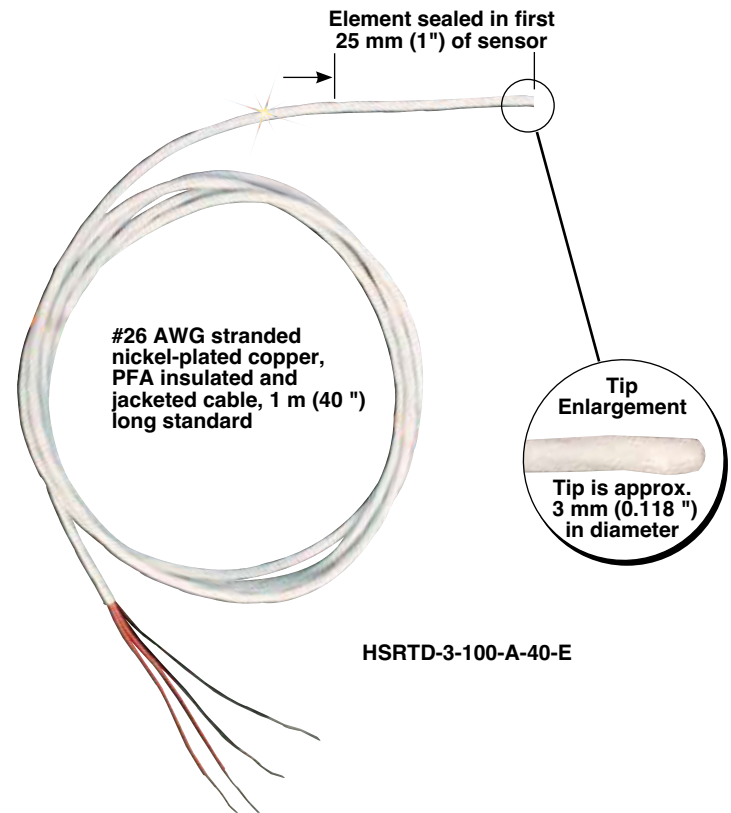# HSRTD Series

## Flexible Sealed PFA RTD Sensors For Use in Wet, Corrosive and Cryogenic Environment

- 100 Ω, Class Accuracy options: "A," "1/3," 1/10" DIN
- Temperature Range: -60 °C to 250 °C
  (Cryogenic option available to -200 °C)
- Pt100 Standard, Pt1000 version also available
- Custom lengths can be supplied
- Hermetically Sealed RTD, IP68 Seal-Welded Tip
- Sealed Against Moisture and Corrosion
- PFA Insulated Cable
- 4-Wire Configuration Standard
- Easily Cleaned and Sterilized

### Description

Omega's HSRTD style PFA insulated wire probes are hermetically seal-welded at the tip to give a continuous PFA coating along the entire length. A unique manufacturing process produces no increase in diameter or change in shape at the tip, allowing the sensor to be installed into areas of limited space. Supplied as standard with stripped ends, there are a number of connector and lead length options - for custom lengths or connector options, contact sales.

Element sealed in first 25 mm (1") of sensor

#26 AWG stranded nickel-plated copper, PFA insulated and jacketed cable, 1 m (40 ") long standard

