NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance

for Weighing and Measuring Devices

For:
Non-Computing Scale
Digital Electronic
Model: SW Series
n_{max}: 4200 to 7500
e_{min}: 0.001 kg (0.002 lb; 0.05 oz)
Capacity: 6 to 150 kg (13 to 330 lb; 210 to 5200 oz)
Platforms: KS-200 x 250 mm, KM- 300 x 380 mm
KL - 390 x 530 mm
Accuracy Class: III

Submitted By:
A&D Engineering, Inc.
4622 Runway Boulevard
Ann Arbor, MI 48108
Tel: 408-564-2322
Contact: Jesus Zapien
Email: jzapien@andweighing.com
Web site: www.andonline.com

Standard Features and Options

- SW is Super Washdown
- SW is Stainless Steel Construction, Plastic Indicator
- "N" is a Marketing Identifier with No Metrological Significance
- Automatic Zero Tracking (AZT)
- Initial Zero Setting Mechanism (IZSM)
- Semi-automatic Zero (push-button)
- Semi-automatic Tare (push-button)
- LED Display
- Counting Feature (not legal for trade)
- AC/DC Power
- Power Saving Feature (auto-shut off)
- Pound (lb)
- Kilogram (kg)
- Ounce (oz)
- Load Cells Used: A&D Model: 1LC181 (6KS/N &15KS/N) non-NTEPA&D Model:1LC173(15KM/N, 30KM/N, 60KM/N, 60KL/N, 150KM/N, 150KL/N) non - NTEP

Options:

- SLA Battery
- RS-232C, RS-422/485 Interface
- Display Pole, Display Stand

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.

Kevin Schnepp
Chair, NCWM, Inc.

Marc Paquette
Chair, NTEP Committee
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A&D Engineering
Non-Computing / SW Series

Model	Capacity	d=e	n_{max}
SW-6KSF	6 kg, 13 lb, 210 oz	0.001kg, 0.002 lb, 0.05 oz	6000, 6500, 4200
SW-6KSNF	6 kg, 13 lb, 210 oz	0.001kg, 0.002 lb, 0.05 oz	6000, 6500, 4200
SW-15KSF	15 kg, 33 lb, 520 oz	0.002 kg, 0.005 lb, 0.1 oz	7500, 6600, 5200
SW-15KSNF	15 kg, 33 lb, 520 oz	0.002 kg, 0.005 lb, 0.1 oz	7500, 6600, 5200
SW- 15KMF	15 kg, 33 lb, 520 oz	0.002 kg, 0.005 lb, 0.1 oz	7500, 6600, 5200
SW- 15KMNF	15 kg, 33 lb, 520 oz	0.002 kg, 0.005 lb, 0.1 oz	7500, 6600, 5200
SW-30KMF	30 kg, 66 lb, 1050 oz	0.005 kg, 0.01 lb, 0.2 oz	6000, 6600,5250
SW-30KMNF	30 kg, 66 lb, 1050 oz	0.005 kg, 0.01 lb, 0.2 oz	6000, 6600,5250
SW-60KMF	60 kg, 130 lb, 2100 oz	0.01 kg, 0.02 lb, 0.5 oz	6000, 6500, 4200
SW-60KMNF	60 kg, 130 lb, 2100 oz	0.01 kg, 0.02 lb, 0.5 oz	6000, 6500, 4200
SW-60KLF	60 kg, 130 lb, 2100 oz	0.01 kg, 0.02 lb, 0.5 oz	6000, 6500, 4200
SW-60KLNF	60 kg, 130 lb, 2100 oz	0.01 kg, 0.02 lb, 0.5 oz	6000, 6500, 4200
SW-150KMF	150 kg, 330 lb, 5200 oz	0.02 kg, 0.05 lb, 1 oz	7500, 6600, 5200
SW-150KMNF	150 kg, 330 lb, 5200 oz	0.02 kg, 0.05 lb, 1 oz	7500, 6600, 5200
SW-150KLF	150 kg, 330 lb, 5200 oz	0.02 kg, 0.05 lb, 1 oz	7500, 6600, 5200
SW-150KLNF	150 kg, 330 lb, 5200 oz	0.02 kg, 0.05 lb, 1 oz	7500, 6600, 5200

Application: Non-computing scale used for general-purpose weighing applications.

Identification: The required information is on an adhesive badge affixed on the top or on the face plate of the indicating element.

Sealing: The calibration switch is located at the bottom of the indicator. Access to the calibration switch can be prevented by a physical seal that runs a metal wire through a plastic lip on the body of the device and a through-hole screw.

Test Conditions: This certificate supersedes Certificate of Conformance 11-078A1 and was issued without additional testing to include the new Model number suffix F. Previous test conditions are listed below for reference.

Certificate of Conformance 11-078A1: This Certificate supersedes Certificate of Conformance Number 11-078 and was issued without additional testing to reactivate Certificate of Conformance 11-078 without lapse. Previous test conditions are listed below for reference.

Certificate of Conformance 11-078: The emphasis of the evaluation was on the device design, operation, marking requirements, and compliance with influence factor requirements. For this evaluation, a model SW-6KS and a model SW-15KM and SW-150KL were submitted. Several increasing/decreasing load and shift tests were conducted on each scale. The scales were tested over a temperature range of –10 °C to 40 °C (14 °F to 104 °F). A load of approximately one-half scale capacity was applied to each scale over 100,000 times. The scales were tested periodically during this time. Tests were also conducted with a power supply of 84 to 264 VAC and 5.7 to 6.6 VDC.

Evaluated By: E. Matthews (OH) 11-078; J. Gibson (NCWM) 11-078A1 (CN 11195); B. Maser (NCWM) 11-078A2 (CN 11559)

Type Evaluation Criteria Used: NIST, Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices, 2011. NCWM, Publication 14: Weighing Devices, 2011.

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) 11-078; D. Flocken (NCWM) 11-078A1; J. Gibson (NCWM) 11-078A2

A&D Engineering
Non-Computing / SW Series

Example of Device:



Model: SW-Series