# • SRU FO

350°C to 2000°C

## Features

- **Dual-Channel Measurement:** Independent channels for refractory and gas temperature monitoring, including smart hybrid temperature computation.
- **Explosion-Proof Design**
- **Electromagnetic Compatibility**
- **Fast Response:** Adjustable response time from 2 ms to 10 s (analog mode).
- **High-Temperature Fiber Cable:** Fiber optic cable rated for ambient up to 250°C.
- **Wide Measurement Span:** Temperature range 350°C to 2000°C, with configurable sub-range.
- **Multiple Outputs:** Dual analog outputs (4–20 mA and 0–20 mA), two relay outputs, RS-485 digital interface, and adjustable analog sub-range.
- **High-Resolution Display:** 128×64 OLED display with integrated keypad for setup and diagnostics.
- **Communication Interface:** RS-485 serial link for configuration, monitoring, and PC connectivity.
- **Software Integration:** Compatible with PC-based "Infrasoft" software for real-time configuration and data logging.

## Standard Scope of Supply

- Optical Head: Model OH(II) with precision fiber alignment.
- Fiber Optic Cable: 2.5 m mono fiber - optional 5 m and 10 m lengths available.
- Connection Cable: 5 m interconnecting cable with industrial-grade connector.
- Certification & Documentation: Calibration Certificate, Explosion-Proof Compliance Certificate (enclosure), PC Software and Operation Manual.

## Applications

- Sulphur Recovery Units
- Petrochemical emission Monitoring
- Thermal Oxidizer Monitoring
- Other High Temperature Furnaces

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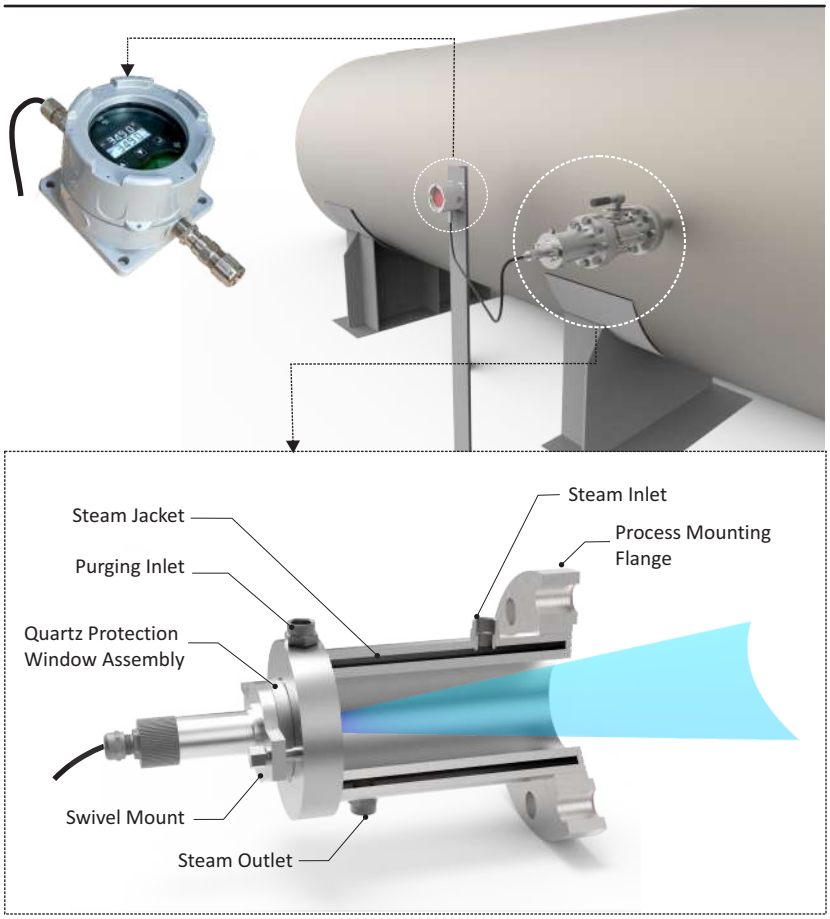
# • SRU FO

Explosion Proof Digital Infrared Fiber Optic Pyrometer




The SRU-FO is a dual-channel fiber optic pyrometer designed for precise measurement of refractory, gas, and hybrid temperatures in demanding industrial environments. It offers exceptional accuracy, high reliability, and a rapid response time of up to 2 ms. Engineered for use in high ambient and explosion-prone areas, the SRU-FO operates efficiently without active cooling.Integrated RS-485 communication and user-friendly PC software enable remote configuration of key parameters such as emissivity, transmissivity, response time, and temperature units—ensuring flexible operation and seamless system integration.

