Kapton-laminated surface measurement temperature sensor

Kapton sealed sensor for temperature range between - 50 °C up to 150 °C, 15x10 mm with 290 mm insulated stranded wires

Benefits of the Kapton-laminated sensors:

- self-adhesive surface temperature sensor
- tightly sealed packaging
- moisture and chemical resistant
- exellent electrical insulation
- up to +200 °C available without glue

Product Name: SMK.P1K0.1510.1K.B.290.AT.S
Nominal resistance: 1000 Ω at 0 °C
Operating temperature range: -50 °C to +150 °C
TCR: Pt 3850 ppm/K
Chip size/dimensions: Sensor chip: 2,5 x 1,6 x 1.1 mm (LxWxH); Kapton seal: 15x10 mm (LxW)
Tolerance/class: IEC 60751 F0.3 (IST AG tolerance class B)
Connection type: Cu/Ag AWG stranded wire, AWG30/19, PTFE insulated (red & white)
Wire length: 290 mm
Special: Laminated with polyimid film, 15 x 10 mm with self-adhesive backside
Supply voltage: 250 V
Product code: 159455

Product details

Kapton laminated surface measurement sensor

The Kapton-laminated surface temperature sensor is self-adhesive, so it's quick to mount directly on the surface you want to measure. Its tightly sealed packaging protects it against moisture and chemicals, and it provides excellent electrical insulation. For higher-temperature applications, a version without adhesive is available for use up to +200 °C.

In-house Kapton technology – from raw film to finished sensor
At iST, lamination, patterning, bonding, and calibration are all performed under one roof at our facilities. This gives us direct control over every production step, with real-time inspection of adhesive layers, sensor alignment, and material integrity – and full traceability from raw Kapton film to finished sensor. For our customers, this means consistently high quality with uniform bond strength, fast customization and prototyping, and reliable scheduling from first samples through to scalable high-volume production. Share your requirements with us, and we will tailor a Kapton-laminated sensor to your application.

ESD optimized design

To strenghten the stability of your assembled systems we are committed to the continued optimization and development of ESD-optimized temperature sensors.

With optimized design and new process technology we offer platinum temperature sensors with outstanding ESD resistance. The designs have been tested according to European Union Standards, the IEC/EN61000-4-2.

Thanks to a state-of-the art in-house ESD laboratory, we are able to test our sensors internally according to international standards.

Download flyer for more information.

Lead-free RTDs

Driven by the expiration of the RoHS exemption (Directive 2011/65/EU, Annex III, 7c.1) on June 30, 2027, we will no longer produce or ship any sensors containing lead-oxide glass. We are proactively initiating the transition from lead-containing to lead-free cover and passivation glass for our sensors, to avoid delays or shortages when the new directive comes into operation.

This material change is being implemented without altering the processing method and is fully interchangeable with previous processes and products. While the sensors do not differ visually, the material number of lead-fee sensors are being newly generated for full traceability.

For a detailed description, please refer to ECN A24.035.

Directly welded insulated wires

Enameled Cu-wire (1E)

iST offers temperature sensors with extended and directly welded insulated enameled Cu-wire. The insulation is additionally removed and pre-tinned at the end of the wire, which enables easy soldering into applications. Due to the small diameter of the enameled Cu-wire (Ø 0.2 mm), the sensor is offered with extremely small dimensions; as low as 0.8 mm x 3 mm or 1.2 mm x 1.6 mm and with extended directly welded wires. Temperature sensors with enameled Cu-wires are used in applications up to +150 °C, short-term excessive temperatures up to +180 °C are definitely possible.

Straight and stranded PTFE-wire (2I / 2L)

We offer sensors with Cu/Ag straight and stranded wire with PTFE-insulation. The directly welded wires enable an outstanding robustness and are optimal for connector assemblies or for soldering, welding and crimping. The Cu/Ag straight and stranded PTFE-wire can be extended or directly welded to the sensor chip to meet application-specific requirements.

Quality

Consistent with the well-known, high-quality standards in Switzerland, IST AG is certified according to ISO 9001:2015 (quality) and ISO 14001:2015 (environment). Appropriate processes are part of our daily work. They are regularly audited and extended parallel to the growth of our company.

> Read more

The online shop

Quantity (pieces)	Price (per piece)
1-10	CHF 75.00

Quantity (pieces)	Price (per piece)
11-20	CHF 65.00
21-50	CHF 55.00

Lager: **0**