

California Type Evaluation Program

Certificate of Approval

Weighing and Measuring Devices

For:

Watt-Hour Meter
Panelboard Monitoring System
Model: i-meter EM-3, i-meter MF-3, and i-meter MF-6

Voltage Rating: 120/208/240 VAC
Class (CL): 100 (100 Amps Max.) TA: 15 Amps
Class (CL): 200 (200 Amps Max.) TA: 30 Amps
Watt-Hour Test Constant (Kt): 5 Wh or 0.005 kWh

Submitted By:

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Standard Features and Options

Standard Features:

Electric Meter Models:

- i-meter[®]EM3 – The i-meter[®]EM3 is a solid state single customer power/energy meter with a one line Liquid Crystal Display (LCD).
- i-meter[®]MF3 – The i-meter[®]MF3 is a solid state single customer power/energy meter with a three line LCD.
- i-meter[®]MF6 – The i-meter[®]MF6 is a solid state multi-customer power/energy meter with a three line LCD for two meters.

Current Transformer (CT) Models:

- ICI Model: INT-CT108-B – The CT is square in shape and has a ratio of 100:0.08A, Accuracy: 0.3, and is a class 100
- ICI Model: INT-BT201S-WT – The CT is round in shape and has a ratio of 200:0.1A, Accuracy: 0.3, and is a class 200

Internal Indicator:

- One line LCD in kWh
- Three line LCD (one of which is the kWh). The other two lines are for voltage and current.
- Three line LCD (one of which is the kWh), but two separate meters.

Options and Notes:

- The metering system can be installed as a stand-alone meter or in either a NEMA enclosure or panelboard style enclosure. However, when a panelboard style is used the enclosure will be inside or part of the panelboard.

Note: When the ICI model INT-CT108-B smaller class 100 CT is used, the manufacturer shall supply special smaller load wire cables for testing due to the small holes on the CTs.

Note: CT selection jumpers are required to select the correct transformer ratio (pictured on the last page).

This device was evaluated under the California Type Evaluation Program (CTEP) and was found to comply with the applicable requirements of California Code of Regulations for "Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages.



Kristin J. Macey, Director
Effective Date: August 11, 2016

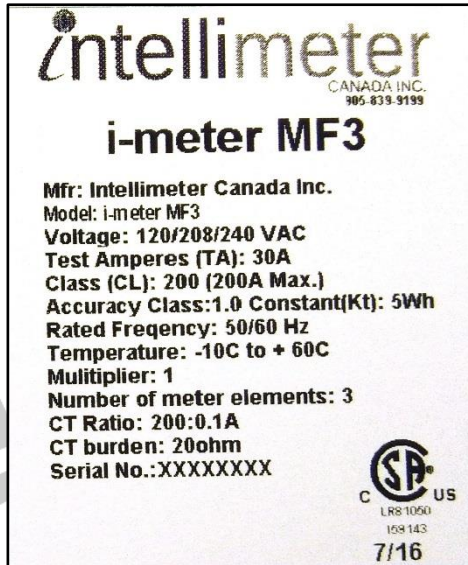
State of California, Department of Food and Agriculture, Division of Measurement Standards
6790 Florin Perkins Road, Suite 100 / Sacramento, CA 95828

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Intellimeter Canada Inc.
Electronic Watt-Hour Meter / i-meter[®]EM-3 Series

Application: For use as a watt-hour metering system in legal sub-metered electric service applications.

Identification: The main meter identification (ID) information is on the face of the meter panel under a clear plastic cover. The serial number is located on the meter printed circuit board (PCB) behind the sealed door and matches the main door ID badge. The external current transformer's (CT) ID information is located on the PCB CT panelboard.



