

# I-Line™ Panelboard with IP2X Bus Shutters per IEC60529

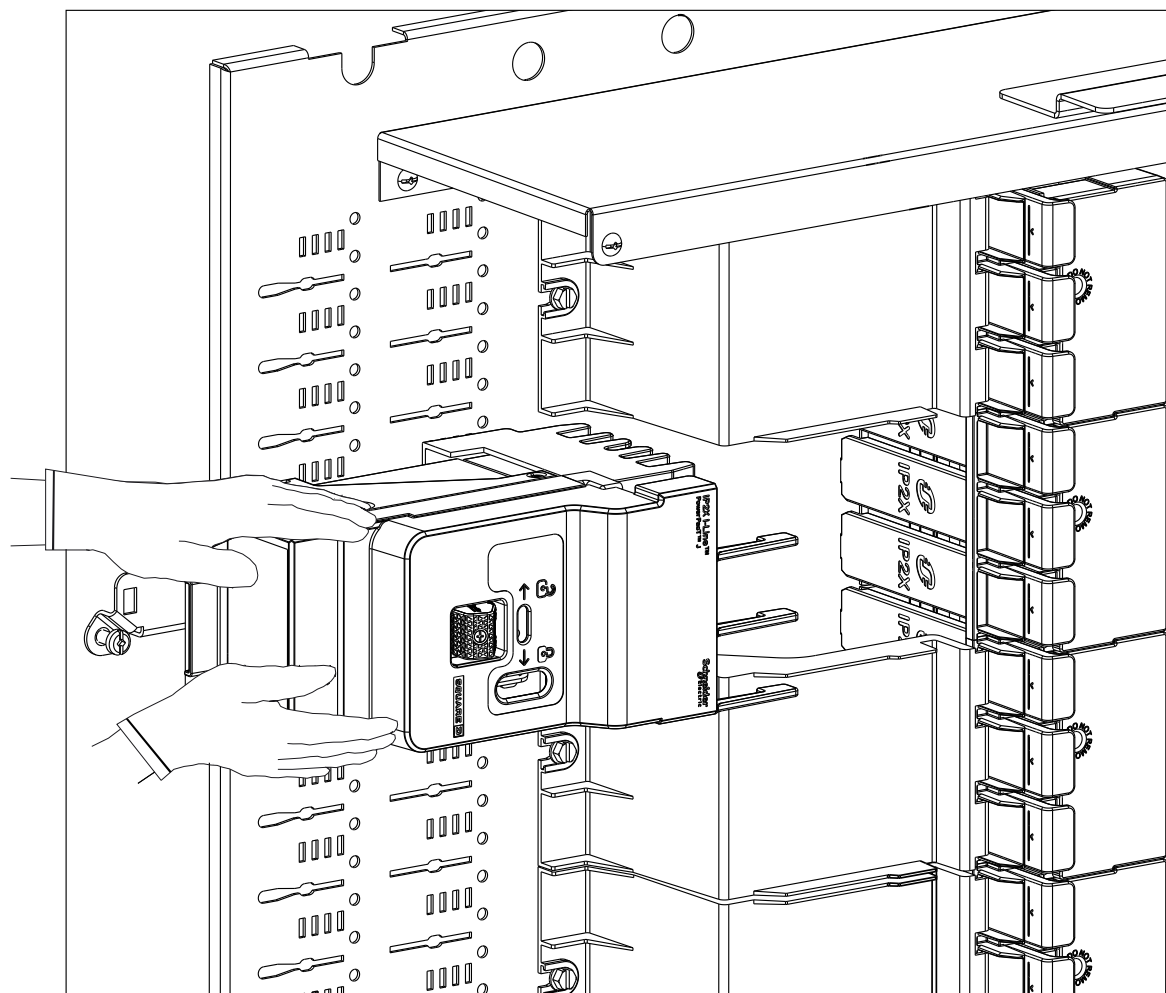
## Power Distribution Panelboards

### Instruction Bulletin

This bulletin contains instructions for installing and removing Circuit Breakers on I-Line Panelboards with IP2X Bus Shutters, and IP2X blank fillers to fill empty spaces.

BQT43203

Release date 5/2024



# Legal Information

The information provided in this document contains general descriptions, technical characteristics and/or recommendations related to products/solutions.

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# Safety Information

Read these instructions carefully and examine the equipment to become familiar with the device before attempting to install, operate, service, or maintain it. The following special messages may appear throughout this user guide or on the equipment to warn of hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of either symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.




This is the safety alert symbol. It is used to alert you to personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

 **DANGER**

**DANGER** indicates a hazardous situation which, if not avoided, **will result in** death or serious injury.

 **WARNING**

**WARNING** indicates a hazardous situation which, if not avoided, **could result in** death or serious injury.

 **CAUTION**

**CAUTION** indicates a hazardous situation which, if not avoided, **could result in** minor or moderate injury.

**NOTICE**

**NOTICE** is used to address practices not related to physical injury.

**NOTE:** Provides additional information to clarify or simplify a procedure.

# Please Note

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction, installation, and operation of electrical equipment and has received safety training to recognize and avoid the hazards involved.

Electrical equipment should be transported, stored, installed, and operated only in the environment for which it is designed.



## Product Related Information

Read and understand the following precautions before performing any procedures in this guide.

### DANGER

#### HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E, CSA Z462, or NOM-029-STPS.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Turn OFF all power supplying this equipment before working on or inside equipment, or if energized work is necessary, follow all OSHA and NFPA 70E safe work practices for energized electrical equipment work.
- Always use properly rated voltage sensing device to confirm the electrical state of equipment.
- All unused spaces must be filled with IP2X blank fillers and blank extensions.
- Replace all devices, doors and covers after completion of work.

**Failure to follow these instructions will result in death or serious injury.**



**WARNING:** This product can expose you to chemicals including Nickel compounds, which are known to the State of California to cause cancer and Bisphenol A (BPA), which is known to the state of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

# About the Book

## IP Codes Designation

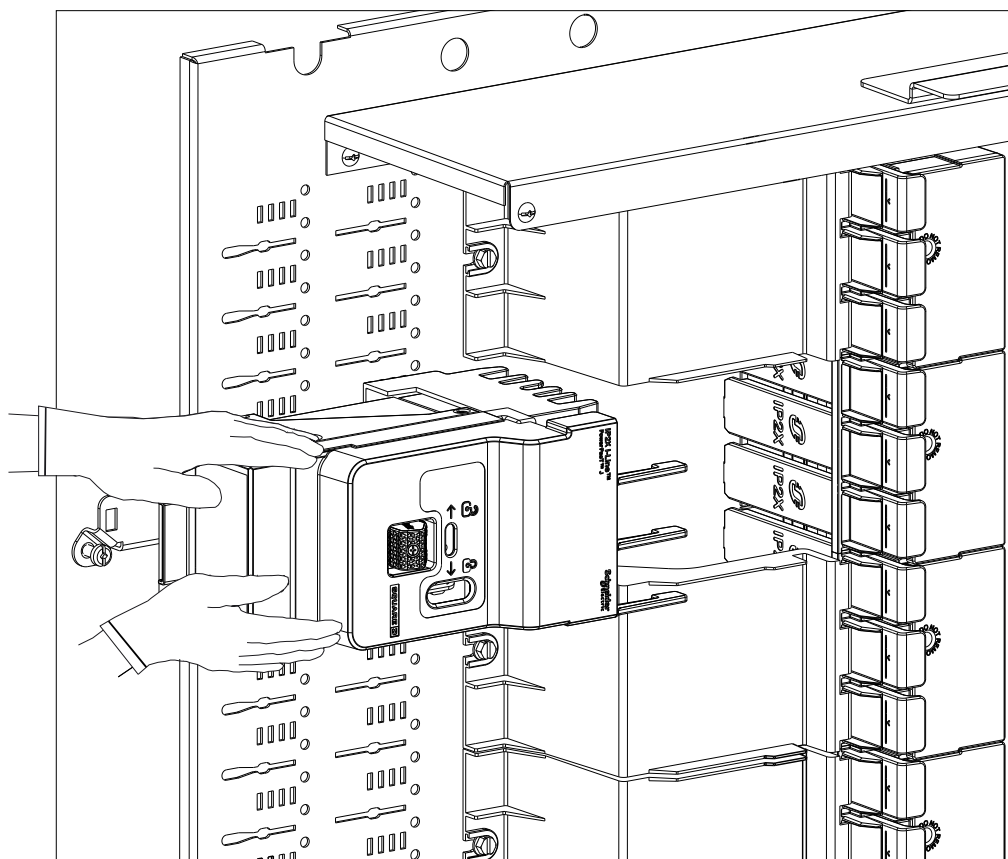
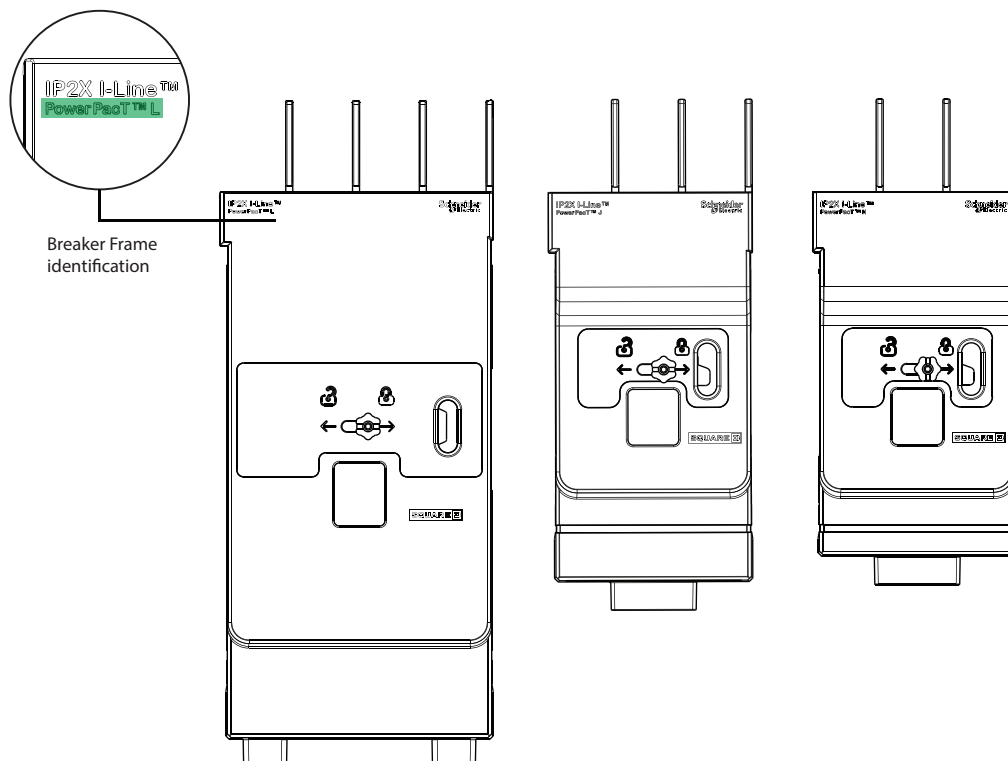
In accordance with IEC60529, IP code indicates the degrees of protection provided by an enclosure of electrical equipment. The first numeral indicates the degree of protection against access to hazardous parts, ingress of solid foreign objects. Number 2 means protected against access to hazardous parts by preventing or limiting the ingress of a part of the human body (finger), or an object held by a person (solid foreign objects of 12,5 mm Ø and greater) The second numeral digit indicates the degree of protection against ingress of water. In this case, "X" indicates there is no protection rating.

