FIBER OPTIC THERMOMETER
FOTEMP T2

KEY FEATURES

→ Robust & durable industrial design
→ DIN Rail or mounting brackets
→ 4 to 16 measuring channels
→ Measuring range: −200°C to +300°C
→ High accuracy: +/−0.2°C
→ Status LED and LCD display
→ 4-20mA analog outputs (up to 8 channels)
→ 4 programmable control relays
→ Built-in USB interface
→ RS485-Modbus RTU or Ethernet-Modbus TCP option
→ Includes FOTEMP-ASSISTANT data logging software

APPLICATIONS

→ Multichannel test and process applications, including: medical, chemical, biomedical, microwave, food, semiconductor and downhole
→ Monitoring temperature inside high voltage transformers, capacitors, and generators
→ Temperature measurements on high voltage distribution power lines, gas insolated switchgears, power breakers, and power factor adjustment capacitors
→ Economical multichannel solution

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OPTOCON®
OPTICAL SENSORS AND SYSTEMS

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FOTEMP T2

DESCRIPTION

Weidmann's FOTEMP T2 offers a mutlichannel on-line monitoring solution for all manner of industrial applications, from process automation to research lab, down hole to medical MRI, from wind turbines to transformers.

In addition to measuring temperature, the FOTEMP T2 system incorporates 4 programmable relays for controlling external hardware during customer-defined emergency or overload conditions.
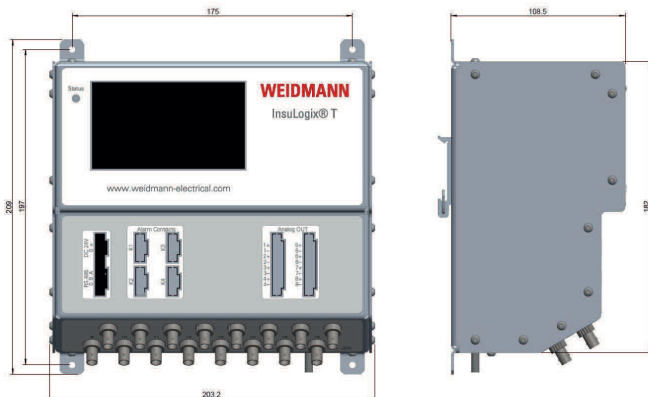
The drift-free, re-calibration free and maintenance-free FOTEMP T2 allows for optimum operation during normal and emergency conditions.

The temperature measurement is based on Gallium Arsenide sensor mounted on 200um all-silica fiber. The probe consists of a glass fiber with PTFE sheath,.

The sensor possesses a resilient construction and has dielectric resistant materials featuring complete immunity to EMI and RFI environments. The optical cable is specially designed for permanent installation in a harsh chemicals or liquid-immersed transformer. The various TS series sensor models are optimized for use in specific applications - general purpose, microwave ovens, harsh chemicals, and medical.

The FOTEMP T2 features a USB interface for ease of configuration and data logging using the supplied FOTEMP-ASSISTANT graphical display and data logging software. For SCADA and other network applications, the system offers Modbus protocol communications via either serial RS485/Modbus RTU or Ethernet/Modbus TCP interface.

