

CMCP500 Series Machine Protection Transmitters and Monitors



- Full API 670 Functionality at a Low Cost
- Single Channel for Easy Distribution
- Din Rail Mountable
- 4-20 mA Output
- Sensor Fault Detection
- Buffered Transducer Output for Analytical Systems
- Alert, Danger & OK Alarms and Relays
- Plug In Frequency Filters
- Trip Multiply (Increases Alarm Values When Necessary)
- Latching and Non-Latching Relays
- Class I Division II, Groups B-D Approved
- CE Approved

Overview of the CMCP500 Series Transmitters and Monitors:

STI's CMCP500 Series are multi-purpose vibration, temperature and process condition transmitters and monitors. They are compatible with any industrial sensor such as accelerometers, proximity probes, velocity transducers, RTD's, Thermocouples and many more. Each unit is designed to provide power to the associated transducer, process the signal to determine the overall amplitude and output a 4-20mA dc current that is proportional to the specified range such as 0-1.00 In/Sec, 0-10.0 mils or 0-500°F. The transmitters have up to 5 different ranges that can be adjusted by simply moving a jumper, no software or re-calibration required. Each transmitter also has the option of becoming a Monitor by adding the alarm module which provides adjustable Alert and Danger relay outputs, sensor condition relay output, trip multiply function and a 0-5Vdc output. Combining the alarm module with the transmitter creates a fully API670 Compliant Protection System. The Monitor (alarm module) feature can be ordered by specifying "A" after the base part number. Ex. CMCP530 for the Transmitter function only or CMCP530A for the Monitor function

The Benefit of Single Channel Transmitters and Monitors:

The CMCP500 Series Transmitters and Monitors allow the user to build a system which fits their application. Each transmitter operates independently allowing different for different combinations, configurations, and installations. The CMCP500 Series can be installed in an existing control cabinet or mounted in an enclosure local to the machine, a dedicated housing is not required. In summary combining transmitters with an existing PLC or DCS system results in a high density, low cost vibration monitoring system. When specified with the alarm feature, the unit functions as a complete single channel API670 compliant monitor which includes alert and danger alarms, and output relays.

Transmitter Features:

Buffered Output:

A BNC connector mounted on the front of the unit provides access to the buffered sensor output signal. This includes both the unfiltered vibration signal, and the DC bias voltage. Portable test equipment or analyzers can be connected to this output without disturbing other system outputs.

Fault Detection:

On board fault detection circuitry continuously monitors the sensor for normal operation. If a fault occurs, the output current is reduced to 2 mA to indicate the fault. When connected to a PLC the 2mA drop notifies the operator of a faulty sensor.

Filters:

For applications which require monitoring specific frequency bands, optional filters can be specified. These filters are modular and can be installed by the factory or in the field.

CMCP500 Series Machine Protection Transmitters and Monitors

Alarms Module Function (Monitor):

Relay Contact:

Each monitor has two independent set points with LED alarm indicators on the front panel along with relay contacts (Alert and Danger). Set points can easily be adjusted in the field with only a voltmeter and screwdriver. The relay contacts can be independently configured by the user for either Normally Open (NO) or Normally Closed (NC) operation. Relays are normally de-energized and can be set for latching or non-latching operation. Latched alarms can be reset by closing the closing the reset contact on the front of the monitor. Relays are single pole double throw (SPDT) and are rated for 5 Amps @ 30Vdc or 250Vac resistive loads.

Alert and Danger LED's

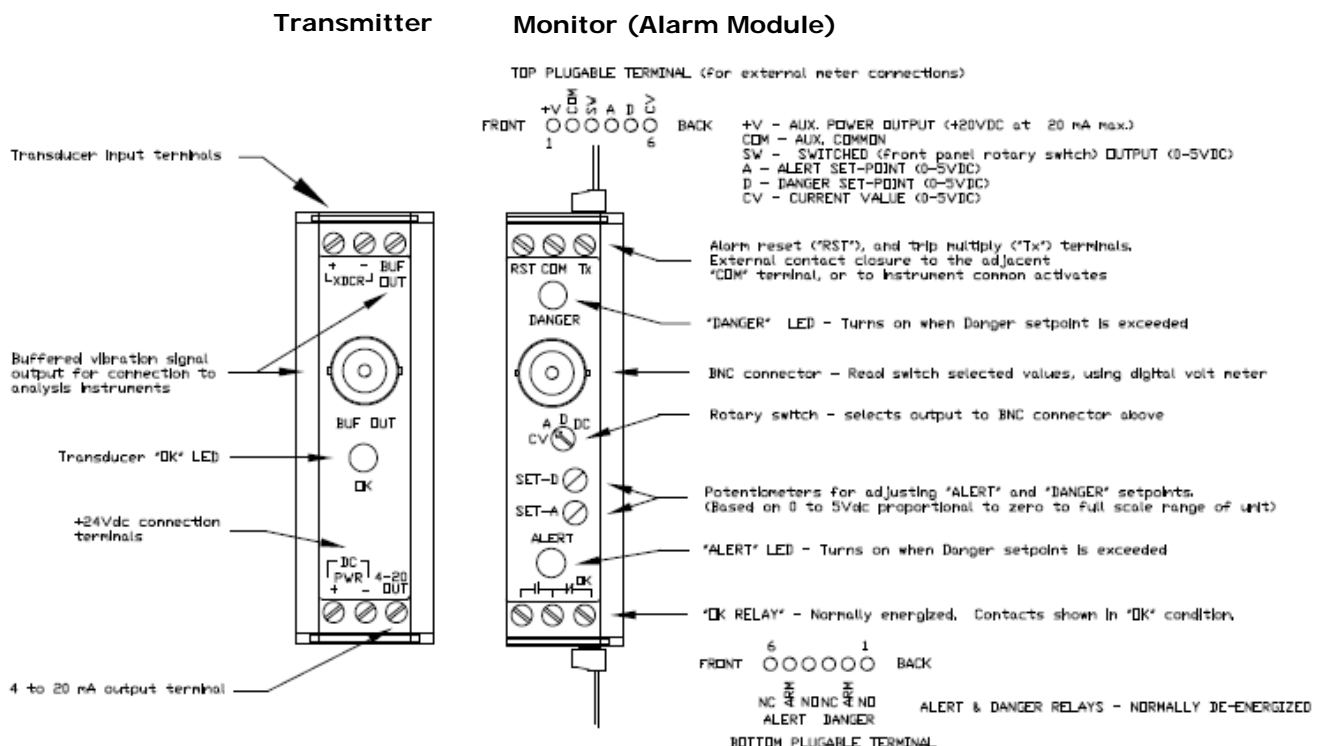
Each monitor comes equipped with a Amber and Red led light on the front of the unit for Alert and Danger condition indications respectively. When the relays are set to latching the LED's will stay on until the user resets the relays and the amplitude has fallen below the alarm threshold. When the relays are set to non-latching the LED's will turn off as soon as the amplitude falls below the set threshold.

