



# ***THERMALERT SX***

The Thermalert® SX™ combines high performance noncontact temperature measurement instrumentation with industry standard two-wire technology.

The smart SX sensors combine digital communications with the 4-20 mA output, allowing remote configuration and monitoring. Up to 15 sensors can be installed on a single multidrop network.

Thermalert SX sensors feature remotely adjustable temperature and output subranges, adjustable emissivity, ambient temperature check, and a user-defined alarm output. Remotely adjustable Averaging and Advanced Peak/Valley Hold algorithms are provided for accurate measurement of complex discrete processes. In addition, through-the-lens sighting or laser aiming help pinpoint the measurement target.

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.

## Highlights:

- Choice of through-the-lens sighting or laser aiming
- Simple, two-wire installation
- Simultaneous 4-20 mA and digital output
- 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

# Thermalert SX

## Measurement Specifications

Model:	Spectral Response:	Temperature Range:
LT (Low Temp)	8 to 14 $\mu\text{m}$	-18 to 500°C (0 to 1000°F)
MT (Medium Temp)	3.9 $\mu\text{m}$	200 to 1000°C (400 to 1800°F)
HT (High Temp)	2.2 $\mu\text{m}$	500 to 2000°C (950 to 3600°F)
G5 (Glass)	5.0 $\mu\text{m}$	250 to 1650°C (500 to 3000°F)
Accuracy <sup>(1)</sup>	±1% of measured value or ±1.4°C (2.5°F), whichever is greater	
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%):		
LT & MT	165 mSec	
HT	100 mSec	
G5	65 mSec	
Emissivity	Adjustable: 0.10 to 1.00 for all models	
Signal Processing	°C/°F, Advanced Peak/Valley Hold, Averaging, Ambient temperature compensation	

## Electrical Specifications

Outputs:	
Analog	4-20 mA, maximum loop resistance 700 ohms
Digital	Hart® or RS-232 (with optional adapter)
Alarm	24 V/150 mA; adjustable setpoints, deadband, normally open/closed settings
Power Supply:	24 VDC ±10% (4-20 mA loop power)
Laser-equipped units	24 VDC ±10% (additional power supply or separate parallel connection to loop power for laser-equipped units)

## General Specifications

Environmental Rating	NEMA-4 (IP 65)
Ambient Temperature Range:	
With laser	0 to 50°C (32 to 120°F)
Without laser	0 to 70°C (32 to 160°F)
With air cooling	up to 120°C (up to 250°F)
With water cooling	up to 175°C (up to 350°F)
With 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
Dimensions:	178 mm x 57 mm diameter (7 in L x 2.25 in diameter)
With cooling jacket	178 mm x 76 mm diameter (7 in L x 3 in diameter)
Weight:	580 g (1.3 lbs)
With cooling jacket	740 g (1.6 lbs)

(1) Accuracy derating for ambient temperature deviation from 20°C: ±0.1%/°C or 0.1°C/°C (±0.1%/°F or 0.1°F/°F), whichever is greater

## Accessories / Options\*

- Sighting viewer
- NIST/DKD calibration certificate\*
- Air purge collar
- Optional air-/water-cooled housing\*
- Right angle mirror
- ThermoJacket enclosure

\* Must be specified at time of order

## Nominal Optical Specifications

(Note: Nominal Spot Size based on 90% energy)

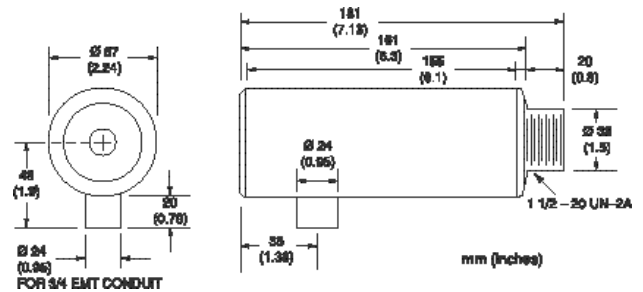
Models	Spot Diameter in mm		Focus Distance in mm		Laser <sup>(2)</sup>
<b>LT versions</b>					
TXSLTSFOS	1.77	45	60	1520	
TXSLTSFL2	1.77	45	60	1520	✓
TXSLTCF1L2	0.1	2.5	3	76	✓
TXSLTCF2L2	0.25	6.4	7.9	200	✓
TXSLTCF2OS	0.25	6.4	7.9	200	
TXSLTCF3L2	0.51	13	16	406	✓
<b>MT versions</b>					
TXSMTCF1L2	0.1	2.5	3	76	✓
TXSMTCF2L2	0.25	6.4	7.9	200	✓
<b>HT versions</b>					
TXSHTSFOS	1.06	27	94.5	2400	
TXSHTCF2OS	0.25	6.4	20.1	510	
TXSHTCF3OS	0.51	13	39.4	1000	
TXSHTCF4OS	0.08	2	3.9	100	
<b>G5 versions</b>					
TXSG5SFOS	1.1	28	60	1520	
TXSG5CF2OS	0.18	4.5	7.9	200	

(2) Laser aiming only, no through-the-lens sighting; includes separate laser switch box. Consult factory for availability of laser aiming on other SX models.

## Remote Communications Kit

The kit includes the HART® protocol/RS-232 adapter and the Windows DataTemp TX software package. One kit serves multiple sensors. Requires RS-232 serial port voltage and Windows 95, Windows 98, or Windows NT.

## General Dimensions



Specifications subject to change without notice.

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