

Wall-Mounted Maintenance Bypass Panel

For Galaxy VS and Easy UPS 3M

Installation

GVSBPSU150KH

Latest updates are available on the Schneider Electric website
9/2023



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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.

Per IEC 62040-1: "Uninterruptible power systems (UPS) -- Part 1: Safety Requirements," this equipment, including battery access, must be inspected, installed and maintained by a skilled person.

The skilled person is a person with relevant education and experience to enable him or her to perceive risks and to avoid hazards which the equipment can create (reference IEC 62040, section 3.102).

Electromagnetic Compatibility

NOTICE

RISK OF ELECTROMAGNETIC DISTURBANCE

This is a product category C2 UPS product. In a residential environment, this product may cause radio interference, in which case the user may be required to take additional measures.

Failure to follow these instructions can result in equipment damage.

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.

Additional Safety Precautions After Installation

DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Do not install the UPS system until all construction work has been completed and the installation room has been cleaned. If additional construction work is needed in the installation room after this product has been installed, turn off the product and cover the product with the protective packaging bag the product was delivered in.

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

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.

When the UPS input is connected through external isolators that, when opened, isolate the neutral or when the automatic backfeed isolation is provided external to the equipment or is connected to an IT power distribution system, a label must be fitted at the UPS input terminals, and on all primary power isolators installed remotely from the UPS area and on external access points between such isolators and the UPS, by the user, displaying the following text (or equivalent in a language which is acceptable in the country in which the UPS system is installed):

⚠ ⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Risk of voltage backfeed. Before working on this circuit: Isolate the UPS and check for hazardous voltage between all terminals including the protective earth.

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

Specifications

NOTE: Maximum short circuit rating: 25 kA RMS symmetrical.

NOTE: GVSBPUSU150KH can support a load of up to 150 kW/kVA as long as the neutral current (250 A) is not exceeded.

Recommended Upstream Protection

Refer to the UPS installation manual for recommended upstream protection.

Recommended Cable Sizes

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

All wiring must comply with all applicable national and/or electrical codes. The maximum allowable cable size is 120 mm².

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

NOTE: Aluminum cables are not supported.

Refer to the UPS installation manual for recommended cable sizes.

Torque Specifications

Bolt size	Torque
M4	1.7 Nm
M5	2.2 Nm
M6	5 Nm
M8	17.5 Nm
M10	30 Nm
M12	50 Nm

Maintenance Bypass Panel Shipping Weights and Dimensions

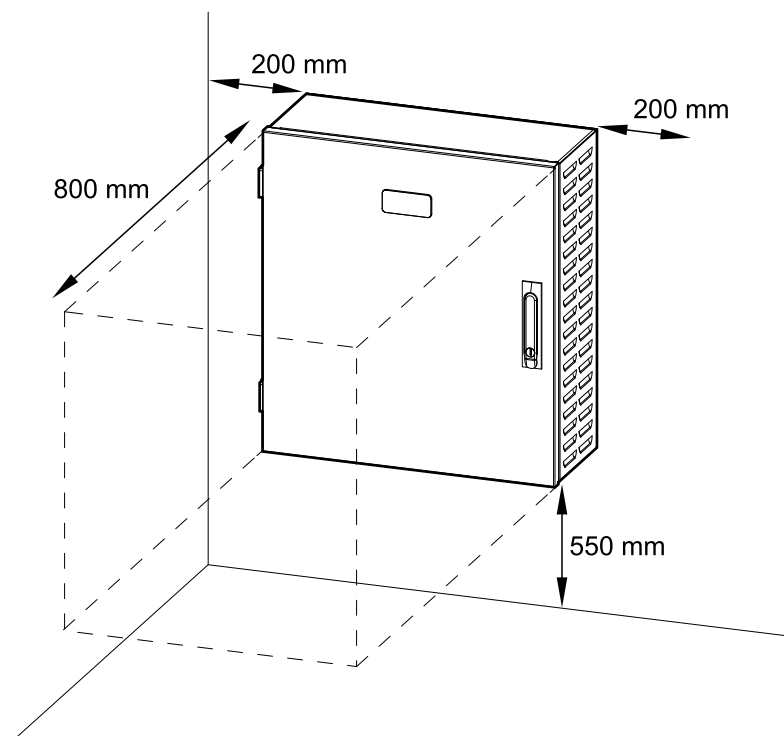
Commercial reference	Weight kg	Height mm ¹	Width mm	Depth mm ¹
GVSbpsu150KH	60	490	840	1220

Maintenance Bypass Panel Weights and Dimensions

Commercial reference	Weight kg	Height mm	Width mm	Depth mm
GVSbpsu150KH	48	800	600	280

Clearance

NOTE: Clearance dimensions are published for airflow and service access only. Consult with the local safety codes and standards for additional requirements in your local area.



1. The product is packaged in a horizontal position, so the shipping height and depth dimensions differ from the product itself.

Environment

	Operating	Storage
Temperature	0 °C to 40 °C	-25 °C to 55 °C
Relative humidity	5-95% non-condensing	10-80% non-condensing
Elevation	0-3000 m	
Protection class	IP20	
Color	RAL 9003, gloss level 85%	

Compliance

Safety	IEC 62040-1: 2017, Edition 2.0, Uninterruptible Power Systems (UPS) - Part 1: Safety requirements
Performance	IEC 62040-3: 2011-03, 2nd edition Uninterruptible Power Systems (UPS) - Part 3: Method of specifying the performance and test requirements
Environmental	IEC 62040-4: 2013-04, 1st edition Uninterruptible Power Systems (UPS) - Part 4: Environmental aspects – Requirements and reporting
Markings	CE
Earthing system	TN-C, TN-S, TT
Overvoltage category	OVCIII
Protective class	I
Pollution degree	2

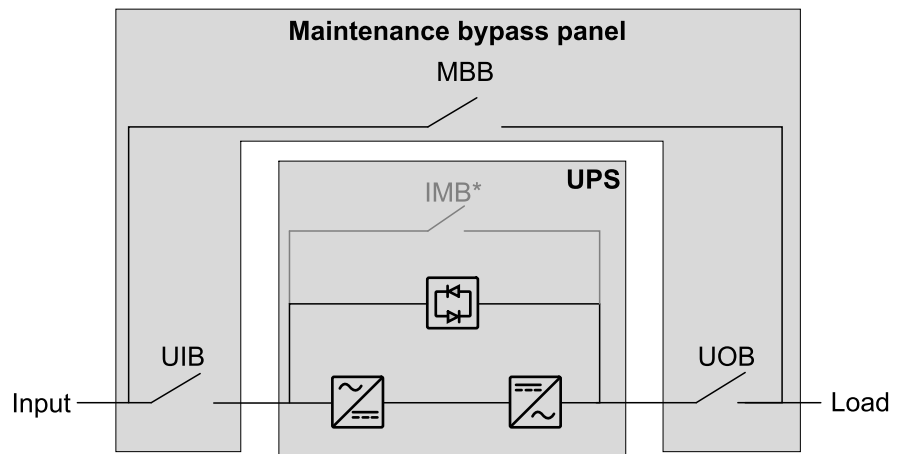
One Line Diagrams

Galaxy VS One Line Diagrams

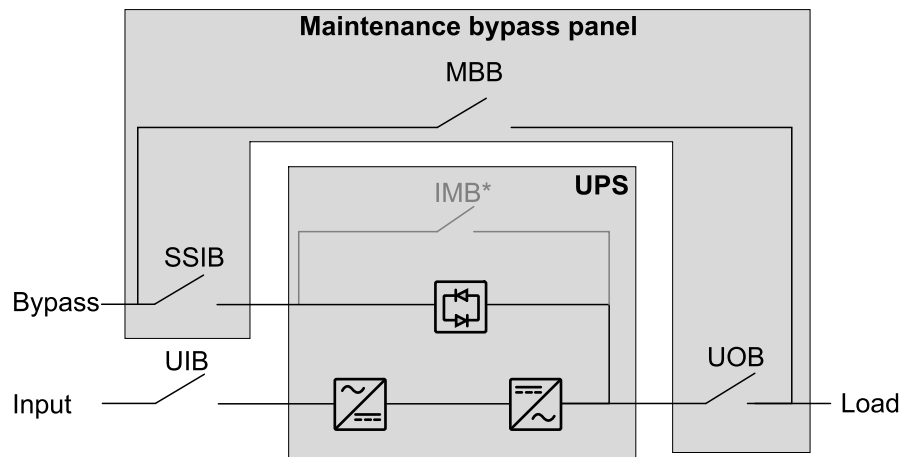
UIB	Unit input breaker
SSIB	Static switch input breaker
MBB	Maintenance bypass breaker
IMB	Internal maintenance breaker
UOB	Unit output breaker

NOTE: The internal maintenance breaker IMB* in the Galaxy VS UPS cannot be used in a system with an maintenance bypass panel and the internal maintenance breaker IMB* must be padlocked in the open position.

