



# Phocos Any-Bridge™ Series Monitoring & Control Gateway Model AB-PLC for access to the PhocosLink Cloud

## AB-PLC

### User and Installation Manual

#### English

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[www.phocos.com](http://www.phocos.com)

### 1 Introduction

Dear customer, thank you for choosing this quality Phocos product. The Any-Bridge™ AB-PLC Monitoring & Control Gateway (referred to as “gateway” in this manual) allows you to connect your Phocos Any-Grid™ PSW-H Series inverter/charger with MPPT solar charge controller (referred to as “power device” in this manual) to the internet for access to the PhocosLink Cloud portal (referred to as “portal” in this manual). This portal enables viewing and control (functionality enabled by a future over-the-air automatic update, no user intervention required) of your power device through any internet-connected device with an internet browser such as a personal computer, tablet or smartphone. The purchase of this device enables free introductory access to the PhocosLink Cloud with up to three Any-Grid PSW-H devices for a limited time, see [www.phocos.com](http://www.phocos.com) for details regarding access plans.

This manual describes the installation and operation of this unit. Read this entire document before proceeding with the installation.

### 2 Important Safety Information

SAVE THESE INSTRUCTIONS: This manual contains important instructions for the model AB-PLC in the Any-Bridge Series. Read and save this manual for future reference. The following words are used to mark important sections for your safety:

<b>WARNING</b>	Failure to follow instructions could cause physical harm.
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**WARNING: It is not necessary to open any covers or access any high voltage components in the power device for installation. The power device may only be opened by trained electricians.**

### 3 About the Any-Bridge AB-PLC

A working internet connection is required for the gateway to be able to communicate with the PhocosLink Cloud portal and upload data regularly. However, in case of internet access interruption, data is stored in the gateway until the internet connection is re-established, then this data is seamlessly sent to the portal to fill any data gaps caused by the internet interruption (functionality enabled by a future over-the-air automatic update, no user intervention required).



- ① MXI interface (unused at this time)
- ② RS-485 interface (unused at this time)
- ③ RS-232 interface for Any-Grid PSW-H
- ④ Power indicator
- ⑤ Portal connectivity indicator
- ⑥ Reset button for factory reset
- ⑦ Ethernet LAN interface
- ⑧ Wi-Fi / BLE antenna

**WARNING: The gateway is designed to be powered by the connected power device. No external power supply is required. Attempting to power the gateway with an external power supply may cause physical harm or damage/destroy the gateway.**

### 4 Installation

#### 4.1 Requirements

- Phocos Any-Bridge AB-PLC monitoring & control gateway
- One to three powered Any-Grid PSW-H power devices with U2 firmware version ≥ 06.18
- Working internet infrastructure (modem/router with active DHCP for automatic IP address issuing) with Ethernet and/or 2.4 GHz 802.11b/g/n Wi-Fi access
- Android™ or iOS device with BLE V4.2 or higher

#### 4.2 Package Contents

Before installation, please inspect the unit. If something inside the package is missing or damaged, please contact your dealer. Package contents:

- Any-Bridge AB-PLC monitoring & control gateway
- External antenna

- Cable with 8P8C modular connectors at each end
- User and installation manual

#### 4.3 Physical Installation

Lightly screw the included antenna into the antenna connector at position ⑧, ensuring it is less than hand-tight to avoid damage. Either place the gateway on a flat surface as pictured in the title image of this manual. Alternatively, mount the gateway on a vertical wall by using the 4 pcs. M3-sized (3.5 mm / 0.14 in) screw-holes provided. Once installed, point the antenna so that it runs parallel to your router antenna or, if in doubt, point it straight up vertically.

#### 4.4 Setup

For a video to help with the installation visit [www.phocos.com/phocoslink-cloud](http://www.phocos.com/phocoslink-cloud). Choose any of the power devices and connect the included cable with 8P8C connectors (any direction) between the RS-232 port of the power device and the ③ RS-232 port of the gateway. Ensure the power device is not in stand-by and that its display is on. The power ④ and portal connectivity ⑤ indicators will blink several times while the gateway starts up (see chapter 5 for details). If using wired Ethernet, connect the Ethernet cable from your router to port ⑦ of the gateway.

Download the latest “PhocosLink Mobile” App from the Google Play™ store or Apple’s App Store® with an Android™ or iOS device, respectively. Open the app and allow BLE and location permission




Google Play™

(location is not recorded or used by the app, but access must be permitted for BLE to function). The QR codes left and right link to the app directly.



