

Vibration Transmitter

Model ST5484E

(formerly 8590)

Typical applications

Offers real-time on-line monitoring of machine vibration for:

- Compressors
- Engines
- Pumps
- Fan, blowers

Key benefits

- Compatible vibration monitoring solution - economical
- Worldwide hazardous area approvals - explosion proof and intrinsically safe
- Compatible with analogue or micro-processor-based monitors, controllers, PLCs, DCS etc

Operation

The ST5484E vibration transmitter combines a vibration sensor and signal transmitter in a single package - the ideal solution for sensing vibration and transmitting an industry standard 4-20mA signal directly to process monitors, controllers or control systems.

Employing no moving parts, the transmitter consists of a precision accelerometer, signal conditioner and current drive circuit, using all solid state components. The transmitter is epoxy encapsulated in a zinc plated steel housing.



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The transmitter is installed by screwing the integral NPT mounting stud into a tapped hole in the machine casing. Each transmitter is factory calibrated to the name-plate sensitivity.

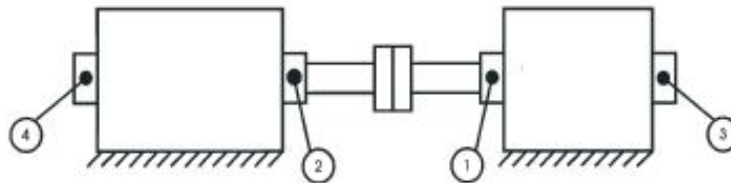
The ST5484E is a non-indicating transmitter which senses peak vibration velocity in the range 0 to 25mm/sec or 0 to 50mm/sec. It can be supplied with a screw cover elbow fitting for field wiring connections.

Vibration Transmitter - Model ST5484E

Specification

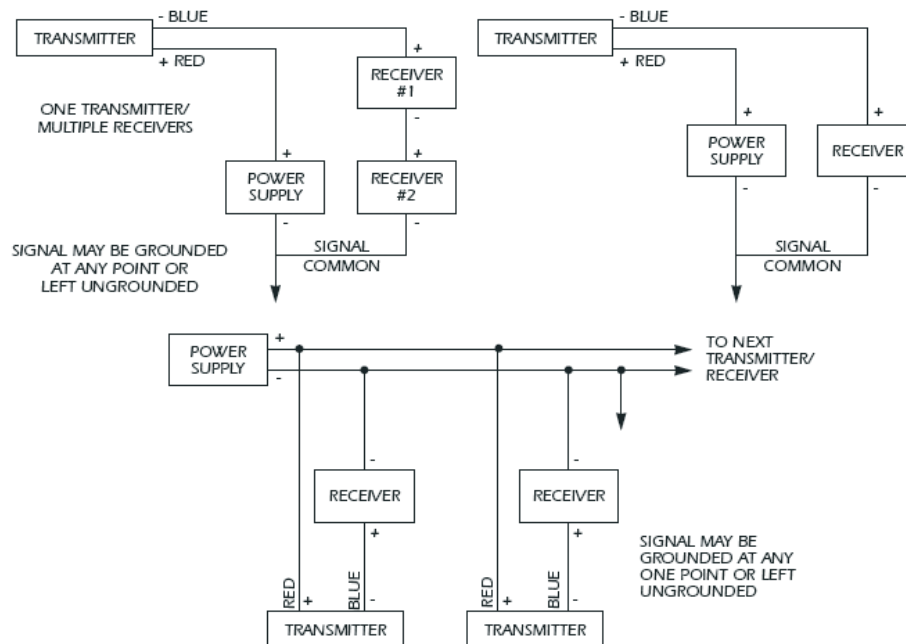
Vibration range	See Specification Check List on page 4	
Output current	4-20 mA	
Frequency range	2 to 1500 Hz	120 to 90,000 rpm
Axis orientation	Any	
Supply voltage (Vs)	11 to 30 VDC	
Maximum load resistance (RL)	50 (Vs - 10) Ohms	
Isolation	500 V	circuit to case
Electrical connection	2 wires, AWG #18	24 inches long
Temperature rating	-40°C to 100°C	
Environment rating	NEMA 4, IP65	
Hazardous area approvals	See Specification Check List on page 4	

