HURYZA

STI

STI Vibration Monitoring Inc.

Warranty Statement

STI Vibration Monitoring has extensive experience in the manufacturing and supply of vibration monitoring systems, sensors and supporting hardware. For over 30 years, STI has been manufacturing industrial grade products for industries worldwide for use in some of the toughest known environments. We stand by our products and should any ever fail, STI will repair or replace them at no charge (subject to specific exclusions). We guarantee that each of our products will be free from defects in material and workmanship.

Refer to the product datasheet for information on specific warranty coverage.

Lifetime Warranty

CMCP700 Series Accelerometers, Cable Assemblies for Permanent Installation, BNC Junction Boxes and Mounting Hardware

3 Year Warranty

CMCP1100 Series Low-Cost Accelerometers, CMCP500 Series Transmitters and Monitors, CMCP420VT Series, Monitoring Systems

1 Year Warranty

Test and Demonstration Equipment, Data Collect Cable

Table of Contents

Industry Consideration

General Purpose

Fans, Motors, Pumps, Compressors, Centrifuges, Conveyors, Air Handlers, Gearboxes, Rolls, Dryers, Presses, Cooling, HVAC, Spindles, Machine Tooling, Process Equipment **and many more.**

- CMCP782A
- CMCP783A Economical Sensors
- CMCP602L
- CMCP602LST Cable Assemblies

Small or Tight Places

- CMCP770A
- CMCP780A Compact Accelerometer
- CMCP602L
- CMCP602LST Cable

Wet Environment

- CMCP786A-IP
- CMCP785A-IP
- Accelerometer with Integral Cable

Pulp & Paper

Corrosive Environment

- CMCP786A
- CMCP785A General Purpose
- CMCP602H
- CMCP602HST Cable Assemblies

High Temperature (up to 150˚C), High Moisture

- CMCP788A
- CMCP787A Premium Sensors
- CMCP602H
- CMCP602HST Cable Assemblies

Slow Turning Machinery (rolls <60rpm)

- CMCP786A-LF
- CMCP785A-LF Low Frequency Sensors
- CMCP602H
- CMCP602HST Cable Assemblies

Oil & Gas Refineries

Hazardous Location Class 1, Division 2

- CMCP786A
- CMCP785A General Purpose
- CMCP602L
- CMCP602LST Cable Assemblies

Hazardous Location Class 1 Division 1

- CMCP786A
- CMCP785A General Purpose
- with Barrier or Isolator
- CMCP602H
- CMCP602HST Cable Assemblies

Explosion Proof

- CMCP420VT/EX Series of 4-20 mA Sensors ATEX/IECEX
- CMCP-DVS Digital Vibration Switch

High Sensitivity Precision

- CMCP788A
- CMCP787A Premium Sensors
- CMCP602H
- CMCP602HST Cable Assemblies

Power Generation

High Temperature and High Precision

- CMCP788A
- CMCP787A Premium Sensors
- CMCP602H
- CMCP602HST Cable Assemblies

Wind

Gearbox

- CMCP786A
- CMCP785A General Purpose
- CMCP602L
- CMCP602LST Cable Assemblies

Main Bearing

- CMCP786A-LF
- CMCP785A-LF Low Frequency Sensors
- CMCP602H
- CMCP602HST Cable Assemblies

Tight Places

- CMCP770A
- CMCP780A Compact Accelerometer
- CMCP602L
- CMCP602LST Cable
- CMCP1100S Low-Cost Accelerometer with M8 Connector
- CMCP1100SR Revolution Series with Pivoting Mounting Stud

Cement & Mining

Robust

- CMCP785A Side Exit General Purpose
- CMCP602A Armored Cable Assemblies

Low Frequency Response

- CMCP785A-LF Side-Exit Low Frequency Sensors
- CMCP602H
- CMCP602HST Cable Assemblies

High Temperature and High Precision

- CMCP787A Side Exit Premium Sensors
- CMCP602H
- CMCP602HST Cable Assemblies

Sensors

The acceleration sensor is the most popular vibration sensor for machinery monitoring due to its versatility and reliability. The standard acceleration sensor has a good signal-to-noise ratio over a wide dynamic range. These sensors are suitable for measuring low to very high frequencies and are available in a variety of general purpose and application-specific designs.

The diversity is driven by varying characteristics of the vibration sensors, including measurement-related factors such as frequency response, sensitivity, and accuracy. Physical characteristics such as temperature rating, dimensions, and connector orientation are also considerations.

Considerations

Sensor Location	
Compact	
Top Entry	
Side Entry	
Temperature Range	
Economical	130°C Max / (266°F Max)
General Purpose	140°C Max / (284°F Max)
Premium	150°C Max / (302°F Max)
Frequency Range / Frequency of Interest	
Economical	1.5 Hz to 10 kHz / (90 cpm to 600 kcpm)
General Purpose	0.8 Hz to 12 kHz / (48 cpm to 720 kcpm)
Premium	0.8 Hz to 15 kHz / (48 cpm to 900 kcpm)
Low Frequency:	0.2 Hz to 15 kHz / (12 cpm to 900 kcpm)
Environmental Requirements	
Economical	No Approvals
General Purpose	Class 1, Division 1&2 Approved
Premium	Class 1, Division 1&2 Approved

Economical Accelerometers

Our Economical Accelerometers are the ideal sensors for general machinery monitoring, where hazardous approvals are not required. These sensors have a high Mean Time Between Failure (MTBF) and provide long-term reliability at a low cost.

Part Number	CMCP782A	CMCP783A CMCP783A-M8
Sensitivity	100 mV/g	100 mV/g
Sensitivity Tolerance	±10%	±10%
Frequency Response	1.5 Hz to 10 kHz (90 cpm to 600 kcpm) ±3dB	1.5 Hz to 10 kHz (90 cpm to 600 kcpm) ±3dB
Dynamic Range	±60 g	±60 g
Settling Time	2 Second	2 Second
Sensing Element	PZT/Compression	PZT/Compression
Resonance Frequency	27 kHz	22 kHz
Electrical Noise	0.1 mg Max	0.1 mg Max
Max. Temperature	130°C (266°F)	130°C (266°F)
Bias Output Voltage	12 VDC	12 VDC
Mounting	1/4-28 UNF Tapped Hole ¼-28 and M8x1.25 Studs Provided	¼-28 (CMCP783A) M8x1.25 (CMCP783A-M8)
Output Connector	2 Pin MIL C 5015	2 Pin MIL C 5015
Compliance	CE	CE
Warranty	Lifetime	Lifetime

When the application does not require hazardous approvals, these economical sensors can be considered, allowing you to save money.

https://www.stiweb.com/Standard_Accelerometers_s/87.htm

TOC

General Purpose Accelerometers with Connectors (MS and M12)

Our General Purpose Accelerometers are for widespread applications in machinery monitoring. These sensors provide long-term reliability for permanent mounting (on-line systems) and route-based (walkaround programs) with a Data Collector.

MS Connectors are often called Military Standard, “MIL-STD”, or (informally) “MIL-SPEC”. They are used in aerospace, industrial, and marine application. The **M12** Connector is a circular connector with a 12-mm locking thread primarily used in factory automation applications.

Part Number	CMCP786A	CMCP785A CMCP785A-M8	CMCP786A-M12	CMCP785A-M12 CMCP785A-M12-M8
Sensitivity	100 mV/g	100 mV/g	100 mV/g	100 mV/g
Sensitivity Tolerance	±10%	±10%	±10%	±10%
Frequency Response	1.0 Hz to 10 kHz (60 cpm to 600 kcpm) ±10% 0.8 Hz to 12 kHz (48 cpm to 720 kcpm) ±3dB		1.0 Hz to 10 kHz (60 cpm to 600 kcpm) ±10% 0.8 Hz to 12 kHz (48 cpm to 720 kcpm) ±3dB	
Dynamic Range	±80 g	±80 g	±80 g	±80 g
Settling Time	1.5 Second	1.5 Second	1.5 Second	1.5 Second
Sensing Element	PZT/Compression	PZT/Compression	PZT/Compression	PZT/Compression
Resonance Frequency	27 kHz	22 kHz	27 kHz	22 kHz
Electrical Noise	0.1 mg Max	0.1 mg Max	0.1 mg Max	0.1 mg Max
Max. Temperature	140°C (284°F)	140°C (284°F)	140°C (284°F)	140°C (284°F)
IP Rating	IP68	IP68	IP68	IP68
Supply Voltage	18 to 30 VDC	18 to 30 VDC	18 to 30 VDC	18 to 30 VDC
Bias Output Voltage	12 VDC	12 VDC	12 VDC	12 VDC
Mounting	¼-28 and M8x1.25 Studs Provided	¼-28 (CMCP785A) M8x1.25 (CMCP785A-M8)	¼-28 and M8x1.25 Studs Provided	¼-28 (CMCP785A-M12) M8x1.25 (CMCP785A-M12-M8)
Output Connector	2 Pin MIL C 5015	2 Pin MIL C 5015	4 Pin M12	4 Pin M12
Compliance	CE	CE	CE	CE
Approvals	Class 1, Division 2 Approved Class 1, Division 1 with Barrier or Isolator			
Warranty	Lifetime	Lifetime	Lifetime	Lifetime
Notes	Alternate Sensitivities Available (10 mV/g, 30 mV/g, 50 mV/g, 250 mV/g, 500 mV/g and 1,000 mV/g)			

The General Purpose Accelerometers are for many applications and feature different connector options at no additional cost.

https://www.stiweb.com/category_s/194.htm

TOC

Premium Accelerometers with Connectors

Our Premium Accelerometers are very precise and ideal for portable data collection and analytical systems. These supreme accelerometers can be used for rotating equipment in adverse environments.

Part Number	CMCP788A	CMCP787A CMCP787A-M8	CMCP788A-M12	CMCP787A-M12 CMCP787A-M12-M8
Sensitivity	100 mV/g	100 mV/g	100 mV/g	100 mV/g
Sensitivity Tolerance	±5%	±5%	±5%	±5%
Frequency Response	1.5 Hz to 12 kHz (90 cpm to 720 kcpm) ±5% 1.0 Hz to 13 kHz (60 cpm to 780 kcpm) ±10% 0.8 Hz to 15 kHz (48 cpm to 900 kcpm) ±3dB		1.5 Hz to 12 kHz (90 cpm to 720 kcpm) ±5% 1.0 Hz to 13 kHz (60 cpm to 780 kcpm) ±10% 0.8 Hz to 15 kHz (48 cpm to 900 kcpm) ±3dB	
Dynamic Range	±80 g	±80 g	±80 g	±80 g
Settling Time	1.0 Second	1.0 Second	1.0 Second	1.0 Second
Sensing Element	PZT/Shear	PZT/Shear	PZT/Shear	PZT/Shear
Resonance Frequency	27 kHz	22 kHz	27 kHz	22 kHz
Electrical Noise	0.1 mg Max	0.1 mg Max	0.1 mg Max	0.1 mg Max
Max. Temperature	150°C (302°F)	150°C (302°F)	150°C (302°F)	150°C (302°F)
IP Rating	IP68	IP68	IP68	IP68
Supply Voltage	18 to 30 VDC	18 to 30 VDC	18 to 30 VDC	18 to 30 VDC
Bias Output Voltage	12 VDC	12 VDC	12 VDC	12 VDC
Mounting	¼-28 and M8x1.25 Studs Provided	¼-28 (CMCP787A) M8x1.25 (CMCP787A-M8)	¼-28 and M8x1.25 Studs Provided	¼-28 (CMCP788A) M8x1.25 (CMCP788A-M8)
Output Connector	2 Pin MIL C 5015	2 Pin MIL C 5015	4 Pin M12	4 Pin M12
Compliance	CE	CE	CE	CE
Approvals	Class 1, Division 2 Approved Class 1, Division 1 with Barrier or Isolator			
Warranty	Lifetime	Lifetime	Lifetime	Lifetime
Notes	Alternate Sensitivities Available (10 mV/g, 30 mV/g, 50 mV/g, 250 mV/g, 500 mV/g and 1,000 mV/g)			

The Premium Accelerometer series stands out with a precision of +/- 5% and extended high limit operating temperature up to 150°C (302°F).

https://www.stiweb.com/category_s/197.htm

TOC

General Purpose Accelerometers with Integral Cables

Our General Purpose Accelerometers with Integral Cables are ideal for applications which require the sensor to be submerged (-IP series) or applications where an armored cable is required for mechanical protection (-I series).

Part Number	CMCP786A-IP	CMCP785A-IP CMCP785A-IP-M8	CMCP786A-I	CMCP785A-I CMCP785A-I-M8
Sensitivity	100 mV/g	100 mV/g	100 mV/g	100 mV/g
Sensitivity Tolerance	±10%	±10%	±10%	±10%
Frequency Response	1.0 Hz to 10 kHz (60 cpm to 600 kcpm) ±10% 0.8 Hz to 12 kHz (48 cpm to 720 kcpm) ±3dB		1.0 Hz to 10 kHz (60 cpm to 600 kcpm) ±10% 0.8 Hz to 12 kHz (48 cpm to 720 kcpm) ±3dB	
Dynamic Range	±80 g	±80 g	±80 g	±80 g
Settling Time	1.5 Second	1.5 Second	1.5 Second	1.5 Second
Sensing Element	PZT/Compression	PZT/Compression	PZT/Compression	PZT/Compression
Resonance Frequency	27 kHz	22 kHz	27 kHz	22 kHz
Electrical Noise	0.1 mg Max	0.1 mg Max	0.1 mg Max	0.1 mg Max
Max. Temperature	140°C (284°F)	140°C (284°F)	140°C (284°F)	140°C (284°F)
IP Rating	IP68	IP68	IP65	IP65
Supply Voltage	18 to 30 VDC	18 to 30 VDC	18 to 30 VDC	18 to 30 VDC
Bias Output Voltage	12 VDC	12 VDC	12 VDC	12 VDC
Mounting	¼-28 and M8x1.25 Studs Provided	¼-28 (CMCP785A-IP) M8x1.25 (CMCP785A-IP-M8)	¼-28 and M8x1.25 Studs Provided	¼-28 (CMCP785A-I) M8x1.25 (CMCP785A-I-M8)
Cable Jacket	PUR	PUR	Stainless Steel Overbraid	Stainless Steel Overbraid
Compliance	CE	CE	CE	CE
Approvals	Class 1, Division 2 Approved Class 1, Division 1 with Barrier or Isolator		Class 1, Division 2 Approved Class 1, Division 1 with Barrier or Isolator	
Warranty	Lifetime			
Notes	Alternate Sensitivities Available (10 mV/g, 30 mV/g, 50 mV/g, 250 mV/g, 500 mV/g and 1,000 mV/g)		Alternate Sensitivities Available (10 mV/g, 30 mV/g, 50 mV/g, 250 mV/g, 500 mV/g and 1,000 mV/g)	

The General Purpose Accelerometer comes with different lengths of integral cables (overbraided or PTE jacketed cables). The stocked accelerometers with 5-meter integral cables cost the same as sensors with connectors.
https://www.stiweb.com/Integral_Cable_Accelerometers_s/86.htm

TOC

Low-Cost Accelerometers with Integral Cables

The CMCP1100 Series Low-Cost 100 mV/g Industrial Accelerometers with Integral Cable are manufactured in-house to meet our high-quality standards. Each accelerometer is fully enclosed in a 316 stainless steel case and is available in three standard length integral cables of 5, 10, and 20 meters. Other cable lengths and custom configurations are available to fit your exact specifications.