## Software "Infrasoft"

Infrasoft is an advanced PC software provided as a standard feature with the SRU-FO pyrometer. It enables seamless communication via RS-485 or serial port for real-time temperature monitoring, data recording, and parameter configuration.

**Key Features :**

- Real-time temperature display with graphical trend analysis
- Multi-pyrometer connectivity for simultaneous monitoring
- Remote configuration of all pyrometer parameters


- Emissivity, Response Time
- Clear Time(Peak Picker)
- Analog Output
- Sub Range
- Unit Of Temperature(°C/°F)
- Communication mode(Comm.mode)

Thermal and Cable Solutions

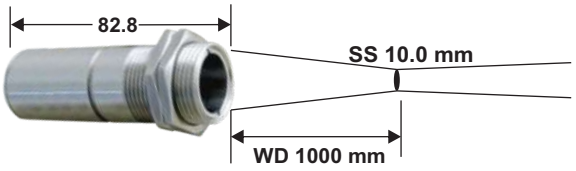
## Technical Specifications

| Model | SRU FO |
|---|---|
| Temperature Range (Analog sub-range adjustable) | 350°C....2000°C |
| Distance to Spot Size Ratio | 100:1 OH(II) |
| Transmitivity | 0.1....1.0 adjustable |
| Emissivity (ε) | 0.01....1.0 adjustable |
| Response Time | 2 msec adjustable upto 10 sec (for Analog) |
| Accuracy | ± 0.25% of the measured value + 1°C |
| Repeatability | 0.1% of reading in °C + 1°C |
| Analog Output | 0-20mA, 4-20mA (User selectable) |
| Digital Output | RS-485 |
| Area Classification | Zone 1 and 2 II C T4 |
| Relay | Output with Hysteresis 60V DC / 42V AC RMS, 0.4A |
| Operating Temp. Range | Pyrometer 0°C.....70°C<br>Optical head and Fiber Optic Cable upto 250°C |
| Steam Requirement | 50 - 100 psig |
| Fiber Optic Cable | Double Jacketed PTFE Tubing with Polyimide Coated Fiber (Customizable Length) |
| Process Connection | 3" ANSI Standard Flange Stainless Steel (Grade 316) with Steam Jacket (Other Size and Type available on request) |
| Steam Jacket Material | Stainless Steel (Grade 316) |
| Lens Flange Material | Stainless Steel (Grade 316) |
| Storage Temp. Range | -20°C...70°C |
| Adjustable Parameters and Features via Software | Emissivity, Transmissivity Response Time, Clear Time(Peak Picker), Analog Output, Analog Scale (Sub Range), Unit Of Temperature(°C/°F), Record feature etc |
| Power Supply | 12V to 28V DC with reverse polarity protection |
| Power Consumption | Max 2.5 W |
| Protection Class | Explosion Proof |
| Housing | Di-Cast Aluminium |
| Isolation | Power supply, *Digital output and Analog output are galvanically islolated against each other |
| Operating Humidity | 10-95%, Non-Condensing Conditions |

## Spot Sizes

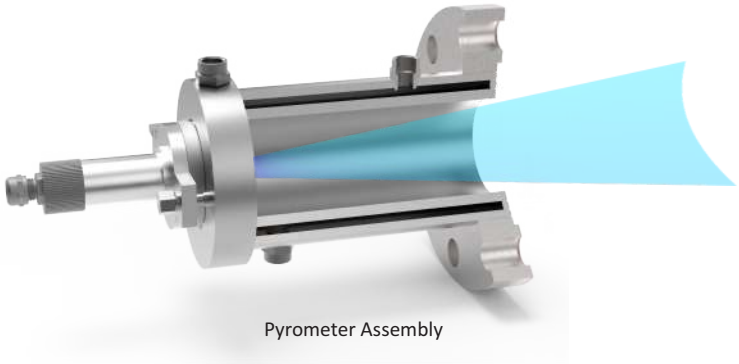
| Fixed Optics | SRU FO | |
|---|---|---|
| Optical Head | Working Distances (mm) | Spot Sizes(mm) 350°C - 2000°C |
|  | 600 | 6.0 |
| | 1000 | 10.0 |
| | 2000 | 20.0 |
| | 4500 | 45.0 |
| Optical Head - II | **Aperture(mm)** | **18.0** |

