



NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance

for Weighing and Measuring Devices

For:

Indicating Element
Digital Electronic
Model: ZM4xx, ZM5xx & ZM6xx Series
 $n_{\max}$: 10 000
Accuracy Class: III / III L

Submitted By:

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Standard Features and Options

- Semi-automatic (Push-Button) Zero
- Automatic Zero-Tracking Mechanism (AZT)
- Semi-automatic (Push-Button) Tare
- Keyboard Tare
- Preprogrammed Tare
- Center of Zero Annunciator
- Gross/Net/Tare Display
- AC Power
- Alphanumeric Display
- Stainless Steel Enclosure
- Unit Selection Key (lb, kg, g, oz, custom unit of measure)
- AC/DC Adaptor
- Linearity Calibration Points (up to 10)
- Multi Range/Multi Interval
- Category 3 Audit Trail
- 2 Event Counters (Configuration, Calibration)
- Variable Print Format
- RS232 Communication
- Ethernet
- USB
- DC Power
- Panel Mount Enclosure(ZM4xx-SPy,ZM5xx-SPy,ZM6xx-SPy)
- Remote Configuration and Calibration
- LCD Display (Segment, 320x80, 320x160 versions)

Options:

- Relay Control
- Wireless Communication Equipment
- Weight In/Weight Out
- Panel Mount Kit
- Additional Scale Input(ZM4xx up to 2, ZM5xx up to 4, ZM6xx up to 8)
- Weight Accumulation (Manual/Automatic)

Software Version:

- 2.0.0.14 or Higher

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.

Ronald Hayes
Chairman, NCWM, Inc.

John Gaccione
Committee Chair, National Type Evaluation Program Committee
Issued: June 1, 2015

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Indicating Element / ZM4xx, ZM5xx and ZM6xx Series

Application: General purpose indicator to be interfaced with an approved compatible weighing element.

Identification: The required marking information is on the back of the device. Labels for capacity, division, CLC (concentrated load capacity; if required), and section capacity (if required) will be identified on an adhesive label. The label will self-destruct when removed.

Access to User Menu:

1. To access the User menu, press and hold the "SETUP" (F1 key for ZM401) key until the word "PASS or Password" is displayed.
2. The display will change to show a password prompt.
3. Using the "Tare" key to scroll up and the "Units" key to advance the cursor position, scroll in the number "111".
4. The "Zero" key is used as the Enter key to accept the password. Upon successful completion of the password, the display will show "USER".

Software Version:

From the "USER" Prompt, Accessing the Software Version:

1. Press the "Units" key to display the word "About"
2. Press the "Select" key to display the word "Boot"
3. Press the "Units" key to display the word "Firm"
4. Press the "Select" key to display the word "PartNo"
5. Press the "Units" key to display the word "Version"
6. Press the "Select" key to display the Version Number
7. Press the "Zero" key to exit the viewing screen to display "Version"
8. Press the "F1" key 3 times to get to the "Save Settings" display screen
9. Press the "Zero" key to exit the menu with "Save No" highlighted

Sealing:

Audit Counters:

From the "USER" Prompt, Accessing the Configuration Event Counter:

1. Press the "Print" key to display the word "AUDIT".
2. Press the "Select" key to display the word "COUNTER".
3. Press the "Select" key to display the word "CONFIG".
4. Press the "Select" key again to display the actual configuration counter.
5. Press the "Zero" key to exit the Configuration Counter display.
6. Press the "Tare" key until the save settings screen is displayed to exit.

From the "USER" Prompt, Accessing the Calibration Event Counter:

1. Press the "Print" key to display the word "AUDIT".
2. Press the "Select" key to display the word "COUNTER".
3. Press the "Select" key to display the word "CONFIG".
4. Press the "Units" key to display the word "CALIB".
5. Press the "Select" key again to display the actual calibration counter.
6. Press the "Zero" key to exit the Calibration Counter display.
7. Press the "Tare" key until the save settings screen is displayed to exit.

From the "USER" Prompt, Printing the Event Logger:

1. Press the "Print" key to display the word "AUDIT".
2. Press the "Select" key to display the word "COUNTER".
3. Press the "Print" Key so the display shows "PRINT".
4. Press the "Select" key and the choice of com port is displayed.
5. Using the "Tare" and "Select" key, one can select from "Com1", "Com3", and "USB". Press the "Zero" key to accept the choice that is displayed.
6. Using the "Tare" and "Select" key, select column or ticket by pressing the "Zero" key.
7. Press the "Tare" key until the save settings screen is displayed to exit.



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Indicating Element / ZM4xx, ZM5xx and ZM6xx Series

Test Conditions: This certificate supersedes Certificate of Conformance 14-039 and was issued to recognize a panel mount option. A ZM305 series model was submitted for this evaluation. The emphasis of the evaluation was on device design, operation, marking, and compliance with applicable requirements. Previous test conditions are listed below for reference.

Certificate of Conformance Number 14-039: The models submitted for this evaluation were the ZM405, ZM505 and the ZM615 indicating elements. The emphasis of the evaluation was on device design, operation, and compliance with environmental factors. All three models were interfaced with load cell simulators and then tested for accuracy over a temperature range of -10°C to +40°C (14°F to 104°F). The ZM615 indicator was interfaced with an Avery Weigh-Tronix BS 20 x 20 N (Certificate of Conformance Number 88-104) load receiving element and an Avery Weigh-Tronix ZG310 wireless printer. The device was tested for, power interruption, zero tests, and print format. Additionally, tests were performed using 102 VAC and 132 VAC as well as 7.8 VDC and 39.6 VDC power supplies.

Evaluated By: E.A. Payne Jr. (MD) 14-039; Z. Tripoulas (MD) 14-039A1

Type Evaluation Criteria Used: *NIST Handbook 44 Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices*, 2015 Edition. *NCWM Publication 14 Weighing Devices*, 2015 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)

Examples of Device:



Model ZM401-SD3/SP3 (Stainless Steel)



Model ZM405-SD3/SP3 (Stainless Steel)



Model ZM505-SD3/SP3 (Stainless Steel)



ZM505-SD4/SP4 (Stainless Steel)





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Indicating Element / ZM4xx, ZM5xx and ZM6xx Series



Model ZM510-SD4/SP4 (Stainless Steel)



Model Z605-SD3/SP3 (Stainless Steel)



Model ZM605-SD4/SP4 (Stainless Steel)



Model ZM615-SD5/SP5 (Stainless Steel)