	General Purpose Cable		High-Temperature Cable	
Part Number	**CMCP1100**	**CMCP1100S**	**CMCP1100HT**	**CMCP1100HTS**
Sensitivity	100 mV/g	100 mV/g	100 mV/g	100 mV/g
Sensitivity Tolerance	±10%	±10%	±10%	±10%
Frequency Response	1.5 Hz to 8 kHz (90 cpm to 480 kcpm) ±10% 0.32 Hz to 10 kHz (19.2 cpm to 600 kcpm) ±3dB		1.5 Hz to 8 kHz (90 cpm to 480 kcpm) ±10% 0.32 Hz to 10 kHz (19.2 cpm to 600 kcpm) ±3dB	
Dynamic Range	±50 g	±50 g	±50 g	±50 g
Settling Time	2.0 Second	2.0 Second	2.0 Second	2.0 Second
Sensing Element	PZT/Shear	PZT/Shear	PZT/Shear	PZT/Shear
Resonance Frequency	25 kHz	25 kHz	25 kHz	25 kHz
Electrical Noise	0.1 mg Max	0.1 mg Max	0.1 mg Max	0.1 mg Max
Max. Temperature	120°C	120°C	200°C	120°C
Sealing	Epoxy Encapsulated	Epoxy Encapsulated	Epoxy Encapsulated	Epoxy Encapsulated
Supply Voltage	18 to 28 VDC	18 to 28 VDC	18 to 28 VDC	18 to 28 VDC
Bias Output Voltage	10 VDC	10 VDC	10 VDC	10 VDC
Mounting	¼-28 UNF	¼-28 UNF	¼-28 UNF	¼-28 UNF
Cable Type	TPE Jacket	TPE Jacket	FEP Jacket	FEP Jacket
Compliance	CE	CE	CE	CE
Warranty	3 Years	3 Years	3 Years	3 Years

HURYZA

CE

With over 100,000 sold, the CMCP1100 Low-Cost Accelerometer has proven its reliability in industrial rotating machinery installations worldwide.

https://www.stiweb.com/Integral_Cable_Accelerometers_s/86.htm

TOC

Compact Accelerometers

STI's Compact Accelerometers have the same features as our standard accelerometers except that they are smaller and lighter. They are designed to fit in tight locations and have the added benefit of improved frequency response due to their smaller size. Using the standard MS 2-pin connector, they are available in both top and side exit configurations.

Part Number	CMCP1100C	CMCP770A	CMCP780A
Sensitivity	100 mV/g	100 mV/g	100 mV/g
Sensitivity Tolerance	±10%	±10%	±10%
Frequency Response	1.5 Hz to 7 kHz (90 cpm to 42 kcpm) at ±10%	1.5 Hz to 16 kHz (90 cpm to 960 kcpm) at ±10%	1.5 Hz to 16 kHz (90 cpm to 960 kcpm) at ±10%
Dynamic Range	±50 g	±80 g	±80 g
Settling Time	2.5 Second	1.0 Second	1.0 Second
Sensing Element	PZT/Compression	PZT/Compression	PZT/Compression
Resonance Frequency	25 kHz	28 kHz	28 kHz
Electrical Noise	0.1 mg Max	0.1 mg Max	0.1 mg Max
Max. Temperature	85°C (185°F)	130°C (266°F)	130°C (266°F)
IP Rating	Waterproof IP67	IP68	IP68
Supply Voltage	18 to 28 VDC	18 to 30 VDC	18 to 30 VDC
Bias Output Voltage	8-12 VDC	12 VDC	12 VDC
Mounting	¼-28 Stud Provided	¼-28 and M8x1.25 Studs Provided	¼-28 (CMCP780A) M8x1.25 (CMCP780-M8)
Output Connector	3 Pin M8	2 Pin MIL C 5015	2 Pin MIL C 5015
Compliance	CE	CE	CE
Warranty	3 Years	Lifetime	Lifetime
Notes	Compact Sensors are available with integral cables.		

The Compact Accelerometers are ideal for use in small spaces.

https://www.stiweb.com/Compact_Accelerometers_s/131.htm

TOC

Dual Output Accelerometers

Our Dual Output Accelerometers divide into general purpose and premium dual output categories.
They all provide a standard 100 mV/g vibration and a 10 mV/°C temperature signal using a 3-pin connector.

	General Purpose		Premium	
Part Number	**CMCP786T**	**CMCP785T CMCP785T-M8**	**CMCP788T**	**CMCP787T CMCP787T-M8**
Sensitivity	100 mV/g	100 mV/g	100 mV/g	100 mV/g
Sensitivity Tolerance	±10%	±10%	±5%	±5%
Frequency Response	1.0 Hz to 10 kHz (60 cpm to 600 kcpm) ±10% 0.8 Hz to 12 kHz (48 cpm to 720 kcpm) ±3dB		1.5 Hz to 12 kHz (90 cpm to 720 kcpm) ±5% 0.8 Hz to 15 kHz (48 cpm to 900 kcpm) ±3dB	
Dynamic Range	±80 g	±80 g	±80 g	±80 g
	0-100°C	0-100°C	0-150°C	0-150°C
Settling Time	1.5 Second	1.5 Second	1.0 Second	1.0 Second
Sensing Element	PZT/Compression	PZT/Compression	PZT/Shear	PZT/Shear
Resonance Frequency	27 kHz	22 kHz	27 kHz	22 kHz
Electrical Noise	0.1 mg Max	0.1 mg Max	0.1 mg Max	0.1 mg Max
Max. Temperature	140°C (284°F)	140°C (284°F)	150°C (284°F)	150°C (284°F)
IP Rating	IP68	IP68	IP68	IP68
Supply Voltage	18 to 30 VDC	18 to 30 VDC	18 to 30 VDC	18 to 30 VDC
Bias Output Voltage	12 VDC	12 VDC	12 VDC	12 VDC
Mounting	¼-28 and M8x1.25 Studs Provided	¼-28 (CMCP785T) M8x1.25 (CMCP785T-M8)	¼-28 and M8x1.25 Studs Provided	¼-28 (CMCP787T) M8x1.25 (CMCP787T-M8)
Output Connector	3 Pin MS 5015	3 Pin MS 5015	3 Pin MS 5015	3 Pin MS 5015
Compliance	CE	CE	CE	CE
Approvals	Class 1, Division 2 Approved Class 1, Division 1 with Barrier or Isolator		Class 1, Division 2 Approved Class 1, Division 1 with Barrier or Isolator	
Warranty	Lifetime	Lifetime	Lifetime	Lifetime
Notes	Alternate Sensitivities Available (10 mV/g, 30 mV/g, 50 mV/g, 250 mV/g, 500 mV/g and 1,000 mV/g)		Alternate Sensitivities Available (10 mV/g, 30 mV/g, 50 mV/g, 250 mV/g, 500 mV/g and 1,000 mV/g)	

The CMCP603 series is the proper cable assembly for both General and Premium Dual Output Sensors.

https://www.stiweb.com/Accelerometers_with_Temperature_s/89.htm

TOC

Low-Frequency Accelerometers

Low-Frequency Accelerometers can be used to monitor slow rotating machinery.
The sensors feature a high sensitivity (500 mV/g) to focus on the amplitudes in these lower frequencies.

Part Number	CMCP786A-LF	CMCP785A-LF CMCP785A-LF-M8
Sensitivity	500 mV/g	500 mV/g
Sensitivity Tolerance	±10%	±10%
Frequency Response	0.5 Hz to 12 kHz (30 cpm to 720 kcpm) ±10% 0.2 Hz to 15 kHz (12 cpm to 900 kcpm) ±3dB	0.5 Hz to 12 kHz (30 cpm to 720 kcpm) ±10% 0.2 Hz to 15 kHz (12 cpm to 900 kcpm) ±3dB
Dynamic Range	±80 g	±80 g
Settling Time	1.5 Second	1.5 Second
Sensing Element	PZT/Shear	PZT/Shear
Resonance Frequency	27 kHz	22 kHz
Electrical Noise	0.1 mg Max	0.1 mg Max
Max. Temperature	140°C (284°F)	140°C (284°F)
Supply Voltage	18 to 30 VDC	18 to 30 VDC
Bias Output Voltage	12 VDC	12 VDC
Mounting	1/4-28 UNF Tapped Hole ¼-28 and M8x1.25 Studs Provided	¼-28 (CMCP785A-LF) M8x1.25 (CMCP785A-LF-M8)
Output Connector	2 Pin MIL C 5015	2 Pin MIL C 5015
Compliance	CE	CE
Approvals	Class 1, Division 2 Approved Class 1, Division 1 with Barrier or Isolator	Class 1, Division 2 Approved Class 1, Division 1 with Barrier or Isolator
Warranty	Lifetime	Lifetime

Alternative sensitivities can be specified in the ordering information by adding -100 (for 100 mV/g) and -250 (for 250 mV/g) to the end of the part ID, for example CMCP786A-LF-100.

https://www.stiweb.com/Low_Frequency_Accelerometers_s/185.htm

TOC

Velocity Output Sensors

Piezo Velocity Sensors are available with standard 2 Pin MS Connectors, M12 Connectors, or with different Integral Cables. Piezo Velocity Sensors are based on accelerometers but feature an integration circuit onboard to produce a dynamic output in velocity (instead of acceleration). These sensors can solve low signal issues by providing a higher millivolt output. As the integration is performed internally where there is a lower noise presence, a cleaner signal is provided.

Part Number	CMCP793V	CMCP797V	CMCP797V-500
Sensitivity	100 mV/in/sec (4 mV/mm/s)	100 mV/in/sec (4 mV/mm/s)	500 mV/in/sec (20 mV/mm/s)
Sensitivity Tolerance	±10%	±10%	±10%
Frequency Response	3 Hz to 4.5 kHz (180 cpm to 270 kcpm) ±10% 2 Hz to 6 kHz (120 cpm to 360 kcpm) ±3dB	3 Hz to 4.5 kHz (180 cpm to 270 kcpm) ±10% 2 Hz to 6 kHz (120 cpm to 360 kcpm) ±3dB	3 Hz to 4.5 kHz (180 cpm to 270 kcpm) ±10% 2 Hz to 6 kHz (120 cpm to 360 kcpm) ±3dB
Dynamic Range	±40 in/sec	±40 in/sec	±10 in/sec
Settling Time	1.0 Second	1.0 Second	1.0 Second
Sensing Element	PZT/Compression	PZT/Compression	PZT/Compression
Resonance Frequency	27 kHz	22 kHz	22 kHz
Electrical Noise	0.1 mg Max	0.1 mg Max	0.1 mg Max
Max. Temperature	140°C (284°F)	140°C (284°F)	140°C (284°F)
IP Rating	IP68	IP68	IP68
Supply Voltage	18 to 30 VDC	18 to 30 VDC	18 to 30 VDC
Bias Output Voltage	12 VDC	12 VDC	12 VDC
Mounting	¼-28 and M8x1.25 Studs Provided	¼-28 (CMCP797V) M8x1.25 (CMCP797V-M8)	¼-28 (CMCP797V-500) M8x1.25 (CMCP797V-500)
Output Connector	2 Pin MIL C 5015	2 Pin MIL C 5015	2 Pin MIL C 5015
Compliance	CE	CE	CE
Approvals	Class 1, Division 2 Approved Class 1, Division 1 with Barrier or Isolator	Class 1, Division 2 Approved Class 1, Division 1 with Barrier or Isolator	Class 1, Division 2 Approved Class 1, Division 1 with Barrier or Isolator
Warranty	Lifetime	Lifetime	Lifetime

Piezo Velocity Transducers are designed for condition monitoring of low-frequency rotating machinery.

http://www.stiweb.com/Velocity_Sensors_s/90.htm

TOC

Low-Cost Triaxial Accelerometers

Triaxial Accelerometers provide a dynamic output in three (3) perpendicular planes simultaneously (X, Y and Z). Three accelerometers are used internally and mounted 90 degrees apart. As an example, if mounted and oriented properly on top of a bearing, 100 mV/g dynamic outputs would be available for simultaneous data collection in the vertical, horizontal, and axial directions. Multi-axial accelerometers use a single multi-pin connector for wiring.

Part Number	CMCP1300T	CMCP1300ST-T
Housing Material	Anodized Aluminum	Stainless Steel
Sensitivity	100 mV/g Per Axis (X,Y,Z)	100 mV/g Per Axis (X,Y,Z)
Sensitivity Tolerance	±10%	±5%
Temperature Output	Not available	10 mV/°C
Frequency Response	0.32 Hz to 10 kHz (19.2 cpm to 600 kcpm) ±3dB	0.32 Hz to 10 kHz (19.2 cpm to 600 kcpm) ±3dB
Dynamic Range	±50 g	±50 g
Settling Time	2.0 Second	2.0 Second
Sensing Element	PZT/Compression	PZT/Compression
Resonance Frequency	25 kHz	20 kHz
Electrical Noise	0.1 mg Max	0.1 mg Max
Max. Temperature	85°C (185°F)	85°C (185°F)
Supply Voltage	18 to 28 VDC	18 to 28 VDC
Bias Output Voltage	12 VDC	12 VDC
Mounting	¼-28 UNF	¼-28 UNF
Output Connector	4 Pin Bayonet, Size 8	5 Pin M12
Compliance	CE	CE
Warranty	3 Years	3 Years

STI carries triaxial accelerometers, matching cable assemblies, and offers a line of triaxial BNC junction boxes with connectors for your data collector or analyzer.

https://www.stiweb.com/Triaxial_Accelerometers_s/88.htm

TOC

Premium Triaxial Accelerometers

Triaxial Accelerometers are commonly housed in miniature cube-shaped enclosures made from Aluminum or Stainless Steel, with a single connector, 4-pin Bayonet or M12 Connector, and a stud for mounting. Triaxial Accelerometers are compact, lightweight, and capable of simultaneously measuring vibration in three axes, providing a single integrated output for quick and accurate analysis.

Along with vibration, temperature is a commonly measured parameter in condition monitoring of machinery. Hence, we offer Triaxial Accelerometers with temperature outputs.

Part Number	Triaxial CMCP760T CMCP760T-M8	Triaxial with Temperature CMCP760TT CMCP760TT-M8
Housing Material	Stainless Steel	Stainless Steel
Sensitivity	100 mV/g Per Axis (X,Y,Z)	100 mV/g Per Axis (X,Y,Z) 10 mV/°C
Sensitivity Tolerance	±10%	±10%
Frequency Response	0.32 Hz to 10 kHz (19.2 cpm to 600 kcpm) ±3dB	0.32 Hz to 10 kHz (19.2 cpm to 600 kcpm) ±3dB
Dynamic Range	±50 g	±50 g
Settling Time	2.0 Second	2.0 Second
Sensing Element	PZT/Compression	PZT/Compression
Resonance Frequency	20 kHz	20 kHz
Electrical Noise	0.1 mg Max	0.1 mg Max
Max. Temperature	140°C (284°F)	140°C (284°F)
Supply Voltage	18 to 30 VDC	18 to 30 VDC
Bias Output Voltage	12 VDC	12 VDC
Mounting	¼-28 UNF or M8x1.25	¼-28 UNF or M8x1.25
Output Connector	4 Pin M12	5 Pin M12
Compliance	CE	CE
Warranty	Lifetime	Lifetime
Notes	Alternate Sensitivities Available (10 mV/g, 30 mV/g, 50 mV/g, 250 mV/g, 500 mV/g and 1,000 mV/g)	Alternate Sensitivities Available (10 mV/g, 30 mV/g, 50 mV/g, 250 mV/g, 500 mV/g and 1,000 mV/g)

In the right applications, Triaxial Sensors can make for a simple install and save valuable time.

https://www.stiweb.com/Triaxial_Accelerometers_s/88.htm

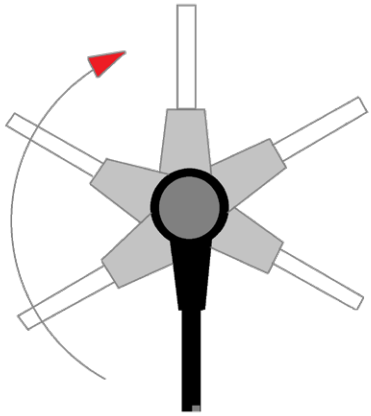
TOC

Special Accelerometers

CMCP1100SR Revolution Series

The Special Accelerometers of the Revolution Series are designed for convenient installation into tight spaces at a cost-match with existing through-bolt sensors. Their design facilitates positioning of the integral side-exit cable while the floating lock nut keeps the sensor securely in place. This low-cost alternative to Ring-Style Accelerometers has distinct size advantages over other Industrial-Grade Vibration Sensors: footprint of 18.3 mm (0.72 inches) diameter and 28 mm (1.1 inches) height.

