

4-20 mA Vibrasyon Hız Transmitteri Üstten Konnektörlü

Main Characteristics

- Velocity (RMS)
- Dynamic output available :Acceleration
- IP67 with associated cable (B=2, 3 only)

Competitive advantage

- Price
- Low cost IP67 overmolded M12 cable assembly
- M12 overmolded cable assembly is available through local electronic distributor
- M12 offers compatibility with sensors used in automation.

Description

The hermetic sealed 4-20 mA loop powered industrial accelerometer model 125 is design to monitor the vibration in harsh industrial environment. It uses the industry standard 4-20mA Loop that interfaces directly with PLC, DCS and 4-20mA monitor. RMS velocity output and large choice of frequency range will help to fit almost every customer requirements. Their compact size allows for installation in tight places. The dynamic signal output (acceleration) can allow spectral vibration measurements

Typical applications

Vibrations measurement in the rugged environments of industrial machinery monitoring. It allows continuous trending of overall machine vibration.

Ordering information model MVT-420

To order, specify model number, options and suffix:

MVT- 420 - AAA - B - C - D

AAA : Full Scale (=20mA)

010 : Velocity RMS 0-10

B : Metric or American

M : mm/sec

I : inch/sec

C : Dynamic Output

DA :Raw Acceleration Signal

DDD : Cable Length with M12 connector

010 : 10 meters

Sample Model :

MVT - 420 - 010-M-DA-005

0-10 mm/sec RMS velocity output, dynamic Acceleration output, 5 meters cable with M12 mating connector



Specifications (24°C)

Dynamic

Sensitivity	
No vibration	4 mA
Full scale (see AAAA ordering information)	20 mA ±2%
Accuracy (Repeatability)	2%
Frequency response	See AAAA ordering information
Mounted Resonant frequency	25 kHz Nom
Transverse response sensitivity (20Hz, 5g)	<5%
Linearity	±1% Max
Turn on time, 4-20 mA loop	< 15 Sec

Option : Dynamic acceleration (DA)

Sensitivity	See ordering information
Dynamic	25 g for 100 mV/g output 250 g for 10 mV/g output
Power	Need 4-20 mA loop, no constant current source is needed, DC bias=2.6V.
Frequency response	±10 % : 3 to 9000 Hz ±3 dB : 1 to 14000 Hz

Electrical

Electrical Grounding	Isolated from machine ground Internal Faraday shielding (fig. 1)
Isolation(Case to shield)	100 MΩ Min
Capacitance to ground	70 pF Nom
Maximum Loop resistance	RI Max=(Vdc power - 10V)/20mA
Minimum RI wattage	Watt min=0.0004xRI
Power requirements for two wire loop	Voltage : +10 to +30 VDC
Protection : Overvoltage	Yes
: Reverse polarity	Yes

Environmental

Temperature, operating continuous	
max. loop current =10mA	-55 to 120 °C (-65 to 250 °F)
max. loop current =20mA	-55 to 90 °C (-65 to 212 °F)
Humidity / Enclosure	
B=1, 2	Not affected, hermetically sealed, 1E-8storr./s
B=3	IP67, epoxy sealed
Acceleration limit : Shock	2 500g peak
: Continuous vibration	250g peak
Mean time between failure (MTBF)	10 Years Nom
ESD Protection	> 40 V
Safety	EN 61010-1 and IEC 1010-1
EMC emission	EN 50081-1, EN 50081-2
EMC immunity (1)	EN 50082-1, EN 50082-2

Physical

Dimensions	
B=1	Fig. 1a
B=2	Fig. 1b
B=3	Fig. 1c
B=5	Fig. 1e
B=6	Fig. 1f
Design	PZT Ceramic
Weight	85 gr Nom (3.0 Oz)
Connector	
B=1	MIL-C-5015 glass seal, Type MS3143 10SL-4P
B=2	M12 glass seal, IEC 60947-5-2
B=3	M12 epoxy seal, IEC 60947-5-2
Material	AISI 316L, DIN 1.4404 (Stainless steel)
Housing thread	Fig 1h
Mounting torque (M6, M7, M8 suffix)	2,4 N.m (21 in-lbs)

Accessories, supplied

Calibration supplied	
.....	DA or DV if applicable

Accessories, not supplied

Cable assembly	
M12 connector B=2, 3 Polyurethane cable	10.01-E01-A01-31-Length
PU or FEP Armored cables are also available.	See Model 10.01.

