



CMCP422VTT-C/IS Series

Intrinsically Safe Loop Powered 4-20 mA Velocity Sensor
with Temperature, Top Exit, 3-Pin MS 5015 Connector



Features

- Loop Powered 4-20 mA Output
- Velocity Output with RMS or Peak Detection
- Voltage Temperature Output (0-1 VDC)
- Top Exit with 3-Pin MS 5015
- Interfaces Directly with Control Systems (PLC/DCS)
- Selectable Full-Scale Ranges
- 10 Hz to 1.0 kHz +/-5% Frequency Response (600 CPM to 60 kCPM)
- Sealed to IP68
- ATEX, IECEX, CSA and UL Approved

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:	5 kHz Min.
Ranges:	See Ordering Information Below
Frequency Response:	10 Hz to 1.0 kHz $\pm$ 5%
Temperature Output Range:	0-1 VDC = 0-100°C (32 to 212°F) 600 CPM to 60k CPM ISO 20816
Isolation:	Base Isolated
Measurement Range:	50 g peak
Transverse Sensitivity:	Less than 5% with Faraday Cage

Electrical

Output Current:	4-20 mA DC Proportional to RMS or Peak Velocity
Supply Voltage:	15 to 30 VDC
Settling Time:	2 Second
Output Impedance:	Loop Resistance 600 Ohm Max @ 24 VDC
Case Isolation:	>10 ⁸ Ohm at 500 Volt

Environmental

Sealing:	IP68
Maximum Shock:	5000 g

Mechanical

Case Material:	Stainless Steel
Sensing Element:	PZT/Compression Type
Mounting Torque:	5.9 ft. lbs (8 Nm)
Weight:	5.2 Oz (150 g)
Mounting:	1/4-28 UNF Mounting Stud and 1/4-28 to M8x1.25 Adapter Stud (Supplied with Sensor)
Mating Connector:	3 Pin MIL 5015 MS Connector

Hazardous Location Ratings

Certificate Details Group I+II

IEEx BAS08.0034X
Baseefa08ATEX0086X
ExII 1GD
Ex ia IIC T6 Ga
Ex ia IIIC T80°C IP65 Da
Ex I M1
Ex ia I Ma
(-40°C ≤ Ta ≤ +60°C)

Certificate Details Group II

ExII 1GD
Ex ia IIC T6 Ga
Ex ia IIIC T130°C IP65 Da
(-40°C ≤ Ta ≤ +110°C)

Accelerometer System Certificate

Baseefa08Y0087
Ex ia IIC T6 (-40°C ≤ Ta ≤ +60°C)

Terminal Parameters

Ui = 28V, Ii = 115mA, Pi = 0.65W Group II
Ui = 16.5V Pi = 0.65W
or Ui = 28V Ii = 115mA Pi = 0.65W Group I

Certified Temperature Range

Ex ia IIC T6 Ga (-40°C ≤ Ta ≤ +60°C) (Gas)
Ex ia IIC T4 Ga (-40°C ≤ Ta ≤ +120°C) (Gas)
Ex ia IIIC T80°C IP65 Da (-40°C ≤ Ta ≤ +60°C) (Dust)
Ex ia IIIC T130°C IP65 Da (-40°C ≤ Ta ≤ +110°C) (Dust)
Ex ia I Ma (-40°C ≤ Ta ≤ +60°C) (Mining)

South African Approval

Certificate No. MASC MS/16-0229X
Group I and II (As Baseefa/ATEX)

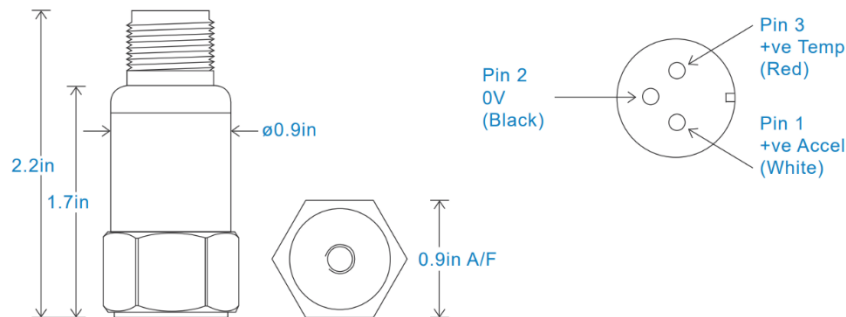
US/Canada Approvals

Certificate No. SGSNA/18/SUW/0000231
Class I, II, III, Division 1, 2, Groups A - G, T4, -40°C to +110°C
Class I, Zone 0, AEx, ia, IIC, T4, Ga, -40°C to +110°C
Zone 20, AEx, ia, IIIC, T130°C, IP65, Da, -40°C to +110°C

Barrier

1 x CMCP245-05 MTL Zener Barrier (MTL 7787+) for 4-20 mA Signals (BAS01ATEX7217) and
1 x CMCP245-02 (MTL 7728+) for Temperature or any other barriers that conform to system drawings

Dimensions



Ordering Information

CMCP422VTT	-XX	-X	-X	/XX	Description
Imperial System	-01				Loop Powered 4-20 mA Velocity Sensor
	-02				1.00 In/Sec Full Scale (25.4 mm/s)
Metric System	-10				2.00 In/Sec Full Scale (50.8 mm/s)
	-20				10 mm/s Full Scale
	-25				20 mm/s Full Scale
	-50				25 mm/s Full Scale
	-100				50 mm/s Full Scale
		-R			100 mm/s Full Scale
		-P			RMS Detection
			-C		Peak Detection
					3 Pin MS 5015 Connector
				/IS	Intrinsically Safe

Example Part Number: CMCP422VTT-01-R-C/IS Intrinsically Safe Loop Powered 4-20 mA Velocity Sensor with Temperature, Top Exit, Full Scale 1.0 Inch/Second, RMS Detection and 3 Pin MS 5015 Connector

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