



- 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

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

### MECHANICAL

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

### ENVIRONMENTAL

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

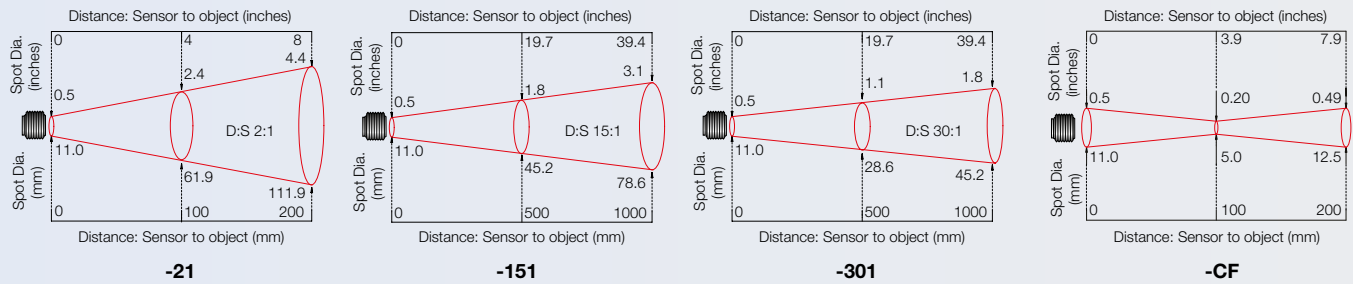
### HAZARDOUS AREA CLASSIFICATION

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

### MODEL NUMBERS

<b>EX-FFF-TT-C-LL</b>	<b>Cable Length</b>
	<b>5</b> = 5 m
	<b>10</b> = 10 m
	<b>25</b> = 25 m
	Custom lengths also available
	<b>User Configurable</b>
	<b>C</b> = Configurable via optional USB adapter
	<b>Temperature Range</b>
	<b>LT</b> = -20°C to 100°C
	<b>MT</b> = 0°C to 250°C
	<b>HT</b> = 0°C to 500°C
	<b>XT</b> = 0°C to 1000°C
	<b>ST</b> = Special temperature range
	Temperature range may be re-scaled between limits -20°C and 1000°C via optional USB adapter and software
	<b>Field of View</b>
	<b>21</b> = 2:1 divergent optics
	<b>151</b> = 15:1 divergent optics
	<b>301</b> = 30:1 divergent optics
	<b>CF</b> = Close focus optics (Spot Ø 5 mm at distance 100 mm)

## DIAMETER OF TARGET SPOT MEASURED VERSUS DISTANCE FROM SENSING HEAD



## CONNECTIONS

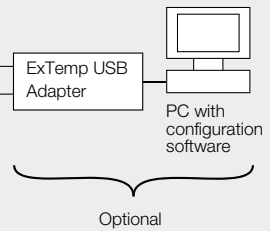
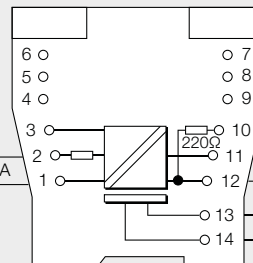
**Hazardous Area**  
(All Zones IIC and IIIC)

**Safe Area**  
(Non-Hazardous)

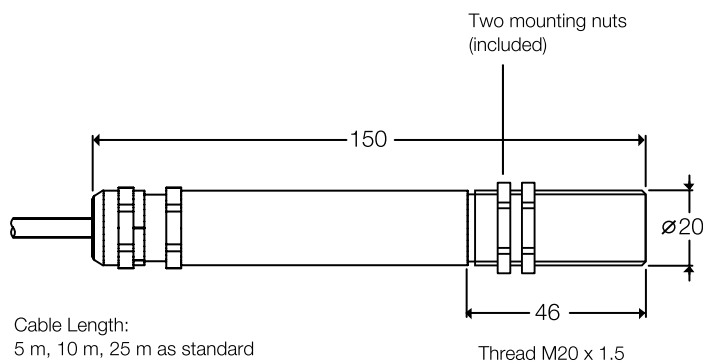
ExTemp sensor

Sensor should be grounded at one point only

Certified Intrinsically Safe Isolator  
(For example: connections shown are for MTL model 5541)



## 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

**OneTemp** pty ltd  
MEASURE | CONTROL | RECORD  
[www.onetemp.com.au](http://www.onetemp.com.au)  
1300 768 887

## Calex Electronics Limited

PO Box 2, Leighton Buzzard, Bedfordshire, England LU7 4AZ  
Tel: +44 (0)1525 373178/853800 Fax: +44 (0)1525 851319 Lo-call Tel: 0845 3108053  
E-mail: [mail@calex.co.uk](mailto:mail@calex.co.uk) Online: <http://www.calex.co.uk>

Issue D - Oct 14  
Specifications subject to change without notice