## IP2X Circuit Breaker Installation

The IP2X I-Line Bus Assembly is covered by individual 1.5 in. shutters, retained by an interlock system. The IP2X Circuit Breaker Mounting Shield (BQT12883, BQT12884, or BQT12881) found in ILBMSIP2X is required to release the corresponding shutters in front of the circuit breaker to be installed.

**Table 1 - ILBMSIP2X — Kit Contents**

Quantity	Part Number	To be used with Circuit Breaker Catalog numbers	
1	BQT12883	PowerPacT H (15-150A)	H-frame with ON/OFF Fixed padlock and IP2X PowerPacT H Mounting Bracket
1	BQT12884	PowerPacT J (150-250A)	J-frame with ON/OFF Fixed padlock suffix
1	BQT12881	PowerPacT L (250-600A)	L-frame with ON/OFF Fixed padlock suffix
<p><b>NOTE:</b> ON/OFF fixed padlock: YP suffix or kit HJPA for PowerPacT H and PowerPacT J, S32631 for PowerPacT L.</p> <p><b>NOTE:</b> IP2X PowerPacT H Mounting Bracket: Y068 suffix or kit HJBSW.</p>			



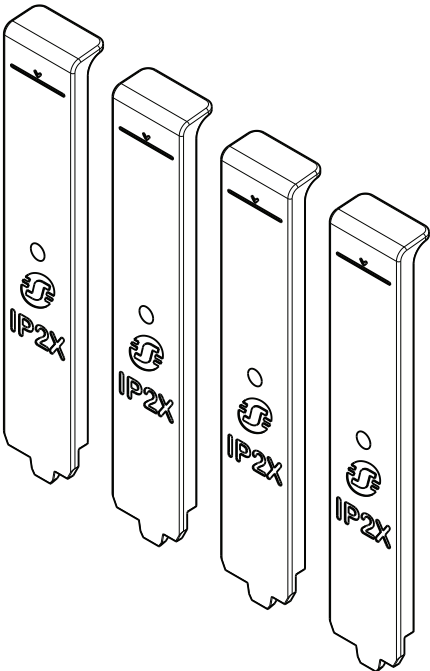
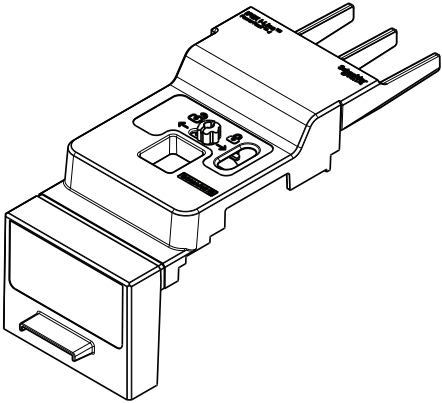
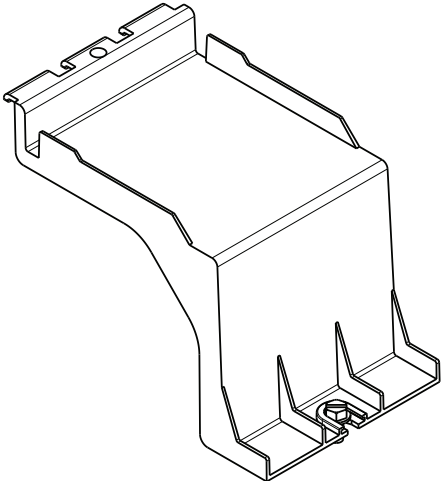
## ***NOTICE***

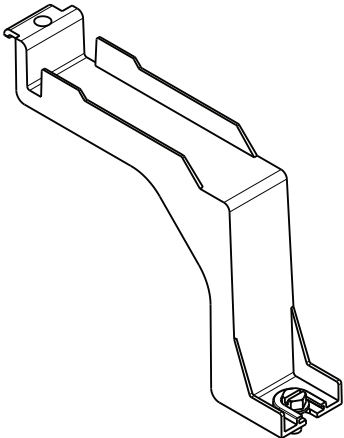
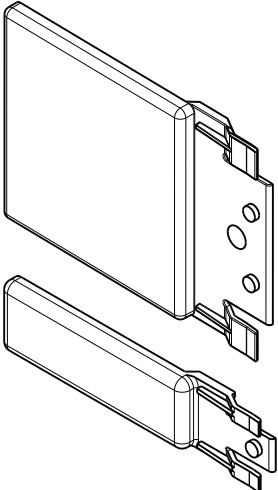
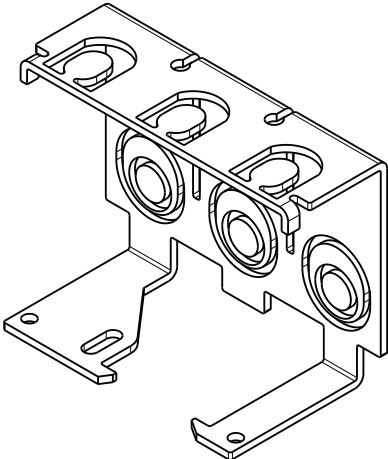
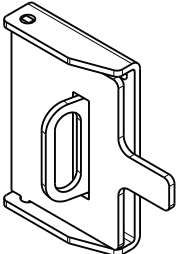
### **IP2X RATING VOID**

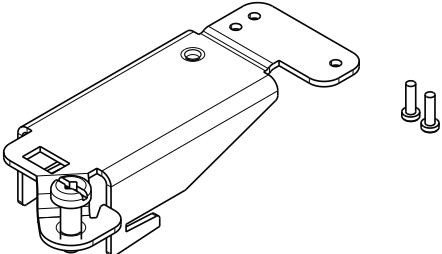
- The I-Line Panelboard Bus Assembly is IP2X per IEC60529 rated only when all shutters, all IP2X blank fillers, all blank extensions and/or all circuit breakers are installed.
- When installing or removing a circuit breaker, use the corresponding circuit breaker mounting shield to release or re-install the shutters.
- Keep all circuit breaker mounting shields, shutters, IP2X blank fillers, and blank extensions for future use, store at room temperature.

