



EFOY

EFOY Pro Hybrid Solution

User Manual – EFOY ProCabinet 4060S/SX + 4120SX

! Warning !











Protect Your EFOY Fuel Cell from Freezing



To avoid complications or potential damage, while doing preliminary work and setting up your EFOY system in cold temperatures, *please ensure any EFOY fuel cells are kept in a warm environment such as a vehicle or building until they are ready to be installed.*

Install the EFOY fuel cell(s) last and then power up the system as soon as possible. Once an EFOY is connected to fuel cartridges and functioning batteries and set to automatic mode, it can protect itself from freezing temperatures.

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Installation & Commissioning Checklist

Customer/End User	Site Location	Site ID
Installed By: Company Name	Installed By: Technician Name	Installation Date
EFOY Panel Serial #	EFOY Fuel Cell Serial #	Fuel Manager Serial #
Fuel Manager Type (FM2, FM4 or FM8)	Fuel Cartridge Type (M10, or M28)	Fuel Cartridge Quantity

EFOY Enclosure Check	Complete	
Heating Thermostat set point has not been adjusted, seal remains intact (found in main compartment)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Cooling Thermostat set point has not been adjusted, seal remains intact (found in main compartment)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Air Intake Exhaust Vent and Metal Screen Filter is clean and clear of obstructions	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Air Exhaust Vent is unobstructed	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Main Cabinet Door closes and seals properly	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Operating Panel Display Door closes and seals properly	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Side Cabinet Door closes and seals properly	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Batteries Installed – proper model # and quantity: See Step 4, below and refer to drawing BOM	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Fuel Manager Installed: See Step 7, below	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Fuel Manager bracket tightened: See Step 7, below	Yes <input type="checkbox"/>	No <input type="checkbox"/>
EFOY(s) Installed: See Step 6, below	Yes <input type="checkbox"/>	No <input type="checkbox"/>
EFOY mounting strap tightened: See Step 6, below	Yes <input type="checkbox"/>	No <input type="checkbox"/>
EFOY Off-Heat Elbow Vent installed as per specified in system drawing package: See Step 18, below	Yes <input type="checkbox"/>	No <input type="checkbox"/>
EFOY water exhaust hose properly connected to EHT exhaust line assembly: See Step 13, below	Yes <input type="checkbox"/>	No <input type="checkbox"/>

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Installation & Commissioning Checklist

EFOY System: Found using the Operating Panel (display)	Value
<i>*Do not adjust these settings without first consulting the SFC Energy Service Team*</i>	
EFOY Firmware Version	
Switch-On Voltage Setting	
Switch-Off Voltage Setting	
Absorption Time Setting	
Maximum Charge Time Setting	
Battery Bank Capacity	
Any Errors or Warnings?	
Recorded EFOY Runtime hours	
Battery Bank wired in proper voltage configuration as per system drawings (12/24/48 VDC)	

EFOY Remote Monitoring Method, if utilized	Complete / Value	
EFOY Cloud Connection	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Modbus TCP Connection	Yes <input type="checkbox"/>	No <input type="checkbox"/>
IP address/Gateway		

EFOY Fuel Cartridges	Complete	
EFOY Fuel Cartridges properly connected to Fuel Manager: See Step 11 and 12, below	Yes <input type="checkbox"/>	No <input type="checkbox"/>
M28 Adaptors secured hand/tight (where applicable): See Step 12, below	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Methanol Volume set for each connected fuel cartridge: See Step 19a, below	Yes <input type="checkbox"/>	No <input type="checkbox"/>
EFOY Manual On Test Cycle Complete: See Step 21, below	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Pull test performed on each fuel cartridge: See Fuel Cartridge Replacement, p.25	Yes <input type="checkbox"/>	No <input type="checkbox"/>

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Installation & Commissioning Checklist

Solar Charge Controller	Complete / Value	
Solar Controller Programmed with proper settings	Yes <input type="checkbox"/>	No <input type="checkbox"/>
DIP Switch Settings		
High Voltage Disconnect Setting		
Low Voltage Disconnect Setting		
Absorption Time Setting		

System Documentation	Complete	
EFOY System Drawings w/ wiring diagram	Yes <input type="checkbox"/>	No <input type="checkbox"/>
EFOY Quick Guide	Yes <input type="checkbox"/>	No <input type="checkbox"/>
EFOY Fuel Cartridge Replacement Instructions	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Duo Cart Switch Instructions (for EFOY Pro 2400 and 800 series)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Cluster Controller Instructions (if more than one EFOY is used)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Integration Kit Guide (if EFOY solution is being integrated into customer system)	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Before Leaving Site: System Checklist	Complete / Value	
Solar Breaker ON	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Power Distribution Breaker ON	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Battery Breaker ON	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Loads Breaker ON	Yes <input type="checkbox"/>	No <input type="checkbox"/>
EFOY Breaker ON	Yes <input type="checkbox"/>	No <input type="checkbox"/>
EFOY Mode: Automatic	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Main door, Operating Panel Door and Side Cabinet Door All Secured	Yes <input type="checkbox"/>	No <input type="checkbox"/>



Installation & Commissioning Checklist

Additional Notes

<p>EFOY Commissioning Successful:</p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>SFC Representative:</p> <p>_____</p> <p>Date Signature</p>	<p>Customer Representative:</p> <p>_____</p> <p>Date Signature</p>
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Submission

Upon successful completion of system commissioning please submit this signed and completed form to the SFC Energy Service department at service-support@sfc.com for record keeping.

If you require assistance, please contact the SFC Energy Canada Service Department at
1 800 565 74 31 or service-support@sfc.com

System Start-up Instructions

1. Verify PV array wiring configuration is correct according to the specific site design. (An example diagram is included in the drawing package).



2. Check PV array for proper voltage and polarity.



3. Verify all field wiring according to drawing package and turn all breakers to the OFF position.



4. Set up and secure the batteries in to place as per the designated system voltage configuration using the cables provided.



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System Start-up Instructions

5. Place the methanol fuel cartridges into the enclosure. You should have enough cartridges to connect one to each fuel hose.



6. Secure the EFOY fuel cell into place by running the strap through the mounting brackets.

Note: If you are working with a Dual EFOY system, steps 6 – 20 will have to be done for EACH EFOY.



