



Australian Government
**Department of Industry,
Science and Resources**

**National
Measurement
Institute**

36 Bradfield Road, West Lindfield NSW 2070

Supplementary Certificate of Approval
NMI S817

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.

Teraoka Model DIX-3000 Digital Indicator

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 and variant 1 approved – certificate issued | 14/12/21 |
| 1 | Variant 2 approved – certificate issued | 11/10/24 |

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI S817' and only by persons authorised by the submitter.

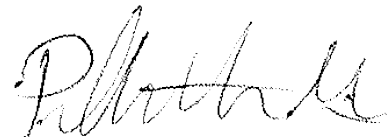
Instruments incorporating a component purporting to comply with this approval shall be marked 'NMI S817' in addition to the approval number of the instrument, and only by persons authorised by the submitter.

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.



Phillip Mitchell
A/g Manager
Policy and Regulatory Services

TECHNICAL SCHEDULE No S817

1. Description of Pattern **approved on 14/12/21**

A Teraoka model DIX-3000 digital mass indicator (Figure 1) which may be configured to form part of:

- A class III weighing instrument with a single weighing range of up to 7500 verification scale intervals; or
- A class III weighing instrument with a single weighing range of up to 1000 verification scale intervals; or
- A class III multi-interval weighing instrument with up to two partial weighing ranges (each with its own verification scale interval) in which case it is approved for use with up to 7500 verification scale intervals per partial weighing range; or
- A class III multi-interval weighing instrument with up to two 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.

Instruments may also be known as the Digi brand of the same model.

The instrument has an ABS enclosure with an LCD touchscreen display for display of the weight value and/or menu.

The pattern may be fitted with output sockets (output interfacing capability) for the connection of auxiliary and/or peripheral devices (see clause 1.5 below).

TABLE 1 – Specifications

| | |
|--|--|
| Maximum number of verification scale intervals | 7500 (class III) 1000 (class III) |
| Minimum sensitivity | 0.66 $\mu\text{V}/\text{scale interval}$ |
| Excitation voltage | 5 V DC |
| Maximum excitation current | 59 mA |
| Fraction of maximum permissible error | $p_i = 0.5$ |
| Minimum load cell impedance | 85 Ω |
| Maximum load cell impedance | 3300 Ω |
| Measuring range minimum voltage | 0 mV |
| Measuring range maximum voltage | 16 mV |
| Maximum tare range | -50% Max $-(Max_1 - e_1)$ (multi-interval) |
| Operating temperature range | -10 $^{\circ}\text{C}$ to +40 $^{\circ}\text{C}$ |
| Load cell connection (*) | 4 or 6 wire plus shield |
| Maximum value of load cell cable length per wire cross section (*) | 406 m/mm ² (6-wire only) |

(*) Additional connection cable between indicator and load cell or load cell junction box. In case a 4-wire connection is used, the load cells are connected directly without a junction box.

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 subtractive tare device of up to 50% of maximum capacity of the instrument (or up to $Max_1 - e_1$ for multi-interval instruments) may be fitted.

1.3 Power Supply

The instrument operates from an AC/DC mains adaptor FSP model FSP036-DHAN3 switch-mode power supply (output 12 V DC, 3 A) or an internal 7.4 V rechargeable battery pack; the submitter should be consulted regarding the acceptability of alternative power supply units.

1.4 Display Check

A display check is initiated whenever power is applied.

1.5 Interfaces

The instrument 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).

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, USB, Ethernet, WiFi and Bluetooth.

1.6 Additional Features

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 Data Carrier

The instrument may also present the weighing result in a visual and machine-readable form/image which carries text-based data.

The data carrier shall comply with GS1 standard and can be read by specific optical scanners and/or mobile devices with an inbuilt digital camera and specialised application software which displays the weighing result.

The data carrier shall contain sufficient information such that there are no mutual differences between the primary indication on the instrument and the decoded and formatted result indicated by any other device/system utilising the data carrier.
Note: This Certificate does not constitute or imply approval for these devices/systems.

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 | Teraoka |
| Name or mark of manufacturer's agent | WEDDERBURN |
| Model number | DIX-3000 |
| Indication of accuracy class | Ⓜ or Ⓜ |
| Maximum capacity | <i>Max</i> g or kg #1 |
| Minimum capacity | <i>Min</i> g or kg #1 |
| Verification scale interval | <i>e</i> = g or kg #1 |
| Maximum subtractive tare | <i>T</i> = - g or kg #2 |
| Serial number of the instrument | |
| Pattern approval mark for the indicator | NMI S817 |
| Pattern approval mark for other components | #3 |

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

#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 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 |

1.10 Software Version

The legally relevant software libwn.so is designated version 1.1. The software is protected by a checksum number 0142994b15a6d3a0832b87f19ca29d9b.

