

# CM-TV Velocity Output Transducer

## 4-20mA Velocity Output - Top Exit

### Features

Low cost on-line means of monitoring with the capability of interfacing direct into PLC, BMS or any 4-20mA input module. Proven use in vibration monitoring for offline applications using commercially available data collectors.

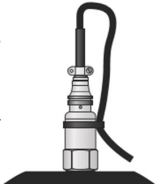
### Protecting

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



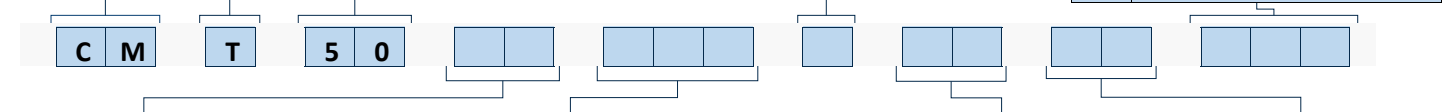
| Technical Performance                 |                           | Mechanical Performance               |                              |
|---------------------------------------|---------------------------|--------------------------------------|------------------------------|
| <b>Measurement Range (Vibration):</b> | See: "How To Order" Table | <b>Case Material:</b>                | 304 Stainless Steel          |
| <b>Frequency Response:</b>            | See: "How To Order" Table | <b>Sensing Element/Construction:</b> | Ceramic Shear                |
| <b>Broadband Resolution:</b>          | 0.005 IPS Peak            | <b>Mounting Torque (Stud):</b>       | 3 to 5 ft-lb (4 to 7 N-m)    |
| <b>Non--Linearity:</b>                | ± 1%                      | <b>Weight:</b>                       | 4.7 oz (131 gm)              |
| <b>Electrical</b>                     |                           | <b>Environmental</b>                 |                              |
| <b>Excitation Voltage:</b>            | 12 to 30 VDC              | <b>Temperature Range:</b>            | -40°F to 185°F (-40 to 85°C) |
| <b>Load Resistance:</b>               | 50 (Vs-12) Ω              | <b>Sealing:</b>                      | Welded Hermetic              |
| <b>Settling Time:</b>                 | <15 sec                   |                                      |                              |
| <b>Electrical Isolation (Case):</b>   | >10 <sup>8</sup> Ω        |                                      |                              |
| <b>Electrical Isolation:</b>          | Case                      |                                      |                              |

- |  |                  |       |           |              |       |          |   |
|--|------------------|-------|-----------|--------------|-------|----------|---|
| 1. Current will fluctuate at frequencies below 5 Hz            | Wiring           | Accel | Accel Gnd | Accel Analog | Temp  | Temp Gnd | Vibration sensor should be firmly fixed to a flat surface (spot face surface may be needed to be produced and cable anchored to sensor body.) |
| 2. Broadband Resolution 0.01 IPS Peak for 0-2.0 IPS RMS & Peak | 2 Pin Mil-C-5015 | Pin A | Pin B     | N/A          | N/A   | N/A      |   |
| 3. Other mounting options available                            | 3 Pin Mil-C-5015 | Pin A | Pin B     | Pin C        | N/A   | N/A      |   |
| 4. Calibration Certificate NIST-Traceable                      | 4 Pin Bayonet    | Pin A | Pin B     | N/A          | Pin C | Pin C    |   |
|  | Integral Cable   | Red   | Black     | N/A          | White | Green    |   |



### How To Order

| Product Prefix |              | Product Series |                       | Code | Model    | Code | Stud Mounting Threads | Code | Cable Length (10 ft Increments)           |
|----------------|--------------|----------------|-----------------------|------|----------|------|-----------------------|------|---|
| CM             | Case Mounted | T              | Vibration Transmitter | 50   | Top Exit | A    | 1/4-28UNF Male        | 010  | 10 ft.                                    |
|                |              |                |                       |      |          | B    | M6 x 1 mm Male        | 020  | 20 ft.                                    |
|                |              |                |                       |      |          |      |                       | 030  | 30 ft.                                    |
|                |              |                |                       |      |          |      |                       | XXX  | Length Specified in ft. ≥40 ft (12.2 mts) |



