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.

Elektro-Trading sp. z o.o.

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	2:1	MLE21LT-X	MLE21MT-X	–
	10:1	MLE101LT-X	MLE101MT-X	MLE101HT-X
	30:1	MLE301LT-X	MLE301MT-X	MLE301HT-X

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

MECHANICAL

	SENSING HEAD	ELECTRONICS MODULE
Construction	Stainless Steel	Die-cast Aluminium
Dimensions	18 mm diameter x 45 mm long	98 mm x 64 mm x 34 mm
Thread Mounting	16 mm diameter x 1 mm pitch	

Cable Length	1 m
Weight with Cable	294 g

ENVIRONMENTAL

Environmental Rating	IP65
Ambient Temperature Range	0°C to 70°C (sensing head), 0°C to 50°C (electronics module)
Relative Humidity	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

MLE21

MLE101

MLE301

Specifications subject to change without notice