The software version number and checksum can be seen by pressing the 'VER:' on the main display screen.

1.11 Sealing Provision

Provision is made for the calibration and configuration 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:

- Slide up twice by a finger on the main display screen. The password input menu is displayed.
- Key in 141 to enter the setting mode.
- Press the 'Spec' to enter the spec setting menu.
- Press one of spec numbers.
- If the switch is in the 'ON' position, the instrument will allow to change the spec digits. In this case the instrument should not be verified until the switch has been correctly located in the 'OFF' position.
- Otherwise the instrument will display 'Span Switch Off' in which case the instrument may be verified.

Sealing to prevent access within the instrument housing may be achieved by mean of 'lead and wire' type seal with drilled screws or a destructible label placed over the sealing screws as shown in Figure 3a.

2. Description of Variant 1

approved on 14/12/21

The Teraoka model DIX-3000SS (Figure 2) which is similar to the pattern but having a stainless steel enclosure.

2.1 Sealing Provision

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

Sealing to prevent access within the instrument housing may be achieved by means of 'lead and wire' type seals with drilled screws or destructible labels placed over the access hole to the calibration switch and the opposite sides of a join in the instrument housing as shown in Figure 3b.

3. Description of Variant 2

approved on dd/yy/mm

The Pattern and variant 1 fitted with alternative mainboard model PX30S.

TEST PROCEDURE No S817

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 $e_1, e_2 \dots$, apply e_1 for zero adjustment, and maximum permissible errors apply $e_1, e_2 \dots$, as applicable for the load.

FIGURE S817 – 1



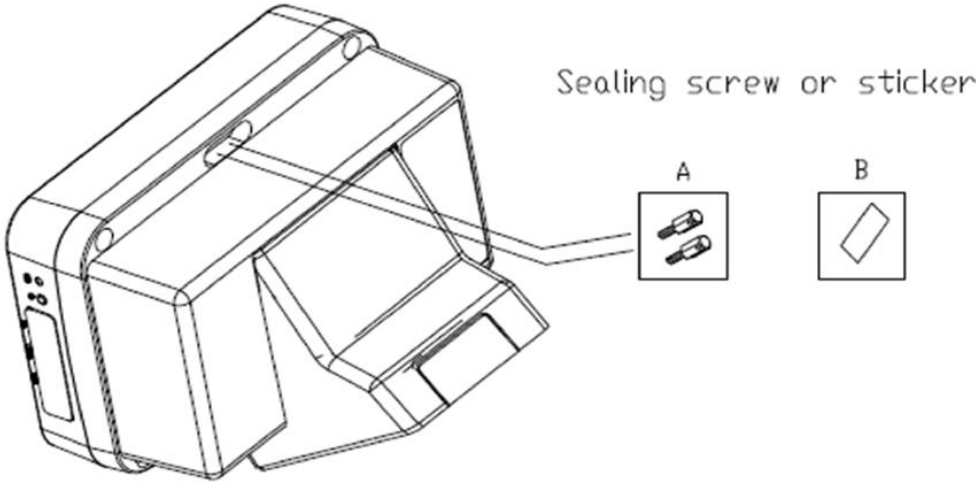
Digi Model DIX-3000 Digital Indicator (Pattern)

FIGURE S817 – 2

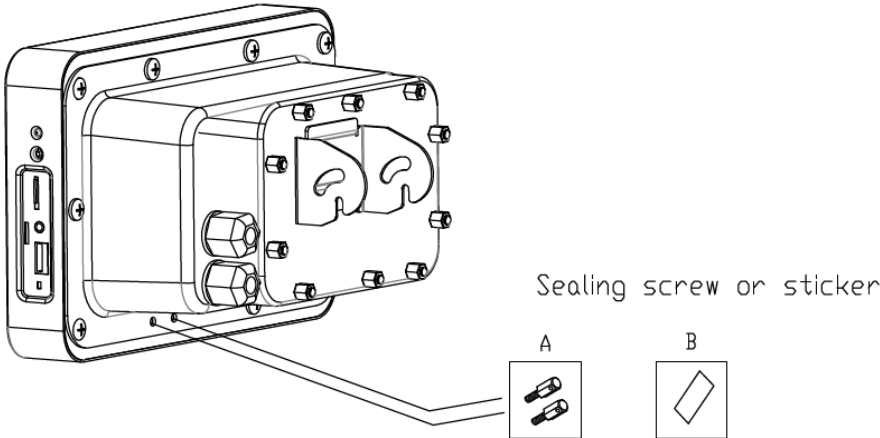


Digi Model DIX-3000SS Digital Indicator (Variant 1)

FIGURE S817 – 3



(a) Typical Sealing Arrangement DIX-3000 Indicator



(b) Typical Sealing Arrangement of DIX-3000SS Indicator

~ End of Document ~