Australian Government
Department of Industry, Science, Energy and Resources

National Measurement Institute

36 Bradfield Road, West Lindfield NSW 2070

Supplementary Certificate of Approval

NMI S799

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-2001 Digital Indicator

submitted by W W Wedderburn Pty Ltd
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.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern and variant 1 approved – certificate issued	18/09/20

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI S799' and only by persons authorised by the submittor.

Instruments incorporating a component purporting to comply with this approval shall be marked 'NMI S799' in addition to the approval number of the instrument, 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 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*.

Darryl Hines
Manager
Policy and Regulatory Services

TECHNICAL SCHEDULE No S799

1. Description of Pattern approved on 18/09/20

A Teraoka model DIX-2001 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 (IIII) weighing instrument with a single weighing range of up to 1000 verification scale intervals; or

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

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

The Instrument is fitted with an integral printer, for printing of receipts (#).

A display in the form of SCALE followed by a number is provided at the middle of the LCD display to show which basework/indication has been selected for display. For example 'SCALE1' indicates that the corresponding basework (scale 1) has been selected – the weight displayed will be that of scale 1. Refer also to clause **1.5 Two Baseworks Facility**.

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

TABLE 1 – Specifications

Maximum number of verification scale intervals	7500 (class (III)) 1000 (class (IIII))
Minimum sensitivity	0.66 µV/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	-100% Max
Operating temperature range	-10°C to +40°C
Load cell connection	4 or 6 wire plus shield
Maximum value of load cell cable length per wire cross section (*)	828.5 m/mm^2 (6-wire only)

(*) Additional connection cable between indicator and load cell or load cell 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 taring device and/or a pre-set taring device, each of up to the maximum capacity of the instrument, may be fitted.

Pre-set tare values may be stored and recalled, and may be associated with each individual basework.

A separate display of tare values is provided.

1.3 Power Supply

The instrument operates from mains AC power (100 - 240 V AC, 50/60 Hz) or an internal 24 V rechargeable battery pack.

1.4 Display Check

A display check is initiated whenever power is applied.

1.5 Two Baseworks Facility

Up to two baseworks may be connected to a single DIX-2001 digital indicator.

The 'SCALE'  key of the indicator is used to select which basework is to have its weight value displayed. The weight value is displayed with an indication of which scale has been selected (i.e. 'SCALE 1' or 'SCALE 2'). Tare, pre-set tare and zero operations may be applied to each individual basework/indication, as if they were separate instruments.

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 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, Ethernet, remote connection and digital output.

1.7 Additional Features

Instruments may be fitted with bar graph, checkweighing (buzzer), counting, percentage and set points functions. 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.

1.8 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-2001
Indication of accuracy class	(III) or (IIII)
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 S799
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.

1.10 Software Version

The software version is designated 5.30.

The software version and number can be seen in the switch-on display sequence (when the power is first applied to the instrument) or as follows (starting from the normal weighing mode):

- Press the 'MENU' button.

- Select the ‘5. Inspection’ and then ‘6. Device Information Display’. The software version numbers are displayed.

1.11 Sealing Provision

Provision is made for the calibration to be sealed by mean of using ‘lead and wire’ type seal with drilled screws or using destructible labels placed over the opposite sides of a join in the instrument housing and the location as shown in Figure 3.

2. Description of Variant 1 approved on dd/yy/mm

Similar to the pattern but without an integral printer (Figure 2).

TEST PROCEDURE No S799

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*.

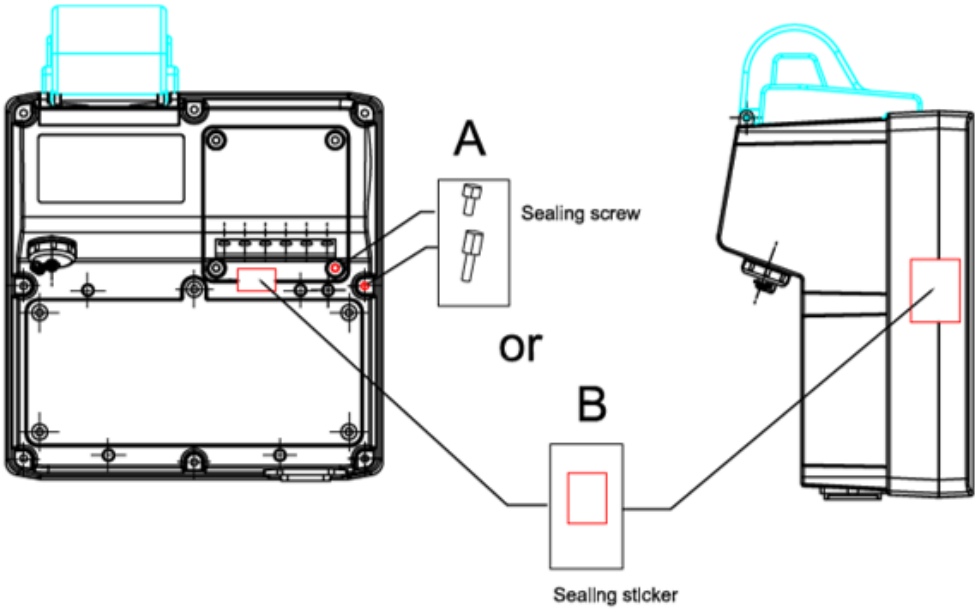
FIGURE S799 – 1

Digi Model DIX-2001 Digital Indicator (Pattern)

FIGURE S799 – 2

Digi Model DIX-2001 Digital Indicator Without a Printer (Variant 1)

FIGURE S7991 – 3



Typical Sealing Arrangement

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