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

Certificate Number: 5520-07

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

For:
Indicating Element, Water Meter
Digital Electronic
Models: RCM-100-C: Cold Water
RCM-100-H: Hot Water
RCM-100-CH: Cold and Hot Water (two indicators, one housing)

Submitted by:
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Standard Features and Options

- Six digit liquid crystal diode (LCD) display
- 3.6 volt lithium battery
- Unit of measure: Gallons or cubic feet
- RCM programmer (see Page 2, Operation)

Option:

Programmable tamper evident options (see Page 2, Sealing)

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: April 20, 2007

Dennis R. Johannes, Director

Copy to Jason 5-2-07

MARS Company
Indicating Element, Water Meter
Models: RCM-100-C, RCM-100-H, RCM-100-CH

Application: For use as an indicator for approved and compatible water meters capable of sending a pulsed output signal. The device may be used where the water meter display is difficult to read after installation.

NOTE: Written installation instructions shall be included with each indicator.

Identification: The identification is located on the front of the clear cover which is permanently affixed to the circuit board.

Sealing: To prevent access to the adjustable components inside an adhesive tamper evident seal may be placed across both sides of the indicator enclosure. The indicator circuit board is held in the front clear cover with four screws held in place by an adhesive. The indicator also has a tamper evident option that can be activated to display a T on the LCD display at the extreme left side if the cover is removed from the circuit board. Once activated, this T cannot be turned off without the use of the RCM programmer which is also used to program the unit of measure value increment. The unit will continue to function normally with the T clearly visible. The indicator can also be set to display an X if the wire or wires are disconnected from the circuit board.

Operation: The indicator uses the pulsed output from the water meter to display water usage in gallons or cubic feet. The dual indicator can receive pulses from two water meters, one meter per indicator. The indicator can be programmed to receive pulses to selectable display increments with the RCM programmer. The adhesive tamper evident seal must be removed, case opened, and RCM plugged into the back of the circuit board to program this device. If the meter pulses at single gallon or single cubic foot pulses, the indicator is set to increment the last digit to the right on the display. If the meter pulses at ten units of measure increments then the second digit from the right hand side would be set to increment and then the increment to the right would be programmed to a non-incrementing zero. The proper unit of measure (gallon or cubic foot) is on the permanent identification label and must match the meter's unit of measure value.

Test Conditions: Single and dual display indicators were submitted for evaluation. Each indicator was interfaced to a water meter capable of sending a pulsed output signal. The indicators were run for 24 days connected to water meters. The meter's flow rates were varied and started and stopped to verify agreement with the indicator. A tolerance of plus or minus one pulse was applied.

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

Type Evaluation Criteria Used: Title 4, California Code of Regulations, 2007 Edition

Tested By: Dan Reiswig (CA)

Model RCM-100-CH