Trip Multiply:

The Trip Multiply (Tx) function is a contact which when closed increases the alarm values by either 2x or 3x to allow for known periods of known high vibration to pass through while still under the protection of the monitor. The Trip Multiply function is commonly used during start up's and coast downs when amplitudes are known to rise above the normal alarm thresholds.

Alarm Reset

The Alarm Reset function is utilized by shorting the RST terminal to common (COM). A remote pushbutton switch can be installed to easily reset the alarms or it can be done automatically by utilizing a PLC. The Reset function is only necessary when the relays are set to latching.



CMCP525 Vibration Acceleration Transmitter Machine Protection Transmitters and Monitors



Transmitter



Monitor

- Acceleration Input (mV/g)
- 4-20mA Output Proportional to Acceleration
- Transmitter Only Option or API 670 Compliant Monitor
- OK, Alert and Danger Relay Contacts
- Adjustable Alarms
- CSA and UL Class 1 Division 2 Approved
- CE Approved
- 5 Selectable Full Scale Ranges with Peak or RMS Detection
- Low Cost

Description:

The CMCP525 Vibration Acceleration Transmitters and Monitors are compatible with all voltage output accelerometers, and they provide a 4-20 mA output proportional to the overall measurement. Each unit provides power for the associated transducer, processes the vibration signal to determine overall amplitude, and outputs a 4-20 mA dc current that is proportional to a user specified range such as 0-5 g's in Peak or RMS detection. The CMCP525 has 5 selectable full scale ranges (5, 10, 15, 20 and 25 g's) to fit any application. Combining transmitters with an existing PLC or DCS system results in a high density, low cost vibration monitoring system.

Technical Specifications:

Power: +24 Vdc Nominal (Reverse Polarity and Transient Protection Included)
 Consumption: 50mA Max. for Transmitter
 100mA Max for Monitor
 Frequency Response: (-3 dB) 2 Hz to 20 kHz.
 Optional Filters: See CMCP591 and CMCP592 Series
 Buffered Output: BNC Connector 0-20 kHz.
 Accuracy: 1.0 % of Full Scale Range
 Output: 4-20 mA proportional to the full scale range in G's Acceleration
 Selectable Ranges: 5, 10, 15, 20 and 25 g's Full Scale
 Maximum Load: 600 Ohms Resistive
 Case: Isolated.

Environmental Specification:

Operating Temp.: -20°C to +80°C (-4°F to +176°F).
 Storage Temp.: -55°C to +125°C (-67°F to +257°F).
 Relative Humidity: 0 - 95% Non-Condensing.
 Mounting: 32mm (G Style) or 35mm (T-Style) DIN Rail

Certifications:

UL 1604
 CSA C22.2 No. 213
 Class I Division II, Groups B-D Approved
 CE Approved
 RoHS Compliant

Ordering Information:

Base P/N	-Input	-Detection	Description
CMCP525			Vibration Acceleration Transmitter
CMCP525A			Vibration Acceleration Monitor (with Alarm Module)
	-100		100mV/g Accelerometer Input
	-Specify		Specify Exact mV/g
		-P	Peak Detection
		-R	RMS Detection

CMCP530 Vibration Velocity Transmitter Machine Protection Transmitters and Monitors



Transmitter



Monitor

- Acceleration or Velocity Input
- 4-20 Output Proportional to Velocity
- Transmitter Only Option or API 670 Compliant Monitor
- OK, Alert and Danger Relay Contacts
- Adjustable Alarms
- CSA and UL Class 1 Division 2 Approved
- CE Approved
- 5 Selectable Full Scale Ranges with Peak or RMS Detection
- Low Cost

Description:

The CMCP530 Vibration Velocity Transmitters compatible with voltage output accelerometer and velometer sensors, and they provide a 4-20 mA output proportional to the overall measurement. Each unit provides power for the associated transducer, processes the vibration signal to determine overall amplitude, and outputs a 4-20 mA dc current that is proportional to a user specified range such as 0-0.5 in/sec in peak or RMS detection. The CMCP530 has 5 selectable full scale ranges (.5, 1, 1.5, 2 and 2.5 In/Sec with metric equivalents) to fit any application. Combining transmitters with an existing PLC or DCS system results in a high density, low cost vibration monitoring system.

