

# Accurate Sensors Technology

 $\otimes$  CE

Highly Accurate On-Line Infrared Non-Contact Pyrometers for Steel line and tubes, Copper products and Glass mold plunger.

A5-2W• **A5-2W-FO** 

A5-2W: 105 to 2500°C (221 to 4532°F) A5-2W-FO: 350 to 1000°C (662 to 1832°F)



AST A5-2W is specially designed IR Pyrometers for non-contact temperature measurement of non-gray body that can be find in many applications like metal processing, heating process, silicon and ceramics.

AST A5-2W and AST A5-2W-FO are Two-wavelength pyrometers which use application specific data base derived from years of experience in real application.

Our pyrometers use special algorithms to accurately calculate both the actual temperature and emissivity of the surface On-line. They have a laser pointer which is aligned in line with the detector so that it ensures both laser and detector looks in to the same spot. This helps precise aiming even in long distances.

AST A5-LW and AST A5-2W-FO offer Bluetooth communication so that it can communicate with Android smartphones or laptop for viewing the measured temperature and for adjusting the parameters or selection of data base and data logging.

## **Spot Sizes for A5-2W-FO**

A5-WL-FO					
Working Distance	Spot Size				
[mm] / [in]	[mm] / [in]				
90 / 3.6	0.5 / 0.02				
200 / 8	1 / 0.04				
600 / 24	3 / 0.12				
4500 / 180	23 / 0.9				



#### Features

- High accuracy 0.25% ±2°C (3.6°F) of measured value for full range of emissivity.
- High consistency, suitable for closed loop control.
- Temperature ranges see table at the beginning of next page.
- Temperature range for measurement in front of black body, when measuring a shiny body minimum temperature will be higher.
- Fast response, compared to T/C.
- Full range of accessories and Wide range of built-in functions.
- Durability, low maintenance.
- Easy to install in existing line, replacing of contact probes.
- Capable of measuring targets with variable emissivity.
- AST NET sw software for PC.
- AST Pyrometer Android Application via Bluetooth.

## Standard Scope of Supply

- Integrated laser pilot light
- Digital Interface RS-232
- Calibration Certificate, PC Software & Operation Manual

#### Optional

- Mechanical and Electrical Accessories
- Analog Output: 0...20mA or 4...20mA or 0-10V or K type T/C
- Extra Cable Lengths
- RS422, RS485, USB, Bluetooth

## **Applications**

- Steel hot dip line
- Steel tubes
- Steel annealing line
- Shot blaster Steel tubes
- High strength steel bearings
- Copper rod, bar and strip
- Glass mold plunger

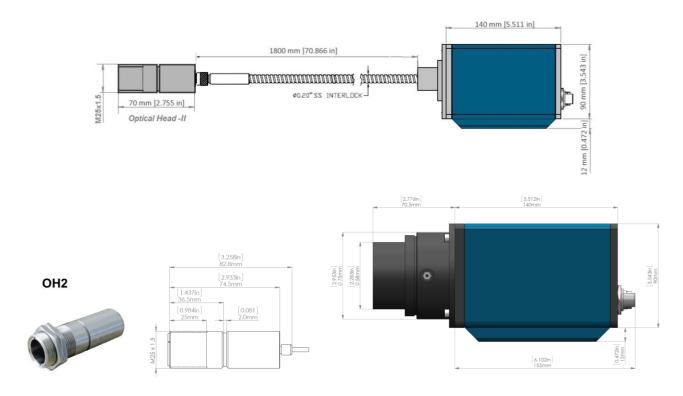
# **Technical Specifications**

Specification	Model A5-2W				Model A5-2W-FO			
Temperature Range (Analog subrange adjustable)	300 - 980°C 360 - 1240°C 380 - 1500°C 450 - 1740°C	572 - 1796°F 680 - 2264°F 716 - 2732°F 842 - 3164°F	105 - 900°C 200 - 1640°C 250 - 1850°C 360 - 2500°C	221 - 1652°F 392 - 2984°F 482 - 3362°F 680 - 4532°F	300 - 980°C	572 - 1796°F		
Spectral Range	According to Application							
Photodetector Type	According to Application							
Distance to Spot Size Ratio	100:1 100:1 200:1 200:1		200:1					
Emissivity	0.1 -1.0							
Response Time t90	Adjustable from 50 ms to 17 sec							
Accuracy and Repeatability	0.25% ± 2°C (3.6°F) of measured value for full range of emissivity							
Sighting	Integrated Laser Pilot Light							
Power Supply	24VDC							
Analog Output	4-20 mA, 0-20 mA, 0-10V, K Type T/C							
Digital Output	RS-232, RS-422, RS-485, USB, Bluetooth							
Digital Display	P110							
Sensor overall dimensions	215 x 110 x 105 mm / 8.46 x 4.33 x 4.13 in							
Sensor weight	~2.0Kg / ~4.4lbs							
Operating temperature range	0°C +50°C / 32°F +122°F							
Storage temperature range	-20°C +70°C / -4°F +158°F							
Protection Class	IP65							

# Spot Sizes for A5-2W

Working Distance [mm] / [in]	A5-2W Spot Size [mm] / [in]								
	FOV 1:100		FOV 1:200						
	105 - 900°C	300 - 980°C	200 - 1640°C	360 - 1240°C	250 - 1850°C	380 - 1500°C	360 - 2500°C	450 - 1740°C	
	221- 1652°F	572 - 1832°F	392 - 2984°F	680 - 2264°F	482 - 3362°F	716 - 2732°F	680 - 4532°F	842 - 3164°F	
500 / 20	5/	0.2	2.5 / 0.1						
1000 / 40	10 /	0.4	5 / 0.2						
1500 / 60	15	0.6	7 / 0.3						
2000 / 80	20 /	0.8	10 / 0.4						
2500 / 100	25	/ 1.0	12.5 / 0.5						
5000 / 200	50	2.0	25 / 1.0						

## **Pyrometer Drawing**



### **Accessories for A5-2W**

AS3000 Application Selector (Reference no: 300-07)

Power Supply Unit (Reference no: 200-09)

Air Purge Tube 200 mm (Reference no: 200-03)

Display & Parameterizer (Reference no: P-110)









Adjustable Mounting (Reference no: 200-01)

Air Purge Tube Adapter (Reference no: 200-02)

Frontal Water-Cooling Plate (Reference no: 200-06)

Top Water-Cooling Plate (Reference no: 200-10)









## **Accessories for A5-2W-FO**

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

Air purge unit for optical head-l Reference No. 8200 - 02 Adjustable Mounting for optical head II Reference No. 8200 - 03

Adjustable mounting for optical head-l Reference No. 8200 - 04









Single Channel Display P110

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

Temperature Indicator with retransmission output 4.20mA Reference No. 9000 - 01

Converter RS-485 ↔ RS-232 Reference No. 9000-03











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