STEP-UPS/24DC/24DC/3/46WH

Uninterruptible power supply



Data sheet
110303_en_01

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1 Description

The product described here is an uninterruptible power supply (UPS) with integrated battery module. In the event of mains breakdowns or failures, it switches to battery operation without interruption so that connected loads continue to be consistently supplied.

Features

Maximum energy efficiency

– > 98% efficiency in mains operation with charged battery module

Comprehensive signaling

– LED indicators, switching outputs

Integrated battery module

– High power density due to lithium-ion technology

Technical data (short form)	
Input voltage range	22.5 V DC ... 29.5 V DC
Nominal output voltage	24 V DC
Output current	3 A (0 °C ... 40 °C)
Buffer time	90 min (1 A) 45 min (2 A) 30 min (3 A) 22 min (4 A)
MTBF (IEC 61709, SN 29500)	> 1401000 h (40 °C)
Efficiency (for charged battery , typ.)	> 98 %
Ambient temperature (operation)	0 °C ... 40 °C
Dimensions W/H/D	108 mm / 90 mm / 71 mm
Weight	532 g
Battery technology	Lithium-ion
Nominal voltage (Battery module)	18.5 V DC
Nominal capacity	46 Wh

Observe this note

All technical specifications are nominal and refer to a room temperature of 25 °C and 70% relative humidity at 2000 m above sea level.

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3 Ordering data

Description	Type	Item no.	Pcs./Pkt.
Uninterruptible power supply with integrated battery. The STEP-BAT/LI-ION/18.5DC/46WH battery can be re-ordered separately.	STEP-UPS/24DC/24DC/3/46WH	1081430	1

Accessories	Type	Item no.	Pcs./Pkt.
STEP-BAT Battery module (device with battery)	STEP-BAT/LI-ION/18.5DC/46WH	1081355	1
Primary-switched power supply unit STEP POWER, Screw connection, DIN rail mounting, input: 1-phase, output: 24 V DC / 4.2 A	STEP-PS/ 1AC/24DC/4.2	2868664	1
Primary-switched power supply unit, STEP POWER, Push-in connection, DIN rail or direct mounting, input: 1-phase, output: 24 V DC / 4 A, adjustable from 22 V DC ... 27 V DC	STEP3-PS/1AC/24DC/4/PT	1140066	1
Primary-switched power supply unit, STEP POWER, Push-in connection, DIN rail or direct mounting, input: 1-phase, output: 24 V DC / 5 A, adjustable from 22 V DC ... 27 V DC	STEP3-PS/1AC/24DC/5/PT	1088478	1



You will find the latest accessories for the item at phoenixcontact.com/products.

4 Technical data

Input data	
Nominal input voltage	24 V DC
Input voltage range	22.5 V DC ... 29.5 V DC
Max. current consumption No load Charging process	 4.7 A < 0.5 A
Fixed backup threshold	< 22.5 V
Variable connect threshold	1 V / 1 s
Typical response time	< 0.5 s
Input fuse, integrated	7 A (slow-blow, internal)
Input connection data	
Connection method	Screw connection
Conductor cross section, rigid	0.2 mm² ... 2.5 mm²
Conductor cross section, flexible	0.2 mm² ... 2.5 mm²
Conductor cross section flexible, with ferrule with plastic sleeve	0.2 mm² ... 2.5 mm²
Conductor cross section flexible, with ferrule without plastic sleeve	0.2 mm² ... 2.5 mm²
Conductor cross section AWG/kcmil	24 ... 12
Stripping length	6.5 mm
Screw thread	M3
Tightening torque	0.5 Nm ... 0.6 Nm
General output data	
Nominal output voltage	24 V DC
Nominal output current (I_N)	3 A (0 °C ... 40 °C)
Output current limit	In mains mode according to connected upstream current limiting device > 4 A (Battery operation)
Connection in parallel	no
Connection in series	no
Output data (mains operation)	
Nominal output voltage	24 V DC
Output voltage range	$U_{Out} = U_{In}$ - 0.3 V DC
Nominal output current I_N	3 A (0 °C ... 40 °C)
Output current I_{max}	4 A (0 °C ... 35 °C)
Power dissipation No-load Nominal load I_{max}	 0.6 W 2 W 4.4 W
Efficiency (for charged battery , typ.)	> 98 %

Output connection data	
Connection method	Screw connection
Conductor cross section, rigid	0.2 mm² ... 2.5 mm²
Conductor cross section, flexible	0.2 mm² ... 2.5 mm²
Conductor cross section flexible, with ferrule with plastic sleeve	0.2 mm² ... 2.5 mm²
Conductor cross section flexible, with ferrule without plastic sleeve	0.2 mm² ... 2.5 mm²
Conductor cross section AWG/kcmil	24 ... 12
Stripping length	6.5 mm
Screw thread	M3
Tightening torque	0.5 Nm ... 0.6 Nm

Output data (battery operation)	
Nominal output voltage	24 V DC
Output voltage range	23 V DC ... 26.5 V DC (constantly regulated to input voltage (mains operation))
Nominal output current I_N	3 A (0 °C ... 40 °C)
Output current I_{max}	4 A (0 °C ... 35 °C)
Power dissipation No-load Nominal load I_{max}	 1.1 W 3.8 W 10 W
Efficiency	> 95 %

Battery module	
Battery technology	Lithium-ion
Nominal capacity	46 Wh
Charging current	0.4 A
Charging time	max. 5.5 h
Nominal voltage	18.5 V DC
End-of-charge voltage	18.5 V DC ... 21 V DC
Battery fuse	yes, electronic 16 A
Battery presence check (time interval)	60 s
Quality check of battery	yes, with each charge and cyclically once per month
Deep discharge protection	< 15 V DC
Buffer period	90 min (1 A) 45 min (2 A) 30 min (3 A) 22 min (4 A)
Service life	500 full cycles
Latest startup	12 Months (25 °C)