7. Ensure the fuel manager (pre-installed) is secured inside the EFOY enclosure on its mounting bracket.



8. Connect the EFOY fuel cartridge connector to the fuel manager.



Find more information on efoy-pro.com

System Start-up Instructions

9. Connect the Fuel Manager data cable to the bottom right port labeled SFC Bus on the EFOY Fuel Cell.



10. Connect the Fuel Manager power cable to the top right port on the EFOY Fuel Cell.



11. M28 cartridges with the P/N 150 905 100 require adapters to attach the fuel manager hoses to the cartridge. If you have this cartridge you will first need secure an M28 adapter to the fuel cartridge hand tight (avoid overtightening as this can lead to issues). If you have the new NA M28 cartridge (P/N 150 905 169), this step can be skipped as an adaptor is not required.



12. Connect the fuel manager hose to the cartridge (or the M28 adapter, if required from step 11) hand tight (avoid overtightening as this can lead to issues). Take care not to cross thread as the fuel manager needs to create a vacuum to draw methanol from the cartridge.



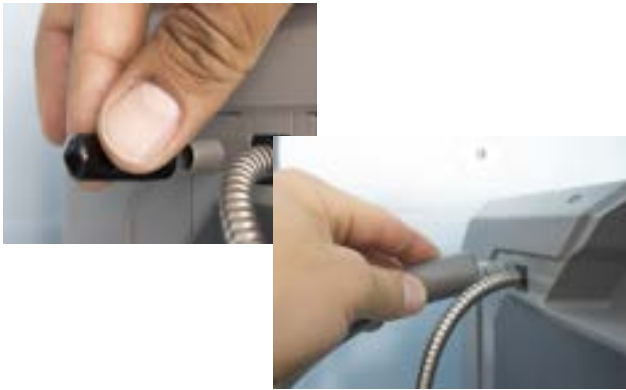
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System Start-up Instructions

13. Remove the protective cap from the EFOY fuel cell exhaust spout and connect the exhaust hose. Perform a quick visual check to ensure there is no pinching or kinking in the hose, and that it is positioned at a downward angle.



15. If you're utilizing any communications with your EFOY Fuel Cell, you can connect the cable to the LAN port seen below.



14. Connect the OP3 Operating Panel (touchscreen display) cable to the SFC Bus port on the Fuel Manager.



16. Connect the EFOY Fuel Cell to the system batteries with the charge/sense wiring harness. The large leads are the charging lines, the small leads are the voltage sense lines. They connect to the port on the EFOY as shown below.



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EFOY Pro Hybrid Solution User Manual



System Start-up Instructions

17. Switch ON the breakers for the EFOY, and the Batteries which are both clearly labelled. Refer to the drawings for more information.

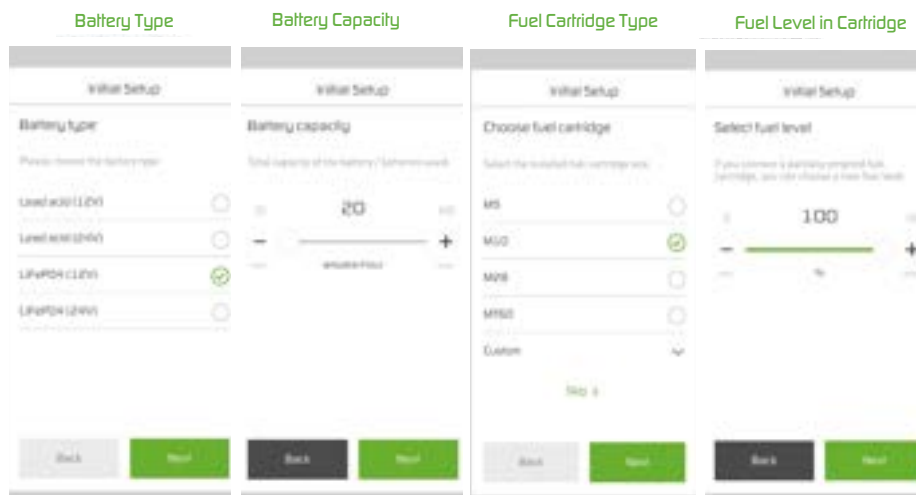


18. Attach the Off-Heat Elbow to the EFOY warm air exhaust port pointed up at a 45 degree angle facing towards the EFOY Fuel Manager and water exhaust line. This is essential to ensure proper air circulation throughout the cabinet and minimize any required exhaust fan runtime.



19. Close the panel door(s) and wake up the Operating Panel (LED Display) on the door by touching the screen. Follow the prompts to complete the initial configuration. See detailed configuration steps below.

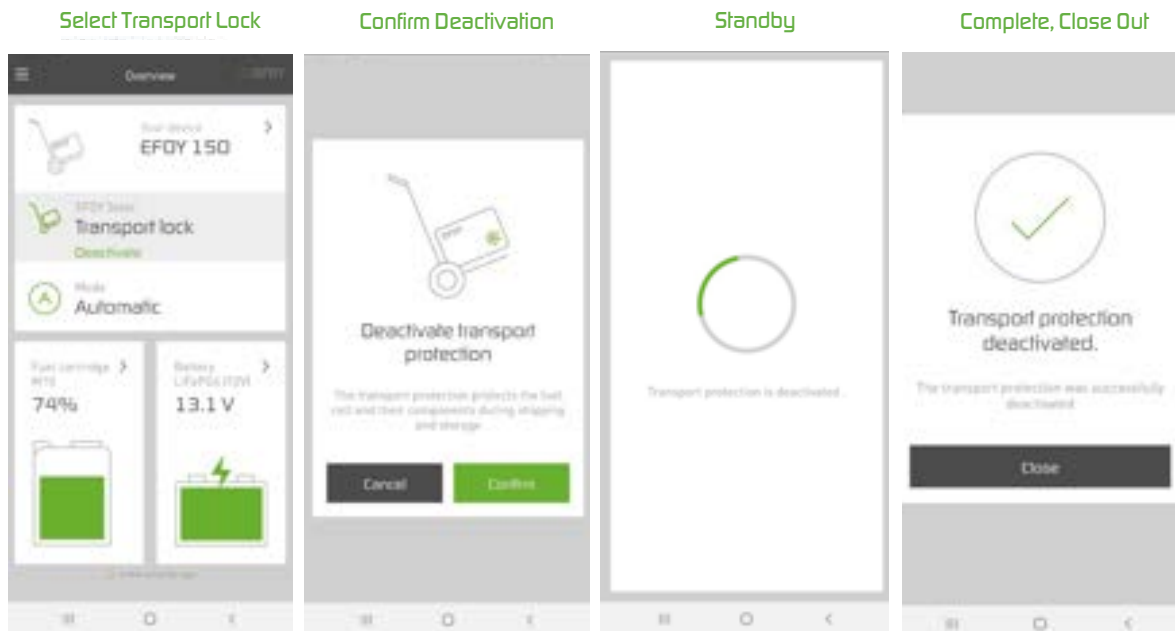
- 19a. Complete the Initial Setup by going through these steps on the Operating Panel.



