# **Classic Battery Cabinet**

# For Easy UPS 3M and Easy UPS 3L

# Installation

E3MCBC7C, E3MCBC7D, E3MCBC10A, E3MCBC10B, E3MCBC10C, E3MCBC10D, E3MCBC10E

Latest updates are available on the Schneider Electric website

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# Important Safety Instructions — SAVE THESE INSTRUCTIONS

Read these instructions carefully and look at the equipment to become familiar with it before trying to install, operate, service or maintain it. The following safety messages may appear throughout this manual or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of this symbol to a "Danger" or "Warning" safety message indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages with this symbol to avoid possible injury or death.

### 

**DANGER** 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.

# **Safety Precautions**

# **A A 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.

### **A A 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.

### **A A 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.

### 

#### 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.

### **A A 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.

# **A A 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.

### **A A DANGER**

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

Do not drill or cut holes for cables or conduits with the gland plates installed and do not drill or cut holes in close proximity to the UPS.

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

### 

#### 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**

# **A A 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 contains an internal energy source. Hazardous voltage can be present even when disconnected from the mains supply. Before installing or servicing the UPS system, ensure that the units are OFF and that mains and batteries are disconnected. Wait five minutes before opening the UPS to allow the capacitors to discharge.
- The UPS must be properly earthed/grounded and due to a high leakage current, the earthing/grounding conductor must be connected first.

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

### **A A DANGER**

#### 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):

### **A A DANGER**

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

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

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

### **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.
- Failed batteries can reach temperatures that exceed the burn thresholds for touchable surfaces.
- 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.

### **A A DANGER**

#### 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 and burns by high short-circuit current. The likelihood of such shock can be reduced if such grounds are removed during installation and maintenance by a skilled person (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. Refer to the label in the classic battery cabinet for information on batteries in your system.

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

# 

#### **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.

# **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.

# **Classic Battery Cabinet Specifications**

### **A A DANGER**

HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

The classic battery cabinet must only be used with the Easy UPS 3M or the Easy UPS 3L.

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

**NOTE:** Up to two classic battery cabinets can be connected to the Easy UPS 3M.

**NOTE:** Up to three classic battery cabinets can be connected to the Easy UPS 3L.

Commercial reference	Battery type	Breaker type	Number of battery blocks
E3MCBC7C	XP12-150	C25S4D + C254MG250D	38
E3MCBC7D	XP12-240	C25S4D + C254MG250D	36
E3MCBC10A	XP12-300	C40S4TM400D	36
E3MCBC10B	XP12-350	C40S4TM400D	36
E3MCBC10C	XP12-350	C40S4TM400D	40
E3MCBC10D	XP12-300	C63S4TM600D	2 x 36
E3MCBC10E	XP12-350	C63S4TM600D	2 x 36

# **Trip Settings for 400 V**

#### Easy UPS 3M 60-100 kVA UPS

Commercial	Breaker type	60 kVA		80 kVA		100 kVA	
reference		lr	Im	lr	Im	lr	lm
E3MCBC7C	C25S4D + C254MG250D	175	520 (fixed)	200	520 (fixed)	-	-
2 x E3MCBC7C	C25S4D + C254MG250D	175	520 (fixed)	175	520 (fixed)	175	520 (fixed)
E3MCBC7D	C25S4D + C254MG250D	200	520 (fixed)	250	520 (fixed)	250	520 (fixed)
2 x E3MCBC7D	C25S4D + C254MG250D	175	520 (fixed)	175	520 (fixed)	175	520 (fixed)
E3MCBC10A	C40S4TM400D	280	1000	280	1000	320	1000
E3MCBC10B	C40S4TM400D	280	1000	280	1000	320	1000
E3MCBC10C	C40S4TM400D	280	1000	280	1000	280	1000
E3MCBC10D	Compact NSX630S DC (LV438274)	420	1500	420	1500	420	1500
E3MCBC10E	Compact NSX630S DC (LV438274)	420	1500	420	1500	420	1500

