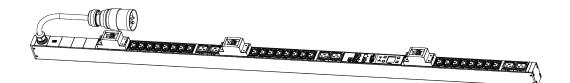
# Mounting and installation instructions

BlueNet PDU BN3000/3500/5000/7000/7500





Blu≡Net



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# About the mounting and installation instructions

These instructions facilitate the safe and efficient mounting and installation of the BlueNet power distribution unit (hereinafter called "PDU". These instructions constitute an integral part of the PDU and must be retained. If the PDU is transferred to a third party, these instructions must also be transferred with the PDU.

Persons who are entrusted to work on the PDU must have carefully read and understood these instructions prior to starting any work. Compliance with all the safety information and instructions set out in these instructions is an essential prerequisite for safe operation.

The illustrations in these instructions are provided for the purpose of a basic understanding and may deviate from the actual version.

### Copyright

The contents of these instructions are protected by copyright. Their use is permitted in conjunction with the mounting and installation of the PDU. Any use that exceeds this is not permitted, unless the written approval of Bachmann GmbH has been obtained.

#### Software licenses

The software contains components that are protected by copyright and are licensed under various license models. A copy of the terms of the licences is included with the PDU and can be accessed using the web interface for the PDU.

#### Other applicable documents

In addition to these instructions, the following additional documents apply:

- Operating instructions
- Data sheet
- Safety information

#### **Customer service**

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E-mail: service@bsg-bachmann.com

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Overview of the PDU

# 1 Overview

# 1.1 Overview of the PDU

## **Overview of functions**

Functions	Measurement per	Measurement per	Identification	Switching
Product name	phase	socket		
BN3000	x	_	_	_
BN3500	x	x	x	_
BN5000	-	-	x	X
BN7000	x	-	x	X
BN7500	x	x	x	X

# Example of a 16-amp version

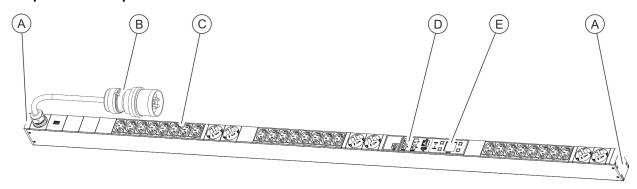


Fig. 1: Product overview (16 amp version)

- (A) Fitting slots for plug-in bracket
- B CEE connector plug
- (c) Sockets

- © Connector panel for GPIO, network, Modbus and sensors
- (E) Control panel

Blu≡Net Overview

Overview of the PDU

## Example of a 32-amp version

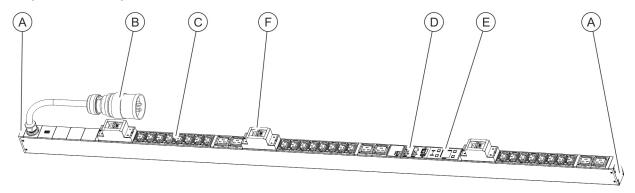


Fig. 2: Product overview (32 amp version)

- Fitting slots for plug-in bracket
- (B) (C) CEE connector plug
- Sockets

- (D) Connector panel for GPIO, network, Modbus and sensors
- Control panel
- Circuit breakers

### **Connector panel for a Master PDU**

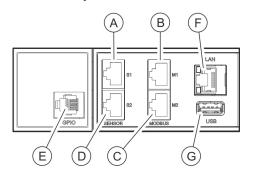


Fig. 3: Connector panel (Master PDU)

- (A) Sensor port S1 (to connect a sensor via a cat 5e cable or to connect to a serial console)
- Modbus port M1 (to connect a Slave PDU via a cat 5e cable)
- © Port M2 (for connecting future applications)
- (D) Sensor port S2 (to connect a sensor via a CAT5e cable)
- (E) GPIO port (supported on the PDU in software version V2.01 and higher)
- LAN port
- USB port

# Connector panel for a Slave PDU

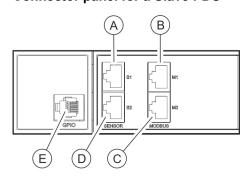


Fig. 4: Connector panel (Slave PDU)

