

FOTEMP T30

for direct real-time hot spot measurement in transformer windings



Power transformers are often vulnerable to failure during overload conditions, especially when inadequate control and protection are in place. The FOTEMP T30 is designed to measure the hot spot temperature of transformer windings in real-time.

This device is drift-free, requires no recalibration, and is maintenance-free, allowing optimized transformer operation at safe load capacities under normal and emergency conditions.

The temperature readings obtained from the FOTEMP T30 are valuable for dynamic load control and can significantly improve the calibration of thermal models.

The temperature measurement system utilizes a Gallium Arsenide crystal sensor that is mounted on a 200 µm silica fiber. The probe is composed of a glass fiber encased in a PTFE sheath, which can be further protected by a PTFE spiral wrap.

The COMEM fiber optic sensors are immune to RF and microwave radiation, and offer high-temperature operating capability, intrinsic safety, and non-invasive use. The probes are also designed to withstand harsh and corrosive environments.

Why buy?

Transformer safety:

- Predictive maintenance approach
- Premature failures prevention
- Effective loading management
- Transformer lifecycle extension

Serviceability:

- Easy installation and maintenance
- Easy integration of up to 16 channels
- Long term reliability
- High-quality fiber optic sensors and devices

Remote monitoring and control:

- Remote control signals through standard communication protocols
- Compatible with MeDICA or third-party monitoring systems

Application

- EHV/UHV/HVDC Transformers
- Power and Distribution Transformers
- Reactors, Generators
- On-load tap-changer, Switchgear, BusBars

TECHNICAL FEATURES AT A GLANCE

FOTEMP T20

Channel	2 to 16
Modules	4x up to 4 channels
Display	7" LCD
Analog	0 - 10 V or 4 - 20 mA
Data logging	Continuous, and time logging, 32 GB
Communication protocols	Modbus, DNP3.0, IEC61850, IEC 60870-104
Interfaces	RS485, Ethernet
Relay	16 free programmable relays
Power supply	24 VDC

Environment

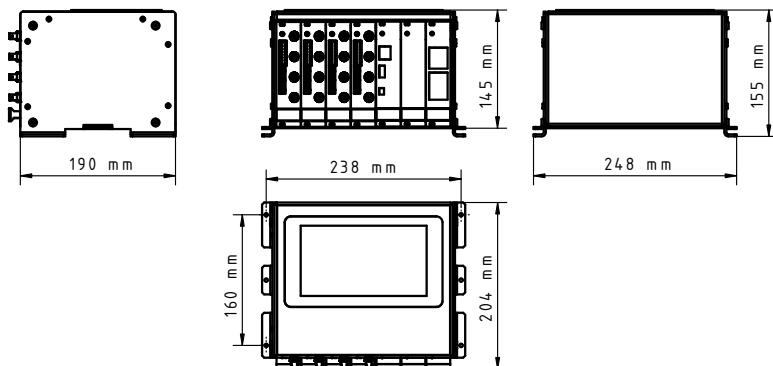
Operating temperature	-20 °C to 60 °C
Storage temperature	-20 °C to 70 °C
Probes	Compatible with all COMEM fiber optic temperature probes
Fiber optic core	200 µm
Connector type	ST
Mounting options	DIN rail mounting or standard mounting brackets

Measurement

Measurement range	-200 °C to 300 °C
Measuring time	< 250 ms per Channel
Accuracy (Standard deviation)	1.0 K
Resolution	0.1 K

DIMENSIONS

FOTEMP T30



Width (mm)	Height (mm)	Depth (mm)	Weight (Kg)
248	204	155	2.0

www.comem.com

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MICRONOR SENSORS INC.
For North American Sales & Service

2065 Sperry Ave, Suite B
Ventura, CA 93003 USA
+1-805-389-6600
sales@micronor.com
www.micronor.com

COMEM Optocon GmbH

Washingtonstraße 16/16a D-01139
Dresden Germany
Tel +49 (0) 351 8435990

FIBER OPTIC TRANSFORMER HOTSPOT MONITORING

FOTEMP-T30

Ordering Info

F O T E M P - T 3 0 - 1 6 - P 1 - M - A 2

No. of Channels

- 4** 4 Channel
- 8** 8 Channels
- 12** 12 Channels (P0 Option Only)
- 16** 16 Channels (P0 Option Only)

Above based on 4-Channel Modules.

Interface/Protocol Options

- P1** RS485/ModbusRTU + Ethernet/ModbusTCP
- P2** RS485/ModbusRTU + Ethernet/ModbusTCP/DNP3
- P3** RS485/ModbusRTU + Ethernet/ModbusTCP/IEC 61850
- P4** RS485/ModbusRTU + Ethernet/ModbusTCP/IEC 60870-5-104

Analog Output Options

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

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

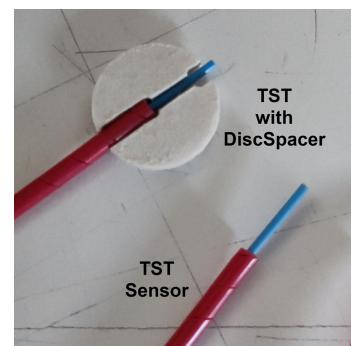
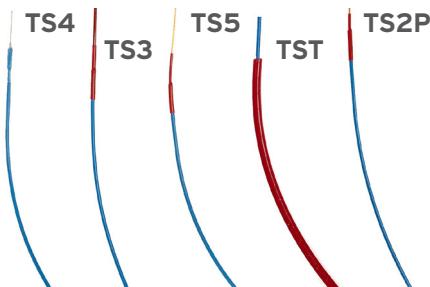
Factory Quick Ship FOTEMP-T30 Models:

FOTEMP-T30-16-P1-M-A2 16 Channels, RS485/ModbusRTU + Ethernet/ModbusTCP, A2-Cal= -40°C to +200°C

Standard stock TS Temperature Probes for Transformer Applications:

TST-02 For Dry or Oil-Filled Transformers,
Sensor Length L=2m, Includes DiscSpacer

Custom lengths (L and L1) available upon request.



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sensors**

MICRONOR SENSORS, INC.
2065 Sperry Ave, Suite B, Ventura, CA, 93003, USA
+1-805-389-6600 sales@micronor.com
www.micronor.com