Quick Start Guide

FLEXware™ Integrated Combiner Solution

FLEXware ICS

Features:

- Powder-coated aluminum housing
- Stainless steel hardware
- Low-profile design
- Mounting methods: vertical wall, pole, or sloped roof mount to 14° incline (3 in 12 pitch)
- Padlock hole for up to 3/8" shank
- Models FWPV6-FH600 & FWPV4-FH600 include fuse holders

NOTE:

Fuses must be UL listed, 1 to 20 Adc, rated minimum 600 Vdc

Packs of (10) replacement 15 Adc or 20 Adc fuses are available from OutBack dealers. They are sold under OutBack part numbers FUSE-15-600Vdc/10 or FUSE-20-600Vdc/10.

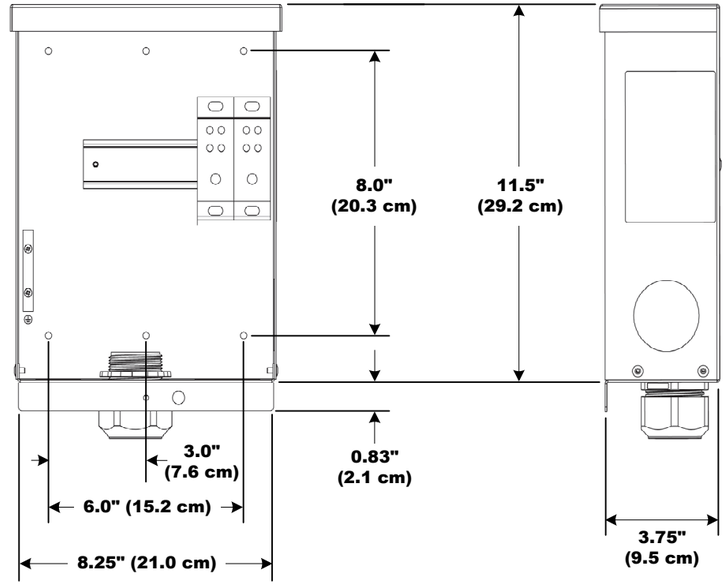
Models:

- **FWPV4-FH600**
  - (4) 600-Vdc fuse holders, DIN rail, distribution blocks, ground terminal bus bar (TBB), and one cable gland with (9) sealed holes for up to 7.7 mm wire
- **FWPV6-FH600**
  - (6) 600-Vdc fuse holders, DIN rail, distribution blocks, ground terminal bus bar (TBB), and two cable glands with (9) and (5) sealed holes for up to 7.7 mm wire
- **FWPV6**
  - DIN rail, distribution blocks, ground terminal bus bar (TBB), and one cable gland with (9) sealed holes for up to 7.7 mm wire

NOTES:

- The DIN rail holds up to (6) 600 Vdc fuse holders (Cooper Bussman model CHPV1U). These are available from OutBack dealers under OutBack part number FH-30-1000Vdc-DIN.
- A second, 5-hole cable gland must be installed when installing more than (4) input PV circuits. The 5-hole gland is available from OutBack dealers under OutBack part number CABLEGLAND-5.
- Replacement 9-hole glands are sold under OutBack part number SPARE-301.
- Use only UL listed wet location or raintight conduit hubs for entry into the enclosure.





IMPORTANT:

- If this product is installed or used in a manner other than specified, the protection it provides may be impaired.
- Fuses are not to exceed maximum output rating.

Listings:

- UL1741
- CSA22.2

Certifications:

- CE (IEC 62109-1)