- Sensor port S1 (to connect a sensor via a cat 5e cable)
- Modbus port M1 (to connect a Master PDU and upstream Slave PDUs via a cat 5e cable)
- Modbus port M2 (to connect a Slave PDU via a cat 5e cable)
- Sensor port S2 (to connect a sensor via a CAT5e cable)
- GPIO port (supported on the PDU in software version V2.01 and higher)

Overview of the PDU

# **Control panel**

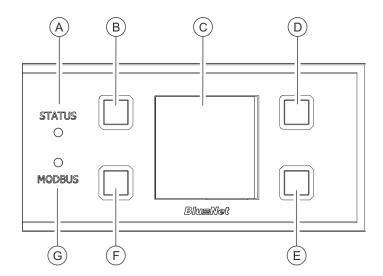


Fig. 5: Control panel

- A Status LED

- B Operating button 1
  C Display
  D Operating button 2
  E Operating button 3
  F Operating button 4
- (G) Modbus LED

## Attachment options at the back

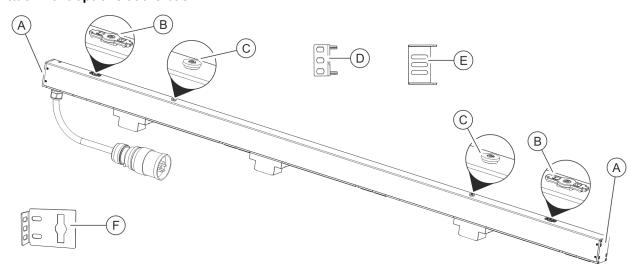


Fig. 6: Overview of the fitting options for the PDU

- Fitting slots for plug-in bracket
- Attachment for the mounting bracket
- Attachment for the mounting solution in the rack
- (D) Plug-in bracket for mounting the PDU via the back (2 each)
- Plug-in bracket for mounting the PDU via the (E) sides (2 each)
- (F) Mounting bracket (x 2)

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Displays and controls

# 1.2 Short description

The power supply of a data centre can be monitored and controlled remotely using the PDU. The PDU can be set up for single-phase or three-phase systems. The individual phases can be distinguished by their colours. The PDU is supplied with electricity via a CEE plug.

The current, power (effective, apparent and reactive power), power consumption, voltage and frequency of all phases are monitored using the PDU. This enables the efficient planning of resources and the issuing of an alarm in the event of a fault. The PDU is designed for a power range of 3.6 to 22 kW.

The PDU is integrated into the company network via the LAN port (only available on the master PDU). Up to 11 Slave PDUs can be cascaded with a Master PDU via the Modbus port.

The PDU can be operated locally via the display, via SNMP access or with a web browser over a network, and the HTTP, HTTPS, SSH, SNMP and Modbus-TCP protocols can be used.

The PDU is made of a sturdy aluminium profile and is installed directly into the rack.

Depending on the type, the PDU has a range of equipment features such as safety sockets or sockets for IEC320 C14 and C20 and external sensors (temperature/air humidity).

A connector inserted into the PDU can be secured with plug interlocks (C13/C19).

# 1.3 Displays and controls

#### Display with control buttons

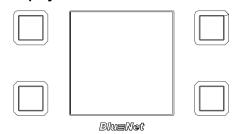


Fig. 7: Display with control buttons

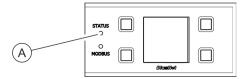
The PDU can be operated locally using the display with the control buttons:

- Display of system data (hardware and software version, serial number, MAC address (only for Master PDUs) and item no.)
- Display of the measured data
- Setting of the duration (only for Master PDUs) and orientation of the display
- Display and adjustment of the network configuration as well as enabling or disabling the DHCP protocol (only for Master PDUs)
- Setting for Modbus (only for Slave PDUs)



Displays and controls

#### **Master PDU status LED**

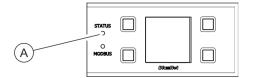


The status LED (Fig. 8/a) indicates the status of the PDU. Possible statuses are:

Fig. 8: Master PDU status LED

Colour	Light	Status
Green	Continuously green	All measured data is OK and the status of the individual connected loads and sensors are OK
Orange	Continuously orange	The measurement monitor issues a warning (based on all the measured data of the PDU and sensors)
Red	Continuously red	The measurement monitor issues an alarm (based on all the measured data of the PDU and sensors) or the connection to a sensor is interrupted
Orange	Continuously orange	PDU starting up
White	Continuously white	Performing factory reset (after releasing the pressed buttons)
Purple	500 ms off, 500 ms purple	An update of a PDU is in progress
Purple, red	500 ms off, 500 ms purple, 500 ms off, 500 ms red	Error during the update of a PDU

