



STI Vibration Monitoring Inc.

Vibration Monitoring and Machine Protection Systems

www.stiweb.com

Condition Monitoring Custom Products

## CMCP785A-IP

### General Purpose Side Entry Accelerometer, Submersible



#### Features

- General Purpose Side Entry Accelerometer
- 100 mV/g  $\pm 10\%$
- 140°C Max Temperature Range
- $\pm 80$  g Dynamic Range
- Integral PUR Cable
- Class 1 Division 2 Approved
- Class 1 Division 1 Approved with IS Barrier or Isolator
- 1/4"-28 UNF or M8x1.25 Captive Mounting Bolt
- Sealed to IP68



#### Typical Applications

Fans, Motors, Pumps, Compressors, Centrifuges, Conveyors, Air Handlers, Gearboxes, Rolls, Dryers, Presses, Cooling, HVAC, Spindles, Machine Tooling, Process Equipment and many more.

#### Technical Performance

Mounted Base Resonance:	21 kHz (nominal)
Sensitivity:	100 mV/g $\pm 10\%$ Nominal 80 Hz at 22°C
Frequency Response:	2.0 Hz to 10 kHz $\pm 5\%$ (120 cpm to 600 kcpm)
	1.0 Hz to 12 kHz $\pm 10\%$ (60 cpm to 720 kcpm)
	0.8 Hz to 15 kHz $\pm 3$ dB (48 cpm to 900 kcpm)
Isolation:	Base Isolated
Measurement Range:	$\pm 80$ g
Transverse Sensitivity:	Less than 5%

#### Electrical

Supply Voltage:	18-30 VDC
Current Range:	0.5 to 8 mA
Bias Voltage:	10-12 VDC
Electrical Noise:	0.1 mg Max.
Settling Time:	1.5 Second
Output Impedance:	200 Ohm Max.
Case Isolation:	$>10^8$ Ohm at 500 Volt

#### Environmental

Operating Temperature Range:	-67 to 284°F (-55 to 140°C)
Sealing:	IP68
Submersible:	Up to 100 meter (10 bar)
Maximum Shock:	5000 g
Approvals:	CE and UKCA Approved CSA/UL Class 1 Division 2, Groups B, C and D

#### Mechanical

Case Material:	Stainless Steel
Cable Jacket:	PUR (Polyurethane)
Sensing Element/Construction:	PZT/Compression
Mounting Torque:	5.9 ft-lbs (8 Nm)
Weight:	6.5 Oz (185 gram), Sensor only
Mating Connector:	Flying Leads (White/Black/Shield)
Mounting Thread:	
CMCP785A-IP:	1/4"-28 UNF Captive Bolt Supplied with Sensor
CMCP785A-IP-M8:	M8x1.25 Captive Bolt Supplied with Sensor

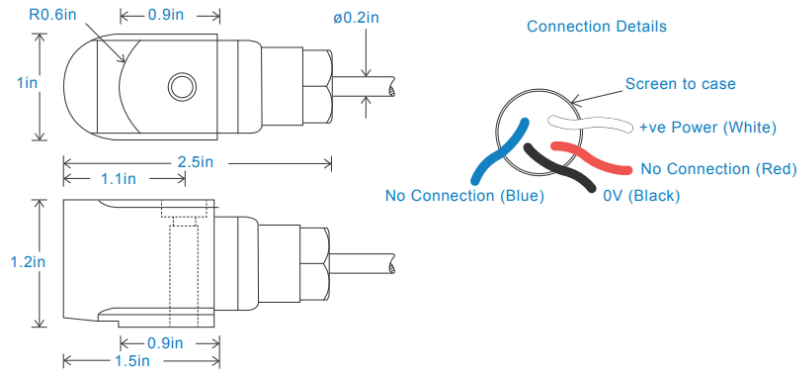
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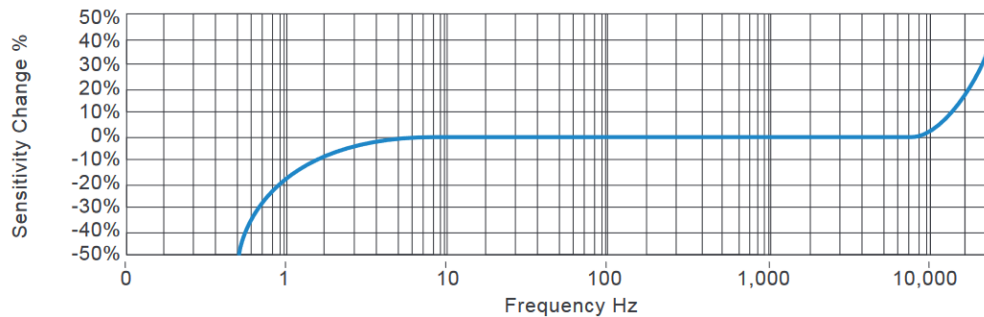
## Hazardous Location Ratings

Class I, II, III, Division 1 and 2, Groups A-G, T4, -55°C to + 110°C IP65  
Class 1, Zone 0, AEx, ia, IIC, T4, Ga, -55°C to + 110°C  
Zone 20, AEx, ia, IIIC, T130°C, IP65, Da, -55°C to + 110°C  
Class I, II, III, Division 1, 2, Groups A-G, T6, -55°C to + 110°C  
Zone 20, AEx, ia, IIIX, T80°C, IP65, DA, -55°C to + 110°C

## Dimensions



## Typical Frequency Response



## Ordering Information

CMCP785A-IP General Purpose Side Entry Accelerometer, 100 mV/g, Submersible, Cable Length 5 Meter (16 ft), 1/4-28 UNF Mount  
CMCP785A-IPXX General Purpose Side Entry Accelerometer, 100 mV/g, Submersible, 1/4-28 UNF Mount  
CMCP785A-IPXX-M8 General Purpose Side Entry Accelerometer, 100 mV/g, Submersible, M8x1.25 Mount  
(Specify Cable Length in Meters in Place of XX)

## Alternative Sensitivity Ordering Information

Part Number	Sensitivity	Measurement Range	Base Resonance
CMCP785A-IPXX-10	10 mV/g	±800 g	27 kHz
CMCP785A-IPXX-30	30 mV/g	±250 g	25 kHz
CMCP785A-IPXX-50	50 mV/g	±160 g	23 kHz
CMCP785A-IPXX-250	250 mV/g	±32 g	19 kHz
CMCP785A-IPXX-500	500 mV/g	±16 g	17 kHz

## Similar Products



**M12 Connector**  
CMCP785A-M12



**Integral Armored Cable**  
CMCP785A-I



**MS Connector**  
CMCP785A