

*VIBRATION MONITORING
FOR THE
**PETROLEUM &
CHEMICAL**
INDUSTRY*



**WHEN RELIABILITY MATTERS
CONNECT TO CONFIDENCE**

Many petroleum/chemical applications have hazardous environments due to gas, oil, or dust that could create a combustible atmosphere in and around the machines. As a result, vibration monitoring of critical assets provides key performance indicators for petrochemical plants worldwide to maintain employee safety and prevent operational downtime.

What We Offer

CTC's extensive experience in petrochemical environments has driven the design and manufacture of rugged and reliable vibration monitoring products that stand up to these environmental challenges and include CTC's unconditional lifetime warranty.

The CTC line offers products that are certified through CSA, ATEX, and IECEx for Intrinsically Safe (Class 1, Division 1 or Zone 0) and Non-Arcing, Non-Sparking (Class 1, Division 2 or Zone 2) environment.

Common Applications Include:

- ▶ Conveyors
- ▶ Fans
- ▶ Gear boxes
- ▶ Motors
- ▶ Pumps
- ▶ Compressors



North America: Class 1, Division 1 | Europe: ATEX Zone 0, Zone 1 | IECEx Protection Method Offerings

Proximity Probe Set Offerings



CTC offers a complete line of intrinsically safe proximity probe systems designed, built and tested to endure prolonged use in the harshest industrial environments. PRO Line proximity probe systems are available in FFv™ 5 mm, 8 mm, 11 mm, and 25 mm systems. The variety of probe sizes offered allows for accurate and precise machinery measurements for applications involving radial dynamic, axial rotor position, 4-20 mA, and thermal case expansion measurements. Complete PRO proximity probe systems are compatible with all standard condition monitoring software, including Bently Nevada® software.

Sensor Offerings



Intrinsically Safe Low Capacitance Accelerometers

- ▶ Single axis (top or side exit), biaxial, triaxial, and dual output vibration + temperature (top or side exit) options available
- ▶ Molded integral cable or armored integral cable options available
- ▶ 10 mV/g, 50 mV/g, or 100 mV/g sensitivity options available

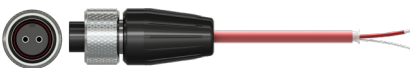


Intrinsically Safe Loop Power Sensors for Velocity or Acceleration

- ▶ Top exit connector
- ▶ Integral cable or armored integral cable

Grounded Connector Offerings

CTC recommends using our Grounded Connector series for intrinsically safe applications. This series features a grounded backshell and comes in two-socket, three-socket, and four-socket configurations. These grounded connectors are compatible with a variety of standard CTC cabling options, including FEP, polyurethane, or armor jacketed cables.



A2AG



A3AG



J4AG

Barrier and Barrier Enclosure Offerings

Hazardous-rated sensors using the intrinsic safety protection method must be used with barriers to limit the energy a sensor can receive. Cabling brings the signal from the sensor to the Zener diode barrier or galvanic isolator, which is the energy-limiting interface. The signal is transferred through the barrier (which can be located in the hazardous or non-hazardous area), to measurement equipment in the hazardous areas, such as a data collector or junction box.



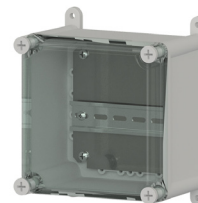
IS111-1B
Sensor Barrier



IS151-1B
Proximity Probe Barrier



IS200-2A
Two Channel
Barrier Enclosure



IS200-10A
Ten Channel
Barrier Enclosure



IS200-20A
Twenty Channel
Barrier Enclosure

North America: Class 1, Division 2 | Europe: ATEX Zone 2 Protection Method Offerings

Sensor Offerings



Low Capacitance Accelerometers for 'Non-Arcing, Non-Sparking' Environments

- ▶ Single axis (top or side exit), biaxial, triaxial, and dual output vibration + temperature (top or side exit) options available
- ▶ Molded integral cable or armored integral cable options available
- ▶ 10 mV/g, 50 mV/g, or 100 mV/g sensitivity



Class 1, Division 2 Approved Loop Power Sensors for Velocity or Acceleration

- ▶ Top exit connector
- ▶ Integral cable or armored integral cable

Cable and Connector Offerings

CTC's Q Series Connectors feature a grounded backshell and locking ring, and are specifically approved for Class 1, Division 2 locations. The Q Series come in two-socket, three-socket, and four-socket configurations and is compatible with CTC's Class 1, Division 2 approved cabling.



Q2A



Q3A



JQ4A



CB190
Two Conductor, TPE Jacket



CB191
Three Conductor, TPE Jacket



CB192
Four Conductor, TPE Jacket



CB296
Two Conductor, Armor Jacket



CB298
Four Conductor, Armor Jacket

Junction Boxes for Use With Hazardous Rated Products

Cabling from a sensor or barrier can be run back to a CTC junction box located outside the hazardous area. A junction box will protect your cable terminations and provide an easy access point for safe, efficient data collection.



JB110
Standard Capacity, Premium Switch Box
with Bias Light Indicator



MX102
Enclosed BNC Connection Box



SB282
Dual Input & Output Sloped Top
Switch Box

Non-Hazardous Rated Offerings

CTC offers the industry's largest portfolio of industrial vibration monitoring hardware, including accelerometers and loop output sensors for machine condition monitoring in a variety of non-hazardous environments within petrochemical facilities.

Offerings include Standard, Compact and Mini Size Accelerometers in top and side exit configurations, top and side exit Biaxial and Triaxial Accelerometers, 4-20 mA Loop Power Sensors for velocity or acceleration in top and side exit configurations, and many more. CTC also offers a wide selection of non-hazardous rated cabling, connectors, mounting hardware, junction boxes, proximity probes, and more.

Scan the QR code to explore CTC's complete line of non-hazardous location offerings.



CTC is the world leader in the design and manufacture of industrial accelerometers, piezo velocity transducers, 4-20 mA vibration sensors, and proximity probes as well as all related mounting hardware, cabling, and junction boxes. Our products enable efficient vibration monitoring for predictive maintenance in a wide variety of industries. Industries served include cement, mining, petrochemical, food & beverage, auto, steel, wind, paper & pulp, power generation, water & wastewater treatment, pharmaceutical, hospitals, bottling, and more. Our mission is to offer the widest variety of accelerometers and vibration hardware products, which are compatible with data collectors and online monitoring systems, as well as the tools for installation.



The CTC product line features vibration analysis hardware for heavy industry.

All CTC products are backed by our unconditional, lifetime warranty. If any CTC product should ever fail, we will repair or replace it at no charge.



The PRO line offers the industry's most reliable proximity probe sets.

All PRO products are backed by a lifetime warranty on materials and workmanship. PRO will repair or replace any of our products as long as the product was not subjected to misuse, neglect, natural disasters, improper installation, or modification.

**Please note: The logo on the product indicates the specific warranty for which it will qualify for the duration of its lifetime.*

All stock products may be returned for a 25% restocking fee if returned in new and unused condition within 90 days of shipment. Built-to-order and private-label products qualify for a 50% refund if returned in new and unused condition within 90 days of shipment. Custom products are quoted and built specifically to the requirements of the customer, which may include completely custom product design or private-labeled versions of standard products for OEM customers. Custom products are non-cancellable, non-returnable, and non-refundable.

