

#### Who We Are

At CTC, we are a family-owned and operated business passionate about providing the best quality products backed by excellent customer service. We are the industry leader in quick delivery for stock and built-to-order products. All CTC products are proudly made or assembled in the U.S.A. We always honor our best-in-class warranties, and our customer service seeks to provide the best customer experience in the world.

## What We Do

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 and beverage, auto, steel, wind, paper, power generation, water and wastewater treatment, pharmaceutical, hospitals, bottling, and more. Our mission is to offer the most extensive collection of accelerometers and vibration analysis hardware products, as well as the tools for installation. Our products are compatible with multiple third-party data collectors and online monitoring systems.



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## **Product Offerings**

At CTC, we offer two comprehensive product lines to meet your industrial vibration monitoring needs. Our products reflect the input from customers and distributors around the world and are designed and tested to meet the real-world demands of plant environments. We believe our products are the highest quality on the market, which is why we back each product line with our best-in-class warranties.



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 complete proximity probe systems compatible with all standard condition monitoring software.

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

## **Refund Policy**

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 designs or private-labeled versions of standard products for OEM customers. Custom products ordered are non-cancellable, non-returnable, and non-refundable.

## **New to the CTC Family**



## Dual Output Vibration & Temperature Triax Sensors

- 100 mV/g, 500 mV/g or 100 mV/in/sec
- Side exit
- Simultaneously monitor three axes of data with additional temperature output
- Premium 5% and low cost 15% sensitivity tolerance options available

#### MCB360 and MEB360 Swivel Mount Accelerometer

- 10 mV/g and 100 mV/g options
- · Side exit, integral cable
- Designed for areas with small spacing tolerance simply swivel the cable towards the exit and tighten the nut to lock the accelerometer in place
- Premium 5% and low cost 15% sensitivity tolerance options available





CTC offers a complete line of industrial accelerometers. Our ruggedized industrial accelerometers are available in single axis, biaxial, and triaxial designs. Many configurations allow for either top or side exit options. Side exit configurations are suitable for installations in areas where height is an issue. CTC's industrial accelerometers support a diverse set of applications with sensitivity values ranging from 10 mV/g to 1000 mV/g. Dual output configurations allow for vibration and temperature outputs.

## Multipurpose Accelerometer, Top Exit







**COMPACT SIZE** 



MINI SIZE

## Multipurpose Accelerometer, Side Exit



STANDARD SIZE



COMPACT SIZE



MINI SIZE

## Multipurpose Accelerometer, Integral Cable Options









STANDARD INTEGRAL ARMORED INTEGRAL

FEP JACKETED

HEAVY DUTY ARMORED

#### **ULTRASOUND**



Sensitivity: 100 mV/g Resonant Peak: 42 kHz

## **Ultrasound Sensors**

#### **UEB332/UEA332**

Dynamic IEPE vibration and ultrasound accelerometer with high amplitude resonance peak for stress wave measurements

HIGH-TEMPERATURE

## High-Temperature Resistance Accelerometers



AC207/AC208 100 mV/g Max Temp: 325 °F (162 °C)



TXEA331-HT

100 mV/g

Triax Sensor

Max Temp: 325 °F (162 °C)



TR207-M12/TR208-M12 100 mV/g RTD Sensors Max Temp: 325 °F (162 °C)



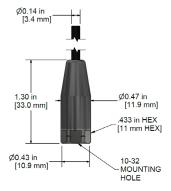
Backed by our Unconditional Lifetime Warranty!

www.ctconline.com

585-924-5900

## **Cost Effective Molded Sensors**

featuring a fully-molded design



These miniature sensors are ideal for applications with limited clearance, limited mounting surface space, or submersible applications. The minimal form factor and excellent frequency response allow this sensor to be used in a wide variety of applications.



MCB211 High Frequency 10 mV/g



MEB210 General Purpose 100 mV/q



MEB211 High Frequency 100 mV/g



## **Dual Output Temperature and Vibration Sensors**



TA202 100 mV/g 10 mV/°C Temp Range: -40 °F to 250 °F (-40 °C to 121 °C)



TA204 100 mV/g 10 mV/°C Temp Range: -40 °F to 250 °F (-40 °C to 121 °C)



100 mV/g PT100 RTD Temp Range: -40 °F to 250 °F (-40 °C to 121 °C)

TR102-M12A



TR104-M12A 100 mV/g PT100 RTD Temp Range: -40 °F to 250 °F (-40 °C to 121 °C)

#### HAZARDOUS RATED

#### Hazardous Rated Accelerometers

CTC offers a variety of single axis, biaxial, triaxial, dual output, and low capacitance sensors certified for Class I Division 2 (ATEX/IECEx Zone 2), as well as intrinsically safe protection methods under Class 1 Division 1 (ATEX/IECEx Zone 0/1).

