

**Highly Accurate Digital pyrometer with Extended Sensor Head, Inbuilt LCD and Keypad for Parameterization, Suitable for Hazardous Area**

**FOR HOT ENVIRONMENT UPTO 250°C**

**0°C to 800°C**

**Intrinsically Safe**

**EL50-H+ EX**

**EL50-H+ Ex** is a digital Pyrometer in economic range with extended sensor head in 4 wire technology, for non-contact temperature measurement between 0°C to 800°C. The sensor head is unaffected by electromagnetic interferences. The pyrometer sensor head is specially designed to withstand ambient temperature upto 250°C without cooling.

The pyrometer is equipped with a Inbuilt 4 digit LCD display which offers many signal processing features. The electronic box with integrated Keypad helps in setting parameters like Emissivity, Analog Sub range, Relay, Set point, Hysteresis (Hyst), Analog Output, Unit of temp (°C or F), Response Time, Peak Picker and Sensor address etc. Analog outputs options available are 4...20mA, 0...20mA, 0...10V, Thermocouple type "K" or "J" (userselectable) via keypad or software. RS-232/RS-485 serial interface card is available as optional.

**EL50-H+ Ex** is provided with USB 2.0 output and PC software. The pyrometer can be powered through USB port. In this case no external power supply is required. 24 V DC is required for operation of Analog Output, RS - 232 & RS - 485 & Relay Output. Energy Limitation with appropriate zener barriers with approval for zone 0, 1, 2 Div. 1, 2.

Certified : BAS 01 ATEX 7005, TUV 99ATEX 1484x



## Technical Specifications

<b>Model</b>	<b>EL50-H+ Ex</b>
Temperature Range(Analog sub-range adjustable)	0°C....800°C
Spectral Range	8...14 μm
Photodetector Type	Thermopile
Distance to Spot Size Ratio	15:1
Emissivity (ε)	0.1....1.2 adjustable
Response Time	60 msec adjustable upto 10 sec
Accuracy	±1% or ±1.5°C (at ambient temperature 23 ±5 °C)
Repeatability	0.3% of reading in °C + 1°C
Analog Output	0-20mA, 4-20mA, 0-10V, Thermocouple Type "K" or "J" (User selectable)
Digital Output	USB 2.0 RS-232/RS-485 interface card (Optional) *At a time only one digital output possible
Operating Temp. Range	Electronic box upto 70°C Sensor head upto 250°C
Storage Temp. Range	-20°C...70°C (Electronics), -20°C...250°C (Sensor Head)
Relay Output	Relay Output with hysteresis 60V DC/42V AC RMS, 0.4A
Zener Barriers	FM Approval : 116-0118 UL Approval : 116-0139(cULus) IECEX Approval : IECEx BAS 09.0142 IECEX BAS 17.0091x
Adjustable Parameters and Features via Software	Emissivity, Response Time, Clear Time (Peak Picker), Analog Output, Analog Scale (Sub Range), Unit Of Temperature (°C/°F), Communication mode(Comm. mode), Record feature etc.
Adjustable Parameters and Features via Keypad	Emissivity, Relay, Setpoint, Hysteresis (Hyst), Analog Sub Range, Analog Output, Unit of temperature, Sensor address, Response Time, Clear Time(Peak Picker) etc.
Power Supply	12V DC to 28 V DC with reverse polarity protection
Power Consumption	Max 2.5 watt
Protection Class	IP65
Housing	Sensor head-Stainless Steel; Electronic Box : Zinc
Isolation	Power supply, *Digital output and Analog output are galvanically isolated against each other * Not applicable for USB 2.0 digital output
Operating Humidity	10-95%, non condensing conditions
Weight & Dimensions	600g, 112.5mmx82.5mmx33mm(L x W x H)

## Features

- Power supply (12V DC to 28 V DC) with reverse polarity protection
- Sensor head can withstand ambient temperature upto 250°C
- Spectral range 8 μm...14 μm
- Wide temperature ranges (0°C to 800°C)
- Inbuilt LCD Display and Keypad for parameterisation
- Intrinsically safe by limitation of the energy with two double zener barriers
- Fast response time within milliseconds
- Analog output like 4...20mA, 0...20mA, 0...10V, Thermocouple type "K" or "J" (user selectable)
- USB 2.0 Digital output and RS-232/RS-485 Serial interface card
- Relay output
- User friendly PC software for communication

