



Manual
BlueNet BN2000

BlueNet

**BACH
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1 Introduction

Congratulations on selecting the intelligent power strip from Bachmann's BlueNet series. From the moment of installation, the various products in the Bachmann BlueNet range will deliver you a high level of cost-effectiveness. The various modules offer you the best conditions for setting up an optimised energy management system.

Before starting to use this product please read the complete manual and observe all operational and safety notices to ensure safe operation.

2 First steps

2.1 Access via TCP / IP

Once assembly is complete and the power strip is connected, you can use a browser to access the user interface.



In the factory settings, the power strip obtains an IP address from a DHCP server. If there is no DHCP server on your network, we recommend installing a local DHCP server on a workstation which is NOT connected to the company network. When you then connect the PDU to the workstation, an IP address will be assigned automatically.

1. Enter the IP address of the power strip in the browser's address bar.
2. You will now see the summary page, where you can check the following information at a glance:

The screenshot shows a web browser window with the address bar containing '172.16.4.236'. The page title is 'BlueNet Monitored'. The interface is divided into three main sections: Channels, Groups, and Environment. Each section contains a table of data. Circled letters A through G are overlaid on the screenshot to highlight specific data points.

Channels	Active Energy (kWh)	Active Power (W)	Current (A)
CH1 L1	7.084	6	0.06
CH2 L2	27.096	9	0.11
CH3 L3	10.682	1	0.00
CH4 N			0.12

Groups	Active Energy (kWh)	Active Power (W)	Current (A)
Pre-defined			
Total CH1-3	44.862	17	0.17

Environment	Temperature (°C)
Internal Sensor	23.2
External Sensor 1	26.1

- A) Effective energy
- B) Effective power
- C) Current

- D) Total effective energy (in multi-phase systems)
 - E) Total effective power (in multi-phase systems)
 - F) Total current (in multi-phase systems)
 - G) Temperature / air humidity (with supported sensors)
3. Click on "Analyzer" for a detailed view of the measured values.

BlueNet Monitored

Home
Analyzer
Login
About

Analyzer

	P (W)	Q (var)	S (VA)	U (V)	I (A)	PF	f (Hz)
CH1 L1	6	-4	13	223.7	0.06	0.464	50.05
CH2 L2	10	-12	24	221.0	0.11	0.396	50.00
CH3 L3	1	0	1	220.8	0.00	1.000	50.00
CH4 N					0.12		

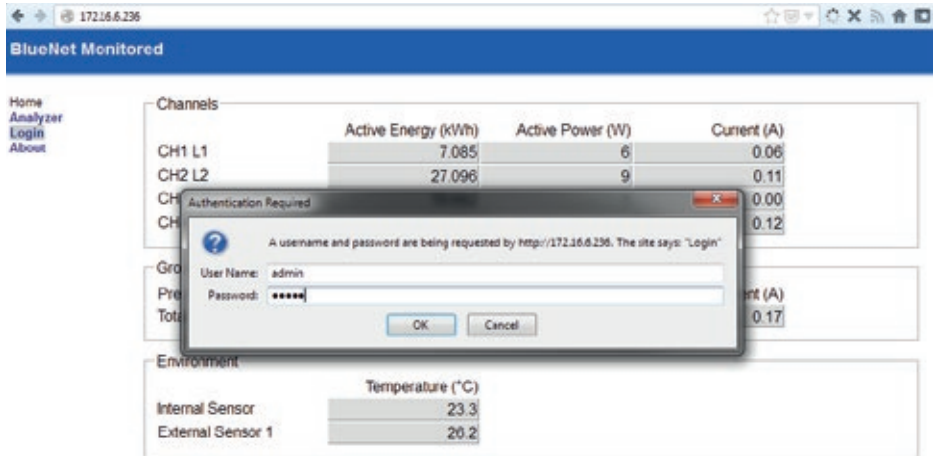
Groups

Pre-defined	P (W)	Q (var)	S (VA)	I (A)
Total CH1-3	17	-17	38	0.17

- A) Effective power
- B) Reactive power
- C) Apparent power
- D) Voltage
- E) Current
- F) Power factor
- G) Frequency
- H) Total effective power (in multi-phase systems)
- I) Total reactive power (in multi-phase systems)
- J) Total apparent power (in multi-phase systems)
- K) Total current (in multi-phase systems)
- L) Neutral conductor power (in multi-phase systems)

3 Operating via a browser

Click on "Login" to log in to the power strip and access advanced functions.



The screenshot shows a web browser window with the address bar displaying "172.16.6.236". The page title is "BlueNet Monitored". On the left, there is a navigation menu with links: "Home", "Analyzer", "Login", and "About". The main content area is divided into several sections:

- Channels:** A table with columns for Channel, Active Energy (kWh), Active Power (W), and Current (A).