| Code              | Output              | Code | Velocity Range | Frequency Range (±10 %)              | Code | Cable/Connector                      | Code | Options   |
|-------------------|---------------------|------|----------------|--------------------------------------|------|--------------------------------------|------|---|
| VV <sup>[1]</sup> | Velocity            | 05R  | 0-0.5 IPS RMS  | 180 CPM to 60,000 CPM (3 Hz to 1KHz) | 52   | 2 Pin MIL-C-5015                     |      | (Blank)=No Options                              |
| VR <sup>[2]</sup> | Velocity & Raw Vib. | 10R  | 0-1.0 IPS RMS  | 180 CPM to 60,000 CPM (3 Hz to 1KHz) | 53   | 3 Pin MIL-C-5015                     | /EX  | Intrinsically Safe                              |
| VT <sup>[3]</sup> | Velocity & Temp.    | 20R  | 0-2.0 IPS RMS  | 180 CPM to 60,000 CPM (3 Hz to 1KHz) | 54   | 4 Pin Bayonet                        | /HT  | High Temperature<br>4 to 257 °F (-40 to 125 °C) |
|                   |                     | 05P  | 0-0.5 IPS Peak | 180 CPM to 60,000 CPM (3 Hz to 1KHz) | 01   | Polyurethane-Jacketed Cable          |      |   |
|                   |                     | 10P  | 0-1.0 IPS Peak | 180 CPM to 60,000 CPM (3 Hz to 1KHz) | 02   | Polyurethane-Jacketed w/ Armor Cable |      |   |
|                   |                     | 20P  | 0-2.0 IPS Peak | 180 CPM to 60,000 CPM (3 Hz to 1KHz) |      |                                      |      |   |

**VT Option Version**  
Temp. Output Range:  
-40 to 257 °F (-40 to 125 °C)

**Note:**  
[1] Connector 52 : 2 Pin MIL-C-5015.  
[2] Connector 53 : 3 Pin MIL-C-5015.  
[3] Connector 54 : 4 Pin Bayonet.



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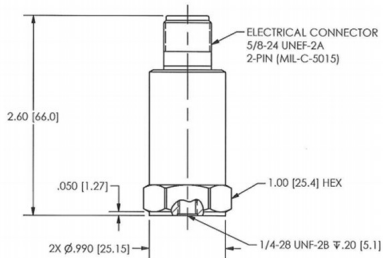
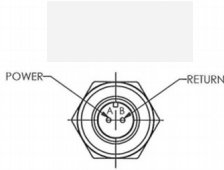
# CM-G General Purpose Accelerometer

4-20mA Velocity Output - Top Exit With Connector

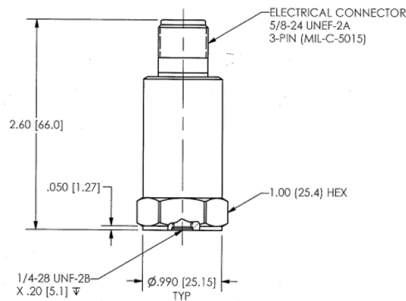
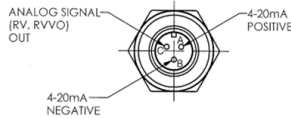
## OUTLINE DRAWING MODEL CM-T50 Velocity Output Transducer



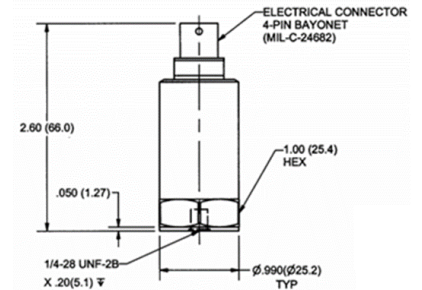
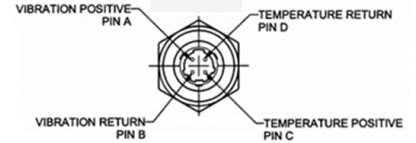
**TOP VIEW OF CONNECTOR  
2-PIN (MIL-C-5015)**



**TOP VIEW OF CONNECTOR  
3-PIN (MIL-C-5015)**



**TOP VIEW OF CONNECTOR  
4 PIN—BAYONET**



**Option: EX , Hazardous Area Approval**

DIV II, CL I, GRPS A-D, ExnL, AExnA, IIC T4

EEx ia IIC T4, -40°C ≤ Ta ≤ 80°C, II 1 G

EEx nL IIC T4, -40°C ≤ Ta ≤ 80°C, II 3 G

DIV I, CL I, II, III, GRPS A-G, Exia, AExia, IIC T4

Contact factory for specific approvals.



