Metering Systems

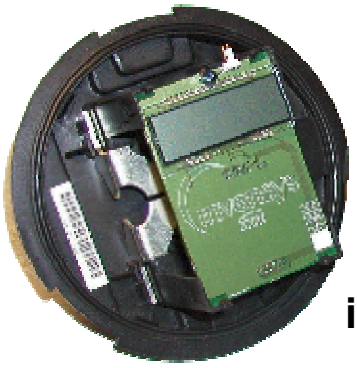
Electronic Meter Technical Manual

Addendum

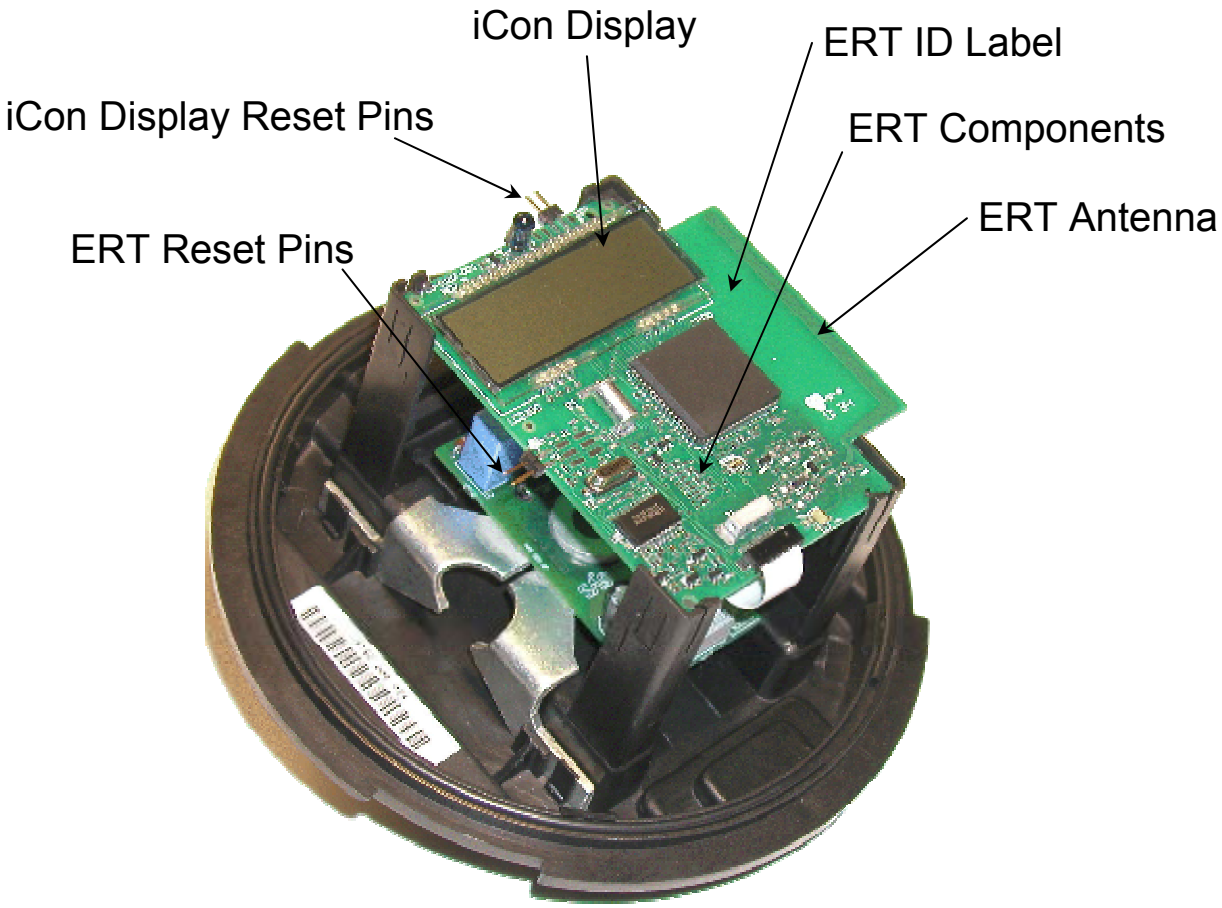
For Single-Phase Form 2S Residential Meter with Integrated Itron 51ESS ERT®