# Slave PDU status LED



The status LED (Fig. 9/A) indicates the status of the PDU. Possible statuses are:

Fig. 9: Slave PDU status LED

# **Starting process**

Colour	Light	Status
Blue, orange	900 ms blue, 100 ms orange	Connection to Master PDU not yet established or lost
Green	Continuously green	Connection to Master PDU present

Blu≣Net

# Overview

Displays and controls

Colour	Light	Status
Blue, purple	500 ms blue, 500 ms purple	An update of a PDU is in progress
Blue, purple, red	500 ms blue, 500 ms purple, 500 ms blue, 500 ms red	Error during the update of a PDU

# In operation

Colour	Light	Status
Orange	900 ms off, 100 ms orange	Connection to Master PDU not yet established or lost
Green, red	500 ms off, 100 ms green, 500 ms off, 100 ms red	Connection to Master PDU present, internal communication problems have occurred
Green	Continuously green	Connection to Master PDU present, internal communication functioning
Purple	500 ms off, 500 ms purple	An update of the internal modules of a PDU is being carried out
Purple, red	500 ms off, 500 ms purple, 500 ms off, 500 ms red	Error during update of the internal modules of a PDU
Red	Continuously red	The measurement monitor is issuing an alarm
Orange	Continuously orange	The measurement monitor is issuing a warning

# **Slave PDU Modbus LED**

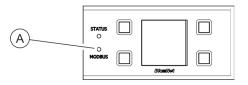


Fig. 10: Slave PDU Modbus LED

The Modbus LED (Fig. 10/A) indicates the activity of the PDUs connected to the Modbus.

The Modbus LED lights up continuously green. If there is communication between the Master and a Slave PDU, the Modbus LED lights up yellow.

Communication

# Status LED on the sockets (only on BN3500/5000/7000/7500)

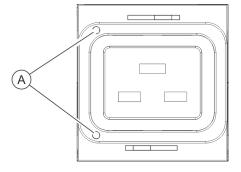


Fig. 11: Status LEDs on the sockets

The status LEDs (only available on the BN3500/5000/7000/7500) display the status of the loads connected to the sockets.



See the operating instructions for details on the status LEDs on the sockets.

# 1.4 Communication

#### Connection for sensors S1/S2

Temperature sensors, combination sensors (temperature, air humidity and dew point) and GPIO modules can be connected to the PDU via the ports for sensors. The values can be called up under "Status → External Sensors" in the web interface.

#### **Connection for Modbus M1/M2**

Individual PDUs can be connected to each other with the Modbus port. This way, up to 11 Slave PDUs can be cascaded with one Master PDU and managed using the web interface. The first Slave PDU is connected to Modbus port M1 of the Master PDU via Modbus port M1. Further Slave PDUs are connected from their Modbus port M1 with the Modbus port M2 of the Slave PDU connected upstream.

#### LAN port (10/100 Mbit/s)

The PDU can be integrated into the network via the LAN port. The data transfer rate is controlled using the network.

# USB port for software updates (only on the Master PDU)

There is a USB port on the PDU next to the display and control panel. It is for updating the software.

#### **GPIO** port

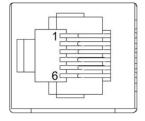
The GPIO port is designed as an RJ-12 socket. It has a potential-free digital input contact and a potential-free relay contact as a changeover contact.

### **Electrical specifications for GPIO port**

Port type	RJ-12
Output	Max. contact voltage 30 V DC/max. 500 mA
Input	5 – 30 V

Overview Blu≡Net

Scope of delivery



Contact	Function
Pin 1	Common terminal (COM)
Pin 2	Normally closed contact
Pin 3	Normally open contact
Pin 4	Potential-free digital input contact
Pin 5	
Pin 6	Not assigned

Output: Pin 1, Pin 2 and Pin 3 serve as changeover contacts. Pin 1 is the common terminal (COM), Pin 2 is the normally closed contact and Pin 3 is the normally open contact. Pin 1 is connected to Pin 2 in the switched-off state. When the relay switches, Pin 1 is connected to the normally open contact Pin 3.



