Australian Government
Department of Industry, Innovation and Science

National Measurement Institute

Supplementary Certificate of Approval

NMI S706

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 Digi DPS-800s 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.

This approval becomes subject to review on 1/01/21, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern & variant 1 approved – certificate issued	10/12/15

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI S706' 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.

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

Dr A Rawlinson

TECHNICAL SCHEDULE No S706

1. Description of Pattern approved on 10/12/15

A Teraoka model Digi DPS-800s digital indicator (Table 1 and Figure 1) which may be configured to form part of:

- A class (III) weighing instrument with a single weighing range of up to 6000 verification scale intervals: or
- A class (IIII) 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 6000 verification scale intervals per partial weighing range: or
- A class (IIII) 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.

Various types of NMI-approved baseworks and printers can be connected to the DPS-800s indicator which will give an automatic (#) operation of weigh, price and labelling. The pattern may also be known as a DIGI DPS-800.

(#) 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	6000 single range (class (III)), 1000 single range (class (IIII)) 6000 per range or partial range (class (III)) 1000 per range or partial range (class (IIII))
Minimum sensitivity	1 µV / scale interval
Excitation voltage	10 V DC
Maximum excitation current	117 mA
Fraction of maximum permissible error	pi = 0.5
Minimum load cell impedance	85 Ω
Maximum load cell impedance	1100 Ω
Measuring range minimum voltage	0 mV
Measuring range maximum voltage	40 mV
Maximum tare range	- 50% Max
Operating temperature range	-10°C to +40°C
Load cell connection	4-wire or 6-wire shielded

The instrument has a TFT LCD touch screen display mounted in stainless steel housing and may be mounted on a variety of frames.

Instruments have unit price to $9999.99/kg, price to $9999.99, and a product look up (PLU) facility. The instrument has the ability to calculate price totals and then print labels for weighed loads, non-weigh items.

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

The pattern operates from mains AC power (100 ~ 240 V AC, 50/60 Hz).

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 tare device, each of up to 50% of the maximum capacity of the instrument, may be fitted.

1.3 Additional Features

The additional functions (other than the indications of measured mass, i.e. gross, tare net displayed either on the indicator or an auxiliary or peripheral device) are not approved for trade use.

1.4 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 NMI General Supplementary Certificate 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 A USB port, Ethernet printer port, LAN port or other digital inputs/outputs.

1.5 Software Version

The software is designated 2.xx.xx.xxxx (with x reflecting non-legally relevant changes).

The software version number appears on screen in the power up display sequence.

1.6 Sealing Provision

The A/D unit is fitted within the controller module (Figure 2).

Provision is made for sealing of the A/D unit SPAN switch cover by use of destructible adhesive labels over the screws of the A/D unit which join the SPAN cover to the A/D unit, to secure the housing against any opening.

The position of the SPAN switch can be checked on the display by entering the Service Menu and selecting the scale option. If the scale option is selected without switching over the SPAN switch, then the ‘Error - Security switch’ error message will be shown. If this error message is displayed then the SPAN protection has been enabled. Note to enter Service Menu a password is required.

1.7 Verification Provision

Provision is made for the application of a verification mark.

1.8 Descriptive Markings and Notices

Instruments are marked with the following data, together in one location, in the form shown at right:

Manufacturer's mark, or name written in full	……..
Name or mark of manufacturer's agent	……..
Indication of accuracy class	(III) or (III)
Pattern approval number for the instrument	NMI S706
Maximum capacity	*Max* ...../..... g or kg #1
Minimum capacity	*Min* ..... g or kg #1
Verification scale interval	*e* = .../..... g or kg #1
Maximum subtractive tare	*T* = - ……. g or kg #2
Serial number of the instrument	……..

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

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

For single interval instruments there is only one range therefore only one value of maximum capacity and verification scale interval to be marked.

In addition, instruments shall carry a notice stating NOT TO BE USED FOR TRADING DIRECT WITH THE PUBLIC, or similar wording.

2. Description of Variant 1 approved on 10/12/15

With modified software, designated World View (Figure 3).

The legally relevant software is contained within two dll files, identified as follows during the power-up sequence:

HeaderDisplay.dll	Version 1.0.0.10
DPS710.dll	Version 1.0.0.29

The dll files can only be accessed and modified via the secured switch on the A/D board. The files are protected by a checksum, any modification in the dll files will result in a change in the checksum value and an error being detected.

Access to the Windows operating system is password-protected; the weighing mode is inactive when accessed.

