

Vibration Transmitter

Model 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 8590 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. When necessary, however, the zero and span controls can be adjusted in the field.

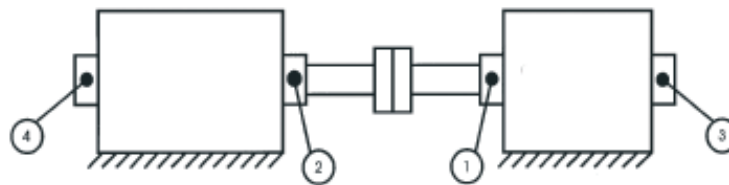
The 8590 is a non-indicating transmitter which senses peak vibration velocity in the range 0 to 25mm/sec or 0 to 50mm/sec. It can be supplied with a screw cover elbow fitting for field wiring connections.

Vibration Transmitter - Model 8590

Specification

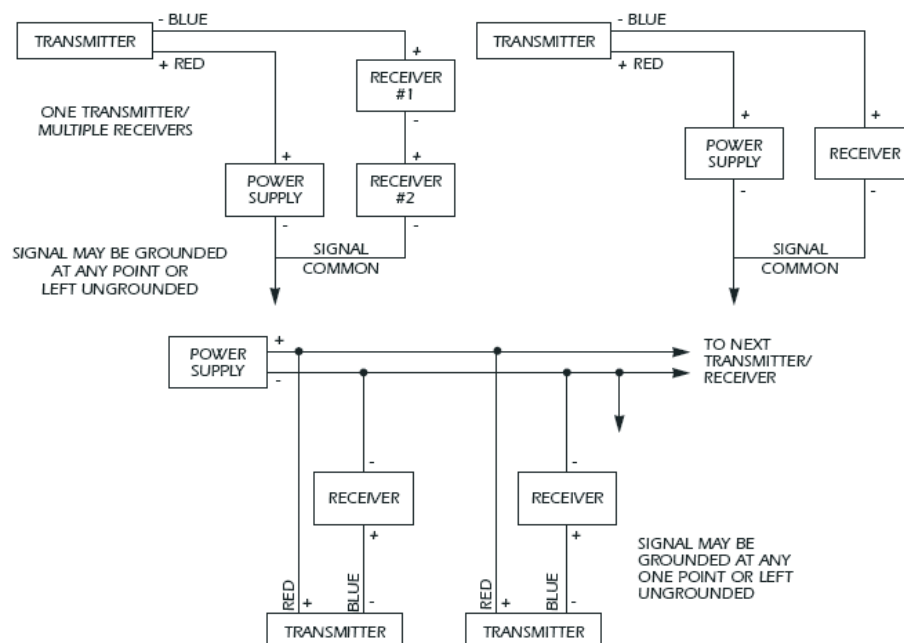
Vibration range	See Specification Check List on page 4	
Output current	4-20 mA	
Frequency range	6 to 1500 Hz	360 to 90,000 rpm
Axis orientation	Any	
Supply voltage (Vs)	10 to 60 VDC	
Maximum load resistance (RL)	50 (Vs - 10) Ohms	
Isolation	500 V	circuit to case
Electrical connection	2 wires, AWG #18	24 inches long
Temperature rating	-40°C to 100°C	-40°F to 212°F
Environment rating	NEMA 4, IP65	
Hazardous area approvals	See Specification Check List on page 4	

Typical Application and Mounting Arrangement



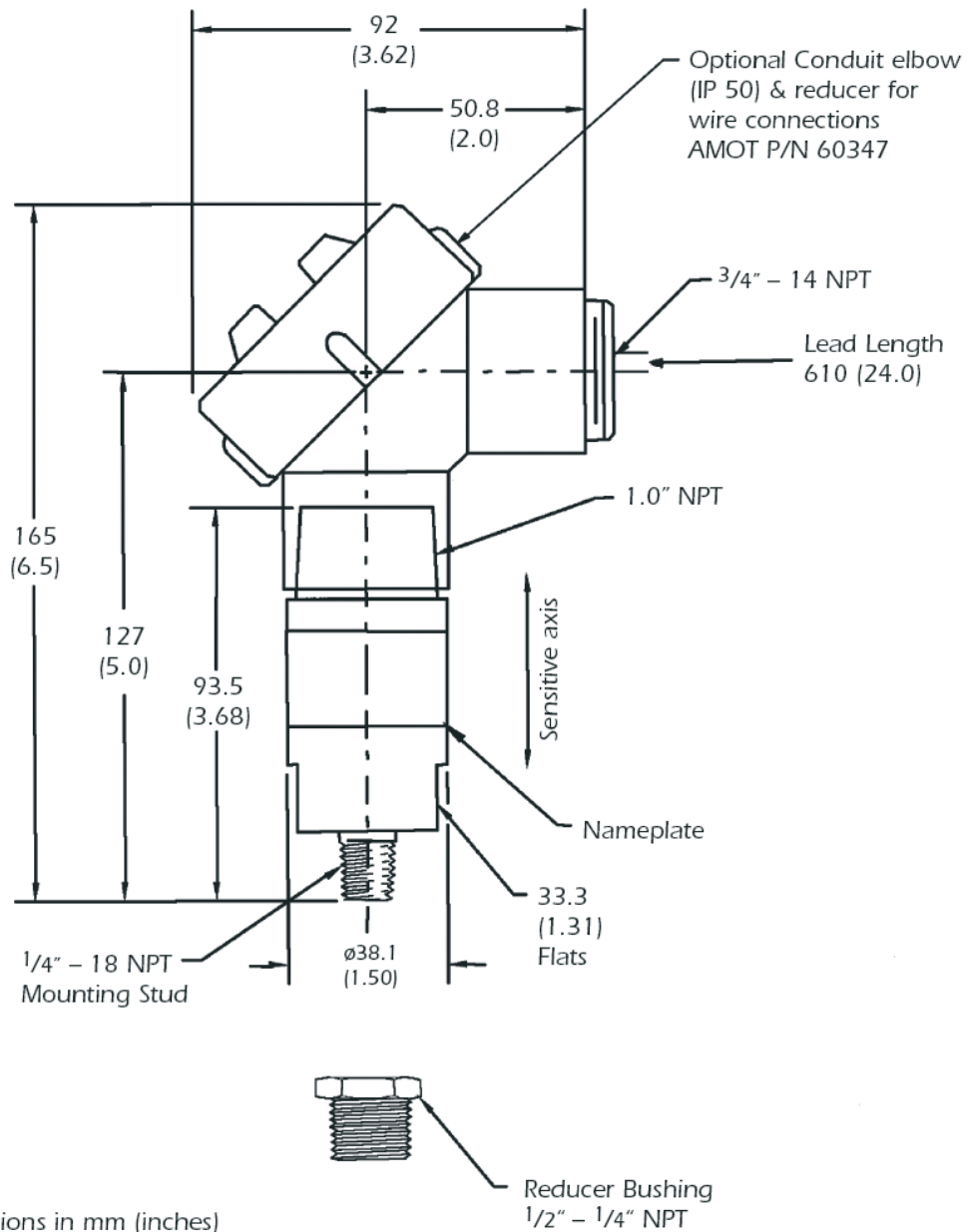
1 to 4 locations of mounting for detection of shaft/bearing vibration

Wiring Diagrams



Vibration Transmitter - Model 8590

Dimensions



Vibration Transmitter - Model 8590

How to order

Use the table below to select the unique specification of your 8590 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	8590B	✓

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	

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