

# Galaxy VS

## Maintenance Bypass Panel for UL

### Installation

GVBPSU60G-WP, GVBPSU100G-WP

Latest updates are available on the Schneider Electric website  
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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.

## FCC Statement

**NOTE:** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

## 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.**

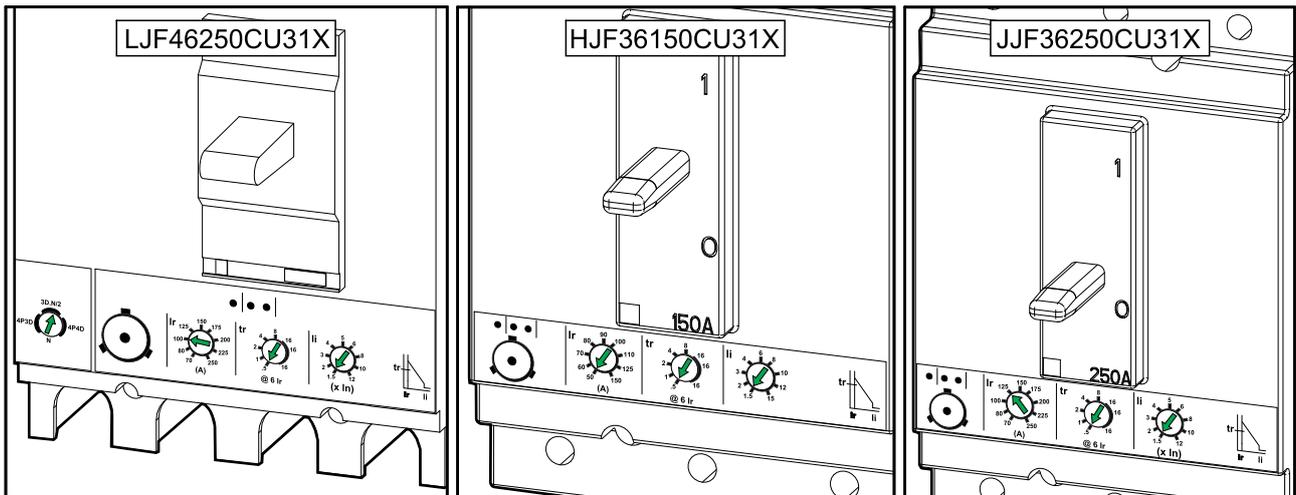
# Specifications

**NOTE:** Maximum short-circuit rating: 65 kA RMS symmetrical amperes, 480 V.

**NOTE:** GVSBPUS60G-WP can support a load of up to 60 kW/kVA as long as the neutral current (100 A) is not exceeded:

- at 200/208/220 V, the maximum neutral current capability is reached with a 20 kVA non-linear load.
- at 400/415/480 V, the maximum neutral current capability is reached with a 40 kVA non-linear load.

## Trip Settings



### 200/208/220 V Systems

UPS rating	Breaker type	Ir (A)			tr @	li	tr @	li	
		UIB	SSIB	MBB/ UOB	6 lr	(x In)	6 lr	(x In)	
10 kW	HJF36150CU31X	BJF46125	50	50	N/A	1	4	N/A	
15 kW	HJF36150CU31X	BJF46125	60	60	N/A	1	5	N/A	
20 kW	HJF36150CU31X	BJF46125	80	80	N/A	1	5	N/A	
25 kW	GVSBPUS60G-WP	HJF36150CU31X	BJF46125	100	100	N/A	1	5	N/A
	GVSBPUS100G-WP	JJF36250CU31X	LJF46250CU31X	100	100	100	1	4	0.5   4
30 kW	GVSBPUS60G-WP	HJF36150CU31X	BJF46125	125	110	N/A	1	12	N/A
	GVSBPUS100G-WP	JJF36250CU31X	LJF46250CU31X	125	125	125	1	6	0.5   6
40 kW	JJF36250CU31X	LJF46250CU31X	175	150	150	1	6	0.5   6	
50 kW	JJF36250CU31X	LJF46250CU31X	200	200	200	1	6	0.5   6	

### 400/415 V Systems

UPS rating	Breaker type	Ir (A)			tr @	li (x In)	tr @	li (x In)	
		UIB	SSI-B	MBB/ UOB	6 lr	UIB/SSIB	MBB/ UOB		
20 kW	HJF36150CU31X	BJF46125	50	50	N/A	1	4	N/A	
30 kW	HJF36150CU31X	BJF46125	60	60	N/A	1	5	N/A	
40 kW	HJF36150CU31X	BJF46125	80	80	N/A	1	5	N/A	
50 kW	GVSBPUS60G-WP	HJF36150CU31X	BJF46125	100	100	N/A	1	5	N/A

**400/415 V Systems (Continued)**

UPS rating		Breaker type		Ir (A)			tr @ 6 lr	li (x ln)	tr @ 6 lr	li (x ln)
		UIB/SSIB	MBB/UOB	UIB	SSI- B	MBB/ UOB	UIB/SSIB		MBB/UOB	
	GVSbpsu100G-WP	JJF36250CU31X	LJF46250CU31X	100	100	100	1	4	0.5	4
60 kW	GVSbpsu60G-WP	HJF36150CU31X	BJF46125	125	110	N/A	1	12	N/A	
	GVSbpsu100G-WP	JJF36250CU31X	LJF46250CU31X	125	125	125	1	6	0.5	6
80 kW		JJF36250CU31X	LJF46250CU31X	150	150	150	1	6	0.5	6
100 kW		JJF36250CU31X	LJF46250CU31X	200	200	200	1	6	0.5	6

**480 V Systems**

UPS rating		Breaker type		Ir (A)			tr @ 6 lr	li(x ln)	tr @ 6 lr	li (x ln)
		UIB/SSIB	MBB/UOB	UIB	SSI- B	MBB/ UOB	UIB/SSIB		MBB/UOB	
20 kW		HJF36150CU31X	BJF46125	50	50	N/A	1	4	N/A	
30 kW		HJF36150CU31X	BJF46125	50	50	N/A	1	5	N/A	
40 kW		HJF36150CU31X	BJF46125	70	70	N/A	1	5	N/A	
50 kW	GVSbpsu60G-WP	HJF36150CU31X	BJF46125	80	80	N/A	1	5	N/A	
	GVSbpsu100G-WP	JJF36250CU31X	LJF46250CU31X	80	80	80	1	4	0.5	4
60 kW	GVSbpsu60G-WP	HJF36150CU31X	BJF46125	100	100	N/A	1	12	N/A	
	GVSbpsu100G-WP	JJF36250CU31X	LJF46250CU31X	100	100	100	1	6	0.5	6
80 kW		JJF36250CU31X	LJF46250CU31X	125	125	125	1	6	0.5	6
100 kW		JJF36250CU31X	LJF46250CU31X	175	175	175	1	6	0.5	6

## Recommended Upstream Protection

Changing the settings to other than the listed settings will impact system performance.

