

FIBER OPTIC THERMOMETER FOTEMP1-OEM- MNT

KEY FEATURES

- Easy OEM Migration
- Very small size, small footprint
- Modular electronic for various device configurations
- Measuring range: $-200\text{ }^{\circ}\text{C}$ to $+300\text{ }^{\circ}\text{C}$
- Standard deviation*: $\pm 0.2\text{ }^{\circ}\text{C}$
- Various serial interfaces
- Privat label option
- Attractive volume discounts

APPLICATIONS

- EMI, RFI and microwave environments
- High voltage environments
- Harsh and hazardous environments
- Nuclear environments
- Aerospace applications
- Process monitoring
- Medical applications (MRT)

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DESCRIPTION

Due to its very small design and modular components the fiber optic thermometer FOTEMP1-OEM-MNT is ideal for OEM usage!

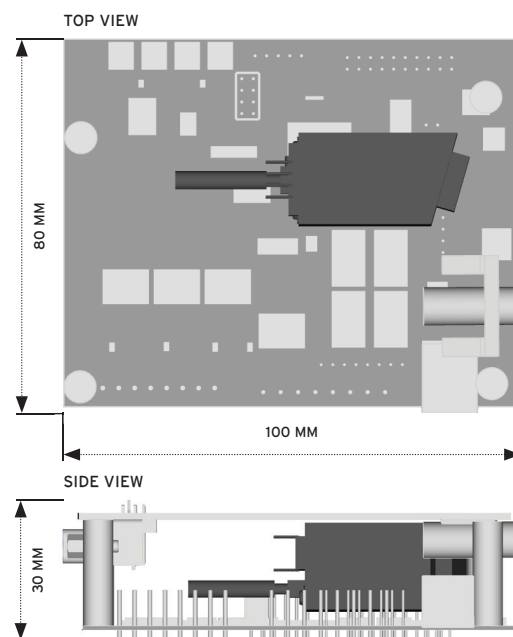
FOTEMP1-OEM-MNT was designed to be integrated into your existing or new systems. Due to its very small and compact design even more applications are possible and a retrofit into existing model series is possible. It is ideal for fiber optic temperature measurement in high electromagnetic interfered environment, in microwave fields and other environments, where measurement with common electric temperature sensors is not possible.

The modular electronic components allow an individual OEM usage and device configuration. The standard analog output and RS-232 communication port are well suited for real-time data acquisition. With additional modules, e.g. LCD-Display, Touch Graphicdisplay and SD-Cardslot this OEM device is individually expandable. The FOTEMP1-OEM-MNT, Single-channel-OEM miniature signal conditioner can be controlled directly using the „FOTEMP Assistant“ software. Hence, complex temperature profiles can be realized and an excellent monitoring and logging of the results is possible.

The outer jacket of the fiber optic temperature sensors is made out of teflon, at the sensor tip a GaAs-crystal (gallium arsenide) is attached. The probe sensor is completely non-conductive. Optocon's fiber optic sensors offer complete immunity to RF and microwave radiation with high temperature operating capability, intrinsic safety, and non-invasive use. The sensors are also designed to withstand harsh and corrosive environments. Due to its characteristics, it is perfectly suitable for installation in microwave or drying ovens.

Starting at a light wavelength of 850 nm GaAs becomes optical translucent. Since the position of the band gap is temperature dependent, it shifts about 0.4 nm/Kelvin. The measurement device contains a light source and a device for the spectral detection of the band gap. This guarantees fast, repeatable and reproducible measurements.

DIMENSIONS



TECHNICAL SPECIFICATIONS

Number of channels	1
Power supply	12 VDC
Power supply	350 mA
Measuring range	- 200 °C to + 300 °C
Standard deviation*	+/- 0.2 °C
Resolution	0,1 °C
Measuring time/ Channel**	250 ms
Analog output	0 to 10 V or 4-20 mA
Communication	RS-232 / RS-485 / USB / Relay / SPI
Calibration	One-point calibration via Software
Display	none
Storage temperature	- 20 °C to + 70 °C
Operating temperature	0 °C to + 50 °C
Weight	140g
Dimensions	100 x 80 x 30 mm
Software	e.g. FOTEMP Assistant 2 or ASCII-Protocol-Description
Communication protocols	ASCII over RS-232, USB, SPI
Warranty	1 year
Probes	Compatible with all Optocon AG fiber optic temperature probes.

*The "expanded uncertainty of measurement" is the product of the reported standard deviation and the coverage factor k=2. It corresponds to a normal distribution to a coverage probability of approximately 95%.

**Mean value. This value depends on the used sensor and its environmental temperature.