#### Easy UPS 3M 120-200 kVA UPS

Commercial	Breaker type	120 kVA		160 kVA		200 kVA	
reference		Ir	Im	Ir	Im	lr	Im
2 x E3MCBC7C	C25S4D + C254MG250D	200	520 (fixed)	-	-	-	-
2 x E3MCBC7D	C25S4D + C254MG250D	250	520 (fixed)	250	520 (fixed)	-	-
E3MCBC10A	C40S4TM400D	360	1000	-	-	-	-
2 x E3MCBC10A	C40S4TM400D	280	1000	280	1000	320	1000
E3MCBC10B	C40S4TM400D	360	1000	-	-	-	-
2 x E3MCBC10B	C40S4TM400D	280	1000	280	1000	320	1000
E3MCBC10C	C40S4TM400D	320	1000	400	1000	400	1000
2 x E3MCBC10C	C40S4TM400D	280	1000	280	1000	280	1000
E3MCBC10D	C63S4TM600D	420	1500	480	1500	600	1500
2 x E3MCBC10D	C63S4TM600D	420	1500	420	1500	420	1500
E3MCBC10E	C63S4TM600D	420	1500	480	1500	600	1500
2 x E3MCBC10E	C63S4TM600D	420	1500	420	1500	420	1500
E3MCBC10A+	C40S4TM400D	280	1000	280	1000	280	1000
E3MCBC10D	C63S4TM600D	420	1500	420	1500	420	1500
E3MCBC10B+	C40S4TM400D	280	1000	280	1000	280	1000
E3MCBC10E	C63S4TM600D	420	1500	420	1500	420	1500

#### Easy UPS 3L 250-400 kVA UPS

Commercial	Breaker type	250 kVA	250 kVA		300 kVA		400 kVA	
reference		Ir	Im	lr	Im	Ir	Im	
3 x E3MCBC7C	C25S4D + C254MG250D	250	520	250	520	-	-	
2 x E3MCBC7D	C25S4D + C254MG250D	250	520	250	520	-	-	
3 x E3MCBC7D	C25S4D + C254MG250D	250	520	250	520	250	520	
2 x E3MCBC10A	C40S4TM400D	400	1000	400	1000	400	1000	
3 x E3MCBC10A	C40S4TM400D	280	1000	320	1000	400	1000	
E3MCBC10B	C40S4TM400D	400	1000	-	-	-	-	

#### Easy UPS 3L 250-400 kVA UPS (Continued)

Commercial	Breaker type	250 kVA	250 kVA		300 kVA		
reference		Ir	Im	lr	lm	lr	Im
2 x E3MCBC10B	C40S4TM400D	400	1000	400	1000	400	1000
3 x E3MCBC10B	C40S4TM400D	280	1000	320	1000	400	1000
E3MCBC10C	C40S4TM400D	400	1000	-	-	-	-
2 x E3MCBC10C	C40S4TM400D	360	1000	400	1000	400	1000
3 x E3MCBC10C	C40S4TM400D	280	1000	280	1000	400	1000
E3MCBC10D	C63S4TM600D	600	1500	600	1500	600	1500
2 x E3MCBC10D	C63S4TM600D	420	1500	480	1500	600	1500
3 x E3MCBC10D	C63S4TM600D	420	1500	420	1500	420	1500
E3MCBC10E	C63S4TM600D	600	1500	600	1500	600	1500
2 x E3MCBC10E	C63S4TM600D	420	1500	480	1500	600	1500
3 x E3MCBC10E	C63S4TM600D	420	1500	420	1500	420	1500

#### Easy UPS 3L 500-600 kVA UPS

Commercial	Breaker type	500 kVA		600 kVA		
reference		Ir	lm	Ir	lm	
2 x E3MCBC10D	C63S4TM600D	600	1500	-	-	
3 x E3MCBC10D	C63S4TM600D	540	1500	600	1500	
2 x E3MCBC10E	C63S4TM600D	600	1500	-	-	
3 x E3MCBC10E	C63S4TM600D	540	1500	600	1500	