DIMENSIONS

TECHNICAL SPECIFICATIONS

Number of channels	4, 8, 12, or 16
Power supply	24V, Max 40W
Measuring range	−200°C to +300°C, actual range depends on calibration option chosen: A1 Basic: -20°C to +150°C A2 Standard -40°C to +200°C B High Temp: -40°C to +300°C C Extended: -200°C to +300C
Accuracy	± 0.2°C (1σ)
Resolution	0.1°C
Sampling rate/channel	250ms per Active Channel (i.e. total for 4 Channels=1s, for 8 Channels=2s). Use supplied FOTEMP-ASSISTANT software to Disablechannels for fastest update rate.
Analog output	4-20mA or 0-10V, 14-bit resolution Up to first 8 channels
Relays	4 Programmable limit settings, Contact Rating: 2A at 24 VDC, 2A at 120 VAC, Maximum 48W or 240 VA
Interfaces	Standard: USB (ASCII) Options: RS485/Modbus RTU or Ethernet/Modbus TCP
Protocol	ASCII and Modbus protocol information available to assist custom programming applications
Data logging	USB and RS232 (ASCII Protocol) models are supplied with FOTEMP-ASSISTANT graphical display/data logging software. Provides Excel file 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/Weight/IP	204 x 209 x 109 mm, 1.2 kg, IP20
Materials	Aluminum housing
Mounting	DIN Rail or mounting brackets
Warranty	2 years
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 12 months for ISO quality systems.

Specifications subject to change without notice

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FOTEMP T2

Ordering Info

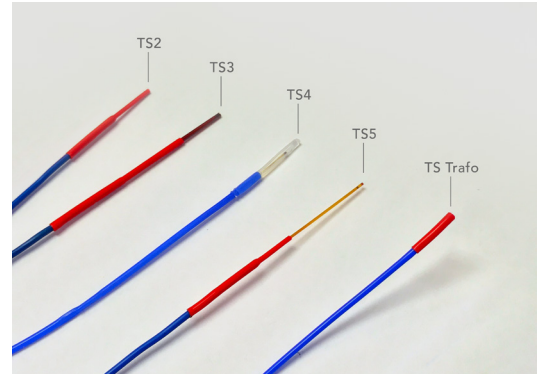**F O T E M P - T 2 - 8 - P 2 - A**

No. of Channels
4   4 Channels
8   8 Channels
12 12 Channels
16 16 Channels

Digital Interface Option
P1   USB + RS485/Modbus RTU
P2   USB + Ethernet/Modbus TCP

Calibration Option
A1   Basic, -20°C to +150°C
A2   Standard, -40°C to +200°C
B   High Temperature, -40°C to +300°C
C   Extended, -200°C to +300°C

Quick Ship Models:
FOTEMP-T2-8-P1-M-A2   8 Channels, USB+RS485/Modbus RTU, 4-20mA, A2-Cal (-40°C to +200°C)
FOTEMP-T2-8-P1-V-A2   8 Channels, USB+RS485/Modbus RTU, 0-10V, Calibrated -40°C to +200°C
FOTEMP-T2-8-P2-M-A2   8 Channels, USB+Ehternet/Modbus TCP, 4-20mA, A2 Cal (-40°C to +200°C)
FOTEMP-T2-16-P1-M-A2   16 Channels, USB+RS485/Modbus RTU, A2 Cal (-40°C to +300°C)

Quick Ship TS Temperature Probes:
TS3-10MM-02   General Purpose, L1 Length=10mm, Length=2m
TS3-10MM-06   General Purpose, L1 Length=10mm, Length=6m
TS4-02   For Harsh Chemicals and Radiation, Length=2m
TS4-06   For Harsh Chemicals and Radiation, Length=6m
TS5-20MM-02   For Medical, L1=20mm, Length=2m
TS5-20MM-02   For Medical, L1=20mm, Length=6m
TS5-50MM-02   For Medical, L1=50mm, Length=2m
TS5-50MM-02   For Medical, L1=50mm, Length=6m
TST2J-06   For Transformer Hot Spot Monitoring with Smart J-Spacer, Length=6m
TST2D-06   For Transformer Hot Spot Monitoring with Smart Disk, Length=6m

Quick Ship DIST series Fiber Optic Extension Cables:
DIST-C320-03   General Purpose, Length=3m
DIST-C320-05   General Purpose, Length=5m
DIST-C320-10   General Purpose, Length=10m
DIST-C900-03   Ruggedized, Length=3m
DIST-C900-05   Ruggedized, Length=5m
DIST-C900-10   Ruggedized, Length=10m

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