



CMCP788A-IP/IS

Intrinsically Safe Precision Accelerometer with PUR Integral Cable, Top Entry



Features

- Intrinsically Safe Top Entry Accelerometer
- ATEX, IECEx, CSA and UL Approved
- 100 mV/g $\pm 5\%$
- 150°C Max Temperature Range
- ± 80 g Dynamic Range
- PUR Integral Cable
- 1/4"-28 UNF and M8x1.25 Mounting Studs Included
- Sealed to IP68, submersible

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:	30 kHz (nominal)
Sensitivity:	100 mV/g $\pm 5\%$ Nominal 80 Hz at 22°C
Frequency Response:	1.5 Hz to 10 kHz $\pm 5\%$ (90 cpm to 600 kcpm) 0.5 Hz to 12 kHz $\pm 10\%$ (30 cpm to 780 kcpm) 0.2 Hz to 15 kHz $\pm 3\text{dB}$ (12 cpm to 900 kcpm)
Isolation:	Base Isolated
Measurement Range:	± 80 g
Transverse Sensitivity:	Less than 5%

Electrical

Electrical Noise:	0.1 mg max
Current Range:	0.5 mA to 8 mA
Bias Voltage:	10-12 Vdc
Settling Time:	1.0 Second
Output Impedance:	200 Ohm max.
Case Isolation:	$>10^8$ Ohm at 500 Volt

Environmental

Operating Temperature Range:	-67 to 302°F (-55 to 150°C)
Sealing:	IP68
Submersible:	Up to 100 meter (10 bar)
Maximum Shock:	5000 g
Approvals:	CE Approved Intrinsically Safe (ATEX, IECEx, CSA and UL)

Mechanical

Case Material:	Stainless Steel
Cable Jacket:	PUR (Polyurethane)
Sensing Element:	PZT/Compression
Mounting Torque:	5.9ft. lbs (8Nm)
Weight:	4.9 Oz (139 gram)
Mating Connector:	Integral Cable
Mounting Thread:	1/4"-28 UNF and M8x1.25 Mounting Studs Provided

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

Intrinsically Safe Requirements

Certificate details: Group I

IECEx 18.0082X
Baseefa18ATEX0130X
EI M 1
Ex ia I Ma

Certificate details: Group II and III

IECEx 18.0082X
Baseefa18ATEX0130X
Ⓔ II 1GD
Ex ia IIC T6..T4 Ga
Ex ia IIIC T135°C Da
Ex ia IIIB T110°C..T145°C Da

Terminal Parameters Connector

Ui = 28V, Ii = 93mA, Pi = 0.65W
Ci = 1.2nF
Li = 0

500V Isolation

Units Will Pass A 500V Isolation Test

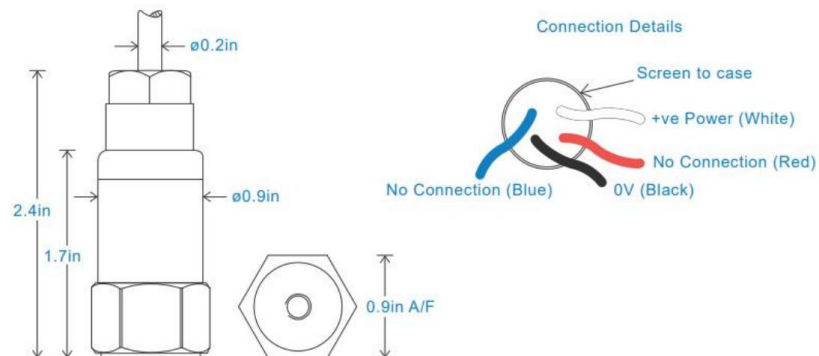
Standards Applied to Product

EN IEC 60079-0:2018
EN 60079-11:2012
IEC 60079-0 Edition 7 2017
IEC 60079-11 Edition 6 2011

Barrier

1 x Pepperl + Fuchs Galvanic Isolator
KFD2-VR4-Ex1.26 (BAS02ATEX7206)
1 x MTL Zener Barrier MTL7728+ (CMCP245-02)

Dimensions



Ordering Information

Part ID: CMCP788A-IP/IS
Description: Intrinsically Safe Top Entry Precision Accelerometer, 100 mV/g, 5m (16 ft) Integral PUR Cable

Part IDs for different cable lengths

CMCP788A-IPXX/IS Replace XX with length in Meter
CMCP788A-IP20/IS Intrinsically Safe Top Entry Accelerometer, 100 mV/g, 20 m (64 ft) Integral PUR Cable

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

or any other barrier that conforms with the terminal parameters

Certified Temperature Range

Ex ia IIC T6 Ga (-55°C ≤ Ta ≤ +57°C) (Gas)
Ex ia IIC T4 Ga (-55°C ≤ Ta ≤ +103°C) (Gas)
Ex ia IIIB T110°C Da (-55°C ≤ Ta ≤ +57°C) (Dust)
Ex ia IIIC T135°C Da (-55°C ≤ Ta ≤ +70°C) (Dust)
Ex ia IIIB T145°C Da (-55°C ≤ Ta ≤ +92°C) (Dust)
Ex ia I Ma (-55°C ≤ Ta ≤ +103°C) (Mining)

Australian Approval Group I

IECEx ExTC 18.0032X
Ex ia I Ma
(-55°C < Ta < +104°C)

US/Canada Approvals

Certificate No. SGSNA/19/BAS/00005
Cl I, II, III, Div 1, 2 Gr A-G T*
Cl I Zn 0 AEx ia IIC T6...T4 Ga
Cl II Zn 20 AEx ia IIIC T135°C Da
Ex ia IIC T6...T4 Ga
Ex ia IIIC T135°C Da
Or
Cl I, II, III, Div 1, 2 Gr A-D G and F T*
Cl I Zn 0 AEx ia IIC T6...T4 Ga
Cl II Zn 20 AEx ia IIIB T110°C...T145°C Da
Ex ia IIC T6...T4 Ga
Ex ia IIIC T110°C...T145°C Da

Control Drawing

CMCP700A(Integral) System Connections