

# Echometer Company Wichita Falls, TX

## FIXED POWER ADAPTER INSTALLATION

**WARNING: Installation of this product must be performed by a qualified experienced electrician.**

### Preparation:

Unpack the contents of this package and note the available wire lengths between the connector assembly, the current transformers, and the leads marked “LEFT”, “CENTER”, and “RIGHT”. Open the disconnect switch and the power panel. Locate a mounting location for the connector that provides easy access for the Wireless Power Sensor, clearance for the connector assembly, and assures that the connection of the black leads will reach their respective terminals. When choosing this location, keep in mind that the power sensor has operator controls and indicators that must be accessible and visible. Figure 1 is a Wireless Power Sensor installed in a power panel that meets this criteria.



Figure 1 – Installed Wireless Power Sensor

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### Installation

Unpack the Fixed Power Adapter. Note the connector assembly is equipped with a floating nut plate. There are four 4-40 Philips head machine screws with lock washers to secure the assembly in the power panel cabinet. In the installation, these screws pass through the external label, the cabinet wall, the sealing gasket, the connector and are secured in the nut plate.



Figure 2 – Unpacked Fixed Power Adapter showing the floating nut plate.

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Figure 3 – Drill Template

Figure 3 demonstrates using the template. The recommended use of the template is to drill one of the top corner holes with a 1/8<sup>th</sup> inch bit and temporarily secure the template with a 4-40 SIMS screw and KEP nut. Next, drill through the template the lower hole diagonally across from the top row bolt and secure with 4-40 hardware as above. Next, drill the remaining corner mounting holes and the center pilot hole. Remove and discard the template. Keep the 4-40 screws and lock washers. The next step is to open the middle hole to 1 1/8 inch diameter. This is easily accomplished using a step drill. Figure 4 pictures using a step drill to open the hole to clear the connector 1 1/8 inch connector thread.



Figure 4 – Step Drill Center Hole

After all holes are cut, carefully deburr the inside surface to assure a good weather tight seal for the connector mounting surface. Remove all cutting chips from the power panel.

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Figure 5, Remove the backing from the label adhesive

Locate the connector label and remove the paper backing from the label. Attach the label to the cabinet being careful to line the four mounting screw holes in the label with the holes in the cabinet. Press the label firmly against the cabinet to secure the adhesive.

Install the connector assembly from the inside of the power panel and secure with the four 4-40 supplied screws and lock washers as shown in Figure 6. When installing the first screw, it may be necessary to turn the nutplate to line up with the screw. The front lower screw should be passed through the eyelet on the end of the chain attached to the protective cover. It is important to orient the connector key. The controls and indicators on the Wireless Power Sensor will face the direction of the connector key. If the mounting location is low, the key should probably be facing up. If the mounting location of the connector assembly is above chest level, the key should face the front of the power panel.

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Figure 6– Mounted Connector Assembly

After the connector assembly is mounted, locate and connect the three black voltage measurement leads to measure voltage ahead of the motor contactor and below the fuses. Connect as shown in Figure 7.



Figure 7 – Voltage Measurement Connections

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Choose a location for the current transformers where the left and right power leads may be passed through the center of the transformers and the transformers will not lay against the steel panel structure.

Disconnect the left lead and pass it through the left current transformer with the toward line label pointed toward the power source. Reconnect the lead. Do the same for the right lead and current transformer. Figure 8 shows a typical installation. It does not make any difference whether the current transformers are above or below the contactor. Figure 6 depicts installation above the contactor.



Figure 8 – Current Transformer Installation

After installation of the wiring, route wires and secure as necessary to assure they will not interfere with the contactor, disconnect, or cover door.

This concludes installation.