MULTILAYERED 289-TYPE BUILDING ENTRANCE PROTECTOR (BEP) INSTALLATION INSTRUCTIONS

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General

This instruction sheet provides procedures for mounting and wiring the 289-type BEP.

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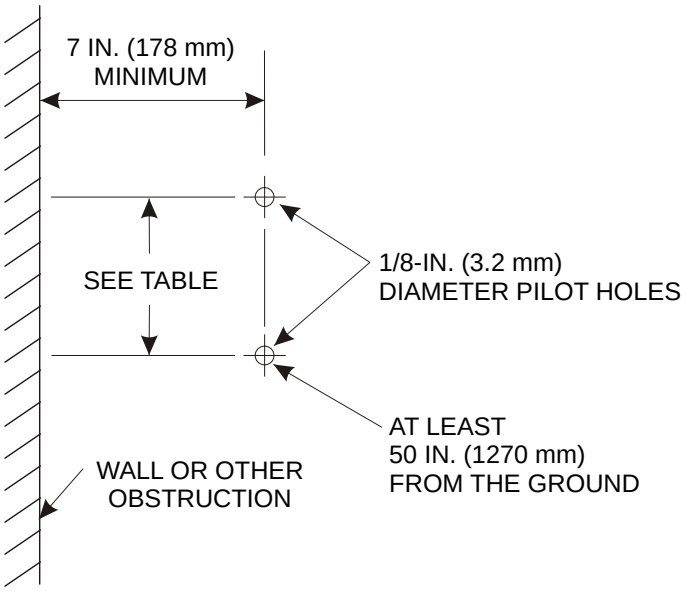
- Report any missing or damaged parts to CommScope customer service in Omaha, Nebraska, at 1-866-539-2795.

Tools Required

- Level
- Tape measure or other measuring device
- Flat- or cross-head screwdrivers, KS- or 216-type tool
- Drill with a 1/8-inch (3.2 mm) wood bit.

HOLE PATTERN FOR MOUNTING A SINGLE UNIT



CAPACITY OF UNIT	DISTANCE
25 PAIR	5-IN. (127 mm)
50 PAIR	11 ½-IN. (292 mm)
100 PAIR	24 ½-IN. (622 mm)

STEP 1A—MOUNTING PROCEDURE, SINGLE-UNIT CONFIGURATION

1. Locate and drill two 1/8-inch (3.2 mm) diameter pilot holes as shown. Mounting template may also be used to locate two holes.
2. Install two lag screws (provided with unit) into pilot holes, leaving 1/8-inch (3.2 mm) clearance between screw head and mounting surface. On shingled or otherwise uneven surfaces, adjust lag screws to provide minimum play of unit.
3. Guide slots in left-side mounting brackets into clearance gap between screwheads and wall. Push unit to left as far as possible, allowing unit to drop down and seat on vertical slots located in side mounting brackets.

