TC, TZ, Pt100 | Thermo sensors

EAN code

TC-0:	8595188110075	TZ-0:	8595188140591	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		

Technical parameters	TC	TZ	Pt100
Range:	0 °C to +70 °C (32 °F to 158 °F)	-40°C to +125°C (-40°F to 257°F)	-30°C to +200°C (-22°F to 392°F)
Scanning element:	NTC 12K 5 %	NTC 12K 5 %	Pt100
In air/ in water:	(τ65) 92 s / 23 s	(τ65) 62 s / 8 s	(τ0.5) - / 7 s
In air/ in water:	(τ95) 306 s / 56 s	(τ95) 216 s / 23 s	(τ0.9) - / 19 s
Cable material:	High temperature PVC	Silicone	Silicone
Terminal material:	High temperature PVC	Nickel plated copper	Copper
Protection degree:	IP67	IP67	IP67
Insulation:	-	-	double insulation silicone
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:	108 g	106 g	68 g
	TC-6	**TZ-6**	**Pt100-6**
- length:	6 m	6 m	6 m
- weight:	213 g	216 g	149 g
	TC-12	**TZ-12**	**Pt100-12**
- length:	12 m	12 m	12 m
- weight:	466 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.

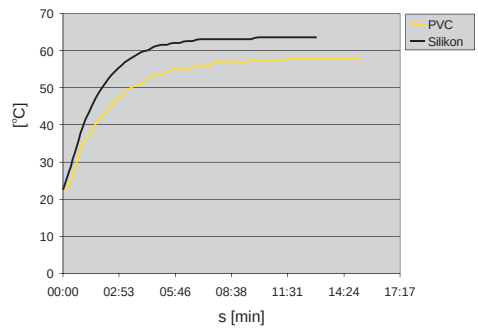
- Thermister temperature sensors are made of Negative Temperature Coefficient (NTC) embedded in a PVC or metal sleeve with a thermally-conductive sealer.
- **Sensor TC**
  - lead-in cable to sensor TC is made of wire CYSY 2D x 0.5 mm/ 0.02".
- **Sensor TZ**
  - cable VO3SS-F 2D x 0.5 mm / 0.02" with silicone insulation for use in high temperature applications.
  - silicone insulation for use in high temperature applications.
- **Sensor Pt100**
  - shielded silicon 2x 0.22 mm² (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 resistence 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 1 °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).