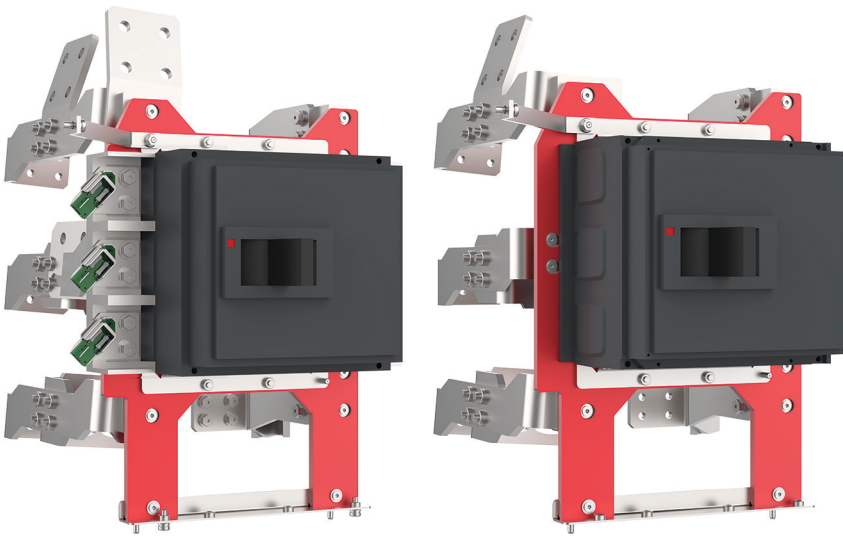


Galaxy VL

Internal Backfeed Kit for UL (GVLOPT003) and Internal Backfeed Kit for IEC (GVLOPT004)

Installation

Latest updates are available on the Schneider Electric website
7/2021



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Important Safety Instructions — SAVE THESE INSTRUCTIONS

Read these instructions carefully and look at the equipment to become familiar with it before trying to install, operate, service or maintain it. The following safety messages may appear throughout this manual or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of this symbol to a “Danger” or “Warning” safety message 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 potential personal injury hazards. Obey all safety messages with 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.**

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

WARNING

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

Failure to follow these instructions can result in death, serious injury, or equipment damage.

CAUTION

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

Failure to follow these instructions can result in injury or equipment damage.

NOTICE

NOTICE is used to address practices not related to physical injury. The safety alert symbol shall not be used with this type of safety message.

Failure to follow these instructions can result in equipment damage.

Please Note

Electrical equipment should only be installed, operated, serviced, and maintained 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.

Safety Precautions

DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Read all instructions in the installation manual before installing or working on this product.

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

DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Do not install the product until all construction work has been completed and the installation room has been cleaned.

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

DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

The product must be installed according to the specifications and requirements as defined by Schneider Electric. It concerns in particular the external and internal protections (upstream breakers, battery breakers, cabling, etc.) and environmental requirements. No responsibility is assumed by Schneider Electric if these requirements are not respected.

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

DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

The UPS system must be installed according to local and national regulations. Install the UPS according to:

- IEC 60364 (including 60364-4-41- protection against electric shock, 60364-4-42 - protection against thermal effect, and 60364-4-43 - protection against overcurrent), **or**
- NEC NFPA 70, **or**
- Canadian Electrical Code (C22.1, Part 1)

depending on which one of the standards apply in your local area.

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

DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Install the product in a temperature controlled indoor environment free of conductive contaminants and humidity.
- Install the product on a non-flammable, level and solid surface (e.g. concrete) that can support the weight of the system.

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

⚠️⚠️ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

The product is not designed for and must therefore not be installed in the following unusual operating environments:

- Damaging fumes
- Explosive mixtures of dust or gases, corrosive gases, or conductive or radiant heat from other sources
- Moisture, abrasive dust, steam or in an excessively damp environment
- Fungus, insects, vermin
- Salt-laden air or contaminated cooling refrigerant
- Pollution degree higher than 2 according to IEC 60664-1
- Exposure to abnormal vibrations, shocks, and tilting
- Exposure to direct sunlight, heat sources, or strong electromagnetic fields

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

⚠️⚠️ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Do not drill or cut holes for cables or conduits with the gland plates installed and do not drill or cut holes in close proximity to the UPS.

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

⚠️⚠️ WARNING

HAZARD OF ARC FLASH

Do not make mechanical changes to the product (including removal of cabinet parts or drilling/cutting of holes) that are not described in the installation manual.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

NOTICE

RISK OF OVERHEATING

Respect the space requirements around the product and do not cover the ventilation openings when the product is in operation.

Failure to follow these instructions can result in equipment damage.

Electrical Safety

This manual contains important safety instructions that should be followed during the installation and maintenance of the UPS system.

DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Electrical equipment must be installed, operated, serviced, and maintained only by qualified personnel.
- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices.
- Disconnection devices for AC and DC must be provided by others, be readily accessible, and the function of the disconnect device marked for its function.
- Turn off all power supplying the UPS system before working on or inside the equipment.
- Before working on the UPS system, check for hazardous voltage between all terminals including the protective earth.
- The UPS contains an internal energy source. Hazardous voltage can be present even when disconnected from the mains supply. Before installing or servicing the UPS system, ensure that the units are OFF and that mains and batteries are disconnected. Wait five minutes before opening the UPS to allow the capacitors to discharge.
- The UPS must be properly earthed/grounded and due to a high leakage current, the earthing/grounding conductor must be connected first.

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

Specifications

Trip Settings

	Galaxy VL internal backfeed kit for UL (GVLOPT003)	Galaxy VL internal backfeed kit for IEC (GVLOPT004)
Breaker type	PLF34080CU33AAC	NS1000H (33473)
I _r	1	0.95
t _r	≥4	≥4
I _i (x I _n)	≤10	≤10

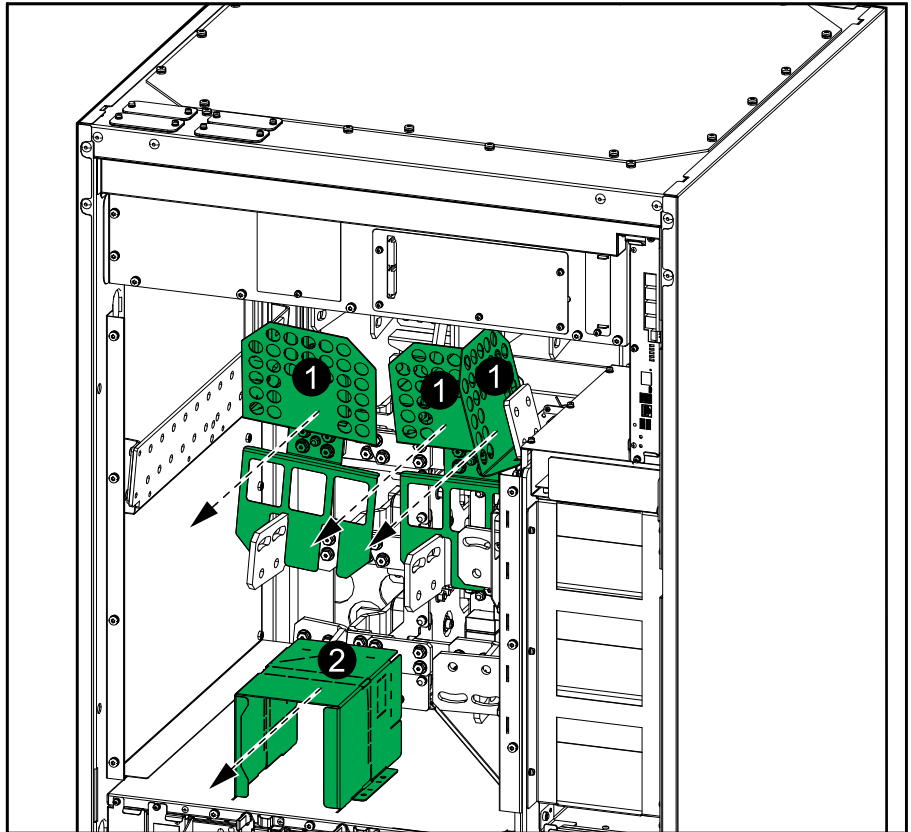
Torque Specifications

Bolt size	Torque
M6	5 Nm (3.69 lb-ft / 44.3 lb-in)
M8	17.5 Nm (12.91 lb-ft / 154.9 lb-in)
M10	30 Nm (22 lb-ft / 194.7 lb-in)
M12	50 Nm (36.87 lb-ft / 442.5 lb-in)

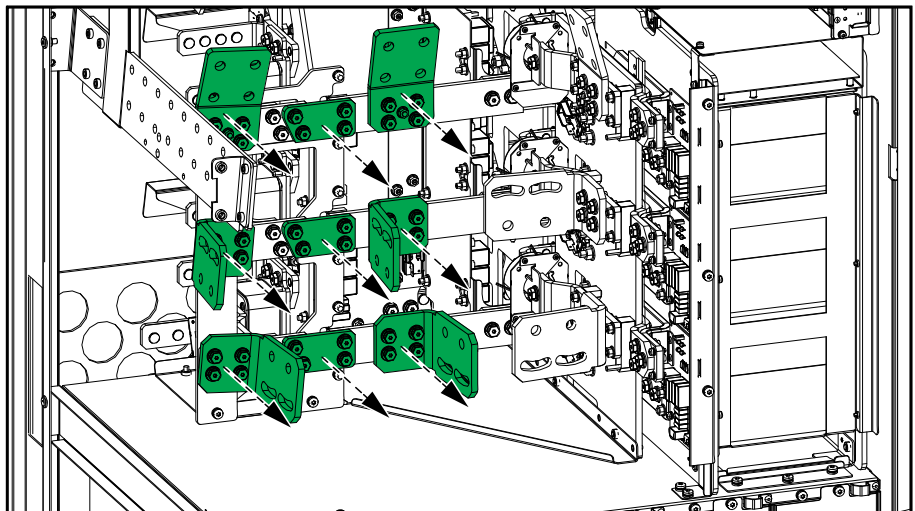
Install the Internal Backfeed Kit for UL (GVLOPT003) in a Single Mains System

NOTE: Install the backfeed kit in the UPS **before** the power cables are installed in the UPS. Follow the UPS installation manual on how to prepare for installation.

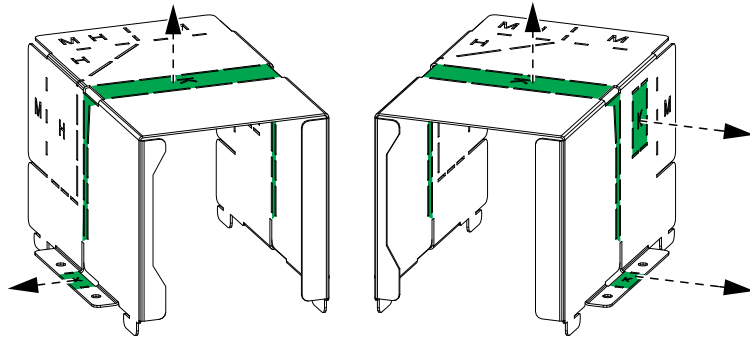
1. Remove the transparent plastic protectors from the busbars. Save for reinstallation.



