# Galaxy 3L

# 250-600 kVA TLC-Certified

# **Technical Specifications**

Latest updates are available on the Schneider Electric website

11/2024





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IEC (380/400/415 V)



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Here you can find your UPS installation manual, UPS operation manual, and UPS technical specifications, and you can also find installation manuals for your auxiliary products and options.

This online manual portal is available on all devices and offers digital pages, search functionality across the different documents in the portal, and PDF download for offline use.

# **Table of Contents**

Important Safety Instructions — SAVE THESE	
INSTRUCTIONS	7
Electromagnetic Compatibility	
Safety Precautions	8
Electrical Safety	
Battery Safety	
Symbols Used in the Product	14
Model List	15
System Overview	
User Interface	16
Status LEDs	16
Overview of Single UPS	17
Overview of 1+1 Redundant Parallel System with Common Bat	tery
Bank	18
Overview of Parallel System	19
Technical Data	21
Input Power Factor	21
Efficiency	21
Derating Due to Load Power Factor	
End of Discharge Voltage	
Battery Runtimes	25
Classic Battery Runtimes	25
Compliance	27
Communication and Management	27
Facility Planning for 250-400 kVA UPSs for External	
Batteries	
Input Specifications	
Bypass Specifications	
Output Specifications	
Battery Specifications	
Recommended Upstream Protection	
Recommended Cables Sizes	
Recommended Bolts and Cable Lugs	
Torque Specifications	
UPS Weights and Dimensions	
UPS Shipping Weights and Dimensions	
Clearance	
Environmental	
Heat Dissipation	
Facility Planning for 500-600 kVA UPSs for External	
Batteries	
Input Specifications	
Bypass Specifications	
Output Specifications	
Battery Specifications	
Recommended Upstream Protection	

Recommended Cables Sizes	
Recommended Bolts and Cable Lugs	39
Torque Specifications	39
UPS Weights and Dimensions	40
UPS Shipping Weights and Dimensions	40
Clearance	40
Environmental	41
Heat Dissipation	41
Requirements for a Third Party Battery Solution	42
Third Party Battery Breaker Requirements	42
Guidance for Organizing Battery Cables	43
Drawings	44
Galaxy 3L UPS for External Batteries – Single Mains System	44
Galaxy 3L UPS for External Batteries – Dual Mains System	
Options	46
Configuration Options	
•	46
Configuration Options	46 47
Configuration Options Hardware Options Default Settings	46 47 48
Configuration Options Hardware Options	46 47 48 50
Configuration Options Hardware Options. Default Settings Weights and Dimensions for Options.	46 47 48 50 50
Configuration Options Hardware Options. Default Settings Weights and Dimensions for Options. Classic Battery Cabinet Weights and Dimensions	
Configuration Options Hardware Options Default Settings Weights and Dimensions for Options Classic Battery Cabinet Weights and Dimensions Classic Battery Cabinet Shipping Weights and Dimensions	
Configuration Options Hardware Options Default Settings Weights and Dimensions for Options Classic Battery Cabinet Weights and Dimensions Classic Battery Cabinet Shipping Weights and Dimensions. Battery Breaker Box Weight and Dimensions	
Configuration Options Hardware Options. Default Settings Weights and Dimensions for Options. Classic Battery Cabinet Weights and Dimensions Classic Battery Cabinet Shipping Weights and Dimensions. Battery Breaker Box Weight and Dimensions Battery Breaker Box Shipping Weight and Dimensions	
Configuration Options Hardware Options Default Settings Weights and Dimensions for Options Classic Battery Cabinet Weights and Dimensions Classic Battery Cabinet Shipping Weights and Dimensions. Battery Breaker Box Weight and Dimensions Battery Breaker Box Shipping Weight and Dimensions Battery Breaker Kit Weight and Dimensions	
Configuration Options Hardware Options. Default Settings Weights and Dimensions for Options. Classic Battery Cabinet Weights and Dimensions Classic Battery Cabinet Shipping Weights and Dimensions. Battery Breaker Box Weight and Dimensions. Battery Breaker Box Shipping Weight and Dimensions Battery Breaker Kit Weight and Dimensions. Battery Breaker Kit Shipping Weight and Dimensions.	

# 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** 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** 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** 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**

### 

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

All safety instructions in this document must be read, understood and followed.

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

### 

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

Read all instructions in the Installation Manual before installing or working on this UPS system.

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

### **A**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.

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

## 

#### 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.
- After the UPS system has been electrically wired, do not start up the system. Start-up must only be performed by Schneider Electric.

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

### 

#### 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.

### 

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

- Install the UPS system in a temperature controlled indoor environment free of conductive contaminants and humidity.
- Install the UPS system 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.

### 

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

The UPS 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.

# 

### 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.

### 

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR 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 will result in death or serious injury.

### NOTICE

#### **RISK OF OVERHEATING**

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

Failure to follow these instructions can result in equipment damage.

### NOTICE

#### **RISK OF EQUIPMENT DAMAGE**

Do not connect the UPS output to regenerative load systems including photovoltaic systems and speed drives.

Failure to follow these instructions can result in equipment damage.

### **Electrical Safety**

# 

#### 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 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.
- A disconnection device (e.g. disconnection circuit breaker or switch) must be installed to enable isolation of the system from upstream power sources in accordance with local regulations. The disconnection device must be easily accessible and visible.
- 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.

### 

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

In systems where backfeed protection is not part of the standard design, an automatic isolation device (backfeed protection option or other device meeting the requirements of IEC/EN 62040–1 **or** UL1778 5th Edition – depending on which of the two standards apply to your local area) must be installed to prevent hazardous voltage or energy at the input terminals of the isolation device. The device must open within 15 seconds after the upstream power supply fails and must be rated according to the specifications.

#### 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 remote 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):

### 

#### 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.

# 

#### RISK OF ELECTRICAL DISTURBANCE

This product can cause a DC current in the PE conductor. Where a residual current-operated protective device (RCD) is used for protection against electrical shock, only an RCD of Type B is allowed on the supply side of this product.

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

### **Battery Safety**

### **A A DANGER**

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

- Battery circuit breakers must be installed according to the specifications and requirements as defined by Schneider Electric.
- Servicing of batteries must only be performed or supervised by qualified personnel knowledgeable of batteries and the required precautions. Keep unqualified personnel away from batteries.
- Disconnect charging source prior to connecting or disconnecting battery terminals.
- Do not dispose of batteries in a fire as they can explode.
- Do not open, alter, or mutilate batteries. Released electrolyte is harmful to the skin and eyes. It may be toxic.

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

### 

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

Batteries can present a risk of electric shock and high short-circuit current. The following precautions must be observed when working on batteries

- Remove watches, rings, or other metal objects.
- Use tools with insulated handles.
- Wear protective glasses, gloves and boots.
- Do not lay tools or metal parts on top of batteries.
- Disconnect the charging source prior to connecting or disconnecting battery terminals.
- Determine if the battery is inadvertently grounded. If inadvertently grounded, remove source from ground. Contact with any part of a grounded battery can result in electric shock. The likelihood of such shock can be reduced if such grounds are removed during installation and maintenance (applicable to equipment and remote battery supplies not having a grounded supply circuit).

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

### 

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

When replacing batteries, always replace with the same type and number of batteries or battery packs.