Galaxy VS – Single Mains



Galaxy VS – Dual Mains

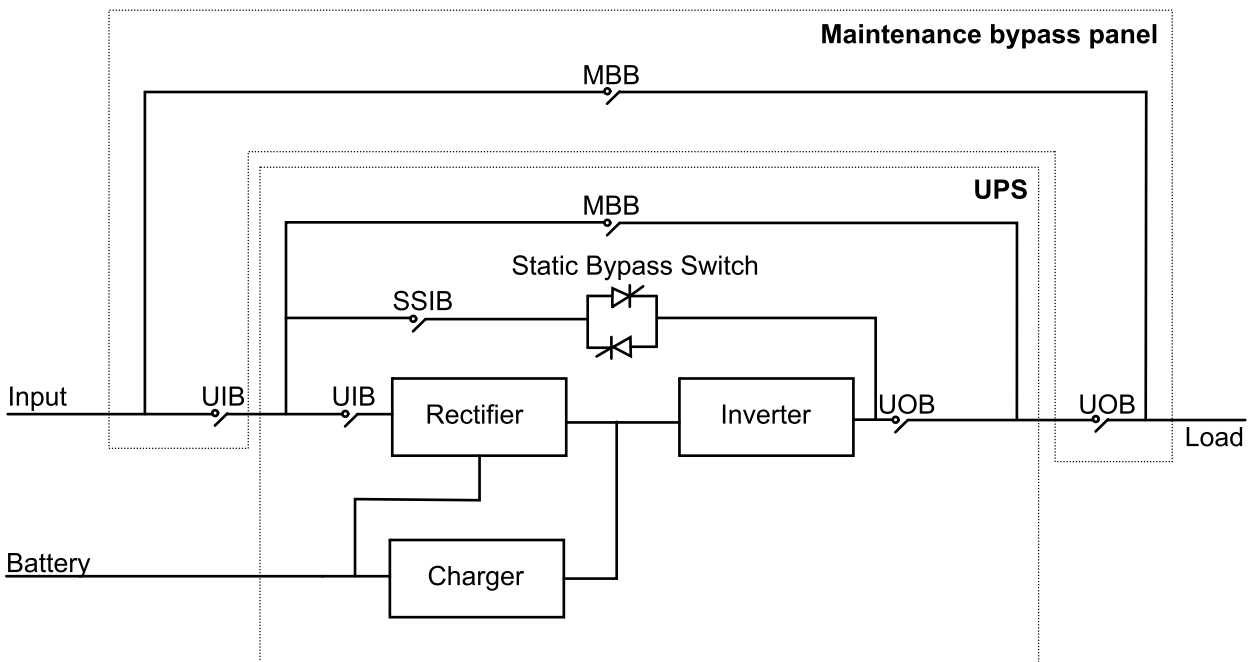


Easy UPS 3M One Line Diagrams

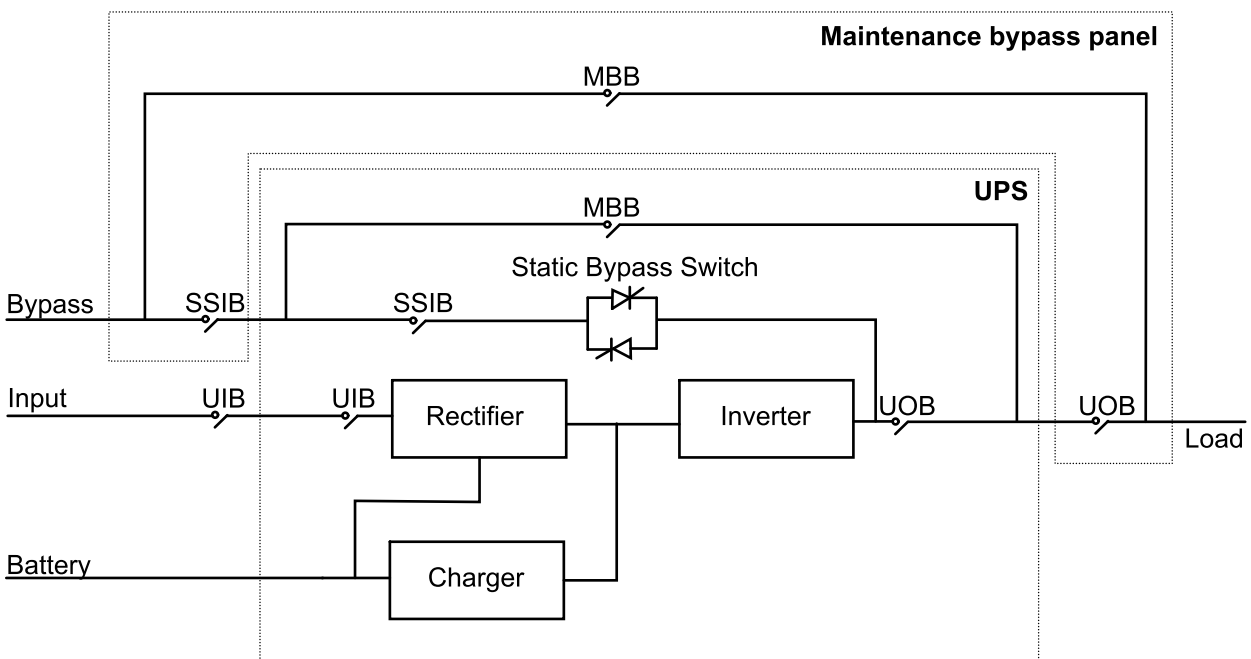
UIB	Unit input breaker
SSIB	Static switch input breaker
MBB	Maintenance bypass breaker
UOB	Unit output breaker

NOTE: The internal MBB in the Easy UPS 3M cannot be used in a system with a parallel maintenance bypass panel and the internal MBB must be padlocked in the open position. Only use the Ext. MBB in the parallel maintenance bypass panel for maintenance bypass operation.

