

INSTRUCTION MANUAL

For Model 7255A, Pyrotron™ Accelerometer IM7255A, Revision A

IMPORTANT: Constant current source of 8 mA to 20 mA is recommended if the total cable length is to exceed 50 ft.

The Endevco Model 7255A is a piezoelectric accelerometer with integral electronics and built-in mechanical filter designed specifically for near-field (close-range) pyrotechnic shock measurement. Due to severe environment in which the accelerometer is installed, certain special precautions must be observed when mounting the accelerometer to avoid measurement errors.

Surface Preparation

The surface on which the accelerometer rests should have a surface roughness of 32 micro inches rms or better. Drill and tap a 0.25-28 UNF-2B thread, 0.25 inches (6.35 mm) deep minimum, with less than $\pm 1^\circ$ perpendicularity.

Adhesive mounting is not recommended due to the possibility of inducing zeroshift and other errors.

Installation Procedure

1. Cut two small pieces of insulation tubings (shrink tubing recommended), approximately 3/8" (9.52 mm), and insert them onto the wires of the Model 3024 Cable prior to soldering.
2. Under good lighting condition and with small soldering tool, solder the Red wire to the positive terminal and the Black wire to the ground terminal. Slip the insulation tubing over the solder joints.
3. Mount the accelerometer to the test article at 30 lbf-in (3.5 Nm) by using a torque wrench. Be careful not to damage the cable assembly or the solder joints during installation. Unwind and straighten the cable if necessary after the accelerometer has been mounted.

For best result, clean threads and apply thread-locking compound, such as Loctite™, before mounting.

4. Form a small loop with the cable (for strain relief) above the solder joints and slip the supplied protective vinyl boot over the transducer as indicated. In very high-g applications, it may be necessary to glue the vinyl boot to the accelerometer body to prevent it from coming off.

Do not let the protective vinyl boot touch the top of the cable loops. Restricting the vertical movements of the cable loop may cause linearity error in the mechanical filter.

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5. Tape the entire length of the cable to the mounting structure if possible.
6. Connections and mounting torque must be checked after each measurement. Failure to verify connections and torque may introduce zeroshift in acceleration data.

