NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance

for Weighing and Measuring Devices

For:
Indicating Element
Digital Controller Element
Models: iQube-yx and iQube2-zxy
n_{max}: 10 000
Accuracy Class: III / III L

Submitted By:
Rice Lake Weighing Systems
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Standard Features and Options

Model: iQube-yx:
- Where "y" will be an "A" for Analog or "D" for Digital
- The "x" will be from 1-8 to indicate the number of channels

Model: iQube2-zxy:
- Z = Number of A/D (Channels per Board) 1-3, No Number represents 4 channels

Both Models:

X = Enclosure Type;
- A = FRP (Plastic)
- B = Stainless Steel
- C = Painted / Galvanized steel

Y = Power Input Voltage;
- A = 100-240 VAC
- B = AC/DC Adapter 6-12 VDC
- D = 9-36 VDC
- E = 10-60 VDC

Example: iQube2-AA — 4 channels, FRP Enclosure, 100-240 VAC
iQube2-2AE — 2 channels, FRP Enclosure, 10-60 VDC

Wireless communication between iQube2 and a certified indicator.
Primary weight indication: (see Application section page 2)
Digital Controller Element for loadcells

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.

Marc Paquette
Chair, NCWM, Inc.

Gene Robertson
Chair, NTEP Committee
Issued: April 7, 2025

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Rice Lake Weighing Systems
Indicating Element / iQube-yx and iQube2-zxy

Application: The Model iQube provides Rice Lake proprietary digital output from an analog load cell weighing system to a compatible and certified indicating element. Applications include tank, hopper, floor, vehicle, and combination vehicle/rail scales.

Identification: The required information for the J-Box such as Manufacture, Model, Class, n_{max}, and serial number are on an adhesive self-destruct label placed on the side of the J-Box. The required marking information for the indicator is on the front panel of the device. Labels for capacity, division, concentrated load capacity (if required), and section capacity (if required) will be identified on an adhesive label. The label will self-destruct when removed.

Sealing: The J-Box can be sealed with two wire security seals at opposite corners threaded through a hole in the J-Box and then through a slot in the screws in the J-Box cover to prevent access to adjustable components inside the J-Box.

Test Conditions: This Certificate of Conformance supersedes Certificate of Conformance Number 03-032A1 and is issued to update the contact information and add the classification of "Digital Controller Element " to the "For Box" and the "Standard Features and Options" section of the certificate per NTEP policy no testing was deemed necessary. Previous test conditions are listed below for reference.

Certificate of Conformance Number 03-032A1: This Certificate of Conformance supersedes Certificate of Conformance Number 03-032 and is issued to add wireless communication between the iQube models and an approved indicating element and to add the model iQube2, which has a different A/D and processor. The iQube2 can have up to 4 CPU boards consisting of up to 4 channels on each board. Each CPU board can sum all of its channels and all four CPU boards can be summed together. The emphasis of the evaluation was on device design, markings, performance, DC power supply and influence factor testing consisting of -10 °C to 40 °C (14 °F to 104 °F). The iQube2 models were evaluated. One plastic and one stainless steel. The evaluation included adding up to 4 CPU boards consisting of up to 4 load cells on each boards and adding DC power from 9 to 60 volts, including an AC/DC power adapter 6 to 12 volts DC. The AC power supply is the same as the iQube model state in 03-032 below. The previous test conditions are repeated below for reference.

Certificate of Conformance Number 03-032: The emphasis of the evaluation was on the device design, markings, operation and compliance with influence factor requirements. For the purpose of this evaluation, the device was attached to 8 load cell simulators and a Rice Lake Model 920i indicating element (Certificate of Conformance Number 01-088). Several increasing load and return to zero tests were conducted. Additionally, tests were conducted over a temperature range of -10 °C to 40 °C (14 °F to 104 °F). Tests were also conducted using 100 VAC / 230 VAC power supply.

Evaluated By: A. McCoy (OH) 03-032; J. Morrison (OH) & T. Lucas (OH) (03-032A1); J. Gibson (NCWM) 03-032A2 (CN 11394)

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

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) 03-032; J. Truex (NCWM) 03-032A1; J. Gibson (NCWM) 03-032A2

Examples of Device: