

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

For:

Bench and Counter Scale
Digital Electronic
Model: PX Series
 n_{\max} and e_{\min} : (See Table on Page 2)
Capacity: (See Table on Page 2)
Platform Size: 9.0" x 11.5"

Accuracy Class: III

Submitted by:

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Standard Features and Options

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

Automatic Zero Setting Mechanism (AZSM)	Gross/Net/Tare Display
Semi-Automatic Zero Setting Mechanism (Push Button)	Units, external selectable, (lb, oz, kg, & g)
Initial Zero Setting Mechanism (IZSM, On/Off Switch)	RS-232, for ECR, or printer communication
Semi-Automatic Tare (Push Button)	Level Indicator, (on the bottom of the Pole bracket)
Battery Saving Feature, (Auto Shut-Off)	Stable weight Enunciator
Battery Power Supply, internal, Rechargeable	
AC Power or AC Adapter	
Liquid Crystal Display (LCD), character height, weight values 23 mm, unit of mass designation 7 mm	
Category 1 Sealing: Physical (wire security seal) and Audit Trail (two non-resettable counters)	

Load cell: Zhongyuan Electrical Measuring Instruments Co. (Non-NTEP) model CZL-6D, 5kg, 10kg, 20 kg or 50kg.

Options

Integrated Customer Display
Remote Customer Display, Atron model TR-05
Remote printer

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.

Don Onwiler
Chairman, NCWM, Inc.

James C. Truex
Chairman, National Type Evaluation Program Committee
Issue date: March 13, 2006

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Atron Systems, Inc.
Bench and Counter Scale
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Application: General purpose weighing. The device 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 two (2) identical pressure sensitive, self-destructive labels located on the right side of the scale as well as on the bottom (base) of the scale. The scale displays the firmware version number (v1.22 or later) on the weight display, whenever the scale is powered on.

Model Nomenclature: PX-YY C R B +

PX → **Model Prefix:** PX-Series.

YY → **Capacity:** 6, 12, 15, 30, or 60 (in pounds)

C → **Country:** (Blank) = USA, C = Canada

R → **RS-232:** (Blank) = No RS-232 port, R = RS-232 port

B → **Power Supply:**

(Blank) = External AC Adapter & Internal Batteries

B = Internal transformer power supply with AC Cord & Internal batteries

+ → **Resolution:** (Blank) = 3000 n_{max} , + = 6000 n_{max}

Base Models PX-YY	n_{max}	Capacity x d (lb)	Capacity x d (oz)	Capacity x d (kg)	Capacity x d (g)	e_{min}
PX-6	6000	6 x 0.001	96 x 0.02	3 x 0.0005	3000 x 0.5	0.001 lb
PX-12	6000	12 x 0.002	200 x 0.05	6 x 0.001	6000 x 1	0.002 lb
PX-30	6000	30 x 0.005	480 x 0.1	12 x 0.002	12,000 x 2	0.002 kg
PX-60	6000	60 x 0.01	960 x 0.2	30 x 0.005	30,000 x 5	0.01 lb
PX-6	3000	6 x 0.002	96 x 0.05	3 x 0.001	3000 x 1	0.002 lb
PX-15	3000	15 x 0.005	200 x 0.1	6 x 0.002	6000 x 2	0.002 kg
PX-30	3000	30 x 0.01	480 x 0.2	15 x 0.005	15,000 x 5	0.01 lb
PX-60	3000	60 x 0.02	960 x 0.5	30 x 0.01	30,000 x 10	0.02 lb

Sealing: These devices are equipped with 2 types of Category 1 methods of sealing: (1) is a Physical Seal and (2) is an Audit Trail. The scale can be setup with a sealed-software setting to exclusively use one method or the other.

To determine the set-up method of 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, then press "Tare", the scale will display "Audit Trail ON" or "Audit Trail OFF", when "ON" this represents method (2) sealing stated below, and when "OFF" this represents method (1) sealing stated below. To exit this mode and return to normal operation press the "Tare" key.

Method 1 Physical Seal: These scales can be sealed using a wire security seal, which is threaded through a rod that protrudes from the scale base. This rod is permanently attached to the upper case and when sealed, prevents the upper case and base from separating without breaking this physical seal. This prevents access to an internal calibration button. The Audit Trail counters are also activated in this position.

Method 2 Audit Trail: These scales have 2 non-resettable, 3-digit event counters. One event counter increments whenever any configuration settings are changed and is identified as "OPT". 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.

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

Remote Printer Option: A remote serial printer (model Zebra LP-2824 or compatible model) may be connected using the RS-232 communication port. This option is protected by the security seal; if a printer is to be used the scale must be configured for this option, which requires breaking the physical seal (if available) and incrementing the Configuration Counter. Print format consists of a single line of print which represents what is displayed on the scale's weight display.

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Remote Display Option: A remote display, Atron model TR-05, 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. This option is protected by the security seal; if a remote display is to be used then the scale must be configured for this option which requires breaking the physical seal (if available) and incrementing the Configuration Counter. Additionally, 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. Display format consists of a 6-digit Weight Display and a 3 character Unit Display.

ECR Interface Option: These scales may be connected to an Electronic Cash Register (ECR), using the RS-232 communication port. This option is protected by a security seal; if an ECR is to be connected, then the scale must be configured for this option which requires breaking the physical seal (if available) and incrementing the Configuration Counter. Additionally, 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. The weight signal (stream) was evaluated when the ECR was 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 6 x 0.001 lb and a 60 x 0.01 lb version scale were submitted. Both devices were tested over a temperature range of -10° C to 40° C (14° F to 104° F). Several increasing/decreasing load tests and shift tests were performed. The 6 lb version was tested with an AC power supply from 100 VAC to 130 VAC and a DC power supply from 11.6 VDC to 15 VDC. A load of approximately one-half (½) capacity was applied to the 6 lb capacity scale over 100 000 times. The scale was tested periodically during this time. Additionally, the 120 lb capacity scale was connected to a serial printer Zebra model LP-2824, an Atron model TR-05 remote display, and a Casio model QT-600 ECR (CC pending) and a SAM4S model ER-600 ECR (CC pending), to evaluate the scale’s RS 232 communication with these external devices.

Evaluated By: Bill Fishman (NY)

Type Evaluation Criteria Used: NIST Handbook 44, 2006 Edition; NCWM Publication 14, 2005 Edition

Conclusion: The results of this evaluation and information requested from and provided by the manufacturer indicate the devices comply with the applicable requirements.

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