

NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance for Weighing and Measuring Devices

For:

Non-Computing Scale Counter Bench

Models: SW-5, SW-10, SW-20 and SW-50

n_{max}: 2 500

 $e_{min} \hspace{-0.05cm} : 0.002 \hspace{0.1cm} lb \hspace{0.1cm} / \hspace{0.1cm} 0.001 \hspace{0.1cm} kg \hspace{0.1cm} / \hspace{0.1cm} 1 \hspace{0.1cm} g \hspace{0.1cm} / \hspace{0.1cm} 0.05 \hspace{0.1cm} oz \hspace{0.1cm}$

Capacity: 5 lb to 50 lb* / 20 kg / 20 000 g / 800 oz

Platform: 7 ¼ in x 9 ¼ in Accuracy Class: III

Submitted By:

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Standard Features and Options

Standard Features:

- Semi-automatic (push-button) Zero
- Automatic Zero Setting Mechanism (AZSM)
- Initial Zero Setting Mechanism
- Semi-automatic (push-button) Tare
- Battery Saving Feature (auto shut off)
- AC/DC Adapter
- Customer Display
- lb, oz, kg, g Capability
- Liquid Crystal Display (LCD)
- RS232C interface communication

*Specific Models and Capacities:

Specific Models and Capacities.	
Model	Capacity
SW-5	5 x 0.002 lb / 2 x 0.001 kg / 2000g x 1 g / 80 x 0.05 oz
SW-10	10 x 0.005lb / 5 x 0.002 kg / 5000g x 2 g / 160 x 0.1 oz
SW-20	20 x 0.01lb / 10 x 0.005 kg / 10000g x 5 g / 400 x 0.2 oz
SW-50	50 x 0.02 lb / 20 x 0.01 kg / 20000g x 10 g / 800 x 0.5 oz

Load Cells Used:

CAS Models SW-2L, SW-5L, SW-10L and SW-20L

Temperature Range: -10 °C to 40 °C (14 °F to 104 °F)

This device was evaluated under the National Type Evaluation Program and was found to comply with the applicable technical requirements of "NIST Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages.

Randy Jennings

Chairman, NCWM, Inc.

Judy Cardin

Chairman, National Type Evaluation Program Committee

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CAS USA, Corporation

Non-Computing Scale / SW-5, SW-10, SW-20 and SW-50

Application: General purpose bench and counter scale.

<u>Identification</u>: The required information is located on a metal badge riveted to the side of the scale and on the face plate adjacent to the display.

Sealing: A metal plate covers the calibration switch on the bottom of the scale. A screw with a hole drilled across the end is placed through the scale from the top with the end protruding through the metal plate. A wire seal can be passed through the hole on the end of the screw and through a plastic tab that also protrudes through the metal plate to secure access to the calibration switch.

<u>Test Conditions</u>: This certificate supersedes NTEP Certificate of Conformance Number 99-002 and is issued to add RS-232C interface communication to the existing Certificate. The emphasis of the evaluation was on performance testing of the RS-232C interfacing to (07-002) PC America Point of Sale System. Previous test conditions are listed below for reference.

<u>Certificate of Conformance Number 99-002</u>: Two Model SW scales were submitted for evaluation (5 lb x 0.002 lb and a 50 lb x 0.02 lb). The emphasis of the evaluation was on device design, operation, compliance with marking requirements, and influence factor requirements. Several Increasing/decreasing load and shift tests were conducted. The scales were tested over a range of temperature from -10 °C to 40 °C (14 °F to 104 °F). A load of approximately one-half capacity was applied to the scales over 100 000 times. The scales were tested periodically over this time. Additionally, tests were conducted using 100 VAC and 130 VAC power supplies.

Evaluated By: E. Matthews (OH), W. West (OH) 99-002; M. Kelley (OH) 99-002A1

<u>Type Evaluation Criteria Used:</u> NIST, <u>Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices</u>, 2010. NCWM, <u>Publication 14: Weighing Devices</u>, 2010.

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

Information Reviewed By: J. Truex (NCWM) 99-002A1

Example of Device:



SW-Series