ExTemp

Intrinsically Safe Infrared Temperature Sensor



- Suitable for hazardous areas, Zone 0, 1 and 2 (gas), and Zone 20, 21 and 22 (dust), with a suitable Intrinsically Safe isolator
- Temperature range: -20°C to 1000°C
- Two wire, 4-20 mA output
- Rescalable output and adjustable emissivity setting via optional USB adapter
- Fast response time and high stability
- Stainless steel 316 housing - ideal for offshore applications
- IP65 sealed
- Supplied with up to 25 m cable

GENERAL SPECIFICATIONS

Temperature range	See table of Model Numbers
Maximum Temperature Span	1000°C
Minimum Temperature Span	100°C
Output	4 to 20 mA
Field of View	See table of Model Numbers
Accuracy	± 1°C or 1%, whichever is greater
Repeatability	± 0.5°C or 0.5%, whichever is greater
Emissivity Setting Range	0.20 to 1.00 (pre-set to 0.95)
Emissivity Setting Method	User configurable via USB interface
Response Time, t_{90}	240 ms (90% response)
Spectral Range	8 to 14 µm
Supply Voltage	12 to 24 V DC ± 5%
Maximum Current Draw	25 mA
Maximum Loop Impedance	See Application Guide (available separately)

MECHANICAL

Construction	Stainless Steel 316
Major Dimensions	Ø 20 x length 150 mm (see Dimensions)
Mounting	M20 x 1.5 mm thread, length 46 mm, supplied with two mounting nuts
Cable Length	5 m, 10 m or 25 m as standard (custom lengths also available)
Weight with 5 m Cable	475 g

ENVIRONMENTAL

Environmental Rating	IP65 (NEMA 4)
Ambient Temperature Range	0°C to 70°C (Operating range)
Relative Humidity	Max. 95% non-condensing
CE Marked	Yes
RoHS Compliant	Yes

HAZARDOUS AREA CLASSIFICATION

ATEX Classification	Ex II 1GD
IECEx Classification (Gas)	Ex ia IIC T4 Ga
IECEx Classification (Dust)	Ex ia IIIC T135°C IP65 Da
Ambient Temperature Rating	-20°C ≤ Ta ≤ 70°C
Maximum DC Input Voltage	Ui = 28 V
Maximum Input Current	Ii = 93 mA
Maximum Input Power	Pi = 650 mW
Maximum Internal Capacitance	Ci = 8 nF
Maximum Internal Inductance	Li = 0 mH
ATEX Certificate Number	CML 14ATEX2079
IECEx Certificate Number	IECEx CML 14.0032

MODEL NUMBERS

EX-FFF-TT-C-LL

Cable Length
- **5** = 5 m
- **10** = 10 m
- **25** = 25 m

Custom lengths also available

User Configurable
- **C** = Configurable via optional USB adapter

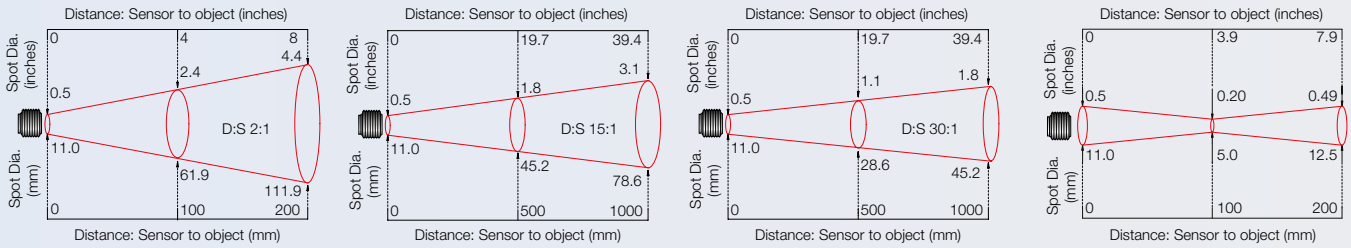
Temperature Range
- **LT** = -20°C to 100°C
- **MT** = 0°C to 250°C
- **HT** = 0°C to 500°C
- **XT** = 0°C to 1000°C
- **ST** = Special temperature range

Temperature range may be re-scaled between limits -20°C and 1000°C via optional USB adapter and software

