Wall-Mounted Parallel Maintenance Bypass Panel for Two UPSs

For Galaxy VS, Easy UPS 3S, and Easy UPS 3M

Installation

GVSBPAR10K30H, GVSBPAR40K50H, GVSBPAR60K120H

Latest updates are available on the Schneider Electric website
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Legal Information

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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.

Electromagnetic Compatibility

NOTICE

RISK OF ELECTROMAGNETIC DISTURBANCE

This is a product category C2 UPS product. In a residential environment, this product may cause radio inference, 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: 10 kA RMS symmetrical.

For a 1+1 parallel system for redundancy, the parallel maintenance bypass panel can support a load of up to 120 kW/kVA as long as the neutral current (250 A) is not exceeded:

- at 380 V, the maximum neutral current capability is reached with a 95 kVA non-linear load.
- at 400 V, the maximum neutral current capability is reached with a 100 kVA non-linear load.

For a 2+0 parallel system for capacity, the parallel maintenance bypass panel can support a load of up to 240 kW/kVA as long as the neutral current (500 A) is not exceeded:

- at 380 V, the maximum neutral current capability is reached with a 190 kVA non-linear load.
- at 400 V, the maximum neutral current capability is reached with a 200 kVA non-linear load.

Recommended Cable Sizes for Galaxy VS

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

All wiring must comply with all applicable national and/or electrical codes.

- The maximum allowable input cable and load cable size is 35 mm^2 and the maximum allowable UPS input/output cable size is 16 mm^2 for GVSBPAR10K30H.
- The maximum allowable input cable and load cable size is 70 mm^2 and the maximum allowable UPS input/output cable size is 25 mm^2 for GVSBPAR40K50H.
- The maximum allowable input cable and load cable size is 185 mm^2 and the maximum allowable UPS input/output cable size is 50 mm^2 for GVSBPAR60K120H.

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 B.52.5 of IEC 60364-5-52 with the following assertions:

- 90 °C conductors
- An ambient temperature of 30 °C
- Use of copper or aluminum conductors
- Installation method C

PE size is based on table 54.2 of IEC 60364-4-54.

If the ambient temperature is greater than 30 °C, larger conductors are to be selected in accordance with the correction factors of the IEC. Aluminum cables are not recommended for ambient temperatures over 30 °C.

NOTE: Neutral conductor is sized to handle 1.73 times phase current in case of high harmonic content from non-linear loads. If no or low harmonic currents are expected, the neutral conductor can be sized as the phase conductor.

Copper

Commercial reference	GVSBPAR10K30H						GVSBPAR40K50H			
Parallel system type	Capacity (2+0)			Redundancy (1+1)			Capacity (2+0)		Redundancy (1+1)	
Parallel system rating	20 kW	40 kW	60 kW	10 kW	20 kW	30 kW	80 kW	100 kW	40 kW	50 kW
Input phases (mm^2)	6	16	35	6	6	10	50	70	16	25
Input PE (mm^2)	6	16	16	6	6	10	25	35	16	16
Input N (mm^2)	10	35	2 x 16	6	10	16	2 x 50	2 x 70	35	50
UPS input (mm^2)	6	6	10	6	6	10	16	25	16	25
UPS output (mm^2)	6	6	10	6	6	10	16	16	16	16
UPS PE (mm^2)	6	6	10	6	6	10	16	16	16	16
UPS N (mm^2)	6	10	16	6	10	16	2 x 16	2 x 16	2 x 16	2 x 16
Load (mm^2)	6	16	25	6	6	10	50	70	16	16
Load PE (mm^2)	6	16	16	6	6	10	25	35	16	16
Load N (mm^2)	10	35	2 x 16	6	10	16	2x50	2x70	35	50

Copper

Commercial reference	GVSBPAR60K120H							
Parallel system type	Capacity (2+0)				Redundancy (1+1)			
Parallel system rating	120 kW	160 kW	200 kW	240 kW	60 kW	80 kW	100 kW	120 kW
Input phases (mm^2)	95	120	185	2 x 120	35	50	70	95
Input PE (mm^2)	50	70	95	120	25	25	35	50
Input N (mm^2)	120	2 x 120	2 x 150	3 x 150	50	95	120	120
UPS input (mm^2)	35	50	2 x 25	2 x 50	35	50	2 x 25	2 x 50
UPS output (mm^2)	25	50	2 x 25	2 x 35	25	50	2 x 25	2 x 35
UPS PE (mm^2)	25	25	35	50	25	25	35	50
UPS N (mm^2)	50	95	3 x 35	3 x 35	50	2 x 50	3 x 35	3 x 35
Load (mm^2)	95	120	185	2 x 95	25	50	70	95
Load PE (mm^2)	50	70	95	95	16	25	35	50
Load N (mm^2)	120	2 x 120	2 x 150	3 x 150	50	95	120	120

Aluminum

Commercial reference	GVSBPAR10K30H						GVSBPAR40K50H			
Parallel system type	Capacity (2+0)			Redundancy (1+1)			Capacity (2+0)		Redundancy (1+1)	
Parallel system rating	20 kW	40 kW	60 kW	10 kW	20 kW	30 kW	80 kW	100 kW	40 kW	50 kW
Input phases (mm^2)	6	25	NA	6	6	NA	70	NA	25	NA
Input PE (mm^2)	6	16	NA	6	6	NA	35	NA	16	NA
Input N (mm^2)	2 x 16	2 x 16	NA	6	16	NA	2 x 70	NA	50	NA
UPS input (mm^2)	6	6	NA	6	6	NA	25	NA	25	NA
UPS output (mm^2)	6	6	NA	6	6	NA	16	NA	16	NA

Aluminum (Continued)

Commercial reference	GVSBPAR10K30H						GVSBPAR40K50H			
Parallel system type	Capacity (2+0)			Redundancy (1+1)			Capacity (2+0)		Redundancy (1+1)	
Parallel system rating	20 kW	40 kW	60 kW	10 kW	20 kW	30 kW	80 kW	100 kW	40 kW	50 kW
UPS PE (mm^2)	6	6	NA	6	6	NA	16	NA	16	NA
UPS N (mm^2)	6	16	NA	6	16	NA	2 x 16	NA	2 x 16	NA
Load (mm^2)	6	16	NA	6	6	NA	70	NA	16	NA
Load PE (mm^2)	6	16	NA	6	6	NA	35	NA	16	NA
Load N (mm^2)	16	2 x 16	NA	6	2 x 16	NA	2 x 70	NA	50	NA

Aluminum

Commercial reference	GVSBPAR60K120H							
Parallel system type	Capacity (2+0)				Redundancy (1+1)			
Parallel system rating	120 kW	160 kW	200 kW	240 kW	60 kW	80 kW	100 kW	120 kW
Input phases (mm^2)	150	185	2 x 120	NA	50	70	95	NA
Input PE (mm^2)	95	95	150	NA	25	70	50	NA
Input N (mm^2)	185	2 x 120	3 x 150	NA	70	150	185	NA
UPS input (mm^2)	50	2 x 35	2 x 50	NA	50	2 x 35	2 x 50	NA
UPS output (mm^2)	50	2 x 35	2 x 35	NA	50	2 x 35	2 x 35	NA
UPS PE (mm^2)	25	35	50	NA	25	35	50	NA
UPS N (mm^2)	2 x 35	3 x 35	3 x 50	NA	2 x 35	3 x 35	3 x 50	NA
Load (mm^2)	120	185	2 x 120	NA	50	70	95	NA
Load PE (mm^2)	70	95	120	NA	25	35	50	NA
Load N (mm^2)	185	2 x 120	4 x 95	NA	70	150	185	NA

Recommended Upstream Protection for Galaxy VS

NOTE: For local directives which require 4-pole circuit breakers: If neutral conductor is expected to carry a high current, due to line-neutral non-linear load, the circuit breaker must be rated according to expected neutral current.

Input

Commercial reference	**GVSBPAR10K30H**					
Parallel system type	**Capacity (2+0)**			**Redundancy (1+1)**		
Parallel system rating	**20 kW**	**40 kW**	**60 kW**	**10 kW**	**20 kW**	**30 kW**
Breaker type	LV429674	LV429671	LV430671	LV429676	LV429674	LV429672
In (A)	40	80	125	25	40	63
Ir (A)	40	80	125	20	40	63
Im (A)	500 (fixed)	640 (fixed)	1250 (fixed)	300 (fixed)	500 (fixed)	

Input

Commercial reference	**GVSBPAR40K50H**			
Parallel system type	**Capacity (2+0)**		**Redundancy (1+1)**	
Parallel system rating	**80 kW**	**100 kW**	**40 kW**	**50 kW**
Breaker type	LV430670	LV431671	LV429671	LV429670
In (A)	160	200	80	100
Ir (A)	160	200	80	100
Im (A)	1250 (fixed)	5-10 x In	640 (fixed)	800 (fixed)

Input

Commercial reference	**GVSBPAR60K120H**							
Parallel system type	**Capacity (2+0)**				**Redundancy (1+1)**			
Parallel system rating	**120 kW**	**160 kW**	**200 kW**	**240 kW**	**60 kW**	**80 kW**	**100 kW**	**120 kW**
Breaker type	LV431670	LV432695	LV432695	LV432895	LV430671	LV430670	LV431671	LV431670
In (A)	250	320	400	500	125	160	200	250
Ir (A)	250	1	0.94		125	160	200	250
Im (A) / Isd (A)	5-10 x In	1.5-10			1250 (fixed)		5-10 x In	

Recommended Cable Sizes for Easy UPS 3S and Easy UPS 3M

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

All wiring must comply with all applicable national and/or electrical codes.

- The maximum allowable input/bypass cable and load cable size is 70 mm^2 and the maximum allowable UPS input/bypass/output cable size is 25 mm^2 for GVSBPAR40K50H.
- The maximum allowable input/bypass cable and load cable size is 185 mm^2 and the maximum allowable UPS input/bypass/output cable size is 50 mm^2 for GVSBPAR60K120H.

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 B.52.5 of IEC 60364-5-52 with the following assertions:

- 90 °C conductors
- An ambient temperature of 30 °C
- Use of copper or aluminum conductors
- Installation method C

PE size is based on table 54.2 of IEC 60364-4-54.

If the ambient temperature is greater than 30 °C, larger conductors are to be selected in accordance with the correction factors of the IEC. Aluminum cables are not recommended for ambient temperatures over 30 °C.

NOTE: Neutral conductor is sized to handle 1.73 times phase current in case of high harmonic content from non-linear loads. If no or low harmonic currents are expected, the neutral conductor can be sized as the phase conductor.

Easy UPS 3S – 3:1 UPS System

Commercial reference		**GVSBPAR40K50H**				**GVSBPAR60K120H**					
Parallel system type		**Capacity (2+0)**		**Redundancy (1 +1)**		**Capacity (2+0)**				**Redundancy (1 +1)**	
Parallel system rating		**20 kVA**	**30 kVA**	**10 kVA**	**15 kVA**	**20 kVA**	**30 kVA**	**40 kVA**	**60 kVA**	**20 kVA**	**30 kVA**
Single mains system	Input phases (mm^2)	35	50	16	25	35	50	2 x 35	2 x 70	35	50
	Input N (mm^2)	35	50	16	25	35	50	2 x 35	2 x 70	35	50
	Input PE (mm^2)	16	25	16	16	16	25	35	70	16	25
Dual mains system	Bypass phases (mm^2)	35	50	16	25	35	50	2 x 35	2 x 70	35	50
	Bypass N (mm^2)	35	50	16	25	35	50	2 x 35	2 x 70	35	50
	Bypass PE (mm^2)	16	25	16	16	16	25	35	70	16	25
Load (mm^2)		35	50	16	25	35	50	2 x 35	2 x 70	35	50
Load N (mm^2)		35	50	16	25	35	50	2 x 35	2 x 70	35	50
Load PE (mm^2)		16	25	16	16	16	25	35	70	16	25
UPS input (mm^2) /UPS bypass (mm^2)		16	25	16	25	16	25	35	50	35	50
UPS output (mm^2)		16	25	16	25	16	25	35	50	35	50

Commercial reference	**GVSBPAR40K50H**				**GVSBPAR60K120H**					
Parallel system type	**Capacity (2+0)**		**Redundancy (1 +1)**		**Capacity (2+0)**				**Redundancy (1 +1)**	
Parallel system rating	**20 kVA**	**30 kVA**	**10 kVA**	**15 kVA**	**20 kVA**	**30 kVA**	**40 kVA**	**60 kVA**	**20 kVA**	**30 kVA**
UPS N (mm²)	16	25	16	25	16	25	35	50	35	50
UPS PE (mm²)	16	16	16	16	16	16	16	25	16	25

