

CMCP-500 Series Transmitters / Monitors



Transmitter Features:

- Low Cost per Channel
- 4-20 mA Output
- Small Size and DIN Rail Mount
- Transducer Fault Detection
- Buffered Transducer Output On Front BNC
- High and Low-Pass Filters Available
- CE Approved

Additional Features of Monitor Option:

- Programmable Alert and Danger Alarms
- N/O or N/C Relays For Alarms
- Optional Latching Alarm With Remote Reset
- Trip Multiply for Startup

CMCP-500 Series transmitters are available to interface with all transducers, including: accelerometers, velocity pickups, eddy probes and temperature sensors for all journal or rolling element bearing machines. Our transmitters offer several features while maintaining a low cost. For instance, a BNC on the face of the transmitter provides access to the buffered raw signal. This provides users access to the vibration data for analysis with hand-held data collectors such as the SKF Microlog. Also, two filter sockets are provided on all transmitters to accommodate special monitoring applications such as gas turbines.

With the addition of the snap on relay module, any transmitter becomes a single channel monitor with all the features required by API-670 and present in legacy systems. In response to demand, a unique line of transmitters is manufactured specifically for the unique parameters of Turbine Supervisory Instrumentation (TSI).

Transmitters Are Available To Interface With A Variety Of Transducers:

- CMCP-525 Acceleration
- CMCP-530 Velocity
- CMCP-535 Integrated Displacement
- CMCP-540 Radial Vibration
- CMCP-545 Thrust Position
- CMCP-547 Differential Expansion
- CMCP-548 Case/Shell Expansion
- CMCP-549 Valve Position
- CMCP-560 RTD Temperature
- CMCP-565 Thermocouple Temperature
- CMCP-570 Solid State Temperature
- CMCP-575 Speed
- CMCP-580 Process Variable
- CMCP-585 Eccentricity



STI Vibration Monitoring Inc.

Vibration Monitoring and Machine Protection Systems

1010 East Main Street, League City, TX 77573 Phone:281.334.0766 Fax: 281.334.4255
www.stiweb.com / www.stiwebstore.com



CMCP5301 and CMCP5302 General Machinery Monitoring Systems



The **CMCP5301 and CMCP5302** are one and two channel Vibration Monitors that have been designed for use on typical rotating machinery such as motors, pumps fans, turbines, compressors, chillers., etc.

The CMCP5301 and 5302 accept inputs from any industry standard 100 mV/g accelerometer, condition's the input signals to velocity and provides a digital display and alarm status indication.

Analog outputs (4-20 mA) are provided for each channel for interface to a PLC or DCS for trending, alarm and operator interface.

The alarm contacts for the OK circuit, and Alert and Danger may be interfaced to machine control and shutdown systems for a complete vibration protection solution.

The system is a pre-wired turn-key package with power supply, and bright LED displays. The power supply accepts 110 or 220 VAC, 50 or 60 Hz. They are available in either an English or Metric configuration.

The CMCP5301 and CMCP5302 are also available with any other CMCP500 Series Monitor. The enclosure is a NEMA 4X Fiberglass housing.

For additional information on wiring and installation please refer to the CMCP500 Series Manuals on the STI website.

Features:

- Two Levels of Alarm with Relays
- True "OK" Circuitry with Relay
- Adjustable Time Delays
- Trip Multiply
- 4-20mA Output
- Buffered Transducer Output
- Reset Button
- Bright LED Digital Readout
- 100mV/g ICP Accelerometer Input
- Class 1 Division 2 Rated Monitors

Electrical Specifications:

Power: Accepts 110 VAC or 220 VAC, 60 or 50 Hz
Frequency Response: (-3 dB) 2 Hz to 20 kHz.
Buffered Output: BNC Connector 0-20 kHz.
Accuracy: 5.0 % of Full Scale Range.
Output: 4-20 mA proportional to the full scale range.
Maximum Load: 600 Ohms Resistive per channel
Case: Isolated.

