



FIBER OPTIC TEMPERATURE SENSOR TS2

KEY FEATURES

- Temperature Range: -200°C to $+300^{\circ}\text{C}$
- Standard deviation*: $\pm 0.2^{\circ}\text{C}$
- Completely non-conductive
- Complete immunity to RFI, EMI, NMR and microwave radiation
- Resistance to extreme temperatures
- High accuracy
- Stable and repeatable measurement
- GaAs-based temperature sensor

APPLICATIONS

- High voltage distribution powerlines, e.g. electric trains
- Gas translated power breakers
- Power bars, bus-bars

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OPTOCON[®]
OPTICAL SENSORS AND SYSTEMS

FIBER OPTIC TEMPERATURE SENSOR TS2

DESCRIPTION

The fiber optic temperature probe TS2 was designed for a wide range of applications, especially for the use inside of generators, power transformers as well as bus bars, R&D and industrial applications and offers complete immunity to RFI, EMI, NMR and microwave radiation - the best choice for all challenges.

The standard temperature sensor TS2 has a response time of 2s. With a standard deviation* of +/-0.2°C it allows precise and repeatable measurements. The coating of TS2 temperature sensor is made of PTFE, the fiber tip has a diameter of 1.0mm and has a serial ST-connector. For mechanical stability and applications e.g. in oil special protective coatings and hoses are available.

The fiber optic probe TS2 consists of a PTFE protected glass fiber and a GaAs-crystal (Galliumarsenid) at the sensor tip.

It is totally free of metal and immune to RFI, EMI, NMR and microwave radiation - therefore TS2 probes are explicit suitable for the use in high temperature ranges (-200°C to +300°C) as well as in aggressive and rough test environments.

All fiber optical temperature sensors can be connected to the fiber optic temperature measurement devices (FOTEMP), delivers accurate and complete reliable, stable and repeatable values. Starting at a light wave length of 850nm GaAs becomes optical translucent. Since the position of the band gap is temperature dependent, it shifts about 0.4nm/Kelvin.

The sensor cable can be up to several meters and kilometers long without influencing the accuracy of the measurement result. Other sensor lengths and connector types are available upon request.

We are always anxious to adjust our offer to your special needs. In case of any further questions about individual measurement problems, lengths of sensors or connector types, please contact us.

TECHNICAL SPECIFICATIONS

Name of sensor	TS2, The comprehensive
Temperature range	- 200°C to + 300°C
Standard deviation*	+/- 0.2°C
Response time	≤ 2,0s
Fiber Ø	200µm

Sensor length	2m standard (Other lengths on customer request)
Connector type	ST
Signal conditioner	Compatible with all Optocon AG fiber optic thermometers

*Statement only possible with analysis unit. See data sheet of the measurement device for information about technical data.

DIMENSIONS

All dimensions in mm.