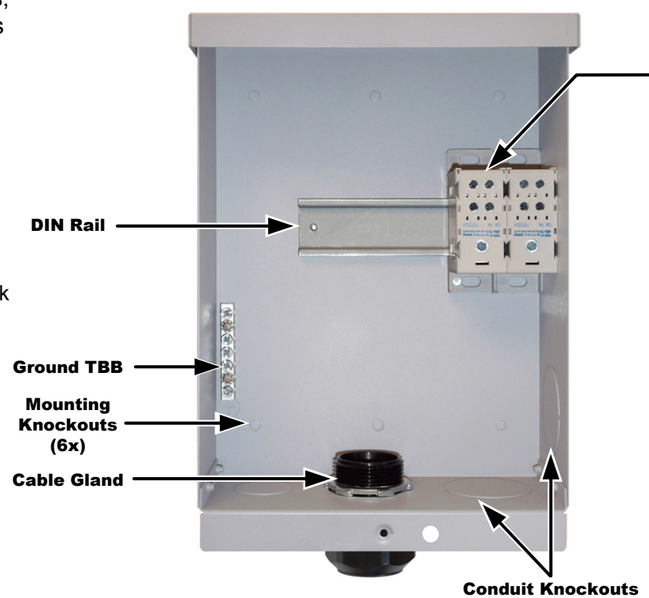
Environmental Ratings:

- Ingress Protection: IP44 and NEMA 3R
- Environmental Category: Outdoor
- Wet Locations Classification: Yes
- Pollution Degree Classification: PD 3
- Ambient Temperature: 60°C
- Relative Humidity (RH) Rating: 5% to 95% noncondensing
- Maximum Altitude Rating: 6561' (2000 m)
- Overvoltage Category (PV Input): OV Cat II

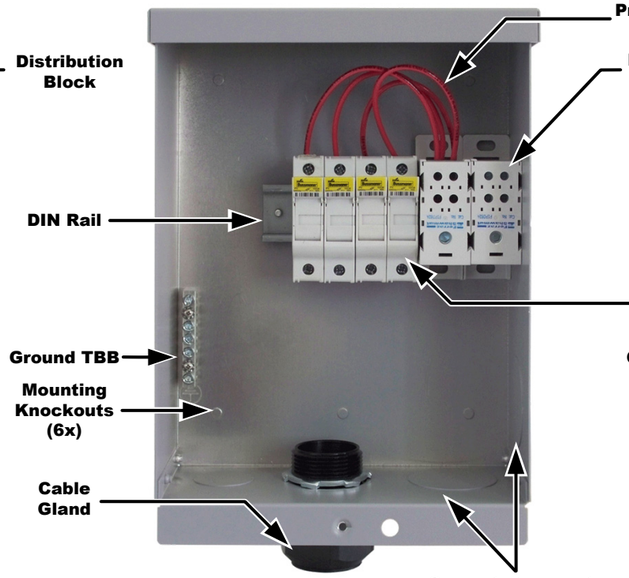
NOTE: The DC input circuits are isolated from the enclosure.

If system grounding is required by Section 250 of the NEC (ANSI/NFPA 70), it is the responsibility of the installer.

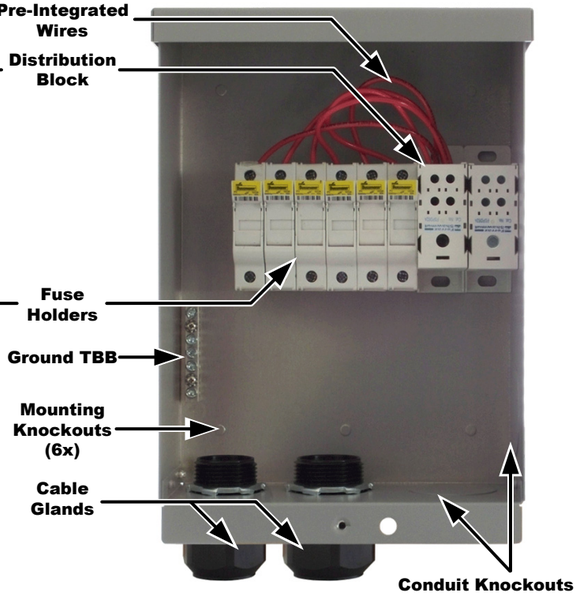
FWPV6



FWPV4-FH600



FWPV6-FH600



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Wiring: Save These Instructions

