National Standards Commission

Supplementary Certificate of Approval

No S255A

Issued under Regulation 9
of the
National Measurement (Patterns of Measuring Instruments) Regulations

This is to certify that an approval for use for trade has been granted in respect of the

Teraoka Model DS-460 Digital Indicator

submitted by   W W Wedderburn Pty Ltd
90 Parramatta Road
Summer Hill   NSW   2130.

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 Certificate is issued upon completion of a review of NSC approval No S255.

CONDITIONS OF APPROVAL

This approval is subject to review on or after 1 October 2000.
This approval expires in respect of new instruments on 1 October 2001.

Instruments purporting to comply with this approval shall be marked NSC No S255A and only by persons authorised by the submittor.

Instruments incorporating a component purporting to comply with this approval shall be marked NSC No S255A in addition to the approval number of the instrument.

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

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 Commission 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 the Commission's Document 106.

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.

The Commission reserves the right to examine any instrument or component of an instrument purporting to comply with this approval.

DESCRIPTIVE ADVICE

Pattern: approved 11 September 1995

.   A Teraoka model DS-460 single or multi-interval digital mass indicator.

Technical Schedule No S255A describes the pattern.

FILING ADVICE

The documentation for this approval comprises:

> Supplementary Certificate of Approval No S255A dated 29 January 1996
> Technical Schedule No S255A dated 29 January 1996 (incl. Table 1 and
> Test Procedure)
> Figure 1 dated 29 January 1996

Signed and sealed by a person authorised under Regulation 9 of the National Measurement (Patterns of Measuring Instruments) Regulations to exercise the powers and functions of the Commission under this Regulation.

National Standards Commission

TECHNICAL SCHEDULE No S255A

Pattern: Teraoka Model DS-460 Digital Indicator.

Submittor: W W Wedderburn Pty Ltd
90 Parramatta Road
Summer Hill   NSW   2130.

1.   Description of Pattern

A Teraoka model DS-460 single or multi-interval digital mass indicator which may be fitted with input/output sockets for the connection of auxiliary and/or peripheral devices. Instruments are approved for use with a maximum of 3000 verification scale intervals per range (Table 1). Figure 1 shows an instrument with a non-functioning weighing unit.

1.1   Zero

Zero is automatically corrected to within ±0.25e whenever power is applied and whenever the instrument comes to rest within 0.5e of zero.

The instrument has a semi-automatic zero-setting device with a range of not more than 4% of the maximum capacity of the instrument.

The instrument has an initial zero-setting device with a range of not more than 20% of the maximum capacity of the instrument.

1.2   Display Check

A display check is initiated whenever power is applied.

1.3   Tare

A semi-automatic subtractive tare device and/or a keyboard-operated pre-set tare device, each of up to maximum capacity, may be fitted.

1.4   Management Function

Instrument are fitted with a set point management function with an associated UNDER/OVER display.

1.5   Sealing and Verification/Certification Provision

Provision is made for the calibration adjustments of the instrument to be sealed.

Provision is made for a verification/certification mark to be applied.

1.6   Markings

Instruments are marked with the following data, together in one location:

Manufacturer's name or mark
Serial number
Accuracy class   (III)
Maximum capacity   Max ..../ .... kg *
Minimum capacity   Min .... kg *
Verification scale interval   e = ... / ...., kg *
NSC approval numbers   -   indicator   NSC No S255A
                            -     other components   NSC No .... #

*   Repeated in the vicinity of each reading face.
#   May be located separately from the other markings.

TABLE 1

Type: Teraoka Model DS-460

Maximum number of verification   3000
     scale intervals per range
Minimum sensitivity 2×10^{-3} mV/scale interval
Excitation voltage   12 V DC
Minimum load impedance   60 Ω
Maximum excitation current   250 mA

TEST PROCEDURE

Instruments shall be tested in conjunction with any tests specified in the approval documentation for the instrument to which the pattern is connected, as appropriate, and in accordance with any relevant tests specified in the Inspector's Handbook.

Maximum Permissible Errors at Verification/Certification

The maximum permissible errors for increasing and decreasing loads, expressed in terms of verification scale interval (e), with the instrument adjusted to zero within ±0.25e at no load, are:

±0.5e for loads from 0 to 500e;
±1.0e for loads over 500e up to 2000e; and
±1.5e for loads over 2000e.

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

FIGURE S255A - 1

Teraoka Model DS-460 Digital Indicator
(With Non-functioning Weighing Unit)