STI Vibration Monitoring Inc.

Vibration Monitoring and Machine Protection Systems
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Predictive Maintenance Essentials

CMCP700S-CVT
Low-Cost Vibration and Temperature Transmitter (Dual 4-20 mA Outputs)

Features

- Accelerometer or Piezo-Velocity Input
- Temperature Output
- BNC Buffered Output
- 24 VDC Powered
- Compact Slim Line Enclosure
- Din Rail Mountable
- Selectable Acceleration or Velocity Output
- 3 Selectable Ranges
- Selectable Filtering
- Bi-Color LED for Sensor Status

Product Description

The CMCP700S-CVT is compatible with all industry standard IEPE (Integrated Electronics Piezo Electric) 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 4-20mA output proportional to one of the three 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, so hardware failures, like open or short circuits, will prompt the front panel LED to change (from green to red).
Multiple transmitters can be combined into a single enclosure or cabinet to create a cost effective, multichannel machine protection system with solid state reliability.

Technical Performance

Input 1:		
IEPE Accelerometer:	50, 100 or 500 mV/g	
Piezo-Velocity Sensor:	100 or 500 mV/in/sec	(4 mV/mm/s or 20 mV/mm/s)
Input 2:		
Solid State Temperature:	10 mV/°C	
Outputs:		
Vibration:	4-20 mA (3 Selectable Ranges, Velocity: 0.5, 1.0, 2.0 in/s (12.7, 25.4, 50.8 mm/s) Acceleration: 5, 10, 20 g; -> See Full-Scale Range Selection Table on Page 2)	
Temperature:	4-20 mA	(0-150°C or 32-302°F)
Buffered Output:	Same As Input with DC Bias Voltage	
Frequency Range:	10 to 1,000 Hz (ISO Standard)	(600 cpm to 60 kcpm) or
	10 to 10,000 Hz	(600 cpm to 600 kcpm)
Signal Detection:	RMS	
Accuracy:	±4%	
Protection:	Reverse Wiring and Transient Protection	
Fault Indication:	Green LED = OK; Red LED = Fault	

Electrical

DC Power:	22-30 VDC (24 VDC Nominal)
Consumption:	100 mA Max
Constant Current Power:	4.4 mA
Output Load:	600 Ohm Max.

