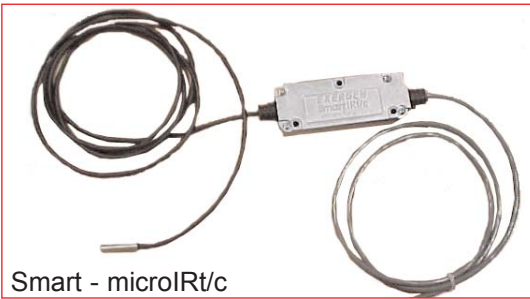


# EXERGEN

## Smart-microIRt/c SERIES

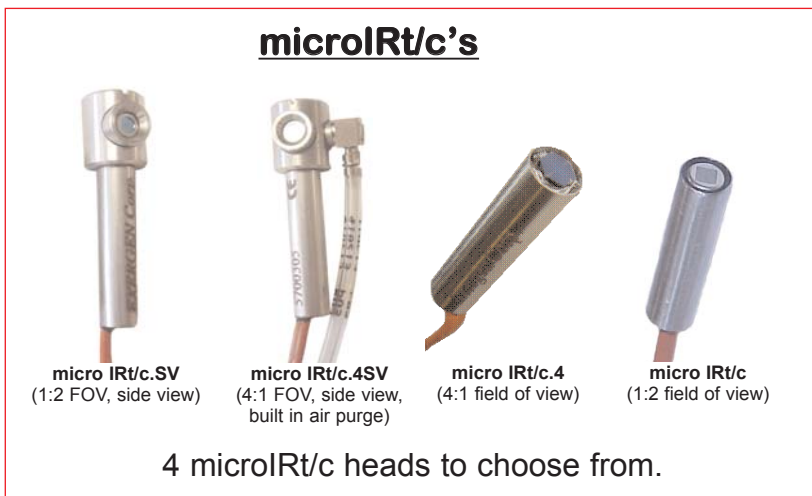


Smart - microIRt/c

**Adding Smart linearization to the smallest IR temperature sensors in the World!**

### FEATURES

- Non-Contact Temperature Measurement, that's Plug and Play
- No Impedance, leakage current, or linearity problems to worry about
- Sensor head is remote and without air purge can be used in ambient temperatures to 100 °C (212 °F) and with small sized air purge jacket can be cooled to 350 °F (177 °C)
- The sensor heads are the smallest sized in the market (0.25" diameter)
- Precision with changes in sensor head ambient
- All digital system
- LOW COST!



The smallest sized IR temperature sensor in the world now has brains. By combining the microIRt/c sensor head with the SmartIRt/c platform, precision in small places is now a reality. The Smart processes the signal from the microIRt/c, linearizes, and gives an analog output (4-20mA, 0-5V, 0-10V). Accuracy holds with changes in ambient from -45 to 100 °C, with no drifting. Four sensor heads with 1:2 and 4:1 optics, straight and side view mounting, built in air purge (cool to 120 °C), air purge jackets (cool to 175 °C), and mounting brackets are available. The IRt/c.01, IRt/c, IRt/c.1X, IRt/c.SV, IRt/c.5, IRt/c.10 and adjustable IRt/c's heads are also available (See specs at: <http://www.exergen.com/industrial/irtc/specs/index.htm>)

# SMALL SIZED AND LINEARIZED!

| SPECIFICATIONS   | Smart-microIRt/c  | Smart-microIRt/c.SV | Smart-microIRt/c.4           | Smart-microIRt/c.4SV                                     |
|--|---|---------------------|------------------------------|--|
| Sensing Ranges:  | -30-70 °C, 0-100 °C, 0-250 °C, 0-500 °C (only 4:1's)<br>(-22-158 °F, 32-212 °F, 32-482 °F, 32-932 °F)                 |                     |                              |  |
| Output:  | 0-10V, 0-5V, 4-20mA, RS232  |                     |                              |  |
| Ambient Range:   | Sensing Head: -40—212 °F (-40—100 °C)<br>Transmitter: 0—70 °C (32 -158 °F)  |                     |                              | -40—240 °F<br>(-40—120 °C)<br>With built in<br>air purge |
| Field of View:   | 1:2<br>(3 mm, 0.1" min spot)  |                     | 4:1<br>(3 mm, 0.1" min spot) |  |
| Power Supply:  | 12 or 24 VDC (±10%), Shuts off when voltage is functionally low.  |                     |                              |  |
| Update Time:   | < 250 milliseconds; Time constant = 40 milliseconds   |                     |                              |  |
| Accuracy:<br>(Includes repeatability & interchangeability) | 2% of full scale *  |                     | 3% of full scale*            |  |
| Environmental:   | Sensor Head: IP67, NEMA 4X, Non condensing humidity.  |                     |                              |  |
| Storage Temperature:                                       | 14 °F-158 °F (-10-70 °C)  |                     |                              |  |
| Relative Humidity:   | Non-condensing  |                     |                              |  |
| Allowed Load Impedance                                     | (voltage models) 750 Ω  |                     |                              |  |
| Loop Impedance   | (4-20mA models) 50 Ω  |                     |                              |  |
| Cable Assembly:  | 3 ft (0.9 m) from sensor to transmitter<br>3 ft (0.9 m) from transmitter, 24 AWG stranded                             |                     |                              |  |
| Power Consumption:   | < 800mW at 24VDC; < 400mW at 12VDC  |                     |                              |  |
| Emissivity Setting:  | 0.90, may be adjusted for large quantities  |                     |                              |  |
| Spectral Response:   | 5.5-20 μm   |                     | 3-20 μm                      |  |
| Minimum Spot Size:   | 0.1" (3 mm)   |                     | 0.1" (3 mm)                  |  |
| Size and Weight  | See individual data sheets for sensors at: <a href="http://www.exergen.com/industrial">www.exergen.com/industrial</a> |                     |                              |  |
| LED  | Indicates normal operation and for diagnostics  |                     |                              |  |

## ORDERING INFO: Smart-microIRt/c.\*-\*\*-\*\*\*-\*\*\*\*

\* - blank (1:2 FOV), SV (1:2 FOV, side view), 4 (4:1 FOV), 4SV (4:1 FOV, side view)

\*\* - 12V (12VDC power), 24V (24VDC power)

\*\*\* - 010 (0-10V), 05 (0-5V), 420 (4-20mA), 232 (RS-232)

\*\*\*\* - 100C (0-100C), 250C (0-250C), 70C (-30-70C), 500C(0-500C)

**Example:** Smart-microIRt/c.SV-010-100C (1:2 FOV, side view, 0-10V from 0-100C)

+ - Does not apply when target temperature is more than 10°C cooler than ambient.