STI
STI Vibration Monitoring Inc.

Vibration Monitoring and Machine Protection Systems
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Condition Monitoring Custom Products

CMCP548(A) Case Expansion Transmitter/Monitor

Transmitter Features:
- Case Expansion
- LVDT Input
- Zero Potentiometer
- 4-20mA Output
- Two Buffered Outputs
- CE, RoHS 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

The **CMCP548 Case Expansion Transmitter** and **CMCP548A Case Expansion Monitor** are compatible with all industry standard LVDT's such as STI's CMCP-LVDT-51A. Each transmitter measures the sensors voltage signal that is measuring the machine or turbine case growth to determine the overall amplitude in terms of Case Expansion in either mils or millimeters. A 4-20mA DC output proportional to the specified full scale range 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 4-20mA output so hardware or power failures can be differentiated by the control system to prevent nuisance alarms and false readings. The CMCP548 can be ordered with the optional alarm module by using the CMCP548A 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:

Transmitter   Monitor   Side View
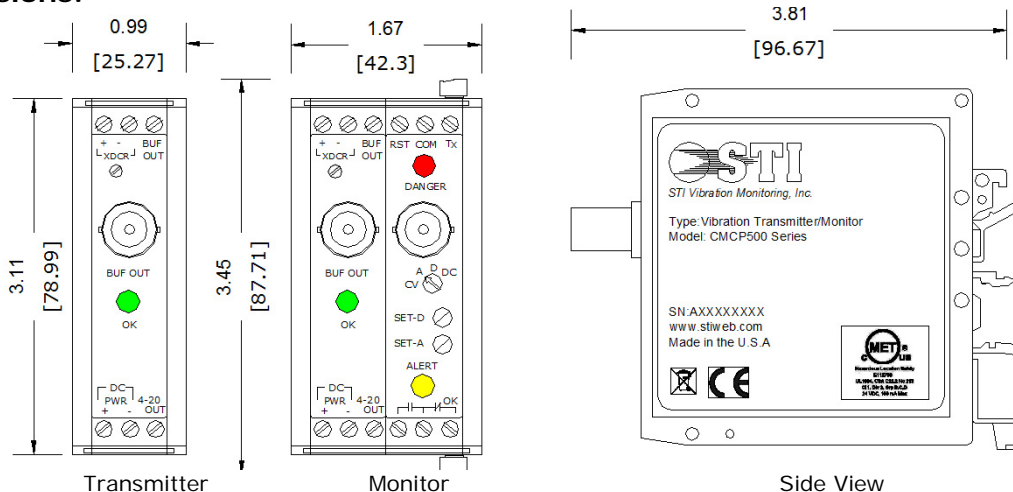
CMCP548(A) Case Expansion Transmitter/Monitor

Specifications:

Electrical Specifications:	CMCP548
Input:	STI DC LVDT (or Specify)
Output:	4-20 mA DC Proportional to Displacement (600 Ohms max. resistive load)
Frequency Response @ -3db	DC
Power:	+24 VDC 50 mA Nominal (100 mA with Alarm Module) Reverse Polarity and Transient Protected
Accuracy:	1% Full Scale
Calibrated Factory Ranges:	0 to 1.0, 0 to 2.0 inch 0 to 25.4, 0 to 50.8 mm
Signal Detection:	DC
Sensor Power:	Separate as Required
OK Circuit:	Green LED (On = OK), Not OK = Off and 4-20 mA < 2.0 mA
Timed OK/Alarm/Danger Defeat:	30 Seconds on Power Up or Loss of OK
Buffered Outputs:	Active Buffer, BNC and Terminal
Case:	Isolated
Terminals:	Screw Type, 24 AWG min, 12 AWG max.
Environmental Specifications:	
Operating Temperature:	-20ºC to +80ºC (-4ºF to +176ºF).
Storage Temperature:	-40ºC to +95ºC (-40ºF to +203ºF)
Relative Humidity:	0 - 95% Non-Condensing
Mechanical Specifications:	
Mounting:	32 mm (G style) or 35 mm (T style) DIN Rail.
Dimensions:	0.99"W x 3.11"H x 3.81"D (25.27 x 78.99 x 96.67 mm) Transmitter 1.67"W x 3.11"H x 3.81"D (42.3 x 78.99 x 96.67 mm) Monitor
Weight:	0.21 lb./0.40 lb. w/Alarm Module (0.095kg/0.18kg)
Certifications:	CE, RoHS

Optional Alarm Module (Monitor):	CMCP548A
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:	Separately Selectable 0.1, 1.0, 3.0 6.0 10.0 Seconds
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: (See Case Expansion Application Note Online)

CMCP548	-XXX	-XXX	Case Expansion Transmitter
CMCP548A	-XXX		Case Expansion Monitor
	-XXX		Specify Exact Input in mv/mil or mv/mm
		-XXX	Specify Range Desired (example: 1.0" or 25.4 mm)

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