# **Trip Settings for 208 V**

#### Easy UPS 3M 50-100 kVA UPS

Commercial	Breaker type	50 kVA		60 kVA		80 kVA		100 kVA	
reference		Ir	Im	Ir	Im	Ir	Im	Ir	Im
E3MCBC7C	C25S4D + C254MG250D	175	520 (fixed)	175	520 (fixed)	-	-	-	-
2 x E3MCBC7C	C25S4D + C254MG250D	175	520 (fixed)	175	520 (fixed)	175	520 (fixed)	175	520 (fixed)
E3MCBC7D	C25S4D + C254MG250D	200	520 (fixed)	200	520 (fixed)	225	520 (fixed)	-	-
2 x E3MCBC7D	C25S4D + C254MG250D	175	520 (fixed)	175	520 (fixed)	175	520 (fixed)	175	520 (fixed)
E3MCBC10A	C40S4TM400D	280	1000	280	1000	280	1000	320	1000
2 x E3MCBC10A	C40S4TM400D	-	-	280	1000	280	1000	280	1000
E3MCBC10B	C40S4TM400D	280	1000	280	1000	280	1000	320	1000
2 x E3MCBC10B	C40S4TM400D	-	-	280	1000	280	1000	280	1000
E3MCBC10C	C40S4TM400D	280	1000	280	1000	280	1000	320	1000
2 x E3MCBC10C	C40S4TM400D	-	-	280	1000	280	1000	280	1000
E3MCBC10D	C63S4TM600D	420	1500	420	1500	420	1500	420	1500
2 x E3MCBC10D	C63S4TM600D	-	-	420	1500	420	1500	420	1500
E3MCBC10E	C63S4TM600D	420	1500	420	1500	420	1500	420	1500
2 x E3MCBC10E	C63S4TM600D	-	-	420	1500	420	1500	420	1500
E3MCBC10A+	C40S4TM400D	-	-	280	1000	280	1000	280	1000
E3MCBC10D	C63S4TM600D	-	-	420	1500	420	1500	420	1500
E3MCBC10B+	C40S4TM400D	-	-	280	1000	280	1000	280	1000
E3MCBC10E	C63S4TM600D	-	-	420	1500	420	1500	420	1500

### **Recommended Cable Sizes for 400 V**

# **A A 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 70 mm<sup>2</sup> for Easy UPS 3M 60-100 kVA. The maximum allowable cable size is 150 mm<sup>2</sup> for Easy UPS 3M 120-200 kVA and Easy UPS 3L 250-600 kVA.

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

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

Cable sizes in this manual are based on table B.52.3 (52-C2) 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

Protective Earth (PE) cables are sized in accordance with table 54.3 of IEC 60364-4-54, Article 543.

If the ambient temperature is greater than 30  $^\circ\text{C}$ , larger conductors are to be selected in accordance with the correction factors of the IEC.

Commercial	60 kVA		80 kVA		100 kVA	
reference	DC (±, N) (mm²)	DC PE (mm <sup>2</sup> )	DC (±, N) (mm²)	DC PE (mm <sup>2</sup> )	DC (±, N) (mm²)	DC PE (mm <sup>2</sup> )
E3MCBC7C	35	16	50	25	-	-
2 x E3MCBC7C	35	16	35	16	35	16
E3MCBC7D	50	25	70	35	70	35
2 x E3MCBC7D	50	25	50	25	50	25
E3MCBC10A	2 x 50	50	2 x 50	50	2 x 50	50
E3MCBC10B	2 x 50	50	2 x 50	50	2 x 50	50
E3MCBC10C	2 x 50	50	2 x 50	50	2 x 50	50
E3MCBC10D	2 x 70	70	2 x 70	70	2 x 70	70
E3MCBC10E	2 x 70	70	2 x 70	70	2 x 70	70

