Installation instructions for Kirk Key Interlock Kit (2C12891G21) in Magnum® low voltage circuit breakers

⚠️ WARNING

(1) ONLY QUALIFIED ELECTRICAL PERSONNEL SHOULD BE PERMITTED TO WORK ON THE EQUIPMENT.
(2) ALWAYS DE-ENERGIZE PRIMARY AND SECONDARY CIRCUITS IF A CIRCUIT BREAKER CANNOT BE REMOVED TO A SAFE WORK LOCATION.
(3) DRAWOUT CIRCUIT BREAKERS SHOULD BE LEVERED (RACKED) OUT TO THE DISCONNECT POSITION.
(4) ALL CIRCUIT BREAKERS SHOULD BE SWITCHED TO THE OFF POSITION AND MECHANISM SPRINGS DISCHARGED. FAILURE TO FOLLOW THESE STEPS FOR ALL PROCEDURES DESCRIBED IN THIS INSTRUCTION LEAFLET COULD RESULT IN DEATH, BODILY INJURY, OR PROPERTY DAMAGE.

⚠️ WARNING

THE INSTRUCTIONS CONTAINED IN THIS IL AND ON PRODUCT LABELS HAVE TO BE FOLLOWED. OBSERVE THE FIVE SAFETY RULES:
- DISCONNECTING
- ENSURE THAT DEVICES CANNOT BE ACCIDENTALLY RESTARTED
- VERIFY ISOLATION FROM THE SUPPLY
- EARTHING AND SHORT-CIRCUITING
- COVERING OR PROVIDING BARRIERS TO ADJACENT LIVE PARTS
DISCONNECT THE EQUIPMENT FROM THE SUPPLY. USE ONLY AUTHORIZED SPARE PARTS IN THE REPAIR OF THE EQUIPMENT. THE SPECIFIED MAINTENANCE INTERVALS AS WELL AS THE INSTRUCTIONS FOR REPAIR AND EXCHANGE MUST BE STRICTLY ADHERED TO PREVENT INJURY TO PERSONNEL AND DAMAGE TO THE SWITCHBOARD.
Section 1: General information

This key interlock provides the following safety features:

1. With no key, the breaker is “OPEN” and cannot close.
2. With the key “ON”, the breaker is fully functional.
3. 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.

Figure 1. Contents of kit 2C12891G21

Required tools
- 1/4 inch socket drive
- 10 mm socket
- #2 Phillips head screwdriver
- 7/16 inch (36 mm) hole saw
- 3/32 hex key
- 9/64 hex key
- Arbor press, bench vise, or equivalent

(K) (Steps 1–5) can be pre-assembled if no portable Arbor press, bench vise, or equivalent is available on job site.

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

(A) Kirk® Key Lock #KC40.10 (Kirk keylock not supplied).
(See your local Kirk Key Interlock company for distribution.)
(B) Bushing
(C) Kirk lock mounting plate
(D) Torsion spring
(E) Guide pin
(F) Cylinder interlock adapter
(G) Hex standoff
(H) 1/2 inch cap screw
(I) Interlock cable
(J) Shoulder screw 1/8 inch
(K) #3–48 x 3/8 flathead screw (2)
(L) Interlock arm assembly
(M) #5–40 x 0.25 inch machine screw (3)
(N) Extension spring
(O) D-latch trip lever (NOT ALWAYS NEEDED)
(P) M3.5 x 10 tapping screw
Section 2: Installation of key locks

Proceed with the following 14 steps:

**IMPORTANT**

**DO NOT REINSERT KEY UNTIL STEP 6.**

**Step 1:** First remove key from key lock (A). Then remove 2 screws from back of key lock and discard the cam arm and screws. Remove 1 knurled nut from barrel of lock.

![Figure 2. Step 1](image)

**Step 2:** Remove second knurled nut from key lock body and place bushing (B) on cylinder body. Note orientation of key lock, then mount to lock mounting plate (C) with the knurled nut.

**IMPORTANT**

**DO NOT INSERT KEY.**

![Figure 3. Step 2](image)

**Step 3:** Put torsion spring (D) on guide pin (E). Note the orientation of spring legs, and carefully press the knurled end of guide pin into hole in key lock body to the depth of the knurl. This step requires an Arbor press, vise, or equivalent.

