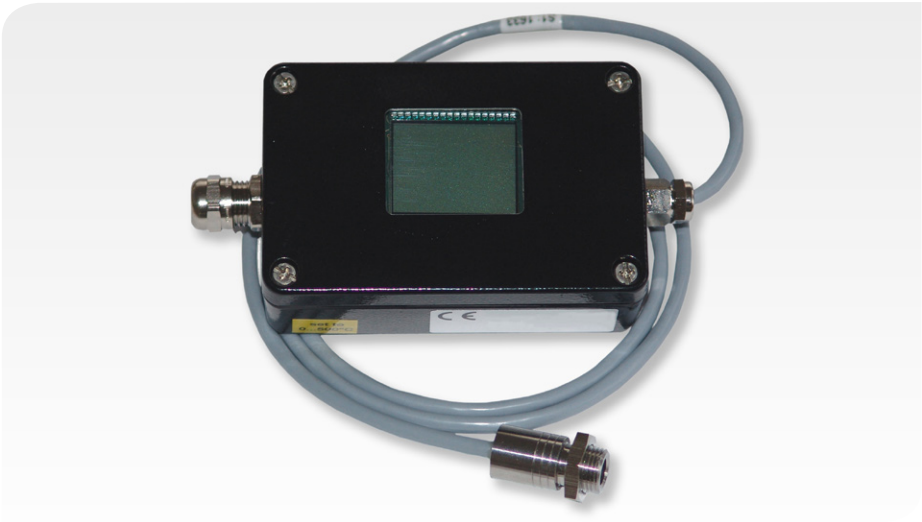
VLSeries

Configurable Two-Piece Non-Contact Temperature Sensor



- -40ºC to 700ºC 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

GENERAL SPECIFICATIONS

Temperature Range	-40ºC to 700ºC
Spectral Range	8 to 14 µm
Accuracy	±1ºC or ±1%, whichever is the greater
Repeatability	±0.5ºC 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/ºC 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 Resolution	Backlit LCD, 4-digit, 3 values per second 0.1ºC, 0.1ºF from -40 to 999.9ºF, 1ºF above 1000ºF
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

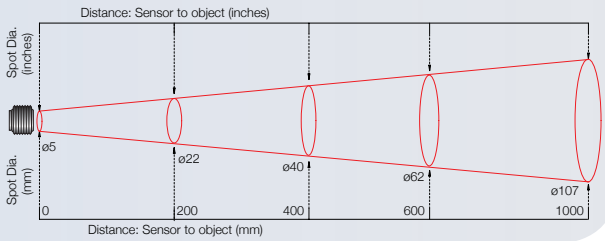
	Sensing head	**Electronics Module**
Construction	Stainless Steel	Aluminium
Dimensions	14 mm diameter x 28 mm	98 mm x 64 mm x 34 mm
Mounting Thread	M12 x 1 mm pitch	
Cable Length	3 m	
Weight	320 g	

ENVIRONMENTAL

Environmental Rating	IP65
Ambient Temperature Range	VL700 Sensing head 0 to 85ºC (200ºC with air-cooling and purging accessories), VL700-HA Sensing head 0 to 180°C without cooling. Electronics Module 0 to 65ºC
Relative Humidity	10 to 95%

DIAMETER OF TARGET SPOT MEASURED VERSUS DISTANCE FROM SENSING HEAD

NB: With a close-focus lens fitted the sensor will measure a ø2mm spot at 17mm distance



The VL miniature infrared temperature sensor from Calex Electronics is designed to offer maximum flexibility in the smallest possible package.

The VL can measure temperatures from -40ºC to 700ºC with a response time of just 180ms. It has a narrow 10:1 field of view, and adjustable emissivity, so it 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 and can therfore 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 85ºC without cooling, or 200ºC with air-cooling and purging accessories. If cooling is impractical, a special model designated VL700-HA can withstand ambient temperatures up to 180°C without cooling.

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: info@calex.co.uk Online: http://www.calex.co.uk

CALEX ELECTRONICS LIMITED

Issue B - Dec 09
Specifications subject to change without notice