Explosion proof type
Sheathed thermocouple and resistance temperature detector with spring load
Model : R921, R922 (RS series)

Service intended
Generally, sheathed type temperature sensors are used with thermowell. To maximize the heat-transfer between sheath junction and thermowell, the sheath must be inserted as close as possible to the bottom of the well. However, it is not always possible to determine the actual distance between the end tip of the sheath and the bottom of the thermowell. Furthermore, heat expansion can damage the sheath which is located inside the thermowell. To prevent this uncertainty and the damage to the sheath, RS series employ the spring load type sheath. This spring load absorbs the impact to the sheath, and protects the sheath from the vibration. Moreover, it is designed to be used in an explosive area.

Examination certificate
Ex d IIC T6 IP65

Standard features

Element
Thermocouple : K, E, J, T, N
R.T.D. : Pt 100Ω at 0°C

Tolerances on temperature reading
- Thermocouple
Class 1, Class 2 (DIN/IEC584-2, BS/EN60584-2, JIS C1602)
Special, Standard (ASTM E230 E988 ISA-MC96.1)
- R.T.D.
Class A : ± (0.15 + 0.002 l t l)
Class B : ± (0.3 + 0.005 l t l)

Head type

Head material
ALDC (Standard)
316SS

Sheath outer diameters
- Thermocouple
1.0, 1.6, 2.3, 3.2, 4.8, 6.4, 8.0, 9.5 and 12.7 mm
- Double elements is not available for 1.0 and 1.6 mm sheath outer diameters
- R.T.D.
3.2, 4.8, 6.4 and 8.0 mm
### Main order

#### 1. Base model
- **R921**: Single element
- **R922**: Double (Duplex) element

#### 2. Head and tip shape type
- **A**: Explosion proof and ungrounded
- **B**: Explosion proof and grounded
- **C**: Explosion proof (Double conduit) and ungrounded
- **D**: Explosion proof (Double conduit) and grounded
- **E**: Explosion proof (316SS) and ungrounded
- **F**: Explosion proof (316SS) and grounded

#### 3. Element
- **K**: K (0.75)
- **J**: J (0.75)
- **T**: T (0.75)
- **N**: N (0.75)
- **E**: E (0.5)
- **B**: B (0.5)
- **R**: R (0.25)
- **S**: S (0.25)
- **Q**: Pt 100Ω (B)

#### 4. Sheath material (RTD. is only 316SS and 316L SS)
- **1**: 316SS
- **2**: Inconel 600
- **3**: 310SS
- **4**: 446SS
- **5**: 347SS
- **6**: 321SS
- **7**: 316L SS
- **9**: Other

#### 5. Sheath outer diameter (mm)
- **A9**: 1.0 (Thermocouple only)
- **B9**: 1.6 (Thermocouple only)
- **C9**: 2.3 (Thermocouple only)
- **D9**: 3.2
- **E9**: 4.8
- **F9**: 6.4
- **G9**: 8.0
- **H9**: 9.5 (Thermocouple only)
- **L9**: 12.7 (Thermocouple only)

### Ordering information

#### 6. Conduit connection
- **1**: ½" PF
- **2**: ½" PT
- **3**: ½" NPT
- **4**: ¾" PF
- **5**: ¾" PT
- **6**: ¾" NPT
- **9**: Other

#### 7. Mounting type
- **X**: Refer to mounting table (11th character)

#### 8. Connection type
- **XX**: Refer to connection type table (12th and 13th character)

#### 9. Insert length
- **X**: Refer to insert length table (14th character)

#### 10. Option
- **0**: None
- **1**: Accessories

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**Sample ordering code**

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- Note for 14th character, please choose a code of next higher length if applicable length is not.
- Actual length shall be specified.
- Note for "Y" code (Oil sealing type), only available with spring-loaded head type.