Channels	Active Energy (kWh)	Active Power (W)	Current (A)
CH1 L1	7.085	6	0.06
CH2 L2	27.096	9	0.11
CH3			0.00
CH4			0.12
- Authentication Required:** A modal dialog box is open, displaying the message: "A username and password are being requested by http://172.16.6.236. The site says: 'Login'". It contains input fields for "User Name" (with "admin" entered) and "Password" (with "*****" entered). There are "OK" and "Cancel" buttons.
- Environment:** A section titled "Environment" with a sub-header "Temperature (°C)". It contains two rows: "Internal Sensor" with a value of "23.3" and "External Sensor 1" with a value of "20.2".



When starting up for the first time, enter the following:

Username: admin

Password: admin

We recommend changing this password after logging in for the first time.

3.1 System settings


1. Click on "Settings" to edit the system settings.

The screenshot shows a web browser window with the address bar displaying '172.16.6.236/settings'. The page title is 'BlueNet Monitored'. On the left side, there is a navigation menu with the following items: Home, Analyzer, Settings, Users, Maintenance, Password, and About. The main content area is divided into several sections:

- General:** Contains 'Device label' (text input: BlueNet 001007) and 'Hostname' (text input: bluenet-001007).
- Network configuration:** Contains 'Enable' (checkbox: checked), 'Method' (dropdown: static), 'IP address' (text input: 172.16.6.236), 'Netmask' (text input: 255.255.248.0), and 'Gateway' (text input: 172.16.0.254).
- SNMP:** Contains 'Enable' (checkbox: checked), 'Community' (text input: public), 'Location' (text input: empty), and 'Contact' (text input: empty).
- Miscellaneous:** Contains 'Web server' (dropdown: open), 'Telnet enable' (checkbox: checked), 'SNTP server' (text input: empty), 'Timezone offset' (text input: 0 with 'Min.' label), and 'Display orientation' (dropdown: 270°).

At the bottom of the form is a 'Save values' button.

- B) Device label
Here you can enter a name with which to label the power strip. You can view this value via SNMP.
- C) Host name
This is where the DNS host name of the power strip is configured.
- D) Network configuration > Enable
The network functionality of the power strip can be disabled here. PLEASE NOTE: To restore the power strip's network functionality, access is required via the serial interface.
- E) Method
Here you can select either static or dynamic (DHCP) IP address allocation.
- F) IP address
The static IP address is entered here.

- G) Netmask
The subnet mask is entered here.
- H) Gateway
The standard gateway is entered here.
- I) SNMP Enable
Use this option to enable or disable SNMP.
- J) Community
This is where the SNMP Read Community is configured.
- K) Location
Here you can enter the location of the power strip.
- L) Contact
Here you can specify the responsible contact person.
- M) Web server
Here you can configure the web server operating mode. The following modes are available:
- a. Open
Permits access to the Home and Analyzer pages without logging in.
 - b. Restricted
Requires web server login for all pages.
 - c. Off
Disables the web server.
-  PLEASE NOTE: To enable the power strip web server again, access is required via the serial interface.
- D) Telnet enable
Telnet access can be disabled here.
- E) SNTP Server
Here you can specify an SNTP time server.
- F) Timezone offset
Defines the offset to GMT in minutes.

G) Display orientation

Defines the orientation of the display. If the PDU is installed vertically the display can be rotated so it is easier to read. It is rotated in 90° steps.

3.2 Users

The screenshot shows a web browser window with the address bar displaying '17216.6.236 users'. The page title is 'BlueNet Monitored'. On the left side, there is a navigation menu with the following items: Home, Analyzer, Settings, Users, Maintenance, Password, and About. The main content area contains three sections for user management:

- Create new user:** Includes a text input for 'Username' (containing 'User'), a dropdown for 'Type' (set to 'User'), a password input for 'Password' (masked with dots), and a 'Create user' button.
- Modify user:** Includes a dropdown for 'User' (set to 'Choose user'), a text input for 'Username', a dropdown for 'Type' (set to 'Choose type'), a password input for 'Password', and a 'Modify user' button.
- Delete user:** Includes a dropdown for 'User' (set to 'Choose user') and a 'Delete user' button.

1. Under Username, enter a user name.
2. Select the user type.
 - a. Admin: Full access rights to the whole system
 - b. User: Access to Home and Analyzer (appropriate if Restricted option has been selected for the web server)
3. Enter a password for the user.
4. Click on "Create User".

3.2.2 Modify User

1. Select the user.
2. Under Username, enter a new user name.
3. Select the user type.

- a. Admin: Full access rights to the whole system
 - b. User: Access to Home and Analyzer (appropriate if Restricted option has been selected for the web server)
4. Enter a password for the user.
 5. Click on "Modify User".

3.2.3 Delete User

1. Select user to be deleted
2. Click on "Delete User"

3.3 Maintenance

3.3.1 Firmware Upgrade

A) Current version

The currently installed version of the firmware is shown here.

B) Firmware file

Here you can upload a new firmware image. New firmware images are available at www.bachmann.com. Click on "Upload" to start the update process.

PLEASE NOTE: Do not disconnect the power strip from the power supply during the update process.

After a successful update, the strip is rebooted with the new firmware.

C) Reboot

Click on "Reboot Device" to reboot the power strip. This does not affect the power supply to connected devices.

