HLP Compact, Non-Contact PyroCouple Fixed Position Infrared Thermometer
Thermocouple or 4~20mA Output

The HLP PyroCouple sensors are high quality, low cost, compact sensors which measure the temperature of inaccessible or moving objects and materials. They can measure temperatures from -20°C to +500°C accurately and consistently, with an outstanding response time of 240ms. PyroCouple sensors are available as either two-wire or four-wire units:
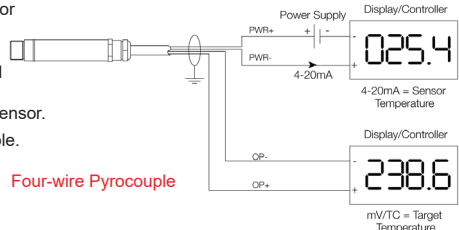
Two-wire PyroCouple sensors transmit the target temperature as a 4~20mA output and offer a simple solution for most non-contact temperature measurement applications.

Four-wire PyroCouple sensors transmit the target temperature as a thermocouple output (type K, J or T) plus the internal sensor temperature as a 4~20mA output. This second output can be used to ensure that the sensor is being operated within the correct ambient temperature limits and prevent damage caused by overheating or overcooling. It can also be used to give an approximate indication of the air temperature surrounding the sensor.
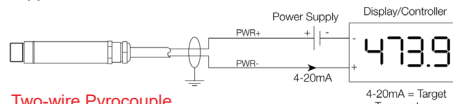
Supplied as standard with a 15:1 field of view. 30:1 also available.

Thermocouple Type K, J, T or 4~20mA output
15:1 Field of View (Standard)

Four-wire Pyrocouple

Two-wire Pyrocouple

General Specification

Model	HLP-100	HLP-250	HLP-500
Temperature Ranges	-20 to +100°C	0 to +250°C	0 to +500°C
Target Temperature Output	(2 wire) 4~20mA (4 wire) Thermocouple Types K, J, T		
Sensor Temperature Output	4~20mA		
Accuracy	±1.0% of reading or ±1.0°C whichever greater		
Repeatability	±0.5% of reading or ±0.5°C whichever greater		
Emissivity	Fixed at 0.95		
Response Time	240 ms (90% response)		
Spectral Range	8 to 14µm		

Temperature Range	code
-20°C to +100°C	HLP-100-x
0°C to +250°C	HLP-250-x
0°C to +500°C	HLP-500-x

Substitute x with K, J, T for thermocouple or M for 4~20mA output

Mechanical Specification

Construction	Stainless steel
Dimensions	18mm diameter x 103mm long
Thread Mounting	M16 x 1mm pitch
Cable Length	1m (longer lengths available)
Weight with Cable	95g

Environmental Specification

Environmental Rating	IP65
Ambient Temp. Range	0°C to +70°C
Relative Humidity	95% max. non-condensing

Electrical Specification

Supply Voltage	24 V DC (28 V DC max.)
Min. Sensor Voltage	6 V DC
Max. Loop Impedance	900 Ω (4~20mA output)
Output Impedance	56 Ω (voltage/thermocouple output)

order code (examples)	Thermocouple Type K, 0-250°C	4~20mA, 0-500°C
	HLP-250-K	HLP-500-M

PyroCouple/PyroUSB Accessories

Fixed Mounting Bracket
The L-shaped fixed mounting bracket offers a rigid support for the sensor and allows fine adjustment in a single plane.

order code	PyroCouple	PyroUSB
	HLP-BF	HLU-BF

Adjustable Mounting Bracket
The adjustable mounting bracket consists of a fixed mounting bracket plus another L-shaped bracket. When assembled, the bracket offers a rigid support for the sensor and allows fine adjustment in two planes.

order code	PyroCouple	PyroUSB
	HLP-BA	HLU-BA

Laser Sighting Tool
The laser sighting tool screws onto the front of the sensor during installation and indicates precisely where the sensor is aiming. Once the sensor has been aimed at the centre of the target and locked in position the laser sighting tool can be removed. The unit is battery powered and the laser is activated by a latching push button on the front of the tool.

order code	PyroCouple	PyroUSB
	HLP-LST	HLU-LST

Air Purge Collar
The air purge collar is used to keep dust, fumes, moisture and other contaminants away from the lens. Air flows into the fitting on the side of the collar and out of the aperture at the front.

Contact sales for further information

order code	PyroCouple	PyroUSB
	HLP-AP	HLU-AP

Air/Water Cooled Housing
The air/water cooled housing allows the sensor to withstand ambient temperatures which exceed the normal 70°C limit. Air or water, depending on the level of cooling required, flows into one of the fittings on the side and out of the other. To prevent condensation forming on the lens, the housing is also supplied with an air purge collar.
Note: the air/water cooled housing must be ordered with the sensor as it cannot be retro-fitted.

order code	PyroCouple	PyroUSB
	Add 'WJ' to order code (e.g. HLP-250-K-WJ)	Add 'WJ' to order code (e.g. HLUA2-151-LT-WJ)