



Australian Government
Department of Industry,
Science and Resources

**National
Measurement
Institute**

36 Bradfield Road, West Lindfield NSW 2070

**Certificate of Approval
NMI 6/10B/115**

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.

Weighbridge Smart Solutions Model TSWB9030 Weighing Instrument

submitted by B.A WHITEHEAD & E.L WHITEHEAD
T/A Weighbridge Smart Solutions
33 Overdale Drive
WAGGA WAGGA NSW 2650

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 & variant 1 approved – certificate issued	14/01/25

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 6/10B/115' and only by persons authorised by the submittor.

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.

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

The pattern as approved herein or with substitute approved load cells and/or approved indicators and in other capacities, or with different platform sizes, shall comply with General Certificate of Approval No 6B/0.

Note:

New instruments manufactured under this approval shall only use load cells and/or indicators with current Supplementary Certificates of Approval; and

New instruments manufactured under this approval with analogue load cells connected parallel to each other in a junction box shall comply with 6-wire cable connection requirements between the junction box and the indicator as shown in Figures 2a and 2b; and

New instruments manufactured with digital load cells under this approval may be acceptable if prior written agreement from NMI is obtained; and

Instruments manufactured or converted under this approval shall only use approved indicators with reference to document NMI R 76 dated October 2015 or later.

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



Darryl Hines
Manager
Policy and Regulatory
Services

TECHNICAL SCHEDULE No 6/10B/115

1. Description of Pattern approved on 14/01/25

A Weighbridge Smart Solutions model TSWB9030 class **III** non-automatic self-indicating single range weighing instrument (Figure 1) of 40 000 kg maximum capacity and approved for use with up to 2000 verification scale intervals.

1.1 Basework

The model TSWB9030 basework has the platform fully supported by six load cells.

1.2 Load Cells

Six Flintec model RC3-30t-C3 load cells of 30 000 kg maximum capacity are used to support the platform.

The load cells are also described in the documentation of approval NMI S695.

1.2.1 Load Cell Connection

The load cells are connected parallel together in a junction box; and 6-wire cable connection is used between the junction box and the indicator as shown in Figure 2a.

1.3 Indicator

A Vishay Precision Group model VPGTransducers VT300 digital mass indicator is used. The indicator is also described in the documentation of approval NMI S824.

1.4 Weighbridge Requirements

Where the instrument is intended to be installed as a weighbridge, it shall be ensured that all relevant weighbridge requirements of the National Measurement Legislation are met (e.g. in relation to weighbridge approaches, visibility and the location of the weighbridge indicator and platform).

This approval does not certify that such requirements have (or can be) met.

The requirements of the National Measurement Legislation regarding the ground or floor under the platform vary according to whether the instrument is installed as a weighbridge without a pit or a weighbridge with a pit. However, bolting of the load cell support pads to suitable concrete piers is considered essential to provide a suitable stable base, irrespective of other aspects of instrument installation.

Note that it is important that suitable provision be made for the loading of test masses. For example, clear access for a forklift may be necessary at both sides of the platform.

1.5 Verification Provision

Provision is made for the application of a verification mark.

1.6 Sealing Provision

Provision is made for the calibration adjustments in the indicator to be sealed as described in the approval documentation for the indicator used.

1.7 Software

The legally relevant software version and number are described in the approval documentation of the indicator.

1.8 Descriptive Markings and Notices

Instruments are marked with the following data:

Manufacturer's mark, or name written in full	Weighbridge Smart Solutions
Indication of accuracy class	Ⓜ
Pattern approval mark for the instrument	NMI 6/10B/115
Pattern approval mark for the indicator	NMI S...
Pattern approval mark for the load cells	NMI S...
Maximum capacity	<i>Max</i> t or kg #1
Minimum capacity	<i>Min</i> t or kg #1
Verification scale interval	<i>e</i> = t or kg #1
Serial number of the instrument

#1 These markings are shown near the display of the result.

Note:

In the case of multiple range configurations, the maximum capacity, minimum capacity and verification scale interval for each range shall be marked in accordance with the approval documentation of the indicator used.

2. Description of Variant 1 approved on 14/01/25

Other Weighbridge Smart Solutions TSWB series instruments, as single range or multiple range instruments, subject to NMI approval parameters of the load cells and indicators, and compliance with NMI General Certificate of Approval No 6B/0.

The platform is fully supported by no less than 4 and with up to 12 approved load cells. Instruments may be in capacities of:

- 100 kg up to 1499 kg;
- 1500 kg up to 14,999 kg;
- 15,000 kg up to 14,9999 kg; and
- 150,000 kg and above.

Using approved load cells and an approved digital indicator in accordance with NMI General Certificate of Approval No 6B/0.

Instruments are approved for use with up to 4000 verification scale intervals (subject to the approval parameters of the load cells and indicator).

Instruments used with more than 3000 verification scale intervals shall be provided with wind protection in accordance with clause 4. **Wind Effects** of NMI General Certificate of Approval No 6B/0.

TEST PROCEDURE No 6/10B/115

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

The instrument shall not be adjusted to anything other than as close as practical to zero error, even when these values are within the maximum permissible errors.

Maximum Permissible Errors

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

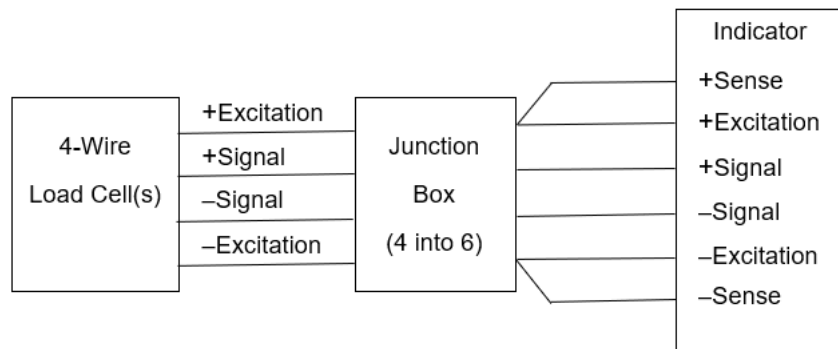
For multi-interval and multiple range instruments with verification scale intervals of $e_1, e_2 \dots$, apply e_1 for zero adjustment, and maximum permissible errors apply $e_1, e_2 \dots$, as applicable for the load.

FIGURE 6/10B/115 – 1

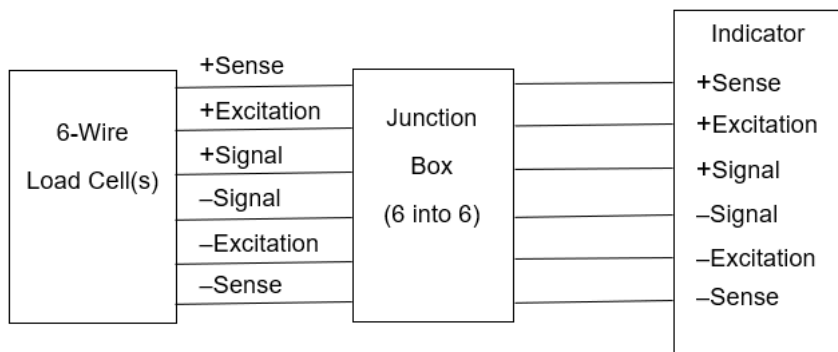


Weighbridge Smart Solutions Model TSWB9030 Weighing Instrument (Steel Deck)

FIGURE 6/10B/115 – 2



a) 4-Wire Analogue Load Cell Connection Using Junction Box



b) 6-Wire Analogue Load Cell Connection Using Junction Box

~ End of Document ~