



NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance

for Weighing and Measuring Devices

For:

Indicating Element
Digital Electronic
Model: 180
 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

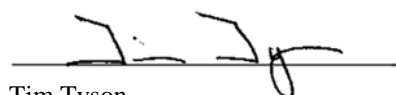
Standard Features and Options

Standard Features:

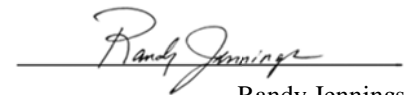
- Semi-automatic (push-button) Zero Setting Mechanism
- Automatic Zero Tracking Mechanism (AZT)
- Semi-automatic (push-button) Tare
- Remote Printer Capability
- Programmable Print Format
- AC Power Supply
- Auto Shut-off Feature
- AC/DC Adapter
- Gross / Net Display
- RS-232 Communication Port
- Wireless Interface
- Center of Zero Annunciator
- Motion Detection
- Units Available (lb, kg, oz)

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 19, 2010

1135 M Street, Suite 110 / Lincoln, Nebraska 68508

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Cardinal Scale Manufacturing Co.

Indicating Element / 180

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

Identification: The self-destructive identification label for the Model 180 is located on the back of the enclosure.

Sealing: Access to the set-up/calibration switch is gained by removing the rear panel. The rear panel is secured with four screws, two of which have drilled heads, allowing installation of a lead-wire security seal.

Test Conditions: This Certificate supersedes Certificate of Conformance Number 06-105 and is issued to add the wireless interface option. The indicator was tested with a wireless interface between it and a load-receiving element connected to a second Model 180 equipped with a wireless interface. Tests were conducted to determine the response to loss and degradation of the wireless signal. Previous test conditions are listed below for reference.

Certificate of Conformance Number 06-105: The Model 180 indicator was submitted for the purpose of this evaluation. The emphasis of the evaluation was on device design, marking requirements, operation, performance, 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 tests were performed with a power supply of 100 VAC to 130 VAC. The indicator was then interfaced with a load cell simulator, several increasing/return to zero tests were performed, then tested for accuracy over a temperature range of -10 °C to 40 °C (14 °F to 104 °F).

Evaluated By: M. Kelly (OH), S. Brenstuhl (OH) 06-105; J. Morrison (OH) 06-105, 06-105A1

Type Evaluation Criteria Used: NIST, Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices, 2008. NCWM, Publication 14: Weighing Devices, 2007.

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) 06-105, 06-105A1

Example of Device:



Model 180