



Australian Government

Department of Industry,
Science and Resources

**National
Measurement
Institute**

36 Bradfield Road, West Lindfield NSW 2070

Supplementary Certificate of Approval

NMI S823

Issued by the Chief Metrologist under Regulation 60
of the
National Measurement Regulations 1999

This is to certify that an approval for use for trade has been granted in respect of the instruments herein described.

HBM Model WTX110 Digital Indicator

submitted by Noise & Vibration Measurement Systems Pty Ltd
437 Vincent Street West
West Leederville WA 6007

NOTE: This Certificate relates to the suitability of the pattern of the instrument for use for trade only in respect of its metrological characteristics. This Certificate does not constitute or imply any guarantee of compliance by the manufacturer or any other person with any requirements regarding safety.

This approval has been granted with reference to document NMI R 76, *Non-automatic weighing instruments, Parts 1 and 2*, dated October 2015.

This approval is subject to review at the decision of the Chief Metrologist in accordance with the conditions specified in the document NMI P 106.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern approved – certificate issued	28/07/22

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI S823' and only by persons authorised by the submitter.

Instruments incorporating a component purporting to comply with this approval shall be marked 'NMI S823' in addition to the approval number of the instrument, and only by persons authorised by the submitter.

It is the submitter's responsibility to ensure that all instruments marked with this approval number are constructed as described in the documentation lodged with the National Measurement Institute (NMI) and with the relevant Certificate of Approval and Technical Schedule. Failure to comply with this Condition may attract penalties under Section 19B of the National Measurement Act and may result in cancellation or withdrawal of the approval, in accordance with document NMI P 106.

Auxiliary devices used with this instrument shall comply with the requirements of General Supplementary Certificate of Approval No S1/0B.

The values of the performance criteria (maximum number of scale intervals etc.) applicable to an instrument incorporating the pattern approved herein shall be within the limits specified herein and in any approval documentation for the other components.

Signed by a person authorised by the Chief Metrologist to exercise their powers under Regulation 60 of the *National Measurement Regulations 1999*.

A handwritten signature in blue ink, appearing to be 'Darryl Hines', written in a cursive style.

Darryl Hines
Manager
Policy and Regulatory Services

TECHNICAL SCHEDULE No S823







1. Description of Pattern

approved on 28/07/22

An HBM model WTX110 digital mass indicator (Figure 1) which is approved for use with NMI approved HBM C16i series digital load cells only as described in the documentation of approval NMI S531 for the instruments which approved with reference to document NMI R 76 dated July 2004 or earlier.

The indicator may be used with an HBM model VKK2R-8 DIGITAL or VKD2R-8 junction box (Figure 2) which contains the RS-485 bus termination enabling use with approved HBM digital load cells.

The indicator may be configured to form part of:

- A class  single weighing range instrument (#); or
- A class  weighing instrument with a single weighing range of up to 1000 verification scale intervals; or
- A class  multi-interval weighing instrument with up to three partial weighing ranges (each with its own verification scale interval) (#); or
- A class  multi-interval weighing instrument with up to three partial weighing ranges (each with its own verification scale interval) in which case it is approved for use with up to 1000 verification scale intervals per partial weighing range; or
- A class  multiple range weighing instrument with up to three weighing ranges (#); or
- A class  multiple range weighing instrument with up to three weighing ranges, in which case it is approved for use with up to 1000 verification scale intervals per weighing range.

The changeover between weighing ranges is automatic.

(#) The maximum number of verification scale intervals (VSI) applicable is determined by the number of VSI given in the approval documentation for the load cell used.

The instrument has a stainless steel enclosure with a LCD display for display of the weight value.

The pattern may be fitted with output sockets (output interfacing capability) for the connection of auxiliary and/or peripheral devices (see **clause 1.7** below).

This approval does not include the use of the indicator as an automatic weighing instrument, unless specifically mentioned in a certificate of approval for such an instrument.

1.1 Zero

A zero-tracking device may be fitted.

The initial zero-setting device has a nominal range of not more than 20% of the maximum capacity of the instrument.

The instrument has a semi-automatic zero-setting device with a nominal range of not more than 4% of the maximum capacity of the instrument.

1.2 Tare

A semi-automatic tare device of up to the maximum capacity of the instrument may be fitted.

1.3 Linearisation Facility

Instruments are fitted with a linearisation correction facility having up to six points.

1.4 Display Check

A display check is initiated whenever power is applied.

1.5 Power Supply

Power supply may be:

- 110 – 240 V AC (mains power); or
- 12 – 30 V DC power source; or
- 12 – 30 V DC road vehicle battery.

1.6 Additional Features

Instruments may be fitted with counting, filling and check functions (o.k./minus/plus). The additional functions (other than the indications of measured mass, i.e. gross, tare, net, totals, displayed either on the indicator or on an auxiliary or peripheral device) are not approved for trade use.

Note: In particular circumstances (e.g. in regard to weighbridge or public weighbridge operation), Trade Measurement legislation or other NMI Certificates of Approval may impose requirements in regard to specific features, methods of operation, or records to be provided (and in what form).

Certain features of this instrument are able to be configured by the installer or user. Whilst NMI believes that an acceptable configuration can be achieved for typical basic modes of operation, it may also be possible for the instrument to be configured to produce unacceptable configurations, and use of some configurations may be inappropriate in different situations. It is the responsibility of the installer and user to ensure that the configuration is acceptable and meets relevant requirements for any particular situation.

1.7 Interfaces

The indicator may be fitted with interfaces for the connection of auxiliary and/or peripheral devices. Any interfaces shall comply with clause 5.3.6 of document NMI R76 (the basic intent of which is that it shall not be possible to alter weighing results via the interfaces).