**Failure to follow these instructions can result in a voided IP2X rating.**

Kit Contents

Kit Content	Catalog Number	Description	Application
	ILSSKIP2X	1.5 in. Shutters kit IP2X I-Line  Quantity 4	Panelboard
	ILBMSIP2X  Refer to ILBMSIP2X — Kit Contents, page 6  ILBMSIP2X — Kit Contents, page 6	Circuit Breaker Mounting Shield Kit, I-Line IP2X  PowerPacT H, Quantity 1  PowerPacT J, Quantity 1  PowerPacT L, Quantity 1	Circuit Breaker  PowerPacT H, PowerPacT J, PowerPacT L
	HNM4BLIP2X	4.5 in. Blank Filler I-Line IP2X  Quantity 3	Panelboard

Kit Content	Catalog Number	Description	Application
	HNM1BLIP2X	1.5 in. Blank Filler I-Line IP2X  Quantity 3	Panelboard
	HLW4EBL HLN1BL HLN4BL HLN4EBL HLW4EBL	Blank extensions	Panelboard  Instruction Bulletin: 80030-695-02
	HDTC	PowerPacT H Lugs shield	Circuit Breaker
	JDTC	PowerPacT J Lugs shield	Instruction Bulletin: 48044-002-04
	LGJTC	PowerPacT L Lugs shield	
	HJPA	PowerPacT H & J On/Off Fixed Padlock	Circuit Breaker  Instruction Bulletin: JYT65472
	S32631	PowerPacT L On/Off Fixed Padlock	Circuit Breaker  Instruction Bulletin: 48049-246-02

Kit Content	Catalog Number	Description	Application
	HJBSW	PowerPacT H Mounting Bracket	Circuit Breaker Instruction Bulletin: BQT94274

**NOTE:** Refer to the I-Line Circuit Breaker Power Distribution Panelboard Instruction Bulletin 80043-309-20.

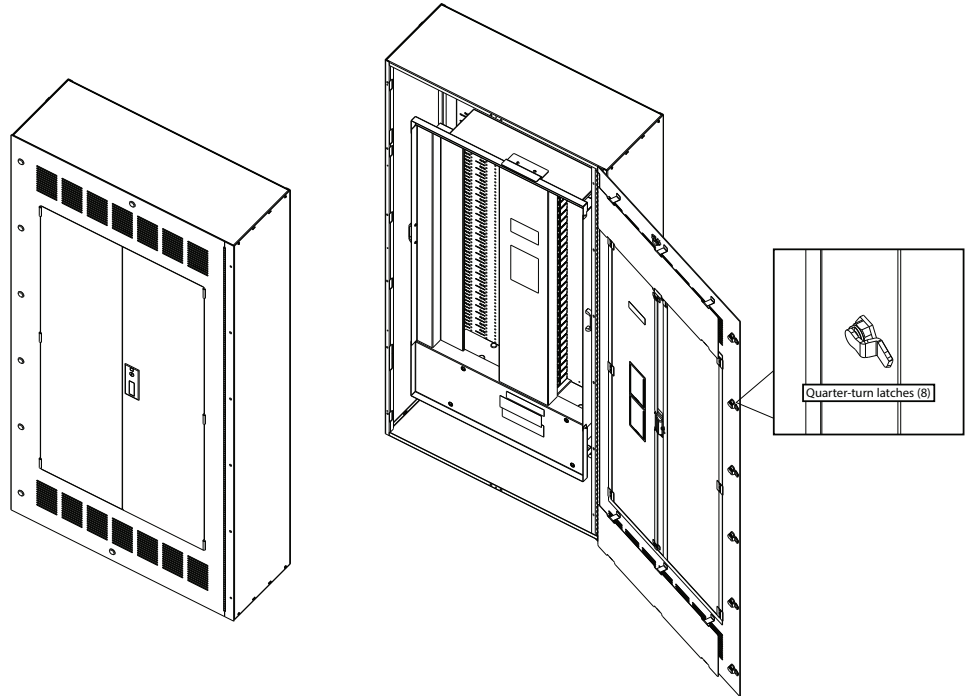
## Necessary Tools

- Pozidriv #2 screwdriver
- Slotted screwdriver

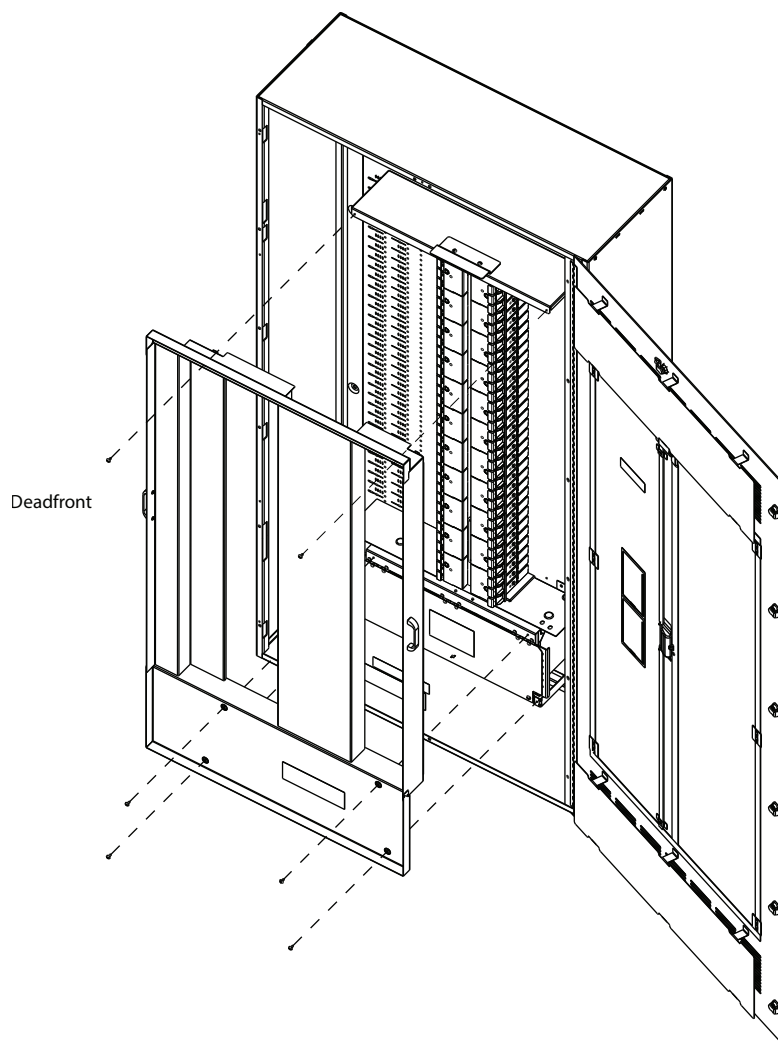


# Removing the Deadfront Assembly

1. Turn OFF all power supplying this equipment before working on or inside equipment, or if energized work is necessary, follow all OSHA and NFPA 70E safe work practices for energized electrical work.
2. Open the trim front by turning the eight quarter turn latches.



3. Remove the deadfront, retaining the screws for reuse.



## **⚠ DANGER**

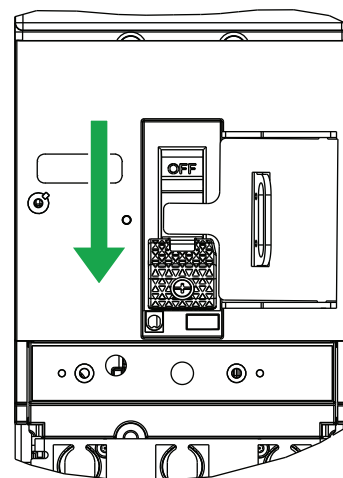
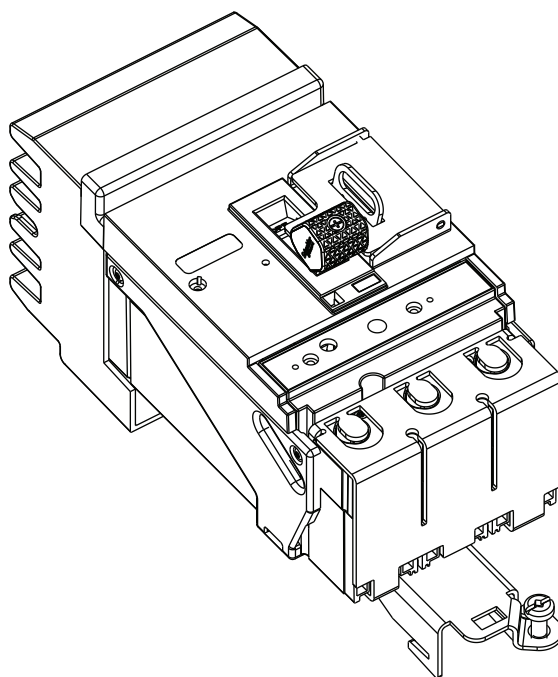
### **HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH**

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E, CSA Z462, or NOM-029-STPS.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Turn OFF all power supplying this equipment before working inside equipment, or if energized work is necessary, follow all OSHA and NFPA 70E safe work practices for energized electrical equipment work.
- Remove IP2X blank filler(s) where circuit breaker will be installed. Prior to circuit breaker installation, all unused spaces must be filled with IP2X blank fillers and blank extensions, rearrange IP2X blank fillers and blank extensions if necessary.
- Do not disable, remove, or modify IP2X interlock and shutters. Use the corresponding circuit breaker mounting shield for circuit breaker installation and removal.
- Do not remove the circuit breaker from mounting pan until the shutters are fully installed.
- Circuit breaker must remain in OFF position during wiring.