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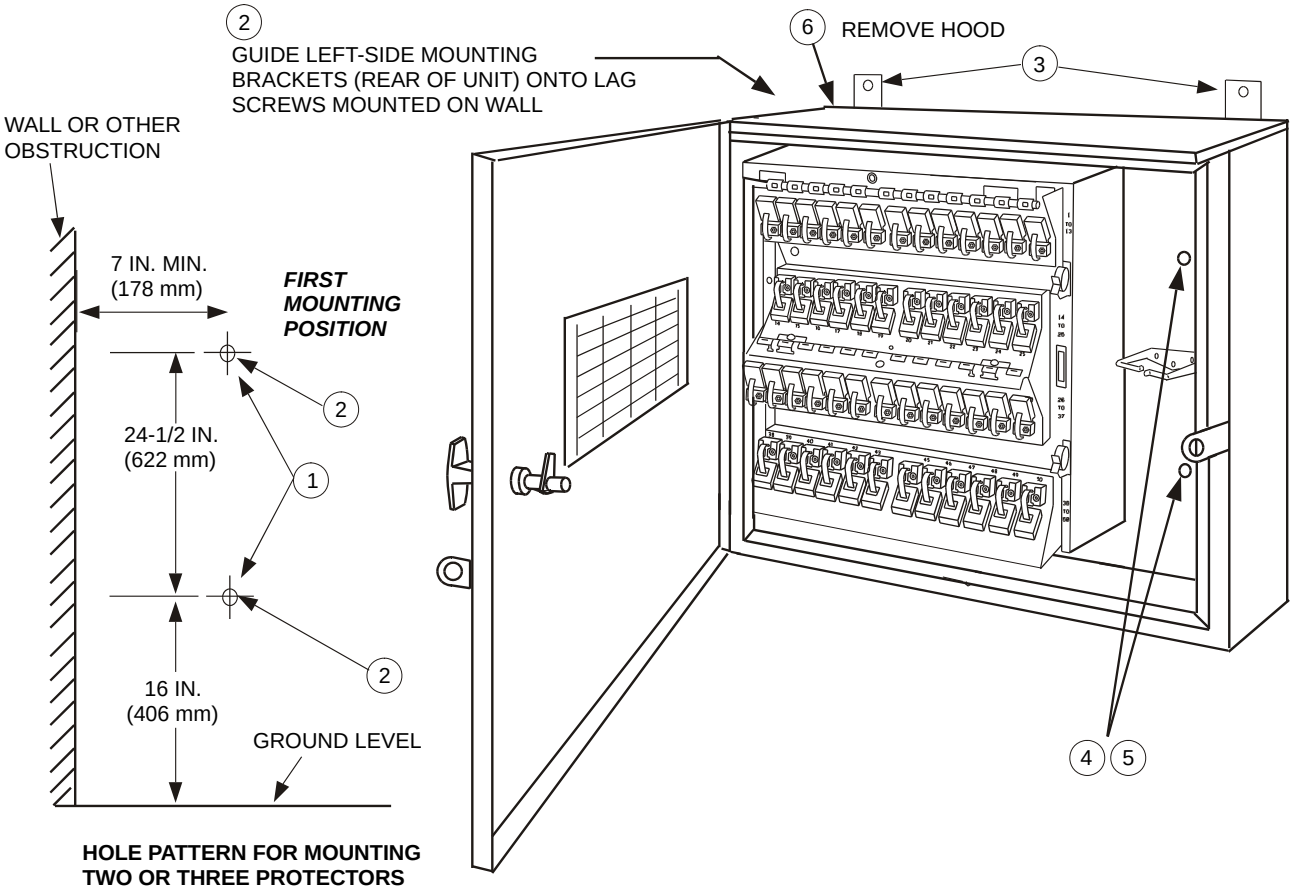
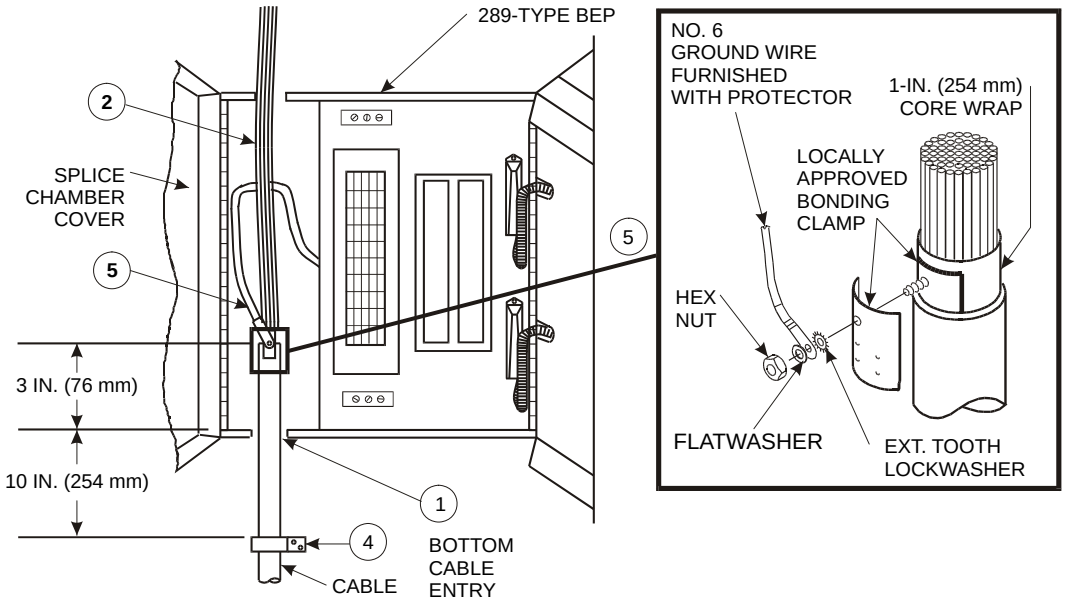
4. Open unit door and, using holes in rear surface of unit as template, drill two holes with 1/8-inch (3.2 mm) diameter drill bit. Install two lag screws provided with unit. Tighten screws securely. See figure on next page.
5. Insert two hole plugs provided with unit. Remove any debris generated by drilling holes.