### Upstream 3-Pole Breakers for 200/208/220 V Systems

UPS rating		Breaker type		Ir (A)		tr @ 6 Ir	li (x In)
		Input	Bypass	Input	Bypass		
10 kW		HJF36100U31X	HJF36100U31X	50	40	0.5	1.5
15 kW		HJF36100U31X	HJF36100U31X	70	60	0.5	1.5
20 kW		HJF36100U31X	HJF36100U31X	100	80	0.5	1.5
25 kW	GVSbpsu60G-WP	HJF36150U31X	HJF36150U31X	125	100	0.5	1.5
	GVSbpsu100G-WP	HJF36150U31X	HJF36150U31X	125	100	0.5	1.5
30 kW	GVSbpsu60G-WP	HJF36150U31X	HJF36150U31X	150	110	0.5	1.5
	GVSbpsu100G-WP	HJF36150U31X	HJF36150U31X	150	125	0.5	1.5
40 kW		JJF36250U31X	JJF36250U31X	200	150	0.5	1.5
50 kW		JJF36250U31X	JJF36250U31X	250	200	0.5	1.5

### Upstream 4-Pole Breakers for 200/208/220 V Systems

UPS rating		Breaker type		Ir (A)		tr @ 6 Ir	li (x In)
		Input	Bypass	Input	Bypass		
10 kW		BJL46070	BJL46060	NA	NA	0.5	1.5
15 kW		BJL46100	BJL46090	NA	NA	0.5	1.5
20 kW		LJF46250U31X	BJF46100	100	NA	0.5	1.5
25 kW	GVSbpsu60G-WP	LJF46250U31X	BJF46125	125	NA	0.5	1.5
	GVSbpsu100G-WP	LJF46250U31X	LJF46250U31X	125	100	0.5	1.5
30 kW	GVSbpsu60G-WP	LJF46250U31X	LJF46250U31X	150	110	0.5	1.5
	GVSbpsu100G-WP	LJF46250U31X	LJF46250U31X	150	110	0.5	1.5
40 kW		LJF46250U31X	LJF46250U31X	200	150	0.5	1.5
50 kW		LJF46250U31X	LJF46250U31X	250	200	0.5	1.5

### Upstream 3-Pole Breakers for 400/415 V Systems

UPS rating		Breaker type		Ir (A)		tr @ 6 Ir	li (x In)
		Input	Bypass	Input	Bypass		
20 kW		HJF36100U31X	HJF36100U31X	50	40	0.5	1.5
30 kW		HJF36100U31X	HJF36100U31X	70	60	0.5	1.5
40 kW		HJF36100U31X	HJF36100U31X	100	80	0.5	1.5
50 kW	GVSbpsu60G-WP	HJF36150U31X	HJF36150U31X	125	100	0.5	1.5
	GVSbpsu100G-WP	HJF36150U31X	HJF36150U31X	125	100	0.5	1.5
60 kW	GVSbpsu60G-WP	HJF36150U31X	HJF36150U31X	150	110	0.5	1.5
	GVSbpsu100G-WP	HJF36150U31X	HJF36150U31X	150	125	0.5	1.5
80 kW		JJF36250U31X	JJF36250U31X	200	150	0.5	1.5
100 kW		JJF36250U31X	JJF36250U31X	250	200	0.5	1.5

**Upstream 4-Pole Breakers for 400/415 V Systems**

UPS rating		Breaker type		Ir (A)		tr @ 6 Ir	Ii (x In)
		Input	Bypass	Input	Bypass		
20 kW		BJL46070	BJL46060	NA	NA	0.5	1.5
30 kW		BJL46100	BJL46090	NA	NA	0.5	1.5
40 kW		LJF46250U31X	BJF46100	100	NA	0.5	1.5
50 kW	GVSbpsu60G-WP	LJF46250U31X	BJF46125	125	NA	0.5	1.5
	GVSbpsu100G-WP	LJF46250U31X	LJF46250U31X	125	100	0.5	1.5
60 kW	GVSbpsu60G-WP	LJF46250U31X	LJF46250U31X	150	100	0.5	1.5
	GVSbpsu100G-WP	LJF46250U31X	LJF46250U31X	150	110	0.5	1.5
80 kW		LJF46250U31X	LJF46250U31X	200	150	0.5	1.5
100 kW		LJF46250U31X	LJF46250U31X	250	200	0.5	1.5

**Upstream 3-Pole Breakers for 480 V Systems**

UPS rating		Breaker type		Ir (A)		tr @ 6 Ir	Ii (x In)
		Input	Bypass	Input	Bypass		
20 kW		HJF36100U31X	HJF36100U31X	40	35	0.5	1.5
30 kW		HJF36100U31X	HJF36100U31X	60	50	0.5	1.5
40 kW		HJF36100U31X	HJF36100U31X	80	70	0.5	1.5
50 kW	GVSbpsu60G-WP	HJF36150U31X	HJF36150U31X	100	80	0.5	1.5
	GVSbpsu100G-WP	HJF36150U31X	HJF36150U31X	100	80	0.5	1.5
60 kW	GVSbpsu60G-WP	HJF36150U31X	HJF36150U31X	125	100	0.5	1.5
	GVSbpsu100G-WP	HJF36150U31X	HJF36150U31X	125	100	0.5	1.5
80 kW		JJF36250U31X	JJF36250U31X	175	125	0.5	1.5
100 kW		JJF36250U31X	JJF36250U31X	200	175	0.5	1.5

**Upstream 4-Pole Breakers for 480 V Systems**

UPS rating		Breaker type		Ir (A)		tr @ 6 Ir	Ii (x In)
		Input	Bypass	Input	Bypass		
20 kW		BJL46070	BJL46060	NA	NA	0.5	1.5
30 kW		BJL46100	BJL46090	NA	NA	0.5	1.5
40 kW		LJF46250U31X	BJF46100	90	NA	0.5	1.5
50 kW	GVSbpsu60G-WP	LJF46250U31X	BJF46125	125	NA	0.5	1.5
	GVSbpsu100G-WP	LJF46250U31X	LJF46250U31X	125	90	0.5	1.5
60 kW	GVSbpsu60G-WP	LJF46250U31X	LJF46250U31X	150	90	0.5	1.5
	GVSbpsu100G-WP	LJF46250U31X	LJF46250U31X	150	100	0.5	1.5
80 kW		LJF46250U31X	LJF46250U31X	175	150	0.5	1.5
100 kW		LJF46250U31X	LJF46250U31X	225	175	0.5	1.5

## 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 4/0 AWG.

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

**NOTE:** Overcurrent protection is to be provided by others.

Cable sizes in this manual are based on Table 310.15 (B)(16) of the National Electrical Code (NEC) with the following assertions:

- 90 °C (194 °F) conductors (75 °C (167 °F) termination)
- An ambient temperature of 30 °C (86 °F)
- Use of copper conductors

If the ambient temperature is greater than 30 °C (86 °F), larger conductors are to be selected in accordance with the correction factors of the NEC.

Equipment grounding conductors (PE in this manual) are sized in accordance with NEC Article 250.122 and Table 250.122.

### 200/208/220 V Systems

UPS rating		10 kW	15 kW	20 kW	25 kW	30 kW	40 kW	50 kW
Input	Input phases (AWG/kcmil)	8	4	3	2	1/0	3/0	4/0
	Input PE (AWG/kcmil)	10	8	8	8	6	6	4
Bypass/output	Bypass/output phases (AWG/kcmil)	8	6	4	3	1	2/0	3/0
	Bypass PE/output PE (AWG/kcmil)	10	10	8	8	6	6	6
Neutral <sup>1</sup> (AWG/kcmil)	For GVSBP60G-WP	6	3	1	1/0	1/0	NA	NA
	For GVSBP100G-WP	NA	NA	NA	2/0	3/0	2 x 1/0	2 x 2/0

### 400/415 V Systems

Rating		20 kW	30 kW	40 kW	50 kW	60 kW	80 kW	100 kW
Input	Input phases (AWG/kcmil)	8	4	3	2	1/0	3/0	4/0
	Input PE (AWG/kcmil)	10	8	8	8	6	6	4
Bypass/output	Bypass/output phases (AWG/kcmil)	8	6	4	3	1	2/0	3/0
	Bypass PE/output PE (AWG/kcmil)	10	10	8	8	6	6	6
Neutral <sup>1</sup> (AWG/kcmil)	For GVSBP60G-WP	6	3	1	1/0	1/0	NA	NA
	For GVSBP100G-WP	NA	NA	NA	2/0	3/0	2 x 1/0	2 x 2/0

1. Neutral conductor is sized to handle 1.73 times phase current in case of high harmonic content from non-linear loads. If non or less harmonic currents are expected, neutral conductor can be sized as phase conductor.