#### Easy UPS 3M 60-100 kVA UPS

#### Easy UPS 3M 120-200 kVA UPS

Commercial	120 kVA	120 kVA			200 kVA		
reference	DC (±, N) (mm <sup>2</sup> )	DC PE (mm <sup>2</sup> )	DC (±, N) (mm <sup>2</sup> )	DC PE (mm <sup>2</sup> )	DC (±, N) (mm <sup>2</sup> )	DC PE (mm <sup>2</sup> )	
2 x E3MCBC7C	35	16	50	25	-	-	
2 x E3MCBC7D	70	35	70	35	70	35	
E3MCBC10A	120	70	-	-	-	_	
2 x E3MCBC10A	95	50	95	50	120	70	
E3MCBC10B	120	70	-	-	-	-	
2 x E3MCBC10B	95	50	95	50	120	70	
E3MCBC10C	95	50	150 or 2 x 70	95	150 or 2 x 70	95	
2 x E3MCBC10C	95	50	95	50	95	50	
E3MCBC10D	150 or 2 x 70	95	2 x 95	95	2 x 120	120	
2 x E3MCBC10D	150	95	150	95	150	95	

#### Easy UPS 3M 120-200 kVA UPS (Continued)

Commercial reference	120 kVA		160 kVA		200 kVA	
	DC (±, N) (mm <sup>2</sup> )	DC PE (mm <sup>2</sup> )	DC (±, N) (mm <sup>2</sup> )	DC PE (mm <sup>2</sup> )	DC (±, N) (mm <sup>2</sup> )	DC PE (mm <sup>2</sup> )
E3MCBC10E	150 or 2 x 70	95	2 x 95	95	2 x 120	120
2 x E3MCBC10E	150	95	150	95	150	95
E3MCBC10A+	95	95	95	95	95	95
E3MCBC10D	150	150	150	150	150	150
E3MCBC10B+ E3MCBC10E	95	95	95	95	95	95
	150	150	150	150	150	150

#### Easy UPS 3L 250-400 kVA UPS

Commercial	250 kVA		300 kVA		400 kVA		
reference	DC (±, N) (mm <sup>2</sup> )	DC PE (mm <sup>2</sup> )	DC (±, N) (mm <sup>2</sup> )	DC PE (mm <sup>2</sup> )	DC (±, N) (mm <sup>2</sup> )	DC PE (mm <sup>2</sup> )	
3 x E3MCBC7C	70	35	95	50	-	-	
2 x E3MCBC7D	95	50	95	50	-	-	
3 x E3MCBC7D	95	50	95	50	120	70	
2 x E3MCBC10A	150 or 2 x 70	95	150 or 2 x 70	95	150 or 2 x 70	95	
3 x E3MCBC10A	95	50	120	70	150	95	
E3MCBC10B	150 or 2 x 70	95	-	-	-	-	
2 x E3MCBC10B	150 or 2 x 70	95	150 or 2 x 70	95	150 or 2 x 70	95	
3 x E3MCBC10B	95	50	120	70	150	95	
E3MCBC10C	150 or 2 x 70	95	-	-	-	-	
2 x E3MCBC10C	120	70	150 or 2 x 70	95	150 or 2 x 70	95	
3 x E3MCBC10C	95	50	95	50	150	95	
E3MCBC10D	2 x 120	120	2 x 120	120	2 x 120	120	
2 x E3MCBC10D	150	95	2 x 95	95	2 x 120	120	
3 x E3MCBC10D	150	95	150	95	150	95	
E3MCBC10E	2 x 120	120	2 x 120	120	2 x 120	120	
2 x E3MCBC10E	150	95	2 x 95	95	2 x 120	120	
3 x E3MCBC10E	150	95	150	95	150	95	

#### Easy UPS 3L 500-600 kVA UPS

Commercial reference	500 kVA		600 kVA		
	DC (±, N) (mm²)	DC PE (mm <sup>2</sup> )	DC (±, N) (mm²)	DC PE (mm <sup>2</sup> )	
2 x E3MCBC10D	2 x 120	120	_	_	
3 x E3MCBC10D	2 x 120	120	2 x 120	120	
2 x E3MCBC10E	2 x 120	120	_	_	
3 x E3MCBC10E	2 x 120	120	2 x 120	120	

### **Recommended Cable Sizes for 208 V**

# **A A 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 70 mm<sup>2</sup> for Easy UPS 3M 50 kVA. The maximum allowable cable size is 150 mm<sup>2</sup> for Easy UPS 3M 60-100 kVA.