STEP 1B—MOUNTING PROCEDURE, STACKED CONFIGURATION

1. For mounting first 100-pair BEP, locate and drill two 1/8-inch (3.2 mm) diameter pilot holes as shown.
2. Install first 100-pair BEP as described in items 2 and 3 under "STEP 1A - MOUNTING PROCEDURE, SINGLE-UNIT CONFIGURATION."
3. Install two additional screws into hanger brackets located on top of first BEP.
4. Open unit door and, using holes in rear of unit as template, drill two holes with 1/8-inch (3.2 mm) diameter drill. Install two lag screws provided with unit. Tighten screws securely.
5. Insert two hole plugs provided with unit. Remove any debris generated by drilling holes.
6. Remove hood of first BEP after removing four wing nuts from inside of first BEP. (Save four wing nuts for later use in securing second BEP).
7. Remove plastic caps that were hidden under hood of first BEP.
8. Uncover studs located at bottom of protector unit to be stacked on top of first BEP.
9. Mount second BEP on top of first BEP by inserting bottom studs into corresponding holes of first BEP. Install four wing nuts onto four studs.
10. Open door of second BEP and, using holes in right rear-surface of unit as template, drill two holes with 1/8-inch drill. Install two wood screws and flatwashers provided with second unit. Tighten screws and insert two hole plugs provided with unit. Remove any debris generated by drilling holes.
11. For stacking additional units, repeat Steps 6 through 11 of this page.



HOLE PATTERN FOR MOUNTING TWO OR THREE PROTECTORS IN A STACKED CONFIGURATION



STEP 2—WIRING PROCEDURE, SINGLE- AND MULTIUNIT CONFIGURATION

1. Insert incoming cable through supplied cold shrink tubing, then into splice chamber of bottommost BEP.
2. Strip sheath from cable, 6 inches (152 mm) past entry gate into splice chamber. Free conductor length should be sufficient to reach top of uppermost BEP.

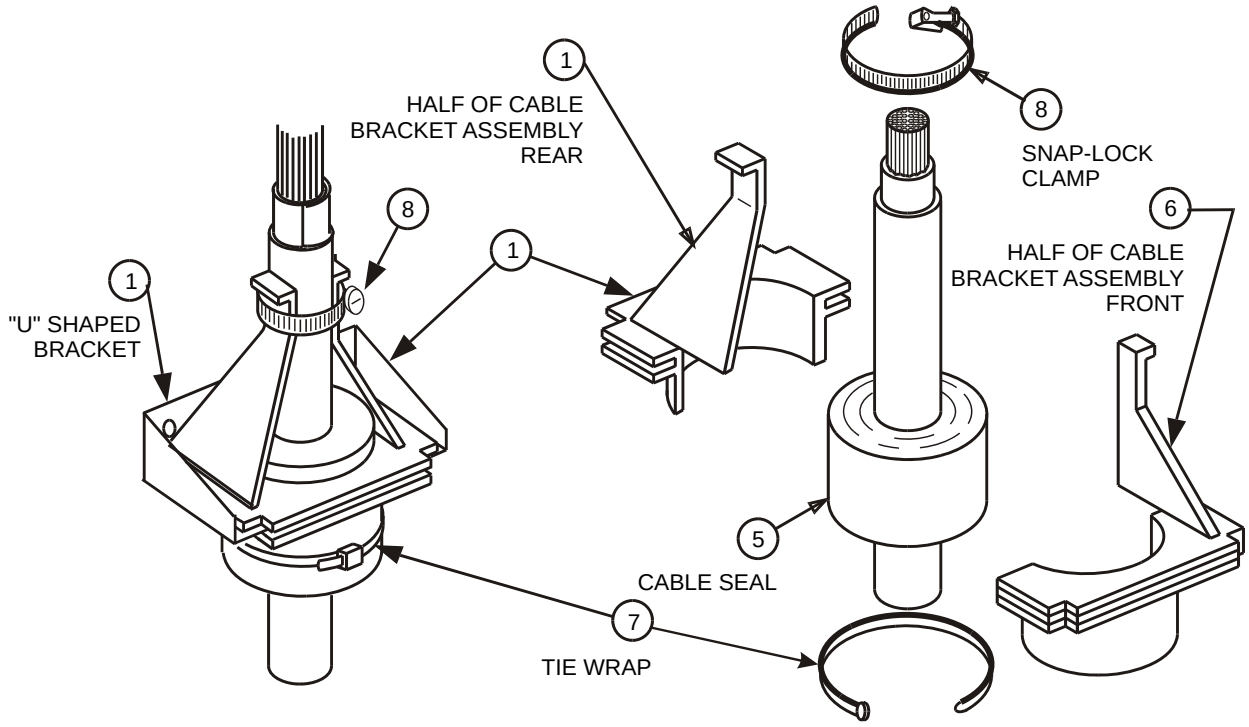
   Note: When terminating gel-filled cable, remove all filling compound from exposed conductors. Tightly wrap vinyl tape twice around first 3 inches (7.6 cm) of loose conductors extending beyond cable jacket.
3. Tighten incoming cable to bottommost strain relief bracket, using snap-lock clamp, provided with unit.
4. Fasten incoming cable to wall about 10 inches (254 mm) before BEP.
5. Install bond clamp (customer supplied) on incoming cable per local practices.