**480 V Systems**

Rating		20 kW	30 kW	40 kW	50 kW	60 kW	80 kW	100 kW
Input	Input phases (AWG/kcmil)	8	6	4	3	1	2/0	3/0
	Input PE (AWG/kcmil)	10	8	8	6	6	6	4
Bypass 3-wire	Bypass phases (AWG/kcmil)	10	8	6	4	3	1	2/0
	Bypass PE (AWG/kcmil)	10	10	8	8	8	6	6
Bypass 4-wire/output	Bypass/output phases (AWG/kcmil)	10	8	6	4	3	1	2/0
	Bypass PE/output PE (AWG/kcmil)	10	8	8	8	6	6	6
Neutral <sup>2</sup> (AWG/kcmil)	For GVSBP60G-WP	6	4	2	1/0	1/0	NA	NA
	For GVSBP100G-WP	NA	NA	NA	1/0	2/0	4/0	2 x 1/0

2. Neutral conductor is sized to handle 1.73 times phase current in case of high harmonic content from non-linear loads. If non or less harmonic currents are expected, neutral conductor can be sized as phase conductor.

## Recommended Bolt and Lug Sizes

**NOTICE**

**RISK OF EQUIPMENT DAMAGE**

Use only UL approved compression cable lugs.

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

### Copper – One Hole Cable Lugs

Cable size	Bolt size	Cable lug type	Crimping tool	Die
10 AWG	For GVSbpsu60G-WP: M8 x 25 mm	LCA10-56-L	NA	NA
8 AWG		LCA8-56-L	CT-720	CD-720-1 Red P21
6 AWG	For GVSbpsu100G-WP: M10 x 30 mm	LCA6-56-L	CT-720	CD-720-1 Blue P24
4 AWG		LCA4-56-L	CT-720	CD-720-1 Gray P29
3 AWG		LCA4-56-L	CT-720	CD-720-1 Gray P29
2 AWG		LCA2-56-Q	CT-720	CD-720-1 Brown P33
1 AWG		LCA1-56-E	CT-720	CD-720-2 Green P37
1/0 AWG		LCA1/0-56-X	CT-720	CD-720-2 Pink P42
2/0 AWG		LCA2/0-56-X	CT-720	CD-720-2 Black P45
3/0 AWG		LCA3/0-56-X	CT-720	CD-720-2 Orange P50
4/0 AWG		LCA4/0-56-X	CT-720	CD-720-3 Purple P54

### Copper – Two Hole Cable Lugs (only supported for GVSbpsu100G-WP)

Cable size	Bolt size	Cable lug type	Crimping tool	Die
6 AWG	M10 x 30 mm	LCC6-12-L	CT-930	CD-920-6 Blue P24
4 AWG		LCC4-12-L	CT-930	CD-920-4 Gray P29
3 AWG				
2 AWG		LCC2-12-Q	CT-930	CD-920-2 Brown P33
1 AWG		LCC1-12-E	CT-930	CD-920-1 Green P37
1/0 AWG		LCC1/0-12-X	CT-930	CD-920-1/0 Pink P42
2/0 AWG		LCC2/0-12-X	CT-930	CD-920-2/0 Black P45
3/0 AWG		LCC3/0-12-X	CT-930	CD-920-3/0 Orange P50
4/0 AWG		LCC4/0-12-X	CT-930	CD-920-4/0 Purple P54

## Torque Specifications

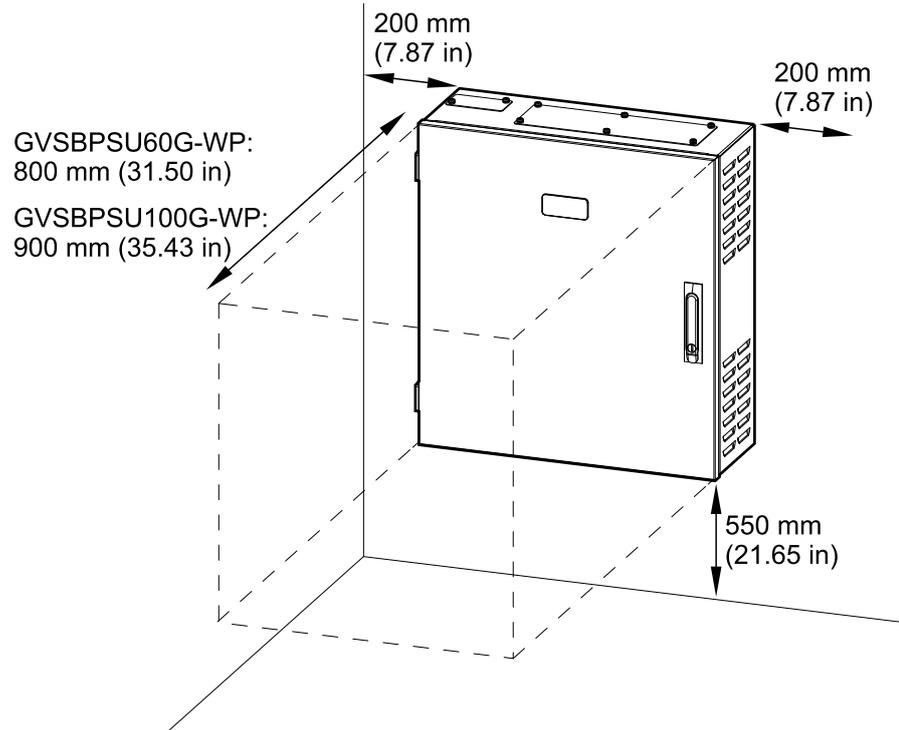
Bolt size	Torque
M4	1.7 Nm (1.25 lb-ft / 15 lb-in)
M5	2.2 Nm (1.62 lb-ft / 19.5 lb-in)
M6	5 Nm (3.69 lb-ft / 44.3 lb-in)
M8	17.5 Nm (12.91 lb-ft / 154.9 lb-in)
M10	30 Nm (22 lb-ft / 194.7 lb-in)
M12	50 Nm (36.87 lb-ft / 442.5 lb-in)

## Maintenance Bypass Panel Weights and Dimensions

Commercial reference	Weight kg (lbs)	Height mm (in)	Width mm (in)	Depth mm (in)
GVSBPSU60G-WP	28 (61.73)	650 (25.59)	600 (23.62)	220 (8.66)
GVSBPSU100G-WP	84 (185.19)	1000 (39.37)	850 (33.46)	280 (11.02)

## 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.



## Environment

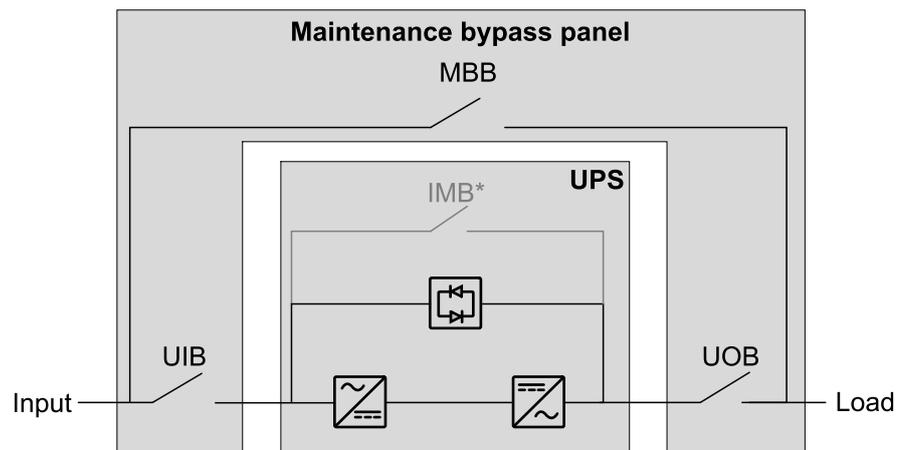
	Operating	Storage
Temperature	0 °C to 40 °C (32 °F to 104 °F )	-25 °C to 55 °C (-13 °F to 131 °F)
Relative humidity	0-95% non-condensing	0-95% non-condensing
Elevation	0-3000 m (0-10000 feet)	
Protection class	IP20	
Color	RAL 9003, gloss level 85%	

