Australian Government
National Measurement Institute

Bradfield Road, West Lindfield NSW 2070

Supplementary Certificate of Approval

No S533

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

HBM Model WE2107 Digital Indicator

submitted by Hottinger Baldwin Messtechnik GmbH
Im Tiefen See 45
D-64293 Darmstadt
Germany.

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 July 2004.

CONDITIONS OF APPROVAL

This approval becomes subject to review on 1 April 2015, and then every 5 years thereafter.

Instruments purporting to comply with this approval shall be marked with approval number 'NMI S533' and only by persons authorised by the submittor.

Instruments incorporating a component purporting to comply with this approval shall be marked 'NMI S533' in addition to the approval number of the instrument.

It is the submittor'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.

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The National Measurement Institute reserves the right to examine any instrument or component of an instrument purporting to comply with this approval.

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

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.

DESCRIPTIVE ADVICE

Pattern: approved 8 March 2010

- An HBM model WE2107 single or multiple range digital indicator.

Variant: approved 8 March 2010

1. Model WE2107M digital indicator.

Technical Schedule No S533 describes the pattern and variant 1.

FILING ADVICE

The documentation for this approval comprises:

Supplementary Certificate of Approval No S533 dated 8 April 2010
Technical Schedule No S533 dated 8 April 2010 (incl. Table 1 and Test Procedure)
Figures 1 and 2 dated 8 April 2010

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

TECHNICAL SCHEDULE No S533

Pattern: HBM Model WE2107 Digital Indicator

Submittor: Hottinger Baldwin Messtechnik GmbH
Im Tiefen See 45
D-64293 Darmstadt Germany

1. Description of Pattern

An HBM model WE2107 digital mass indicator (Table 1 and Figure 1) which is approved for use with the specifications listed in Table 1. The indicator may be configured to form part of:

- A weighing instrument with a single weighing range of up to 6000 verification scale intervals; or
- A multiple range weighing instrument with up to three weighing ranges (each with its own verification scale interval) in which case it is approved for use with up to 3000 verification scale intervals per weighing range for a two range instrument and with up to 2000 verification scale intervals per weighing range for a three range instrument. The changeover between weighing ranges is automatic.

Instruments may be fitted with output sockets (output interfacing capability) for the connection of auxiliary and/or peripheral devices (see clause **1.6 Interfaces**).

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.

TABLE 1 – Specifications

Maximum number of verification scale intervals	Single range:	6000e
	Dual range:	3000e per range
	Triple range:	2000e per range
Minimum sensitivity	0.6 μV/scale interval	
Excitation voltage	5 V DC	
Maximum excitation current	83.33 mA	

1.1 Zero

A zero-tracking device may be fitted.

Zero is automatically corrected to within ±0.25e whenever the instrument comes to rest within 0.5e of zero.

The instrument has a combined semi-automatic zero-setting/subtractive tare balancing device (to set the instrument to within ±0.25e of zero) with a nominal range of not more than 4% of the maximum capacity of the instrument.

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

1.2 Linearisation Facility

Instruments are fitted with a linearisation correction facility having up to 4 correction points.

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1.3 Tare

A semi-automatic subtractive taring device having a capacity of up to the maximum capacity of the instrument may be fitted. The instrument has a pre-set tare device of up to maximum capacity.

1.4 Display Check

A display check is initiated whenever power is applied.

1.5 Additional Features

The indicator has certain additional functions including set points ('dosing') and a 'hold' function. These 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.

1.6 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 No S1/0/A (in particular in regard to the data and its format).

Note particularly that 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.

Data derived from any analog output or interface shall not be used for trade use.

1.7 Descriptive Markings and Notices

Instruments carry the following markings:

Manufacturer's mark, or name written in full	HBM GmbH	
Indication of accuracy class	(III)	
Maximum capacity	*Max* ..... kg	#1
Minimum capacity	*Min* ..... kg	#1
Verification scale interval	*e* = ... kg	#1
Maximum subtractive tare	*T* = - ..... kg	#2
Serial number of the instrument	.....	
Pattern approval mark for the indicator	NMI S533	
Pattern approval mark for other components	.....	#3

#1 These markings shall also be shown near the display of the result if they are not already located there.

#2 This marking is required if *T* is not equal to *Max*.

#3 May be located separately from the other markings.

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

Note: 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, as shown in the instrument display (e.g. '1', '2', '12').

Range (*)	1	2	12 (#)
Max	…. kg	…. kg	…. kg
Min	…. kg	…. kg	…. kg
e =	…. kg	…. kg	…. kg

(*) The markings for each weighing range shall be clearly associated with an indication of the corresponding range (i.e. '1', '2', '12') to correspond to the weighing range designations shown in the instrument display.