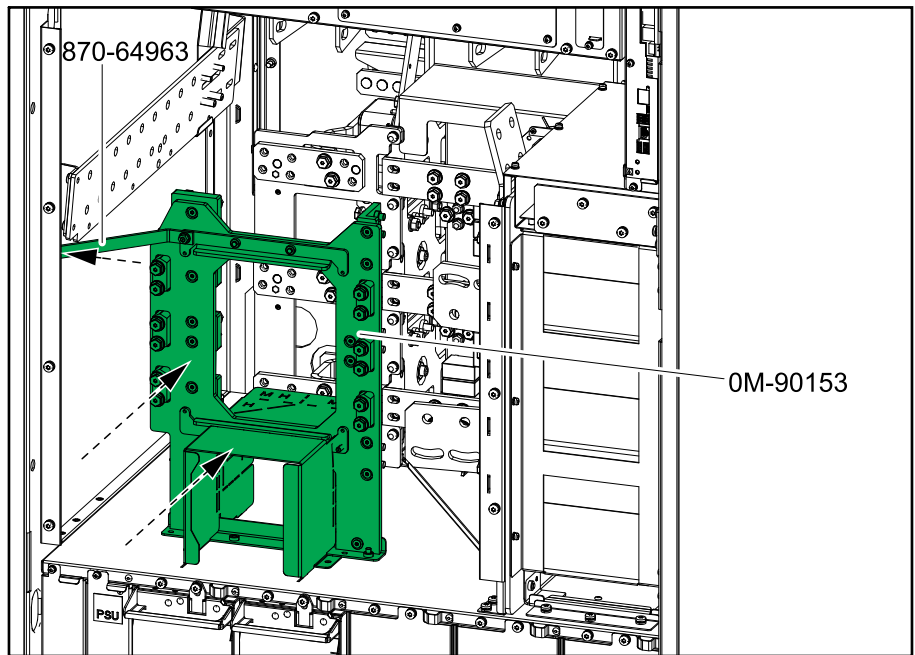
2. Remove the plastic box. Save for reinstallation.
3. Remove the input busbars, the bypass busbars, and the single mains busbars. Save the busbars.



- Cut away the K zone parts on the plastic box. After cutting, the plastic box will be in two pieces.

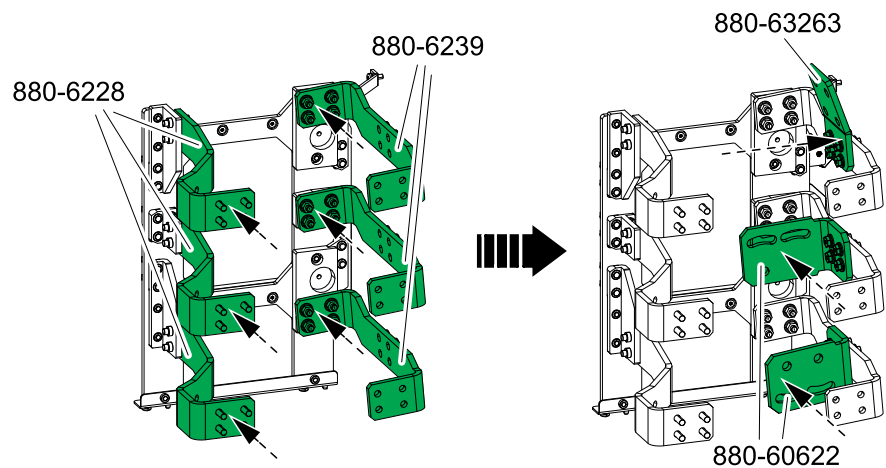


- Install the backfeed kit frame and the two plastic box pieces. Connect the small bracket from the backfeed kit frame to the corner pillar of the UPS. Use the provided M6x16 screws and M6 nuts.



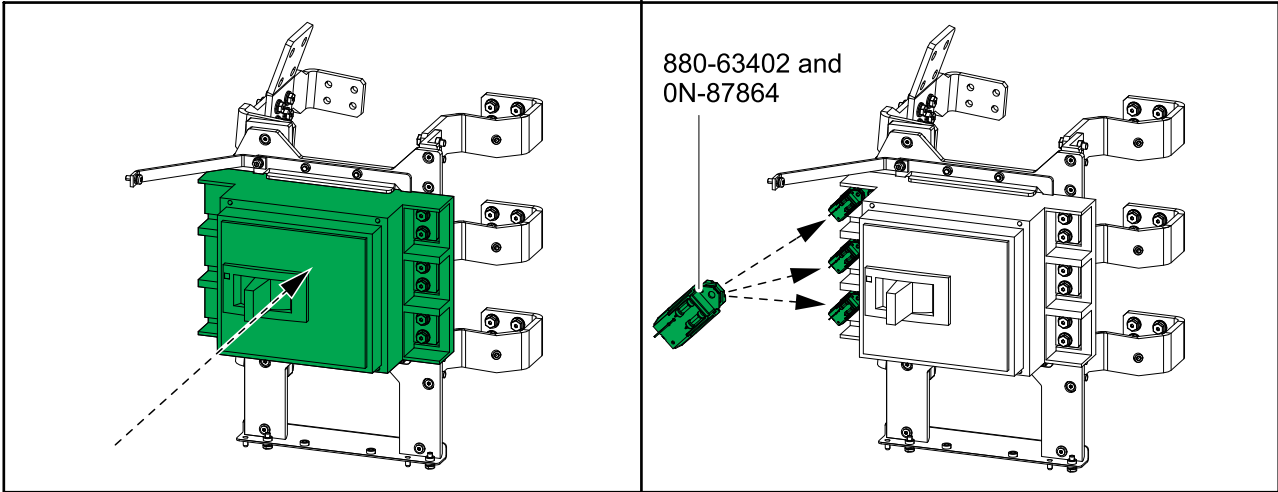
- Install the six backfeed kit busbars and the three input busbars on the backfeed kit frame and connect to the busbars in the UPS. The input busbars were removed from the UPS in step 3.

Rear View

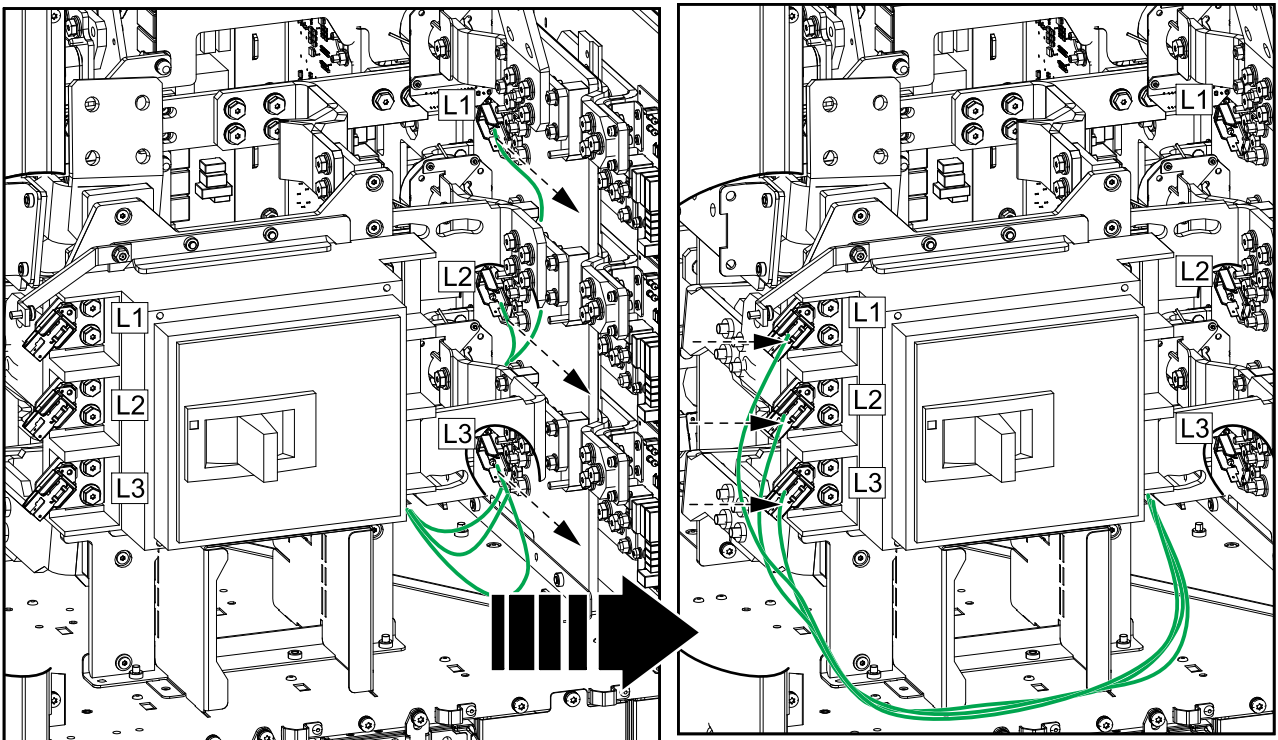


- Follow the UPS installation manual to connect the power cables. Note that the input busbars are now located on the backfeed kit assembly.

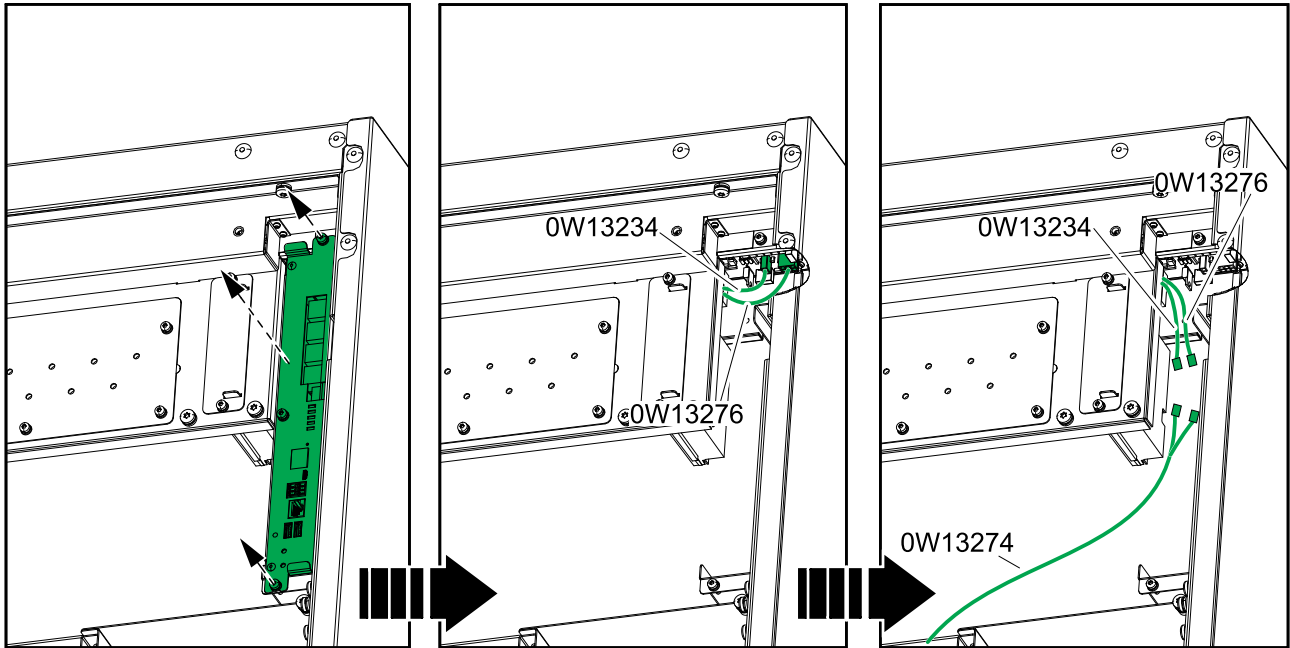
8. Install the circuit breaker and the service measurement boards on the backfeed kit frame assembly with the provided M6x16 screws.



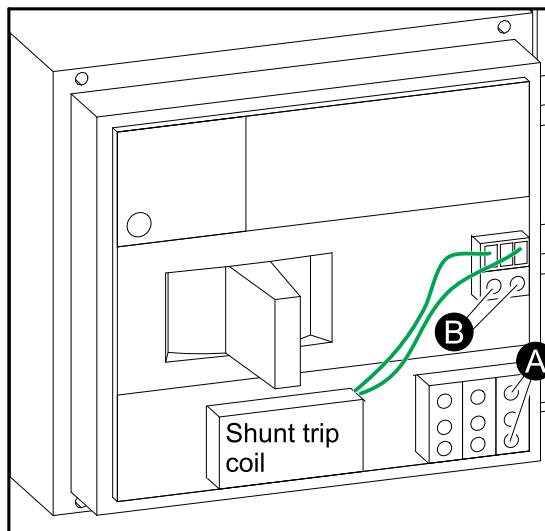
9. Disconnect the preconnected signal cables from the measurement boards on the side of the static bypass switch. Connect the signal cables to the new service measurement boards on the backfeed breaker. The signal cables will make a click when connected properly.