## One Line Diagrams

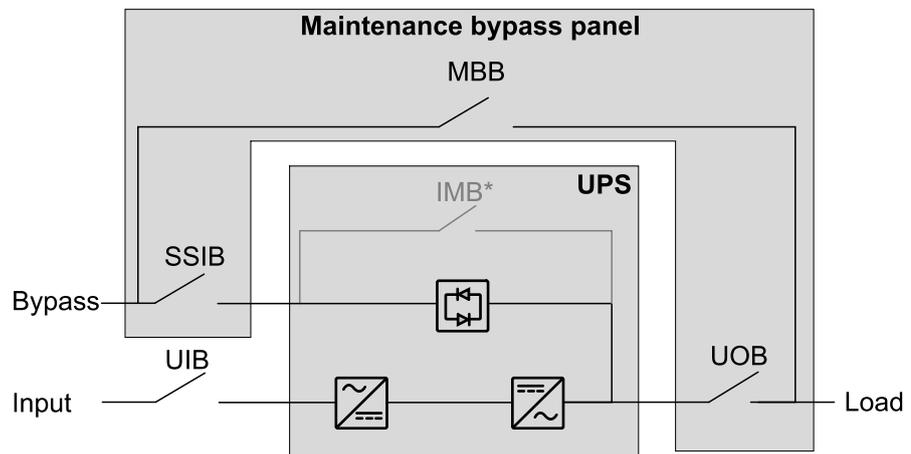
UIB	Unit input breaker
SSIB	Static switch input breaker
MBB	Maintenance bypass breaker
IMB	Internal maintenance breaker
UOB	Unit output breaker

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

### Single Mains System

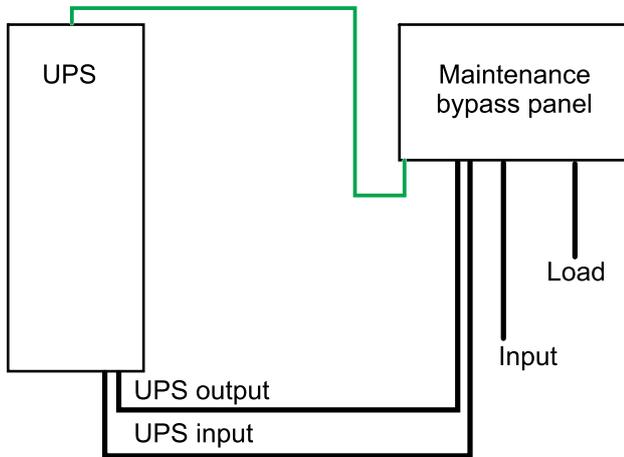


### Dual Mains System

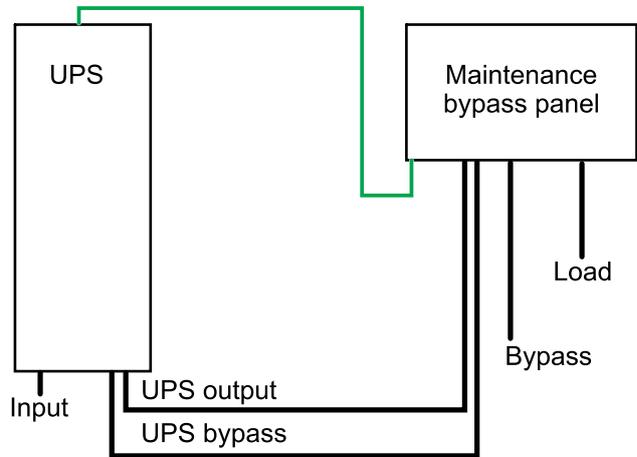


# Installation Procedure

## Single Mains System



## Dual Mains System



— Signal cable  
 — Power cable

1. Mount the Maintenance Bypass Panel to the Wall, page 19.
2. Perform one of the following:
  - Prepare GVSBPSU60G-WP for Cables, page 21, or
  - Prepare GVSBPSU100G-WP for Cables, page 23.
3. Perform one of the following:
  - Connect the Power Cables in GVSBPSU60G-WP, page 25, or
  - Connect the Power Cables in GVSBPSU100G-WP, page 26.
4. Connect the Signal Cables, page 27.
5. Final Installation, page 30.

# Mount the Maintenance Bypass Panel to the Wall

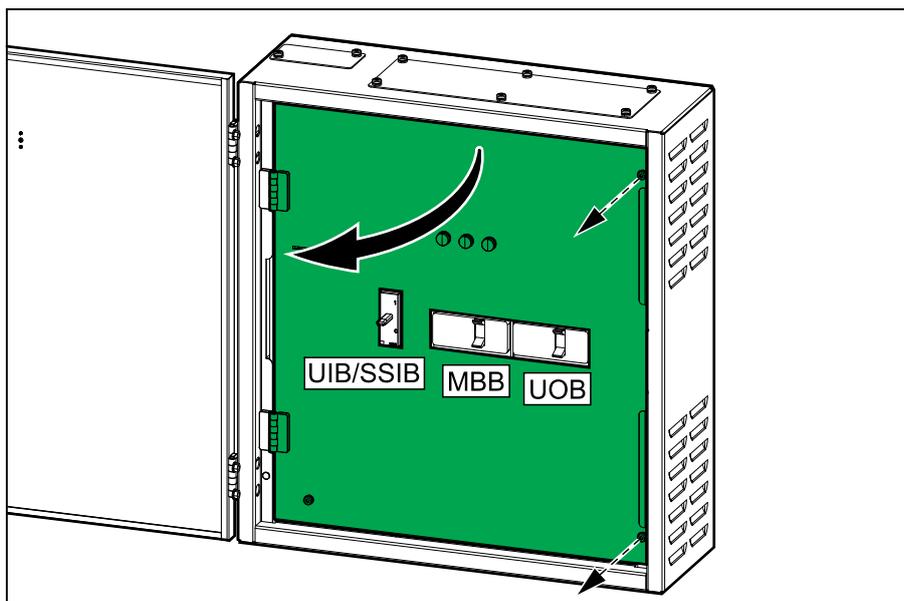
## ⚠ CAUTION

### RISK OF INJURY OR EQUIPMENT DAMAGE

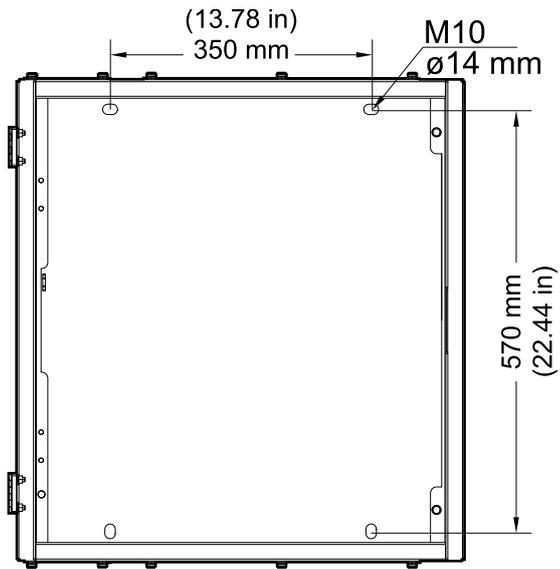
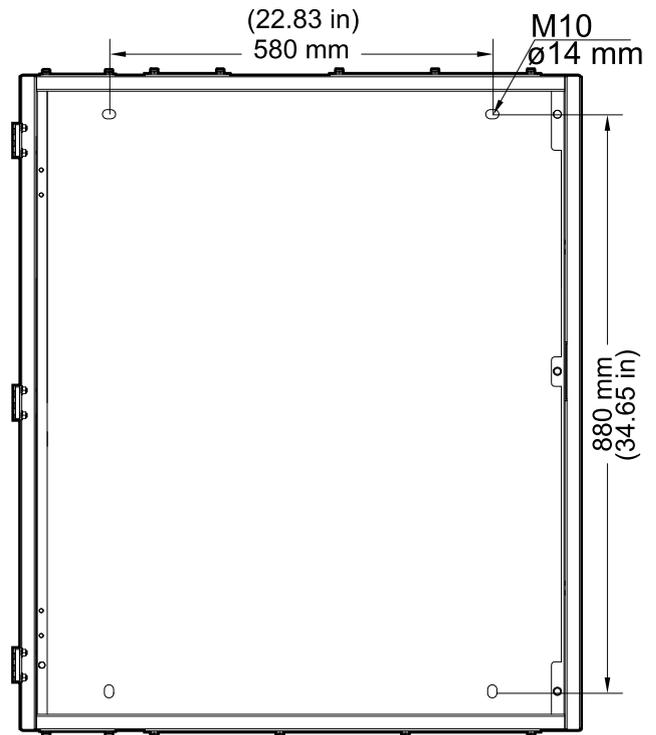
- Mount the maintenance bypass panel to a wall or a rack that is structurally sound and able to support the weight of the unit.
- Use appropriate hardware for the wall/rack type.

