

ATEX / IECEx RTD Pt100s with Termination Entry Gland

RTD Pt100 Resistance Thermometers 3.0mm to 8.0mm dia.

Our ATEX / IECEx approved mineral insulated platinum resistance thermometers utilise, as standard, detector elements with a resistance of 100 ohms @ 0°C and a fundamental interval of 38.5 ohms to IEC 60751. Single and duplex elements are available.

- Approved to II 2 GD Ex d IIC Gb (Gas) and Ex tb IIIC Db (Dust)
- Also suitable for use in intrinsically safe areas to Ex II 1 G Ex ia IIC Ga, see page 19 for details
- Temperature classification T6-T1, see page 20 for stand-off requirements
- Available in B, A, 1/3, 1/5 and 1/10 grade accuracies
- Sheath diameters from 3.0mm to 8.0mm
- 316 seamless stainless steel sheath (other grades/materials available)
- Terminated in a compression gland pot seal with 100mm Kapton® sleeved tails
- Wide operating temperature range of -100°C to +600°C
- UKAS calibration available



Model shown is fitted with connection tails. A choice of cables is also available, see section 7

The above sensor must be terminated in a suitable ATEX / IECEx approved Enclosure or Box



| SECTION 1 | N° of Elements | SECTION 2 | Sheath Diameter (mm) | Sheath Diameter (inches) | SECTION 3 | N° of Wires | | | SECTION 4 | Sheath Length |
|-----------|----------------|----------------|----------------------|--------------------------|-----------|-------------|--|-------------|-----------|---------------|
| 1 | Simplex | Standard Sizes | 3.0mm | 0.118" | 2 | 2 wire | | As Required | | |
| 2 | Duplex | | 4.5mm | 0.177" | 3 | 3 wire | | | | |
| 3 | Triplex | | 6.0mm | 0.236" | 4 | 4 wire | | | | |
| | | | 8.0mm | 0.315" | | | | | | |

SECTION 5 Termination Entry Gland (please use code number to specify thread size and material for the sensor diameter chosen)

| Dia. | Thread Size | Order Code for Brass | Order Code for Stainless Steel |
|-------|-------------|----------------------|--------------------------------|
| 3.0mm | 16mm ISO | SFBM16-30CBEX | SFSM16-30CBEX |
| 4.5mm | 16mm ISO | SFBM16-45CBEX | SFSM16-45CBEX |
| 6.0mm | 16mm ISO | SFBM16-60CBEX | SFSM16-60CBEX |
| 8.0mm | 16mm ISO | SFBM16-80CBEX | SFSM16-80CBEX |
| 3.0mm | 20mm ISO | SFBM20-30CBEX | SFSM20-30CBEX |
| 4.5mm | 20mm ISO | SFBM20-45CBEX | SFSM20-45CBEX |
| 6.0mm | 20mm ISO | SFBM20-60CBEX | SFSM20-60CBEX |
| 8.0mm | 20mm ISO | SFBM20-80CBEX | SFSM20-80CBEX |

SECTION 6 Tolerance of Element (IEC 60751)

| Grade | Accuracy @ 0°C | Accuracy @100°C | Order Code |
|-------|----------------|-----------------|-------------|
| B | ±0.30°C | ±0.80°C | R100 - B |
| A | ±0.15°C | ±0.35°C | R100 - A |
| 1/3 | ±0.08°C | ±0.19°C | R100 - 1/3 |
| 1/5 | ±0.05°C | ±0.15°C | R100 - 1/5 |
| 1/10 | ±0.03°C | ±0.12°C | R100 - 1/10 |

SECTION 7 Optional Extension Cables (please specify length in metres)

| Code | Insulation | Seal rating | Diagram | Options |
|------|------------------------|-------------|---------|--|
| RP | PVC Insulation (105°C) | 90°C | | RP37 (3-wire) RP47 (4-wire) RP67 (Duplex 3-wire) |
| RT | PFA Insulation (250°C) | 230°C | | RT37 (3-wire) RT47 (4-wire) RT67 (Duplex 3-wire) |

* All cables have 7/0.2mm conductors. If no cable is required, leave this section of the order code blank and the sensor will be supplied with 100mm Kapton 'tails'.

SECTION 8 Optional Stainless Steel Adjustable Compression Fittings

| Dia. | 1/8" BSPT | 1/4" BSPT | 1/2" BSPT |
|-------|------------|------------|------------|
| 3.0mm | SFS18T30EX | SFS14T30EX | SFS12T30EX |
| 4.5mm | SFS18T45EX | SFS14T45EX | SFS12T45EX |
| 6.0mm | SFS18T60EX | SFS14T60EX | SFS12T60EX |
| 8.0mm | — | SFS14T80EX | SFS12T80EX |

Other thread sizes are available - please see page 14 for details.

Need advice

on using our ATEX approved products?
Contact one of our experienced engineers on **01895 252222**
International +44 1895 252222
or send an email to atex@tc.co.uk

| Type N° | I.S. Version (Optional, please see page 19 for details) | N° of Elements (See section 1) | Sheath Diameter (See section 2) | N° of Wires (See section 3) | Sheath Length (mm) | Termination (See section 5) | Resistance Value of Element | Grade of Element (See section 6) | Extension Cable (Optional, see section 7) | Compression Fitting (Optional, see section 8) |
|---------|---|--------------------------------|---------------------------------|-----------------------------|--------------------|-----------------------------|-----------------------------|----------------------------------|---|---|
| 57 | - IS | - 1 | - 3.0 | - 3 | - 250 | - SFSM2030CBEX | - R100 | - B | - 1m RP37 | - SFS14T30EX |

RTD Pt100 Sensors with Terminal Entry Gland

RTD Pt100 Resistance Thermometers 3.0mm to 8.0mm dia.