Tip Enlargement

Tip is approx. 3 mm (0.118 ") in diameter

**HSRTD-3-100-A-40-E**

## Ordering Guide - Metric Offering

| Part Number | Description |
|---|---|
| **Class A Hermetically Sealed 100 Ω RTD Probes:** | |
| HSRTD-3-100-A-1M | Hermetically sealed Pt100 RTD probe, 1 m long, Class A with stripped ends. |
| HSRTD-3-100-A-2M | Hermetically sealed Pt100 RTD probe, 2 m long, Class A with stripped ends. |
| HSRTD-3-100-A-5M | Hermetically sealed Pt100 RTD probe, 5 m long, Class A with stripped ends. |
| HSRTD-3-100-A-10M | Hermetically sealed Pt100 RTD probe, 10 m long, Class A with stripped ends. |
| HSRTD-3-100-A-30M | Hermetically sealed Pt100 RTD probe, 30 m long, Class A with stripped ends. |
| **Cryogenic Class A Hermetically Sealed 100 Ω RTD Probes (-200 °C):** | |
| HSRTD-3-100-A-1M-CRYO-TEMP | Hermetically sealed Pt100 RTD probe, 1 m long, Class A with stripped ends (-200 °C version) |
| HSRTD-3-100-A-2M-CRYO-TEMP | Hermetically sealed Pt100 RTD probe, 2 m long, Class A with stripped ends (-200 °C version) |
| **Class 1/3 B Hermetically Sealed 100 Ω RTD Probes:** | |
| HSRTD-3-100-1/3-1M | Hermetically sealed Pt100 RTD probe, 1 m long, Class 1/3 DIN with stripped ends. |
| HSRTD-3-100-1/3-2M | Hermetically sealed Pt100 RTD probe, 2 m long, Class 1/3 DIN with stripped ends. |
| **Class 1/10 B Hermetically Sealed 100 Ω RTD Probes:** | |
| HSRTD-3-100-1/10-1M | Hermetically sealed Pt100 RTD probe, 1 m long, Class 1/10 DIN with stripped ends. |
| HSRTD-3-100-1/10-2M | Hermetically sealed Pt100 RTD probe, 2 m long, Class 1/10 DIN with stripped ends. |
| **Class A Hermetically Sealed 1,000 Ω RTD Probes:** | |
| HSRTD-3-1000-A-1M | Hermetically sealed Pt1000 RTD probe, 1 m long, Class A with stripped ends. |
| HSRTD-3-1000-A-2M | Hermetically sealed Pt1000 RTD probe, 2 m long, Class A with stripped ends. |

# Ordering Guide - Imperial Offering

| Part Number | Element | Number of Wires | Wire Length |
|---|---|---|---|
| HSRTD-3-100-A-40-E | 100 Ω, Class "A" | 4 | 1 m (40 in) |
| HSRTD-3-100-A-80-E | 100 Ω, Class "A" | 4 | 2 m (80 in) |
| HSRTD-3-100-A-120-E | 100 Ω, Class "A" | 4 | 3 m (120 in) |
| HSRTD-3-100-A-180-E | 100 Ω, Class "A" | 4 | 4.5 m (180 in) |
| HSRTD-3-100-A-240-E | 100 Ω, Class "A" | 4 | 6 m (240 in) |

## Part Number Builder

HSRTD — (1) — (2) — (3) — (4) — (5) — (6) — (7)

**Series**
**HSRTD**

**Number of Wires (1)**
**1:** 2 Wire
**2:** 3 Wire
**3:** 4 Wire (Standard)

**Resistance Value (2)**
**100:** Pt100 (Standard)
**1000:** Pt1000

**Class Accuracy (3)**
**A:** Class A (Standard
**1/3:** 1/3 DIN (Pt100 only)
**1/10:** 1/10 DIN (Pt100 only)

**Wire Length (4)**
**xM:** Cable length in meters - 1 m, 2 m, 3 m, 5 m, 10 m, or 30 m
**40:** 40 inches
**80:** 80 inches
**For custom lengths, contact Sales**

**RTD Curve (7)**
**-E:** For inch versions, place a "-E" at the end the part number

**SS Cap (6)**
**Blank:** No cap (Standard)
**SS50MM:** 50mm Stainless Steel Cap

**Cryogenic (5)**
**Blank:** -60 °C to +250 °C (Standard)
**CRYO:** Cryogenic ( -200 °C to +250 °C)

**Note:** Sensors supplied standard with stripped leads. Custom cable lengths and connector options available – contact Sales for further information

**Ordering example:** **HSRTD-3-100-1/10-2M-CRYO:** 4 wire Pt100 RTD, 1/10 DIN accuracy, 2 m cable, rated -200 °C to 250 °C

**HSRTD-3-1000-A-40-E:** 4 wire Pt1000 RTD, Class A accuracy, 40 inch cable

### Accuracy Chart

**Interchangeability in °C**

| Temp °C | Class A | 1/3 DIN | 1/10 DIN |
|---|---|---|---|
| -100 | 0.35 | | |
| -50 | 0.25 | 0.18 | |
| 0 | 0.15 | 0.10 | 0.03 |
| 100 | 0.35 | 0.27 | 0.08 |
| 200 | 0.55 | 0.43 | |
| 250 | 0.65 | 0.52 | |
| 300 | 0.75 | | |
| 350 | 0.85 | | |
| 400 | 0.95 | | |
| 450 | 1.05 | | |