Applicable for permanent installations in space-restricted locations, the CMCP1100SR's Stainless Steel body also makes it suitable for use in industrial environments.



Features

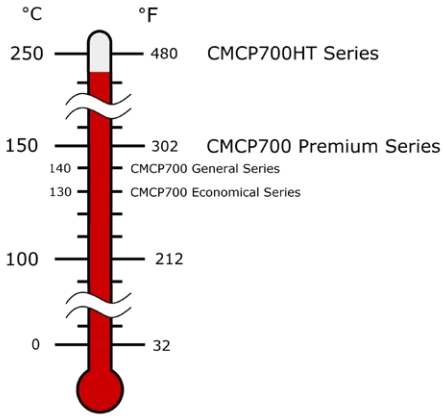
- Pivoting Mounting Stud (Union)
- Output 100 mV/g +/-10%
- Frequency Response 0.32 Hz to 10 kHz
- Waterproof (Epoxy-Sealed)
- Compact Case Size
- Santoprene Strain Relief (High Performance Elastomer)
- UV and Oil Resistant Integral Cable
- 5-, 10-, and 20- Meter Stocked Cable Lengths
- Optional Stainless Steel Overbraided Armor

A small side exit accelerometer with cable exit in any direction.

TOC

CMCP700HT High Temperature Accelerometer

The CMCP700HT is a charge mode accelerometer that generates an electrical output proportional to the applied acceleration. The series is ideal for high temperature vibration applications because they lack internal microelectronics which limits the use of standard industrial sensors to about +150°C (302°F).



Shown Above

Accelerometers on a Temperature Scale
With charge amplifiers and an accurate output, the CMCP700HT High Temperature Accelerometer are rated up to 250°C (480°F), perfect for use in adverse environments and inside machinery.

Features

- Top Exit or Side Exit High Temperature Sensor
- 480°F (250°C) Maximum Temperature
- External Charge Amplified
- 2 Hz to 15 kHz Frequency Range
- 100 mV/g or 500 mV/g Sensitivity
- Quick Fit Adapter for Easy Installation and Removal
- Sealed to IP67
- Braided Armor Cable Sensor Cable (Sensor to Charge Amp)
- High Temperature Silicone Charge Amp Cable (Low Noise Cable)

Please click here for the CMCP700HT High Temperature Accelerometer data sheet.

TOC

4-20mA Output Sensors

Simply the lowest cost approach to vibration monitoring.

CMCP422XT Series Sensors - 4-20mA Output Only

STI Vibration Monitoring's 4-20mA Sensors are an accelerometer and transmitter combined in one housing. Each sensor provides a 4-20mA output signal proportional to the overall vibration level in terms of acceleration, velocity, or temperature. 4-20mA sensors can interface directly with process control systems such as PLC, DCS, and SCADA systems, creating a low-cost and effective continuous monitoring system. All 4-20mA sensors are approved for use in Class 1, Division 2 areas or Class 1, Division 1 with an approved barrier. STI keeps all popular models in stock for immediate delivery.

Velocity Output	CMCP422VT-C	CMCP422VTS-C	CMCP422VT-M12	CMCP422VTS-M12
Acceleration Output	**CMCP422AT-C**	**CMCP422ATS-C**	**CMCP422AT-M12**	**CMCP422ATS-M12**
Connection	2 Pin MS	2 Pin MS	4 Pin M12 Eurofast	4 Pin M12 Eurofast
Vibration Output	4-20 mA	4-20 mA	4-20 mA	4-20 mA
Frequency Response	10 Hz - 1.0 KHz (Velocity) or 10 Hz – 5.0 KHz (Acceleration)		10 Hz - 1.0 KHz (Velocity) or 10 Hz – 5.0 KHz (Acceleration)	
Max. Temperature	120°C (248°F)	120°C (248°F)	120°C (248°F)	120°C (248°F)
Detection	Peak or RMS	Peak or RMS	Peak or RMS	Peak or RMS
Approvals	CE, Class 1, Division 2	CE	CE, Class 1, Division 2	CE

Velocity Output	CMCP422VT-I	CMCP422VTS-I	CMCP422VT-IP	CMCP422VTS-IP
Acceleration Output	**CMCP422AT-I**	**CMCP422ATS-I**	**CMCP422AT-IP**	**CMCP422ATS-IP**
Connection	Integral Braided Cable (IP65)	Integral Braided Cable (IP65)	Integral Braided Cable (IP65)	Integral Braided Cable (IP65)
Vibration Output	4-20 mA	4-20 mA	4-20 mA	4-20 mA
Frequency Response	10 Hz - 1.0 KHz (Velocity) or 10 Hz – 5.0 KHz (Acceleration)	10 Hz - 1.0 KHz (Velocity) or 10 Hz – 5.0 KHz (Acceleration)	10 Hz - 1.0 KHz (Velocity) or 10 Hz – 5.0 KHz (Acceleration)	10 Hz - 1.0 KHz (Velocity) or 10 Hz – 5.0 KHz (Acceleration)
Max. Temperature	120°C (248°F)	120°C (248°F)	120°C (248°F)	120°C (248°F)
Detection	Peak or RMS	Peak or RMS	Peak or RMS	Peak or RMS
Approvals	CE, Class 1, Division 2	CE	CE, Class 1, Division 2	CE

Select Top Exit Sensors for applications in Intrinsically Safe areas.

https://www.stiweb.com/2_Wire_Loop_Powered_Vibration_Transmitters_CMCP420VT_s/45.htm

TOC

CMCP422XT-D Series Sensors - 4-20mA Output with Dynamic Output

Velocity Output	CMCP422VT-D-C	CMCP422VTS-D-C	CMCP422VT-D-IP	CMCP422VTS-D-IP
Acceleration Output	**CMCP422AT-D-C**	**CMCP422ATS-D-C**	**CMCP422AT-D-IP**	**CMCP422ATS-D-IP**
Connection	3 Pin MS	3 Pin MS	Integral Cable (IP68)	Integral Cable (IP68)
Vibration Output	4-20 mA	4-20 mA	4-20 mA	4-20 mA
Dynamic Output	100 mV/g	100 mV/g	100 mV/g	100 mV/g
Frequency Response	10 Hz -1.0 KHz (Velocity) or 10 Hz – 5.0 KHz (Acceleration)		10 Hz -1.0 KHz (Velocity) or 10 Hz – 5.0 KHz (Acceleration)	
Max. Temperature	120°C (248°F)	120°C (248°F)	120°C (248°F)	120°C (248°F)
Detection	Peak or RMS	Peak or RMS	Peak or RMS	Peak or RMS
Approvals	CE, Class 1, Division 2	CE	CE, Class 1, Division 2	CE

CMCP420VT Series Sensors - 4-20mA & Dual 4-20mA Output Sensors

Model Number	CMCP420VT	CMCP420VT-T
Connection	4 Position Terminal Block (IP65)	4 Position Terminal Block (IP65)
Output 1	4-20 mA for Velocity RMS	4-20 mA for Velocity RMS
Output 2	100 mV/g Dynamic Output	4-20 mA for Temperature (0-100°C)
Frequency Response	2 Hz – 2.0 KHz (120 cpm to 120 kcpm)	2 Hz – 2.0 KHz (120 cpm to 120 kcpm)
Range	0-1.00 in/sec (CMCP420VT-01 and CMCP420VT-T1) 0-2.00 in/sec (CMCP420VT-02 and CMCP420VT-T2)	
Max. Temperature	90 °C (184 °F)	90 °C (184 °F)
Detection	RMS	RMS
Approvals	CE, Class 1, Division 2	CE, Class 1, Division 2

PDF

- When the application utilizes NPT tubing (conduit), then the CMCP420VT can be directly connected.
- To access the raw acceleration signal with a portable analyzer, then the CMCP420VT and an NPT Elbow with BNC (CMCP420BNC) can be used.
- To read the measured Velocity value, use the CMCP420VT in conjunction with an LED display (CMCP420LED) that also includes a BNC Connector

UK CA

TOC

CMCP420VT/Ex Series Sensors – ATEX/IECEx Explosion Proof

Model Number	CMCP420VT/Ex	CMCP420VT-T/Ex
Connection	4 Position Terminal Block(IP65)	4 Position Terminal Block(IP65)
Output 1	4-20mA for Velocity RMS	4-20mA for Velocity RMS
Output 2	100 mV/g Dynamic Output	4-20 mA for Temperature (0-100°C)
Frequency Response	2 Hz – 2.0 KHz (120 cpm to 120 kcpm)	2 Hz – 2.0 KHz (120 cpm to 120 kcpm)
Range	0-1.00 in/sec (CMCP420VT-01 and CMCP420VT-T1) 0-2.00 in/sec (CMCP420VT-02 and CMCP420VT-T2)	0-1.00 in/sec (CMCP420VT-01 and CMCP420VT-T1) 0-2.00 in/sec (CMCP420VT-02 and CMCP420VT-T2)
Max. Temperature	79 °C (184 °F)	79 °C (184 °F)
Detection	RMS	RMS
Approvals	CE, Class 1, Division 2, IECEx Ex d, ATEX Ex d	CE, Class 1, Division 2, IECEx Ex d, ATEX Ex d

For employment in hazardous locations, use the Explosion Proof CMCP420VT/Ex series of IECEx/ATEX approved Loop-Powered Vibration Transmitter with dynamic output.

https://www.stiweb.com/category_s/181.htm

TOC

CMCP460XT Series Triaxial Sensors - 4-20mA Output

Velocity is the preferred overall measurement to measure vibration severity at rotating frequency (running speed) and orders of rotating frequency (multiples of running speed) for most industrial equipment operating at running speeds between 1,200 to 3,600 rpm.

The CMCP460T Triaxial Sensor processes the vibration signal to determine overall amplitude, and outputs three 4-20 mA dc currents that are proportional to the selected range of 1.00 or 2.00 in/s (respectively 25.4 or 50.8 mm/s). These measurements provide an overall single value instead of a spectrum and can be used for identifying a developing fault in a piece of equipment.

Connecting the triaxial transmitters to the input of existing Control Systems (PLC or DCS) result in a high-density, low-cost vibration monitoring system.

- **Available for Acceleration measurements (CMCP460AT)**
- **Available with additional Temperature output (CMCP460VTT)**

Features

- Side Exit, Triaxial Velocity Sensor
- Three 4-20 mA Outputs (X, Y and Z)
- Interfaces Directly to Control Systems (PLC’s)
- 248°F (120°C) Max Temperature
- ISO Standard Frequency Range (10-1.0 kHz)
- 1 Second Settling Time
- Stainless Steel Case
- 8 Pin M12 Eurofast Connector
- ¼”-28 UNF or M8x1.25 Captive Mounting Bolt
- Sealed to IP68

https://www.stiweb.com/category_s/191.htm

TOC

Signal Access & Cable Reduction Boxes

STI's wide variety of BNC and Switch Boxes offer a local access point for all of the machine's sensors. The BNC and Switch Boxes are typically installed close to the machine being monitored. Rigid or flex conduits can be connected to the enclosure to protect the sensor cables or cable glands, such as our CMCP261 Liquid Tight Strain Relief Connectors, which can be used for individual cables that do not require a conduit.

Considerations

Location (Enclosure Material)

- NEMA 4X, IP66, Fiberglass
- NEMA 4, IP66, Painted Steel
- NEMA 4X, IP66, Stainless Steel

Number of Sensors

Sensor Type

- Single Axis
- Dual Output
- Triaxial

Outputs for Continuous Monitoring Systems

Low-Cost BNC Boxes

PDF

For indoor use

Part Number	CMCP305-02 (Includes Cable Entries)	CMCP305-04 (Includes Cable Entries)
Enclosure Material	Polycarbonate	Polycarbonate
Number of Inputs	2	4
IP Rating	IP65	IP65
Mounting	Wall Mounted	Wall Mounted
Sensor Connection	Screw Terminals	Screw Terminals

UK CA

TOC

DIN Rail Mountable BNC Interface Modules

Part Number	CMCP312	CMCP300E
Type	Switchable Output	Individual BNC Output Output
Enclosure Material	Individual BNC Output	Individual BNC Output
Number of Inputs	12	4
IP Rating	N/A	N/A
Mounting	TS35 DIN Rail	TS35 DIN Rail

https://www.stiweb.com/DIN_Rail_Mounted_BNC_s/166.htm

Portable BNC Switch Box

Part Number	CMCP310PSB-BNC	CMCP310PSB-TB
Type	Switchable Output	Switchable Output
Enclosure Material	Anodized Aluminum	Anodized Aluminum
Number of Inputs	8	8
IP Rating	BNC Inputs	Terminal Block Inputs
Mounting	IP54	IP54

Individual BNC Boxes for Portable Data Collection

The CMCP300 Series BNC Junction Boxes are multiple channel connection centers for terminating the outputs of accelerometers or other transducers. They are normally located in a close proximity to a machine to reduce wiring costs as well as to provide a convenient and safe location to access sensor signals. The CMCP300 Series BNC Boxes are available with either a Fiberglass NEMA 4X, Painted Steel NEMA 4 or Stainless Steel NEMA 4X enclosure. All enclosures feature integral mounting flanges and quick release door latches. BNC boxes are suitable for Class 1 Division 2 environments.

Ordering Information

CMCP300 AA - BB - CC - DD	
AA	FG (Fiberglass Enclosure, NEMA 4X)
	PS (Painted Steel Enclosure, NEMA 4)
	-SS (Stainless Steel Enclosure, NEMA 4X)
BB	01 (Single Channel, 1 BNC)
	02 (Two Channel, 2 BNCs)
	04 (Four Channel, 4 BNCs)
	06 (Six Channel, 6 BNCs)
	08 (Eight Channel, 8 BNCs)
	10 (Ten Channel, 10 BNCs)
	12 (Twelve Channel, 12 BNCs)
CC	01 (Internal BNCs, Must Open Door to Access)
DD	00 (No Cable Glands Installed)
	CG (With Cable Glands Installed)

→ **The last two digits in the part ID determine if cord grips are installed in the bottom of the enclosure as cable entries for sensor cables.**

PDF

WARRANTY LIFETIME WARRANTY

UK CA

TOC

Switchable Output Boxes for Portable Data Collection

Switchable BNC Junction Boxes provide a BNC output, an MS 5015 2-pin connector, and a rotary switch for a set of up to 12 sensors. With additional BNC outputs, MS 5015 2-pin connectors, and rotary switches, up to 48 sensors can be accommodated. The MS 5015 2-pin connector provides a second option to connect a data collector. Typically, these boxes are installed close to the machine and present a quick and safe way to access the sensor signals. Different enclosure materials are available, such as stainless steel, painted steel, or fiberglass.

Ordering Information

CMCP310 AA - BB - CC - DD	
AA	FG (Fiberglass Enclosure, NEMA 4X)
	PS (Painted Steel Enclosure, NEMA 4)
	SS (Stainless Steel Enclosure, NEMA 4X)
BB	06 (Six Channel)
	12 (Twelve Channel)
	18 (Eighteen Channel)
	24 (Twenty-Four Channel)
	36 (Thirty-Six Channel)
	48 (Forty-Eight Channel)
CC	01 (Internal BNCs, Must Open Door to Access)
	02 (External BNCs, BNC's Mounted Thru Door)
DD	00 (No Cable Glands Installed)
	CG (With Cable Glands Installed)

→ **Exceptional concept and design:** The hinged inner bezel covers the terminals completely and protects the wiring after installation.