Easy UPS 3M – Single Mains

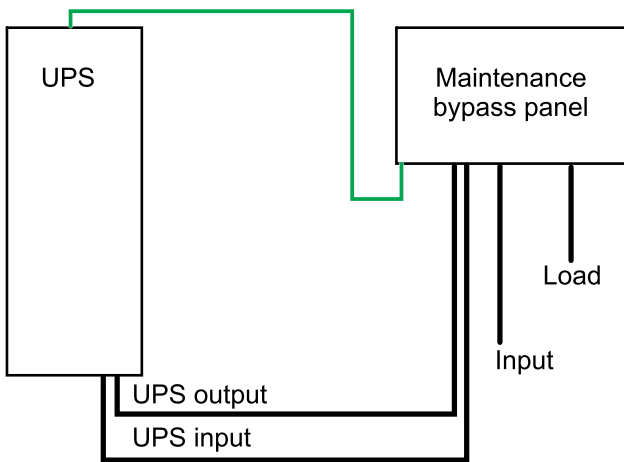


Easy UPS 3M – Dual Mains

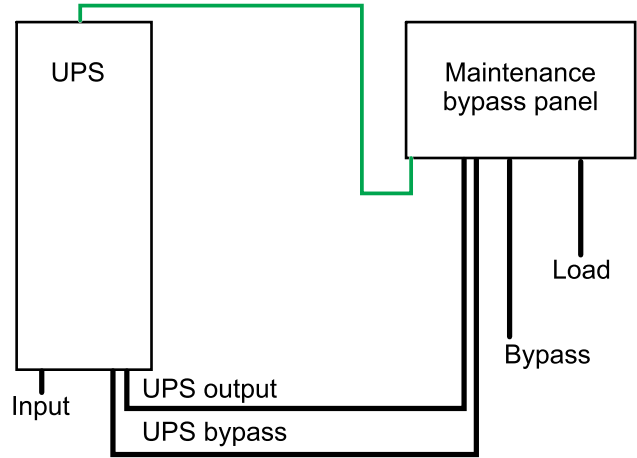


Installation Procedure for Galaxy VS UPS

Single Mains



Dual Mains



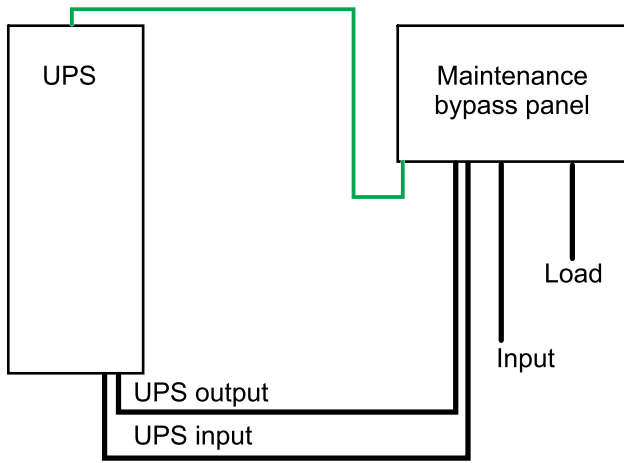
— Signal cable
— Power cable

1. Mount the Maintenance Bypass Panel to the Wall, page 17.
2. Prepare the Maintenance Bypass Panel for Cables, page 19.
3. Only in countries where required: Remove the Neutral Jumpers, page 20.
4. Connect the Power Cables, page 21.
5. Connect the Signal Cables for the Galaxy VS UPS, page 23.
6. Add Translated Safety Labels to Your Product, page 29.
7. Final Installation, page 30.

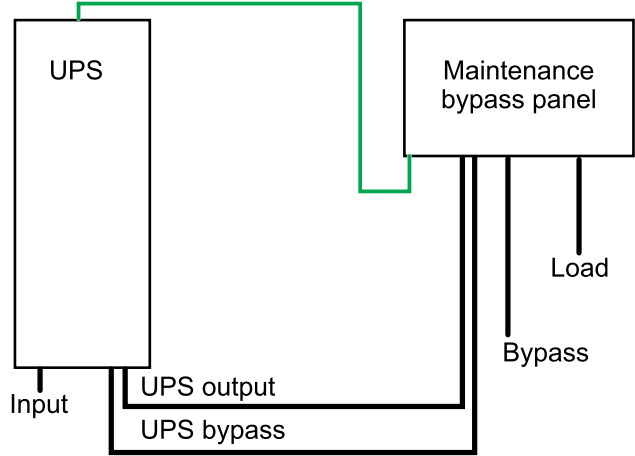
For moving or decommissioning the maintenance bypass panel after installation has been completed, see [Decommission or Move the Maintenance Bypass Panel to a New Location](#), page 31.

Installation Procedure for Easy UPS 3M

Single Mains



Dual Mains



— Signal cable
 — Power cable

1. Mount the Maintenance Bypass Panel to the Wall, page 17.
2. Prepare the Maintenance Bypass Panel for Cables, page 19.
3. Remove the Neutral Jumpers, page 20.
4. Connect the Power Cables, page 21.
5. Connect the Signal Cables for the Easy UPS 3M, page 26.
6. Add Translated Safety Labels to Your Product, page 29.
7. Final Installation, page 30.

For moving or decommissioning the maintenance bypass panel after installation has been completed, see Decommission or Move the Maintenance Bypass Panel to a New Location, page 31.

Mount the Maintenance Bypass Panel to the Wall

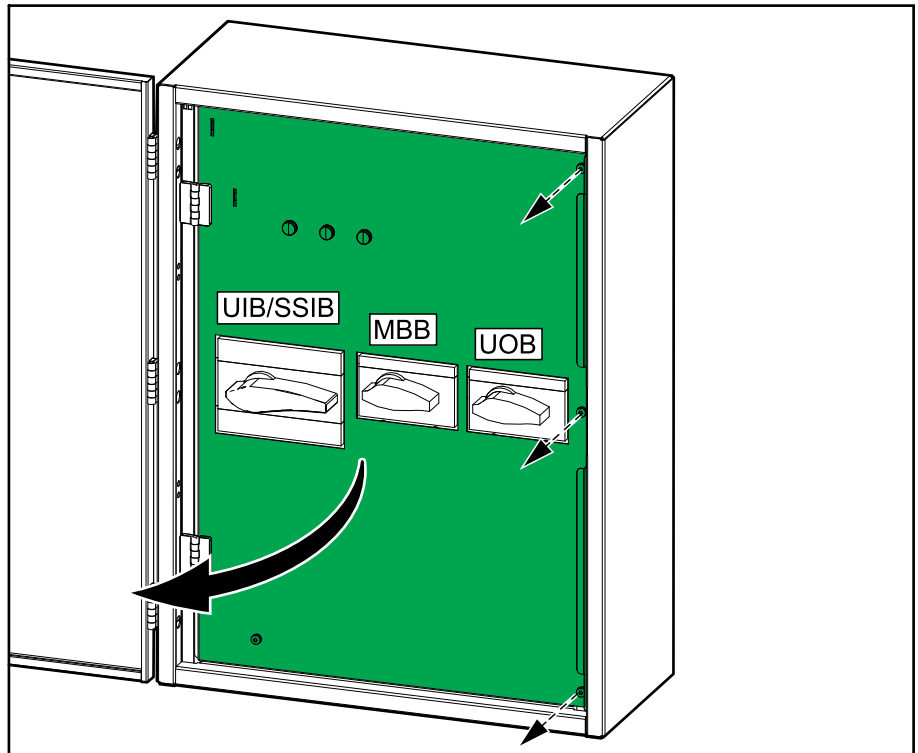
⚠ CAUTION

RISK OF INJURY OR EQUIPMENT DAMAGE

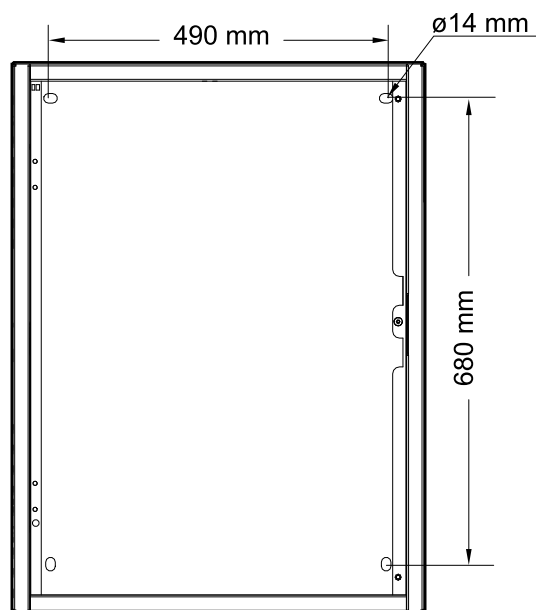
- Mount the maintenance bypass panel to a wall or a rack that is structurally sound and able to support the weight of the unit.
- Use appropriate hardware for the wall/rack type.

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

1. Remove the screws and open the inner door in the maintenance bypass panel.



2. Measure and mark the four mounting hole locations on the wall.



3. Drill holes in the four marked locations and mount the anchor bolts.

4. Mount the maintenance bypass panel to the wall.

Prepare the Maintenance Bypass Panel for Cables

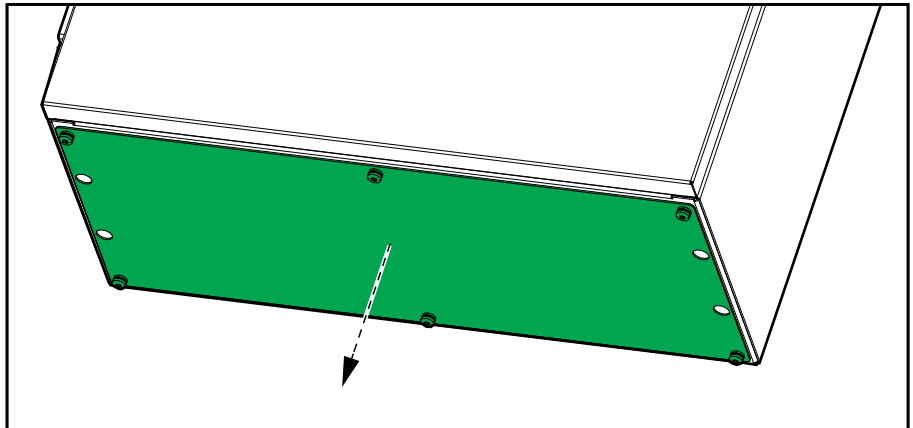
⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Do not drill or punch holes with the gland plates installed and do not drill or punch holes in close proximity to the maintenance bypass panel.