Status and diagnostic indicator POWER IN OK	
Status indication	LED (green) , static on
Status and diagnostic indicator overload	
Status indication	LED (green) , flashing
Status and diagnostic indicator / signal output Battery Mode	
Switching output	Transistor
Status indication	LED (yellow) , static on
Status and diagnostic indicator / signal output Battery Charge	
Switching output	Transistor
Status indication	LED (yellow) , flashing
Status and diagnostic indicator / signal output Alarm	
Switching output	Transistor
Status indication	LED (red) , static on
Status and diagnostic indicator Service/Battery Error	
Status indication	LED (red) , flashing
Remote control	
Version 1 : Output R2 to input R1	Plug-in bridge
Version 2 : Input R1	+ 24 V DC
Input current R1	20 mA
Signal connection data	
Conductor cross section, rigid	0.2 mm² ... 2.5 mm²
Conductor cross section, flexible	0.2 mm² ... 2.5 mm²
Conductor cross section flexible, with ferrule with plastic sleeve	0.2 mm² ... 2.5 mm²
Conductor cross section flexible, with ferrule without plastic sleeve	0.2 mm² ... 2.5 mm²
Conductor cross section AWG/kcmil	24 ... 12
Stripping length	6.5 mm
Screw thread	M3
Tightening torque	0.5 Nm ... 0.6 Nm
Housing	
Housing material	PC
Foot latch material	POM (Polyoxymethylene)
Dimensions W/H/D	108 mm / 90 mm / 71 mm
Normal mounting position	horizontal DIN rail NS 35, EN 60715
General data	
Weight	532 g
MTBF (IEC 61709, SN 29500)	> 1401000 h (40 °C)

Security	
Degree of protection	IP20
Protection class	III

Ambient conditions	
Ambient temperature (operation)	0 °C ... 40 °C
Ambient temperature (storage/transport)	-20 °C ... 45 °C
Humidity at 25°C, non-condensing	≤ 95 %
Degree of pollution in acc. with EN 50178	2
Vibration (operation)	< 15 Hz, amplitude ±2.5 mm (according to IEC 60068-2-6) 15 Hz ... 150 Hz, 2.3g, 90 min.
Shock	18 ms, 30g, in each space direction (according to IEC 60068-2-27)
Climatic class	3K22 (in accordance with EN 60721)
Installation height	max. 2000 m

Standards	
Electrical safety (of information technology equipment)	IEC 62368-1 (SELV)
Electronic equipment for use in electrical power installations	EN 50178/VDE 0160 (PELV)

Approvals	
UL approvals	UL/C-UL listed UL 508 UL/C-UL Recognized UL 60950-1



You will find the latest approvals for the item at phoenixcontact.com/products.

Conformance with EMC Directive 2014/30/EU		
Immunity in accordance with EN 61000-6-2		
	EN 61000-6-2 requirement	**tested**
Electrostatic discharge EN 61000-4-2		
Housing contact discharge	4 kV (Test Level 2)	6 kV (Test Level 3)
Housing air discharge	8 kV (Test Level 3)	8 kV (Test Level 3)
Comments	Criterion B	Criterion A
Electromagnetic HF field EN 61000-4-3		
Frequency range	80 MHz ... 1 GHz	80 MHz ... 1 GHz
Test field strength	10 V/m (Test Level 3)	10 V/m (Test Level 3)
Frequency range	1.4 GHz ... 6 GHz	1 GHz ... 6 GHz
Test field strength	3 V/m (Test Level 2)	10 V/m (Test Level 3)
Comments	Criterion A	Criterion A
Fast transients (burst) EN 61000-4-4		
Input	2 kV (Test Level 3 - asymmetrical)	2 kV (Test Level 3 - asymmetrical)
Output	2 kV (Test Level 3 - asymmetrical)	2 kV (Test Level 3 - asymmetrical)
Signal	1 kV (Test Level 3 - asymmetrical)	2 kV (Test Level 4 - asymmetrical)
Comments	Criterion B	Criterion A
Conducted interference EN 61000-4-6		
Input/Output/Signal	asymmetrical	asymmetrical
Frequency range	0.15 MHz ... 80 MHz	0.15 MHz ... 80 MHz
Voltage	10 V (Test Level 3)	10 V (Test Level 3)
Comments	Criterion A	Criterion A

Key	
Criterion A	Normal operating behavior within the specified limits.
Criterion B	Temporary impairment to operational behavior that is corrected by the device itself.

Emitted interference in acc. with EN 61000-6-3	
Radio interference voltage in acc. with EN 55011	EN 55011 (EN 55022) Class B, area of application: Industry and residential
Emitted radio interference in acc. with EN 55011	EN 55011 (EN 55022) Class B, area of application: Industry and residential

5 Safety regulations and installation notes

5.1 Symbols used

Instructions and dangers are labeled with the corresponding symbols in this installation note.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety measures that follow this symbol to avoid possible personal injuries.

There are different categories of personal injury that are indicated by a signal word.



WARNING

This indicates a hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION

This indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

The following symbols are used to indicate potential damage, malfunctions, or more detailed sources of information.



NOTE

This symbol together with the signal word NOTE and the accompanying text alert the reader to a situation which may cause damage or malfunction to the device, hardware/software, or surrounding property.



This symbol and the accompanying text provide the reader with additional information or refer to detailed sources of information.



This symbol and the accompanying text provide additional information on the proper disposal of electronic components.



This symbol and the accompanying text provide additional information on recycling.

5.2 Safety and warning notes



WARNING: Danger to life by electric shock!

- Only skilled persons may install, start up, and operate the device.
- For indoor use only.
- Never carry out work when voltage is present.
- Establish connection correctly and ensure protection against electric shock.
- Cover termination area after installation in order to avoid accidental contact with live parts (e. g., installation in control cabinet).
- This device receives power from more than one source - disconnect the input power source and the battery module to de-energize the device before servicing.
- Provide a switch/circuit breaker close to the device at the DC input and the DC output respectively, which are marked as the disconnecting device for this device.
- Keep flames, embers or sparks away from the module.
- Do not disconnect the fuse and/or battery module under hazardous location conditions.

