



HARCOSEMCO
EMPOWERED 2 BE BETTER

THERMOCOUPLES



ENGINE | FIXED WING | ROTORCRAFT

OIL, FUEL TEMPERATURE AND T5 THERMOCOUPLE PROBES

Our family of high temperature thermocouple probes is ruggedly constructed and is available with an exposed junction for quick response or an enclosed insulated junction for exhaust gas environments. The replaceable element probes have separate protective body and gas sampling ports.

Associated high-temperature cable and connector designs are capable of operating up to 2000°F with consistent results. Our conductors are available in thermocouple alloys, nickel-plated copper alloy, optical fibers, or in any combination of these materials. Insulation materials are non-asbestos and perform in extreme temperatures. Outer metallic braids of stainless steel, nickel, or inconel can be applied to cables for enhanced abrasion protection.

FEATURES

- Standard thermocouple alloy stud and nut output terminals
- Hermetically sealed connector or flexible leads
- Available in standard or custom configurations and calibrations

BENEFITS

- Low lifecycle cost
- High reliability

APPLICATIONS

- Averaging or individual multiple depth temperature sensing



FLEXIBLE THERMOCOUPLE ASSEMBLY

Our hermetically sealed probes have demonstrated consistent, trouble-free performance in installations around the globe. In typical applications, multiple EGT probes are connected to a single, flexible cable assembly. This provides the ability to easily replace individual probes—a distinct maintenance advantage over rigid thermocouple harnesses.

FEATURES

- Temperature Range: -65°F to 2300°F • Accuracy: ± 2°F from 32°F to 530°F, ±.4% from 530°F to 2000°F

BENEFITS

- Single unit – saving weight and complexity • Highly reliable • Additional features can be added

APPLICATIONS

- Exhaust Gas Temperature • Inlet Sensor • T5 Sensor

RIGID THERMOCOUPLE RAKE ASSEMBLY

Custom-designed rigid thermocouple assemblies provide a cost-effective solution for measuring critical temperature parameters in commercial and military aircraft, and industrial and marine gas turbines applications. Leveraging years of application experience, our rigid assemblies incorporate innovative design, superior construction, excellent performance, and proven reliability for installations around the world. We also offer an array of thermocouples with our SEMPAK® material, a dense composite of metal sheath and wire which is insulated by a compacted ceramic.

FEATURES

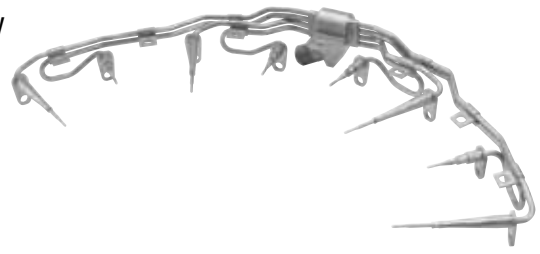
- Application-specific design • Rugged superalloy construction • Mineral insulated cable • Hermetically sealed
- Wide temperature range • Fast response time • High shock resistance • OEM spec compliance
- Multiple measurement points • Dual channel • Averaging/Individual readings

BENEFITS

- Harsh environmental operation • High accuracy • Excellent stability
- Ease of installation • Low maintenance • Low-cost redundancy

APPLICATIONS

- Exhaust gas temperature (EGT) • T3 through T6 • Sensor system
- Industrial power generation



THERMOCOUPLE IMMERSION PROBES

HarcoSemco’s family of immersion probes are typically used for total temperature, stagnation, and direct reading applications. Temperature and/or pressure sensing can be incorporated in the same housing. Immersion probes provide specific or averaging of temperatures at multiple immersion depths with resistance balancing for true electrical average. These immersion probes are often used with flexible thermocouple assemblies and are designed with studs to accommodate attachment to ring terminals on the flexible thermocouple assemblies.

FEATURES

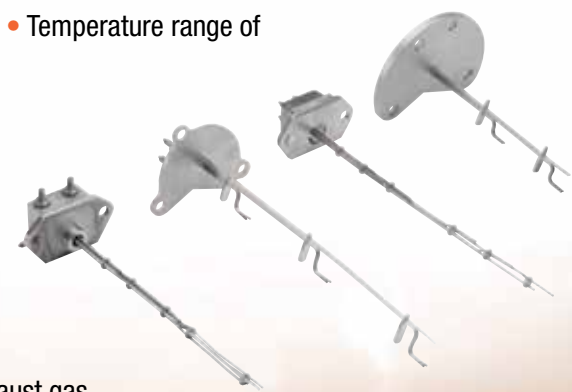
- Individually replaceable sensors • Enclosed or exposed junctions • Temperature range of -65°F to 2300°F • Hermetically sealed

BENEFITS

- Custom engineering provides the best performance and fit to meet demanding application • Removable, replaceable sensing element can be incorporated to optimize field maintenance

APPLICATIONS

- Oil temperature monitoring • Fuel temperature monitoring • Exhaust gas



INTEGRATED THERMOCOUPLE/CABLE ASSEMBLY

The Integrated Thermocouple-Cable Assembly is a high temperature-capable design that features an overmolded transition at the cable to probe interface. This provides a moisture-proof seal to the probe. Coupled with the overmolded connector, the entire cable assembly is waterproof.

FEATURES

- Incorporates EMI/RFI shielding • Abrasion resistant jacketing of Teflon® spiral wrap • Stainless steel or other materials can be utilized based on environmental operating conditions • Separate sensor immersion depths with individual or averaged outputs • Color coded cable

BENEFITS

- Flexible harness incorporates probes and eliminates need for multiple part management.

APPLICATIONS

- Exhaust gas temperature (EGT) • T3 through T6 • Sensor system
- Industrial power generation



HARCOSEMCO EMPOWERED 2 BE YOUR GLOBAL PARTNER.

HarcoSemco's mission is to provide superior service, technologically advanced products and custom solutions for challenging aerospace applications. We deliver on that commitment by empowering our people to provide a better customer experience, find innovative solutions, and deliver quality products on time, every time. We have been partner of choice in the Aerospace industry for over 65 years and continue to be a cutting edge supplier that you can trust.

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