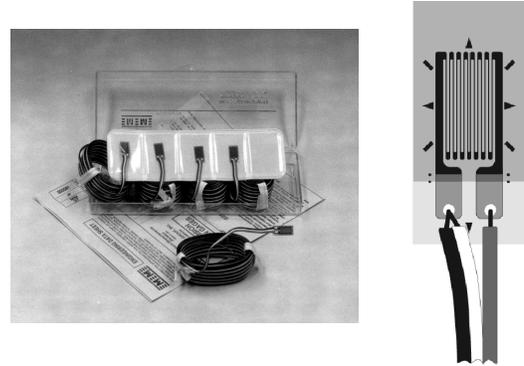


Installing Gages with Option P2

CEA-Series gages supplied with Option P2 can be installed in a wide variety of applications. General gage installation procedures provided in Micro-Measurements technical literature and training programs provide a sound foundation; however, the need for leadwire attachment after gage bonding is eliminated by Option P2. Although application conditions may dictate certain installation procedures, the following guidelines are recommended for maximum performance. They supplement any standard procedures when installing gages with preattached leadwires.



SURFACE PREPARATION

Surface preparation for bonding is described in Application Note B-129, *Surface Preparation for Strain Gage Bonding*,

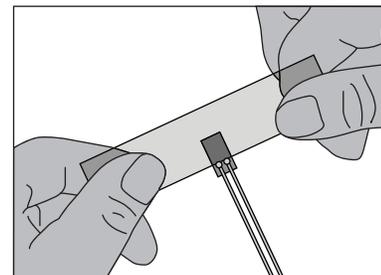
for gages with preattached leadwires.

GAGE HANDLING AND CABLE SUPPORT

After removing the gage and its protective window from the pouch in the plastic box, hold the gage/cable assembly by the cable bundle. Release a comfortable working length of cable and place the gage on a chemically clean surface. Temporarily secure the remainder of the bundle before removing the gage from its protective window with a pair of BTW-1 Blunt-nosed Tweezers.

hold the gage/tape assembly by the bundle when moving it to the installation site.

Apply a strip of PCT-2M Cellophane Tape to the gage face. This transfer tape should be applied in the direction transverse to the leadwires.



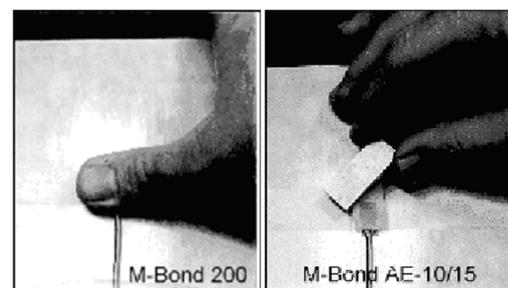
When ready to bond the gage, carefully lift the tape from the surface at a shallow angle. Unsecure the cable bundle and

GAGE BONDING

To preclude damage to the cable insulation, the adhesive selected should be curable at a temperature of no more than +180°F (+80°C).

gages with Option P2 because their elevated curing temperatures are excessive for the vinyl cable insulation.

Lift the gage end of the gage/tape assembly at a shallow angle to the specimen surface (less than 45 degrees) until the gage is no longer in contact with the surface. Continue lifting the tape until it is free from the surface about 1/2 in (13mm) beyond the gage. Tuck the loose end of the tape under itself and apply the adhesive according to the instructions provided. Since Option P2 leadwires are attached directly to the gage, a cushion may be used over the grid area to promote uniform pressure over the entire gage area. With M-Bond 200, a folded gauze sponge can be used as a cushion. However, the thumb by itself is sufficient when placed transverse to the leadwires. When M-Bond AE-10 / 15 is used, the silicone gum pad should be placed over the gage grids and butted to the ends of the leadwire on the solder tabs. M-Bond 600 and 610 should not be used on



After the adhesive has cured, remove the transfer tape by pulling it back directly over itself, peeling it slowly and steadily off the surface. An application of M-LINE Rosin Solvent will quickly soften the mastic and ease tape removal.

Installing Gages with Option P2

PROTECTIVE COATINGS

Option P2 provides electrical insulation of the gage grids, but not the solder joints. Therefore, an additional protective coating is recommended when the gage installation is exposed to moisture, chemical attack, or potential for

mechanical damage. When applying coatings, pay particular attention to the junction between the solder tabs and cable leadwires. Apply an appropriate coating in this area before the cable is permanently anchored to the specimen.

STRAIN RELIEF

Before loosening the cable bundle, it is recommended that strain relief loops be provided in the cable. Form these loops over the handle of a M-LINE DPR-1 Dental Probe or rod of similar diameter. The jumper-wire loop, which should lie in the plane of the specimen, is usually held in place by the protective coating. The cable loop, which should remain upright, is usually located outside the coated area. M-LINE 3145 RTV silicone rubber can be used as a cable anchor.

After the cable has been properly anchored, the remainder of the bundled cable can be loosened and routed to the strain gage instrumentation. If a cable extension is added, remember that it should be attached by soldering. Alligator clips, twist caps, and most other mechanical connections should be avoided when making electrical connections within strain gage circuits.

Gages supplied with Option P2 can be installed readily with these techniques in most applications. Should you have any questions about your particular application, our Applications Engineering staff is always ready to assist you. Don't hesitate to give them a call.