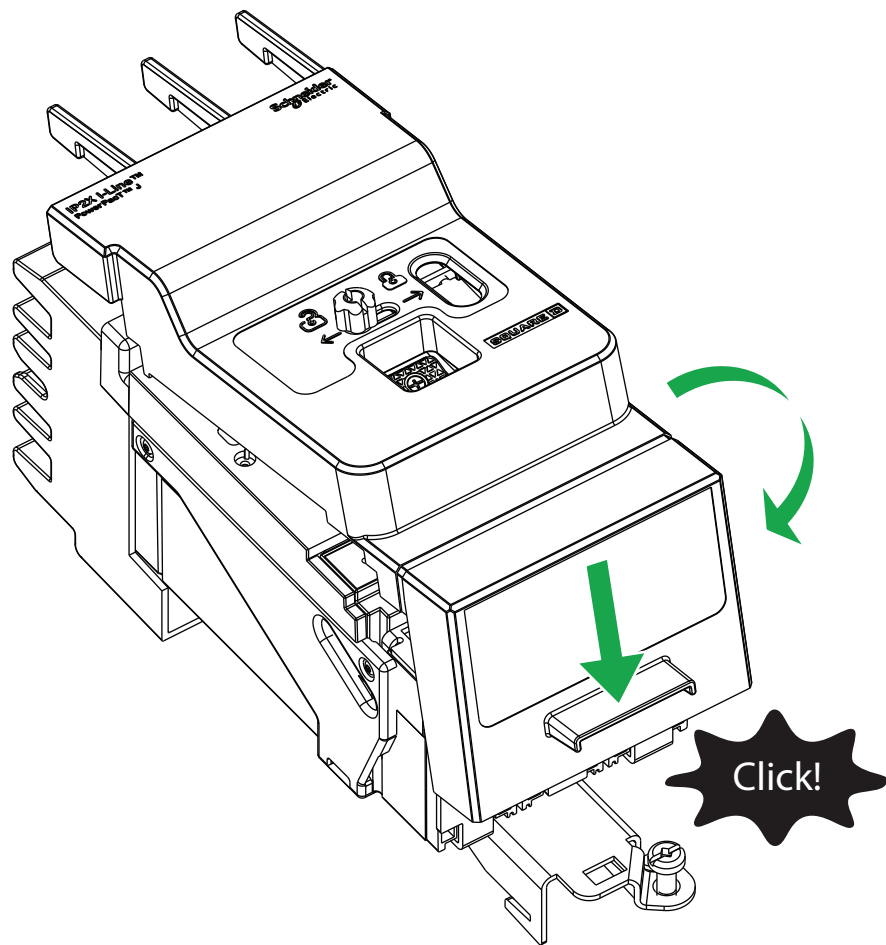
**Failure to follow these instructions will result in death or serious injury.**

# Branch Circuit Breaker Installation

1. Turn the circuit breaker OFF.



- 2. Install the corresponding circuit breaker mounting shield, snap into place at the lugs side.



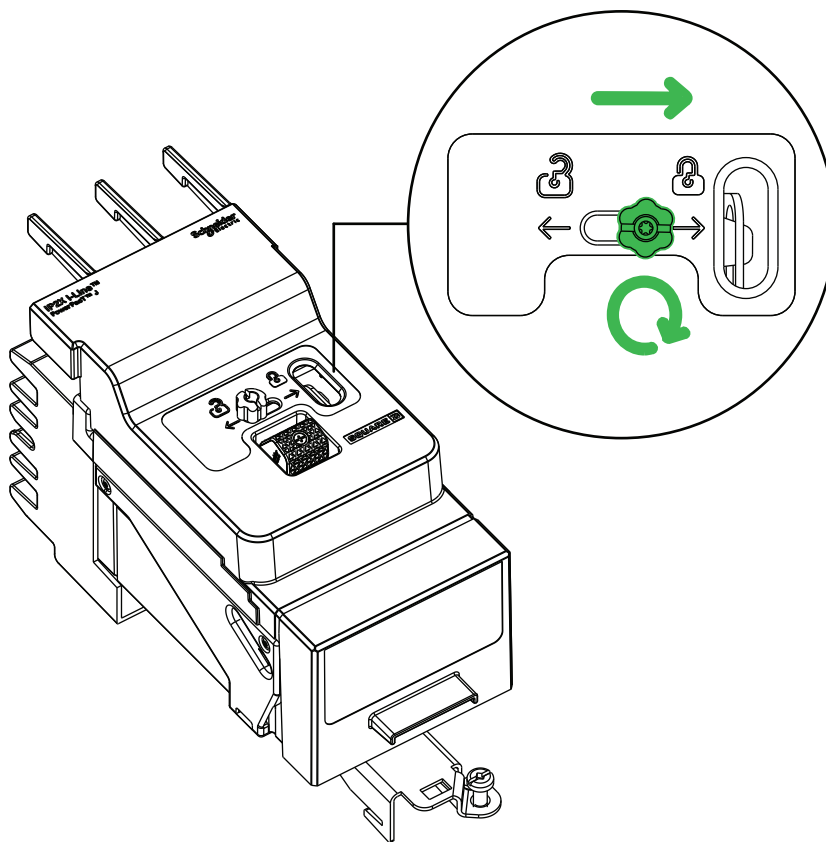
3. Loosen the thumbscrew to slide the locking bracket into the padlock hasp, then tighten the thumbscrew for proper fixation to circuit breaker.

## NOTICE

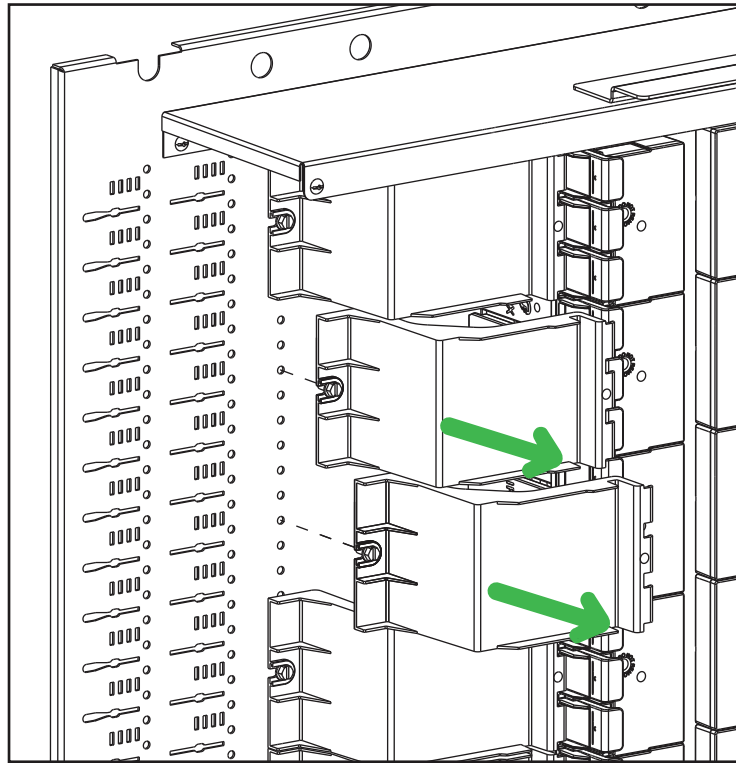
### IP2X CIRCUIT BREAKER MOUNTING SHIELD COMPATIBILITY

- The circuit breaker lug shield must be installed on the load side of the circuit breaker to ensure the circuit breaker mounting shield snaps into place properly.
- Install the ON/OFF fixed padlock onto the circuit breaker to ensure proper fixation of the circuit breaker mounting shield
- Please refer to the kit content table for further details.

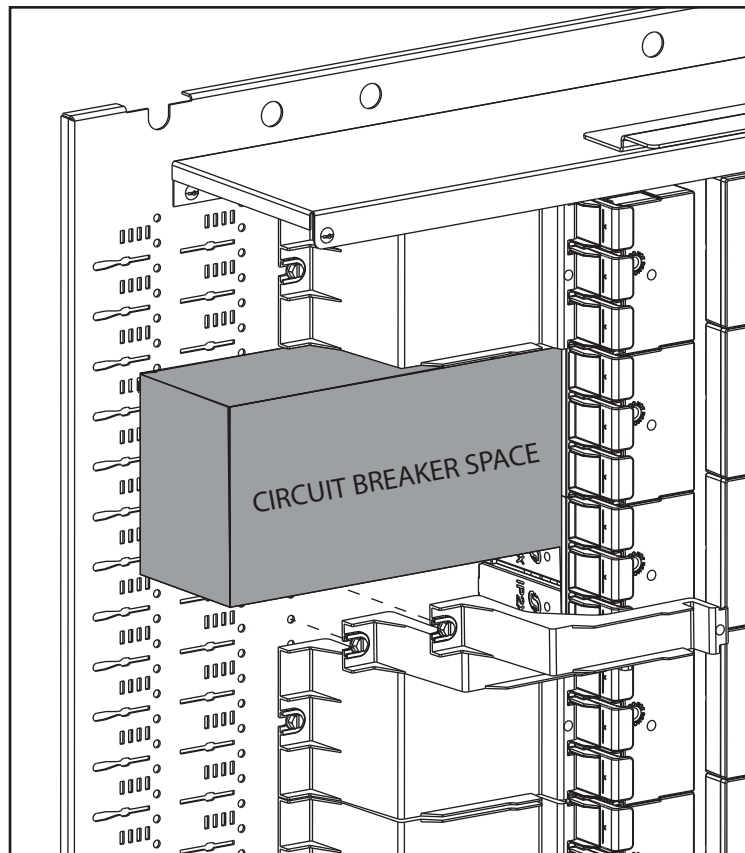
**Failure to follow these instructions can result in equipment damage.**



4. Prior to circuit breaker installation, all unused spaces must be filled with IP2X blank fillers. Remove IP2X blank filler(s) from interior where circuit breaker will be installed.