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

# **A**CAUTION

#### **RISK OF EQUIPMENT DAMAGE**

- Mount the batteries in the UPS system, but do not connect the batteries until the UPS system is ready to be powered up. The time duration from battery connection until the UPS system is powered up must not exceed 72 hours or 3 days.
- Batteries must not be stored more than six months due to the requirement of recharging. If the UPS system remains de-energized for a long period, we recommend that you energize the UPS system for a period of 24 hours at least once every month. This charges the batteries, thus avoiding irreversible damage.

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

# 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.
$\sim$	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.
( <u> </u>	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.
$\rightarrow$	This is the input symbol. It is used to identify an input terminal when it is necessary to distinguish between inputs and outputs.
$\bigcirc$	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 disconnector 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.

# **Model List**

- G3LUPS250KHTS: Galaxy 3L 250 kVA 400 V, TLC-Certified, start-up 5x8
- G3LUPS300KHTS: Galaxy 3L 300 kVA 400 V, TLC-Certified, start-up 5x8
- G3LUPS400KHTS: Galaxy 3L 400 kVA 400 V, TLC-Certified, start-up 5x8
- G3LUPS500KHTS: Galaxy 3L 500 kVA 400 V, TLC-Certified, start-up 5x8
- G3LUPS600KHTS: Galaxy 3L 600 kVA 400 V, TLC-Certified, start-up 5x8

# **System Overview**

# **User Interface**

ALARM	$\bigcirc$
BYPASS	$\bigcirc$
BATTERY	$\bigcirc$
INVERTER	0

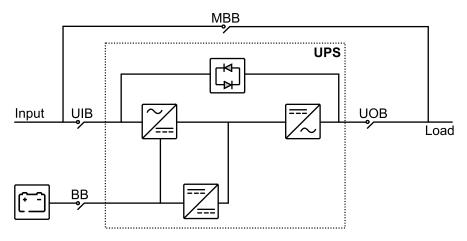


### **Status LEDs**

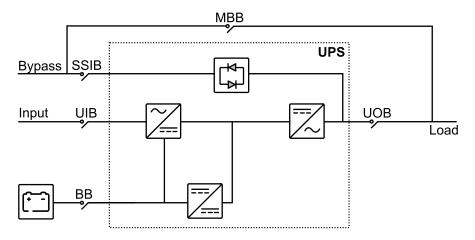
LED	State	Description	
ALARM	Steady or flashing red	Critical alarm	
	Steady or flashing yellow	Warning alarm	
	Off	No alarm condition	
BYPASS	Steady yellow	The load is supplied by the bypass source	
	Flashing yellow	There is an alarm condition on the bypass source	
	Off	The load is not supplied by the bypass source	
BATTERY	Steady yellow	The load is supplied by the battery source	
	Flashing yellow	The battery source is unavailable	
	Off	The load is not supplied by the battery source	
INVERTER	Steady green	Inverter on	
	Off	Inverter off	

# **Overview of Single UPS**

#### Single Mains System

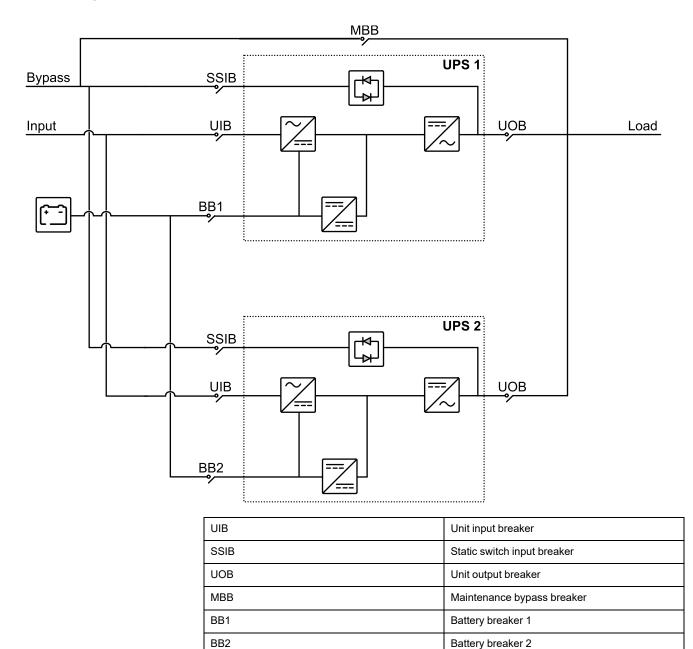


#### **Dual Mains System**



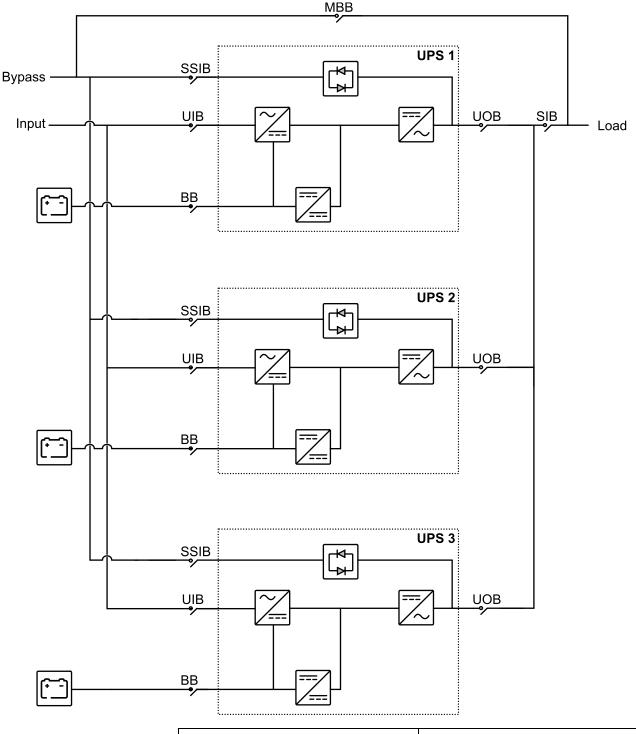
UIB	Unit input breaker
SSIB	Static switch input breaker
UOB	Unit output breaker
МВВ	Maintenance bypass breaker
ВВ	Battery breaker

## **Overview of 1+1 Redundant Parallel System with Common Battery Bank**



# **Overview of Parallel System**

The impedance of the bypass paths need to be controlled in a parallel UPS system. When operating in bypass mode, the parallel load sharing is determined by the total impedance of the bypass path comprising cables, switchgear, static bypass switch, and cable formation.



UIB	Unit input breaker	
SSIB	Static switch input breaker	
UOB	Unit output breaker	
МВВ	Maintenance bypass breaker	
SIB	System isolation breaker	
ВВ	Battery breaker	

# NOTICE

#### **RISK OF EQUIPMENT DAMAGE**

To ensure correct load sharing in bypass operation in a parallel system, the following recommendations apply:

- The bypass cables must be the same length for all UPSs.
- The output cables must be the same length for all UPSs.
- The input cables must be the same length for all UPSs in a single mains system.
- Cable formation recommendations must be followed.
- The reactance of busbar layout in the bypass/input and output switchgear must be the same for all UPSs.

If the above recommendations are not followed the result can be uneven load sharing in bypass and overload of individual UPSs.

Failure to follow these instructions can result in equipment damage.

# **Technical Data**

# **Input Power Factor**

UPS rating	250 kVA	300 kVA	400 kVA	500 kVA	600 kVA
25% load	0.99	0.99	0.99	0.98	0.98
50% load	0.99	0.99	0.99	0.99	0.99
75% load	0.99	0.99	0.99	0.99	0.99
100% load	0.99	0.99	0.99	0.99	0.99

# Efficiency

The values are at a 400 V 50 Hz linear load at output power factor 1.

