Installation instructions for Castell key interlock kit (2C12891G22) 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 (in cylinder) and rotated, the breaker is fully functional
• The key cannot be removed when the breaker is ON (closed). 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

• M10 socket with 1/4-inch drive
• 1-7/16-inch (36 mm) hole saw/drill
• #1 Phillips head screwdriver
• Flat blade screwdriver
• Needle-nose pliers
• 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) Castell lock CL1019 with key CL1062—specify unique lock lettering code when ordering (Castell keylock not supplied)
(C) Castell keylock mounting plate
(D) Interlock adapter
(E) Hold-down bracket
(F) Torsion spring
(G) Spring pin
(H) Hex standoff
(I) Extension spring (two, one spare)
(J) Adapter screw
(K) Standoff screw (1/8-inch shoulder)
(L) Interlock cable
(M) Retaining clip (M5 x 0.7)
(N) Interlock lever
(O) Lock mounting plate screw (three)
(P) Interlock lever screw (M3.5 x 10 tapping)

Figure 1. Contents of kit
Installation of key interlock

Proceed with the following 14 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, drill a 1-7/16-inch (36 mm) hole using existing countersink on inside of cover as a pilot guide.

**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.

**Step 4:** Snap the interlock arm assembly (A) into place on the shaft as shown.

**Step 5:** Remove existing screws from the back of the lock cylinder (B), and use one screw to mount the lock cylinder to the mounting plate (C). Note the orientation of the key in this step and subsequent steps, and the orientation of the slot in the lock cylinder when mounting to the lock mounting plate.

**Step 6:** Assemble the interlock cable (L), hex standoff (H), and the interlock adapter (D) with the adapter screw (J) and standoff screw (K).

**Step 7:** Mount the assembly from Step 5 to the assembly from Step 6 as shown. Note the key alignment orientation with the standoff.
Step 8: Mount the torsion spring (F) and the hold-down bracket (E) to the assembly from Step 7 using spring pin (G), and the flathead screw from the lock assembly. Note the spring winding direction as shown in the side view.

Figure 8. Step 8

Step 9: Mount the assembly from Step 8 to the breaker as shown using three lock plate mounting screws (O).

Figure 9. Step 9

Step 10: Connect extension spring (I) between interlock arm assembly (A) and mounting plate (C). Attach one end of the spring to the interlock arm assembly such that the free end of the spring is facing downward, as shown.

Step 10a: 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 11. Step 10a

Step 10b: Pull the spring through and attach to the mounting plate, as shown.

Figure 12. Step 10b

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

The spring SHALL NOT be mounted in this orientation.

Figure 13. Incorrect spring mounting
**Step 11:** Turn key assembly clockwise to create slack during this cable installation. Replace the interlock lever (N), and capture in place with the retaining clip (M). Attach the interlock cable with the interlock lever screw (P).

![Figure 14. Step 11](image)

**Step 12:** Rotate the key counterclockwise to lock out interlock as shown.

If an operations counter was previously removed in **Step 3**, re-install it to the back of the new lock mounting plate using two M3.5 x 8 mm self-tapping screws. Refer to IL2C14767 for complete operations counter installation instructions.

![Figure 15. Step 12](image)

**Step 13:** 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 14:** Re-install the front cover removed in **Step 1**. Key removal is required to install the front cover. The key must be in place for breaker operation.

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