Technical Specifications:

Power: +24 Vdc Nominal (Reverse Polarity and Transient Protection Included)
 Consumption: 50mA Max. for Transmitter
 100mA Max for Monitor
 Frequency Response: (-3 dB) 2 Hz to 2 kHz (Standard)
 Optional Filters: See CMCP591 and CMCP592 Series
 Buffered Output: BNC Connector 0-20 kHz.
 Accuracy: 1.0 % of Full Scale Range
 Output: 4-20 mA proportional to the full scale range in Velocity Peak or RMS
 Selectable Ranges: English: 0.5, 1, 1.5, 2 and 2.5 In/Sec Full Scale
 Metric: 12.7, 25.4, 38.1, 50.8 and 63.5mm/Sec Full Scale
 Maximum Load: 600 Ohms Resistive
 Case: Isolated.

Environmental Specification:

Operating Temp.: -20°C to +80°C (-4°F to +176°F).
 Storage Temp.: -55°C to +125°C (-67°F to +257°F).
 Relative Humidity: 0 - 95% Non-Condensing.
 Mounting: 32mm (G Style) or 35mm (T-Style) DIN Rail

Certifications:

UL 1604
 CSA C22.2 No. 213
 Class I Division II, Groups B-D Approved
 CE Approved
 RoHS Compliant

Ordering Information:

Base P/N	-Input	-Detection	-Filter	Description
CMCP530				Vibration Velocity Transmitter
CMCP530A				Vibration Velocity Monitor (with Alarm Module)
	-100A			100mV/g Accelerometer Input
	-100V			100mV/In/Sec Velocity Input
	-Specify			Specify Exact Input
		-P		Peak Detection
		-R		RMS Detection
			-ISO	ISO Standard Filter Range (10Hz-1kHz)
			-ISOLF	ISO Low Frequency Range (2Hz to 2kHz) **Standard**

CMCP535 Vibration Displacement Transmitter Machine Protection Transmitters and Monitors



Transmitter



Monitor

- **Velocity Input**
- **4-20mA Output Proportional to Displacement**
- **Transmitter Only Option or API 670 Compliant Monitor**
- **OK, Alert and Danger Relay Contacts**
- **Adjustable Alarms**
- **CSA and UL Class 1 Division 2 Approved**
- **CE Approved**
- **5 Selectable Full Scale Ranges with Peak to Peak Detection**
- **Low Cost**

Description:

The CMCP535 Vibration Displacement Transmitters are compatible with voltage output velocity transducer inputs, and they provide a 4-20 mA output proportional to the overall measurement. Each unit provides power for the associated transducer, processes the vibration signal to determine overall amplitude, and outputs a 4-20 mA dc current that is proportional to a user specified range such as 5 mils peak to peak. The CMCP535 has 5 selectable full scale ranges (5, 10, 15, 20 and 25 mils with metric equivalents) to fit any application. Combining transmitters with an existing PLC or DCS system results in a high density, low cost vibration monitoring system.

Technical Specifications:

Power: +24 Vdc Nominal (Reverse Polarity and Transient Protection Included)
 Consumption: 50mA Max. for Transmitter
 100mA Max for Monitor
 Frequency Response: (-3 dB) 2 Hz to 2 kHz
 Optional Filters: See CMCP591 and CMCP592 Series
 Buffered Output: BNC Connector 0-20 kHz.
 Accuracy: 1.0 % of Full Scale Range
 Output: 4-20 mA proportional to the full scale range in Displacement Peak to Peak
 Selectable Ranges: English: 5, 10, 15, 20 and 25 Milis Peak to Peak Full Scale
 Metric: 127, 254, 381, 508 and 635 Microns Peak to Peak Full Scale
 Maximum Load: 600 Ohms Resistive
 Case: Isolated.

Environmental Specification:

Operating Temp.: -20°C to +80°C (-4°F to +176°F).
 Storage Temp.: -55°C to +125°C (-67°F to +257°F).
 Relative Humidity: 0 - 95% Non-Condensing.
 Mounting: 32mm (G Style) or 35mm (T-Style) DIN Rail

Certifications:

UL 1604
 CSA C22.2 No. 213
 Class I Division II, Groups B-D Approved
 CE Approved
 RoHS Compliant

Ordering Information:

Base P/N	-Input	Description
CMCP535		Vibration Displacement Transmitter
CMCP535A		Vibration Displacement Monitor (with Alarm Module)
	-100V	100mV/In/Sec Velocity Transducer (4mV/mm/sec)
	-500V	500mV/In/Sec Velocity Transducer (20mV/mm/sec)
	-Specify	Specify Exact Input

CMCP540 Vibration Displacement Transmitter Machine Protection Transmitters and Monitors



Transmitter



Monitor

- *Displacement Input from Proximity Probes*
- *4-20mA Output Proportional to Displacement*
- *Transmitter Only Option or API 670 Compliant Monitor*
- *OK, Alert and Danger Relay Contacts*
- *Adjustable Alarms*
- *CSA and UL Class 1 Division 2 Approved*
- *CE Approved*
- *5 Selectable Full Scale Ranges with Peak to Peak Detection*
- *Low Cost*

Description:

The CMCP540 Vibration Displacement Transmitters are compatible with voltage output proximity probe inputs, and they provide a 4-20 mA output proportional to the overall measurement. Each unit processes the vibration signal to determine overall amplitude and outputs a 4-20 mA dc current that is proportional to a user specified range such as 5 mils peak to peak. The CMCP540 has 5 selectable full scale ranges (5, 10, 15, 20 and 25 mils with metric equivalents) to fit any application. Combining transmitters with an existing PLC or DCS system results in a high density, low cost vibration monitoring system.

