

Accelerometer Transmitter

Intended Use

The Accelerometer Transmitter is an extremely sensitive 3-axis acceleration sensor. It is especially designed for measurements of vibration in structural monitoring (vibration) of whole or parts of buildings, vibration measurement of rotating machinery, for monitoring tower vibration at wind power plants etc.

- Platform stabilization systems
- Seismic imaging
- Robotics
- Structural health monitoring
- Tilt sensing
- Condition monitoring



Basic Function

Accelerometer Transmitter is the new generation precision MEMs sensor with industry standard amplifying electronics for high resolution analogue output suitable for Data Acquisition systems or similar subsequent electronics. The integrated electronic measuring equipment provides a current signal that is proportional to the acceleration acting on the sensor.

Requirements on the Personnel

The installation and use of the product must be carried out only by authorised and qualified personnel. Work on electrical components must be carried out only by persons who skills are equivalent to those of a qualified electrician. Further, basic knowledge in the field of vibration measurement is indispensable.

Environmental Conditions

Operating temperature	: -10 °C ... +85 °C
Relative humidity	: ≤ 100 %
IP degree of protection according to EN 60529 (sensor and cable connection plug)	: IP65
Shock resistance	: 300 g in all directions

Supply

- Accelerometer Transmitter consists of Sensor
- 2 screws (M6)
- 2 anti-loss washers (premounted)
- User manual

TECHNICAL SPECIFICATION

□ General Information	
Weight	approx. 250 g
Housing	stainless steel
Mounting	2x M6 screws A2-70 (property class)
Connection	M12 plug, 6-pole
Dimension (L X W X H)	45 mm x 45 mm x 55 mm
Housing Design	hermetically sealed

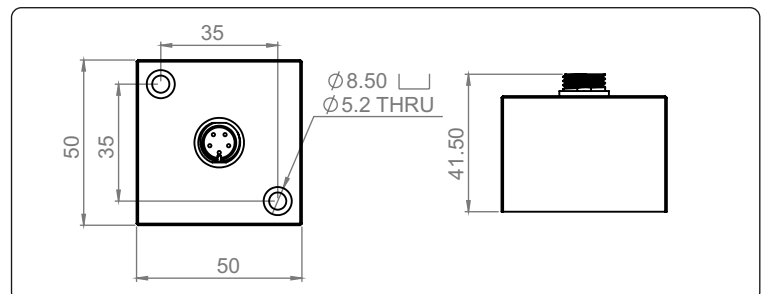
□ Dynamic Parameters	
Measurement Range	±10 g
Sensitivity (in X,Y & Z axis)	Independent 16 bit resolution for each axis ~ 1600 microA /g
Cross-sensitivity	≤ 1 %
Amplitude non-linearity	< 0.1 %
Frequency response	
0 - 1000 Hz	+ -1 dB
0 - 1800 Hz	-1dB / +3 dB
Resonance frequency	> 5.5 kHz
Temperature coefficient	≤ 0,01% /0C

Electrical Parameters

Unless otherwise expressly stated, all data provided are valid at standard conditions (temperature = 25 °C and rel.humidity ≤ 75 %)

Supply Voltage	10 ~ 30 Vdc
Nominal ub	+24 Vdc
Output Signal	Option 1 Analog: 4...20 mA, loop powered, proportional to vibration velocity mm/s rms
	Option 2 Digital: RS-485 MODBUS appropriate for Long distance data signal transmission (For Tri Axis and Temperature)
Max. Power consumption	<40 mA
Spectral noise density	≤ 75 µg/√Hz

DIMENSIONAL DETAILS



Typical Digital Signal Output Format

Accelerometer data				
Holding Register	Int. Value	Conversion	Read Value(float)	Eng Value
30001	123	100	1.23	g
30002	125	100	1.25	g
30003	128	100	1.28	g
30004	235	10	23.5	°C

Specifications are subject to change without Prior notice

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