**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.

**GVSBPSU60G-WP****GVSBPSU100G-WP**

3. Drill holes in the four marked locations and mount the anchor bolts.
4. Mount the maintenance bypass panel to the wall.

# Prepare GVSBPUSU60G-WP for Cables

**⚠ DANGER**

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

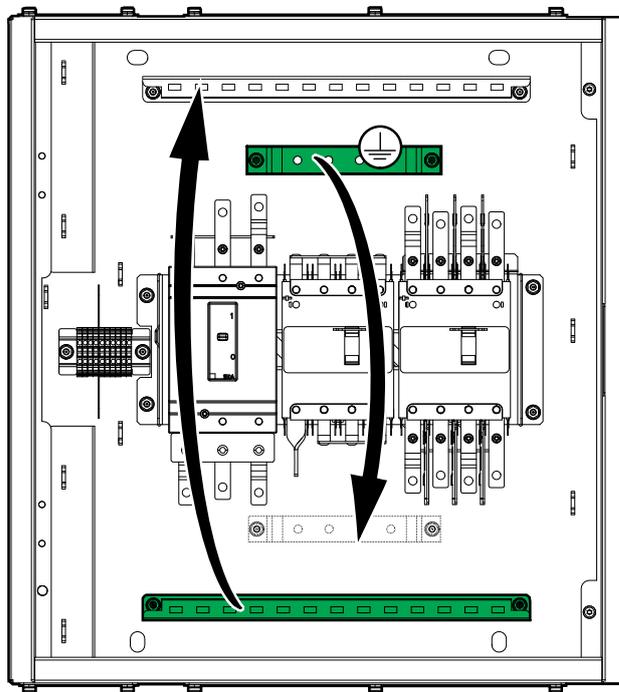
Do not drill or punch holes with the gland plates installed and do not drill or punch holes in close proximity to the maintenance bypass panel.

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

**1. Only for bottom cable entry system:**

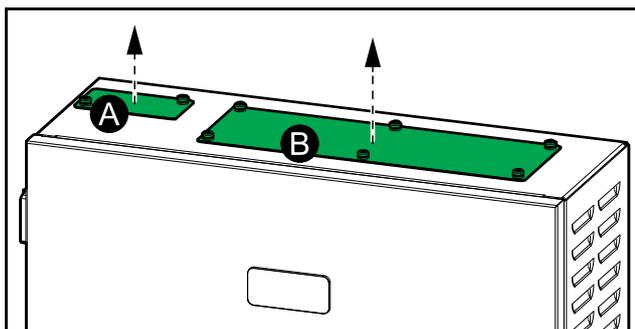
- a. Remove the cable relief in the bottom and install it in the top of the maintenance bypass panel.
- b. Remove the PE busbar in the top and install it in the bottom of the maintenance bypass panel.

**Bottom Cable Entry System**

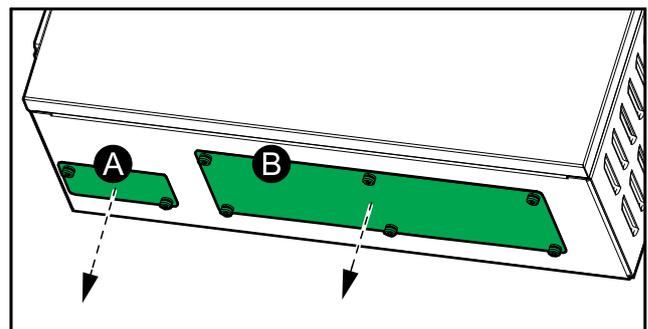


- 2. Remove the gland plates in the top or bottom of the maintenance bypass panel.**

**Top Cable Entry System**



**Bottom Cable Entry System**



3. Drill or punch holes for cables or conduits in the gland plates for signal cables (A) and power cables (B).

**⚠ 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.**

4. Install conduits (if applicable) and reinstall the gland plates.

# Prepare GVSBPUSU100G-WP for Cables

**⚠ DANGER**

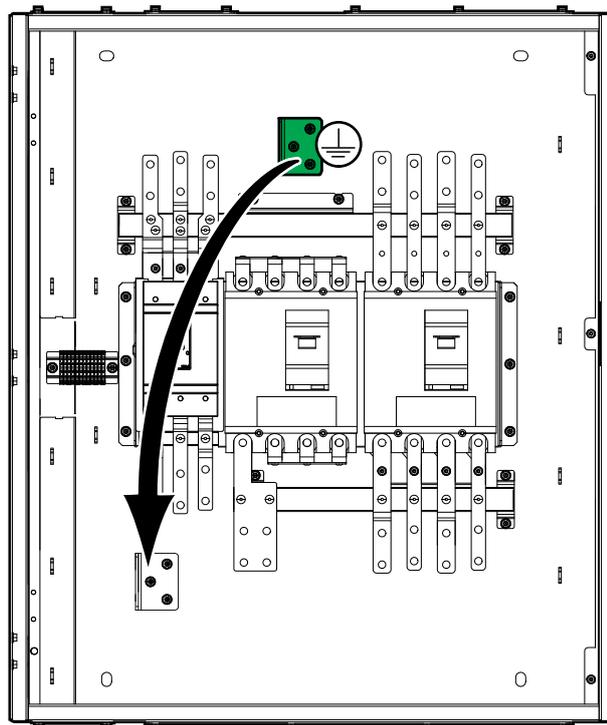
**HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH**

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.**

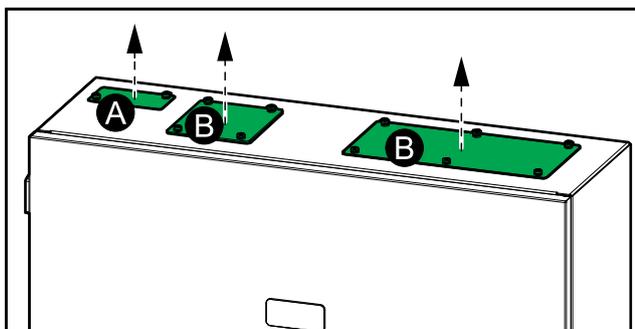
1. **Only for bottom cable entry system:** Remove the PE busbar in the top and install it in the bottom of the maintenance bypass panel.