Technical Specifications:

Power:	+24 Vdc Nominal (Reverse Polarity and Transient Protection Included)
Consumption:	50mA Max. for Transmitter 100mA Max for Monitor
Frequency Response:	(-3 dB) 2 Hz to 20 kHz
Optional Filters:	See CMCP591 and CMCP592 Series
Buffered Output:	BNC Connector 0-20 kHz.
Accuracy:	1.0 % of Full Scale Range
Output:	4-20 mA proportional to the full scale range in Displacement Peak to Peak
Selectable Ranges:	English: 5, 10, 15, 20 and 25 Mils Peak to Peak Full Scale Metric: 127, 254, 381, 508 and 635 Microns Peak to Peak Full Scale
Maximum Load:	600 Ohms Resistive
Case:	Isolated.

Environmental Specification:

Operating Temp.:	-20°C to +80°C (-4°F to +176°F).
Storage Temp.:	-55°C to +125°C (-67°F to +257°F).
Relative Humidity:	0 - 95% Non-Condensing.
Mounting:	32mm (G Style) or 35mm (T-Style) DIN Rail

Certifications:

UL 1604
CSA C22.2 No. 213
Class I Division II, Groups B-D Approved
CE Approved
RoHS Compliant

Ordering Information:

Base P/N	-Input	Description
CMCP540		Vibration Displacement Transmitter
CMCP540A		Vibration Displacement Monitor (with Alarm Module)
	-100	100mV/mil Proximity Probe
	-200	200mV/mil Proximity Probe
	-Specify	Specify Exact Input

CMCP545 Position (Thrust) Transmitter Machine Protection Transmitters and Monitors



Transmitter



Monitor

- Displacement Input from Proximity Probes
- 4-20mA Output Proportional to Position
- Transmitter Only Option or API 670 Compliant Monitor
- OK, Alert and Danger Relay Contacts
- Adjustable Alarms
- CSA and UL Class 1 Division 2 Approved
- CE Approved
- 4 Selectable Full Scale Ranges
- Low Cost

Description:

The CMCP545 Position Transmitters are compatible with voltage output proximity probe inputs, and they provide a 4-20 mA output proportional to the overall measurement. Each unit processes the signal to determine overall amplitude and outputs a 4-20 mA dc current that is proportional to a user specified range such as +/- 40 mils. The CMCP545 has 4 selectable full scale ranges (20, 40, +/-20 and +/-40 mils with metric equivalents) to fit any application. Combining transmitters with an existing PLC or DCS system results in a high density, low cost vibration monitoring system.

Technical Specifications:

Power: +24 Vdc Nominal (Reverse Polarity and Transient Protection Included)
 Consumption: 50mA Max. for Transmitter
 100mA Max for Monitor
 Frequency Response: (-3 dB) 2 Hz to 20 kHz
 Optional Filters: See CMCP591 and CMCP592 Series
 Buffered Output: BNC Connector 0-20 kHz.
 Accuracy: 5.0 % of Full Scale Range
 Output: 4-20 mA proportional to the full scale range in Position (Thrust)
 Selectable Ranges: English: 20, 40, +/-20 and +/-40 Mils Full Scale
 Metric: 0.5mm, 1mm, +/-0.5mm and +/- 1.0mm Full Scale
 Maximum Load: 600 Ohms Resistive
 Case: Isolated.

Environmental Specification:

Operating Temp.: -20°C to +80°C (-4°F to +176°F).
 Storage Temp.: -55°C to +125°C (-67°F to +257°F).
 Relative Humidity: 0 - 95% Non-Condensing.
 Mounting: 32mm (G Style) or 35mm (T-Style) DIN Rail

Certifications:

UL 1604
 CSA C22.2 No. 213
 Class I Division II, Groups B-D Approved
 CE Approved
 RoHS Compliant

Ordering Information:

Base P/N	-Input	Description
CMCP545		Position (Thrust) Transmitter
CMCP545A		Position (Thrust) Monitor (with Alarm Module)
	-100	100mV/mil Proximity Probe
	-200	200mV/mil Proximity Probe
	-Specify	Specify Exact Input

CMCP547 Differential Expansion Transmitter Machine Protection Transmitters and Monitors



Transmitter



Monitor

- *Accepts Inputs from LVDT's and Proximity Probes*
- *4-20mA Output Proportional to Expansion*
- *Transmitter Only Option or API 670 Compliant Monitor*
- *OK, Alert and Danger Relay Contacts*
- *Adjustable Alarms*
- *CSA and UL Class 1 Division 2 Approved*
- *CE Approved*
- *3 Selectable Full Scale Ranges*
- *Low Cost*

Description:

The CMCP547 Differential Expansion Transmitters are compatible with voltage output proximity probe and LVDT inputs, and they provide a 4-20 mA output proportional to the overall measurement. Each unit processes the signal to determine overall amplitude and outputs a 4-20 mA dc current that is proportional to a users specified range such as 1.0 Inch. The CMCP547 has 3 selectable full scale ranges (0.5", 1.0" and 2.0" Inches with metric equivalents) to fit any application. Combining transmitters with an existing PLC or DCS system results in a high density, low cost vibration monitoring system.

