

Wall-Mount Maintenance Bypass Panel

Easy UPS 3S/3M/3L, Easy UPS 3-Phase Modular, and
Easy UPS 3M Advanced

Installation

E3MBP60K400H

Latest updates are available on the Schneider Electric website

3/2024



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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 62040-1, section 3.102).

Electromagnetic Compatibility

NOTICE


RISK OF ELECTROMAGNETIC DISTURBANCE

This is a product Category C3 according to IEC 62040-2. This is a product for commercial and industrial applications in the second environment - installation restrictions or additional measures may be needed to prevent disturbances. The second environment includes all commercial, light industry, and industrial locations other than residential, commercial, and light industrial premises directly connected without intermediate transformer to a public low-voltage mains supply. The installation and cabling must follow the electromagnetic compatibility rules, e.g.:

- the segregation of cables,
- the use of shielded or special cables when relevant,
- the use of grounded metallic cable tray and supports.

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 system 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 system.

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

WARNING

HAZARD OF ARC FLASH

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

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

NOTICE

RISK OF OVERHEATING

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

Failure to follow these instructions can result in equipment damage.

Electrical Safety

⚠ 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.
- 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 system 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 system 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.

Distribution-Related Backfeed

The upstream disconnection switchgear must be suitable for disconnection purposes. Before working on the upstream supply, the MBB must be locked in the open position using the built-in lockout function.

When installing the parallel maintenance bypass panel, warning labels must be posted on the load side of all upstream disconnection devices. The labels must be supplied 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):

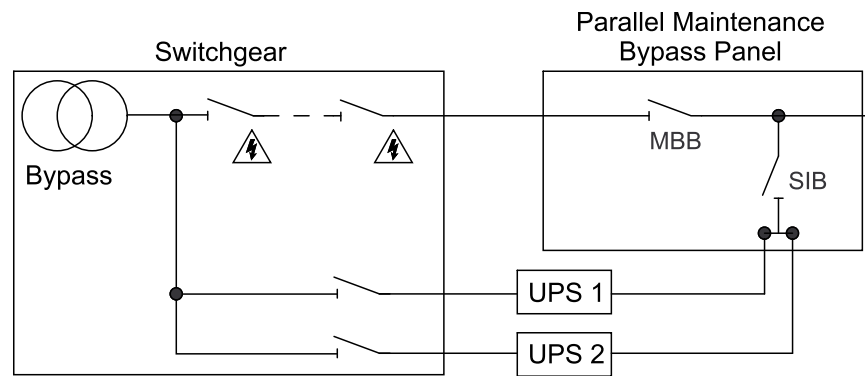
⚠⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

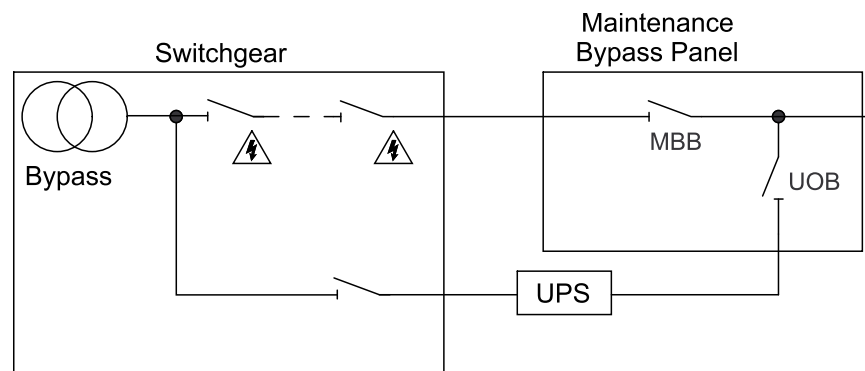
Risk of Voltage Backfeed. Before working on this circuit: Isolate the UPS and check for hazardous voltage between all terminals including the protective earth.

885-95958_REV04















Easy UPS 3S / Easy UPS 3M / Easy UPS 3-Phase Modular / Easy UPS 3M Advanced



Easy UPS 3L



Symbols Used in the Product

	This is the earthing/ground symbol.
	This is the protective earth/equipment grounding conductor symbol.
	This is the direct current symbol. It is also referred to as DC.
	This is the alternating current symbol. It is also referred to as AC.
	This is the positive polarity symbol. It is used to identify the positive terminal(s) of equipment which is used with, or generates direct current.
	This is the negative polarity symbol. It is used to identify the negative terminal(s) of equipment which is used with, or generates direct current.
	This is the battery symbol.
	This is the static switch symbol. It is used to indicate switches that are designed to connect or disconnect the load to or from the supply respectively without the existence of moving parts.
	This is the AC/DC converter (rectifier) symbol. It is used to identify an AC/DC converter (rectifier) and, in case of plug-in devices, to identify the relevant receptacles.
	This is the DC/AC converter (inverter) symbol. It is used to identify an DC/AC converter (inverter) and, in case of plug-in devices, to identify the relevant receptacles.
	This is the input symbol. It is used to identify an input terminal when it is necessary to distinguish between inputs and outputs.
	This is the output symbol. It is used to identify an output terminal when it is necessary to distinguish between inputs and outputs.
	This is the switch disconnecter symbol. It is used to identify the disconnecting device in the form of switch.
	This is the circuit breaker symbol. It is used to identify the disconnecting device in the form of circuit breaker that protects the equipment from short circuit or heavy load current. It opens the circuits once the current flow crosses its maximum limit.

Specifications

NOTICE

HAZARD OF EQUIPMENT DAMAGE

Refer to the UPS installation manual for detailed specifications for the UPS system.

Failure to follow these instructions can result in equipment damage.

Specifications for Easy UPS 3S

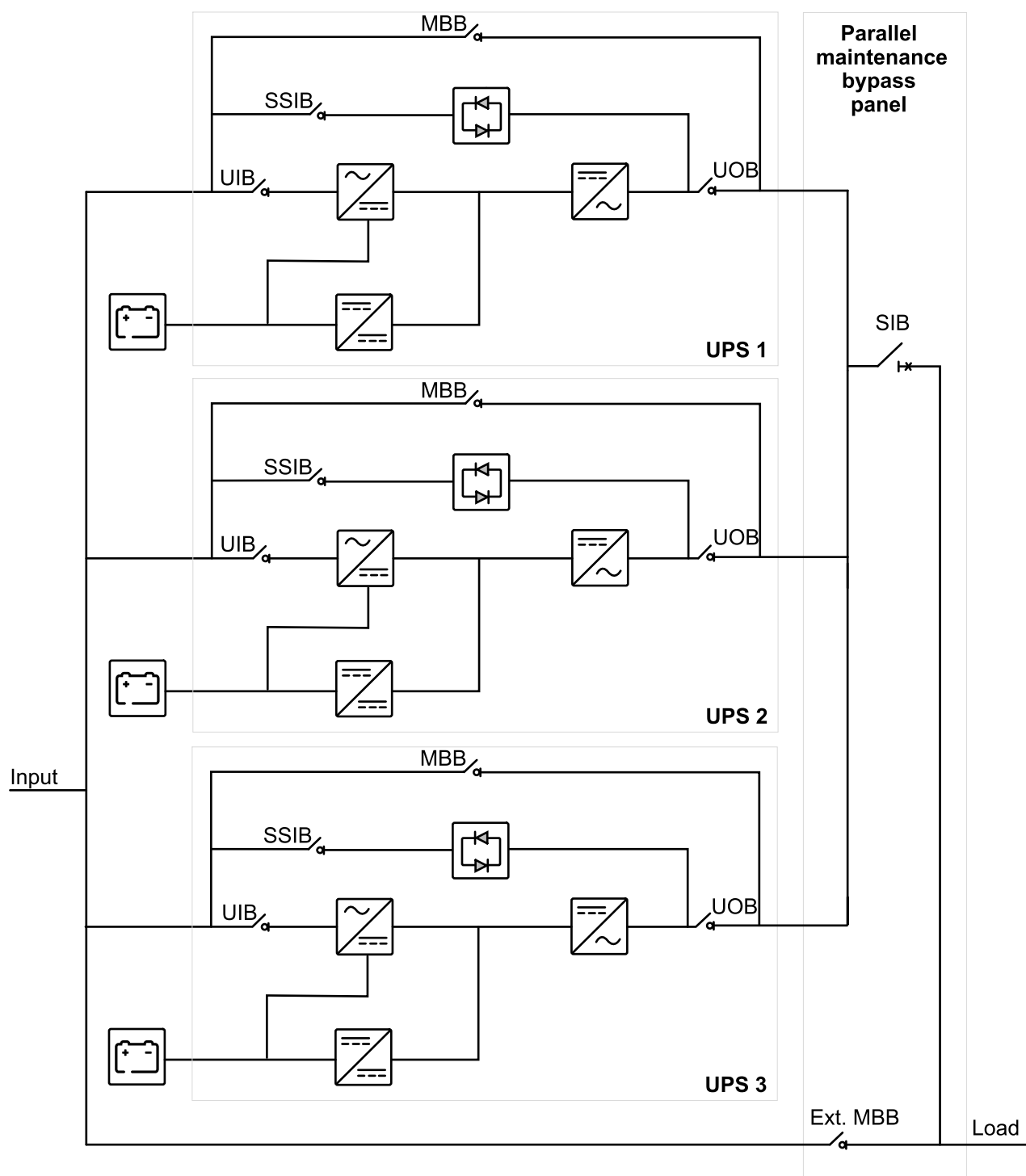
In Easy UPS 3S systems E3MBP60K400H can be used as a single maintenance bypass panel or as a parallel maintenance bypass panel..

Overview of Easy UPS 3S System with Parallel Maintenance Bypass Panel

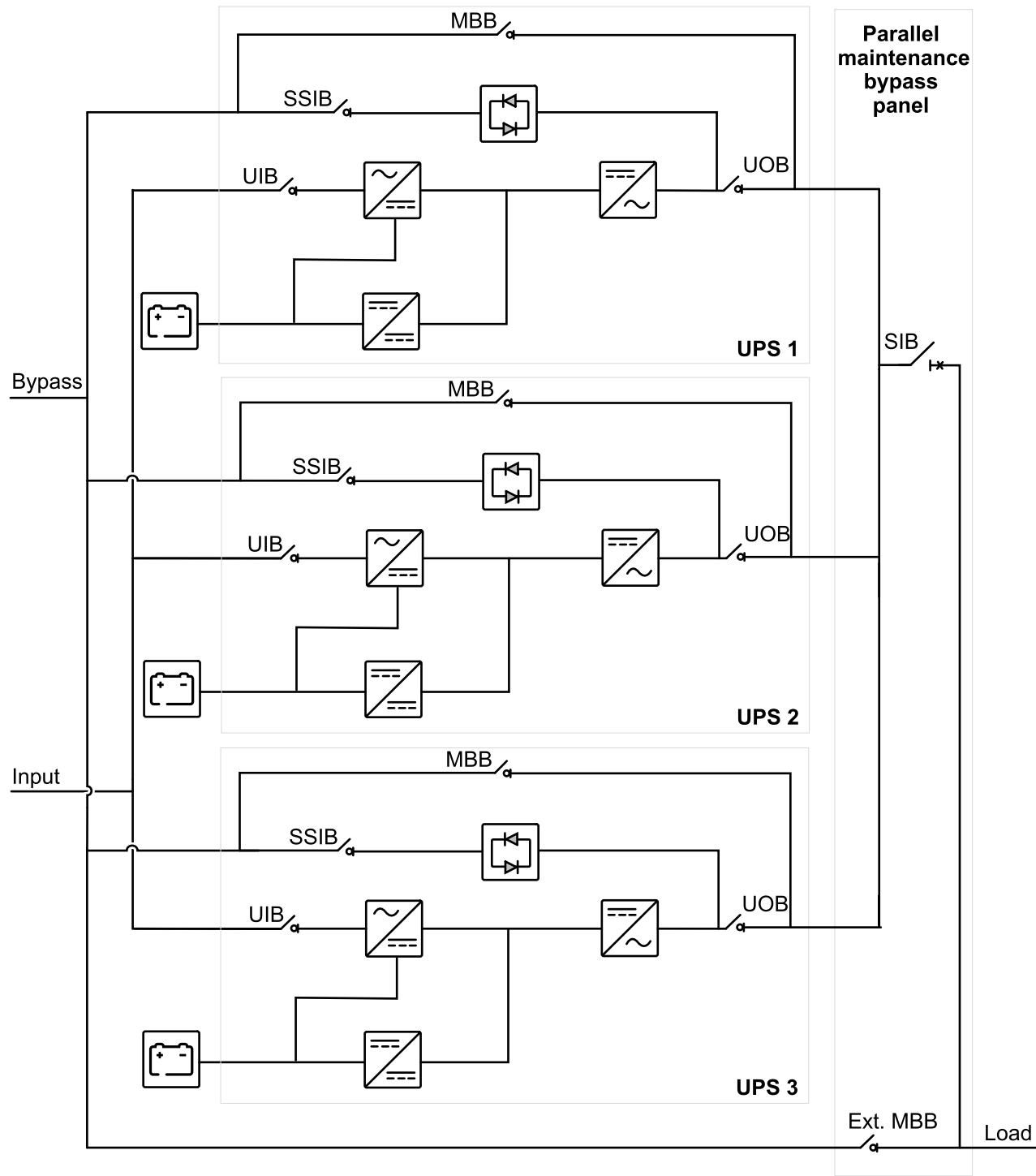
UIB	Unit input switch
SSIB	Static switch input switch
UOB	Unit output switch
MBB	Maintenance bypass switch in UPS
SIB	System isolation switch
Ext. MBB	External maintenance bypass switch

NOTE: In parallel systems with an external maintenance bypass switch (Ext. MBB), the maintenance bypass switches (MBB) in the UPSs must be padlocked in the open position.

Easy UPS 3S Single Mains System



Easy UPS 3S Dual Mains System



Recommended Cable Sizes for Easy UPS 3S

⚠️ 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 185 mm².

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

NOTE: Overcurrent protection must be provided by others.

Cable sizes in this manual are based on:

- Single core cables type U1000 R02V
- Specific to AC cables: Maximum length 70 m with a line voltage drop <3% installed on perforated cable trays, XLPE-type insulation, single layer trefoil formation, THDI between 15% and 33%, 35 °C at 208 V grouped in four touching cables
- Specific to DC cables: Maximum length 15 m with a line voltage drop <1%

NOTE: 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.