PDF

WARRANTY LIFETIME WARRANTY

UK CA

TOC

Switchable Output Boxes for Triaxial Accelerometers

The CMCP315 Series Triaxial Sensor Connection Boxes connect remotely installed triaxial accelerometers to multi-channel data collectors and analyzers. The CMCP315 Connection Boxes are installed in a convenient and safe area and connected to triaxial accelerometers mounted on your rotating machinery. The CMCP315 Series Triaxial Accelerometer Connection Boxes are available for 2 to 16 triaxial sensor inputs. They are also available in fiberglass, painted steel or stainless steel enclosures, with fiberglass being the most popular. The quick access port allows connection to a multi-pin port using the data collectors triaxial cable assembly.

The CMCP303 Series Triaxial Connection Boxes are multiple channel connection centers for terminating the outputs of triaxial accelerometers. They are normally located in close proximity to a machine to reduce wiring costs as well as to provide a convenient and safe location to access sensor signals. The CMCP303 Series Triaxial Connection Boxes are available with either a Fiberglass NEMA 4X, Painted Steel NEMA 4 or Stainless Steel NEMA 4X enclosures. A 5 pin M12 output connector is available for each triaxial sensor input. The 5 pin allows for the use of triaxial sensors with the optional temperature output and is compatible with 4 and 5 socket connecting cables. The CMCP303 is not data collector specific and can be used with any manufacturer with the proper cable. (Select the -M12 option for Side B when specifying CMCP665/667 Data Collector Cable Assemblies).

Ordering Information

CMCP310 AA - BB - CC - DD	
AA	FG (Fiberglass Enclosure, NEMA 4X)
	PS (Painted Steel Enclosure, NEMA 4)
	SS (Stainless Steel Enclosure, NEMA 4X)
BB	02 (Two Triaxial Inputs)
	04 (Four Triaxial Inputs)
	06 (Six Triaxial Inputs)
	08 (Eight Triaxial Inputs)
	12 (Twelve Triaxial Inputs)
	16 (Sixteen Triaxial Inputs)
CC	00 (No Cable Entries)
	CG (With Cable Entries)
DD	00 (3x BNC Outputs Only)
	CSI (Quick Access Port for CSI 2130/3140)

PDF

WARRANTY LIFETIME WARRANTY

UK CA

TOC

Cable Reduction Boxes

Cable Reduction Boxes are used to connect individual sensor extension cables to multi-conductor instrument cables or individual instrument wires for further signal transmission. They are normally mounted close to the machine or any other location cables need to be interconnected. They are available in fiberglass (NEMA 4X), painted steel (NEMA 4), and stainless steel (NEMA 4X) enclosures. The CMCP260 Series is empty except for the back plate. The CMCP265 Series is complete with three (3) DIN rail-mounted terminals per channel so that shields may be carried through, preventing ground loops.

CMCP265 Series
Color Coded Terminals (White, Black, Red)
Single High Terminals
Accepts 14-26AWG Wires
IP66 Rated Enclosures
Sensor ID Chart

Ordering Information

CMCP265 AA - BB	
AA	FG (Fiberglass Enclosure, NEMA 4X)
	PS (Painted Steel Enclosure, NEMA 4)
	SS (Stainless Steel Enclosure, NEMA 4X)
BB	04 (Four Channels, For 12 Wires)
	08 (Eight Channels, For 24 Wires)
	12 (Twelve Channels, For 36 Wires)
	16 (Sixteen Channels, For 48 Wires)

PDF

WARRANTY LIFETIME WARRANTY

UK CA

TOC

Cable Reduction Boxes

CMCP265HD Series

High Density (Smaller Enclosures)
Three High Terminals
Accepts 14-26 AWG Wires
IP66 Rated Enclosures
Sensor ID Chart

Ordering Information

CMCP265 AA - BB	
AA	FG (Fiberglass Enclosure, NEMA 4X)
	PS (Painted Steel Enclosure, NEMA 4)
	SS (Stainless Steel Enclosure, NEMA 4X)
BB	08 (Eight Channels, For 24 Wires)
	12 (Twelve Channels, For 36 Wires)
	16 (Sixteen Channels, For 48 Wires)
	-24 (Twenty-Four Channels, For 72 Wires)

Cable Assemblies & Connectors (Permanent Installation)

The CMCP602 and CMCP603 Cable Assemblies are for both 2 wire standard and 3 wire multi-parameter accelerometers in standard and high-temperature versions. MS-5015 and M12 connectors are available with ‘seal tight push on’ and ‘locking collar’ versions. Hose and braided armor options are available for installations not using conduits. Cable assemblies are in stock or can be manufactured quickly for fast delivery.

Considerations			
Connector Type	→ Locking Collar	[IP68]	
	→ Seal Tight Push On	[IP68]	
Connection Type	→ 2 Socket MS		
	→ 3 Socket MS		
	→ 4 or 5 Pin M12		
	→ Multi-Conductor		
Environment	→ General Purpose Halogen Free Cable		
	→ High-Temperature Flame Retardant Cable		
Cable Length	→ Signal Type		
	→ Attenuation		
Grounding	→ Isolated	[-I]	Grounded at Instrument side Standard
	→ Non-Isolated	[-NI]	Grounded at Machine side

TOC

Cable Assemblies and Connectors

General Purpose Halogen Free 2 Socket MS 5015 Cable Assemblies

PDF

WARRANTY LIFETIME WARRANTY

CMCP602L Series ‘Locking Collar’

Connector Type	2 Socket MS 5015, Locking Collar
Jacket Material	TPE (Thermoplastic Elastomer)
Connector Material	Viton / Stainless Steel
Conductors	2 Plus Drain/Shield
Conductor Size	20AWG
Cable Diameter	0.19” (4.83 mm)
Shield Type	Braided Shield
Temperature Rating	-55 to 120°C (-67 to 248°F)
IP Rating	IP68

PDF

WARRANTY LIFETIME WARRANTY

CMCP602LST Series ‘Push On Seal Tight’

Connector Type	2 Socket MS 5015, Push On Seal Tight
Jacket Material	TPE (Thermoplastic Elastomer)
Connector Material	Viton
Conductors	2 Plus Drain/Shield
Conductor Size	20AWG
Cable Diameter	0.19” (4.83 mm)
Shield Type	Braided Shield
Temperature Rating	-55 to 120°C (-67 to 248°F)
IP Rating	IP68

Ordering Information

Locking Collar: CMCP602L-AA-BB-CC
Push On Seal Tight: CMCP602LST-AA-BB-CC

AA = -(Cable Length in Feet)

BB = -01 (Standard Cable, No Armor)
-03 (Stainless Steel Braided Armor)

CC = -01 (Tinned Leads/Bare Wire)
-02 (Female BNC)
-03 (Spade Lugs)
-04 (Male BNC)

Optional Armor Cabling

All cables are available with overbraided armor.

Stocked Cables

CMCP602L(LST)-16-01-01
16’ (5m) Overall Length, No Armor, Tinned Leads on Fly End

CMCP602L(LST)-32-01-01
32’ (10m) Overall Length, No Armor, Tinned Leads on Fly End

CMCP602L(LST)-64-01-01
64’ (20m) Overall Length, No Armor, Tinned Leads on Fly End

For stainless steel flexible hose armor, please see CMCP602A Cable Connector Assemblies.

TOC

General Purpose Halogen Free 3 Socket MS 5015 Cable Assemblies

CMCP603L Series ‘Locking Collar’

Connector Type	3 Socket MS 5015, Locking Collar
Jacket Material	TPE (Thermoplastic Elastomer)
Connector Material	Viton / Stainless Steel
Conductors	3 Plus Drain/Shield
Conductor Size	20AWG
Cable Diameter	0.20” (5.08 mm)
Shield Type	Braided Shield
Temperature Rating	-55 to 120°C (-67 to 248°F)
IP Rating	IP68

CMCP603LST Series ‘Push On Seal Tight’

Connector Type	23 Socket MS 5015, Push On Seal Tight
Jacket Material	TPE (Thermoplastic Elastomer)
Connector Material	Viton
Conductors	3 Plus Drain/Shield
Conductor Size	20AWG
Cable Diameter	0.20” (5.08 mm)
Shield Type	Braided Shield
Temperature Rating	-55 to 120°C (-67 to 248°F)
IP Rating	IP68

Ordering Information

Locking Collar: CMCP603L-AA-BB-CC
Push On Seal Tight: CMCP603LST-AA-BB-CC

AA = -(Cable Length in Feet)

BB = -01 (Standard Cable, No Armor)
-03 (Stainless Steel Braided Armor)

CC = -01 (Tinned Leads/Bare Wire)
-03 (Spade Lugs)

Optional Armor Cabling

All cables are available with overbraided armor.

Stocked Cables

CMCP603L(LST)-16-01-01
16’ (5m) Overall Length, No Armor, Tinned Leads on Fly End

CMCP603L(LST)-32-01-01
32’ (10m) Overall Length, No Armor, Tinned Leads on Fly End

CMCP603L(LST)-64-01-01
64’ (20m) Overall Length, No Armor, Tinned Leads on Fly End

For stainless steel flexible hose armor, please see CMCP603A Cable Connector Assemblies.

High-Temperature Flame Retardant 2 Socket MS 5015 Cable Assemblies

CMCP602H Series ‘Locking Collar’

Connector Type	2 Socket MS 5015, Locking Collar
Jacket Material	FEP (Fluorinated Ethylene Propylene)
Connector Material	Viton / Stainless Steel
Conductors	2 Plus Drain/Shield
Conductor Size	20AWG
Cable Diameter	0.19” (4.83 mm)
Shield Type	Braided Shield
Temperature Rating	-55 to 120°C (-67 to 248°F)
IP Rating	IP68

CMCP602HST Series ‘Push On Seal Tight’

Connector Type	2 Socket MS 5015, Push On Seal Tight
Jacket Material	TPE (Thermoplastic Elastomer)
Connector Material	Viton
Conductors	2 Plus Drain/Shield
Conductor Size	20AWG
Cable Diameter	0.19” (4.83 mm)
Shield Type	Braided Shield
Temperature Rating	-55 to 120°C (-67 to 248°F)
IP Rating	IP68

Ordering Information

Locking Collar: CMCP602HL-AA-BB-CC
Push On Seal Tight: CMCP602HST-AA-BB-CC

AA = -(Cable Length in Feet)

BB = -01 (Standard Cable, No Armor)
-03 (Stainless Steel Braided Armor)

CC = -01 (Tinned Leads/Bare Wire)
-02 (Female BNC)
-03 (Spade Lugs)
-04 (Male BNC)

Optional Armor Cabling

All cables are available with overbraided armor.

Stocked Cables

CMCP602L(LST)-16-01-01
16’ (5m) Overall Length, No Armor, Tinned Leads on Fly End

CMCP602L(LST)-32-01-01
32’ (10m) Overall Length, No Armor, Tinned Leads on Fly End

CMCP602L(LST)-64-01-01
64’ (20m) Overall Length, No Armor, Tinned Leads on Fly End

For stainless steel flexible hose armor, please see CMCP602A Cable Connector Assemblies.

TOC

High-Temperature Flame Retardant 3 Socket MS 5015 Cable Assemblies

CMCP603H Series ‘Locking Collar’ 3-Pin

Connector Type	3 Socket MS 5015, Locking Collar
Jacket Material	FEP (Fluorinated Ethylene Propylene)
Connector Material	Viton / Stainless Steel
Conductors	3 Plus Drain/Shield
Conductor Size	20AWG
Cable Diameter	0.20” (5.08 mm)
Shield Type	Braided Shield
Temperature Rating	-55 to 120°C (-67 to 248°F)
IP Rating	IP68

CMCP602HST Series ‘Push On Seal Tight’ 3-Pin

Connector Type	3 Socket MS 5015, Push On Seal Tight
Jacket Material	TPE (Thermoplastic Elastomer)
Connector Material	Viton
Conductors	3 Plus Drain/Shield
Conductor Size	20AWG
Cable Diameter	0.20” (5.08 mm)
Shield Type	Braided Shield
Temperature Rating	-55 to 120°C (-67 to 248°F)
IP Rating	IP68

Ordering Information

Locking Collar: CMCP603HL-AA-BB-CC
Push On Seal Tight: CMCP603HST-AA-BB-CC

AA = -(Cable Length in Feet)

BB = -01 (Standard Cable, No Armor)
-03 (Stainless Steel Braided Armor)

CC = -01 (Tinned Leads/Bare Wire)
-02 (Female BNC)
-03 (Spade Lugs)

Optional Armor Cabling

All cables are available with overbraided armor.

Stocked Cables

CMCP603H(LST)-16-01-01
16’ (5m) Overall Length, No Armor, Tinned Leads on Fly End

CMCP603H(LST)-32-01-01
32’ (10m) Overall Length, No Armor, Tinned Leads on Fly End

CMCP603H(LST)-64-01-01
64’ (20m) Overall Length, No Armor, Tinned Leads on Fly End

For stainless steel flexible hose armor, please see CMCP603A Cable Connector Assemblies.

Low-Cost Armored Cable Assemblies

Armored Cable Assemblies are ideal for environments where objects could damage the cable by piercing or crushing it. The CMCP602A/603A Armored Cable Assembly Series increases the mechanical protection at a low-cost point and excels in industries like cement, production, coal processing, metal machine operations, and many other harsh environments.

Armored Cable 2 Socket MS 5015 Cable Assemblies

CMCP602A/603A Series 'Locking Collar'	
Connector Specifications	
Connector Type	2 or 3 Socket MS 5015, Locking Collar
Shield Isolation	Case Isolated (-I) or Non-Isolated (-NI)
Locking Collar Material	316 Stainless Steel
Connector Material	Ryton
Connector Temperature Rating	121 °C (250 °F)
Ingress Protection (IP) Rating	IP68
Cable Specifications	
Jacket Material	FEP (Fluorinated Ethylene Propylene)
Connector Material	Viton / Stainless Steel
Conductors	2 or 3 Plus Drain/Shield
Conductor Size	20 AWG (0.52 mm²)
Cable Diameter	0.175" (4.45 mm²)
Shield Type	Braided Shield
Temperature Rating	-67 to +400 °C (-55 to +400 °F)
Armor Specifications	
Armor Material	316 Stainless Steel, Interlocked Hose
Armor Diameter	0.30" (7.8 mm)
Maximum Armored Length	100' (30 m)

Ordering Information

2 Socket Connector: CMCP602A - AAA - BB - CC
3 Socket Connector: CMCP603A - AAA - BB - CC

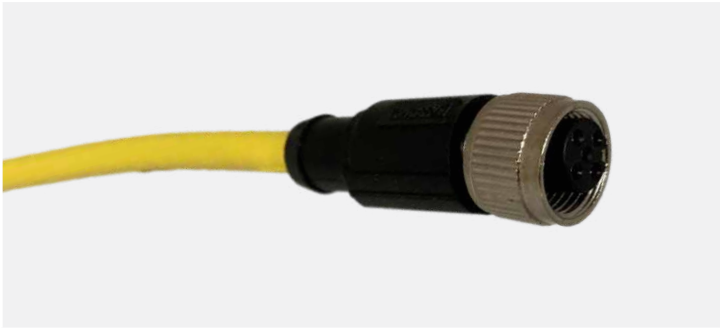
AAA = Overall Cable Length in Feet

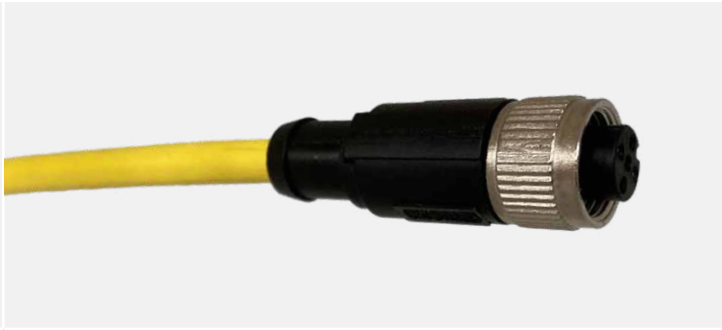
BB = Armored Length in Feet

CC = I (Isolated) -Shield not tied to Connector
NI (Non-Isolated) -Shield tied to Connector

TOC

General Purpose M12 Cable Assemblies – For 4 or 5 Pin Sensors





CMCP605M Series

Connector Type	M12
Jacket Material	PVC
Mates To	4 or 5 Pin M12 Sensors
Connector Material	Nickel Plated Brass
Conductors	5 Plus Shield
Conductor Size	22AWG
Shield Type	Braided Shield
Cable Diameter	0.22” (5.7 mm)
Temperature Rating	-30°C to +120°C (-22°F to +248°F)
IP Rating	IP68

Stocked Cables

CMCP605M-05-01
16’ (5m) Overall Length, Straight Exit Connector

CMCP605M-10-01
32’ (10m) Overall Length, Straight Exit Connector

CMCP605M-20-01
64’ (20m) Overall Length, Straight Exit Connector

CMCP605M-05-02
16’ (5m) Overall Length, Side Exit Connector

CMCP605M-10-02
32’ (10m) Overall Length, Side Exit Connector

CMCP605M-20-02
64’ (20m) Overall Length, Side Exit Connector

Ordering Information

Locking Collar: CMCP605M - AA - BB

AA = Cable Length in Meters

BB = 01 (Straight Exit Connector)
02 (Side Exit Connector)

TOC

Data Collector Cables

CMCP665 Series – Straight Cables

STI's CMCP665 Series Data Collectors are available for all manufacturers, including Emerson, SKF, DLI, Rockwell/Entech, and Adash. Cables are available for accelerometers and tachometers. Refer to the datasheet for details on the connector options and ordering information.