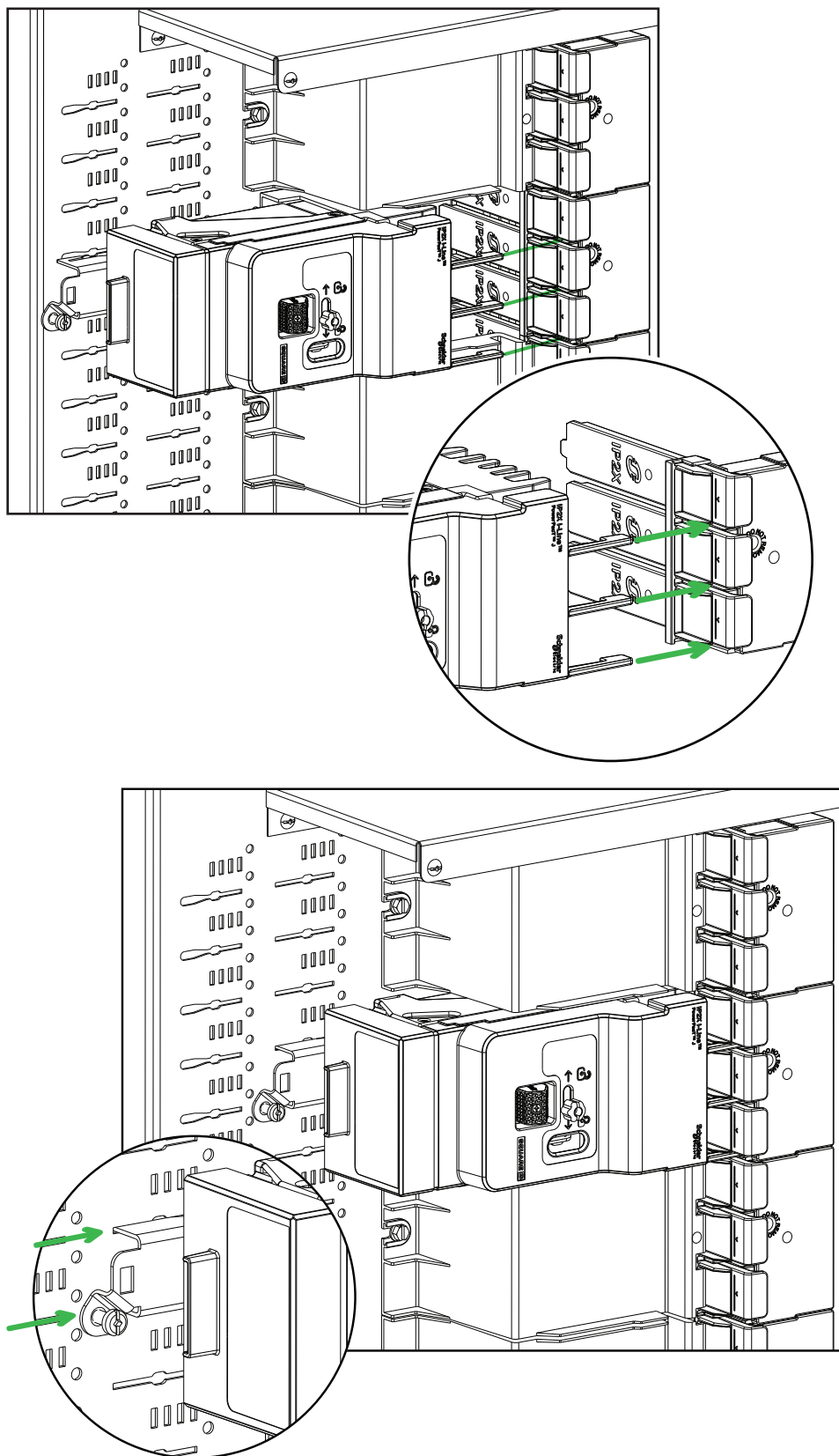


5. Rearrange IP2X blank fillers and blank extensions if necessary.

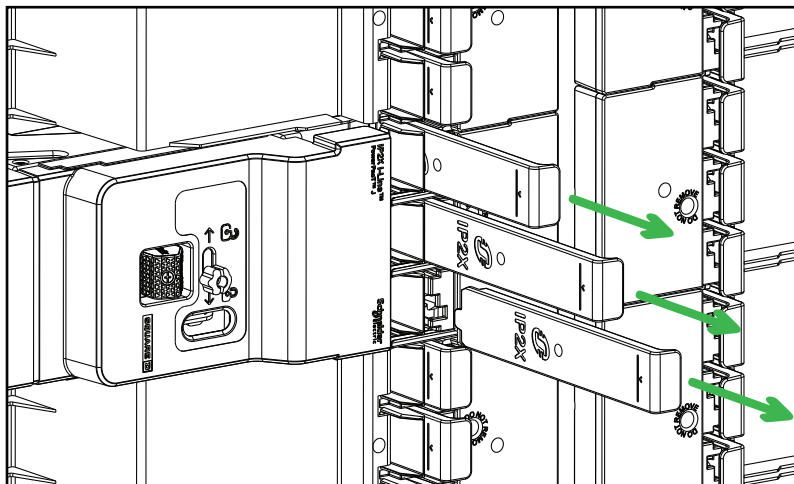


6. Position the circuit breaker with mounting shield installed. Align mounting shield fingers into interlock openings, guiding the circuit breaker and circuit breaker mounting bracket into the slots in the mounting pan.

**NOTE:** PowerPacT H circuit breaker reference must include suffix Y068 (J-Frame mounting bracket). If not, the I-Line mounting bracket must be replaced by kit HJBSW.



7. Remove the corresponding shutters quantity in front of the circuit breaker under installation. Keep shutters for future use.



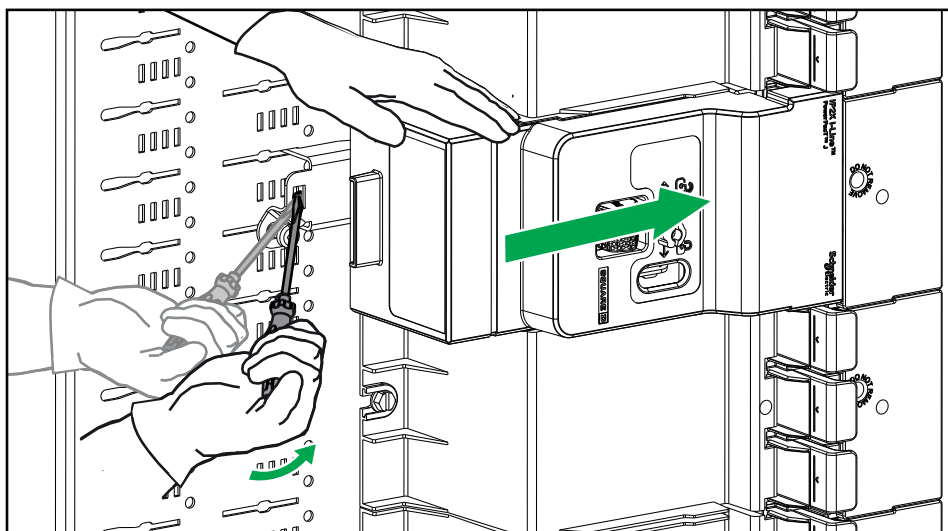
## **⚠ DANGER**

### **HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH**

- Do not remove the circuit breaker from the mounting pan when shutters are removed.

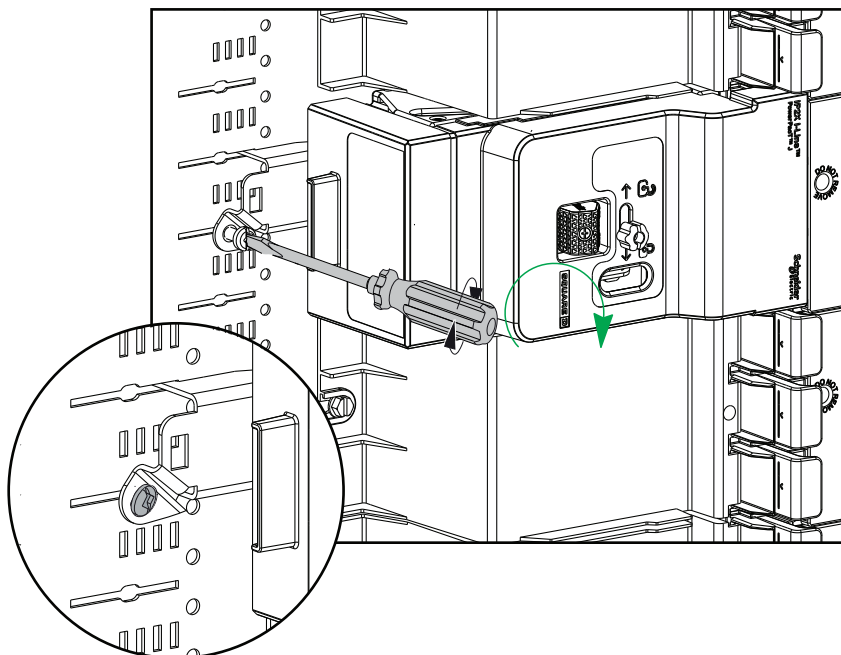
**Failure to follow these instructions will result in death or serious injury.**

8. Place a screwdriver through the rectangular hole in the circuit breaker mounting bracket and into the screwdriver slot in the mounting pan. Ratchet the circuit breaker firmly into the bus bar stack and align the retaining screw with the 7/32 in. (5.6 mm) mounting hole in the pan.

