

# Qualified Hermetic Exhaust Gas Temperature Thermocouple Upgrade

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

**POWER  
& INDUSTRIAL**

## THERMOCOUPLE

### ***FIT-IT & FORGET-IT***

Eliminate Exhaust Gas Temperature (EGT) thermocouple concerns with AMETEK's new EGT thermocouple product offering for Frame turbine applications. AMETEK has worked closely with the turbine OEM to design and engine test this thermocouple as a direct replacement and upgrade for all new and existing EGT thermocouples. The new EGT thermocouples are qualified and meet all design specifications.

### ***MISTAKE-FREE INSTALLATION***

The new EGT design makes it impossible to over-tighten, while ensuring the proper immersion depth of the thermocouple into the radiation shield. Furthermore, the new EGT design allows the cable leads to be attached to the thermocouple prior to insertion into the radiation shield, and also enables a convenient, stress-free orientation of the thermocouple junction box and cable leads.

### ***SINGLE EGT THERMOCOUPLES AND COMPLETE UPGRADE KITS AVAILABLE***

Whether you are upgrading from the 302A4010Pxxx, 351A3488Pxxx, or the 362A1102Pxxx EGT thermocouples, AMETEK can provide either the thermocouples only or the complete upgrade kit with all the required fittings, adapters, and cables. A more detailed description of the many different upgrade options available, including parts lists, installation instructions, and drawings, can be found in AMETEK's **EGT THERMOCOUPLE RETROFIT MANUAL**.

## FEATURES AND BENEFITS

- Foolproof Installation—ensures proper insertion depth and eliminates over-tightening induced open circuit failures
- Flexible Installation—enables cable leads to be connected prior to assembly and a stress-free orientation of the thermocouple junction box and cable leads
- Quick Installation—use of compression fitting significantly reduces installation time
- New Probe Design—eliminates thermal gradient differences that could cause thermocouple element breakage
- Includes the Benefits of the Original Design—100% Hermetic for high accuracy and long life, *Positive Stop* to ensure proper location of the thermocouple into the radiation shield, *Material Selection* eliminates seizure, *Type K Terminal Studs* to reduce secondary junction error, and a *Junction Box* that simplifies installation and makes cable connection foolproof

**AMETEK®**

**POWER  
INSTRUMENTS**

Experience the Power™

## SPECIFICATIONS

### Calibration

- Type K, ungrounded
- Error: special limits ( $\pm 0.4\%$ )

### Time Response

- Approximately 2.9 seconds

### Hermetic Seal

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

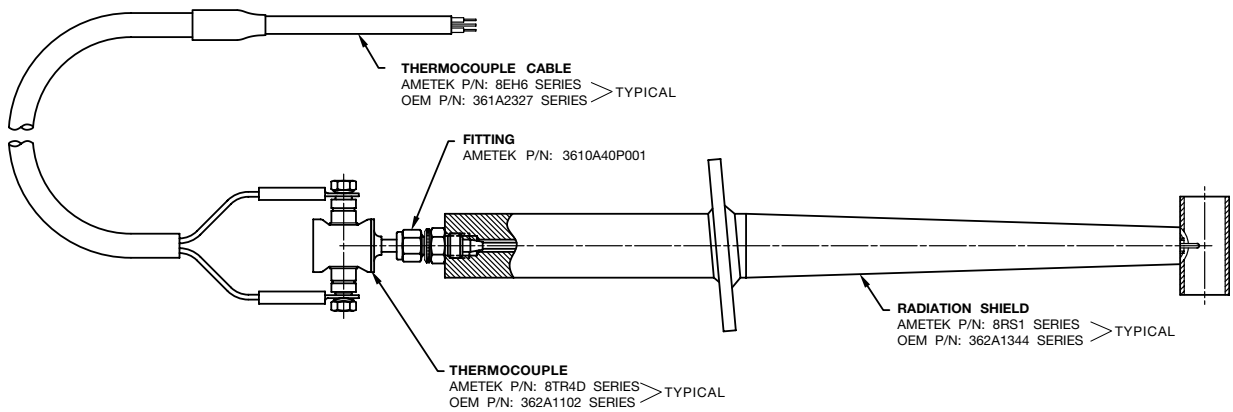
### Environment

- $-20^{\circ}$  to  $700^{\circ}\text{F}$  at thermocouple junction box ( $-29^{\circ}$  to  $371^{\circ}\text{C}$ )
- $-20^{\circ}$  to  $392^{\circ}\text{F}$  for the cable ( $-29^{\circ}$  to  $200^{\circ}\text{C}$ )
- 100% humidity for the entire thermocouple

### Lengths

- For Frame 5, 6, 7, and 9 gas turbine applications

Figure 1: Replacing 362A1102P001, P006, or P011 EGT Thermocouples



For details on how to replace 302A4010Pxxx or 351A3488Pxxx EGT Thermocouples, please refer to AMETEK's **EGT THERMOCOUPLE RETROFIT MANUAL**.



For customer support call:

#### POWER INSTRUMENTS

50 Fordham Road  
Wilmington, MA 01887  
Tel: 978.988.4903  
Fax: 978.988.4990  
power.sales@ametek.com

#### HEADQUARTERS

AMETEK Power Instruments  
50 Fordham Road  
Wilmington, MA 01887  
Tel: 978.988.4903  
Fax: 978.988.4990  
power.sales@ametek.com

#### EUROPEAN HEADQUARTERS

Unit 20, Ridgeway  
Donibristle Industrial Estate  
Dalgety Bay, Dunfermline, KY119JN  
Scotland U.K.  
Tel: 44.1383.825630  
Fax: 44.1383.825715  
power.sales@ametek.com

#### ASIA PACIFIC HEADQUARTERS

10 Ang Mo Kio Street 65  
#05-12 Techpoint  
Singapore 569059  
Tel: 65.6484.2388  
Fax: 65.6481.6588



ISO 9001 Certified