



USER MANUAL

EG4 Load Center





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1. Safety Information

Before any work begins, carefully read all safety instructions, and always observe them when working on or with the system. The installation must follow all applicable national or local standards and regulations. Consult with your AHJ to obtain the proper permits and permissions before installation.

Incorrect installation may cause:

- ***injury or death to the installer, operator or third party***
- ***damage to any attached equipment***

Important Safety Notifications

There are various safety concerns that must be carefully observed before, during, and after the installation, as well as during future operation and maintenance. The following are important safety notifications for the installer and any end users of this product under normal operating conditions.



Dangers of High Voltages and Large Current

1. **Use caution when working with metal tools on or around the system.** Risk of electrical arcs and/or short circuiting of equipment can lead to severe injury or death and equipment damage.
2. Do not make any connections or disconnections to the system with any live circuits. Damage to system components or risk of electrical shock may occur if working with energized circuits.
3. An installer should make sure to be well protected by reasonable and professional insulative equipment [e.g., personal protective equipment (PPE)].
4. Before installing, operating, or maintaining the system, it is important to inspect all existing wiring to ensure it meets the appropriate specifications and conditions for use.
5. Ensure that the system component connections are secure and proper to prevent damage or injuries caused by improper installation.



Warning

1. **All work on this product must be carried out by qualified personnel. To reduce the risk of electric shock, do not perform any servicing other than that specified in the operating instructions unless you are qualified to do so.**
2. Read all instructions before commencing installation. For electrical work, follow all local and national wiring standards, regulations, and these installation instructions. All wiring should be in accordance with the National Electrical Code (NEC), ANSI/NFPA 70.
3. The system can connect with the utility grid only if the utility provider permits. Consult with your utility and your local AHJ before installing this product for any additional permits, regulations, and requirements for your area.
4. The installer should consider the safety of future users when choosing the system's correct position and location as specified in this manual.
5. Please keep children away from touching or misusing the components in the system.
6. **Never operate the system with the protective front covers removed.**

DISCLAIMER

EG4® reserves the right to make changes to the material herein at any time without notice. You may refer to the EG4® website at www.eg4electronics.com for the most updated version of our manual.

2. EG4 Load Center Components and Features

The EG4 Load Center is an out-of-the-box unit that is pre-wired for support the integration of 2 EG4 6500 Inverters and batteries for both on-grid and off-grid residential solar installations. The pre-wired system is designed to save thousands of dollars and precious time for both installers and homeowners on their installation.



Warning: The EG4 Load Center must only be used with inverters running in stationary mode (Common Neutral)

The EG4 Load Center consists of the following pre-assembled DIN rail parts:

AC Bypass Assembly (AC Protection and Transfer Switch)

# of Breakers	2
Poles per Breaker	4
Current per Pole	63A
AC Bypass Current	126A
Inverter Input Current Limit	63A per inverter
Inverter Output Current Limit	63A per inverter
Voltage	120/240VAC
Torque (Breaker)	22.125 in-lb (2.5 Nm)
Torque (Jumper Bar Lug)	50 in-lb (5.7 Nm)
Min Wire Size	12 AWG (4 mm ²)
Max Wire Size	2 AWG (35 mm ²)
Wire type	Stranded or Solid

Two DC Breakers (Battery Protection and Disconnect)

# of Poles	2
Current	125A per pole, 250A total
Voltage	60VDC
Torque	50 in-lb (5.7 Nm)
Min Wire Size	8 AWG (10 mm ²)
Max Wire Size	1/0 AWG (50 mm ²)
Wire type	Stranded

Two DC Isolators (PV Disconnect)

# of Poles	4
Current	25A
Voltage	600V DC
Torque	10.62 – 15.93 in-lb (1.2–1.8 Nm)
Min Wire Size	12 AWG (4mm ²)
Max Wire Size	6 AWG (16mm ²)
Wire Type	Stranded or Solid

