Temperature Sensing Technologies



AST 250/450 FO/PL

Digital pyrometer with mono fiber optic cable

AST 250 FO/PL and AST 450 FO/PL are highly accurate digital pyrometers with fiber optic for non contact temperature measurement. They are specially designed for applications under rough condition. These can be used in areas with high ambient temperatures without cooling or in areas where strong electromagnetic interference can influence a correct measurement because the fiber and optical head do not contain electronics part. With the very short response time of <2ms the pyrometer can even measure fastest heating processes. The main parameters such as emissivity and response time can be set. These parameter as well as the additional parameters such as Analog ouput sub range, Peak Picker and address can be adjusted via PC.





Applications

Induction heating Welding Casting Forging Annealing Sintering Rolling mill Rotary kilns Pouring stream

We Measure Temperature Accurately even in extreme Conditions

- Highly accurate 0.3 % of measured value + 1°C
- * Wide temperature range
- * Analog and Digital output
- * High Optical Resolution
- * Laser targeting light
- Small Spot sizes
- Analog output 0...20mA or 4...20mA or 0-10 V
- ✤ Digital interference RS232 or RS 485
- * Peak Picker
- Fiber optics and optical head withstand up to 250°C
- Rugged mono fiber optics

TECHNICAL SPECIFICATION

| Model | 250 FO/PL | 450 FO/PL | |
|--------------------------------------|--|----------------|--|
| Measured Temperatures Range | 300 °C - 1800 | 750 °C -2500°C | |
| | Analog output Sub Range Adjustable | | |
| Emissivity Range | 0.11.0 adjustable | | |
| Spectral Range, µm | 1.6µm | 1µm | |
| Photodetector Type | InGaAs | Si | |
| Response Time | 2msec. Adjustable upto 10S | | |
| Accuracy & Repeatability | +/-0.3% of the measured value + 1°C | | |
| Analog Output | 420mA or 0.20mA or 0-10V User Selectable | | |
| Digital Output | Serial communication : RS 232 or Rs485 Isolated | | |
| Power | 24 V DC | | |
| Operating temperature range at fiber | Max.250°C at fiber optics cable and optical head 070°C at pyrometer end | | |
| Fiber Optic | 2.5meter standard (available 5,10,15 meter on request) | | |
| Sighting | Laser pilot light | | |
| Isolation | Power supply and digital output and analog output are galvanically isolated against each other | | |
| Operating humidity | Unlimited | | |
| Housing | Stainless steel,IP65 Ø50mm; L=118mm;/0.6kg | | |
| Adjustable Parameters via software | Response time, Peak picker, Average, Analog output sub range, emissivity | | |
| Readable parameters via software | Measured temperature, temperature graph, Internal Temperature, Brightness Temperature | | |

| | | AST 250 FO/PL | AST 450 FO/PL |
|-------------------|--------------------------|---------------|---------------|
| Optical Head | Working Distance (mm) | Spot Size(mm) | Spot Size(mm) |
| | 120 | 3 | 1.2 |
| | 260 | 6.5 | 2.6 |
| Optical Head - I | 700 | 17.5 | 7.0 |
| | 90 | 1.2 | 0.5 |
| | 200 | 2.5 | 1 |
| | 600 | 7.5 | 3 |
| Optical Head - II | 4500 | 57 | 23 |

ACCESSORIES



Water Cooling Jacket & Air purge unit for optical head-II Reference No. 8000 - 01



Fiber Optic Cable Reference No. 5000 - 01 (2.5 Mtr)



Power supply input 110/230 AC Output 24 V DC, 0.75Amp Reference No. 9000 - 02



Air purge unit for optical head-ll Reference No. 8200 - 01



Adjustable Mounting for for optical head-II Reference No. 8200 - 03

Converter, RS 485 to RS 232

Reference No. 9000 - 03

Display with Parameterizer (P-120)

Device # 1

Pyrometer Type

Basic Range Internal Temp

Picker Status

Model

Temperature [°C]

ingle Colour

2ºC (OK)

icker Off

ST- 450 EO P

Reference No. 9001 - 01



Air purge unit for optical head-I Reference No. 8200 - 02



Temperature Indicator with retransmission output 4..20mA Reference No. 9000 - 01



Adjustable mounting for optical head-I

Software MT 500

- * Emissivity setting
- * Response time setting
- * Peak picker setting
- * Average temperature setting
- Graphs
 Gra
- Data logging



Ph. : +91-294-3057700, Fax : +91-294-3057750 E-mail : info@tempsens.com Website : www.tempsens.com