PRELIMINARY

Rev. 4



iCon™ Form 2S Meter



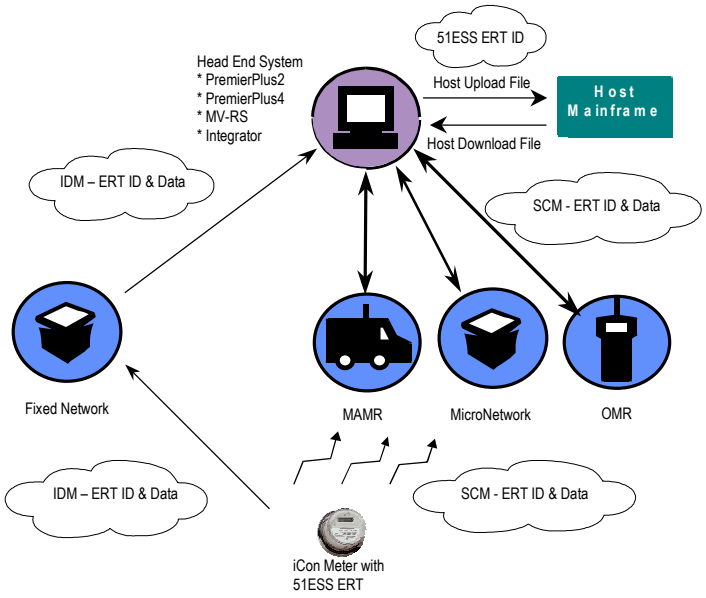
iCon™ Form 2S Meter with Integrated Itron 51ESS ERT®

iCon™ Meter / Itron 51ESS ERT®

Itron's 51ESS ERT module is integrated into the iCon electronic residential Form 2S meter and arrives from the factory ready for installation. The 51ESS ERT requires NO programming.

How does the 51ESS ERT work?

Itron has provided integrated technology, the 51ESS ERT, that provides the same functionality of existing ERT models 41ER-1 and 45ER-1 but now in the iCon electronic meter. The 51ESS ERT employs self-initiated RF transmission technology for transmitting the Standard Consumption Message (SCM) and the Interval Data Message (IDM). No "wake-up" tone is required. The ERT consumption register reading is retrieved from the meter register. The iCon meter and the integrated 51ESS ERT are both pre-programmed at the factory and are ready for installation. The meter serial number and the ERT serial number will be included in the test data provided by Invensys Metering Systems and shown on the meter inner cover.



How can I replace my 51ESS ERT module?

Refer to the section "Replacing the Register Display Board" in the Technical Manual for a detailed procedure for replacing the iCon meter display board. The iCon meter retains a copy of the kWh reading in non-volatile memory (NOVRAM) so changing the display/ERT board will not destroy your register reading. After successful replacement of the display/ERT board and power up, the kWh reading will be retrieved from NOVRAM and displayed. The ERT consumption register will then be updated with the register read from the meter display.

To obtain a replacement display board, contact Invensys Customer Service at 800-375-8875. A replacement ERT ID label will accompany each replacement display board to assist in records maintenance. This ERT ID label is to be installed over the existing ERT ID label on the meter inner cover.

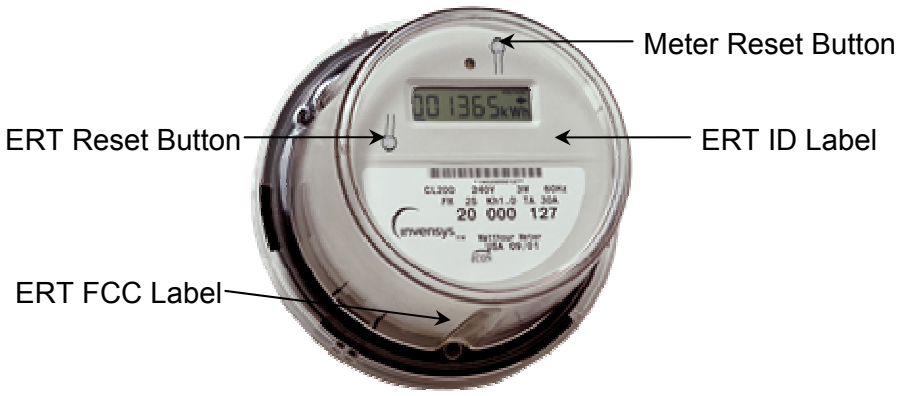
How do I reset the 51ESS ERT?

During normal operation, the iCon display updates the 51ESS ERT in fractional kilowatt-hour increments. Therefore, during normal operation, the 51ESS ERT consumption register will always match the Total kWh displayed on the meter. The 51ESS ERT SCM Tamper Counters (Meter Inversion and Meter Removal) and the IDM Counters (Meter Inversion, Meter Removal, Reverse Rotation and Power Outage) plus the IDM data are also stored in the ERT NOVRAM.

To reset to zero all counters and Interval Data values from the ERT NOVRAM:

1. Turn off the power to the meter and wait for 60 seconds.
2. Remove the T-bar seal from the side of the meter.
3. Grasp the Meter Cover and turn it counter-clockwise until you reach a positive stop. Remove the meter cover.
4. Re-apply power to the meter
5. Press and hold the ERT Reset Button for three (3) consecutive seconds.
   NOTE: This button must be pressed for three consecutive seconds, otherwise, the meter must be powered down before another reset can be attempted successfully.

To reset the Total kWh reading of the meter display, refer to the section “Resetting the kWh Display” in the Technical Manual.



FCC Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation."