



NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance

for Weighing and Measuring Devices

For:

Indicating Element
Digital Electronic
Models: 204 and 204S
 n_{max} : 5 000
Accuracy Class: III/III L

***Submitted By: Contact Info. Updated: October 2010**

Cardinal Scale Manufacturing Co.
203 East Daugherty
Webb City, MO 64870
Tel: 417-673-4631
Fax: 417-673-5001
Contact: Stephen Langford
Email: slangford@cardet.com
Web site: www.cardinalscales.com

Standard Features and Options

- Model 204 is a wall/desk mount IP55 enclosure
- Model 204S is a wall/desk mount IP66 waterproof/dustproof enclosure

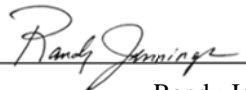
Standard Features:

- Semi-automatic (push-button) Zero Setting Mechanism
- Automatic Zero Setting (AZSM) Mechanism
- Semi-automatic (push-button) Tare
- Remote Printer Capability
- Programmable Print Format
- AC Power Supply
- Battery Power Supply
- Battery Saving (sleep mode) Feature
- Battery Saving (auto shut-off) Feature
- AC/DC Adapter
- Gross/Net Display
- RS-232 Communication Port
- Center of Zero Annunciator
- Motion Detection
- Units Available (lb, kg, oz, g)

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

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. *Editorial changes, not affecting the type or metrological content, corrected this certificate.


Tim Tyson
Chairman, NCWM, Inc.


Randy Jennings
Chairman, National Type Evaluation Program Committee
Issued: October 21, 2010

1135 M Street, Suite 110 / Lincoln, Nebraska 68508

The National Conference on Weights and Measures (NCWM) 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.



Cardinal Scale Manufacturing Co.

Indicating Element / 204 and 204S

Application: General purpose indicating element when connected to an approved and compatible weighing/load receiving element.

Identification: The self-destructive identification label for the Model 204 is located on the back of the indicator.

Sealing: Model 204: Access to the set-up/calibration switch can be secured with a wire security seal threaded through three drilled head fillister screws, two located on the back of the indicator and the other on the right side of the device.

Model 204S: Access to the set-up/calibration switch can be secured with a wire security seal threaded through two drilled head screws on the rear panel, one in the upper left corner and the other adjacent to it.

Test Conditions: This Certificate of Conformance Number 02-016 and is issued to add the Model 204S which is metrologically equivalent to the Model 204. The Model 204S differs only in the enclosure. The Model 204S enclosure is rated for IP66 (water and dust proof) while the Model 204 enclosure is rated for IP55 (dust resistant). The manufacturer submitted pictures that the laboratory compared to the previous pictures from the earlier evaluation. No further testing was deemed necessary. Previous test conditions are listed below for reference.

Certificate of Conformance Number 02-016: The Model 204 indicator was submitted for the purpose of this evaluation. The emphasis of the evaluation was on device design, marking requirements, operation, and compliance with influence factor requirements. The indicator was interfaced with a Cardinal Model 1250 LPAN (Certificate of Conformance 89-030A2) weighing element and a printer. The device was tested for discrimination, power interruption, zero tests, and print format. Also test were performed with a power supply of 100VAC to 130VAC and battery supply of 5.6VDC to 9VDC. The indicator was then interfaced with a load cell simulator, several increasing/return to zero test were performed, then tested for accuracy over a temperature range of -10 °C to 40 °C (14 °F to 104 °F).

Evaluated By: A. McCoy (OH) 02-016A1 & 02-016

Type Evaluation Criteria Used: NIST, Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices, 2002. NCWM, Publication 14: Weighing Devices, 2002.

Conclusion: The results of the evaluation and information provided by the manufacturer indicate the device complies with applicable requirements.

Information Reviewed By: S. Patoray (NCWM), L. Bernetich (NCWM) 02-016, 02-016A1