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

1. Remove the gland plate.



2. Drill or punch holes for cables or grommets in the gland plate.

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Ensure that there are no sharp edges that can damage the cables.

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

3. Install grommets (if applicable) and reinstall the gland plate.

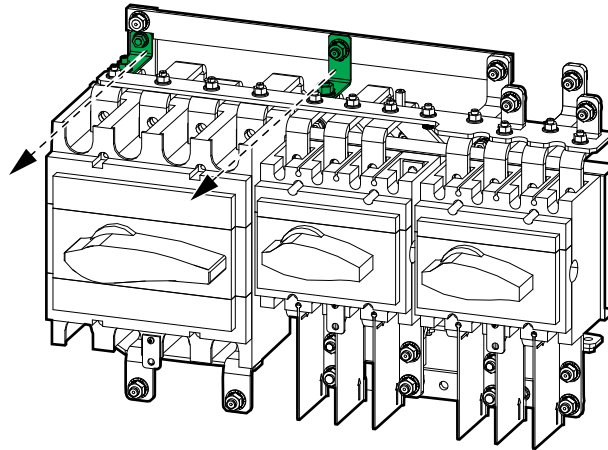
Remove the Neutral Jumpers

NOTE: The neutral jumper makes a bolted connection of the neutral so that the neutral is not disconnected when the 4-pole breakers are opened.

NOTE: Only remove the neutral jumpers in a Galaxy VS installation, if this is a local requirement. Removal of the neutral jumpers is an **option** for a Galaxy VS installation.

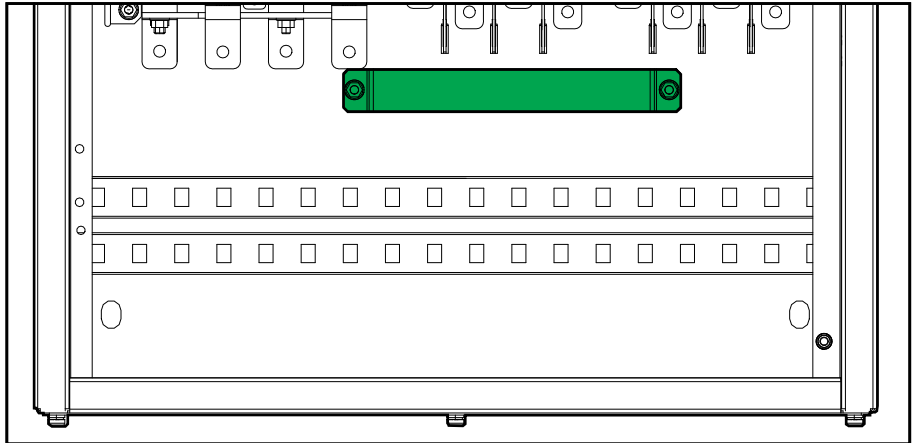
NOTE: Always remove the neutral jumpers in an Easy UPS 3M installation. Removal of the neutral jumpers is **mandatory** for an Easy UPS 3M installation.

1. Remove the neutral jumpers from the breakers.

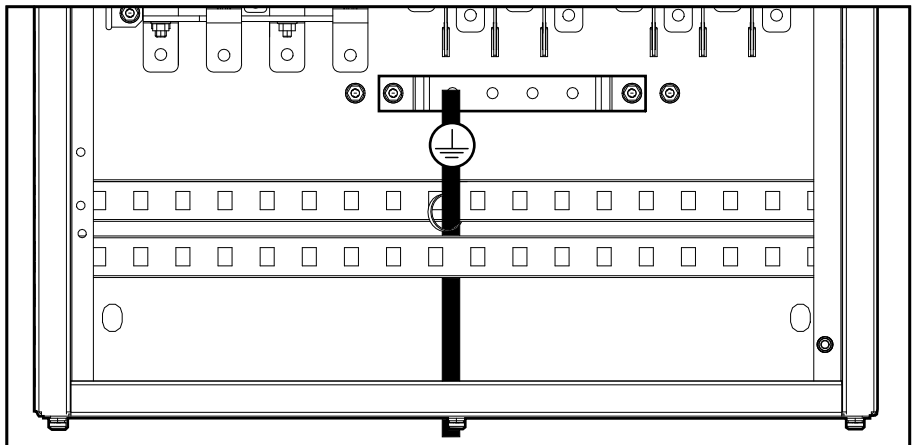


Connect the Power Cables

1. Remove the cover from the PE busbar.

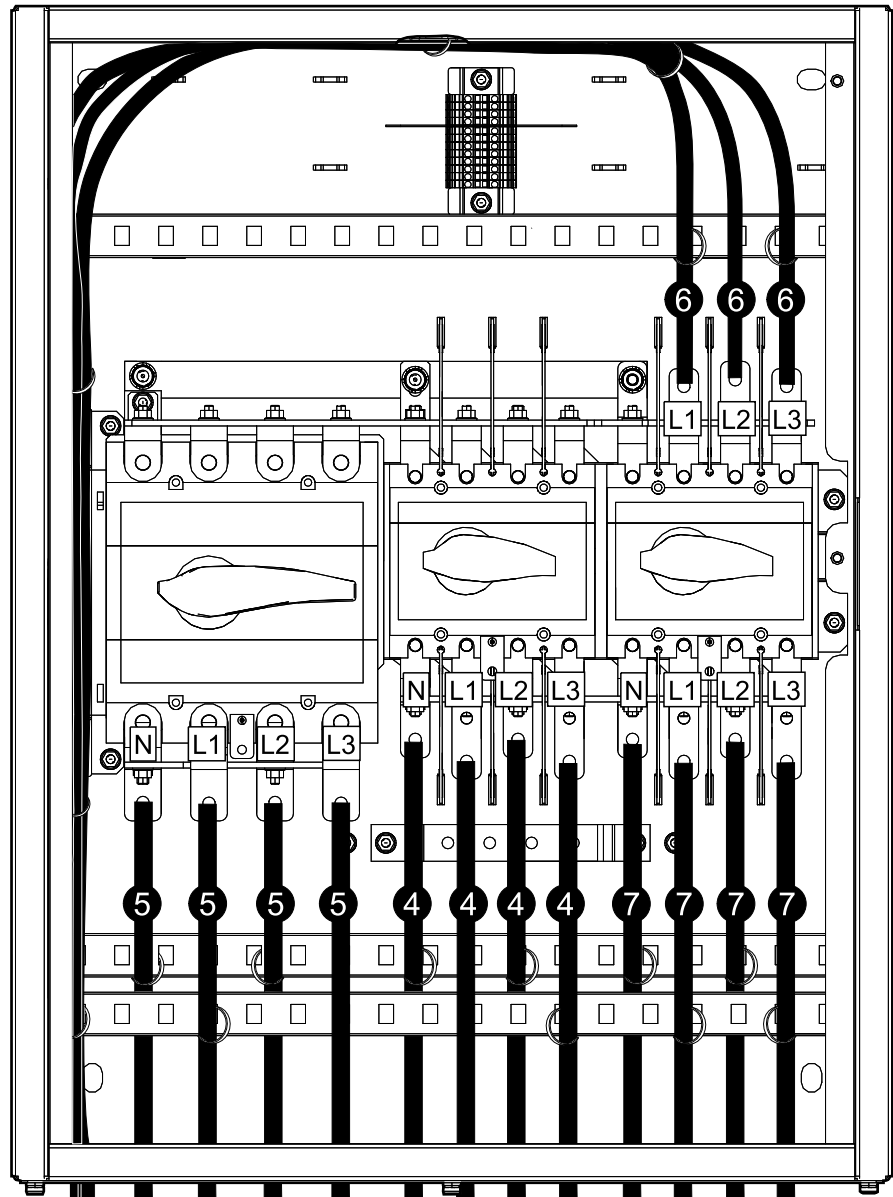


2. Connect the PE cables to the PE busbar.



3. Reinstall the cover on the PE busbar.
4. Do one of the following:
 - **For single mains:** Connect the input cables from utility/mains.
 - **For dual mains:** Connect the bypass cables from utility/mains.
5. Do one of the following:
 - **For single mains:** Connect the UPS input cables.
 - **For dual mains:** Connect the UPS bypass cables.
6. Connect the UPS output cables.

