



Product Specification

Vibration Velocity Transmitter VT-110

Features

- Analog output 4-20 mA - loop powered, proportional to vibration velocity mm/s rms
- Dynamic signal output (Buffer)
- Standardized measurements according ISO 10816
- High quality with glass sealed M12 connector, dual case isolation
- Compact size with superior "annular shear technology"
- Industrial design IP67, shock resistant
- Temperature range -55 ...+120 °C
- Attractive price



Applications

High vibration levels on rotating equipment are the most common source for machine damages and reduced availability. For small and medium-sized machinery vibration transmitters provide a reliable and cost-effective way to measure the overall vibration and monitor it via the machine control or DCS.

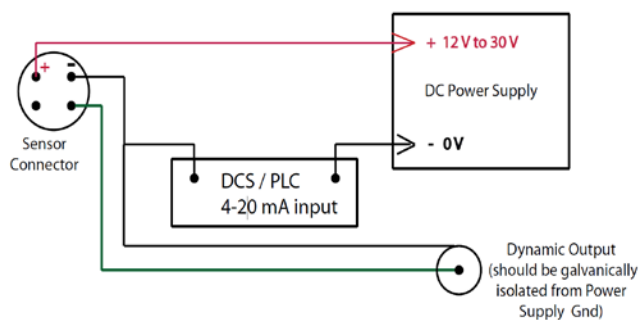
Fans, pumps, compressors, industrial turbines and particularly all rotating machines with roller-element bearing are classical application areas for case vibration transmitters.

Product description

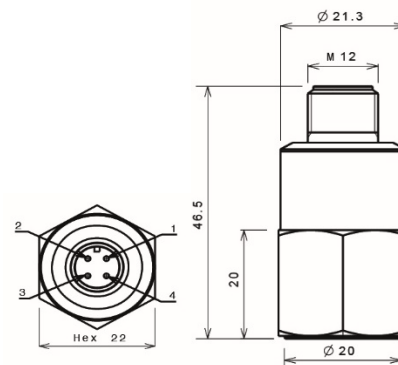
The hermetic sealed 4-20 mA loop powered industrial vibration velocity transmitter type VT-110 is designed to monitor the vibration in harsh industrial environment. It uses the industry standard 4-20 mA Loop that interfaces directly with PLC, DCS and 4-20 mA monitor. Measurements according the most relevant standards (ISO 10816) or extended frequency from 3...1,000 Hz will fit in nearly all applications. Their compact size allows for installation in tight places.

Connection

Wiring diagram:



Dimensions:



Pin 1	Pin 2	Pin 3	Pin 4
(+)	(-)	Not connected	DV (dynamic)



Technical Data

The following performance data apply, to the extent that nothing else is indicated, under standard conditions (Ambient temperature = 24 °C)

Analog output

- Analog output 4...20 mA, loop powered, proportional to vibration velocity mm/s rms
- No vibration 4 mA $\pm 5\%$
- Full scale 20 mA $\pm 5\%$

Dynamic Output

- Dynamic Output sensitivity 100 mV
- Tolerance $\pm 30\%$

Frequency range (see Order Code):

- 3...1,000 Hz
- 10...1,000 Hz
- Mountant resonant 25 kHz
- Linearity max. $\pm 1\%$

Measuring Range (see Order Code)

- 0...20 mm/s rms
- 0...50,8 mm/s rms

Temperature operating

- Loop current max. 10 mA -55...+120 °C (-65...+250 °F)
- Loop current max. 20 mA -55 ...+90 °C (-65...+212 °F)

Mounting (via included stud)

- Machine thread M8 x 1.25
- Transmitter thread 1/4" 28 UNF 2A

Cable and Connector

Integrated connector M12 glass seal, IEC 60947-5-2

- Connecting cable AC-1405 overmolded, blunt cut, shield connected M12, length 5 m
- Connection cable AC-1406 **angle** overmolded, blunt cut, shield connected M12, length 5 m

Environmental

- Acceleration limit: Shock 2,500 g peak
- Continuous vibration. 250 g peak
- Protection class IP 67

Electrical

- Power for 2-wire loop 10...30 VDC
- Grounding isolated from machine ground
- Isolation(Case to shield) min. 100 M Ω
- Capacitance to ground nom. 70 pF
- Maximum Loop resistance
RI Max=(Vdc power -10V)/20mA
- Minimum RI wattage Watt min=0.0004xRI
- Protection: Overvoltage Yes
Reverse polarity Yes

Approval

- CE

Order Code & Accessories:**Velocity transmitter types:****Order Code:****Connector type / frequency range / measuring range**

- | | |
|--|--------------------------------|
| • M12 axial connector / 3 ...1,000 Hz / 20 mm/s | Order Code: VT-110/01/020/CE/0 |
| • M12 axial connector / 10...1,000 Hz / 20 mm/s | Order Code: VT-110/02/020/CE/0 |
| • M12 axial connector / 3...1,000 Hz / 50,8 mm/s | Order Code: VT-110/01/050/CE/0 |
| • M12 axial connector / 10...1,000 Hz 50,8 mm/s | Order Code: VT-110/02/050/CE/0 |

Connecting cables:

- | | |
|--|--------------------------|
| • AC-1405: Standard overmolded cable with M12 connector, 5m length | Order Code: AC-1405/0050 |
| • AC-1406: Angle overmolded cable with M12 connector, 5m length | Order Code: AC-1406/0050 |