Brand	Part Number	Analyzer Connection
Emerson/CSI (2120/2130/2140)	CMCP665E Series	M12
SKF (Microlog Series AX/GX/CMXA80)	CMCP665S Series	Fischer
DLI (DCA 50/60/Watchman)	CMCP665D Series	LEMO
Rockwell/Entech (Datapac)	CMCP665R Series	LEMO
Adash (Vibrio)	CMCP665A Series	ODU or Binder

CMCP667 Series – Coiled Cables

Coiled Cables are available for all popular data collector models. Extended lengths include 6', 10', and 15'. All cables are available with an optional safety breakaway connector. Refer to the datasheet for details on the connector options and ordering information.

Brand	Part Number	Analyzer Connection
Emerson/CSI (2120/2130/2140)	CMCP667E Series	M12
SKF (Microlog Series AX/GX/CMXA80)	CMCP667S Series	Fischer
DLI (DCA 50/60/Watchman)	CMCP667D Series	LEMO
Rockwell/Entech (Datapac)	CMCP667R Series	LEMO
Adash (Vibrio)	CMCP667A Series	ODU or Binder

Part Number	Type	Length	Analyzer Side	Sensor Side	Function
Emerson 2130/2140 *Popular Models					
CMCP667E-5PINA-2PLC-06-00	Coiled	6'	5 Pin M12 Male	2 Socket MS 5015	Accelerometer Input, Channel A
CMCP667E-5PINT-M12T-06-00	Coiled	6'	5 Pin M12 Male	M12 (Triaxial)	Triaxial Input
CMCP665E-5PINA-2PLC-04-00	Straight	4'	5 Pin M12 Male	2 Socket MS 5015	Accelerometer Input, Channel A
CMCP665E-8PINV-MBNC-04-00	Straight	4'	8 Pin M12	Male BNC	Voltage Input, 2140
SKF					
CMCP667S-6PINF-2PLC-06-00	Coiled	6'	6 Pin Fischer	2 Socket MS 5015	Accelerometer Input, Channel A
CMCP667S-6PINF-M12T-06-00	Coiled	6'	6 Pin Fischer	M12 (Triaxial)	Triaxial Input
CMCP665S-7PINF-MBNC-04-00	Straight	4'	7 Pin Fischer	Male BNC	Tachometer Input
Rockwell					
CMCP667R-7PL-2PLC-06-00	Coiled	6'	7 Pin LEMO	2 Socket MS 5015	Accelerometer Input, Channel A
CMCP665R-7PLT-MBNC-06-00	Straight	6'	7 Pin LEMO	Male BNC	Tachometer Input

Field Installable Connector Kits

CMCP600C-K Series
2 and 3 Socket MS 5015 Connector Kits

The CMCP600C-K is a full accessory kit for use on-site to assist in the installation of the CMCP602 and CMCP603 Crimp On Style MS Connectors. The tool kit includes crimpers for the contacts and backshell, a pin insertion tool, wire strippers, a cable jacket stripper, and a 50mL epoxy cartridge with a dispensing tool. Connector kits are sold separately.

Tool Kit Ordering Information

CMCP600C-K	MS Connector Tool Kit

Crimp On MS 5015 Connectors

STI offers 2 and 3 socket MS 5015 Connectors in both ‘push on’ and ‘locking collar’ connections. The ‘locking collar’ connection includes the stainless steel locking collar and is compatible with all standard 10SL MS 5015 connectors.

2 Socket MS 5015 Connector Kits

For Use with 2 Pin MS Sensors

CMCP602 CXX - XX — 2 Socket MS 5015 Connector Kit

AA =
- CK (Push On Connector)
- CKL (Locking Collar Connector)

BB =
- 01 (1 Connector Kit)
- 10 (Pack of 10 Connector Kits)
- 25 (Pack of 25 Connector Kits)
- 50 (Pack of 50 Connector Kits)

3 Socket MS 5015 Connector Kits

For Use with 3 Pin MS Sensors

CMCP603 CXX - XX — 3 Socket MS 5015 Connector Kit

AA =
- CK (Push On Connector)
- CKL (Locking Collar Connector)

BB =
- 01 (1 Connector Kit)
- 10 (Pack of 10 Connector Kits)
- 25 (Pack of 25 Connector Kits)
- 50 (Pack of 50 Connector Kits)

TOC

Cable Adapters

STI stocks the most common cable adapters for vibration monitoring, for example:

CMCP624
2 Socket MS to BNC Plug

CMCP625
2 Socket MS to BNC Jack

CMCP626
2 Pin MIL to BNC Plug

CMCP627
2 Pin MIL to BNC Jack

Bulk Cabling

CMCP402L

- General Purpose Halogen Free Black TPE Jacket
- Two Conductors with Shield/Drain
- 20AWG Wires
- White/Black Conductors
- Overall Braided Shield with Drain Wire
- Improved Noise Immunity
- UV, Oil, and Chemical Resistant
- Circular Cross Section for Improved Sealing
- Flexible and Abrasion Resistant Jacket

CMCP403L

- General Purpose Halogen Free Black TPE Jacket
- Three Conductor, 20AWG Shielded Cable
- White/Black/Red Conductors
- Overall Braided Shield with Drain Wire
- Improved Noise Immunity
- UV, Oil, and Chemical Resistant
- Circular Cross Section for Improved Sealing
- Flexible and Abrasion Resistant Jacket

CMCP402H

- High-Temperature Flame Retardant Yellow FEP Jacket
- Two Conductors with Shield/Drain
- 20AWG Wires
- White/Black Conductors
- Overall Braided Shield with Drain Wire
- Improved Noise Immunity
- UV, Oil, and Chemical Resistant
- Circular Cross Section for Improved Sealing
- Flexible and Abrasion Resistant Jacket

CMCP403H

- High-Temperature Flame Retardant Yellow FEP Jacket
- Three Conductors with Shield/Drain
- 20AWG Wires
- White/Black/Red Conductors
- Overall Braided Shield with Drain Wire
- Improved Noise Immunity
- UV, Oil, and Chemical Resistant
- Circular Cross Section for Improved Sealing
- Flexible and Abrasion Resistant Jacket

TOC

Bulk Cabling

CMCP402HD

- High-Temperature Blue FEP Jacket
- Double Shielded Cable for High Noise Environments
- Two Conductors
- 20AWG Wires
- White/Black Conductors
- Overall Braided Shield with Drain Wire
- Improved Noise Immunity
- UV, Oil, and Chemical Resistant
- Circular Cross Section for Improved Sealing
- Flexible and Abrasion Resistant Jacket

CMCP405L

- General Purpose Blue PUR Jacket
- 5 Conductors with Shield and Drain Wire
- 22AWG Wires
- Overall Braided Shield with Drain Wire
- Improved Noise Immunity
- UV, Oil, and Chemical Resistant
- Circular Cross Section for Improved Sealing
- Flexible and Abrasion Resistant Jacket

CMCP405C

- Coiled Cable
- 6’, 10’, and 15’ Extended Lengths Available
- 5 Conductors with Shield and Drain Wire
- 22AWG Wires
- Overall Braided Shield with Drain Wire
- Improved Noise Immunity
- UV, Oil, and Chemical Resistant
- Circular Cross Section for Improved Sealing
- Flexible and Abrasion Resistant Jacket

Bulk Multi-Core Cabling

STI carries a wide variety of multi-core cabling for permanent installations. Multi-core cabling is used to transition individual sensor cabling to multi-core to lower installation costs and reduce the number of cable pulls. Multi-core cables are available with 1, 2, 4, 8, 12, 16, or 24 pairs (2 wires per core) or triad (3 wires per core) and in either 18 or 20AWG conductors. Each core is individually shielded to provide better noise immunity. All cables are instrumentation and tray rated cables, available in spools of up to 2,500’ max. For more information refer to the CMCP410, CMCP415, CMCP420, and CMCP425 datasheets.

https://www.stiweb.com/Instrument_Wire_s/60.htm

TOC

Mounting Hardware

STI offers a complete line of accelerometer mounting hardware, including mounting pads or discs, epoxy, NPT adapters, motor fin mounts, end mils, and magnetic mounting bases.

All accelerometer mounting hardware is in stock and ready for immediate delivery.

Considerations

Mounting Type
- Permanent
- Temporary

Environment
- Temperature

Application

Mounting Pads

Accelerometer Mounting Pads are used to ensure a smooth mounting surface for your sensors. Pads are available for stud mounting and epoxy mounting.

	Fully Threaded for Stud Mounting			
				
Part Number	**CMCP200-01**	**CMCP200-01-M8**	**CMCP200-02**	**CMCP200-02-M8**
Material	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel
Diameter	1.0” (25.4 mm)	1.0” (25.4 mm)	1.0” (25.4 mm)	1.0” (25.4 mm)
Height	0.25” (6.35 mm)	0.25” (6.35 mm)	3/8” (9.53 mm)	3/8” (9.53 mm)
Mounting Hole	¼-28 UNF 2B	¼-28 UNF 2B	¼-28 UNF 2B	¼-28 UNF 2B

	Partially Threaded for Adhesive Mounting		Isolated Mounting Bases	
				
Part Number	**CMCP200E**	**CMCP200E-M8**	**CMCP200I**	**CMCP200I-M8**
Material	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel with Delrin Insulator	316 Stainless Steel with Delrin Insulator
Diameter	1.0” (25.4 mm)	1.0” (25.4 mm)	1.0” (25.4 mm)	1.0” (25.4 mm)
Height	0.25” (6.35 mm)	0.25” (6.35 mm)	0.625” (15.88 mm)	0.625” (15.88 mm)
Mounting Hole	¼-28 UNF 2B	¼-28 UNF 2B	¼-28 UNF 2B	¼-28 UNF 2B

	Ferrous Pads for Use with Magnetic Sensor Bases			
				
Part Number	**CMCP200M-01**	**CMCP200M-02**	**CMCP200MP**	
Material	416 Stainless Steel	416 Stainless Steel	416 Stainless Steel	
Diameter	1.0” (25.4 mm)	1.0” (25.4 mm)	1.0” (25.4 mm)	
Height	0.25” (6.35 mm)	3/8” (9.53 mm)	0.25” (6.35 mm)	
Mounting Hole	¼-28 UNF 2B	M8x1.25	Flat Target	

TOC

NPT Adapters

Why drill a hole when you don't have to? Make use of existing plugged holes on your machine using a pipe thread adapter. The CMCP203 NPT Adapters are made from stainless steel and are available in all popular sizes.

CMCP203-01	1/2" NPT to 1/4-28 UNF Adapter
CMCP203-02	3/4" NPT to 1/4-28 UNF Adapter
CMCP203-04	3/8" NPT to 1/4-28 UNF Adapter
CMCP203-04	1/4" NPT to 1/4-28 UNF Adapter

Motor Fin Mounts

When a good spot to mount an accelerometer is not available on an electric motor, STI's CMCP205 Motor Fin Mounts may be the perfect solution. To select the proper motor fin mount, measure the depth and width of the cooling fins where you want to place the accelerometer. The motor fin mount needs to be long enough to directly contact the motor case between the fins. CMCP206 adhesive filler is then used to hold the motor fin mount in place. The thickness of the motor fin mount should allow contact at the base and minimize the amount of adhesive needed.

Part Number	CMCP205-01	CMCP205-02	CMCP205-03	CMCP205-04
Material	416 Stainless Steel	416 Stainless Steel	416 Stainless Steel	416 Stainless Steel
Surface Diameter	1.0" (25.4 mm)	1.0" (25.4 mm)	1.0" (25.4 mm)	1.0" (25.4 mm)
Stem Height	1.25" (31.75 mm)	2.00" (50.8 mm)	1.75" (44.45 mm)	1.0" (25.4 mm)
Fin Thickness	0.50" (12.7 mm)	0.50" (12.7 mm)	0.25" (6.35 mm)	0.25" (6.35 mm)

Thread Adapters

Threaded Mounting Studs allow for the broadest dynamic measurement range and are recommended for permanent monitoring systems. Since most sensors come with ¼-28 threads, STI provides a wide range of adapters to meet your specific requirements.

English Mounting Adapters		Metric Mounting Adapters	
CMCP238-01	¼-28 UNF to 5/16-24	**CMCP237-01**	¼-28 UNF to M8x1.25
CMCP238-02	¼-28 UNF to 3/8-24	**CMCP237-02**	¼-28 UNF to M10x1.0
CMCP238-03	¼-28 UNF to 1/2-20	**CMCP237-03**	¼-28 UNF to M6x1.25
CMCP238-04	¼-28 UNF to 1/4-20	**CMCP237-04**	¼-28 UNF to M6x1.0
CMCP238-05	¼-28 UNF to 10-32		

https://www.stiweb.com/Mounting_Adapters_s/154.htm

TOC

Magnetic Mounting Bases

Magnetic Bases are generally used with portable data collectors as they provide a quick and convenient way to mount a sensor onto a machine. Magnets are available for both flat and curved surfaces. All magnets feature a stainless steel case.

Curved Surface Magnets

Part Number (1/4-28 Mount)	Part Number (M8x1.25 Mount)	Pull Strength	Diameter	Height	Mounting
CMCP-MB01	CMCP-MB01-M8	20 Lbs	0.75” (19 mm)	0.70” (17.7 mm)	Stud
CMCP-MB02	CMCP-MB02-M8	40 Lbs	1.0” (25 mm)	0.90” (22.9 mm)	Threaded Hole
CMCP-MB03	CMCP-MB03-M8	80 Lbs	1.40” (38 mm)	1.30” (33 mm)	Threaded Hole

https://www.stiweb.com/Magnetic_Bases_s/142.htm

Flat Surface Magnets

Part Number (1/4-28 Mount)	Part Number (M8x1.25 Mount)	Pull Strength	Diameter	Height	Mounting
CMCP-MB01F	CMCP-MB01F-M8	26 Lbs	0.75” (19 mm)	0.30” (7.6 mm)	Stud
CMCP-MB02F	CMCP-MB02F-M8	55 Lbs	1.2” (30 mm)	0.60” (15.2 mm)	Threaded Hole
CMCP-MB03F	CMCP-MB03F-M8	110 Lbs	1.6” (40 mm)	0.40” (10.1 mm)	Stud

https://www.stiweb.com/Magnetic_Bases_s/142.htm

CMCP803 Explosion Proof Conduit Head

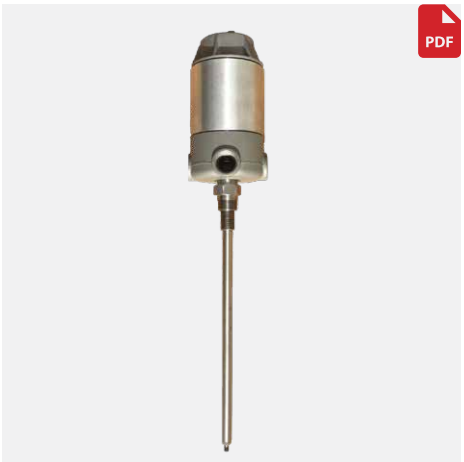
The CMCP803 Explosion Proof Conduit Head is designed to be used with the CMCP4190 Eddy Probe Adapter and is available in both 1/2” and 3/4” NPT versions. It is furnished with a 2” Dome lid with an “O” ring seal. The CMCP803 is suitable for Class I, Div. 1 and 2, if installed in compliance with NEC 501-4(a)(b) and for Class II, Div. 1 and 2.

