

National Type Evaluation Program
Certificate of Conformance
for Weighing and Measuring Devices

For:

Price Computing Scale
Digital Electronic
Models: SG and SF Series
Capacity: 6 kg to 30 kg (15 lb to 60 lb) (See Below)
 n_{\max} : 3000
Platform: 300 mm x 280 mm (12" x 11")

Accuracy Class: III

Submitted by:

A & D Engineering
1555 McCandless Drive
Milipitas, CA 95035
Tel: (408) 263-5333
Fax: (408) 263-0119
Contact: Jerry Wang

Standard Features and Options

Initial zero setting mechanism (IZSM)	Automatic zero setting mechanism (AZSM)
Gross/net weight display	Semi-automatic zero setting mechanism (push-button)
Semi-automatic tare (push-button)	RS-232 communication port
Battery power supply	AC to DC power adapter
Model SF Series comes with a tower customer display	Load cell: A & D Model SF/SG (30 kg capacity)
Model SG Series comes with a built-in operator and customer display	

Models*	Capacities	
SF-6 or SG-6	15 lb x 0.005 lb	6 kg x 0.002 kg
SF-15 or SG-15	30 lb x 0.01 lb	15 kg x 0.005 kg
SF-30 or SG-30	60 lb x 0.02 lb	30 kg x 0.01 kg

* Suffix descriptions:

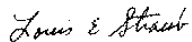
Model SF Series: KA - Vacuum fluorescent display with AC hard wired
KB - Liquid crystal display with AC adapter
KC - Vacuum fluorescent display with AC adapter

Model SG Series:KA - Liquid crystal display with AC adapter

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

This device was evaluated under the National Type Evaluation Program (NTEP) and was found to comply with the applicable technical requirements of 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.

Effective Date: June 4, 1999



Louis E. Straub
Chairman, NCWM, Inc.



G. Weston Diggs
Chairman, National Type Evaluation Program Committee

Issue date: August 17, 1999

Note: The National Conference on Weights and Measures does not "approve", "recommend", or "endorse" any proprietary product or material, either as a single item or as a class or group. Results shall not be used in advertising or sales promotion to indicate explicit or implicit endorsement of the product or material by the NCWM.

This is a reissuance by the NCWM of a Certificate of Conformance already issued by the National Institute of Standards and Technology.

**A & D Engineering
Price Computing Scale
Models: SG and SF Series**

Application: For use in direct sales, price computing, or general purpose weighing.

Identification: A metal identification tag is attached on the right side of scale.

Sealing: A pressure sensitive security seal can be applied over the plate located on the bottom of the scale. The plate is used to cover access to the calibration switch.

Test Conditions: The Models SF-30 KA and SF-6 KB price computing scales were submitted for evaluation. The emphasis of the evaluation was on the device design, operation, performance, and marking requirements. Each device was tested for width of zero, center of zero, discrimination, and zone of uncertainty tests. Several increasing/decreasing load and shift tests were conducted. Additionally, the devices were tested over a voltage range of 100 VAC to 130 VAC and 10.9 VDC and 12 VDC. Influence factor tests were conducted on each scale over a temperature range of $-10\text{ }^{\circ}\text{C}$ to $40\text{ }^{\circ}\text{C}$ ($14\text{ }^{\circ}\text{F}$ to $104\text{ }^{\circ}\text{F}$). A load of one-half capacity was applied to the scales over 100,000 times. The devices were tested periodically during this time.

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

Type Evaluation Criteria Used: NIST Handbook 44, 1999 Edition

Tested By: S. Chan (CA)