#### **Normal Mode**

UPS rating	250 kVA	300 kVA	400 kVA	500 kVA1	600 kVA1
25% load	95.06%	95.13%	95.39%	95.42%	95.36%
50% load	95.49%	95.54%	95.50%	95.45%	95.58%
75% load	95.08%	95.17%	95.09%	94.90%	95.06%
100% load	94.54%	94.56%	94.57%	94.16%	94.24%

#### ECO mode

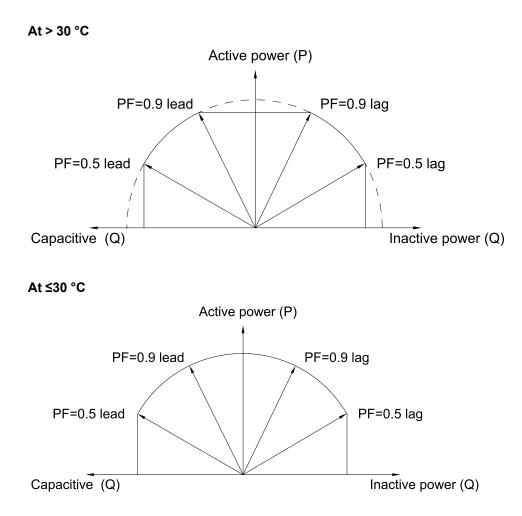
UPS rating	250 kVA	300 kVA	400 kVA	500 kVA	600 kVA
25% load	98.92%	99.07%	98.97%	99.02%	98.91%
50% load	99.30%	98.99%	99.26%	99.27%	99.28%
75% load	99.35%	99.03%	99.32%	99.35%	99.37%
100% load	99.40%	99.05%	99.36%	99.35%	99.42%

#### **Battery operation**

UPS rating	250 kVA	300 kVA	400 kVA	500 kVA	600 kVA
25% load	94.19%	94.37%	94.30%	94.46%	94.80%
50% load	94.82%	95.03%	95.04%	95.18%	95.07%
75% load	94.79%	94.75%	94.70%	94.81%	94.62%
100% load	94.21%	94.19%	94.28%	94.29%	94.34%

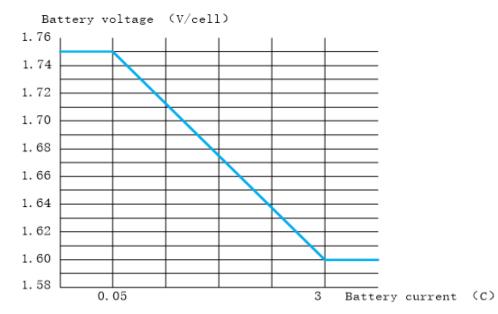
<sup>1.</sup> Can reach 96% efficiency (measured by the power analyzer) under certain conditions: ambient temperature 25°C, UPS operates in normal mode, (linear load) input 426 V and output 415 V.

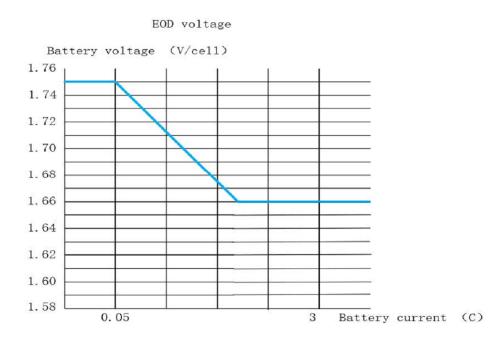
# **Derating Due to Load Power Factor**



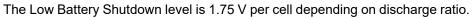
# **End of Discharge Voltage**

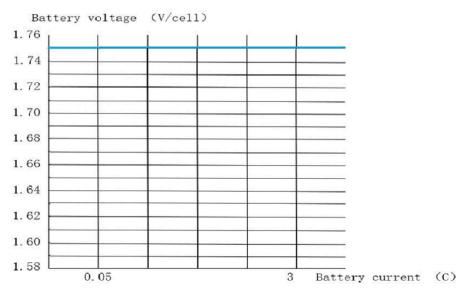
The Low Battery Shutdown level is 1.6 V per cell depending on discharge ratio.





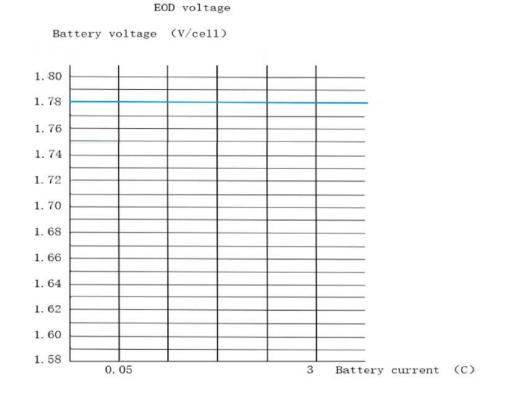
# The Low Battery Shutdown level is 1.61 V to 1.74 V per cell depending on discharge ratio.





EOD voltage

The Low Battery Shutdown level is 1.76 V to 1.8 V per cell depending on discharge ratio.



# **Battery Runtimes**

### **Classic Battery Runtimes**

Battery runtimes are listed in minutes.

Battery runtimes are estimated values based on battery manufacturer data for operation at 25  $^\circ\text{C}.$ 

Please note that not all battery solutions are available for all UPS ratings due to:

• The specific battery solution would provide less than 5 minutes runtime with the specific UPS.

UPS rating	250 kV/	4				300	) kVA	4				400 kVA	4			
Power factor	0.9											•				
	25% load	50% Ioa		5% ad	100% load	25% Ioa		50% load	75% load	100 Ioa		25% load	50% load	75% Ioa		100% load
E3MCBC10A	17	6.1														
E3MCBC10B	24	8.3														
E3MCBC10C	28	10				21.	5	7.1								
E3MCBC10D	41.5	17.5	5 9.	.8	6.1	33		13.5	7.3			23	8.9			
E3MCBC10E	59	24.5	5 1	3.5	8.2	47		19	10	5.7		32.5	12	5.7		
2 x E3MCBC7B	30	12	6	.3		23.	5	9.1								
2 x E3MCBC10A	41.5	17.5	5 9.	.8	6.1	33		13.5	7.3			23	8.9			
2 x E3MCBC10B	59	24.5	5 1:	3.5	8.2	47		19	10	5.7		32.5	12	5.7		
2 x E3MCBC10C	67.5	28	1	6	10	53.	5	22	12	7.1		37.5	14.5	7.1		
2 x E3MCBC10D	94	42	2	5.5	17.5	76		33.5	20	13.	5	54.5	23.5	13.	5	8.8
2 x E3MCBC10E	135	60	3	6	24.5	105	5	47.5	28	18.	5	78	33	19		12
3 xE3MCBC7A	36	13.5	5 6	.7		28		10								
3 xE3MCBC7B	50	21	1:	2	7.7	39.	5	16	9.1	5.6		27.5	10.5	5.7		
3 xE3MCBC10A	67	29.5	5 1	7.5	11.5	54		23.5	13.5	8.8		38.5	16	8.9		5.4
3 xE3MCBC10B	96.5	42	24	4.5	16	77.	5	33	19	12		55	22.5	12		7.3
3 xE3MCBC10C	105	48	2	8	18.5	88		38	22	14		62.5	26	14.	5	8.9
3 xE3MCBC10D	145	68	42	2	29.5	120	)	55	33.5	23		87.5	39	23.	5	16
3 xE3MCBC10E	215	98	6	0	41.5	175	5	78.5	47.5	33		125	55.5	33		22
UPS rating	500 kV/	4							600 kV/	4						
Power factor	0.9															
	25% loa	ad	50% lo	bad	75% loa	ıd	100	0% load	25% loa	ad	509	% load	75% lo	ad	100	)% load
E3MCBC10D	17.5		6.1													
E3MCBC10E	24.5		8.3													
<b>2 x</b> E3MCBC10A	17.5		6.1													
2 x E3MCBC10B	24.5		8.3													
2 x E3MCBC10C	28.0		10.0						22.0		7.2					
2 x E3MCBC10D	42.0		17.5		9.8		6.0		33.5		13.	5	7.3			
2 x E3MCBC10E	59.5		24.5		13.5		8.2		47.5		19.	0	10.0		5.7	
<b>3 x</b> E3MCBC7B	20.5		7.7													
3 xE3MCBC10A	29.5		11.5		6.1				23.5		8.9					
1	1				1						1		1		1	

