



CMCP422VTTS-M12/IS Series

Intrinsically Safe Loop Powered 4-20 mA Velocity Sensor
with Temperature, Side Exit, 4-Pin M12 Connector



Features

- Loop Powered 4-20 mA Output
- Velocity Output with RMS or Peak Detection
- Voltage Temperature Output (0-1 VDC)
- Side Exit with 4-Pin M12 Connector
- 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:	10 kHz Min.
Ranges:	To specify see Ordering Information below
Temperature Output Range:	0-1 VDC = 0-100°C (32 to 212°F)
Frequency Response:	10 Hz to 1.0 kHz ± 5% 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

Operating Temperature Range:	-13 to +248°F (-25 to +120°C)
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)
Mating Connector:	4 Pin M12 Eurofast Connector
Mounting:	
CMCP422VTS-XX-X-M12/IS:	1/4"-28 UNF Captive Bolt Supplied with Sensor
CMCP422VTS-XX-X-M12/IS-M8:	M8x1.25 Captive Bolt Supplied with Sensor

Intrinsically Safe Requirements

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)

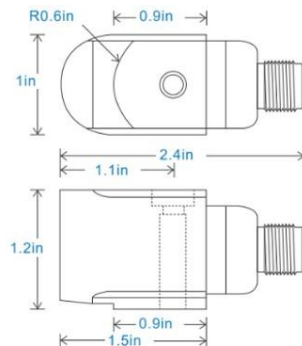
US/Canada Approvals

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

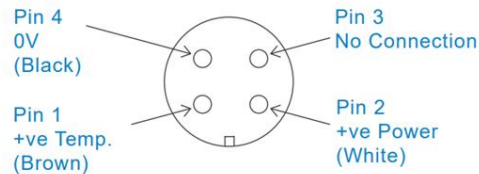
Barrier

1 x CMCP245-05 MTL Zener Barrier MTL7787+ 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



Connection Details



Ordering Information

CMCP422VTTS -XX -X -XXX /XX

Imperial System -01
-02
Metric System -10
-20
-25
-50
-100

-R
-P

-M12

/IS

/IS-M8

Description

Loop Powered 4-20 mA Velocity Sensor, Side Exit
1.00 In/Sec Full Scale (25.4 mm/s)
2.00 In/Sec Full Scale (50.8 mm/s)
10 mm/s Full Scale
20 mm/s Full Scale
25 mm/s Full Scale
50 mm/s Full Scale
100 mm/s Full Scale
RMS Detection
Peak Detection
4 Pin M12 Connector
/IS Intrinsically Safe with 1/4"-28 UNF Captive Bolt
/IS-M8 Intrinsically Safe with M8x1.25 Captive Bolt

Example Part Number:

CMCP422VTTS-02-R-M12/IS

Intrinsically Safe Loop Powered 4-20 mA Velocity Sensor, Side Exit, Full Scale 2.0 In/Sec, RMS Detection and 4 Pin M12 Connector, 1/4"-28 UNF Captive Bolt

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