The No. 11BR (Brown Housing) and 11WH (White Housing) Vibration Sensors are used indoors, in closed circuit alarm systems, to protect against intrusion through windows, walls, ceilings, safes, cabinets, etc. The sensors are UL Listed for use as supplemental protection (UL File AMQV:BP547).

**INSTALLATION CONSIDERATIONS**

Two holes are provided in the base for screw mounting. The ribbed rear surface of the base permits cementing to a glass, or other smooth, surface if necessary.

When installing on a vertical surface, such as a wall, mount the sensor with its long dimension vertical and its interior weighted blade downward, as shown in the illustration.

On a ceiling, the sensor may be mounted directly thereon (upside down) without the use of any bracket.

When protecting a window, mount the vibration sensor on the frame of the window rather than directly on the glass. This reduces the danger of false alarms from heavy vehicles passing by or from tapping on the window by pedestrians.

When connected in a fast response (approximately 10ms) closed circuit protection loop, vibration sensors will initiate an alarm when a blow of sufficient force strikes the protection surface. The sensors can be adjusted to respond on virtually any surface (e.g. plaster, sheet rock, plywood, cement block, brick, glass).

Low frequency vibration caused by normal building vibration has little effect on the sensor, as it is designed to respond much more efficiently to sharp blows.

The sensor contacts are enclosed in an inner compartment that guards against erratic operation in dusty or particle laden environments.

Temperatures ranging from -5° F (-21° C) to 150° F (66° C) had negligible effect on the operation of the sensor in tests conducted by Underwriters Laboratories.

The coverage of vibration sensors on walls and ceilings can be increased if the contacts can be mounted on furring strips. On walls, run furring strips vertically, from the ceiling to about 4 feet from the floor (the distance between them is dependent on the type of construction). On ceilings, run the furring strips from one end of the protected area to the other.

A typical installation for wall protection might consist of vibration sensors mounted 42 to 48 inches above the floor and spaced at 36 to 48 inches intervals along the wall. Optimum locations for vibration sensors can best be determined by experimentation, because of the variety of construction materials and methods that may be encountered.

**ADJUSTMENT AND TESTING**

An adjustment screw on the sensor's contact assembly permits sensitivity adjustment with a screwdriver (see the illustration).

**Initial Adjustment**

Mount the sensor (leave the cover off). Connect an ohmmeter across the sensor's terminals and slowly turn the adjustment screw. If the sensor contacts are already closed, turn the screw counterclockwise until they open. With the sensor contacts open, turn the screw slowly clockwise until the contacts just close and continue turning exactly 1/8 turn (45°) past the closure point. This is the sensor's maximum advisable sensitivity setting.

Note: Higher sensitivity (less than 1/8 turn past the closure point) is not recommended, as erratic operation and false alarms may result.

**Final Adjustment**

Connect the sensor in series with the closed protection circuit intended for it. Light blows with a small hammer, approximately 2 to 3 feet from the sensor, will permit its adjustment for desired response.

The sensor can be made less sensitive by turning its adjustment screw clockwise. Turn it in 1/8 turn steps until the desired response is obtained.

**Caution:** Do not turn the screw more than 1/2 turn clockwise from the maximum advisable sensitivity position described previously or the sensor's contact assembly vibration blade may be permanently injured.

Replace the sensor's cover (do not overtighten!) and recheck the final adjustment with the cover in place.

**SPECIFICATIONS:**

- **Length:** 3" (76mm);
- **Width:** 13/16" (21mm);
- **Height:** 5/8" (16mm)

**Contact Rating:** 50mA @ 28VDC (max).
TO THE INSTALLER

Regular maintenance and inspection (at least annually) by the installer and frequent testing by the user are vital to continuous satisfactory operation of any alarm system. The installer should assume the responsibility of developing and offering a regular maintenance program to the user as well as acquainting the user with the proper operation and limitations of the alarm system and its component parts. Recommendations must be included for a specific program of frequent testing (at least weekly) to insure the system's proper operation at all times.

WARNING

THE LIMITATIONS OF THIS VIBRATION SENSOR

While the Vibration Sensor is a highly reliable intrusion detection device it does not offer guaranteed protection against burglary. Any intrusion detection device is subject to compromise or failure-to-warn for a variety of reasons, such as:

- Proper operation cannot be ensured if sensors are not installed and adjusted as described in the installation instructions.
- Vibration Sensors cannot detect vibration or forced entry when the attack; on surfaces disconnected or separated from the mounting surface of the sensors or outside of their protection range.
- Mechanical or electrical tampering with the sensor could compromise intrusion detection.
- Vibration Sensors will not detect intrusion if the control device to which they are connected is not operative (because of lack of power, malfunction, etc.)
- Vibration Sensors, like other electrical devices, are subject to component failure. Even though the sensors are designed to last longer than ten years, the components in them could fail at any time.

Above are cited some of the most common reasons why a Vibration Sensor can fail to detect intrusion. However, this does not imply that these are the only reasons, and therefore it is recommended that periodic testing of this type of unit, in conjunction with testing of the entire alarm system, be performed to ensure that the sensors are working properly.

Installing an alarm system may make one eligible for lower insurance rates, but an alarm system is not a substitute for insurance. Homeowners, property owners and renters should continue to act prudently in protecting themselves and continue to insure their lives and property.

We continue to develop new and improved protection devices. Users of alarm systems owe it to themselves and their loved ones to learn about these developments.

ADEMCO

LIMITED WARRANTY

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