



Installation Instructions - SolTrex® Logger

MOUNTING AND WIRING INSTRUCTIONS

Mounting the Enclosure

The enclosure can be mounted horizontally or vertically using the mounting tabs supplied or by turning screws through the recessed holes on the outside corners of the box. It can be mounted indoors or outdoors, but care must be taken with outdoor mounting to ensure points of entry for power supply, sensor, and communications lines are watertight. It is best to install the data logger indoors, and, if possible, in close proximity (i.e., within a few inches) of the kWh meter. A dessicant pack should be used when mounted outdoors.

Grounding the Logger

The logger should be grounded by attaching a green or bare 18AWG or larger grounding wire from any of the GROUND (G) terminals on the logger terminal block to a verified ground outside the logger. The grounding wire can also originate from a ring terminal attached to one of the socket board's mounting screws at the corners.

Transition

Always drill transition holes on the lower side of the enclosure. All signal wires and the 5VDC power supply can share the same transition, as long as signal wires are shielded. We recommend putting all signal wires and other wires in conduit, using watertight fittings, or an equivalent squeeze-tight fitting for outdoor use. A snug rubber grommet is sufficient for indoor use.

Sensor Wiring

KYZ electric meter pulse signals: Use only high-quality, shielded signal wires. Wire shields should be grounded to the GROUND terminal on the sensor block. When exposed outdoors, wire insulation should be UV rated. Wire the common lead (K) to GROUND on the logger's terminal block, wire the pulse leads (Y and Z) to the COUNT 1 and 2 terminals if only one meter is present. If two meters are present, wire both meters' K leads to GROUND, one Y to COUNT 1, and the other Y to COUNT 2.

Apogee Pyranometer: Use only high-quality, shielded signal wires. Wire shields should be grounded to the GROUND terminal on the sensor block. When exposed outdoors, wire insulation should be UV rated. Wire the pyranometer's ground and negative leads to GROUND on the logger's terminal block; wire the pyranometer's positive lead to +/-0-250MV on the logger's terminal block.

Sensors connected to 1-Wire ports: Use high-quality 4-wire telephone wire or two twisted pairs on a CAT 5 cable. When exposed outdoors, wire insulation should be UV rated. Use RJ-11 male phone jacks at the sensor and logger ends of the wire, wired exactly the same way. Insert the RJ-11 jack at the logger end to either of the 1-WIRE labeled jacks on the logger. You must restart the logger in order for the logger to detect these sensors.



Telecom Wiring

Telephone: Use only high-quality twisted pair telephone wire. If the telephone line shares DSL or other communications traffic, it may be necessary to install a DSL or general noise filter to ensure the logger's modem has a clear signal. When exposed outdoors, wire insulation should be UV rated. Terminate with an RJ-11 connector at the logger's PHONE port.

Ethernet: Use only high-quality CAT5 or CAT5e cable. When exposed outdoors, wire insulation should be UV rated. Terminate with an RJ-45 connector at the logger's ETHERNET port.

INSTALLATION SEQUENCE

1. Install Communication Line

The logger can communicate via a standard analog phone line or an Ethernet connection.

- ✓ **Phone line.** Connect the phone line extension to the logger's RJ-11 phone jack.
- ✓ **Ethernet.** Connect the Ethernet extension to the logger's Ethernet jack. Note: By default, the logger attempts to use DHCP to obtain its IP settings. If DHCP is not enabled on the network, it may be necessary to set static IP parameters on the logger (see the SolTrex Logger Field Troubleshooting Guide for more details on this procedure).

2. Install Sensors

See the section on Sensor Wiring above, as well as any additional documentation shipped with each sensor, for information on correct installation.

3. Connect to laptop (optional)

A laptop connection can be used by an installer to monitor the logger's startup sequence and for troubleshooting during logger operation. The laptop attaches to the logger's serial port via a standard 9-pin male-to-female serial cable. The laptop must be equipped with the software available on the Logger Support Tools CD-ROM contents (also available from the Support page on www.SolTrex.com). See the document "Field Troubleshooting SolTrex Loggers," also available from the Support page, for more information.

4. Apply Power

Apply power to the logger by plugging the enclosed 5VDC transformer into a standard 110VAC wall outlet and inserting the adapter into the logger's 5VDC receptacle. The logger will begin its startup sequence as soon as power is applied, and will attempt to communicate with the SolTrex server within about 5 minutes.

5. Register the Logger

The logger will not be activated until registered! Fill out the form **SolTrex® Logger Activation Form** and return it to CSGServices to activate the logger. This form must be filled out completely for each system installed and must be faxed to CSGServices at 512-327-2553. Monitoring service begins only after CSGServices has sent a confirmation of receipt to the email addresses listed on the form. For questions contact CSG at 512-327-6830.