Typical Application and Mounting Arrangement



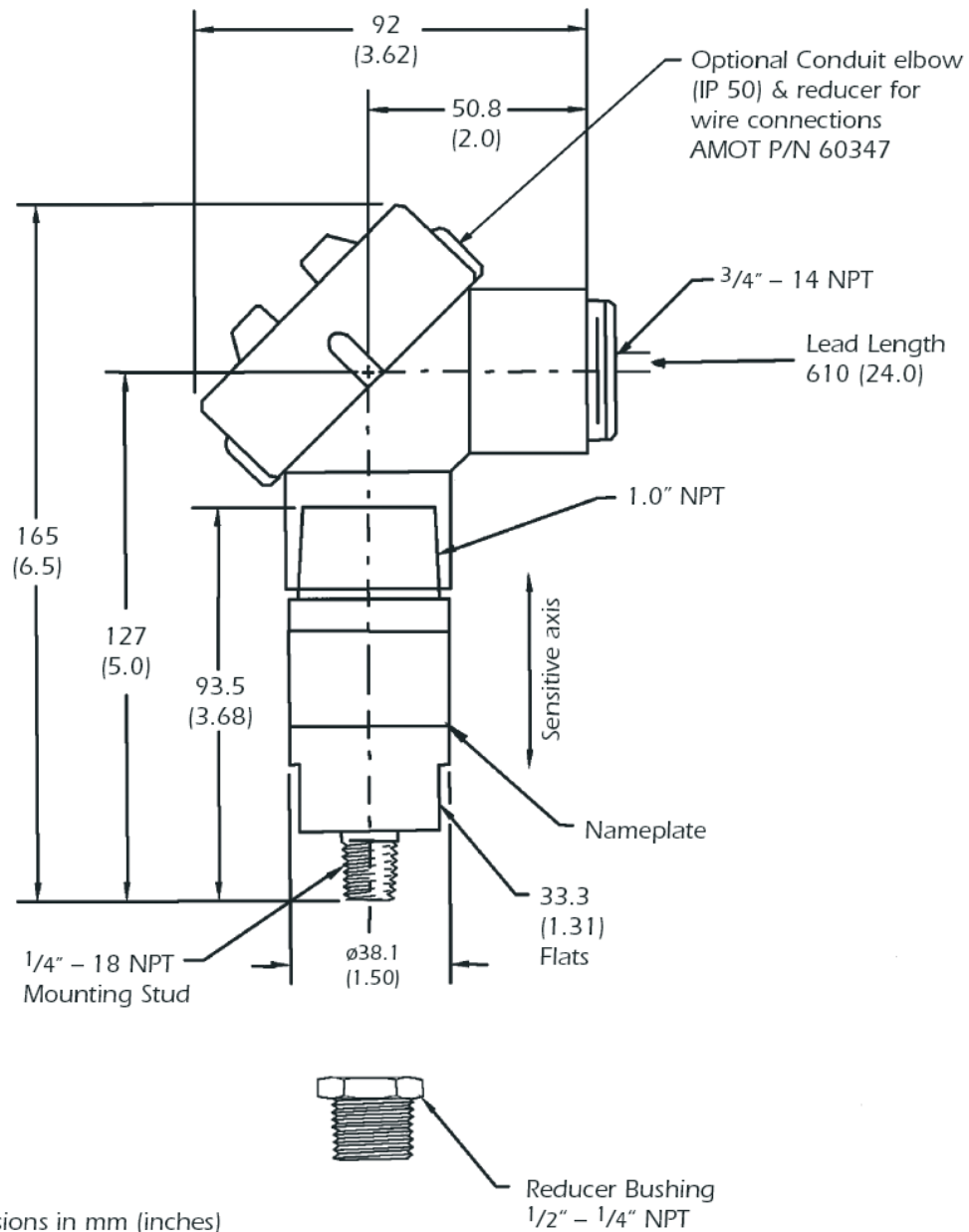
1 to 4 locations of mounting for detection of shaft/bearing vibration

Wiring Diagrams



Vibration Transmitter - Model ST5484E

Dimensions



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Specification Check List

Use the table below to select the unique specification of your ST5484E Vibration Transmitter.

Please select one characteristic from each section. Each characteristic is associated with a code that you will need to state when ordering.

Type	Code	✓
Vibration transmitter	ST5484E	✓

Full Scale	Code	✓
1 ips (25 mm/s) pk	121	
0.5 ips (12.7 mm/s) pk	122	
2.0 ips (50 mm/s) pk	123	
5.0 ips (125 mm/s) pk	124	
3.0 ips (75 mm/s) pk	132	
1 ips (25 mm/s) rms	151	
0.5 ips (12.7 mm/s) rms	152	
2.0 ips (50 mm/s) rms	153	
5.0 ips (125 mm/s) rms	154	
3.0 ips (75 mm/s) rms	162	

Mounting	Code	✓
Integral 1/4" NPT	0	
Integral 1/2" NPT	1	
3/8 - 24 UNF x 1/2"	2	
1/2 - 20 UNF x 1/2"	3	
M8 x 1-6	4	
M10 x 1.25-6	5	

Hazard rating	Code	✓
Non-hazardous & CSA/NRTL/C (for all connections) Class I, Div 2 groups A, B, C & D	1	
Class I, Div 1, Groups B, C & D & Class II, Div 1, groups E, F & G (available with flying leads only)	2	
CENELEC EEx Ia IIC T4 intrinsically safe (available with block or 2-pin MS connector)	3	

Connection	Code	✓
4-20 mA flying leads (hazard rating table codes 1 & 2)	0	
4-20 mA and dynamic signal, flying leads (hazard rating table codes 1 & 2)	1	
4-20 mA 2-pin terminal block (hazard rating table codes 1 & 3)	2	
4-20 mA and dynamic signal 4-pin terminal block (hazard rating table, codes 1 & 3)	3	
4-20 mA 2 pin MIL style connector (hazard rating table codes 1 & 3)	4	

Filter (high pass)	Code	✓
2 Hz	0	
5 Hz	1	
10 Hz	2	
20 Hz	3	
50 Hz	4	
100 Hz	5	
200 Hz	6	

Filter (low pass)	Code	✓
1500 Hz (no filter)	0	
500 Hz	1	
1000 Hz	2	
2000 Hz	3	