



NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance

for Weighing and Measuring Devices

For:

Non-Computing Scale
 Digital Electronic
 Model: SCB-R 9000-xxx
 n_{max} : 3402
 Accuracy Class: III

Submitted By:

Fairbanks Scales
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Standard Features and Options

Specific Models: The manufacturer's model numbers for the SCB-R9000 series are followed with a suffix "xxx." The suffix represents various non-metrological features/options. Also refer to Fairbanks part number as listed below.

Standard Features:

- Automatic Zero Tracking Mechanism (AZT)
- Remote Customer Display
- Liquid Crystal Display (LCD)
- Semi-automatic (push-button) Zero
- Center of Zero

Options:

- Roller Ball Platter
- lb / kg Conversion
- Construction Material: Plastic or Metal

Load Cells Used:

- *Flintec* PBW Series (non-NTEP)
- 3S WMB Series (non-NTEP)
- *HBM* FWB Series (non-NTEP)

Fairbanks Part Number 29823 and Lower:

- e_{min} : 0.02 lb (0.01 kg)
- Capacity: Single Range
150 lb x 0.05 lb – 600 lb x 0.2 lb (68.04 kg – 272.2 kg)
- Capacity: Multi Interval
0 lb – 60 lb x 0.02 lb and 60 lb – 150 lb x 0.05 lb
- Platform: 14 in x 14 in to 18 in x 18 in
- RS-232 Communications Port
- AC Power (AC range: 100-242 VAC)
- Serial Data Clock Bus

Fairbanks Part Number 29824 and Higher:

- n_{max} : 3402
- e_{min} : 0.05 lb (0.02 kg)
- Capacity: 150 lb x 0.05 lb – 600 lb x 0.2 lb (68.04 kg – 272.2 kg)
- Platform: 14 in x 14 in to 31 in x 31 in
- Universal Serial Bus (USB) Communications Port
- Powered by USB or External AC Adapter
- DC Range: 4.25 – 5.5 VDC
- AC Range: 100 – 242 VAC
- RS-232 Communications Port

Temperature Range: 0 °C to 40 °C (32 °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: November 21, 2012

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Fairbanks Scales

Non-Computing Scale / SCB-R 9000-xxx

Application: General purpose weighing.

Identification: The required identification information appears on a foil badge glued to the back of the scale.

Sealing: To seal the plastic model a wire security seal can be threaded through a tab in the base and then through a threaded plug that must be removed to gain access to calibration and configuration (push button behind the seal). See picture. To seal the metal model a double "D" plug with a paper seal is applied over the plug to prevent access to the calibration switch.

Test Conditions: This Certificate supersedes Certificate of Conformance Number 98-198A6 and is issued to add a 31 in x 31 in x 250 lb x 0.2 lb metal version of the scale. The emphasis of the evaluation was on operation and the marking and sealing requirements. For the purpose of this evaluation, three samples of the SCB-R9000 (250 lb x 0.2 lb, 113.4 kg x 0.1 kg) device were evaluated. Several increasing/decreasing load, shift, discrimination, level indicator, and creep tests were conducted. Based on the previous test information and information supplied by the manufacturer related to this device no additional testing was deemed necessary. Previous test conditions are listed below for reference.

Certificate of Conformance Number 98-198A6: This Certificate supersedes Certificate of Conformance Number 98-198A5 and is issued to add new load cells. The emphasis of the evaluation was on operation and compliance with influence factor requirements. For the purpose of this evaluation, samples of the SCB-R9000 (150 lb x 0.05 lb, 68.04 kg x 0.02 kg) device with the new HBM Model FWB Series and the new 3S Model WMB Series load cells were evaluated. Several increasing/decreasing load, shift, discrimination, level indicator, RFI, and creep tests were conducted. The scales were tested over a temperature range of 0 °C to 40 °C (32 °F to 104 °F). A load of approximately one-half capacity was applied to the scales over 100 000 times. The scale was tested periodically over this time.

Certificate of Conformance Number 98-198A5: This Certificate supersedes Certificate of Conformance Number 98-198A4 and is issued to include a new electrical design. This includes a Universal Serial Bus (USB) port and an option to be powered by either an external AC adapter or directly by a USB port. The new design also includes a new analog to digital converter (ADC), microcontroller, LCD. A new Remote Display is also included as a customer accessory. The number of divisions has also been corrected to 3402 when operating in kg mode, but remains 3000 in lb mode. The emphasis of the evaluation was on the device design, operation, performance, marking, and compliance with influence factor requirements. A quantity of 4 (four) Fairbanks, Model SCB-R9000 were submitted for evaluation. A complete evaluation with several increasing/decreasing load and shift tests conducted. The scale was tested over a temperature range of 0 °C to 40 °C (32 °F to 104 °F). Tests were conducted with power supplies of 115 VAC and 230 VAC and also USB port supply power of 5 VDC. A laptop computer was interfaced with the device USB communication port and several weightings were recorded. Based on the previous test information and information supplied by the Manufacturer related to this device no additional testing was deemed necessary.