Technical Specifications:

Power:	+24 Vdc Nominal (Reverse Polarity and Transient Protection Included)
Consumption:	50mA Max. for Transmitter 100mA Max for Monitor
Buffered Output:	BNC Connector
Accuracy:	5.0 % of Full Scale Range
Output:	4-20 mA proportional to the full scale range in Expansion
Selectable Ranges:	English: 0.5, 1.0 and 2.0 Inches Full Scale Metric: 12.7, 25.4 and 50.8 mm Full Scale
Maximum Load:	600 Ohms Resistive
Case:	Isolated.

Environmental Specification:

Operating Temp.:	-20°C to +80°C (-4°F to +176°F).
Storage Temp.:	-55°C to +125°C (-67°F to +257°F).
Relative Humidity:	0 - 95% Non-Condensing.
Mounting:	32mm (G Style) or 35mm (T-Style) DIN Rail

Certifications:

UL 1604
CSA C22.2 No. 213
Class I Division II, Groups B-D Approved
CE Approved
RoHS Compliant

Ordering Information:

Base P/N	-Input	Description
CMCP547		Differential Expansion Transmitter
CMCP547A		Differential Expansion Monitor (with Alarm Module)
	-10	10mV/mil
	-20	20mV/mil
	-34	34mV/mil
	-100	100mV/mil
	-200	200mV/mil
	-Specify	Specify Exact Input

CMCP548 Case Expansion Transmitter

Machine Protection Transmitters and Monitors



Transmitter



Monitor

- *Accepts Inputs from LVDT's*
- *4-20mA Output Proportional to Expansion*
- *Transmitter Only Option or API 670 Compliant Monitor*
- *OK, Alert and Danger Relay Contacts*
- *Adjustable Alarms*
- *CSA and UL Class 1 Division 2 Approved*
- *CE Approved*
- *2 Selectable Full Scale Ranges*
- *Low Cost*

Description:

The CMCP548 Case Expansion Transmitters are compatible with voltage output LVDT inputs, and they provide a 4-20 mA output proportional to the overall measurement. Each unit processes the signal to determine overall amplitude and outputs a 4-20 mA dc current that is proportional to a users specified range such as 1.0 Inch. The CMCP548 has 2 selectable full scale ranges (1.0" and 2.0" Inches with metric equivalents) to fit any application. Combining transmitters with an existing PLC or DCS system results in a high density, low cost vibration monitoring system.

Technical Specifications:

Power:	+24 Vdc Nominal (Reverse Polarity and Transient Protection Included)
Consumption:	50mA Max. for Transmitter 100mA Max for Monitor
Buffered Output:	BNC Connector
Accuracy:	5.0 % of Full Scale Range
Output:	4-20 mA proportional to the full scale range in Expansion
Selectable Ranges:	English: 1.0 and 2.0 Inches Full Scale Metric: 25.4 and 50.8 mm Full Scale
Maximum Load:	600 Ohms Resistive
Case:	Isolated.

Environmental Specification:

Operating Temp.:	-20°C to +80°C (-4°F to +176°F).
Storage Temp.:	-55°C to +125°C (-67°F to +257°F).
Relative Humidity:	0 - 95% Non-Condensing.
Mounting:	32mm (G Style) or 35mm (T-Style) DIN Rail

Certifications:

UL 1604
CSA C22.2 No. 213
Class I Division II, Groups B-D Approved
CE Approved
RoHS Compliant

Ordering Information:

Base P/N	-Input	Description
CMCP548		Case Expansion Transmitter
CMCP548A		Case Expansion Monitor (with Alarm Module)
	-10	10mV/mil
	-Specify	Specify Exact Input

CMCP549 Valve Position Transmitter

Machine Protection Transmitters and Monitors



Transmitter



Monitor

- *Accepts Inputs from Rotary Potentiometers*
- *4-20mA Output Proportional to Valve Position*
- *Transmitter Only Option or API 670 Compliant Monitor*
- *OK, Alert and Danger Relay Contacts*
- *Adjustable Alarms*
- *CSA and UL Class 1 Division 2 Approved*
- *CE Approved*
- *Low Cost*

Description:

The CMCP549 Valve Position Transmitters are compatible with rotary potentiometer inputs, and they provide a 4-20 mA output proportional to the overall measurement. Each unit processes the signal to determine overall amplitude and outputs a 4-20 mA dc current that is proportional to a users specified range such as 0 -100%. Combining transmitters with an existing PLC or DCS system results in a high density, low cost vibration monitoring system.

Technical Specifications:

Power: +24 Vdc Nominal (Reverse Polarity and Transient Protection Included)
 Consumption: 50mA Max. for Transmitter
 100mA Max for Monitor
 Buffered Output: BNC Connector
 Accuracy: 5.0 % of Full Scale Range
 Output: 4-20 mA proportional to the full scale range in percentage
 Range: 0-100%
 Maximum Load: 600 Ohms Resistive
 Case: Isolated.

