

Vibration real wave velocity transmitter

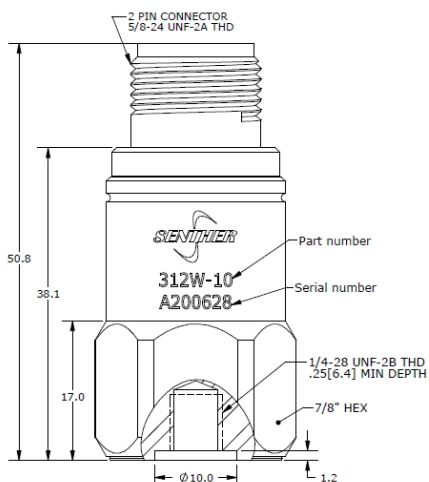
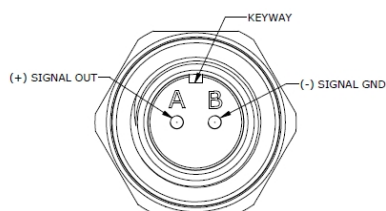


Features

- Velocity real wave output
- IEPE voltage signal
- Lightning protection
- Hermetic seal
- Case isolated
- EMI / RFI shielded
- Shock resistance

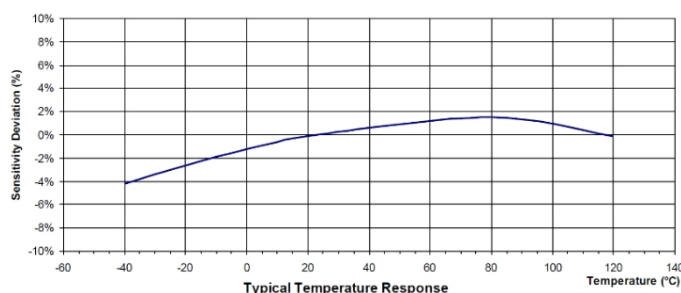
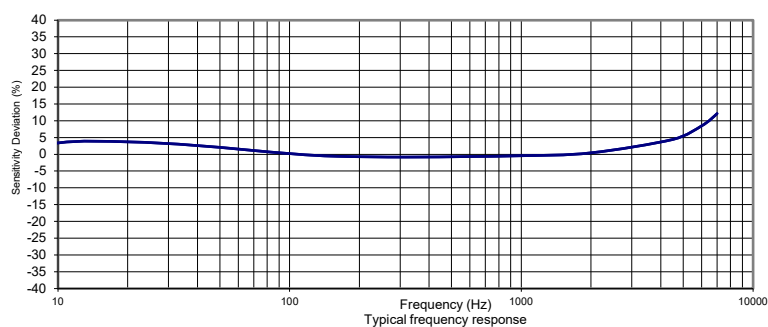
Application

- Blowing machine
- Gear box monitoring
- Bearing detection
- Machine monitoring



Description

Model 312W is a lightning protection IEPE accelerometer permitting vibration velocity real wave measurements. 312W features an annular shear ceramic crystal which exhibits excellent output stability over time. The accelerometer incorporates an internal circuit with in a two-wire IEPE system which transmits its low impedance voltage output through the same cable that supplies the constant current power. Signal ground is internal shielded and isolated from the outer case of the unit. Polarity inversion protection for the amplify circuit is inherent in the circuit design. The welded stainless-steel construction provides a hermetic housing. The standard MIL-C-5015 glass insulated connector provides long-term stability over the operating temperature range. In addition to adhesive mounting, 312W has 1/4-28 threaded holes for stud mounting on the test object. The 312W provides wide frequency response and shock resistance, which is ideal for industrial vibration monitoring under incidental shock environment. Senter's model 16-L is a MIL-C-5015 connector mating cable for the sensor.



Specification

Typical at +24°C (+75°F), 4mA and 100Hz, unless otherwise stated.

Part Number	312W-5	312W-6.25	312W-10	312W-20	312W-50	312W-100	
Measurement Range	0-5	0-6.25	0-10	0-20	0-50	0-100	in/sec
	0-127	0-158.75	0-254	0-508	0-1270	0-2540	mm/sec
Sensitivity ±10%	1000	800	500	250	100	50	mV/(in /sec)
	39.4	31.5	19.7	9.9	3.9	2.0	mV/(mm/sec)
Frequency Range ±10%	6-4000	6-4000	5-4000	5-4000	4-4000	3-4500	Hz
Frequency Range ±3dB	4-5000	4-5000	3-5000	3-5000	2.5-5000	2-6000	Hz
Residual Noise (1Hz to 3kHz)	50	50	50	50	80	120	µin/sec
Non-Linearity	±1	±1	±1	±1	±1	±1	%
Transverse Sensitivity	<5	<5	<5	<5	<5	<5	%
Temperature Response	±10	±10	±10	±10	±10	±10	%
Sinusoidal Vibration Limit	±500	±500	±500	±500	±500	±500	g
Shock Limit	±2000	±2000	±2000	±2000	±2000	±5000	g pk
Settling Time	<5	<5	<5	<5	<5	<5	sec
Weight	87	87	87	87	87	80	Gram

Specifications	Standard	Units
Compliance Voltage	18 - 30	VDC
Excitation Current	2 - 10	mA
Bias Voltage	10 - 14	VDC
Output Impedance	<100	Ω
Insulation Resistance (@100Vdc)	>100	MΩ
High Voltage Insulation (Pin A & Pin B to Case @60Seconds)	4000	Vac
Temperature Range	-40 - 120	°C
Humidity	IP68	
Sensing Element	Piezo Ceramic(Shear)	
Case Material	Stainless Steel	
Connector	2 Pin MIL-C-5015	

Accessories

Calibration certificate included.

Part Number	Description	Availability
PM0011	Mounting stud ¼-28 to ¼-28 thread	One stud Included
PM0008	Mounting stud ¼-28 to M6 thread	
PM0007	Mounting stud ¼-28 to M10 thread	
PM0445	Adhesive mounting adapter	Optional
MB0001	Flat bottom magnet mounting adapter	Optional
MB0011	Saddle-shaped magnet mounting adapter	Optional
16A-10	10 meter mating cable with MIL-C-5015 connector	Optional
16A-10-B	10 meter mating cable with MIL-C-5015 to BNC connector	Optional
IN-03	3 channels IEPE signal conditioner	Optional
IN-91	Portable vibration analyzer	Optional
IN-3062	8 channels data acquisition system	Optional

Measurement configuration

Sensor	Mating cable	Signal conditioner	BNC cable	Data acquisition	Computer
					

Ordering information

312	W	-	1	-	A
Model	Output signal	-	Range	-	Mounting stud
312	W=Velocity Real Wave signal output	-	5=5in/sec 6.25=6.25in/sec 10=10in/sec 20=20in/sec 50=50in/sec 100=100in/sec	-	A= 1/4-28 to 1/4-28 thread B= 1/4-28 to M6 metric thread C*=Special