10. Remove the system level controller and disconnect the preconnected signal cables 0W13234 and 0W13276 from board 0P4828.



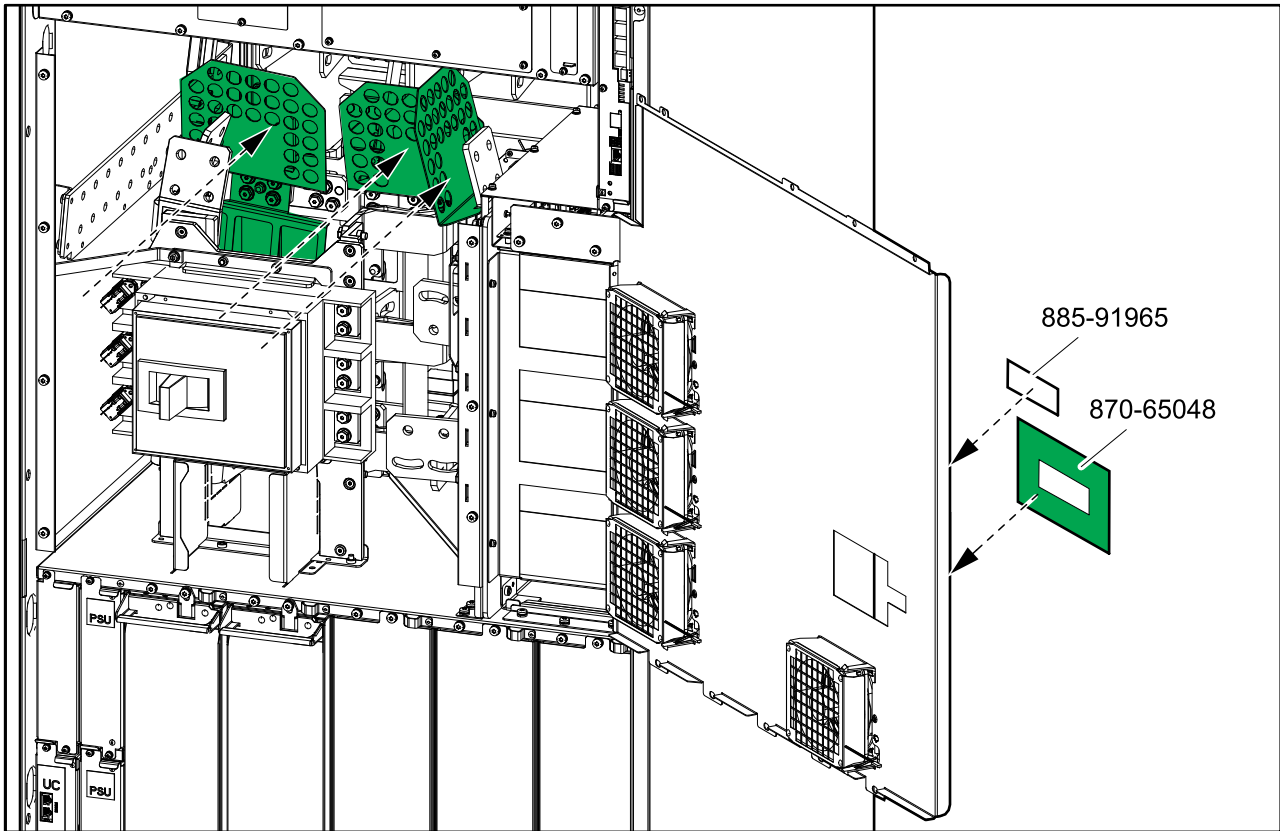
11. Connect the provided signal cable 0W13274 to the signal cables 0W13234 and 0W13276. Reinstall the system level controller and fasten with the three screws.
12. Remove the front cover from the backfeed breaker.
13. Connect the two wires in the signal cable 0W13274 labeled BF_AUX to terminal 1 and 4 on the AUX contact (normally open NO) in the backfeed breaker. The position of the AUX contact is marked with an (A) in the illustration.



14. Connect the wires labeled BF_Coil_+ in 0W13274 to the C2 terminal in the backfeed breaker. Connect the wires in 0W13274 labeled BF_Coil_- to the C1 terminal in the backfeed breaker. The terminals for the shunt trip coil are marked with a (B) in the illustration.
15. Reinstall the front cover on the backfeed breaker.

16. Reinstall the transparent plastic protectors in the original position. The transparent plastic protectors were removed in step 1.

▲ CAUTION
RISK OF ELECTRIC SHOCK
The transparent plastic protectors must be reinstalled in the original position.
Failure to follow these instructions can result in injury or equipment damage.

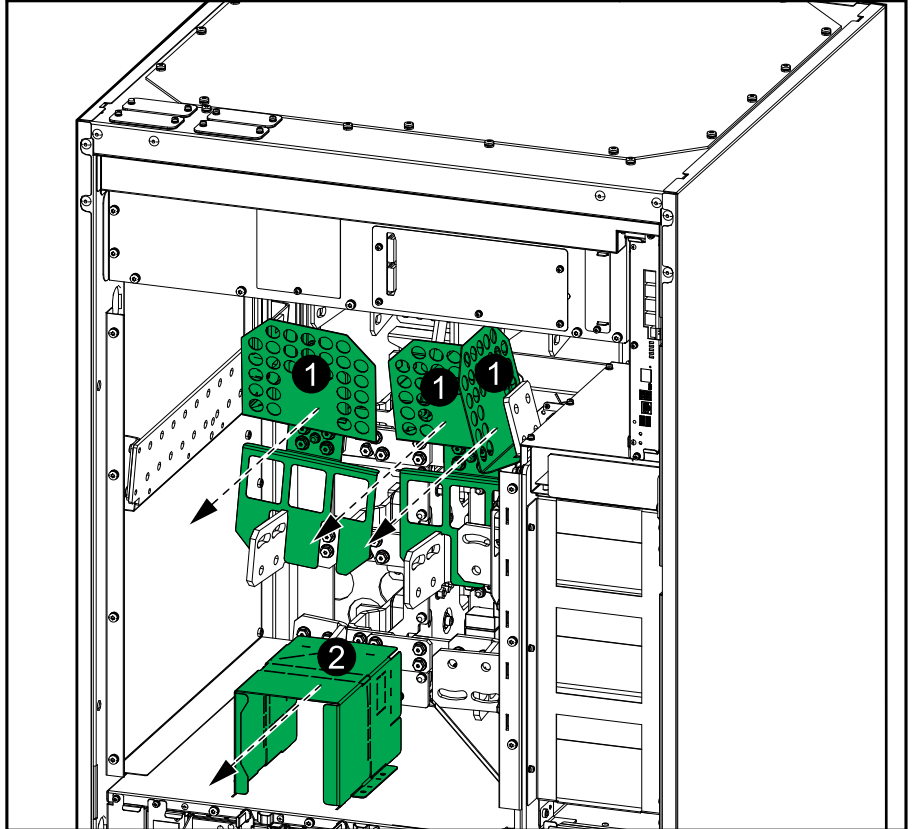


17. Remove the plate in front of the backfeed breaker from the inner door of the UPS. Install the replacement plate 870-65048 provided in the kit.
18. Place label 885-91965 (provided with the UPS) on the front of the inner door of the UPS near the backfeed breaker.

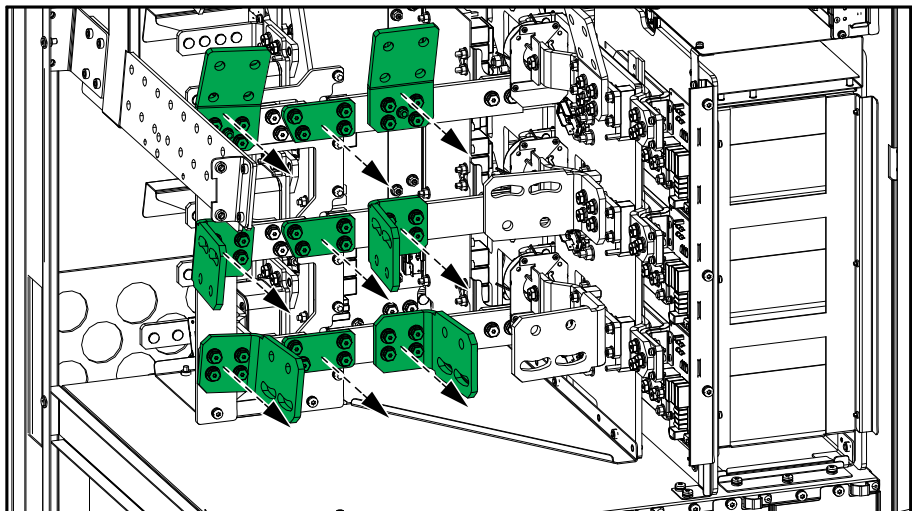
Install the Internal Backfeed Kit for IEC (GVLOPT004) in a Single Mains System

NOTE: Install the backfeed kit in the UPS **before** the power cables are installed in the UPS. Follow the UPS installation manual on how to prepare for installation.

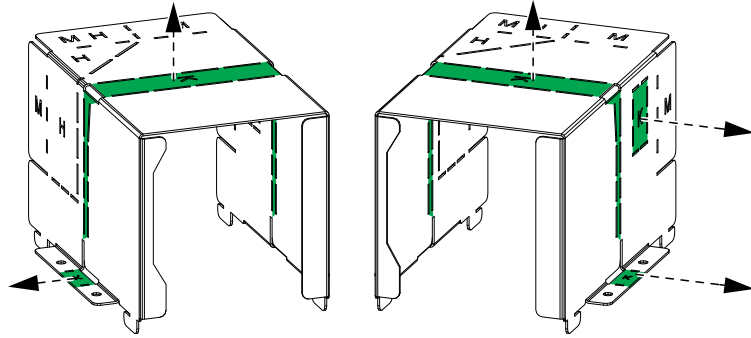
1. Remove the transparent plastic protectors from the busbars. Save for reinstallation.



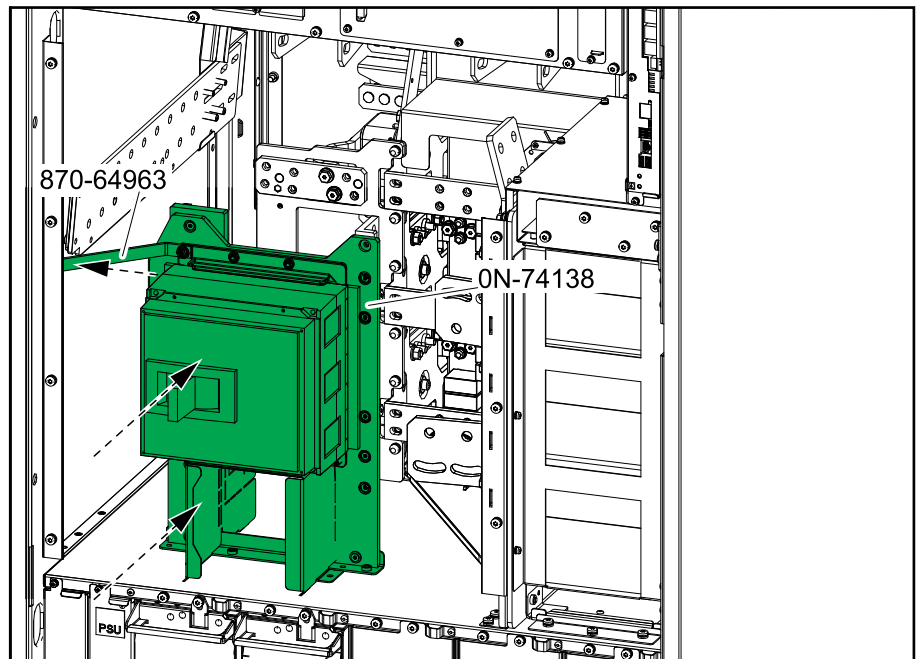
2. Remove the plastic box. Save for reinstallation.
3. Remove the input busbars, the bypass busbars, and the single mains busbars. Save the busbars.