Environmental Specification:

Operating Temp.: -20°C to +80°C (-4°F to +176°F).
 Storage Temp.: -55°C to +125°C (-67°F to +257°F).
 Relative Humidity: 0 - 95% Non-Condensing.
 Mounting: 32mm (G Style) or 35mm (T-Style) DIN Rail

Certifications:

UL 1604
 CSA C22.2 No. 213
 Class I Division II, Groups B-D Approved
 CE Approved
 RoHS Compliant

Ordering Information:

Base P/N	-Input	Description
CMCP549		Valve Position Transmitter
CMCP549A		Valve Position Monitor (with Alarm Module)
	-5000	0-5,000 Ohm Potentiometer
	-Specify	Specify Exact Input

CMCP560 Isolated RTD Transmitter

Machine Protection Transmitters and Monitors



Transmitter

Monitor

Note: CMCP560 Does not have BNC Buffered Output

- *Accepts Inputs RTD's*
- *4-20mA Output Proportional to Temperature*
- *Transmitter Only Option or API 670 Compliant Monitor*
- *OK, Alert and Danger Relay Contacts*
- *Adjustable Alarms*
- *CSA and UL Class 1 Division 2 Approved*
- *CE Approved*
- *3 Selectable Ranges*
- *Low Cost*

Description:

The CMCP560 Isolated RTD Temperature Transmitters are compatible with RTD inputs, and they provide a 4-20 mA output proportional to the overall measurement. Each unit provides power for the associated transducer, processes the signal to determine overall amplitude, and outputs a 4-20 mA dc current that is proportional to a user specified range such as 0-250° F. Each transmitter has 3 selectable ranges (250, 350 and 500°F with metric equivalents). Combining transmitters with an existing PLC or DCS system results in a high density, low cost monitoring system.

Technical Specifications:

Power: +24 Vdc Nominal (Reverse Polarity and Transient Protection Included)
 Consumption: 50mA Max. for Transmitter
 100mA Max for Monitor
 Accuracy: 5.0 % of Full Scale Range
 Output: 4-20 mA proportional to the full scale range in temperature
 Selectable Ranges: English: 250, 350 and 500°F
 Metric: 121, 177 and 260°C
 Maximum Load: 600 Ohms Resistive
 Case: Isolated.

Environmental Specification:

Operating Temp.: -20°C to +80°C (-4°F to +176°F).
 Storage Temp.: -55°C to +125°C (-67°F to +257°F).
 Relative Humidity: 0 - 95% Non-Condensing.
 Mounting: 32mm (G Style) or 35mm (T-Style) DIN Rail

Certifications:

UL 1604
 CSA C22.2 No. 213
 Class I Division II, Groups B-D Approved
 CE Approved
 RoHS Compliant

Ordering Information:

Base P/N	-Input	Description
CMCP560		Isolated RTD Transmitter
CMCP560A		Isolated RTD Monitor (with Alarm Module)
	-100P	100 Ohm Platinum RTD
	-Specify	Specify Exact Input

CMCP565 Isolated Thermocouple Transmitter Machine Protection Transmitters and Monitors



Transmitter

Monitor

Note: CMCP565 Does not have BNC Buffered Output

- *Accepts Inputs Thermocouples*
- *4-20mA Output Proportional to Temperature*
- *Transmitter Only Option or API 670 Compliant Monitor*
- *OK, Alert and Danger Relay Contacts*
- *Adjustable Alarms*
- *CSA and UL Class 1 Division 2 Approved*
- *CE Approved*
- *3 Selectable Ranges*
- *Low Cost*

Description:

The CMCP565 Isolated Thermocouple Temperature Transmitters are compatible with all thermocouple inputs, and they provide a 4-20 mA output proportional to the overall measurement. Each unit provides power for the associated transducer, processes the signal to determine overall amplitude, and outputs a 4-20 mA dc current that is proportional to a user specified range such as 0-250° F. Each transmitter has 3 selectable ranges (250, 350 and 500°F with metric equivalents). Combining transmitters with an existing PLC or DCS system results in a high density, low cost monitoring system.

Technical Specifications:

Power: +24 Vdc Nominal (Reverse Polarity and Transient Protection Included)
 Consumption: 50mA Max. for Transmitter
 100mA Max for Monitor
 Accuracy: 5.0 % of Full Scale Range
 Output: 4-20 mA proportional to the full scale range in temperature
 Selectable Ranges: English: 250, 350 and 500°F
 Metric: 121, 177 and 260°C
 Maximum Load: 600 Ohms Resistive
 Case: Isolated.

Environmental Specification:

Operating Temp.: -20°C to +80°C (-4°F to +176°F).
 Storage Temp.: -55°C to +125°C (-67°F to +257°F).
 Relative Humidity: 0 - 95% Non-Condensing.
 Mounting: 32mm (G Style) or 35mm (T-Style) DIN Rail

Certifications:

UL 1604
 CSA C22.2 No. 213
 Class I Division II, Groups B-D Approved
 CE Approved
 RoHS Compliant

Ordering Information:

Base P/N	-Input	Description
CMCP565		Isolated Thermocouple Transmitter
CMCP565A		Isolated Thermocouple Monitor (with Alarm Module)
	-J	Type J Thermocouple Input
	-K	Type K Thermocouple Input
	-Specify	Specify Exact Input

CMCP570 Solid State Temperature Transmitter Machine Protection Transmitters and Monitors



Transmitter



Monitor

- Accepts Inputs Dual Output Sensors (Vib+Temp)
- 4-20mA Output Proportional to Temperature
- Transmitter Only Option or API 670 Compliant Monitor
- OK, Alert and Danger Relay Contacts
- Adjustable Alarms
- CSA and UL Class 1 Division 2 Approved
- CE Approved
- Low Cost

Description:

The CMCP570 Solid State Temperature Transmitters are compatible with all most dual output sensors. They provide a 4-20 mA output proportional to the overall measurement. Each unit provides power for the associated transducer, processes the signal to determine overall amplitude, and outputs a 4-20 mA dc current that is proportional to a user specified range such as 2-120° C. Combining transmitters with an existing PLC or DCS system results in a high density, low cost monitoring system.