Find more information on efoy-pro.com

System Start-up Instructions

- 19b. Close the panel door(s) and wake up the Operating Panel (LED Display) on the door by touching the screen. Follow the prompts to complete the initial configuration. See detailed configuration steps below.



- 19c. Put the EFOY into 'Automatic' operating mode. The EFOY will sense when the voltage in the batteries is drawn down to the switch-on voltage threshold and automatically switch on to begin a charging cycle whenever required.



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System Start-up Instructions



20. Inside the EFOY is a mixing tank containing a methanol and water mixture which is used in the chemical reaction to create power. Over long periods of time if the EFOY isn't operating, the water can evaporate. When starting up an EFOY, it **MAY** prompt you to add 'Service Fluid'. If your EFOY does prompt you to add fluid, you can remove the exhaust hose, and add it straight into the exhaust port. Each new EFOY comes with a small bottle of service fluid. Ensure you re-attach the exhaust hose afterwards. If the EFOY does not prompt you to add fluid, it is not necessary.

Note: If you are setting up a Dual EFOY System, please skip ahead to the Dual EFOY ProCabinet Systems section to activate the EFOY cluster functionality before proceeding to Step 21 below.

21. To ensure the EFOY has been installed successfully, select 'Mode' to return to the 'Charge Mode' screen and initiate a 'Charge Now' cycle. This will test that the EFOY is correctly connected to fuel. The EFOY will attempt to pull fuel from the active cartridge. If unable to do so, it will switch over to the other cartridge, and the previous connection will have to be examined and reconnected. If there are any other issues, the Operating Panel will display the relative error messages. Once the EFOY completes its charging cycle, it will automatically switch itself back into 'Automatic' mode.

Note: The EFOY will not allow you to perform a 'Charge Now' cycle if the batteries are fully charged (above 13.2V in a 12V system and 26.4V in a 24V system). In order to facilitate this test, turn OFF the solar input breakers, and turn ON the load breakers to draw down the batteries. You can monitor the battery voltage level on the EFOY display and initiate the 'Charge Now' cycle when the battery voltage is below 13.2V or 26.4V.

21. Once you've verified that the EFOY has run a successful charge cycle, you can energize the rest of the system and prepare to close it up. Turn on all the applicable load breakers, and ensure the solar breakers are turned on. Verify there are no errors on the operating panel, close and secure the cabinet by turning the handle to fix it in place. other cartridge, and the previous connection will have to be examined and reconnected. If there are any other issues, the Operating Panel will display the relative error messages. Once the EFOY completes its charging cycle, it will automatically switch itself back into 'Automatic' mode.



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Solar Array Setup Guidelines and Example

! WARNING ! Have your solar installation done by certified electricians. The following is an example and meant to serve as a guideline. Ensure local codes and regulations are always followed, otherwise injury and/or damage to property could occur!

Accounting for Solar Components

If your order included a solar package from SFC Energy, there are several items to account for. Solar Panels, pairs of PV cables, a Panel Mounting System, a Solar Combiner box with Disconnect, Breakers, a GFCI breaker, and a Lightning Arrestor are all items we often provide. The items you receive may vary depending on the package purchased. We design our 12 and 24VDC systems to arrange solar panels in a series-parallel configuration whenever possible. If your system has just 1 or 3 solar panels, these will come with an equal number of breakers and sets of PV cables, and enter the Combiner Box separately. If your system comes with an even number of solar panels, these will enter the box in pairs (series-parallel or sets of 2) and have one set of PV cables and one breaker per pair.

Wiring the Solar Combiner Box/Disconnect

If purchased, your Combiner Box/Disconnect should have come pre assembled. To verify, ensure the breakers are installed on the rail, connecting to the positive bus at the top. The GFCI breaker should also be installed on the rail, but not connected to the positive bus like the other breakers.

Wire the positive bus to the bottom of the power side of the GFCI breaker. Then, connect it's white lead to the negative bus, and it's green lead to the ground bar. The lightning arrestor should be installed directly onto the combiner box (side or bottom is recommended) and the red lead connected to the positive bus, the black lead to the negative bus, and the green lead to the ground bar.

Wiring the Solar Panels and Connecting to EFOY Cabinet

Begin by entering the PV cables from your solar panels into the combiner box. These will be wired as per the comments above. For example, if you have a 4 solar panel system, you will require 2 breakers and 2 sets of PV cables. Connect 2 Solar panels together, then connect them to the combiner box using one set of PV cables. Wire the positive lead to one breaker, and the negative lead to the negative bus. Do this for each pair of solar panels.