(#) The marking of the 3rd range is referred to as "range one-two" (not "twelve").

1.8 Power Supply

The instrument requires a 12 to 30 V DC power supply.

Power for the instrument may be supplied by the following methods:

(a) Using a 12-30 V DC power supply to supply input power to the indicator.

(b) Using an AC/DC adaptor with the following specifications:

Type: FW7333/15 (**)
Input: 100 to 240 V DC, 50-60 Hz, 200 mA
Output: 15 V DC, 530 mA

(**) The submittor should be consulted regarding the acceptability of alternative power supply units.

1.9 Verification Provision

Provision is made for the application of a verification mark.

1.10 Sealing Provision

The calibration parameters and span adjustment are protected by the calibration button which is located on the mainboard. Destructible adhesive labels should be applied to cover access to the calibration button (##) and cover at least one of the housing screw holes as shown in Figure 2.

(##) Typically, an insert bearing the instrument markings covers the access hole and a destructible adhesive label seals this marking insert in place (Figures 1 and 2).

2. Description of Variant 1

The HBM model WE2107M digital indicator which has the same specifications and functions as the pattern, except in a metal, rather than plastic, enclosure.

TEST PROCEDURE

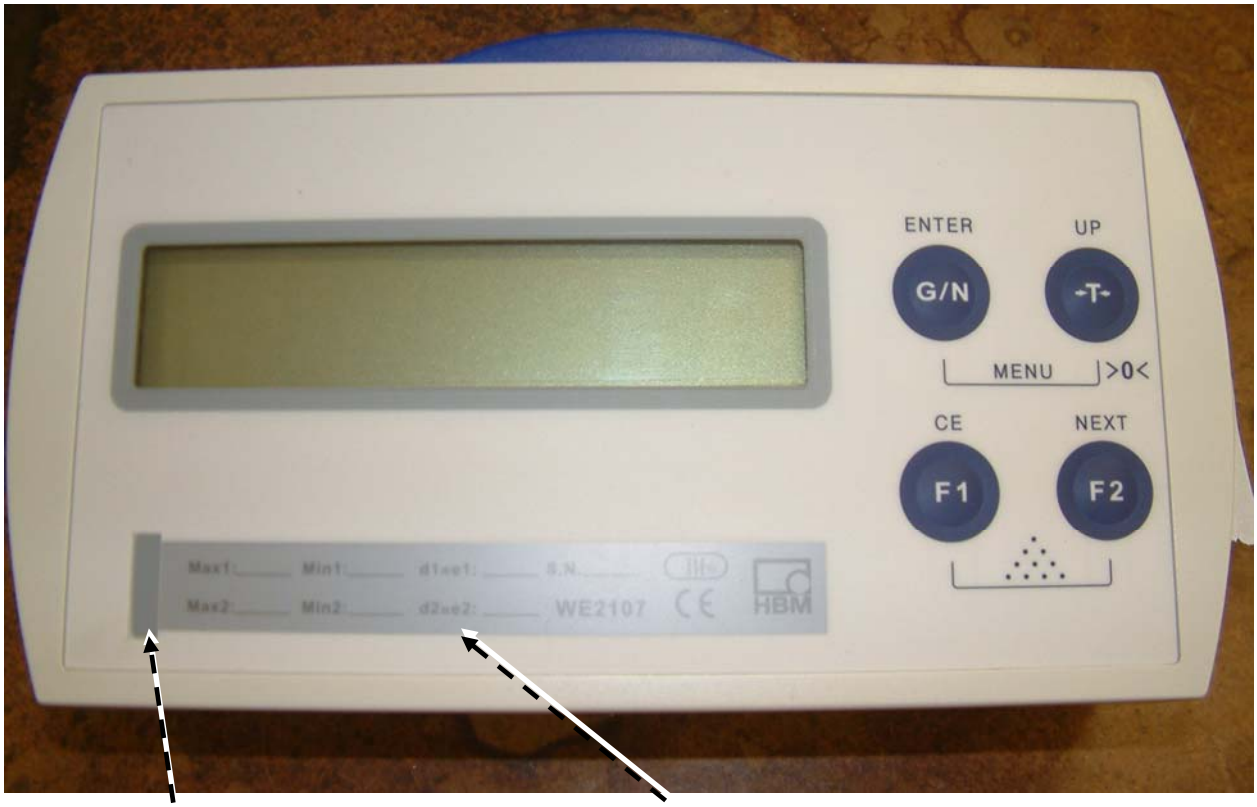
Instruments should be tested in accordance with any relevant tests specified in the Uniform Test Procedures.