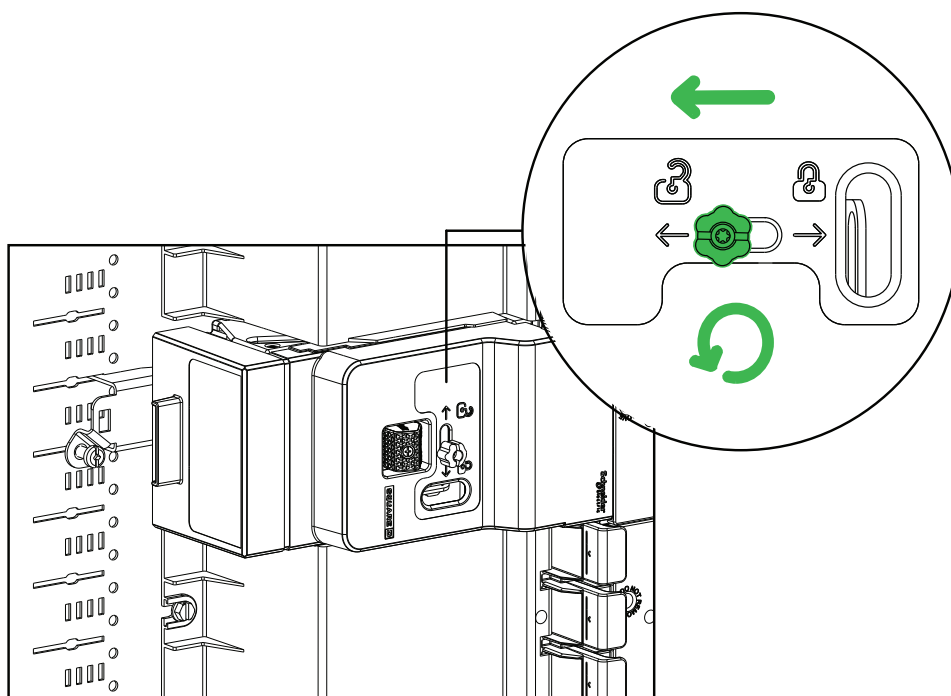




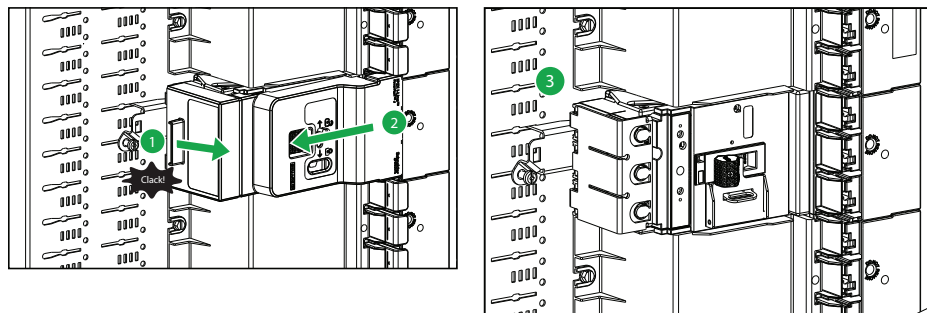
9. Tighten the retaining screw securely to help prevent the circuit breaker from moving.



10. Remove the circuit breaker mounting shield by loosening the thumbscrew to slide the locking bracket out of the padlock hasp.



11. Unsnap the shield from the circuit breaker lugs side.



12. Finalize load side wiring on circuit breaker. Ensure all connections are properly tightened. Follow the circuit breaker markings for wire size and torque value. Ensure the circuit breaker lug shield is in place.

**NOTE:** Reference Instruction Bulletin [Termination Covers Installation Instructions for Molded Case Circuit Breakers](#) for installing cables through load side lug shields.

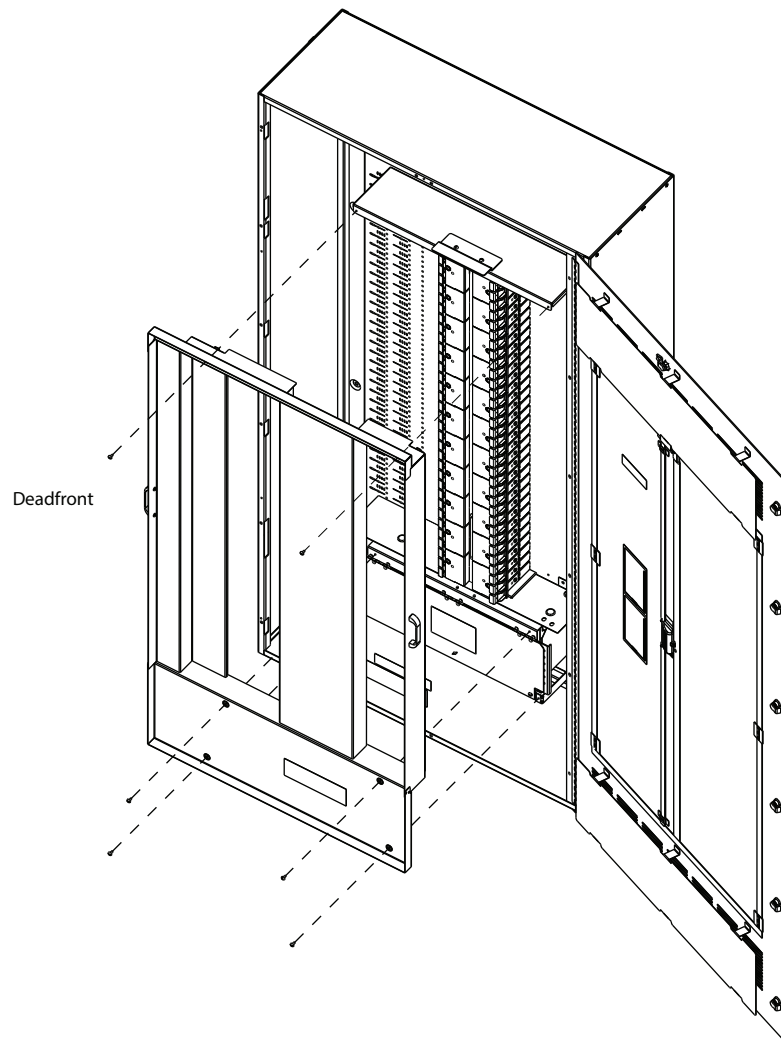
## NOTICE

### HAZARD OF EXCESSIVE HEAT DUE TO LOOSE CONNECTIONS

- Ensure all connections are properly tightened.
- Refer to the torque information label provided on the panelboard before tightening the connections.

**Failure to follow these instructions can result in equipment damage.**

## 13. Reinstall the deadfront.

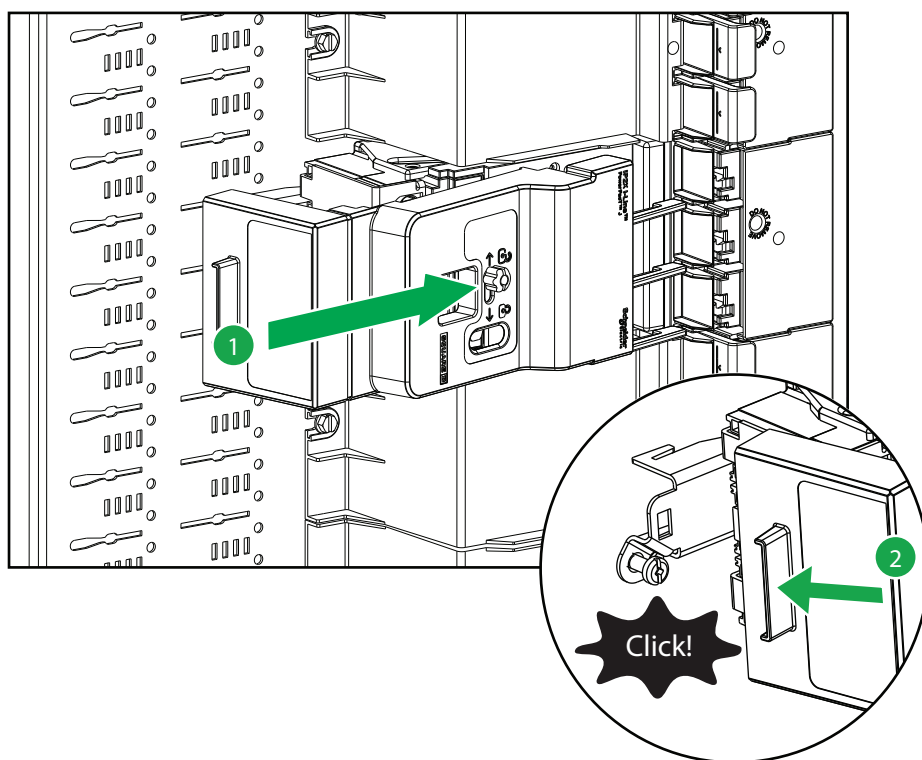
**⚠ DANGER****HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH**

- Before energizing the panelboard, all unused spaces must be filled with IP2X blank fillers and blank extensions.
- Replace all devices, doors, and covers before energizing this equipment.