Easy UPS 3S – 3:1 UPS System

UPS rating		3+0 Parallel Capacity			2+0 Parallel Capacity 2+1 Parallel Redundant			1+0 Single 1+1 Parallel Redundant		
		Per phase (mm ²)	Neutral (mm ²)	PE (mm ²)	Per phase (mm ²)	Neutral (mm ²)	PE (mm ²)	Per phase (mm ²)	Neutral (mm ²)	PE (mm ²)
10 kVA	Load	50	50	25	35	35	16	16	16	16
	Input (single mains)/bypass (dual mains)	50	50	25	35	35	16	16	16	16
	UPS output	16	16	16	16	16	10	16	16	16
15 kVA	Load	2X50	2X50	50	50	50	25	25	25	16
	Input (single mains)/bypass (dual mains)	2X50	2X50	50	50	50	25	25	25	16
	UPS output	25	25	16	25	25	16	25	25	16
20 kVA	Load	2X70	2X70	70	2X35	2X35	35	35	35	16
	Input (single mains)/bypass (dual mains)	2X70	2X70	70	2X35	2X35	35	35	35	16
	UPS output	35	35	16	35	35	16	35	35	16
30 kVA	Load	3X70	3X70	2X70	2X70	2X70	70	50	50	25
	Input (single mains)/bypass (dual mains)	3X70	3X70	2X70	2X70	2X70	70	50	50	25
	UPS output	50	50	25	50	50	25	50	50	25

Easy UPS 3S – 3:3 UPS System

UPS rating		3+0 Parallel Capacity			2+0 Parallel Capacity 2+1 Parallel Redundant			1+0 Single 1+1 Parallel Redundant		
		Per phase (mm ²)	Neutral (mm ²)	PE (mm ²)	Per phase (mm ²)	Neutral (mm ²)	PE (mm ²)	Per phase (mm ²)	Neutral (mm ²)	PE (mm ²)
10 kVA	Load	16	2x16	16	10	2x10	10	6	2x6	6
	Input (single mains)/ bypass (dual mains)	16	2x16	16	10	2x10	10	6	2x6	6
	UPS output	6	2x6	6	6	2x6	6	6	2x6	6
15 kVA	Load	16	2X16	16	16	2x16	16	6	2x6	6
	Input (single mains)/ bypass (dual mains)	25	2X16	16	16	2x16	16	6	2x6	6
	UPS output	6	2x6	6	6	2x6	6	6	2x6	6
20 kVA	UPS output	35	2X25	16	25	2x25	16	10	2x10	10
	Input (single mains)/ bypass (dual mains)	35	2X25	16	25	2x25	16	10	2x10	10
	Load	10	2x10	10	10	2x10	10	10	2x10	10
30 kVA	Load	70	2X70	35	25	2X25	16	16	2x16	16
	Input (single mains)/ bypass (dual mains)	70	2X70	35	35	2X25	16	16	2x16	16
	UPS output	16	2x16	16	16	2x16	16	16	2x16	16
40 kVA	Load	95	3X95	50	50	2X50	25	25	2x25	16
	Input (single mains)/ bypass (dual mains)	95	3X95	50	50	2X50	25	25	2x25	16
	UPS output	25	2x25	16	25	2x25	16	25	2x25	16

Recommended Upstream Protection for Easy UPS 3S

Easy UPS 3S – 3:1 UPS System

UPS rating	3+0 parallel capacity				2+0 parallel capacity 2+1 parallel redundant			
	Breaker type	Io	Ir	Isd	Breaker type	Io	Ir	Isd
10 kVA	Compact NSX160F 160A TM160D (C16F3TM160)	Fixed	Fixed/100	/	C120H-C-100A/NSX100F 100A TMD (C10F3TM100)	Fixed	Fixed/100	/
15 kVA	Compact NSX250F TM250D (C25F3TM250)	5~1-0*In	225	/	Compact NSX160F 160A TM160D (C16F3TM160)	Fixed	Fixed/160	/
20 kVA	NSX400N mic2.3 (C40N32D400)	280	280	1.5-10	Compact NSX250F TM200D (C25F3TM200)	5~10-*In	200	/
30 kVA	NSX630N mic2.3 (C63N32D630)	450	441	1.5-10	NSX400N mic2.3 (C40N32D400)	280	280	1.5-10

Easy UPS 3S – 3:1 UPS System

UPS rating	1+0 single 1+1 parallel redundant			
	Breaker type	Io	Ir	Isd
10 kVA	iC65H-C-50A/C60H-C-50A	Fixed	Fixed	/
15 kVA	C120H-C-80A/NSX100F 80A TM100D (C10F3TM080)	Fixed	Fixed/80	/
20 kVA	C120H-C-100A/NSX100F 100A TM100D (C10F3TM100)	Fixed	Fixed/100	/
30 kVA	Compact NSX160F 160A TM160D (C16F3TM160)	Fixed	144	/

Easy UPS 3S – 3:3 UPS System

UPS rating	3+0 parallel capacity				2+0 parallel capacity 2+1 parallel redundant			
	Breaker type	Io	Ir	Isd	Breaker type	Io	Ir	Isd
10 kVA	iC65H-C-63A / C60H-C-63A /C120H-C-63A	Fixed	Fixed	Fixed	iC65H-C-40A/C60H-C-40A	Fixed	Fixed	Fixed
15 kVA	C120H-C-100A / NSX100F TM100D 100A (C10F3TM100)	Fixed/100	Fixed/100	Fixed	iC65H-C-63A/C60H-C-63A /C120H-C-63A	Fixed	Fixed	Fixed
20 kVA	Compact NSX160F TM125D (C16F3TM125)	Fixed	125	Fixed	C120H-C-80A/ NSX100F TM80D 80A (C10F3TM080)	Fixed	Fixed/80	Fixed
30 kVA	NSX250N mic2.2 (C25N32D250)	200	200	1.5-10	Compact NSX160F TM125D (C16F3TM125)	Fixed	125	Fixed
40 kVA	NSX250N mic2.2 (C25N32D250)	250	225	1.5-10	Compact NSX160F TM160D (C16F3TM160)	Fixed	160	Fixed

Easy UPS 3S – 3:3 UPS System

UPS rating	1+0 single 1+1 parallel redundant			
	Breaker type	Io	Ir	Isd
10 kVA	iC65H-C-20A/C60H-C-20A	Fixed	Fixed	Fixed
15 kVA	iC65H-C-32A/C60H-C-32A	Fixed	Fixed	Fixed
20 kVA	iC65H-C-40A/C60H-C-40A	Fixed	Fixed	Fixed

Easy UPS 3S – 3:3 UPS System (Continued)

UPS rating	1+0 single 1+1 parallel redundant			
	Breaker type	Io	Ir	Isd
30 kVA	iC65H-C-63A/C60H-C-63A/C120H-C-63A	Fixed	Fixed	Fixed
40 kVA	C120H-C-80A/NSX100F TM80D (C10F3TM080)	Fixed	Fixed/80	Fixed

Specifications for Easy UPS 3M

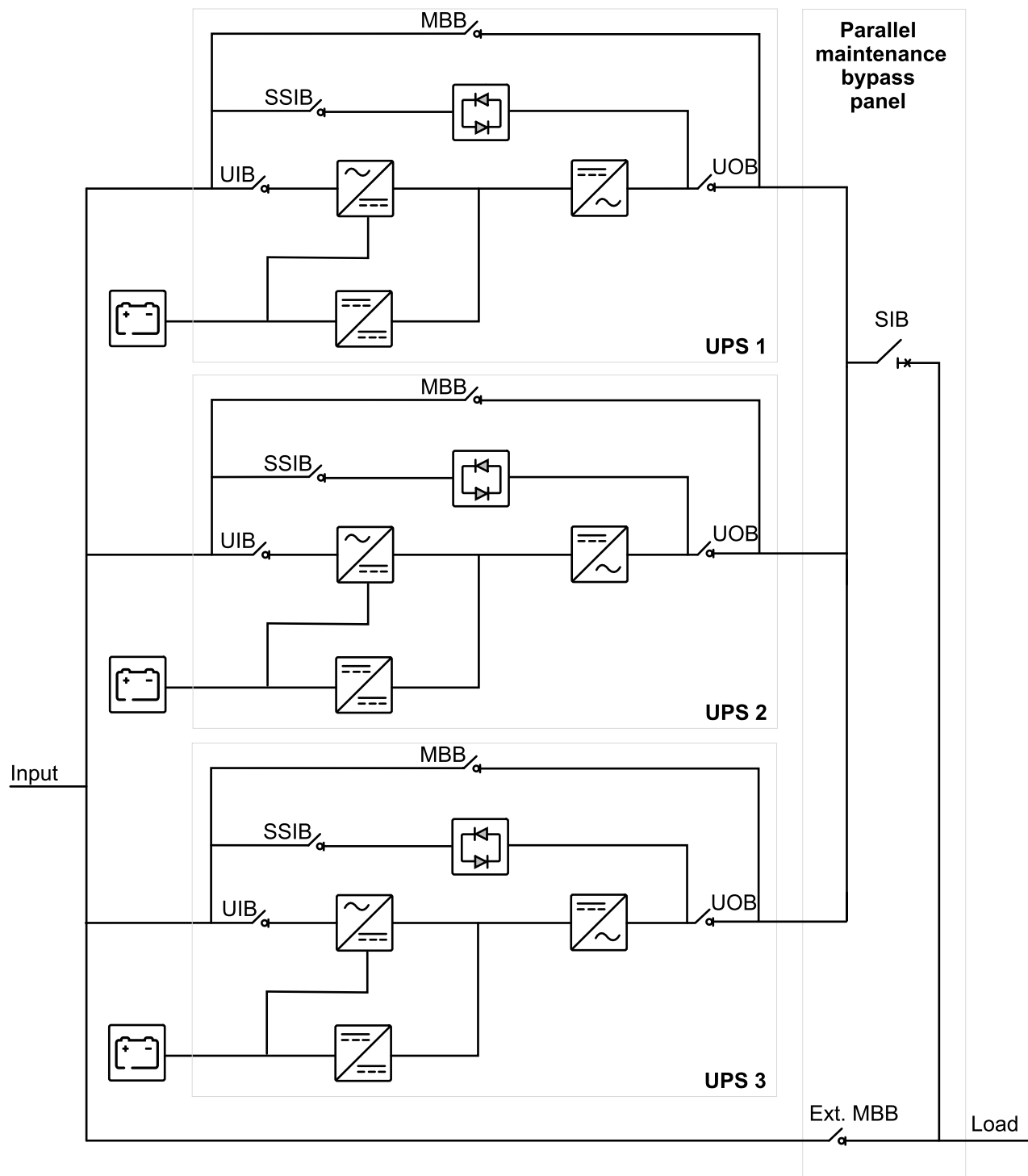
In Easy UPS 3M systems E3MBP60K400H can be used as a single maintenance bypass panel or as a parallel maintenance bypass panel.

Overview of Easy UPS 3M System with Parallel Maintenance Bypass Panel

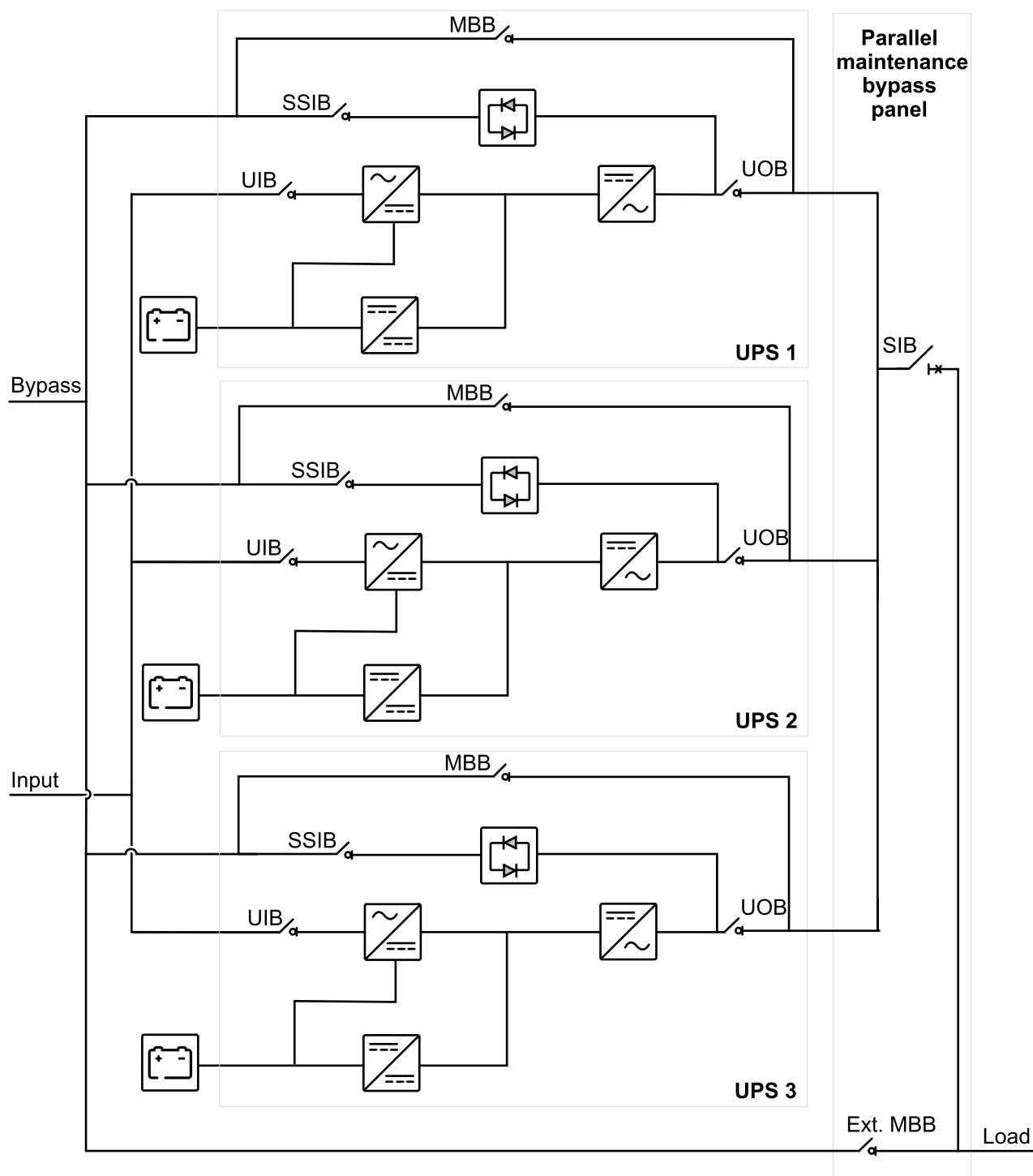
UIB	Unit input switch
SSIB	Static switch input switch
UOB	Unit output switch
MBB	Maintenance bypass switch in UPS
SIB	System isolation switch
Ext. MBB	External maintenance bypass switch

NOTE: In parallel systems with an external maintenance bypass switch (Ext. MBB), the maintenance bypass switches (MBB) in the UPSs must be padlocked in the open position.

Easy UPS 3M Single Mains System



Easy UPS 3M Dual Mains System



Recommended Cable Sizes for 400 V for 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 cable size is 240 mm².

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

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 conductors (Tin)
- 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 used in accordance with the correction factors of the IEC.

NOTE: Refer to the UPS installation manual for UPS input cable sizes.