4. Cut away the K zone parts on the plastic box. After cutting, the plastic box will be in two pieces.



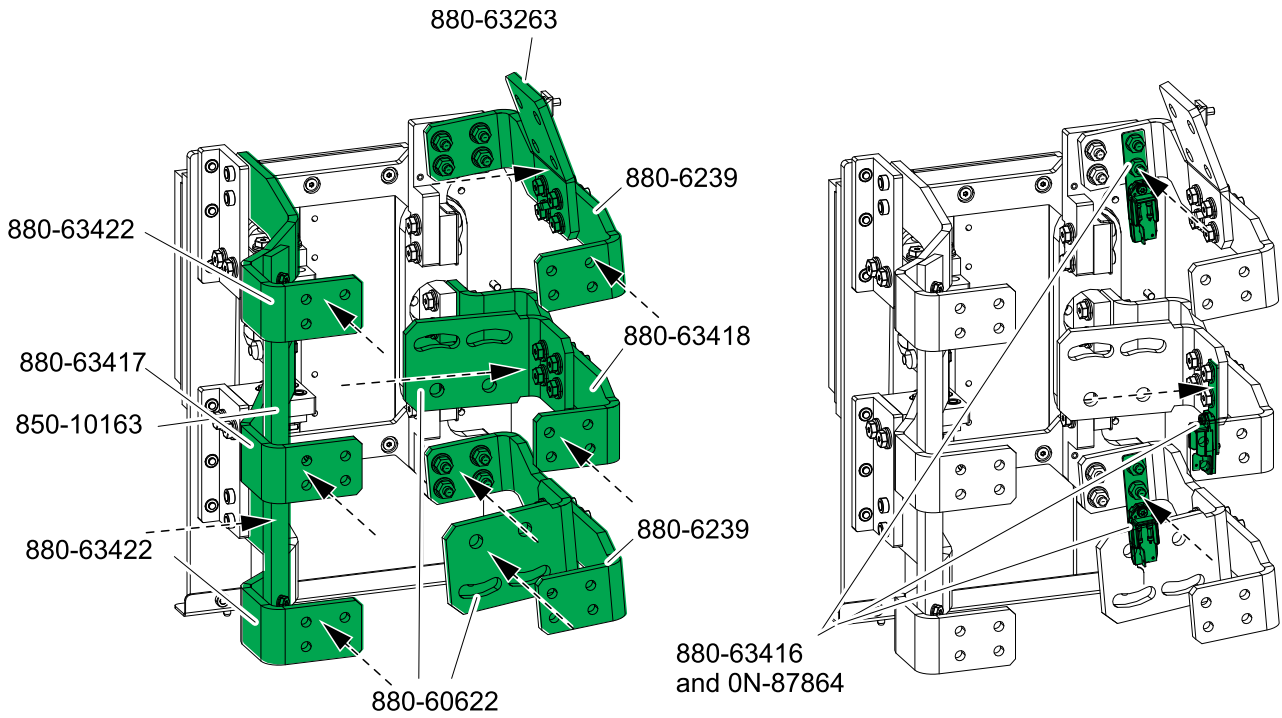
5. Install the backfeed kit frame and the two plastic box pieces. Connect the small bracket from the backfeed kit frame to the corner pillar of the UPS. Use the provided M6x16 screws and M6 nuts.



6. Install the busbars:

- a. Install the six backfeed kit busbars and the insulation part on the backfeed kit frame and connect to the busbars in the UPS.
- b. Install the input busbars and the service measurement boards on the backfeed kit frame. The input busbars were removed from the UPS in step 3.

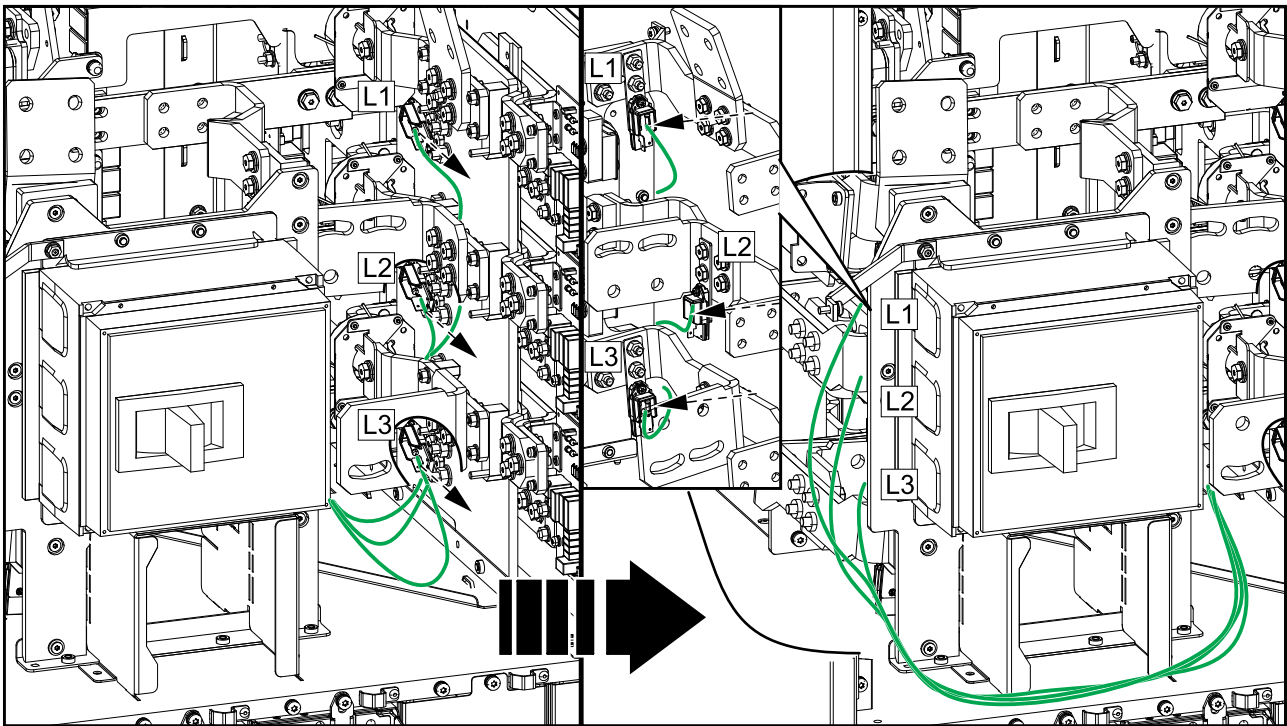
Rear View



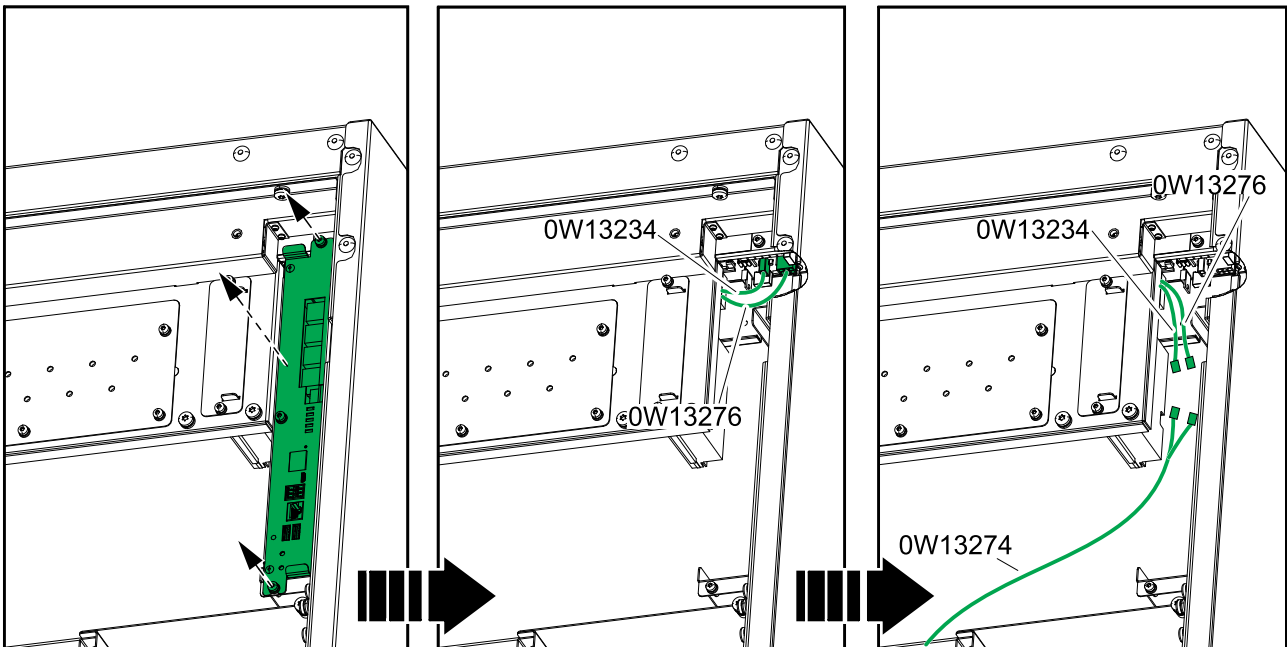
7. Follow the UPS installation manual to connect the power cables. Note that the input busbars are now located on the backfeed kit assembly.

8. Disconnect the preconnected signal cables from the measurement boards on the side of the static bypass switch. Connect the signal cables to the new service measurement boards on the backfeed breaker. The signal cables will make a click when connected properly.

GVLOPT004

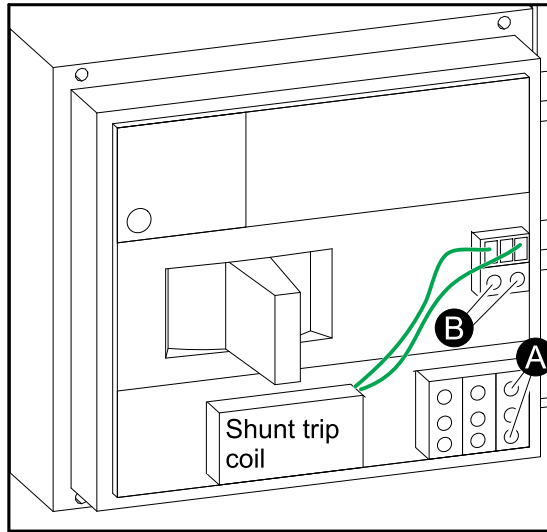


9. Remove the system level controller and disconnect the preconnected signal cables 0W13234 and 0W13276 from board 0P4828.



10. Connect the provided signal cable 0W13274 to the signal cables 0W13234 and 0W13276. Reinstall the system level controller and fasten with the three screws.
11. Remove the front cover from the backfeed breaker.