NOTE

- Observe the national safety and accident prevention regulations.
- Assembly and electrical installation must correspond to the state of the art.
- The uninterruptible power supply is a built-in device. The protection class IP20 of the device is meant to be applied in a clean and dry environment.
- The device must be installed in a control cabinet that can be locked and only opened by specialist staff.
- Observe mechanical and thermal limits.
- Ensure sufficient convection. The minimum distance (above/below) is shown in the relevant figure.
- Use a current-limited source (STEP POWER) or a suitable fuse at the DC input of the UPS. Mark the fuse that is used here as the disconnecting device. Make sure that the wiring on the primary side and the secondary side is adequately dimensioned and protected.
- Use ferrules for flexible cables.
- For the connection parameters for wiring the power supply, such as the required stripping length with and without ferrule, refer to the technical data section.
- Protect the device against foreign bodies penetrating it, e.g., paper clips or metal parts.
- The uninterruptible power supply is maintenance-free. Repairs may only be carried out by the manufacturer. The warranty no longer applies if the housing is opened.
- The uninterruptible power supply may only be used for its intended use.
- Improper use invalidates the device protection.

UL note

- Use copper cables for operating temperatures of
  >75 °C (ambient temperature <55 °C)
  >90 °C (ambient temperature <75 °C).

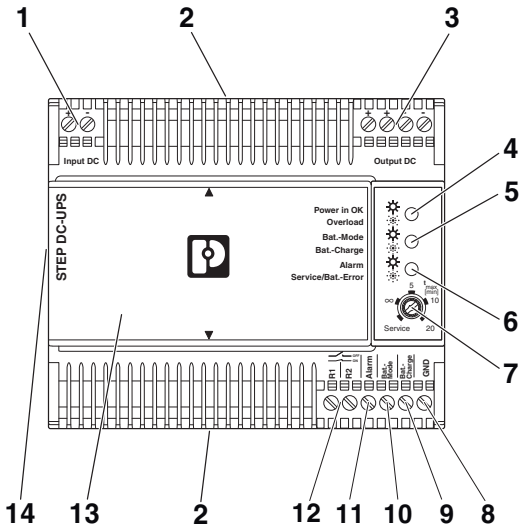
More follows

- The permanent output power P_N is limited at an ambient temperature of 40°C. Observe the maximum output powers for the respective operating conditions.
- The switching outputs are active outputs according to SELV. These may only be operated on permitted SELV circuits.
- Keep these instructions in a safe place – this data sheet contains important safety notes that must be observed during installation and maintenance of the device and battery module.

6 Structure

6.1 Function elements

Figure 1 Position of the function elements

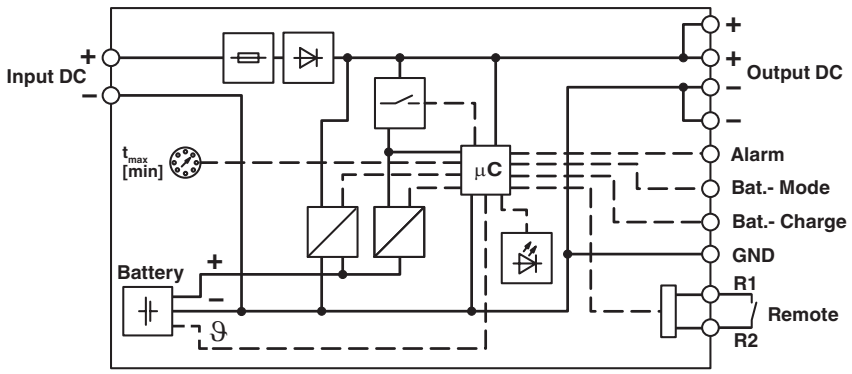


Key

No.	Connection terminal blocks and function elements
1	Connection terminal blocksinput voltage: Input DC +/-
2	Mounting flange for panel mounting (back of device)
3	Connection terminal blocks output voltage: Output DC +/-
4	LED status indicator (green) Power in OK (on), Overload (flashing)
5	LED status indicator (yellow) Bat.-Mode (on), Bat.-Charge (flashing)
6	LED status indicator (red) Alarm (on), Service/Bat.-Error (flashing)
7	Rotary selector switch for setting the buffer time t_{max} [min]
8	Reference potential GND for active switching outputs
9	Active signal output battery charge
10	Active signal output battery mode
11	Active signal output alarm
12	External switching input R1/R2: plug-in bridge inserted in delivery state R1/R2 closed: the load is supplied in battery mode. R1/R2 open: the DC output is switched off in battery mode.
13	Lithium-ion battery module (pluggable)
14	Integrated snap-on foot for DIN rail mounting (back of device)

6.2 Block diagram

Figure 2 Block diagram



Key

Element	Meaning
	Fuse
	Decoupling
	Switch
	Microprocessor
	Charging unit
	LED
	Temperature sensor
	Selector switch
	Battery module