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

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

Cable sizes in this manual are based on table B.52.3 (52-C2) 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

Protective Earth (PE) cables are sized in accordance with table 54.3 of IEC 60364-4-54, Article 543.

If the ambient temperature is greater than 30  $^\circ\text{C}$ , larger conductors are to be selected in accordance with the correction factors of the IEC.

#### Easy UPS 3M 50-100 kVA UPS

Commercial reference	50 kVA		60 kVA	60 kVA		80 kVA		100 kVA	
	DC (±, N) (mm²)	DC PE (mm <sup>2</sup> )	DC (±, N) (mm²)	DC PE (mm <sup>2</sup> )	DC (±, N) (mm²)	DC PE (mm <sup>2</sup> )	DC (±, N) (mm²)	DC PE (mm <sup>2</sup> )	
E3MCBC7C	50	25	50	25	-	-	-	-	
2 x E3MCBC7C	35	16	35	16	35	16	50	25	
E3MCBC7D	50	25	70	35	70	35	-	-	
2 x E3MCBC7D	50	25	50	25	50	25	50	25	
E3MCBC10A	2 x 50	50							
2 x E3MCBC10A	-	-	95	50	95	50	95	50	
E3MCBC10B	2 x 50	50							
2 x E3MCBC10B	-	-	95	50	95	50	95	50	
E3MCBC10C	2 x 50	50							
2 x E3MCBC10C	-	-	95	50	95	50	95	50	
E3MCBC10D	2 x 70	70							
2 x E3MCBC10D	-	-	150	95	150	95	150	95	
E3MCBC10E	2 x 70	70							
2 x E3MCBC10E	-	-	150	95	150	95	150	95	
E3MCBC10A+ E3MCBC10D	-	_	95	95	95	95	95	95	
	-	_	150	150	150	150	150	150	
E3MCBC10B+ E3MCBC10E	-	-	95	95	95	95	95	95	
	-	-	150	150	150	150	150	150	

# **Torque Specifications**

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

# Environment

	Operating	Storage
Temperature	0 °C to 40 °C	-15 °C to 40 °C

### 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 room should be ventilated to prevent the concentration of the dihydrogen generated by the battery cabinet. Recommended minimum airflow: 2.41 m<sup>3</sup>/h.



# **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.

# **Installation Procedure**



**NOTE:** The distance between the battery bank and the UPS must not exceed 200 m. Contact Schneider Electric for installations with a longer distance.

#### 1. Perform one of the following:

- Connect the Signal Cables to an Easy UPS 3M, page 22, or
- Connect the Signal Cables to an Easy UPS 3L, page 25.
- 2. Connect the Power Cables, page 29.
- 3. Final Installation, page 32.

**Post-requisite:** For moving or decommissioning the classic battery cabinet after installation has been completed, please see Decommission or Move the Classic Battery Cabinet to a New Location, page 34.

# **Optional Cable Kits for Line-Up Solutions**

Two cable kits are available:

- E3MOPT003: Cable kit that includes power cables and signal cables for installation of one classic battery cabinet adjacent to the 60–100 kVA UPS. This cable kit is for the 700 mm wide Easy UPS 3M Classic Battery Cabinet.
- E3MOPT004: Cable kit that includes power cables and signal cables for installation of one classic battery cabinet adjacent to the 60–100 kVA UPS. This cable kit is for the 1000 mm wide Easy UPS 3M Classic Battery Cabinet.

# **Connect the Signal Cables to an Easy UPS 3M**

**NOTE:** Route the signal cables separately from the power cables to ensure sufficient isolation.

 ${\bf NOTE:}$  Use double isolated signal cables. The signal cables must have a minimum rating of 600 V.