The GPIO port (RJ-12) is supported on the PDU in software version V2.01 and higher.

# 1.5 Scope of delivery

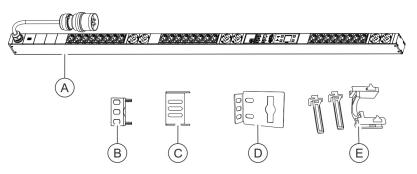


Fig. 12: Scope of delivery

The scope of delivery includes:

- PDU (Fig. 12/♠)
- Two plug-in brackets for mounting the PDU via the back (Fig. 12/®)
- Two plug-in brackets for mounting the PDU via the sides (Fig. 12/ⓒ)
- Two sets of plug interlocks (C13/C19) (Fig. 12/⑤)
- Mounting and installation instructions
- Safety information

**Blu≡Net** Overview

Optional accessories

# 1.6 Optional accessories

Temperature and combination sensor

The temperature, air humidity and dew point at the installation location of the PDU can be measured via a temperature sensor or a combination sensor for temperature and humidity. The values can be displayed on the display and on the web interface. The CAT5e cable required to connect the sensors is included.

**GPIO** module

The GPIO module can be used to connect the PDU to external devices in order to read out input statuses and to switch outputs.



# 2 Explanation of symbols

# Safety information

Safety information is indicated by symbols in these instructions. The safety information is introduced by signal words that express the nature of the danger.



#### **DANGER!**

This combination of symbol and signal word indicates that there is an imminent danger that will result in death or serious injury if it is not avoided.



#### **WARNING!**

This combination of symbol and signal word indicates that there is a potential danger that can result in death or serious injury if it is not avoided.



#### NOTICE!

This combination of symbol and signal word indicates that there is a potential danger that can result in damage to property if it is not avoided.

## Tips and recommendations



This symbol highlights useful tips and recommendations as well as information for efficient and troublefree operation.

The following markings are used to highlight specific instructions, results, lists, references and other elements in these instructions:

Marking	Explanation
_	Step-by-step instructions
$\Rightarrow$	Results of the steps of an instruction
\$	References to sections in these instructions and to other applicable documents
	Items in a list without a specified sequence

# 3 Personnel requirements and responsibilities



#### **WARNING!**

# Risk of injury if the personnel is insufficiently qualified!

If unqualified personnel carry out the installation work on the PDU, serious injuries or substantial damage to property can be caused.

- The installation and the connection of the PDU must be carried out by an IT specialist.
- Defective components on the PDU must be repaired by a qualified electrician.

Only permit persons to work on the PDU who can be expected to carry out their work reliably. Persons whose capacity to react is impaired, e.g. through drugs, alcohol, or medication, cannot be permitted to perform such work.

In these instructions, the following personnel qualifications are required for the various tasks listed below:

#### IT specialist

IT specialists have obtained specialist training or the appropriate experience in dealing with IT systems and have a basic knowledge of electrical engineering.

Due to their specialist training, IT specialists are in a position to assess the consequences of their actions in dealing with the system as well as its components and the potential dangers in respect thereof and are able to avoid these.

The duties of an IT specialist include the following tasks:

- Setting up hardware and software systems
- Installing updates
- Maintenance work on the PDU
- Administration of the PDU via the web interface
- System diagnostics

#### **Qualified electrician**

Due to their professional training, knowledge and experience, as well as their knowledge of the relevant standards and regulations, qualified electricians are capable of working on electrical installations and independently identify and avoid potential dangers.

Qualified electricians are specifically trained for the working environment in which they work and know the relevant standards and regulations.



# 4 Unpacking the PDU

Unpacking

- Unpack the delivery and check its completeness and integrity. If there is a defect, contact Bachmann GmbH immediately.
- If possible, keep the packaging of the PDU so that the PDU can be safely stored and transferred in the future. Dispose of the packaging material that is no longer required in a manner that is environmentally responsible.

Installing the PDU > Overview

# 5 Installing and connecting the PDU

# 5.1 Safety instructions for the installation

Improper installation



#### NOTICE!

Risk of damage due to improper fitting and installation!

Improper fitting and installation can cause substantial damage to property.

