

**MARSHALL**



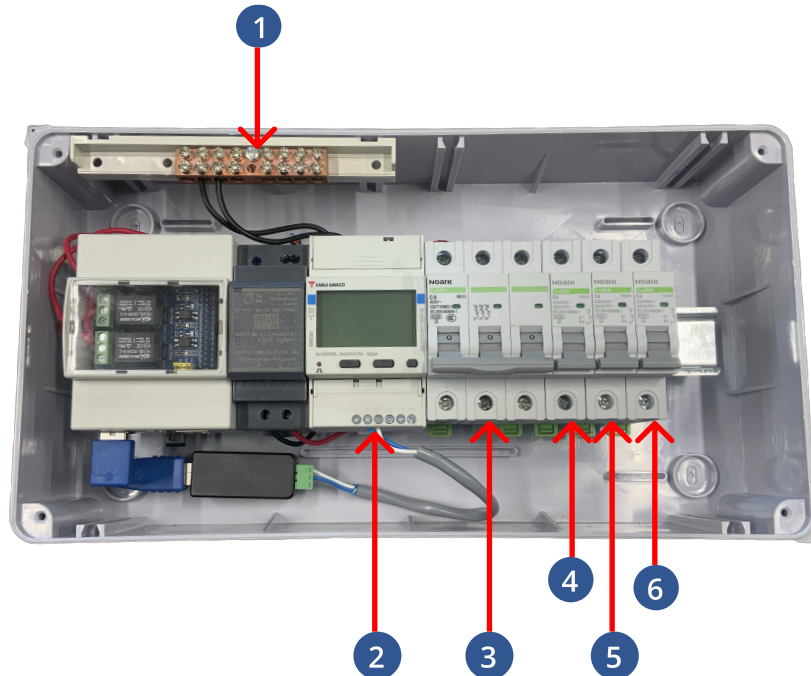
2024

# INSTALLATION GUIDE

Marshall Blackbox Ultra

# Installation Guide

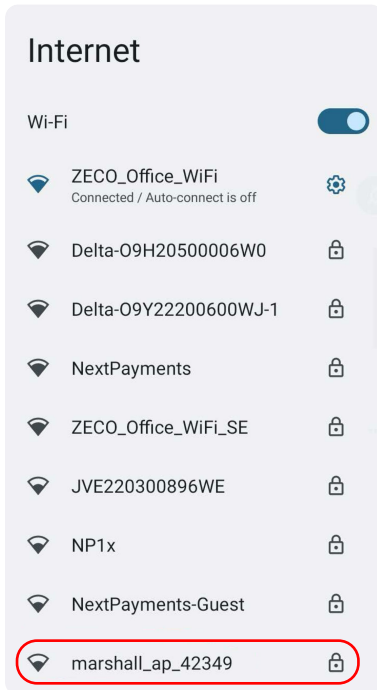
## 1. Three phases - Marshall Blackbox Ultra - BBU-24-1



- 1 Neutral Bar
- 2 Open the RS485 connector and connect the 5Amp CTs
- 3 Three-phase power supply, 230V
- 4 Connect the coil active of the first contactor to the bottom of the breaker, the first contactor in the main switchboard always supplies the water heater.
- 5 Connect the coil active of the second contactor to the bottom of the breaker, any loads except EV charger can be connected to the second contactor in the main switchboard.
- 6 Connect the coil active of the third contactor to the bottom of the breaker, EV charger or other loads can be connected to the third contactor in the main switchboard.