UPS rating		3+0 Parallel Capacity			2+0 Parallel Capacity 2+1 Parallel Redundant			1+0 Single 1+1 Parallel Redundant		
		Per Phase (mm ²)	Neutral (mm ²)	PE (mm ²)	Per Phase (mm ²)	Neutral (mm ²)	PE (mm ²)	Per Phase (mm ²)	Neutral (mm ²)	PE (mm ²)
60 kVA	UPS output	25	2x25	16	25	2x25	16	25	2x25	16
	Input (single mains)/bypass (dual mains)	2x70	4x70	70	95	2x95	50	25	2x25	16
	Load	2x70	4x70	70	95	2x95	50	25	2x25	16
80 kVA	UPS output	50	2x50	25	50	2x50	25	50	2x50	25
	Input (single mains)/bypass (dual mains)	2x95	4x95	95	120	2x120	70	50	2x50	25
	Load	2x95	4x95	95	120	2x120	70	50	2x50	25
100 kVA	UPS output	70	2x70	35	70	2x70	35	70	2x70	35
	Input (single mains)/bypass (dual mains)	4x50	4x95	120	2x70	4x70	70	70	2x70	35
	Load	4x50	4x95	120	2x70	2x150 / 4x70	70	70	2x70	35
120 kVA	UPS output	95	2x70	50	95	2x70	50	95	2x70	50
	Input (single mains)/bypass (dual mains)	4x70	4x95	150	2x95	4x70	95	95	120 / 2x70	50
	Load	4x70	4x95	150	2x95	2x150 / 4x70	95	95	120 / 2x70	50
160 kVA	UPS output	–	–	–	120	120	70	120	120	70
	Input (single mains)/bypass (dual mains)	–	–	–	4x50	4x70	120	120	120	70
	Load	–	–	–	2x120 / 4x50	2x150 / 4x70	120	120	120	70
200 kVA	UPS output	–	–	–	2x70	2x70	70	2x70	2x70	70
	Input (single mains)/bypass (dual mains)	–	–	–	4x70	4x70	185	150 / 2x70	150 / 2x70	70
	Load	–	–	–	2x185 / 4x70	2x185 / 4x70	185	150 / 2x70	150 / 2x70	70

Recommended Cable Sizes for 208 V for 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 cable size is 240 mm².

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

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 conductors (Tin)
- 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 used in accordance with the correction factors of the IEC.

NOTE: Refer to the UPS installation manual for UPS input cable sizes.

UPS rating		3+0 Parallel Capacity			2+0 Parallel Capacity 2+1 Parallel Redundant			1+0 Single 1+1 Parallel Redundant		
		Per Phase (mm ²)	Neutral (mm ²)	PE (mm ²)	Per Phase (mm ²)	Neutral (mm ²)	PE (mm ²)	Per Phase (mm ²)	Neutral (mm ²)	PE (mm ²)
50 kVA	UPS output	70	2x70	35	70	2x70	35	70	2x70	35
	Input (single mains)/bypass (dual mains)	4x50	4x95	120	2x70	4x70	70	70	2x70	35
	Load	4x50	4x95	120	2x70	2x150 / 4x70	70	70	2x70	35
60 kVA	UPS output	95	2x70	50	95	2x70	50	95	2x70	50
	Input (single mains)/bypass (dual mains)	4x70	4x95	150	2x95	4x70	95	95	120 / 2x70	50
	Load	4x70	4x95	150	2x95	2x150 / 4x70	95	95	120 / 2x70	50
80 kVA	UPS output	–	–	–	120	120	70	120	120	70
	Input (single mains)/bypass (dual mains)	–	–	–	4x50	4x70	120	120	120	70
	Load	–	–	–	2x120 / 4x50	2x150 / 4x70	120	120	120	70
100 kVA	UPS output	–	–	–	2x70	2x70	70	2x70	2x70	70
	Input (single mains)/bypass (dual mains)	–	–	–	4x70	4x70	185	150 / 2x70	150 / 2x70	70
	Load	–	–	–	2x185 / 4x70	2x185 / 4x70	185	150 / 2x70	150 / 2x70	70

Recommended Upstream Protection for 400 V for Easy UPS 3M

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.

	3+0 Parallel Capacity				2+0 Parallel Capacity 2+1 Parallel Redundant				1+0 Single 1+1 Parallel Redundant			
UPS rating	Breaker type	Io	Ir	I _{sd}	Breaker type	Io	Ir	I _{sd}	Breaker type	Io	Ir	I _{sd}
60 kVA	NSX400N mic2.3 (C40N32-D400)	320	320	1.5-10	NSX250N mic2.2 (C25N32-D250)	200	200	1.5-10	NSX100N TM100D (C10N3T-M100)	–	100	–
80 kVA	NSX400N mic2.3 (C40N32-D400)	400	400	1.5-10	NSX400N mic2.3 (C40N32-D400)	280	280	1.5-10	NSX160N TM160D (C16N3T-M160)	–	144	–
100 kVA	NSX630N mic2.3 (C63N32-D630)	500	500	1.5-10	NSX400N mic2.3 (C40N32-D400)	320	320	1.5-10	NSX160N TM160D (C16N3T-M160)	–	160	–
120 kVA	NSX630N mic2.3 (C63N32-D630)	570	570	1.5-10	NSX400N mic2.3 (C40N32-D400)	400	400	1.5-10	NSX250N mic2.2 (C25N32-D250)	250	250	1.5-10
160 kVA	–	–	–	–	NSX630N mic2.3 (C63N32-D630)	500	500	1.5-10	NSX400N mic2.3 (C40N32-D400)	320	320	1.5-10
200 kVA	–	–	–	–	NSX630N mic2.3 (C63N32-D630)	630	630	1.5-10	NSX400N mic2.3 (C40N32-D400)	400	400	1.5-10

Recommended Upstream Protection for 208 V for Easy UPS 3M

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.

	3+0 Parallel Capacity				2+0 Parallel Capacity 2+1 Parallel Redundant				1+0 Single 1+1 Parallel Redundant			
UPS rating	Breaker type	I _o	I _r	I _{sd}	Breaker type	I _o	I _r	I _{sd}	Breaker type	I _o	I _r	I _{sd}
50 kVA	NSX630N mic2.3 (C63N32-D630)	500	500	1.5-10	NSX400N mic2.3 (C40N32-D400)	320	320	1.5-10	NSX160N TM160D (C16N3T-M160)	–	160	–
60 kVA	NSX630N mic2.3 (C63N32-D630)	570	570	1.5-10	NSX400N mic2.3 (C40N32-D400)	400	400	1.5-10	NSX250N mic2.2 (C25N32-D250)	250	250	1.5-10
80 kVA	–	–	–	–	NSX630N mic2.3 (C63N32-D630)	500	500	1.5-10	NSX400N mic2.3 (C40N32-D400)	320	320	1.5-10
100 kVA	–	–	–	–	NSX630N mic2.3 (C63N32-D630)	630	630	1.5-10	NSX400N mic2.3 (C40N32-D400)	400	400	1.5-10

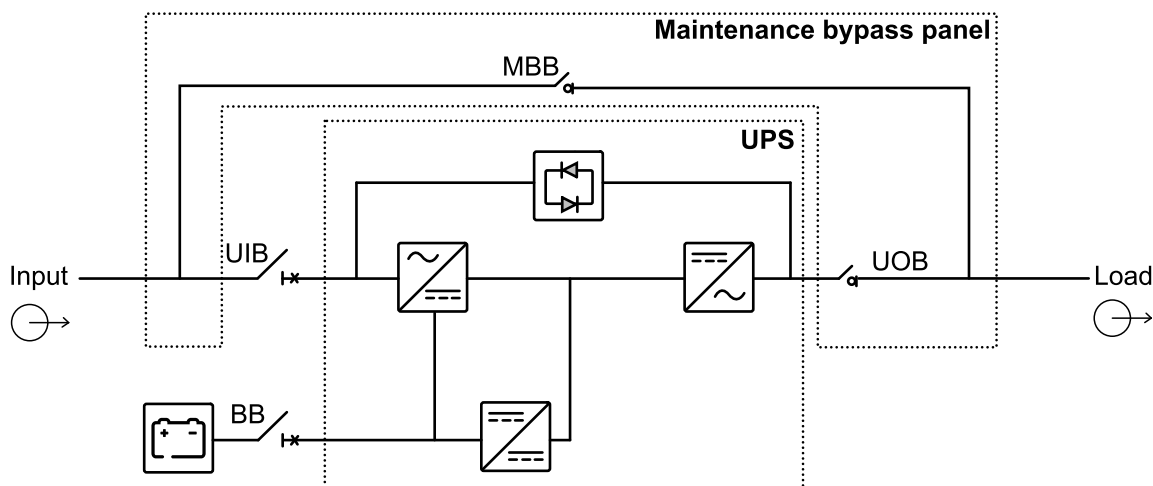
Specifications for Easy UPS 3L

In Easy UPS 3L systems E3MBP60K400H can only be used as a single maintenance bypass panel.

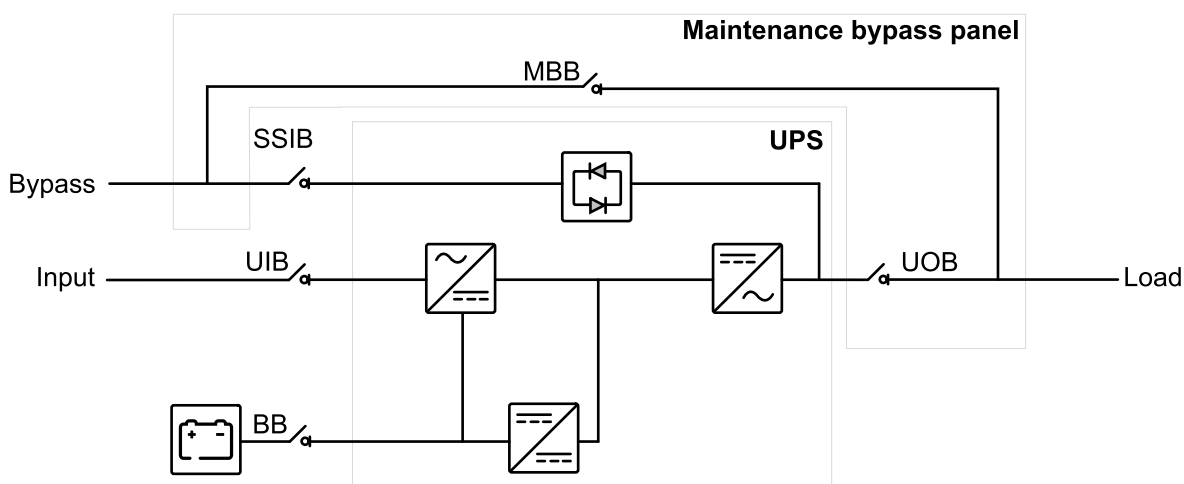
Overview of Easy UPS 3L System with Maintenance Bypass Panel

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

Easy UPS 3L Single Mains System



Easy UPS 3L Dual Mains System



Recommended Cable Sizes for Easy UPS 3L

⚠ 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 240 mm².

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

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 conductors (Tin)
- 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 used in accordance with the correction factors of the IEC.

NOTE: Refer to the UPS installation manual for UPS input cable sizes.

UPS rating		Per Phase (mm ²)	Neutral (mm ²)	PE (mm ²)
250 kVA	UPS output	2x120	2x120	120
	Input (single mains)/ bypass (dual mains)	4x50	4x50	2x50
	Load	4x50	4x50	2x50
300 kVA	UPS output	2x150	2x150	150
	Input (single mains)/ bypass (dual mains)	4x70	4x70	2x70
	Load	4x70	4x70	2x70
400 kVA	UPS output	2x240	2x240	240
	Input (single mains)/ bypass (dual mains)	4x95	4x95	2x95
	Load	4x95	4x95	2x95

Recommended Upstream Protection for Easy UPS 3L

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.

UPS rating	Breaker type	I _o	I _n	I _r	I _{sd}
250 kVA	NSX630N mic2.3 (C63N32D630)	500	–	0.95	1.5-10
300 kVA	NS630bN mic2.0 (NS33460)	–	630	0.9	1.5-10
400 kVA	NS800N mic2.0 (NS33466)	–	800	0.95	1.5-10

Specifications for Easy UPS 3-Phase Modular

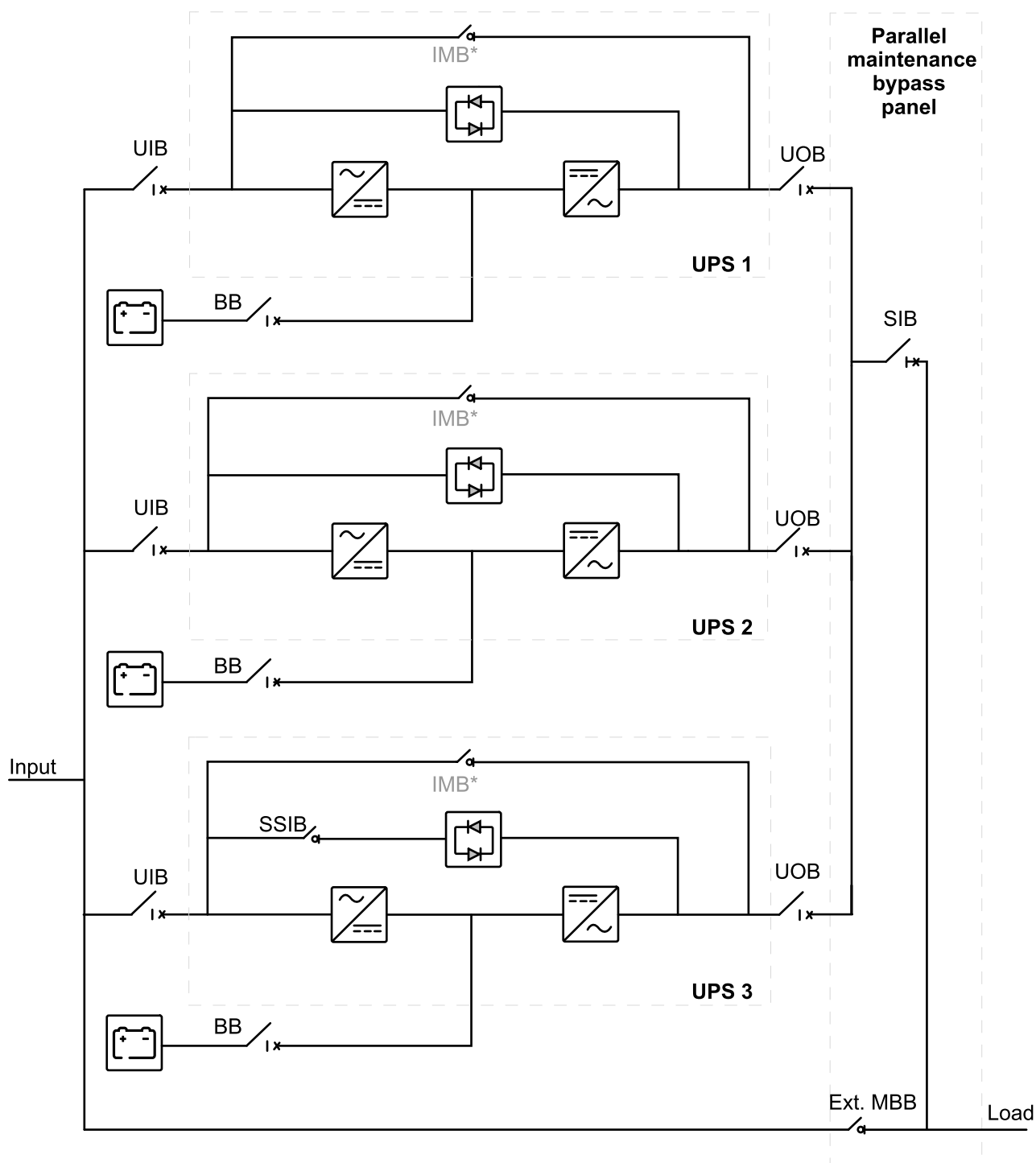
In Easy UPS 3-Phase Modular systems E3MBP60K400H can be used as a single maintenance bypass panel or as a parallel maintenance bypass panel.