#### **Hazardous Ratings**























## New Triaxial Accelerometers



TXEA331-TA

Dual Output Triax

Acceleration & Temperature

100 mV/g

10 mV/°C



TXEA331-VT
Dual Output Triax
Velocity & Temperature
100 mV/in/sec
10 mV/°C



TXGA331
Premium
Low Frequency
1000 mV/g

## Other Popular Triaxial Accelerometers



AC115 Low Cost Standard Size 100 mV/g



TREA330
Premium
Compact Size
100 mV/g



TCEB331
Premium
Circular Shape
100 mV/g



TXFA331
Premium
Low Frequency
500 mV/g

## Popular Biaxial Accelerometers



AC119
Low Cost
Biaxial with X & Z Axis
100 mV/g



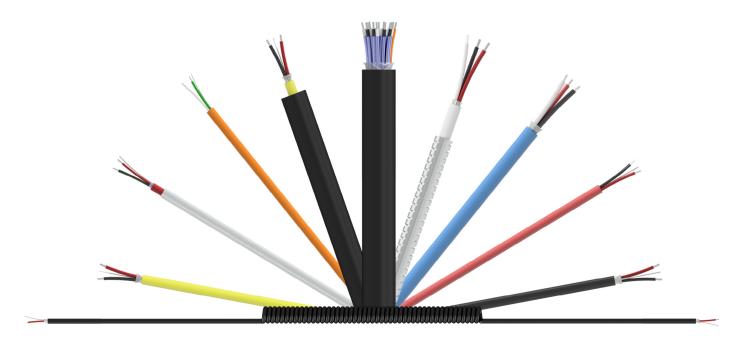
AC979
Intrinsically Safe
Biaxial with X & Z Axis
100 mV/g



BSFA333-IV Inverse Voltage Biaxial with X & Z Axis 100 mV/g



## CTC Offers a Variety of Cable Options for All Application and Environmental Criteria



#### JACKET TYPES

- Fluorinated Ethylene Propylene (FEP)
- Polyurethane
- Lightweight Polyurethane
- PVC
- Thermoplastic Elastomer (TPE)
- Low Smoke
   Zero Halogen

#### ARMOR OPTIONS

- Stainless Steel Braided Sheathing
- Stainless Steel Armor
- Hydraulic Hose Armor

#### CONDUCTOR OPTIONS

- 2 Conductor
- 3 Conductor
- 4 Conductor
- 6 Conductor

#### HAZARDOUS ZONE OPTIONS

 Class 1 Division 2 Approved Cables

#### LOW COST CABLE REELS

Bulk Cable Options Available in 1000 ft Reels





## CTC Offers a Variety of Standard and Specialty Connectors for Every Possible Application

CTC sensor connectors support temperatures ranging from -58 °F to 325 °F (-58 °C to 162 °C). A wide selection of connectors supporting IP (Ingress Protection) ranging from IP66 to IP68 is available.

#### A SERIES: MIL STYLE (C-5015) COMPATIBLE CONNECTOR



#### **Connector Options**

- Straight or Right Angle Connectors
- Hydraulic Hose Sleeve Available
- Available in 2 and 3 Live Socket Configurations

#### **Material Options**

- Polycarbonate
- Polyurethane
- Nvlon
- **PPS**

#### J SERIES: MINI-MIL STYLE CONNECTOR



#### Connector Options

- Straight Connector
- Strain Relief Available
- Class 1 Division 2 Rated
- Available in 2 and 4 Live **Socket Configurations**

#### **Material Options**

- Polycarbonate
- Nylon
- Polyurethane
- Viton®
- **PPS**



## K SERIES: MIL STYLE (C-5015) COMPATIBLE CONNECTOR

#### **Connector Options**

- Straight Connector
- Strain Relief
- **Grounded Backshell**
- Available in 2 and 3 Live Socket Configurations

#### **Material Options**

Polyurethane



#### **Connector Options**

- Straight Connector
- Strain Relief Available
- Available in 2, 3, 4, and 5 Live Socket Configurations

#### **Material Options**

- Nylon
- Polycarbonate
- Polyurethane



#### **Connector Options**

- Straight Connector
- Available in 2, 3, or 4 Live Socket Configurations

#### V Series: Viton® Protective Boot Cover

M SERIES: M12 MOLDED CONNECTOR

#### **Material Options**

- Viton® Seal with
  - Nylon Insert Option
- PPS Insert Option

Many other options for cabling and connectors are available. Please visit our website for more details.