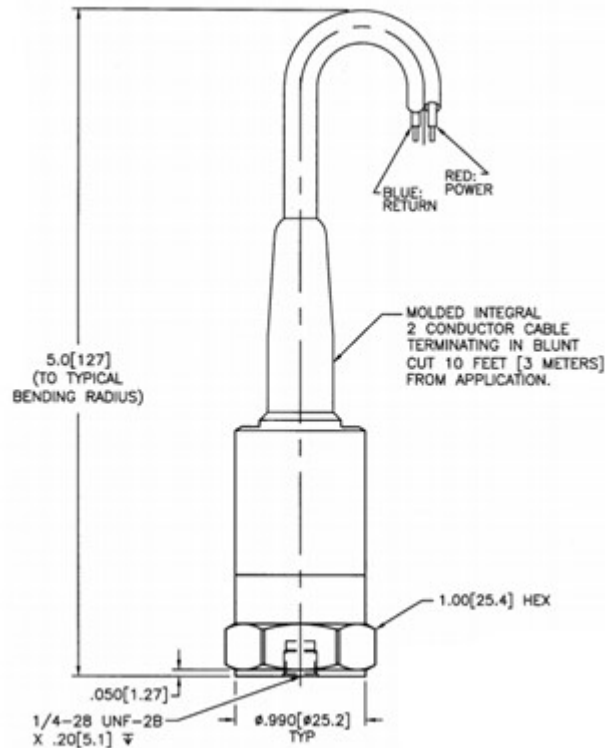
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# CM-TV Velocity Output Transducer

4-20mA Velocity Output - Top Exit With Integral Polyurethane Cable

## OUTLINE DRAWING MODEL CM-T50 Velocity Output Transducer



Option: EX , Hazardous Area Approval

DIV II, CL I, GRPS A-D, ExnL, AExnA, IIC T4

EEx ia IIC T4, -40°C≤Ta≤80°C, II 1 G

EEx nL IIC T4, -40°C≤Ta≤80°C, II 3 G

DIV I, CL I, II, III, GRPS A-G, Exia, AExia, IIC T4

Contact factory for specific approvals.



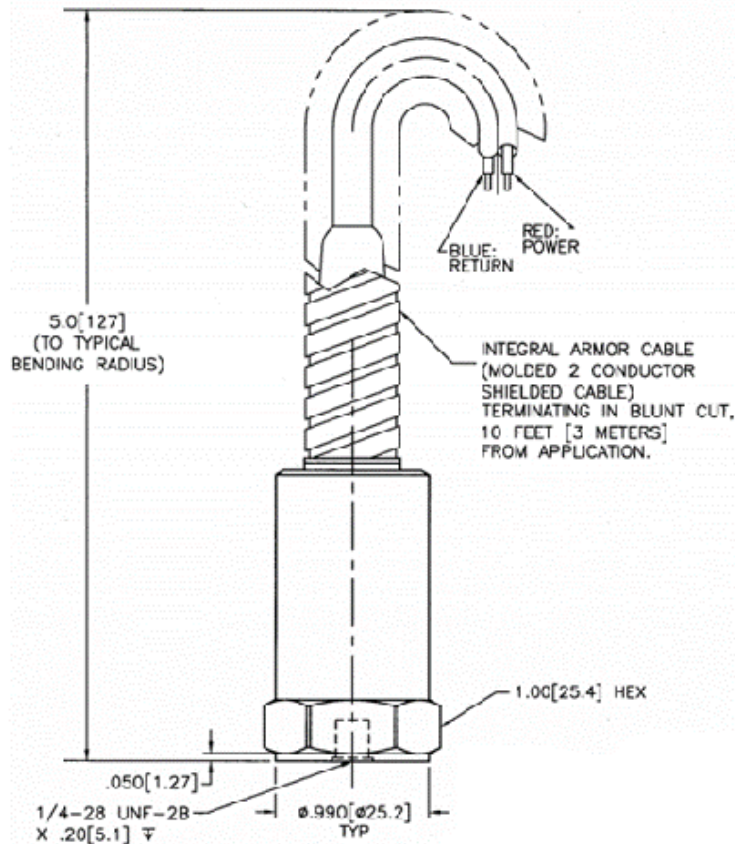
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# CM-TV Velocity Output Transducer

4-20mA Velocity Output - Top Exit With Integral Armor Cable

## OUTLINE DRAWING MODEL CM-T50 Velocity Output Transducer



Option: EX , Hazardous Area Approval

DIV II, CL I, GRPS A-D, ExnL, AExnA, IIC T4

EEx ia IIC T4, -40°C ≤ T<sub>a</sub> ≤ 80°C, II 1 G

EEx nL IIC T4, -40°C ≤ T<sub>a</sub> ≤ 80°C, II 3 G

DIV I, CL I, II, III, GRPS A-G, Exia, AExia, IIC T4

Contact factory for specific approvals.



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