

Chapter 1 Installation: Power Cabling

The PowerPak 2 PDU allows top or bottom cable entry/exit. Customers must specify top or bottom cable entry/exit at time of order. The position of ground and neutral busbars can change as the result of this choice.

Input and output cable entry/exit is shown on the PDU Outline Drawings (to). For top cable entry, input and output share the same plate, which may have solid plate for input and for output solid plate or panelboard knockouts (KOs).

1.1 Power Wiring



IMPORTANT

- Power wiring must comply with NEC and applicable local codes and should be wired by licensed electricians.
 - Reference your submittal package for 1-line drawings specific to your PDU configuration.
 - Grounding for this equipment must comply with NEC and local building and electrical codes.
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IMPORTANT

1.2 Input Power Wiring

1.2.1 Main Input Circuit Breaker

3-phase input power cables are connected to the main input circuit breaker in the main cabinet input section.

Customers must make their own cutouts for input cable and conduit. Pull input power conduit through cutouts. Connect input phase cables directly to main circuit breaker lugs. Torque lugs to the circuit breaker manufacturer's specification, which are typically given on the circuit breaker.

In bottom entry, customer phase connections are made to the bottom of the main input circuit breaker. In top entry, phase connections are made to the top of the circuit breaker. Ground busbar and transformer connections to the main input circuit breaker are reversed for top cable entry. (see [Figure 1.](#))

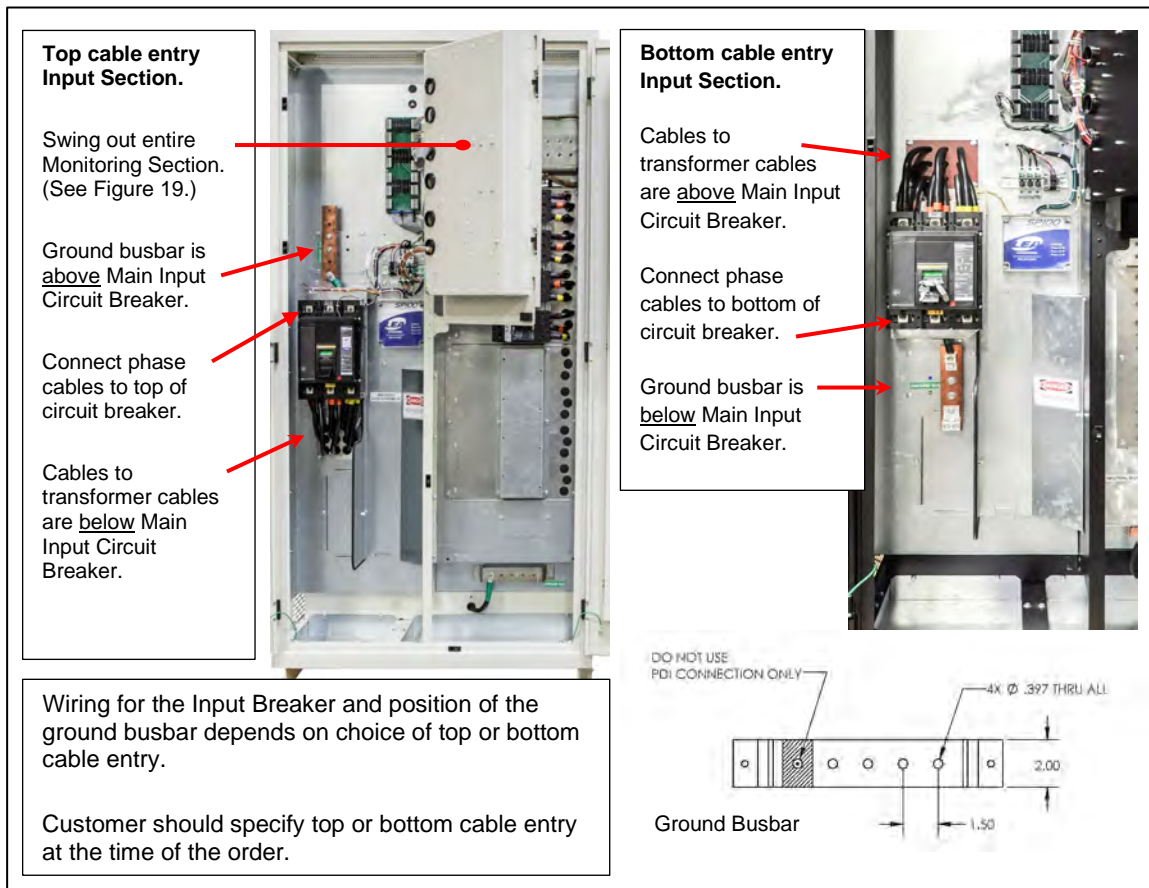
There is no input neutral busbar for delta power input.

