

## INSTRUCTION MANUAL

### For Model 25B, Isomin™ Accelerometer IM25B, Revision A

**IMPORTANT: To meet all published specifications, the constant current source used to power this accelerometer must be adjusted to  $4.0 \pm 0.5$  mA.**

The Endevco Model 25B is a microminiature, piezoelectric accelerometer with integral electronics. Because of its extremely small size and physical construction, certain special precautions must be observed when mounting and removing the accelerometer to avoid damaging the unit.

#### Accessories, Adhesive, Solvent and Tools

**For use at room temperature:**

- \* Petro wax or bees wax

**For use up to 60°C:**

- \* All-temperature glue stick and hot-melt glue gun
- \* Solvent: Follow the recommendations from glue stick manufacturers

**For use up to 125°C:**

- \* Adhesive: Cyanoacrylate (Loctite Super Bonder 430 Adhesive is recommended)
- \* Solvent: Nitromethane base (Loctite X-NMS Solvent 768 is recommended)  
Alternatives: Acetone, Chloroethene (Trichloroethane) or equivalent hydrocarbon solvent
- \* Cotton swabs or lint-free tissue
- \* Toothpicks or equivalent applicators

Endevco P/N 31849 Adhesive Kit contains most of the required items for mounting transducer. Contact the factory for details.

**CAUTION:** Observe precautions recommended by manufacturer of adhesive or solvent.

**WARNING:** When Cyanoacrylate is used, do not break cement bond by striking accelerometer or by using any tool that makes a metal-to-metal contact with the accelerometer. Always break the bond with the supplied tool after cement has been softened, by twisting or torquing the accelerometer, stressing the bond in shear.

## Mounting Procedure

1. Ensure that mating surfaces are smooth and flat.
2. Remove all traces of grease and oily residue from mating surfaces using cotton swabs and solvent.
- 3a. With Cyanoacrylate, apply a tiny drop to approximately 1/5 the diameter of the mounting pad (the side opposite to the gold lid).
- 3b. Spread the cement with toothpick to form thin, uniform layer covering area of contact.
- 3c. Press down immediately and hold accelerometer firmly in place for 30 seconds while cement sets. Allow cement to set for at least several minutes for maximum strength.
4. With hot glue, apply a drop of approximately the diameter of the mounting pad (the side opposite to the gold lid) and press down on the unit when the glue is still hot.
5. To attach units to the Model 2950M16 Triaxial Mounting Block, use hot glue only. Dissolving Cyanoacrylate between the unit and the block may be difficult and time consuming.
6. It is recommended to secure the accelerometer cable to the vibrating structure/object to avoid cable damage. Masking tape works wonderfully.

## Removal Procedure

- 1a. With Cyanoacrylate, apply solvent around accelerometer base (the side opposite to the gold lid) with cotton swab and wait a short period for cement to soften. Repeat the procedure if the solvent evaporates too soon.
- 1b. Break cement bond, using removal tool P/N 31836 (supplied with the accelerometer). Always use this tool to remove the Model 25B Accelerometer from the test structure. Twist or torque the accelerometer, stressing the bond in shear.
- 1c. Remove cement residue on the accelerometer using a cotton swab dipped in solvent or equivalent remover. A short soak will facilitate this process. Repeat, if necessary, to remove all traces of adhesive. Ensure that all excess adhesive forming fillet around the accelerometer case or built up on the sides of the accelerometer has been removed.
2. With hot glue, use removal tool P/N 31836 to twist or torque the accelerometer, freeing it from the glue joint. Carefully peel off any residuals from the accelerometer base, or use recommended solvent.

**Failure to heed this caution may prevent proper use of removal tool and result in damage to the accelerometer.**

3. Wipe surfaces clean with cotton swabs or lint-free tissue dipped in solvent.
4. **NOTE:** The accelerometer base must **not** be filed, sanded, roughened, or edges burred during removal of the cement. A rough mounting surface on an accelerometer can result in poor frequency response and an increase in transverse sensitivity.

## Repair/Replacement of Leads

The supplied Model 3006-120 cable is a miniature Teflon® jacketed cable with a 1.20 UNM connection at one end and a 10-32 type plug at the other. Exercise care when backing out and threading the 1.20 UNM connection into the 25B Accelerometer. Cross threading will cause permanent damage to accelerometer. NOTE: Dash number in cable assembly part number is length of cable in inches. Example: 3006-120 is a 120" or 10 ft. cable.