3 xE3MCBC10B

3 xE3MCBC10C

41.5

47.5

16.0

19.0

8.3

10.0

5.7

5.7

7.2

12.0

14.5

33.0

38.0

UPS rating	500 kVA				600 kVA				
Power factor	0.9	)							
	25% load	50% load	75% load	100% load	25% load	50% load	75% load	100% load	
3 xE3MCBC10D	68.0	29.5	17.5	11.5	54.5	23.5	13.5	8.8	
3 xE3MCBC10E	97.5	42.0	24.5	16.0	78.5	33.0	19.0	12.0	

UPS rating	250 kV	Α			300 kV	Ά			400 kV	<b>A</b>		
Power factor	1											
	25% load	50% Ioad	75% load	100% load	25% load	50% load	75% load	100% load	25% load	50% load	75% Ioad	100% load
E3MCBC10B	21	6.8										
E3MCBC10C	24	8.3										
E3MCBC10D	36.5	15	8.3	5	29	11.5	6.1		20	7.5		
E3MCBC10E	52	21	11	6.7	41.5	16	8.3		28.5	10		
2 x E3MCBC7D	26	10	5.4		20.5	8						
2 x E3MCBC10A	36.5	15	8.3	5	28.5	11	5.9		20	7.5		
2 x E3MCBC10B	52	21	11	6.7	41.5	16	8.3		28.5	10		
2 x E3MCBC10C	59.5	24.5	13.5	8.2	47.5	19	10	5.6	32.5	12	5.7	
2 x E3MCBC10D	83.5	37	22	15	67.5	29.5	17.5	11.5	48	20.5	11.5	7.4
2 x E3MCBC10E	120	52.5	31	21	97	42	24.5	16	68.5	28.5	16	10
3 x E3MCBC7C	26.5	10.5	5.5		21	8						
3 x E3MCBC7D	43	18	10	6.5	34.5	14	8		24	9.5		
3 x E3MCBC10A	59.5	26	15	9.9	47	20	11	7.2	33.5	13.5	7.5	
3 x E3MCBC10B	85.5	36.5	21	13.5	68.5	28.5	16	10	48	19	10	5.8
3 x E3MCBC10C	97	42	24.5	16	78	33	19	12	55	22.5	12	7.2
3 x E3MCBC10D	130	60	37	25.5	105	48.5	29.5	20	77.5	34	20.5	13.5
3 x E3MCBC10E	190	86.5	52.5	36	155	69.5	41.5	28.5	110	48.5	28.5	19

UPS rating	500 kVA				600 kVA			
Power factor	1							
	25% load	50% load	75% load	100% load	25% load	50% load	75% load	100% load
E3MCBC10E	21	6.8						
<b>2 x</b> E3MCBC10B	21	6.8						
2 x E3MCBC10C	24.5	8.3						
2 x E3MCBC10D	37	15	8.3		29.5	11.5	6.1	
<b>2 x</b> E3MCBC10E	52.5	21	11	6.7	41.5	16	8.3	
3 x E3MCBC7C								
3 x E3MCBC7D	18	6.8						
<b>3 x</b> E3MCBC10A	25.5	10	5		20	7.5		
<b>3 x</b> E3MCBC10B	36.5	13.5	6.7		28.5	10		
3 x E3MCBC10C	41.5	16	8.3		33	12	5.7	
<b>3 x</b> E3MCBC10D	60	26	15	9.9	48	20.5	11.5	7.4
<b>3 x</b> E3MCBC10E	86	36.5	21	13.5	69	28.5	16	10

# 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
EMC	IEC 62040-2:2016, Edition 3.0, Uninterruptible power systems (UPS) – Part 2: Electromagnetic compatibility (EMC) requirements. IEC 62040-2:2005-10, 2nd edition, Uninterruptible Power Systems (UPS) – Part 2: Electromagnetic compatibility (EMC) requirements
Performance	IEC 62040-3: 2011-03, 2nd edition Uninterruptible Power Systems (UPS) - Part 3: Method of specifying the performance and test requirements
Environmental	IEC 62040-4: 2013-04, 1st edition Uninterruptible Power Systems (UPS) - Part 4: Environmental aspects – Requirements and reporting
Markings	CE, WEEE
Transportation	ISTA 2B
Pollution degree	2
Overvoltage category	111
Earthing system	TN-S, TN-C, TT, or IT

# **Communication and Management**

- User interface with status LEDs and display
- RS485
- SNMP
- Dry contacts
- USB

# Facility Planning for 250-400 kVA UPSs for External Batteries

# **Input Specifications**

UPS rating	250 kVA	L .		300 kVA	۱.		400 kVA	A Contraction of the second se	
Voltage (V)	380	400	415	380	400	415	380	400	415
Connections <sup>2</sup>	L1, L2, L	3, N, PE		·	·	·	·	·	
Input voltage range (V)	323-477	323-477 (full load)							
Frequency range (Hz)	40-70	)-70							
Nominal input current (A) <sup>3</sup>	364	346	333	436	415	400	582	553	533
Nominal input current (A) <sup>4</sup>	404	384	370	485	461	444	647	614	592
Maximum input current (A) <sup>3</sup>	434	413	398	511	486	468	681	647	624
Maximum input current (A)4	474	451	434	568	540	520	757	719	693
Input current limitation (A)	600			720			960		
Total harmonic distortion (THDI)		<3% for linear loads <5% for non-linear loads							
Input power factor	>0.99	>0.99							
Maximum short circuit rating	lcc=35 k	Icc=35 kA							
Ramp-in	7 second	ls							

# **Bypass Specifications**

UPS rating	250 kVA			300 kVA			400 kVA		
Voltage (V)	380	400	415	380	400	415	380	400	415
Connections	L1, L2, L3, I	-1, L2, L3, N, PE							
Overload capacity	125% for 10	115% continuous 25% for 10 minutes 50% for 1 minute							
Minimum bypass voltage (V)	209	221	228	209	221	228	209	221	228
Maximum bypass voltage (V)	475	480	477	475	480	477	475	480	477
Frequency (Hz)	50 or 60	50 or 60							
Frequency range (%)	±1, ±2, ±4, :	±5, ±10. Defa	ault is ±10 (us	er selectable	).				

It is mandatory to have the neutral line for the input and the load. If the input or the load does not have a neutral line, a ∆-Y transformer for input or a Y-∆ transformer for load needs to be installed. And the capacity of the transformer should be >1.2 times the rated capacity of the UPS.