3.4 Password

Here you can assign a new password to a user.

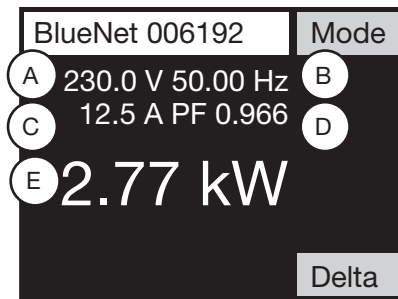
3.5 About

Here you will find information about the manufacturer and the serial number of the power strip.

4 Operating via display

4.1 Switching on the display

1. To switch on the display, press one of the two buttons next to it.
2. The display lights up and shows the start page with an overview of measured values.



4.2 Reading the measured values

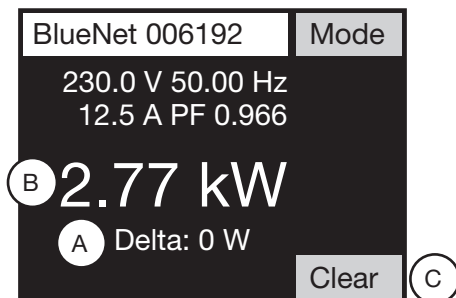
The following measured values are shown on the display's start page

- A) Voltage
- B) Frequency
- C) Current
- D) Power factor
- E) Effective power

4.3 Delta function

By pressing the "Delta" button you can measure the difference from the effective power value currently displayed.

1.1.1 Fixing basis



1. Press "Delta" button
2. The difference value (A) appears below the effective power (B)

1.1.2 Resetting difference value

1. Press "Clear" (C) to reset the difference value
2. The difference value (B) is no longer displayed

4.4 Reading extended measured values with "Analyzer"

1. The "Analyzer" page is displayed by pressing the "Mode" button.
2. Pressing the "Page" button allows you to page between further measured values.

4.5 "Metering" energy meter

1.1.3 Energy meter which cannot be reset

Meter	Mode
Active Energy	
0.0 kWh	
Reactive Energy (L)	
0.000 kvarh	
Reactive Energy (C)	
-0.000 kvarh	

The "Meter" page is displayed by again pressing the "Mode" button. The energy meters for effective energy and reactive energy which cannot be reset are displayed.

1.1.4 Energy meter which can be reset

Meter (User)	Mode
Timer: 0:27:40	
0.000 kWh	
	Clear

The "Meter (User)" page is displayed by again pressing the "Mode" button. The energy meter which can be reset and the runtime are displayed.

1.1.4.1 Resetting the energy meter

1. Press the "Clear" button to reset the energy meter to 0 kWh
2. The energy meter is set to 0 kWh and starts counting

4.6 "Environment" sensors

The values of the internal and external sensors are displayed by again pressing the "Mode" button.



If there are no external sensors connected, "n/a" is displayed instead.

4.7 "Maintenance" settings

Maintenance 1/3	Mode	Maintenance 2/3	Mode	Maintenance 3/3	Mode
S/N 006192 Version 1.16 (2413)		IP Address 192.168.0.101 MAC Address D466.A800.1830		PLC n/a Frequency Band n/a	
Page		Page		Page	

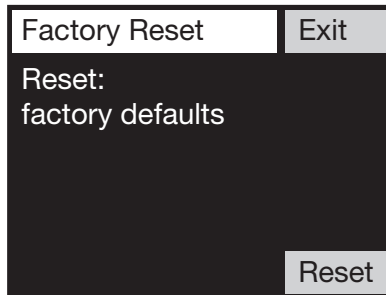
The PDU settings are displayed by again pressing the "Mode" button.

The "Page" button allows you to page between the sub-pages.

1.1.5 Displaying the IP address

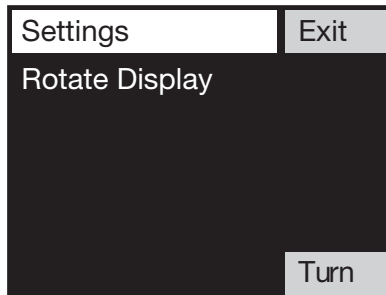
1. Make sure you are in the "Maintenance" menu
2. The second page is displayed by pressing the "Page" button. The IP address and MAC address of the PDU are listed here. Possible displays include:
 - a. Down
No cable connected or an address cannot be obtained from the DHCP server
 - b. DHCP..
An address is being requested from the DHCP server
 - c. xxx.xxx.xxx.xxx (IP address)
The set IP address or the address obtained from the DHCP server

4.8 Resetting to factory settings



1. To reset the PDU to factory settings, press and hold the "Delta" button on the start page
2. The "Factory Reset" page appears after five seconds
3. Press "Reset" button
4. The PDU resets to the factory settings and restarts

4.9 Turning the display



1. To turn the display, press and hold the "Mode" button on the start page
2. The "Settings" page appears after five seconds
3. The display is turned in steps of 90° by pressing the "Turn" button
4. Press "Exit" button to return to the start page



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