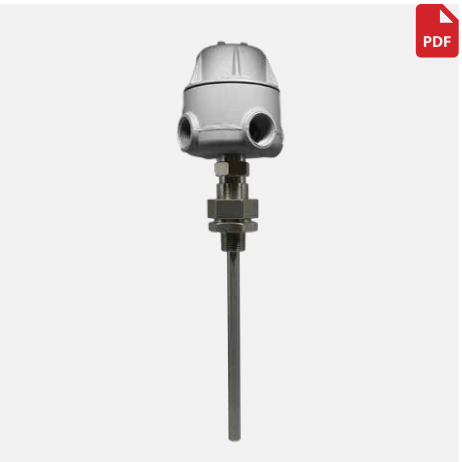
CMCP801 Relative Probe Holder with Stinger

External (through the case) mounting allows for the easy removal, inspection, and adjustment of the proximity probe as opposed to internal mounting, where the bearing cap or cover needs to be removed prior to inspection. The CMCP801 Probe Holder has an adjustment range of plus or minus 1” (2.54 cm), 2” (5.08 cm) overall. The CMCP801 can be cut to the required insertion depth either in the field or by a local machine shop. Additional insertion depth can be achieved by using longer proximity probes. All machined parts of the CMCP801 Probe Holder are made of 316 stainless steel. The outlet body and extension are cast aluminum. The outlet body is provided with four (4) 3/4” NPT hubs and is rated for Class 1 and 2, Division A, B, C, and D. As the probe holder uses 3/4” NPT entry into the machine case, if a standoff is required, it can easily be constructed using readily available 3/4” pipe and pipe fittings.

CMCP801DP Dual Probe Holder with Stinger

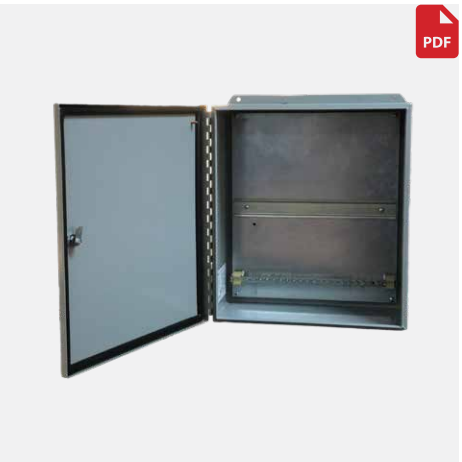
The CMCP801DP Dual Probe Holder is designed for the external mounting of proximity (Eddy) probes, as described and recommended by API-670, along with an accelerometer or velocity sensor for shaft absolute vibration measurements. External (through the case) mounting allows for the easy removal, inspection, and adjustment of the Proximity Probe as opposed to internal mounting, where the bearing cap or cover needs to be removed prior to inspection. The CMCP801D Probe Holder has an adjustment range of plus or minus 1” (2.54 cm), 2” (5.08 cm) overall. The CMCP801 can be cut in the field or by a local machine shop to the required insertion depth.





CMCP801QD Quick Disconnect Probe Holder

The CMCP801QD Quick Disconnect Proximity Probe Holder is designed for externally mounting proximity probes as described and recommended by API670. External (through the case) mounting allows for the easy removal, inspection, and adjustment of the proximity probe gap voltage. The CMCP801QD comes with a standard insertion length of 9” (228.6mm) and has an adjustment range of +/-1.0” (+-25.4mm). Custom stinger lengths are available upon request for applications requiring a longer insertion depth. The quick disconnect coupling allows the probe to be removed without having to be re-gapped, making it easy to troubleshoot the proximity probe system and quickly perform routine calibration checks.



CMCP140/150 Series Driver Enclosures

The CMCP140 and CMCP150 Series Enclosures are provided for housing proximity probe drivers. These enclosures are not limited to drivers, the enclosures may be used to mount other DIN rail-mounted devices such as transmitters. The enclosure covers have a continuous hinge on the long side of the unit for convenience and are secured to the enclosure with clamps. All enclosures are provided with an oil resistant gasket and stainless steel clamps for easy screwdriver access. Painted steel models are ANSI 61 powder coated on the interior and exterior surfaces. They are constructed from 14-gauge mild steel or stainless steel. These enclosures are designed for use in areas which may be regularly hosed down or are very wet, and they are suitable for indoor or outdoor installations. Each enclosure comes with an internal panel with TS35 DIN rail for mounting proximity probe drivers.

Ordering Information

NEMA 4 Painted Steel Enclosure:	CMCP140 - XX
NEMA 4X Stainless Steel Enclosure:	CMCP150 - XX

AA = **Specify Enclosure Size**

- 04 (10”x8”x6” for up to 4 Drivers)
- 06 (12”x10”x6” for up to 6 Drivers)
- 08 (14”x12”x6” for up to 8 Drivers)
- 10 (16”x14”x6” for up to 10 Drivers)
- 14 (20”x16”x10” for up to 14 Drivers)

Proximity Probe Mounting Hardware

STI manufactures all the proximity probe (Eddy current probe) mounting hardware you need for your journal bearing installation, for either internal or external mounting. Our hardware includes probe stinger assemblies for external mounting (through bearing housing) or internal mounting (side of journal bearing). Proximitor housings, in either painted steel or stainless steel, are available for all manufacturers' proximitors or drivers footprints.

CMCP805 Proximity Probe Mounting Blocks

The CMCP805 Proximity Probe Mounting Blocks eliminate the chore of making special brackets or fixtures for proximity probe installations. Threaded and slotted, the CMCP805 ensures a firm grip and stable installation once you have correctly positioned the probe. The CMCP805 is available for either 1/4"-28 UNF or 3/8"-24 threaded proximity probes in either aluminum or Delrin for applications where isolation between the proximity probe and mounting surface is required, such as on generators that use isolated bearings. Mounting blocks are kept in stock for immediate delivery.

Ordering Information

CMCP805-01	Aluminum Mounting Block for 3/8-24 Threaded Probes
CMCP805-02	Aluminum Mounting Block for 1/4-28 Threaded Probes
CMCP805D-01	Delrin Mounting Block for 3/8-24 Threaded Probes
CMCP805D-02	Delrin Mounting Block for 1/4-28 Threaded Probes

CMCP4190 Proximity Probe Mounting Adapter

STI Vibration Monitoring offers the CMCP4190 for probe installations where the shaft is only a short distance from the bearing housing. The probe adapter is a 1/2" or 3/4" NPT threaded on either end for mounting to the housing and a conduit head. The internal thread is available to fit the 2 standard Eddy probe thread sizes. For particularly long probes, an optional deep conduit head is available. The CMCP4190 is made of 316 stainless steel and can be used in conjunction with the CMCP803 housing.

Ordering Information

CMCP4190-01	½" NPT Adapter to ¼-28 Threaded Probes
CMCP4190-02	½" NPT Adapter for 3/8-24 Threaded Probes
CMCP4190-03	¾" NPT Adapter for ¼-28 Threaded Probes
CMCP4190-04	¾" NPT Adapter for 3/8-24 Threaded Probes

TOC

Sensor Installation Tool Kits

Accelerometer installation tool kits, or Spot Face Tools, are used to prepare a round flat area on your machine's bearing to mount accelerometers or accelerometer mounting pads. Accelerometers and velocity sensors need a smooth, flat surface to perform to their optimum specifications. Once the smooth, flat area is prepared, the accelerometer sensor may either be epoxy or stud mounted.

CMCP270(L&S) Series of Accelerometer Mounting Tool Kits

Includes a counterbore, drill bit, tap and hex key, and an optional tap handle.

Ordering Information

1.0" (25.4 mm) Diameter P/N:
CMCP270 - AA - BB

1.125" (28.56 mm) Diameter P/N:
CMCP270L - AA - BB

0.75" (19 mm) Diameter P/N:
CMCP270S-01 - BB

AA = -01 (1/4-28 UNF)
-02 (M8x1.25)

BB = -00 (No Tap Handle)
-T (With Standard Tap Handle)
-RT (With Ratcheting Tap Handle)

Series	CMCP270	CMCP270L	CMCP270S
Spot Facer Size	1.0" (25.4 mm)	1.125" (28.56 mm)	0.75" (19 mm)
Number of Installations	50-100	50-100	50-100
Type	High Speed Steel	High Speed Steel	High Speed Steel

CMCP271(L) Series of Indexable Counterbores

Includes a counterbore, 10 cutting blades (tri-tipped), drill bit, tap and hex key, and an optional tap handle

Ordering Information

CMCP271 - AA - BB

AA = -01 (1/4-28 UNF)
-02 (M8x1.25)

BB = -00 (No Tap Handle)
-T (w/ Standard Tap Handle)
-RT (w/ Ratcheting Tap Handle)

Series	CMCP271L
Spot Facer Size	1.0" (25.4 mm)
Number of Installations	50-100
Type	Replaceable Carbide Cutting Blades
Blades Included	10

TOC

CMCP272 Spare Counterbore

Includes counterbore and hex key.

Series	CMCP272-01	CMCP272-02	CMCP272-03
Spot Facer Size	1.0” (25.4 mm)	1.125” (28.56 mm)	0.75” (19 mm)

CMCP220 Complete Accelerometer Installation Kits

The CMCP220 Series Kits provide all the items necessary for adhesive mounting 10, 32, 64, or 128 accelerometers. Kits include mounting pads, accelerometer installation tool kits, adhesive, and a silicone dielectric.

Part Number	Mounting Pads	Spot Facing Kits	Adhesive Bypacs	Silicone Dielectric
CMCP220-10-01	10	1	10	1
CMCP220-32-01	32	2	32	2
CMCP220-64-01	64	3	64	3
CMCP220-128-01	128	6	128	6

CMCP250 Accelerometer Mounting Kit

Mount your accelerometers quickly and easily with the CMCP250 Accelerometer Mounting Kit. The kit includes all the items required to mount up to 33 accelerometers.
The kit includes:

25 each	CMCP200-02 Mounting Pads
2 each	CMCP205-01 Motor Fin Mounts
2 each	CMCP205-02 Motor Fin Mounts
2 each	CMCP205-03 Motor Fin Mounts
2 each	CMCP205-04 Motor Fin Mounts
25 each	¼-28 Mounting Studs, ½” Long
25 each	¼-28 Mounting Studs, ¾” Long
1 each	CMCP270-01-T Spot Facer Tool Kit
1 each	CMCP211 Adhesive and Activator
1 each	CMCP212 Silicone Dielectric
1 each	CMCP213 Silicone Sealant
2 each	CMCP206 Adhesive Filler
1 each	Adhesive Dispenser
12 each	Mixing Nozzles for Adhesive

TOC

Customizable Monitoring Systems

CMCP5300 Series Systems

The CMCP5300 Series Monitoring and Protection Systems are complete pre-packaged solutions for all types of rotating machinery. STI's CMCP500A Series Single Channel Vibration and Temperature Monitors allow you to create a custom system for your exact application. By using single channel transmitters or monitors, the exact amount of measurement points can be monitored, significantly lowering the cost compared to "rack" based systems that come with a minimum channel amount per card. The CMCP5300 Series Monitoring Systems are designed to be used with the CMCP530A-100A Vibration Velocity Monitor but can be retrofitted for use with any other CMCP500A Series Monitors, whether your application calls for proximity probes, accelerometers, RTD's, thermocouples or any other industry standard sensor STI can retrofit the CMCP5300 to accommodate your needs. Other enclosure types are available for systems that require more than 6 channels.

PDF

WARRANTY 3 YEARS WARRANTY

Ordering Information

CMCP530 A - B - CC - D	
A	Number of Channels
B	E (English Units)
	M (Metric Units)
CC	FG (Fiberglass Enclosure)
	PS (Painted Steel Enclosure)
	SS (Stainless Steel Enclosure)
D	0 (No Local Displays)
	I (Individual Displays)
	C (Common Switchable Display

CMCP7500MMS Human Machine Interface (HMI)

PDF

WARRANTY 3 YEARS WARRANTY

The CMCP7500MMS Machinery Monitoring System is an HMI (Human Machine Interface) based Machinery Protection System. The CMCP7500MMS is available in 8, 16, 24, 32 and 64 Channels as Standard Options. The CMCP7500MMS continuously monitors input from Channel Input Modules (Transmitters) and provides a local bar graph display along with trending, alarm history, remote viewing and email and SMS alerts. The CMCP7500MMS is easily configured in the field to accept any Velocity, Acceleration, Enveloping, Displacement, Thrust or Temperature input by selecting the required Channel Input Module and entering the appropriate values in the HMI. The CMCP7500MMS is available in 7", 9" and 15" color touch screen displays and can be easily added to any monitoring system from STI.

- Color Touch Screen
- Easy Setup in Field
- CE and Class 1 Division 2 Approvals
- Built in Web Server (Remote Viewing)
- Four Alarms per Channel
- Meter and Bar Graph Displays
- Alarm and Event List
- 16 Pin Trending
- Email and SMS Text Alerts
- 10 Base T/100 Base Ethernet

TOC

Complete Monitoring Systems

CMCP7504 General Machinery Monitoring System

The CMCP7504 can monitor up to four channels of vibration, position, temperature, or analog inputs. Additional dedicated speed and temperature inputs are provided.

Four dedicated BNC Buffered Outputs are located on the front cover and provide convenient access to the raw sensor signals for portable vibration analyzers. Buffered output signals are also available on screw terminals for hardwiring to online systems. The local LCD display provides bar graphs, alarm indicators, and the overall vibration value directly on the front of the enclosure. Speed and temperature are also displayed on the front panel. The configuration software included with the system allows the user to program the four inputs, nine relay outputs and four recorder outputs with a laptop or PC via USB cable.

STI's DataView FFT Saver function allows advanced diagnostic capability by allowing the user to access a recording of the sensor's raw signal. Recordings are collected on alarm (alert and danger) and are saved to the internal SD Card as a .wav file which allows the user to review the waveform or FFT using a portable data collector or online monitoring system.

The CMCP7504 is rated IP65 and protects against dust and water ingress. Enclosures are available for additional protection. An internal Micro SD-Card records a rolling buffer of the overall values which can be reviewed at a later time.

Features

- Compact Monitoring System
- API 670 Compliant
- Compatible with All Standard Sensors
- 4.3" LCD Color Bar Graph Display
- Local Alarm Indications
- Modbus TCP and RS485 Output
- BNC Buffered Outputs
- 4-20mA Outputs
- Relay Outputs (OK, Alert and Danger)
- Speed Input with Readout
- Temperature Input with Readout
- AC or DC Powered

Available Input Modules

-AA	Acceleration Monitor, IEPE Accelerometer Input
-AV	Velocity Monitor, IEPE Accelerometer Input
-VV	Velocity Monitor, Piezo-Velocity Input
-EV	Enveloped Acceleration Monitor, Accelerometer Input
-DS	Displacement Monitor, Proximity Probe Input
-TP	Thrust/Position Monitor, Proximity Probe Input

Flexible Protection System per API 670.