Overview of Easy UPS 3-Phase Modular System with Maintenance Bypass Panel

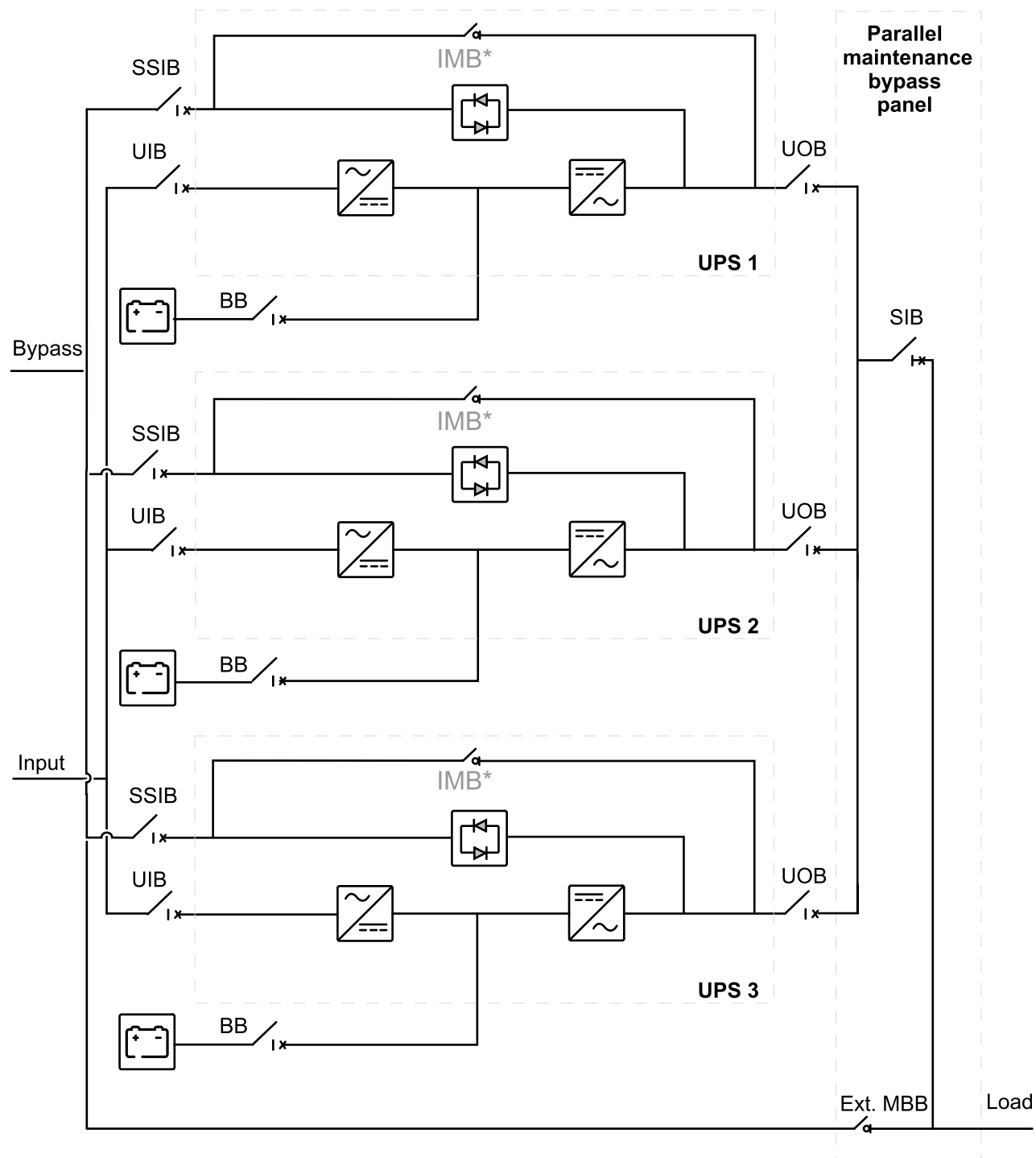
UIB	Unit input breaker
SSIB	Static switch input breaker
UOB	Unit output switch
IMB	Internal maintenance switch
MBB	Maintenance bypass switch
BB	Battery breaker

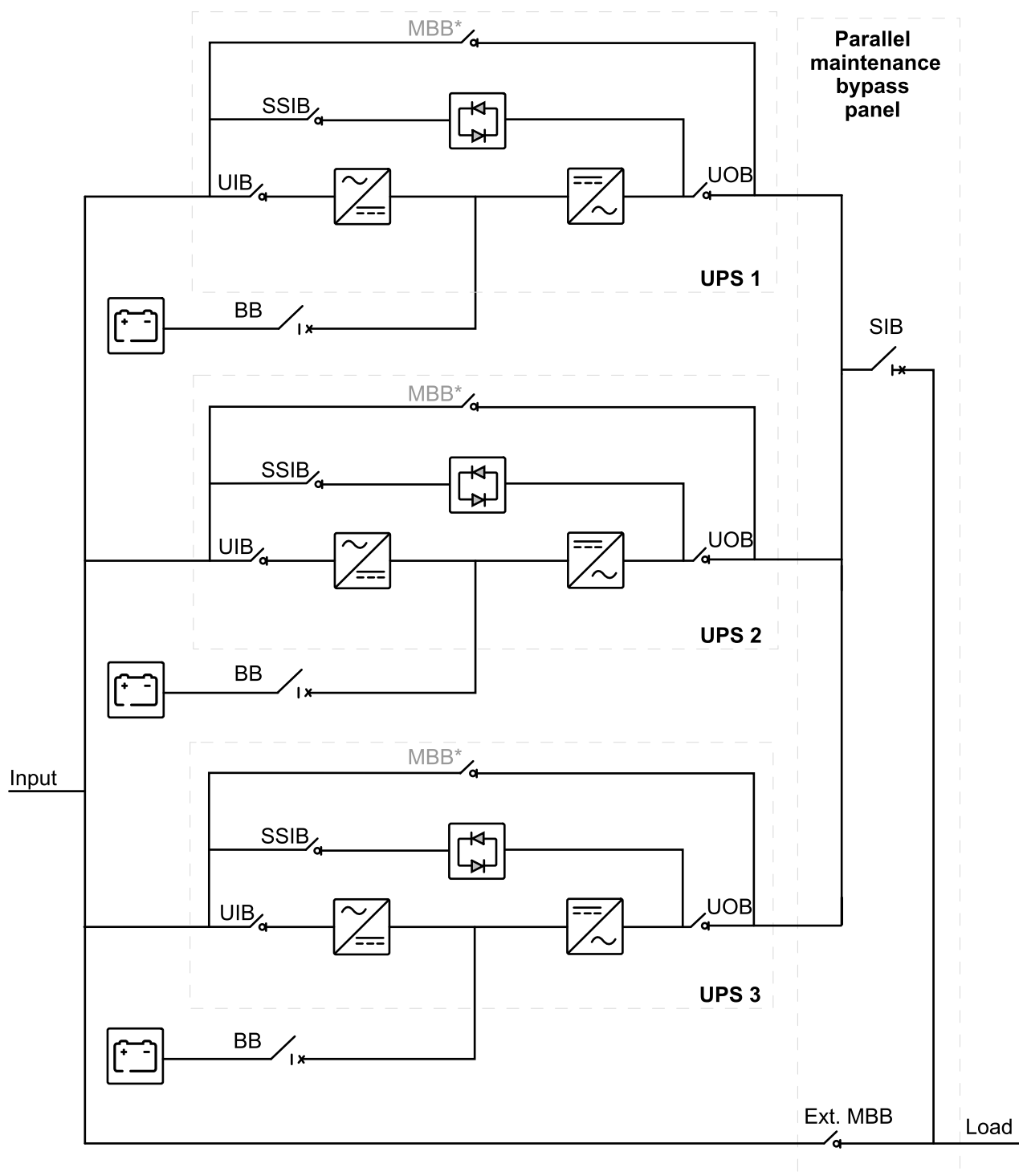
Easy UPS 3-Phase Modular Parallel System

Parallel System – Single Mains (One Internal Switch)

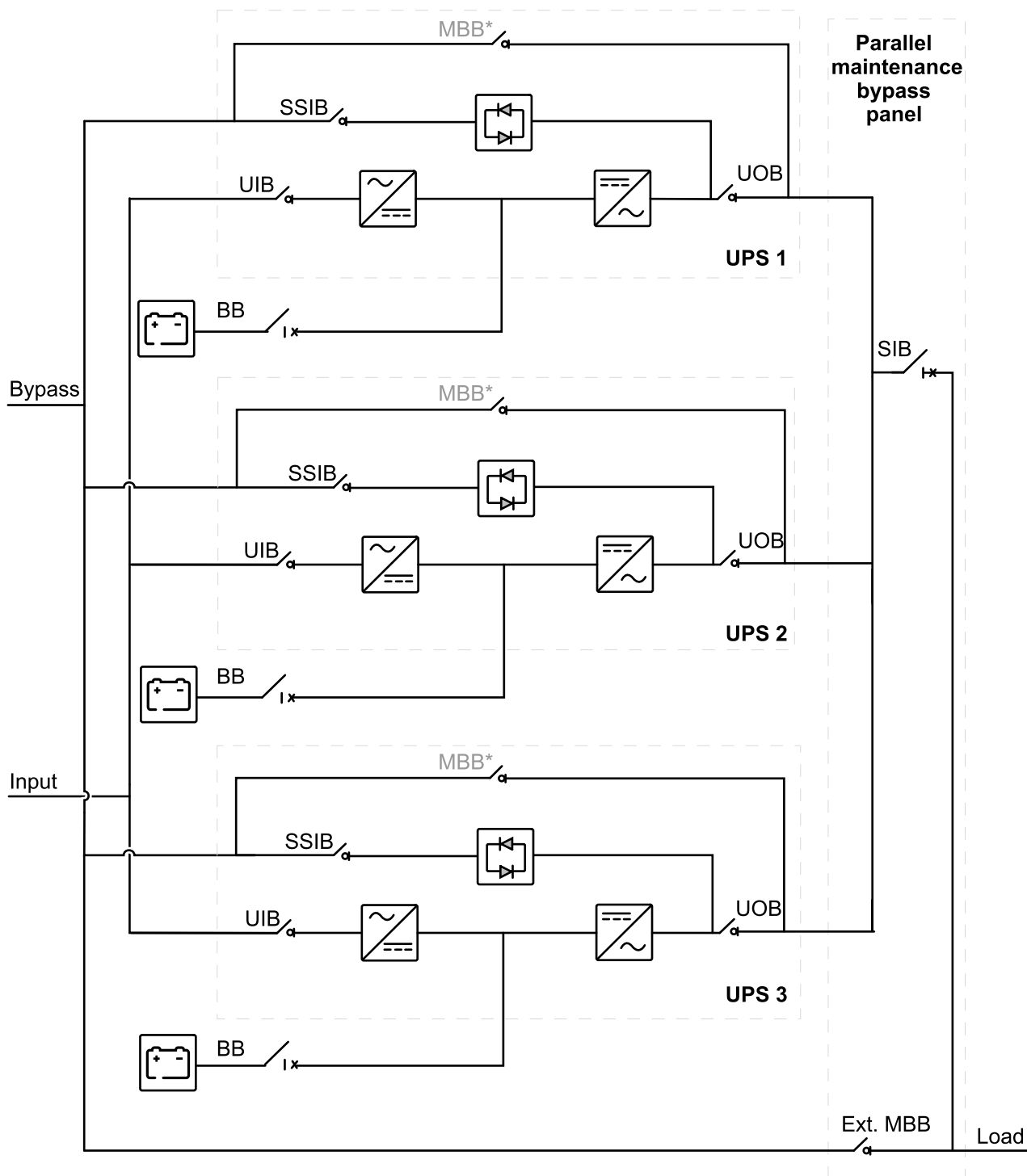


Parallel System – Dual Mains (One Internal Switch)



Parallel System – Single Mains (Four Internal Switches)

Parallel System – Dual Mains (Four Internal Switches)



Recommended Cable Sizes for Easy UPS 3-Phase Modular

⚠️ 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 185 mm².

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

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 conductors (Tin)
- 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 used in accordance with the correction factors of the IEC.

NOTE: Refer to the UPS installation manual for UPS input cable sizes.

UPS rating		3+0 Parallel Capacity			2+0 Parallel Capacity 2+1 Parallel Redundant			1+0 Single 1+1 Parallel Redundant		
		Per Phase (mm ²)	Neutral (mm ²)	PE (mm ²)	Per Phase (mm ²)	Neutral (mm ²)	PE (mm ²)	Per Phase (mm ²)	Neutral (mm ²)	PE (mm ²)
50 kW	UPS output	16	2x16	16	16	2x16	16	16	2x16	16
	Input (single mains)/bypass (dual mains)	2x50	2x95	50	70	2x70	35	16	2x16	16
	Load	2x50	2x95	50	70	2x70	35	16	2x16	16
100 kW	UPS output	70	2x70	35	70	2x70	35	70	2x70	35
	Input (single mains)/bypass (dual mains)	4x50	4x95	120	2x70	4x70	70	70	2x70	35
	Load	4x50	4x95	120	2x70	4x70	70	70	2x70	35
150 kW	UPS output	–	–	–	120	120	70	120	120	70
	Input (single mains)/bypass (dual mains)	–	–	–	4x50	4x95	120	120	120	70
	Load	–	–	–	4x50	4x95	120	120	120	70
200 kW	UPS output	–	–	–	2x70	2x70	70	2x70	2x70	70
	Input (single mains)/bypass (dual mains)	–	–	–	4x70	4x70	185	2x70	2x70	70
	Load	–	–	–	4x70	4x70	185	2x70	2x70	70
250 kW	UPS output	–	–	–	–	–	–	2x95	2x95	95
	Input (single mains)/bypass (dual mains)	–	–	–	–	–	–	2x95	2x95	95
	Load	–	–	–	–	–	–	2x95	2x95	95

Recommended Upstream Protection for Easy UPS 3-Phase Modular

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.