6.3 Device dimensions and keep-out areas

Figure 3 Device dimensions

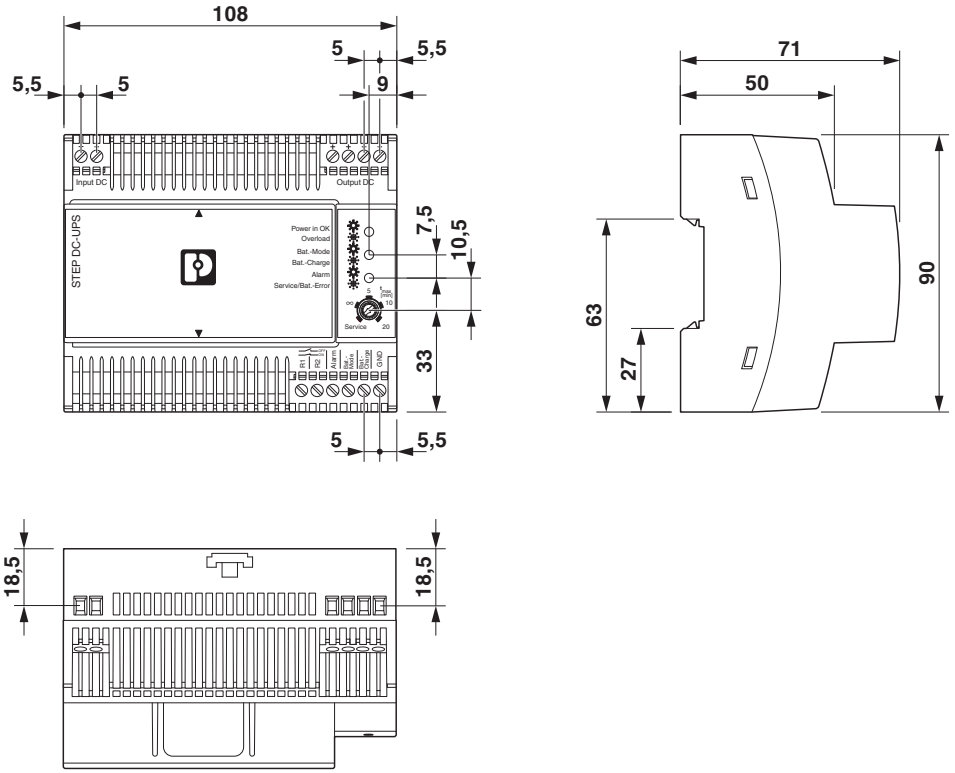
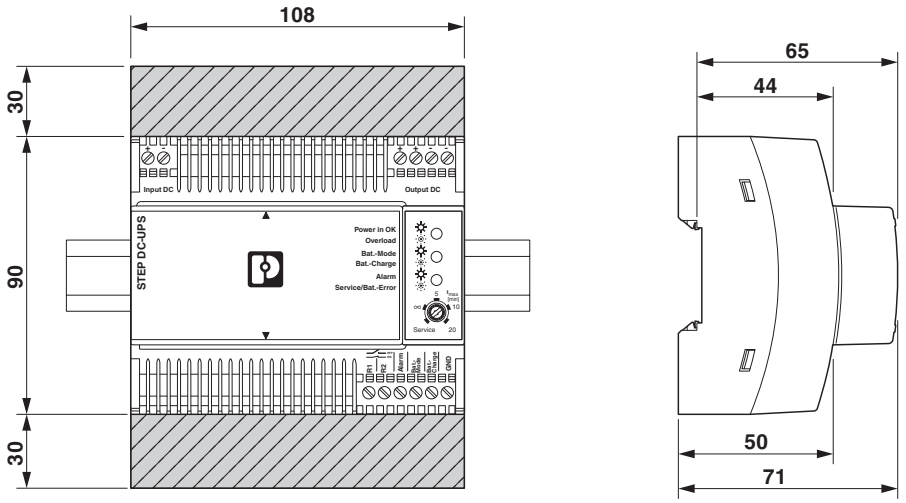


Figure 4 Device dimensions and keep-out areas



7 Mounting and removing

7.1 Convection

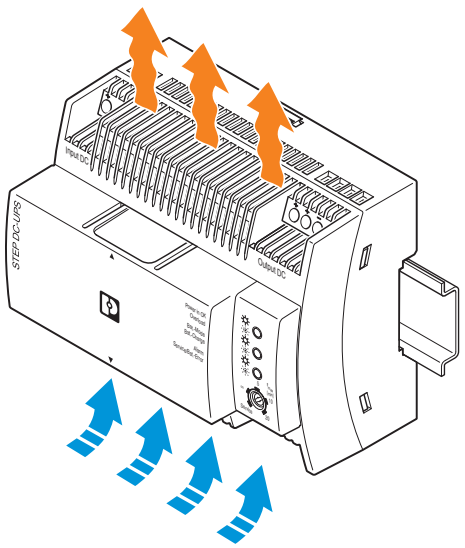
NOTE

Depending on the ambient temperature and load on the uninterruptible power supply, the housing can become hot.

NOTE: enable convection

In order to ensure sufficient convection, we recommend a minimum vertical distance of 30 mm to the other devices.

Figure 5 Convection



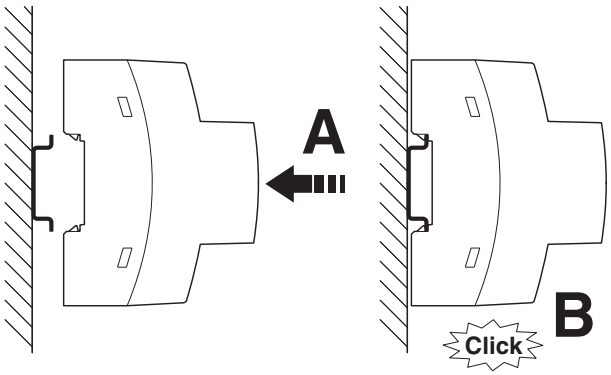
7.2 DIN rail mounting

The uninterruptible power supply can be installed on all 35 mm DIN rails in accordance with EN 60715. Simply snap the UPS directly onto the DIN rail.

To mount the device on the DIN rail, proceed as follows:

1. In the normal mounting position, the UPS is mounted on the DIN rail from the front. When doing so, ensure that the integrated snap-on foot rests completely on the DIN rail (A).
2. Push the device onto the DIN rail until the snap-on foot audibly snaps in (B).
3. Check that the device is securely mounted on the DIN rail.