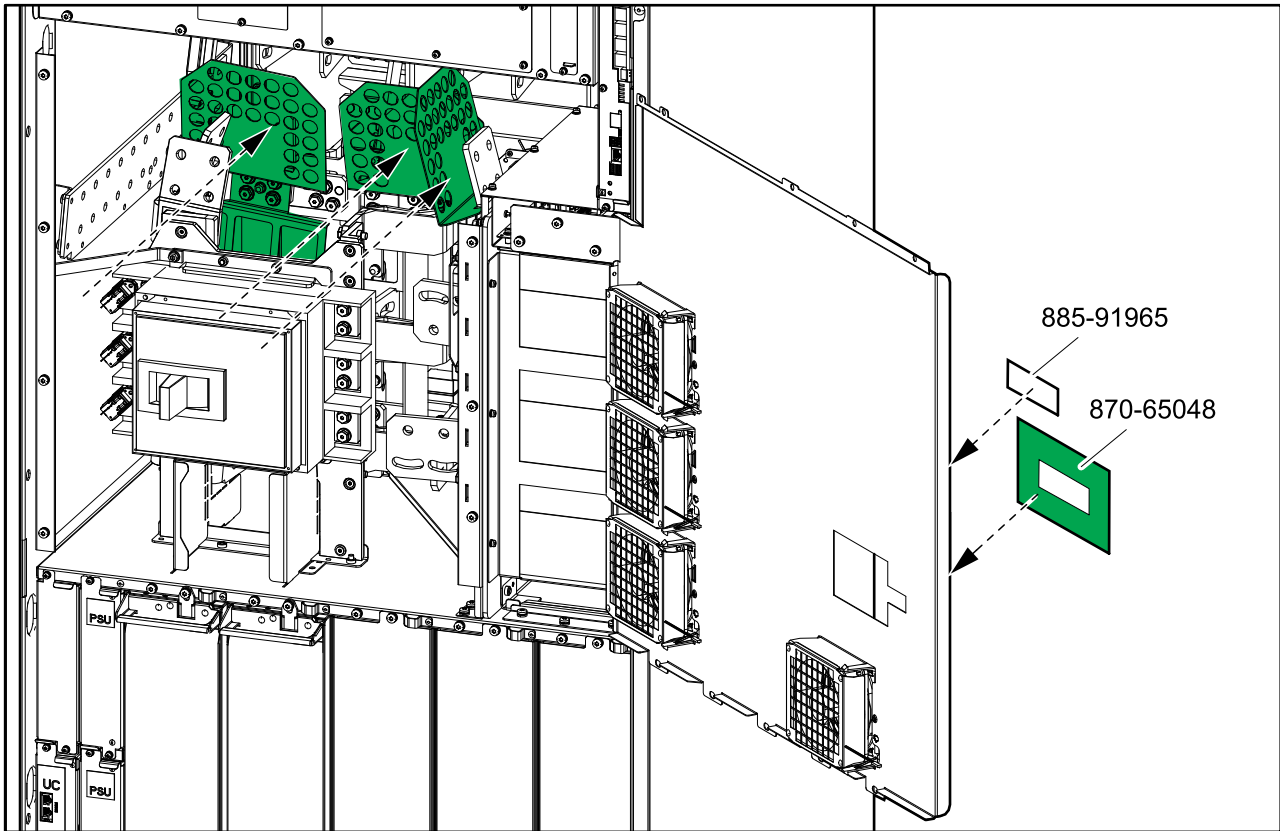
12. Connect the two wires in the signal cable 0W13274 labeled BF_AUX to terminal 1 and 4 on the AUX contact (normally open NO) in the backfeed breaker. The position of the AUX contact is marked with an (A) in the illustration.



13. Connect the wires labeled BF_Coil_+ in 0W13274 to the C2 terminal in the backfeed breaker. Connect the wires in 0W13274 labeled BF_Coil_- to the C1 terminal in the backfeed breaker. The terminals for the shunt trip coil are marked with a (B) in the illustration.
14. Reinstall the front cover on the backfeed breaker.

15. Reinstall the transparent plastic protectors in the original position. The transparent plastic protectors were removed in step 1.

▲ CAUTION
RISK OF ELECTRIC SHOCK
The transparent plastic protectors must be reinstalled in the original position.
Failure to follow these instructions can result in injury or equipment damage.

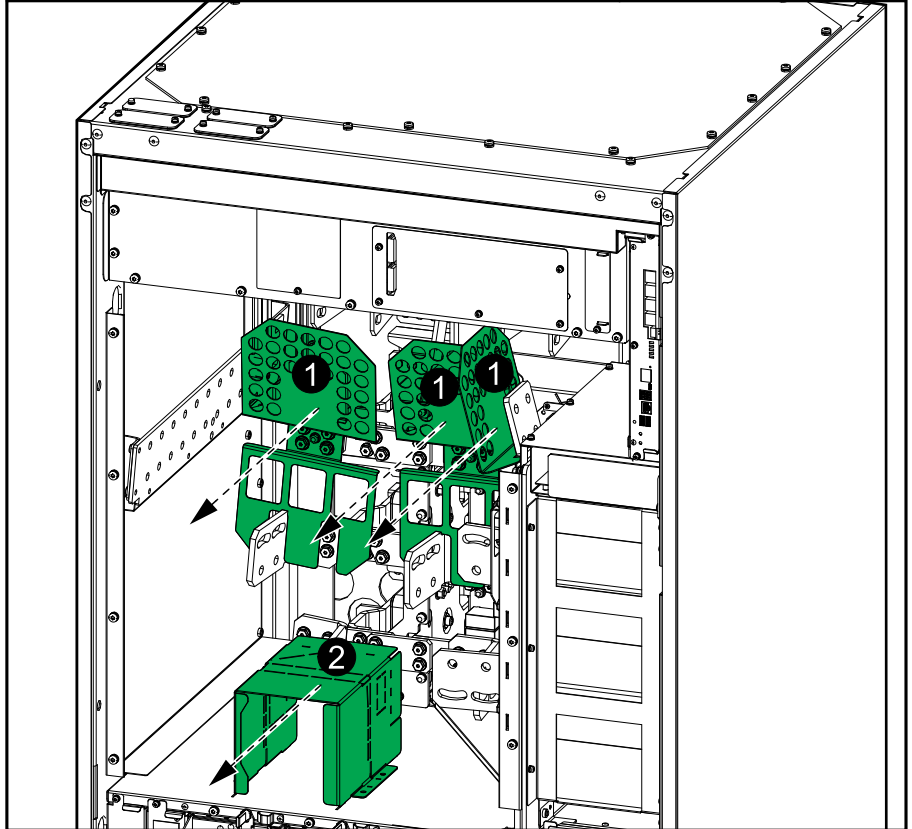


16. Remove the plate in front of the backfeed breaker from the inner door of the UPS. Install the replacement plate 870-65048 provided in the kit.
17. Place label 885-91965 (provided with the UPS) on the front of the inner door of the UPS near the backfeed breaker.

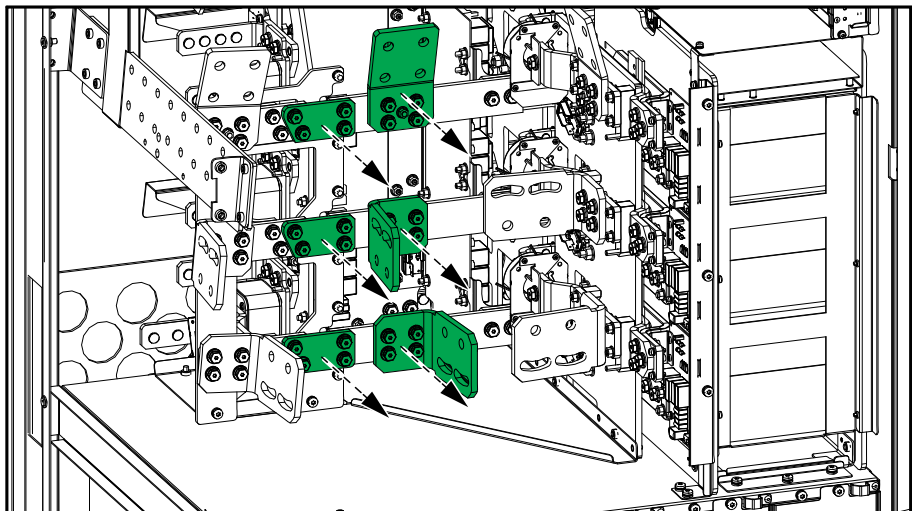
Install the Internal Backfeed Kit for UL (GVLOPT003) in a Dual Mains System

NOTE: Install the backfeed kit in the UPS **before** the power cables are installed in the UPS. Follow the UPS installation manual on how to prepare for installation.

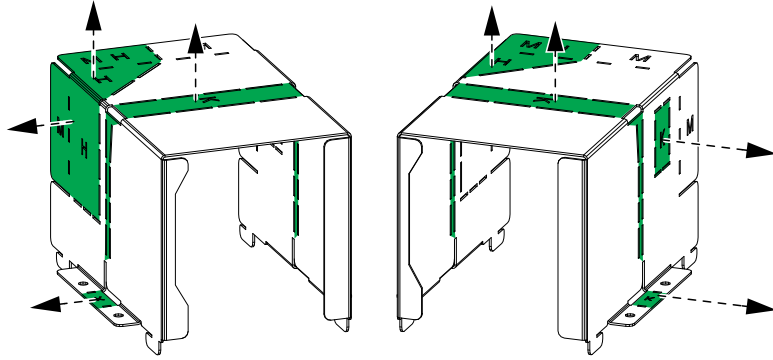
1. Remove the transparent plastic protectors from the busbars. Save for reinstallation.



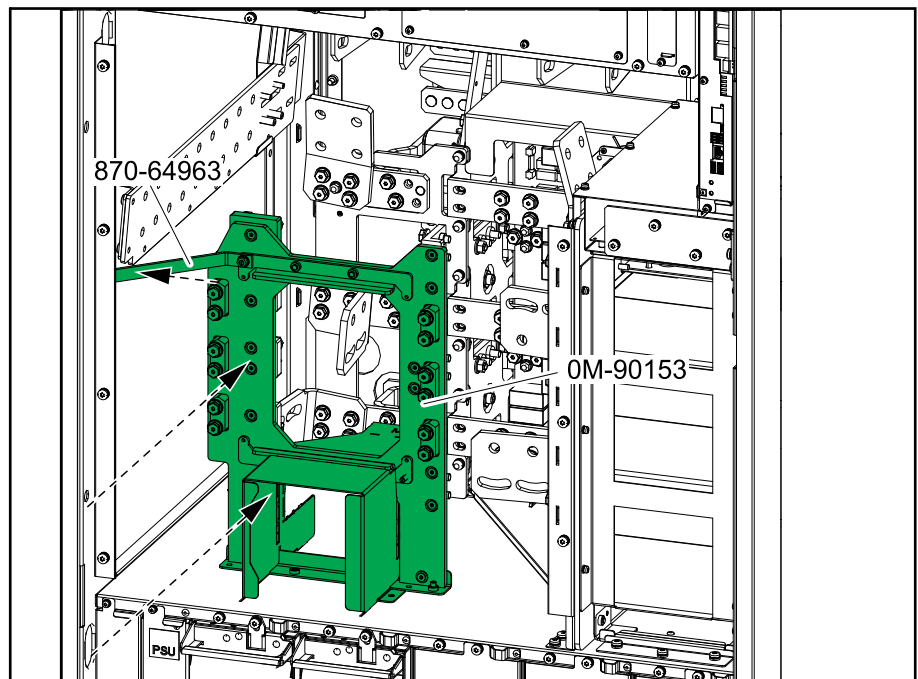
2. Remove the plastic box. Save for reinstallation.
3. Remove the bypass busbars and the single mains busbars. Save the busbars.



4. Cut away the K zone parts and the H zone parts on the plastic box. After cutting, the plastic box will be in two pieces.

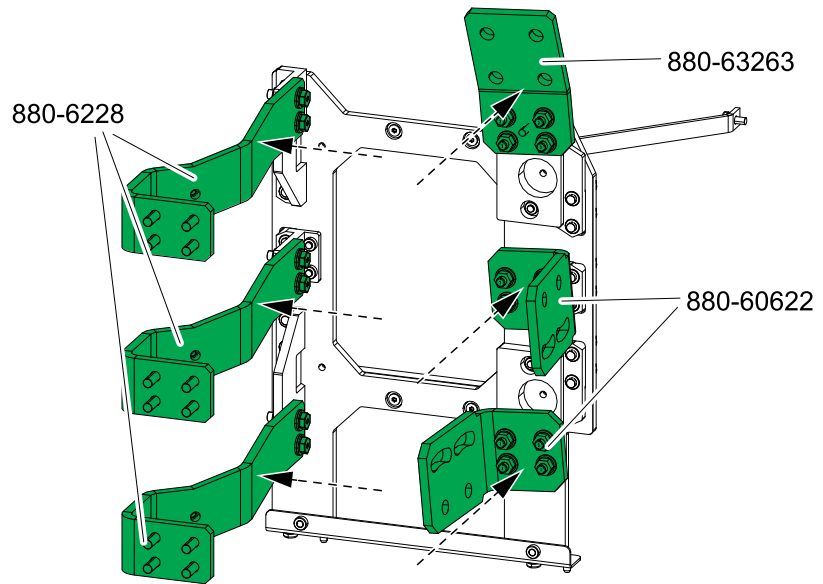


5. Install the backfeed kit frame and the two plastic box pieces. Connect the small bracket from the backfeed kit frame to the corner pillar of the UPS. Use the provided M6x16 screws and M6 nuts.