**IMPORTANT**

**DO NOT INSERT KEY.**

![Figure 4. Step 3](image)

**Step 4:** Mount cylinder interlock adapter (F) to hexagonal standoff (G) with 1/2 inch long cap head screw (H) and tighten securely. Attach cable assembly (I) to other end of hexagonal standoff with shoulder screw (J).

**IMPORTANT**

**DO NOT INSERT KEY.**

![Figure 5. Step 4](image)
Step 5: Mount interlock assembly to rear of key lock with two #3-48 x 3/8 inch long flathead screws (K).

**DO NOT INSERT KEY.**

Step 6: Using pliers, wind free leg of torsion spring (F) clockwise approximately 360 degrees, and hook under lip of interlock adapter as shown.

Step 7: Check that the breaker is “OPEN” and discharged. Using the 10 mm socket and 1/4 inch driver, remove the front cover of the breaker by loosening 4 mounting bolts (6 bolts if four-pole breaker), and holding the charging handle down approximately 45 degrees to simplify removal.

Step 8: Remove plug from Keylock hole. If hole does not exist, drill a 1-7/16 inch (36 mm) hole using existing drill point countersink on inside of cover as a pilot guide. Use a hole saw such as a Starrett #KAVH0176.

![Figure 6. Step 5](image)

**Figure 6. Step 5**

![Figure 7. Step 6](image)

**Figure 7. Step 6**

![Figure 8. Steps 7 and 8](image)

**Figure 8. Steps 7 and 8**

Step 9: Remove existing key lock mounting plate (if installed) from the universal mounting bracket and discard it. If there is an operations counter mounted to it, remove it before discarding and save for Step 13.

![Figure 9. Step 9](image)

**Figure 9. Step 9**
Installation instructions for Kirk Key Interlock Kit (2C12891G21) in Magnum low voltage circuit breakers

**Step 10**: Snap interlock arm assembly (L) into place on shaft, with steel spring flush against mechanism side plate.

![Figure 10. Step 10](image)

**Step 11**: Mount lock/interlock assembly to plate mounting bracket with 3 machine screws (M) supplied. Connect tension spring (N) between interlock arm assembly (L) and lock mounting plate (C).

![Figure 11. Step 11](image)

**Step 12**: Insert key and rotate lock and standoff assembly. Connect cable assembly to new trip lever with tapping screw (Q). DO NOT OVERTIGHTEN. See **Step 12a** for old lever replacement.

![Figure 12. Steps 12 and 12a](image)

**Step 12a**: If installed trip lever (O) is not provisioned to accept tapping screw (Q), replace it by prying off existing e-clip and sliding off the trip lever. Install new trip lever (O) and reinstall e-clip.

**Step 13**: If the breaker includes an operations counter, mount it to the back of the lock mounting plate with 2 M3.5 x 8 mm self tapping screws. Refer to IL2C14767H01 for complete operations counter installation instructions.

**Step 14**: 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”.

---

**Note**: Illustrations and diagrams may not be to scale. Always refer to the actual product for precise measurements and specifications.
Disclaimer of warranties and limitation of liability

The information, recommendations, descriptions, and safety notations in this document are based on Eaton’s (“Eaton”) experience and judgment, and may not cover all contingencies. If further information is required, an Eaton sales office should be consulted.

Sale of the product shown in this literature is subject to the terms and conditions outlined in appropriate Eaton selling policies or other contractual agreement between Eaton and the purchaser.

THERE ARE NO UNDERSTANDINGS, AGREEMENTS, WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY, OTHER THAN THOSE SPECIFICALLY SET OUT IN ANY EXISTING CONTRACT BETWEEN THE PARTIES. ANY SUCH CONTRACT STATES THE ENTIRE OBLIGATION OF EATON. THE CONTENTS OF THIS DOCUMENT SHALL NOT BECOME PART OF OR MODIFY ANY CONTRACT BETWEEN THE PARTIES.

In no event will Eaton be responsible to the purchaser or user in contract, in tort (including negligence), strict liability, or otherwise for any special, indirect, incidental, or consequential damage or loss whatsoever, including but not limited to damage or loss of use of equipment, plant or power system, cost of capital, loss of power, additional expenses in the use of existing power facilities, or claims against the purchaser or user by its customers resulting from the use of the information, recommendations, and descriptions contained herein.

The information contained in this manual is subject to change without notice.
Installation instructions for Kirk Key Interlock Kit (2C12891G21) in Magnum low voltage circuit breakers