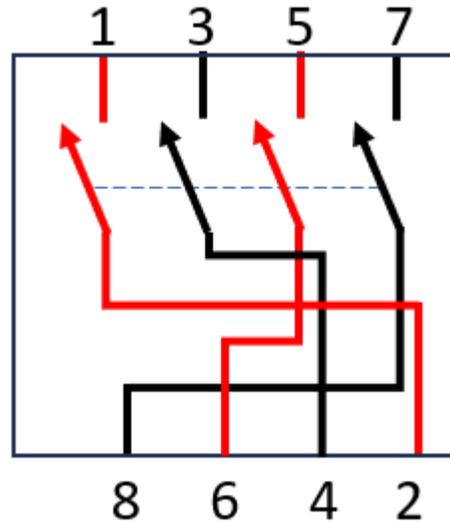
Two Bus Bars (Common Neutral and Common Ground)

# of Connections	8 (max)
Torque	20-35 in-lbs. (2.25–3.95 Nm) <i>See next section</i>
Min Wire Size	12 AWG
Max Wire Size	6 AWG
Wire type	Stranded or Solid

Torque Values for Ground and Neutral Bus Bars

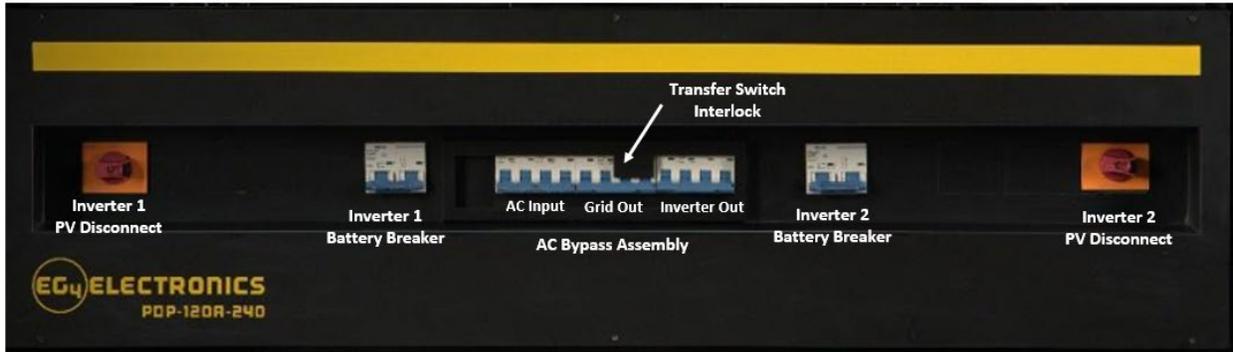
<u>Wire Size</u>	<u>Torque Value</u>
10-14 AWG	20 in-lb (2.25 Nm)
8 AWG	25 in-lb (2.82 Nm)
6 AWG	35 in-lb (3.95 Nm)