Single Channel Transmitters and Monitors

CMCP500 Series Din Rail Mount Transmitters

STI's CMCP500 Series DIN Rail-Mount Transmitters are available in 13 versions, including all vibration parameters, temperature, speed, and all TSI (Turbine Supervisory Instrumentation) functions. Transmitters include an OK circuit and a buffered BNC connector. Adding the optional alarm module (A), allows the units to become fully functional single channel monitors with OK, alert, and danger alarms. All units are CSA/UL Class 1, Division 2 and CE approved.

(A) Denotes models with optional Alarm Module

The Transmitters are the base for customizable vibration monitoring systems.

https://www.stiweb.com/CMCP500_Series_s/97.htm

Models Available	
CMCP525(A)	Acceleration Transmitter
CMCP530(A)	Velocity Transmitter
CMCP535(A)	Displacement Transmitter (Piezo-Velocity Input)
CMCP540(A)	Displacement Transmitter (Proximity Probe Input)
CMCP545(A)	Thrust/Position Transmitter (Proximity Probe Input)
CMCP547(A)	Differential Expansion Transmitter
CMCP548(A)	Case Expansion Transmitter
CMCP549(A)	Valve Position Transmitter
CMCP570(A)	Solid State Temperature Transmitter
CMCP575	Speed Transmitter
CMCP576	Proximity Probe to TTL Transmitter
CMCP585(A)	Eccentricity Transmitter
CMCP590(A)	Enveloped Acceleration Transmitter

CMCP700S-CVT Low-Cost Vibration and Temperature Transmitter

The CMCP700S-CVT is compatible with all industry standard IEPE Accelerometers and Piezo Velocity transducers. Each transmitter provides constant current power for the associated sensor and processes the signal through a True RMS detector to determine the overall amplitude in terms of Acceleration or Velocity. A 4-20 mA output proportional to one of the three user selectable ranges, can be connected to a Control System (PLC, DCS or SCADA system). This allows operations and maintenance staff to view real time machinery health, set alarms and trigger machine shutdowns for scheduled preventative maintenance. The CMCP700S-CVT features a temperature output that provides a second 4-20 mA loop for dual output accelerometers such as the CMCP786T. For Vibration measurements only, the temperature output can be left unused.

The CMCP700S-CVT Case Vibration and Temperature Transmitter is supplied in a 17.5 mm case and features a BNC connector on the front of the unit to provide easy access to the raw vibration data with a portable analyzer or data logger.

Models Available	
CMCP700S-CVT	Case Vibration and Temperature Transmitter

TOC

CMCP730D Universal Signal Conditioner and Relay Module

The CMCP730D Universal Signal Conditioner and Relay Module accepts an input from any DC Voltage, Current, RTD or Thermocouple and provides two levels of alarm and a 4-20mA or voltage output for a PLC, DCS, SCADA or other control system. The CMCP730D is user programmable and features a local LCD display which displays the overall value of its associated sensor. The CMCP730D can be paired with a signal conditioner (for example CMCP700S-CVT) to service as the monitor unit with relays and local display. Additionally, a 4-20mA output sensor or temperature sensor can be connected directly to the CMCP730D.

The CMCP730D works as a Display and Relay module for the CMCP700S-CVT Transmitter or as a Signal Conditioner for temperature sensors.

Models Available	
CMCP730D	Universal Display and Relay Module

Adhesives

Motor Fin Mounts

Adhesive fillers fill the gaps between the Motor Fin Mount and the motor cooling fins. This adhesive is thicker than the typical mounting pad adhesive, allowing it to build up around the fin mount. The adhesive hardens after approximately 3 minutes.

CMCP206
Adhesive Filler
50mL Cartridge
(10-50 Fin Mounts)

CMCP207
Adhesive Dispenser (Re-Usable)

CMCP208
Adhesive Mixing Nozzles
Pack of 12 (Disposable)

Good	Better	Best

CMCP211
Depend 330 Spray and Activator
(Up to 50 Sensors)

CMCP210
Acrylic Adhesive Bypac
(1-2 Sensors)

CMCP210C
Acrylic Adhesive, 50mL
(50-100 Sensors)
Requires CMCP207 and CMCP208)

Other

→ **Increase Connector Longevity**
CMCP212 - Silicone Dielectric
Prevents Moisture from Entering Connectors (Up to 50 Connectors)

→ **Improve Signal Quality**
CMCP213 - Silicone Sealant
Prevents Moisture Between Pad and Sensor (75-150 Sensors)

→ **Make it Stick!**
CMCP214 - ODC Free Degreaser
Removes Grease and Oil from Surface (25-75 Installations)

TOC

Vibration Switches

CMCP-DVS Digital Vibration Switch

The CMCP-DVS is a single channel microprocessor-controlled vibration switch with two (2) alarm levels with associated relays. Alarm levels are completely programmable and can be either latching or non-latching. It shows the current vibration on a good visible LED Display along with LED alarm indicators. The Sensor module is mounted in the bottom of the housing uses a 100 mV/g Accelerometer and converts the signal to True RMS Velocity.

It is designed to be mounted directly to rotating machinery and prevent catastrophic failure by shutting down the machine when vibration levels become excessive. Alarm time delay is programmable to prevent false shutdowns. The CMCP-DVS-GP General Purpose unit can be deployed on any rotating machinery in many industries and the CMCP-DVS-EX is mounted in an Explosion Proof Enclosure.

For Latching Alarms, a reset switch on the front panel keypad is provided. An additional external switch with NPT fitting is provided for each CMCP-DVS-GP unit. The switch can be installed in any of the conduit's hubs. Terminals are also available for wiring to a remote reset switch.

Ordering Information

CMCP-DVS-GP - AA	-Digital Vibration Switch for General Purpose, External Switch included
CMCP-DVS-EX - AA - BBB	-Explosion Proof Digital Vibration Switch
AA =	-E1 (0-1.00 in/sec RMS Range) -E2 (0-2.00 in/sec RMS Range) -M1 (0-25 mm/sec RMS Range) -M2 (0-50 mm/sec RMS Range)
BBB =	-00 (No External Push Button Reset Switch) -RST (with External Push Button Reset Switch)

CMCP-DVS-PS Explosion Proof Power Supply

The CMCP-DVS-PS is an Explosion Proof Power Supply that takes 85 to 305 VAC Input or 100 to 430 VDC Input and converts it into 24V DC. This allows operators to use equipment such as the CMCP-DVS Vibration Switch series or other equipment. The built-in fuse resets automatically when an overload is removed. The device simplifies the installation of Digital Vibration Switches, and the Input and Output terminals are pluggable to make wiring easier

Features

- Universal Power Supply
- 24 VDC Output, 200 mA (5 Watt)
- 85 to 305 VAC Input or
- 100 to 430 VDC Input
- Load Regulation, +/-1%
- FM Class 1, Division 1, Group B, C, D Approved
- High Ingress Protection (IP68)
- Highly Reliable (MTBF 2.6 million Hours)
- Internal Green LED-On Light
- Automatic Fuse Reset
- Protection from high Voltage Spikes (MOV and TVS)
- Temperature Range -40 to 185 °F (-40 to 85 °C)

TOC

A Perfect XP Match!

CMCP-DVS-PS
Power Supply

85 to 305 VAC
or
100 to 430 VDC

= 24 VDC

CMCP-DVS
Vibration Switch

CMCP423VTA Compact Vibration Switch

The CMCP423VTA is a low-cost, compact vibration switch that provides both a 4-20mA output and a relay output without the need for separate signal conditioners or relay modules. The CMCP423VTA measures overall velocity in RMS. Alarm limits and time delays can be programmed by rotating the adjustment rings on the outside of the sensor. A local green “OK” and orange “alarm” indicators are visible on the side of the sensor. Each sensor includes a plastic sleeve, which prevents unwanted setting changes when the sensor is in operation.

Measurement Type	Velocity RMS
Frequency Response	10Hz to 1kHz (600 to 60kcpm)
Sensitivity Tolerance	±10%
Connector	4 Pin M12
Range	-01 Model: 1.0 in/sec (25 mm/s) -02 Model: 2.0 in/sec (50 mm/s)
Output	4-20mA
Relay	Normally Energized, 24VDC Output
Max Temperature	80°C (176°F)
IP Rating	IP67

Ordering Information

CMCP423TA - AA	
AA	-01 (0-1.00 in/sec or 25 mm/sec Range)
	-02 (0-2.00 in/sec or 0-50 mm/sec Range)

Vibration Meters

CMCP630VP Vibration Pen

The CMCP630VP is a portable, handheld vibration meter designed for operators, maintenance personnel, and inspectors that complies with the ISO 2372 Standard for Mechanical Vibration of Machines Operating from 10 to 200 rev/s (600 to 12,000 RPM). The CMCP630VP features a shockproof high-strength aluminum case, a backlit LCD display for low light and direct sunlight conditions, and a simple 2-button operation. The Vibration Pen is capable of measuring acceleration, velocity, and displacement and can display the highest measurement using the 'Peak Hold' function. The rechargeable lithium-ion battery allows for up to 30 hours of continuous measurements and recharges using a standard 5VDC USB charger which is provided with the kit. An ISO 10816-1 Vibration Severity Chart is included with the kit to easily reference measurements with industry standards

Features

- Quick and Easy to Setup and Use
- English or Metric Units
- Backlit LCD Display for Low Light Conditions
- Lightweight, Compact, and Ergonomically Designed Case
- Velocity, Acceleration, and Displacement Measurements
- Peak Hold Function
- Hand Pressure
- 30-Hour Battery Life (Continuous Use)
- Rechargeable Battery
- Conforms to ISO2372
- Lanyard, Travel Case, Charger, Storage Bag and
- ISO 10816-1 Severity Chart Included

Ordering Information

CMCP630VP-E	Vibration Pen, English Units
CMCP630VP-M	Vibration Pen, Metric Units

What's in Your Pocket?

CMCP620V/VT Handheld Vibration Meter

CMCP620V Vibration and the CMCP620VT Vibration and Temperature battery-powered portable kits have been designed for use as both entry-level and comprehensive vibration and temperature monitoring instruments for maintenance engineers across all types of industries. The CMCP620VT kit consists of the compact vibration meter with a combined non-contact temperature measuring sensor aided by a locator beam, a handheld probe, a magnetic mount for more permanent installations, a protective carrying case, an instruction manual, and battery chargers for both main and in-car use. The meter is microprocessor based and can be easily set up to monitor acceleration (g) levels, velocity (mm/sec), displacement (ìm), bearing condition (BG or BV), and temperature (°C or °F). A display hold function is also included. The unit, which conforms to ISO 2954 and ISO 10816-3 also has an automatic alarm check for bearing conditions. Operating from an internal rechargeable lithium battery, the meter offers 48 hours of continuous operation. The unit can be recharged from flat in 3 hours using either the AC line or the in-car charger supplied with the kit. Because of its compact size, ease of use and battery operation, the CMCP620 allows engineers to monitor vibration and temperature levels on important machinery anywhere around the factory.

Features

- Handheld Vibration Meter
- 100 mv/g IEPE Accelerometer
- Acceleration, Velocity, or Displacement
- Optional Temperature (VT)
- Lithium Battery and Charger
- LCD Display
- 2.5’ (0.8 m) Cable
- 3.0” (75 mm) Spike
- 26lb (12 kg) Pull Curved Surface Magnet
- Automatic Alarm Check ISO10816-3
- Includes Carry Case

Ordering Information

CMCP620V	Vibration Meter Kit
CMCP620VT	Vibration and Temperature Meter Kit

Test Kits

CMCP-TKAT Accelerometer Tester

The CMCP-TKAT Cable and Bias Checker is a battery-powered, handheld unit designed to enable installation engineers to verify plant cabling in vibration monitoring systems. The unit provides constant current accelerometer power via a BNC connector and indicates correct accelerometer operation or cabling short /open circuits using a tri-color LED. In addition, the accelerometer bias voltage is indicated on an LCD display. The battery compartment, containing a single 9V battery, is accessible after removing the rubber protective cover.

Features

- Verifies Sensor Bias Voltage
- Verifies Cable Wiring
- LED Voltage Display
- OK, Short or Open LED Indicators
- 9V Battery Powered
- BNC Cable For Direct Connection
- Test Leads for Junction Boxes
- Includes Carry Case and Spare Battery

CMCP-TKAS Accelerometer Simulator

The CMCP-TKAS Accelerometer Simulator is a battery-powered, handheld unit designed to enable installation engineers to test vibration monitoring systems that employ 100mV/g constant current type industrial accelerometers. The unit provides two switched levels of simulated vibration velocity signals, 0.20 in/s (5 mm/s) and 0.78 in/s (20 mm/s), allowing verification of vibration monitors and alarm circuits. The switched vibration levels, and accelerometer power from the monitoring system, are indicated by LEDs.

Features

- Easily Verify Alarm Circuits
- Two Level Simulation
- 9V Battery Powered
- BNC Cable For Direct Connection
- Test Leads for Junction Boxes
- Includes Carry Case and Spare Battery

CMCP-TKAP Accelerometer Power

The CMCP-TKAP is used to power IEPE Accelerometers using a 3.3 mA Constant Current Diode. Both battery power and accelerometer bias can be checked using the LCD display's two-position momentary switch. As the LCD may add noise to the accelerometer signal, the display is only powered and used when not taking data. The CMCP-TKAP is provided with an off/on switch, but the unit does not draw power from the batteries unless an accelerometer is connected or the display is selected.

Features

- Power One (1) Standard Accelerometer (IEPE*)
- Standard BNC Connectors for Input and Output
- BNC to Terminal Adapters Provided (2)
- Battery Powered, Standard 9V Alkaline (3)
- AC Coupled Output
- 3.3 mA Constant Current Diode
- 0.5" (12.5 mm) LCD Display (Battery and Accelerometer Bias)
- 125+ Hours Battery Life (When connected to Accelerometer)
- Small and Lightweight
- Molded Carry Case
- Batteries Included

A portable and rugged tester for Standard Accelerometers.

*__IEPE__ stands for Integrated Electronics Piezo-Electric.
The IEPE power scheme is unique in that it uses constant current, rather than constant voltage, to power the accelerometer's internal electronics.

Proximity Probe Testing

CMCP-TKPW Pocket Wobulator

The CMCP-TKPW Pocket Wobulator is used to provide a calibrated mechanical vibration using a variable speed wobble plate. A precision dial indicator is placed in the probe shuttle and set at the desired amplitude. The dial indicator is then replaced with a proximity probe to simulate vibration signals. Both the proximity probe system and monitoring system can be verified by this method. The CMCP-TKPW's wobble plate is made from 4140 steel and features 0-15 mil (0-381 Micron) dynamic range calibrations.

Features

- Compact, Battery Powered Wobulator
- For Use with Proximity Probe Systems
- 4140 Steel Wobble Plate
- 0-15 mil (0-381um) Dynamic Range
- Collets for English and Metric Probe Sizes
- Precision Dial Indicator
- Variable Speed (0-7,000 RPM)
- Tachometer and Key Phase Notch for Speed Probes
- Includes Travel Case, Battery Pack, Charger, and Mounting Magnet

CMCP-TKPC QuickClick Pocket Calibrator

The CMCP-TKPC QuickClick Pocket Calibrator provides a convenient and precise method of verifying the voltage output vs. the physical gap of a proximity probe system. Designed for use in a field or shop environment, the CMCP-TKPC will work with any manufacturer's 5 mm and 8 mm probes and is supplied with probe holders to accommodate 1/4-28, 3/8-24, M8, and M10 thread sizes. STI's patented QuickClick micrometer allows the user to easily adjust the micrometer in 0.005" (English option) or 0.1 mm (Metric option) increments quickly and reliably, improving report precision and reducing the overall time it takes to complete a report. With the length of the physical gap and the output of the proximity probe, a calibration curve can then be generated using STI's Proximity Probe Calibration Tool and Microsoft Excel. CMCP-TKPC comes in a protective carrying case complete with a 2-pole magnet and 4 standard collets. Material-specific targets are also available.

