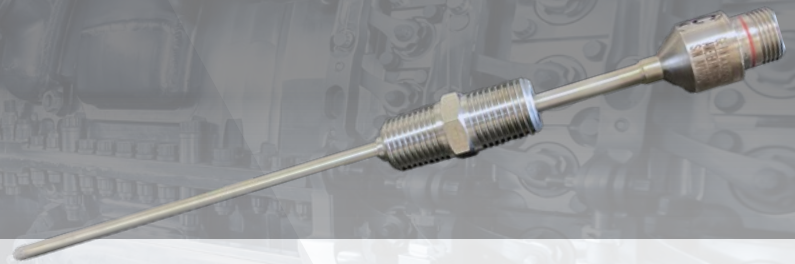


## TEMPERATURE PRODUCTS



# 8TC70 Series Spring/Non-Spring-Loaded Thermocouple Probe

## For Frame 6, 7 and 9 Gas Turbine Applications

AMETEK Power Instruments 8TC70 Series of immersed thermocouples utilize a hermetically sealed connector to provide protection against degradation when monitoring oil and fuel temperatures within the turbine. Available in either spring-loaded or non-spring-loaded configuration, our thermocouples are ready to withstand the harsh and corrosive environments while effectively and accurately monitoring temperature.

The non-spring-loaded thermocouple is specifically designed for direct immersion mounting while maintaining constant contact with the substance being monitored during operation. The spring-loaded design is manufactured to fit perfectly inside a thermowell installed on the turbine to optimize accuracy when measuring temperature. The thermowell acts as a protective barrier to the sensor to keep the sensor free from harmful substances that can degrade the life of it. The spring-loaded design allows the thermocouple to move within the thermowell as needed to ensure constant contact is maintained while monitoring the temperature. While the time response is slower when utilizing a thermowell, it is a vital part of the construction that allows the sensor to be immersed in high temperatures with corrosive materials.

Our 8TC70 immersed thermocouples use a 1/4" sheath diameter made of 321SST with a 2-conductor Type K junction. Its 260°C hermetically sealed connector is attached to its seamless shaft design, isolating itself from any environmental effects that could degrade the thermocouple. Manufactured and tested on base and peak load operation, our thermocouples meet the requirements of ASTM E608 and E585 with an accuracy of 1.1°C or 0.4%.

### FEATURES AND BENEFITS

1	OEM Qualified
2	Available in Spring or Non-Spring-Loaded configurations
3	Spring-loaded design allows movement of the T/C to maintain constant contact with the thermowell
4	Quick connect style connector allows for faster installation and removal
5	Hermetically sealed connector
6	Available in either SST or Inconel Sheath material

For detailed descriptions and drawings for the 8TC70 Series Spring/Non-Spring-Loaded Thermocouple Probe, please contact us.

# SPECIFICATIONS

## VIBRATION

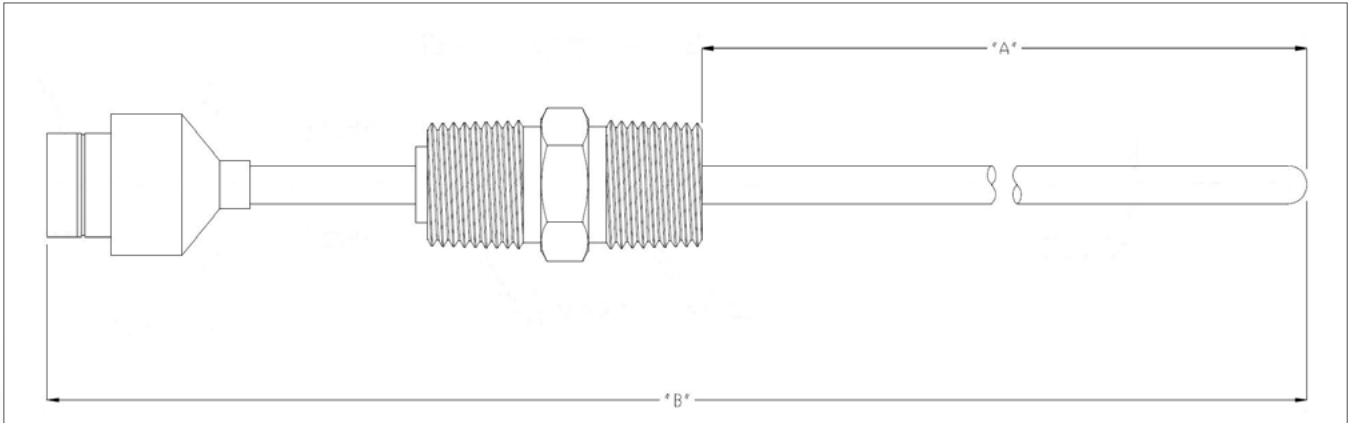
- 20 – 600 Hz Vibration Sweep to detect Resonance frequencies

## ENVIRONMENTAL SEAL TEMPERATURE

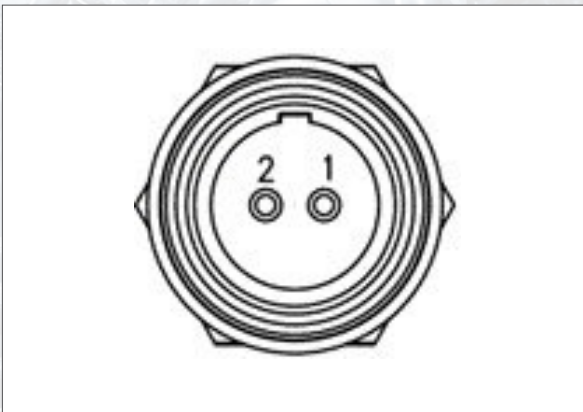
- -20°C to 250°C (-4°F to 482°F)

## CONFIGURATION

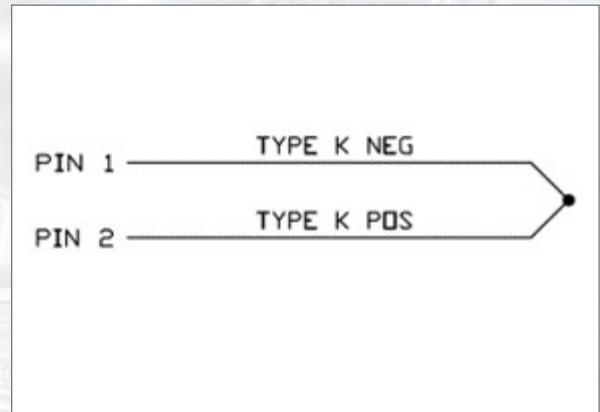
- Non-Spring-Loaded – used for direct immersion
- Spring-Loaded – used for thermowell mounting



Thermocouple Configuration



Connection Head



Wiring Diagram

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](http://www.ametekpower.com) or contact us directly at [pi.marketing@ametek.com](mailto:pi.marketing@ametek.com).

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REV 02/2023