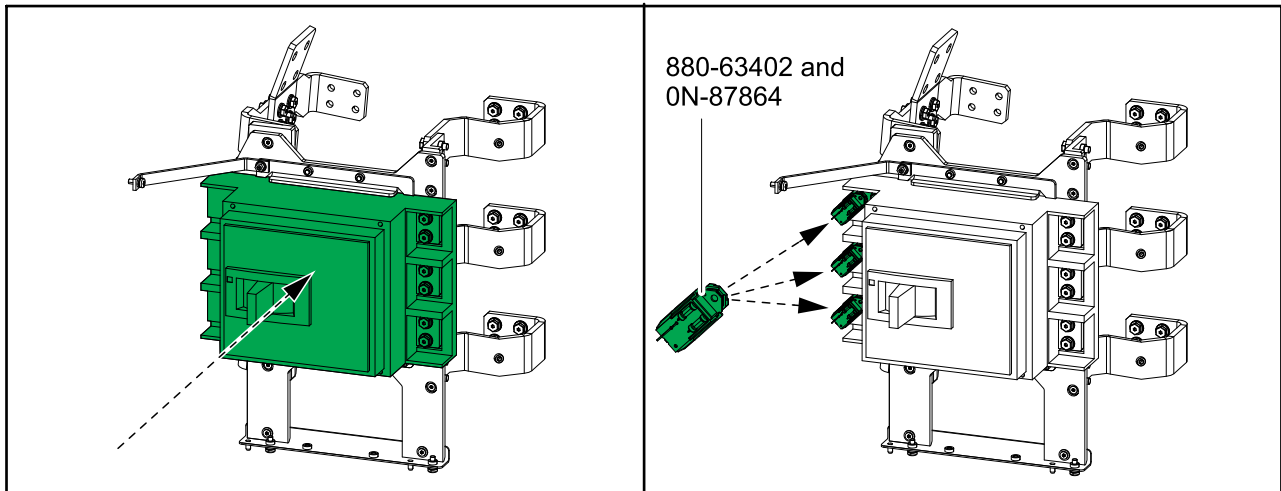


6. Install the three backfeed kit busbars and the three bypass busbars on the backfeed kit frame and connect to the busbars in the UPS. The bypass busbars were removed from the UPS in step 3.

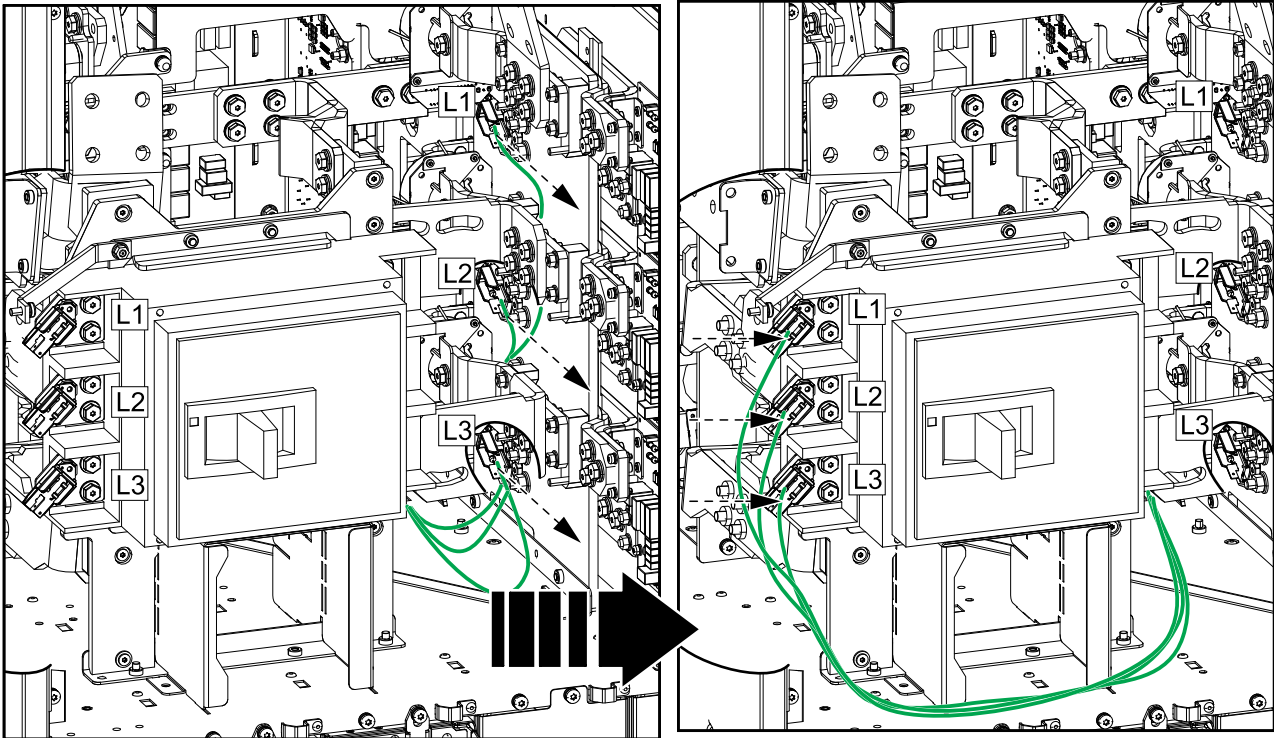
Rear View



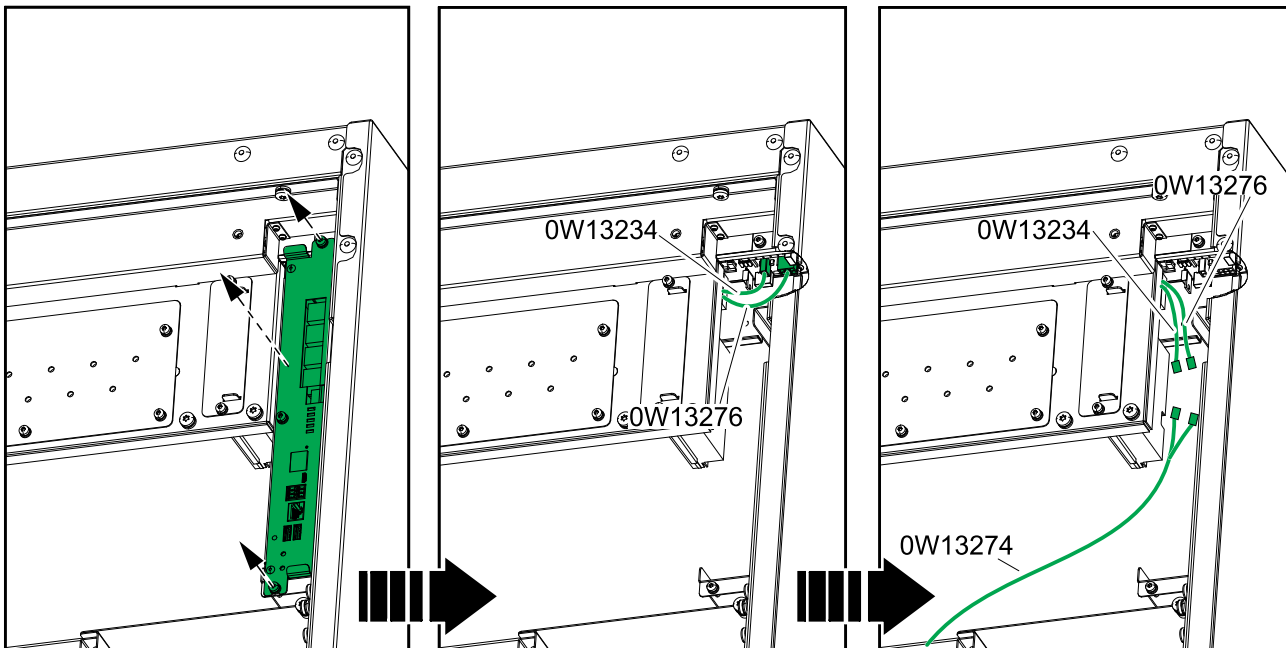
7. Follow the UPS installation manual to connect the power cables. Note that the bypass busbars are now located on the backfeed kit assembly.
8. Install the circuit breaker and the service measurement boards on the backfeed kit frame assembly with the provided M6x16 screws.



9. Disconnect the preconnected signal cables from the measurement boards on the side of the static bypass switch. Connect the signal cables to the new service measurement boards on the backfeed breaker. The signal cables will make a click when connected properly.

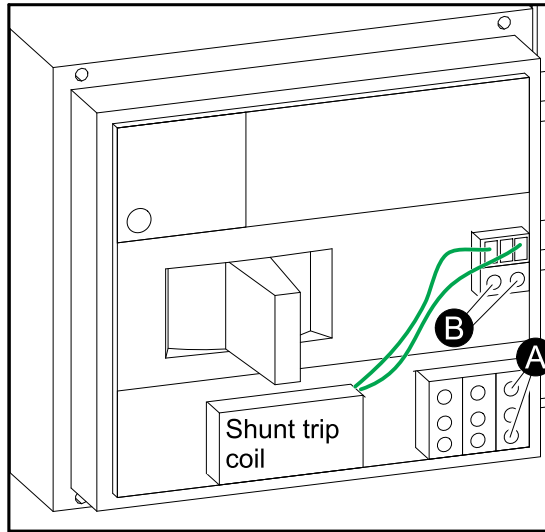


10. Remove the system level controller and disconnect the preconnected signal cables 0W13234 and 0W13276 from board 0P4828.



11. Connect the provided signal cable 0W13274 to the signal cables 0W13234 and 0W13276. Reinstall the system level controller and fasten with the three screws.
12. Remove the front cover from the backfeed breaker.

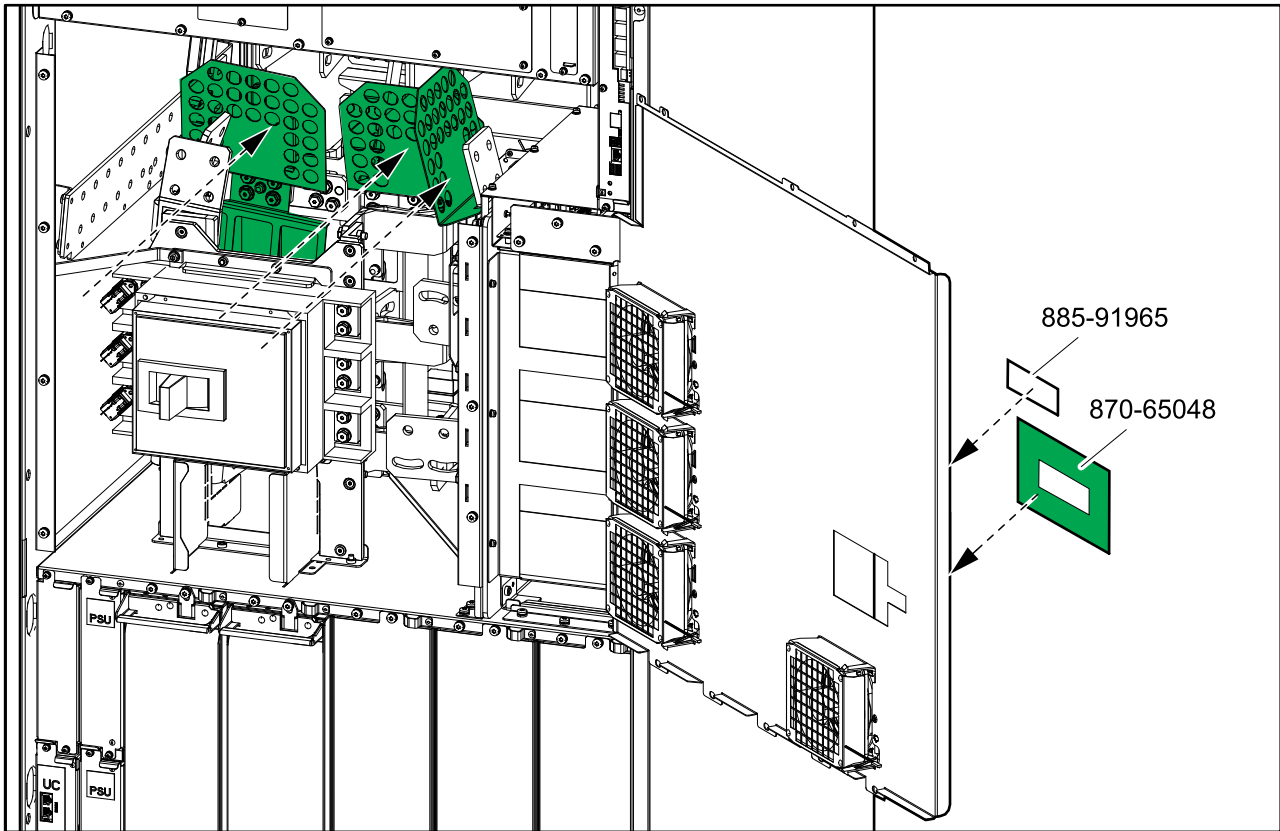
13. Connect the two wires in the signal cable 0W13274 labeled BF_AUX to terminal 1 and 4 on the AUX contact (normally open NO) in the backfeed breaker. The position of the AUX contact is marked with an (A) in the illustration.



