical parameters   | TC  | TZ                                      | Pt100   |
|------------------------|---|---|---|
| Range:                 | -20 °C to +80 °C<br>(-4 °F to 176 °F)       | -40 °C to +125 °C<br>(-40 °F to 257 °F) | -30 °C to +200 °C<br>(-22 °F to 392 °F)       |
| 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,<br>2 x 0.25 mm <sup>2</sup> | PVC                                     | shielded silicone<br>2 x 0.22 mm <sup>2</sup> |
| Terminal material:     | polyamide                                   | 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                           |

| 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 m    | 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    |

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

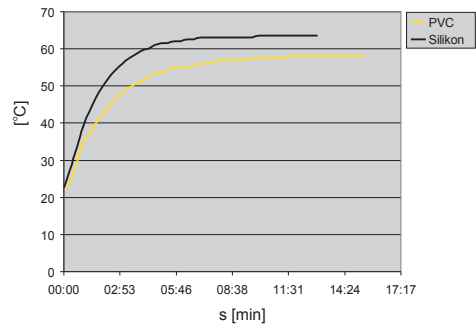
- Thermister temperature sensors are made of Negative Temperature Coefficient (NTC) embedded in a PVC or metal sleeve with a thermally-conductive sealer.
- **Sensor TC**
  - lead-in cable to sensor TC is made of wire CYSY 2D x 0.5 mm/0.02".
- **Sensor TZ**
  - cable VO3SS-F 2D x 0.5 mm/0.02" with silicone insulation for use in high temperature applications
  - silicone insulation for use in high temperature applications.
- **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.

Resistive values of sensors in dependance on temperature

| Temperature (°C/°F) | Sensor NTC (kΩ) | Sensor Pt100 (Ω) |
|---------------------|-----------------|------------------|
| 20 /68              | 14.7            | 107.8            |
| 30 /86              | 9.8             | 111.7            |
| 40 /104             | 6.6             | 115.5            |
| 50 /122             | 4.6             | 119.4            |
| 60 /140             | 3.2             | 123.2            |
| 70 /158             | 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).

Diagramm of sensor warm up via air



PVC - reaction to water temperature from 22.5 °C to 58 °C (from 72.5 °F to 136.4 °F).

Silicone - reaction to water temperature from 22.5 °C to 63.5 °C (from 72.5 °F to 144.5 °F).

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