<sup>3.</sup> At output power factor: 0.9.

<sup>4.</sup> At output power factor: 1.

UPS rating	250 kVA			300 kVA			400 kVA		
Voltage (V)	380	400	415	380	400	415	380	400	415
Nominal bypass current (A)	384	364	351	460	437	422	614	583	562
Maximum short circuit rating	lcc=35 kA								

# **Output Specifications**

UPS rating	250 kVA			300 kVA			400 kVA		
Voltage (V)	380	400	415	380	400	415	380	400	415
Connections <sup>5</sup>	L1, L2, L3,	N, PE							
Overload capacity <sup>6</sup>	125% for 10	105% continuous 125% for 10 minutes 150% for 1 minute							
Output voltage regulation	±1%								
Dynamic load response	20 milliseco	onds							
Output power factor	0.97	.97							
Nominal output current (A)	380	380 361 348 456 433 417 608 577 556							556
Total harmonic distortion (THDU)		% linear load % non-linear							
Output frequency (Hz)	50 or 60								
Slew rate (Hz/sec)	Programma Default is 0	able: 0.5 to 2. .5	0						
Output performance classification (according to IEC/ EN62040-3)	VFI-SS-111	VFI-SS-111							
Load power factor	0.5 leading	0.5 leading to 0.5 lagging without derating							
Output short circuit current (inverter)	630 A/200 ms 820 A/200 ms 1000 A/200 ms								

It is mandatory to have the neutral line for the input and the load. If the input or the load does not have a neutral line, a  $\Delta$ -Y transformer for input or a Y- $\Delta$  transformer for load needs to be installed. And the capacity of the transformer should be >1.2 times the rated capacity of the UPS. At 30 °C and output power factor 0.9 according to YD/T 1095-2018. 5.

<sup>6.</sup> 

<sup>7.</sup> The output power factor is 0.9 at > 30 °C. The output power factor is 1 at  $\leq$  30 °C.

# **Battery Specifications**

NOTE: The UPS supports 36-50 battery blocks.

UPS rating	250 kVA	300 kVA	400 kVA			
Max. charging power in % of output power	26					
Maximum charging power (kW)	60	72	96			
Nominal battery voltage (VDC)	±216 to ±300					
Nominal float voltage (VDC)	±243 to ±337.5					
End of discharge voltage (full load) (VDC)	±172.8 to ±240					
Battery current at full load and nominal battery voltage (A) <sup>8</sup>	554-399	665-479	887-638			
Battery current at full load and nominal battery voltage (A) <sup>9</sup>	615-443	738-531	985-709			
Battery current at full load and minimum battery voltage (A) <sup>8</sup>	693-499	831-598	1108-798			
Battery current at full load and minimum battery voltage (A) <sup>9</sup>	769-554	923-664	1231-886			
Temperature compensation (per cell) <sup>10</sup>	Programmable from 0 to 7 mV/°C. Default is 0 mV/°C.					
Ripple current	<5% C10					

# **Recommended Upstream Protection**

**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	250 kVA		300 kVA		400 kVA		
	Input	Bypass	Input	Bypass	Input	Bypass	
Breaker type	NSX630F Mic 2.3 (LV432877)	NSX630F Mic 2.3 (LV432877)	NS630bN Mic 2.0 (33463/ NS33463)	NS630bN Mic 2.0 (33463/ NS33463)	NS800N Mic 2.0 (33469/ NS33469)	NS800N Mic 2.0 (33469/ NS33469)	
In setting	lo=500	lo=500	1	1	1	1	
Ir setting	0.95	0.9	0.9	0.9	0.95	0.9	
Im setting	lsd=1.5-10	lsd=1.5-10	lsd=1.5-10	lsd=1.5-10	lsd=1.5-10	lsd=1.5-10	

- 9. At output power factor: 1.
- 10. If the temperature is above 25 °C. No compensation below 25 °C.

<sup>8.</sup> At output power factor: 0.9.

### **Recommended Cables Sizes**

# 

#### 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 mm<sup>2</sup>.

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

Cable sizes in this manual are based on table A.52-5 of IEC 60364-5-52 with the following assertions:

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

PE size is based on table 54.3 of IEC 60364-5-54.

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:** Battery cables are sized according to 36 battery blocks. Contact Schneider Electric for cable sizes for systems with more than 36 battery blocks.

**NOTE:** The battery cable sizes given here are recommendations – Always follow the specific instructions in the battery solution documentation for battery cable sizes and battery PE cable sizes and ensure that the battery cable sizes match the battery breaker rating.

**NOTE:** Recommended cable sizes and maximum allowable cable size may vary for the auxiliary products. Refer to the installation manual provided with the auxiliary product.

	Cable size per phase (mm <sup>2</sup> )	Neutral cable size (mm <sup>2</sup> )	PE cable size (mm <sup>2</sup> ))
Input	2 x 120	2 x 120	120
Bypass	2 x 120	2 x 120	120
Output	2 x 120	2 x 120	120
Battery	2 x 185	2 x 185	185

### 250 kVA – Copper

### 300 kVA – Copper

	Cable size per phase (mm <sup>2</sup> )	Neutral cable size (mm <sup>2</sup> )	PE cable size (mm <sup>2</sup> ))
Input	2 x 150	2 x 150	150
Bypass	2 x 150	2 x 150	150
Output	2 x 150	2 x 150	150
Battery	2 x 240	2 x 240	240

## 400 kVA – Copper

	Cable size per phase (mm <sup>2</sup> )	Neutral cable size (mm <sup>2</sup> )	PE cable size (mm <sup>2</sup> ))
Input	2 x 240	2 x 240	240
Bypass	2 x 240	2 x 240	240
Output	2 x 240	2 x 240	240
Battery	4 x 150	4 x 150	2 x 150

# **Recommended Bolts and Cable Lugs**

Cable Size (mm²)	Bolt Size	Cable Lug Type
120	M12x35 mm	TLK 120-12
150	M12x35 mm	TLK 150-12
185	M12x35 mm	TLK 185-12
240	M12x35 mm	TLK 240-12

# **Torque Specifications**

Bolt Size	Torque
M12	50 Nm

# **UPS Weights and Dimensions**

UPS rating	Weight kg	Height mm	Width mm	Depth mm
250 kVA	425	1970	600	850
300 kVA	449	1970	600	850
400 kVA	538	1970	600	850

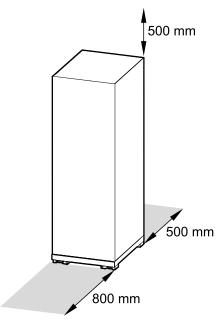
# **UPS Shipping Weights and Dimensions**

UPS rating	Weight kg	Height mm	Width mm	Depth mm
250 kVA	470	2117	800	1000
300 kVA	503	2117	800	1000
400 kVA	584	2117	800	1000

## 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.

**NOTE:** The minimum rear clearance is 500 mm for maintenance and 350 mm for operation.



## **Environmental**

	Operating	Storage			
Temperature	0 °C to 40 °C	-15 $^\circ\text{C}$ to 40 $^\circ\text{C}$ for systems with batteries -25 $^\circ\text{C}$ to 55 $^\circ\text{C}$ for systems without batteries			
Relative humidity	0-95% non-condensing				
Elevation derating according to IEC 62040-3	Power derating factor: 0-1500 m: 1.000 1500-2000 m: 0.975	< 15000 m above sea level (or in an environment with equivalent air pressure)			
Audible noise	<70 dBA at 100% load according to ISO3746				
Protection class	IP20 (air filter as standard)				
Color	RAL 9003	RAL 9003			