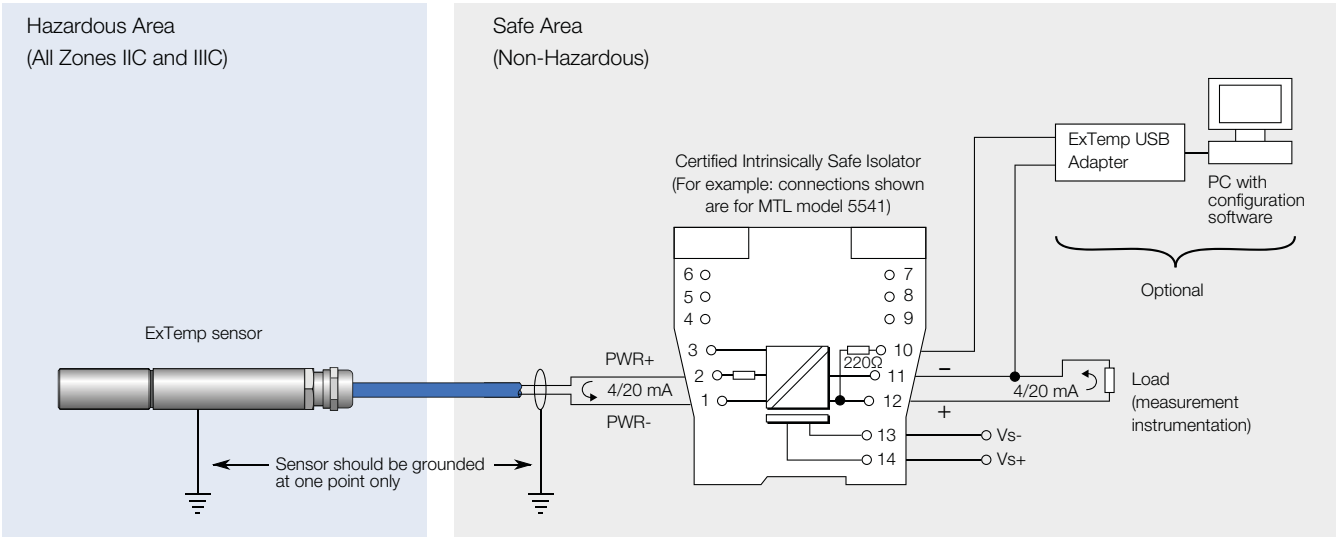
Field of View
- **21** = 2:1 divergent optics
- **151** = 15:1 divergent optics
- **301** = 30:1 divergent optics
- **CF** = Close focus optics (Spot Ø 5 mm at distance 100 mm)

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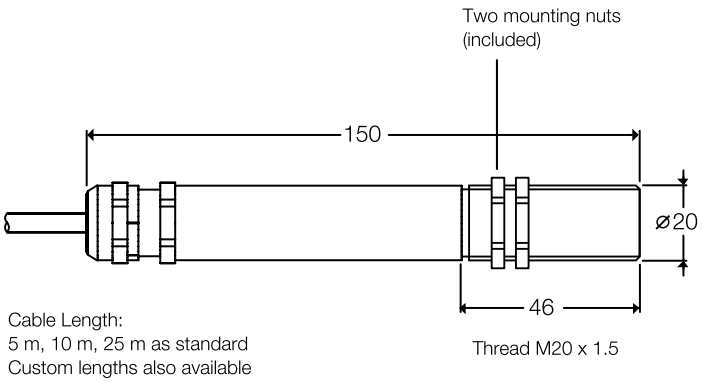
DIAMETER OF TARGET SPOT MEASURED VERSUS DISTANCE FROM SENSING HEAD



CONNECTIONS



DIMENSIONS (mm)



Cable Length:
5 m, 10 m, 25 m as standard
Custom lengths also available
User may extend cable subject to safety requirements

CONFIGURATION

The ExTemp sensor may be connected to a PC via the optional USB adapter and included Windows software.

Configurable settings include the emissivity setting, 4-20 mA temperature range, averaging, peak and valley hold processing and reflected energy compensation.



ACCESSORIES

FBL	Fixed mounting bracket (1-axis rotation)
ABL	Adjustable mounting bracket (2-axis rotation)
APMW	Air purge collar (for 2:1 optics)
APMN	Air purge collar (for all other optics)
CALCERTA	Calibration certificate, 3 temperature points, UKAS traceable
LCT	USB adapter and configuration software

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