#### **Data Collector Cord Sets**

CTC offers a variety of OEM replacement data collector cables and portable cable options for all major vibration analyzer manufacturers. Data collector cables are available in both coiled and straight cable options. Replacement cable assembly and adapters are available for every major data collector including:

ACOEM, ADASH Ltd., AES Reliability, Azima/Symphony Industrial AI, Betavib, Bently Nevada/Baker Hughes/Commtest, Emerson/CSI, Entek/Rockwell, Erbessed, Pruftechnik, Schenk, SDT, SEMAPI, SKF, SPM, and Windrock.

## Popular Data Collector Connectors







#### **EMERSON/CSI**

#### C555

Channel A Acceleration Input to Emerson 2130 & 2140

#### ACOEM

#### C494

Single Channel Input for Falcon Data Collectors

#### BENTLY NEVADA/BAKER HUGHES/COMMTEST C416

Triaxial Input X, Y and Z for VB Series







#### ENTEK/ROCKWELL C22

Single Channel Input for Datapac

#### PRUFTECHNIK C618

Single Channel Input to VIBXpert II

#### SKF C66

Channel A Input for CMXA and DLI/DCA Series



## Popular Adapters



CB901-1A 2 Pin MIL to 2 Pin MIL In-Line Feedthrough



CB903-1A 2 Pin MIL to 2 Pin MIL Bulkhead Feedthrough, ½-NPT



CB908-1A 2 Pin MIL to BNC Plug Adapter with Overmolded Reinforcement



CB910-1A In-Line BNC Jack to **BNC Jack Adapter** 



CB911-1A BNC "T" Adapter



CB911-3A In-Line BNC Plug to **BNC Plug Adapter** 



2 Socket MIL to **BNC Plug Adapter** with Overmolded Reinforcement

CB912-1A



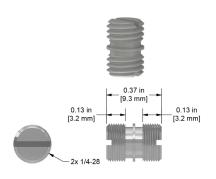
CB917-1A **BNC Connector with Mounting Bracket** 



**EMPP** Molded BNC Jack Connector with Nylon **Protective Cover** 

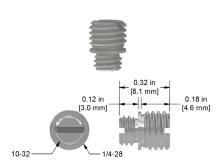


## **Specialty Mounting Adapters & Studs**



#### MH108-1B

1/4-28 to 1/4-28 Mounting Stud Stainless Steel



#### MH108-3B

1/4-28 to 10-32 Adapter Stud Stainless Steel



#### MH108-4B

1/4-28 Mounting Screw Stainless Steel



## MH108-5B

0.24 in

1/4-28 to M6x1 Adapter Stud Stainless Steel



#### MH108-6B

1/4-28 to M8 Adapter Stud Stainless Steel



#### MH108-7B

1/4-28 to M10x1.25 Adapter Stud Stainless Steel

## **Empty Enclosures & Replacement Boards**



JBA0608-FG

Empty Fiberglass Enclosure 6 in. x 8 in. x 4 in.



**JBA0608-SS** 

Empty Stainless Steel Enclosure 6 in. x 8 in. x 4 in.



JB900 SERIES

Single Axis, Multichannel Switch Box PC Boards



At CTC, we offer the widest variety of junction boxes in the world. Our junction box solutions allow for the monitoring of remotely mounted vibration sensors, which would be otherwise restricted to human access due to safety considerations. Also offered is a selection of low-cost cable termination boxes that allow multiple measurement points to be routed to a single location to gather data. Many CTC junction boxes offer continuous output options for direct interface to online monitoring systems.

#### Premium JB Series Switch Boxes

Fully featured NEMA 4X (IP66) rated vibration junction box with IEPE sensor condition indicator lights and convenient interface with fold-forward panel for easy wiring.

Compatible with single axis, biaxial, and triaxial inputs.



