



## CMCP7504 Compact API670 Machinery Protection System



### Features

- Continuous Monitoring for Machine Protection
- 4 Variable Inputs Plus Speed and Temperature
- Local Bar Graph Display with Alarm Indicators
- 3 Levels of Alarm Per Channel
- Four Configurable 4-20 mA Recorder Outputs
- Modbus TCP/IP and RTU Outputs
- DataView Signal Saver
- Two Buffered Outputs per Channel (BNC and Terminal)



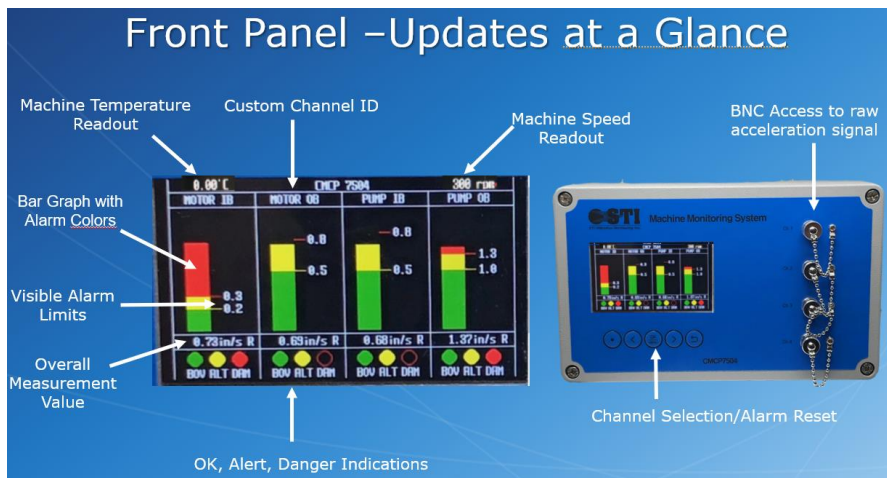
The CMCP7504 Compact Machinery Protection System was designed to continuously monitor Essential and Balance of Plant machinery, in all industries, where the cost of larger rack-based systems cannot be justified. The CMCP7504's flexible design allows it to accept a combination of four vibration, position, temperature, speed, or analog inputs and can be used in conjunction with a PLC, DCS or SCADA system. The system also allows for a single temperature and speed input for readout and visual alarming. Four dedicated BNC Buffered Outputs are located on the front cover and provide convenient access to the raw sensor signals for portable vibration analyzers. Buffered output signals are also available on screw terminals for hardwiring to online systems.

The local LCD display provides bar graphs, alarm indicators, and the overall vibration value directly on the front of the enclosure. Speed and temperature are also displayed on the front panel. The configuration software included with the system allows the user to program the four inputs, nine relay outputs and four recorder outputs with a laptop or PC via USB cable.

STI's DataView FFT Saver function allows advanced diagnostic capability by allowing the user to access a recording of the sensor's raw signal. Recordings are collected on alarm (alert and danger) and are saved to the internal SD Card as a .wav file which allows the user to review the waveform or FFT using a portable data collector or online monitoring system.

The CMCP7504 is rated IP65 and protects against dust and water ingress. Enclosures are available for additional protection. An internal Micro SD-Card records a rolling buffer of the overall values which can be reviewed at a later time.

Condition Monitoring Custom Products



## Specifications

### Electrical

Number of Inputs:	Four (4) Plus Speed and Temperature
Signal Types:	Accelerometer, Velocity Sensor, Proximity Probes or Analog Signals (mA or VDC)
Analog Outputs:	Four (4) Isolated 4-20 mA Outputs
Buffered Outputs:	Two Buffered Outputs Per Channel (BNC and Screw Terminal)
Frequency Response:	Velocity: 10-1,000 Hz (ISO) or 2 to 2,000 (ISO LF) Acceleration: 2 to 20,000 Hz Displacement: 2 to 2,000 Hz Thrust/Position: DC Enveloping: Filter #2 and #3 (Jumper Selectable)
Power:	85-264 VAC, 50/60 Hz or 24 VDC (1 Amp)
Accuracy:	±1% Full Scale
Input Module Accuracy:	±5% of Full Scale
Communications:	Modbus TCP/IP and RS485
Signal Detection:	RMS, Peak or Peak to Peak (User Defined)
Sensor Power:	Internal 4.4 mA Constant Current Diode for IEPE Style Sensor +24VDC for 4-20mA Sensors
Sensor OK Detection:	Continuous Monitoring of Sensor Bias Voltage
Number of Alarms/Relays:	9 (4 Alerts, 4 Danger, 1 Common System OK)
Alarm Indication:	OK = Green LED, Alert = Yellow LED, Danger = Red LED
Relay Specification:	Form C, SPDT, 5 Amp 250 VAC, Latching or Non-Latching Selectable Normally Energized or Normally De-Energized (User Defined)
Alarm Time Delay:	1 to 90 Seconds (User Defined)
Reset Function:	Push Button
Case:	Powder Coated Aluminum, Isolated
Terminals:	Screw Type, 24 AWG min., 12 AWG max.
Programming:	Software and USB Cable Included (Windows Required)
Display Type:	Color LCD