- All the installation work must be carried out by an IT specialist.
- Only install the PDU while it is de-energised.
- Before starting the work, ensure that you have sufficient room for the installation.
- Ensure that installation area is clean and tidy.
- Install the components properly and lay the connectors and cables in a manner that is safe.
- Secure the components so that they cannot fall down or over.

# 5.2 Requirements of the installation location

- There must be enough space in the rack to install the PDU.
- The PDU may only be operated within the environmental conditions set out in the technical specifications.
- The the PDU may not be used in potentially explosive atmospheres.
- The PDU may not be subjected to vibrations.
- A location for the installation must be selected that does not have excessive humidity, high temperatures, sources of electromagnetic interference, moisture, solvents, flammable gases, dust or vapours.
- There must be sufficient lighting.
- Fire protection measures must be in place.

# 5.3 Installing the PDU

#### 5.3.1 Overview

Overview of the fitting options for the PDU

There are four options for installing the PDU in the rack:

- Installation with mounting brackets ( Chapter 5.3.2 "Installing the PDU with the mounting brackets" on page 19)
- Installation with plug-in brackets via the rear of the PDU ( Chapter 5.3.3 "Installation with plug-in brackets via the rear of the PDU" on page 20)

Installing the PDU > Overview

- Installation with plug-in brackets via the sides of the PDU ( Chapter 5.3.4 "Installation with plug-in brackets via the sides of the PDU" on page 21)
- Installation with the mounting solution in the rack ( Chapter 5.3.5 "Installation with the mounting solution in the rack" on page 22)

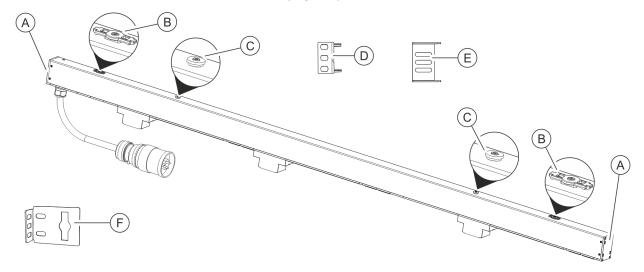


Fig. 13: Overview of the fitting options for the PDU

- (A) Fitting slots for plug-in bracket
- B Attachment for the mounting bracket
- C Attachment for the mounting solution in the rack
- Plug-in brackets for mounting the PDU via the back
- Plug-in brackets for mounting the PDU via the sides
- (F) Mounting bracket

# **Tools required**

The following tools are required for the installation:

- Phillips screwdriver
- Torx screwdriver (IP8)

Installing the PDU > Installing the PDU with the mounting brackets

# 5.3.2 Installing the PDU with the mounting brackets

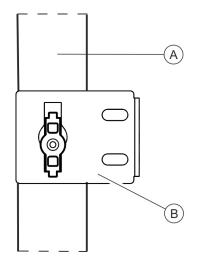


Fig. 14: Installation with mounting brackets

- A PDU
- B Mounting bracket

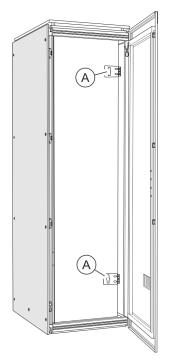


Fig. 15: Rack with mounting brackets

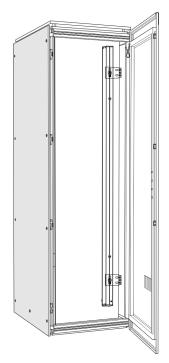
Personnel: IT specialist

- 1. Fit the mounting brackets (Fig. 14/®) onto the attachments at the top and bottom of the PDU (Fig. 14/®).
- 2. Hold the PDU in the desired position against the rack and mark the position of the mounting holes.

**3.** Remove the mounting brackets (Fig. 15/ⓐ) from the PDU and screw them onto the rack in the positions marked.



Installing the PDU > Installation with plug-in brackets via the rear of the PDU



**4.** Fit the PDU onto the mounting brackets (Fig. 16).

Fig. 16: Rack with PDU

# 5.3.3 Installation with plug-in brackets via the rear of the PDU

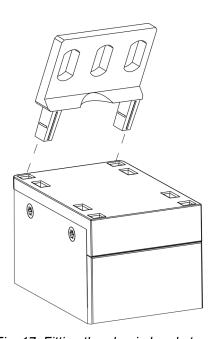
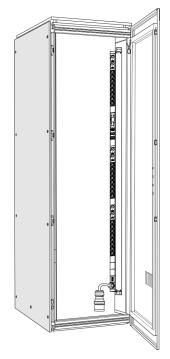


Fig. 17: Fitting the plug-in brackets

- Personnel: IT specialist
- 1. Insert the plug-in brackets into the rear slots on both sides (Fig. 17).
- 2. Position the PDU in the rack.

