Ronis key interlock kit in Magnum™
low-voltage circuit breakers

WARNING

(1) ONLY QUALIFIED ELECTRICAL PERSONNEL SHOULD BE PERMITTED TO WORK ON THE EQUIPMENT.

(2) DO NOT ATTEMPT TO INSTALL OR PERFORM MAINTENANCE ON THE EQUIPMENT WHILE ENERGIZED. ALWAYS VERIFY THAT NO VOLTAGE IS PRESENT BEFORE PROCEEDING.

(3) ALWAYS DE-ENERGIZE PRIMARY AND SECONDARY CIRCUITS BEFORE REMOVING CIRCUIT BREAKER.

FAILURE TO FOLLOW THESE STEPS FOR ALL PROCEDURES DESCRIBED IN THIS INSTRUCTION LEAFLET COULD RESULT IN DEATH, BODILY INJURY, OR PROPERTY DAMAGE.

General information

This key interlock provides the following safety features:

- With no key, the breaker is OPEN and cannot close
- With the key ON, the breaker is fully functional
- The key cannot be removed when the breaker is ON. The key cannot turn the breaker OFF

Note: To remove the key, press the breaker OFF button, and rotate the key 90 degrees counterclockwise.

Required tools

- 1/4-inch drive socket
- 10 mm socket
- #2 Phillips head screwdriver
- Adjustable crescent wrench
- Needle nose pliers
- 3 mm wrench
- Small blade screwdriver
- Spring puller (such as Moody Tool item #6HAR6)

Kit parts identification

Refer to Figure 1 for visual identification of the parts listed below:

(A) Interlock arm assembly
(B) HF Securite (Ronis lock #RBA90GEL3000) with Ronis Protect Key (Ronis keylock not supplied)
(C) Bushing
(D) Lock mounting plate
(E) Torsion spring
(F) Interlock adapter assembly
(G) Retainer nut
(H) M3.2 retaining ring
(I) Cable assembly
(J) M3 x 6 self-thread screw (three)
(K) Extension spring (two, one spare)
(L) Hex standoff
(M) Trip lever (only used if necessary)

Note: Used only when necessary to replace an existing older design trip lever.

(N) Trip lever screw
(P) Adapter plate
(Q) and (R) Standoff mounting screws
(S) Adapter plate screws (two)

Installation of key interlock

Proceed with the following 17 steps:

Step 1: Check that the breaker is OPEN and discharged. Using 10 mm socket, remove the front cover of the breaker by loosening four mounting bolts (six bolts if four-pole breaker), and hold the charging handle down approximately 45 degrees to simplify removal.
Step 2: Remove plug from keylock hole. If hole does not exist, use a 1-7/16 inch (36 mm) hole saw to drill a hole using existing drill point countersink on inside of cover as a pilot guide.

Figure 2. Steps 1 and 2

Step 3: If there is an operations counter and operation spring installed, remove and save these items for later re-installation. Remove existing counter/lock mounting plate and discard it.

Figure 3. Step 3

Step 4: Snap interlock arm assembly (A) into place on shaft, with steel spring flush against mechanism side plate.

Figure 4. Step 4

Step 5: Place bushing (C) on keylock body (B). Note orientation of keylock and mount to lock mounting plate (D) with hex nut supplied with lock. Discard other hardware supplied with keylock—collar, small hex nut, cam arm.

Figure 5. Step 5

Step 6: Place torsion spring (E) on rear of keylock. The leg of the spring fits into hole in lock mounting plate assembly above keylock mounting nut.

Figure 6. Step 6

Step 7: Place interlock adapter assembly (F) on rear of keylock.

Figure 7. Step 7

Step 8: Screw retainer nut (G) onto rear of keylock assembly.

Figure 8. Step 8

Step 9: Using pliers, wind free leg of spring counterclockwise approximately 100 degrees and hook onto leg of interlock adapter as shown.

Figure 9. Step 9
Step 10: Attach adapter plate (P) to keylock assembly with adapter plate screws (S).

Figure 10. Step 10

Step 11: Mount the hex standoff (L) and cable assembly (I) with the hex standoff mounting screw (Q) and screw (R) as shown.

Figure 11. Step 11

Step 12: Mount lock assembly to back side of universal mounting bracket with three M3 screws (J) provided with kit and torque to 10–12 in-lb (1.1–1.3 Nm).

Figure 12. Step 12

Step 13: Connect extension spring (K) between interlock arm assembly (A) and mounting plate (D). Attach one end of the spring to the interlock arm assembly such that the free end of the spring is facing downward, as shown.

Figure 13. Step 13

Step 13a: Using a spring hook or similar tool, hook the free end of the spring and rotate it 90 degrees clockwise. The open end of the spring hook should be facing inward toward the mechanism.

Figure 14. Step 13a

Step 13b: Pull the spring through and attach to the mounting plate, as shown.

Figure 15. Step 13b

**IMPORTANT**
ATTACHING THE SPRING IN THIS MANNER WILL CAUSE MALFUNCTION OF THIS KIT.

The spring SHALL NOT be mounted in this orientation.

Figure 16. Incorrect spring mounting
**Step 14:** If it is necessary to replace the existing trip lever, remove the existing E-Clip from shaft of mechanism, and slide old trip lever off of mechanism shaft. Slide new trip lever (M) onto mechanism shaft. Fasten lever in place with M3.2 retaining ring (H) as shown. Attach remaining end of cable assembly to mounting hole on trip lever with trip lever screw (N).

**Step 14a:** Note operation of trip lever when rotating key. When the key is rotated clockwise to the vertical position, the trip lever is pulled down, which locks out the breaker.

**Step 15:** If the breaker includes an operations counter, install it to the back of the lock mounting plate with two M3.5 x 8 mm self-tapping screws. Refer to IL2C14767 for complete operations counter installation instructions.

**Step 16:** Before reinstalling front cover, perform the following functional checks:
1. Verify if a UVR is installed. It may have to be temporarily removed to perform checks.
2. With no key, the breaker is OPEN and cannot CLOSE.
3. With the key installed and rotated 90 degrees clockwise, the breaker is fully functional.
4. The key cannot be removed when the breaker is CLOSED.
5. The key cannot turn the breaker OFF.
6. Key removal only occurs when breaker is OFF.

**Step 17:** Reinstall the front cover.

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