Easy UPS 3S – 3:3 UPS System

Commercial reference		**GVSBPAR40K50H**									
Parallel system type		**Capacity (2+0)**					**Redundancy (1+1)**				
Parallel system rating		**20 kVA**	**30 kVA**	**40 kVA**	**60 kVA**	**80 kVA**	**10 kVA**	**15 kVA**	**20 kVA**	**30 kVA**	**40 kVA**
Single mains system	Input phases (mm²)	10	16	25	35	50	6	6	10	16	25
	Input N (mm²)	2 x 10	2 x 16	2 x 25	2 x 25	2 x 50	6	6	10	16	25
	Input PE (mm²)	10	16	16	16	25	6	6	10	16	16
Dual mains system	Bypass phases (mm²)	10	16	25	25	50	6	6	10	16	25
	Bypass N (mm²)	2 x 10	2 x 16	2 x 25	2 x 25	2 x 50	6	6	10	16	25
	Bypass PE (mm²)	10	16	16	16	25	6	6	10	16	16
Load (mm²)		10	16	25	25	50	6	6	10	16	25
Load N (mm²)		2 x 10	2 x 16	2 x 25	2 x 25	2 x 50	6	6	10	16	25
Load PE (mm²)		10	16	16	16	25	6	6	10	16	16
UPS input (mm²) /UPS bypass (mm²)		6	6	10	16	25	6	6	10	16	25
UPS output (mm²)		6	6	10	16	25	6	6	10	16	25
UPS N (mm²)		6	6	10	16	25	6	6	10	16	25
UPS PE (mm²)		6	6	10	16	16	6	6	10	16	16

Easy UPS 3M – 3:3 UPS System

Commercial reference		**GVSBPAR60K120H**			
Parallel system type		**Capacity (2+0)**		**Redundancy (1+1)**	
Parallel system rating		**120 kVA**	**160 kVA**	**60 kVA**	**80 kVA**
Single mains system	Input phases (mm²)	95	120	35	50
	Input N (mm²)	2 x 95	2 x 120	2 x 25	2 x 50
	Input PE (mm²)	50	70	16	25
Dual mains system	Bypass phases (mm²)	95	120	35	50
	Bypass N (mm²)	2 x 95	2 x 120	2 x 25	2 x 50
	Bypass PE (mm²)	50	70	16	25
Load (mm²)		95	120	25	50
Load N (mm²)		2 x 95	2 x 120	2 x 25	2 x 50
Load PE (mm²)		50	70	16	25

Commercial reference	**GVSBPAR60K120H**			
Parallel system type	**Capacity (2+0)**		**Redundancy (1+1)**	
Parallel system rating	**120 kVA**	**160 kVA**	**60 kVA**	**80 kVA**
UPS input (mm^2) /UPS bypass (mm^2)	35	50	35	50
UPS output (mm^2)	25	50	25	50
UPS N (mm^2)	2 x 25	2 x 50	2 x 25	2 x 50
UPS PE (mm^2)	16	25	16	25

Recommended Upstream Protection for Easy UPS 3S and Easy UPS 3M

Easy UPS 3S – 3:1 UPS System

Input/Bypass (Only for Dual Mains System)

Commercial reference	**GVSBPAR40K50H**				**GVSBPAR60K120H**					
Parallel system type	**Capacity (2+0)**		**Redundancy (1+1)**		**Capacity (2+0)**				**Redundancy (1+1)**	
Parallel system rating	**20 kVA**	**30 kVA**	**10 kVA**	**15 kVA**	**20 kVA**	**30 kVA**	**40 kVA**	**60 kVA**	**20 kVA**	**30 kVA**
Breaker type	C120H-C-100A/ NS-X100F 100A TM100D C10F3T-M100	Com-pactNS-X160F 160A TM160D C16F3T-M160	iC65H-C-50A/ C60H-C-50A	C120H-C-80A / NS-X100F 80A TM80D C10F3T-M080	C120H-C-100A/ NS-X100F 100A TM100D C10F3T-M100	Com-pactNS-X160F 160A TM160D C16F3T-M160	Com-pactNS-X250F TM200D C25F3T-M200	NS-X400N mic2.3 (C40-N32-D400	C120H-C-100A/ NS-X100F 100A TM100D C10F3T-M100	Com-pactNS-X160F 160A TM160D C16F3T-M160
In (A)	Fixed	160	Fixed	Fixed	Fixed	160	250	400	Fixed/ 100	160
Ir (A)	Fixed/ 100	144	Fixed	Fixed/80	Fixed/ 100	144	200	280	Fixed/ 100	144
Im (A)	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	5~10*In	Io= 1.5~10	Fixed	Fixed

Easy UPS 3S – 3:3 UPS System

Input

Commercial reference	**GVSBPAR40K50H**									
Parallel system type	**Capacity (2+0)**					**Redundancy (1+1)**				
Parallel system rating	**20 kVA**	**30 kVA**	**40 kVA**	**60 kVA**	**80 kVA**	**10 kVA**	**15 kVA**	**20 kVA**	**30 kVA**	**40 kVA**
Breaker type	iC65H-C-40A / C60H-C-40A	iC65H-C-63A / C60H-C-63A /C120H-C-63A	C120H-C-80A / NS-X100F 80A TM80D C10F3T-M080	Compact NS-X160F TM125D (C16F3T-M125)	Compact NS-X160F TM160D (C16F3T-M160)	iC65H-C-20A / C60H-C-20A	iC65H-C-32A / C60H-C-32A	iC65H-C-40A / C60H-C-40A	iC65H-C-63A / C60H-C-63A /C120H-C-63A	C120H-C-80A / NS-X100F 80A TM80D C10F3T-M080
In (A)	Fixed	Fixed	Fixed/80	125	160	Fixed	Fixed	Fixed	Fixed	Fixed/80
Ir (A)	Fixed	Fixed	Fixed/80	125	160	Fixed	Fixed	Fixed	Fixed	Fixed/80
Im (A)	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed

Bypass (Only for Dual Mains System)

Commercial reference	**GVSBPAR40K50H**									
Parallel system type	**Capacity (2+0)**					**Redundancy (1+1)**				
Parallel system rating	**20 kVA**	**30 kVA**	**40 kVA**	**60 kVA**	**80 kVA**	**10 kVA**	**15 kVA**	**20 kVA**	**30 kVA**	**40 kVA**
Breaker type	iC65H-C-40A / C60H-C-40A	iC65H-C-63A / C60H-C-63A /C120H-C-63A	C120H-C-80A / NS-X100F 80A TM80D C10F3T-M080	Compact NS-X100F TM100D (C10F3-TM100)	Compact NS-X160F TM160D (C16F3-TM160)	iC65H-C-20A / C60H-C-20A	iC65H-C-32A / C60H-C-32A	iC65H-C-40A / C60H-C-40A	iC65H-C-63A / C60H-C-63A /C120H-C-63A	C120H-C-80A / NS-X100F 80A TM80D C10F3T-M080
In (A)	Fixed	Fixed	Fixed/80	100	160	Fixed	Fixed	Fixed	Fixed	Fixed/80
Ir (A)	Fixed	Fixed	Fixed/80	100	144	Fixed	Fixed	Fixed	Fixed	Fixed/80
Im (A)	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed

Easy UPS 3M – 3:3 UPS System

Input/Bypass (Only for Dual Mains System)

Commercial reference	**GVSBPAR60K120H**			
Parallel system type	**Capacity (2+0)**		**Redundancy (1+1)**	
Parallel system rating	**120 kVA**	**160 kVA**	**60 kVA**	**80 kVA**
Breaker type	NSX250N mic2.2 (C25N32D250)	NSX400N mic2.3 (C40N32D400)	Compact NSX160F TM125D (C16F3TM125)	Compact NSX160F TM160D (C16F3TM160)
Io (A)	250	400	125	160
Ir (A)	200	280	125	160
Isd (A)	1.5-10	1.5-10	800 (fixed)	1250 (fixed)

Torque Specifications

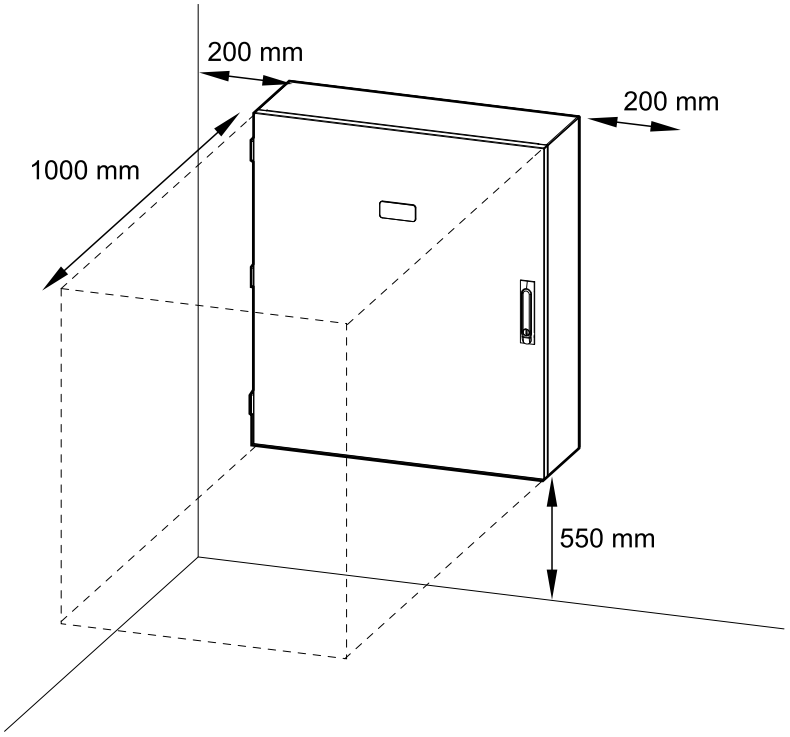
Bolt size	Torque
M4	1.7 Nm
M5	2.2 Nm
M6	5 Nm
M8	17.5 Nm
M10	30 Nm
M12	50 Nm

Parallel Maintenance Bypass Panel Weights and Dimensions

Commercial reference	Weight kg	Height mm	Width mm	Depth mm
GVSBPAR10K30H	35	700	650	210
GVSBPAR40K50H	50	850	750	250
GVSBPAR60K120H	83	1000	900	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.



Environment

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

One Line Diagram

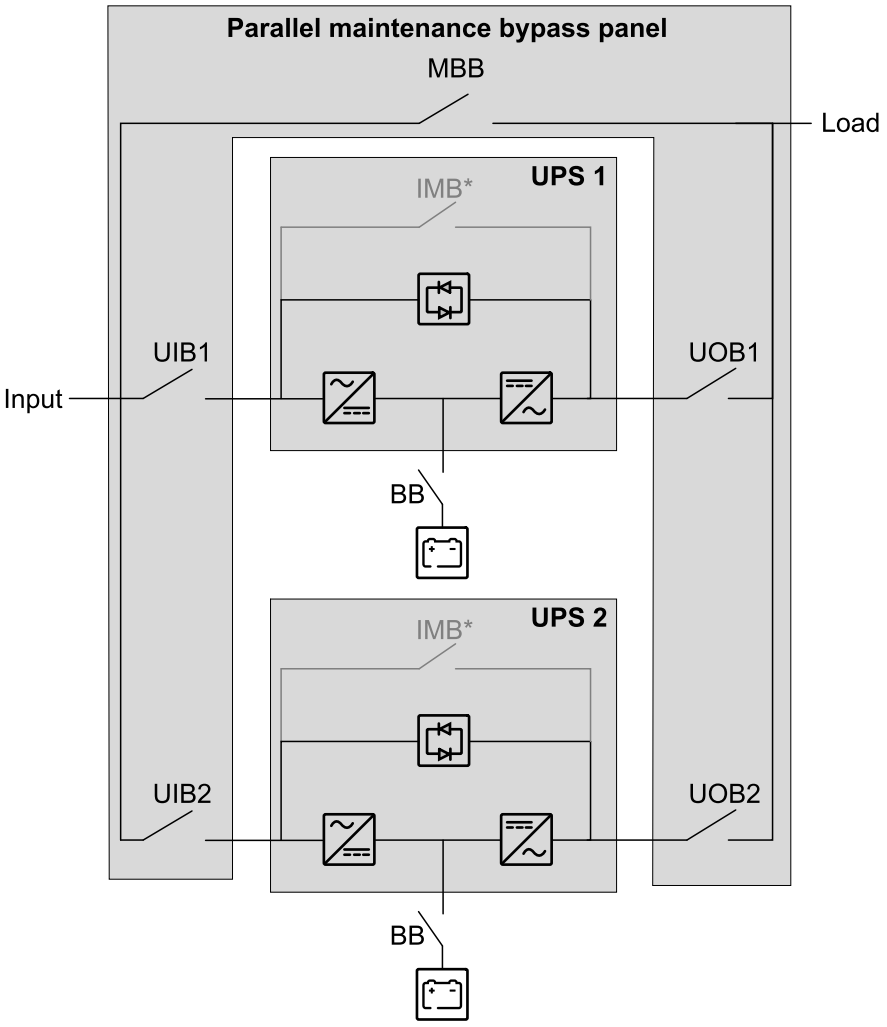
Galaxy VS One Line Diagrams

UIB1	Unit input breaker for UPS 1
UIB2	Unit input breaker for UPS 2
MBB	Maintenance bypass breaker
IMB	Internal maintenance breaker
UOB1	Unit output breaker for UPS 1
UOB2	Unit output breaker for UPS 2
BB	Battery breaker

The parallel maintenance bypass panel is used in single mains systems to parallel two UPSs for either capacity or redundancy.

