

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

Certificate Number: 5313(a)-03  
Page 1 of 2

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

**For:**

EZ Meter  
Electronic Watt-Hour Meter  
Class 100 Models: 4011, 4021, 4111, 4211, 4221,  
4311, 4411, and 4511  
Class 200 Models: 4010, 4020, 4110, 4210, 4220,  
4410, and 4510

**Submitted by:**

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**Standard Features and Options**

- Separate electromechanical odometer type register/counter module(s), 24" leads
- K<sub>h</sub> 10; K<sub>t</sub> 10
- Class 100, TA 15; Class 200, TA 30
- Models 4410 and 4411: Single element, single register; 120 VAC service
- Models 4510 and 4511: Same as Models 4410 and 4411; computer interface capability
- Models 4010 and 4011: Dual element, single register, 120 VAC, 208 VAC, or 240 VAC service
- Models 4210 and 4211: Same as Models 4010 and 4011; computer interface capability
- Models 4020 and 4021: Dual element, dual register meters, two separate 120 VAC services, or with the register terminals tied together, single 208/240 VAC service
- Models 4220 and 4221: Same as Models 4020 and 4021; computer interface capability
- Models 4110 and 4111: Triple element, single register, three phase applications
- Model 4311: Same as Model 4111; computer interface capability
- Model 4720/2: Class 100 current transformer, 400:1 ratio, 24" leads
- Model 4720/1: Class 200 current transformer, 400:1 ratio, 24" leads
- A meter model number suffix between /16 and /19, inclusive, indicates it is made for the California market

**Option**

- A model number suffix of /17, /18, or /19 indicates a communication option. Communication options include twisted pair communication, power line communication, and switches that can be used to activate relays or read switch positions.

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: November 12, 2003



Mike Cleary, Director

**Davidge Controls**  
**EZ Meter**  
**Electronic Watt-Hour Meter**  
**Class 100 Models: 4011, 4021, 4111, 4211, 4221, 4311, 4411, and 4511**  
**Class 200 Models: 4010, 4020, 4110, 4210, 4220, 4410, and 4510**

**Application:** For use as a watt-hour metering system in legally submetered electric service applications.

**Identification:** The meter identification label covers the top face of the meter module. The current transformer (CT) label is adhered to the transformer output leads or on the windings.

**Sealing:** A tamper evident paper seal can be applied over the screw that retains the back plate on the meter module, however, there are no adjustable components inside. Calibration is a software based, factory only procedure. Wiring terminals may be sealed by securing a hinged bar across the terminal screws with a wire security seal.

**Operation:** These watt-hour meters are not self contained. Mechanical display is a separate module. Current transformer Model 4720/1 for Class 200 meters or Model 4720/2 for Class 100 meters must be used to sense the load. Meter must be mounted in a NEMA enclosure appropriate for the location to insure a dry environment for the electronic module.

**Test Conditions:** This certificate supersedes Certificate of Approval number 5313-02 and is issued to add Class 100 meters.

One sample of each of the six Class 100 meter models, with register modules and Model 4720/2 current transformers, were submitted for evaluation. The meters were tested at the Division of Measurement Standards lab. The meters were subjected to a total of over 150 tests from 1.5 amps to 50 amps at both unity and 0.5 power factor. No communication capabilities were evaluated. The previous test conditions are repeated below for reference.

**Certificate of Approval Number 5313-02:** Two samples of each model meter, with register modules and Model 4720/1 current transformers, 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 marina. After a permanence period of approximately 8 weeks the meters were returned to the DMS lab for retesting. The meters were subjected to a combined total of over 200 tests from 3 amps to 50 amps at both unity and 0.5 power factor. No communication capabilities were evaluated.

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

**Type Evaluation Criteria Used:** Title 4, California Code of Regulations, 2003 Edition

**Tested By:** J. Raspino (CA)



**Meter Module**



**Register**



**Class 200 CT**



**Class 100 CT**