	3+0 Parallel Capacity				2+0 Parallel Capacity 2+1 Parallel Redundant				1+0 Single 1+1 Parallel Redundant			
UPS rating	Breaker type	Io	Ir	I _{sd}	Breaker type	Io	Ir	I _{sd}	Breaker type	Io	Ir	I _{sd}
50 kW	NSX250H TM250D (C25H3T-M250)	—	250	5-10	NSX160H TM160D (C16H3T-M160)	—	160	1250 (fixed)	NSX100H TM80D (C10H3T-M080)	—	80	640 (fixed)
100 kW	NSX630H mic2.3 (C63H32-D630)	500	1	1.5-10	NSX400H mic2.3 (C40H32-D400)	320	1	1.5-10	NSX160H TM160D (C16H6T-M160)	160	160	1250 (fixed)
150 kW	—	—	—	—	NSX630H mic2.3 (C63H32-D630)	500	1	1.5-10	NSX250H TM250 (C25H3T-M250)	250	250	5-10
200 kW	—	—	—	—	NSX630H mic2.3 (C63H32-D630)	630	1	1.5-10	NSX400H MiC.2.3 (C40H32-D400)	320	1	1.5-10
250 kW	—	—	—	—	—	—	—	—	NSX400H MiC.2.3 (C40H32-D400)	400	1	1.5-10

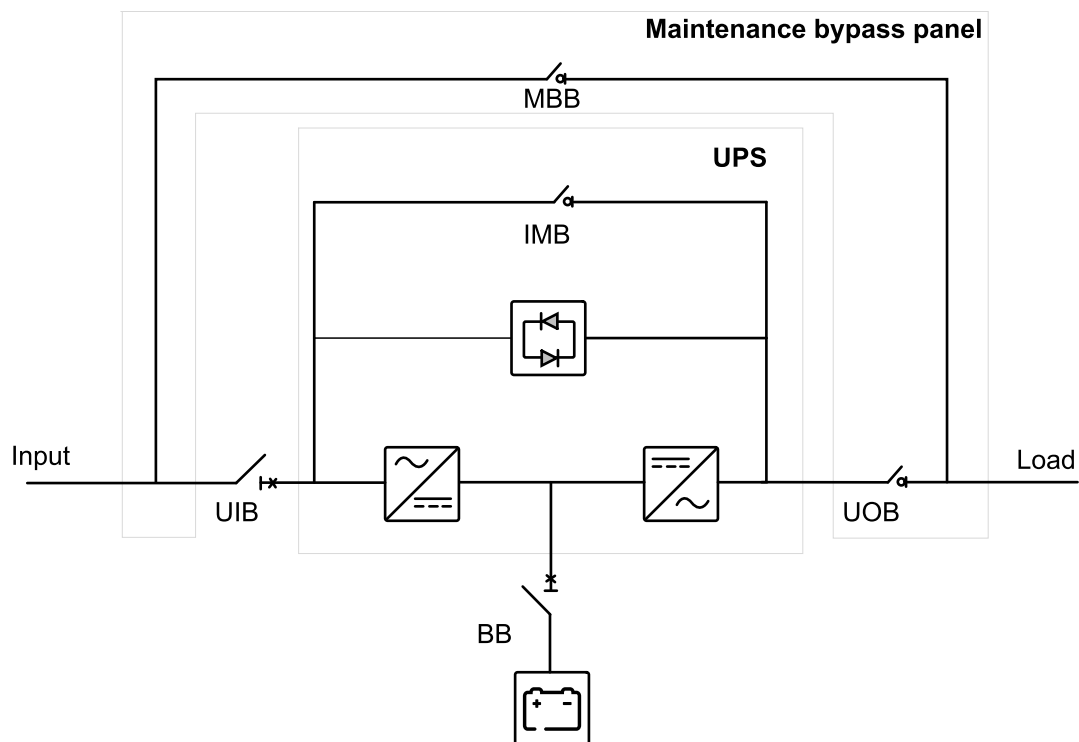
Specifications for Easy UPS 3M Advanced

In Easy UPS 3M Advanced systems E3MBP60K400H can be used as a single maintenance bypass panel or as a parallel maintenance bypass panel.

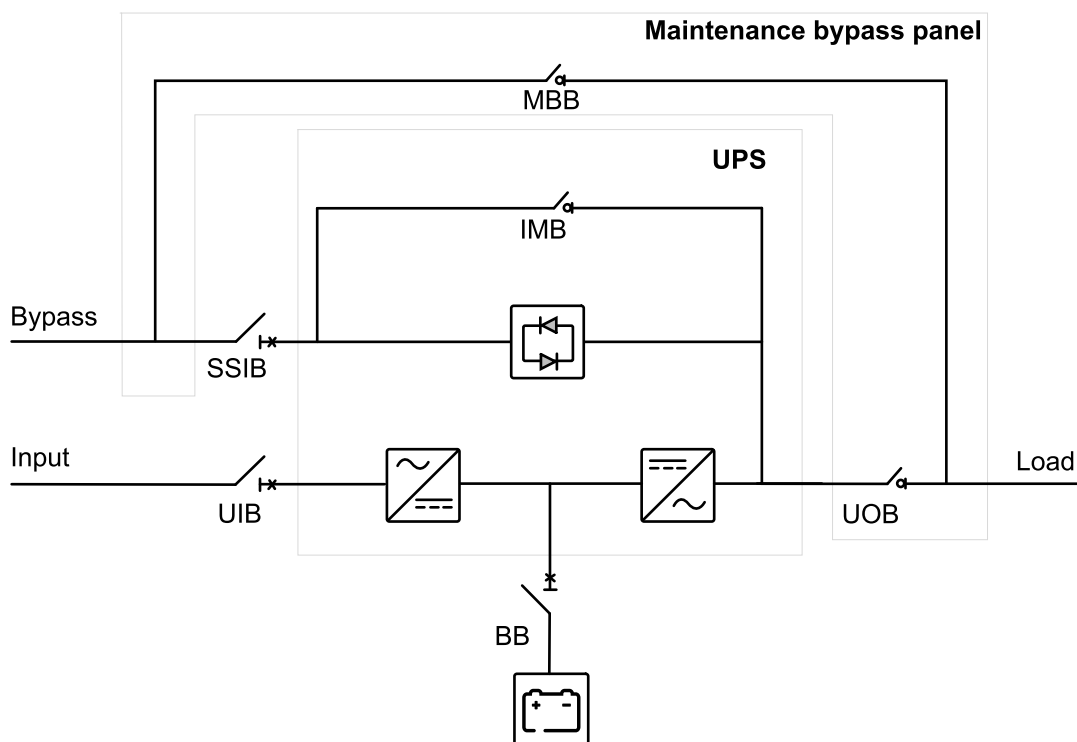
Overview of Easy UPS 3M Advanced System with Maintenance Bypass Panel

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

Easy UPS 3M Advanced Single Mains System



Easy UPS 3M Advanced Dual Mains System



Recommended Cable Sizes for Easy UPS 3M Advanced

⚠️ 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 185 mm².

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

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 conductors (Tin)
- 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 used in accordance with the correction factors of the IEC.

NOTE: Refer to the UPS installation manual for UPS input cable sizes.

UPS rating		3+0 Parallel Capacity			2+0 Parallel Capacity 2+1 Parallel Redundant			1+0 Single 1+1 Parallel Redundant		
		Per Phase (mm ²)	Neutral (mm ²)	PE (mm ²)	Per Phase (mm ²)	Neutral (mm ²)	PE (mm ²)	Per Phase (mm ²)	Neutral (mm ²)	PE (mm ²)
100 kW	UPS output	70	2x70	35	70	2x70	35	70	2x70	35
	Input (single mains)/bypass (dual mains)	4x50	4x95	120	2x70	4x70	70	70	2x70	35
	Load	4x50	4x95	120	2x70	4x70	70	70	2x70	35
150 kW	UPS output	–	–	–	120	120	70	120	120	70
	Input (single mains)/bypass (dual mains)	–	–	–	4x50	4x95	120	120	120	70
	Load	–	–	–	4x50	4x95	120	120	120	70
200 kW	UPS output	–	–	–	2x70	2x70	70	2x70	2x70	70
	Input (single mains)/bypass (dual mains)	–	–	–	4x70	4x70	185	2x70	2x70	70
	Load	–	–	–	4x70	4x70	185	2x70	2x70	70
250 kW	UPS output	–	–	–	–	–	–	2x95	2x95	95
	Input (single mains)/bypass (dual mains)	–	–	–	–	–	–	2x95	2x95	95
	Load	–	–	–	–	–	–	2x95	2x95	95

Recommended Upstream Protection for Easy UPS 3M Advanced

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.

	3+0 Parallel Capacity				2+0 Parallel Capacity 2+1 Parallel Redundant				1+0 Single 1+1 Parallel Redundant			
UPS rating	Breaker type	Io	Ir	I _{sd}	Breaker type	Io	Ir	I _{sd}	Breaker type	Io	Ir	I _{sd}
100 kW	NSX630H mic2.3 (C63H32-D630)	500	1	1.5-10	NSX400H mic2.3 (C40H32-D400)	320	1	1.5-10	NSX160H TM160D (C16H6T-M160)	160	160	1250 (fixed)
150 kW	—	—	—	—	NSX630H mic2.3 (C63H32-D630)	500	1	1.5-10	NSX250H TM250 (C25H3T-M250)	250	250	5-10
200 kW	—	—	—	—	NSX630H mic2.3 (C63H32-D630)	630	1	1.5-10	NSX400H MiC.2.3 (C40H32-D400)	320	1	1.5-10
250 kW	—	—	—	—	—	—	—	—	NSX400H MiC.2.3 (C40H32-D400)	400	1	1.5-10

Recommended Bolt and Lug Sizes

Cable size	Terminal bolt diameter	Cable lug type
16 mm ²	M10x35mm	KST TLK16-10
25 mm ²	M10x35mm	KST TLK25-10
35 mm ²	M10x35mm	KST TLK35-10
50 mm ²	M10x35mm	KST TLK50-10
70 mm ²	M10x35mm	KST TLK70-10
95 mm ²	M10x35mm	KST TLK95-10
120 mm ²	M10x35mm	KST TLK120-10
150 mm ²	M10x35mm	KST TLK150-10
185 mm ²	M10x35mm	KST TLK185-10
240 mm ²	M10x35mm	KST TLK240-10

Torque Specifications

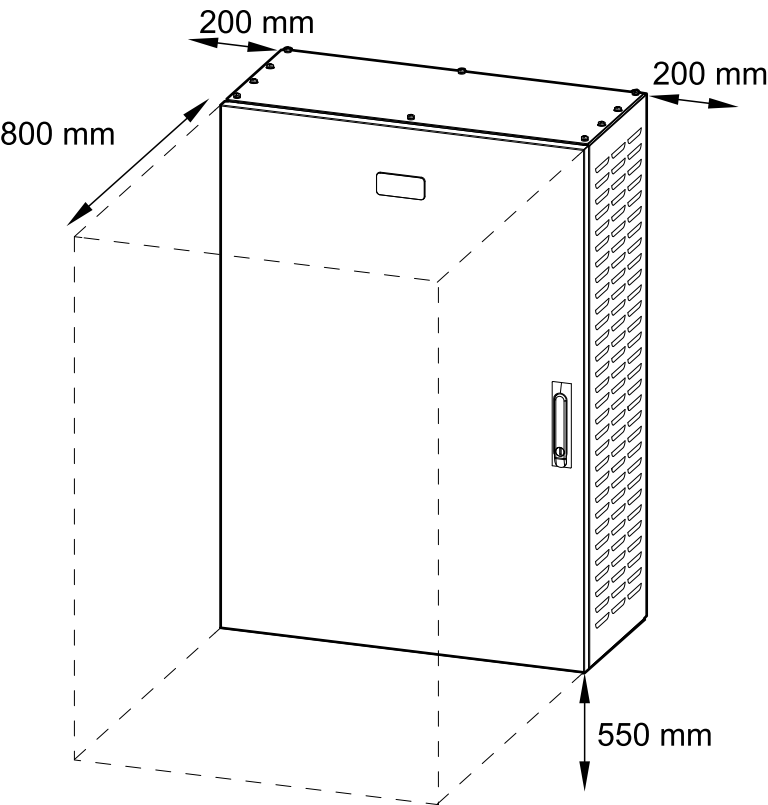
Bolt Size	Torque
M10	30 Nm

Maintenance Bypass Panel Weights and Dimensions

Commercial reference	Weight kg	Height mm	Width mm	Depth mm
E3MBP60K400H	75	1050	750	350

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	5 – 95% non-condensing	10 – 80% non-condensing
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 IEC 62040-1: 2008-6, 1st edition, Uninterruptible Power Systems (UPS) – Part 1: General and safety requirements for UPS IEC 62040-1:2013-01, 1st edition amendment 1
Pollution degree	2
Overvoltage category	III
Earthing system	TN-S, TN-C, TT, or IT

Installation Procedure

1. Mount to the Wall, page 42.
2. Prepare for Cables, page 44.
3. Connect the power cables. Perform one of the following:
 - Connect the Power Cables for 3:1 Systems, page 45
 - Connect the Power Cables for 3:3 Systems, page 46.
4. Connect the signal cables. Follow one of the procedures:
 - Connect the Signal Cables for Easy UPS 3S, page 47
 - Connect the Signal Cables for Easy UPS 3M, page 50, or
 - Connect the Signal Cables for Easy UPS 3L, page 52, or
 - Connect the Signal Cables for Easy UPS 3-Phase Modular, page 54, or
 - Connect the Signal Cables for Easy UPS 3M Advanced, page 56.
5. Final Installation, page 58.

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 59.

Mount to the Wall

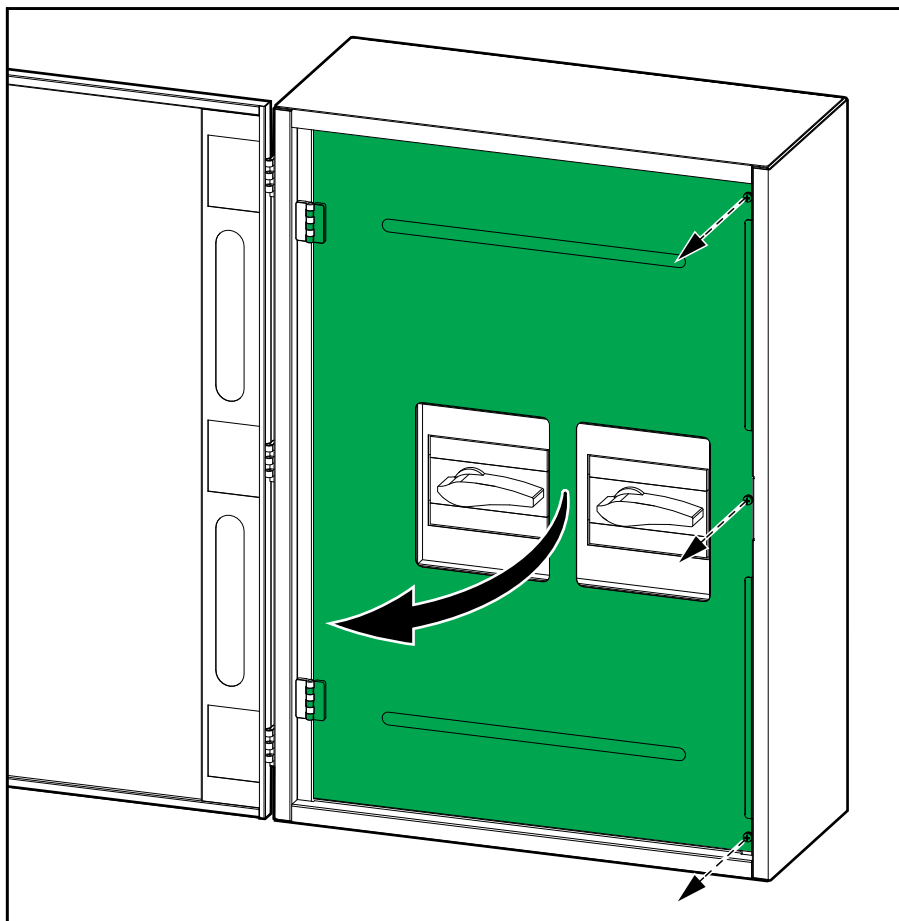
⚠ CAUTION

RISK OF INJURY OR EQUIPMENT DAMAGE

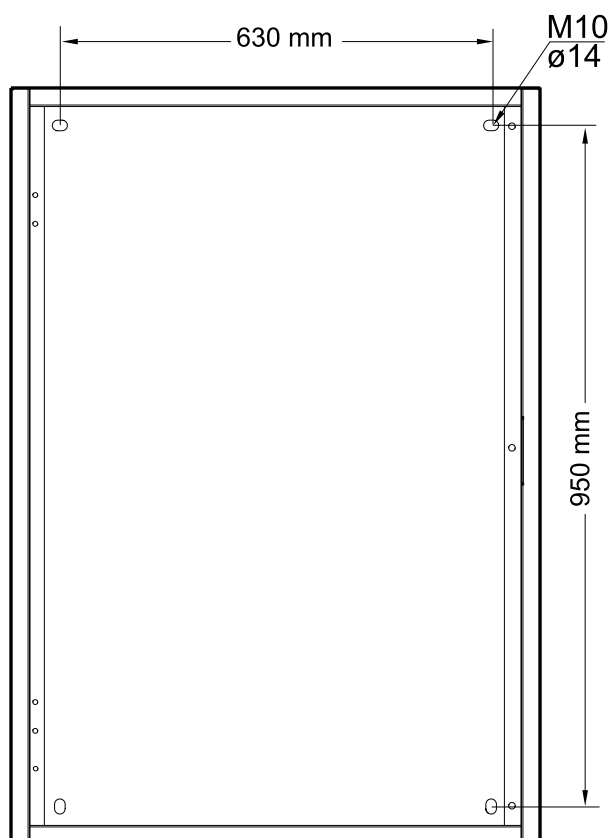
- Mount the maintenance bypass panel to a wall or a rack that is structurally sound and able to support the weight of the unit.
- Use appropriate hardware for the wall/rack type.