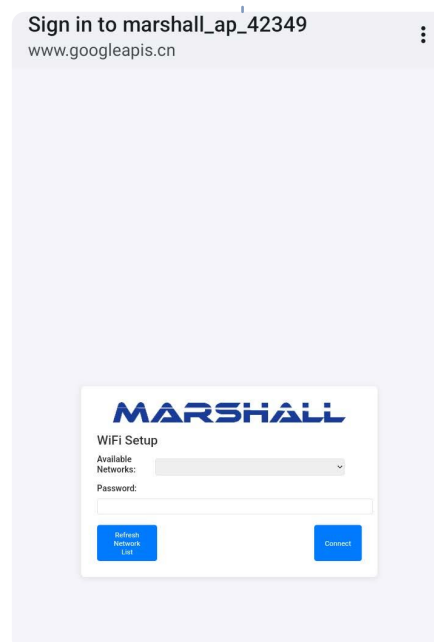
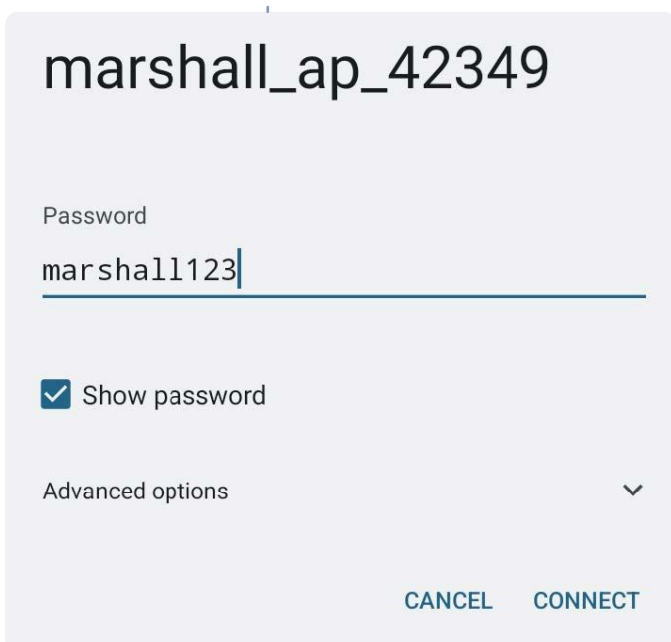


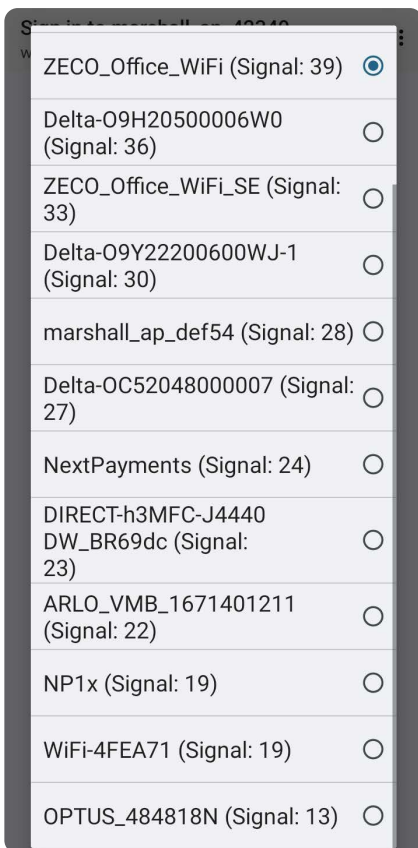
## 2. Internet Setup



- a**
1. Turn on the power supplying breaker for the Marshall.
  2. Go to your smartphone's WiFi settings.
  3. Find and select the SSID named 'marshall\_ap\_xxxxx' (e.g., 'marshall\_ap\_42349').
  4. Connect to the W-iFi network 'ZECO\_Office\_WiFi'.

- b** Log in to the Marshall AP with the password: **marshall123**, and then a sign in page will pop up.





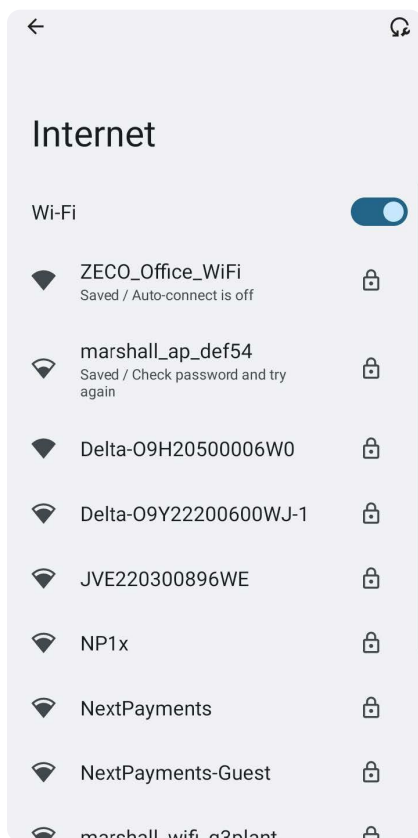
c

1. Click the 'Refresh Network List' button on the left.
2. The SSID will appear in the 'Networks' bar.
3. Click the 'Networks' bar to see the list of available WiFi.



d

1. Find your home WiFi in the list.
2. Enter your WiFi password.
3. Click the 'Connect' button.
4. A 'trying to connect' message will appear.