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

Galaxy VS – Parallel System – Single Mains

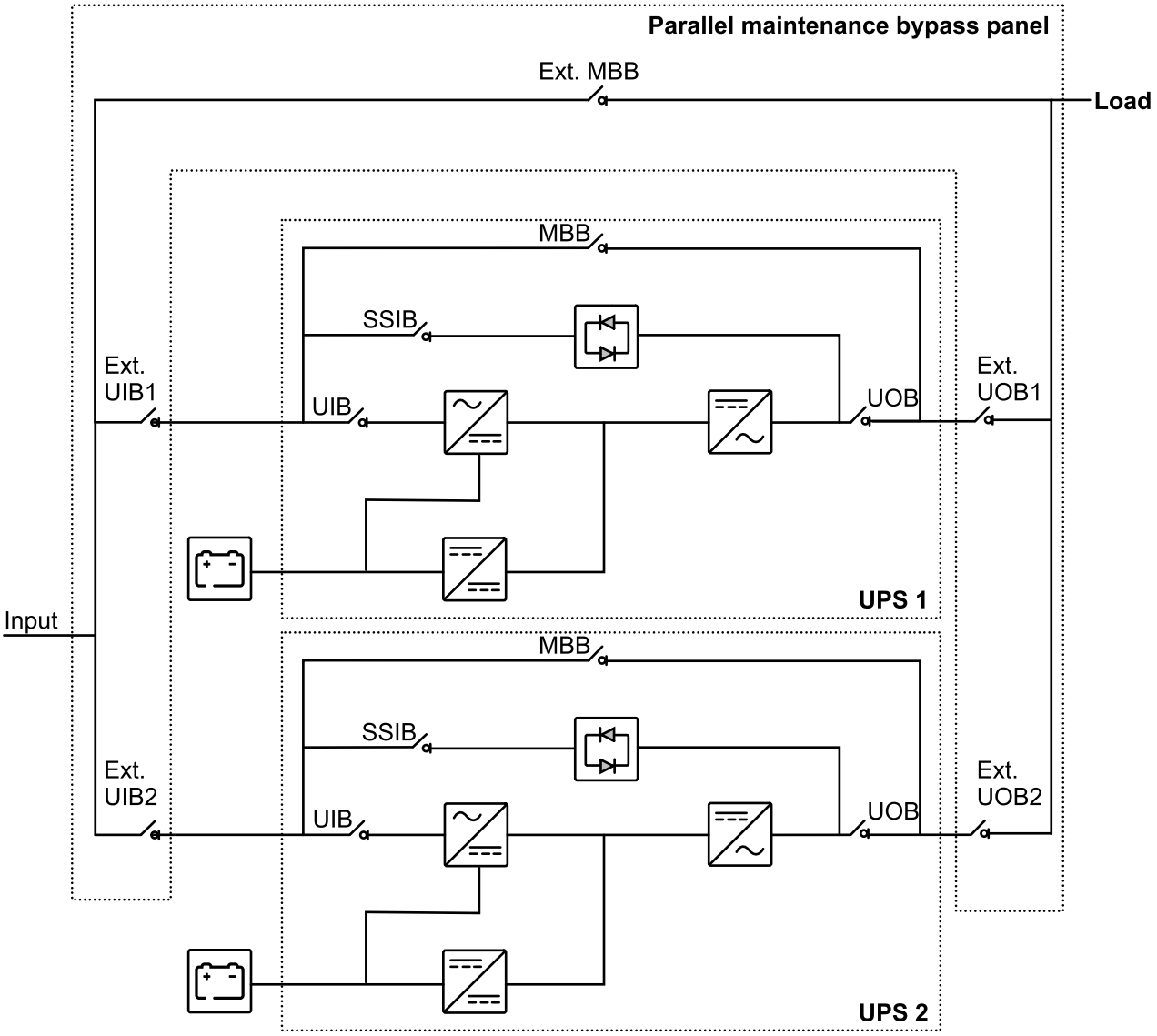


Easy UPS 3S and Easy UPS 3M One Line Diagrams

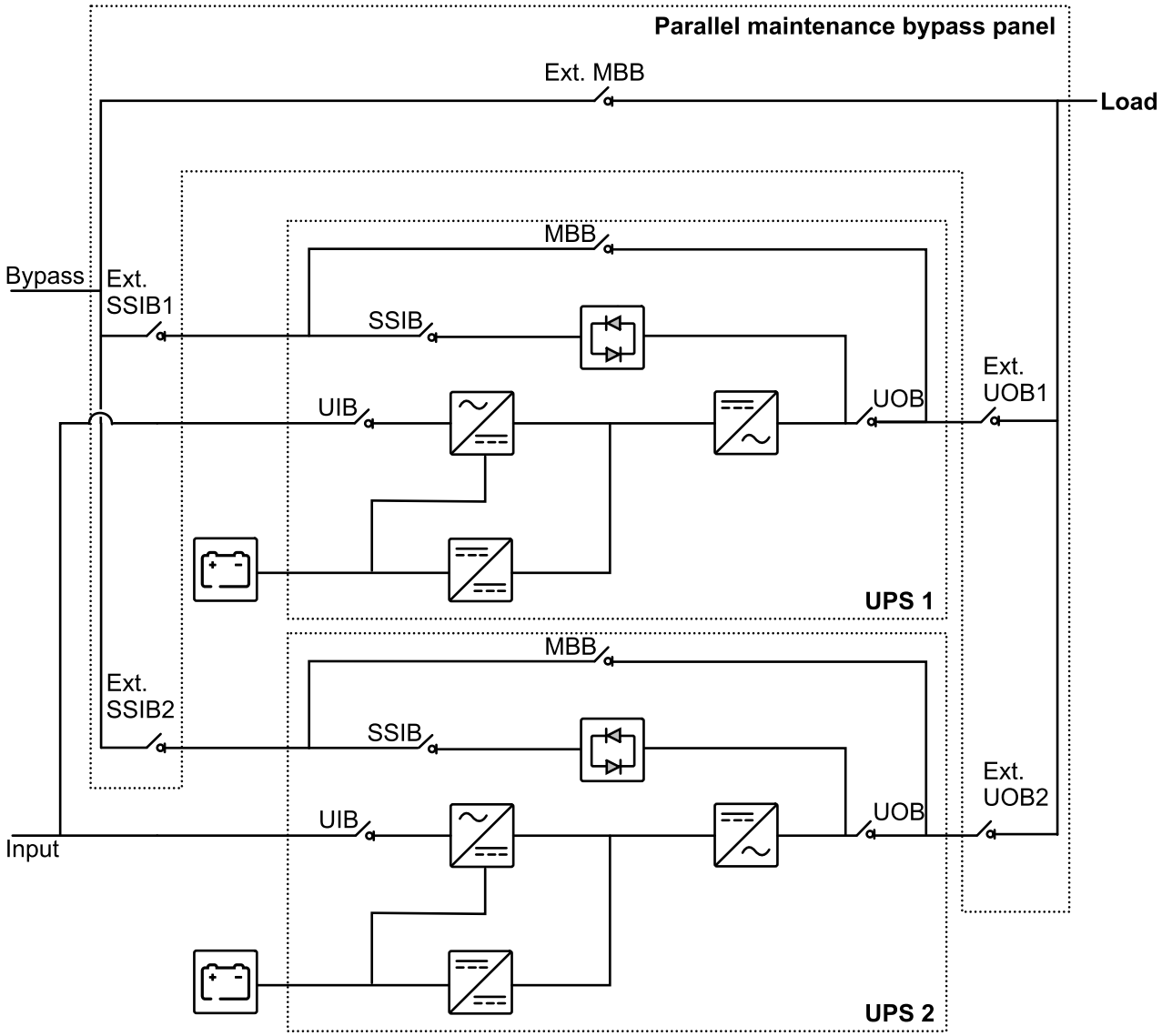
NOTE: The internal MBB in the Easy UPS 3S/3M cannot be used in a system with a parallel maintenance bypass panel and the internal MBB must be padlocked in the open position. Only use the Ext. MBB in the parallel maintenance bypass panel for maintenance bypass operation.

UIB	Unit input breaker
SSIB	Static switch input breaker
MBB	Internal maintenance bypass breaker
UOB	Unit output breaker
Ext. UIB1/Ext. SSIB1	External unit input breaker/static switch input breaker for UPS 1
Ext. UIB2/Ext. SSIB2	External unit input breaker/static switch input breaker for UPS 2
Ext. MBB	External maintenance bypass breaker
Ext. UOB1	External unit output breaker for UPS 1
Ext. UOB2	External unit output breaker for UPS 2
BB	Battery breaker

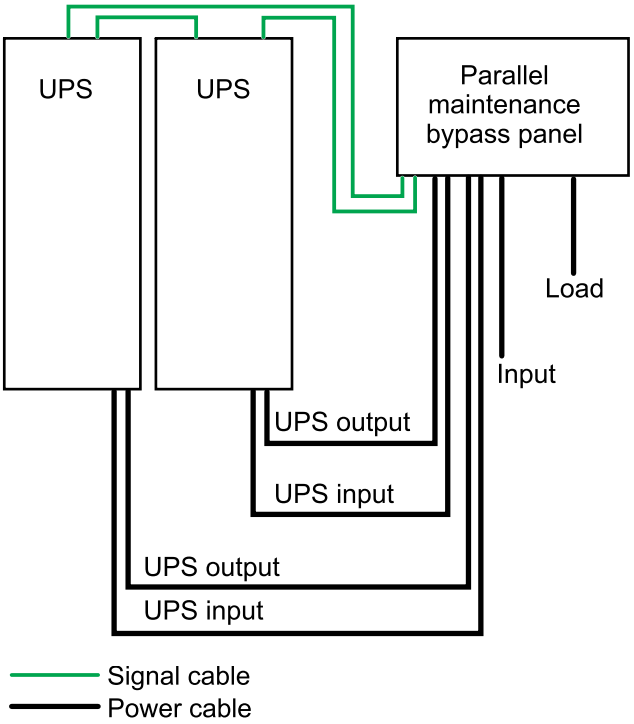
Easy UPS 3S and Easy UPS 3M – Parallel System – Single Mains



Easy UPS 3S and Easy UPS 3M – Parallel System – Dual Mains

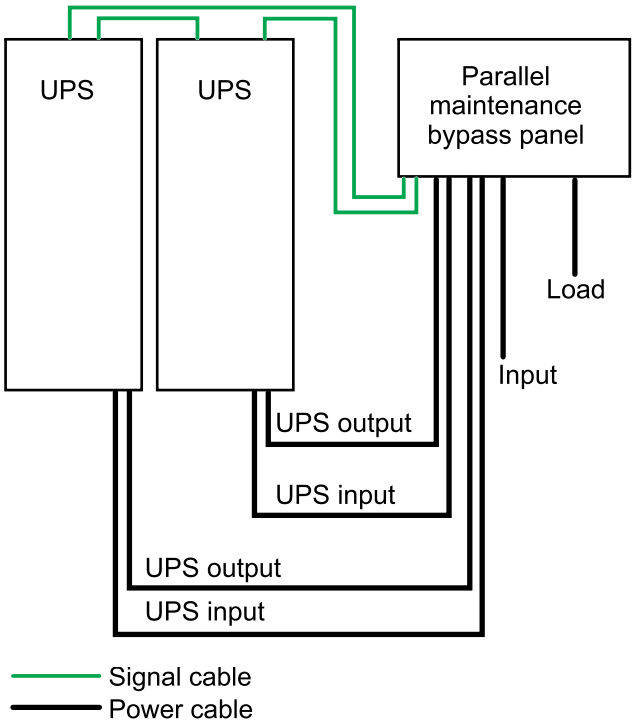


Installation Procedure for Galaxy VS



1. Mount the Parallel Maintenance Bypass Panel to the Wall, page 25.
2. Prepare for Cables, page 28.
3. Only in countries where required: Remove the Neutral Jumper, page 29.
4. Perform one of the following:
   - Connect the Power Cables on GVSBPAR10K30H, page 31, or
   - Connect the Power Cables on GVSBPAR40K50H for a 3:3 UPS System, page 35, or
   - Connect the Power Cables on GVSBPAR60K120H for a 3:3 UPS System, page 39.
5. Connect the Signal Cables for Galaxy VS UPSs, page 40.
6. Add Translated Safety Labels to Your Product, page 46.