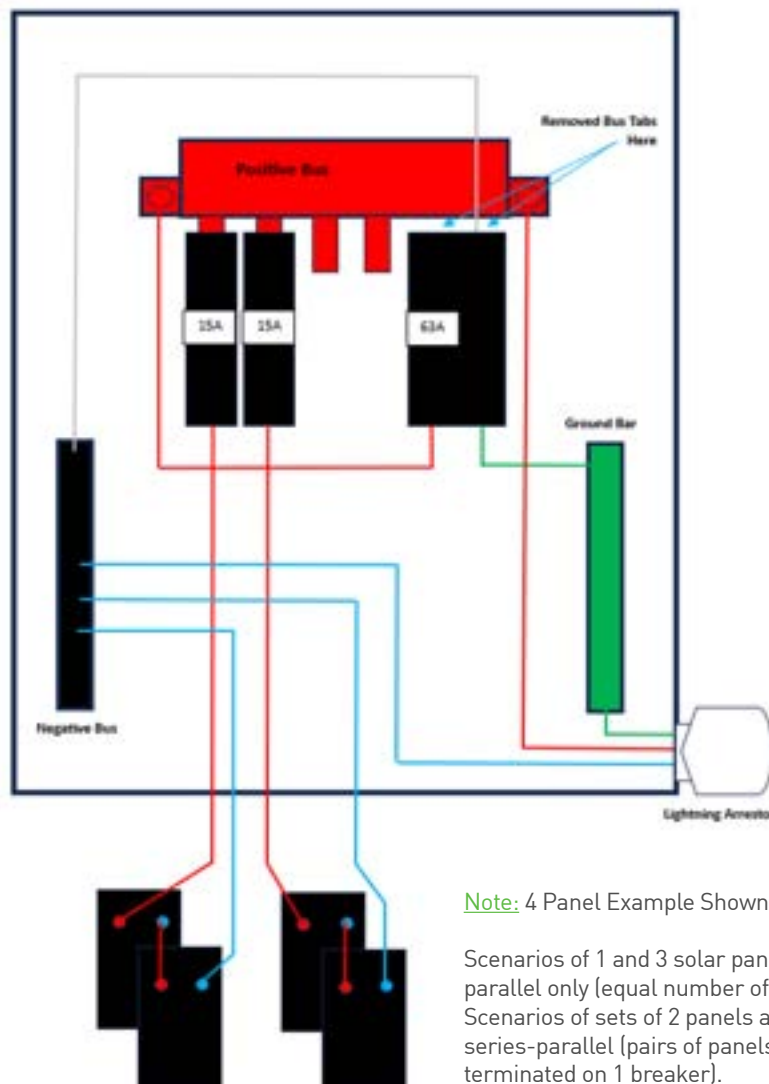
The outgoing power cable to connect the combiner box to the EFOY cabinet will connect to the (+24V) lead top of the power side of the GFCI breaker, and the (-) lead to the negative bus. The cable ground can connect to the ground bar.

Note: Please refer to "A1 - Annex 1 Typical PV Array Interconnection" of the system drawing package for a reference guide detailing typical PV array interconnections.

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Solar Array Setup Guidelines and Example

Typical 24VDC Combiner Box Wiring



Find more information on efoy-pro.com

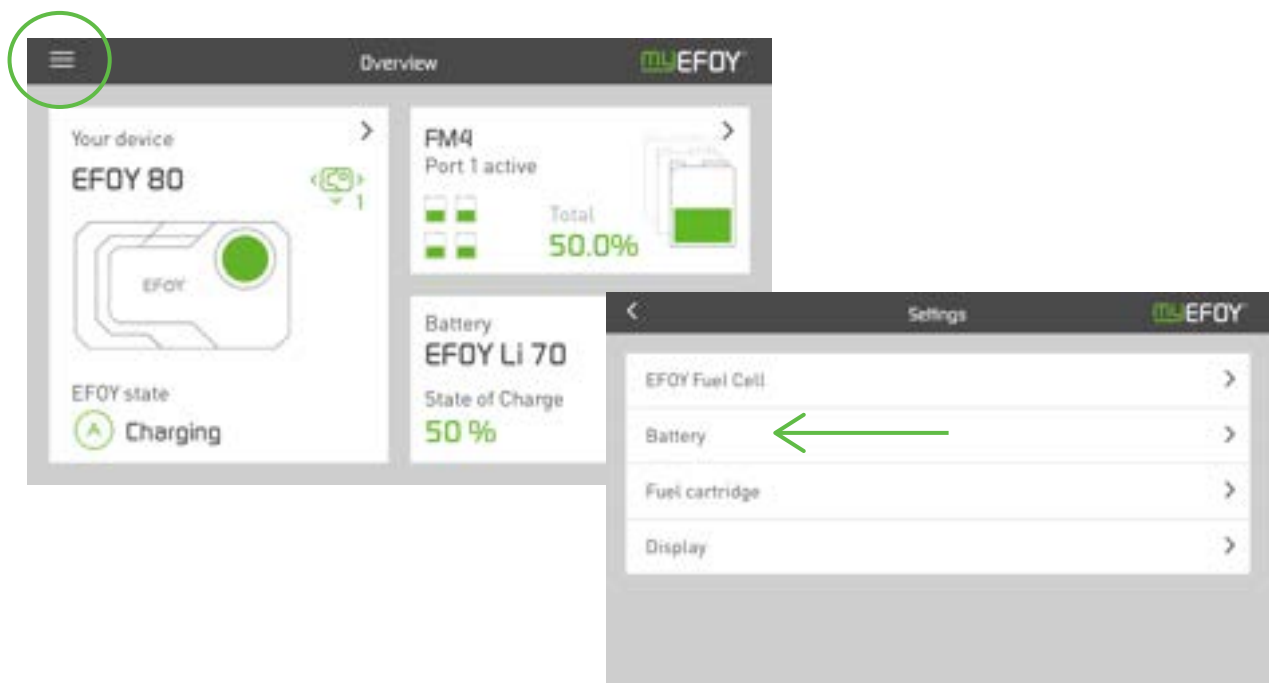
Dual EFOY Systems Activating the Cluster Functionality

Our 250W EFOY ProCabinet 4120SX solution contains (2) EFOY Fuel Cells. In this configuration we want each EFOY to run at the same time to ensure each EFOY uses the same amount of fuel and accumulates the same number of runtime hours. This ensures optimum system performance and allows you to refuel both EFOYs at the same time, minimizing trips to site. To ensure both fuel cells operate in parallel, we need to enable them to communicate. All EFOYs with firmware version 24.14.275 or higher can utilize the onboard clustering functionality in the firmware. EFOYs with older firmware versions require the use of a Cluster Controller device. Please see the following instructions for both options.