Figure 6 Mounting on a DIN rail

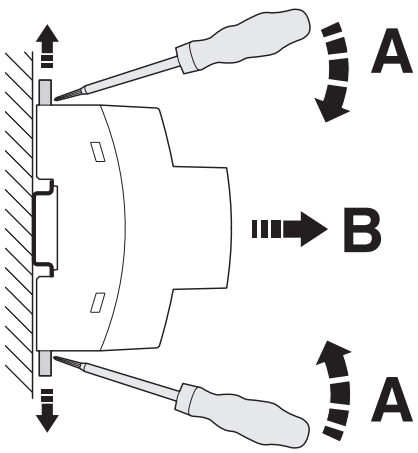


7.3 Mounting on DIN rail end

To remove the device from the DIN rail, proceed as follows:

1. Take a suitable screwdriver and insert it into the interlock opening on the snap-on foot.
2. Release the latch by levering the screwdriver downwards (A).
3. Then lift the device from the DIN rail (B).

Figure 7 Removal from the DIN rail

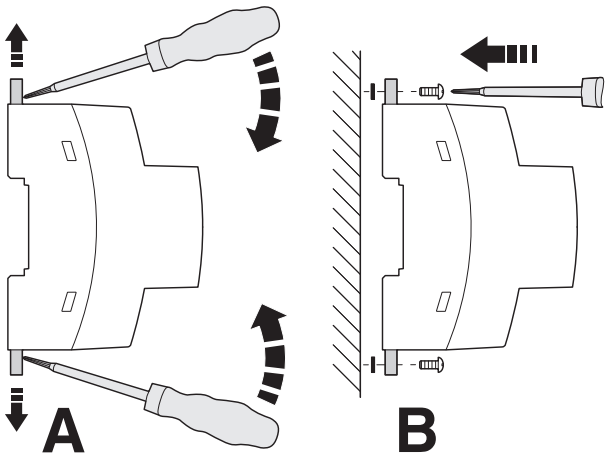


7.4 Panel mounting

To mount the device directly on a mounting surface, proceed as follows:

1. Two M4 cylinder screws (DIN EN ISO 1207) are needed to screw-mount the device.
2. Drill two fixing holes with M4 threads and a hole clearance of 98 mm in the mounting location.
3. Push the mounting flanges (orange base latch) for fixing to the mounting surface upwards and downwards out of the housing base.
4. Position a washer (M4 x 0.8 mm) under each of the base latches. Then screw the device onto the mounting surface using the two M4 cylinder screws.
5. Check that the device is securely attached to the mounting surface.

Figure 8 Panel mounting



7.5 Panel mounting

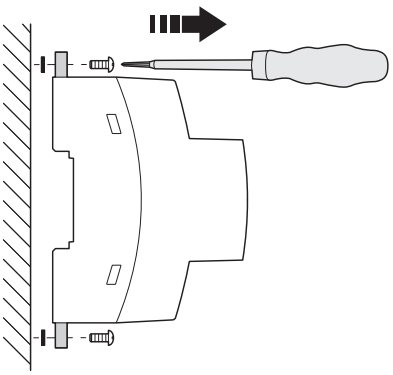
WARNING: Danger due to short circuit

When unscrewing and removing the M4 cylinder screws, ensure that none fall into your application.

Proceed as follows to remove the device:

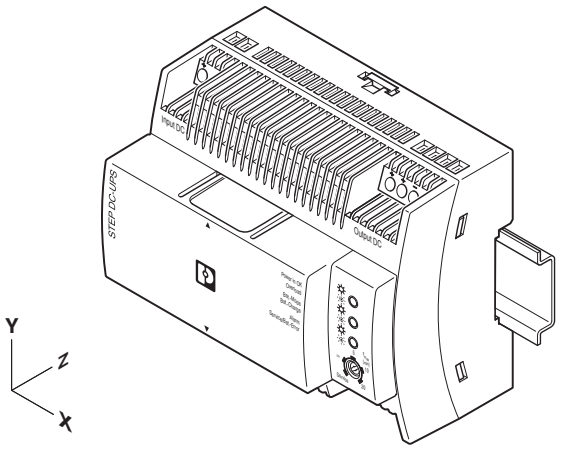
1. Loosen one of the two M4 cylinder screws used to secure the device.
2. Remove the M4 cylinder screw.
3. Loosen the second M4 cylinder screw and then remove the device from the mounting surface.

Figure 9 Wall removal



7.6 Normal mounting position

The uninterruptible power supply can be snapped onto all DIN rails in accordance with EN 60715. It should be mounted horizontally in the normal mounting position.

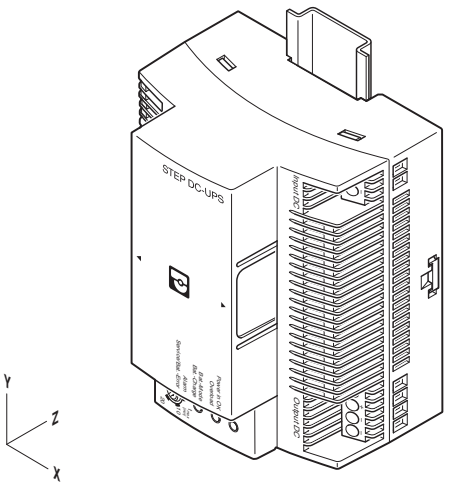


7.7 Alternative mounting positions

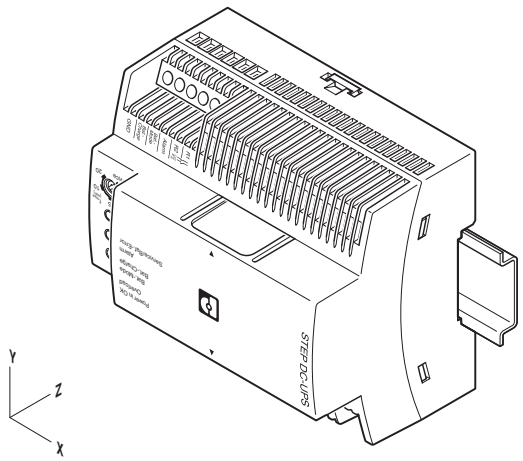
Alternative mounting positions are possible.