## Standard Scope of Supply

- Pyrometer with LCD Display
- Keypad for parameterizing,
- Extended sensor head with 3m cable
- USB 2.0 Digital output, USB Cable
- Relay Output
- Analog output 4...20mA, 0...20mA, 0...10V, Thermocouple Type "K" or "J" (user selectable)[Thermocouple outputs J & K to be specified while ordering]
- Two zener barriers compliance to IEC 60529
- Calibration certificate, Software & operation manual

## Optional

- Mechanical and Electrical Accessories
- RS-232 & RS-485 serial interface card
- Extra Cable Lengths

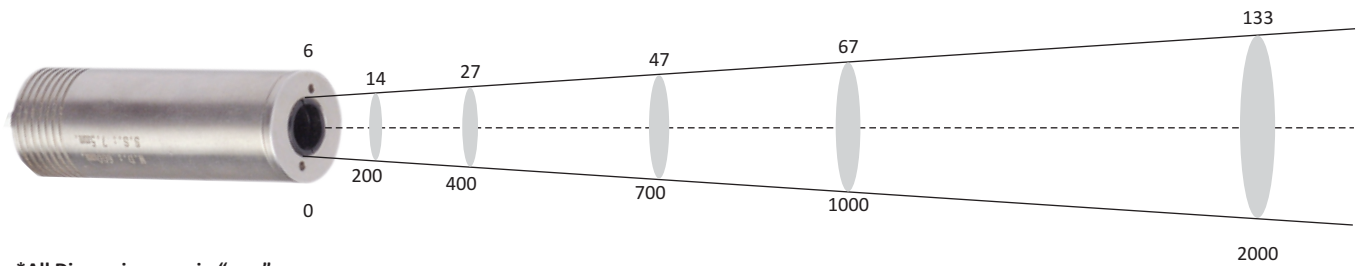
## Applications

- Chemical and Petrochemical Application
- All Hazardous Application

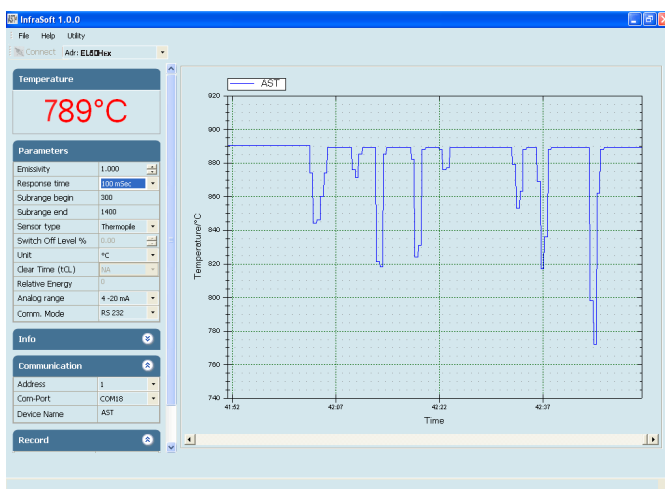
**We measure accurate temperature in extreme conditions**