Installation Procedure for Easy UPS 3S and Easy UPS 3M



1. Mount the Parallel Maintenance Bypass Panel to the Wall, page 25.
2. Prepare for Cables, page 28.
3. Remove the Neutral Jumper, page 29.
4. Perform one of the following:
   - Connect the Power Cables on GVSBPAR40K50H for a 3:1 UPS System, page 32, or
   - Connect the Power Cables on GVSBPAR40K50H for a 3:3 UPS System, page 35, or
   - Connect the Power Cables on GVSBPAR60K120H for a 3:1 UPS System, page 36, or
   - Connect the Power Cables on GVSBPAR60K120H for a 3:3 UPS System, page 39.
5. Connect the Signal Cables for Easy UPS 3S and Easy UPS 3M, page 42.
6. Add Translated Safety Labels to Your Product, page 46.

Mount the Parallel Maintenance Bypass Panel to the Wall

⚠CAUTION

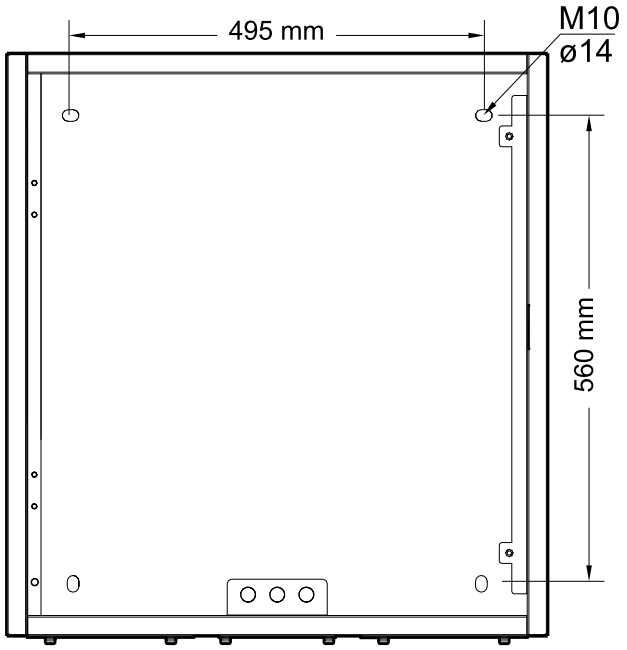
RISK OF INJURY OR EQUIPMENT DAMAGE

- Mount the parallel 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.

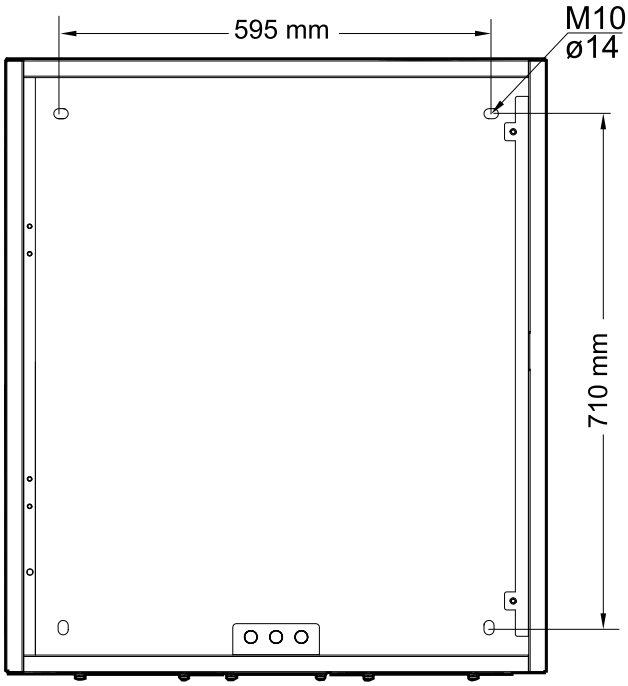
Failure to follow these instructions can result in injury or equipment damage.

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

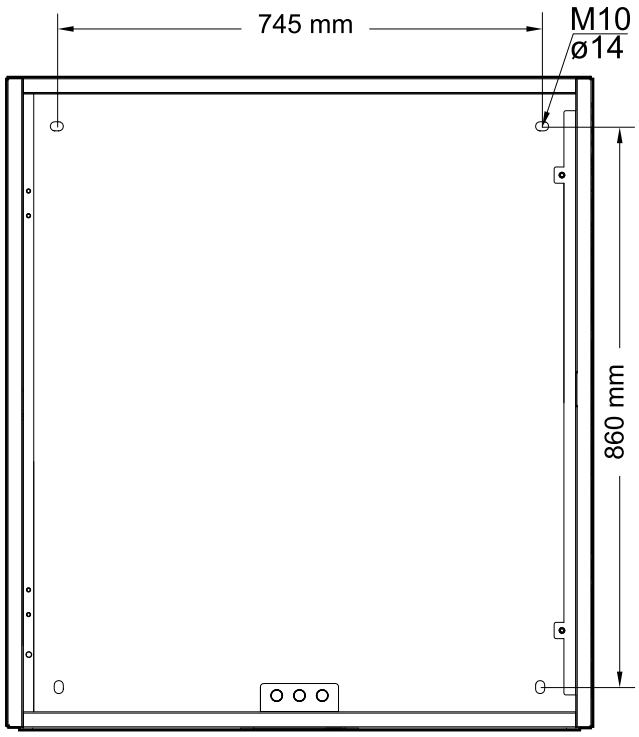
GVSBPAR10K30H



GVSBPAR40K50H

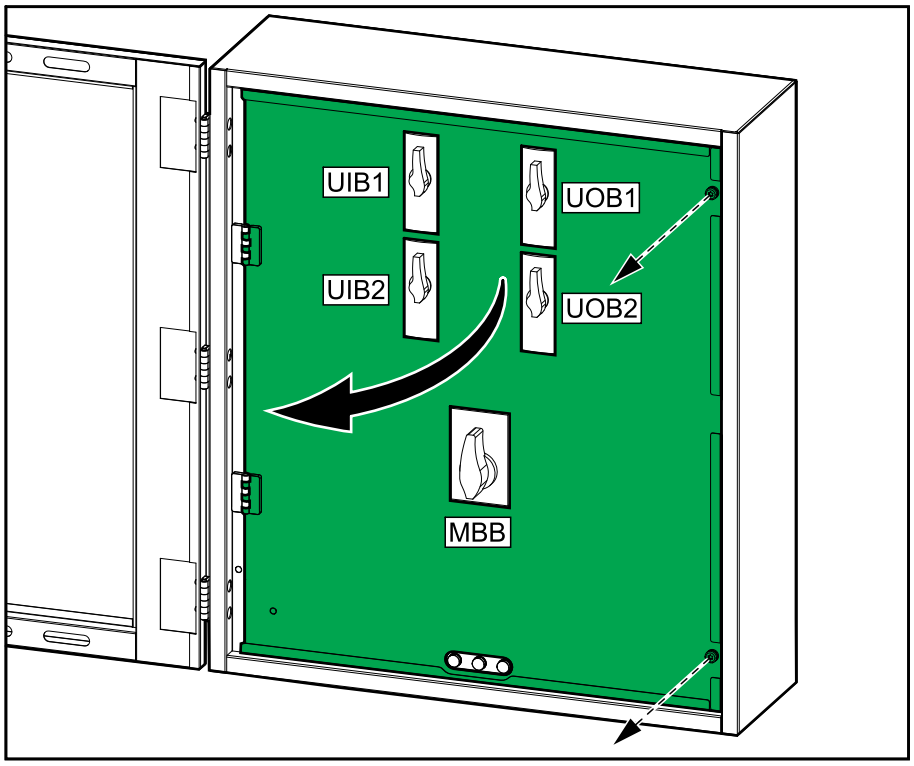


GVSBPAR60K120H



2. Drill holes in each of the four marked locations and mount the anchor bolts.

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



4. Mount the parallel maintenance bypass panel to the wall.

Prepare for Cables

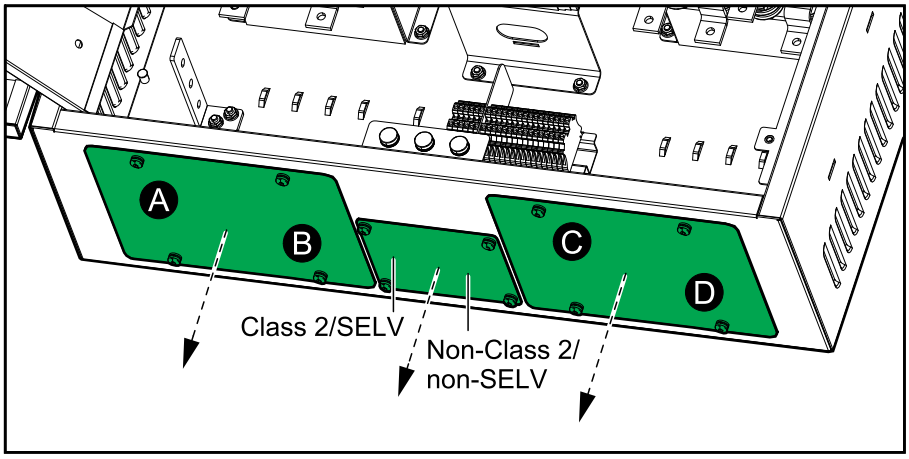
⚠DANGER

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 cabinet.

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

1. Remove the bottom gland plates.



2. Drill or punch holes for power cables and signal cables or grommets in the gland plates. UPS input (A), input (B), load (C), UPS output (D).
3. Install grommets (if applicable) and reinstall the gland plates.

⚠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.

Remove the Neutral Jumper

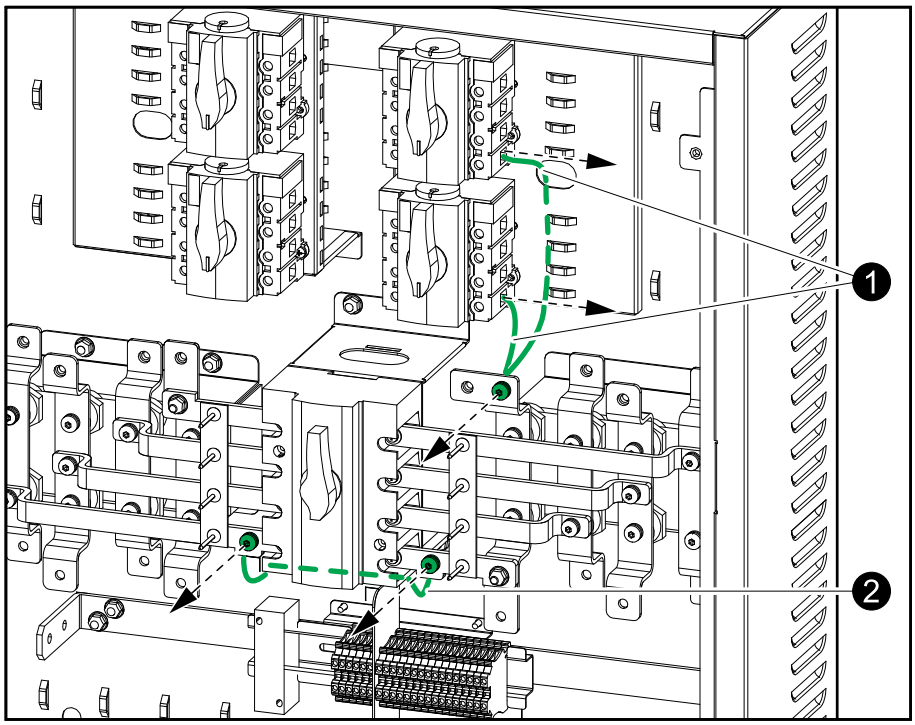
NOTE: The neutral jumper makes a bolted connection of the neutral so that the neutral is not disconnected when the 4-pole breakers are opened.