PV Disconnect Schematic

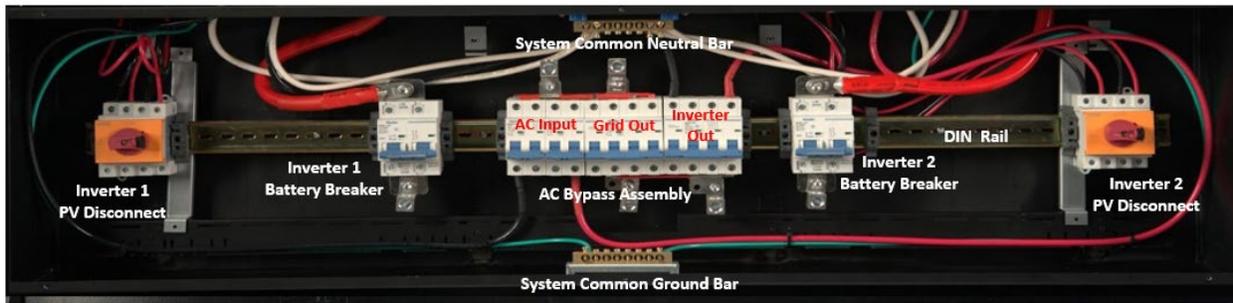


3. System Component Identification and Layout

External View

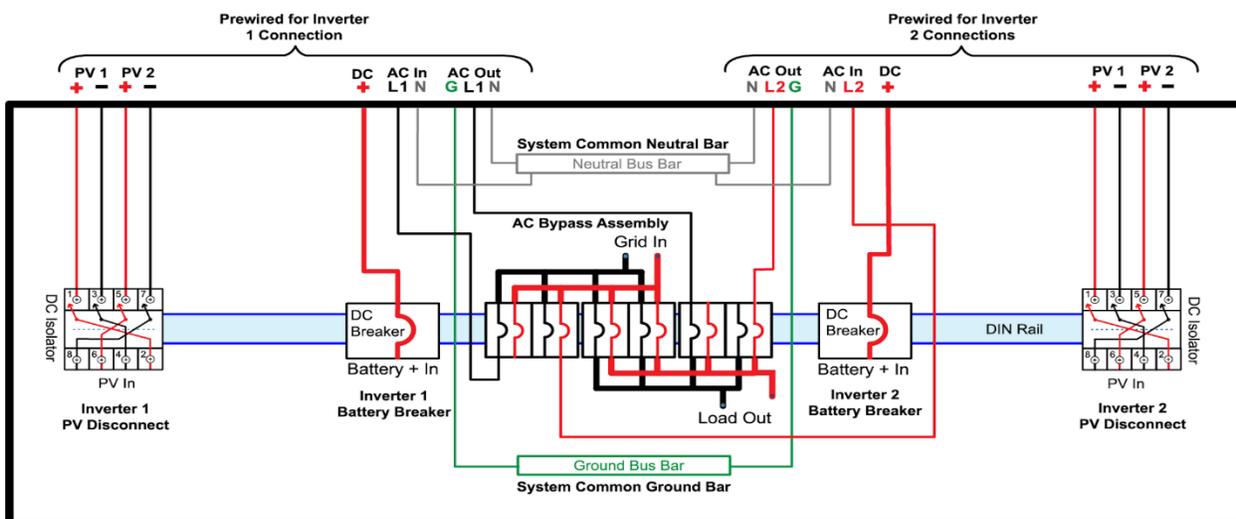


Internal View



Warning: The EG4 Load Center must never be operated with the front cover removed.
 (Removing the front cover disables the transfer switch interlock)

Schematic View



5. Specifications

Product Name

EG4 Load Center

General Specifications

Wiring (Customer Provided)

To PV Panels	10 AWG, PV Wire
AC Wiring	6 - 2 AWG, THHN/THWN-2 Cu for AC
Battery Wiring	1/0 AWG, 600V MTW&THW for Batteries