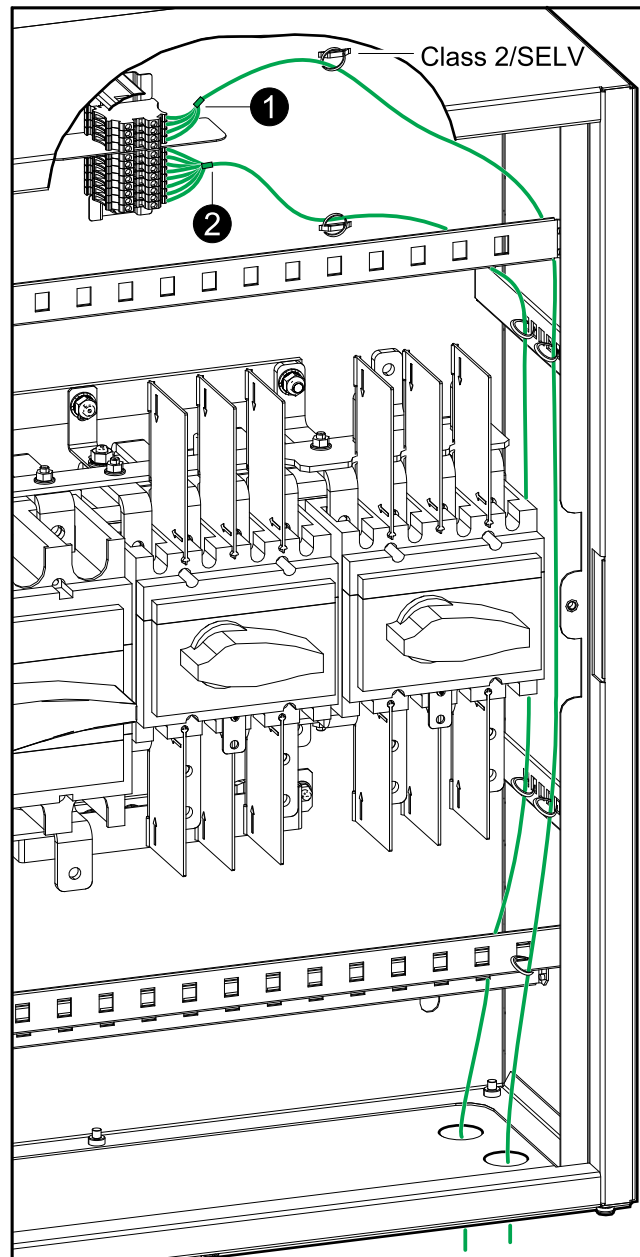
7. Connect the load cables.



8. Fasten the cables with cable ties (not provided) to the cable reliefs in the left side, top, and bottom of the maintenance bypass panel.

Connect the Signal Cables for the Galaxy VS UPS

NOTE: Route the signal cables separately from the power cables and route the Class 2/SELV cables separately from the non-Class 2/non-SELV cables.

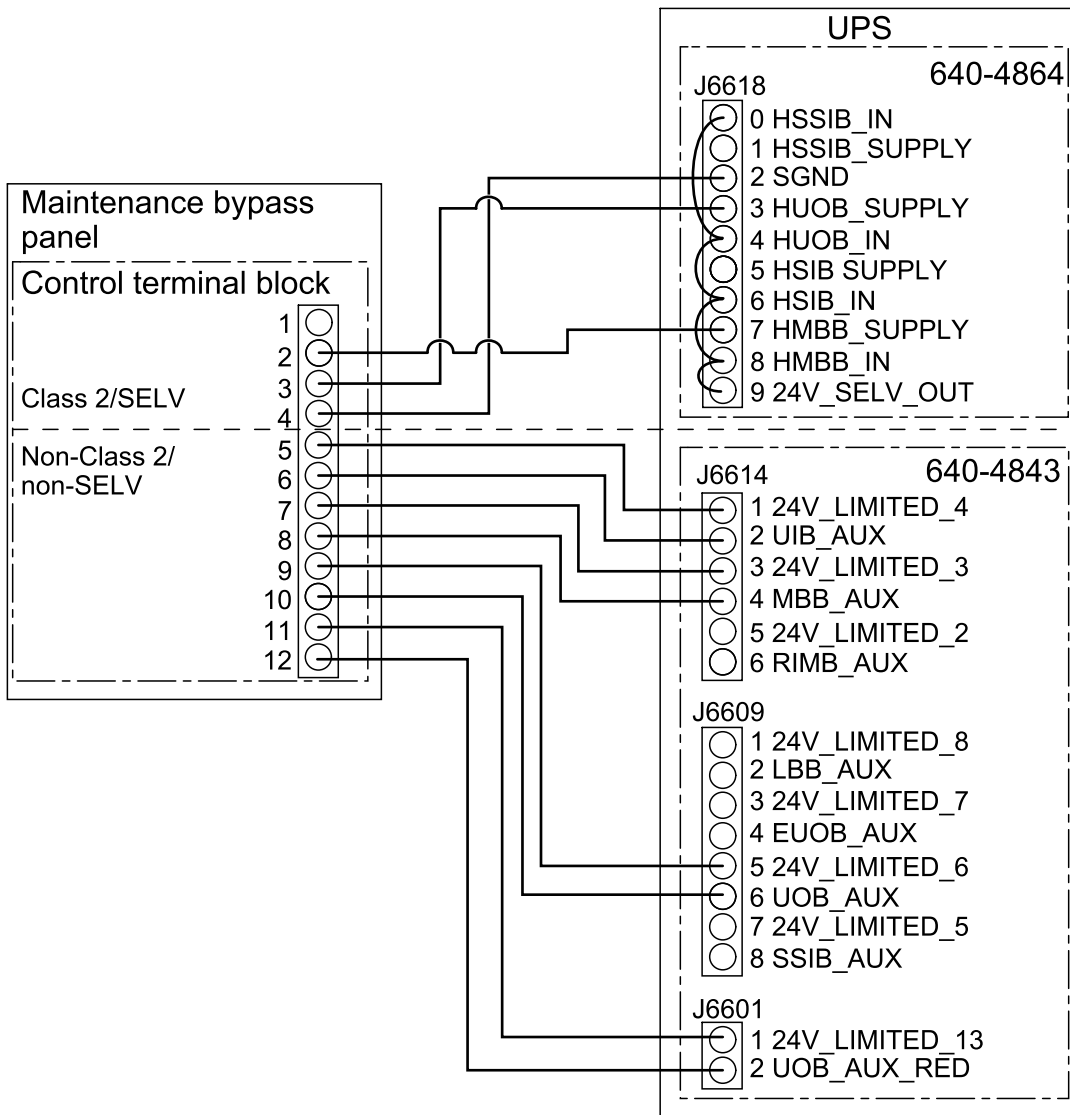


1. Connect the Class 2/SELV signal cables for the breaker indicator lights from the control terminal block in the maintenance bypass panel to the UPS as per your configuration.