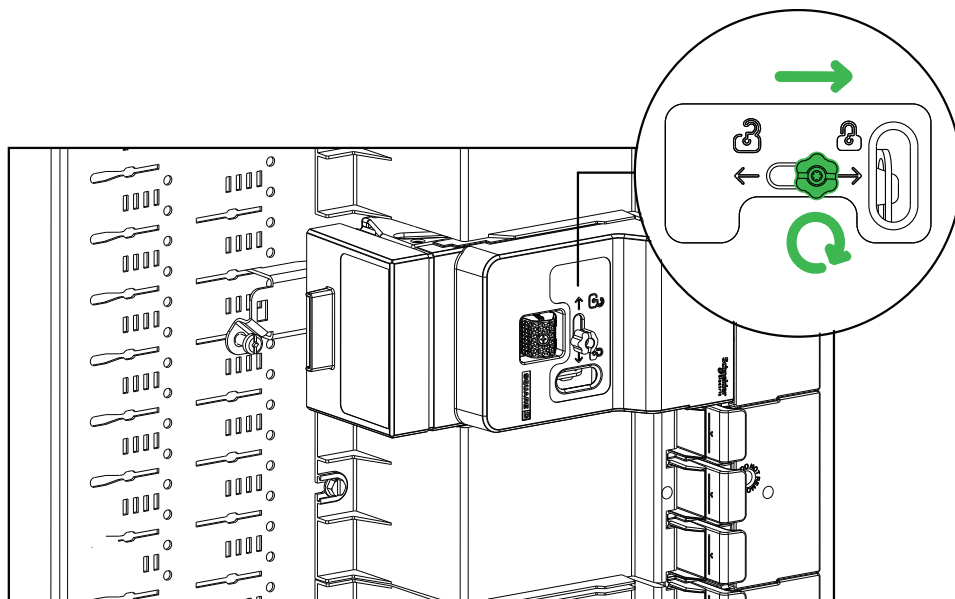
**Failure to follow these instructions will result in death or serious injury.**

## Removing a Branch Circuit Breaker

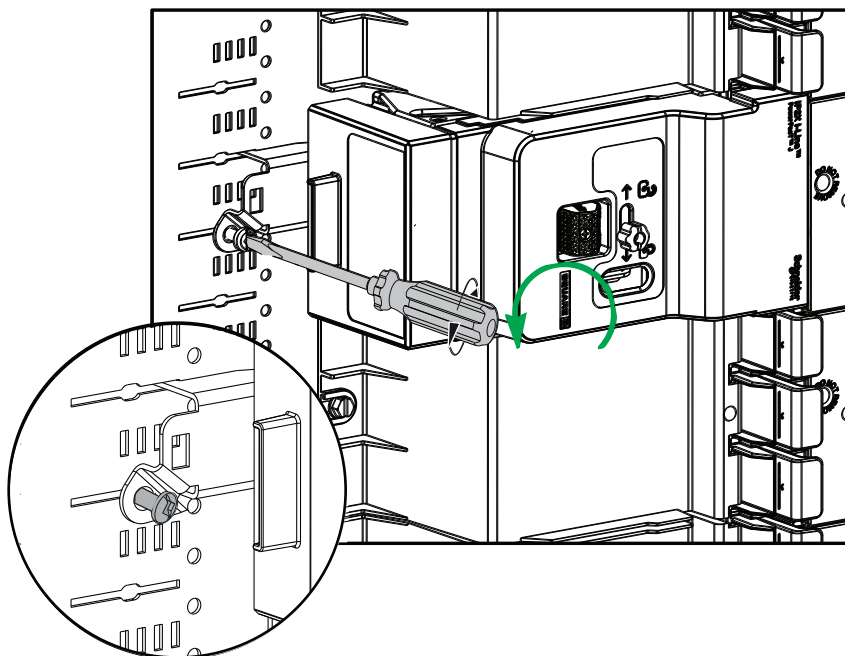
1. Turn OFF all power supplying this equipment before working on or inside equipment, or if energized work is necessary, follow all OSHA and NFPA 70E safe work practices for energized electrical work. Turn OFF the circuit breaker to be removed.
2. Perform the **Removing the Deadfront Assembly** procedure.
3. Remove the circuit breaker wiring.
4. Install the corresponding circuit breaker mounting shield, snap into at the lugs side.



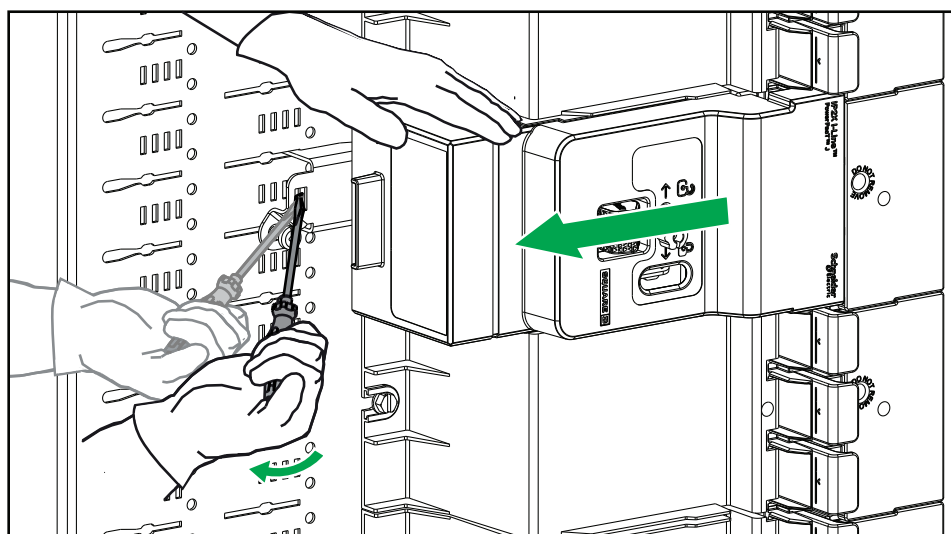
5. Loosen the thumbscrew to slide the locking bracket into the padlock hasp, and tighten the thumbscrew for proper fixation to circuit breaker.



6. Loosen the retaining screw(s) in the circuit breaker mounting bracket until the screw(s) is completely removed from the 7/32 in. (5.6 mm) mounting hole in the mounting pan.

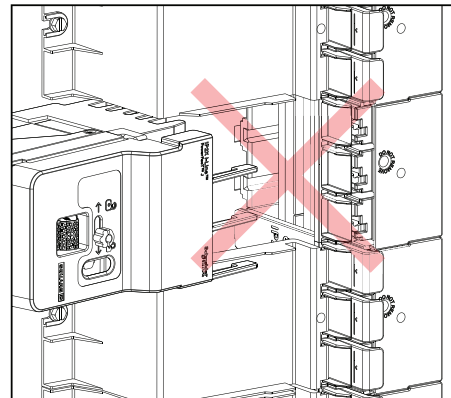
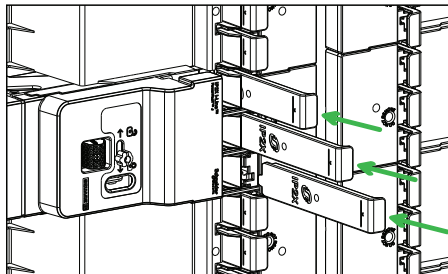


7. Place the screwdriver through the rectangular hole in the circuit breaker mounting bracket and into the screwdriver slot in the mounting pan. Ratchet the circuit breaker away from the bus bar stack until it stops at the back of the slot.



