

Applications

- Refrigerators
- Deep freezers

Features

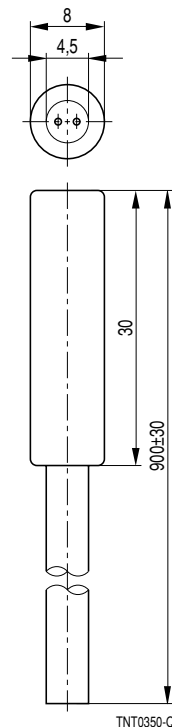
- Thermistor in molded plastic case
- PVC-insulated connecting cable (white), $T_{\max} = 105\text{ }^{\circ}\text{C}$
- Conductor cross section: $2 \times 0,34\text{ mm}^2$
- Construction based on DIN EN 60 730-1/VDE protection class 2

Options

Alternative resistance ratings,
rated temperatures,
resistance tolerance and cable lengths
available on request

Delivery mode

Bulk



Dimensions
in mm

TMT0350-Q

Climatic category (IEC 60068-1)		40/80/56	
Max. power at 25 °C	P_{25}	350	mW
Resistance tolerance	$\Delta R_N/R_N$	± 2 %	
Rated temperature	T_N	0	°C
B value tolerance	$\Delta B/B$	± 1,5 %	
Dissipation factor (in air)	δ_{th}	approx. 10	mW/K
Thermal time constant (in water)	τ_a	approx. 35	s
Insulation resistance	R_{is}	> 1000	MΩ

R_{25}	R_0	No. of R/T characteristic	$B_{25/100}$	Ordering code
Ω	Ω		K	
5000	16330	2003	3980	B57020M2502A017

Temperature Measurement	B57020
Probe Assemblies	M 2020

Reliability data

Test	Standard	Test conditions	$\Delta R_{25}/R_{25}$ (typical)	Remarks
Storage in dry heat	IEC 60068-2-2	Storage at upper category temperature $T: 80\text{ }^{\circ}\text{C}$ $t: 1000\text{ h}$	< 2 %	No visible damage
Storage in coldness		Storage at lower category temperature $T: -40\text{ }^{\circ}\text{C}$ $t: 1000\text{ h}$	< 2 %	No visible damage
Storage in damp heat, steady state	IEC 60068-2-3	Temperature of air: $40\text{ }^{\circ}\text{C}$ Relative humidity of air: 93 % Duration: 56 days	< 2 %	No visible damage
Rapid temperature cycling	IEC 60068-2-14	Lower test temperature: $-40\text{ }^{\circ}\text{C}$ Upper test temperature: $80\text{ }^{\circ}\text{C}$ Time to change from lower to upper temperature: < 30 s; Number of cycles: 1000 Medium: air	< 2 %	No visible damage
Storage in water		Temperature of water: $30\text{ }^{\circ}\text{C}$ $t: 4000\text{ h}$ Applied voltage with drop resistor 10 k Ω : 10 V_{dc} switched between on ($t_{on} = 30\text{ min}$) and off ($t_{off} = 30\text{ min}$)	< 2 %	No visible damage
Temperature cycling test		Lower test temperature: $-30\text{ }^{\circ}\text{C}$ Upper test temperature: $10\text{ }^{\circ}\text{C}$ Test frequency < 15 min under wetness and frozen water Number of cycles: 50000 Medium: air	< 2 %	No visible damage
Voltage proof test		3750 V; 1 min		No flash-over
Insulation test		The sensors are placed in a vessel containing metallic balls of 1 mm diameter (with total immersed head). The applied voltage is 500 V_{dc} .		Above 1000 M Ω

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