

State of California
Department of Food and Agriculture
Division of Measurement Standards

Certificate Number: 5403-04

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California Type Evaluation Program
Certificate of Approval
for Weighing and Measuring Devices

For:

Electronic Watt-Hour Meter
Models: C1S and C1SR
Generic Name: CENTRON™ Series
Voltage Rating: 240 VAC
Class: 200 (200 Amps Max.)
TA: 30 Amps

Submitted by:

Itron Electricity, Inc.
(formerly Schlumberger Electricity, Inc.)
313-B North Highway 11
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Standard Features and Options

- Unit of measure: kWh
- Form 2S electronic socket meters
- 60 hertz, 3 wire
- 1.0 Kh
- Glass or clear plastic cover
- Liquid crystal display (LCD)

Note: The C1SR meter has remote read radio frequency capability (remote not tested).

This device was evaluated under the California Type Evaluation Program (CTEP) and was found to comply with the applicable technical 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.

Effective Date: August 19, 2004



Mike Cleary, Director

Itron Electricity, Inc.
Electronic Watt-Hour Meter
Models: C1S and C1SR

Application: For use in legally sub-metered service systems.

Identification: The watt-hour meter identification label is applied to the face of the meter.

Sealing: A wire security seal may be used in addition to the manufacturer's seal.

Operation: Two separate versions of the LCD are available.

The non-segment check version displays only the kWh reading. A downward pointing arrow or square on the LCD pulses at a rate equal to the energy consumption. The arrow or square flashes on for one watt-hour and off for one watt-hour. This effectively produces an equivalent Kh of 2.0.

The second version of the LCD is available which displays the kWh reading and a segment check. The display scrolls between the kWh reading and segment check with 7 seconds of on-time for each display item. The three triangle segments in the bottom right corner of the display represent a watt disk emulator. This electronic load indicator will advance with each pulse, since each pulse is equivalent to one watt-hour. Reverse power is indicated by a reversal in the direction of the electronic load indicator.

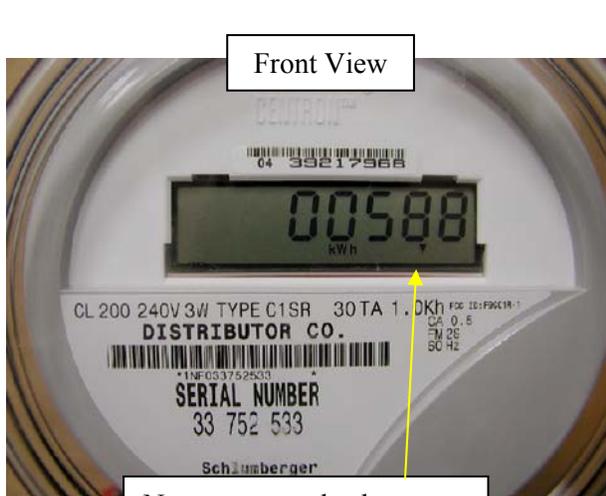
Both meters can also be tested using the infrared test LED at the top of the meter. The rate of pulsing is one watt-hour per pulse.

Test Conditions: The Models C1S and C1SR meters with each type of LCD were submitted for evaluation. The meters were initially tested at the Division of Measurement Standards (DMS) lab. The meters were then sealed and installed at a field location. After a permanence period of approximately 70 days, the meters were returned to the DMS lab for retesting. The meters were subjected to a combined total of over 179 tests from 3 amps to 50 amps at both unity and 0.5 power factors.

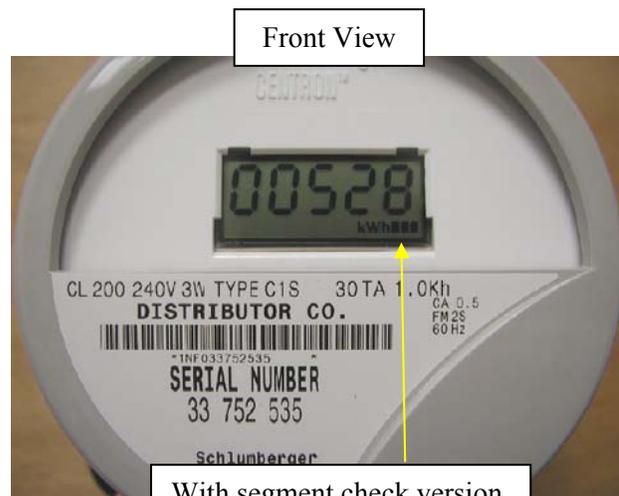
Results of the evaluation indicate the devices comply with applicable requirements.

Type Evaluation Criteria Used: Title 4, California Code of Regulations, 2004 Edition

Tested By: John Roach (CA)



Non-segment check version LCD with a triangle pulse indicator



With segment check version LCD with a square watt disk test emulator