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

1. Remove the screws and open the inner door.



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



3. Mount the maintenance bypass panel to the wall.

Prepare for Cables

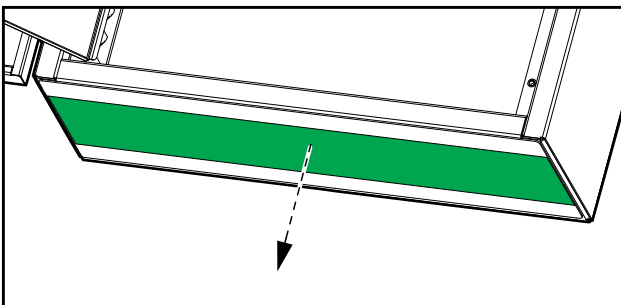
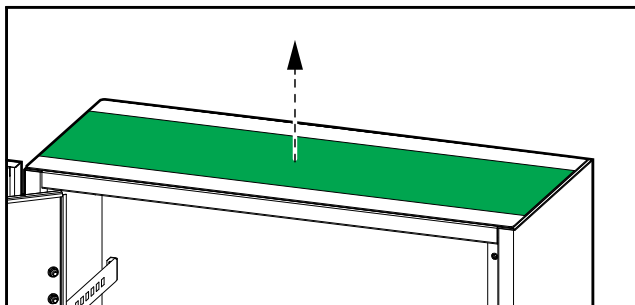
⚠ DANGER

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 maintenance bypass panel.

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

1. Remove the top and bottom gland plates.



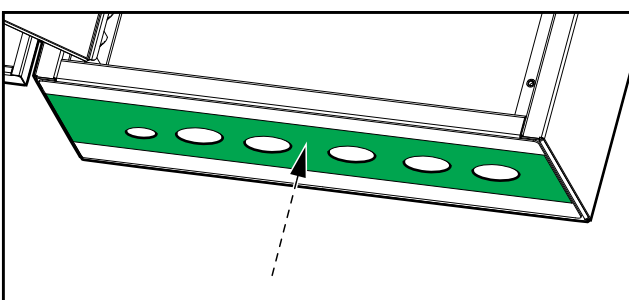
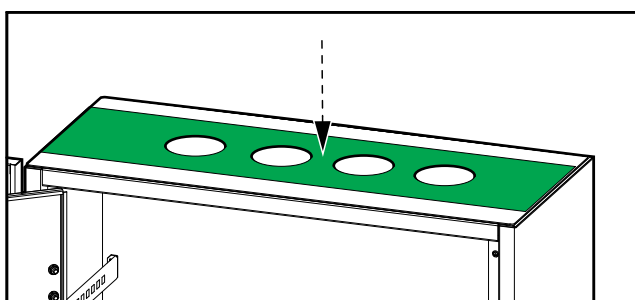
2. Drill or punch holes for cables or grommets in the gland plates.
3. Install grommets (if applicable) and reinstall the gland plates.

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

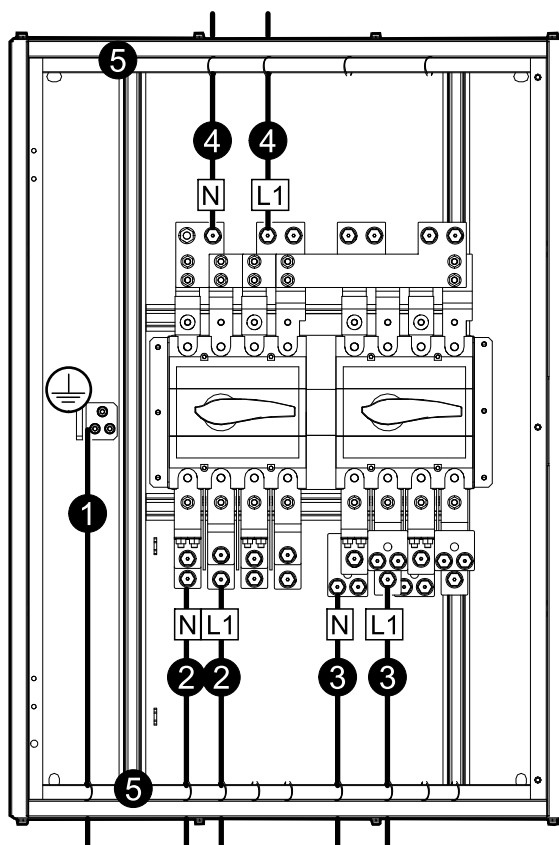
Ensure that there are no sharp edges that can damage the cables.

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



Connect the Power Cables for 3:1 Systems

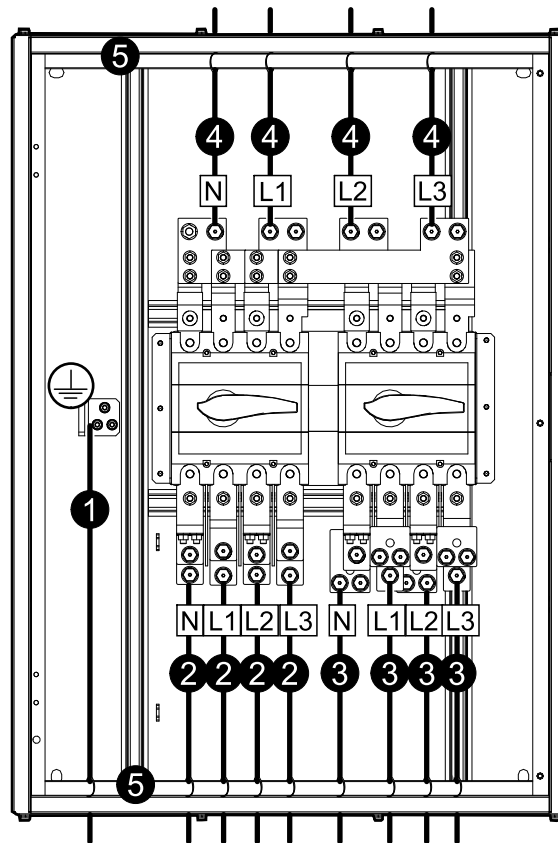
1. Connect the PE cable.



2. Perform one of the following:
 - **For single mains:** Connect the input cables.
 - **For dual mains:** Connect the bypass cables.
3. Connect the UPS output cables.
4. Connect the load cables.
5. Fasten the cables with cable ties to the cable reliefs.

Connect the Power Cables for 3:3 Systems

1. Connect the PE cable.



2. Perform one of the following:
 - **For single mains:** Connect the input cables.
 - **For dual mains:** Connect the bypass cables.
3. Connect the UPS output cables.
4. Connect the load cables.
5. Fasten the cables with cable ties to the cable reliefs.

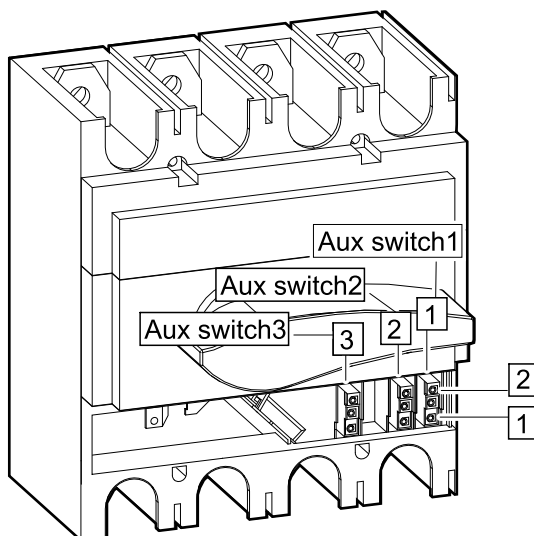
Connect the Signal Cables for Easy UPS 3S

NOTE: Route the signal cables separately from the power cables.

Recommended signal cable size is 0.8 mm².

1. Remove the plastic cover of the maintenance bypass switch MBB to get access to the AUX switches.

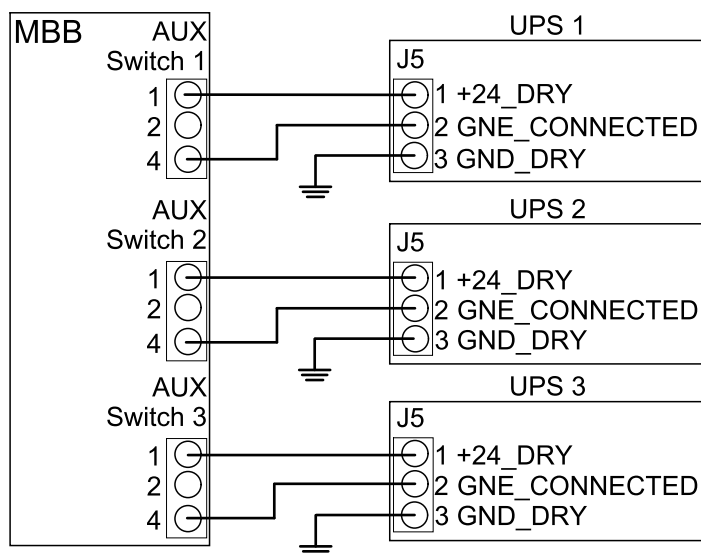
AUX Switches in MBB



2. Connect the signal cables (not supplied) from the three AUX switches in the MBB to the UPSs using one of the following methods.

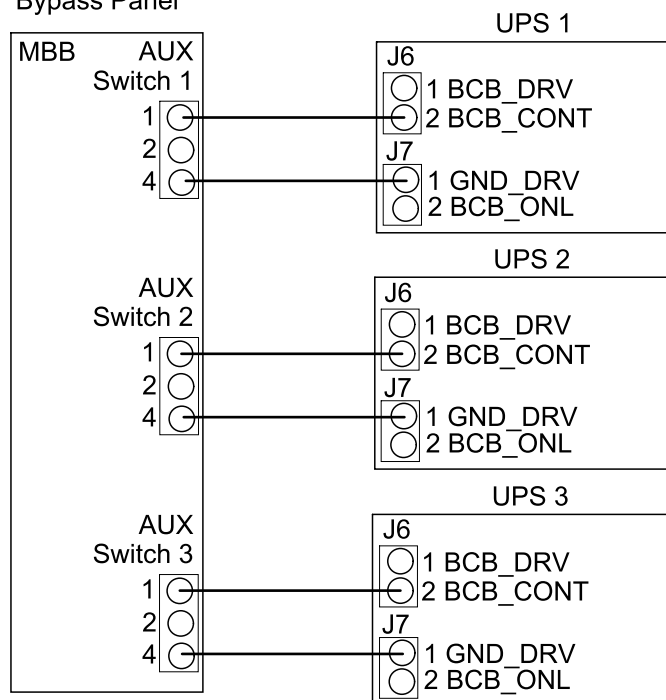
Connection method 1

Maintenance
Bypass Panel

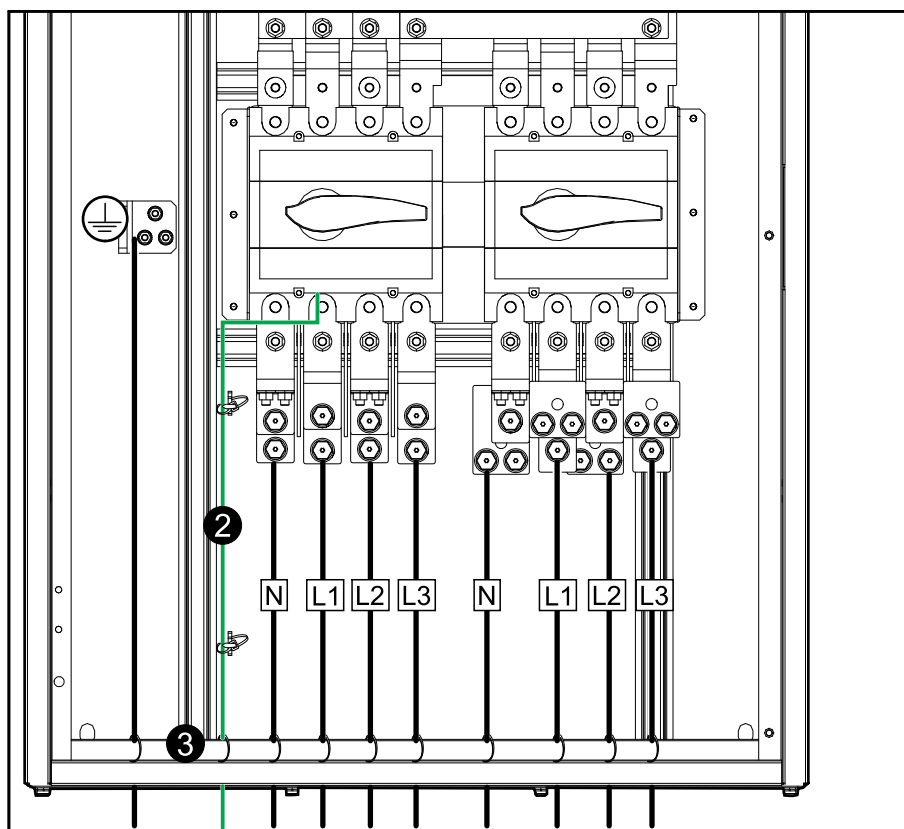


Connection method 2

Maintenance
Bypass Panel



3. Fasten the signal cables to the cable reliefs.



4. Close the inner door and fasten with the screws.

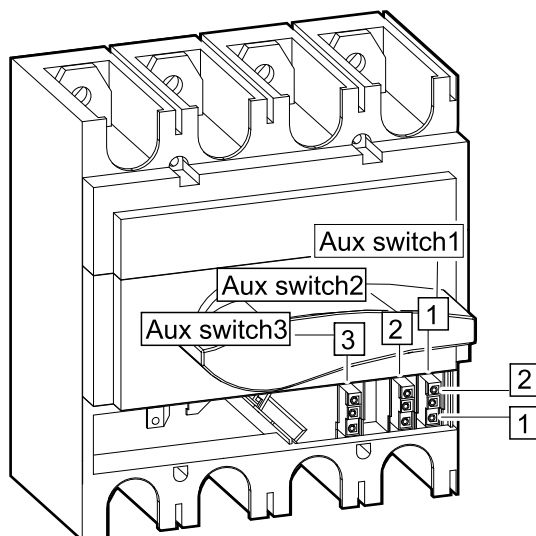
Connect the Signal Cables for Easy UPS 3M

NOTE: Route the signal cables separately from the power cables.