14. Connect the wires labeled BF_Coil_+ in 0W13274 to the C2 terminal in the backfeed breaker. Connect the wires in 0W13274 labeled BF_Coil_- to the C1 terminal in the backfeed breaker. The terminals for the shunt trip coil are marked with a (B) in the illustration.
15. Reinstall the front cover on the backfeed breaker.

16. Reinstall the transparent plastic protectors in the original position. The transparent plastic protectors were removed in step 1.

▲ CAUTION
RISK OF ELECTRIC SHOCK
The transparent plastic protectors must be reinstalled in the original position.
Failure to follow these instructions can result in injury or equipment damage.

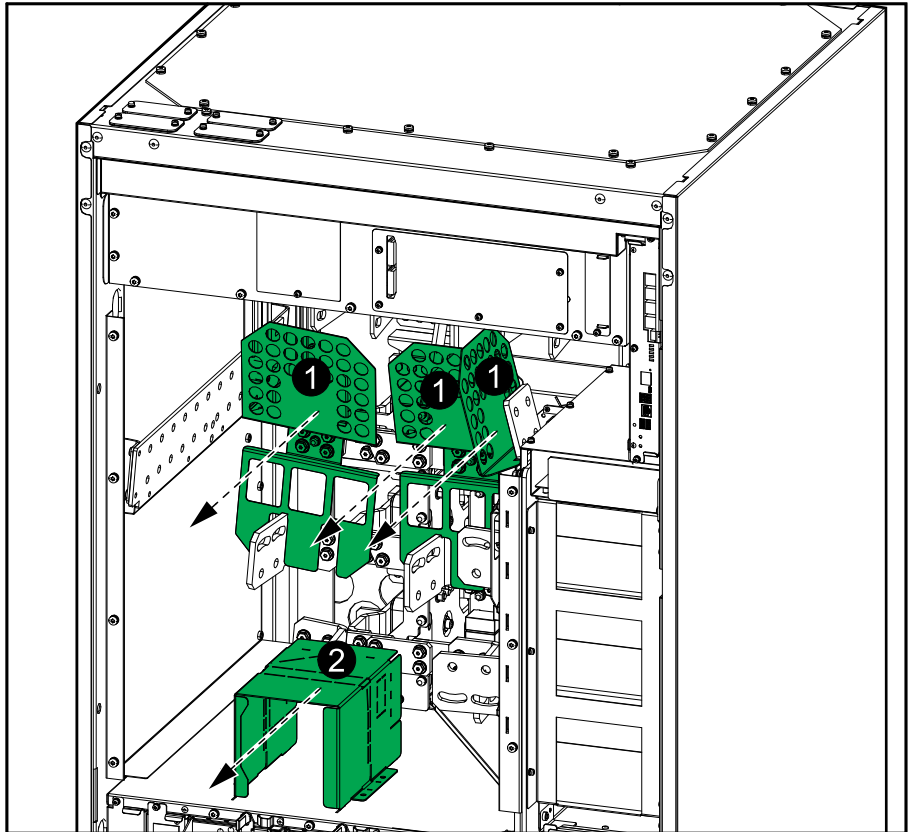


17. Remove the plate in front of the backfeed breaker from the inner door of the UPS. Install the replacement plate 870-65048 provided in the kit.
18. Place label 885-91965 (provided with the UPS) on the front of the inner door of the UPS near the backfeed breaker.

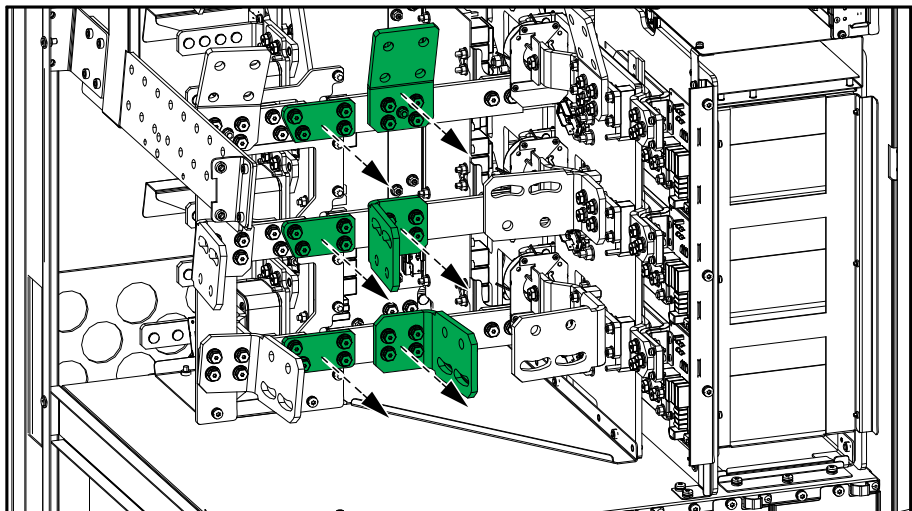
Install the Internal Backfeed Kit for IEC (GVLOPT004) in a Dual Mains System

NOTE: Install the backfeed kit in the UPS **before** the power cables are installed in the UPS. Follow the UPS installation manual on how to prepare for installation.

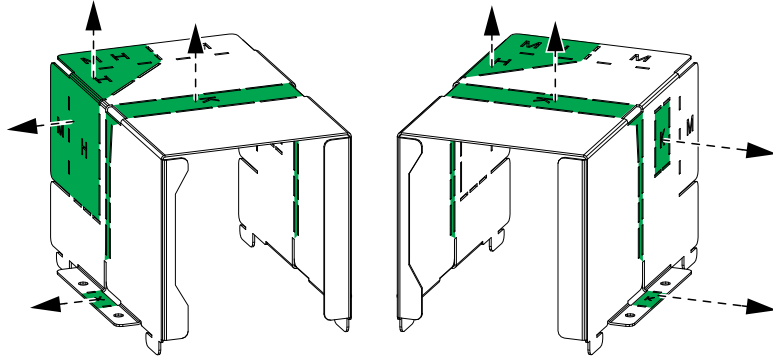
1. Remove the transparent plastic protectors from the busbars. Save for reinstallation.



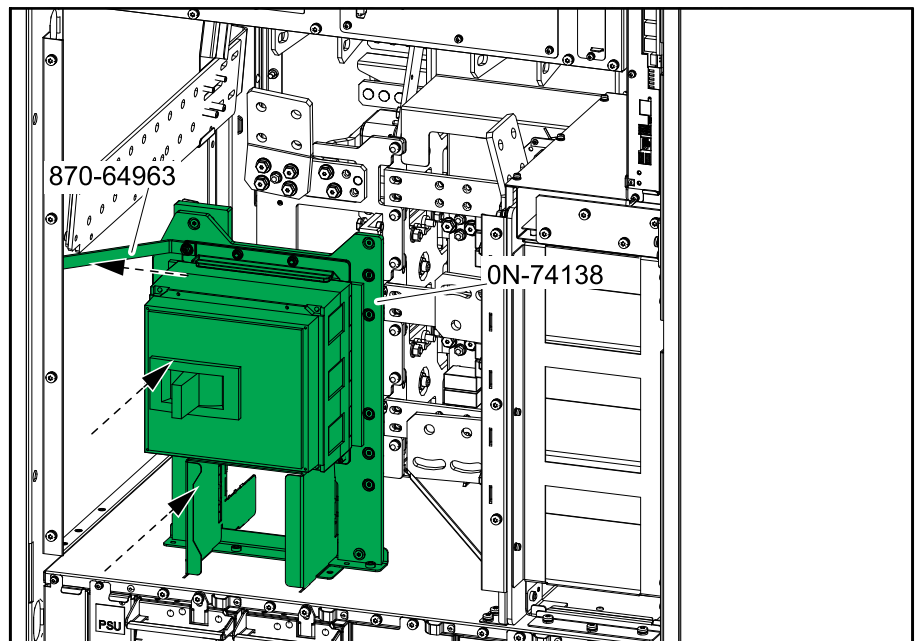
2. Remove the plastic box. Save for reinstallation.
3. Remove the bypass busbars and the single mains busbars. Save the busbars.



4. Cut away the K zone parts and the H zone parts on the plastic box. After cutting, the plastic box will be in two pieces.

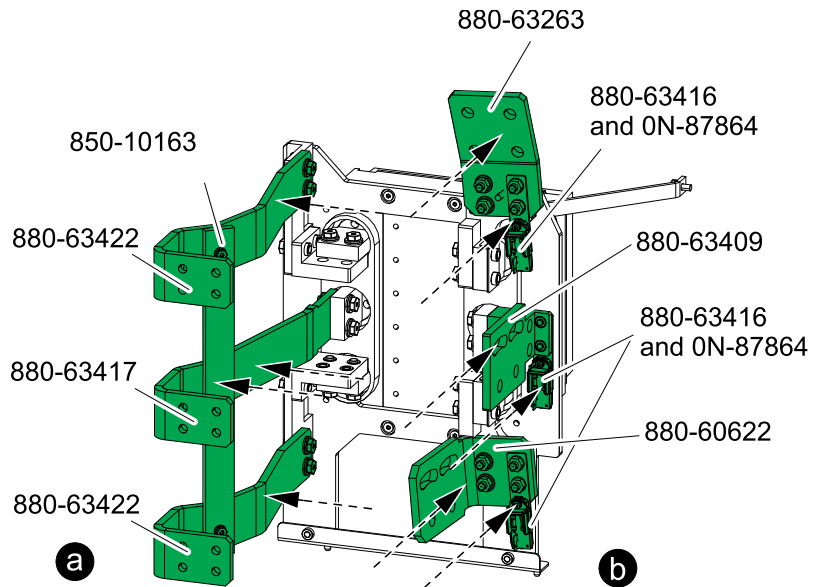


5. Install the backfeed kit frame and the two plastic box pieces. Connect the small bracket from the backfeed kit frame to the corner pillar of the UPS. Use the provided M6x16 screws and M6 nuts.