   Note: For gel-filled cable, tightly apply three wraps of vinyl tape around last 3 inches (76 mm) of cable jacket, bond clamp, and first 3 inches (76 mm) of loose conductors. Center of bond clamp must be left exposed to make contact with ground strap.
6. Connect No. 6 gauge (4 mm) flexible ground strap provided in bottommost splice chamber to bond clamp. Make sure ground strap is touching metal of bond clamp.

   Note: Only ground strap closest to cable entry point will be used to ground incoming cable. Ground straps of all other BEP units will be unused.
7. Terminate cable conductors onto splicing connectors used.
8. Dress splicing connectors and conductors neatly into splice chamber. **Be careful to avoid any sharp bends or kinks in conductors**.
9. Use short length of No. 6 gauge (4 mm) solid conductor wire to bridge grounds from top protector to middle protector and from middle protector to bottom protector.
10. Provide No. 6 gauge (4 mm) solid conductor from approved building ground to network ground.
11. Close splice chamber covers and secure top layers in closed position by using either KS- or 216-type tool, depending on type of security screw used on protector unit.
12. Close cover of outside enclosure.

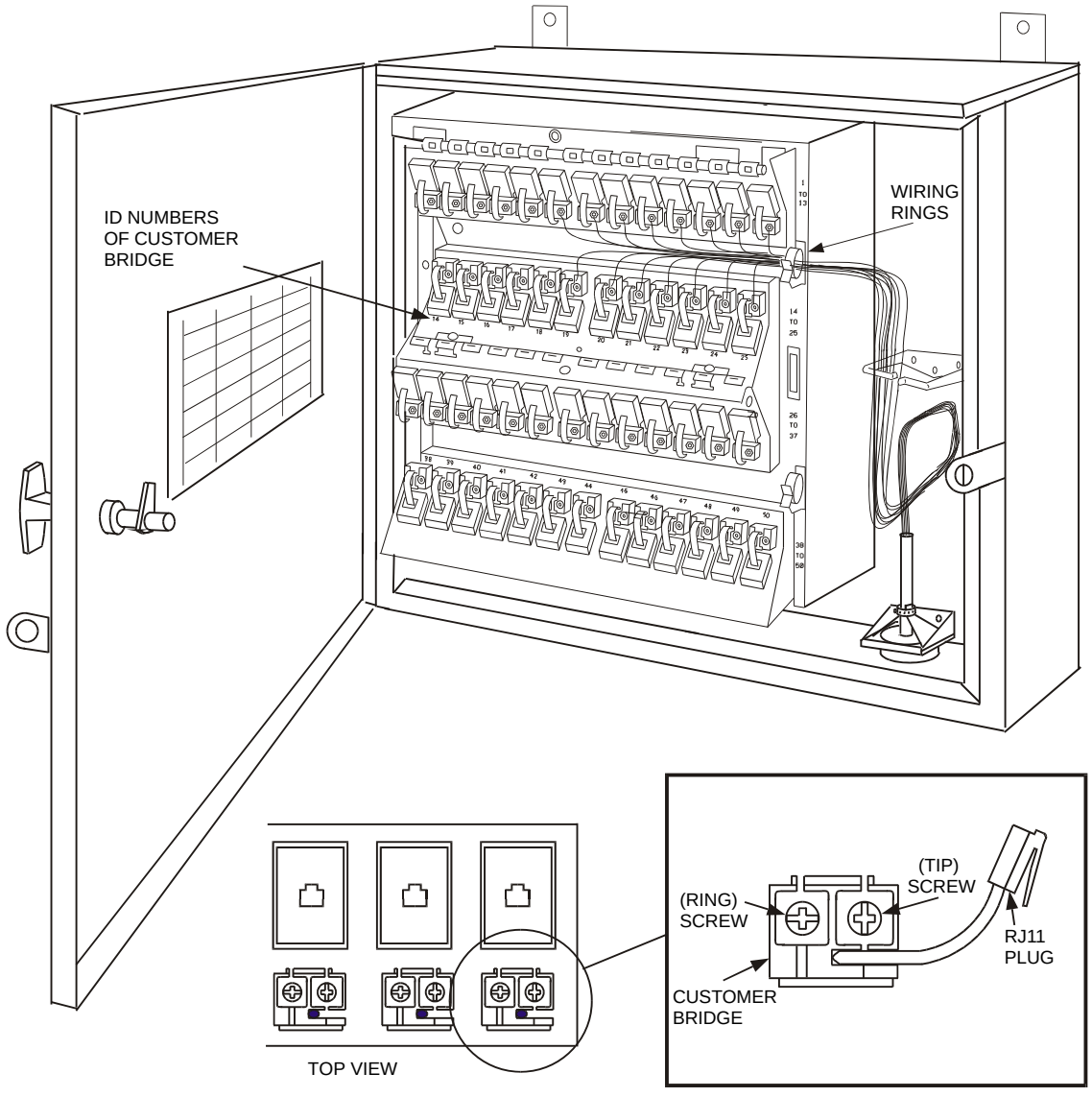
STEP 3—INSTRUCTION FOR CIRCUIT WIRING

1. Slide rear half of plastic cable bracket into mounted "U" shaped bracket.
2. Secure output customer cable to wall about 10 inches (254 mm) below bottom of protector.
3. Strip sheath from cable 5 inches (127 mm) past entry gate. Free conductor length should be long enough to reach farthest customer bridge of topmost protector.
4. Remove cable seal core to match diameter of cable to be used.
5. Wrap black cable seal (provided with unit) around cable and seat into rear of cable bracket assembly.
6. Slide front half of cable bracket assembly into slot until it contacts rear half of bracket.
7. Secure two halves of cable bracket assembly together using tie wrap (provided with unit).
8. Squeeze two strain-relief extensions tight against cable and secure using snap-lock clamp (provided with unit).



STEP 3—INSTRUCTION FOR CIRCUIT WIRING (CONT)

9. Route customer wires to customer bridges through wiring troughs located on right-hand side of unit and front right-hand edge of RJ11 chassis.
10. Unplug assigned RJ11 plug.
11. Loosen two screws on assigned customer bridge.
12. Strip about 1/2 inch (12.7 mm) from ends of customer wires.
13. Wrap stripped green wire clockwise around TIP screw between two washers; then, wrap stripped red wire clockwise around RING screw between two washers.
14. Tighten screws, making sure stripped part of wires are not touching.
15. Plug RJ11 plug into jack.