Recommended signal cable size is 0.8 mm².

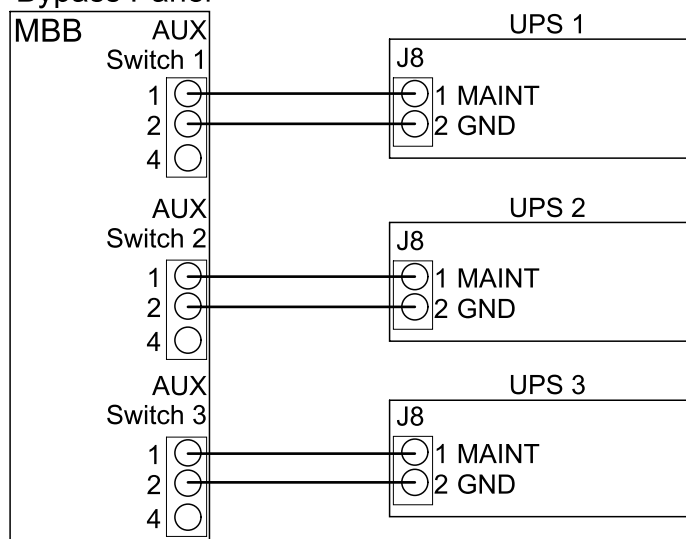
1. Remove the plastic cover of the maintenance bypass switch MBB to get access to the AUX switches.

AUX Switches in MBB

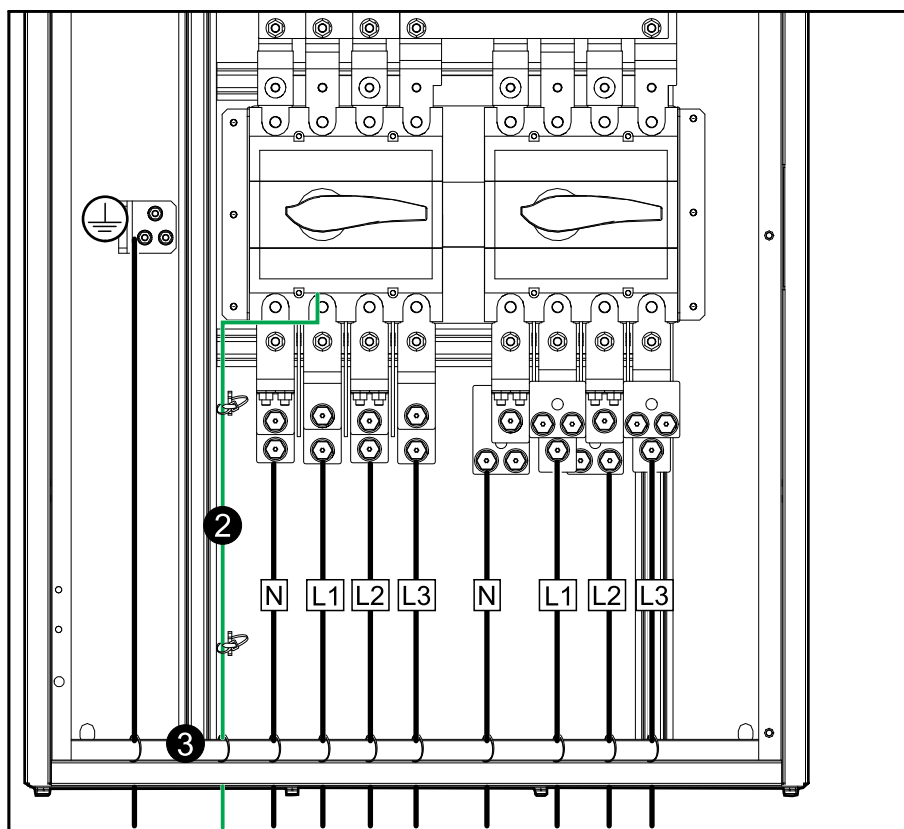


2. Connect the signal cables (not supplied) from the three AUX switches in the MBB to the UPSs.

Parallel Maintenance Bypass Panel



3. Fasten the signal cables to the cable reliefs.



4. Close the inner door and fasten with the screws.

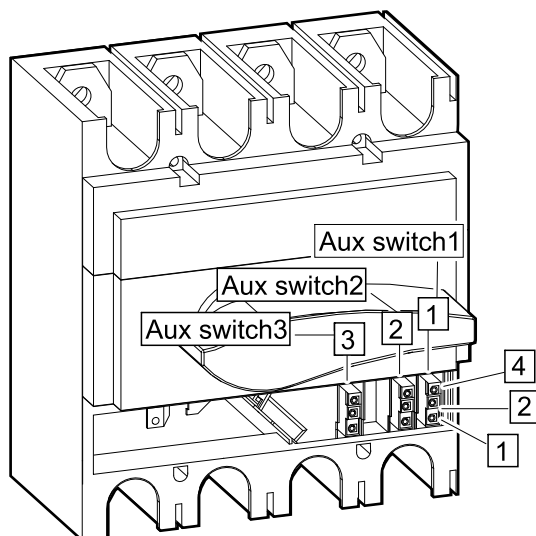
Connect the Signal Cables for Easy UPS 3L

NOTE: Route the signal cables separately from the power cables.

Recommended signal cable size is 0.8 mm².

1. Remove the plastic cover of the unit output switch UOB and the maintenance bypass switch MBB to get access to the AUX switches.

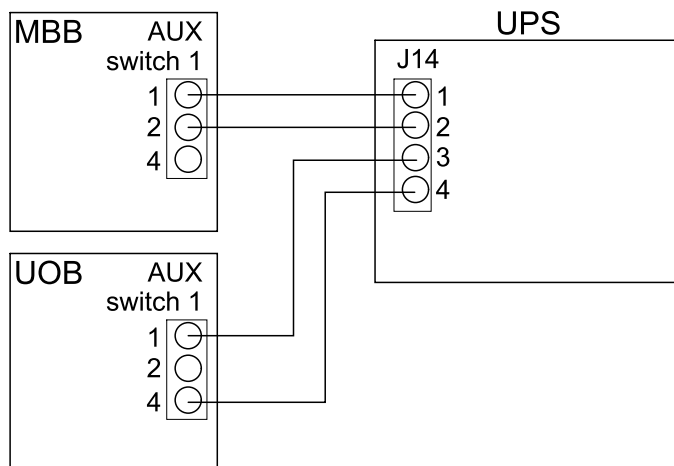
AUX Switches in MBB



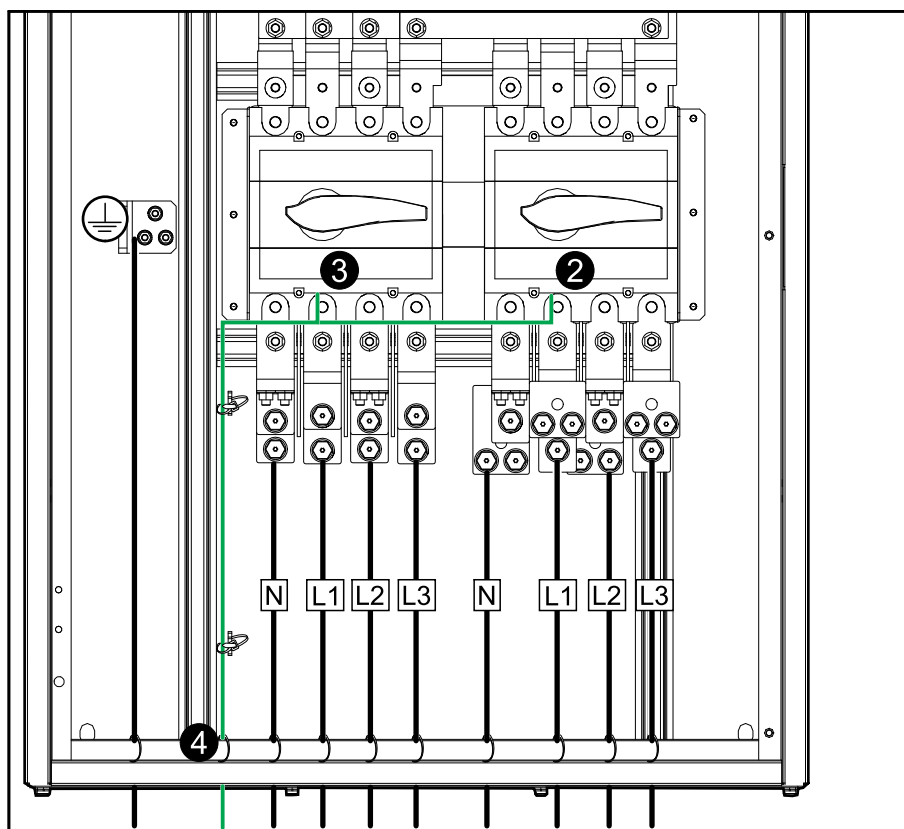
NOTE: UOB contains one AUX switch and MBB contains three AUX switches.

2. Connect the signal cables (not supplied) from the AUX switch in the unit output switch UOB to the UPS.
3. Connect the signal cables (not supplied) from the first AUX switch in the maintenance bypass switch MBB to the UPS.

Maintenance Bypass Panel



4. Fasten the signal cables to the cable reliefs.



5. Close the inner door and fasten with the screws.

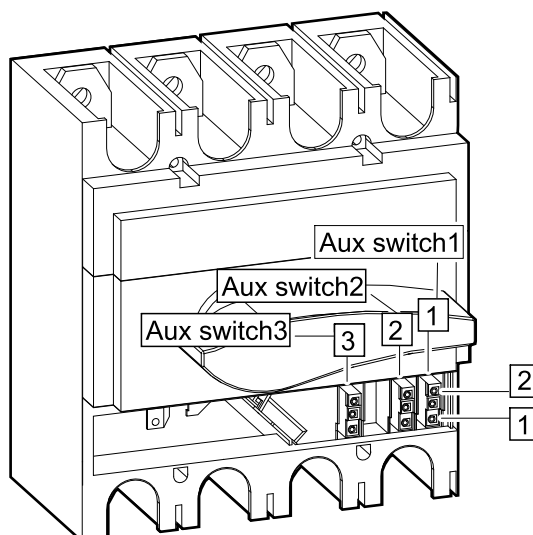
Connect the Signal Cables for Easy UPS 3-Phase Modular

NOTE: Route the signal cables separately from the power cables.

Recommended signal cable size is 0.8 mm².

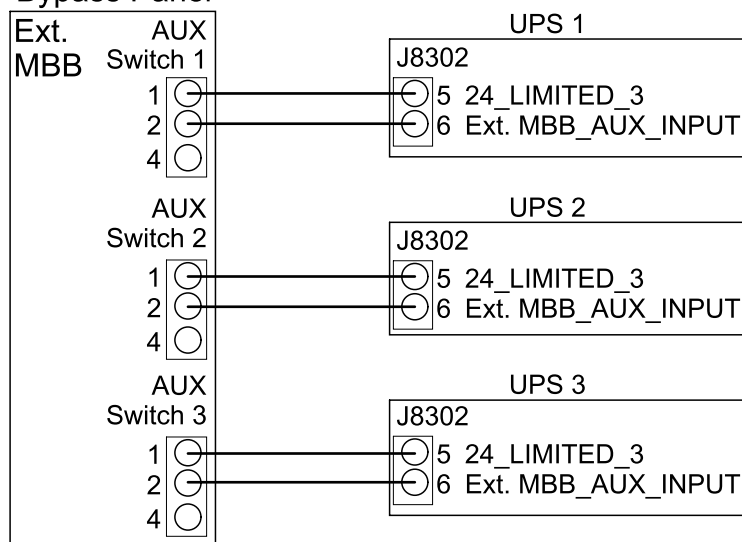
1. Remove the plastic cover of the unit output switch UOB / system isolation breaker SIB and the maintenance bypass switch MBB / external maintenance bypass switch (Ext. MBB) to get access to the AUX switches.

AUX Switches in MBB (Ext. MBB)

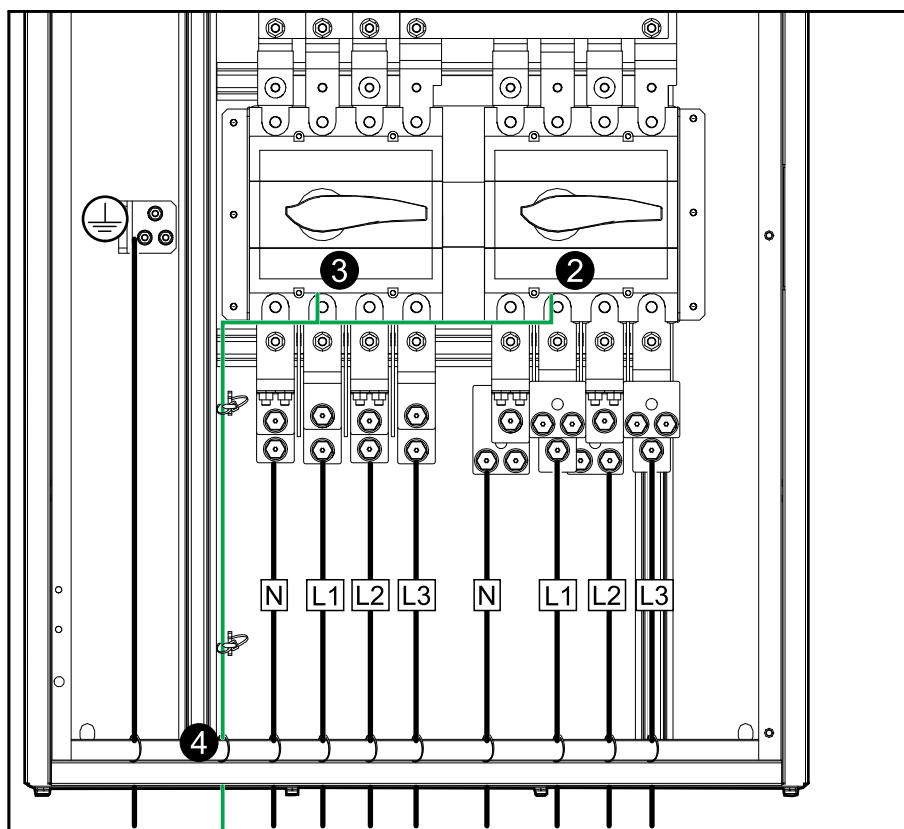


2. Connect the signal cables (not supplied) from the AUX switch in the unit output switch UOB / system isolation breaker SIB to the UPS.
3. Connect the signal cables (not supplied) from the AUX switch in the maintenance bypass switch MBB / external maintenance bypass switch (Ext. MBB) to the UPS.

Parallel Maintenance Bypass Panel



4. Fasten the signal cables to the cable reliefs.



5. Close the inner door and fasten with the screws.

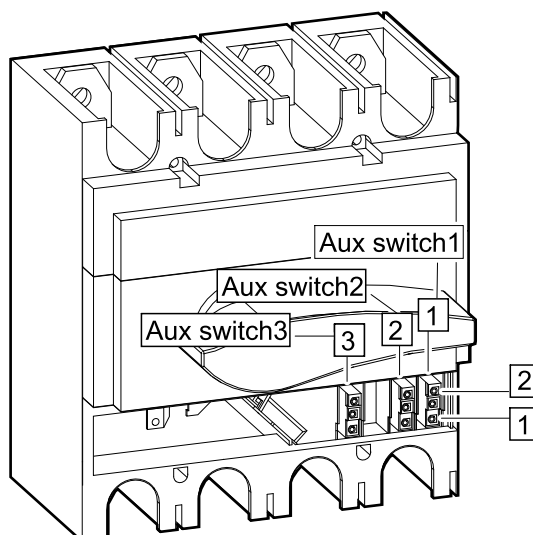
Connect the Signal Cables for Easy UPS 3M Advanced

NOTE: Route the signal cables separately from the power cables.