### Bottom Cable Entry System

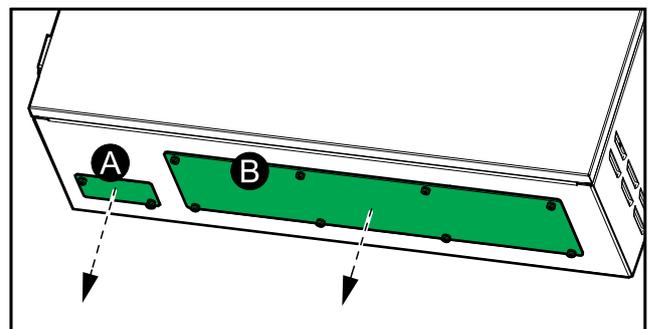


2. Remove the gland plates in the top or bottom of the maintenance bypass panel.

### Top Cable Entry System



### Bottom Cable Entry System



3. Drill or punch holes for cables or conduits in the gland plates for signal cables (A) and power cables (B).

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

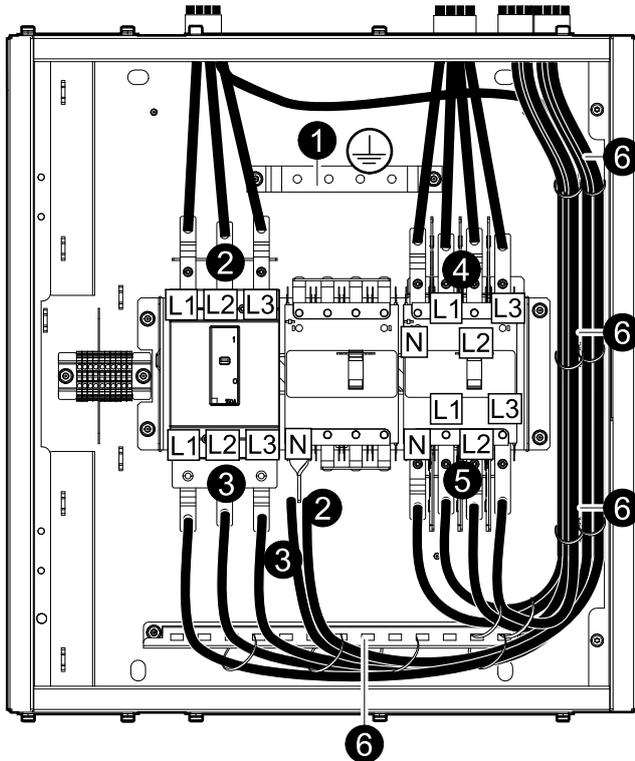
Ensure that there are no sharp edges that can damage the cables.

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

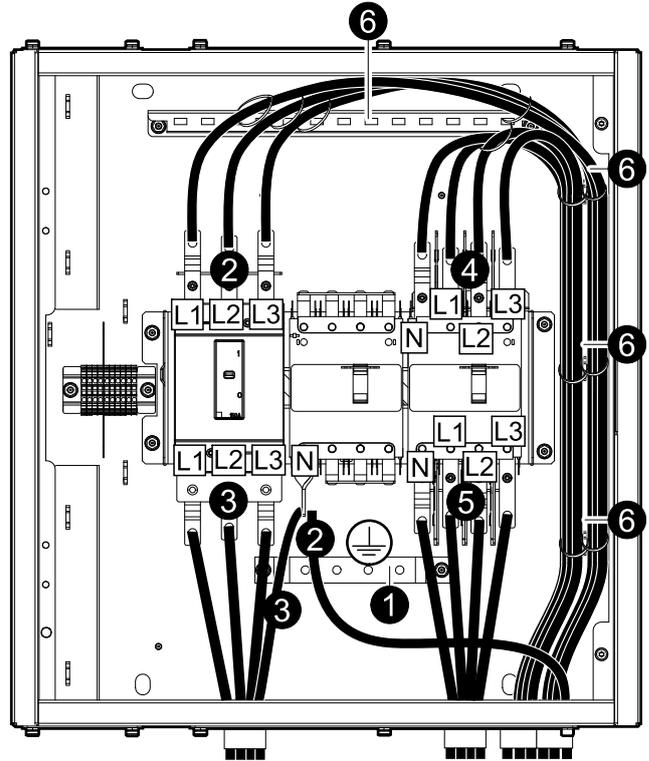
4. Install conduits (if applicable) and reinstall the gland plates.

# Connect the Power Cables in GVSBP60G-WP

## Top Cable Entry System



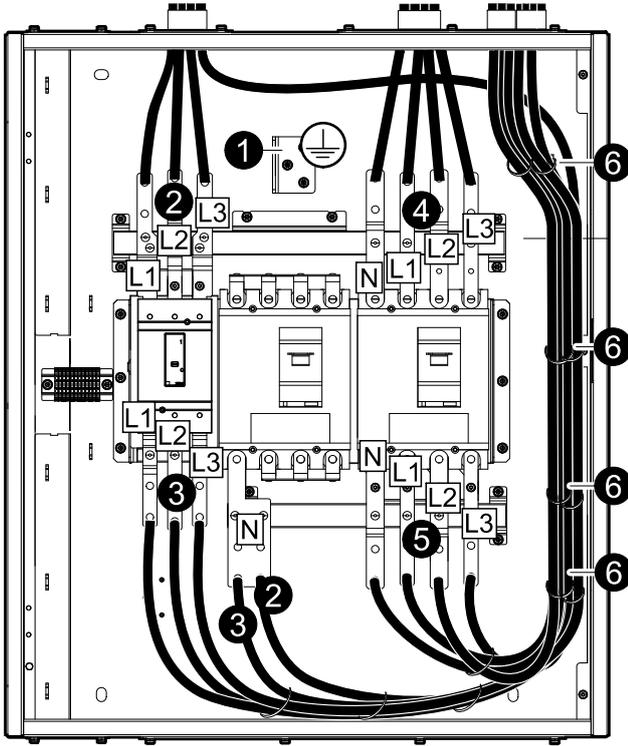
## Bottom Cable Entry System



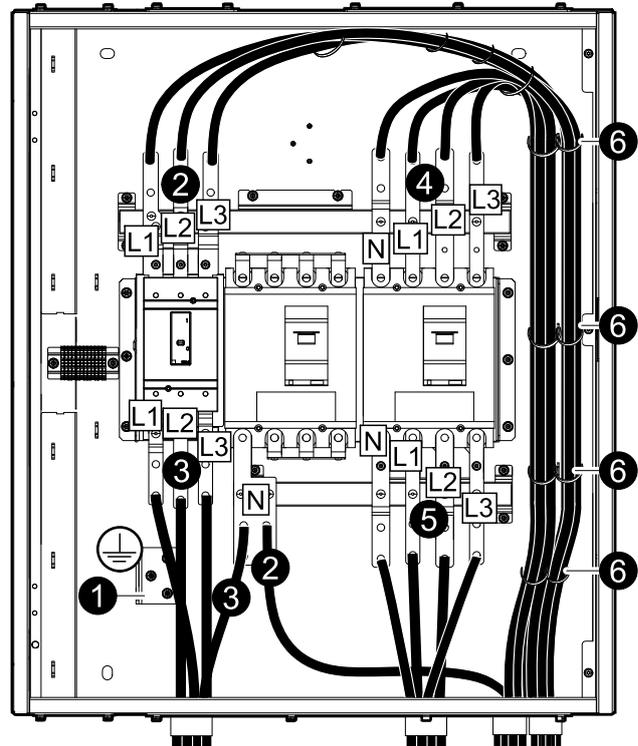
1. Connect the PE cables to the PE busbar.
2. Perform one of the following:
  - **For single mains:** Connect the input cables from utility/mains.
  - **For dual mains:** Connect the bypass cables from utility/mains.
3. Perform one of the following:
  - **For single mains:** Connect the UPS input cables.
  - **For dual mains:** Connect the UPS bypass cables.
4. Connect the UPS output cables.
5. Connect the load cables.
6. Fasten the cables with cable ties to the cable reliefs as shown.