Main Door ID Badge Examples



Examples of the Meter Serial Number Label Location on the PCB



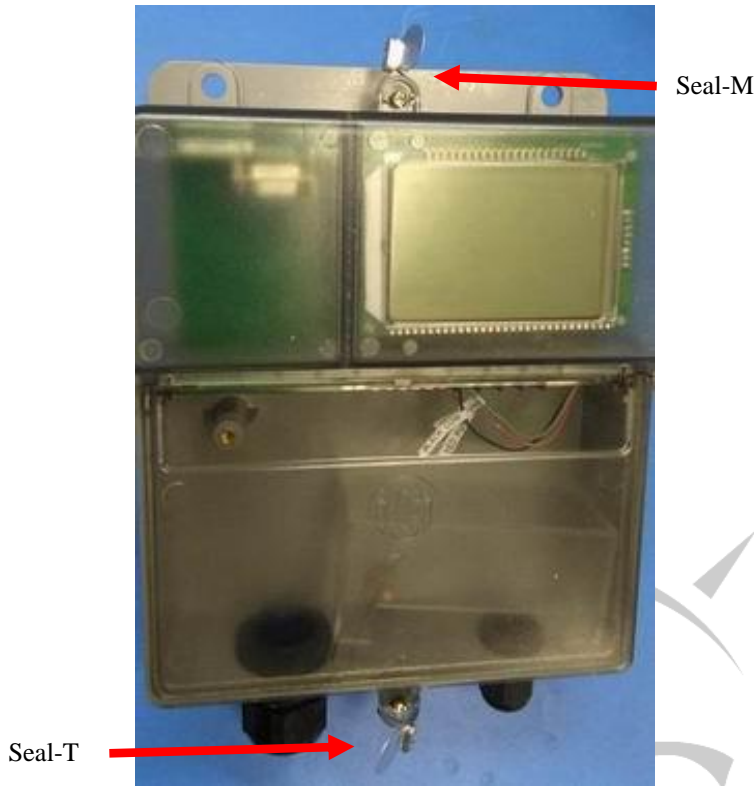
ICI Model: INT- BT201S-WT



ICI Model: INT- CT108-B

Intellimeter Canada Inc.
Electronic Watt-Hour Meter / i-meter[®]EM-3 Series

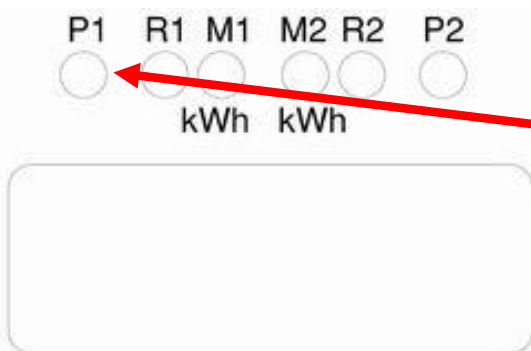
Sealing: The meter is secured by a wire security seal preventing access to the meter PCB and the meter wire terminal blocks. There are two seals; one is Seal-M and another is Seal-T. The Seal-M is a metrological seal and the Seal-T is a wire terminal seal.



Operation: The i-meter[®]EM series has a one-line or three-line LCD for kWh display, and a communication port for the AMI system which outputs kWh and all instantaneous measurements including voltage and current harmonics up to the 24th. The meter's pulse output (Kt) is 5 Wh per change state for easier testing purposes. The CT's are direction sensitive and the arrow point toward the load.

i-meter[®]EM3 – The i-meter[®]EM3 has a one-line LCD display and the LEDs indicate pulsing, kWh, or kVA. See below for the LED's indicators:

- P1: kWh pulse output
- R1: Reversed energy
- M1: kWh indicator
- M2: kVAh indicator
- R2: N/A
- P2: N/A



kWh pulse output
(Kt = 10 Wh/pulse)



Intellimeter Canada Inc.
Electronic Watt-Hour Meter / i-meter[®]EM-3 Series

Test Conditions: A Model i-meter[®]EM series class 100 and class 200 meter were submitted for evaluation. The meters were randomly selected and installed on a test bench with various loads for initial evaluation. The meters were retested for permanence after 34 days. The meters were subjected to accuracy tests from 1.5 amps to 50 amps at both unity and 0.5 power factors. Starting load and creep tests were also conducted

Evaluated By: J Roach

Type Evaluation Criteria Used: *California Code of Regulations, Title 4, Division 9, Article 1. National Uniformity, Exceptions and Additions 2016 Edition.*

Conclusion: The results of the evaluation and information provided by the manufacturer indicate the device complies with applicable requirements.



Model: i-meter EM-3



Model: i-meter MF-3



Model: i-meter MF-6



CT Selection Jumpers