FLEXware™ Integrated Combiner Solution

Torque Requirements

Cable Size*	Fuse Holder Terminals	Distribution Block		Ground TBB
		Input Terminals	Output Terminals	
2/0 to #1 AWG (70 to 50 mm^2)	--	--	100 in-lb (11.4 Nm)	--
#2 AWG (35 mm^2)	--	80 in-lb (9 Nm)	80 in-lb (9 Nm)	--
#4 to #6 AWG (25 to 16 mm^2)	30 in-lb (3.4 Nm)	80 in-lb (9 Nm)	80 in-lb (9 Nm)	35 in-lb (3.9 Nm)
#8 AWG (10 mm^2)	30 in-lb (3.4 Nm)	35 in-lb (3.9 Nm)	35 in-lb (3.9 Nm)	25 in-lb (2.8 Nm)
#10 to #12 AWG (6 to 4 mm^2)	30 in-lb (3.4 Nm)	35 in-lb (3.9 Nm)	35 in-lb (3.9 Nm)	20 in-lb (2.3 Nm)
#14 AWG (2.5 mm^2)	20 in-lb (2.3 Nm)	35 in-lb (3.9 Nm)	35 in-lb (3.9 Nm)	20 in-lb (2.3 Nm)
#16 to #18 AWG (1.5 to 1.0 mm^2)	20 in-lb (2.3 Nm)	--	--	--

*AWG size conversions are listed to the closest equivalent mm^2 commercial size.

Installation:

NOTE:

Mount this produce a minimum of 36" (91.4 cm) above the ground.

1) Remove any necessary knockouts.
   - The FW-ICS has six knockouts along the back side. These are used for mounting hardware. The knockouts are sized for #10 or M5 screws.
2) Mount the FW-ICS. Secure it appropriately for the mounting type.
   - The surface and fastening hardware must be sufficient to support the weight of the product.

Wiring:

NOTES:

- PV input wiring must be outdoor rated and suitable for wet locations.
- All conductors must be copper and rated 90°C. In the United States, all wiring methods must be in accordance with the NEC (National Electric Code, ANSI/NFPA 70).
- Wire larger than #1 AWG must use the side knockouts to comply with UL1741 requirements for wire-bending radius.

1) Disconnect all electrical sources to the system (both PV and batteries).
2) If the FWPV6 is used, install all needed items. See Figures 1 and 2.
3) Complete all ground connections.
4) Connect all ungrounded PV input wires to the fuse holders.
5) Connect all grounded PV input wires to distribution block **A**.
   - The distribution blocks are attached with retaining tabs. The blocks can unsnap for better access during wiring. See Figure 3.
   - The distribution blocks have four input holes, but they are also rated for two wires to be installed in each hole. (The wires must be the same type and size.) For five or six inputs, use two wires per hole as required.
6) If the FWPV6 is used, connect all PV wires between the fuse holders and distribution block **B**.
7) Connect all PV output wires between the distribution blocks and charge controller or other device.
8) Tighten all connections to the torque values on the table above.
9) Reconnect PV and other sources. Repower the system as appropriate.

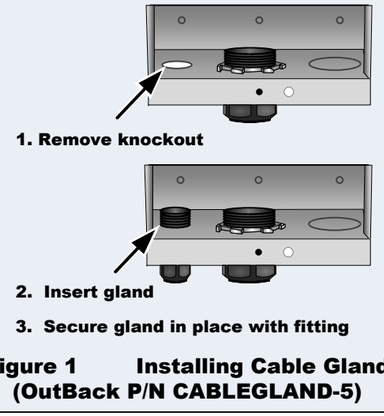


Figure 1 Installing Cable Gland (OutBack P/N CABLEGLAND-5)

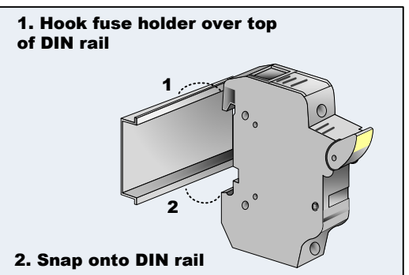


Figure 2 Installing Fuse Holder (OutBack P/N FH-30-1000Vdc-DIN)

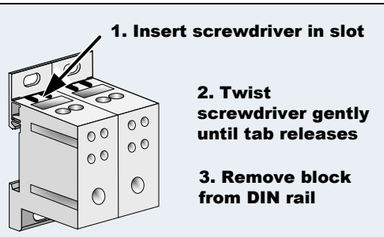


Figure 3 Removing Distribution Block (OutBack P/N SPARE-300)

