

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

For:

Bench and Counter Scale
Digital Electronic
Model: POS Series
 n_{\max} and e_{\min} : (See Table on Page 2)
Capacity: (See Table on Page 2)
Platform Size: 14.3-in x 12.8-in

Accuracy Class: III

Submitted by:

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Standard Features and Options

The POS Series of scales has the following external selectable units of measure:
pound (lb), ounce (oz), kilogram (kg), and gram (g)

Automatic Zero Setting Mechanism, (AZT)	RS-232, for ECR, or printer communication
Semi-Automatic Zero Setting Mechanism (Push Button)	Level Indicator, (underneath the Platter)
Initial Zero Setting Mechanism (IZSM, On/Off Switch)	Stable weight Enunciator
Semi-Automatic Tare (Push Button)	
Gross/Net/Tare Display	
Units, external selectable, (lb, oz, kg, & g)	
AC Power Only	
Light Emitting Diode Display (LED), character height, weight values 23 mm, unit of mass designation 7 mm	
Category 1 Sealing: Physical (wire security seal) or Audit Trail (two non-resetable counters)	

Load cell: Zhongyuan Electrical Measuring Instruments Co. (Non-NTEP) model CZL-6N, 20kg, 50 kg or 75kg.

Options

Remote Customer Display, Atron model TR-05
Remote printer, compatible with RS-232 communication

Temperature Range: -5° C to 40° C (23° 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.

Judith L. Cardin
Chair, NCWM, Inc.

Steven Malone
Chairman, National Type Evaluation Program Committee
Issue date: July 8, 2008

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Application: General purpose weighing. These devices may be used in point of sale applications when interfaced with a certified and compatible electronic cash register. (See **ECR Interface Option** on page 3.)

Identification: The manufacturer's identification, model number, and serial number are on a pressure sensitive, self-destructive label located on the right side of the scale. The scale displays the firmware version number (v1.07 or later) on the weight display, whenever the scale is powered on.

Model Nomenclature: POS-YYY C X †

POS- → **Model Prefix:** POS.

YYY → **Capacity:** 30, 60, or 150 (in pounds)

C → **Country:** if blank = USA, if C = Canada

X → **Displays:** if blank = has User & Customer Displays (Front & Left sides)

if X = No User or Customer Displays (Front & Left sides); Remote Display Only.

†(Position) → **Resolution:** if blank = n_{\max} , 3000, if † = n_{\max} 6000 or n_{\max} 7500

Base Models POS-yy	n_{\max}	Capacity x d (lb)	Capacity x d (oz)	Capacity x d (kg)	Capacity x d (g)	e_{\min}
POS-30	6000	30 x 0.005	480 x 0.1	12 x 0.002	12,000 x 2	0.002 kg
POS-60	6000	60 x 0.01	960 x 0.2	30 x 0.005	30,000 x 5	0.01 lb
POS-150	7500	150 x 0.02	2400 x 0.5	75 x 0.01	75,000 x 10	0.02 lb
POS-30	3000	30 x 0.01	480 x 0.2	15 x 0.005	15,000 x 5	0.01 lb
POS-60	3000	60 x 0.02	960 x 0.5	30 x 0.01	30,000 x 10	0.02 lb
POS-150	3000	150 x 0.05	2400 x 1	60 x 0.02	60,000 x 20	0.02 kg

Sealing: These devices may be sealed using either of 2 types of Category 1 methods of sealing: (1) is a Physical Seal, wire security, and (2) is an Audit Trail. A scale is setup at the factory to exclusively use one method or the other.

To determine the method set-up for sealing: turn the scale on and during the displayed count down (but before it goes to zero) press the "Tare" key. Then press the * key 4 times, and then press "Tare", the scale will display either "Audit Trail" or "Physic Seal" which represent the official method of sealing. To exit this mode and return to normal operation press the "Tare" key.

Method 1- Physical Seal: Scales can be sealed using a wire security seal, which can be threaded through two sealing screws that secure the scale's top case cover and a calibration access cover, both of which give access to a calibration button located on the motherboard. The sealing location is underneath the platter, towards the front-right of the scale see picture on page 4. The seal prevents the removal of the calibration access cover and the disassembly of the scale's case. Note: Audit Trail counters are always active even when the prescribed method of sealing is a wire security seal.

Method 2- Audit Trail: Scales have 2 non-resettable, 3-digit event counters. One event counter which increments whenever any configuration settings are changed and is identified as "CON"; the other event counter increments when the device is calibrated and is identified as "CAL". These counters can be viewed by pressing the "Mode" key after turning the scale on (during scale count down) but before it goes to zero. The counters appear as "CON.xxx" and "CAL.yyy" where xxx and yyy represent the individual values for the counters (000 to 999); a decimal point is always shown as a separator between the text (CAL or CON) and the value (xxx or yyy). See picture on page 4.

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Operation: The requirements for the options stated below must be met to be included in the scope of this Certificate of Conformance.

All of the following options are protected by the security seal; if an option is to be used with the scale, the scale must be configured for that option, this requires breaking the physical seal (if available) and incrementing the Configuration Counter.

Remote Printer Option: A remote serial printer, model Zebra LP-2824 or compatible model, may be connected to this scale using the RS-232 communication port. Print format consists of Gross Weight, Tare (Weight) and Net Weight values.

Remote Display Option: This options limits information that may be displayed, the scale must be configured so that *only* the *Unit* and *Zero* keys are active and functioning; deactivated keys will sound an “error tone” (double beep) whenever pressed. Atron model TR-05 remote display, may be connected to the scale using the RS-232 communication port. The remote display must be marked with the same capacity by division as the scale. Display format consists of a 6-digit weight display and a 3 character unit display. See picture on page 4.

ECR Interface Option: These scales may be connected to an Electronic Cash Register (ECR), using the RS-232 communication port. , The scale must be configured so that *only* the *Zero* key is active and functioning; deactivated keys will sound an *error tone* (double beep) whenever pressed. Additionally, a tamper-resistant sticker stating the capacity in either *Pounds (lb)* or *Kilograms (kg)*, no ounces or grams, shall be placed over the capacity markings on the overlays. The weight signal (stream) was evaluated with the ECR set for *weight capture* only; no *live weight* was evaluated and is not covered under this Certificate of Conformance.

Test Conditions: The emphasis of the evaluation was on the device design, marking, operation and compliance with influence factor requirements. For the purpose of the evaluation a 30 x 0.005 lb (nmax 6000) and a 150 x 0.02 lb (nmax 75000) version scales were submitted. These devices were tested over a temperature range of -5° C to 40° C (23° F to 104° F). Several increasing/decreasing load tests and shift tests were performed. These devices were tested with an AC power supply from 100 VAC to 130 VAC. A load of approximately one-half (1/2) capacity was applied to the 30 lb scale over 100 000 times. The scale was tested periodically during this time. Additionally, the device was connected to a serial printer Zebra model LP-2824, and an Atron model TR-05 remote display, and an ECR, SAM4S model ER-5200M (07-035), to evaluate the scale’s RS 232 communication with these external devices.

Evaluated By: Bill Fishman (NY)

Type Evaluation Criteria Used: NIST Handbook 44, 2008 Edition; NCWM Publication 14, 2008 Edition

Conclusion: The results of the evaluations and information provided by the manufacturer indicate the devices comply with applicable requirements.

Information Reviewed By: S. Patoray, L. Bernetich (NCWM)

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Model POS Series: Front view, Operator's Display and keyboard



Sealing

Wire Security Seal



Optional Remote Display, model TR-05



Example of Audit Trail Counters

