

IOTA

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IDP-240 OVERVIEW

The IDP-240 Distribution Panel is a compact, attractive, electrical distribution panel designed to handle the AC distribution of an RV or other similar AC system. The panel provides AC electrical distribution for a 50 amp system of either 120 or 240 volts. Features include a 2 Pole Main and up to 20 branch circuits. It comes with a standard two-year warranty.

INSTALLATION

I. LOCATION

The IDP should be mounted on an interior vertical surface where there is sufficient depth to allow for space for the panel and wiring behind it. Typical locations include under counter cabinet fronts or sides, below closet compartments, overhead cabinet fronts, and bed pedestals. **Under floor storage compartments or in the back wall of closets are not acceptable, as the panel must not be installed in the rear of any storage compartment.** Eye level locations are best, where possible, as it is easier to reset or replace breakers.

The location chosen must have access space in front for service after installation. This space is defined by the National Electric Codes as 24" wide by 30" deep. However, if the IDP is mounted facing the aisle, then one of these dimensions may be reduced to 22".

When choosing a mounting location for the IDP, consideration should be given to its proximity to supply components, such as a powercord (or powercord/generator/inverter lines from a transfer switch).

II. CABINET PREPARATION

Cut an opening in the face of the cabinet for the IDP. The cabinet face must be strong enough to support the unit during vehicle operation. Approximate dimensions for the opening are 7.25" high and 12.25" wide. If the opening is cut into light paneling the opening must be framed with support members into which Distribution Panel mounting screws may be driven and to which cables may be attached.

IDP-240 DISTRIBUTION PANEL

OWNER'S MANUAL



Determine how many branch circuits will be used. Remove the rectangular knockouts for those branch circuits. Mount the IDP in the opening on the cabinet using four screws.

III. 120 VOLT COMPARTMENT

Install an 8 gauge copper chassis ground wire to the IDP ground bar. A hole in the case is provided for wire entry directly to the bar.

Branch Circuits- (Fig. A) Remove sheathing from non-metallic branch circuit wiring, and trim leads (recommended 1.5" for the ground wire, and 2.5" for the neutral and hot wires; see wire stripping guide, Fig. B.) Strip 1/2" insulation from the ends of the leads. Insert wires into rectangular openings; the sheathing must intrude into the compartment 1/4" or more. Wedge-shaped cable clamps can be provided for the IDP-240 to secure the branch circuit nonmetallic cables inside the box as required by the National Electric Code. If wedge clamps are required, contact Customer Service at 1-800-866-IOTA (4682).

Insert ground wire into the ground bar and tighten terminal screw. Attach the neutral conductor to the neutral bar. Tighten securely. The NEC allows only one conductor per terminal position on the neutral bar. Repeat this process with all the branch circuits.

IV. CIRCUIT BREAKERS

Install circuit breakers (Fig. C). Connect black (hot) wires to the circuit breakers. Tighten securely. The NEC allows only one conductor per terminal in the circuit breakers. NOTE: The IDP-240 is listed to accept any standard 1" wide circuit breaker and interchangeable models currently on the market, whether one pole or twin. It is not brand or part number specific. Refer to the specifications labeled on the IDP-240 for the maximum circuit breaker amperage.

VII. FRONT COVER

Install the front cover by means of the decorative screw provided. Make sure all wires are neatly tucked inside and none are pinched. Tighten snugly with the screw provided.

VIII. LABELS

Install labels for 120 volt circuit identification. Labels may be preprinted or blank labels may be filled in by the installer.

HI-POT TESTING

(MANUFACTURING COMPANIES ONLY)

- 1) Turn on all circuit breakers in panel.
- 2) Make sure all power supplies including inverter and generator are off. If there are other power supplies present, and they are electrically connected to the RV system by means of a transfer switch, refer to the transfer switch hi-pot instructions before proceeding further. See Note.
- 3) Turn off or disconnect all appliances that would be damaged by the hi-pot test.
- 4) Connect the hi-pot leads to the powercord plug: one lead to the hot and neutral prongs, the other lead to the ground prong.
- 5) Energize the hi-pot and conduct test. This will hi-pot test for leakage (short) between the current-carrying conductors and the ground in the entire RV 120 VAC circuitry. It will also test the powercord itself. Turn off hi-pot.
- 6) If hi-pot test fails there is a short in the system. The next step is to isolate the location of the short. Turn off the main breaker in panel and hi-pot test again. If test fails, fault is between the cord plug and the panel. Test cord for shorted plug. If second test passes, turn on main breaker, and turn off all branch breakers except one. Retest each branch circuit individually until short circuit is isolated. Repair fault and retest. Hi-pot test is successful when there are no more fault indications.

NOTE: If the hi-pot test is performed from the plug on the powercord, and there is a transfer switch present, the test may only hi-pot the cord itself; it may not test the RV wiring beyond the switch. In this case the hi-pot transfer switch should be performed from either the transfer switch output, or from the main panel, as well as from the plug to test the cord itself.

WARRANTY

All IOTA Power Products come with a two-year warranty. IOTA warrants their products in the continental United States and Canada from defects in materials or workmanship under normal use for two years from date of retail purchase and will repair or replace any product under warranty found to be defective free of charge. For complete warranty information, consult Customer Service or visit www.iotaengineering.com.

FIG. A - BRANCH CIRCUIT CONNECTIONS

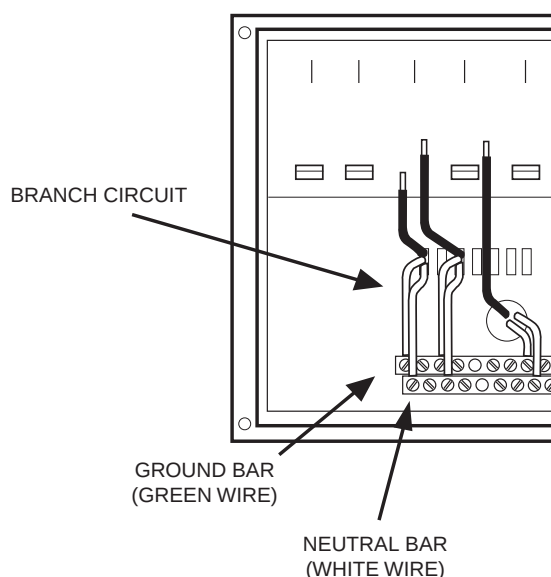


FIG. B - WIRE STRIPPING GUIDE

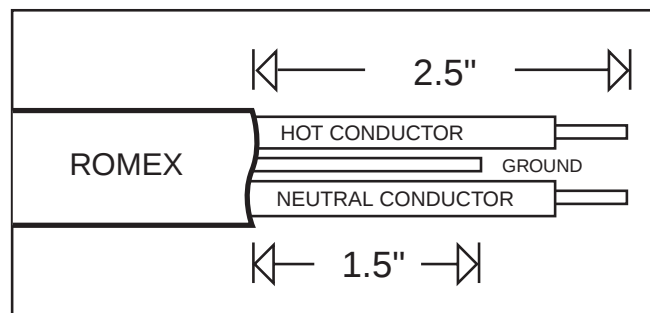


FIG. C - CIRCUIT BREAKER CONNECTIONS

