ST5491E VIBRATION TRANSMITTER

Datasheet

OVERVIEW

Model ST5491E is the ideal solution for sensing vibration on most plant equipment. This precision case mounted, indicating velocity vibration sensor and signal conditioner in a single package is built to provide years of reliable service. A simple two-wire loop signal proportional to velocity is generated for transfer to a programmable logic controller (PLC), distributed control system (DCS) or other 4-20 mA input devices. Simply mount the transmitter on the machine case, connect the 2-wire loop and read and/or record the vibration.

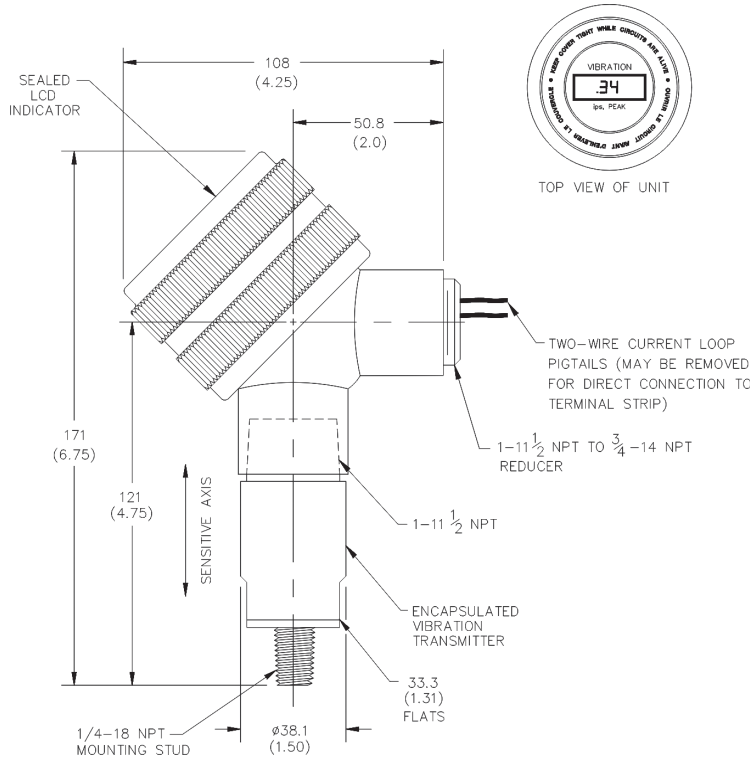
FEATURES

- LCD Indicator
- Loop-powered
- 4-20 mA output proportional to velocity
- Interfaces w/PLC, DCS, and 4-20 mA monitors
- Built-in temperature shock protection
- “Ski slope” problem protected
- Widest frequency range
- High- & low-pass filters
- Built-in base & housing strain

APPLICATIONS

- Blowers
- Centrifuges
- Compressors
- Engines
- Fans
- Generators
- Motors
- Pumps
- Turbines
- Turbochargers

WEIGHT & DIMENSIONS



Weight: 0.8 kg (1.8 lbs.)

Dimensions in mm [inches]

ORDERING INFORMATION

ST5491E - A - B - C D - E F □□□-□□-□□-□□				
A				**Full Scale Range**
	0	2	1	1.0 in/s (25.4 mm/s), pk
	0	2	2	20 mm/s (0.787 in/s), pk
	0	2	3	100 mm/s (3.94 in/s), pk
	0	2	4	2.0 in/s (50.8 mm/s), pk
	0	5	1	1.0 in/s (25.4 mm/s), true RMS
	0	5	2	20 mm/s (0.787 in/s), true RMS
	0	5	3	100 mm/s (3.94 in/s), true RMS
	0	5	4	2.0 in/s (50.8 mm/s), true RMS
B				**Housing Material, Stud Size & Length**
	0	0		Integral ¼" NPT stud mount, 303 SST
	0	1		Integral ½" NPT stud mount, 303 SST
	0	2		3/8 - 24 UNF - ½" stud mount, 303 SST
	0	3		1/2 X 20 UNF - ½" stud mount, 303 SST
	0	4		M8 X 1-12mm stud mount, 303 SST
	0	5		M10 X 1.25-12mm stud mount, 303 SST
	1	0		Integral ¼" NPT stud mount, 316 SST
	1	1		Integral ½" NPT stud mount, 316 SST
	1	2		3/8 - 24 UNF X ½" stud mount, 316 SST
	1	3		1/2 X 20 UNF - ½" stud mount, 316 SST
	1	4		M8 X 1-12mm stud mount, 316 SST
	1	5		M10 X 1.25-12mm stud mount, 316 SST
C				**Hazardous Area Certifications**
	1			NRTL Class I, Div 2, Grps C & D
	2			NRTL Class I, Div 1, Grps C-D & Class II, Div 1, Grps E-G (available with flying leads ONLY)
D				**Connection**
	0			4-20 mA: Flying leads
E				**High Pass Filter**
	0			No filter (2 Hz), Standard
	1			5 Hz
	2			10 Hz
	3			20 Hz
	4			50 Hz
	5			100 Hz
	6			200 Hz
F				**Low Pass FIlter**
	0			No filter (1500 Hz), Standard
	1			500 Hz
	2			1000 Hz
	3			2000 Hz

SPECIFICATIONS

Vibration Range	4 - 20 mA output proportional to velocity. Refer to "Ordering Information AAA" for available ranges. Nonstandard ranges available. Contact Metrix for more information.
Accuracy	5%
Indicator	2½ digits, ips or mm/s
Frequency Response	Standard: 2 - 1500 Hz, available up to 2000 Hz; Refer to "Ordering Information E/F". 12 dB / oct high pass and low pass filters are used
Axis Orientation	Any
Supply Voltage (Vs)	13 to 30 VDC
Isolation	500 Vrms, circuit to case
Electrical Connection	Flying leads - 457 mm (24 in.) length, 18 AWG
Maximum Load Resistance (R_L)	50 (Vsupply - 13) Ω
Service Temp. Rating	-10°C to +70°C (+14°F to +156°F)
Enclosure Materials	303 SS / 316SS
Agency Approvals	Refer to "Ordering Information C"

*For SIL approval, add an "S" prefix to the desired Hazardous Area Rating

SAFETY INTEGRITY LEVEL

SIL is a method or measurement unit to determine the reliability of electrical, electronic and programmable systems.The purpose of the SIL certification is to measure safety system performance and the likelihood of failure. Achieving SIL certification, based on the IEC61508 Functional Safety Standard, signifies that the product has been thoroughly assessed and is a reliable electronic device ready to use across a wide range of industries.

Metrix products have been thoroughly evaluated by an independent third party agency on the basis of IEC61508 Functional Safety standards to obtain SIL certifications.

OPTIONAL STUD ADAPTERS

8253-002	1/4" NPT to 1/2" NPT
8841-084	3/8 - 24 UNF to 1/2 - 20 UNF
8841-099	M8 to M10 x 1.25

Note: Metrix is continuously improving our products. Please refer to our website to download the latest version of this datasheet.