There is no voltage or position-dependent derating.

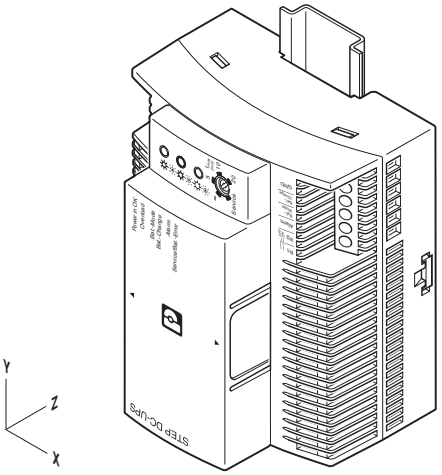
Rotated mounting position 90° Z-axis



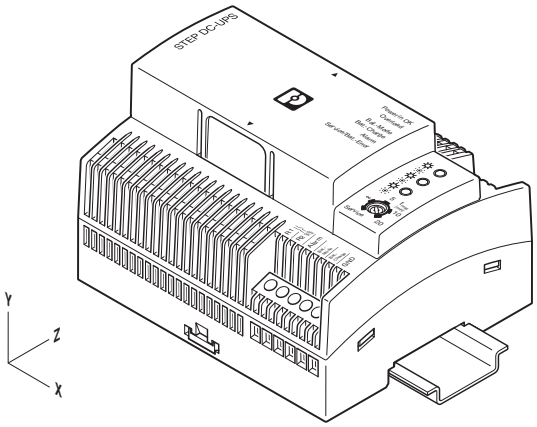
Rotated mounting position 180° Z-axis



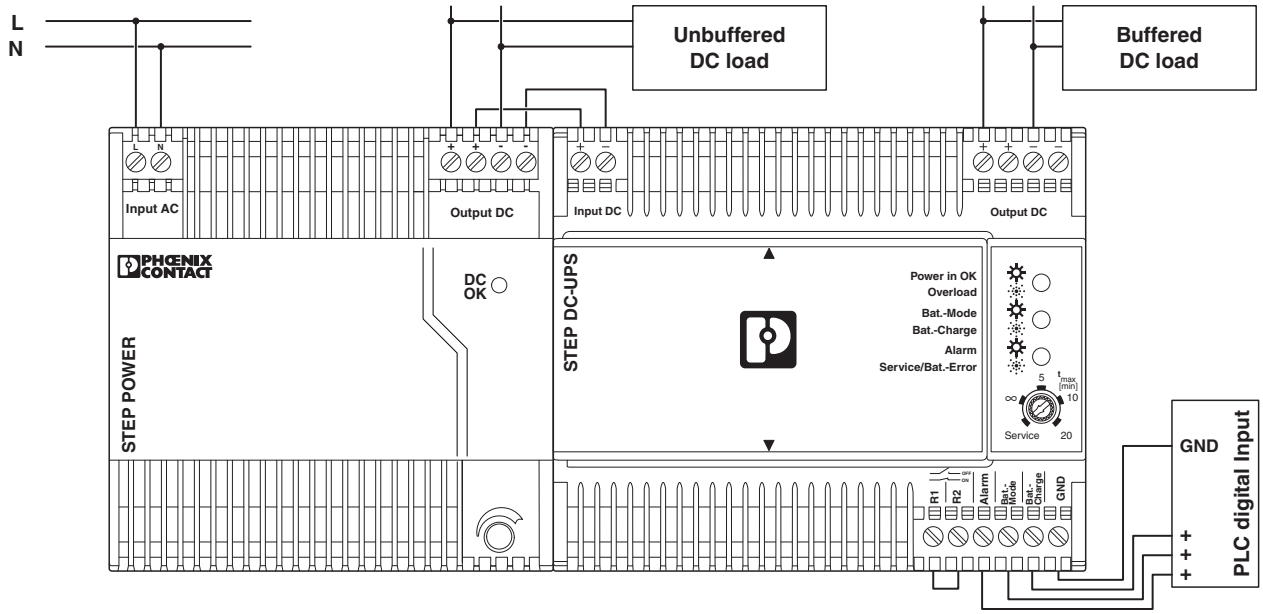
Rotated mounting position 270° Z-axis



Rotated mounting position 90° X-axis



8 Installation of individual components



The image is a schematic representation of the design and does not contain all parts.

Observe the installation instructions.

Power supply

Use a current-limited source (e.g., STEP POWER power supply) or connect a suitable fuse upstream.

CAUTION

It must be possible to disconnect the power supply unit connected upstream (e.g., STEP POWER) from the outside (e.g., by line protection on the primary side).

NOTE

To ensure symmetrical current distribution, all cable connections from the power supply unit to the busbar must be the same length and have the same conductor cross section.

UL note:

Use copper cables with an operating temperature > 75°C (ambient temperature < 55°C) and > 90°C (ambient temperature < 75°C).

STEP-UPS uninterruptible power supply

- Input: the input is supplied with 22.5 ... 29.5 V DC.
- Output: in the event of mains interruption or failure, the connected DC load is supplied with voltage without interruption.
- Battery module: the required power is made available by the integrated battery module.
- Signal R1, R2: activation/deactivation of the UPS functionality

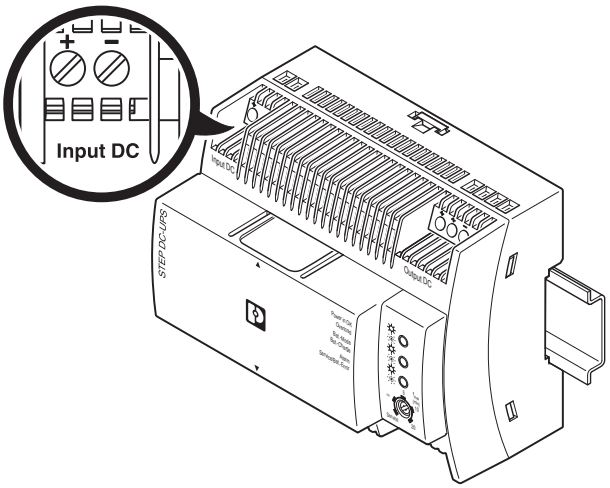
9 Device connection terminal blocks

For the connection parameters, including the required stripping length for wiring with and without ferrule, refer to the Section: Technical data.

