AST ✦ Accurate Sensors Technologies

Highly Accurate On-Line Infrared Non-Contact Pyrometer

CE **250°C to 3000°C**

AST A250 & AST A450 are specially designed highly accurate digital pyrometers to provide high performance and low maintenance of non contact temperature measurement in demanding industrial environments. The emissivity, analog output sub-range, response time and peak picker can be preset ex-works or adjusted through software. This enables the instrument to be adapted to various measuring tasks.

AST A250/A450 is provided with USB 2.0 connector with cable. The pyrometer can be powered through USB port. In this case no external power supply is required (+24V DC requires for operation of analog output, laser, RS- 232 / RS-485 output)

These pyrometer have solid body in stainless steel housing which provides high operation safety even in rough industrial environment. Variety of working Distances with fixed focus available for different applications.
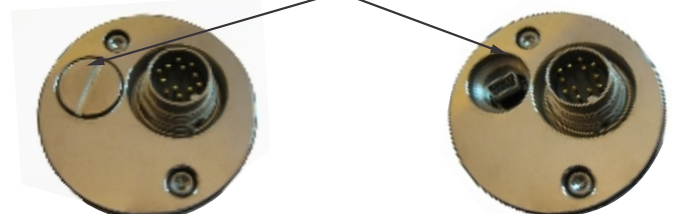
AST A250 & AST A450

Standard Scope of Supply

AST A250 & AST A450 with Laser Targeting Light or through the Lens Sighting, USB Output. RS-232 & RS-485, 5 M Long Connection Cable, 1.5M Communication Cable. USB Cable.

Applications

- ➤ **Induction Heating**
- ➤ **Casting**
- ➤ **Annealing**
- ➤ **Welding**
- ➤ **Forging**
- ➤ **Sintering**
- ➤ **Melting**
- ➤ **Rolling mills**
- ➤ **Hardening**

Features

- ➤ **Highly accurate**
- ➤ **Wide temperature ranges (250°C to 3000°C)**
- ➤ **Small Spot Sizes**
- ➤ **Fast Response Time**
- ➤ **USB Output**
- ➤ **Analog and Digital Output**
- ➤ **User Friendly Software**
- ➤ **Rugged Stainless Steel Housing**
- ➤ **Variety of Accessories**

Open Screw For USB 2.0

We Measure Temperature Accurately even in extreme conditions

Technical Specification

Model	AST A250	AST A450
Measured Temperature Ranges (Analog sub range adjustable)	250° - 1000°C 300° - 1300°C 350° - 1800°C 500° - 3000°C	600° - 1900°C 750° - 2500°C
Emissivity	0.1….1 Adjustable	
Spectral Range, μm	1.6 μm	1 μm
Photodetector Type	InGaAs	Si
Response Time	2 msec. Adjustable upto 10 sec	
Accuracy	±0.3% of the measured value +1° C	
Repeatability	0.1% reading in °C + 1°C	
Distance to Spot size Ratio	50 : 1 (250° - 1000°C) 100 : 1 (300° - 1300°C) 200 : 1 (350° - 1800°C) 200 : 1 (500° - 3000°C)	200 : 1 (600° - 1900°C) 200 : 1 (750° - 2500°C)
Analog Output	4-20 mA or 0-20mA or 0-10 V User selectable	
Digital Output	USB 2.0, RS-232 or RS-485 (Isolated) User Selectable	
Power	24V DC	
Sighting	Laser pilot light (PL) or through the lens sighting (TL)	
Laser Power	<1mW	
Protection class	IP 65	
Operating temperature range	0°C........+70°C, 0°C........+200°C (With cooling jacket)	
Isolation	Power supply and digital output and analog output are galvanically isolated against each other	
Storage temprature	-20°........+70°C	
Operating humidity	Unlimited	
Dimensions/Weight	Dia. = Ø49.5 mm; Length = 118 mm / Weight = 0.6 kg	
Adjustable Parameters via software	Response time, Peak picker, Average, Analog out put sub-range, emissivity, interval of data storage etc.	

Software "Infrasoft"
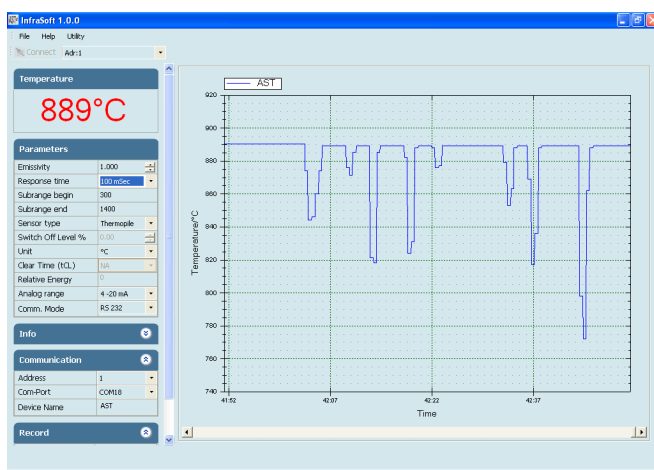
- ➢ **Emissivity setting**
- ➢ **Response time setting**
- ➢ **Peak picker setting**
- ➢ **Average temperature setting**
- ➢ **Graph**
- ➢ **Data logging**

