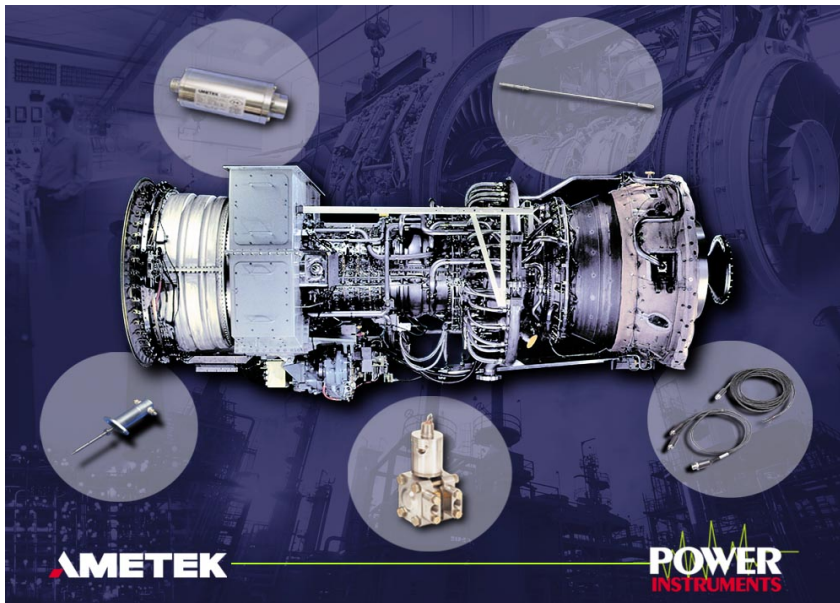


AMETEK POWER INSTRUMENTS Company Capabilities T/C's and Cabling

Design Engineering - Mechanical, Electrical, Software, Metallurgical & Optical
Qualification Testing & Material Analysis
MFG. - Custom Designs or Build-To-Print
Field Service / Product Support
Repair / Overhaul Facility



Products

- Thermocouples – Exhaust, Inlet, Compressor, Wheelspace, ...
- Thermocouple & Pressure Rakes
- Electrical & Thermocouple Cables/Harnesses
- Radiation Shields
- Flame Sensors & Signal Conditioning Systems
- Pressure Transmitters

Thermocouple Capabilities

- Custom designed to meet specific requirements
- Qualification testing performed in-house
- High temperature – up to 2200F
- Harsh mechanical environment
 - 0-2000Hz up to 20 Gs Input
 - Corrosive environments
 - High pressure
- Fast response - <2 sec
- Hermetic
 - Improves Longevity, Accuracy, & Performance
- Tight mechanical tolerances
- Ability to use connectors
 - Up to 1000 °F
 - No secondary junctions
 - Ease of Installation
 - Hermetic design



Thermocouple Differentiators

- Custom Design, Test, and Mfg. Capability
- AMETEK has >50 Years Experience
- Aerospace Mentality for Industrial Market
- High Volume Capability (>1,000/week)
- Continuous Operational Improvements

Cable Capabilities

- Custom designed to meet specific requirements
 - Qualification testing performed in-house
 - Thermocouple, Electrical, EMI/RFI shielded cables
- Mil-Std connectors
- Potted and molded backshells
- Braiding
 - Stainless, nickel, Teflon, fiberglass, Kevlar
- Water resistant to water proof
 - High pressure water soak



Cable Differentiators

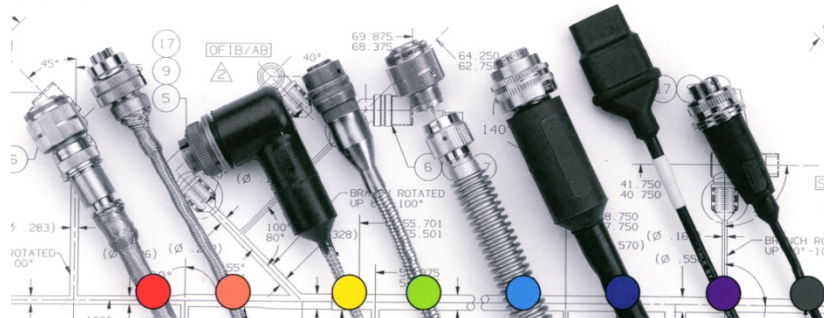
- Custom Design, Test, and Mfg. Capability
- AMETEK is OEM Qualified on many Gas Turbines
- AMETEK has Experience with VERY critical apps.
 - Missile launch cables
 - Fly-By-Wire cables for B777
- High Volume Capability (>1200/week)



• SUPPLIED TO EACH CONNECTOR TO FOREIGN MATERIAL AND ASSEMBLY WITHOUT REMOVING THE COVER.

vg U05.

T3	D38999/26KB-98SN
TVIB	D38999/26KA-98SA
WF	D38999/26KB-98SN



GT30 Flame Sensor

- Smallest sensor: 4.67" long x 2.5" diameter
- Highest pressure lens: 435 psi (30 Bar)
- Greatest temperature range: -40°F - 700°F
- Detects wide UV spectrum: provides strong output even during water or steam injection
- Wide dynamic range: dual gain amplifier with saturation limiting circuitry
- Adaptable to any gas turbine
- Easy mounting on 3/4 inch NPT thread
- 4-20 mA output directly from the sensor eliminates the need for a separate amplifier
 - Can connect 4-20 mA output directly to engine controller or through a relay module
- Low voltage 24 VDC input eliminates need for special wiring considerations, such as conduit
- Numerous cabling options
 - Length, shielding, etc.



Gulton Statham Pressure Transmitters

- High Accuracy Option (0.1% or better)
- High Temperature Option (220°F ambient)
- Fast Response Option (3-7 Milliseconds)
- High Pressure Gage (10,000 psi)
- High Line Pressure (10,000 psi w/30" range)
- Zero Suppression and Elevation
 - 5:1 Turndown
- High Reliability Sensing Technology
- All Welded 316 SST Construction
- Submersible
- Hermetically Sealed
- Five year warranty
- FM/CSA/CENELEC IS & EXP Agency Approvals
- GOST-R Approval
- Optional with nuclear approvals (IEEE, KTA)



Typical Gas Turbine Applications:

- | | | | |
|--------------------|-----------|----------------|-----------|
| • Surge Control | | • Fuel Supply | 300 psig |
| • Fuel Skids | | • Fuel Flow | 150" wc |
| • Liquid Level | 100 psig | • Compressor | 300 psig |
| • Air Flow | 1000 psig | • Bell Housing | 20" wc |
| • Turbine Inlet | 20" wc | • Silencer | 15.2 psia |
| • Bearing Lube | 200 psig | • Steam Supply | 300 psig |
| • Lube Oil | 50 psig | • Steam Flow | 30" wc |
| • Hydraulic Pump | 2000 psig | • Atmospheric | 15 psia |
| • Hydraulic Filter | 5 psid | | |