

Infrared Temperature Sensors



Features:

- Simple, two-wire installation
- Simultaneous 4-20 mA and digital output for smart TX sensors
- Compact, rugged sensor with NEMA-4 (IP 65) rating
- Wide temperature range from -18 to 2000°C (0 to 3600°F)
- Advanced signal processing
- Point-to-point or multidrop installation
- Install up to 15 sensors on a single multidrop network
- Windows software for remote configuration and monitoring
- Wide choice of focus distances
- Special models for glass and plastics applications

The **Thermalert® TX™** combines high performance non-contact temperature measurement with industry standard two-wire technology. Choose between the **smart TX sensor** with remotely addressable digital control, or the **basic TX.Smart TX** sensors provide digital communications, as well as 4-20 mA output, allowing remote configuration and monitoring. Up to 15 sensors can be installed on a single multidrop network.

Smart TX sensors feature remotely adjustable temperature and output subranges, adjustable emissivity, ambient temperature check, and a user-defined alarm output. Averaging and Advanced Peak/Valley Hold algorithms are provided for accurate measurement of complex discrete processes.

DataTemp® TX Windows® software provides an easy-to-use interface for configuration and monitoring. Temperatures can be archived or exported to other applications for analysis and process documentation.

Basic TX models provide the same accuracy, repeatability, and response time as the **smart TX** sensors, with fixed temperature and output ranges. Emissivity on these models is switched manually at the sensor.

Remote Communications Kit

Required for Smart Models, the kit includes the HART® protocol/RS-232 adapter and the Windows Data Temp TX software package. One kit serves multiple sensors. Requires RS-232 serial port voltage and Windows 95, Windows 98, or Windows NT.

Accessories/Options*

- Sighting viewer
- NIST/DKD calibration certificate*
- Intrinsic safety* (call for specifications)
- Optional air-/water-cooled housing*
- °C/°F (must be specified for basic models)*
- Air purge collar
- Lens protector
- Right angle mirror
- ThermoJacket enclosure

*Must be specified at time of order

Measurement Specifications:

Model:	Spectral Response	Temperature Range:
LT (Low Temp)	8 to 14 μ m	-18 to 500°C (0 to 1000°F)
LTO (Low Temp)	8 to 14 μ m	0 to 500°C (32 to 932°F)
MT (Medium Temp)	3.9 μ m	200 to 1000°C (400 to 1800°F)
HT (High Temp)	2.2 μ m	500 to 2000°C (950 to 3600°F)
G5 (Glass)	5.0 μ m	250 to 1650°C (500 to 3000°F)
P7 (Plastics)	7.9 μ m	10 to 360°C (50 to 650°F)
Accuracy:	±1% of measured value or ±1.4°C (2.5°F), whichever is greater, @23°C ±5°C (73°F ±9°F)	
Repeatability:	±0.5% of measured value or ±0.7°C (1.2°F), whichever is greater	
Temperature Resolution:	0.1°C (0.2°F) for all models except LT ; 0.1°C (0.2°F) LT only	
Response Time (95%):	165 mSec (100 mSec for HT models)	
Emissivity:	Adjustable; 0.10 to 1.00 for all models	
Signal Processing (Smart models):	°C/°F, Advanced Peak/Valley Hold, Averaging, Ambient temperature compensation	

Electrical Specifications:

Outputs:	
Analog	4-20mA (all models), max, loop resistance 700 Ω @ 24VDC
Digital (Smart models)	Hart® or RS-232 (with optional adapter)
Alarm (Smart models)	24V/150 mA; adjustable setpoints, deadband, normally open/closed settings
Power Supply:	12-24VDC ±20% (Basic models) 4-20 mA loop power for Basic and Smart models

General Specifications:

Environmental Rating:	NEMA-4 (IP 65)
Ambient Temp. Range:	0 to 70°C (32 to 160°F) w/ air cooling up to 120°C (up to 250°F) w/ water cooling up to 175°C (up to 350°F) w/ ThermoJacket™ up to 315°C (up to 600°F)
Storage Temperature:	-18 to 85°C (0 to 185°F)
Relative Humidity:	10 to 95%, non-condensing
Shock:	IEC 68-2-27 (MIL STD 810D) 50 g's, 11 mSec, any axis
Vibration:	IEC 68-2-27 (MIL STD 810D) 3 g's, any axis, 11-200 Hz
Dimensions:	187mm L x 42mm dia. (7.4" L x 1.7" dia.) w/ cooling jacket: 187mm L x 60mm dia. (7.4" L x 2.4" dia.)
Weight:	330g (0.72 lb); w/ cooling jacket: 595g (1.3 lbs)

Model	Description	Price
RAYTXSLTSF	8 to 14 μ m, -18 to 500°C, 33:1 Optics	\$1455
RAYTXSLTPSF	8 to 14 μ m, 0 to 500°C, 15:1 Optics	\$1382
RAYTXSLTCF1	8 to 14 μ m, -18 to 500°C, 30:1 (not available for G5, P7 models)	\$1528
RAYTXSLTCF2	8 to 14 μ m, -18 to 500°C, Close Focus 2 (not available for G5, P7 models)	\$1528