## Spot Sizes

### FOV-15:1

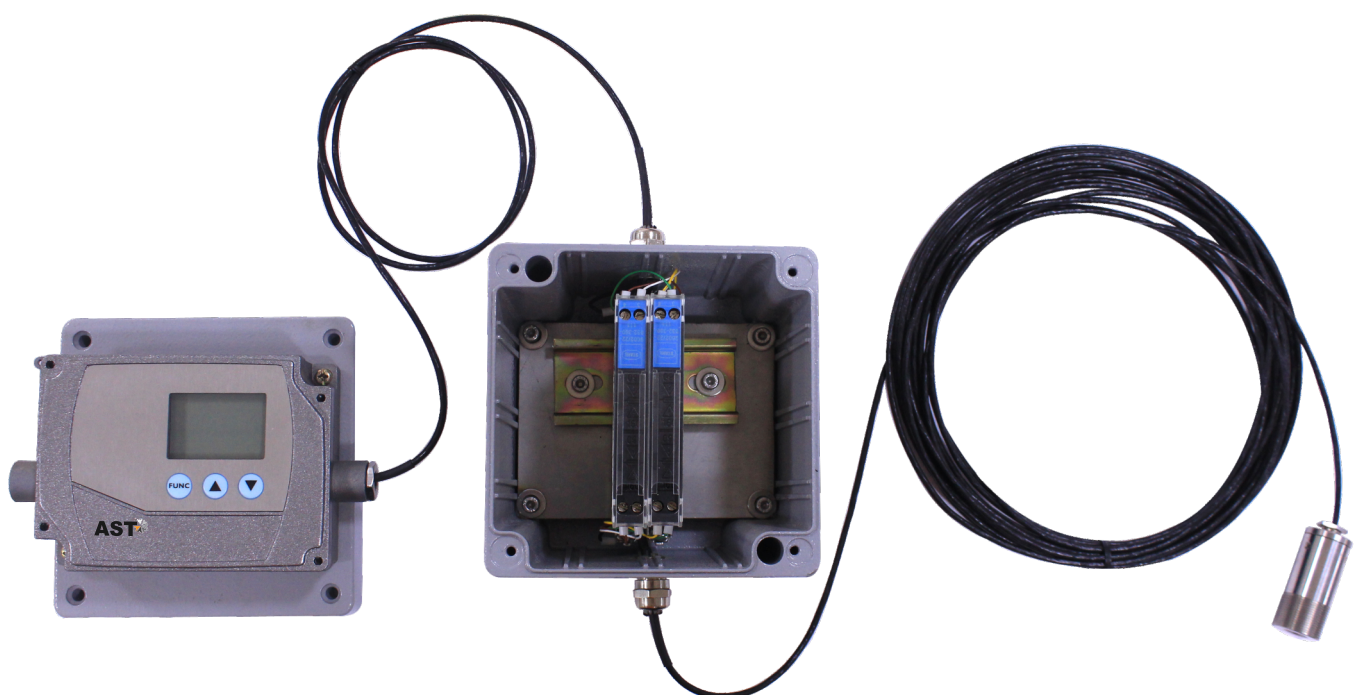


## Software "Infrasoft"



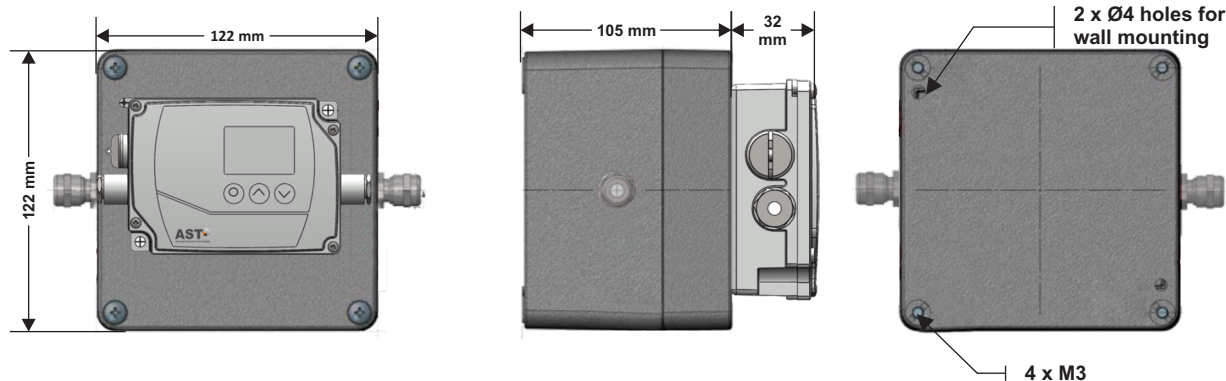
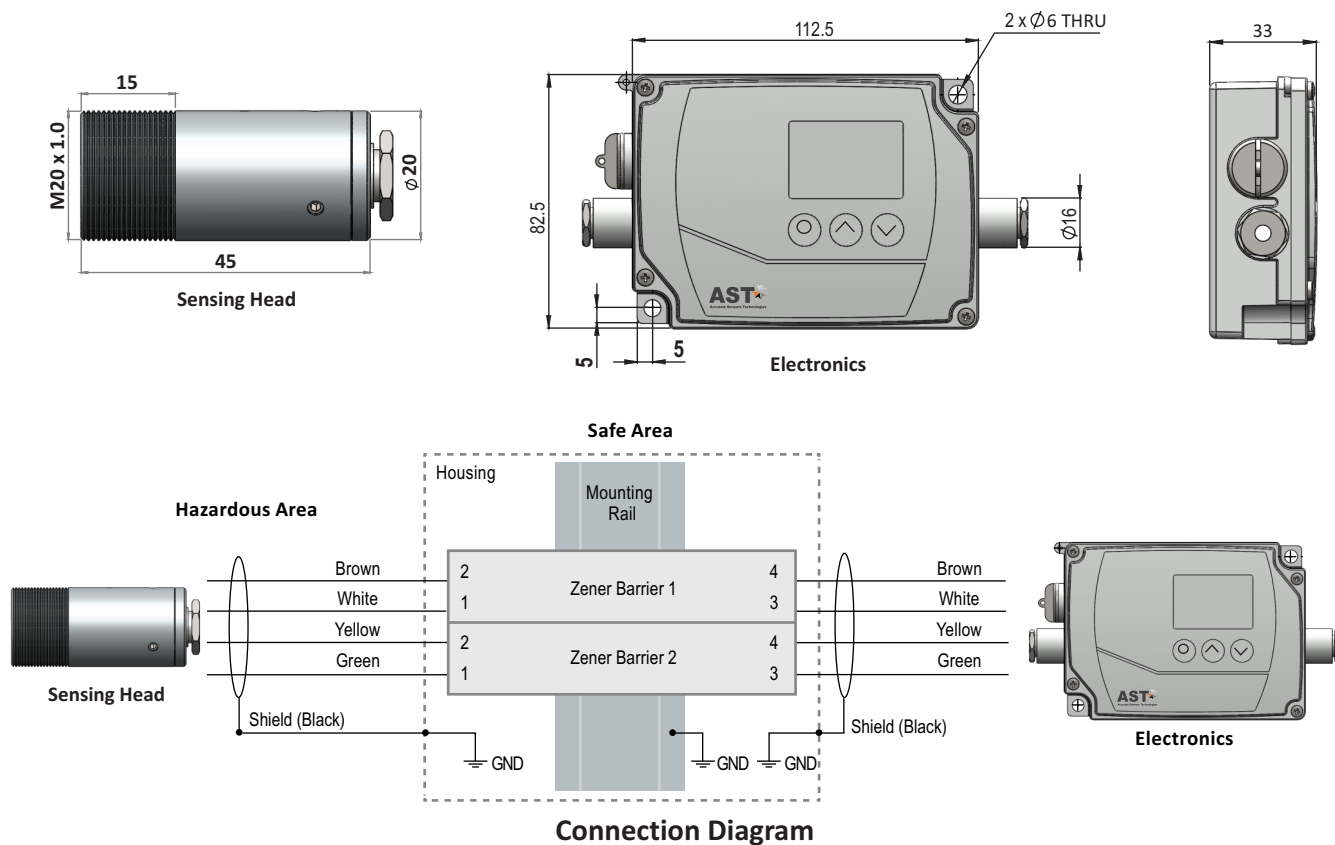
AST "Infrasoft" software is under standard scope of supply. It offers possibilities of parameter setting, view real time graph, offline graph and to evaluate measuring data. Communication between the pyrometer and the software is implemented via a cable connected between the pyrometer and the PC serial port.

## Pyrometer



We measure accurate temperature in extreme conditions

## Pyrometer Drawing



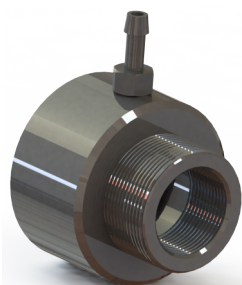
## Accessories

**Air Purge Unit For Sensor Head**  
 (Reference No. - 8300-03)

**Adjustable Mounting for Sensor Head**  
 (Reference No. - 8300-04)

**Converter RS-232  $\leftrightarrow$  RS-485**  
 (Reference no: 9000-03)

**Power supply Input 110/230V AC**  
**Output 24 V DC, 0.7Amp.**  
 (Reference No. 9000 - 02)



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