Our ATEX / IECEx approved mineral insulated platinum resistance thermometers utilise, as standard, detector elements with a resistance of 100 ohms @ 0°C and a fundamental interval of 38.5 ohms to IEC 60751. Single and duplex elements are available.

- Approved to II 3 GD Ex nA IIC Gc (Gas) and Ex tc IIIC Dc (Dust)
- Pt100 element conforming to BS EN 60751 / IEC 60751
- Available in B, A, 1/3, 1/5 and 1/10 grade accuracies
- Sheath diameters from 3.0mm to 8.0mm
- 316 seamless stainless steel sheath (other grades/materials available)
- Terminated in a compression gland pot seal with 100mm Kapton sleeved tails
- Simplex, duplex and triplex sensors available
- Wide operating temperature range of -100°C to +600°C
- UKAS calibration available



Model shown is fitted with connection tails.
A choice of cables is also available, see section 7

The above sensor must be terminated in a suitable ATEX / IECEx approved enclosure or box



| SECTION 1 N° of Elements | | SECTION 2 Sheath Diameter (mm) / Sheath Diameter (inches) | | SECTION 3 N° of Wires | | | SECTION 4 Sheath Length |
|--------------------------|---------|---|-------|-----------------------|--|-------------|-------------------------|
| 1 | Simplex | Standard Sizes | 3.0mm | 0.118" | | As Required | |
| 2 | Duplex | | 4.5mm | 0.177" | | | |
| | | | 6.0mm | 0.236" | | | |
| 3 | Triplex | | 8.0mm | 0.315" | | | |

| SECTION 5 Termination Entry Gland (please use code number to specify thread size and material for the sensor diameter chosen) | | | |
|---|-------------|----------------------|--------------------------------|
| Dia. | Thread Size | Order Code for Brass | Order Code for Stainless Steel |
| 3.0mm | 16mm ISO | SFBM16-30CB | SFSM16-30CB |
| 4.5mm | 16mm ISO | SFBM16-45CB | SFSM16-45CB |
| 6.0mm | 16mm ISO | SFBM16-60CB | SFSM16-60CB |
| 8.0mm | 16mm ISO | SFBM16-80CB | SFSM16-80CB |
| 3.0mm | 20mm ISO | SFBM20-30CB | SFSM20-30CB |
| 4.5mm | 20mm ISO | SFBM20-45CB | SFSM20-45CB |
| 6.0mm | 20mm ISO | SFBM20-60CB | SFSM20-60CB |
| 8.0mm | 20mm ISO | SFBM20-80CB | SFSM20-80CB |

| SECTION 6 Tolerance of Element (IEC 60751) | | | |
|--|----------------|------------------|-------------|
| Grade | Accuracy @ 0°C | Accuracy @ 100°C | Order Code |
| B | ±0.30°C | ±0.80°C | R100 - B |
| A | ±0.15°C | ±0.35°C | R100 - A |
| 1/3 | ±0.08°C | ±0.19°C | R100 - 1/3 |
| 1/5 | ±0.05°C | ±0.15°C | R100 - 1/5 |
| 1/10 | ±0.03°C | ±0.12°C | R100 - 1/10 |

| SECTION 7 Optional Extension Cables (please specify length in metres) | | |
|---|--|----------------------|
| RP | PVC Insulation (105°C) (Seal rating: 125°C) | RP37 (3-wire) |
| | | RP47 (4-wire) |
| | | RP67 (Duplex 3-wire) |
| RT | PFA Insulation (250°C) (Seal rating: 225°C) | RT37 (3-wire) |
| | | RT47 (4-wire) |
| | | RT67 (Duplex 3-wire) |

* All cables have 7/0.2mm conductors. If no cable is required, leave this section of the order code blank and the sensor will be supplied with 100mm Kapton 'tails'.

| SECTION 8 Optional Stainless Steel Adjustable Compression Fittings | | | |
|--|-----------|-----------|-----------|
| Dia. | 1/8" BSPT | 1/4" BSPT | 1/2" BSPT |
| 3.0mm | SFS18T30 | SFS14T30 | SFS12T30 |
| 4.5mm | SFS18T45 | SFS14T45 | SFS12T45 |
| 6.0mm | SFS18T60 | SFS14T60 | SFS12T60 |
| 8.0mm | — | SFS14T80 | SFS12T80 |

Other thread sizes and materials available. Contact us for details.

Need advice

on using our **ATEX** approved products?
Contact one of our experienced engineers on
01895 252222
International +44 1895 252222
or send an email to atex@tc.co.uk

| Order Code - Example | | | | | | | | | |
|----------------------|--------------------------------|-----------------------------|-----------------------------|--------------------|-----------------------------|-----------------------------|----------------------------------|---|---|
| Type N° | N° of Elements (See section 1) | Sheath Dia. (See section 2) | N° of Wires (See section 3) | Sheath Length (mm) | Termination (See section 5) | Resistance Value of Element | Grade of Element (See section 6) | Extension Cable (Optional, see section 7) | Compression Fitting (Optional, see section 8) |
| 37 | - 1 | - 3.0 | - 3 | - 250 | - SFSM2030CB | - R100 | - B | - 1m RP37 | - SFS14T30 |