# Connect the Power Cables in GVSbpsu100G-WP

### Top Cable Entry System



### Bottom Cable Entry System

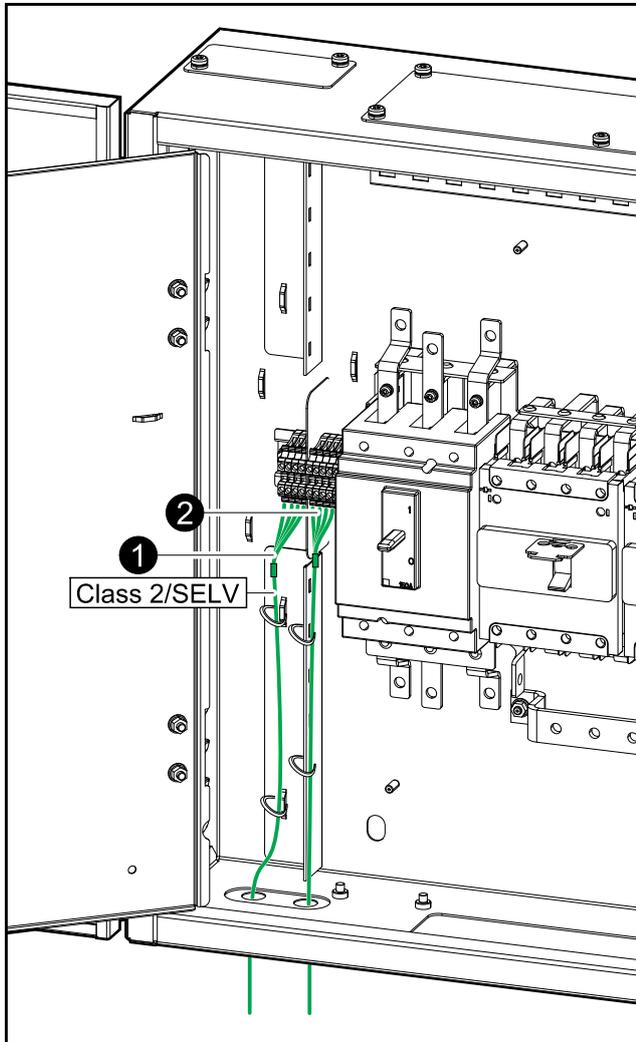


1. Connect the PE cables to the PE busbar.
2. Perform one of the following:
  - **For single mains:** Connect the input cables from utility/mains.
  - **For dual mains:** Connect the bypass cables from utility/mains.
3. Perform one of the following:
  - **For single mains:** Connect the UPS input cables.
  - **For dual mains:** Connect the UPS bypass cables.
4. Connect the UPS output cables.
5. Connect the load cables.
6. Fasten the cables with cable ties to the cable reliefs as shown.

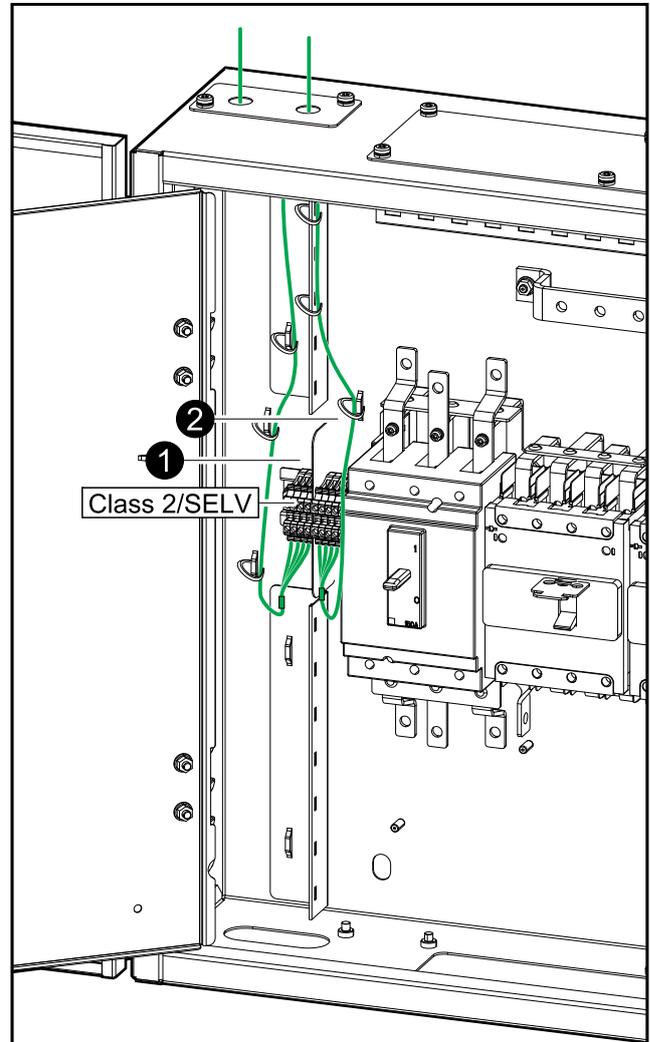
# Connect the Signal Cables

**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.

Bottom Cable Entry System



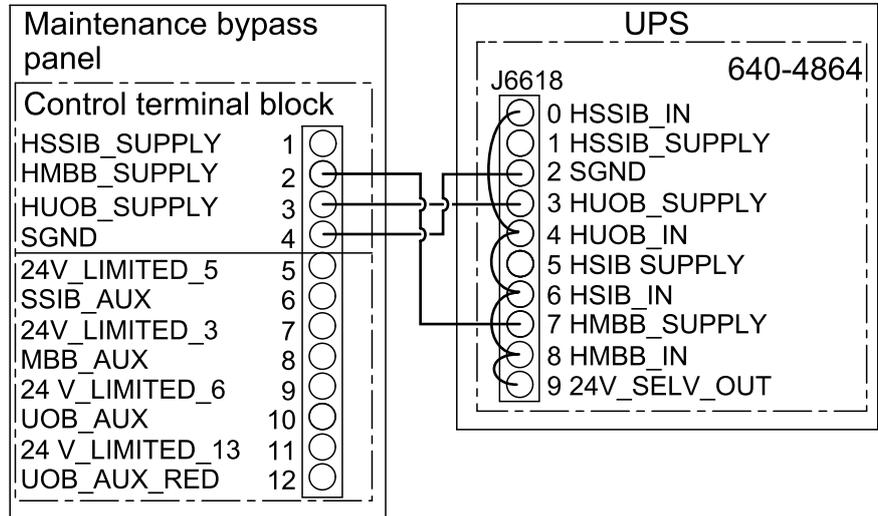
Top Cable Entry System



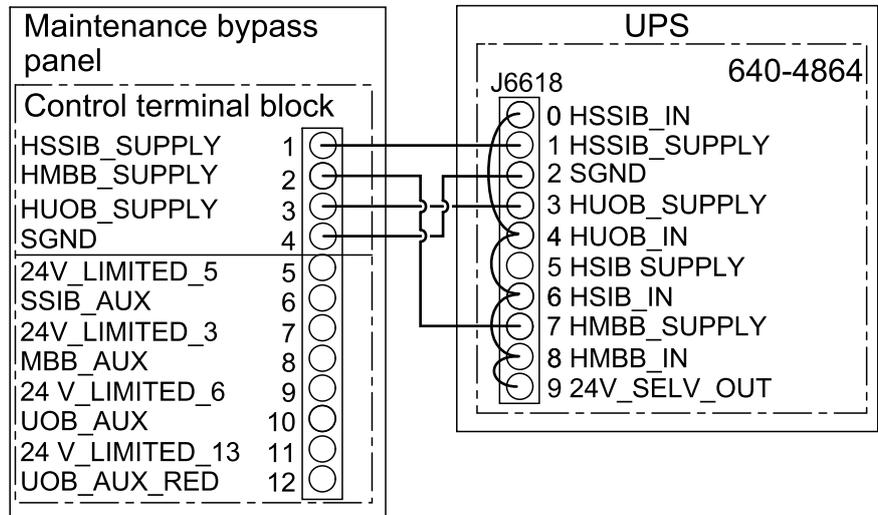
1. Connect the Class 2/SELV signal cables for the breaker indicator lights from the control terminal block in the maintenance bypass panel to the UPS as per your configuration.