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.

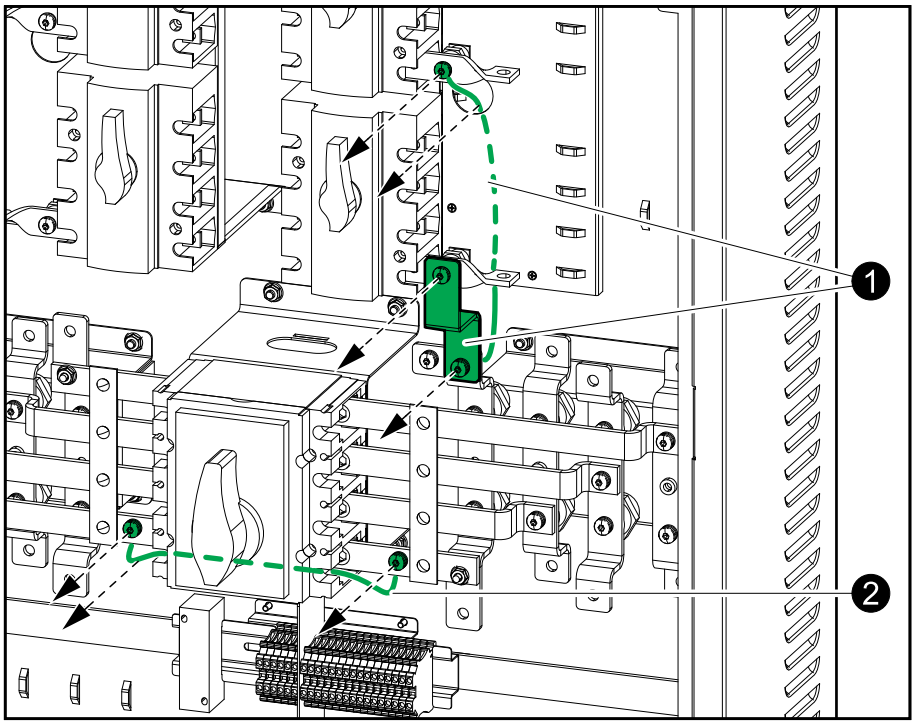
NOTE: Always remove the neutral jumpers in an Easy UPS 3S installation and in an Easy UPS 3M installation. Removal of the neutral jumpers is **mandatory** for an Easy UPS 3S installation and for an Easy UPS 3M installation.

1. Remove the neutral jumpers (cable and/or busbar) between UOB1 and UOB2. Reinstall the screws in the same position.
2. Remove the neutral jumpers on the MBB (cable or busbar).

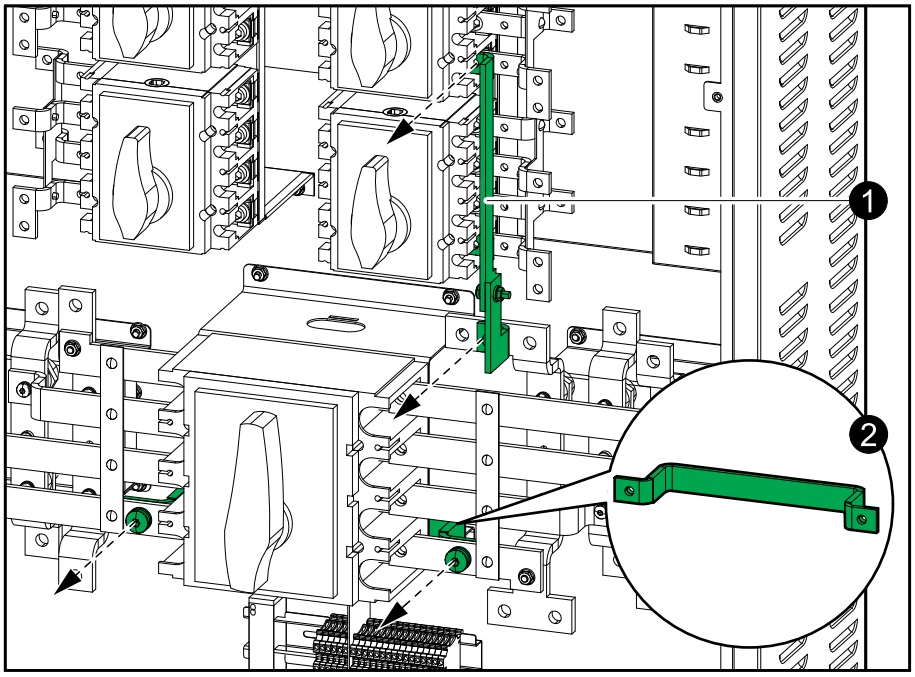
GVSBPAR10K30H



GVSBPAR40K50H

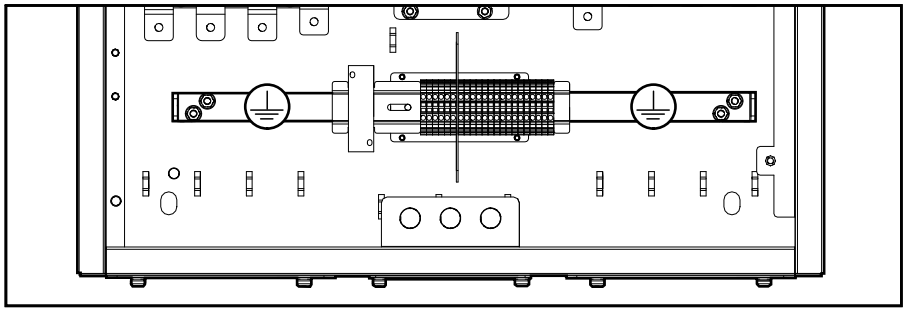


GVSBPAR60K120H

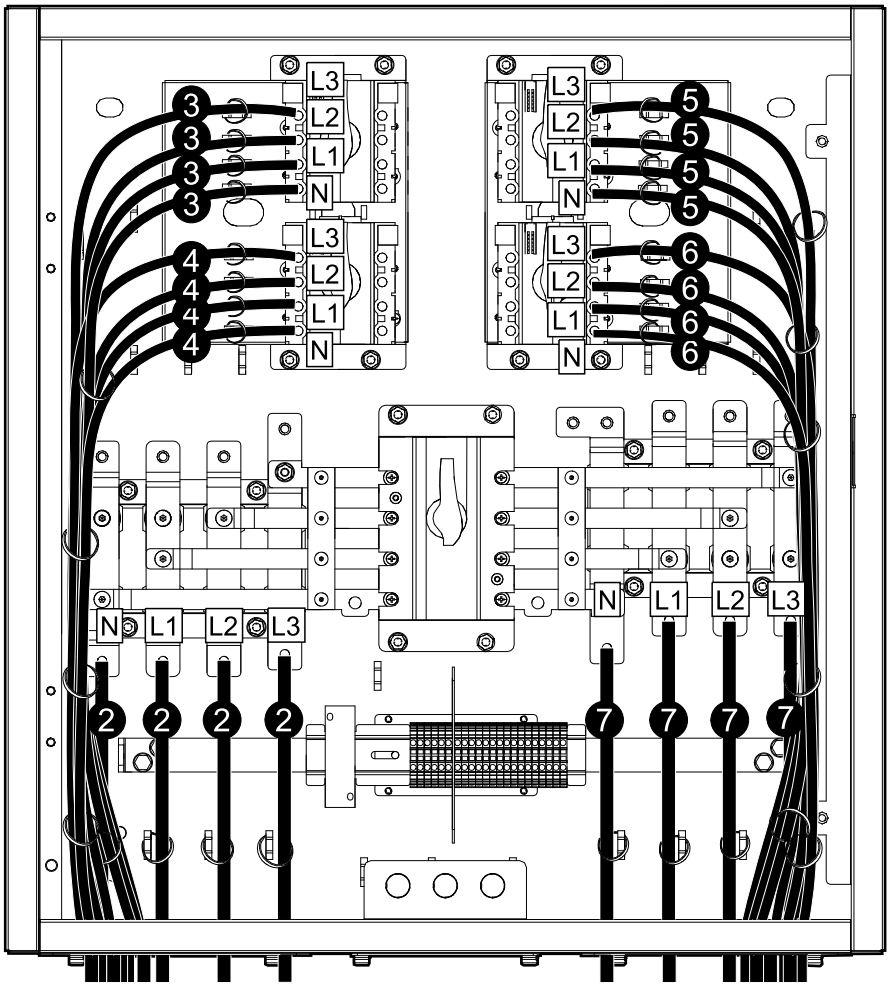


Connect the Power Cables on GVSBPAR10K30H

1. Connect the PE cables to the PE busbar.



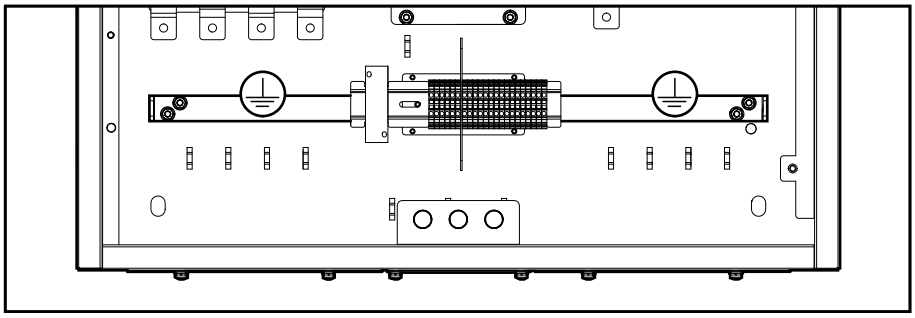
2. Connect the input cables from utility/mains.



3. Connect the UPS input cables from UPS 1.
4. Connect the UPS input cables from UPS 2.
5. Connect the UPS output cables from UPS 1.
6. Connect the UPS output cables from UPS 2.
7. Connect the load cables.
8. Fasten the cables with cable ties (provided) to the cable reliefs as shown.

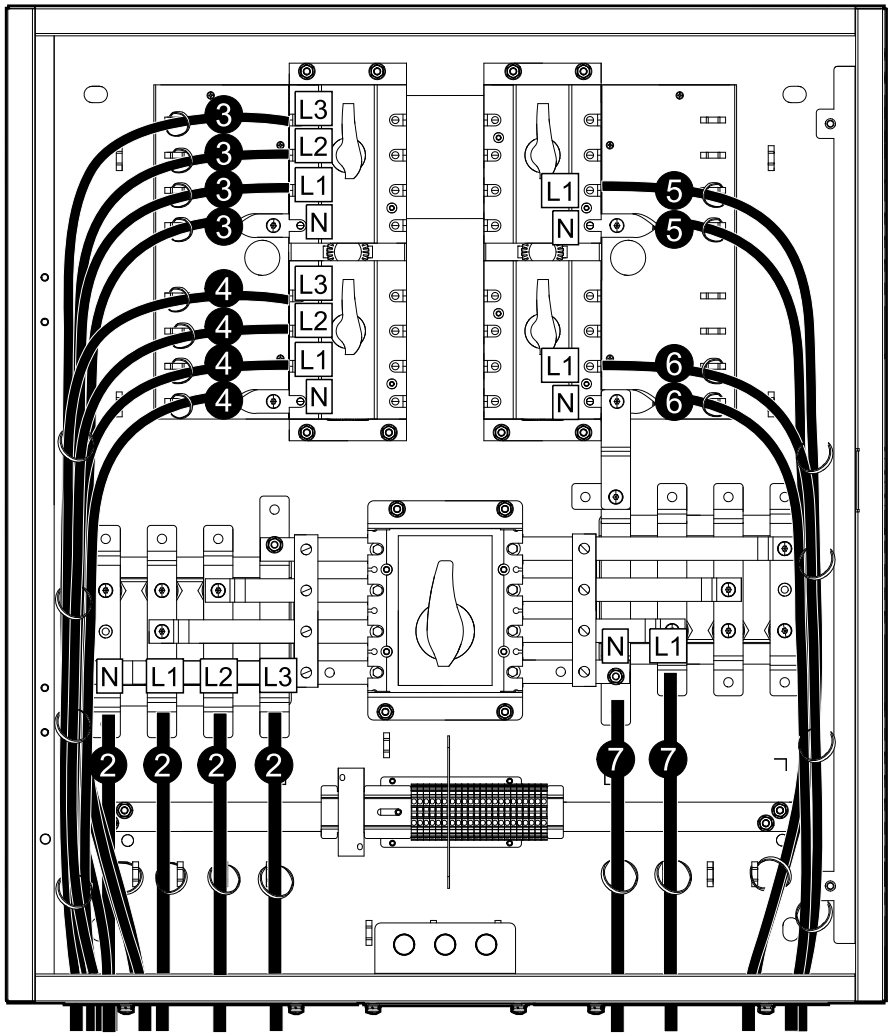
Connect the Power Cables on GVSBPAR40K50H for a 3:1 UPS System

