Enapter

Electrolyser
## EL 4.0

Quick Start Guide

For indoor use only	For humid environments additional IP68 protection required	Check all parts for damage regularly

1 Download the Owner's Manual

All information about Enapter devices can be found at handbook.enapter.com.
Contact support at support@enapter.com.

Enapter makes different versions of electrolyser based on your needs. Electrolysers come in AC/DC or DC/DC versions as well as air-cooled or liquid-cooled versions (LC).
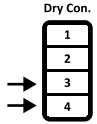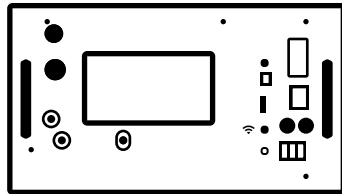
2 Follow Installation Instructions in the Owner's Manual

Device out-of-the-box comes in Maintenance mode. Yellow LED should be steady. Do not leave it turned on and unattended for a long time.

You must follow owner's manual for all steps, including pipe and wire connection, operation, transportation, storage and disposal.

Dry Con.

Insert the two supplied jumpers into **the Dry Con. port in the 3rd and 4th positions** on the front panel of the EL. If you want/need to implement a safety chain, please refer to **Dry Contact Connection Guide** in the owner's manual.

Ant.

Screw supplied antenna **to the Ant. port.**

G N L

Plug the power cable into **the Power port**
AC – protective earth on the left, live on the right.
DC – positive on the top.
and **switch the power on.**

3 Water Inlet Requirements

H2O IN port is used for automatic refilling from connected demineralised water source during normal operation, first refilling and maintenance. During hydrogen production water consumption rate is around 400 mL/hr.

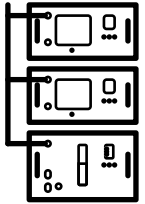⚠ **Proper inlet water source must be connected before proceeding to the next steps.**

⚠ **Flush all water pipes with demineralised water before connecting your device to ensure nothing is stuck in the lines.**

H2O IN
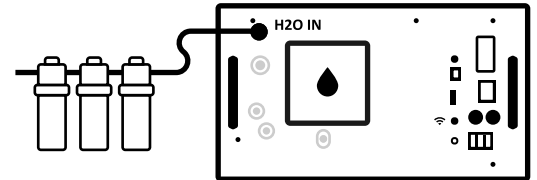
Connect electrolyser to water supply only through water purification system according to the Owner's Manual. Water conductivity must be < 20 μS/cm (at 25°C) and pressure between of 1-4 bar.

Optional **External Enapter Water Tank**

Use **Enapter Water Tank** to solve the problem of unstable water supply**.** It can be filled manually with prepared demineralised water as well as directly connected to water source.

Enapter Water tank deliveries pressure up to 2.75 bar. Water conductivity must be < 20 μS/cm (at 25°C).

EL4.0 LC version **Cooling Loop Requirement**

Cooling Water ports (normally closed) are used for cooling the system using water or a water glycol mixture. Check the manual to guarantee the optimal temperature as a function of your flow rate and ambient temperature.

The required flow rate is 1-2 L/min and input pressure can't exceed 4 bar. Make sure you are not reversing the IN and the OUT.

4 Check H2 Vent and O2 Vent Lines

It is the installer's responsibility to regularly check and maintain **H2 VENT** and **O2 VENT** lines, as well as keeping the lines free of ice and any obstructions.
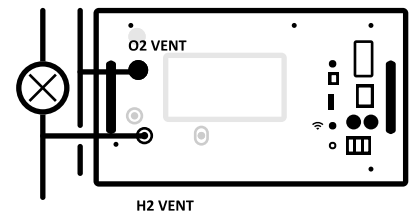
⚠ **DO NOT connect H2 VENT line with O2 VENT line. Mixing these outputs is extremely dangerous.**

⚠ **Always check H2 vent and O2 vent lines for blockage and damage.**

Make sure there is no obstruction into the **H2 VENT line.** This can cause irreparable damage to your hydrogen system

No blockage should be present on **O2 VENT** on the user side of the interface.

O2 VENT

H2 VENT

5   Connect the Electrolyser to Enapter Cloud

To download the Enapter mobile app, scan the QR-code or visit app.enapter.com from your Android or Apple mobile phone.

Skip this step for isolated setups with no internet connection.

→ 6

Power on the device.

Make sure antenna 📶 is turned on (blue led steady on the front panel of electrolyser).

Open the Enapter App and follow the steps to create your site in the **Enapter Cloud.**

Press **the Add device** button.

