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## EntelliGuard™ Power Circuit Breaker Accessories

### Bell Alarm with Lockout for 3200–5000 Ampere Circuit Breakers

#### Introduction

The Bell Alarm with Lockout prevents closing of the breaker after a protection trip until the accessory is reset. It contains a set of switch contacts to remotely indicate that the circuit breaker has opened due to a protection trip.

The catalog number for the Bell Alarm with Lockout kit for 3200–5000 ampere EntelliGuard breakers is EGBLALMLFKIT. The kit includes the Bell Alarm module, a universal mounting plate, and all necessary hardware for installation.

#### Operation

The Bell Alarm with Lockout is activated and its status circuit changes state whenever the EntelliGuard Messenger™ trips the breaker due to an overcurrent, ground fault, or protective relay function. A trip caused by the manual OPEN button or the Shunt Trip does not activate the Bell Alarm with Lockout. The EntelliGuard Messenger continuously monitors the state of the status circuit.

The Bell Alarm with Lockout can be reset by manually depressing the target on the breaker escutcheon. This will return the Bell Alarm with Lockout status contact to its normal position and allow the breaker to be closed. The connections of the Bell Alarm with Lockout to the secondary disconnect are illustrated in Figure 1.

Note that the circuit breaker must be racked in to the connected position, as indicated by the legend CONN on the draw-out position indicator flag, for proper operation of the lockout function of a Bell Alarm with Lockout.

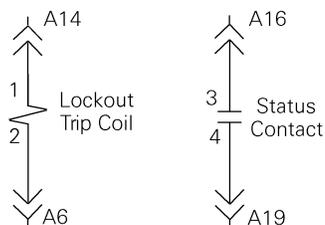


Figure 1. Bell Alarm with Lockout connections to the secondary disconnect.

#### Installation



**WARNING:** Before installing any accessories, turn the breaker OFF, disconnect it from all voltage sources, and discharge the closing springs.



**AVERTISSEMENT:** Tourner le disjoncteur à la position OFF, le débrancher de toute source de tension et décharger les ressorts de fermeture avant l'installation de tout accessoire.

The following installation procedure is described in several sections. First, follow the procedure for preparing the breaker for installation. Next, install the Bell Alarm with Lockout, then return the breaker to operation.

#### Preparing for Installation

1. Open the breaker and remove it from the cubicle or substructure. (See DEH-202 or DEH-204 for detailed instructions.)
2. Insert the racking handle (catalog number 568B731G1 or G2) and move the racking mechanism to the DISC position, as shown on the draw-out position indicator.
3. Remove the trim ring from the around the breaker escutcheon by disengaging the ends of the spring-loaded rods from the escutcheon brackets.
4. Remove the six screws securing the escutcheon to the breaker. Pull the manual charging handle out part way, then slide off the escutcheon.

#### Installing the Bell Alarm with Lockout

5. Screw the supplied standoff into the front plate of the breaker, as shown in Figure 2.
6. Place the Bell Alarm mounting plate over the standoff and secure with a washer and nut. Insert the long bolt, with two washers, through the pivot on the mounting plate and screw it into the tapped hole in the front plate of the breaker, as illustrated in Figure 2. Ensure that the engagement pin on the side of the mounting plate, also shown in the top view in Figure 3, fits into the slot in the breaker mechanism and that the lockout tab is underneath the handle tab.
7. Line up the Bell Alarm module on the mounting plate, as shown in Figure 2, so that the solenoid

plunger and locating pin fit in the appropriate holes. The label on the end of the module appears as in Figure 4, with the legend ↑ LF LO horizontal. Attach the module with the two screws provided.

8. Run the wires from the Bell Alarm module to the secondary disconnect, as illustrated in Figure 5. Attach the wires to the breaker frame with wire ties, as indicated. Table 1 lists the wire colors and terminal numbers. Figure 6 shows the secondary disconnect terminal numbering scheme, as seen from the front of the breaker, with the Bell Alarm terminals in bold.