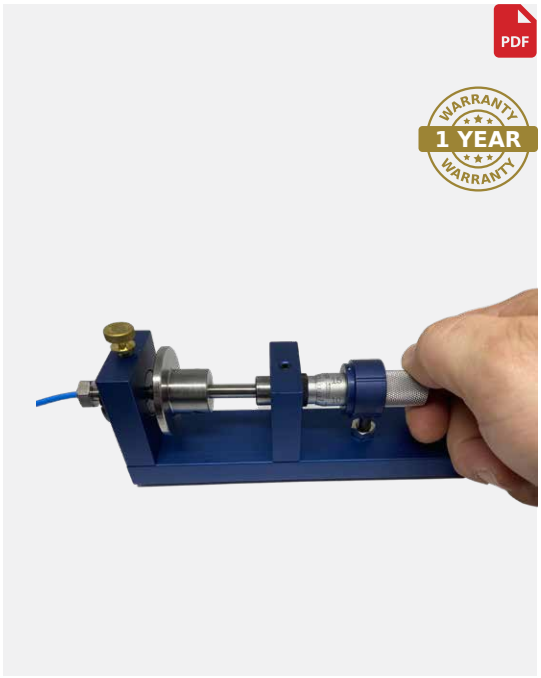
Features

- Used to Verify Proximity Probe Calibration
- For 5 mm and 8 mm Proximity Probes
- Patented QuickClick Micrometer Adjustment
- Compact Size (1.5"x3.5")
- 4 Collect Sizes 1/4", 3/8", M8 and M10
- 4140 Steel, 0.938" (24 mm) Dia. Target
- Table or Magnetic Mount
- Hard Carrying Case
- English or Metric Micrometer

TOC

CMCP610 Series Benchtop Static Calibrator

The CMCP610 Static Proximity Probe Calibrator provides a convenient and precise method of verifying the voltage output vs. the physical gap of a proximity probe and driver system. The CMCP610 will work with any manufacturer's 5 mm, 8 mm, or 11 mm probes. Collets are provided for 1/4", 3/8", M8, M10, and M14 probes to allow the user to easily adapt the calibrator for the most popular sizes. The CMCP610 is supplied with a replaceable precision 1.5" diameter 4140 steel spindle target for verifying calibration per API 670. The patented QuickClick micrometer allows the user to easily adjust the micrometer in 0.005" or 0.1 mm increments.



Features

- Used to Verify Proximity Probe Calibration
- QuickClick for Precise Incremental Measurements
- 1.00" (25.4 mm) Range
- 1.5" (38.1 mm) Target for Up to 11 mm Probes
- 4140 Steel Target (Others Available)
- Benchtop or Magnetic Base Mounting
- Excel Spreadsheet Calibration Reporting Tool
- Travel Case Included

CMCP-TKSC Proximity Probe Shaft Calibrator

The CMCP-TKSC Shaft Calibrator is used to determine the actual Proximity Probe System output in mv/mil or mv/um of a machine shaft or piston rod. Knowing the correct calibration allows the monitoring system to be adjusted to read vibration, thrust, or rod drop correctly. Electrical or mechanical runout measurement can also be easily corrected for sensitivity. Using the CMCP-TKSC is straightforward. STI's patented QuickClick micrometer allows the user to easily adjust the micrometer in 0.005" (English option) or 0.1 mm (Metric option) increments quickly and reliably, improving the overall time it takes to complete calibration with greater precision. The QuickClick can also be disengaged to allow for 0.001" or 0.01 mm graduations.

Features

- Easy to Use
- QuickClick for Precise Incremental Measurements
- Measure Actual Shaft or Rod Sensitivity
- Accepts Proximity Probes up to 0.400 dia.
- 0.50" or 12.7 mm Range
- Delrin Base, proven not to affect Sensitivity
- Mounting Strap Included

CMCP-TKPRO Vibration Test Kit

The CMCP-TKPro is used to provide a calibrated mechanical vibration using a variable speed wobble plate. A precision dial indicator is used to position the swing arm to the desired amplitude. The dial indicator is then replaced with a proximity probe. Both the Proximity Probe System and Monitoring System can be verified by this method. The CMCP-TKPro's wobble plate is 4140 Steel which is the standard for all Proximity Systems. The CMCP-TKPro is battery-powered using a long-life Lithium Ion battery. The CMCP-TKPro also runs on AC power using the provided smart charger.

Features

- Portable Dynamic Signal Simulator
- 0-15 mil (380um) Range
- Collets for 5 Probe Sizes
- Internal Lithium-Ion Battery
- Variable Speed Motor (0-7,000 RPM)
- Local Speed Indication (RPM)
- Key Phase Notch
- Precision Dial Indicator for Setting Amplitude
- English and Metric Kits Available
- Includes Travel Case

CMCP-TKSG-M Mini Field Signal Generator

The CMCP-TKSG-M Mini Field Signal Generator is an ideal tool for engineers and technicians who perform installations, maintenance, troubleshooting, and verification of calibrations on vibration monitoring systems. The portable CMCP-TKSG-M simulates a fixed frequency acceleration or velocity signal with a bias of +10 VDC.

The amplitude of the signal can be adjusted in 8 pre-defined increments or manually adjusted using the variable output setting. The signal generator produces a 10 VDC bias voltage to satisfy OK circuits and offers over 18 hours of runtime on its internal rechargeable lithium-ion battery pack.

Features

- Calibrated Acceleration and Velocity Outputs
- BNC Female Output Connector
- 8 Selectable RMS Outputs plus Variable Output
- 318 Hz Fixed Signal Frequency
- Designed for Standard Acceler ometers with +24 VDC Powered Systems
- +10 VDC Bias to replicate common sensors and to enable OK circuits
- Lithium-Ion Battery-Powered with Smart Charger for more than 18+ Hours of Runtime

TOC

CMCP-TKSG Field Signal Generator

The rechargeable generator produces a calibrated 318 Hz sinewave signal with various, selectable amplitudes. In addition, it generates a ±10.0 VDC bias on the signal output to satisfy devices with OK circuits.
The signal is available on the front BNC output and serves as the input to the devices under test (DUT), for example, transmitters. With the included BNC “T” adapter, a calibrated Digital Voltmeter (DVM) or oscilloscope can be connected at the same time.

When the generator is set to “AC Signal” acceleration and velocity sensors will be simulated. The amplitudes, in either Peak or RMS, are controlled by the selector switch on the left with 10 preset signals or the rotary knob for seamless adjustments.

Selecting “DC Gap” provides the means to calibrate proximity systems (Eddy current probe systems). The selector switch on the right side is then activated and features 10 preset DC voltages for quickly and accurately charting input versus output of the device under test, for example a position transmitter. The rotary knob below provides variable DC voltages when selected.

The typical applications include

- Calibration Verification
- Testing End to End Wiring
- Vibration Signal Simulation
- Verification of OK Circuits, Alarms and Relays
- Thrust Position Setup and Calibration

Features

- Lithium-Ion Battery Powered with Smart Charger
- >80 Hours of Runtime
- Calibrated Acceleration, Velocity, and Displacement Outputs
- Peak or RMS Selectable
- ±AC and ±DC Bias/Gap Selectable
- 318 Hz Fixed Signal Frequency
- 10 Selectable AC and DC Voltage Outputs
- Variable 0-2.5 VAC Voltage Range
- Variable 0-20.0 DC Voltage Range
- ±20 VDC Gap Voltage
- ±10.0 VDC Sensor Bias (AC Signals)

A portable vibration signal and DC voltage source for calibrating and verifying machinery monitoring systems including proximity probe systems.

CMCP-TKBC Bias Checker

Condition monitoring systems should have all their various input types periodically checked. One way is to measure the bias voltage of the sensors. The CMCP-TKBC Bias Checker is a small, portable device to quickly check voltages on standard accelerometers.

Several tests can be rapidly performed using the CMCP-TKBC Bias Checker.

1. Accelerometer Test: Powers accelerometer to test bias voltage.
2. Pass-Through Test: Connected in series between accelerometer and analyzer. No boost power provided. Reads bias of accelerometer in a loop by pressing read button A or B.
3. Two Accelerometer Test: Powers two accelerometers to test bias voltages. (X&Y or Vertical and Horizontal)
4. Dual Output Accelerometer with Temperature Test; Accel Power/ Signal (STI CMCP700 series: CMCP785T, CMCP786T): Tests bias voltage of both accelerometer and temperature sensor. Only provides power to accelerometer side.
5. Dual Output Accelerometer with Temperature Test; Accel & Temp Power/ Signal (Wilcoxon: 797T-1, 793T-3) Accelerometer with CCD Powered Temperature: tests bias voltage and supplies Constant Current Diode (CCD) voltage to both accelerometer and temperature sensors.

Features

- Small Footprint
- Powered by Rechargeable Lithium-Ion Battery with 13 Hours Runtime
- Checks Both Bias and Temperature Channels
- Provides +24 VDC for Unpowered Accelerometer
- Measures Bias of Powered Accelerometers

A portable bias checker can provide power to dual parameter sensors (acceleration and temperature) and read out the temperature output.

Rotor Kits

CMCP600 Bearing Fault Demonstrator

The CMCP600 is designed to demonstrate Vibration measurement techniques that illustrate bearing fault analysis in rolling element bearings. Simple to use, the CMCP600 provides fast, reliable and repeatable results. The included fault bearing has a 0.004” outer race flaw. Accelerometers easily mount to the bearing housing for desktop demonstration of data collection and vibration analysis techniques. Excellent for displaying demodulation or Acceleration Enveloping vibration analysis.

CMCP601 Series Rotor Kits

The CMCP601 Rotor Kits were developed as a small working example of a real machine where vibration signals may be simulated under realistic circumstances. Both short (single critical) and long based (2 criticals) rotor kits are available. A variety of transducers may be installed to provide vibration signals. These signals may be used to train vibration analysts or maintenance personnel to troubleshoot actual vibration transducer systems or vibration signals. The Rotor Kit using sleeve-type bearings is primarily studied using time based analysis techniques such as time waveforms, orbits, and shaft position plotting, phase, and mode shape analysis. With the optional ball bearing, an FFT-type instrument is useful to study the frequencies generated by the bearing. The standard Rotor Kit is supplied with a detailed workbook with example experiments, a speed controller, pre-lubricated sleeve bearings, balance weights, and a rotor mass drilled and tapped with balance weight locations.

Ordering Information

CMCP600	Bearing Fault Demonstrator
CMCP601-01	Short Base Rotor Kit
CMCP601-02	Long Base Rotor Kit

Capabilities

- Critical Speed (First Critical Only)
- Frequency Based Signals
- Time-Based Signals
- Orbital Analysis
- Balancing
- Runout
- Rotor Bow
- Identify Rotor Critical Speeds
- Shaft Relative Signals
- Resonance
- Amplitude Factor
- Rotor Dynamic Studies
- Phase Signals

Available Accessories

- Rolling Element Bearing Stands
- Safety Covers
- Travel Case
- Proximity Probes
- Accelerometers
- Cables
- Spare Shafts
- Thrust and Eccentricity Bracket
- Spare Balance Weights
- Proximity Probe Power Module
- Mounting Plate.

TOC

CMCP601M Mini Battery Powered Rotor Kit

The CMCP601M Mini Rotor Kit is designed for easy transport, setup, and use. With a long battery life of 10+ hours, it makes it easy to demonstrate and train on the use of vibration sensors such as proximity probes, accelerometers and velocity sensors using vibration analyzers or other monitoring systems. Balancing holes are provided on the rotating mass at 20° apart to allow the user to create an imbalance or to make balance corrections. A balance weight kit with assorted weights is provided with the kit. The CMCP601M features swappable rolling elements and journal bearing modules. Each kit is provided with 2 journal bearings, 2 new rolling element bearings, and 2 flaw-induced rolling element bearings. Two flaw-induced rolling element bearings are provided with the kit, one with a 0.004” outer race slice and the other with a 0.004” inner race slice.

CMCP601P Portable Rotor Kit

The CMCP601P Battery Powered Portable Rotor Kit is designed for portability and quick setup. Used for sales demonstrations and training, the CMCP601P is Li-Ion Battery Powered. No external power is required for the CMCP601P or Sensors. Simply connect your Analyzer or portable Oscilloscope to the Sensor’s BNC Outputs. The CMCP601P has a variable speed motor and can demonstrate field balancing using the mass’s balancing holes and weights provided. The CMCP601P can be purchased with or without sensors so you can equip it with sensors of your choice. The CMCP601P comes equipped with the phase reference sensor and is designed for Vertical and Horizontal Accelerometers along with X&Y Proximity Probes. Overall Values, Spectrums, Orbits and Balancing may be quickly demonstrated.

CMCP601R Mini Battery Reciprocating Compressor Kit

The CMCP601R Reciprocating Compressor Demonstration Kit is designed to demonstrate vibration monitoring techniques used on reciprocating machinery. Fully equipped with sensors, the CMCP601R can be equipped with accelerometers on the motor, gear, crosshead, and cylinder end along with proximity probes in the crosshead for rod drop and rod runout. A mounting bracket and machined flywheel notch are provided for a proximity probe keyphasor or other type of once-per-turn reference signal. Two shaft connecting rod holes are provided for adjusting the total stroke distance.

The battery-powered DC motor has an adjustable speed of 0 to 319 RPM (0 to 5.3 Hz). The cylinder is independently mounted on two vertical spring-loaded linear bearings and height (alignment) can easily be adjusted to demonstrate both rod drop and rod run out. The crosshead has both upper and lower oil-infused bronze bearings (slippers) and the piston rides on actual wear ring stock. The connecting rod has bronze bearings on both ends and connects the flywheel (crank) to the crosshead pin. Stroke can be adjusted on the flywheel between 1” and 1.25” (25.4, 31.75 mm).

Ordering Information

CMCP601M	Battery Powered Mini Rotor Kit
CMCP601P-AA-BB	AA: Optional 1 or 2 Accelerometers (V&H), BB: Optional 1 or 2 Proximity Probe Systems (X&Y)
CMCP601R	Reciprocating Compressor Demonstration Kit

TOC

Electrical Runout Measurement Kits

CMCP810SIM Sensor Interface Module

The CMCP810SIM Sensor Interface Module provides a single sensor and meter connection for electrical runout measurements. The interface module is battery-powered and produces both -24VDC, for powering a proximity probe system, and a +15VDC output for an optical/laser sensor used for phase measurement. The CMCP810SIM allows the user to offset the DC gap voltage, allowing the runout signal to be measured by a standard oscilloscope. The CMCP810SIM can be used with any proximity probe system as long as the sensitivity is known. STI also offers a kit that includes all the sensors and adapters necessary to perform runout measurements.

CMCP810SIM-00 Sensor Interface Module Kit Contents

1x CMCP810SIM Sensor Interface Module
1x Battery Charger

CMCP810SIM-KIT01 Sensor Interface Module and Sensor Kit Contents

1x CMCP810SIM Sensor Interface Module
1x Battery Charger
1x 8 mm Proximity Probe System, 200mV/mil Output
1x Optical/Laser Speed/Phase Sensor
1x Accessory Kit (Mounting Adapters, Reflective Tape)
1x Travel Case

CMCP810SIM-KIT02 Complete Runout Kit

1x CMCP810SIM Sensor Interface Module
1x Battery Charger
1x 8 mm Proximity Probe System, 200mV/mil Output
1x Optical/Laser Speed/Phase Sensor
1x Accessory Kit (Mounting Adapters, Reflective Tape)
1x USB (PC) Based Oscilloscope with Software
1x Travel Case

Electrical runout in the condition monitoring industry refers to the apparent displacement of a rotating shaft and is measured with proximity probes (eddy current sensors).

The CMCP810SIM Sensor Interface Module provides a single access point for the sensors and oscilloscope, eliminating the need for dual power supplies and simplifying the wiring.

STI Vibration Monitoring Inc.

1010 East Main Street League City, Texas 77573
Phone: 281.334.0766 | FAX: 281.334.4255
www.stiweb.com