

8TR4C Series

Exhaust Gas Thermocouples

For Frame 7 & 9 Gas Turbine Applications

The AMETEK Power Instruments' 8TR4C Series Exhaust Gas Thermocouples (EGT) for Frame 7 and 9 applications have been designed, fully tested and qualified to meet OEM specifications. Working closely with the OEM turbine manufacturer, we have qualified and engine tested this thermocouple as a direct replacement, or for upgrading older style exhaust gas thermocouples.

These OEM qualified exhaust gas thermocouples use type K wire, MgO insulation and an Inconel sheath material. The thermocouple tip and junction box are hermetically sealed and have been qualified to ASTM E1652 with a leak rate of less than 1×10^{-6} cc/sec.

AMETEK 8TR4C Series connectorized thermocouples use a circular, channeled, connector mating to an anti-vibration fitting on the mating cable. The ease of this new connection reduces total errors and labor hours.

AMETEK also manufactures the full line of matching cables to compliment the 8TR4C Series of EGTs.

FEATURES AND BENEFITS

1	OEM qualified
2	Hermetically sealed to ensure a long product life and continuous accuracy
3	Material selection to eliminate seizure
4	Positive stop to ensure proper seating of thermocouple within the radiation shield
5	Quick installation - Compression fitting and bushing design allow for fast and easy replacement
6	Connectorized cable - Foolproof installation and easier than ever cable connection

SPECIFICATIONS

TIME RESPONSE

- Less than 2.5 seconds for 0.090 tip diameters

ACCURACY

- Special Limits: $\pm 0.4\%$ for exhaust gas type thermocouples

HERMETIC SEAL

- 1×10^{-6} cc/sec

ENVIRONMENT

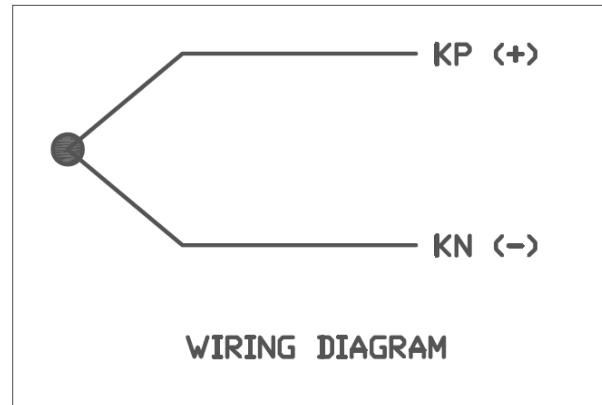
- 100% humidity for entire thermocouple
- Maximum Operating Temperature: $1,149^{\circ}\text{C}$ ($2,100^{\circ}\text{F}$)
- Calibration: 649°C ($1,200^{\circ}\text{F}$)
- Connector Maximum Temperature: 260°C (500°F)

MATERIAL

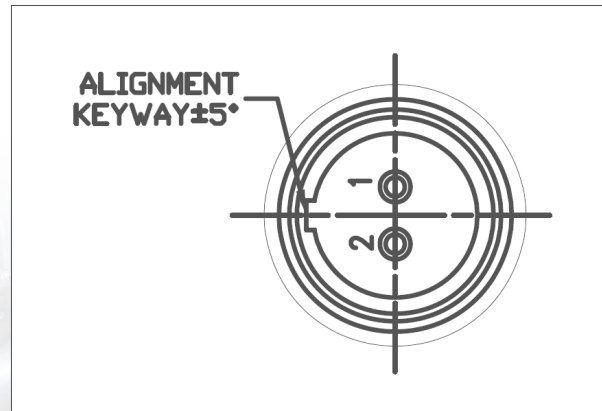
- Ungrounded Type "K" Thermocouple – Single Junction
- Inconel 625 Sheath Material
- Magnesium Oxide (MgO) Insulation per ASTM E1652

STANDARDS

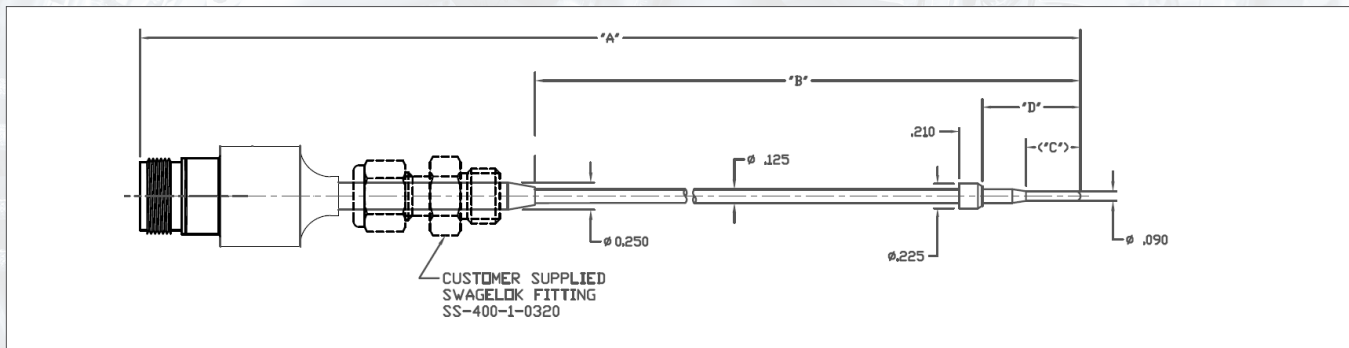
- ASME 19.3
- ASTM E585
- ASTM STP 470A
- ASTM E608
- ASTM E839
- ASTM E235
- ASTM B829
- ASTM B444
- ASTM A632
- ASTM E1652
- MIL-STD-810
- MIL-STD-202



8TR4C Series Wiring



8TR4C Series Connector



AMETEK Power Instruments also manufactures a full line of sensors for gas and steam turbine applications. These include flame sensors, RTDs, thermocouples, cables and radiation shields. We manufacture to OEM requirements and can design and test to meet your unique application requirements. For more information, please visit our website at www.ametekpower.com or contact us directly at pi.marketing@ametek.com.

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REV 06/2023