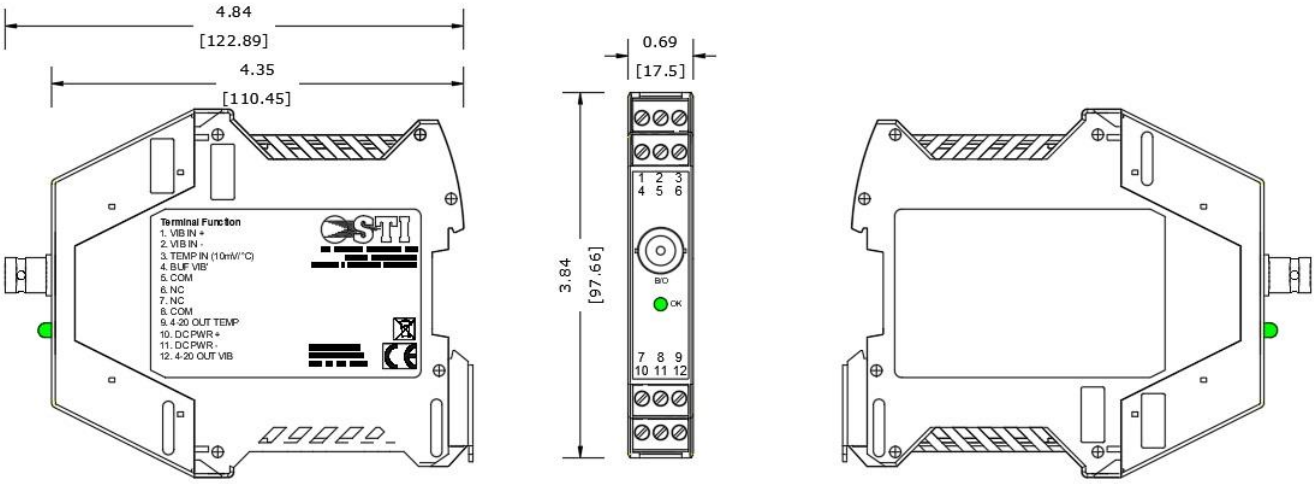
Environmental

Operating Temperature Range:	-4 to 176°F	(0 to 70°C)
Storage Temperature Range:	-40 to 203°F	(-40 to 95°C)
Humidity:	0-95% Non-Condensing	
IP Rating:	IP54	
Certifications:	CE, RoHS3	

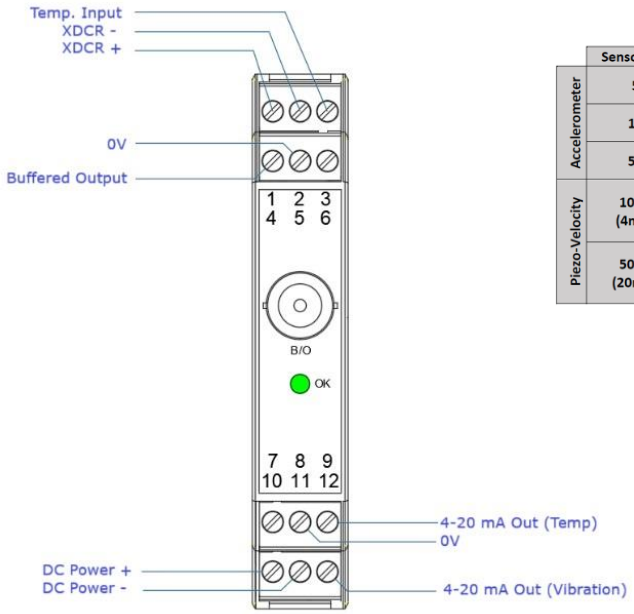
Mechanical

Case Material:	Polycarbonate	
Terminals:	Screw Terminals	(16-24 AWG)
Dimensions:	4.94” x 43.84” x 0.69”	(125.4 x 97.66 x 17.5 mm)
Weight:	3.0 Ounces	(85 g)

Dimensions



Wiring



Full-Scale Range Selection Table

		R-1 (Range 1)		R-2 (Range 2)		R-3 (Range 3)	
	Sensor Sensitivity	Acceleration	Velocity	Acceleration	Velocity	Acceleration	Velocity
Accelerometer	50mV/g	10g's	1.0 in/s (25.4mm/s)	20g's	2.0 in/s (50.8mm/s)	40g's	4.0 in/s (101mm/s)
	100mV/g	5g's	0.5 in/s (12.7mm/s)	10g's	1.0 in/s (25.4mm/s)	20g's	2.0 in/s (50.8mm/s)
	500mV/g	1g	0.10 in/s (2.5mm/s)	2g's	0.2 in/s (5.0mm/s)	8g's	0.8 in/s (20mm/s)
Piezo-Velocity	100mV/in/s (4mV/mm/s)	N/A	0.5 in/s (12.7mm/s)	N/A	1.0 in/s (25.4mm/s)	N/A	2.0 in/s (50.8mm/s)
	500mV/in/s (20mV/mm/s)	N/A	0.10 in/s (2.5mm/s)	N/A	0.2 in/s (5.0mm/s)	N/A	0.8 in/s (20mm/s)

Order Information

CMCP700S-CVT	Vibration and Temperature Transmitter

Optional Accessories

CMCP730D	Relay and Display Module
CMCP515	24 VDC Power Supply
CMCP786A	Top Entry Accelerometer, 100 mV/g
CMCP786T	Dual Output Accelerometer, 100 mV/g and 10 mV/°C
CMCP700H	700 Series Transmitter Enclosure

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