8. Install the corresponding shutters quantity in front of the circuit breaker.

**NOTE:** Use shutter part # BQT12864. More shutters are available from kit # ILSSKIP2X.



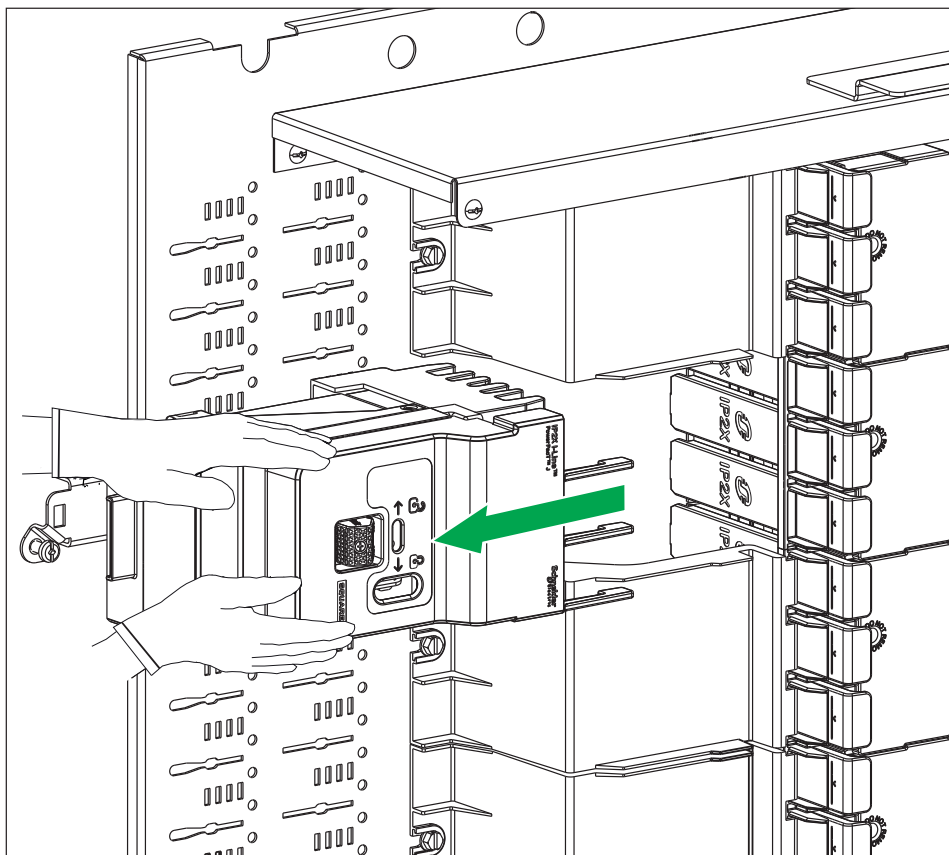
## **⚠ DANGER**

### **HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH**

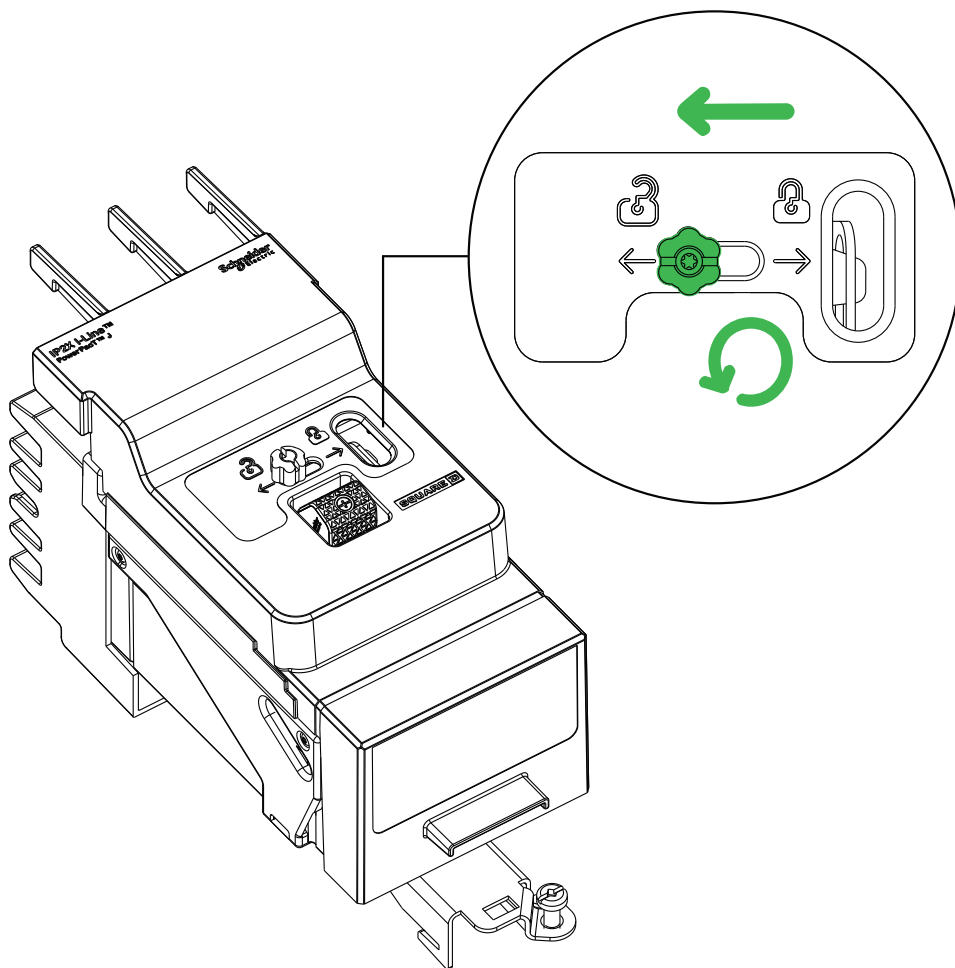
- Do not remove the circuit breaker from the mounting pan when the shutters are removed.

**Failure to follow these instructions will result in death or serious injury.**

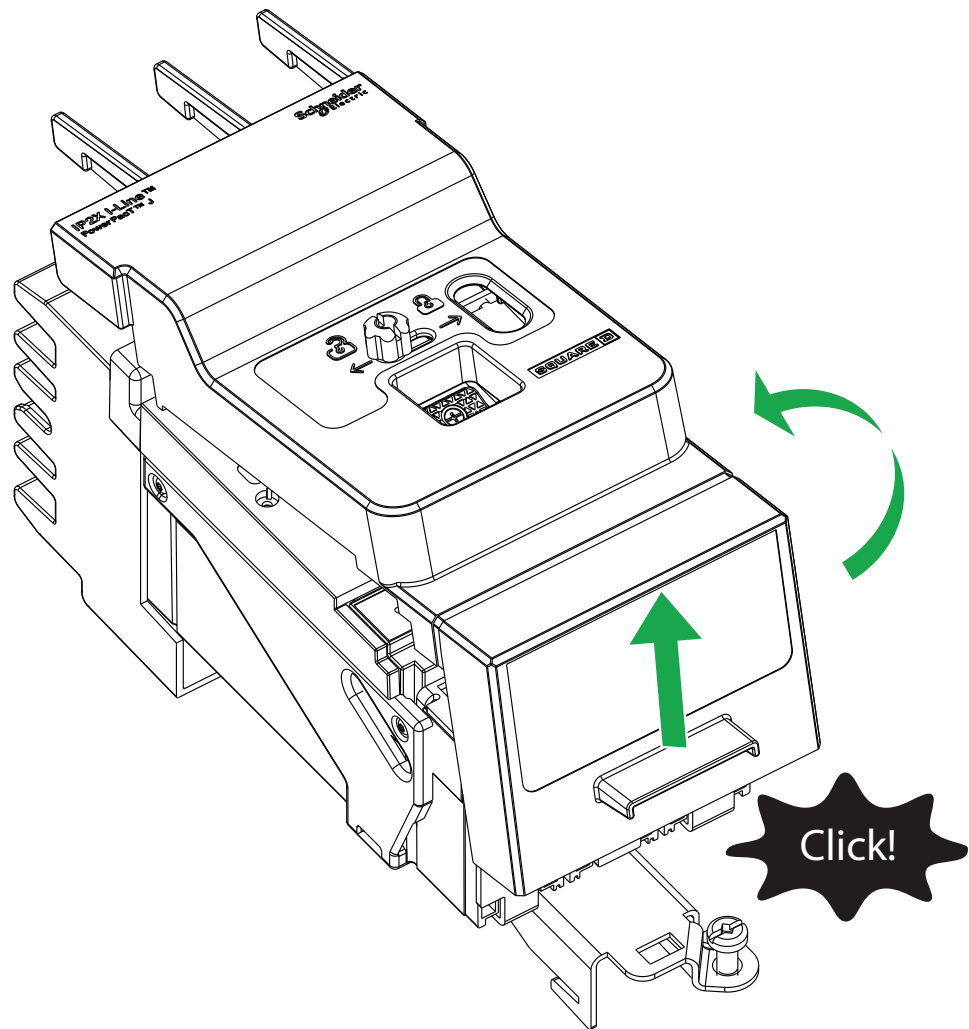
9. Lift the circuit breaker away from the bus bars.



10. Remove the circuit breaker mounting shield by loosening the thumbscrew to slide the locking bracket out of the padlock hasp.



11. Unsnap the shield from breaker lugs side.

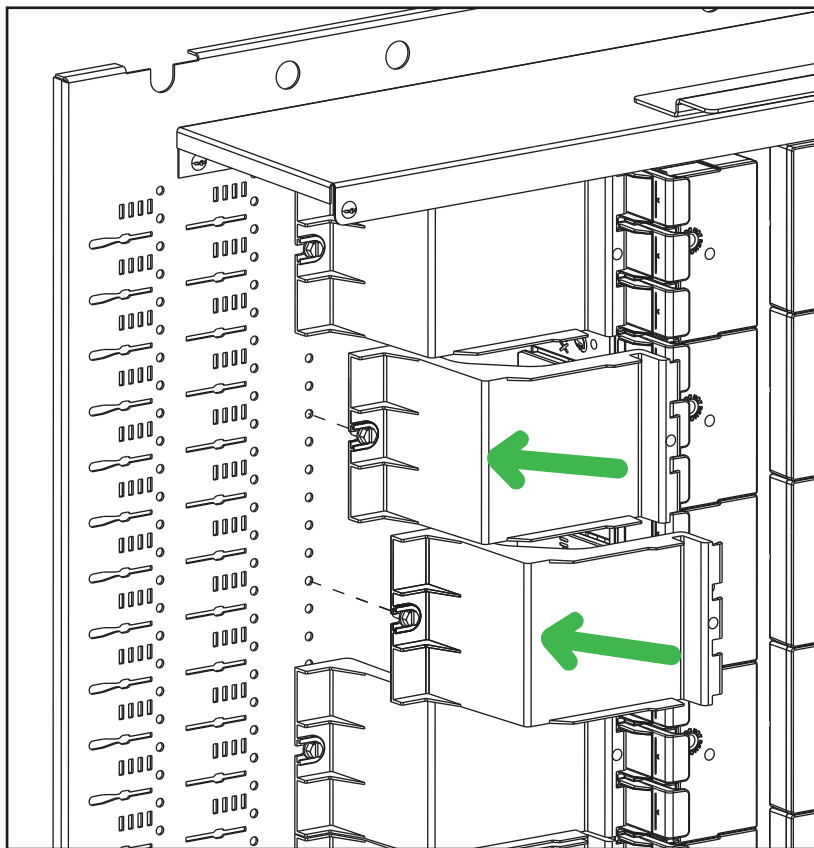




12. Install IP2X blank filler(s) and blank extensions if necessary, where the circuit breaker was removed.

**NOTE:**

All unused spaces must be filled with IP2X blank fillers and blank extensions on wide side of panel, rearrange the IP2X blank fillers if necessary.



13. Secure the IP2X blank filler extensions to the deadfront. Per Instruction Bulletin I-Line Panelboards & Switchboards Blank Extension Installation Instructions
14. Reinstall the deadfront.
15. Close and secure the trim front by turning the eight quarter turn latches
16. Turn ON all power supplying this equipment..

**NOTE:** I-Line circuit breakers are supplied with factory-applied joint compound on the plug-on connectors. The compound must not be removed because it contributes to the overall performance of the connection. Whenever an I-Line circuit breaker is removed and reinstalled, the joint compound must be reapplied. A two-ounce container of compound especially formulated for I-Line plug-on connectors is available for purchase (catalog number PJC7201).





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