1. Connect the PE cables to the PE busbar.

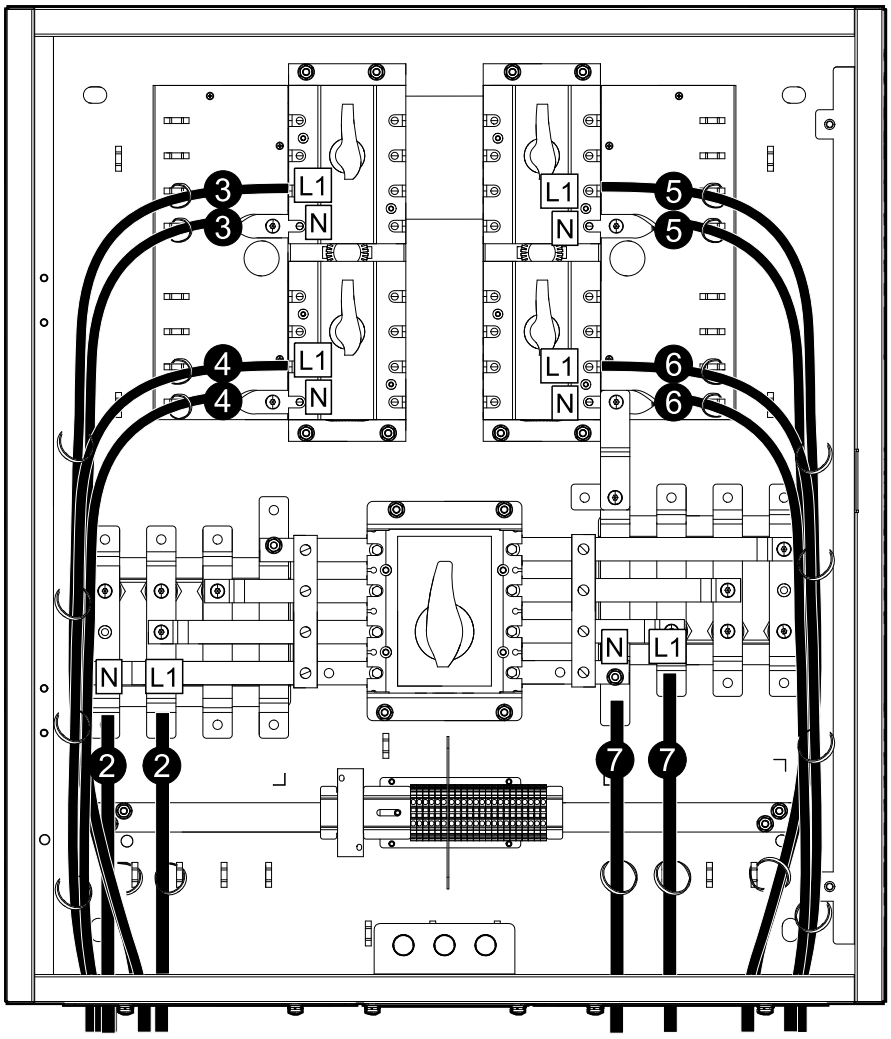


2. Connect the input cables/bypass cables from utility/mains.

Single Mains



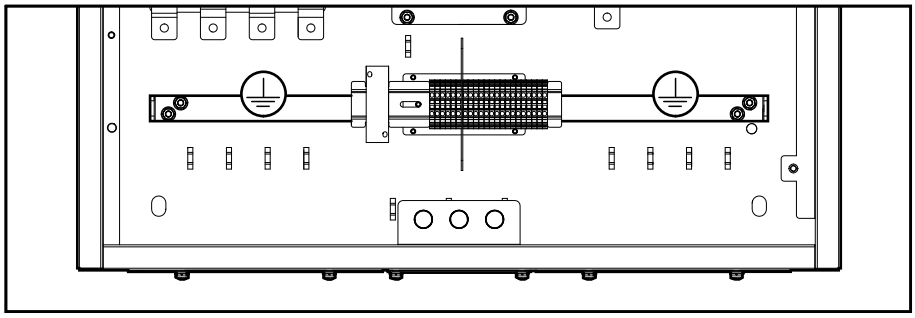
Dual Mains



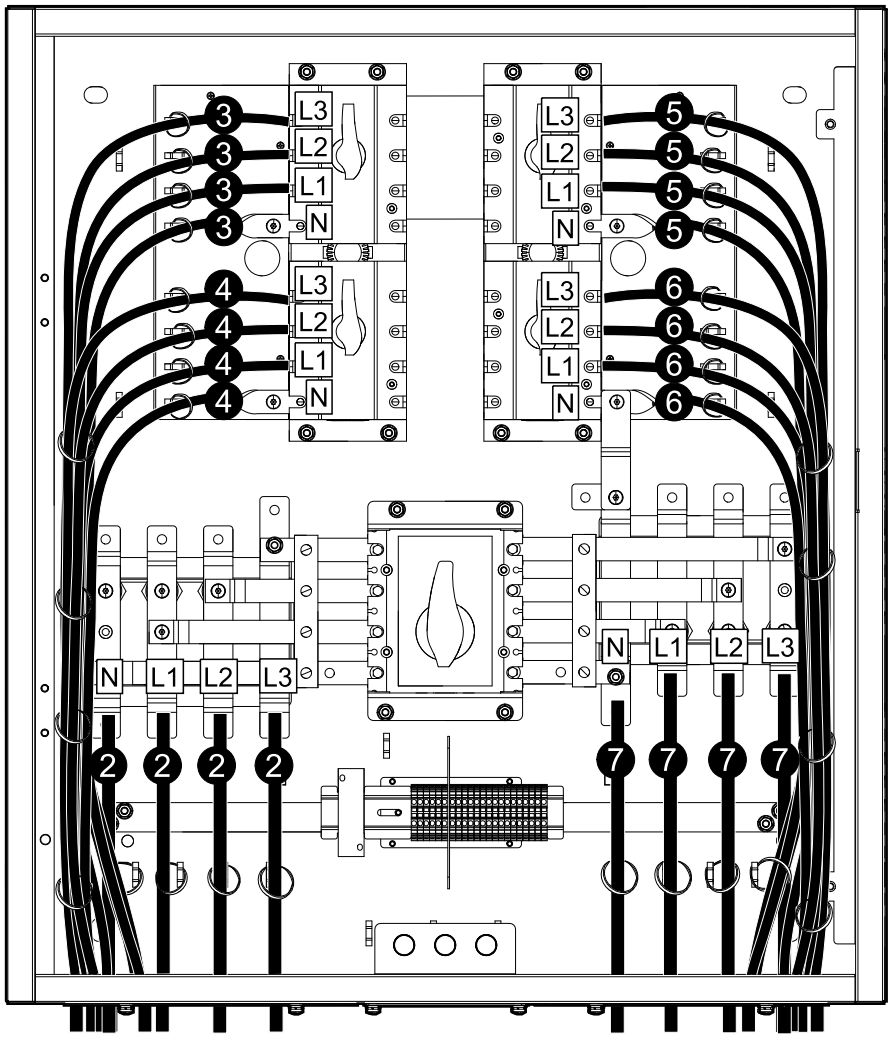
3. Connect the UPS input cables/UPS bypass cables from UPS 1.
4. Connect the UPS input cables/UPS bypass cables from UPS 2.
5. Connect the UPS output cables from UPS 1.
6. Connect the UPS output cables from UPS 2.
7. Connect the load cables.
8. Fasten the cables with cable ties (provided) to the cable reliefs as shown.

Connect the Power Cables on GVSBPAR40K50H for a 3:3 UPS System

1. Connect the PE cables to the PE busbar.



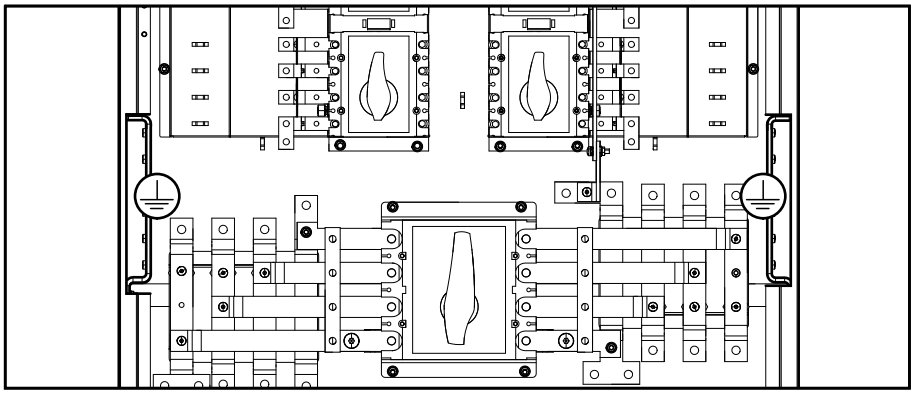
2. Connect the input cables/bypass cables from utility/mains.



3. Connect the UPS input cables/UPS bypass cables from UPS 1.
4. Connect the UPS input cables/UPS bypass cables from UPS 2.
5. Connect the UPS output cables from UPS 1.
6. Connect the UPS output cables from UPS 2.
7. Connect the load cables.
8. Fasten the cables with cable ties (provided) to the cable reliefs as shown.

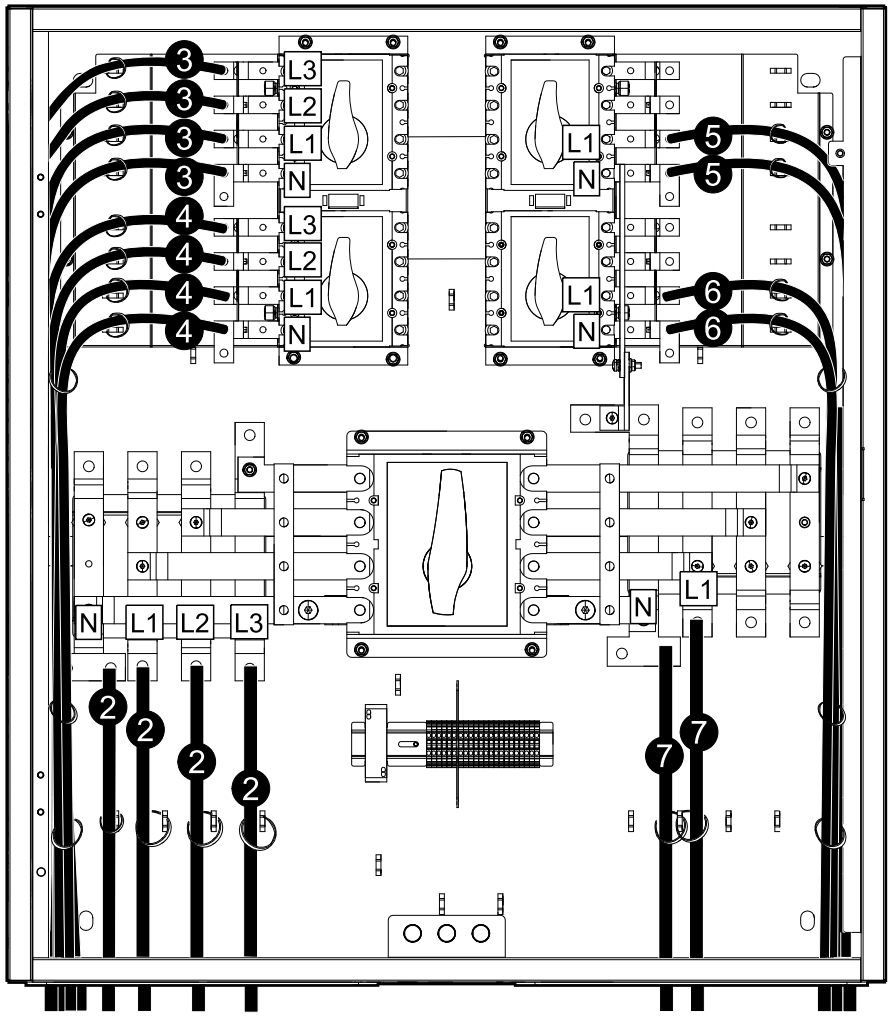
Connect the Power Cables on GVSBPAR60K120H for a 3:1 UPS System