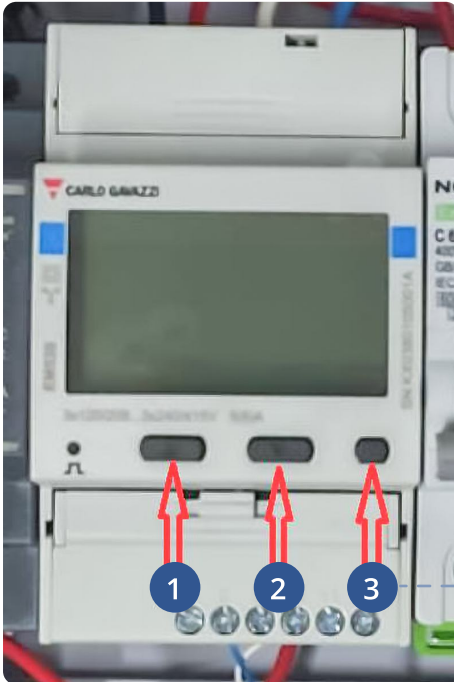


e

1. When the Marshall connects to your WiFi, the sign-in page will close automatically.
2. The 'marshall\_ap\_XXXXX' SSID will disappear from your smartphone's WiFi settings.

### 3.Meter Configuration

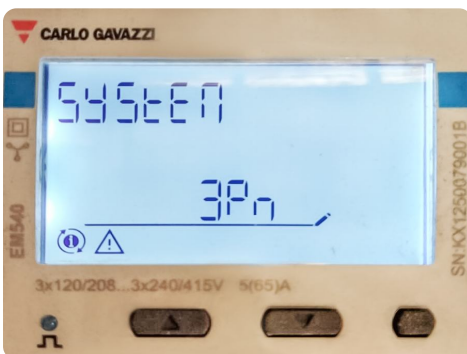
#### a. Three phases



- 1 Up
- 2 Down
- 3 OK

1. **A.** Long press the OK button to enter the configuration page.

**B.** Short press the OK button when prompted for the password.

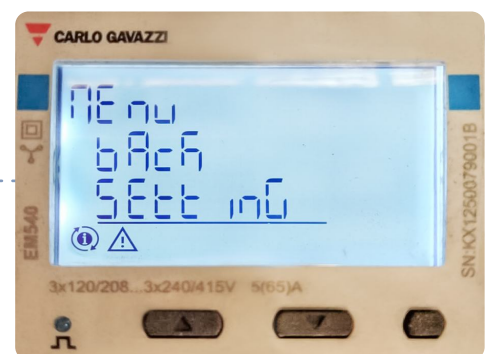


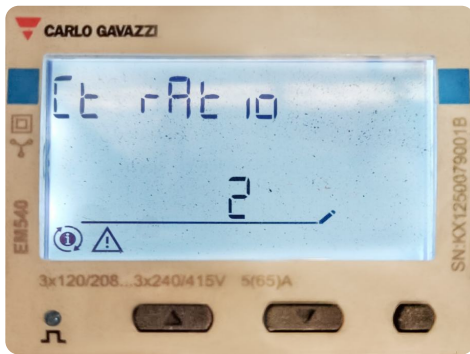
2. **A.** Press the Down button to select parameters.

**B.** Choose 'System' and short press OK.

**C.** Change the system type to '3Pn'.

2.1 Short press the OK button to save the configuration and go back to the parameter selecting page.





3. **A.** Select 'CT Ratio' and short press OK twice.