**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.

**Single Mains System**



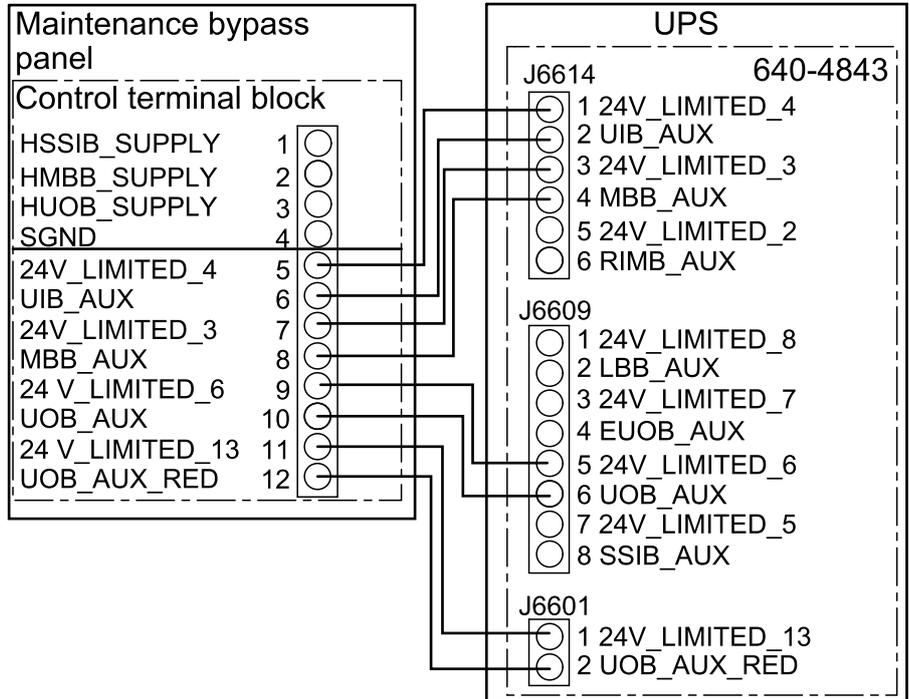
**Dual Mains System**



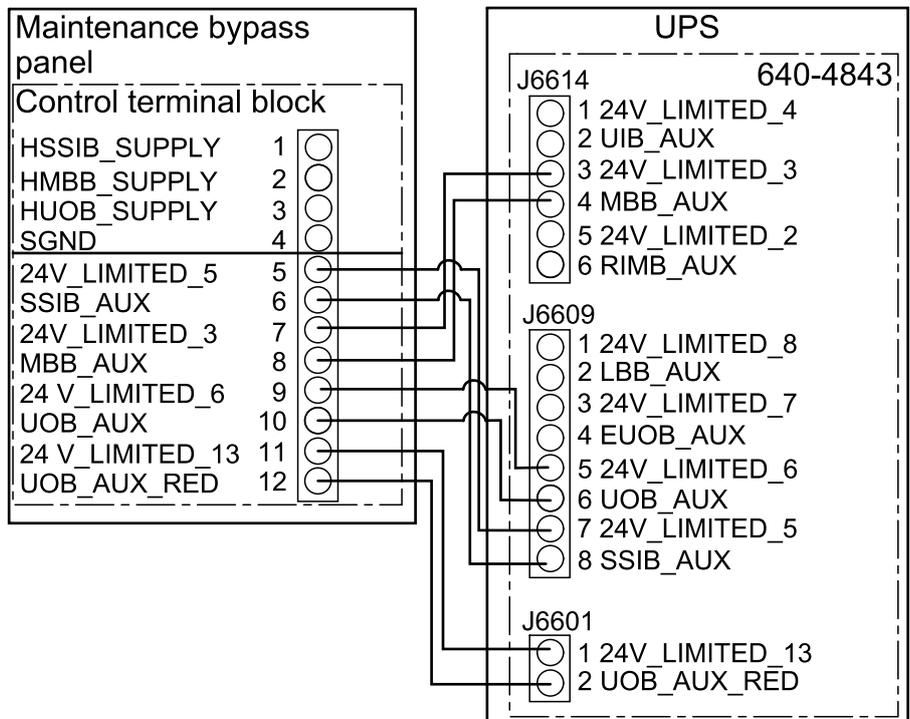
- Connect the non-Class 2/non-SELV signal cables from the control terminal block in the maintenance bypass panel to the UPS as per your configuration.

**NOTE: Only for GVSBPUSU60G-WP:** Terminal 11 and 12 are not present on the control terminal block in GVSBPUSU60G-WP and there is no connection needed to J6601 in the UPS.

**Single Mains System**



**Dual Mains System**

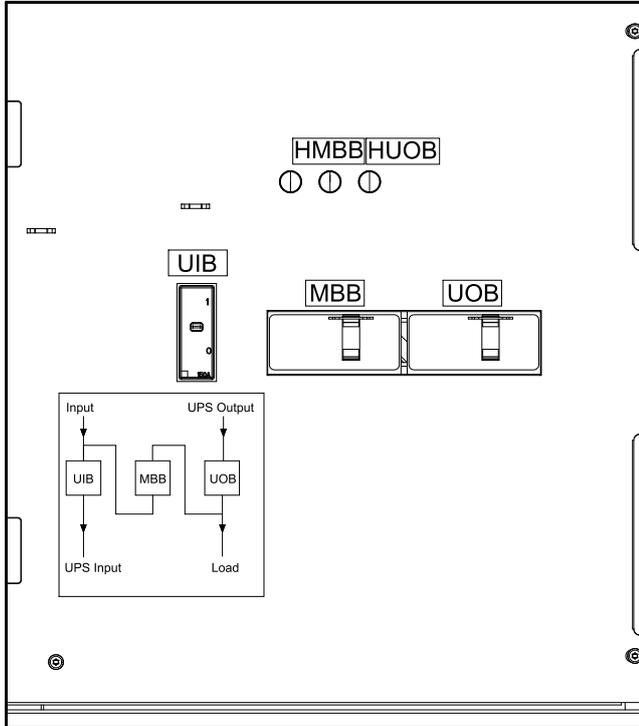


- Pull up the slack in the signal cables and fasten the signal cables to the cable reliefs.

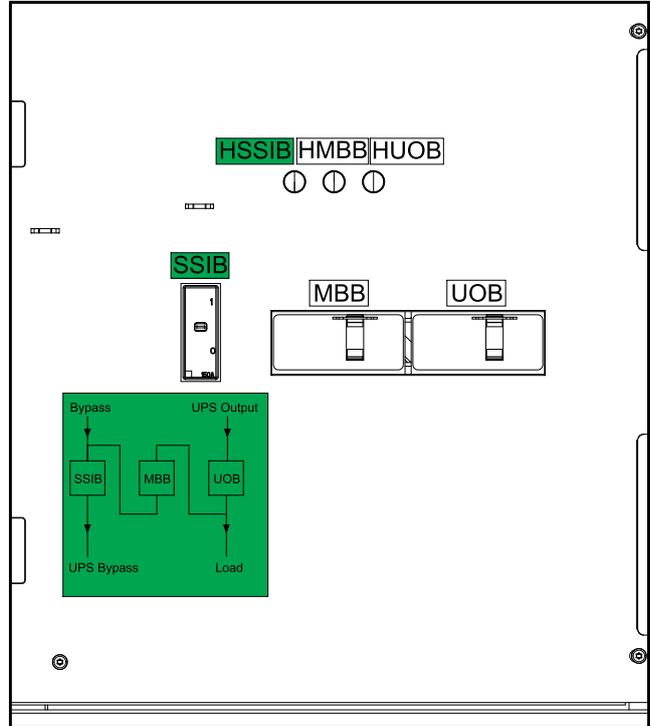
# Final Installation

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 in Single Mains System



## Labels in Dual Mains System





Schneider Electric  
35 rue Joseph Monier  
92500 Rueil Malmaison  
France

+ 33 (0) 1 41 29 70 00



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