



NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance

for Weighing and Measuring Devices

For:

Indicating Element

Digital Electronic

Models: 2200, 2200CW, 4300, 7000XLM, 7400M, 8000XLM, 8100IS, and 8200IS

 $n_{\max}$: 10 000

Accuracy Class: III

***Submitted By: Contact Info. Updated November 2018**

Doran Scales, Inc.

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Contact: Mark Podl

Email: markp@doranscales.comWeb site: www.doranscales.com**Standard Features and Options****Standard Features:**

- Semi-automatic Zero Setting Mechanism (push-button)
- Keyboard Tare
- Multiple Tare Memories (2200, 2200CW, and 8200IS models only)
- lb/kg/oz/g Units Capability
- LED and LCD Displays
- Motion Indicator
- DC Power (5.8 to 9.9 VDC)
- Battery Power
- Initial Zero Setting Mechanism
- Automatic Zero Setting Mechanism
- Semi-Automatic (pushbutton) Tare
- Gross/Net Display
- Print Key
- Power Save Mode
- AC Power Supply

Options:

- Remote Printing Capability
- Ethernet (Wired and Wireless)
- USB
- Remote input for either Unit Switching, Zero, or Print Command
- Bi-directional RS-232
- Fiber Optic (Models 8100IS and 8200IS only)

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.

Gene Robertson
Chairman, NCWM, Inc.

Mahesh Albuquerque
Chair, NTEP Committee
Issued: February 7, 2024

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**Doran Scales, Inc.**

Indicating Element / Models: 2200, 2200CW, 4300, 7000XLM, 7400M, 8000XLM, 8100IS, and 8200IS

Application: General purpose indicating element for use with a NTEP certified and compatible weighing element.

Identification: The required information is on a self destructive label attached by adhesive to the top or rear of the device.

Sealing: The indicator may be sealed with a wire security seal threaded through two drilled head screws, which holds the back cover of the indicator in place.

These indicating elements also have a Category 1 audit trail, with two event counters. To view the event counters:

1. Turn on the indicator
 2. Press and hold the UNITS key and the ZERO (ON/OFF) key at the same time for approximately 3 seconds.
 3. The calibration parameter audit counter "C#" will be displayed followed by the configuration parameter audit counter "P#"
- Note: Newer models no longer cycle through each of the internal settings as described in Step 4 below and will return to the normal weighing mode after the event counters are displayed.**
4. After the audit counters are displayed, the scale will cycle through each of the internal settings and return to the normal weighing mode.

To determine if the Indicator is locked to prevent access through the front panel, while the internal settings are being displayed, note the setting of "oP" which will appear toward the end of the list of settings.

If the display is "oP 44", set-up and calibration can be accessed through the front panel.

If the display is "oP 44S", the only way to access set-up and calibration is by breaking the seal on the back of the indicator and removing the back cover to gain access to the calibration switch.

The Inspector can also tell that the Indicator is locked if, when the UNITS key and the ZERO (ON/OFF) key are pressed together, the event counters are not displayed.

Test Conditions: This Certificate supersedes Certificate of Conformance Number 06-101 and is issued to consolidate the indicating elements listed on NTEP Certificates of Conformance 97-038A1, 99-129A4, and to add the new models 8100IS and 8200IS. All models listed on this certificate use the same electronics, software, and hardware and are configured with power and communications ports as defined by the model. No additional testing was deemed necessary. Previous test conditions are shown below and on Inactive NTEP Certificates of Conformance Number 97-038A1 and 99-129A4 for reference.

Certificate of Conformance Number 06-101A1: This Certificate supersedes Certificate of Conformance Number 06-101 and is issued to add a new model (2200CW) with multiple tare memories. Wireless Ethernet, Ethernet, and USB are also being added for all indicators listed on this Certificate. Several tares were taken, stored in the memory, recalled, and printed to a USB printer to ensure they were compliant with storage and printing requirements. Previous test conditions are listed below for reference.

Certificate of Conformance Number 06-101: The emphasis of the evaluation was on the device design, marking requirements, and compliance with influence factor requirements. For the purpose of this evaluation the 2200 Indicator was submitted interfaced with the Doran Model DXL 8100 (NTEP CC 97-097) weighing element. The indicator was evaluated for discrimination, center of zero, over capacity, voltage variation and the print format using the weighing /load receiving element. The performance testing was performed with the indicator connected to a calibrated load cell simulator. Several increasing/decreasing load tests were performed. The device was tested over a temperature range of -10 °C to 40 °C (14 °F to 104 °F). Additionally, the device was tested with a power supply of 100 VAC to 130 VAC and 5.69 VDC to 7.15 VDC.

Evaluated By: W. West (OH), P. Thuman (OH) 06-101; T Buck (OH) 06-101A1; D. Flocken 06-101A2 (CN 10971)

Type Evaluation Criteria Used: *NIST Handbook 44 Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices*, 2014 Edition. *NCWM Publication 14 Weighing Devices*, 2013 Edition.

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) 06-101, 06-101A1; D. Flocken 06-101A2



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Indicating Element / Models: 2200, 2200CW, 4300, 7000XLM, 7400M, 8000XLM, 8100IS, and 8200IS

Examples of Device:



Model 2200, older style keyboard



Model 2200, newer style keyboard



Model 2200CW, older style keyboard



Model 2200CW, newer style keyboard



Model 4300



Model 7000XLM



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Indicating Element / Models: 2200, 2200CW, 4300, 7000XLM, 7400M, 8000XLM, 8100IS, and 8200IS



Model 7400



Model 8000XLM



Model 8100IS with battery option



Model 8200IS with battery option