



Sales Manual Section 140
Product Specification Model 580A

**Model 580A Stud Mount
Vibration Switch**

Avoid Catastrophic Failure

Protect your rotating or reciprocating machinery, including pumps, motors, fans, blowers, gear boxes, compressors, turbines and other machinery from excessive vibration. Vibration switches will alert you of increasing machine vibration levels and shut down equipment before catastrophic failures occur.



Cable Sold Separately

General Description

The 580A uses an accelerometer and a microprocessor powered by a 2 wire cable. The microprocessor uses the input from the USB programmer to determine the set-point and time delays. Once the vibration reaches the set limit the microprocessor activates a solid state relay which either completes (NO) or breaks (NC) the circuit.

Installation is simple and no calibration is required. A 1/4-28 stud is provided for mounting in a 1/4-28 tapped hole. The unit has a 2 pin connector and mates with a standard MIL-C-5015 2 socket connector with splash-proof boot for a weatherproof, splash-proof connection. Optional cable assemblies are available in lengths of 16, 32, 64 and 112 feet.

Features and Benefits:

- **USB Programmable from a PC**
- **2-pin IP66 sealed cable connection**
- **Compact design,**
- **Corrosion resistant (316L Stainless Steel)**
- **Solid State AC/DC relay**
- **Universal AC or DC Power**
- **Programmable features:**
 - Alarm threshold level
 - Normally open or normally closed relay
 - Startup and monitoring delay
 - Residual vibration level
- **CE Certified**

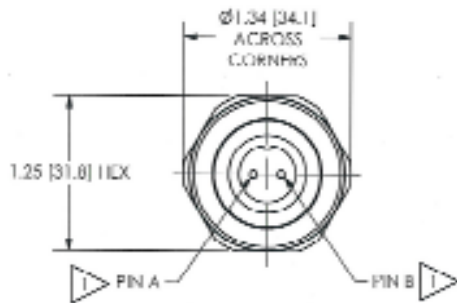
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Mounting Instructions

The mounting point on the structure should be faced to a diameter of 1.25 inches. For measurements involving frequencies above 1 kHz, the surface should be flat within 1 mil and have a surface texture no greater than 32 micro-inches.

The tapped hole must be perpendicular to the mounting surface and at least two threads deeper than the stud. This will prevent a gap between the transmitter and the mounting surface producing optimum frequency response.

Proper screw torque on the mounting stud is also required. Under-torquing the transmitter reduces the stiffness of the coupling. Over-torquing can cause permanent thread damage to the transmitter. It is recommended that the 1/4-28 stud be torqued to a value of 30 inch-pounds.



Before stud mounting the transmitter, a coupling fluid should be applied to the mating surfaces. The coupling fluid protects the mounting surface and optimizes the frequency response by increasing the coupling stiffness. Suggested coupling fluids are machine oil or vacuum grease. It is recommended that a thread adhesive such as Loctite 222 be used.

Cable Routing and Electromagnetic Interference

Walkie-talkies, power lines, or even electrical sparks may cause signal interference. The following guidelines will eliminate many measurement errors due to electromagnetic radiation and electrostatic discharge (ESD).

Assure that high quality, well shielded cables are used. If cable splices are made, complete shielding must be maintained.

Proper cable routing is imperative. Never run transmitter cable alongside AC power lines; cables must cross AC power lines at right angles. Where possible, provide a separate grounded conduit to enclose the transmitter cable. In addition, route the cable away from radio transmission equipment, motors/generators, and transformers. Finally, avoid routing the cable through areas prone to ESD. Even though transmitters are protected against ESD failure, temporary distortion signals may appear at the output.

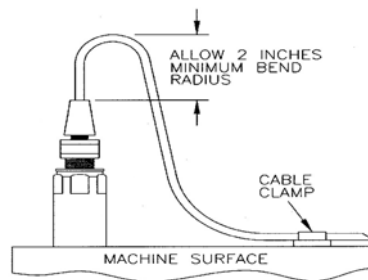
Cable Grounding and Ground Loops

In order to provide proper shielding and prevent ground loops, cable grounding should be carefully considered.

For transmitters using *two conductor shielded cable*, the power is carried on one lead and the return on the other. The cable shield serves to protect the signal from ESD and electromagnetic interference (EMI). The shield should be grounded at only one point.

Cable Anchoring

After mounting the transmitter, the cable should be anchored to reduce stress at the cable terminations. When securing the cable, leave enough slack to allow free movement of the transmitter.



Due to continued research and development, the manufacturer reserves the right to amend these specifications without notice.



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