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STI Vibration Monitoring Inc.

Vibration Monitoring and Machine Protection Systems
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Phone: +1(281)334-0766 Website: www.stiweb.com

Predictive Maintenance Essentials

CMCP530(A) Velocity Transmitter/Monitor



CMCP530 Transmitter **CMCP530A Monitor**

Transmitter Features

- Velocity Output (Peak or RMS)
- Accelerometer or Velocity Input
- 5 Selectable Ranges
- 4-20 mA Output
- Two Buffered Outputs
- Class 1 Division 2, Groups B-D
- CE Approved

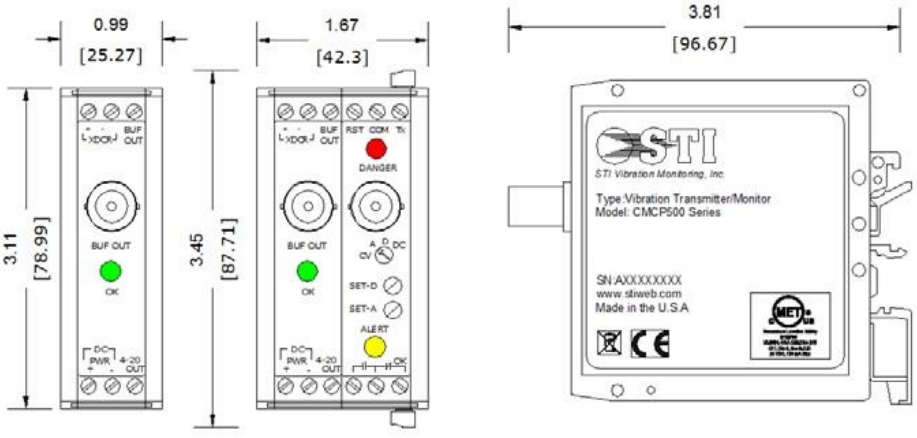
Monitor Features

- OK, Alert and Danger Alarms
- 5A @250VAC Relay Outputs
- Latching or Non-Latching Alarms
- Trip Multiply (2x or 3x)
- Selectable Time Delay
- API 670 Compliant

Description

The **CMCP530 Velocity Transmitter** and **CMCP530A Velocity Monitor** are compatible with all industry standard IEPE Accelerometers and Velocity transducers. Each transmitter provides constant current power for the associated sensor and processes the signal through a True Peak or True RMS detector to determine the overall amplitude in terms of Velocity. A 4-20 mA DC output proportional to one of the five user selectable ranges can then be sent to the plant's PLC, DCS, SCADA or other control system to allow operations and maintenance staff to view real time machinery health, set alarms and trigger machine shutdowns for scheduled preventative maintenance. An OK Fault Detection Circuit is provided with the 4-20 mA output so hardware or power failures can be differentiated by the control system to prevent nuisance alarms and false readings. The CMCP530 can be ordered with the optional alarm module by using the CMCP530A prefix. The optional alarm module provides OK, Alert and Danger alarms along with associated relays, selectable time delays and adjustable set points for standalone API 670 compliant machine protection. A Timed OK Danger Defeat circuit is also provided to prevent unwanted false trips. Multiple transmitters and/or monitors can be combined into a single enclosure or cabinet to create a cost effective, multichannel machine protection system with solid state reliability.

Dimensions



Specifications

Electrical

Input:	-100A	100 mV/g Accelerometer
	-100V	100 mV/in/sec Velocity Sensor (3.937 mV/mm/s)
		Other Sensitivities Available On Request
Output:		4-20 mA DC Proportional to Velocity (600 Ohm max. resistive load)
Signal Detection:		
	-R	RMS
	-P	Peak
Frequency Response @ -3db		
	-ISOLF	2 to 2,000 Hz ISO Low Frequency
	-ISO	10 to 1,000 Hz ISO Standard
Power:		+24 VDC 50 mA max. Transmitter (100 mA max. Monitor)
		Reverse Polarity and Transient Protected
Accuracy:		1% Full Scale
Selectable Ranges:		0.5, 1.0*, 1.5, 2.0, 2.5 in/sec (12.7, 25.4*, 38.1, 50.8, 63.5 mm/s) *Factory Preset
Sensor Power:		Internal 4.4 mA Constant Current Diode
OK Circuit:		Green LED (On = OK), Not OK = Off and 4-20 mA < 2.0 mA
Timed OK Danger Defeat:		30 Second on Power Up or Loss of OK (Alert and Danger)
Buffered Outputs:		Active Buffer, BNC and Terminal
Optional Filters:		Pluggable High Pass and Low Pass Filters
Case:		Isolated
Terminals:		Screw Type, 24 AWG min., 12 AWG max.

Environmental Specifications

Operating Temperature:	-20°C to +80°C	(-4°F to +176°F).
Storage Temperature:	-40°C to +95°C	(-40°F to +203°F)
Relative Humidity:	0 - 95% Non-Condensing	

Mechanical Specifications

Mounting:		32 mm (G style) or 35 mm (T style) DIN Rail.	
Dimensions:	Transmitter	0.99” W x 3.11” H x 3.81” D	(25.27 x 78.99 x 96.67 mm)
	Monitor	1.67” W x 3.11” H x 3.81” D	(42.42 x 78.99 x 96.67 mm)
Weight:	Transmitter	0.22 Lbs	(99.8 Gram)
	Monitor	0.40 Lbs	(181.4 Gram)
Certifications:		CE, RoHS, CSA & UL Approved Class I Division II B-D	

Specifications CMCP530A Monitor

Number of Alarms/Relays:	3 - OK, Alert and Danger		
Alarm Indication:	OK = Green LED,	Alert = Yellow LED,	Danger = Red LED
Relay Specification:	3 - Form C, SPDT, 5 Amp 30 VDC/250 VAC, Latching or Non-Latching		
Alarm Time Delay:	0.1, 1.0, 3.0 6.0 10.0 Second	-Separately Selectable	
Trip Multiply Function:	Terminal for None, 2X or 3X Alarm Limit Trip Multiply		
Reset Function:	Terminal for Remote Reset if Latching Alarms Selected		
Bypass Function:	Hold Reset to Common		
Display Output:	0-5 VDC Switch Selectable Current Value, Alert and Danger Setpoint		

Ordering Information

CMCP530	**-XXXX**	**-X**	**-XXXXX**	**Vibration Velocity Transmitter**	
CMCP530A	**-XXXX**	**-X**	**-XXXXX**	**Vibration Velocity Monitor**	
	-100A			For 100 mV/g Piezo Voltage Output Accelerometer	
	-100V			For 100 mV/in/sec Piezo Voltage Output Velocity Transducer	
		-R		RMS Detection (Root Means Square)	
		-P		Peak Detection	
			-ISO	ISO Standard Filters,	10 Hz to 1.0 kHz
			-ISOLF	ISO Low Frequency,	2.0 Hz to 2.0 kHz **STI Standard**

Example Part Number:
CMCP530A-100A-R-ISOLF
Vibration Velocity Monitor for
100 mV/g Piezo Voltage Output
Accelerometer, RMS Detection,
ISO Low Frequency, 2.0 Hz to 2.0 kHz

Image:



Note: Due to STI’s continuous process improvement, specifications are subject to change without notice.

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