



NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance

for Weighing and Measuring Devices

For:

Indicating Element
Digital Electronic
Model: SBI-521
 $n_{\max}$: 10 000
Accuracy Class: III

Submitted By: Contact Info. Updated January 2024

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Standard Features and Options

- Automatic Zero Tracking (AZT)
- Semi-Automatic (push-button) Zero Setting Mechanism (SAZSM)
- Alphanumeric Display
- LED or LCD Display
- Semi-Automatic (push-button) Tare
- Unit Selection Key (lb, kg, oz)
- AC/DC Adaptor (110 VAC nominal)
- DC Power (Internal Lead Acid 6 VDC Battery)
- Center of Zero Annunciator
- Programmable Serial Output Content
- Gross/Net Annunciator
- Two RS232 or RS485 Serial Communication Ports
- Stainless Steel Enclosure IP65
- Category 1 Audit Trail

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.


Kurt Floren
Chairman, NCWM, Inc.


Jim Tyson
Chairman, National Type Evaluation Program Committee
Issued: December 15, 2011

Application: A general-purpose indicator to be interfaced with an NTEP certified and compatible weighing element.

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Identification: The required marking information is on the back of the device. Labels for capacity by division will be identified on an adhesive label. The label will self-destruct when removed.

To Verify the Software Version:

1. With the Indicator in the **OFF** position
2. Press the **ON/OFF** button.
3. The Model SBI-521 will display the software revision (01.01 or greater).

Or

1. Indicator in the ON position
2. Press down **SETUP** until **CONFIG** is shown
3. Using **PRINT** or **N/G** key to select **MISC**
4. Press **TARE** key then using **PRINT** or **N/G** key to select **VER**
5. Press **TARE** to display current Version

Sealing:

Category 1 Physical Seal: A Seal Switch is located under an access cover on the back of the enclosure of the SBI-521 indicator fixed by three sealable screws. Placing the switch in the OFF position will seal the indicator and deny access to the configure/calibrate menu. Note: If the switch is OFF, the following steps can be done, but the result will not be saved. The SBI-521 display will show "CFG OFF" if the menu is accessed while in the sealed state. A lead wire seal will be used to seal the enclosure through one of the access switch cover screws and two adjacent enclosure screws.

Category 1 Audit Trail: Configuration and calibration audit trail counters update each time a configuration or calibration change occurs. These counters will return to zero after 999 changes, individually.

The Counters May Be Viewed By:

Configuration

1. Press and hold the SETUP key for 3 seconds
 - a. CONFIG is displayed
2. Press the TARE key
 - a. The display will briefly show the number of times the configuration has been changed and saved up to 999

To Exit:

3. Press ON/OFF key
 - a. Exit? is displayed
4. Press TARE key to return to weigh mode

Calibration

1. Press and hold the SETUP key for 3 seconds
 - a. CONFIG is displayed
2. Press the FUNC key twice
 - a. Cal is displayed
3. Press the TARE key
 - a. The display will briefly show the number of times the configuration has been changed and saved up to 999

To Exit:

4. Press ON/OFF key
 - a. Exit? is displayed
5. Press TARE key to return to the weigh mode

Test Conditions: The emphasis of the evaluation was on the device design, markings, operation, performance, and compliance with influence factor requirements. Three Model SBI-521 indicators were submitted for evaluation. Several performance tests were conducted with the indicator interfaced to a weighing element, a load cell simulator and a printer. The indicator was tested over a

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temperature range of -10 °C to 40 °C (14 °F to 104 °F). Additionally, the device was tested over a voltage range of 94 VAC to 121 VAC using the AC/DC adaptor and also from 5.7 VDC to 6.6 VDC to ensure compliance with the DC battery power regulations.

Evaluated By: C. Harris (OH); J. Morrison (OH)

Type Evaluation Criteria Used: NIST, Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices, 2011. NCWM, Publication 14: Measuring Devices, 2011.

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)

Examples of Device:

Model SBI-521