Installing the PDU > Installation with plug-in brackets via the sides of the PDU



**3.** Fasten the PDU to the rack with screws via both plug-in brackets (Fig. 20).

Fig. 18: Rack with PDU

# 5.3.4 Installation with plug-in brackets via the sides of the PDU

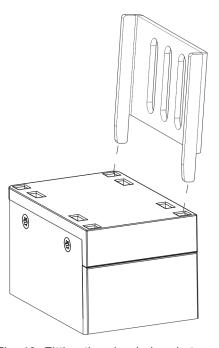
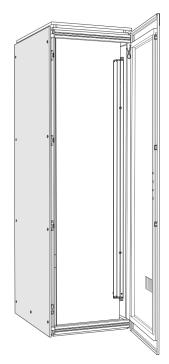


Fig. 19: Fitting the plug-in brackets

- Personnel: IT specialist
- 1. Insert the plug-in brackets into the side slots on both sides (Fig. 19).
- **2.** Position the PDU in the rack.



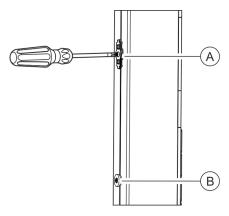
Installing the PDU > Installation with the mounting solution in the rack



**3.** Fasten the PDU to the rack with screws via both plug-in brackets (Fig. 20).

Fig. 20: Rack with PDU

# 5.3.5 Installation with the mounting solution in the rack



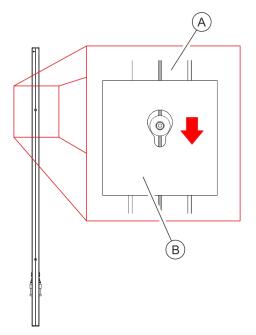
Personnel: IT specialist

1. Unscrew the attachment for the mounting bracket with a screwdriver (Fig. 21/ⓐ).

Fig. 21: Unscrewing the attachment for the mounting bracket

- Attachment for the mounting bracket
- Attachment for the mounting solution in the rack

Installing the PDU > Installation with the mounting solution in the rack



**2.** Fit the PDU into the provided fitting slots via the attachment for the existing mounting solution in the rack (Fig. 22).

Fig. 22: Fitting the PDU in the rack with mounting solution

- (A) PDU
- Mounting solution in the rack (example)

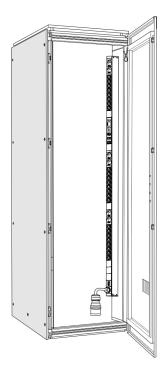


Fig. 23: Rack with PDU

 $\underline{\textbf{3.}}$  Check that the PDU is fitted securely into the cabinet.



Connecting the network cable

# 5.4 Connecting the PDU to the power supply

#### **Electric current**



#### **WARNING!**

#### Risk of fatal injury due to electric current!

If live components are touched, there is an imminent risk of fatal injury due an electric shock. Damage to the insulation or the individual components can constitute a life-threatening danger.

- Always ensure that access to the device is unobstructed so that in the event of an emergency the power cable can be disconnected immediately.
- Do not touch the PDU or its connecting line if either of these is damaged. Disconnect the current from the relevant power socket (e.g. via the relevant circuit breaker) and then carefully unplug the power cable from the power socket. Do not continue using the PDU, but have it repaired by qualified electrician.
- In order to disconnect the device from the mains completely, unplug its power cable from the power socket.
- Do not touch the power cable plug with wet hands.
- When unplugging the power cable plug from the power socket, always pull the plug and not the cable. Do not pull the cable to unplug the power cable plug.
- The power cable must not be crushed, kinked, damaged by sharp edges or subjected to any other mechanical stress.
- Avoid subjecting the power cable to excessive heat or cold.

#### Connecting the power connection

Personnel: IT specialist

Connect the CEE plug for the PDU power inputs to the power supply.

