

Applications

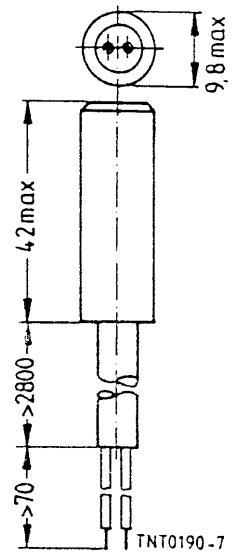
- Temperature measurement and control in heating and air conditioning systems

Features

- Aluminum case
- PVC-insulated connecting cable
H03VV-F2 × 0.7 (DIN 57 281)
- With cable end sleeves
- PVC cable withstands temperatures of up to 105 °C

Options

Alternative resistances, rated temperatures, tolerances and cable lengths available upon request



Dimensions in mm
Approx. weight 80 g

Climatic category (IEC 68-1)		10/100/56	
Max. power at 25 °C	P_{25}	380	mW
Resistance tolerance	$\Delta R/R_N$	± 2.5 %	
Rated temperature	T_N	50	°C
B value tolerance	$\Delta B/B$	± 1.5 %	
Dissipation factor (in air)	δ_{th}	approx. 11	mW/K
Thermal cooling time constant (in air)	τ_c	approx. 150	s
Heat capacity	C_{th}	approx. 1600	mJ/K

Type	R_{50}	R_{25}	No. of R/T characteristic	$B_{25/100}$	Ordering code
	Ω	Ω		K	
M 831/870/A3	359.3	886.2	1008	3560	B57831-M871-A3

Reliability data

Test	Standard	Test conditions	$\Delta R_{25}/R_{25}$ (typical)	Remarks
Storage in dry heat	IEC 68-2-2	Storage at upper category temperature T: 100 °C t: 1000 h	< 1.5 %	No visible damage
Storage in damp heat, steady state	IEC 68-2-3	Temperature of air: 40 °C Relative humidity of air: 93 % Duration: 56 days	< 1 %	No visible damage
Rapid temperature cycling	IEC 68-2-14	Lower test temperature: -10 °C Upper test temperature: 100 °C Number of cycles: 10	< 1 %	No visible damage
Endurance		$P_{\max}$: 380 mW Duration: 1000 h	< 2 %	No visible damage
Long-term stability (empirical value)		Temperature: 100 °C Duration: 10 000 h	< 2 %	No visible damage
Robustness of terminations	DIN 46 249	Pull-out force $F = 50 \text{ N}$	—	No visible damage