1.3 Cable Entry: Input Power

Input power is cabled into the Main Cabinet Input section. The bottom input power cable plate is solid and customers should make their own cutout(s) for cables or conduit. See [Figure 3.](#)

If cable entry is from the top of the unit, input cables must be run behind the Controls Compartment. The entire Controls Compartment must be swung open to run input power cables to the Main Input Circuit Breaker.

Figure 1. Input Section: Top and Bottom Cable Entry

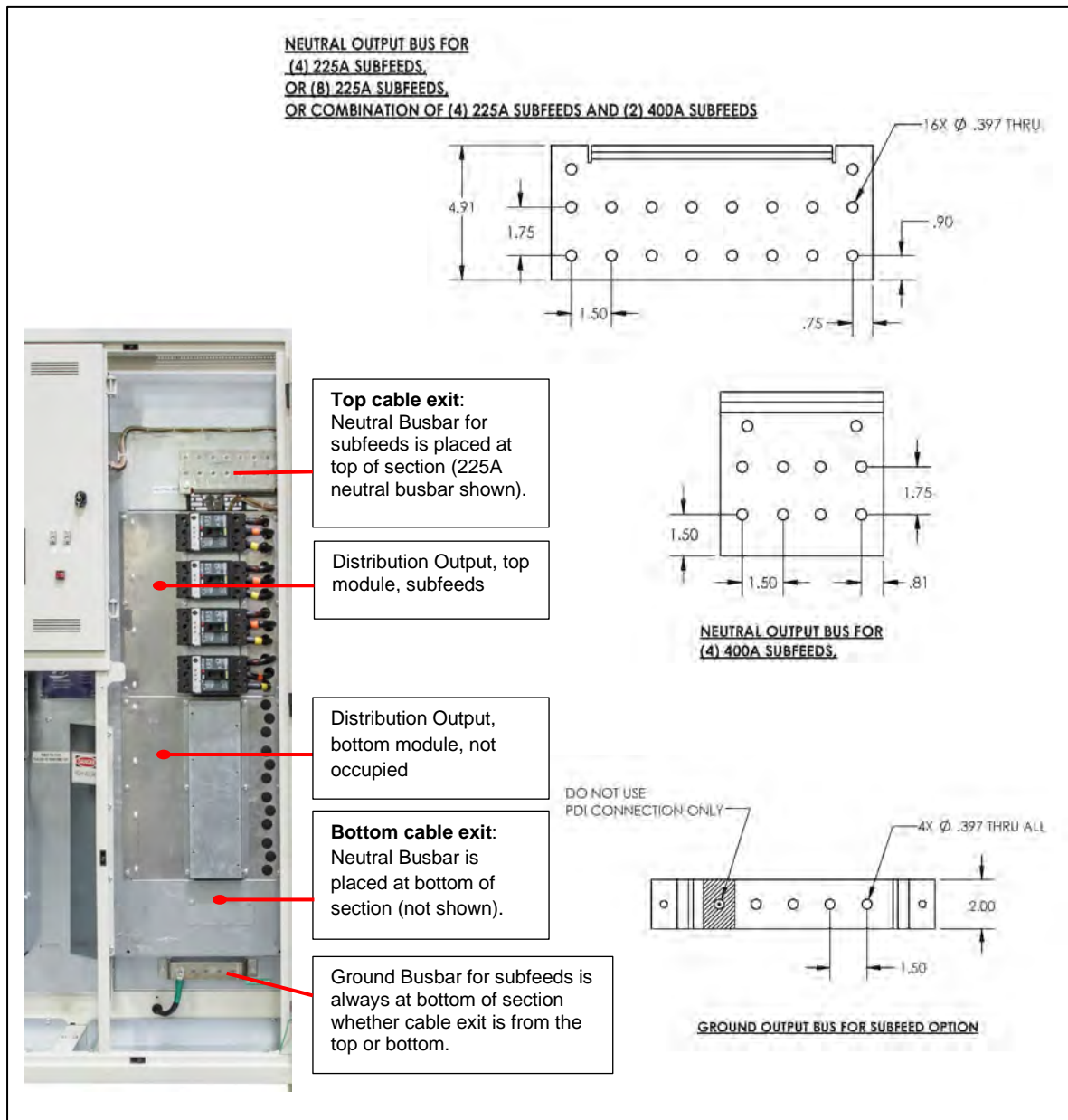


1.4 Output Power Connections

Each Distribution Output Section has its own ground and neutral output connections. (See [Figure 2.](#))