Clustering Using the Onboard Firmware Functionality

Available with firmware version 24.14.275 or higher

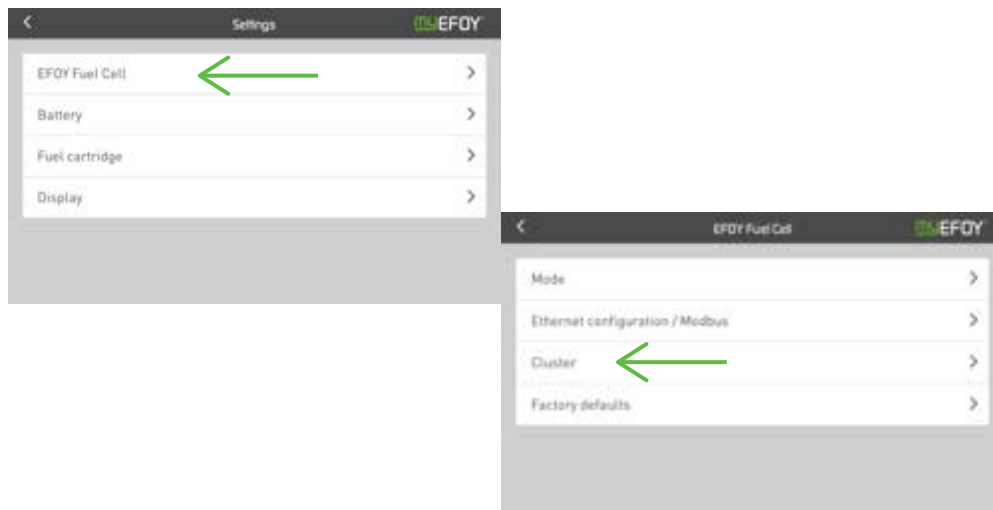
1. It is important that each EFOY is set up with the same charging parameters. Please refer back to Step 19a of the initial set-up instructions, and additionally, review the information in the Battery Menu. Please do not change any settings without first consulting an SFC Energy Service Team representative. These settings should already be correctly input, and the same for each EFOY.



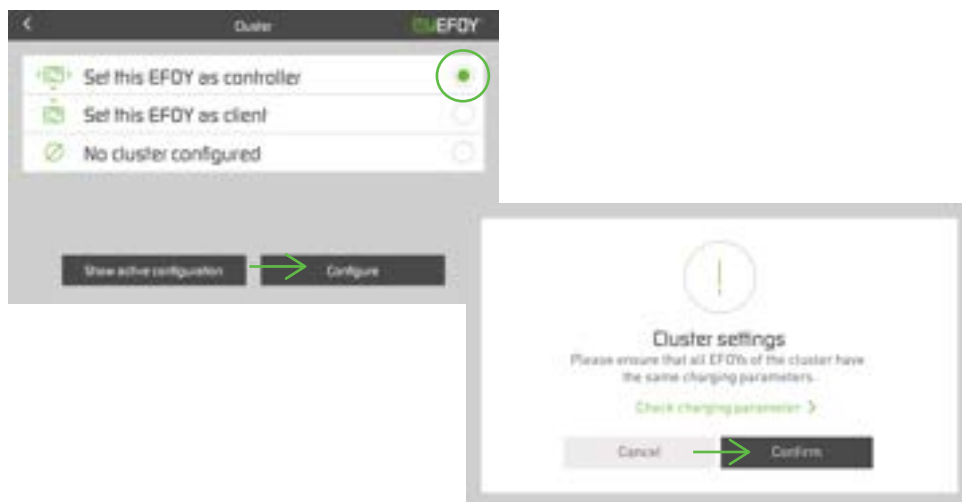
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Dual EFOY Systems Activating the Cluster Functionality

2. Ensure the (2) EFOY Fuel Cells are connected via their onboard ethernet ports and the breaker for the network switch is turned on. Then, on the Operating Panel, select EFOY Fuel Cell, then Cluster.



3. Choose which EFOY will be the 'Controller'. This EFOY will be the one to send commands to the other.



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Dual EFOY Systems Activating the Cluster Functionality

- The system will assign an IP address to the Controller. If you are using your ProCabinet on a network with other pieces of equipment, it may be necessary to input a customer IP address for the EFOYs. Take note of the IP address and Cluster PIN of the Controller, as the other EFOY will need this to find it on the network.



Set this EFOY as controller

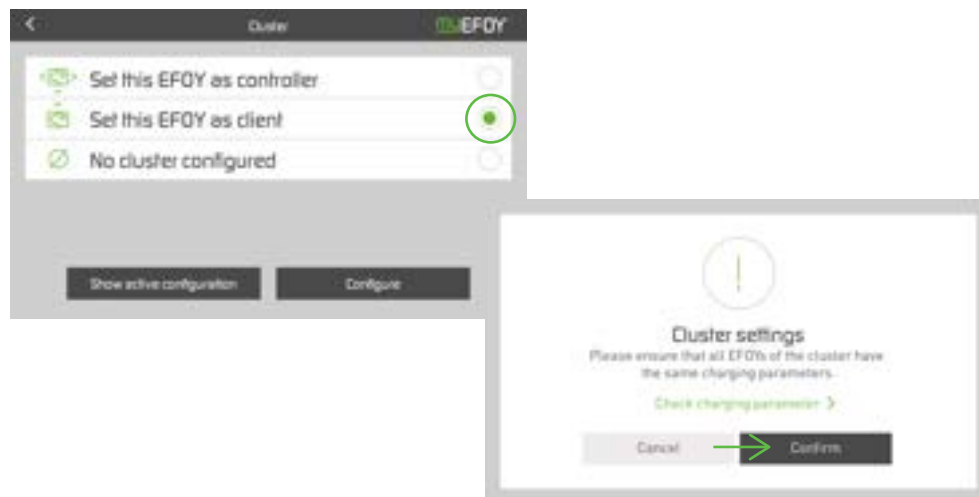
IP address 192.168.123.28 >

Cluster PIN 64252896

By setting this EFOY as controller, the IP address and the cluster PIN are automatically saved and can be used for the client configuration. Only possible if this operating panel is used for the configuration of the client EFOYs.

Save

- The other EFOY will be set as the 'Client' meaning it will take direction from the Controller. Here, we follow actions similar to Step 3, but select Client.



Cluster

Set this EFOY as controller

Set this EFOY as client

No cluster configured

Show active configuration Configure

Cluster settings

Please ensure that all EFOYs of the cluster have the same charging parameters.

