



## NATIONAL TYPE EVALUATION PROGRAM

# Certificate of Conformance

for Weighing and Measuring Devices

**For:**

Digital Controller Element for Load Cells.  
A to D Controller, Digital Electronic  
Model: SmartCAN Series  
 $n_{\max}$ : 10 000  
Accuracy Class: III / IIII

**Submitted By:**

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**Standard Features and Options**

- A multi-channel load cell junction box which allows signals from analog load cells in a multi-cell scale (or scales) to be individually digitized and then sent to a compatible indicating element. Operational controls, motion detection, and primary weight indication(s) are provided by the certified and compatible primary weight indicating element.
- Multiple SmartCANs can be connected (Daisy Chained) for multiple-controller systems.
- A/D Signal Conversion on Individual Channels
- Multiple Load Cell Interface Capability
- Multiple Scale Capability
- Load Cell Diagnostic Functions
- DC power (indicator provided)


**Options:**

- AC power supply

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.

  
Brett Gurney  
Chairman, NCWM, Inc.

  
James Cassidy  
Committee Chair, National Type Evaluation Program Committee  
Issued: January 31, 2019

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**Cardinal Scale Manufacturing Company**  
Digital Controller Element for Load Cells / SmartCAN Series

**Application:** A Digital Controller Element for analog load cells. Multiple SmartCANs can be connected to provide individual or total values of all load cells or load receiving elements. The SmartCAN outputs a Cardinal Scale proprietary digital output from analog load cells or load receiving elements to a Cardinal Scale NTEP-certified and compatible indicating element. May be used for general-purpose Class III and IIIIL weighing applications.

**Identification:** The tamper-evident self-destructive identification label for the SmartCAN is located on the exterior of the enclosure.

**Sealing:** Sealing is accomplished using a physical lead-wire security seal on the enclosure.

**Test Conditions:** The emphasis of this evaluation was on device design, performance, operation, and marking requirements. For this evaluation the following models of the SmartCAN series were submitted. A SmartCAN 4-channel and a SmartCAN 10-channel digital controller element were connected to a Cardinal (CC. 01-011) indicating element and a Cardinal scale base. Multiple increasing/decreasing load tests were performed on individual and multiple channels of each device, the devices were then connected, and multiple increase/decrease testing was repeated. The devices were tested over a temperature range of -10 °C to 40 °C (14 °F to 104 °F) and evaluated for VAC and VDC voltage at 85VAC, 264 VAC and 6.4 VDC, 7.9 VDC.

**Evaluated By:** J. Gibson (OH)

**Type Evaluation Criteria Used:** *NIST Handbook 44 Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices*, 2019 Edition. *NCWM Publication 14 Weighing Devices*, 2018 Edition.

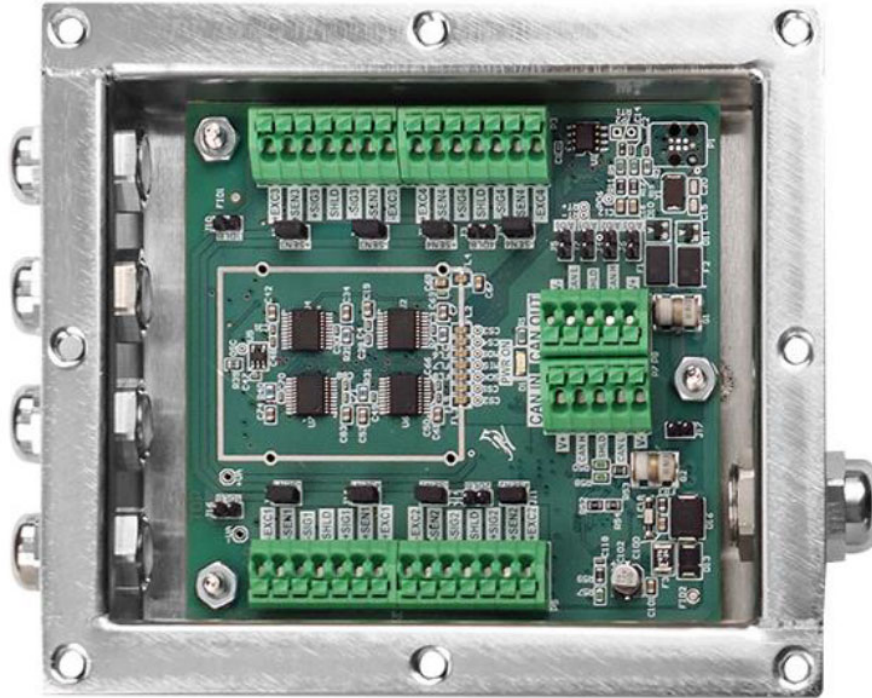
**Conclusion:** The results of the evaluation and information provided by the manufacturer indicate the device complies with applicable requirements.

**Information Reviewed By:** J. Truex (NCWM)



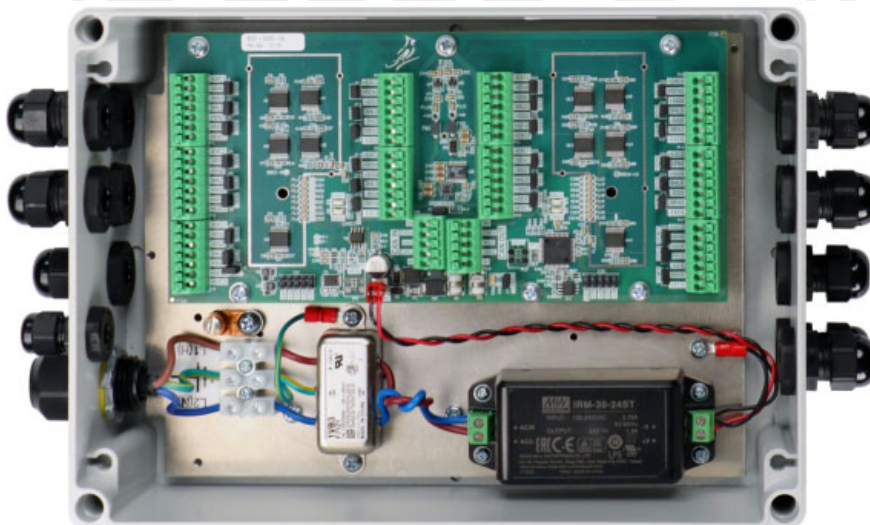
**Cardinal Scale Manufacturing Company**  
Digital Controller Element for Load Cells / SmartCAN Series

**Examples of Device:**



**Figure 1**

SmartCAN 4-cell system



**Figure 2**

SmartCAN 10-cell system with optional AC mains power s