Technical Specifications:

Power:	+24 Vdc Nominal (Reverse Polarity and Transient Protection Included)
Consumption:	50mA Max. for Transmitter 100mA Max for Monitor
Buffered Output:	BNC Connector
Accuracy:	5.0 % of Full Scale Range
Output:	4-20 mA proportional to the full scale range in temperature
Ranges:	See Ordering Table
Maximum Load:	600 Ohms Resistive
Case:	Isolated.

Environmental Specification:

Operating Temp.:	-20°C to +80°C (-4°F to +176°F).
Storage Temp.:	-55°C to +125°C (-67°F to +257°F).
Relative Humidity:	0 - 95% Non-Condensing.
Mounting:	32mm (G Style) or 35mm (T-Style) DIN Rail

Certifications:

UL 1604
CSA C22.2 No. 213
Class I Division II, Groups B-D Approved
CE Approved
RoHS Compliant

Ordering Information:

Base P/N	-Input	Description
CMCP570		Solid State Temperature Transmitter
CMCP570A		Solid State Temperature Monitor (with Alarm Module)
	-01	10mV/°K Output Sensors -17 to 121°C (0-250°F) Range
	-03	10mV/°C Output Sensors (CMCP793T or CMCP797T) 2 to 120°C (35.6-248°F) Range
	-Specify	Contact STI to Specify Alternate Inputs

CMCP575 Speed Transmitter Machine Protection Transmitters



- *Accepts Inputs from Proximity Probes or Hall Effect Sensors*
- *Easy Setup and Calibration (One Touch Button)*
- *0.031 to 83kHz Frequency Response*
- *Selectable Output (mA or VDC) Proportional to Speed*
- *Low Cost*

Description:

The CMCP575 Speed Transmitters are compatible with proximity probe or Hall effect inputs, they provide a 4-20 mA output proportional to the overall measurement. Each unit processes the signal, and outputs a 4-20 mA dc current that is proportional to a user calibrated range such as 0-1,000 RPM. Combining transmitters with an existing PLC or DCS system results in a high density, low cost monitoring system.

Technical Specifications:

Power: +24 Vdc Nominal
Consumption: 33mA Max.
Accuracy: 0.1 % of Full Scale Range
Output: 4-20 mA proportional to the full scale range in speed

Environmental Specification:

Operating Temp.: -31°C to +85°C (-25°F to +185°F).
Storage Temp.: -40°C to +93°C (-40°F to +200°F).
Relative Humidity: 0 - 95% Non-Condensing.
Mounting: 32mm (G Style) or 35mm (T-Style) DIN Rail

Ordering Information:

Base P/N	Description
CMCP575	Solid State Temperature Transmitter

CMCP585 Eccentricity Transmitter

Machine Protection Transmitters and Monitors



Transmitter



Monitor

- *Accepts Inputs from Proximity Probes*
- *4-20mA Output*
- *Transmitter Only Option or API 670 Compliant Monitor*
- *OK, Alert and Danger Relay Contacts*
- *Adjustable Alarms*
- *CSA and UL Class 1 Division 2 Approved*
- *CE Approved*
- *Low Cost*

Description:

The CMCP585 Eccentricity Transmitters are compatible with proximity probe inputs, they provide a 4-20 mA output proportional to the overall measurement. Each unit provides power for the associated transducer, processes the vibration signal to determine overall amplitude, and outputs a 4-20 mA dc current that is proportional to a user specified range such as 0-10 mils. Each transmitter has 5 user selectable ranges (5, 10, 15, 20 and 25 mils with metric equivalents). Combining transmitters with an existing PLC or DCS system results in a high density, low cost vibration monitoring system. When specified with the alarm feature (CMCP585A), the unit functions as a complete single channel monitor that includes alert and danger alarms, and output relays.

Technical Specifications:

Power: +24 Vdc Nominal (Reverse Polarity and Transient Protection Included)
 Consumption: 50mA Max. for Transmitter
 100mA Max for Monitor
 Buffered Output: BNC Connector
 Accuracy: 5.0 % of Full Scale Range
 Output: 4-20 mA proportional to the full scale range
 Ranges: English: 5, 10, 15, 20 and 25 mils
 Metric: 127, 254, 381, 508 and 635 Microns
 Maximum Load: 600 Ohms Resistive
 Case: Isolated.

Environmental Specification:

Operating Temp.: -20°C to +80°C (-4°F to +176°F).
 Storage Temp.: -55°C to +125°C (-67°F to +257°F).
 Relative Humidity: 0 - 95% Non-Condensing.
 Mounting: 32mm (G Style) or 35mm (T-Style) DIN Rail

Certifications:

UL 1604
 CSA C22.2 No. 213
 Class I Division II, Groups B-D Approved
 CE Approved
 RoHS Compliant

Ordering Information:

Base P/N	-Input	Description
CMCP585		Eccentricity Transmitter
CMCP585A		Eccentricity Monitor (with Alarm Module)
	-100	100mV/mil
	-200	200mV/mil
	-Specify	Specify Input

CMCP590 Acceleration Enveloping Transmitter Machine Protection Transmitters and Monitors



Transmitter



Monitor

- *Accepts Inputs from Accelerometers*
- *4-20mA Output*
- *Transmitter Only Option or API 670 Compliant Monitor*
- *OK, Alert and Danger Relay Contacts*
- *Adjustable Alarms*
- *CSA and UL Class 1 Division 2 Approved*
- *CE Approved*
- *3 Selectable Bandwidths*
- *3 Selectable Full Scale Ranges*
- *Low Cost*

Description:

Used with a 100mV/g accelerometers, the CMCP590 Acceleration Enveloping Transmitter processes the dynamic vibration acceleration input signal to defects in over-rolling bearing defects or gearbox problems. Each CMCP590 has 3 selectable bandwidth ranges and 3 full scale ranges. Combining transmitters with an existing PLC or DCS system results in a high density, low cost monitoring system.