TEST PROCEDURE

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.

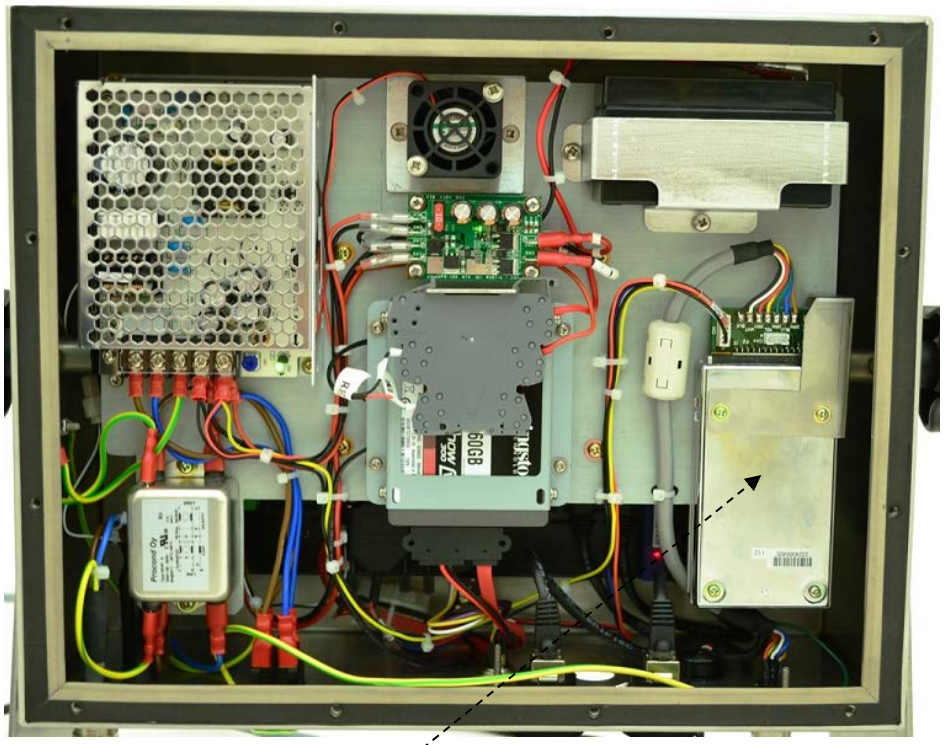
Maximum Permissible Errors

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

FIGURE S706 – 1

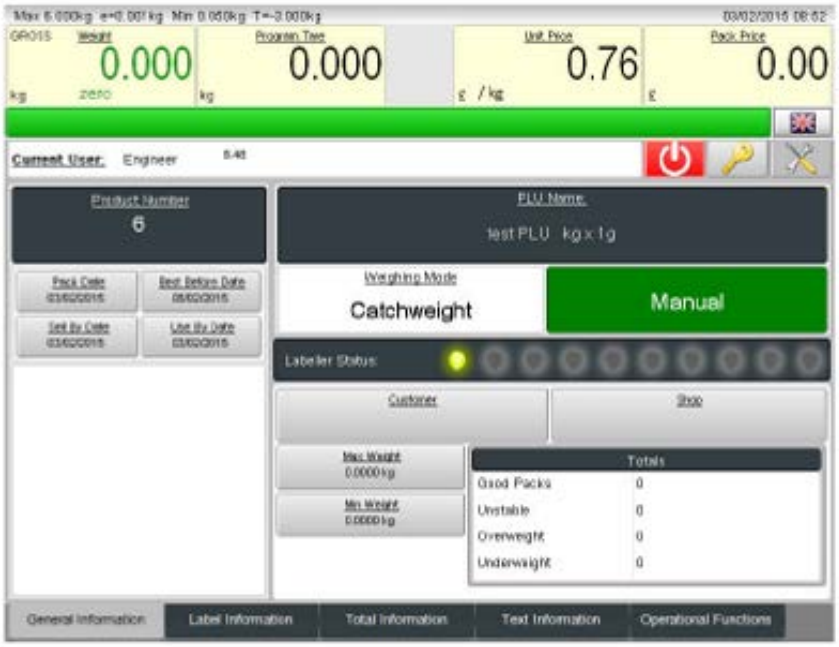
Teraoka Model Digi DPS -800s Digital Indicator

FIGURE S706 – 2



Location of A/D Unit Within Indicator Housing (A/D Unit to be Sealed)

FIGURE S706 – 3



Example of World View Operating Screen (Variant 1)

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