**Example of OH(II)**

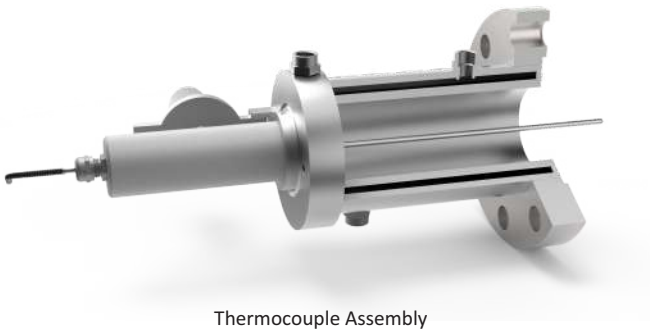



**Pull Out (P) = 1.7 mm**
**Optical Head Length (L) = 68.1 mm**

## Configuration

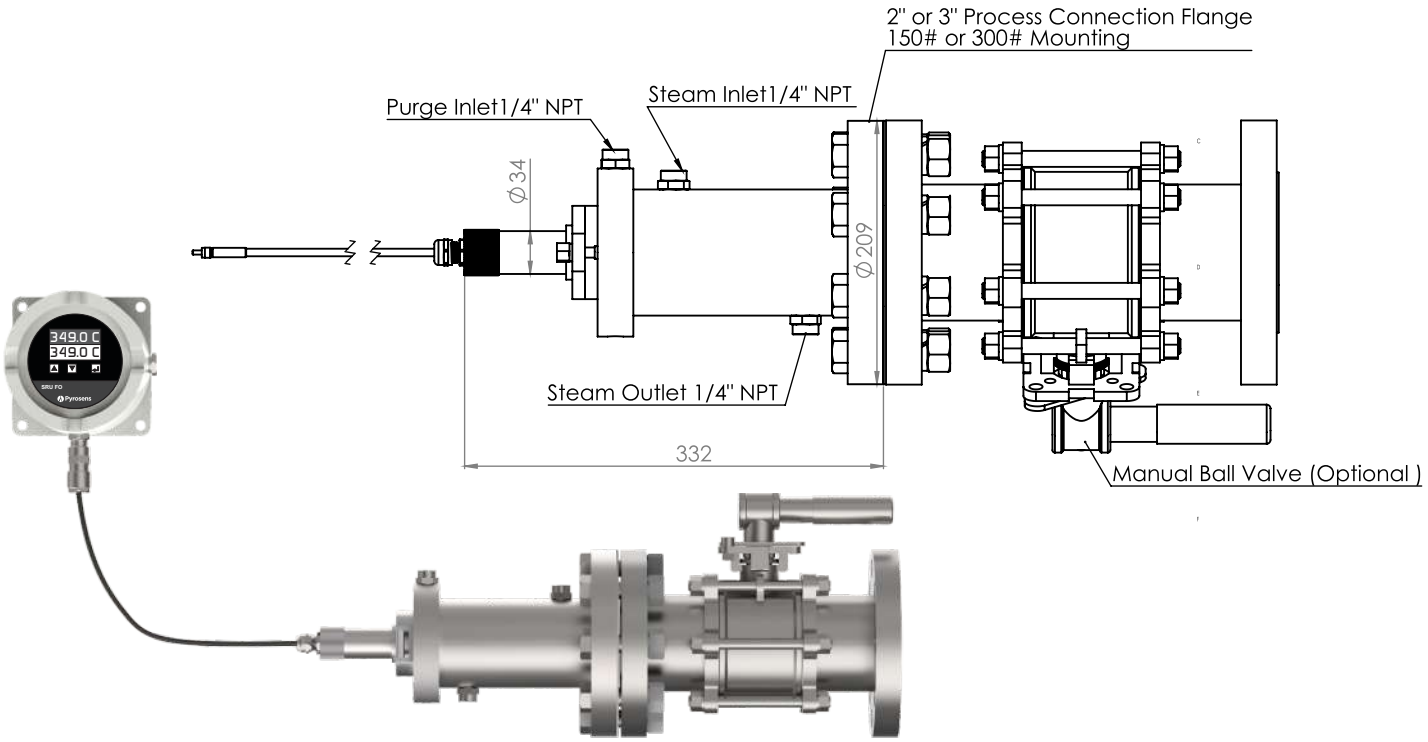


Pyrometer Assembly



Thermocouple Assembly

## Special Accessories - Air Purging Unit with Steam Jacket




## Accessories

| Power supply Input 110/230V AC<br>Reference No. 9000 - 02<br>Output 24 V DC, 0.7Amp | Temperature Indicator with retransmission output 4..20mA<br>Reference No. 9000 - 01 | Converter RS-485 ↔ RS-232<br>Reference No. 9000-03 | Purge Control System<br>Reference No. 9000-04 |
|---|---|---|---|

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