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PCWC-A-SnCu

Platinum-chip temperature sensors with terminal clamps

according to DIN EN IEC 60751

Areas of application

- Heating, air conditioning, and ventilation technology

Special features

- Protective epoxy coat
- Protection against condensation
- Solderable connections
- Standardized nominal values and tolerances
- High long-term stability

Description

Platinum-chip temperature sensors of the PCWC-A-SnCu design type are based on the same manufacturing process as standard thin film sensors of the PCW design type. In contrast to standard temperature sensors, these temperature sensors do not have welded-on connection wires but are fitted with pushed-on and soldered terminal clamps.

To protect against condensation and external influences, the complete temperature sensor, including the soldered joint, is covered with a protective epoxy coat. The PCWC-A-SnCu design type is especially well suited for various probes in the "heating, ventilation, and air-conditioning" industry, with the option to place the temperature sensor openly in the air flow.

JUMO platinum-chip temperature sensors are available in different versions. You can find a summary and further information on our website.

⇒ [Platinum-chip temperature sensors](#)



Type 906140

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Technical data

Temperature range	-30 to +105 °C
Temperature coefficient	$\alpha = 3.851 \times 10^{-3} \text{ } ^\circ\text{C}^{-1}$ (between 0 and 100 °C)
Temperature range of validity Class F 0.3	-30 to +105 °C
Measuring current Pt100 Pt1000	Recommended 1.0 mA, maximum 1.8 mA Recommended 0.1 mA, maximum 0.5 mA
Operating conditions	Platinum-chip temperature sensors of the design type PCWC-A-SnCu are also coated with a protective epoxy coat. The coating is intended to protect against moisture and condensation. Despite this additional protection against external influences, do not use platinum-chip temperature sensors unprotected in aggressive atmospheres. The user may have to carry out some checks before using the sensors. Refer to the installation instructions "Application notes for platinum-chip temperature sensors", which can be found on the website.
Self-heating	$\Delta t = I^2 \times R \times E$ Δt : Self-heating or measurement error I: Measuring current E: Self-heating coefficient, see the table "Self-heating and response times"
Insulating varnish	Epoxy varnish, blue UL-compliant, UL 94/V0
Terminal clamps Base material Series resistance	Soldered-on and especially rigid terminal clamps Phosphor bronze (CuSn6), tin-plated 1 m Ω /mm
Processing	Soft-soldering Avoid lateral stress on the connections and unnecessary bending of the terminal clamps.
Tensile strength	10 N on single terminal clamp
Measuring point	2 mm in front of open end of the terminal clamps Take the line resistance into account when the wire length is changed.
Long-term stability	Max. R ₀ drift of 0.05 % per year
Storage	Can be stored for at least 24 months after delivery in the original packaging.
Compliant with RoHS 2011/65/EU and RoHS 2015/863/EU	Yes
Compliant with REACH 1907/2006	Yes

Self-heating and response times

Size (B × LO) in mm	Self-heating coefficient E in °C/mW in air (v = 3 m/s, t = 22 °C)	Response times in s in air (v = 3 m/s)	
		t _{0.5}	t _{0.9}
4.5 × 15.8	0.1	4	11

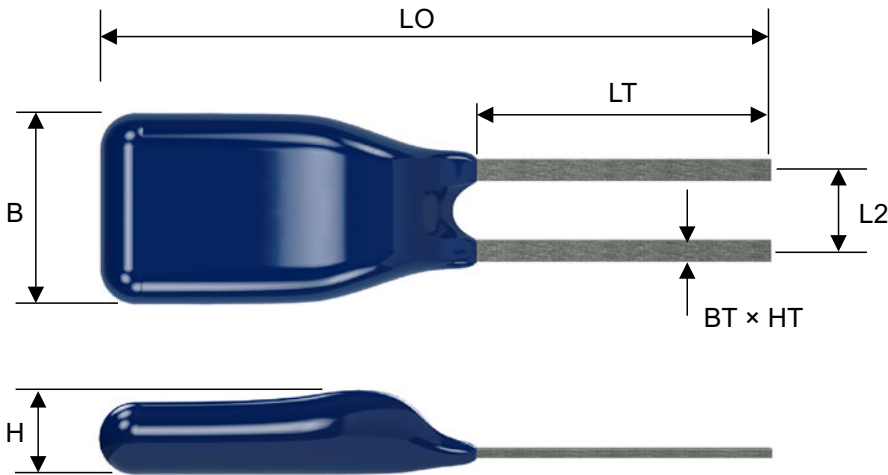
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Dimensions



B	Width (tolerance ± 0.3 mm)	LT	Length of connection (tolerance ± 1.6 mm)
H	Height (tolerance ± 0.4 mm)	L2	Clamp distance (tolerance ± 0.2 mm)
LO	Total length (tolerance ± 0.8 mm)	BT x HT	Width x height