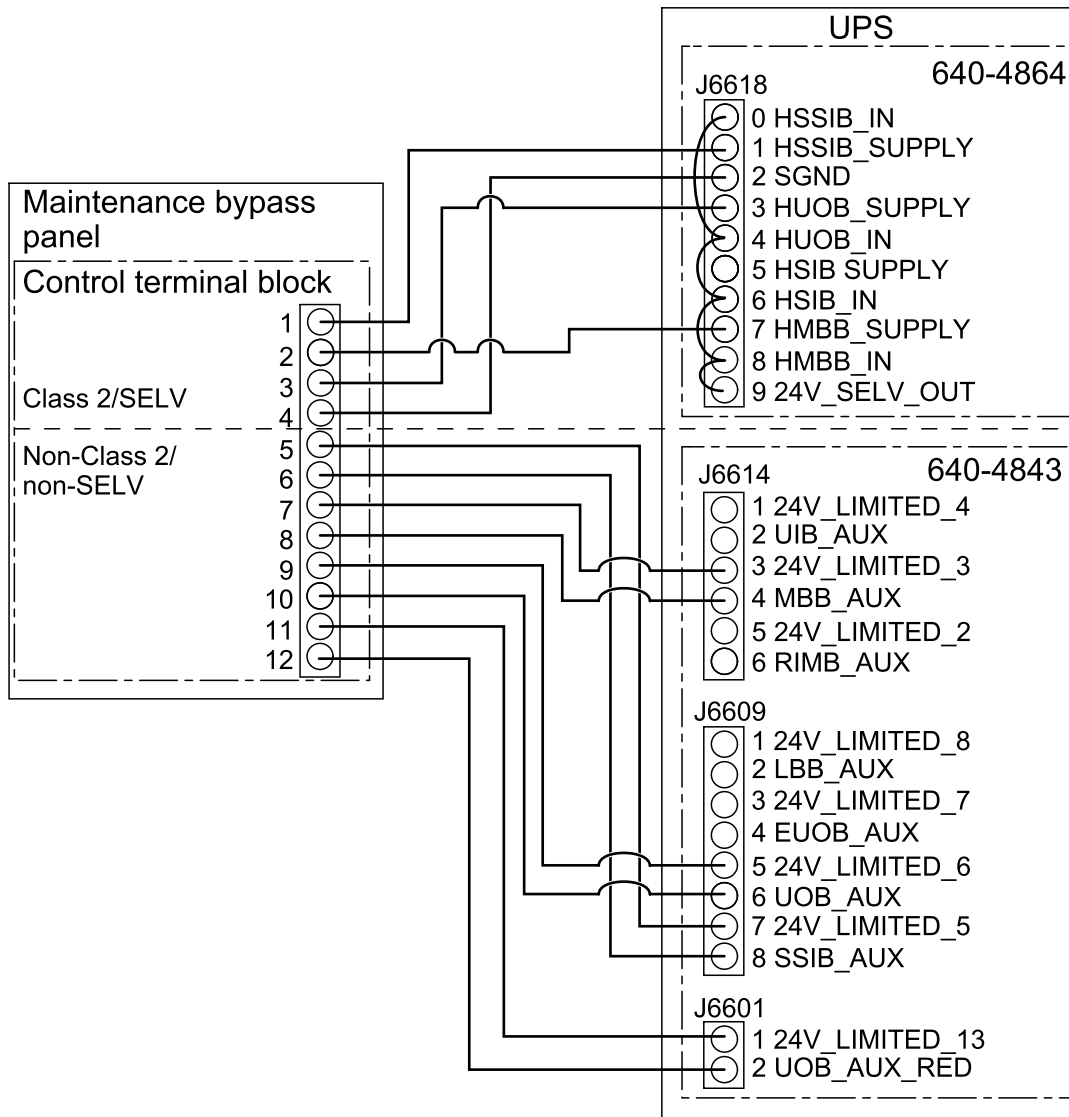
NOTE: The breaker indicator light circuit is considered Class 2/SELV. Class 2/SELV circuits must be isolated from the primary circuitry. Do not connect any circuit to the breaker indicator light terminals unless it can be confirmed that the circuit is Class 2/SELV.

2. Connect the non-Class 2/non-SELV signal cables from the control terminal block in the maintenance bypass panel to the UPS as per your configuration.

Single Mains



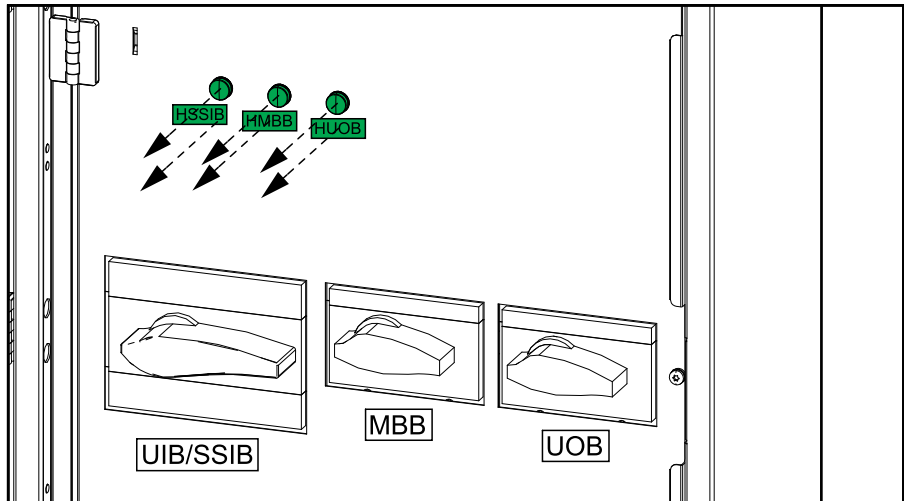
Dual Mains



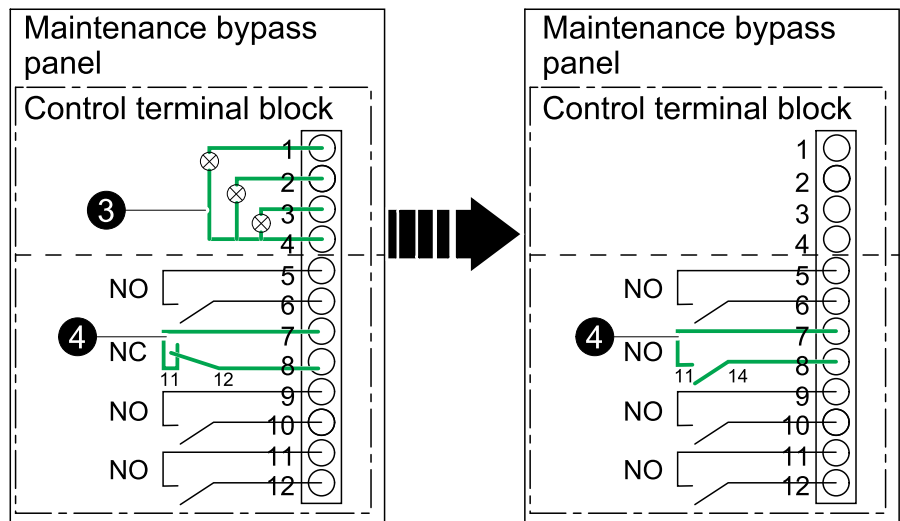
3. Pull up the slack in the signal cables and fasten the signal cables to the cable reliefs.

Connect the Signal Cables for the Easy UPS 3M

1. Remove the three breaker indicator lights and the breaker indicator light labels from the maintenance bypass panel. The breaker indicator lights are not supported with the Easy UPS 3M.