# **Heat Dissipation**

UPS rating	250 kVA		300 kVA		400 kVA	
	w	BTU/hr	w	BTU/hr	w	BTU/hr
Normal mode	14500	49488	17400	59386	23200	79181
Battery mode	14000	47782	16800	57338	22400	76451
ECO mode	2000	6826	2400	8191	3200	10922

# Facility Planning for 500-600 kVA UPSs for External Batteries

# **Input Specifications**

UPS rating	500 kVA			600 kVA				
Voltage (V)	380	400	415	380	400	415		
Connections <sup>11</sup>	L1, L2, L3, N, PE	L1, L2, L3, N, PE						
Input voltage range (V)	323-477 (full load)	323-477 (full load)						
Frequency range (Hz)	40-70							
Nominal input current (A) <sup>12</sup>	727	691	666	873	829	799		
Nominal input current (A) <sup>13</sup>	808	768	740	970	921	888		
Maximum input current (A) <sup>12</sup>	854	811	782	1027	976	940		
Maximum input current (A) <sup>13</sup>	946	899	866	1135	1079	1040		
Input current limitation (A)	1080			1320				
Total harmonic distortion (THDI)		<3% for linear loads <5% for non-linear loads						
Input power factor	>0.99	>0.99						
Maximum short circuit rating	Icc=35 kA							
Ramp-in	7 seconds							

# **Bypass Specifications**

UPS rating	500 kVA			600 kVA			
Voltage (V)	380	400	415	380	400	415	
Connections	L1, L2, L3, N, PE						
Overload capacity	125% for 10 minut	≤115% continuous 125% for 10 minutes 150% for 1 minute					
Minimum bypass voltage (V)	209	221	228	209	221	228	
Maximum bypass voltage (V)	475	475 480 477 475 480 477					
Frequency (Hz)	50 or 60						
Frequency range (%)	±1, ±2, ±4, ±5, ±10	). Default is ±10 (us	er selectable).				

It is mandatory to have the neutral line for the input and the load. If the input or the load does not have a neutral line, a Δ-Y transformer for input or a Y-Δ transformer for load needs to be installed. And the capacity of the transformer should be >1.2 times the rated capacity of the UPS.

<sup>12.</sup> At output power factor: 0.9.

<sup>13.</sup> At output power factor: 1.

UPS rating	500 kVA			600 kVA		
Voltage (V)	380	400	415	380	400	415
Nominal bypass current (A)	767	729	703	921	875	843
Maximum short circuit rating	Icc=35 kA					

# **Output Specifications**

UPS rating	500 kVA			600 kVA		
Voltage (V)	380	400	415	380	400	415
Connections <sup>14</sup>	L1, L2, L3, N, PE					
Overload capacity <sup>15</sup>	105% continuous 125% for 10 minut 150% for 1 minute					
Output voltage regulation	±1%					
Dynamic load response	20 milliseconds					
Output power factor	0.9 <sup>16</sup>					
Nominal output current (A)	760	722	696	912	866	835
Total harmonic distortion (THDU)	<2% at 100% linea <4% at 100% non-					
Output frequency (Hz)	50 or 60					
Slew rate (Hz/sec)	Programmable: 0. Default is 0.5	Programmable: 0.5 to 2.0 Default is 0.5				
Output performance classification (according to IEC/ EN62040-3)	VFI-SS-111					
Output short circuit current (inverter)	1.2 kA/200 ms			1.5 kA/200 ms		

It is mandatory to have the neutral line for the input and the load. If the input or the load does not have a neutral line, a  $\Delta$ -Y transformer for input or a Y- $\Delta$  transformer for load needs to be installed. And the capacity of the transformer should be >1.2 times the rated capacity of the UPS. 14.

<sup>15.</sup> 

At 30 °C and output power factor 0.9 according to YD/T 1095-2018. The output power factor is 0.9 at > 30 °C. The output power factor is 1 at  $\leq$  30 °C. 16.

### **Battery Specifications**

NOTE: The UPS supports 36-50 battery blocks.

UPS rating	500 kVA	600 kVA
Max. charging power in % of output power	24%	
Maximum charging power (kW)	108	132
Nominal battery voltage (VDC)	±216 to ±300	
Nominal float voltage (VDC)	±243 to ±337.5	
End of discharge voltage (full load) (VDC)	±172.8 to ±240	
Battery current at full load and nominal battery voltage (A) <sup>17</sup>	1102-794	1323-952
Battery current at full load and nominal battery voltage (A) <sup>18</sup>	1231-886	1470-1058
Battery current at full load and minimum battery voltage (A) <sup>17</sup>	1385-992	1662-1191
Battery current at full load and minimum battery voltage (A) <sup>18</sup>	1539-1102	1847-1323
Temperature compensation (per cell) <sup>19</sup>	Programmable from 0 to 7 mV/°C. Default is 0 mV/°C.	
Ripple current	<5% C10	

#### **Recommended Upstream Protection**

**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	500 kVA		600 kVA	
	Input	Bypass	Input	Bypass
Breaker type	NS1000N Mic 2.0 (33475/NS33475)	NS1000N Mic 2.0 (33475/NS33475)	NS1250N Mic 2.0 (33480/NS33480)	NS1250N Mic 2.0 (33480/NS33480)
In setting	1	1	1	1
Ir setting	0.95	0.9	0.9	0.9
Im setting	lsd=1.5-10	lsd=1.5-10	lsd=1.5-10	lsd=1.5-10

<sup>17.</sup> At output power factor: 0.9.

<sup>18.</sup> At output power factor: 1.

<sup>19.</sup> If the temperature is above 25 °C. No compensation below 25 °C.

#### **Recommended Cables Sizes**

#### 

#### 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 mm<sup>2</sup>.

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

Cable sizes in this manual are based on table A.52-5 of IEC 60364-5-52 with the following assertions:

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

PE size is based on table 54.2 of IEC 60364-5-54.

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:** Battery cables are sized according to 36 battery blocks.

**NOTE:** The battery cable sizes given here are recommendations – Always follow the specific instructions in the battery solution documentation for battery cable sizes and battery PE cable sizes and ensure that the battery cable sizes match the battery breaker rating.

**NOTE:** Recommended cable sizes and maximum allowable cable size may vary for the auxiliary products. Refer to the installation manual provided with the auxiliary product.

