



NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance

for Weighing and Measuring Devices

For:

Indicating Element
Digital Electronic
Models: 200, 205, 210, 210-F, 210-FE, 212-G, 212-GX, 215,
220 and 225
 n_{max} : 10 000
Accuracy Class: III / III L

Submitted By:

Cardinal Scale Manufacturing Company
203 East Daugherty Street
PO Box 151
Webb City, MO 64870
Tel: 417-673-4631 ext. 132
Fax: 417-673-5001
Contact: Stephen Langford
Email: slangford@cardet.com
Web site: www.cardinalscales.com

Standard Features and Options

Standard Features:

- Semi-Automatic Tare (Push-Button)
- Semi-Automatic Zero (Push-Button)
- Automatic Zero Tracking Mechanism (AZT)
- Gross/Net Display
- Gross/Net Weight Accumulation
- Bi-directional RS232 Serial Interface
- Units Conversion Key
- Second RS232 Serial / Printer Interface
- Display Element Test Key
- LCD or LED Display
- Test Function Key
- Motion Detection
- AC Power Supply
- Category 1 Physical Seal
- Livestock Weighing Feature (210, 212-G and 212-GX only)

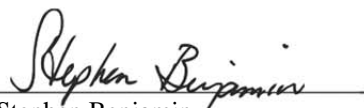
Options:


- DC Power Supply with Low Battery Indication (Models 205, 210, 212-G, 212-GX and 215)
- Third RS232 or Analog Interface
- Wireless Interface

Also see table on Page 2.

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.


Stephen Benjamin
Chairman, NCWM, Inc.


Kurt Floren
Chairman, National Type Evaluation Program Committee
Issued: April 9, 2013

1135 M Street, Suite 110 / Lincoln, Nebraska 68508

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The features in the table below are in addition to the features in the Standard Feature Box which is on all the devices.

Model	200	205	210	210F	210FE	212G	212GX	215	220	225
Category 1 event counter										X
Truck storage feature									X	X
Fill Control									X	X
Batching									X	X
Maximum weight retention									X	
3-inch backlit LCD display				X						
Keyboard Tare			X		X	X	X	X	X	X
Time & Date			X		X	X	X	X	X	X
Automatic "shut off" mode	X	X	X	X	X	X	X	X		
Preset weight comparators			X		X	X	X	X	X	X
14 segment LCD display									X	
7 segment LCD display								X		
240 x 64 dot matrix display										X
Multi-point calibration									X	X
Multi-interval									X	X
Transaction storage									X	X
Weigh-in/Weigh-Out									X	X
Alphanumeric identification									X	X
Auto print on balance			X		X	X	X	X	X	X
Multi-Load receiving elements										X
Livestock Weighing Feature (210, 212-G and 212-GX only)			X			X	X			

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

Identification: The self-destructive identification label for the Model 200 is located on the front panel. The self-destructive identification label for the Models 205, 210, 210-F, 210-FE, 212-G, 212-GX, 215, 220, and 225 is located on top of the indicator.

Sealing: For all models except the 210-F, 210-FE, 212-G and 212-GX, access to the set-up/calibration switch can be secured with a wire security seal threaded through two drilled-head screws on the back panel of the indicator. The screw must be removed to access the internal setup/calibration switch. For the Models 210-F and 210-FE, a wire security seal attaches the enclosure lid and mounting flange web thus eliminating access to the internal weight indicator calibration switch. For the Models 212-G and 212-GX, a wire security seal attaches the front panel to the enclosure preventing access to the internal setup/calibration switch. For the 225 Model, audit trail event counters may be viewed by pressing the SHIFT key and the red square navigation ENTER key simultaneously to display the SETUP/REVIEW MENU. Press the 2 key to select VIEW AUDIT TRAIL COUNTERS. Press the PRINT key to print the counter contents or any key to return to the SETUP/REVIEW MENU. Press the up arrow navigation key to exit the setup menu and return to normal operation.

Test Conditions: This Certificate supersedes Certificate of Conformance Number 01-011A7 and is issued to include the Livestock Weighing Feature to the models 210, 212-G and 212-GX and due to new main controller pcb. A model 210 and a model 212G indicator were interfaced with a load cell simulator and then tested for accuracy over a temperature range of -10 °C to 40 °C (14 °F to 104 °F).



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104 °F). The model 210 indicator was interfaced with a load cell weighing element and a printer. The device was tested for power interruption, zero tests, and print format. Additionally, the device was tested with a supply voltage of 100VAC to 130VAC. Previous test conditions are listed below for reference.

Certificate of Conformance Number 01-011A7: This Certificate supersedes Certificate of Conformance Number 01-011A6 and is issued to include the table on the top of Page 2. The table was inadvertently removed when addendum certificate 01-011A5 was issued. The table included key features for models of the indicating element. No additional testing was necessary. Previous test conditions are listed below for reference.

