

HLU Compact, Non-Contact PyroUSB Fixed Position Infrared Thermometer 4~20mA Output

The PyroUSB is a high performance, compact sensor which can measure the temperature of inaccessible or moving objects and materials. Temperatures of -40°C to +1000°C can be measured accurately and consistently, with an outstanding response time of 240ms. The 4~20mA output is compatible with almost any indicator, controller, recorder, data logger etc. without the need for special interfacing or signal conditioning.

The PyroUSB is available with either a 15:1 (suitable for most applications) or 30:1 (specially designed for distant targets) field of view.

The sensors are fully configurable from a PC using the supplied software and USB cable. The software enables the user to set the range and emissivity, compensate for reflected energy; apply filtering; select max, min, average or instantaneous readings; and peak or valley hold processing. These features can also be monitored and adjusted by an OPC client. Other features include Data Acquisition, Alarms and a scrolling Graphical Display.

The sensor will operate with either the 4~20mA cable connected, the USB cable connected, or both. The USB cable has an IP65 connector at the sensor end. An IP65 cap protects the sensor when the USB cable isn't connected.

The PyroUSB sensor is supplied with a stainless steel mounting nut which makes it easy to install. Standard sensors will operate in ambient temperatures up to +70°C. For more hostile environments or difficult mounting conditions a wide range of accessories are available.



4~20mA output
15:1 or 30:1 Field of View



Technical Details		
Temperature Range	-40°C to +1000°C	
Field of View	15:1 (HLU-151)	30:1 (HLU-301)
Output	4~20mA (linear with temperature)	
Configuration	Via PC port conforming to USB 2.0	
Accuracy	±1.0% of reading or ±1.0°C whichever greater	
Repeatability	±0.5% of reading or ±0.5°C whichever greater	
Emissivity	0.1 to 1.0	
Response Time	240 ms (90% response)	
Spectral Range	8 to 14 µm	
Supply Voltage	24 V DC (28 V DC max.)	
Sensor Voltage	6 V DC min.	
Max. Loop Impedance	900 Ω	
Minimum / Maximum Span	+100°C / +1000°C	
Construction	Stainless steel	
Dimensions	25mm Ø x 106.5mm long	
Thread Mounting	M20 x 1mm pitch	
Weight with Output Cable	175g	
Output Cable Length	1m (longer lengths available)	
USB Cable Length	1m	
Environmental Rating	IP65	
Ambient Temperature Range	0°C to +70°C	
Relative Humidity	95% max. non-condensing	

Order Code (examples)	15:1 Field of View HLU-151	30:1 Field of View HLU-301
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HLU PyroUSB 2.2 for Demanding Applications (Suitable for Reflective Surfaces) Selectable 4~20mA or 0~20mA Output

The PyroUSB 2.2 series of infrared pyrometers measure temperatures from +45°C to +2000°C accurately and consistently with an outstanding response time. The specification is as per the HLU PyroUSB above, but the PyroUSB 2.2 series are suitable for short wavelength measurement of low emissivity targets such as steel rollers and other metal surfaces, even at low temperature.

Additional features (compared to PyroUSB) include:

Output	Selectable 4~20mA or 0~20mA (linear with temperature)
Accuracy	±1.0% of reading or ±2.0°C whichever greater
Response Time	≥ 240 ms (90% response)
Spectral Range	2.0 to 2.4 µm
Sensor Voltage	11 V DC min.
Max. Loop Impedance	900 Ω @ 24 V DC
Maximum Span	Full temperature range (up to +1550°C)

Models Available:

15:1 Field of View

HLU-151-LT-22 (+45°C to +300°C)
HLU-151-PT-22 (+100°C to +400°C)

25:1 Field of View

HLU-251-MT-22 (+250°C to +1000°C)
HLU-251-HT-22 (+450°C to +2000°C)

75:1 Field of View

HLU-751-MT-22 (+250°C to +1000°C)
HLU-751-HT-22 (+450°C to +2000°C)

Note: add 'WJ' to end of order code if an air/water cooled housing with air purge collar is required.

Example: HLU-251-MT-22-WJ



Order Code (example)	25:1 Field of View (250°C ~ 1000°C) HLU-251-MT-22
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HLM PyroMini Miniature Infrared Temperature Sensor With Optional High-Ambient Sensing Head and Touch Screen

- Temperature ranges from -20°C to 1000°C
- 4-20 mA or RS485 Modbus outputs
- Miniature sensing head and configurable electronics module
- High ambient temperature sensing head option for use at up to 180°C ambient temperature without cooling
- Touch screen interface (optional)
- Data logging to MicroSD Card (optional)

Contact sales for further information



Model shown includes optional touch screen