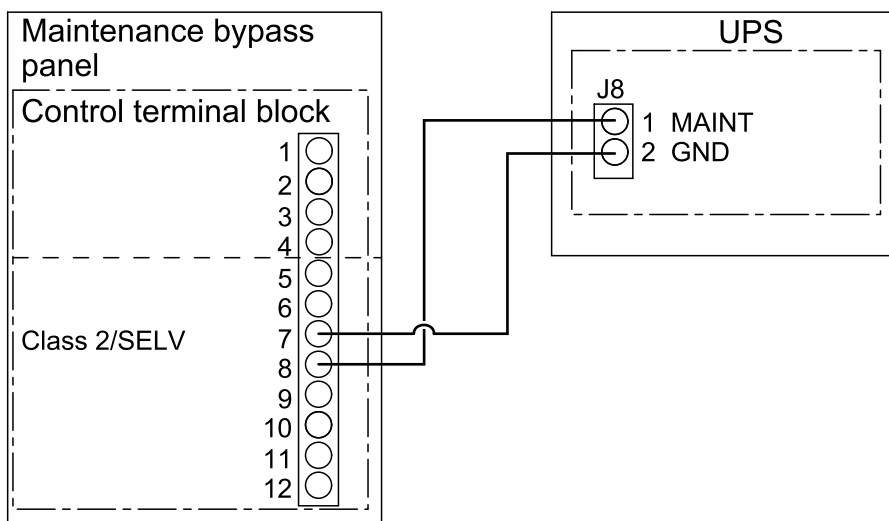
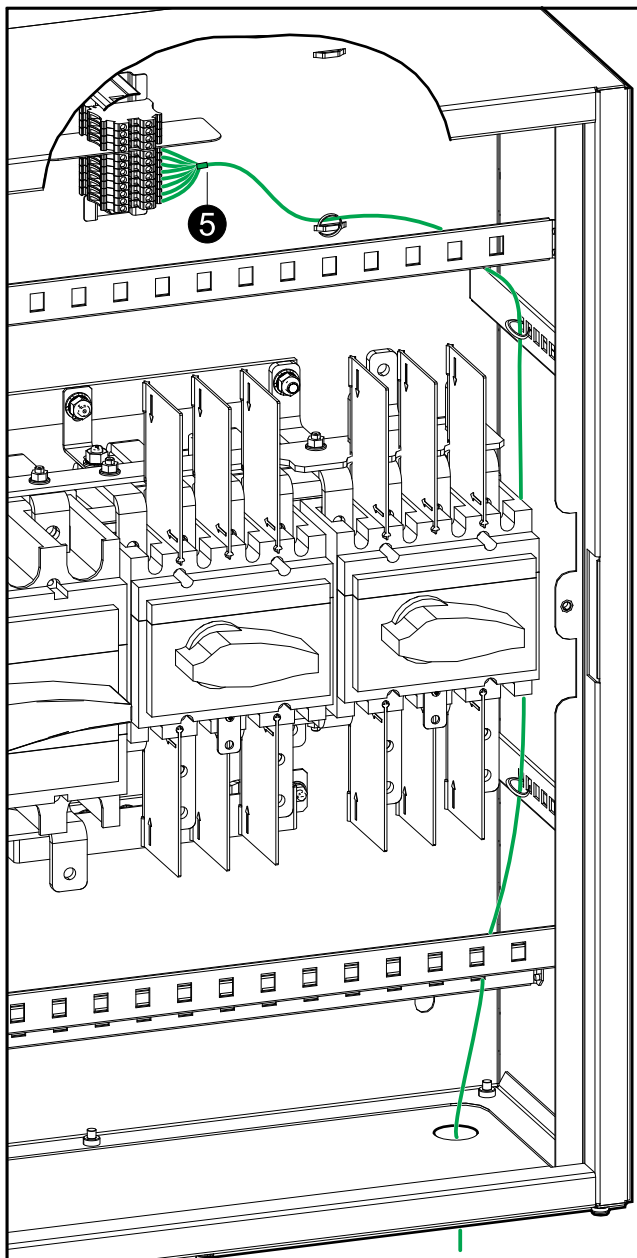


2. Install three round blanking plugs (not provided) in the holes in the inner door.
3. On the control terminal block, remove the internal connections for the breaker indicator lights (pin 1-4).
4. On the control terminal block, modify the internal connection for the MBB AUX switch (pin 7-8) from Normally Closed (NC) to Normally Open (NO).



- 5. Connect the Class 2/SELV signal cables from the control terminal block in the maintenance bypass panel to the UPS as per your configuration.

NOTE: Route the signal cables separately from the power cables and route the Class 2/SELV cables separately from the non-Class 2/non-SELV cables.



6. Pull up the slack in the signal cables and fasten the signal cables to the cable reliefs.

Add Translated Safety Labels to Your Product

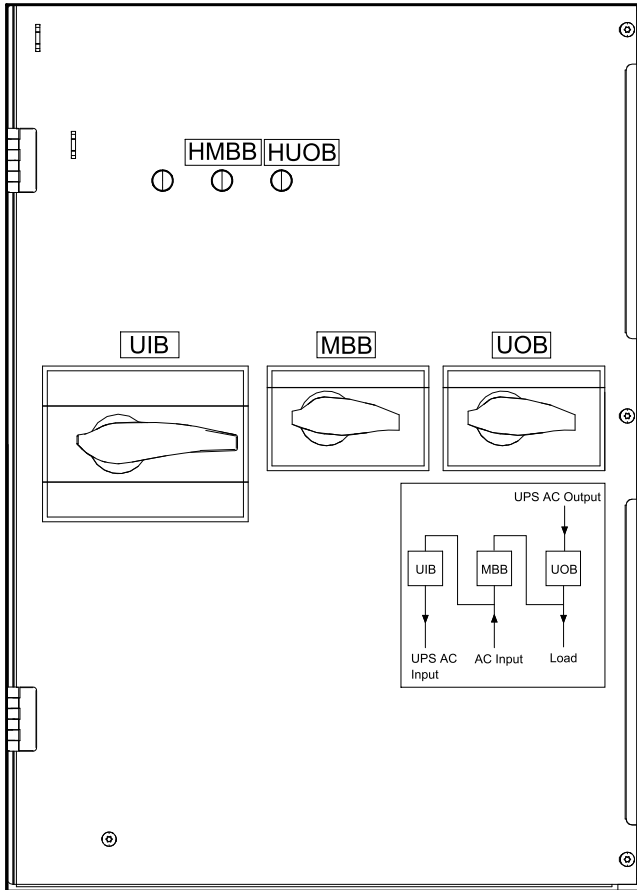
The safety labels on your product are in English and French. Sheets with translated safety labels are provided with your product.

1. Find the sheets with translated safety labels provided with your product.
2. Check which 885-XXX numbers are on the sheet with translated safety labels.
3. Locate the safety labels on your product that match the translated safety labels on the sheet – look for the 885-XXX numbers.
4. Add the replacement safety label in your preferred language to your product on top of the existing French safety label.

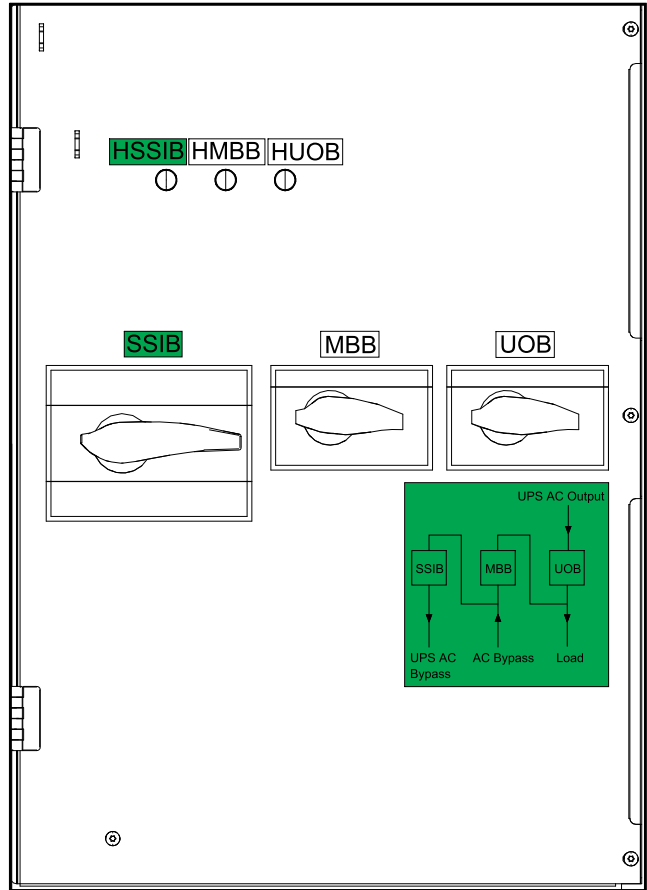
Final Installation

1. Close the inner door and fasten it with the screws.
2. Add labels to the breaker indicator lamps, the breakers, and the diagram label according to your system. The labels are provided with this manual.

Labels – Single Mains



Labels – Dual Mains



Decommission or Move the Maintenance Bypass Panel to a New Location

1. Shut down the UPS completely – follow the instructions in the UPS operation manual.
2. Lockout/Tagout all breakers in the switchgear in the OFF (open) position.
3. Lockout/Tagout all battery breakers in the switchgear/battery solution in the OFF (open) position.
4. Verify that all upstream breakers are in the OFF (open) position.

