



## FIBER OPTIC THERMOMETER FOTEMP-PLUS

### KEY FEATURES

- Robust & durable bench top design
- Small footprint
- Also ideal for OEM applications
- 1-4 measuring channels
- Measuring range:  $-200^{\circ}\text{C}$  to  $+300^{\circ}\text{C}$
- High accuracy:  $\pm 0.1^{\circ}\text{C}$
- High resolution color LCD display
- 0-10V or 4-20mA analog outputs
- 4 control relay option
- Standard: USB interface
- Additional Interface Option: RS232 or RS485/ModbusRTU
- Includes FOTEMP-ASSISTANT control/data logging software

### APPLICATIONS

- EMI, RFI and microwave environments
- High voltage environments
- Processing monitoring
- Medical applications (MRI)



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 **OPTOCON®**  
OPTICAL SENSORS AND SYSTEMS

# FIBER OPTIC THERMOMETER

## FOTEMP-PLUS

### DESCRIPTION

Together with TS series fiber optic temperature sensors, the FOTEMP-PLUS thermometer system is the ideal solution for monitoring temperature in microwave, high frequency, high voltage, magnetic or aggressive environments where metal temperature sensors (RTC, TC, etc.) are either inaccurate or hazardous.

The measurement principle is based on the inherent optical properties of gallium arsenide (GaAs) with temperature. The TS series sensors are offered in different configurations optimized for a particular operating environment or application - process, food processing, microwave, harsh chemical, and medical.

Standard analog output per channel (V or M) and serial communication port offer real-time data acquisition.

In addition, the supplied FOTEMP-Assistant software provides instrument control, configuration and data logging functions. The software is compatible with either USB or RS232 ports using ASCII protocol.

### DIMENSIONS

FRONT VIEW



BACK VIEW



### TECHNICAL SPECIFICATIONS

Number of channels	1, 2 or 4
Power supply	12 VDC. Wall plug-in power supply included.
Power consumption	350 mA
Measuring range	-200°C to +300°C, actual range depends on calibration option chosen and temperature range of selected TS sensor: A1 Basic: -20°C to +150°C A2 Medium: -40°C to +200°C B HighTemp: -40°C to +300°C C Extended: -200°C to +300°C
Accuracy	Factory Calibration: $\pm 0.1^\circ\text{C}$ (1 $\sigma$ ) Field Calibration: $\pm 0.5^\circ\text{C}$ (1 $\sigma$ )
Resolution	0.1°C
Measuring time/channel	< 250ms per channel (i.e. update rate for 4 Channels=1000 ms or 1 second)
Analog output	0-10V or 4-20mA, 14-bit resolution
Relays	Optional: Programmable limit settings, Contact Rating: 2A at 24 VDC, 2A at 120 VAC, Maximum 48W or 240 VA
Interfaces	Standard: USB Options: RS232 or RS485/Modbus RTU
Protocol	USB and RS232 use ASCII protocol. RS485 uses Modbus protocol. Protocol available for custom programming applications.
Data logging	USB/RS232 (ASCII Protocol) models are supplied with FOTEMP-ASSISTANT graphical display/data logging software. Provides Excel compatible output files.
Optical Interface	ST, compatible with all TS series probes
Temperature	Storage: -20°C to +70°C, Operating: -20°C to +60°C
Dimensions	190 x 110 x 90 mm
Weight	0.5 kg
Material	Aluminum housing
Ingress Protection	IP54
Warranty	12 months
Calibration Interval	Under normal use, the instrument does not require recalibration. When sensors and cables are changed, a One-Point Calibration is required. Recommended cal interval is 24 months for ISO quality systems.
Contents	FOTEMP-PLUS signal conditioner Universal 12VDC AC Wall Charger USB Cable RS232 Cable (if requested) Calibration Report USB stick with FOTEMP-Assistant software and documentation

Specifications subject to change without notice

# FIBER OPTIC THERMOMETER

## FOTEMP-PLUS

### Ordering Info

**F O T E M P 4 - P L U S - P 0 - V - - B**

#### No. of Channels

- 1** 1 Channel
- 2** 2 Channels
- 4** 4 Channels

#### Interface Options

- P0** USB (ASCII) and RS232 (ASCII Protocol)
- P1** USB (ASCII) and RS485 (Modbus RTU)

#### Analog Output Options

- M** 4-20mA
- V** 0-10V

#### Control Interface Option

- Blank** None
- R** Relays

#### Calibration Options

- A1** -20°C to +150°C
- A2** -40°C to +200°C
- B** -40°C to +300°C
- C** -200°C to +300°C

Quick Ship and Rental Models::

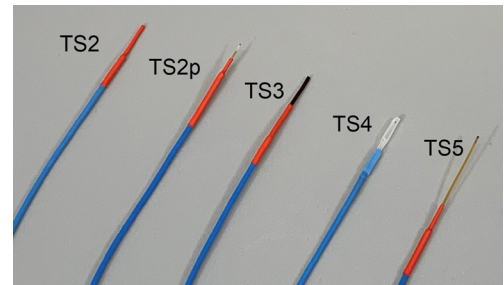
**FOTEMP4-PLUS-P0-V-B4** Channels, USB+RS232, Calibrated -40°C to +300°C

**FOTEMP4-PLUS-P0-V-C4** Channels, USB+RS232, 0-10V, Calibrated -200°C to +300°C

Standard stock TS Temperature Probes:

- TS2-02** General Purpose, L=2m
- TS2-06** General Purpose, L=6m
- TS2p-02** Smallest Form Factor, L=2m
- TS3-10MM-02** General Purpose, Rigid Tip, L1=10mm, L=2m
- TS3-10MM-06** General Purpose, Rigid Tip, L1=10mm, L=6m
- TS4-02** For Harsh Chemicals and Radiation, L=2m
- TS4-06** For Harsh Chemicals and Radiation, L=6m
- TS5-20MM-02** For Medical, Small Profile, L1=20mm, L=2m
- TS5-20MM-06** For Medical, Small Profile, L1=20mm, L=6m
- TS5-50MM-02** For Medical, Small Profile, L1=50mm, L=2m
- TS5-50MM-06** For Medical, Small Profile, L1=50mm, L=6m

Custom lengths (L and L1) available upon request.



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