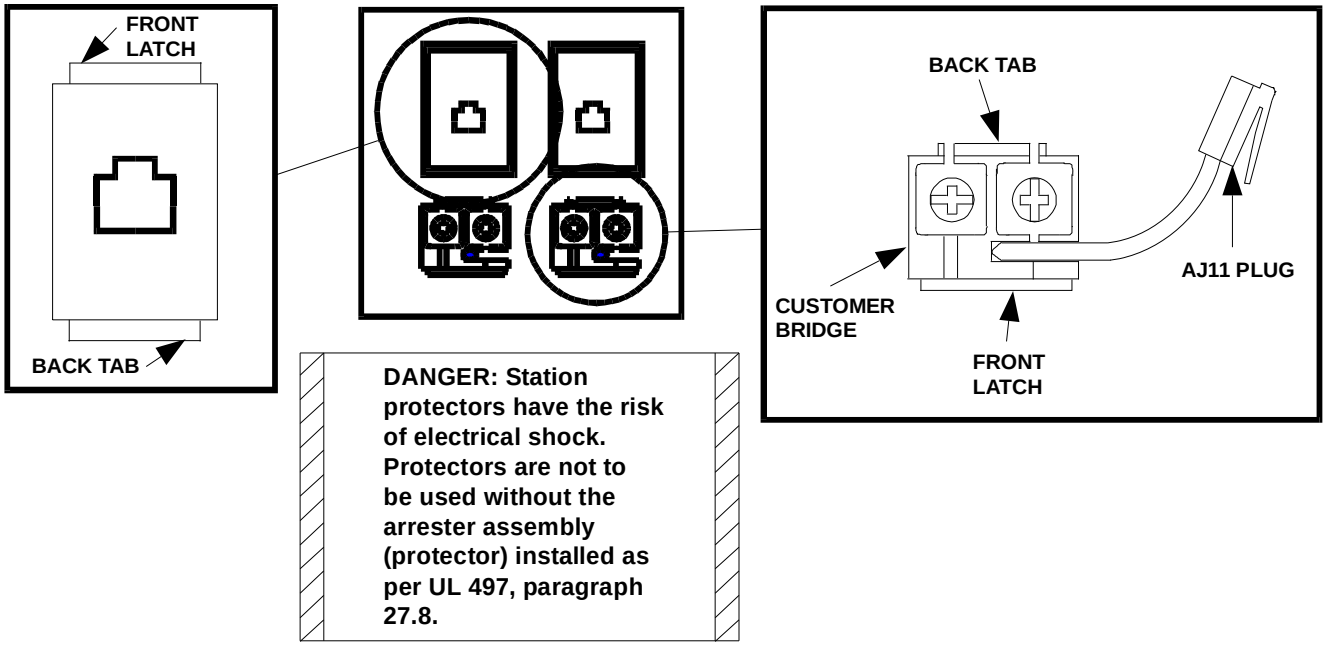
STEP 4—REPLACEMENT OF RJ11 JACK ASSEMBLY AND CUSTOMER BRIDGE

Replacement of Customer Bridge/RJ11 Jack Assembly:

1. Locate customer bridge to be replaced.
2. Unplug RJ11 plug from RJ11 jack.
3. Remove customer bridge/RJ11 jack assembly by pressing in and out on front latch with flat screwdriver.
4. Install new customer bridge by first inserting back tab into slot, then pressing down on front latch.
5. Plug RJ11 plug into RJ11 jack.

Replacement of RJ11 Jack Assembly With or Without Electronic Packages:

1. Locate RJ11 jack assembly to be replaced.
2. Unplug RJ11 plug from RJ11 jack assembly.
3. Remove RJ11 jack assembly by pressing in and out on front latch with flat screwdriver.
4. Pull out on disconnected RJ11 jack assembly until at least 6 inches (152 mm) of red and green wires become exposed and accessible.
5. Hold red and green wires in place so that they will not slip back into RJ11 chassis once they are cut off from old RJ11 jack assembly.
6. Cut off red and green wires at point closest to old RJ11 jack assembly.
7. Use Lucent Technologies 700-type splicing connector, or equivalent connector, to splice red and green wires to new RJ11 jack assembly.
8. Insert spliced wires back into RJ11 chassis. Then install new RJ11 jack assembly by first inserting back tab into slot, then pressing down on front latch.
9. Insert RJ11 plug into new RJ11 jack assembly.



Protector Modules Recommended for Use in all 289 type BEPs					
Protector Code	**Material ID**	**Description**	**Sneak Current Rating @ 25 Degree C**	**DC Voltage Breakdown**	**Impulse Sparkover Voltage**
3B1EW	104 410 147	Gas tubes	N/A	265-425 V	200-800 V
4B1EW	104 401 856	Gas tubes + Heat Coils	Carry 350 Ma Operate in <210 seconds at 540 mA	265-425 V	200-800 V
3C1S	105 514 756	Solid State, Balanced	N/A	220-300 V	220-300 V
4C1S	104 386 545	Solid State + Heat Coils, Balanced	Carry 350 mA Operate in <210 seconds at 540 mA	220-300 V	220-300 V
7AAOT	108 115 197	Solid State, Bi Mod	N/A	265-400 V	265-400 V
7ABOT	106 945 074	Solid State, Balanced	N/A	265-400 V	265-400 V
7CBOT	106 945 538	Solid State, Balanced + Heat Coils	Carry 350 mA Operate in <210 seconds at 540 mA	265-400 V	265-400 V
7AB6A	107 098 196	Solid State + MTU + Half Ringer	N/A	265-400 V	265-400 V
7AB6B	107 670 028	Solid State + Half Ringer	N/A	265-400 V	265-400 V
7AB6C	107 911 612	Solid State + MTU	N/A	265-400 V	265-400 V

NOTE:

For the full range of protector modules available to you, contact your Lucent Technologies account representative.

IMPORTANT: UL* PROTECTOR SHOULD BE INSTALLED IN ACCORDANACE WITH NEC†, NCS, ANSI/NFPA 70 (ARTICLE 800 SECTION C).

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