

# Exhaust Gas and Wheel Space Thermocouples

FOR FRAME 5, 6, 7, AND 9 GAS TURBINE APPLICATIONS

**POWER  
& INDUSTRIAL**

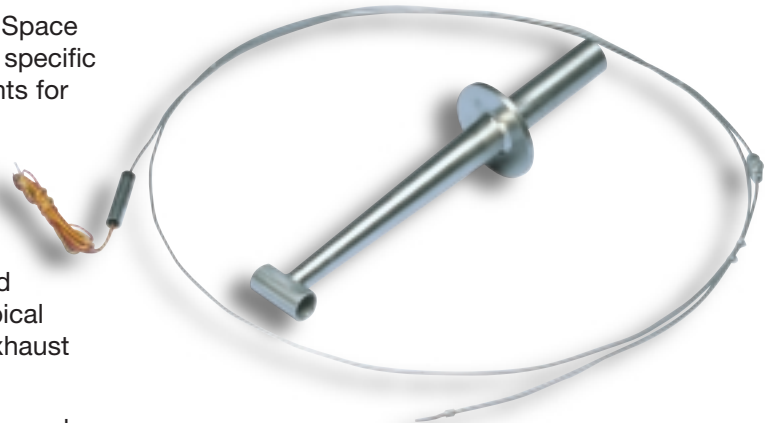
## THERMOCOUPLE

AMETEK Exhaust Gas (EGT) and Wheel Space Frame Turbine Thermocouples meet the specific operational and performance requirements for **REPLACEMENT** and **RETROFIT** Frame gas turbine applications. AMETEK's expertise in solving creep, stress, rupture, corrosion, EMF drift, and other problems affecting sensor performance has resulted in a robust line of single and dual element thermocouple designs. Typical applications include wheel space and exhaust gas temperature monitoring.

AMETEK EGT and Wheel Space Thermocouples use Type K wire with MgO insulation and stainless steel sheathing. The thermocouple probe tips and terminations are hermetically sealed against exposure to operational environments and have been qualified to ASTM E585 and ASTM E608 standards, with a leak rate of less than  $1 \times 10^{-6}$  cc/sec.

For exhaust gas applications, AMETEK manufactures production-qualified radiation shields. These shields, together with AMETEK EGT Thermocouples, form a system that controls thermocouple immersion depth, eliminates fretting due to vibration, and provides improved turbine performance.

AMETEK can provide kits to **RETROFIT** older Frame turbines with this improved thermocouple and radiation shield configuration. Contact AMETEK for a cross-reference list that contains hundreds of different thermocouple, radiation shield, and retrofit kit part numbers.



## FEATURES AND BENEFITS

- Hermetically-sealed single and dual junction configurations
- Exhaust gas temperature systems prevent:
  - Mechanical probe damage at installation*
  - Tip vibration during normal operation*
- Rapid time response
- Cost-effective retrofit capability
- AMETEK quality, OEM experience, and worldwide service



**AMETEK®**

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## SPECIFICATIONS

### Time Response

- Below 1.3 sec for 0.125 tip diameters
- Below 0.8 sec for 0.0625 tip diameters

### Calibration

- ± 0.75% for Type K thermocouples
- ± 0.4% for all exhaust gas temperature thermocouples

### Hermetic Seal

- $1 \times 10^{-6}$  cc/sec

### Temperature at Environmental Seal

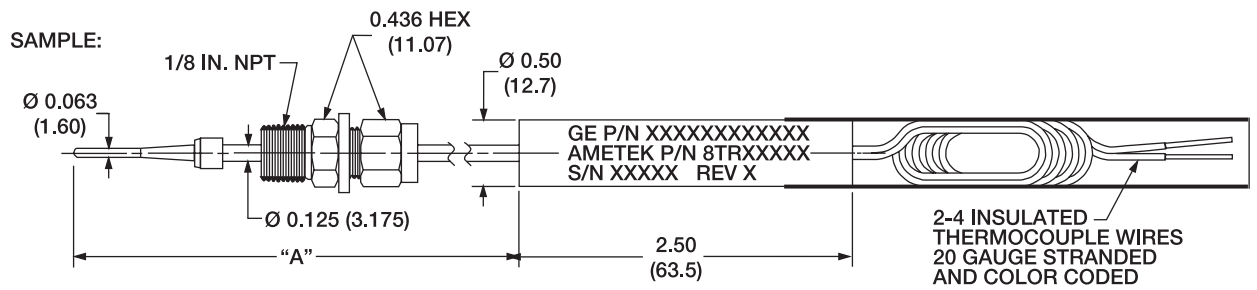
- -70° to 400°F (-57° to 204°C)

### Lengths

- Various from 60" to 500"

### Sheath Diameters

- 0.062" to 0.125"



NOTE: Dimension (A) varies between 60 and 500 inches depending on the part number ordered.

IN  
(MM)



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