Any measurement data output from the instrument or its interfaces shall only be used for trade in compliance with Supplementary Certificate of Approval No NMI S1/0B (in particular in regard to the data and its format).

Indications other than the indications of measured mass (i.e. gross, tare, net, totals) displayed either on the indicator or on an auxiliary or peripheral device, are not for trade use.



Instruments may be fitted with RS-232/RS485 serial data interfaces, Profibus, ProfiNET, Modbus, Ethernet, Ethernet/IP, USB interfaces, Bluetooth, digital inputs/outputs and analogue inputs/outputs.

1.8 Verification Provision

Provision is made for the application of a verification mark.

1.9 Descriptive Markings and Notices

Instruments carry the following markings:

Manufacturer's mark, or name written in full	Hottinger Brüel & Kjaer GmbH, Germany
Name or mark of manufacturer's agent	Noise and Vibration Measurement Systems
Model number	.....
Indication of accuracy class	 or 
Maximum capacity	<i>Max</i> g or kg or t #1
Minimum capacity	<i>Min</i> g or kg or t #1
Verification scale interval	<i>e</i> = g or kg or t #1
Maximum subtractive tare	<i>T</i> = - g or kg or t #2
Serial number of the instrument	.....
Pattern approval mark for the indicator	NMI S823
Pattern approval mark for other components	..... #3
#1	These markings are shown in the electronic markings field above the display of the result.
#2	This marking is required if <i>T</i> is not equal to <i>Max</i> .
#3	May be located separately from the other markings.

In addition, instruments not greater than 100 kg capacity shall carry a notice stating NOT TO BE USED FOR TRADING DIRECT WITH THE PUBLIC, or similar wording..

Note:

For multi-interval instruments the markings shall be as above, with the exception that the 'Maximum capacity' and 'Verification scale interval' shall be marked for both interval ranges, e.g. as follows:

Maximum capacity	<i>Max</i> / kg
Verification scale interval	<i>e</i> = / kg

For multiple range instruments, the maximum capacity, minimum capacity and verification scale interval for each range shall be marked, with an indication of the range to which they apply, e.g.

Range	W1.1	W1.2	W1.3
<i>Max</i>	.... kg	.... kg	.... kg
<i>Min</i>	.... kg	.... kg	.... kg
<i>e</i> =	.... kg	.... kg	.... Kg

1.10 Sealing Provision

Provision is made for the calibration adjustments to be sealed by the use of at least two destructible adhesive labels one at each side of the instrument case.

The calibration parameters are stored within the DWB interface circuit board. The ability to change these parameters is inhibited when the jumper 'W1' on the DWB board is in the protected location (connecting pins 1 and 2, as shown in Figure 3).

1.11 Software Version

The software is identified by a checksum number 15487782 and designated version V4.xx.yy, where 'xx.yy' refers to the identification of non-legally relevant software.

The instructions for accessing the software id are as follows (starting from the normal weighing mode):

- Press the 'Upward Pointing Arrow ↑' key and then 'Enter ↵' key to enter Supervisor Mode.
- Press the 'F1' key until 'Software ID' is displayed.
- Press the 'Enter ↵' key and then the software ID information is displayed.

TEST PROCEDURE No S823

Instruments shall be tested in accordance with any relevant tests specified in the National Instrument Test Procedures.

Maximum Permissible Errors

The maximum permissible errors are specified in Schedule 1 of the *National Trade Measurement Regulations 2009*.

Tests

For multi-interval and multiple range instruments with verification scale intervals of e_1 , e_2 ..., apply e_1 for zero adjustment, and maximum permissible errors apply e_1 , e_2 ..., as applicable for the load.

FIGURE S823 – 1



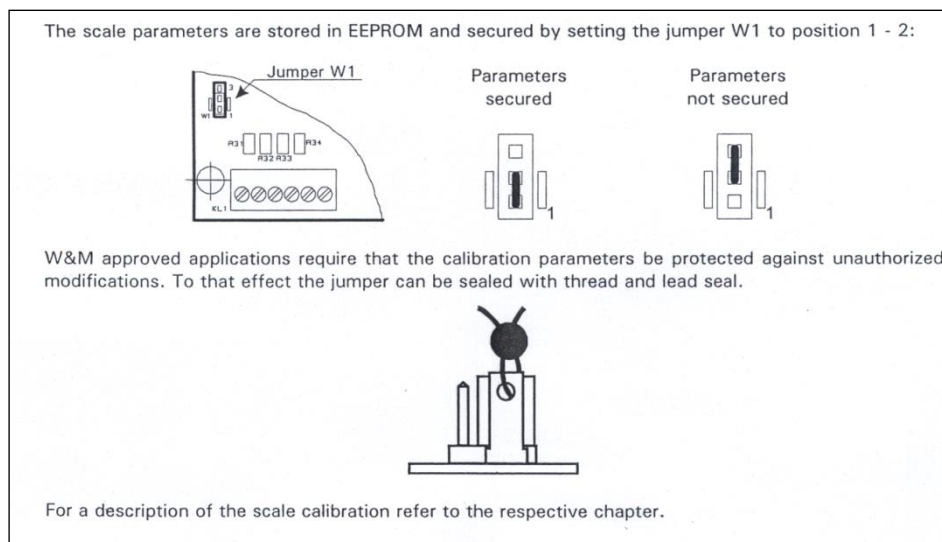
HBM Model WTX110 Indicator (Pattern)

FIGURE S823 – 2



HBM Model VKK2R-8 DIGITAL / VKD2R-8 Junction Box

FIGURE S823 – 3



Showing Jumper W1 Sealing – Model WTX110

Typical Sealing Methods

~ End of Document ~