JB100/JB200 STANDARD SIZE

Fiberglass or Stainless Steel, Input Options: 4 to 12 Sensors



JB100/JB200 Extended Capacity

Fiberglass or Stainless Steel, Input Options: 24 to 48 Sensors



JB300 SERIES SLOPE TOP

Stainless Steel Slope Top, Input Options: 4 to 12 Sensors

## Legacy Switch Boxes



SB102/SB202/SB262 STANDARD SIZE

Fiberglass, Stainless Steel, or Stainless Steel Slope Top, Input Options: 4 to 12 Single Output Sensors



SB142/SB242/SB282 STANDARD SIZE

Fiberglass, Stainless Steel, or Stainless Steel Slope Top, Input Options: 4 to 8 Dual Output Sensors



SSB-MODX

Single Axis Switch Module, DIN Rail Mountable, Input Options: 4 to 12 Single Output Sensors



#### Cable Termination and Enclosed BNC Connection Boxes



CT101
Cable Termination
Boxes, Input Options:
1 to 4 Single Output
Sensors



MMX-MOD3

DIN Rail Mountable,
MAXX Box BNC

Connection Module,
3 BNC Jacks



MX102/MX202
Fiberglass or
Stainless Steel
MAXX Boxes,
Input Options: 1 to
12 Single Output
Sensors



MX502
Aluminum Mini-MAXX
Boxes, Input Options:
1 to 4 Single Output
Sensors

#### **Cable Reduction Boxes**

CTC cable reduction boxes reduce the input cabling of up to 16 individual sensors into one multiconductor cable. Utilizing a cable reduction box can significantly reduce cabling costs for applications with long cable runs. Fiberglass and stainless steel options are available.



CR102/CR202
Fiberglass or Stainless Steel,
Input Options:

8, 12, and 16 Channels

-58 °F to 180 °F (-50 °C to 82 °C)



#### CRHT102/CRHT202

Fiberglass or Stainless Steel, High Temperature, Input Options: 12 and 16 Channels -40 °F to 212 °F (-40 °C to 100 °C)



CTC offers a variety of adhesive and stud mounted sensor mounting pads. Magnet mounting pad options for portable field applications are also available, including flat and two rail mounting configurations. Additionally, we offer specialty mounting accessories for fin-cooled motors as well as a variety of munting probe tips, which allow access to traditionally hard-to-reach bearing locations. Visit our website for a complete list of our mounting hardware solutions.

## Rare Earth Magnetic Bases

made from Neodymium Iron Boron



Flat Surface, Pull Strength: 40 lbs/18 kg



Flat Surface, Pull Strength: 60 lbs/27 kg



MH122-1A Flat Surface, Pull Strength: 40 lbs/18 kg



Flat Surface, Pull Strength: 25 lbs/11 kg



Multipurpose, Pull Strength: 30 lbs/14 kg





Multipurpose, Pull Strength: 50 lbs/23 kg



Multipurpose, Pull Strength: 50 lbs/23 kg

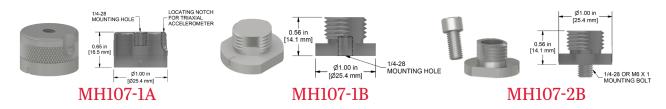


Multipurpose, Pull Strength: 95 lbs/43 kg



## **Accelerometer Quick Disconnects**

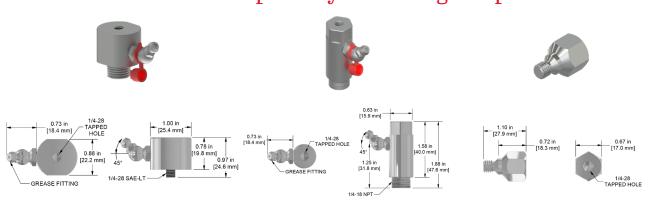
CTC's quick disconnects are ideally suited for triaxial sensor use. The permanently mounted stud creates a consistent mounting location for portable routes. The receptacle features a triaxial locating notch and ¼ turn engagement onto the stud, ensuring the sensor is oriented in the same position for every reading.



## Mounting Pads/Magnet Targets



### Zerk and Specialty Mounting Adapters



# MH134-1B Zerk Adapter 1/4 -18 NPT Mounting Thread

Zerk Adapter 1/4 in. SAE-LT Mounting Thread

MH134-4B

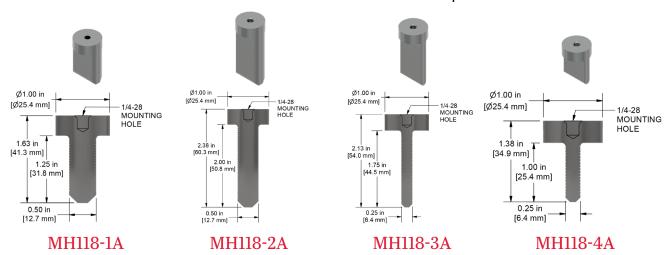
MH143-1A

Hex Head Mounting Stud
for Accelerometers,
SPM Compatible



#### Motor Fin Probe Pads

Take measurements from hard-to-reach places.