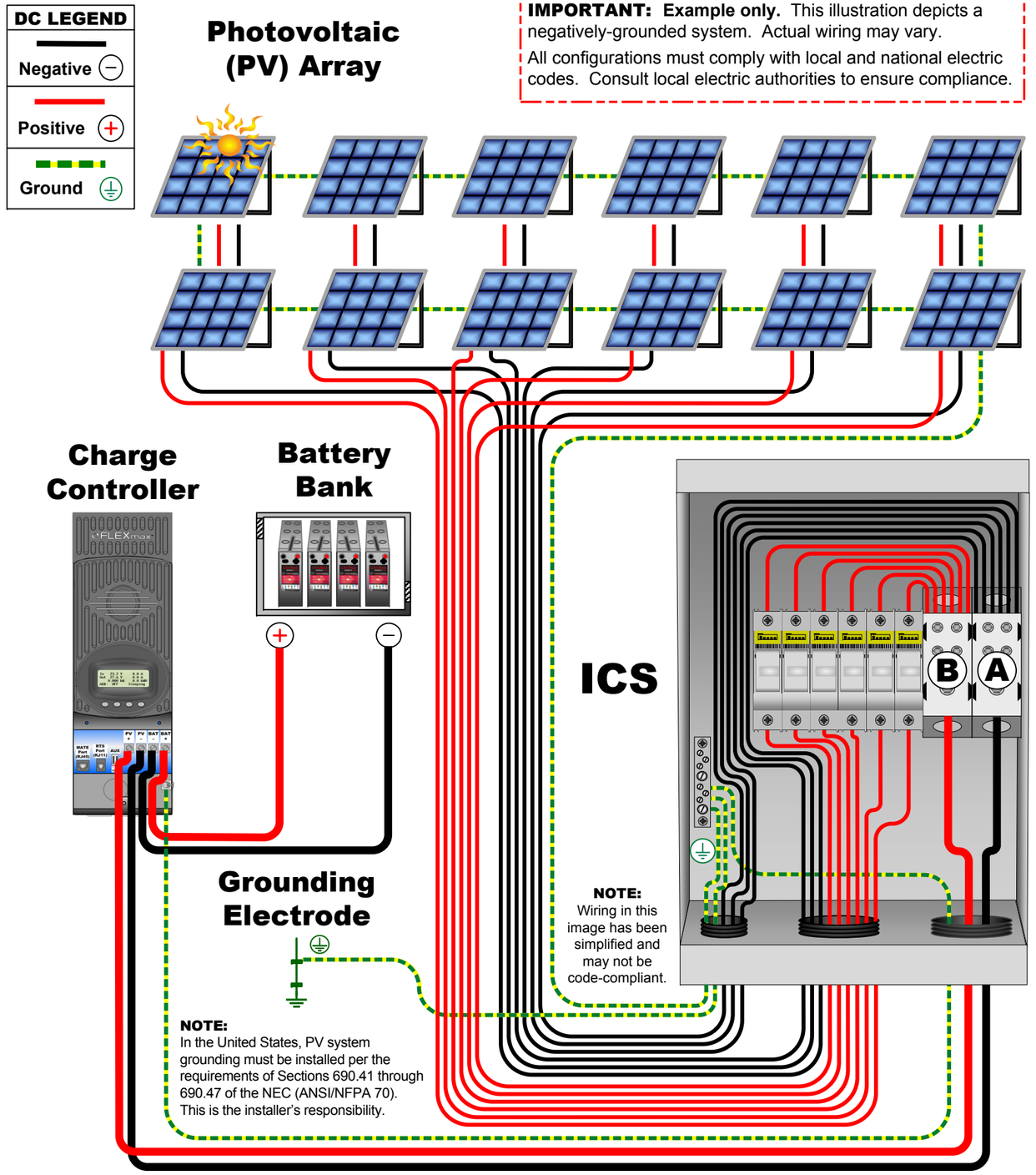


Figure 4 Wiring FW-ICS

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