Maximum Permissible Errors

The maximum permissible errors are specified in Schedule 12 of the *National Measurement Regulations 1999*.

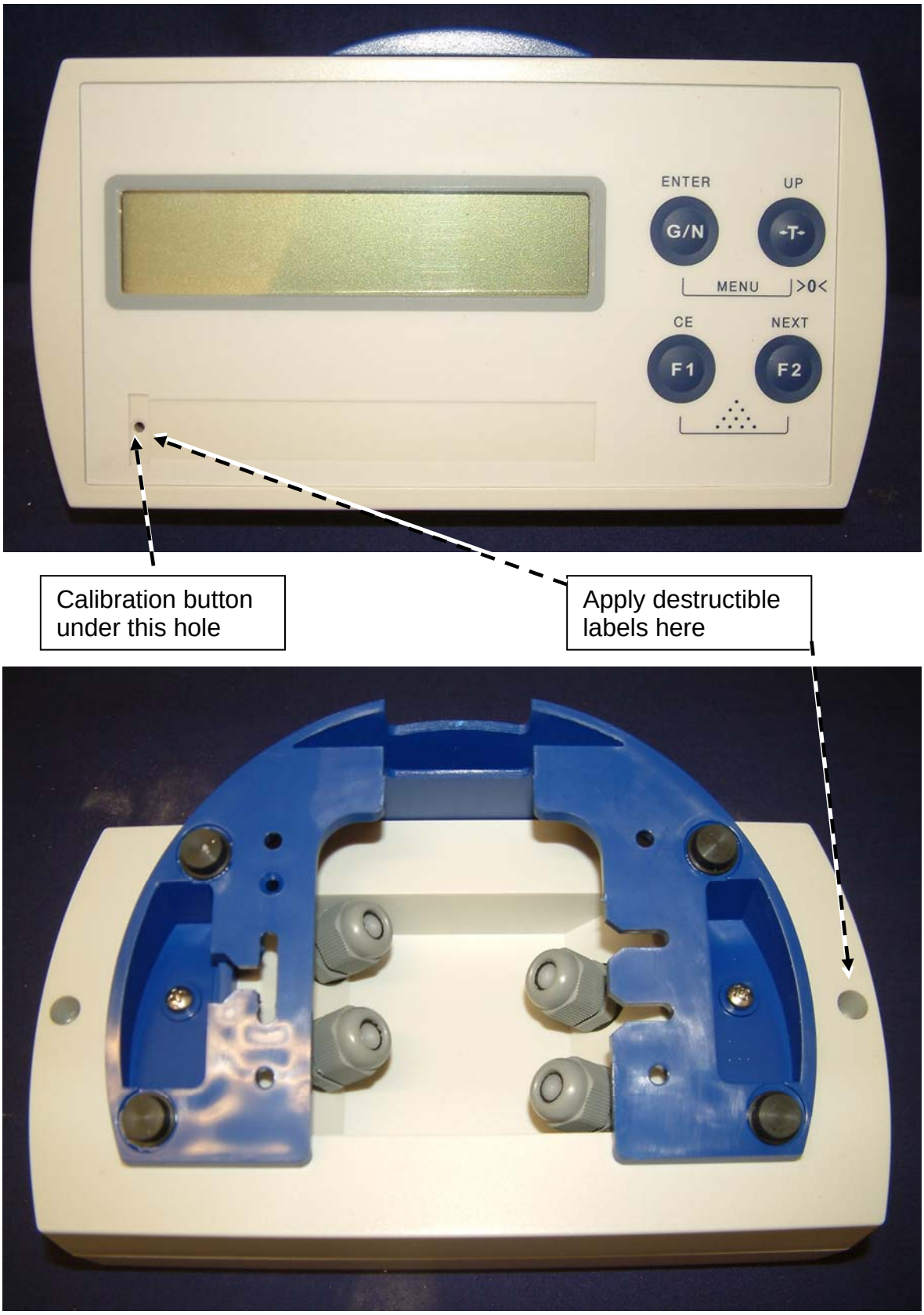
For multiple range instruments with verification scale intervals of e_1, e_2 …, apply e_1 for zero adjustment, and maximum permissible errors apply e_1, e_2 …, as applicable for the load.

FIGURE S533 – 1



HBM Model WE2107 Digital Indicator

FIGURE S533 – 2



HBM Model WE2107 – Showing Typical Sealing Methods