- Bottom cable exit: ground and neutral busbars are located at the bottom of the section.
- Top cable exit: neutral busbar for subfeeds is at top of section; ground busbar is at bottom of section.
- Panelboard ground and neutral strips are always at the sides of the panel boards.

Figure 2. Distribution Output Section with Subfeeds: Ground and Neutral Busbars



1.5 Cable Entry/Exit Knockout Plates

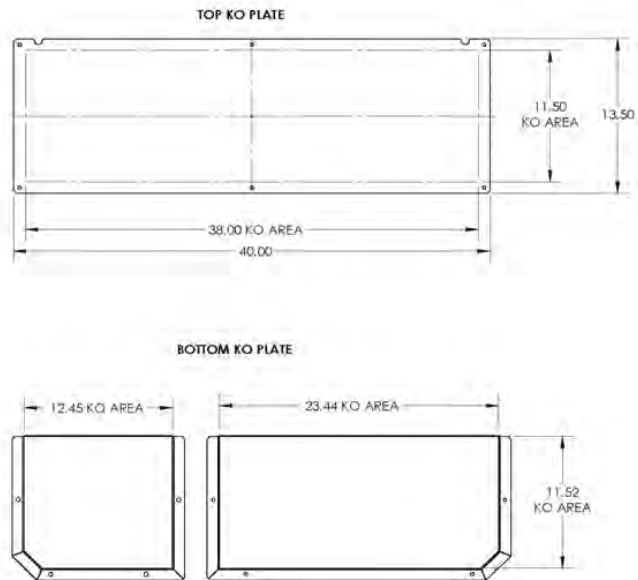
Different cable entry/exit knockout plates are provided for different Distribution Output Section configurations. Knockouts (KOs) are provided for panelboards. Solid plate is provided for large (input or output) cables or pilot holes allowing expansion of the opening for output subfeeds. Mixed solid plate and KOs are provided when the output has both subfeeds and panelboards.

KO plates are specifically designed for the Main Cabinet, 24" Side Car, and 12" Side Car as shown in [Figure 3](#) to [Figure 5](#).

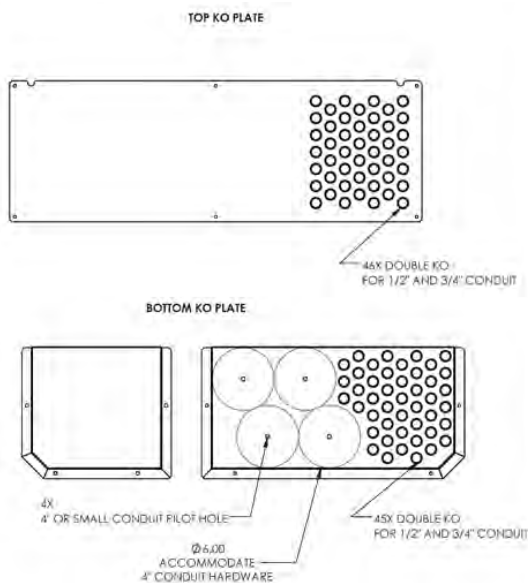
Figure 3. Main Cabinet Knock-out Plates

Cable Entry/Exit Plates (Knock-Out Plates or KO Plates) are different according to the configuration of the Distribution Output Column's modules:

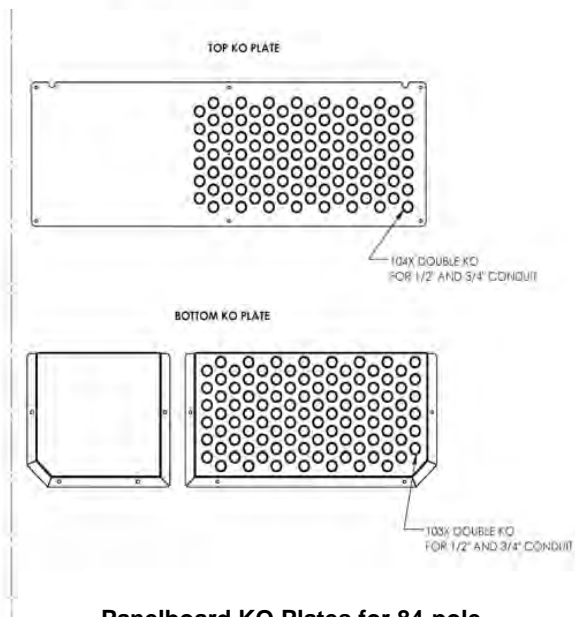
- Blank KO plates are for an all subfeed configuration (customer creates cutouts).
- Mixed KO plates are for panelboard in one module and subfeeds in the other module.
- Panelboard KO plates are for panelboards in both of the column's modules or a combined top/bottom module with an 84-pole panelboard.
- The Input Power KO area is always solid plate.



Standard Blank KO Plates



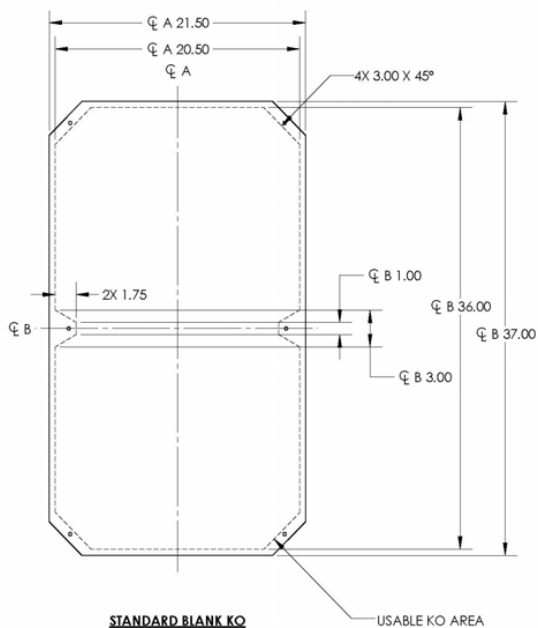
Mixed KO Plates for 42-pole panelboard and (4) subfeeds



Panelboard KO Plates for 84-pole panelboard or (2) x 42-pole panelboards

Figure 4. 24-inch Side Car Knock-Out Plates

Top and bottom cable plates match in dimensions.



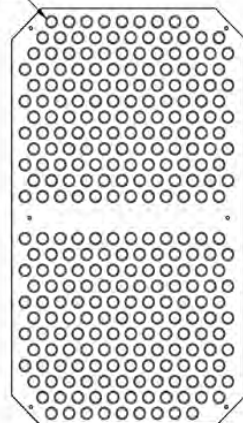
A 24" side car can have one or two columns, or up to four (4) modules.

Different KO plates are available for different side car configurations:

- Standard Blank KO Plate
- All Panelboard KO Plate
- Mixed Subfeed-Panelboards Plate

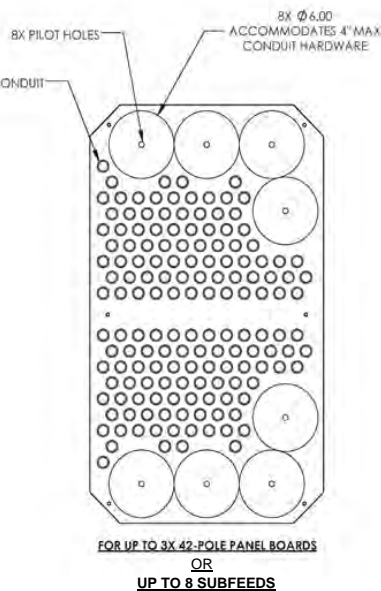
Top and bottom cable plates match in dimensions.

280X DOUBLE KO
FOR 1/2" AND 3/4" CONDUIT



24" side car has all panelboards.

152X DOUBLE KO
FOR 1/2" AND 3/4" CONDUIT



24" side car has mixed panelboards and subfeeds

Additional KO Plate designs may be available.

Figure 5. 12-inch Side Car Knockout Plates

