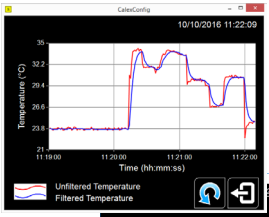
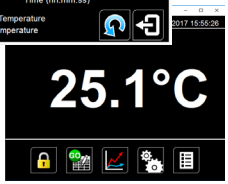
HLUA PyroUSB Infrared Temperature Sensor with 4~20mA Output

The PyroUSB Series measures temperatures from -40°C to 2000°C accurately and consistently, with an outstanding response time of 200 ms.

The 4 to 20 mA output is compatible with almost any indicator, controller, recorder or data logger, without the need for special interfacing or signal conditioning. A choice of measurement wavelengths is available to suit a range of applications.

All models have USB communications. A USB cable and Windows software is included. All data is transmitted via Modbus, so it is easy to configure and read temperatures from the sensor using third-party software. The USB cable has an IP65 connector at the sensor end. An IP65 cap protects the sensor when the USB cable is not connected.





- Temperature ranges from -40°C to 2000°C
- 2-wire 4-20 mA output
- Fully configurable via USB using Modbus protocol. Cable/software included
- Specialised models for measuring metals, high-temperature objects or glass surfaces
- General-purpose models for most other applications
- Peak and valley hold mode allows easy measurement of objects on conveyors
- Stainless steel housing, sealed to IP65
- Quick and easy installation

Software

The sensor is supplied with configuration software which is Windows® compatible (Vista onwards). The software will configure emissivity, Peak/Valley hold processing, Reflected Energy Compensation, 4~20mA output temperature scale, and show averages. It displays temperature readings, temperature charts and logs data from the USB connection in real time. Multi-channel software for sensors with digital communications is available for free download. The sensor's Modbus protocol allows it to be used with other 3rd-party Modbus software.

HLUA8 General-purpose

HLUA8-301 (8-14 µm) models can measure from -40°C to 1000°C. They are suitable for measuring high-emissivity materials such as paper, thick plastics, food, pharmaceuticals, rubber, asphalt and painted surfaces. These models are capable of measuring very low temperatures, so they are ideal for sub-zero measurements in the food, logistics and storage industries. 30:1 optics supplied as standard.

HLUA2 Short-wavelength

HLUA2 (2.2 µm) models have a choice of temperature ranges from 45°C to 2000°C. They provide a more accurate reading when measuring low-emissivity materials such as many reflective metals. They are also capable of measuring through glass viewports.
15:1 and 25:1 optics options available.

HLUA5 Glass

HLUA5 (5 µm) models have a choice of temperature ranges from 50°C to 1650°C. They are filtered at a wavelength where glass is least reflective, making them an ideal pyrometer for glass surface temperature measurement. 25:1 optics supplied as standard.

HLUA8 general-purpose		code
Optics	30:1	301
Range	-40°C to 1000°C	ST

HLUA2 short-wavelength		code
Optics	15:1	151
	25:1	251
Range	45°C to 300°C*	LT
	100°C to 400°C*	PT
	250°C to 1000°C	MT
	450°C to 2000°C	HT

* 15:1 optics models only

HLUA5 glass		code
Optics	25:1	251
Range	50°C to 1000°C	GLT
	200°C to 1650°C	GHT

General Specification			
Model	**HLUA8**	**HLUA2**	**HLUA5**
Spectral Response	8 to 14 µm	2.2 µm	5 µm
Application	General purpose	Ferrous metals and high-temperature targets	Glass
Temperature Range	-40°C to +1000°C	+45°C to +2000°C	+50°C to +1650°C
Response Time	200 ms	200 ms	200 ms
Accuracy	±1°C or 1% of reading	±2°C or 1% of reading	±1°C or 1% of reading
Output	2-wire, 4~20mA, linear with measured temperature		
Communications	USB 2.0 (removable USB cable and software included) using the Modbus protocol		
Optics	Choice of divergent or focused optics for small or large targets at short or long distances		
Repeatability	±0.5°C or ±0.5% of reading, whichever greater		
Emissivity Setting	0.1 to 1.0		
Minimum Span (4~20mA output)	100°C		
Maximum Span (4~20mA output)	Full temperature range		

Mechanical Specification	
Construction	Stainless Steel
Dimensions	Ø 27.6 x length 61 mm incl. cable glands
Thread mounting	M20 x 1 mm pitch, length 15 mm
4-20 mA Output Cable Length	1m (standard), up to 30m (optional)
Weight with 1m Output Cable	155 g
USB Cable Length	1.8 metre

Electrical Specification	
Supply Voltage	24 V DC (28 V DC max)
Sensor Voltage (minimum)	6 V DC
Maximum Loop Impedance	900 Ω @ 24 V DC

Environmental Specification	
Environmental Rating	IP65
Ambient (Operating) Temperature	0°C to 70°C (cooled models are available for higher temperatures)
Relative Humidity	95% max. non-condensing

Please visit our website for latest software compatibility information

order code (example)	Glass, 25:1, 200°C to 1650°C
	HLUA5-251-GHT