

Temperature Measurement

B57500 / B57501

Probe Assemblies

K 500 / K 501

Applications

- Evaporator sensor for air conditioning systems
- Heating systems

Features

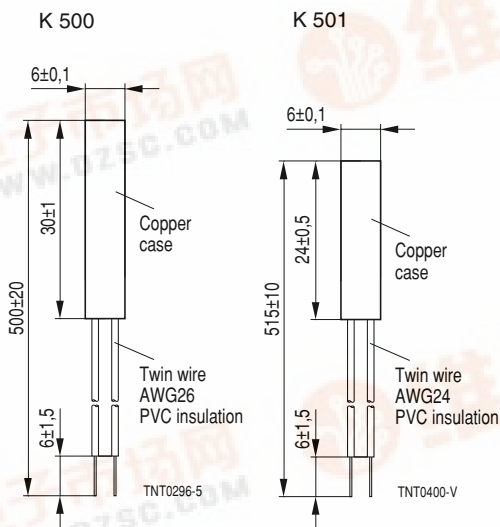
- Copper case
- Twin cable (black)
- PVC-insulated wires with tinned ends,
 $T_{\max} = 105\text{ }^{\circ}\text{C}$

Options

Alternative resistance ratings, rated temperatures, resistance tolerances, wire lengths and AWG 22, 24 or 26 available on request

Delivery mode

Bulk



Dimensions in mm

Climatic category (IEC 60068-1)		30/100/56	
Max. power at 25 °C	P_{25}	60	mW
Resistance tolerance	$\Delta R_N / R_N$	± 3 %	
Rated temperature	T_N	25	°C
B value tolerance	$\Delta B / B$	± 0,5 %	
Dissipation factor (in air)	δ_{th}	approx. 5	mW/K
Thermal cooling time constant (in air)	τ_c	approx. 50	s
Thermal time constant (in water)	τ_a	approx. 8	s
Heat capacity	C_{th}	approx. 250	mJ/K
Insulation resistance ($V = 100\text{ Vdc}$)	R_{is}	> 100	MΩ
Test voltage ($t = 1\text{ s}$)	V_T	1,5	kVAC

Type	AWG	R_{25}	No. of R/T characteristic	$B_{25/100}$	Ordering code
		Ω		K	
K 500	26	10,0 k	8016	3988	B57500K0103A001
K 501	24	6,8 k	8016	3988	B57501K0682A002



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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 : 100 °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
Storage in coldness		Storage at lower category temperature T : - 30 °C t : 1000 h	< 2 %	No visible damage
Rapid temperature cycling (in fluid)	IEC 60068-2-14	Lower test temperature: 0 °C Upper test temperature: 100 °C Time to change from lower to upper temperature: < 30 s Number of cycles: 1000 Medium: oil	< 2 %	No visible damage
Vibration resistance	IEC 60068-2-6	Frequency range: 5 to 500 Hz Amplitude: 7,5 mm/2 g Duration: 3 × 8 h	< 3 %	No visible damage
Long-term stability (empirical value)		T : 100 °C t : 10 000 h	< 3 %	No visible damage
Voltage proof test		1500 Vac; 1 s		No flashover
Insulation test		The sensors are placed in a vessel containing metallic balls of 1 mm diameter (with total immersed head). The applied voltage is 100 Vdc.		Above 100 MΩ

Diese Broschüre ersetzt die vorige Ausgabe.

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