	Cable size per phase (mm <sup>2</sup> )	Neutral cable size (mm <sup>2</sup> )	PE cable size (mm <sup>2</sup> ))
Input	3 x 185	3 x 185	2 x 150
Bypass	3 x 185	3 x 185	2 x 150
Output	3 x 185	3 x 185	2 x 150
Battery	6 x 120	6 x 120	3 x 120

#### 500 kVA – Copper

#### 600 kVA – Copper

	Cable size per phase (mm <sup>2</sup> )	Neutral cable size (mm <sup>2</sup> )	PE cable size (mm <sup>2</sup> ))
Input	3 x 240	3 x 240	2 x 185
Bypass	3 x 240	3 x 240	2 x 185
Output	3 x 240	3 x 240	2 x 185
Battery	6 x 150	6 x 150	3 x 150

## **Recommended Bolts and Cable Lugs**

Cable Size (mm²)	Bolt Size	Cable Lug Type
120	M12x35 mm	TLK 120-12
150	M12x35 mm	TLK 150-12
185	M12x35 mm	TLK 185-12
240	M12x35 mm	TLK 240-12

## **Torque Specifications**

Bolt Size	Torque
M12	50 Nm

### **UPS Weights and Dimensions**

UPS rating	Weight kg	Height mm	Width mm	Depth mm
500 kVA	665	1970	1000	850
600 kVA	745	1970	1000	850

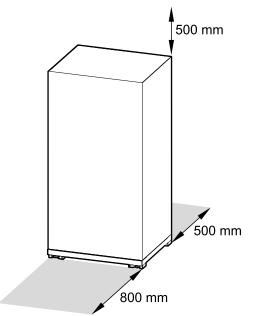
## **UPS Shipping Weights and Dimensions**

UPS rating	Weight kg	Height mm	Width mm	Depth mm
500 kVA	720	2100	1200	1015
600 kVA	800	2100	1200	1015

#### 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.

**NOTE:** The minimum rear clearance is 500 mm for maintenance and 350 mm for operation.



#### **Environmental**

	Operating	Storage
Temperature	0 °C to 40 °C	-15 $^\circ\text{C}$ to 40 $^\circ\text{C}$ for systems with batteries -25 $^\circ\text{C}$ to 55 $^\circ\text{C}$ for systems without batteries
Relative humidity	0-95% non-condensing	
Elevation derating according to IEC 62040-3	Power derating factor: 0-1500 m: 1.000 1500-2000 m: 0.975	< 15000 m above sea level (or in an environment with equivalent air pressure)
Audible noise	<72 dBA at 100% load according to ISO3746	
Protection class	IP20 (dust filter as standard)	
Color	RAL 9003	

#### **Heat Dissipation**

UPS rating	500 kVA		600 kVA	
	w	BTU/hr	w	BTU/hr
Normal mode	31800	108507	37200	126932
Battery mode	28550	97417	33960	115877
ECO mode	3250	11090	3480	11874

## **Requirements for a Third Party Battery Solution**

Battery breaker boxes from Schneider Electric are recommended for the battery interface. Please contact Schneider Electric for more information.

### **Third Party Battery Breaker Requirements**

#### **A A DANGER**

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

All selected battery breakers must be equipped with instantaneous trip functionality with an undervoltage release coil or a shunt trip release coil.

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

**NOTE:** There are more factors to consider when selecting a battery breaker than the requirements listed below. Please contact Schneider Electric for more information.

#### **Design Requirements for Battery Breaker**

Battery breaker rated DC voltage > Normal battery voltage	The normal voltage of the battery configuration is defined as the highest nominal occurring battery voltage. This can be equivalent to the float voltage which may be defined as <b>number of battery blocks x number of cells x cell float voltage</b> .
Battery breaker rated DC current > Rated discharge battery current	This current is controlled by the UPS and must include maximum discharge current. This will typically be the current at the end of discharge (minimum operation DC voltage or in overload condition or a combination).
DC landings	Three DC landings (+, -, N) for DC cables are required.
AUX switches for monitoring	One AUX switch must be installed in each battery breaker and connected to the UPS. The UPS can monitor one battery breaker.
Short-circuit breaking capability	The short-circuit breaking capability must be higher than the short-circuit DC current of the (largest) battery configuration.
Minimum trip current	The minimum short-circuit current to trip the battery breaker must match the (smallest) battery configuration, to make the breaker trip in case of a short circuit, up to the end of its life time.

#### **Guidance for Organizing Battery Cables**

**NOTE:** For 3rd party batteries, use only high rate batteries for UPS applications.

**NOTE:** When the battery bank is placed remotely, the organizing of the cables is important to reduce voltage drop and inductance. The distance between the battery bank and the UPS must not exceed 200 m (656 ft). Contact Schneider Electric for installations with a longer distance.

**NOTE:** To minimize the risk of electromagnetic radiation, it is highly recommended to follow the below guidance and to use grounded metallic tray supports.

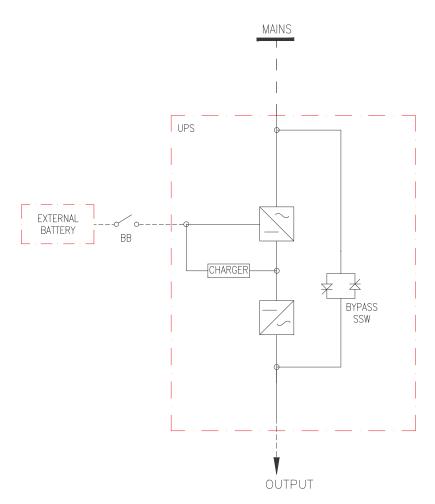
Cable Length				
<30 m	Not recommended	Acceptable	Recommended	Recommended
31–75 m	Not recommended	Not recommended	Acceptable	Recommended
76–150 m	Not recommended	Not recommended	Acceptable	Recommended
151–200 m	Not recommended	Not recommended	Not recommended	Recommended

## **Drawings**

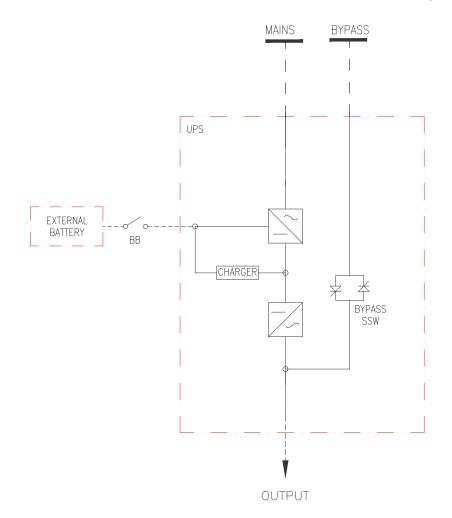
**NOTE:** A comprehensive set of drawings is available on www.se.com.

**NOTE:** These drawings are for reference ONLY – subject to change without notice.

# Galaxy 3L UPS for External Batteries – Single Mains System



## Galaxy 3L UPS for External Batteries – Dual Mains System



## Options

## **Configuration Options**

- Single or dual mains
- Up to 6+0 UPSs in parallel
- ECO mode

#### **Hardware Options**

#### **Battery Solutions**

- E3MCBC7A: Easy UPS 3M Classic Battery Cabinet with batteries, IEC, 700 mm wide - Config A
- E3MCBC7B: Easy UPS 3M Classic Battery Cabinet with batteries, IEC, 700 mm wide - Config B
- E3MCBC10A: Easy UPS 3M Classic Battery Cabinet with batteries, IEC, 1000 mm wide - Config A
- E3MCBC10B: Easy UPS 3M Classic Battery Cabinet with batteries, IEC, 1000 mm wide Config B
- E3MCBC10C: Easy UPS 3M Classic Battery Cabinet with batteries, IEC, 1000 mm wide - Config C
- E3MCBC10D: Easy UPS 3M Classic Battery Cabinet with batteries, IEC, 1000 mm wide - Config D
- E3MCBC10E: Easy UPS 3M Classic Battery Cabinet with batteries, IEC, 1000 mm wide - Config E
- E3MBBB100K200H: Battery Breaker Box 630 A, one circuit breaker for Easy UPS 3M and Galaxy 3L
- E3MBBK100K200H: Battery Breaker Kit 630 A, one circuit breaker for Easy UPS 3M and Galaxy 3L

#### **Maintenance Bypass Panel**

 E3MBP60K400H: Maintenance Bypass Panel for Easy UPS 3M 60-200 kVA and Galaxy 3L 250-400 kVA