Enclosure

Indoor-rated, wall mount

Dimensions & Weight

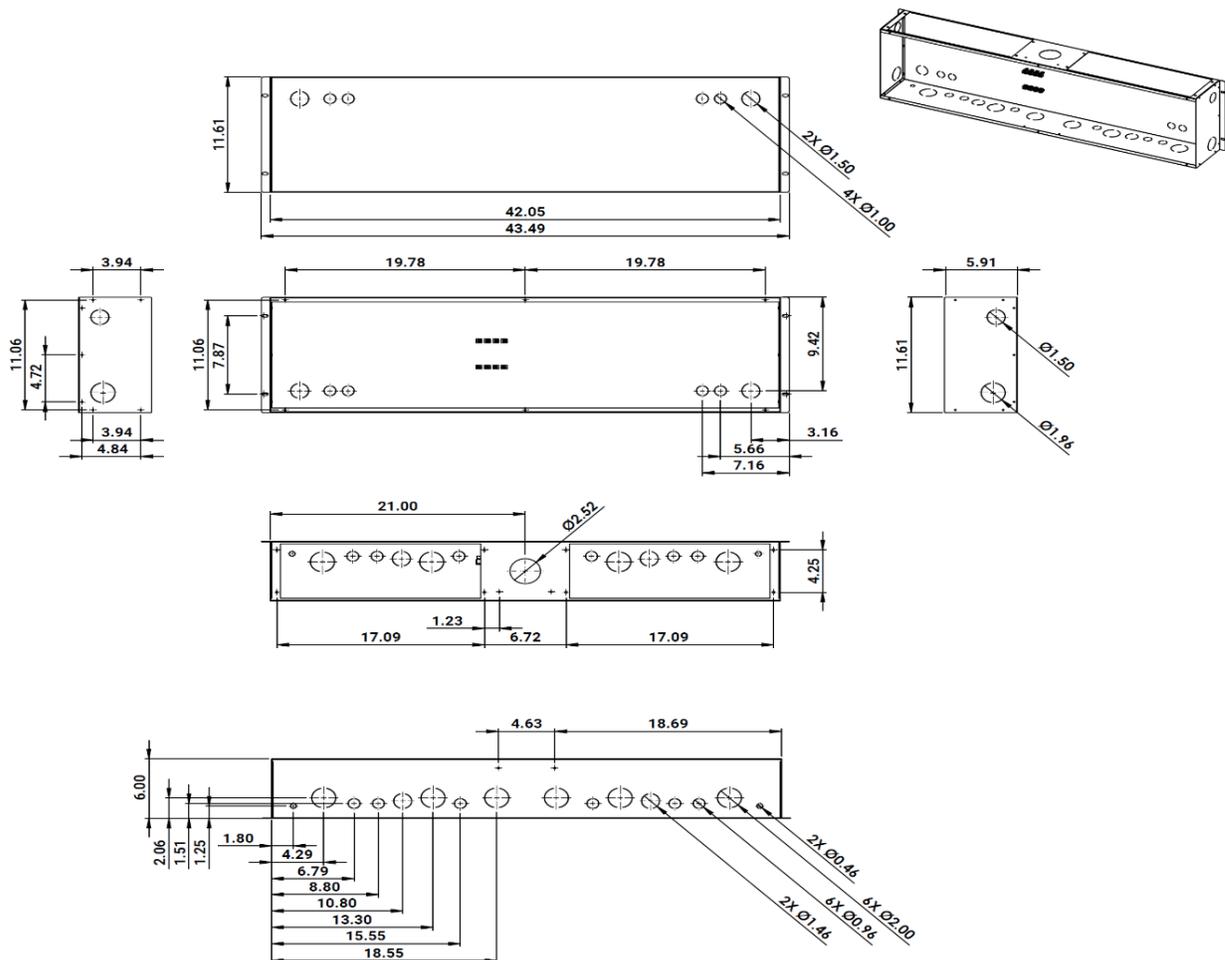
Without Shipping

6x12x43 in (15.25x30.5x109.2cm); 37.35 lb.

(16.94 kg)

With Shipping

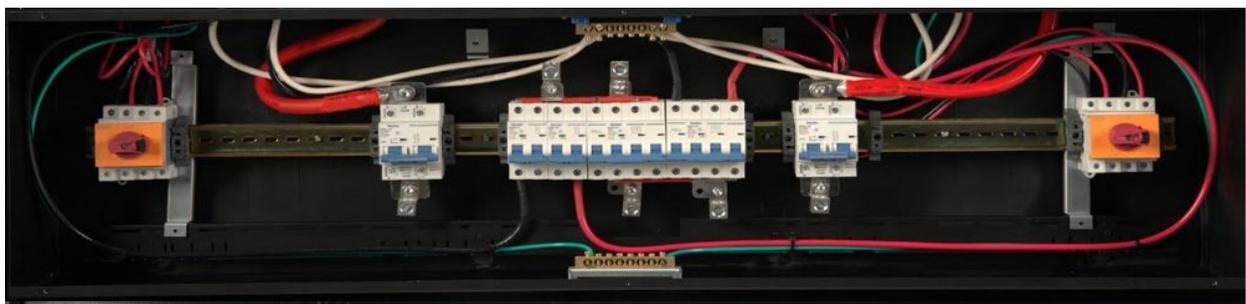
7x13x44 in (17.78x33x11.76cm); 39.25 lb. (17.82 kg)



6. Reference Diagram

The following photo shows 2 EG4 6500EX's installed utilizing the EG4 Load Center.

This picture is for reference only.





Contact Us

Email: support@eg4electronics.com

Phone: +1 (903) 609-1988

Website: www.eg4electronics.com