**NOTE:** The length of the battery temperature signal cable is 5m.

- 1. Open the front door of the classic battery cabinet(s).
- 2. Lockout/Tagout the battery breaker.
- 3. Remove the left and right breaker protection plates.

#### 700 mm Wide Classic Battery Cabinet





4. Install the temperature sensor provided with the UPS in the top of the classic battery cabinet.

### **A**WARNING

#### **HAZARD OF FIRE**

Position the temperature sensor as described to ensure correct temperature measurements.

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

#### 700 mm Wide Classic Battery Cabinet





- 5. Route the battery temperature cable through the bottom of the classic battery cabinet to the UPS dry contact terminals BAT\_T–1 and BAT\_T–2.
- 6. Remove the terminal cover from the left side of the battery breaker.



7. Remove the cover from the battery breaker and connect the signal cables to the breaker.

**NOTE:** AUX switch signal cables and fuse cables are SELV and must be double isolated from the DC cables.



8. Route the signal cables from behind the battery breaker and out through the bottom of the classic battery cabinet and connect the signal cables:

#### **Rear View of the Battery Breaker**



- a. Connect the AUX switch signal cables from the classic battery cabinet to J5–1 and J5–2 in the UPS.
- b. Connect the undervoltage trip coil signal cables from the battery breaker to J6–1 and J6–4 in the UPS.
- c. Fasten the signal cables with cable ties (provided) to the cable relief.
- 9. Reinstall the breaker cover on the battery breaker.

# **Connect the Signal Cables to an Easy UPS 3L**

**NOTE:** Route the signal cables separately from the power cables to ensure sufficient isolation.

 $\ensuremath{\textbf{NOTE:}}$  Use double isolated signal cables. The signal cables must have a minimum rating of 600 V.

NOTE: The length of the battery temperature signal cable is 5m.

- 1. Open the front door of the classic battery cabinet(s).
- 2. Lockout/Tagout the battery breaker.
- 3. Remove the left and right breaker protection plates.

#### 700 mm Wide Classic Battery Cabinet





4. Install the temperature sensor provided with the UPS in the top of the classic battery cabinet.

### 

#### HAZARD OF FIRE

Position the temperature sensor as described to ensure correct temperature measurements.

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

1000 mm Wide Classic Battery Cabinet





- 5. Route the battery temperature cable through the bottom of the classic battery cabinet to the UPS dry contact terminal J12 (NTC).
- 6. Remove the terminal cover from the left side of the battery breaker.



7. Remove the cover from the battery breaker and connect the signal cables to the breaker.

**NOTE:** AUX switch signal cables and fuse cables are SELV and must be double isolated from the DC cables.



8. Route the signal cables from behind the battery breaker and out through the bottom of the classic battery cabinet and connect the signal cables:

#### Rear View of the Battery Breaker



- a. Connect the AUX switch signal cables from the battery breakers and fuses to J4-3/J4-4, J5-1/J5-2, J5-3/J5-4 in the UPS.
- b. Connect the undervoltage trip coil signal cables from the battery breakers to J3-1/J3-2, J3-3/J3-4, J4-1/J4-2 in the UPS.
- c. Fasten the signal cables with cable ties (provided) to the cable relief.
- 9. Reinstall the breaker cover on the battery breaker.

# **Connect the Power Cables**

### **A A DANGER**

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

Perform a total power off of the UPS before connecting the battery cables to the classic battery cabinet(s).

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

**NOTE:** An E3MCBC10D or E3MCBC10E battery solution consists of two battery cabinets: one cabinet with a battery breaker and batteries and one cabinet with only batteries.

- 1. Lockout/Tagout the battery breaker.
- 2. Route the PE cable through the bottom of the classic battery cabinet and connect the PE cable.

#### 700 mm Wide Classic Battery Cabinet





- 3. Route the DC cables from the UPS through the bottom of the classic battery cabinet and connect the battery cables (N, DC+, DC-). Use lock washers (not provided) when connecting the DC cables.
- 4. Reinstall the terminal cover on the left side of the battery breaker and remove the terminal cover from the right side of the battery breaker.