#### **Options**

- E3LOPT001: Easy UPS 3L Parallel Kit with 20m cable
- E3MOPT005: Easy UPS 3M Cold start kit
- E3LOPT002: Synchronization Kit with 20m cable for Easy UPS 3M/3L
- E3LOPT003: Easy UPS 3L IP31 Kit for 250/300kVA 400V 3:3 UPS
- E3LOPT004: Easy UPS 3L IP31 Kit for 400kVA 400V 3:3 UPS
- E3LOPT005: Easy UPS 3L IP31 Kit for 500/600kVA 400V 3:3 UPS

## **Default Settings**

Setting	Default Value	Available Settings
Display brightness	63	1-63
Backlight timeout (sec)	60	10-255
Device ID	1	1-255
Baud rate	9600	2400, 4800, 9600, 14400, 19200
Password timeout (minutes)	3	0-120
Date	2015-01-01	
Time	00:00:00	
Operation mode	Single mode	Single mode, ECO mode
Autostart	Enable	Enable, Disable
Self-aging load rate (%)	60	18-100
Frequency converter mode	Disable	Disable, Enable
LBS operation	LBS disabled	LBS disabled, LBS master, LBS slave
Transfer delay (sec)	1	0- 20
Par. transfer delay (sec)	10	0 -200
EPO transfers to bypass	Disable	Disable, Enable
Output frequency (Hz)	50	50, 60
Output voltage (V)	400	380, 400, 415
Output volt. compensation (%)	0.0	-5.0, -4.5, -4.0, -3.5, -3.0, -2.5, -2.0, -1.5, -1.0, -0.5, 0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0
Min. bypass RMS voltage (%)	-45	-10, -15, -20, -30, -45
Max. bypass RMS voltage (%)	15 at 415 V, 20 at 400 V, 25 at 380 V	10, 15, 20, 25
Bypass frequency range (%)	10	1, 2, 4, 5, 10
Output slew rate (Hz/sec)	0.5	0.5-2.0
Use bypass ON with overheated SCR	Disable	Disable, Enable
Allowed transfers to bypass	10	3-10
Parallel ID	1	1-6
Number of parallel UPSs	2	2-6
Number of par. redundant UPSs	0	0, 1, 2, 3, 4, 5
Strings in battery bank 1	1	1-12
Strings in battery bank 2	1	1-12
Strings in battery bank 3	1	1-12
Battery blocks per string	36	36, 38, 40, 42, 44, 46, 48, 50
Battery block capacity (Ah)	7	7-2000
Periodic boost charge (M)	0	0-24
Maximum charge current	0.1	0.05-0.2
Float voltage (V)	2.25	2.20-2.29
Boost voltage (V)	2.30	2.30-2.40
Boost charge duration (minutes)	240	0-999
Float charge temp. compensation	0.000	0.000-0.007

Setting	Default Value	Available Settings
Alarm for no battery connected	Enable	Enable, Disable
Common battery bank	No	Yes, No
External batt. breaker 1 status	Enable	Disable, Enable
External batt. breaker 2 status	Enable	Disable, Enable
External batt. breaker 3 status	Enable	Disable, Enable
Battery breaker trip	Enable	Disable, Enable
Backfeed on input	Enable	Disable, Enable
Backfeed on bypass	Enable	Disable, Enable
External MBB status	Disable	Disable, Enable
External SPD status	Enable	Disable, Enable
OUT 01	Disable	Disable, Common alarm, In normal
OUT 02	Disable	operation, On battery, Static bypass, Maintenance bypass, Output overload,
OUT 03	Disable	Fan inoperable, Battery inoperable, Battery disconnected, Battery voltage
OUT 04	Disable	low, Input out of tol., Bypass out of tol., EPO active, Charging
OUT 05	Disable	
OUT 06	Disable	
IN 01	Disable	Disable, INV ON, INV OFF, Battery
IN 02	Disable	inoperable, Genset on, Custom alarm 3, Custom alarm 4, Disable ECO, Force INV
IN 03	Disable	OFF, Force charger OFF
IN 04	Disable	
IN 05	Disable	
IN 06	Disable	
Self-test settings	Disable auto self-test	Disable auto self-test, self-test every month, self-test every week
Self-test every	0 Day 0 hour 0 minute	
Self-test type	Customize	10 seconds, 10 minutes, EOD, -10%, Customize
Air filter check (months)	3	0, 3, 4, 5, 12
Air filter counter (days)	0	

## Weights and Dimensions for Options

**NOTE:** Not all options listed here are available for all UPS models. Refer to the hardware options list for the relevant UPS model.

### **Classic Battery Cabinet Weights and Dimensions**

Commercial reference	Weight kg	Height mm	Width mm	Depth mm
E3MCBC7C	531	1900	710	845
E3MCBC7D	800	1900	710	845
E3MCBC10A	1038	1900	1010	845
E3MCBC10B	1164	1900	1010	845
E3MCBC10C	1280	1900	1010	845
E3MCBC10D	1041	1900	1010	845
	1023	1900	1010	845
E3MCBC10E	1170	1900	1010	845
	1152	1900	1010	845

**NOTE:** E3MCBC10D and E3MCBC10E consist of two cabinets.

# **Classic Battery Cabinet Shipping Weights and Dimensions**

Commercial reference	Weight kg	Height mm	Width mm	Depth mm
E3MCBC7C	551	1980	815	970
E3MCBC7D	820	1980	815	970
E3MCBC10A	1117	1980	1130	970
E3MCBC10B	1297	1980	1130	970
E3MCBC10C	1424	1980	1130	970
E3MCBC10D Cabinet with breaker	1120	1980	1130	970
Cabinet without breaker	1102	1980	1130	970
E3MCBC10E Cabinet with breaker	1300	1980	1130	970
Cabinet without breaker	1282	1980	1130	970

### **Battery Breaker Box Weight and Dimensions**

Commercial reference	Weight kg	Height mm	Width mm	Depth mm
E3MBBB100K200H	38	800	500	280

### **Battery Breaker Box Shipping Weight and Dimensions**

Commercial reference	Weight kg	Height mm	Width mm	Depth mm
E3MBBB100K200H	65	1200	825	530

#### **Battery Breaker Kit Weight and Dimensions**

Commercial reference	Weight kg	Height mm	Width mm	Depth mm
E3MBBK100K200H	13	530	320	230

#### **Battery Breaker Kit Shipping Weight and Dimensions**

Commercial reference	Weight kg	Height mm	Width mm	Depth mm
E3MBBK100K200H	29	800	500	570

#### Maintenance Bypass Panel Weights and Dimensions

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

# Maintenance Bypass Panel Shipping Weights and Dimensions

Commercial reference	Weight kg	Height mm	Width mm	Depth mm
E3MBP60K400H	110	1200	810	600

## **Limited Factory Warranty**

#### **One-Year Factory Warranty**

The limited warranty provided by Schneider Electric in this Statement of Limited Factory Warranty applies only to products you purchase for your commercial or industrial use in the ordinary course of your business.

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Schneider Electric warrants that the product shall be free from defects in materials and workmanship for a period of one year from the date of product start-up, when start-up is performed by Schneider Electric-authorized service personnel, or within 18 months from the shipment date from Schneider Electric, whichever occurs first. This warranty covers repairing or replacing any defective parts including on-site labor and travel. In the event that the product fails to meet the foregoing warranty criteria, the warranty covers repairing or replacing defective parts at the sole discretion of Schneider Electric for a period of one year from the shipment date.

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