

Pyrowell



TEMPSENS

Pyro-Well is a pressure tight receptacle IR Sensor which is used in mechanically or chemically compatible with process environment.

Pyro-well is a combination of IR non-contact sensor & one end closed sighting tube like Thermowell. In Optical head on top of the ceramic well is connected to a signal cable and the other end of signal cable is connected to electronics. Electronics part of the sensor is separated from the process atmosphere through a well-insulated signal cable.

IR sensor target the tip of the closed sighting tube through the laser light exposed in the process and accurately measure the temperature. The one end closed sighting tube works as a perfect black body hence like other Infrared sensors no need of setting of emissivity.

Why Pyrowell is highly recommended over thermocouple ?

Pyrowell is highly recommended for high temperature Applications because of its construction, sighting tube is made up of Ceramic which protects IR sensor from Excessive pressure, Material Velocity & Corrosion. Ceramic can bare the temperature till 1800°C

Pyrowell easily replace expensive thermocouples thus Cost effective. Precious metal thermocouple like type R, S & B, Since the elements are made up of Platinum & Rhodium. This makes Thermocouple very expensive.

Pyrowell Facilitate Sensor replacement in high pressure & harsh environment due to flange connection. Unfortunately, resultant Drift cannot predicted & rectified contact sensors need to replace in particular interval of time.

Pyrowell ensure In-interrupt operation in the process due to flange connection for sensor replacement.

System can be field calibrated and any drift after years of operation can be re-calibrated and can be fixed to the claimed accuracy without removal of the system from the process. It gives analogue output in the range 4-20 mA which can be coupled to the PLC or any existing system.



Specifications

Temperature Range	:	350°C to 1800°C
Spectral Range	:	1.6 µm
Photodetector Type	:	InGaAs
Response Time	:	<2 sec
Accuracy & Repeatability	:	± 0.3% of measured value or ± 2°C whichever is greater
Analog Output	:	4 - 20mA/ Thermocouple O/P (R, S, B)
Digital Output	:	RS 232/ 485, USB 2.0
Operating Temperature Range	:	Electronic Box and Sensor head upto 70°C (158°F)
Power Supply	:	24 V DC
Display	:	Temperature output
Protection Class	:	P65
Housing	:	Optical head-Stainless Steel, Electronic Unit: Zinc
Operating Humidity	:	10-95%, non condensing conditions
Length Below Flange	:	600, 750, 900, 1000 mm
Adjustable Parameters and Features via Software	:	Response Time, Analog Scale (Sub Range), Unit Of Temperature (°C/°F) etc.

Advantage

- Increase longevity of the IR sensor
- Protective barrier to IR sensor from Corrosion, liquids or intense temperature
- High Stability and reliability for a longer time in abrasion Environment
- Reduced Operational cost
- Pyrowell are very durable
- High speed response

Application

- Coke Oven
- Reheating Furnace Application
- Large Ovens & Boilers
- Flue Gases & Air temp Measurement.

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