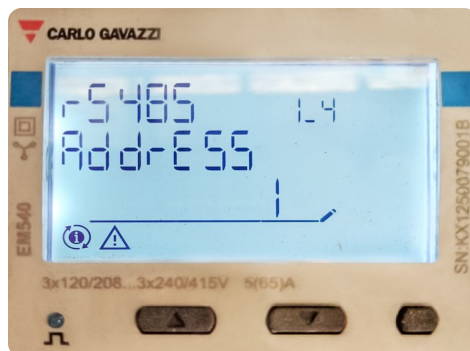
**B.** Use the Up/Down buttons to adjust the CT ratio.

**C.** Ensure the meter's CT ratio matches the connected CTs.



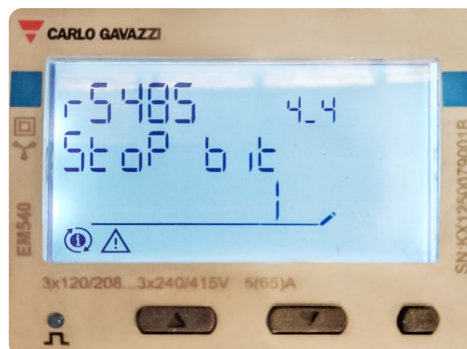
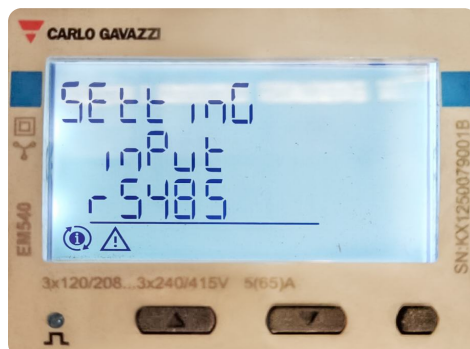
4. **A.** Short press OK twice to save the CT ratio and return to the parameter page.

**C.** Scroll down to 'rS485' and short press OK to set up RS485 communication.



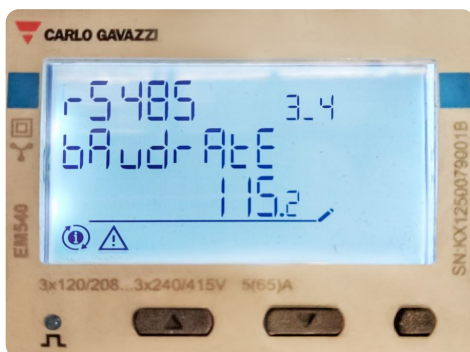
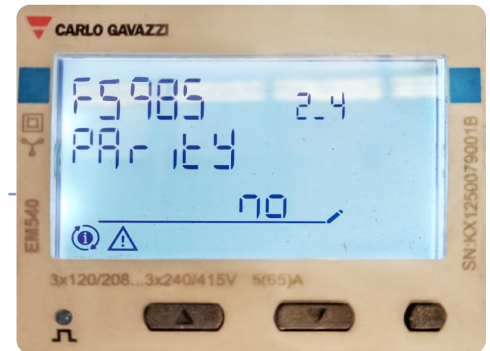
5. **A.** Change the RS485 address to '1' using the Up/Down buttons.

**C.** Short press OK to move to the next parameter.



6. **A.** Set RS485 parity to 'no'.

**B.** Short press OK to go to the next parameter.



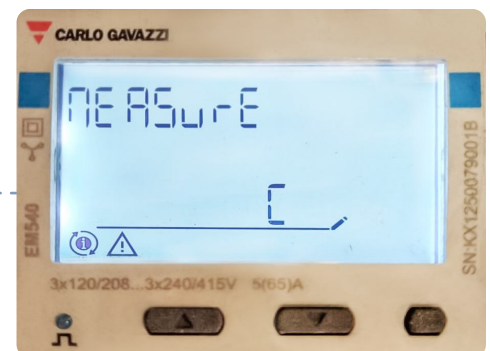
7. **A.** Use the Up/Down buttons to set RS485 baudrate to '115.2'.

**B.** Short press OK twice to save and return to the parameter page.

8. **A.** Press Up/Down to select 'Measure'.

**B.** Short press OK and set to 'C'.

**C.** Short press OK twice to save.



**A.** From the parameter page, short press Down to select 'End'.

**B.** Short press OK to return to the 'Menu' page.

**C.** Scroll up and select 'Back' to go to the main meter screen.

**D.** If powering on for the first time, set the CT ratio to match the connected CTs and save using the same process.

**MARSHALL**

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