Recommended signal cable size is 0.8 mm².

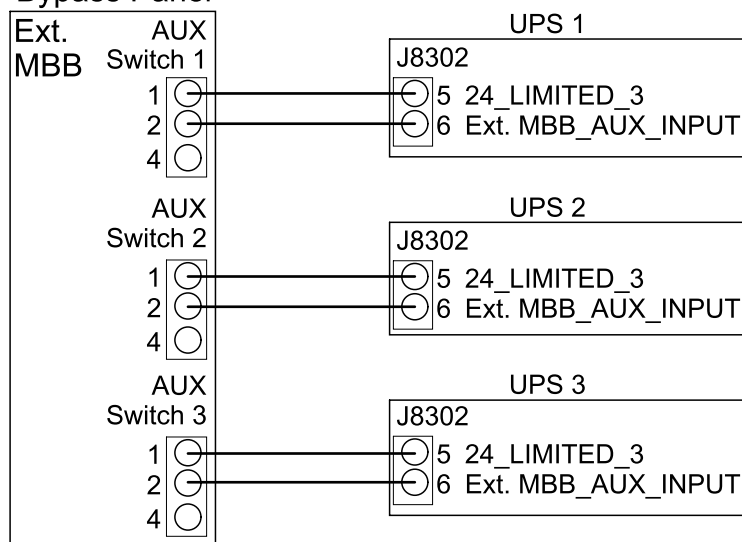
1. Remove the plastic cover of the unit output switch UOB / system isolation breaker SIB and the maintenance bypass switch MBB / external maintenance bypass switch (Ext. MBB) to get access to the AUX switches.

AUX Switches in MBB (Ext. MBB)

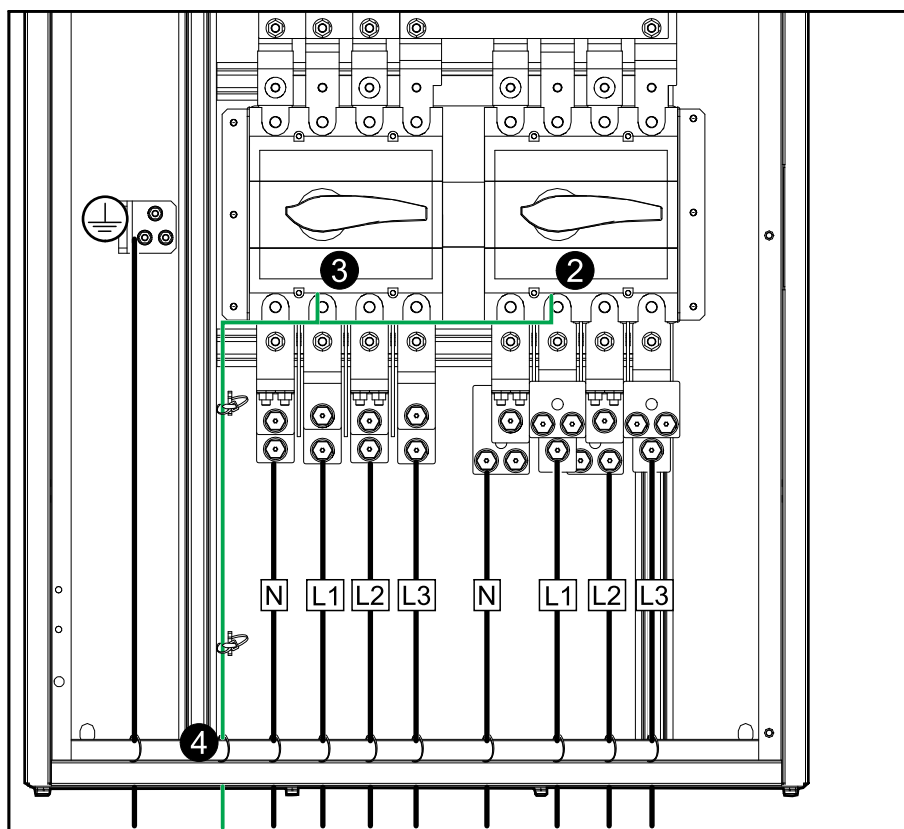


2. Connect the signal cables (not supplied) from the AUX switch in the unit output switch UOB / system isolation breaker SIB to the UPS.
3. Connect the signal cables (not supplied) from the AUX switch in the maintenance bypass switch MBB / external maintenance bypass switch (Ext. MBB) to the UPS.

Parallel Maintenance Bypass Panel



4. Fasten the signal cables to the cable reliefs.

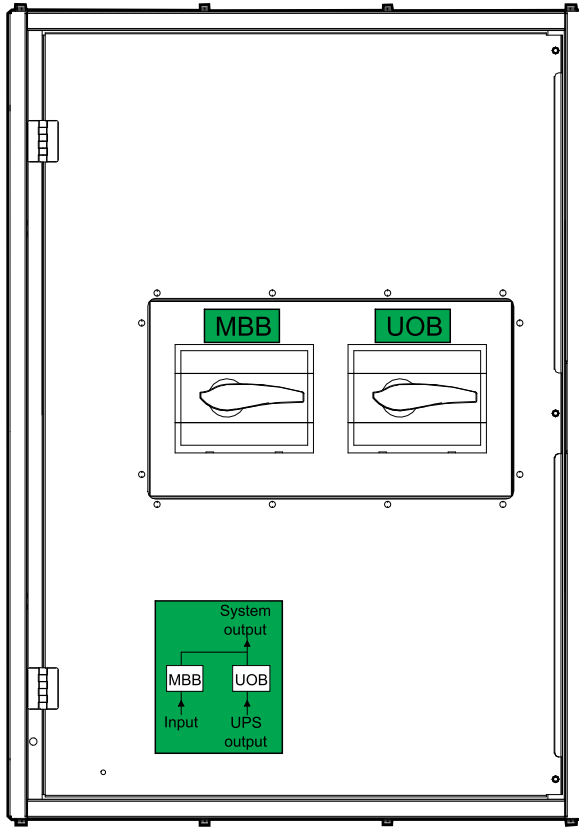


5. Close the inner door and fasten with the screws.

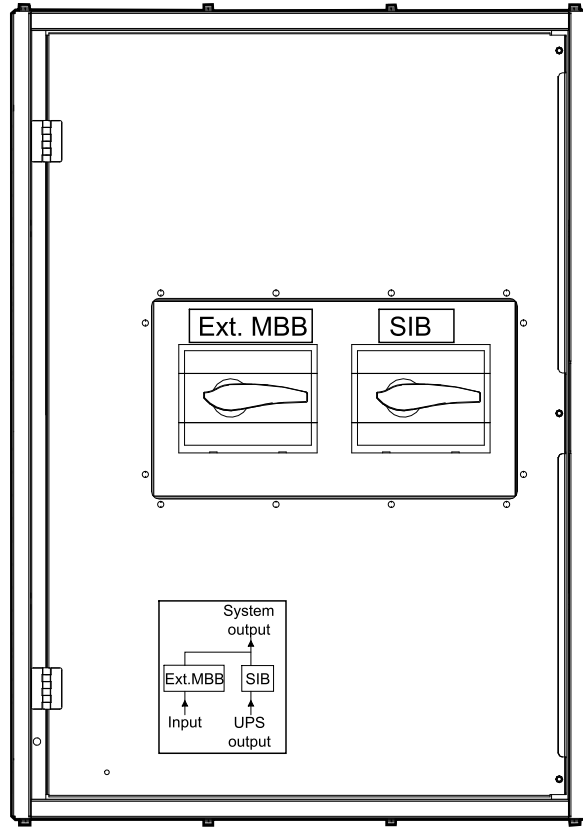
Final Installation

1. Replace the labels so they match your system. The labels are provided with the manual.

Single System



Parallel System



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.

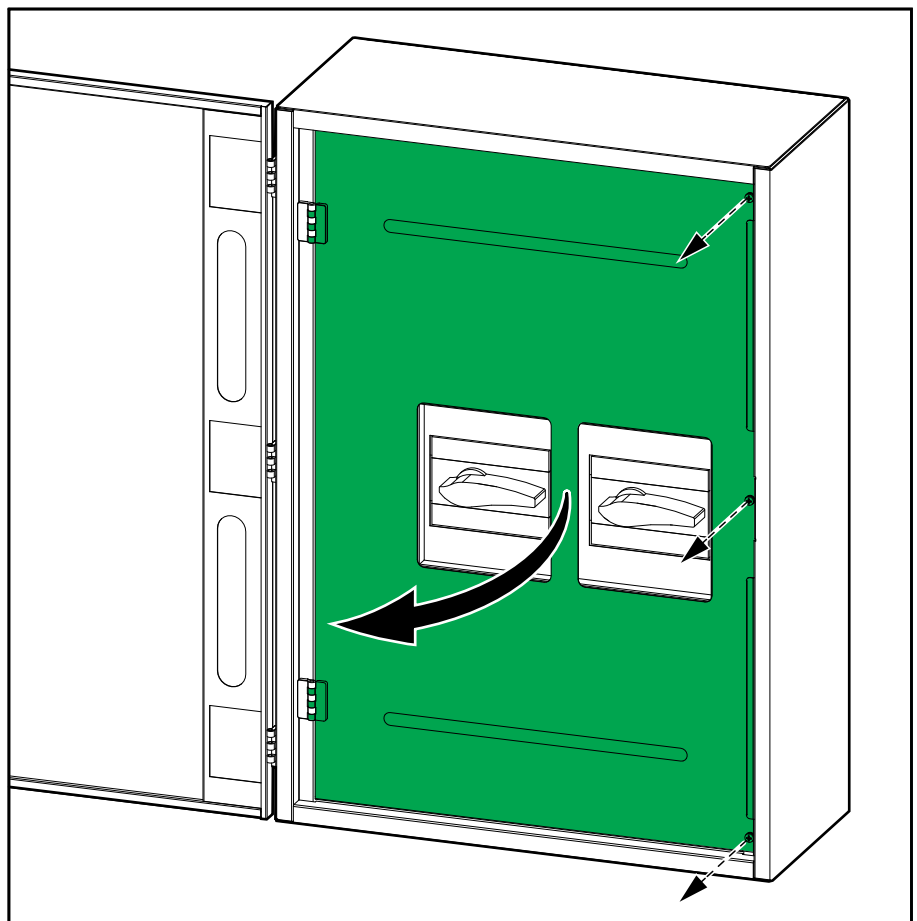
⚡ ⚠ DANGER

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 of 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.

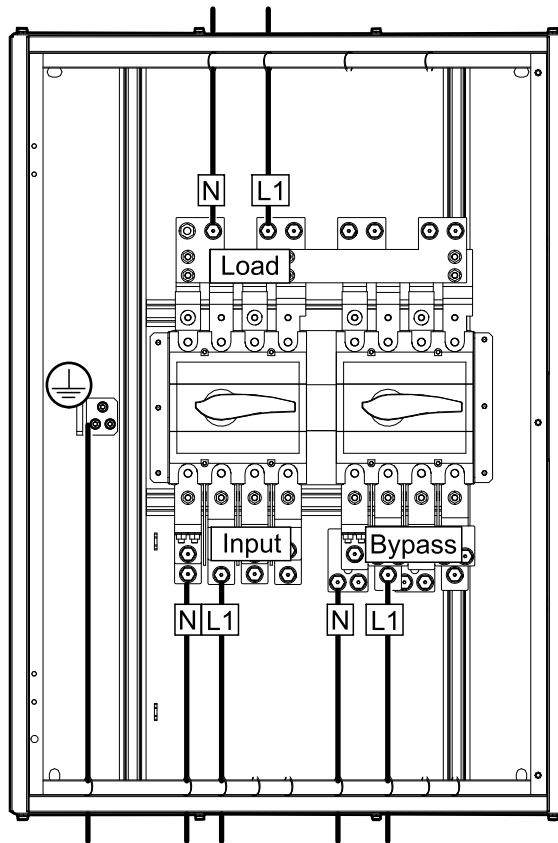
⚡⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

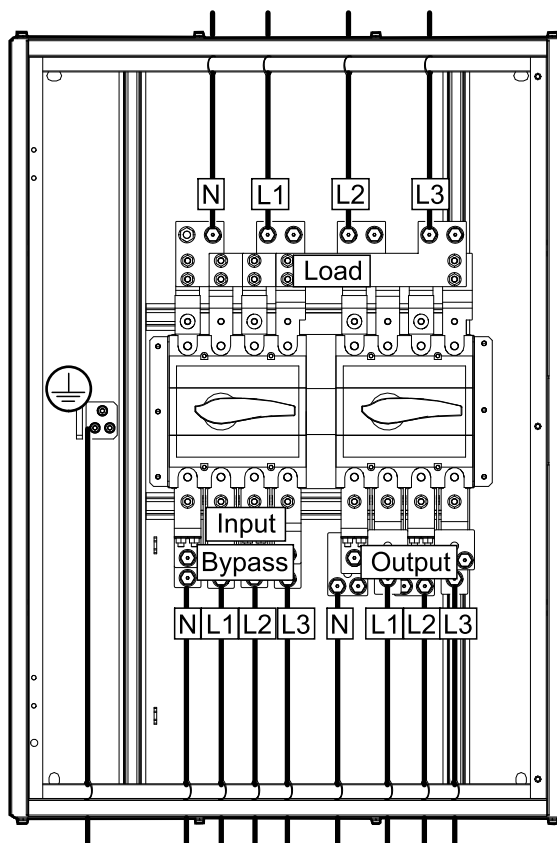
Measure for and verify ABSENCE of voltage on each input/bypass busbar, UPS input/UPS bypass busbar, UPS output busbar, and load busbar before continuing.

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

3:1 Systems



3:3 Systems



9. Disconnect and remove all power cables from the maintenance bypass panel. See [Connect the Power Cables for 3:1 Systems](#), page 45 or [Connect the Power Cables for 3:3 Systems](#), page 46 for details.
10. Disconnect and remove all signal cables from the maintenance bypass panel. See [Connect the Signal Cables for Easy UPS 3S](#), page 47 or [Connect the Signal Cables for Easy UPS 3M](#), page 50 or [Connect the Signal Cables for Easy UPS 3L](#), page 52 or [Connect the Signal Cables for Easy UPS 3-Phase Modular](#), page 54 or [Connect the Signal Cables for Easy UPS 3M Advanced](#), page 56 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 (75 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
<p>TIPPING HAZARD</p> <p>For transport of the maintenance bypass panel ensure:</p> <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). <p>Failure to follow these instructions can result in death, serious injury, or equipment damage.</p>

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 (75 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
<p>UNEXPECTED EQUIPMENT BEHAVIOR</p> <p>Do not lift the maintenance bypass panel with a forklift/pallet truck directly on the frame as it may bend or damage the maintenance bypass panel.</p> <p>Failure to follow these instructions can result in death, serious injury, or equipment damage.</p>

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, page 41](#) 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,
please ask for confirmation of the information given in this publication.

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