Certificate of Conformance Number 98-198A4: This Certificate supersedes Certificate of Conformance Number 98-198A3 and is issued to add a metal version of the scale and a new load cell. The emphasis of the evaluation was on the device design, operation and compliance with influence factor requirements. For the purpose of this evaluation, an SCB-R9000 (600 lb x 0.2 lb) metal device with the new HBM Model FWB Series load cell was evaluated. A complete evaluation with several increasing/decreasing load and shift tests conducted. The scale was tested over a temperature range of 0 °C to 40 °C (32 °F to 104 °F). Tests were also conducted with 100 VAC and 130 VAC power supplies. A load of approximately one-half capacity was applied to the scale over 100 000 times. The scale was tested periodically over this time. A laptop computer was interfaced with the device RS232 communication port and several weightings were recorded. For the SCB-R9000 (600 lb x 0.2 lb) metal version with the Flintec Model PBW Series load cell installed, several increasing/decreasing load, shift and discrimination tests were conducted. Based on the previous test information and information supplied by the Manufacturer related to this device no additional testing was deemed necessary.

Certificate of Conformance Number 98-198A3: This Certificate supersedes Certificate of Conformance Number 98-198A2 and is issued to add a roller ball platter as an option. The emphasis of the evaluation was on the device design and operation. For the purpose of this evaluation, an SCB-R9000 (150 lb x 0.05 lb) with the roller ball platter was evaluated. Several increasing/decreasing load and shift tests were conducted.



Fairbanks Scales

Non-Computing Scale / SCB-R 9000-xxx

Certificate of Conformance Number 98-198A2: This Certificate supersedes Certificate of Conformance Number 98-198A1 and is issued to increase the capacity. The emphasis of the evaluation was on the device design, operation, marking requirements and compliance with influence factor requirements. For the purpose of this evaluation, an SCB-R9000 (600 lb x 0.2 lb) was submitted. Several increasing/decreasing load and shift tests were conducted. The scale was tested over a temperature range of 0 °C to 40 °C (32 °F to 104 °F). Tests were also conducted with 100 VAC and 130 VAC power supplies. A load of approximately one-half capacity was applied to the scale 100 342 times. The scale was tested periodically over this time. A laptop computer was interfaced with the device RS232 communication port and several weighments were recorded.

Certificate of Conformance Number 98-198A1: This Certificate supersedes Certificate of Conformance Number 98-198 and is issued to include a single range device. Based on the previous test information and information supplied by the Company related to this device, no additional testing was deemed necessary.

Certificate of Conformance Number 98-198: A Model SCB-R 9000 (0 lb to 60 lb x 0.02 lb and 60 lb to 150 x 0.05 lb) multi-interval scale with a Fairbanks remote display was submitted for evaluation. The emphasis of the evaluation was on the device design, operation, marking requirements and compliance with influence factor requirements. Several increasing/decreasing load and shift tests were conducted. The scale was tested over a temperature range of 0 °C to 40 °C (32 °F to 104 °F). Tests were also conducted with 100 VAC and 130 VAC power supplies. A load of approximately one-half capacity was applied to the scale 100 342 times. The scale was tested periodically over this time.

Evaluated By: W. West (OH) 98-198; A. McCoy (OH) 98-198A4 & 98-198A2; T. Lucas (OH) 98-198A3 & 98-198A5; M. Rieser (OH) 98-198A5; E. Matthews and M. Kelley (OH) 98-198A6; J. Morrison and C. Harris (OH) 98-198A7

Type Evaluation Criteria Used: NIST, Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices, 2012. 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) 98-198A1, 98-198A2, 98-198A3, 98-198A4, J. Truex (NCWM) 98-198A5, 98-198A6, 98-198A7

Example of Device:



Fairbanks Part Number 29824



Fairbanks Part Number 24304



Fairbanks Scales

Non-Computing Scale / SCB-R 9000-xxx



Fairbanks Part Number 26889

Method of Sealing Models with a Plastic Housing

