

CRL 232 CRL 233 Lighting Push-Button Bar *Ten-Lite System*

The CRL 232 Lighting Pushbutton Bar installed with a buzzer or tone unit is a complete station for the Ten-Lite System. It consists of two housings containing six pushbuttons each five of which are lighting pushbuttons. One housing contains lighting pushbuttons numbered 1 through 5 and a sound pushbutton. The other housing contains the five colored lighting pushbuttons and a reset pushbutton. The CRL 232 Lighting Pushbutton Bar is supplied with a 7 foot cable attached and the CRL 233 has a 21 foot cable attached. This cable is split for the last six inches to allow the housings to be mounted stacked or in tandem.

The CRL 232 Lighting Pushbutton Bar is used wherever a compact station is desired. It must be in a



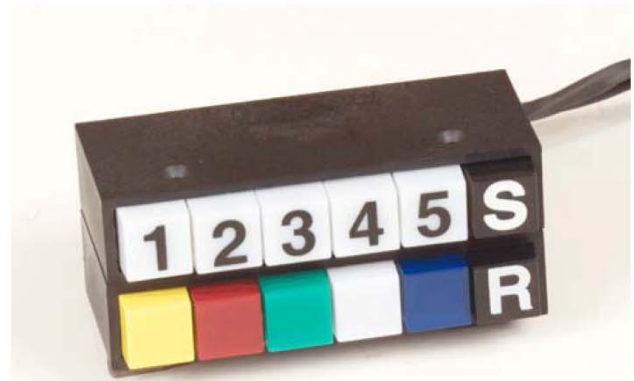
location which is both in sight and within easy reach of the persons working in the area.

Reception

CRL 232 Lighting Pushbutton Bar is often mounted under a high counter where it will be directly in front of the receptionist. It will then be at eye level and within easy reach. A CRL 239 Utility Buzzer or CRL 291 Utility Tone Unit is usually mounted under the main counter.

Operatory

Theta Corporation does not recommend the CRL 232 Lighting Pushbutton Bar for use in an operatory as it is rare one location is optimum for both the display lights and the pushbuttons that operate them. Also the buttons on the CRL 232 Lighting Pushbutton are not guarded and are easily operated accidentally when used in an operatory.



Private Office

The CRL 232 Lighting Pushbutton Bar may be mounted under the edge of a desk. A CRL 239 Buzzer Unit or a CRL 291 Tone Unit is usually mounted under the desk. If the buzzer unit or tone unit is to be mounted where it will be seen, a CRL 238 Buzzer Panel or a CRL 290 Tone Panel may be mounted on the wall where the cable enters.

Caution -- the pushbuttons of the CRL 232 Lighting Pushbutton Bar are very easy to push. If mounted where personnel will bump into it or where carts will be pushed against it, lights will be turned on when not wanted.

Installation

The CRL 232 Lighting Pushbutton Bar is mounted with its housings stacked or in tandem. Stacked they will be 2 inches high by 4 ¾ inches wide. In either mounting, they are 2 ¼ inches deep with the cable protruding from the back. Two #6 x 2 ¾ inch flat head screws are provided for stacking the bars and four #6 x 1 ½ inch screws are provided for tandem mounting.

Pilot holes should be drilled with a 7/64" drill for mounting on hard wood or sheet metal. In soft wood, the screws will make their own hole. If the CRL 232 Lighting Pushbutton Bar is to be mounted to metal thicker than 16 gauge (1/16"), 9/64" holes should be drilled and #6-32 x 1½" machine screws and nuts should be used. If it is not practical to use screws, the CRL 232 Lighting Pushbutton Bar may be mounted using scotch mount double face tape.

New Construction

As the cabinetry on which the CRL 232 Lighting Pushbutton Bar is usually mounted is not installed until after the walls have been finished, the cable from the rest of the signal System is left in a switch box behind where the cabinet is to be mounted. After the walls are finished and the cabinetry installed, the CRL 232 Lighting Pushbutton Bar is mounted. The cable from the CRL 232 Lighting Pushbutton Bar is strung to the switch box. A CRL 239 Buzzer Unit or a CRL 291 Tone Unit is usually mounted next to the switch box. The cable from the CRL 232 Lighting Pushbutton Bar and the wires from the CRL 239 Buzzer Unit or the CRL 291 Tone Unit are spliced to the cable from the remainder of the Signal System.

Existing Construction

Where the walls are existing and the cabinets are installed, the cable from the remainder of the Signal System is fished down through the walls and brought out behind the cabinet or brought up through the floor from below. The CRL 232 Lighting Pushbutton Bar is mounted and the cable is strung through the cabinet to the other cable. A CRL 239 Buzzer unit or the CRL 291 Tone Unit is installed and the cables are spliced.

Splicing

This component may either have its cable routed to a component which has terminal screws or it may be spliced to the #84 System cable. There are two orange wires and two black wires in the CRL 232 Lighting Pushbutton Bar's cable. Both orange wires should be connected to the System orange wires. Both black wires should be connected to the System black wires. There are three methods of splicing which Theta feels are acceptable:

- wire nuts
- crimp connectors
- solder

All methods require that the outside jacket of the cables be removed about four inches. The inside conductors of all cables should have their insulation removed about 3/4 inches. All conductors of each color are then tightly twisted together. Wire nuts may then be twisted on, crimp connectors crimped on or solder applied to the conductors. If uninsulated crimp connectors or solder are used, electrical tape should be used to insulate each different color. Wire nuts or crimp connectors must be acquired locally. They should be of the proper size for the #22, #18, & #16 gage conductors used in the #84 Cable. Usually, the capacities are listed on the box that they are sold in. When soldering, rosin core solder should be used with a soldering iron or gun. Crimp connectors must be crimped with a special tool designed for the connectors. A pliers will not do a reliable job. All methods of splicing may be tested by pulling on the individual conductors. They should not break apart under about five pounds of tension.

Changing Lamps

The CRL 232 Lighting Pushbutton Bar manufactured in 1998 and after uses a #1819 miniature lamp. Lamps

may easily be changed without tools. The square lens is pulled straight off ("rock" the lens up and down) and the bulb is pushed in and turned counter-clockwise one quarter turn and allowed to pop out. Press transit in (the moving part that the lens mounts on) to expose more of the lamp surface to grip.

This procedure is reversed to install new lamps.