Scan QR-code located on the front side of the device and follow the Enapter app instructions.

If you can't scan the QR code, enter the device ID and PIN manually. You can find them on the back of the device.

+ Add device

✓ Device connected.

Monitor device activity in Enapter App or Enapter Cloud.
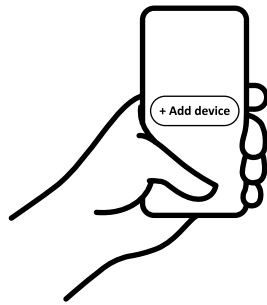
6   Access the Electrolyser's Web GUI

For Isolated setups with no internet connection use Enapter Web GUI (Graphical User Interface) to monitor and control the device locally through a web browser.

Instructions on how to access Electrolyser's Web Interface are available at handbook.enapter.com.

A

Local WiFi Network

Ethernet cable

B
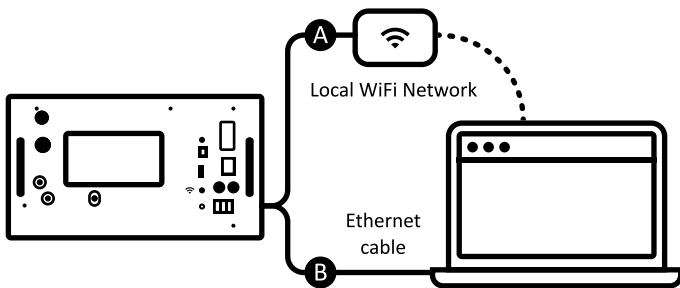
Option A   For sites with a local WiFi network. This connection type allows users to access web interface of multiple electrolysers' and also use it via mobile web browser.

Option B   Connection via ETH (Ethernet) port on the front panel of the device allows users to access the web interface of a single electrolyzer.

⚠ **Alternating current voltage of 220-240V is potentially lethal! Direct current voltage of 48-60V can be a hazard!**
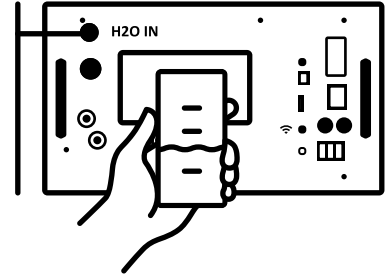
7   The First Electrolyte Refilling

Follow Enapter App or Web GUI instructions to refill the electrolyser for the first time.

⚠ Water inlet must be connected during electrolyte refiling and draining routines for Electrolyser 4.0.
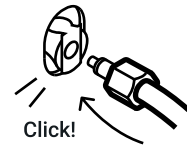
H2O IN

Make sure electrolyser is in maintenance mode and drained.

Prepare electrolyte bag with **2L of the 1,54% KOH solution** and supplied refilling pipe. Do not dilute the electrolyte!

Connect the refilling pipe to the bag using the special connector.

Insert the opposite end of the pipe to **the Fill/Drain Port.**

Click!

To start refilling carefully raise the electrolyte bag above the device. Refilling will start automatically.

Pour out all of the solution from the electrolyte bag.

Disconnect refilling pipe from the Fill/Drain port.

If you forget to disconnect the pipe, electrolyser can be overfilled during the next steps or KOH concentration might be wrong. If that happens, the device will require service checkup.
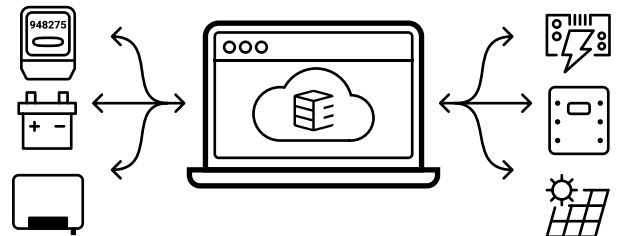
Press **Exit Maintenance Mode** button.

Electrolyser will be filled with required amount of water automatically.

✓ Electrolyser Is Ready for Hydrogen Production.

8   Electrolyser is Ready for Use!

During normal operation the LEDs indicate the status of the machine. Monitor device activity in **Enapter App, Enapter Cloud or WEB GUI.**

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Optional   **Connect any energy devices to Enapter Cloud**

To integrate solar invertetrs, power meters, fuel cells, irradiance sensors, etc to Enapter Cloud you will need a suitable **Universal Communication Module (UCM)** and **a Blueprint.**

Visit marketplace.enapter.com to find out which device integration Blueprints are already available. To learn how to develop your own Blueprints visit developers.enapter.com.