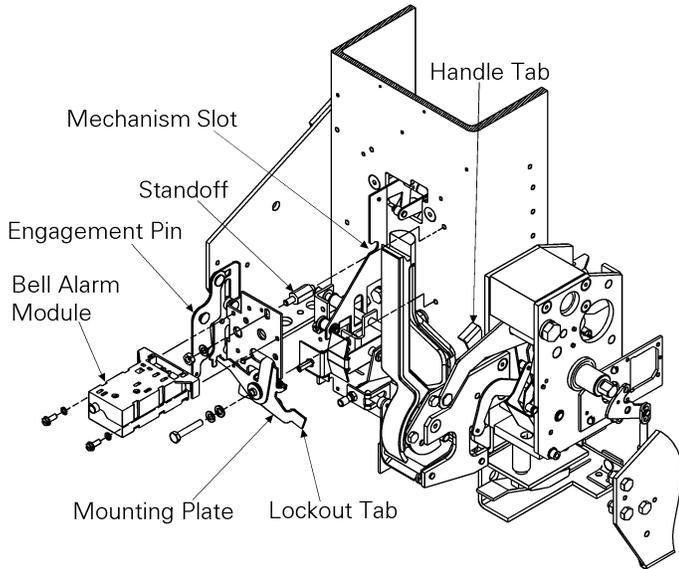


Figure 2. Installation of the Bell Alarm with Lockout.

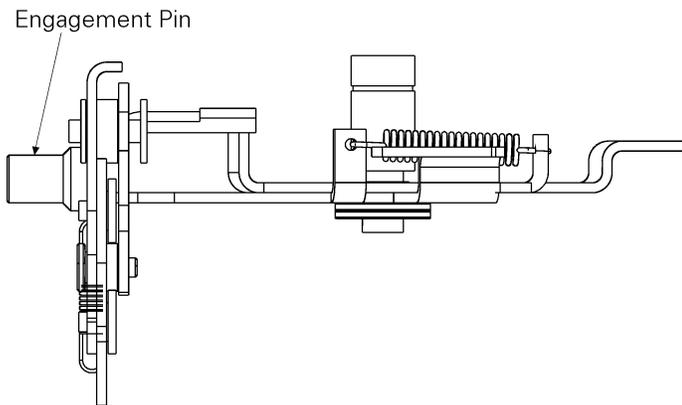


Figure 3. Top view of the Bell Alarm mounting plate, showing the pin to engage the breaker mechanism.

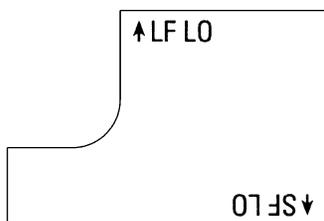


Figure 4. Orientation of the label on the Bell Alarm with Lockout module.

## Returning the Breaker to Service

9. Check that the breaker racking mechanism is still in the DISC position. Pull the manual charging handle out part way, then slide the handle through the slot in the escutcheon and move the escutcheon into place. Insert the six mounting screws and tighten to 14–20 in-lb.
10. Replace the trim ring around the escutcheon, with the narrow side at the bottom. Insert the ends of the spring loaded rods into the holes in the escutcheon brackets.
11. Insert the racking handle and return the racking mechanism to the DISC position, as shown by the draw-out position indicator.
12. Reinstall the breaker into its cubicle or substructure.