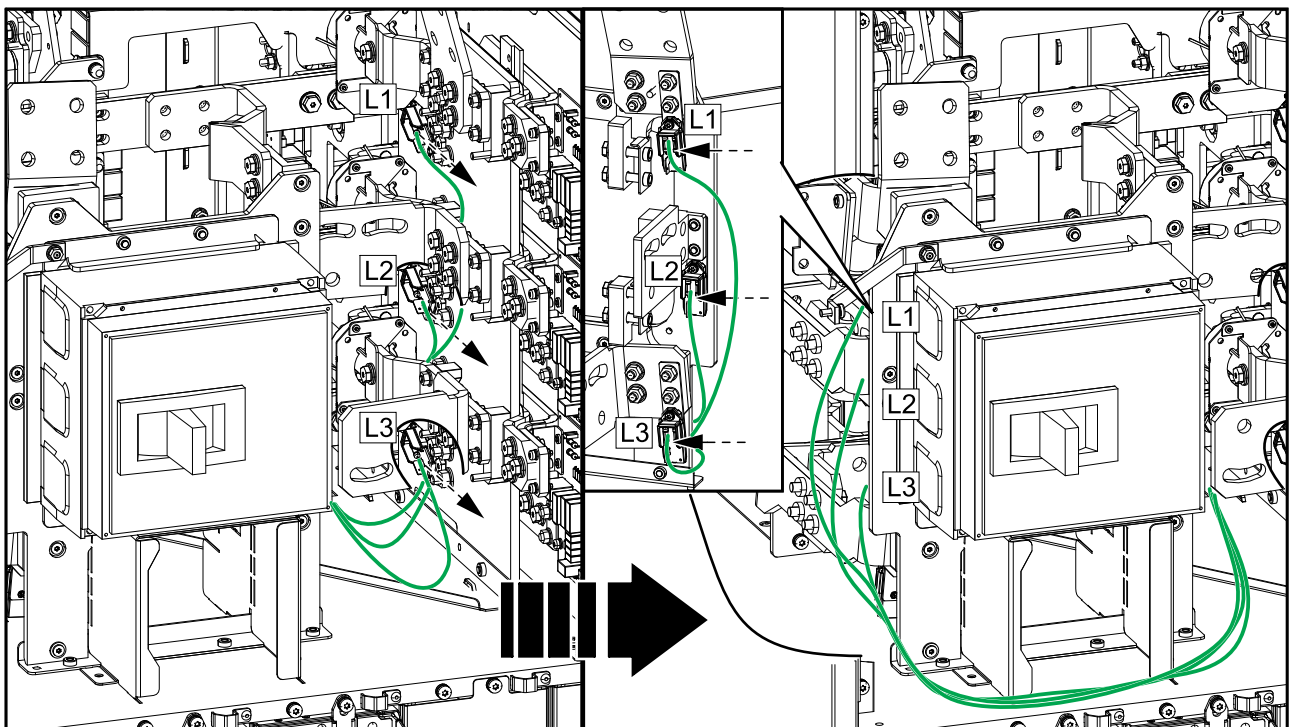


6. Install the busbars:
 - a. Install the three backfeed kit busbars and the insulation part on the backfeed kit frame and connect to the busbars in the UPS.
 - b. Install the bypass busbars and the service measurement boards on the backfeed kit frame. The L1 and L3 bypass busbars were removed from the UPS in step 3 and the L2 bypass busbar is part of the backfeed kit.

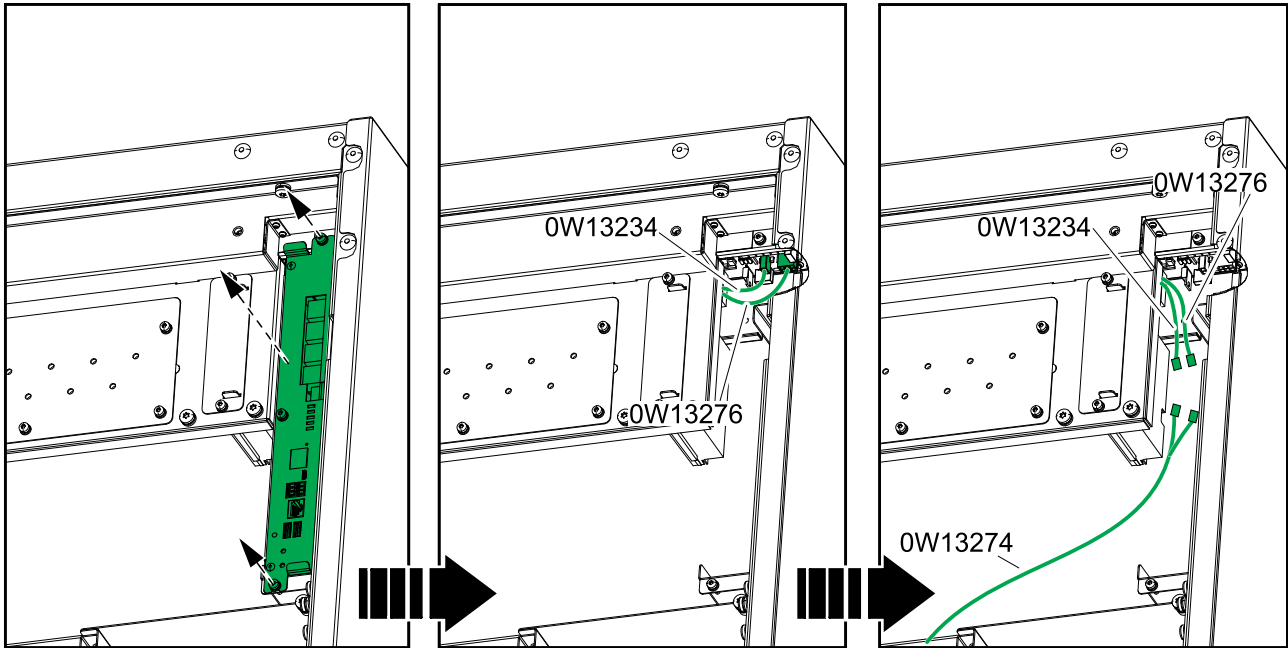
Rear View



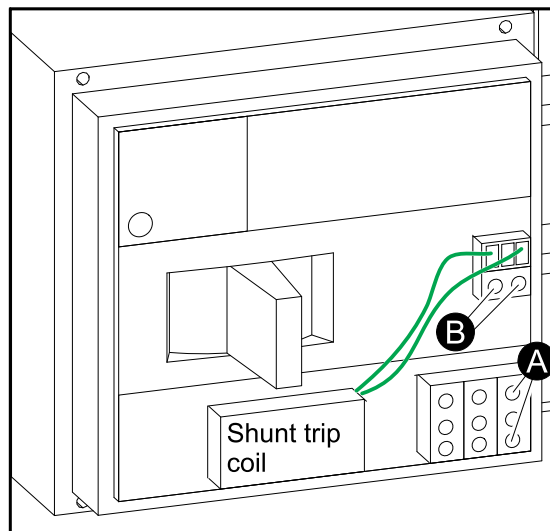
7. Follow the UPS installation manual to connect the power cables. Note that the bypass busbars are now located on the backfeed kit assembly.
8. Disconnect the preconnected signal cables from the measurement boards on the side of the static bypass switch. Connect the signal cables to the new service measurement boards on the backfeed breaker. The signal cables will make a click when connected properly.



9. Remove the system level controller and disconnect the preconnected signal cables 0W13234 and 0W13276 from board 0P4828.



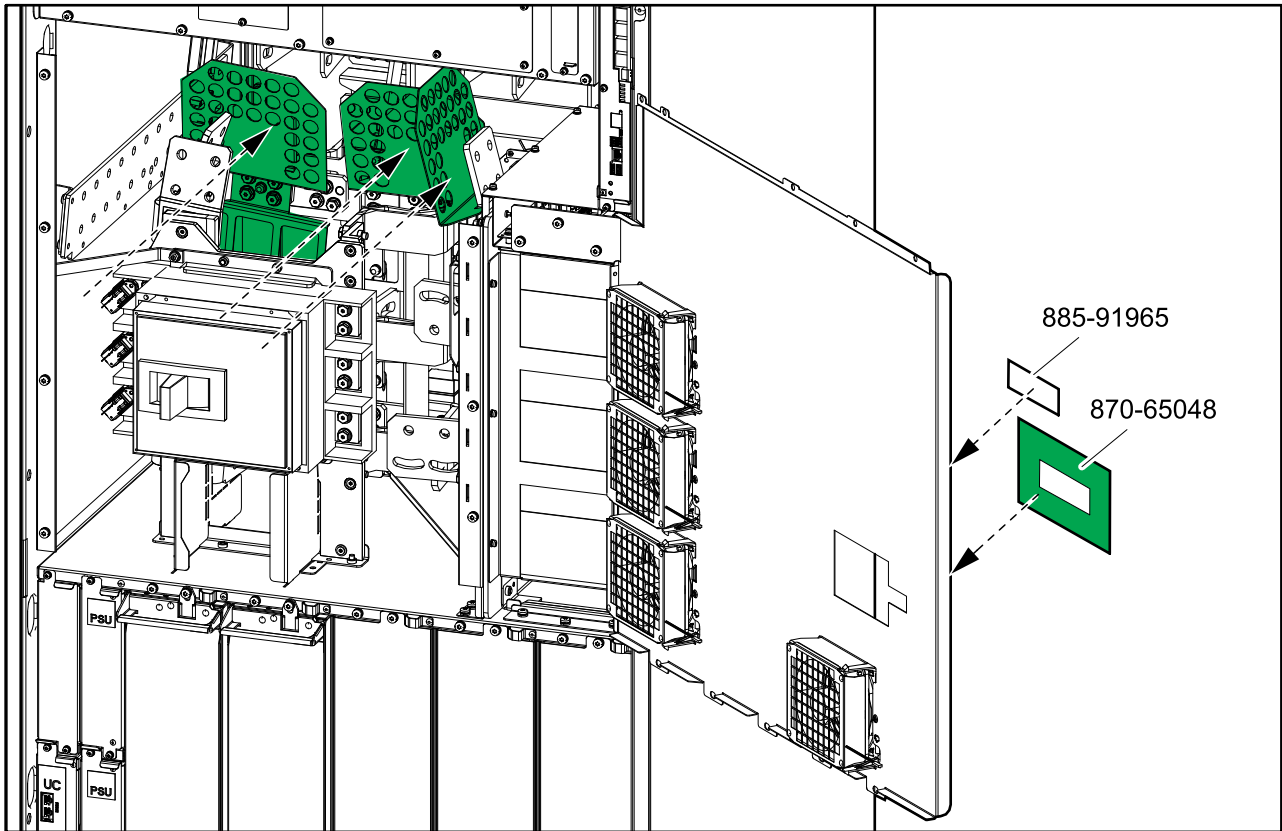
10. Connect the provided signal cable 0W13274 to the signal cables 0W13234 and 0W13276. Reinstall the system level controller and fasten with the three screws.
11. Remove the front cover from the backfeed breaker.
12. Connect the two wires in the signal cable 0W13274 labeled BF_AUX to terminal 1 and 4 on the AUX contact (normally open NO) in the backfeed breaker. The position of the AUX contact is marked with an (A) in the illustration.



13. Connect the wires labeled BF_Coil_+ in 0W13274 to the C2 terminal in the backfeed breaker. Connect the wires in 0W13274 labeled BF_Coil_- to the C1 terminal in the backfeed breaker. The terminals for the shunt trip coil are marked with a (B) in the illustration.
14. Reinstall the front cover on the backfeed breaker.

15. Reinstall the transparent plastic protectors in the original position. The transparent plastic protectors were removed in step 1.

⚠ CAUTION
RISK OF ELECTRIC SHOCK
The transparent plastic protectors must be reinstalled in the original position.
Failure to follow these instructions can result in injury or equipment damage.



16. Remove the plate in front of the backfeed breaker from the inner door of the UPS. Install the replacement plate 870-65048 provided in the kit.
17. Place label 885-91965 (provided with the UPS) on the front of the inner door of the UPS near the backfeed breaker.

Post-Installation Checklist

1. Verify that the busbars have been installed as instructed.
2. Verify torque on all electrical connections – see Torque Specifications, page 9.
3. Adjust the settings on the backfeed breaker – see Trip Settings, page 9.
4. Verify the backfeed trip. A Schneider Electric-certified service partner will perform a backfeed breaker test at start-up.

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As standards, specifications, and design change from time to time,
please ask for confirmation of the information given in this publication.

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