### DataView Signal Processing

Storage:	1GB
Raw Signal Length:	30 Seconds
Recordings Saved:	Up to 1,000
Recording Format:	.wav
Overall Value Save:	Continuous – First in First Out
Overall Value File Format:	.txt

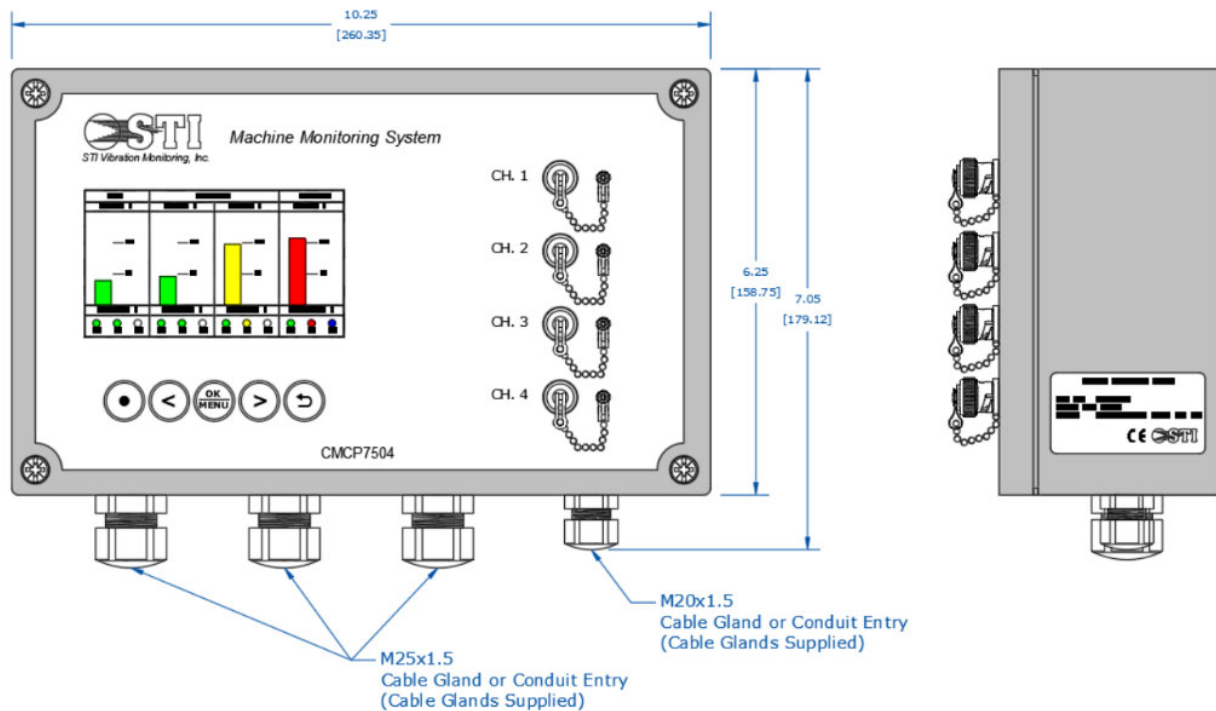
### Environmental Specifications

Operating Temperature:	-4 to 176°F (-20 to +80°C)
Storage Temperature:	-40 to 185°F (-40 to +85°C)
Relative Humidity:	10 - 95% Non-Condensing
Enclosure Rating:	IP65

### Mechanical Specifications

Housing Material:	Gray Aluminum, Die-Cast
Mounting:	Mounting Bolts
Dimensions:	10.24" x 6.3" x 3.55" (260 x 160 x 90mm)
Weight:	25 oz. (700g)
Certifications:	CE Approved - EN 60950-1

## Dimensions



## Ordering Information

### CMCP7504 -XX -XX -XX -XX Channel Selection

- Input 1 Module Type, Specify Ordering Code from Table Below
- Input 2 Module Type, Specify Ordering Code from Table Below
- Input 3 Module Type, Specify Ordering Code from Table Below
- Input 4 Module Type, Specify Ordering Code from Table Below

Note: Each CMCP7504 is supplied with a USB cable and USB thumb drive containing the setup software.