# 5.5 Connecting the network cable

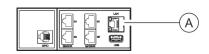


Fig. 24: LAN port

Personnel: IT specialist

- 1. Insert the connector of the data cable into the LAN port on the Master PDU (Fig. 24/ⓐ).
- 2. Properly lay the data cable to the network splitter.
- **3.** Insert the data cable into the network splitter.

Cascading the PDUs

# 5.6 Connecting the sensors

#### **Available sensors**



Personnel:

PDU (Fig. 25/A).

Various sensors can be connected to the PDU (e.g. a temperature sensor, a combination sensor or a GPIO module). The sensor used must be an original sensor from Bachmann GmbH to guarantee communication with the software.

IT specialist

▶ Insert the connector of the sensor into port S1 or S2 on the

## Connecting the sensor

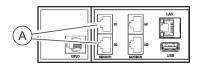


Fig. 25: Sensor port S1/S2

# 5.7 Cascading the PDUs Wiring



Individual PDUs can be connected to each other with the Modbus port. This way, up to 11 Slave PDUs can be cascaded with one Master PDU and managed using the web interface.

It is not possible to connect individual PDUs with a crossover cable.

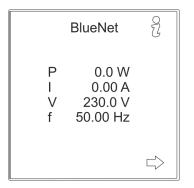
## Personnel:

- IT specialist
- Connect a cat 5e cable to the Modbus port M1 of the Master PDU.
- 2. Connect a cat 5e cable to the Modbus port M1 of the Slave PDU.
- **3.** Connect further Slave PDUs to each other via a network cable to the respective Modbus ports M1 and M2.



Cascading the PDUs

# Setting the Modbus address on the Slave PDU



- 1. Press any button on the Slave PDU to activate the display.
- **2.** Use the  $\frac{9}{6}$  button to open the "System" menu.

Fig. 26: "BlueNet" menu



3. Use the 🔅 button to open the "Settings" menu.

Fig. 27: "System" menu

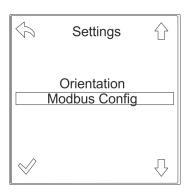
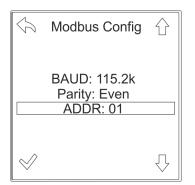


Fig. 28: "Settings" menu

Cascading the PDUs



**5.** Use the  $\circlearrowleft$  button to select the "ADDR" menu and confirm by pressing the  $\checkmark$  button.

Fig. 29: "ADDR" menu

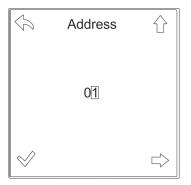
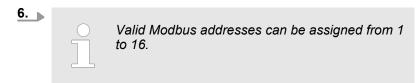


Fig. 30: Setting the Modbus address



If necessary, use the  $_{\Box}$  button to switch between digits. Use the  $_{\Box}$  button to set the address for the Slave PDU and confirm by pressing the  $_{\varnothing}$  button.

Adjusting the display orientation

# 6 Putting the PDU into operation

# 6.1 Adjusting the display orientation



The display orientation can be manually adjusted (0°, 90°, 180°, 270°) according to the installation position.

Personnel:

IT specialist

- 1. Press any button on the PDU to activate the display.
- 2. Use the g button to open the "System" menu.

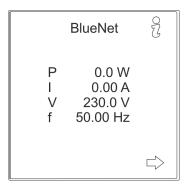
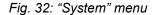


Fig. 31: "BlueNet" menu



3. Use the 🔅 button to open the "Settings" menu.



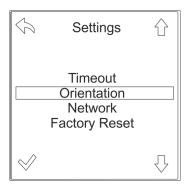
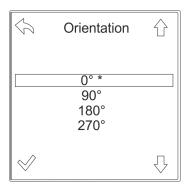


Fig. 33: "Settings" menu

**4.** Use the  $\bigtriangledown$  button to select the "Orientation" menu and confirm by pressing the  $\vartriangleleft$  button.

Querying the network address of the PDU



- **5.** Use the  $\bigcirc /\bigcirc$  keys to select the desired display orientation and confirm by pressing the  $\varnothing$  key.
  - ⇒ The orientation of the display changes and the function of the individual buttons changes accordingly.

Fig. 34: "Orientation" menu

# 6.2 Querying the network address of the PDU

The DHCP protocol is enabled by default. After connecting the power supply and the network connection, the PDU automatically obtains an IP address from the server

Personnel: IT specialist

- 1. Press any button on the PDU to activate the display.