9.1 DC input connection terminal blocks

The input voltage is connected via the connection terminal blocks:
Input DC 24 V.

Figure 10 Input voltage connection terminal blocks: Input DC 24 V



If loads must not be supplied in the event of a mains breakdown or failure, they must be connected directly to the output of the power supply as unbuffered DC load.

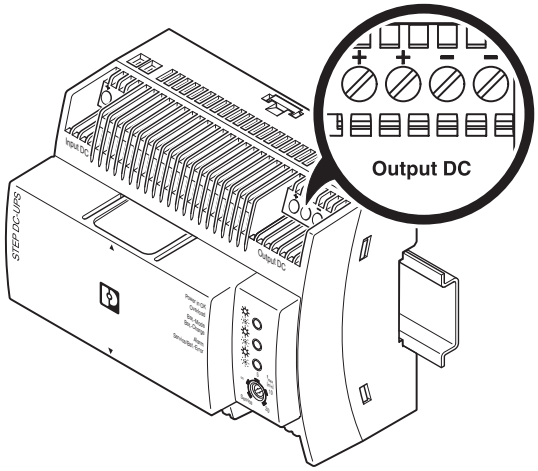
Protection of the primary side

Use a current-limited source (e.g., STEP POWER power supply) or connect a suitable fuse upstream.

All cables must have large cross sections in order to keep voltage drops as small as possible.

9.2 DC output connection terminal blocks

The output voltage is connected via the connection terminal blocks: Output DC 24 V.



10 Operating modes

10.1 Mains operation

In mains operation (DC input voltage present), the load connected to the output of the uninterruptible power supply is supplied by the mains.

The output voltage corresponds to the applied input voltage reduced by 0.3 V. The input voltage is monitored and supplied by the UPS.

10.2 Battery operation

In battery operation, the load connected to the DC output of the uninterruptible power supply is supplied by the battery module.

The output voltage in battery operation corresponds to the previous output voltage.

10.3 Charging the battery module

In mains operation of the uninterruptible power supply, supplying the load connected to the DC output of the UPS is of paramount importance. The battery module is charged using the power reserve of power supply.

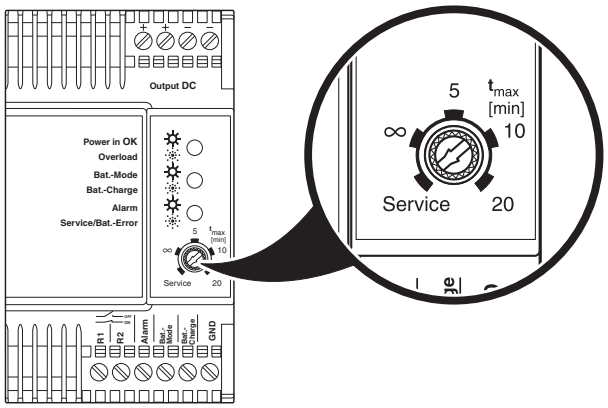
The charging time of the battery module depends on the capacity and the power supplied by the power supply. The maximum charging time can last up to several hours.

11 Operation

11.1 Setting the buffer time

You can set the time for exiting battery mode via the rotary selector switch on the front of the device. For this purpose use a screwdriver.

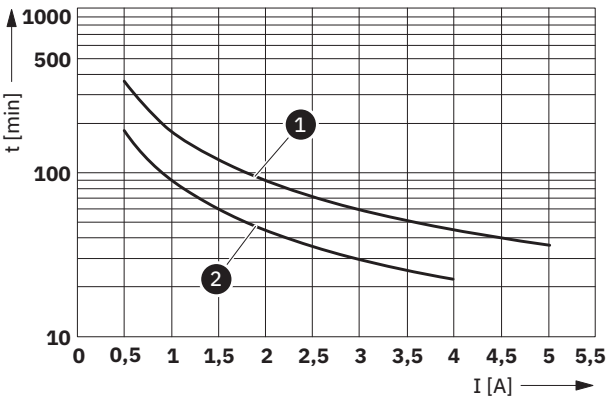
Figure 11 Rotary selector switch



t_{max} [min] setting	Meaning
5, 10, 20	The UPS switches off after the set buffer time.
∞ (unlimited, delivery state)	Buffering with the total stored power

Using the chart select the resulting values for the buffer time and discharge current.

Figure 12 Buffer time/discharge current diagram



❶ Buffer time: STEP-UPS/12DC/12DC/4/46WH
❷ Buffer time: STEP-UPS/24DC/24DC/3/46WH

11.2 Remote control (contact R1, R2)

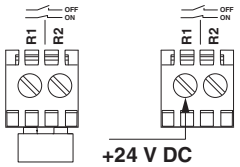
Battery operation of the UPS can be switched on and off via a signal to contacts R1/R2. Shutdown can take place during mains operation or active battery operation.

Remote shutdown is deactivated

UPS in function (delivery state)

– The "R1" and "R2" terminal points are short circuited (delivery with plug-in bridge) OR 24 V DC is present at terminal point "R1".
– In the event of a voltage supply failure, the UPS switches over to battery mode.

Figure 13 Remote shutdown is deactivated



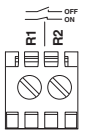
NOTE:

In the event of a supply voltage failure, the UPS switches over to battery operation. The load connected to the DC output is supplied by the battery module.

Remote shutdown is activated

– Terminal points “R1” and “R2” are not short circuited and 0 V is applied at terminal point “R1”.
– In the event of a voltage supply failure, the UPS does not switch over to battery mode. The device switches off.

