

### Highlights

- Wide temperature range from -40 to 2250 °C (-40 to 4082 °F)
- Multiple spectral models for any kind of application, such as metals, glass and plastics
- Best in class ambient temperature up to 85 °C (185 °F)
- Wide choice of optics
- Fast response time down to 30 ms
- Laser sighting (except LT-07, LT-15, P3)
- Compact, rugged design in stainless steel
- Galvanic isolated outputs
- Real time background temperature compensation
- Simple, two-wire installation or RS485 communication
- Software for remote configuration, monitoring and field calibration

## Thermalert® 4.0

### Datasheet



### General Specifications

**Environmental Rating** IP65 / NEMA-4

#### Operating Ambient Temperature

without cooling	-20 to 85°C (-4 to 185°F)
with air cooling	120°C (248°F)
with water cooling	175°C (347°F)
with ThermoJacket	315°C (599°F)

#### Storage Temperature

-20 to 85°C (-4 to 185°F)

**Relative Humidity** 10 to 95%, non-condensing

#### Dimension

185 mm (7.2 inch)  
for 2 wire / 6 wire models

165 mm (6.4 inch)  
for 12 wire model

#### Weight

500 g (17.6 oz)

### Measurement Specifications

#### Temperature Range

<b>LT-07, LT-15, LT-30</b>	-20 to 600°C (-4 to 1112°F)
<b>LT-50, LT-70</b>	-40 to 1000°C (-40 to 1832°F)
<b>P7-30</b>	10 to 360°C (50 to 680°F)
<b>LTB-30</b>	-20 to 600°C (-4 to 1112°F)
<b>G7-70</b>	300 to 900°C (572 to 1652°F)
<b>G5-30</b>	250 to 1650°C (482 to 3002°F)
<b>G5-70</b>	450 to 2250°C (842 to 4082°F)
<b>MT-30</b>	200 to 1000°C (392 to 1832°F)
<b>MT-70</b>	450 to 2250°C (842 to 4082°F)
<b>P3-20</b>	25 to 450°C (77 to 842°F)
<b>HT-60</b>	500 to 2000°C (932 to 3632°F)

#### Spectral Response

<b>LT-07, LT-15, LT-30, LT-50, LT-70, LTB-30</b>	8 to 14 µm
<b>P7-30, G7-70</b>	7.9 µm
<b>G5-30, G5-70</b>	5 µm
<b>MT-30, MT-70</b>	3.9 µm
<b>P3-20</b>	3.43 µm
<b>HT-60</b>	2.2 µm

#### System Accuracy<sup>1</sup>

**P3-20** ±(3°C + 1% of reading) for T<sub>meas</sub> > 75°C (167°F)

**All other models** ±1% of reading or ±1.0°C (2.0°F) for T<sub>meas</sub> > 0°C (32°F)

#### models

for T<sub>meas</sub> ≤ 0°C (32°F):

±[1.0°C + 0.1\* (0°C - T<sub>meas</sub>)] with T<sub>meas</sub> in °C  
±[2.0°F + 0.1\* (32°F - T<sub>meas</sub>)] with T<sub>meas</sub> in °F

#### Repeatability<sup>2</sup>

<b>P3-20</b>	±1°C (2°F) or 0.5% of reading <sup>3</sup>
<b>All other models</b>	±0.3°C (0.6°F) or 0.3% of reading <sup>3</sup>

#### Response Time<sup>4</sup>

<b>LT-50, LT-70, P7-30, G7-70, MT-30, MT-70, HT-60</b>	130 ms
<b>LT-07, LT-15<sup>5</sup></b>	150 ms
<b>P3-20</b>	130 ms <sup>6</sup>
<b>LT-30, LTB-30</b>	30 ms
<b>G5-30, G5-70</b>	60 ms

<sup>1</sup> at ambient temperature 23°C ± 5°C (73°F ± 9°F), ε = 1.0, and calibration geometry

<sup>2</sup> at ambient temperature 23°C ± 5°C (73°F ± 9°F)

<sup>3</sup> whichever is greater

<sup>4</sup> 90% value

<sup>5</sup> Plastic lens only

<sup>6</sup> 10 s for T target < 150°C (302°F)

**Optical Specifications**

Optical Resolution	D:S	Focus Distance
LT-07	7:1	CFO
LT-15	15:1	SFO
LT-30, LTB-30	33:1	SFO, CF1, CF2
LT-50	50:1	SFO, CF2
LT-70	70:1	SF2, CF2
P7-30	33:1	SFO
G7-70	70:1	SF2
G5-30	33:1	SFO
G5-70	70:1	SF2
MT-30	33:1	SFO, CF1, CF2
MT-70	70:1	SF2, CF1, CF2
P3-20	20:1	SF4
HT-60	60:1	SFO, CF1, CF2

**Focus Distances**

SFO	1520 mm (60 in)
SF2	1250 mm (49 in)
SF4	500 mm (20 in)
CFO	50 mm (2 in)
CF1	76 mm (3 in)
CF2	200 mm (7.9 in)

**Electrical Specifications**

**Power Supply**

<b>2-Wires</b>	12 to 24 VDC
<b>6/12-Wires</b>	24 VDC nominal (20 to 48 VDC), 100 mA @ 24 V

**2-Wires**

<b>Analog</b>	4 to 20 mA
<b>Digital</b>	USB (for setup only)

**6-Wires**

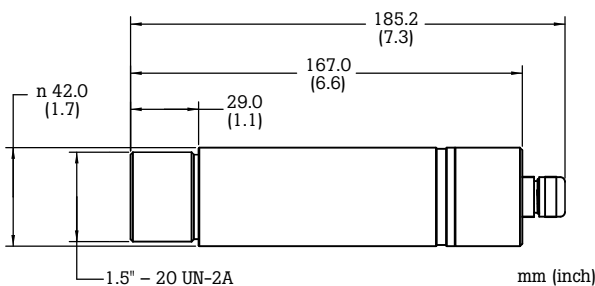
<b>Analog</b>	0/4 to 20 mA, 0 to 10 V, J/K thermocouple
<b>Digital</b>	RS485, USB (for setup only)

**12-Wires**

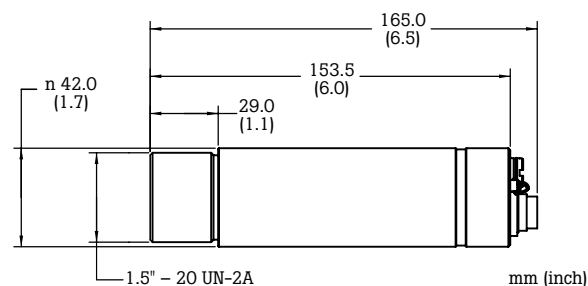
<b>Analog</b>	output 0/4 to 20 mA, 0 to 10 V, input 0 to 10 V 0 to 10 V for emissivity setting, and background temperature compensation
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<b>Digital</b>	RS485, USB (for setup only) alarm output, trigger input
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**2-Wire and 6-Wire terminal block model**



**12 Wire M16 model**



**The Fluke Process Instruments Guarantee**

The Thermalert 4.0 Series is supported by a 2 year warranty. With a network of trained representatives and agents in over one hundred countries and offices located in the U.S., Germany and China, we provide local service and support.

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**Worldwide Service**

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