### Input Module Type

#### Ordering Code Description

-AC	Acceleration, Input from Accelerometer
-VA	Velocity, Input from Accelerometer
-VV	Velocity, Input from Velocity Sensor
-DS	Displacement, Input from Proximity Probe
-TP	Thrust Position, Input from Proximity Probe
-EV	Enveloped Acceleration, Input from Accelerometer
-AM	Analog Input, mA or VDC
-TM	Temperature Input (100Ohm Plat or 10mV/°C from Dual Output Accelerometer)
-XX	Empty Slot, Unused

### Example Part Number:

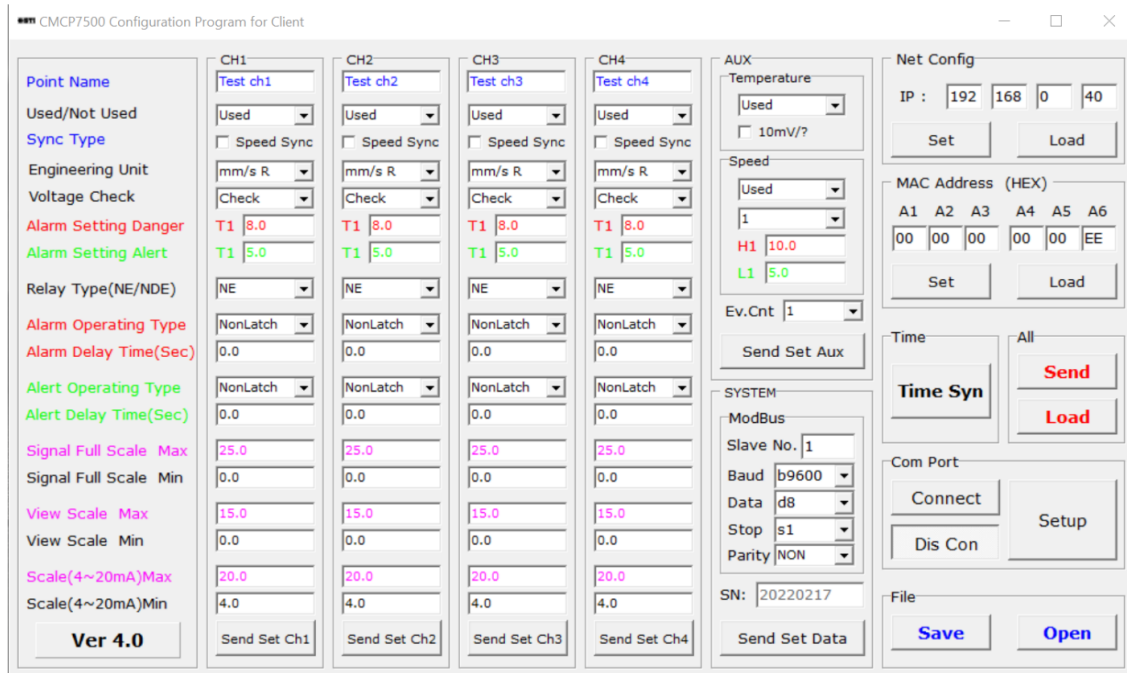
#### CMCP7504-VA-EV-VA-EV

Four Channel Monitoring System  
 Module 1: Velocity, Accelerometer Input  
 Module 2: Enveloped Acceleration  
 Module 3: Velocity, Accelerometer Input  
 Module 4: Enveloped Acceleration

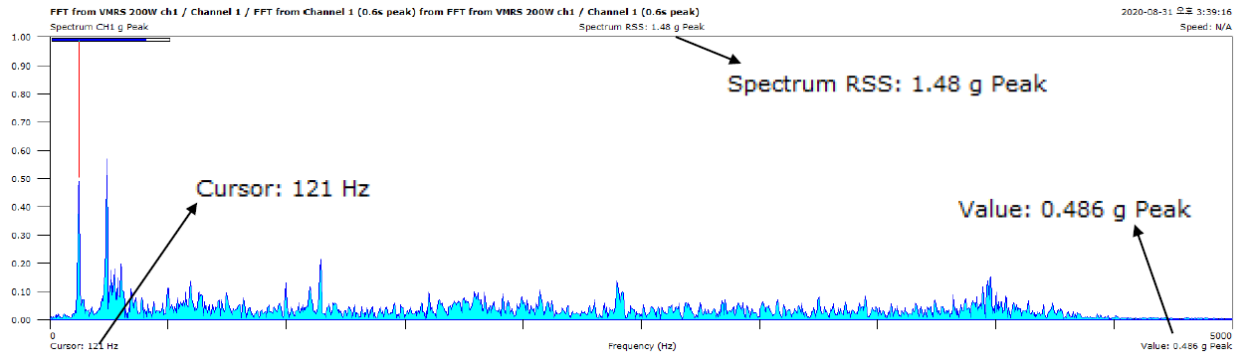
### What's Included:

