



phocos AB-PLC Remote Monitoring and Control Gateway User Manual

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phocos AB-PLC Remote Monitoring and Control Gateway



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 AnyGrid™ 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 for details regarding access plans. This manual describes the installation and operation of this unit. Read this entire document before proceeding with the installation.

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:

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.

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.

Installation

Requirements

- Phocos Any-Bridge AB-PLC monitoring & control gateway
- One to three powered Any-Grid PSW-H power devices with U2 firmware version ≥ 06.16
- 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

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

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.

Setup

For a video to help with the installation visit 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 standby 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 (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.



Google Play™



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:

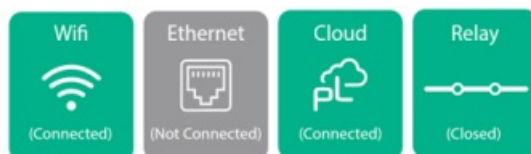
- Wi-Fi Access Point (SSID) and W-Fi password (only shown if no Ethernet cable is plugged in)
- PV system name as it will be shown on the portal
- Your e-mail address serving as your login ID to the cloud then tap “SUBMIT”.

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 email, go to 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 ⑤. 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):



LED Indicators

The gateway is equipped with two LED indicators, the power ④ and the portal connectivity ⑤ indicators. During operation, these indicators have the following meanings:

Power ④	Portal con. ⑤	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

- **Slow blink:** 0.5s on, 0.5s off.
- **Fast blink:** 0.1s on, 0.9s off.

Troubleshooting

Problem	What to do
Power indicator ④ 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 ④ and Portal con. ⑤	The firmware on the power device is not compatible with the gateway. Contact your
indicator	dealer or Phocos for a firmware update. A
blinking	standard USB to RS-232 converter and
slowly > 10s	Windows PC is required for the update.
Power ④	If using Wi-Fi, the entered access point (SSID) or
indicator ON	password is incorrect or the access point is not
and Portal con. ⑤	using WPA-PSK2 encryption. To re-enter Wi-Fi credentials, press the reset button ⑥ until the
indicator	gateway restarts. Then repeat the setup
blinking	procedure in chapter 4.4.
slowly	If using wired Ethernet, make sure the

	connection is good and that your router
	supports DHCP.
	Ensure your router is connected to the internet.

Warranty

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.

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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Documents / Resources

	phocos AB-PLC Remote Monitoring and Control Gateway [pdf] User Manual AB-PLC Remote Monitoring and Control Gateway, AB-PLC, Remote Monitoring and Control Gateway, Monitoring and Control Gateway, Control Gateway, Gateway
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References

-  [PhocosLink Cloud](#)
-  [PhocosLink Cloud | Phocos - Your off-grid and Any-Gridâ„¢ Partner](#)

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