

Two Color Pyrometer



PM two-color (ratio) infrared pyrometer is primarily used in Iron & Steel industry to measure temperature of steel or molten iron, wire rod, hot rolled steel, as well as cement kilns. The pyrometer can “look” into a process and measure the target temperature from a distance, providing an accurate reading while eliminating problems associated with contact measuring devices. Dual infrared wavelengths input signals overcome application challenges such as variable emissivity, dust, water vapor or other interfering media between the target and the pyrometer. Accurate temperatures are obtained even when the target is 95% obstructed.

PM	XXX	XXX	XXX
Base Model	Temperature range 616=600° to 1600 °C 3514=350° to 1400°C	Fiber optic option FOC=Fiber Optic Blank=Standard	Power Input 024 = 24 VDC 110 = 110 VAC 220 = 220 VAC

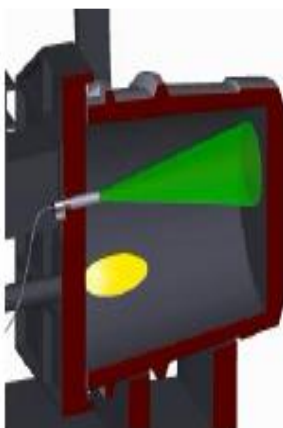
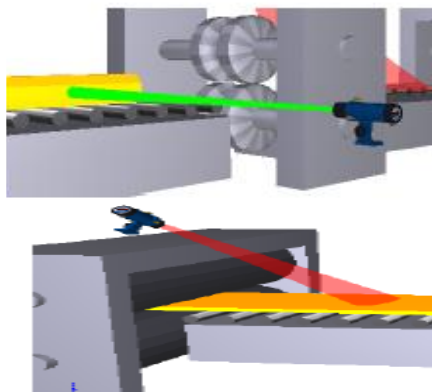
Operating Temp	-20°C to +55°C (-4°F to +130°F). With cooling water: +120°C (250°F)
Accuracy	0.5%
Repeatability	0.1% (±2°C, ±3.6°F)
Response Time	Adjustable – the fastest response time is 20 ms
Display Mode	4 digit LEDs. Display peak, valley, average or real time options
Analog Output	Linear 4-20 mA proportional to temperature Linear 0-10 VDC proportional to temperature
Alarm Output	High or low process temperature alarm, rated 0.2 A at 220 VAC, 0.5 A at 30 VDC, MOS relay output. Ambient temperature high or low alarm
Housing	Sealed stainless-steel enclosure rated IP66, includes purge air and cooling water connections Optional fiber optic lens assembly includes air purge fitting
Size	370 mm L x 100 mm W x 190 mm H, (14.5” L x 4” W x 7.5” H), 4 kg (8.8 lbs)
Laser Aiming	Visible aiming laser, wavelength 630 nm ±10%, Power≤3 mW. Class 2 laser
Self-testing	Self-test activates when test pin connected to 0VDC OR test button is press at the back

Key Features

- Designed for harsh environment with IP66 enclosure
- Integrated air purging and cooling water connection
- Back panel adjustment
- Laser pointer for alignment
- Easy to install
- Fast Response time

Typical Applications

- Wire Rod Mill / TMT / Plate Mill
- Measure temperature of slabs, billets, blooms, bars and wire rod, liquid steel

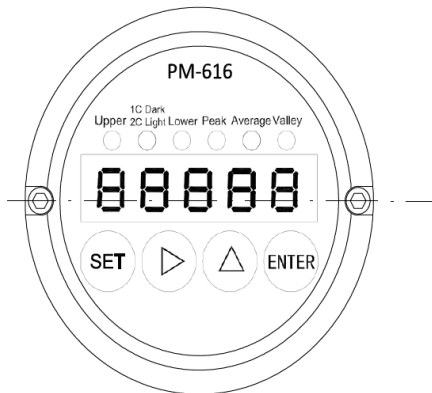


Additional Options

- Junction Box – Includes AC/DC converter and terminal connections.
- Shroud - Sheet metal protective cover.
- Support Stand - Steel Construction - adjustable for mounting sensors.
- Remote Temperature Display Unit (UTD-1).

Cable Terminal Wiring Description.

Cable No.	Color	Function	Junction Box Number	Junction Box Name
1	Brown	+24VDC	1	+24V
2	Red	0V	2	0V
3	Orange	Analog 0-10V Output	3	0-10V
4	Yellow	Analog 4-20mA Output	4	mA
5	Green	Analog Output Ground	5	AGND
6	Blue	PNP output (Upper limit alarm)	6	PNP
7	Purple	Upper limit alarm closed=Alarm	7	UPPER1
8	Grey	Upper limit alarm Common	8	UPPER2
9	White	Lower limit alarm closed=Alarm	9	LOWER1
10	Black	Lower limit alarm Common	10	LOWER2
11	Sky blue	RS485 A	11	RS485 A
12	Pink	RS485 B	12	RS485 B



Dual color / Ratio pyrometer Model

Model No	Measuring Range	FO	Wave Length
PM616	600 to 1600	YES	$\lambda_1 = 0.7 \sim 1.08 \mu\text{m}$ $\lambda_2 = 1.08 \mu\text{m}$
PM3514	350 to 1400	NO	$\lambda_1 = 0.9 \sim 1.7 \mu\text{m}$ $\lambda_2 = 1.7 \mu\text{m}$

Figure 7.6 Pyrometer control panel layout

