



Enhanced Exhaust Gas Thermocouples

Introducing New and Improved Exhaust Gas Thermocouples
Exclusively from Conax Technologies



Patent Pending

Product Features and Benefits

- Superior design
- Superior quality
- Hermetically sealed for high accuracy and long life
- Simple quick installation saves time
- Parts are usually in stock to provide quick turn around time
- Interchangeable with OEM equipment

Conax Technologies has designed an innovative and unique approach to exhaust gas temperature sensors. These sensors address the problem of having sensor tips breaking off prematurely in service because the thermal expansion of radiation shields currently causes sensors within them to vibrate appreciably. A high temperature compression spring is built into these sensor sheaths so that through the spring's oscillating characteristics in dealing with stress and strain, the spring dampens the vibration and keeps the temperature sensor tip stable within the radiation shield by ensuring a continuity of contact between the stop on the sheath and the seat of the radiation shield.

Conax Technologies' hermetically designed exhaust gas thermocouples have been field tested and proved to be more reliable than other suppliers' products for Frame turbine applications. This 100% hermetic thermocouple also has the latest more compatible materials to help eliminate open circuits during start up, thus eliminating false turbine trips and inconvenient down times. Our new exhaust gas thermocouple has been subjected to rigorous qualification tests including vibration testing to 10 million cycles of simulated on turbine operation, thermal cycling the measuring tip 20,000 times between 1220°F and room temperature, and thermal cycling the hermetic terminal head 600 times between 700°F and -65°F, passing all OEM qualification tests and meeting all design specifications required by the OEM. Our unit is manufactured with an all welded construction that is superior to brazing in prolonging the life of the thermocouple. This thermocouple is a direct replacement for all other exhaust gas thermocouples on Frame turbines, whether you are replacing or upgrading your equipment.

Precise Installation

Conax exhaust gas thermocouples are designed to ensure proper installation every time. The bushing at the sensing end of the thermocouple seats firmly into the radiation shield allowing the junction to be in the proper position, giving you the optimum response time and accurate temperature measurement. The bushing is also fabricated of materials that reduces the possibility of seizure in the radiation shield. The cold end features a ceramic insulated junction box using two different size studs to guarantee proper installation every time. It also enables a convenient, stress-free orientation of the thermocouple junction box as it relates to the mating cable by using a compression fitting.

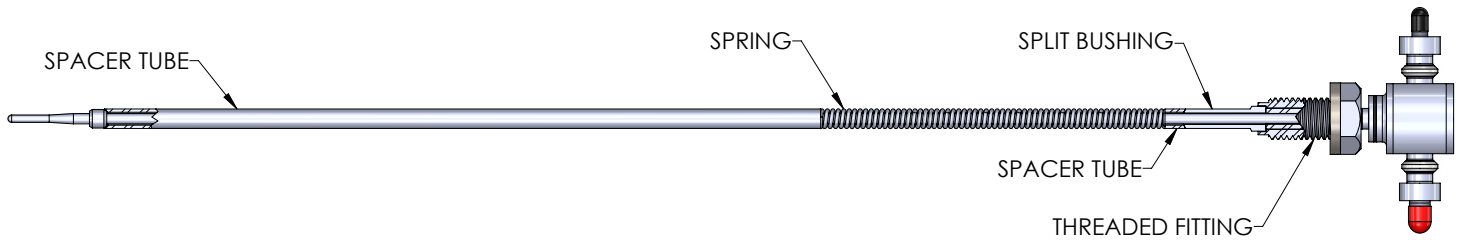
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Product Design Features

Conax Enhanced Hermetic Exhaust Gas Thermocouple



Specifications

Calibration

- Type K, Chromel Alumel®
- $\pm 0.4\%$ accuracy (special limits of error)
- Meets the requirements of ASTM E585 and ASTM E608

Insulation Resistance:

- 1×10^9 ohms @ 500 VDC

Time Response:

- 2.9 seconds

Hermetic Seal:

- 1×10^{-6} ssc/sec He for the entire thermocouple

Sheath Diameter:

- 0.125"

Environmental Ranges:

- -20° to 700°F (-29° to 371°C) at the termination
- -20° to 392°F (-29° to 200°C) for the cable
- 100% humidity for the entire thermocouple

Applications:

- Frame turbines

Related Products

- Wheelspace & Exhaust Gas Thermocouple – Model 351A3488
Bulletin 6052
- Exhaust Gas Thermocouple – Model 372A2221
Bulletin 6069
- Bearing Sensors: Bulletin 6035B
- Hermetic Wheelspace Thermocouples – Model 361A2289
Bulletin 6053
- Bearing Sensor Wire Seals: Catalog 5001D
- RTDs/Thermocouples: Bulletin 6002
- Frame 5, 6, 7 Retrofit Exhaust Gas Sensors
Bulletin 6064

Also Available from Conax Technologies

- Radiation shields – Model 362A1344Pxxx
- Mating cables – Model 361A2327Pxxx