Certificate of Conformance Number 01-011A6: This Certificate supersedes Certificate of Conformance Number 01-011A5 and is issued to include the Models 212G and 212GX weight indicators which are metrologically equivalent to the Models 200, 205, 210, 210-F, 210-FE, 215, 220 and 225, except for the enclosure, keyboard and display. The Model 212G uses a 12 character 15 segment 0.8-inch high back lit LCD display while the Model 212GX uses a 6 character 15 segment 1-inch high back lit LCD display. Both are housed in a polycarbonate enclosure with a 24-key keyboard. Models 212G and 212GX were submitted for review in an NTEP laboratory.

Certificate of Conformance Number 01-011A5: This Certificate supersedes Certificate of Conformance Number 01-011A4 and is issued to include the audit trail information in the Sealing section of the certificate. The audit trail feature was evaluated during the laboratory evaluation of the Model 225 number certificate 01-011A4. No additional testing was deemed necessary.

Certificate of Conformance Number 01-011A4: This Certificate supersedes Certificate of Conformance Number 01-011A3 and is issued to include the Model 225 weight indicator which is metrologically equivalent to the Models 200,205,210,210-F, 210-FE, 215 and 220. The Model 225 is identical to the Model 220 except for the display, keyboard and enclosure. The Model 225 uses a 260 x 64 dot matrix monochrome display with LED backlight and a 60-key keyboard. A Model 225 was submitted for evaluation. The emphasis of the evaluation was on device design, operation and compliance with influence factors. The indicator was interfaced with a load cell simulator and tested for accuracy over a temperature range of -10°C to 40°C (14°F to 104°F). The indicator was interfaced with a load cell weighing element and printer. The device was tested for discrimination, power interruption, zero tests, and print format. Additionally, the device was tested with a supply voltage of 100 VAC to 130 VAC.

Certificate of Conformance Number 01-011A3: This Certificate supersedes Certificate of Conformance Number 01-011A2 and is issued to include the Model 210-FE which is metrologically equivalent to the Models 200, 205, 210, 210-F, 215 and 220 and to add a wireless interface option. The Model 210-FE is identical to the Model 210-F except for the display and enclosure. The Model 210-FE uses a 2.5 inch LED 7-segment display rather than the 3-inch LCD display used by the Model 210-F. The enclosure has been changed for simplification. With exception of the display, the Model 210-FE is metrologically identical to the Model 210-F. A Model 205 with a wireless interface option was tested with a load receiver connected to a Model 180 (NTEP CC 06-105) equipped with a wireless interface. The indicator was tested for its response to the loss and degradation of the wireless signal and for interference from an adjacent identical wireless system. This certificate is issued without additional testing.

Certificate of Conformance Number 01-011A2: This Certificate supersedes Certificate of Conformance Number 01-011A1 and is issued to include the Model 215 which is metrologically equivalent to the Models 200, 205, 210, 210-F, and 220. The Model 215 is identical to the Model 210 except for the display. The Model 215 uses a LCD 7-segment display rather than the red light-emitting LED display used by the Model 210. This certificate is issued without additional testing.

Certificate of Conformance Number 01-011A1: This Certificate supersedes Certificate of Conformance Number 01-011 and is issued to include the Models 210-F and 220 which are metrologically equivalent to the Models 200, 205 and 210. The Model 220 differs only in the features available and in the use of a multi-segment LCD display. The Model 210-F differs only in that it is housed within a fiberglass enclosure and has a LCD display with 3 inch-high characters. This certificate is issued without additional testing.

Certificate of Conformance Number 01-011: The Model 210 digital weight indicator with the NEMA 4X enclosure was submitted for this evaluation. The emphasis of the evaluation was on device design, operation, and compliance with influence factor requirements. The indicator was interfaced with a load cell simulator and then tested for accuracy over a temperature range of -10°C to 40°C (14°F to 104°F). The indicator was interfaced with a load cell weighing element and a printer. The device was tested for discrimination, power interruption, zero tests, and print format. Additionally, the device was tested with a supply voltage of 100VAC to 130VAC and 10.8VDC to 13.2VDC



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Evaluated By: Dan Parks (CA) 01-011, W. West (OH) 01-011A1, 01-011A2, J. Morrison (OH) 01-011A3; Angie McCoy (OH) 01-011A4; E. A. Payne, Jr. (MD) 01-011A6, E.A. Payne Jr., Z. Tripoulas (MD) 01-011A8

Type Evaluation Criteria Used: NIST, Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices, 2013. NCWM, Publication 14: Weighing Devices, 2012.

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

Information Reviewed By: S. Patoray, L. Bernetich (NCWM) 01-011; 01-011A1; 01-011A2, 01-011A3, 01-011A4; J. Truex (NTEP) 01-011A5, 01-011A6, 01-011A7, 01-011A8

Examples of Device:



Model 200



Model 205



Model 210



Model 210-FE



Model 210-F



Model 215



Model 220



Model 225



Model 212-G



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Model 212-GX



Model 212-G / Model 212-GX Rear Panel