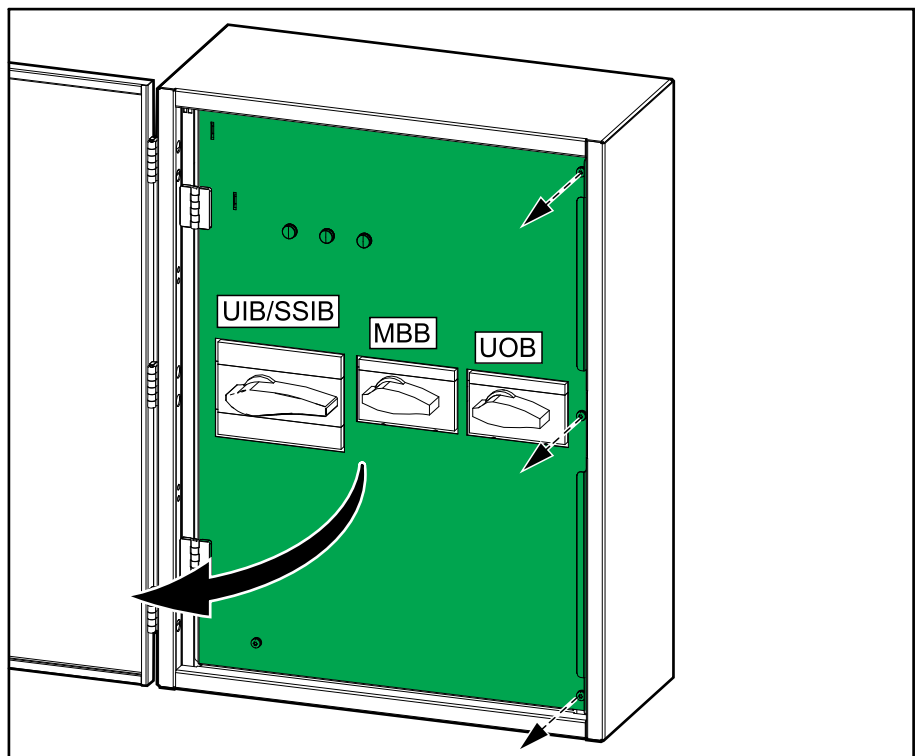
⚡ ⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Verify that all upstream breakers are in the OFF (open) position.

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

5. Open the front door of the maintenance bypass panel.
6. Lockout/Tagout UIB/SSIB, MBB, and UOB in the maintenance bypass panel in the OFF (open) position.
7. Remove the screws and open the inner door in the maintenance bypass panel.



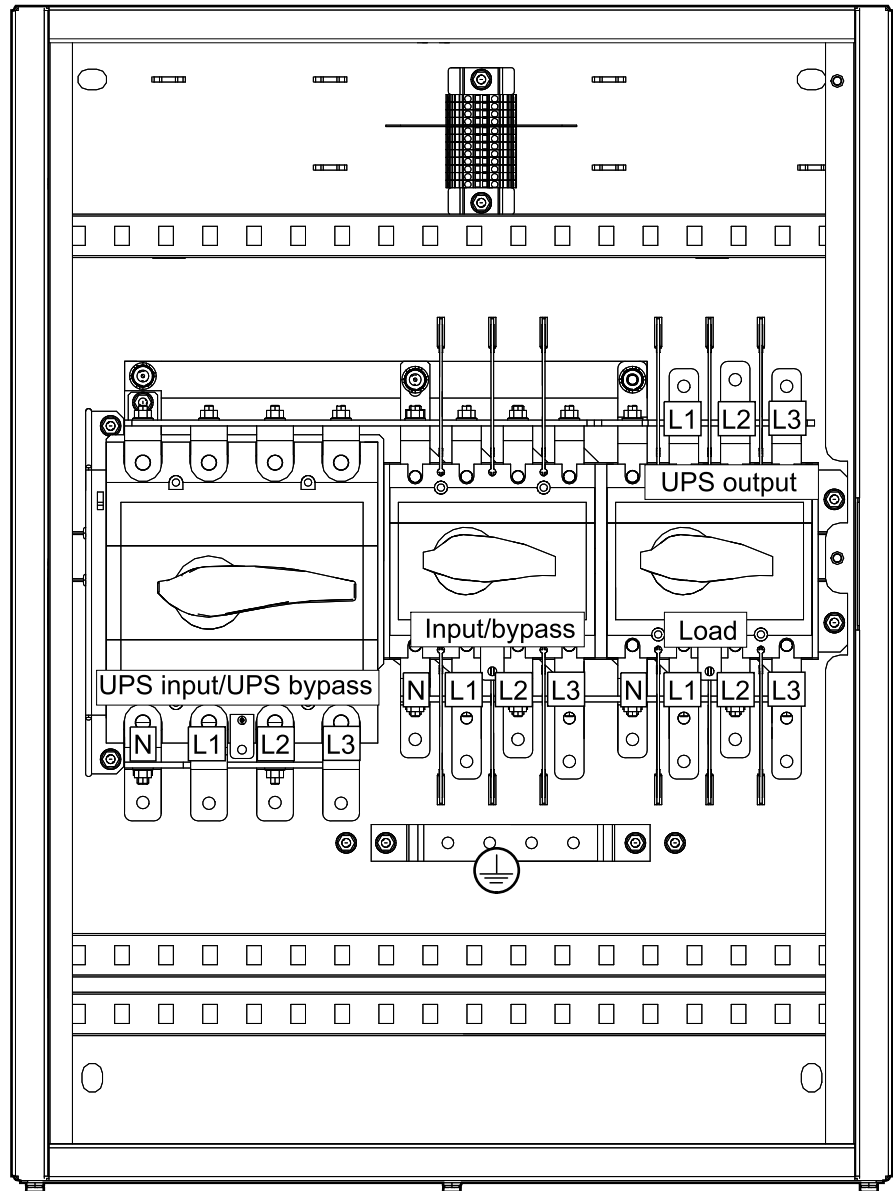
8. Measure for and verify ABSENCE of voltage on each input/bypass busbar, UPS input/UPS bypass busbar, UPS output busbar, and load busbar before continuing.

⚡⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Measure for and verify ABSENCE of voltage on each input/bypass busbar, UPS input/UPS bypass busbar, UPS output busbar, and load busbar before continuing.

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



9. Disconnect and remove all power cables from the maintenance bypass panel. See Connect the Power Cables, page 21 for details.
10. Disconnect and remove all signal cables from the maintenance bypass panel. See Connect the Signal Cables for the Galaxy VS UPS, page 23 or Connect the Signal Cables for the Easy UPS 3M, page 26 for details.

11. Remove the four M10 screws from the wall and remove the maintenance bypass panel from the wall.

⚠ CAUTION
HEAVY LOAD The maintenance bypass panel is heavy (48 kg). Use appropriate tools to safely lift the maintenance bypass panel. Failure to follow these instructions can result in injury or equipment damage.

12. Close the inner door and fasten it with the screws.
13. Close and lock the front door of the maintenance bypass panel.
14. **For transport:**

⚠ WARNING
TIPPING HAZARD For transport of the maintenance bypass panel ensure: <ul style="list-style-type: none">• that personnel performing the transport have necessary skills and have received adequate training;• to use appropriate tools to safely lift and transport the product;• to protect the product against damage by using appropriate protection (like wrapping or packaging). Failure to follow these instructions can result in death, serious injury, or equipment damage.

Transportation requirements:

- Mount the maintenance bypass panel in a horizontal position in the center of a suitable pallet with minimum pallet dimensions: 840 mm x 1220 mm. The pallet must be suitable for the weight of the maintenance bypass panel (48 kg).
- Mount the maintenance bypass panel to the pallet with appropriate means of fixation that can withstand vibrations and shocks during loading, transport, and unloading.
- The original shipping pallet in combination with the original transportation brackets can be reused, if in undamaged condition.

⚠ WARNING
UNEXPECTED EQUIPMENT BEHAVIOR Do not lift the maintenance bypass panel with a forklift/pallet truck directly as it may bend or damage the maintenance bypass panel. Failure to follow these instructions can result in death, serious injury, or equipment damage.

15. Perform one of the following:
 - Decommission the maintenance bypass panel, OR
 - Move the maintenance bypass panel to a new location to install it.
16. **Only for installing the maintenance bypass panel in a new location:** Follow the installation manual to install the maintenance bypass panel in the new location. See *Installation Procedure for Galaxy VS UPS, page 15* or *Installation Procedure for Easy UPS 3M, page 16* for installation overview. Reinstallation and startup must only be performed by qualified personnel.

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As standards, specifications, and design change from time to time,
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