Accessories, spares part

Mounting Stud	
M6	191.01-06-06-1
1/4" 28 UNF	191.01-06-16-1
M8	191.01-06-08-1

Standard Wiring color

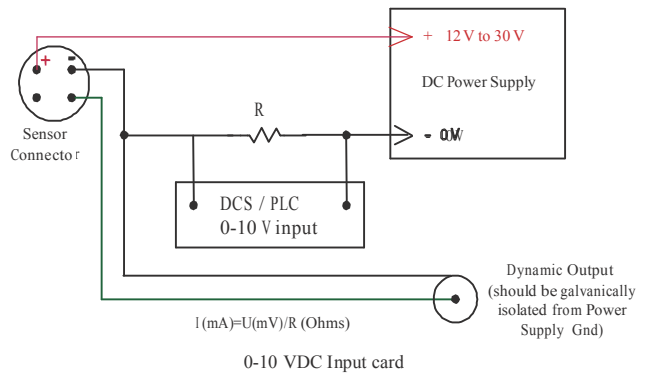
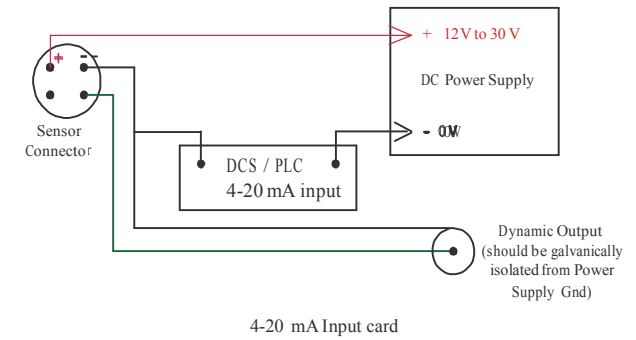
With Mil-C-5015 cable assembly: + = Red // - = White
With M12 cable harness: + = Brown // - = White // DA or DV=Black

Repair

Consult factory for replacement of connector in case of broken or bended pins. Repair of electronic is not possible.

(1) Guaranteed if using accessories listed in this product datasheet only

Wiring Schematic



Drawings

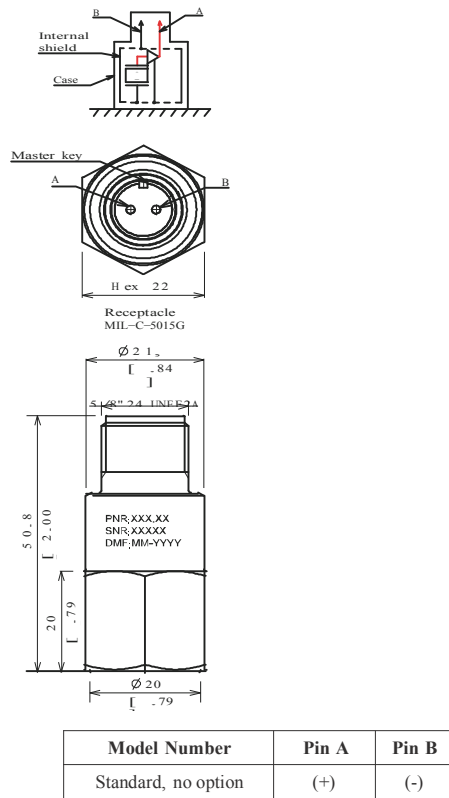
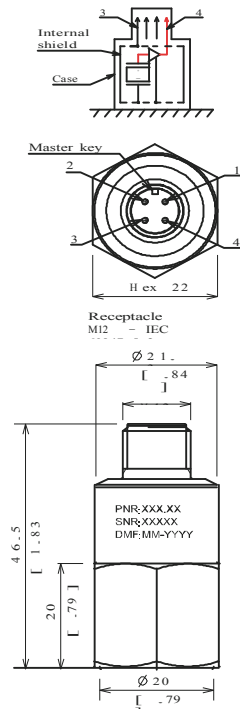


Fig 1a : Outline drawing & Electrical layout, B=1 (MIL-C-5015)



Model Number	Pin 1	Pin 2	Pin 3	Pin 4
Standard, no option	(+)	(-)	NC	NC
DA / DV Option	(+)	(-)	NC	DA or DV

(NC) : Not connected
fig 1b : Outline drawing & Electrical layout, B=2 (M12 glass seal)

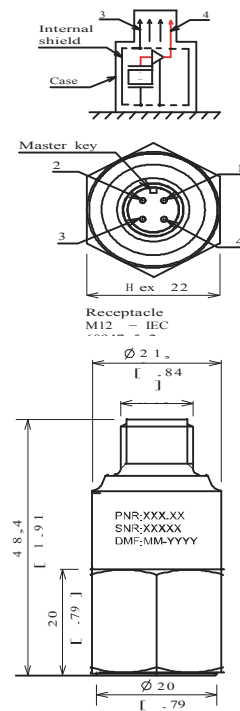


Fig 1c : Outline drawing B=3 (M12 Epoxy)
electrical layout : See above B=2