

Non-contact Temperature Monitoring in the Steel Industry

Infrared Temperature Measurements in Harsh Environments



Pyrometers for Casting, Rolling and Steel Mill Applications

- Metis 1 or 2-color Heavy Duty, Fiber Optic System
- 2-color Sensor with Video Output
- Line Scanning Systems
- Rugged Portable IR Thermometers (2-color / 1-color versions)
- Protective Cooling, Purging and Mounting Accessories









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Flexible Pyrometer Measuring Systems

Process Sensors pyrometers are modern infrared measuring devices for industrial applications that use state-of-the-art processor technology and fully digital signal processing to measure with the highest accuracy, even measuring objects with low emissivities. They are used for temperature monitoring or control of heating or cooling.

Many model variants with useful equipment are used:

Advantages

- 2-color or standard radiation pyrometer models adaptable for all application conditions
- Minimum and average storage, peak picker for highest temperature of scale-free points on metal surfaces
- 2 high resolution 16 bit analog outputs (0/4 to 20 mA) for high accuracy temperature measurement
- High-speed digital serial interface (up to 921 kBaud) for communication to a PC or PLC
- 3 configurable inputs / outputs for remote control or alarm output functions
- Bright red LED temperature display / menu

For use in harsh conditions, the pyrometers are integrated into heavy-duty housings, allowing them to perform difficult measurements in the steel industry.

Heavy-Duty Stainless Steel Measuring System



Typical Examples in Hot Metal Rolling Applications

METIS M3

Pyrometers can be used in a variety of locations where monitoring and control should occur or where an associated control is required. Typical measuring points for the HD system are on the roll support system or behind the scale breaker.

Casting Section: Measurements in the secondary cooling section to control the cooling or casting speed.

Hot Rolling Mill Section:

Bottom side strip measurement through the roller table on slabs, strips and billets.

Measurement result is not affected by scale or water accumulation after blasting by the descaling unit.

Line Scanner

Suitable for many industrial applications, line scanners with laser sighting feature measure and detect product surface profiles. Line



Heavy Duty Protection

Depending on the ambient conditions, a protective cooling housing can be cooled with air or water, thus enabling the use of the pyrometer in much higher ambient temperatures. It can be mounted directly via a mounting flange, pipe adaptor or heavy-duty swivel base mount.

- Pyrometers can be used in ambient temperatures up to 250°C
- Air purging systems keep the optics clean and the pyrometers' fields of vision free from contamination

Handheld, Battery Operated Infrared Portables

Process Sensors' new Capella 1-color/2-color handheld thermometer is ideal for accuracy verification of stationary production line pyrometers and for fast measurements on moving targets. The integrated measurement value memory allows the retention and evaluation of the temperature data.

Advantages

- Adjustable focus from 380 mm (1.25 ft) to 10 m (33 ft).
- Target under measurement can be at a greater distance than the focus range
- 2-color or 1-color radiation pyrometer models adaptable for all application conditions
- Switchable laser to thru-lens view finder sighting
- Bright green laser targeting light highly visible on hot glowing targets
- Robust aluminum housing with rubber bumpers designed for long term durability
- Huge data storage capacity for up to 32000 points of measurement
- Minimum and average storage, peak picker for highest temperature of scale-free points on metal surfaces
- Bluetooth and USB connectivity for battery charging and easy data transmission to a PC
- Modern Lithium-Ion technology for long duration operation
- Fast response speed of 1 ms
- Ultra-small spot size



Process Sensors reserves the right to make changes in scope of technical progress or further developments.

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PROCESS SENSORS CORPORATION

IR Temperature Sales: 787 Susquehanna Avenue, Franklin Lakes, NJ USA • Tel: 201-485-8773 • Fax: 201-485-8770 Corporate Headquarters: 113 Cedar Street, Milford, MA USA • Tel: 508-473-9901 • Fax: 508-473-0715 www.ProcessSensors.com • irtemp@processsensors.com

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Flange mounting

CAPELLAC

Air purging

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Protective

housing