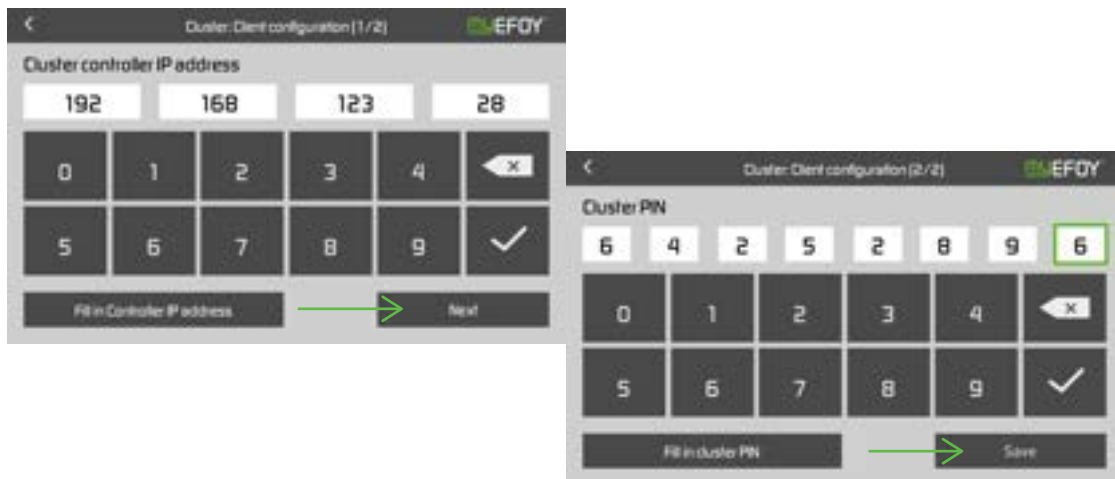
Check charging parameter >

Cancel Confirm

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Dual EFOY Systems Activating the Cluster Functionality

6. It will prompt you to enter the IP address of the Controller EFOY, and then the Cluster PIN so it can establish a connection.



Note: The connection may be blocked if the DHCP Client is currently enabled. To rectify this, you can return to the 'EFOY Fuel Cell' menu and go into the 'Ethernet Configuration' menu. There you will see a toggle switch called DHCP Client, and if it's currently green, and enabled, select it to disable it.



Note: Any commands to the cluster will have to be given to the Controller. Command input on the Client will be disabled. If there is an issue with the cluster, each EFOY will continue to operate independently. If the issue is resolved, the cluster will resume functionality.

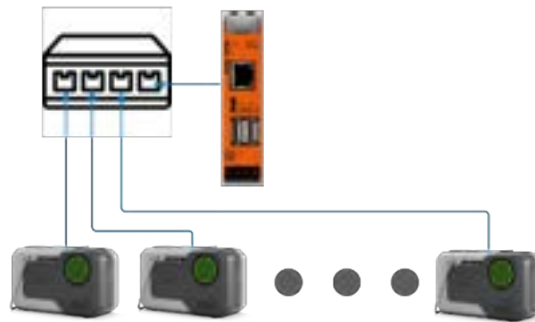
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Dual EFOY Systems Activating the Cluster Functionality

Clustering Using the EFOY Cluster Controller (CC2)



1. It is important that each EFOY is set up with the same charging parameters. Please refer back to Step 19a of the initial set-up instructions, and additionally, review the information in the Battery Menu. Do not change any settings without first consulting an SFC Energy Service Team representative. These settings should already be correctly input, and the same for each EFOY.
2. Ensure the Cluster Controller and each EFOY Fuel Cell is connected to the ethernet switch via their onboard ethernet ports.



Note: The CC2 communicates with EFOY devices using the ModbusTCP protocol over Ethernet connections. Each device in the cluster, including EFOYs and the CC2 itself, must be in the same IP subnet. EFOYs are configured to use dynamic addresses by default. The CC2 will automatically detect if a DHCP server is present;

If a DHCP server is present (provides an IP to the CC2 and EFOYs) the CC2 will detect the EFOYs and begin operation.

If a DHCP server is not present, the CC2 will enable its own DHCP server and provide IP addresses to itself and the EFOYs.

The CC2's DHCP server will not assign IP addresses to any device that is not an EFOY

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Dual EFOY Systems Activating the Cluster Functionality

- Each EFOY must have Modbus TCP Enabled. To verify this, you can go to the 'EFOY Fuel Cell' menu and then into the 'Ethernet Configuration' menu. There you will see a toggle switch called Modbus TCP. Ensure it is turned on, and is green.



Note: The CC2 will put every EFOY that is in the cluster in the Automatic operation mode using the Modbus protocol. If the user sets the Manual or Off operation mode, either through the display or serial connection, this mode will be overwritten by the CC2 and forced to the Automatic mode.


The CC2 will poll the status of every EFOY in the cluster once every 2 seconds. If any EFOY turns on or goes into deep discharge protection, the other EFOYs in the cluster will be turned on via Modbus.

Once the cluster is on, if any EFOY turns off, the other EFOYs in the cluster will be turned off using the Modbus protocol. An EFOY is considered off if the operating mode is off, standby or shutdown. The cluster will not be stopped if an EFOY in the cluster enters an

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Dual EFOY Systems Activating the Cluster Functionality

Note: There are two LEDs on its front panel that are controlled by the CC2 app, as shown in Figure 2. These are labelled A1 and A2.

	LED	Definition
	A1 Green/Off	The CC2 app is running, and there are no problems.
	A1 Green/Orange	The CC2 app is running, and there are no EFOYs in the cluster.
	A1 Green/Red	The CC2 app is running, and some type of error is occurring.
	A2 Off	The CC2 app is not running.
	A2 Red	The CC2 app is waiting to see whether it is assigned an IP address via DHCP. This will happen when the application starts. The LED may stay up for up to 90 seconds and for a minimum of 30s.
	A2 Green	The CC2 is assigned an IP address via external DHCP, or the Ethernet cable is unplugged. The CC2 DHCP server is not enabled.
	A2 Orange	The CC2 DHCP server is enabled.