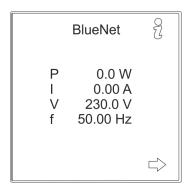


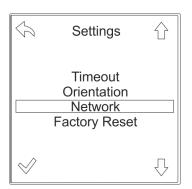
Fig. 35: "BlueNet" menu



Fig. 36: "System" menu

3. Use the 🔅 button to open the "Settings" menu.

Querying the network address of the PDU



**4.** Use the ⊕ button to select the "Network" menu and confirm by pressing the  $\checkmark$  button.

Fig. 37: "Settings" menu

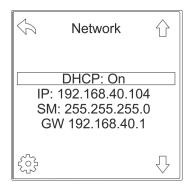


Fig. 38: "Network" menu

**5.** Make a note of the IP address displayed in the "Network" menu for subsequent entry in the web browser.



If there is no DHCP server in the network, the IP address has to be assigned manually. Consult the operating instructions to find the procedure for assigning the IP address manually.

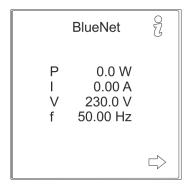
# 7 Operation



The operation of the web interface is described in the accompanying operating instructions.

The operating instructions can be downloaded from www.bachmann.com in the "Downloads" area. Make sure to download the correct operating instructions for your software version of the PDU. You can read the software version on the PDU.

## Reading the software version



Personnel: IT specialist

- 1. Press any button on the PDU to activate the display.
- **2.**  $\blacktriangleright$  Use the  $\frac{9}{6}$  button to open the "System" menu.

Fig. 39: "BlueNet" menu



3. View "SW:" to read the software version of the PDU.

Fig. 40: "System" menu



# 8 Troubleshooting

Fault description	Cause	Remedy
No display.	The display is switched off.	Press a button on the PDU to switch on the display.
	There is no voltage.	<ul><li>Check the fuses (if any).</li><li>Connect the on-site power supply.</li></ul>
	The PDU is not connected correctly.	■ Check the connections.
The status LED does not light up.	There is no voltage.	<ul><li>Check the fuse (if any).</li><li>Connect the on-site power supply.</li></ul>
	The PDU is not connected correctly.	■ Check the connections.
No current at one socket.	There is no voltage.	<ul><li>Check the fuse (if any).</li><li>Connect the on-site power supply.</li></ul>

# 9 Cleaning the PDU

#### **Electric current**



#### **WARNING!**

## Risk of fatal injury due to electric current!

Cleaning the unit whilst it is supplied with power is dangerous.

 Always unplug the power supply cable from the socket before cleaning.

## Improper cleaning



#### NOTICE!

# Risk of damage to the PDU due to improper cleaning!

Cleaning that is carried out improperly can damage the PDU.

- Do not use strong acids or bases for cleaning.
- Only clean the PDU with a lint-free cloth.
- Do not use a high-pressure cleaner or compressed air for cleaning. Keep splashing and sprayed water away from the PDU.

Disposal

# 10 Dismantling and disposing of the PDU

# 10.1 Dismantling

#### **Electric current**



#### **WARNING!**

#### Risk of fatal injury due to electric current!

If there is contact with live devices, there is a risk of sustaining fatal injuries. Live electrical devices can cause extremely serious injuries.

 Before starting to dismantle, switch off the power supply and permanently disconnect it.

### **Dismantling the PDU**

Personnel:

IT specialist

- **1.** Disconnect the CEE plug from the power supply.
- 2. Unplug the network cable.
- 3. Unplug the plugs of the connected devices.
- 4. Dismantle the PDU from the rack.

# 10.2 Disposal



Fig. 41: Do not dispose in household waste

Electric and electronic components must not be disposed of with household waste.

If the service life of the PDU has expired, dispose of it according to the applicable local waste disposal regulations. Never use force to open the PDU.

# 11 Technical data

# **Specifications of the PDU**



The technical specifications of the PDU are set out on the nameplate and the data sheet.

## Nameplate

The nameplate is located on the housing of the PDU and contains the following information:

- Product name
- Item number
- Serial number
- MAC address (physical network address)
- Rated current
- Rated voltage
- Power frequency
- Manufacturer's address
- CE marking

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