#### 5. For E3MCBC10D or E3MCBC10E classic battery solution:

- a. Connect the PE cable between the two classic battery cabinets.
- b. Connect the battery cables (N, Batt+, Batt-) from the batteries in the second classic battery cabinet to the right side of the battery breaker in the first classic battery cabinet.

#### E3MCBC10D or E3MCBC10E Classic Battery Solution



6. Reinstall the breaker protection plates.



#### 700 mm Wide Classic Battery Cabinet



7. Interconnect the batteries on each shelf in the classic battery cabinet(s) and connect to the right side of the battery breaker. Refer to the connection diagram on the inside of the front door.

### **A A DANGER**

#### 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.

# **Final Installation**

1. Install the provided kick plates on the front, rear, and sides of the classic battery cabinet.



**NOTE:** Only remove the kick plates when following the procedure for decommissioning or moving the classic battery cabinet. See Decommission or Move the Classic Battery Cabinet to a New Location, page 34 for details.

2. Close the door(s). On the 1000 mm wide classic battery cabinet, install two screws to close the left door.



# Decommission or Move the Classic Battery Cabinet to a New Location

- 1. Open the door(s). On the 1000 mm wide classic battery cabinet, remove two screws to open the left door.
- 2. Lockout/Tagout the battery breaker in the OFF (open) position.
- 3. Remove the breaker protection plates.

#### 700 mm Wide Classic Battery Cabinet



#### 1000 mm Wide Classic Battery Cabinet



4. Remove the terminal cover from the left side of the battery breaker.



5. Disconnect and remove the DC cables, N cables, and PE cable from the battery breaker.

#### 700 mm Wide Classic Battery Cabinet





#### 6. For E3MCBC10D or E3MCBC10E classic battery solution:

- a. Disconnect the PE cable between the two classic battery cabinets.
- b. Disconnect the battery cables (N, Batt+, Batt-) from the batteries in the second classic battery cabinet from the right side of the battery breaker in the first classic battery cabinet.

#### E3MCBC10D or E3MCBC10E Classic Battery Solution



7. Disconnect and remove the interconnections between the batteries on each shelf. Disconnect and remove the battery cables from the right side of the battery breaker. Refer to the connection diagram on the inside of the front door of the classic battery cabinet.

### **A A DANGER**

#### 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 and burns by high shortcircuit current. The likelihood of such shock can be reduced if such grounds are removed during installation and maintenance by a skilled person (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.

8. Remove the batteries from the shelves. Recycle or reuse the batteries as appropriate.



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.

- Recycle lead-acid batteries correctly. Batteries contain lead and dilute sulfuric acid.
- Dispose of the batteries in accordance with country and local regulations.

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

9. Reinstall the terminal cover on the left side of the battery breaker.



- 10. Disconnect and remove any signal cables from the classic battery cabinet.
- 11. Reinstall the breaker protection plates.

#### 700 mm Wide Classic Battery Cabinet





12. Close the door(s). On the 1000 mm wide classic battery cabinet, install two screws to close the left door.

#### 1000 mm Wide Classic Battery Cabinet



13. Remove the kick plates from the front, rear, and sides of the classic battery cabinet.

14. Lift the classic battery cabinet from the left or right side with a pallet truck.

### 

#### **TIPPING HAZARD**

- Do not lift the cabinet with a forklift. Use a pallet truck
- Do not lift the cabinet from the front or from the rear. Lift from the left or right side.

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



- 15. Perform one of the following:
  - Decommission the classic battery cabinet, OR
  - Move the classic battery cabinet to a new location to install it.
- 16. **Only for installing the classic battery cabinet in new a location**: Reinstall the batteries in the classic battery cabinet after moving it to the new location. Follow the installation manual to install battery interconnections, signal cables, power cables, etc. See Installation Procedure, page 20 for installation overview.

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