Technical Specifications:

Power:	+24 Vdc Nominal (Reverse Polarity and Transient Protection Included)
Consumption:	50mA Max. for Transmitter 100mA Max for Monitor
Buffered Output:	BNC Connector
Accuracy:	5.0 % of Full Scale Range
Output:	4-20 mA proportional to the full scale range in enveloping
Bandwidths:	50 to 1,000Hz, 500 to 10,000Hz and 5,000 to 40,000Hz
Ranges:	10, 30 and 80 gE
Maximum Load:	600 Ohms Resistive
Case:	Isolated.

Environmental Specification:

Operating Temp.:	-20°C to +80°C (-4°F to +176°F).
Storage Temp.:	-55°C to +125°C (-67°F to +257°F).
Relative Humidity:	0 - 95% Non-Condensing.
Mounting:	32mm (G Style) or 35mm (T-Style) DIN Rail

Certifications:

UL 1604
CSA C22.2 No. 213
Class I Division II, Groups B-D Approved
CE Approved
RoHS Compliant

Ordering Information:

Base P/N	Description
CMCP590	Acceleration Enveloping Transmitter
CMCP590A	Acceleration Enveloping (with Alarm Module)

CMCP500A Relay Module for Transmitters Machine Protection Transmitter Accessories



Transmitter shown with optional
CMCP500-Alarm Module

- Available for Most CMCP500 Series Transmitters
- 0-5VDC Output Proportional to Full Scale Range
- Switchable 0-5VDC Output for Displays
- OK, Alert and Danger Relay Contacts
- Adjustable Alarms
- CSA and UL Class 1 Division 2 Approved
- CE Approved
- Trip Multiply (2x and 3x Alarm Value)
- Latching and Non-Latching Alarms
- Remote Alarm Reset

Description:

The CMCP500A Relay Module is a snap on protection system for most CMCP500 Series Transmitters that are not already equipped with it. The alarm module provides Alert and Danger relay contacts that can be configured in the field. By combining a CMCP500A module with one of STI's CMCP500 Series Transmitter the module then becomes a fully API670 compliant protection system.

Technical Specifications:

Power:	Power Supplied from CMCP500 Series Transmitter
Consumption:	100mA Max for when connected to transmitter
Output Connector:	BNC Connector, 0-5VDC proportional to full scale range
Output:	SPDT Relay Contact for Alert and Danger Output SPST Relay Contact for OK Output
Relay Ratings:	5 Amps at 30 VDC or 250 VAC
Case:	Isolated.

Environmental Specification:

Operating Temp.:	-20°C to +80°C (-4°F to +176°F).
Storage Temp.:	-55°C to +125°C (-67°F to +257°F).
Relative Humidity:	0 - 95% Non-Condensing.
Mounting:	32mm (G Style) or 35mm (T-Style) DIN Rail

Certifications:

UL 1604
CSA C22.2 No. 213
Class I Division II, Groups B-D Approved
CE Approved
RoHS Compliant

Available For:

CMCP525, CMCP530, CMCP535, CMCP540, CMCP545, CMCP547, CMCP548,
CMCP549, CMCP560, CMCP565, CMCP570, CMCP585 and CMCP590

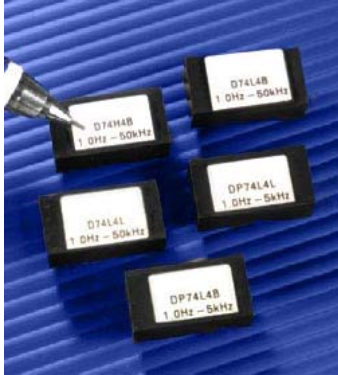
Ordering Information:

Note: CMCP500 Series Transmitters can be ordered from the factory with the optional Alarm module by specifying "A" after the base part number. Ex. CMCP530A-100A-R-ISO

Base P/N	Description
CMCP500A	Alarm Module for CMCP500 Series Transmitters

CMCP591 and CMCP592 Series Filters

Machine Protection Transmitter and Monitor Accessories



- For CMCP500 Series Transmitters and Monitors
- Low Pass and High Pass Filters Available
- Easy to Install—Plug In

Description:

All CMCP500 Series Transmitters and Monitors that accept dynamic inputs are equipped with two (2) filter sockets. One for a Low Pass Filter and one for a High Pass Filter. Simply insert the Filter into the appropriate socket as shown in the manual (available online) and move the Filter Jumper to activate. Care should be taken when selecting filters as damaging vibration levels may be filtered out.

Ordering Information:

Base P/N	-Filter Range	Description
CMCP591		High Pass Filter
	-005	5 Hz High Pass Filter
	-010	10 Hz High Pass Filter
	-020	20 Hz High Pass Filter
	-110	110 Hz High Pass Filter
	-Specify	Specify High Pass Filter Frequency
CMCP592		Low Pass Filter
	-0200	200 Hz Low Pass Filter
	-0500	500 Hz Low Pass Filter
	-2000	2,000 Hz Low Pass Filter
	-5000	5,000 Hz Low Pass Filter
	-10000	10,000 Hz Low Pass Filter