

# Convir MLE Series Two-Piece Non-Contact Temperature Sensor

The new MLE Series is a range of miniature infrared temperature sensors with separate electronics.

MLE sensors are capable of measuring temperatures in the range -20°C to 500°C and are available with either a current, voltage or thermocouple output.

Output	Model-X
4-20 mA	-0
0-50 mV	-1
0-100 mV	-2
J thermocouple	-3
K thermocouple	-4
1 mV/°C	-5
10 mV/°C	-6
0-5 V	-7

The miniature sensing head measures just 18 mm diameter x 45 mm. It is made of stainless steel, sealed to IP65, and will operate in ambient temperatures up to +70°C without additional cooling. This makes the MLE Series ideal for applications where there is only a small amount of room available to mount the sensor or the ambient temperature around the sensing head is higher than normal.

The electronics module measures 98 mm x 64 mm x 34 mm. It is made of die-cast aluminium, sealed to IP65, and will operate in ambient temperatures up to +50°C. It is powered from a 24 VDC (28 VDC max) power source.

The emissivity setting is fixed at 0.95, making the MLE Series suitable for the majority of applications where the target is made of a non-reflective material such as paper, plastic, rubber, cloth, food etc. or it can be used to measure metals that are painted, anodised or oxidised.

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## GENERAL SPECIFICATIONS

		Temperature Range (other ranges to order)		
		-20°C to 100°C	0°C to 250°C	0°C to 500°C
Field-of-View	30:1	MLE21LT-X	MLE21MT-X	-
	10:1	MLE101LT-X	MLE101MT-X	MLE101HT-X
	2:1	MLE301LT-X	MLE301MT-X	MLE301HT-X

<b>Output</b>	See table
<b>Accuracy</b>	±1% of reading or ±1°C whichever is greater
<b>Repeatability</b>	±0.5% of reading or ±0.5°C whichever is greater
<b>Emissivity</b>	Fixed at 0.95
<b>Response Time, t<sub>90</sub></b>	200 ms (90% response)
<b>Spectral Range</b>	8 to 14 μm
<b>Power</b>	24 V DC (28 V DC max)
<b>Min. Sensor Voltage</b>	9 V DC
<b>Max. Loop Impedance</b>	750 Ω (4-20 mA output)
<b>Output Impedance</b>	50 Ω (voltage/thermocouple output)

## MECHANICAL

<b>Construction</b>	Stainless Steel
<b>Dimensions</b>	18 mm diameter x 45 mm long
<b>Thread Mounting</b>	16 mm diameter x 1 mm pitch

## SENSING HEAD

<b>Construction</b>	Stainless Steel
<b>Dimensions</b>	18 mm diameter x 45 mm long
<b>Thread Mounting</b>	16 mm diameter x 1 mm pitch

## ELECTRONICS MODULE

<b>Construction</b>	Die-cast Aluminium
<b>Dimensions</b>	98 mm x 64 mm x 34 mm

<b>Cable Length</b>	1 m
<b>Weight with Cable</b>	294 g

## ENVIRONMENTAL

<b>Environmental Rating</b>	IP65
<b>Ambient Temperature Range</b>	0°C to 70°C (sensing head), 0°C to 50°C (electronics module)
<b>Relative Humidity</b>	95% max. non-condensing

## ACCESSORIES

- ◆ Fixed mounting bracket
- ◆ Adjustable mounting bracket
- ◆ Air purge collar
- ◆ Laser sighting tool
- ◆ Portable calibration checker

## OPTIONS

- ◆ Longer sensor cable (5 m max.)
- ◆ Certificate of calibration
- ◆ Combined thermocouple extension/power cable

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