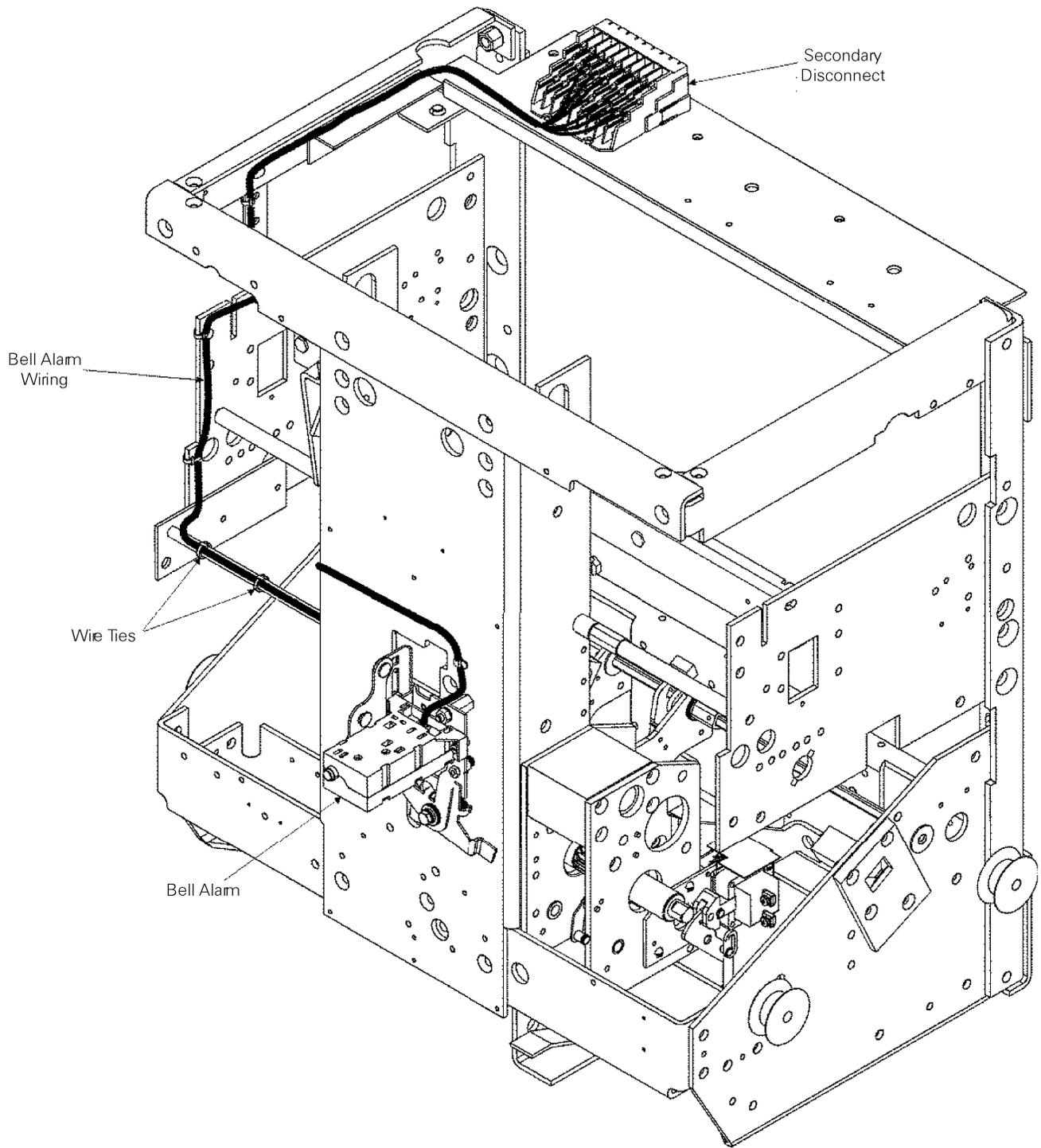


Figure 5. Path for routing wires from the Bell Alarm with Lockout to the secondary disconnect.

Connection	Wire Color	Sec. Disc. Terminal #
Switch NO	blue	A16
Switch COM	black	A19
Bell Alarm Trip	white	A14
Bell Alarm Trip COM	green	A6

Table 1. Bell Alarm wires and corresponding secondary disconnect terminals.

9	8	7	<b>6</b>	5	4	3	2	1
18	17	<b>16</b>	15	<b>14</b>	13	12	11	10
27	26	25	24	23	22	21	20	<b>19</b>
36	35	34	33	32	31	30	29	28

Figure 6. Terminal numbering scheme of the secondary disconnect, as seen from the front of the breaker.

These instructions do not cover all details or variations in equipment nor do they provide for every possible contingency that may be met in connection with installation, operation, or maintenance. Should further information be desired or should particular problems arise that are not covered sufficiently for the purchaser's purposes, the matter should be referred to the GE Company.

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***GE Consumer and Industrial***

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