Australian Government
Department of Industry, Science, Energy and Resources

National Measurement Institute

36 Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

NMI 6/4C/315

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.

Shanghai Teraoka Electronic Co., Ltd Model PS-160 Weighing Instrument

submitted by W.W. Wedderburn Pty. Limited
101 Williamson Road
Ingleburn NSW 2565

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	10/06/20
1	Variant 2 approved – certificate issued	29/07/21

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 6/4C/315' 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.

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 6/4C/315

1. Description of Pattern approved on 10/06/20

A Shanghai Teraoka Electronic Co,, Ltd model PS-160 class (III) non-automatic multi-interval self-indicating weighing instrument (Figure1) with a verification scale interval (e_1) of 0.001 kg for up to 2 kg and with a verification scale interval (e_2) of 0.01 kg from 2 kg to 30 kg. The minimum capacity is 0.02 kg.

Instruments are fitted with two LCD display units, one for the operator and one for the customer, attached to the instrument body with plastic brackets and thumb screws. The customer display has a 1 metre long cable allowing for remote mounting.

Instrument may be fitted with output socket (output interfacing capability) for the connection of auxiliary and / or peripheral devices.

Instruments are fitted with a Teraoka model R30-7.5kg load cell of 45 kg maximum capacity. The platter size is 246 mm × 280 mm.

Instruments use an ENG model 6A-151DA12 switch mode AC/DC mains adaptor (output 12 V DC, 1.25 A); the submittor should be consulted regarding the acceptability of alternatives.

1.1 Zero

A zero-tracking device may be fitted.

The initial zero-setting device of the pattern 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 Display Check

A display check is initiated whenever power is applied.

1.3 Levelling

The instrument is fitted with adjustable feet and a level indicator.

The level indicator is located under the platter. The platter has a window to allow viewing of the level indicator.

The instrument is to be used in a level condition as indicated by the level indicator.

1.4 Verification Provision

Provision is made for the application of a verification mark.

1.5 Interfaces

Instruments 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 General Supplementary Certificate of Approval No S1/0B (in particular in regard to the data and its format).

Instruments may be fitted with serial data interface RS-232.

1.6 Sealing Provision

Provision is made for the calibration to be sealed by setting the SPAN switch within the instrument to an OFF position, and then preventing access within the instrument housing.

It is possible to determine that the switch status is in the 'OFF' position as follows:

- Hold down the '→0←' key, and press the 'TEST key three times in weighing mode. The location of the 'TEST' key is shown in Figure 4.
- If the SPAN switch is in the 'OFF' position, the instrument will display '0.000'. In this case the instrument may be verified.
- Otherwise the instrument will display 'SPAn' in which case the instrument should not be verified until the SPAN switch correctly located in the 'OFF' position.

Provision is made for the instrument housing to be sealed by means of destructible adhesive labels placed over the housing securing screws underneath the platter (Figure 3) or the opposite sides of a join in the instrument housing; and for access to the SPAN switch to be sealed by means of lead and wire type seals with drilled screws or a destructible adhesive label placed over the SPAN switch access hole underneath the instrument as shown in Figure 3.

1.7 Descriptive Markings and Notices

Instruments carry the following markings:

Manufacturer's mark, or name written in full	Shanghai Teraoka Electronic Co., Ltd.
Name or mark of manufacturer's agent	WEDDERBURN
Indication of accuracy class	(III)
Pattern approval number for the instrument	NMI 6/4C/315
Maximum capacity	*Max* ..../..... g or kg #
Minimum capacity	*Min* .....g or kg #
Verification scale interval	*e = .../.....* g or kg #
Serial number of the instrument	.....

These markings are shown near the display of the result.

1.8 Software

The software version is designated 1.xx, where 'xx' represents the identification of the non-legally relevant software.

The software version and number can be seen in the switch-on display sequence (when the power is first applied to the instrument).

2. Description of Variant 1 **approved on 10/06/20**

Similar to the pattern but with both LCD displays mounted on a pole remote to the basework (Figure 2).

3. Description of Variant 2 **approved on 29/07/21**

The pattern or variants with an alternative serial interface board for USB connection.

TEST PROCEDURE No 6/4C/315

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*.

