

Convir EL Series Low Cost Non-Contact Temperature Sensor with 4 to 20mA Output

The EL Series is a range of high quality, low cost, miniature sensors which measure the temperature of inaccessible or moving objects and materials.

They measure temperatures from 0°C to 250°C accurately and consistently, with an outstanding response time of 250 ms. The 4 to 20 mA output is compatible with almost any indicator, controller, recorder, data logger etc. without the need for special interfacing or signal conditioning.

The EL21A has 2:1 optics making it suitable for most applications where the sensor can be mounted close to the target. The EL101A is designed for small or distant targets and has an optical resolution of 10:1. The EL301A is designed for very small or distant targets and has an optical resolution of 30:1.

These compact 2 wire sensors are small enough to fit almost anywhere and their rugged stainless steel housings make them ideal for applications where cleanliness and hygiene are paramount.

The EL Series Sensors are easy to install and will operate in ambient temperatures up to 50°C. For more hostile environments or difficult mounting conditions a wide range of accessories is available.

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GENERAL SPECIFICATIONS

Temperature Range	0°C to 250°C (Other ranges to order)
Output	4 to 20 mA (linear with temp)
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)
Field-of-View	2:1 nominal (Convir EL21A), 10:1 nominal (Convir EL101A) 30:1 nominal (Convir EL301A)
Spectral Range	8 to 14 μ m
Power	24 V DC (28 V DC max)
Min. Sensor Voltage	9 V DC
Max. Loop Impedance	750 Ω

MECHANICAL

Construction	Stainless Steel
Dimensions	18 mm diameter x 85 mm long
Thread Mounting	M16 x 1 mm pitch
Cable Length	1 m
Weight with Cable	95 g

ENVIRONMENTAL

Environmental Rating	IP65
Ambient Temperature Range	0°C to 50°C
Relative Humidity	95% max. non-condensing

ACCESSORIES

- ◆ Fixed mounting bracket
- ◆ Adjustable mounting bracket
- ◆ Air purge collar
- ◆ Air/water cooled housing
- ◆ Laser sighting tool
- ◆ Portable calibration checker

OPTIONS

- ◆ Longer cable (5 m max.)
- ◆ Certificate of calibration

DIAMETER OF TARGET SPOT MEASURED VERSUS DISTANCE FROM SENSING HEAD

