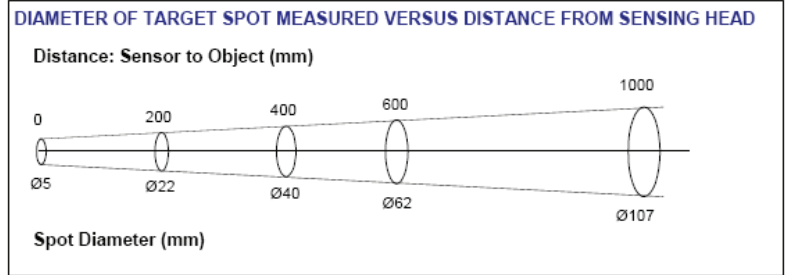


# Convir VL Configurable Two-Piece Non-Contact Temperature Sensor

- **-40°C to 700°C Measurement Range**
- **Adjustable Emissivity From 0.1 to 1.00**
- **Choice of 0/4 to 20 mA, 0 to 5 V and Type J or K Thermocouple Outputs**
- **Backlit LCD Display**
- **Miniature Sensing Head**
- **RS-485 Interface**
- **Configurable Relay Output**



The new VL miniature infrared temperature sensor is designed to offer maximum flexibility in the smallest possible package. The VL can measure temperatures from - 40°C to 700°C with a response time of just 180ms. It has a narrow 10:1 field of view, and adjustable emissivity so can be configured to measure most materials. Each unit offers a choice of either 0/4 to 20mA, 0 to 5V or type J or K thermocouple outputs so can be used with virtually all process control instrumentation. Under the lid of the electronics enclosure are buttons which are used to adjust the configuration parameters of the sensor and set the temperature range, response time and output. From here the analogue outputs can also be configured and maximum/minimum readings switched on or off. To compliment the analogue outputs the VL also provides a digital relay output, the alarm level and hysteresis of which can be adjusted with the electronics module. The VL also has an RS-485 interface for connection to a PC, and can be interrogated using the UPP® (Universal Pyrometer Protocol). The compact sensing head of the VL is made of stainless steel and is sealed to IP65. It can operate in ambient temperatures up to 85°C without cooling, or 200°C with air-cooling and purging accessories.

## GENERAL SPECIFICATIONS

Temperature Range	-40°C to 700°C
Spectral Range	8 to 14 µm
Accuracy	±1°C or ±1%, whichever is the greater
Repeatability	±0.5°C or ±0.5%, whichever is the greater
Response Time t90	180 ms, switchable to 0.5 s, 1 s, 2 s, 5 s, 10 s or 30 s
Emissivity Adjustable	0.10 to 1.0
Field Of View	10:1
Output	0/4 to 20 mA, 0 to 5 V or thermocouple type J or K
Additional Output	10 mV/°C for sensing head temperature
Relay Contact	Isolated relay contact, 50 V DC, 0.2 A, temperature and hysteresis adjustable
Digital Interface	RS-485 using UPP® (Universal Pyrometer Protocol)
MAX/MIN Value Hold	Maximum/minimum value hold, set to either OFF, every 0.1 s, 0.25 s, 0.5 s, 1 s, 5 s, or 25 s
Temperature Display	Backlit LCD, 4-digit, 3 values per second
Resolution	0.1°C 0.1°F from -40 to 999.9°F, 1°F above 1000°F
Power Supply	10 to 30 V DC, maximum ripple 500 mV, power consumption 60 mA maximum
Load Maximum	700 Ohm at 24 V with current output
Output Impedance	100 Ohm for thermocouple and voltage outputs

## MECHANICAL

Construction  
Dimensions  
Mounting Thread  
Cable Length  
Weight

## SENSING HEAD

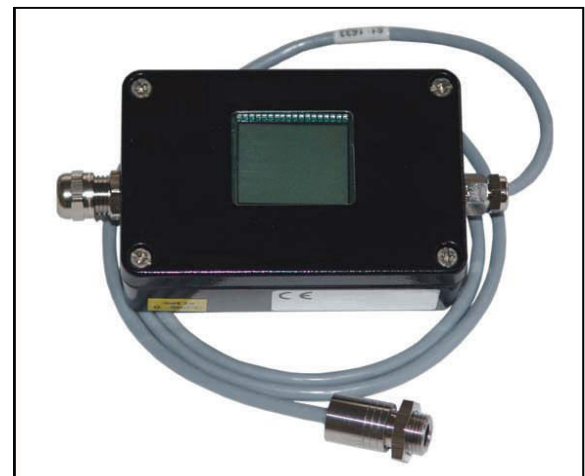
Stainless Steel  
14 mm Ø x 28 mm  
M12 x 1 mm pitch  
3 metres  
320 g

## ELECTRONICS MODULE

Aluminium  
98 mm x 64 mm x 34 mm

## ENVIRONMENTAL

Environmental Rating IP65  
Ambient Temperature Sensing head 0 to 85°C (200°C with air-cooling and purging accessories), Electronics Module 0 to 65°C  
Relative Humidity 10 to 95%



## SOUTHERN TEMPERATURE SENSORS LTD.

Temperature Sensors, Accessories and Components

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