Figure 14 Remote shutdown active



Example 1

The remote shutdown can be used to suppress the buffering of selective machine shutdowns. In doing so, the auxiliary contact of the main switch is connected to R1 and R2 connection terminal blocks.

Example 2

End the buffering at a specific time (e.g., following shutdown of another machine part). Remote shutdown can be activated with a relay (N/C contact).

11.3 Battery replacement

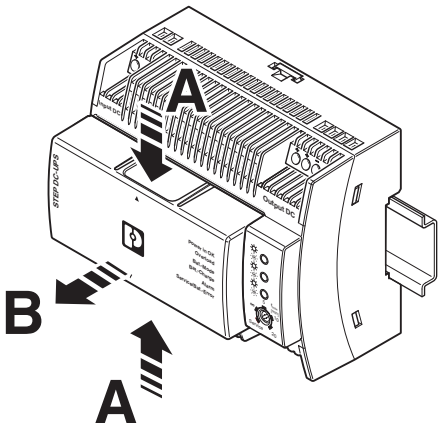
The battery module is maintenance-free and must not be opened.

Only remove the lithium-ion battery module when the rotary selector switch is in the Service position, otherwise an alarm will be triggered.

Remove battery module

1. Set the service mode via the rotary selector switch. Use a suitable screwdriver to do this.
2. Press the locking buttons on the battery module at the same time. Pull the battery module out of the UPS housing.

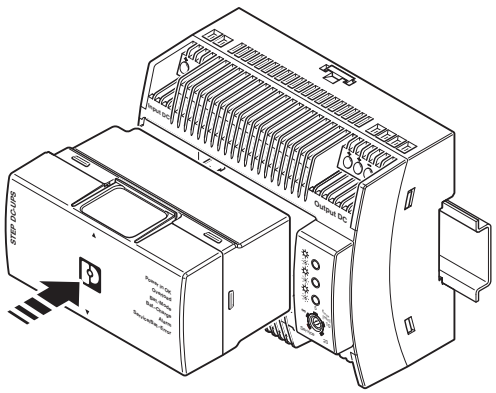
Figure 15 Remove battery module



Insert battery module

1. Correctly position and insert the battery module into the UPS until it audibly snaps in.
2. Set the buffer time.

Figure 16 Insert battery module



Notes on disposal

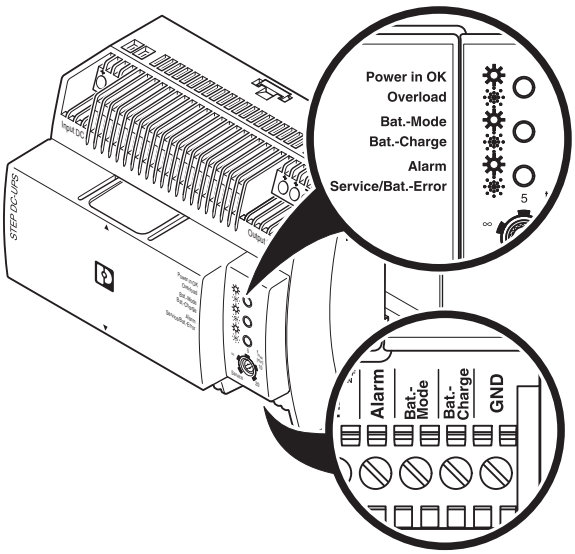
Do not dispose of the UPS and battery module with household waste. They should be disposed of in accordance with the currently applicable national regulations.

You can return old batteries and accumulators to Phoenix Contact.

12 Signaling

Various LED indicators are available for visual function monitoring of uninterruptible power supplies. Moreover, active signal outputs can be used to forward this data to a higher-level control system.

Figure 17 LED indicators and signal outputs



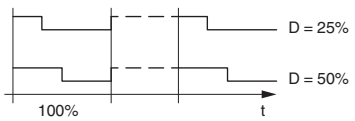
12.1 LED indicators and signal outputs

For UPS signaling and the corresponding states, please refer to the table below.

Please look up each LED individually and combine the information:

Status LED		Switching output	Note
GREEN			Mains operation, Power in OK (I ≤ In)
	2 Hz		Mains operation, Overload at ouput (I > In)
YELLOW		Bat.-Mode high Bat.-Charge low	Battery mode
	1 Hz D=50%	Bat.-Mode low Bat.-Charge high	Battery charging
	1 Hz D=25%	Bat.-Mode low Bat.-Charge high	waiting for valid temperature range to charge
RED	1 Hz D=50%	Alarm high	Service-Mode for battery change
	2 Hz D=50%	Alarm low	Quality check fail / Battery error / No battery
		Alarm low	Battery voltage low (≤ 17,5 V)
all LEDs ON for 3 sec.		Bat.-Mode low Bat.-Charge low Alarm high	System initialisation
all LEDs OFF		Bat.-Mode low Bat.-Charge low Alarm low	Device off
all LEDs OFF		Bat.-Mode low Bat.-Charge low Alarm high	Device on, R1/R2 open, Remote off (battery mode off)

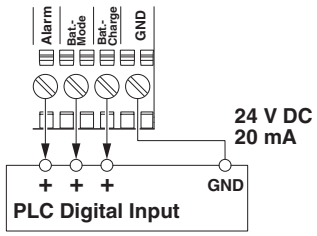
... Hz LED flashing LED on



12.2 Active signal outputs

Active signal outputs can be used to forward this data to a higher-level control system. The 24 V DC signal is applied between the “Alarm” and “Bat.-Mode” connection terminal blocks or between “Bat.-Charge” and “GND” and can carry up to 20 mA.

Figure 18 Active signal outputs



13 Derating

13.1 Ambient temperature

At ambient temperatures from 0°C to 35°C, the uninterruptible power supply provides the maximum output current. At ambient temperatures upwards of 35°C, the output power must be reduced by 4 % per Kelvin temperature increase (temperature-dependent derating).

Figure 19 Temperature-dependent derating