4. Once powered and connected, the CC2 will operate automatically, ensuring the EFOYs operate in tandem.

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EFOY IP Address Assignment

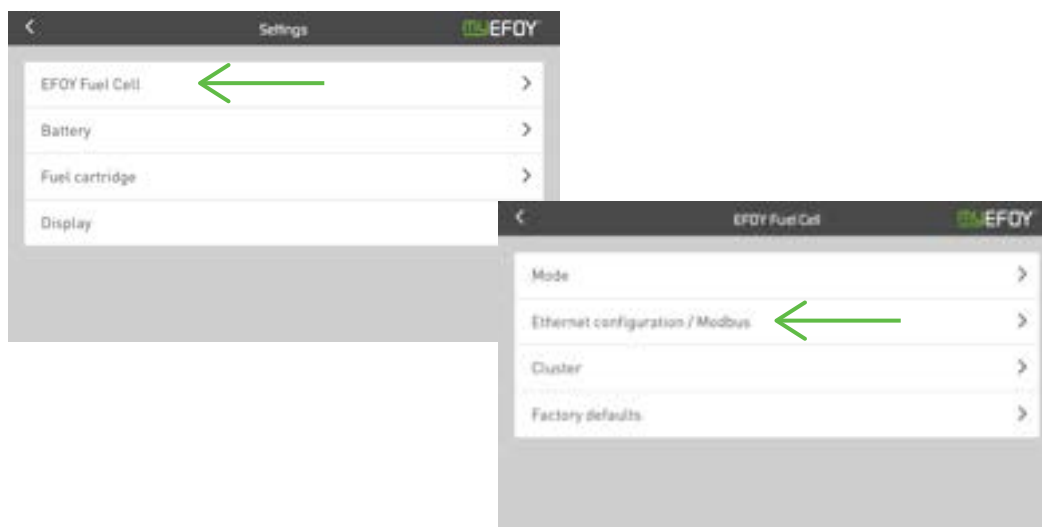
Assigning an IP Address to an EFOY Pro Fuel Cell

In some communication scenarios, you may wish to manually assign an EFOY a specific IP Address. Please see the following steps for doing so.

1. On the EFOY Operating Panel (LED touchscreen) select the icon with 3 lines in the top left corner to access the Menu, and then click on 'Settings'.



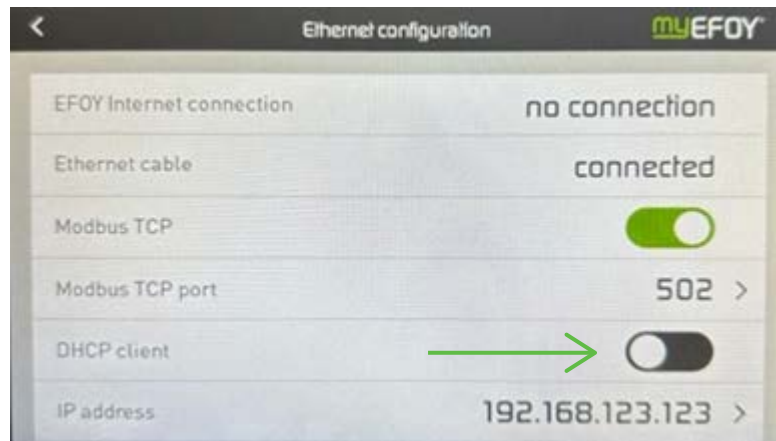
2. In the settings menu, click 'EFOY Fuel Cell' and then 'Ethernet configuration / Modbus'.



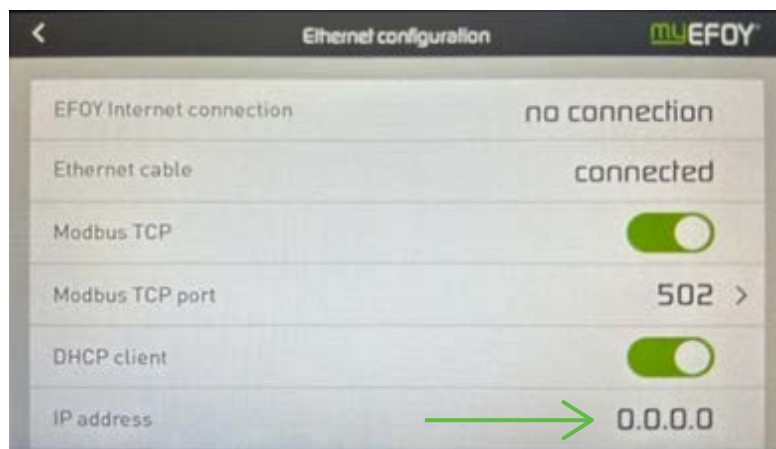
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EFOY IP Address Assignment

3. From here, you can see the DHCP client setting. To be able to manually input an IP Address, this switch needs to be set to the off position, as seen here.



4. Then, you can select 'IP address' and continue to manually input the desired IP address and hit Confirm. This will conclude the process.



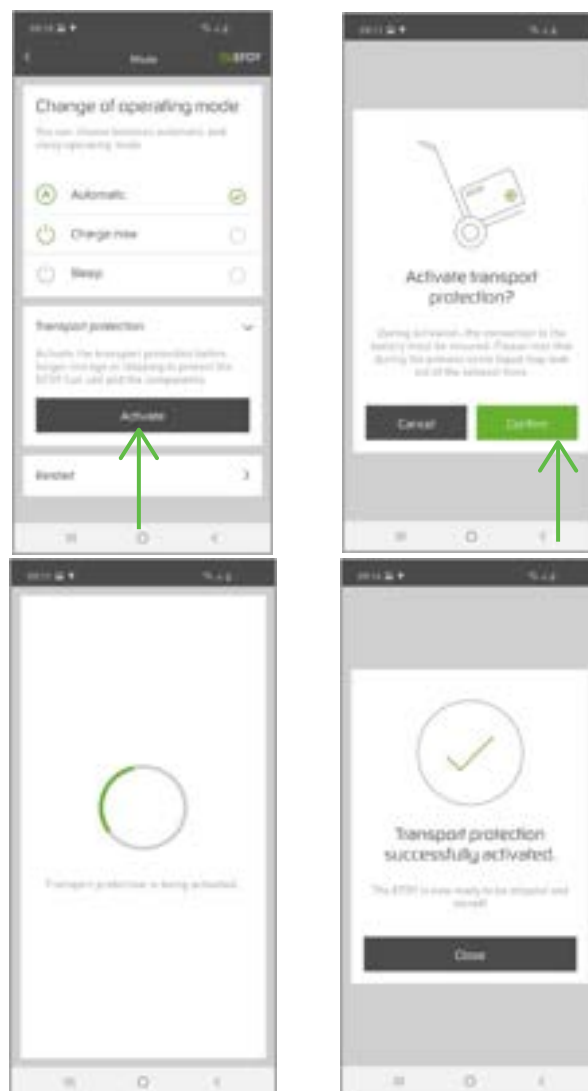
Note: The DNS Setting are unchangeable on the EFOY.

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EFOY Transport Mode

The EFOY Pro 2800 has a protective mode we can enable if its to either be transported or stored for long periods of time.

Activate Transport Mode by following the below steps. This may take a few minutes, depending on the state of your EFOY.