Environmental Specifications:

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.
Approvals: NEMA 4X

Dimensions:

Width: 7.25"
Height: 7.25"
Depth: 5.00"

Ordering Information

CMCP5301	1 Channel Monitoring System
CMCP5302	2 Channel Monitoring System
-E	0-1.00 In/Sec RMS
-M	0-25.0 mm/sec RMS

Condition Monitoring Custom Products

To Order Online Please Visit
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Condition Monitoring Custom Products

CMCP420VT Vibration Transmitter

Features

- *Solid State Reliability*
- *Integral Sensor*
- *4-20 mA Output*
- *Dynamic Signal Output*
- *UL and CSA Approved Class 1, Div 2, Group B-D*
- *CE Approved*
- *RoHS Compliant*

Description

The CMCP420VT is a solid state, loop powered vibration transmitter. It provides a 4-20 mA output that is proportional to overall vibration in terms of velocity. The CMCP420VT continuously monitors machinery health and transmits directly into a PLC or DCS for trending, alarm and machine shutdown. In addition, the CMCP420VT provides access to the dynamic transducer output. The buffered output is available for temporary connection of portable analyzers for detailed machine fault analysis.

Simple Installation

Simply mount the CMCP420VT into a tapped hole in the bearing housing or machine case, connect two wires into a 4-20 mA loop, and you are ready to interface with a PLC or DCS. Electrical conduit may be connected directly to the top 3/4" NPT fitting. The CMCP420VT has a 1/4"-28 UNF tapped hole and has a variety of adaptors available.

If the LED display is ordered, it is shipped loose, and is a simple installation.



CMCP420VT
CE



Hazardous Location Safety
E112798
UL1604, CSA C22.2 No 213
Cl 1, Div 2, Grp B,C,D



CMCP420 & CMCP420-LED

Specifications:

Dynamic

Output: 4-20 mA proportional to full scale Velocity
Frequency Response: 2-2,000 Hz
Buffered Output: Acceleration, 100 mV/g
Accuracy: ±5%

Electrical

Power (Two wire loop power): + 22 to + 36 Vdc
Recommended Load: $(V_s - 14 - V_d) / .02$
RL= Load Resistance
Vs= Dc Supply Voltage
Vd= Display Voltage: 5.0 Vdc for LED, 2.0 Vdc for LCD, 0.0 for no display

The Recommended RL for most installations if: 250 Ohms or 100 Ohms, @ Vs= 24 VDC

Grounding: Case Isolated

Environmental

Operating Temperature: -20° C to +80° C
Sealed: Epoxy Encapsulated

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Condition Monitoring Custom Products

Accelerometers and Mounting Accessories



CMCP1100 Low Cost Industrial Accelerometers:

The CMCP-1100 accelerometers are manufactured in house to high quality standards. Each accelerometer is fully enclosed in a potted and waterproof stainless steel case. CMCP-1100 accelerometers, in three standard cable lengths, are always in stock ready for quick delivery. High temperature, side exit and custom cable length versions are also available.

CMCP300 and CMCP310 BNC Junction and Switch Boxes:

BNC Junction and Switch Boxes are multiple channel connecting centers for terminating the outputs of accelerometers or other transducer field wiring. They are normally located in close proximity to the machine to reduce wiring cost and provide convenient access to the vibration signal by a portable data collector or analyzer. The CMCP-300 and CMCP-310 are available in NEMA 4 Painted Steel and NEMA 4X Fiberglass and Stainless Steel.

Mounting Accessories:

STI provides mounting accessories to assist our customers with the installation of permanently installed accelerometers. These accessories will simplify acquiring the various components required to complete the job quickly and properly.

The following list itemizes the accessories available for accelerometer installation:

- Standard Extension Cables
- High Temperature Extension Cables
- Low Cost Extension Cables
- Intermediate Termination Boxes
- Mounting Pads
- Pipe Thread Mounting Adapters
- Motor Fin Mounts
- API 670 Accelerometer Housings
- Acrylic Epoxy
- Silicone Dielectric
- Accelerometer Mounting Studs
- Cable Securing Devices
- Piloted End Mill Spot Reamers

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