1. Connect the PE cables to the PE busbar.

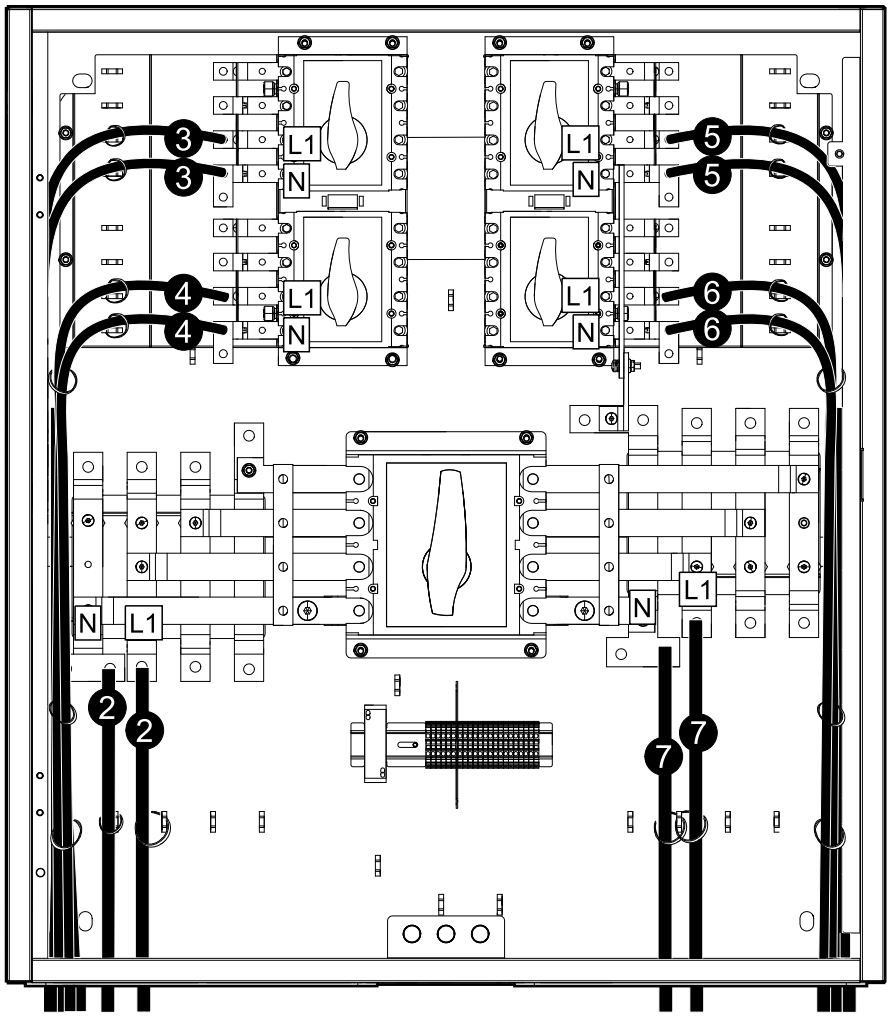


2. Connect the input cables/bypass cables from utility/mains.

Single Mains



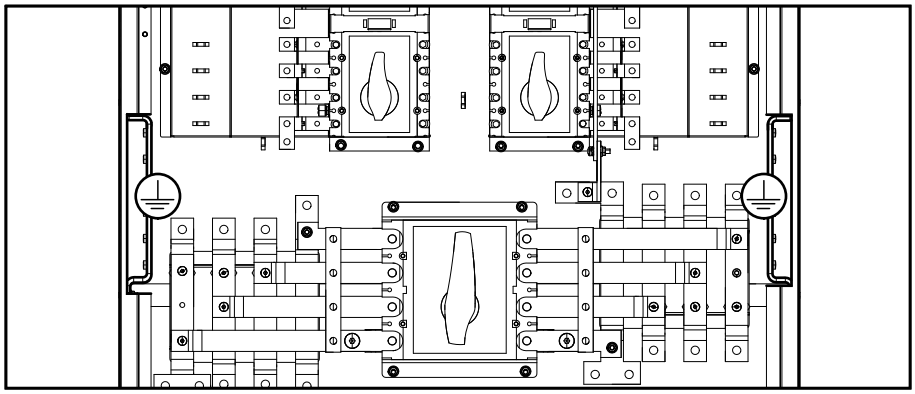
Dual Mains



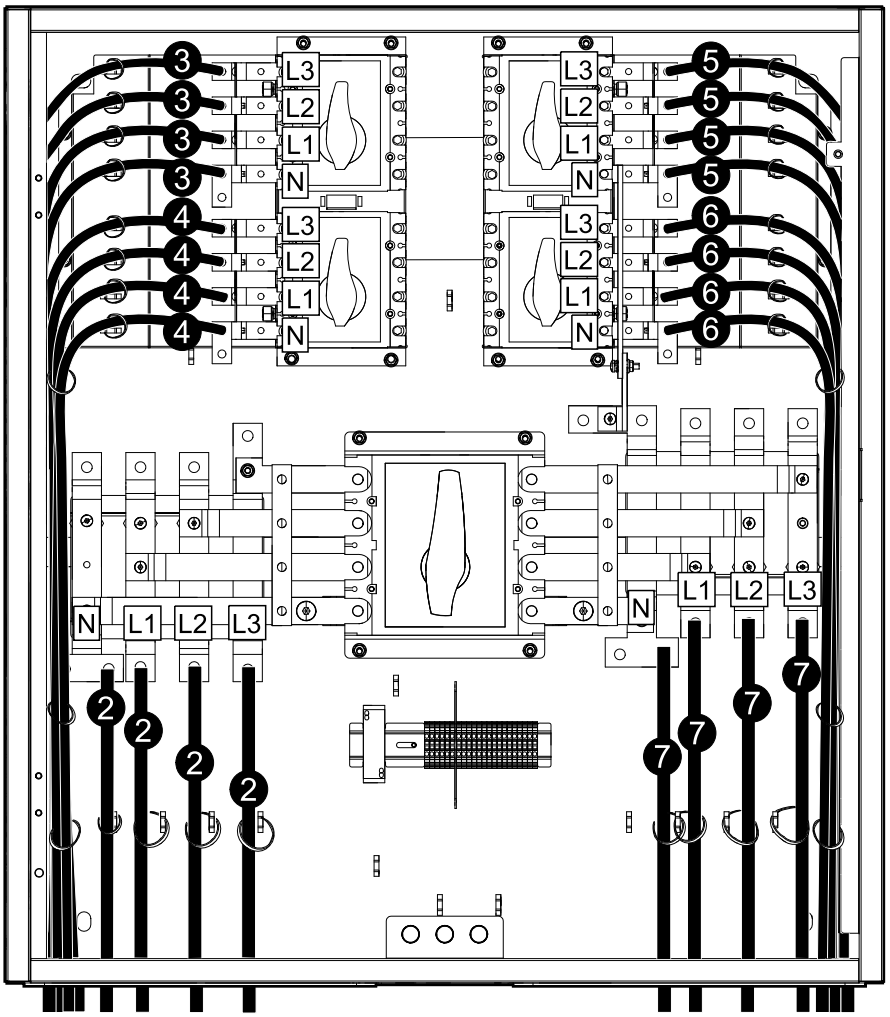
3. Connect the UPS input cables/UPS bypass cables from UPS 1.
4. Connect the UPS input cables/UPS bypass cables from UPS 2.
5. Connect the UPS output cables from UPS 1.
6. Connect the UPS output cables from UPS 2.
7. Connect the load cables.
8. Fasten the cables with cable ties (provided) to the cable reliefs as shown.

Connect the Power Cables on GVSBPAR60K120H for a 3:3 UPS System

1. Connect the PE cables to the PE busbar.



2. Connect the input cables/bypass cables from utility/mains.



3. Connect the UPS input cables/UPS bypass cables from UPS 1.
4. Connect the UPS input cables/UPS bypass cables from UPS 2.
5. Connect the UPS output cables from UPS 1.
6. Connect the UPS output cables from UPS 2.
7. Connect the load cables.
8. Fasten the cables with cable ties (provided) to the cable reliefs as shown.

Connect the Signal Cables for Galaxy VS UPSs

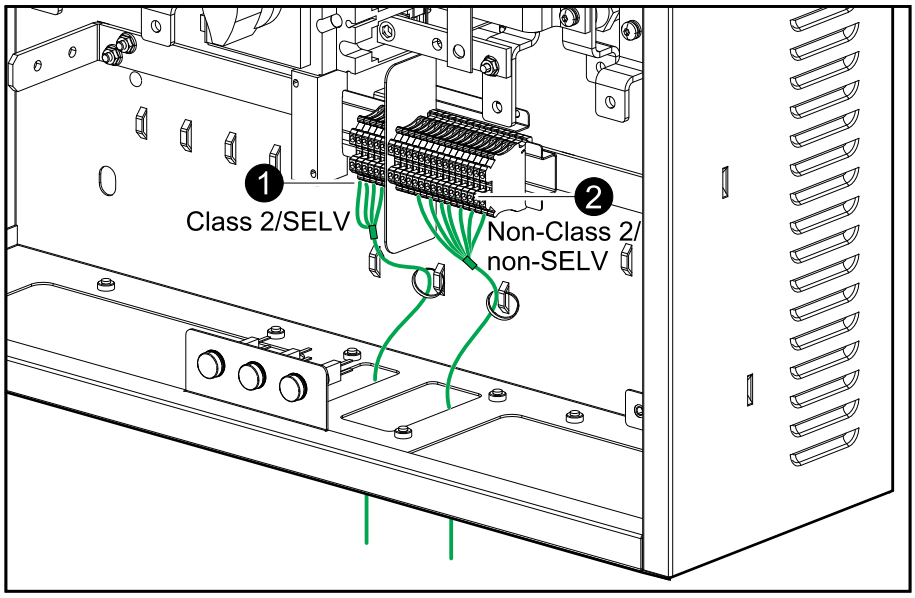
NOTE: Route the signal cables separately from the power cables and route the Class 2/SELV cables separately from the non-Class 2/non-SELV cables.

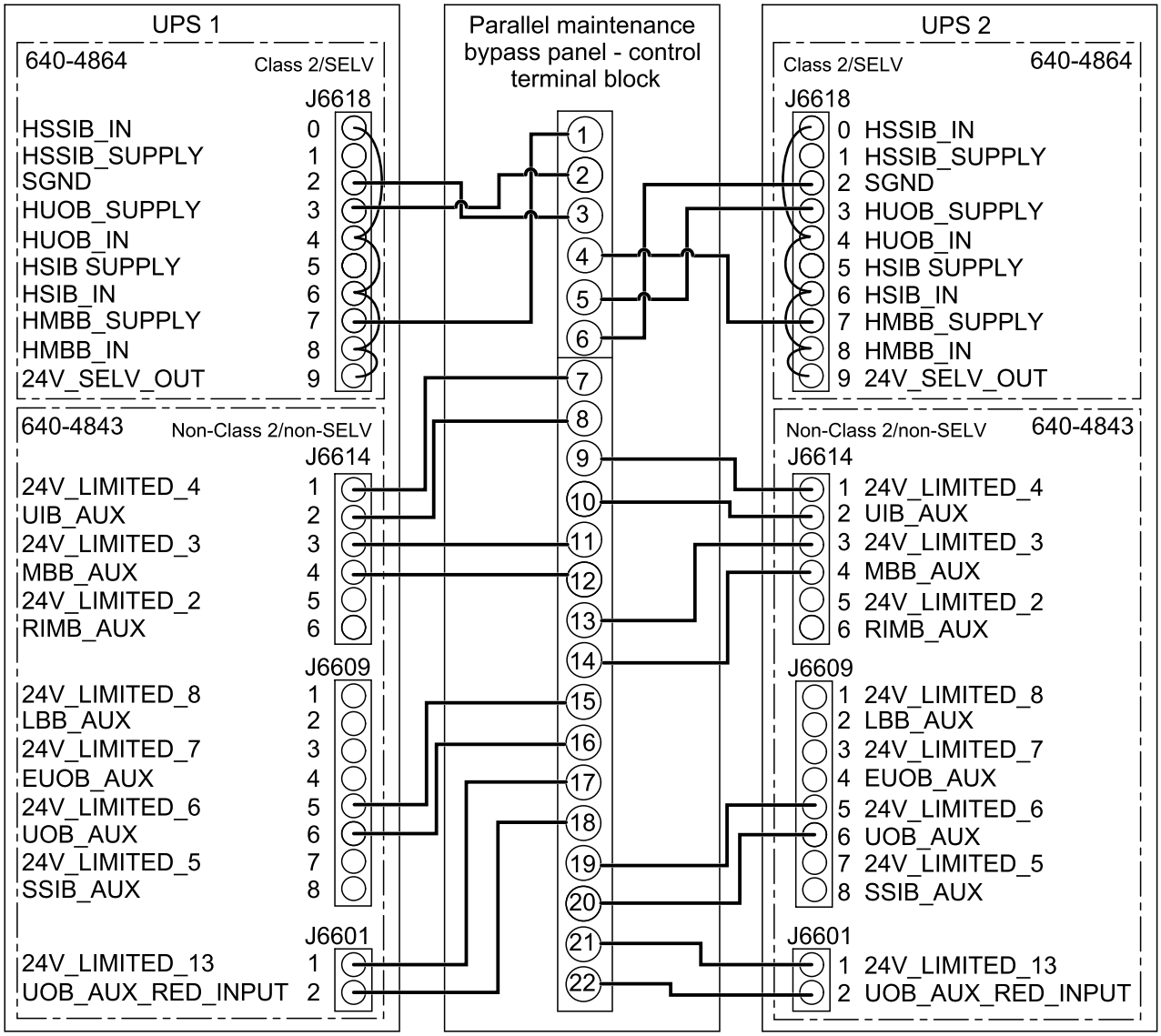
1. Connect the Class 2/SELV signal cables for the breaker indicator lights from the control terminal block in the parallel maintenance bypass panel to UPS 1 and UPS 2.

