



**Temperature Measurement**

**B57020**

**Probe Assemblies**

**M 2020**

**Applications**

- Refrigerators
- Deep freezers

**Features**

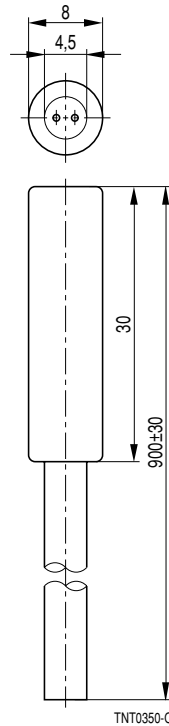
- Thermistor in molded plastic case
- PVC-insulated connecting cable (white),  $T_{max} = 105\text{ °C}$
- Conductor cross section:  $2 \times 0,34\text{ mm}^2$
- Construction based on DIN EN 60 730-1/VDE protection class 2

**Options**

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

**Delivery mode**

Bulk



Dimensions in mm

TNT0350-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)	$\delta_{th}$	approx. 10	mW/K
Thermal time constant (in water)	$\tau_a$	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



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**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 °C t: 1000 h	< 2 %	No visible damage
Storage in coldness		Storage at lower category temperature T: - 40 °C t: 1000 h	< 2 %	No visible damage
Storage in damp heat, steady state	IEC 60068-2-3	Temperature of air: 40 °C Relative humidity of air: 93 % Duration: 56 days	< 2 %	No visible damage
Rapid temperature cycling	IEC 60068-2-14	Lower test temperature: - 40 °C Upper test temperature: 80 °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 °C t: 4000 h Applied voltage with drop resistor 10 kΩ: 10 V <sub>dc</sub> switched between on (t <sub>on</sub> = 30 min) and off (t <sub>off</sub> = 30 min)	< 2 %	No visible damage
Temperature cycling test		Lower test temperature: - 30 °C Upper test temperature: 10 °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 <sub>dc</sub> .		Above 1000 MΩ



**Herausgegeben von EPCOS AG**

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