- 1x CMCP7504 (Configured as Ordered)
- 3x M25x1.5 Cable Glands
- 1x M20x1.5 Cable Gland
- 1x USB Thumb Drive with Software and Manual
- 1x USB Programming Cable
- 1x Calibration Certificate

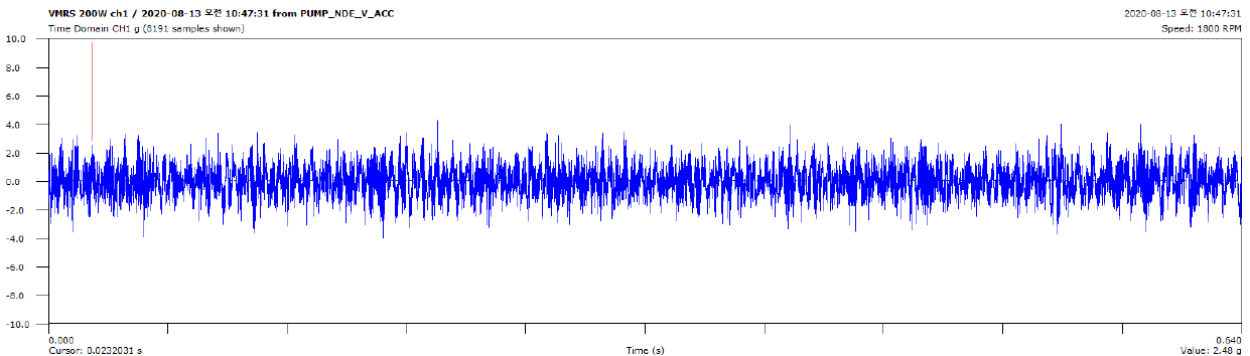
# CMCP7504 Setup Application



## DataView Signal Processing – FFT Using SKF Microlog GX



## DataView Signal Processing – Time Waveform Using SKF Microlog GS



## Accessories

### Enclosures

Additional enclosures for harsh environments

#### Material

-FG Option	Compression Molded Fiberglass
-PS Option	14 AWG Mild Steel Polyester Powder Coated
-SS Option	14 AWG 304 Stainless Steel

#### NEMA Rating

-FG and -SS:	NEMA 4, 4X, 12 and 13
-PS:	NEMA 4, 12 and 13

#### IP Rating:

IP66

#### Door Closure:

1/4 Turn Quick Release Latch (Steel) or Quick Release Latch (Fiberglass)

#### Optional Cord Grips

Material:	Nylon
IP Rating:	IP68
Cable Diameter:	0.17"-0.22" Cable Diameter
Location:	Enclosure Bottom



CMCP7504H	-XX	-XX	Description
	-FG		NEMA 4X, IP66, Fiberglass Enclosure with Door Window
	-PS		NEMA 4, IP66, Painted Steel Enclosure with Door Window
	-SS		NEMA 4X, IP66, Stainless Steel Enclosure with Door Window
		-01	For One CMCP7504 (14"x12"x6")
		-02	For up to Two CMCP7504's (16"x14"x8")
		-04	For up to Four CMCP7504's (24"x20"x8")
		-CG	With Cord Grips, 1x CMCP261-03 & 1x CMCP262-01 (for Sensor Inputs)

#### Example:

#### CMCP7504H-FG-01-CG

Fiberglass Enclosure for 1x CMCP7504, with Cord Grip Cable Entries

## Adapters



CMCP7500DR Din Rail Kit



Blanking Plugs



Thread

#### Din Rail Adapter Kit

CMCP7500DR Din Rail Mounting Clip & Adapter Plate

#### Blanking Plugs

CP2105009-1 Blanking Plug for M20x1.5 Entry

CP2105009-2 Blanking Plug for M25x1.5 Entry

#### Conduit Adapters

CP2105010-NPT M20x1.5 to 1/2" NPT Conduit Adapter

CP2105010-2 M25x1.5 to 3/4" NPT Conduit Adapter

CP2105010-3 M20x1.5 to PG11 Adapter

CP2105010-4 M25x1.5 to PG16 Adapter