Manufactured working distance WD (mm)	Spot Size S (mm)			
	AST A250 250°C - 1000°C (50:1)	AST A250 300°C - 1300°C (100:1)	AST A250 350°C - 1800°C 500°C - 3000°C (200:1)	AST A450 600°C - 1900°C 750°C - 2500°C (200:1)
350	7	3.5	1.75	1.75
500	10	5	2.5	2.5
700	14	7	3.5	3.5
800	16	8	4	4
1000	20	10	5	5
1500	30	15	7.5	7.5
2000	40	20	10	10
2500	50	25	12.5	12.5
3000	60	30	15	15
5000	100	50	25	25
Aperture(A)	11	11	11 (350 - 1800°C) 4 (500 - 3000°C)	12(600 - 1900°C) 5(750 - 2500°C)

Accessories

Water Cooling Jacket withAdjustable Flange
(Reference no: 8000-02 for PL)
(Reference no: 8000-06 for TL)

Adjustable Mounting Stand
(Reference no: 8000-07)
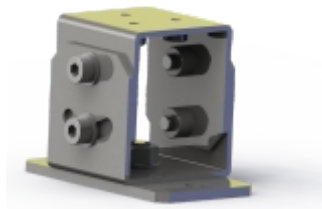
Air Purge Unit
(Reference no: 8000-04)

Adjustable Mounting Support
(Reference no: 8000-05)

Display & Parameterizer P-120
(Reference no: 9001-01)
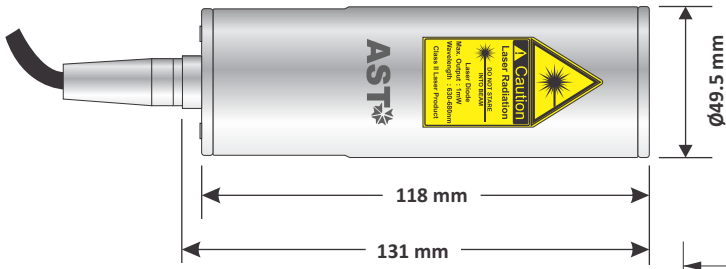

Converter RS-232 ↔ RS-485
(Reference no: 9000-03)
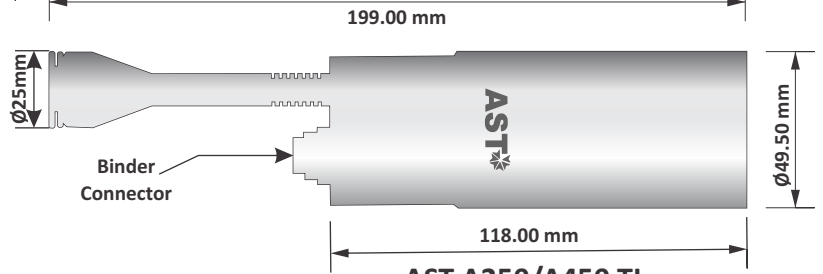

Power Supply Unit
(Reference no: 9000-02)
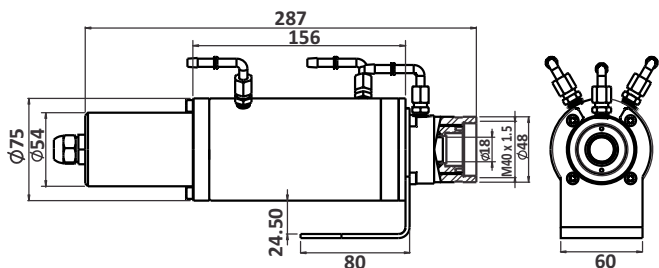

Temperature Indicator
(Reference no: 9000-01)

Pyrometer Drawing

Ø49.5 mm

118 mm

131 mm

AST A250/A450 PL

199.00 mm

Ø25mm

Ø49.50 mm

Binder Connector

118.00 mm

AST A250/A450 TL

287
156

Ø75
Ø54

Ø18
M40 x 1.5
Ø48

24.50

80

60

Water Cooling Jacket with Adjustable Flange PL
(Reference no: 8000-02)

292
175

Ø80
Ø65

Ø18
M40 x 1.5
Ø48
Ø75

24.50

80

60
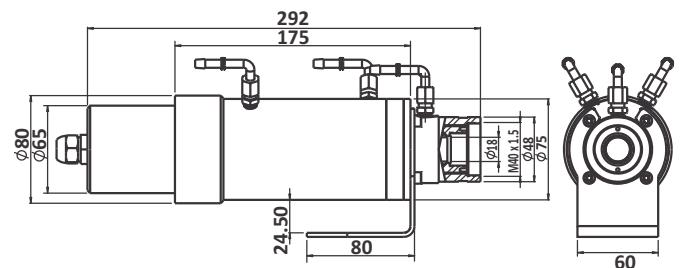
Water Cooling Jacket with Adjustable Flange TL
(Reference no: 8000-06)

FOR 6 mm INSIDE DIAMETER HOSE

Ø68
Ø20
Ø63

30.60

GRUB SCREW FOR FIXING PYROMETER

Air Purge Unit
(Reference no: 8000-04)

3 x M6 THRU AT 120°

60
66

86
110

60

75

R30

60°

5

Adjustable mounting stand
(Reference no: 8000-07)

70   Ø50

110

3

70
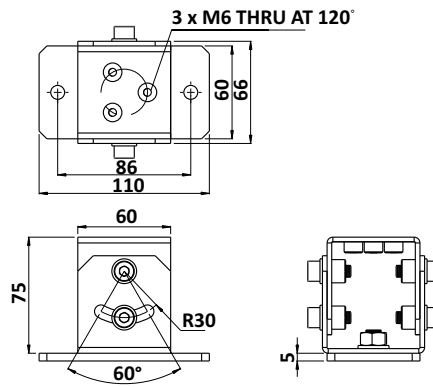
Mounting Clamp
(Reference no: 8000-05)