Apple App Store®

In the app, scan for devices with the  button at the bottom right and then tap the Any-Bridge™ gateway:




Ensure the connection between power device and gateway is not greyed out (power device is shown as connected) and the solid-state relay is shown as “closed” (green). If it is not, go back to the previous screen (arrow at top left) and try again by tapping the Any-Bridge. Then tap “SETUP”. Enter your credentials:


- Wi-Fi Access Point (SSID) and W-Fi password (only shown if no Ethernet cable is plugged in)
- PV system name as it will be shown on the portal

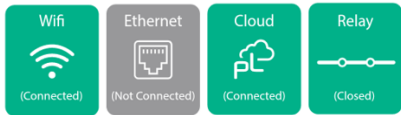
- Your e-mail address serving as your login ID to the cloud

then tap "SUBMIT".



Once submitted, wait for each of the steps to automatically complete with a  (except the "Wi-Fi" steps if using wired Ethernet), this may take a few minutes, then tap "DONE" when completed and the activation e-mail is successfully sent.



You will now receive an invitation to the e-mail address you provided with your access link to the PhocosLink Cloud, select "Accept Invitation". This will lead you to the PhocosLink Cloud website to finalize your initial setup. If you do not receive the e-mail within 5 minutes, check your e-mail spam folder. If you still did not get the e-mail, go to [cloud.phocos.com](http://cloud.phocos.com) and select "Forgot your password?". Then enter the same e-mail address you used previously and select "Send reset email".

The initial setup is now complete, and the gateway automatically sends data to the PhocosLink Cloud continuously while the internet connection is active as shown by indicator . While connected to the gateway with the "PhocosLink Mobile" app, the 4 green (connected) or grey (disconnected) toggle icons give you a view of the working state of the gateway at any time while it is running (example shown with Wi-Fi):



## 5 LED Indicators

The gateway is equipped with two LED indicators, the power  and the portal connectivity  indicators. During operation, these indicators have the following meanings:







Power 	Portal con. 	Meaning
OFF	n/a	Gateway is not powered. This is normal if the power device is in stand-by (display off)
ON	n/a	Gateway is powered and power device communication successful
Slow blink*	n/a	Gateway is powered and a BLE device is connected
n/a	ON	Connected to portal
n/a	OFF	Disconnected from portal
ON	Slow blink*	Connected to Wi-Fi or Ethernet, but portal connection unsuccessful
Slow blink*	Slow blink*	Gateway starting up or power device firmware incompatible if blinking for >10s

Fast blink**	Fast blink**	Gateway performing reset
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\* Slow blink: 0.5s on, 0.5s off.

\*\* Fast blink: 0.1s on, 0.9s off.

## 6 Troubleshooting

Problem	What to do
Power indicator  OFF	Gateway is not powered. Use only the included cable for connection between power device and gateway. Check the cable for correct seating on both ends. Ensure the power device is running (power device display on).
Power  and Portal con.  blinking slowly > 10s	The firmware on the power device is not compatible with the gateway. Contact your dealer or Phocos for a firmware update. A standard USB to RS-232 converter and Windows PC is required for the update.
Power  indicator ON and Portal con.  indicator blinking slowly	If using Wi-Fi, the entered access point (SSID) or password is incorrect or the access point is not using WPA-PSK2 encryption. To re-enter Wi-Fi credentials, press the reset button  until the gateway restarts. Then repeat the setup procedure in chapter 4.4.  If using wired Ethernet, make sure the connection is good and that your router supports DHCP.  Ensure your router is connected to the internet.

## 7 Warranty

### 7.1 Conditions

We warranty this product against defects in materials and workmanship for a period of 24 months from the date of purchase and will repair or replace any defective unit when directly returned, postage paid by the customer, to Phocos. This warranty will be considered void if the unit has suffered any obvious physical damage or alteration either internally or externally. This warranty does not cover damage arising from improper use, such as plugging the unit into unsuitable power sources, attempting to operate products that require excessive power consumption, or use in unsuitable environments. This is the only warranty the company makes. No other warranties express or implied including warranties of merchantability and fitness for a particular purpose. Repair and replacement are your sole remedies and the company shall not be liable for damages, whether direct, incidental, and special or consequential, even if caused by negligence.

Further details about our warranty conditions can be found at [www.phocos.com](http://www.phocos.com).

### 7.2 Liability Exclusion

The manufacturer shall not be liable for damages, especially on the battery, caused by use other than as intended or as mentioned in this manual or if the recommendations of the battery manufacturer are neglected. The manufacturer shall not be liable if there has been service or repair carried out by any unauthorized person, unusual use, wrong installation, or incorrect system design.

Specifications are subject to change without notice.

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