   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 parallel maintenance bypass panel to UPS 1 and UPS 2.

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

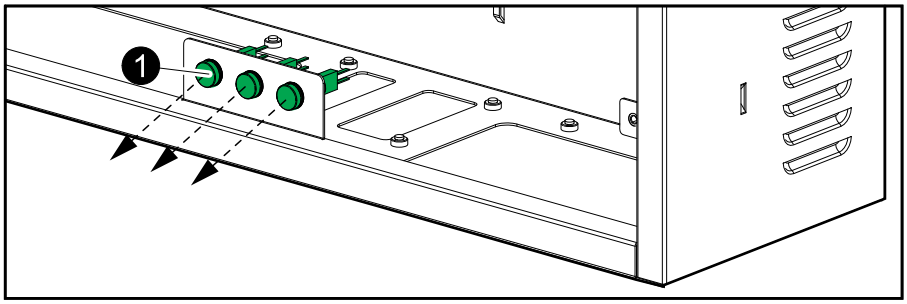




Connect the Signal Cables for Easy UPS 3S and Easy UPS 3M

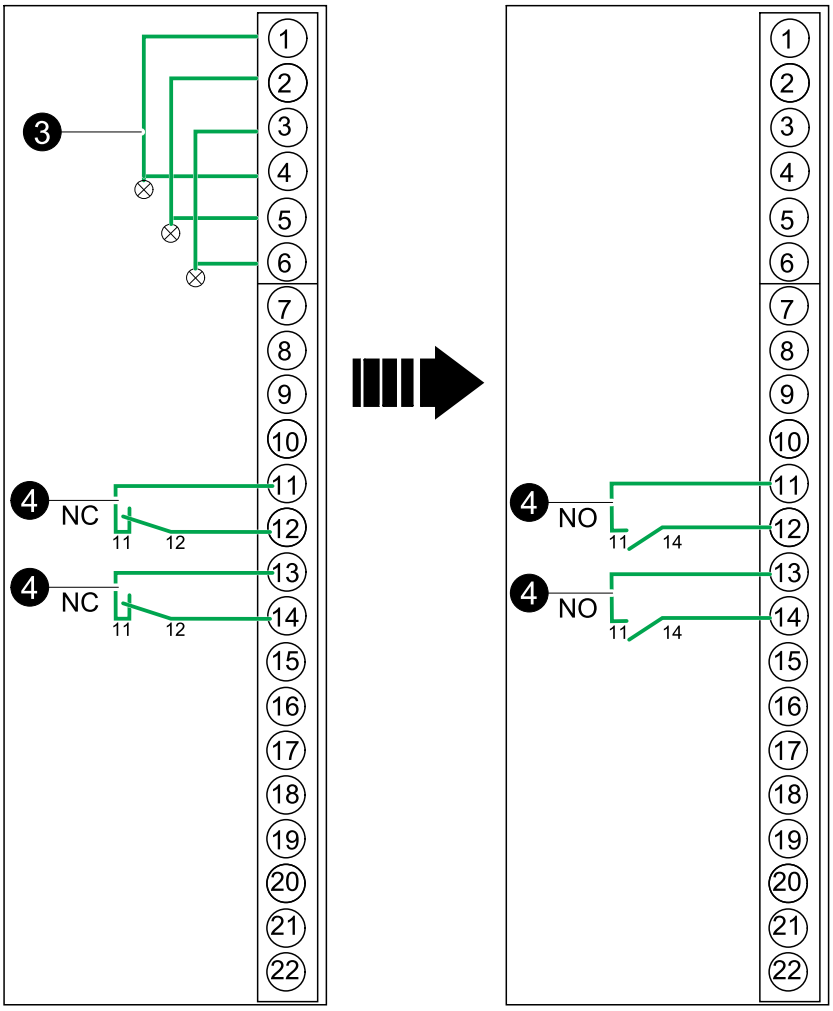
NOTE: Route the signal cables separately from the power cables and route the Class 2/SELV cables separately from the non-Class 2/non-SELV cables.

1. 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 3S and 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 1-6).

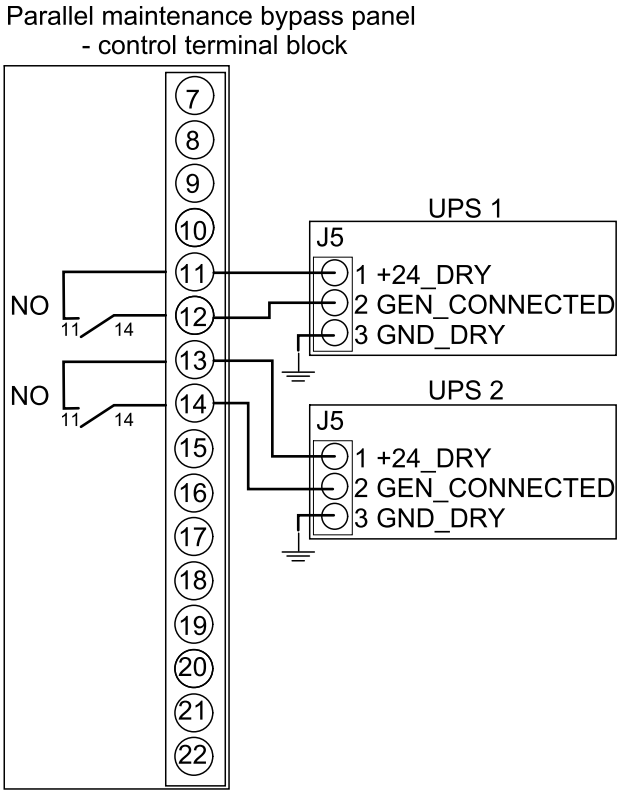
Parallel maintenance bypass panel
- control terminal block



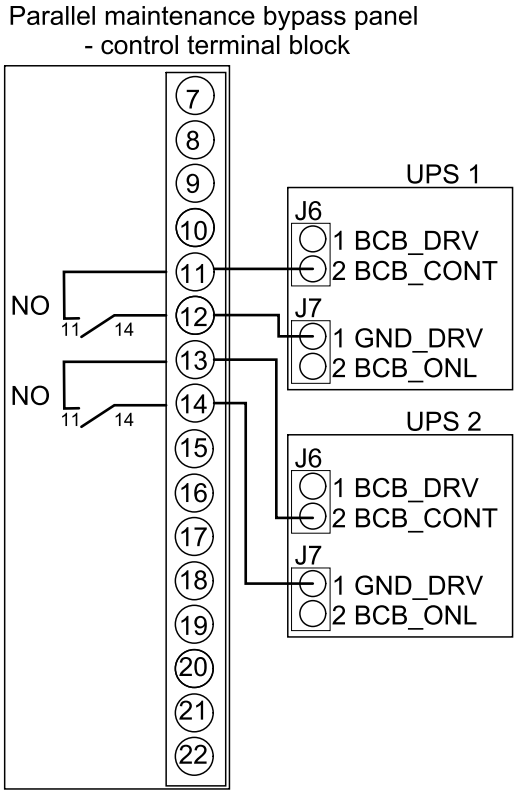
4. On the control terminal block, modify the internal connection for the MBB AUX switches (pin 11–14) from Normally Closed (NC) to Normally Open (NO).

5. Connect the non-Class 2/non-SELV signal cables from the control terminal block in the parallel maintenance bypass panel to UPS 1 and UPS 2. Follow one of the options below:
   - **For Easy UPS 3S**: Connect to J5 in the UPSs OR to J6 and J7 in the UPSs.
   - **For Easy UPS 3M**: Connect to J8 in the UPSs.

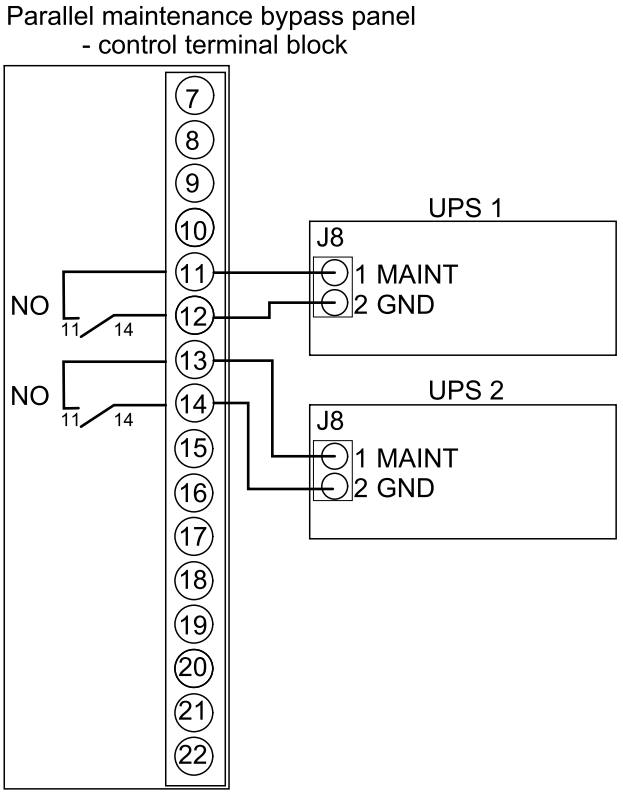
Easy UPS 3S



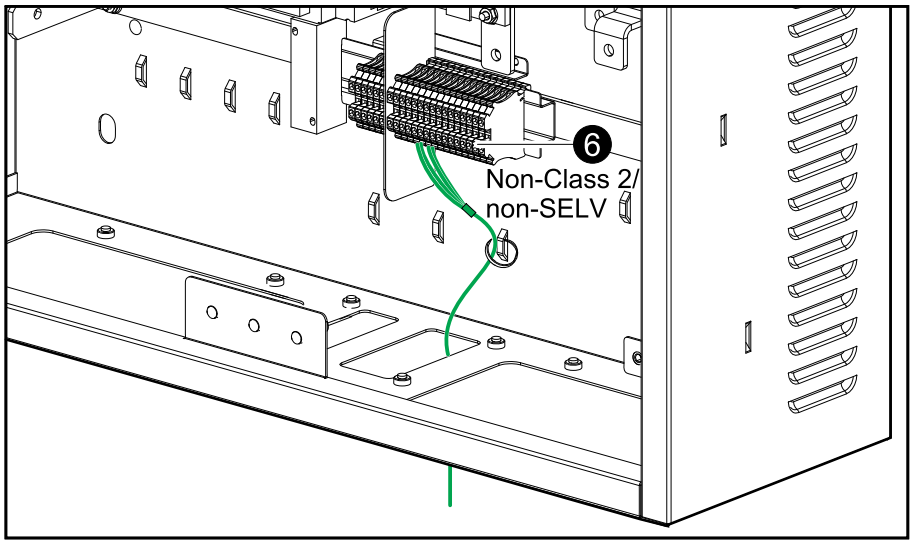
Easy UPS 3S



Easy UPS 3M



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.

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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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