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EFOY Pro Hybrid Solution User Manual

Recommended System Settings

It's important to remember that set points will be pre-set with our recommended system settings by the team at SFC Energy. While these settings are adjustable, before modifying any on your own we advise having a discussion with an SFC Energy Service Team member about what you'd like to change and why. Adjusting set points incorrectly could result in less efficient EFOY operation resulting in more fuel consumption and unnecessary runtime hours.

	EFOY 80 / 150	Pro 900/1800/2800	Pro 1200
Switch-on Voltage	12.0V / 24.0V	12.0V / 24.0V	24.0V / 48.0V
Switch-off Voltage	14.0V/28.0V	14.0V/28.0V	28.0V / 56.0V
Max Battery Voltage	15.0V / 29.5V	15.0V / 29.5V	29.5V / 59.5V
Max Charge Time	6 - 12 hrs	6 - 12 hrs	6 - 12 hrs
Heat Trace Thermostat	5° C	5° C	5° C
Exhaust Fan Thermostat	30° C	30° C	30° C

Tips:

- ⚡ The default system settings are fine for most applications.
- ⚡ Longer charge cycles are better than shorter more frequent cycles as the start-up phase is the hardest on the power stack.
- ⚡ You can adjust the switch on/off voltage and max charge time settings to conserve fuel but this may shorten battery bank lifespan.
- ⚡ An EFOY can mask an end of life battery bank but this will show up clearly in the data if you look at charge cycles as the battery voltage will drop as soon as a charge cycle is completed and the EFOY will quickly turn back on again.
- ⚡ Do not ever adjust the Heat Trace or Exhaust Fan Thermostats.

Find more information on efoy-pro.com

Fuel Cartridge Replacement

EFOY Fuel Cartridge Replacement Process

Please review the following basic steps to ensure your fuel cartridges are replaced and reconnected correctly.

1. Disconnect the empty cartridge and remove it.
2. Place the new cartridge in position and reconnect the fuel hose connector hand tight – avoid overtightening as this can cause connection issues. Ensure the connector is not cross threaded as a seal is required to successfully pump fuel.
*If an M28 cartridge with PN: 150 905 100 is being used then an M28 adapter will need to be utilized. First connect the M28 adapter to the fuel cartridge, then the fuel hose connector to the adapter.
3. Using the operating panel, we can re-set the new cartridge value to 100% by following these steps:
 - ⏻ Enter the main menu by selecting the three lines icon in the top left corner.
 - ⏻ Select Settings, and then Fuel Cartridge.
 - ⏻ Choose which port you are replacing (1 or 2, the numbers are on the fuel hose connector)
 - ⏻ Input the correct fuel cartridge type, and adjust the new fuel level to 100%
 - ⏻ Save your changes.
4. Confirm the new fuel levels are correctly displayed on the Fuel Cartridge menu.

To ensure a proper connection has been made to each cartridge please complete the following steps:

1. In the Fuel Cartridge menu, click on the cartridge port you have just replaced.
2. Click 'Enable' in the lower left of the screen.
3. Run a manual charge cycle to start the EFOY. From the home screen, select 'Mode' and then click 'Charge Now'.
4. This will initiate the start-up phase on the EFOY, and it will begin to pull fuel from the enabled cartridge. This may take up to 30 minutes.
5. Once the start-up phase is complete, it will enter 'Charging' phase. Seeing this transition means the EFOY has successfully pulled fuel from the enabled cartridge. After the unit has completed a 'Charge Now' cycle, it will revert to 'Automatic Mode' on its own.
6. Repeat the above steps to check any additional cartridges that have been changed out.
7. Before leaving the system, be sure to set any partially full cartridges to the active cartridge by enabling it via the Fuel Cartridge menu.

If the EFOY was not able to pull fuel from the newly replaced cartridge, it will attempt to switch to the other cartridge to pull fuel. Try reconnecting the fuel hose on the cartridge it was having difficulty with, enable it, and run another charge now cycle to verify a secure connection has been made.

Note: As mentioned in the Start Up Instructions, the EFOY will not allow you to perform a 'Charge Now' cycle if the batteries are fully charged (above 13.2V in a 12V system, and 26.4V in a 24V system). In order to facilitate this test, turn OFF the solar input breakers, and turn ON the load breakers to draw down the batteries. You can monitor the battery voltage level on the EFOY display and initiate the 'Charge Now' cycle when the battery voltage is below 13.2V or 26.4V.

Find more information on efoy-pro.com

EFOY Pro Hybrid Solution User Manual



Do's and Don'ts

Do's

- ⏻ Set a partially full fuel cartridge as the active cartridge when refuelling.
- ⏻ Ensure fuel cartridges are connected hand tight only. Avoid overtightening as this can lead to issues.
- ⏻ Install the Off Heat Elbow to the EFOY warm air exhaust to direct warm air away from the thermostats.
- ⏻ Maintain proper spacing around the EFOY for airflow.
- ⏻ Inspect the water exhaust line and exhaust spout to ensure they are free of obstructions.
- ⏻ Clean any dirt/dust/snow off solar panels whenever possible.
- ⏻ Health test your battery bank on a yearly basis, as an EFOY can mask dead batteries.
- ⏻ Add service fluid to the EFOY only if the system prompts you to do so.
- ⏻ If an EFOY has been exposed to freezing temperatures while powered down, bring it to room temperature before reinstallation and energization.
- ⏻ Ensure the solar array is positioned facing south and is free from shading as much as possible.

Don'ts

- ⏻ Let the EFOY run out of fuel during sub-zero temperatures.
- ⏻ Let the EFOY freeze during transportation or prior to installation.
- ⏻ Install and Energize an EFOY that has been exposed to freezing temperatures without first warming it back up to room temperature for approximately 24 hours.
- ⏻ Allow the system to operate with dead batteries.
- ⏻ Adjust the Thermostats controlling the heat trace or exhaust fans.
- ⏻ Add additional solar panels or batteries to the system without first consulting the SFC Service team.
- ⏻ Store Service Fluid in the ProCabinet, it will freeze.

Resources

Our Technical Services Team is available 24/7/365 by calling [1-800-565-7431](tel:1-800-565-7431) and you can also visit <https://sfcenergy.freshdesk.com/support/solutions/folders/13000010811> to find additional information on EFOY Firmware Updates, Modbus TCP Registers, EFOY Cloud Overview and more.

Find more information on efoy-pro.com