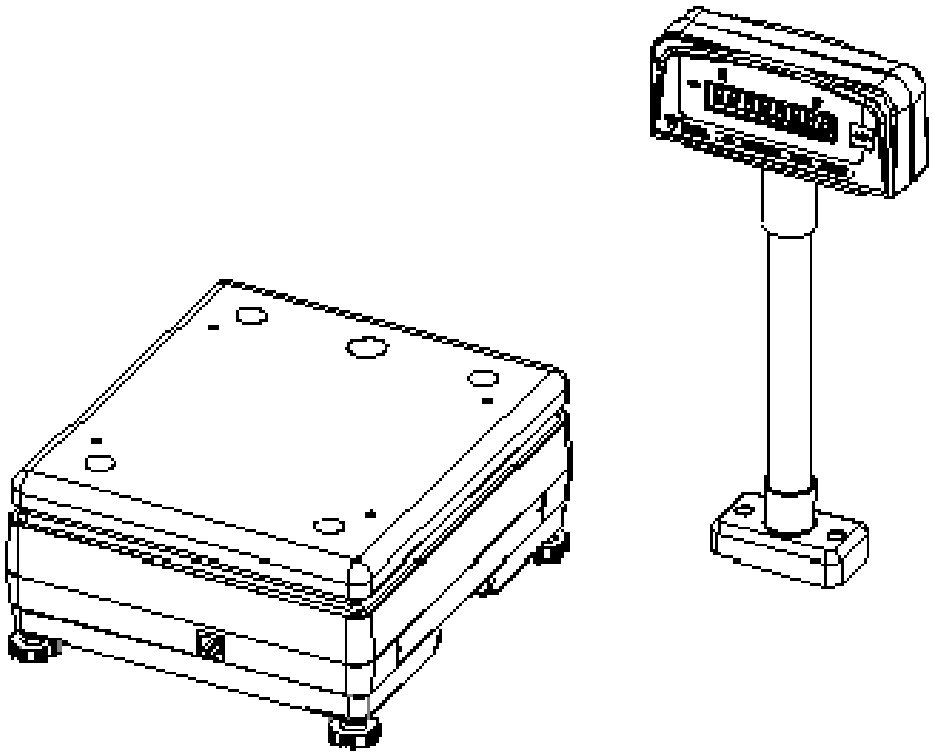
Tests

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 6/4C/315 – 1

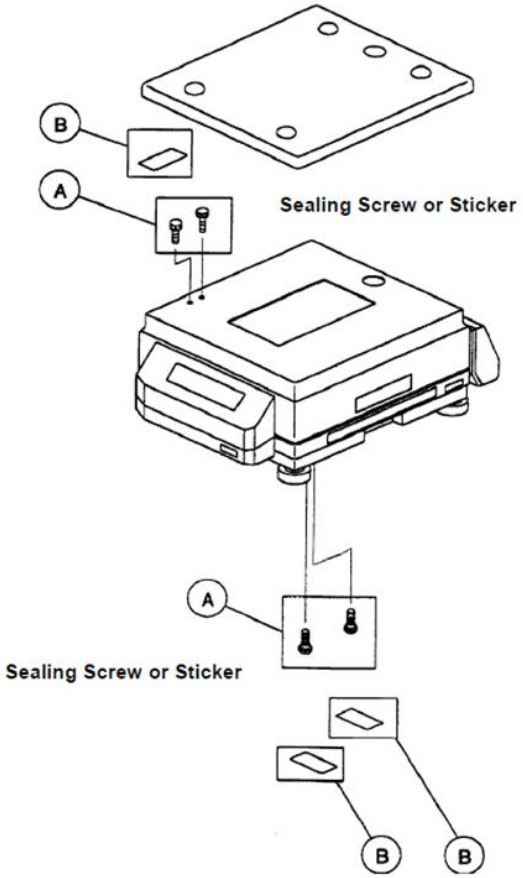
Teraoka Model Digi PS-160 (Pattern)

FIGURE 6/4C/315 – 2



Teraoka Model Digi PS-160P (Variant 1)

FIGURE 6/4C/315 – 3



Typical Sealing Method

FIGURE 6/4C/315 – 4

TEST Key

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