Our fin mount probes are perfect for narrow measurement points in motors, turbines, and other machinery. Fin mounts can be used for portable route measurements or permanently mounted accelerometers.

### **Accelerometer Installation Tool Kit**



#### MH117 SERIES

Spot Face and Pilot Hole Drill in One Operation. Option for Taps and Ratcheting Tap Handle Included.

#### High Speed Steel End Mill Tool Kits

Available Thread Sizes	Available End Mill Diameters
1/4-28	% in., 1 in., 1¼ in.
10-32	% in., 1 in.
M5x.8	% in.
M6x1	1 in., 1¼ in.
M8x1.25	11/4 in.

#### Carbide Tipped End Mill Tool Kits

Available Thread Sizes	Available End Mill Diameters
1/4-28	% in., 1 in., 1¼ in.
M8x1.25	1¼ in.



CTC offers a wide array of 4-20 mA output solutions for industrial applications. CTC's standard 4-20 mA loop-powered vibration sensors are available with velocity as well as acceleration output measurement options. CTC's loop-powered sensor line also includes a dual output option, with both 4-20 mA output and dynamic output configurations in one sensor. Other options include 24 VDC powered transmitters that power standard IEPE accelerometers and convert the vibration to a powered 4-20 mA signal. These transmitters also offer a 4-20 mA output for temperature when coupled with CTC dual output vibration and temperature sensors.

## **Velocity & Acceleration**

LP200 Series sensors for velocity and LP300 Series sensors for acceleration come in top or side exit connector, integral cable, and armored integral cable options.



LP200
Velocity Output,
Top Exit or Side Exit



LP300
Acceleration Output,
Top Exit or Side Exit



PMX Series
Fiberglass or Stainless
Steel, Relay and
Protection Enclosure,
Input Options: 1 to 4
Single Output Loop
Power Sensors





#### SC300 Series

CTC's SC300 Series Signal Conditioners are fully customizable for your application's needs and price point. All SC300 Series Signal Conditioners provide process control signals to a PLC, DCS, or SCADA system that are proportional to the vibration levels set within the signal conditioner and come with a built in temperature output. The SC310/SC311 offers a single vibration band output. The SC320 series features Dual Band Technology, which allows the user to configure two independent process control output signals from one sensor. This feature allows for the monitoring of two separate vibration/frequency bands with one device, such as both standard vibration monitoring and ultrasonic early bearing fault detection. One band can be configured for monitoring a standard vibration range, and the second band can be configured for monitoring the ultrasound range .

#### 4-20 mA Enclosures

CTC's Signal Conditioner Enclosures are turnkey solutions, which come fully populated with signal conditioners, power supply, and terminal blocks for sensor terminations. The signal conditioners are available pre-configured based on customer-specific requirements. Terminal blocks are provided for easy sensor terminations. These terminal blocks are pre-wired to the signal conditioners, and the outputs from the signal conditioners are wired to terminal blocks for integration into PLC/DCS systems.



#### SCE SERIES

Fiberglass or Stainless Steel, Capacity Options: 1 to 8 SC300 Series Signal Conditoners



SCD100 Series

Fiberglass, Relay & Protection for 1 to 4 SC300 Series Signal Conditioners



CTC offers a complete line of proximity probe systems designed and built to endure the harshest industrial environments. Proximity probes systems are available with probe tip sizes in  $FFv^{TM}$  5 mm, 8 mm, 11 mm, and 25 mm diameters. The variety of probe sizes offered allows accurate and precise machinery measurements for applications involving radial dynamic, axial rotor position, and thermal case expansion measurements.



## PROBE TIP OPTIONS FFv<sup>™</sup> 5 mm, 8 mm, 11 mm, 25 mm Standard and Armor Cable Options Available

## Complete Your Proximity Probe Set



DRIVERS
with BNC for a Fully
Buffered Dynamic
Voltage Output



CABLES
Standard or Armor

## **Proximity Probe Accessories**



Enclosures

Mounting Blocks



Mounting Bushings



Reverse Mount Housing

Fiberglass and Stainless Steel Enclosures, 1-6 Channels, Powered and 4-20 mA Options Available









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BACHED BY OUR UNCONDITIONAL LIFETIME WARRANTY