



NATIONAL STANDARDS COMMISSION

NATIONAL MEASUREMENT (PATTERNS OF INSTRUMENTS) REGULATIONS

REGULATION 9

SUPPLEMENTARY CERTIFICATE OF APPROVAL No S151

CANCELLED

This is to certify that an approval has been granted that the pattern and variants of the

Ultra Series 85 Digital Indicator

submitted by Ultra Scales Pty Ltd
33-35 Judge Street
Sunshine Vic 3020

0/3

are suitable for use for trade.

Conditions of Approval

General

This approval is subject to review on or after 1/6/88.

The approval of provisional variant 4 was cancelled on 1/3/84.

Instruments purporting to comply with this approval shall be marked NSC No S151 in addition to the approval number of the pattern to which they are connected.

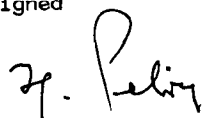
This approval may be withdrawn if instruments are constructed and used other than in accordance with the drawings and specifications lodged with the Commission.

Special

The number of scale intervals applicable to any weighing instrument in which this indicator is used, shall be no greater than the number of verification scale intervals approved for the indicator (6000e), or the basework, or the load cell(s) whichever is the smallest.

Variant 7 may only be used when connected to a printer complying with NSC approval No S1/0.

Signed


Executive Director

Descriptive Advice

Pattern: approved 20/4/83

. Ultra series 85 digital indicator.

Variants: approved 20/4/83

1. With output sockets for the connection of auxiliary and/or peripheral devices.
2. In alternative housings, known as Datapond 85 or Minipond 85.

3. With a keyboard in a separate housing.

Provisional Variant: provisionally approved 20/4/83 - cancelled 1/3/84

4. With symbols replacing text on the indicator facia to identify functions.

Technical Schedule No S151 describes the pattern and variants 1 to 4.

Variants: approved 9/4/84 - re-approved 24/8/84

5. With digital tare facility.

6. With tare recall facility.

7. With "two weighing" facility, with or without an alphanumeric keyboard.

8. With modified semi-automatic tare indication, utilising a single tare button and light.

Technical Schedule No S151 Variation No 1 describes variants 5 to 8.

Variant: approved 13/6/85

9. With calibration and parameter setup facilities operated by the keyboard.

Technical Schedule No S151 Variation No 2 describes variant 9.

Filing Advice

Certificate of Approval No S151 dated 27/11/84 is superseded by this Certificate and may be destroyed.

A Cancellation Certificate for provisional variant 4 was issued on 18/11/83.

The documentation for this approval now comprises:

Certificate of Approval No S151 dated 22/8/85
Technical Schedule No S151 dated 16/5/83
Technical Schedule No S151 Variation No 1 dated 27/11/84
Technical Schedule No S151 Variation No 2 dated 22/8/85
Test Procedure No S151 dated 16/5/83
Figures 1 and 2 dated 16/5/83
Figure 3 dated 27/11/84.



NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No S151

Pattern: Ultra Series 85 Digital Indicator

Submittor: Ultra Scales Pty Ltd
33-35 Judge Street
Sunshine, Victoria, 3020.

1. Description of Pattern

Ultra series 85 digital mass indicator (Figure 1) displaying up to 6000 scale intervals.

1.1 Zero

Zero within 0.25e, displayed by the ZERO indicator being illuminated, may be obtained by pressing the ZERO push-button.

1.2 Net/Gross

Use of the NET/GROSS push-button allows either the net or gross mass to be displayed, indicated by the appropriate light illuminating.

1.3 Tare

Use of the push-button marked T allows a mass on the receptor of up to maximum capacity to be tared to within 0.25e, displayed by the ZERO indicator and TARE light illuminating. When the mass is removed the tare value prefixed by a minus sign is displayed.

1.4 Display Check

All segments and indicating lights are illuminated whenever power is applied or the TEST button is pressed.

1.5 Markings

Instruments which incorporate this indicator are to be marked with the following data, together in a clearly visible location:

Manufacturer's name or mark
Serial number
Accuracy class
Maximum capacity in the form
Minimum capacity in the form
Verification scale interval
Maximum subtractive tare
NSC approval numbers

III

Max*

Min*

e = d =..*

T = - ...*

Indicator NSC No S151

Headwork NSC No†

Basework NSC No

Load cell(s) NSC No...

Load cell serial number(s)

1.6 Provision for Verification

A verification stamping plug or an adhesive label is provided.

* These markings are repeated in the vicinity of the reading face if not already there.

† This approval number should only be included where the existing headwork is retained as part of the modified instrument.

2. Description of Variants

2.1 Variant 1

With output sockets for the connection of auxiliary or peripheral equipment.

2.2 Variant 2

With the instrument in alternative housings, and known as either Micropond 85 or Minipond 85 or Datapond 85 or Digitizer 793 or Digitizer 792 or Digitizer 791.

2.3 Variant 3

With a numeric or alpha-numeric data entry keyboard connected by cable to the instrument.

2.4 Provisional Variant 4

With symbols replacing text on the indicator facia to identify functions (Figure 2).

TEST PROCEDURE No S151

The following tests should be carried out in conjunction with any test procedures in the Technical Schedule of the instrument to which the pattern is connected.

All load applications to the instrument should be in accordance with the Commission's recommended testing procedure for the elimination of rounding error as set out in Document 104.

The maximum permissible errors are:

- $\pm 0.5e$ for loads between 0 and 500e;
- $\pm 1.0e$ for loads between 501e and 2000e; and
- $\pm 1.5e$ for loads above 2000e.

1. Zero Range

Check that the range of the zero adjustment is not more than 4% of the maximum capacity ($\pm 2\%$ approximately).

2. Zero Test

Check, by means of Document 104, that when the ZERO indicator illuminates, zero is set within 0.25e.

3. Range of Indication

- (a) The maximum mass indicated should not exceed the maximum capacity (Max) by more than 10 scale intervals; above this indicated mass the indicator should be blank.
- (b) Below zero the indicator should display the mass prefixed by a minus sign or be blank.

4. Taring

- (a) Attempt to tare a mass above maximum capacity as determined in 3(a). On removal of the mass no tare should have been entered, and the indicator should display all zeroes.
- (b) The tare function should reset the mass indicator to zero within 0.25e at any load within its tare capacity. This may be checked as described in Zero Test.

5. Test Loads

Test loads are to be applied to the complete weighing instrument increasing in not less than 5 approximately equal steps to maximum capacity, followed by decreasing loads in not less than 5 approximately equal steps to zero load.

6. Multiple Indicators

Where the existing headwork is retained and used in conjunction with the pattern, the variation between indications or printings for the same load shall not be greater than the absolute value of the maximum permissible error for that load registered on the device with the largest verification scale interval.



NATIONAL STANDARDS COMMISSION

CANCELLATION OF PROVISIONAL VARIANT

CERTIFICATE OF APPROVAL No S151

This is to certify that Provisional Variant 4 of Approval No S151 for the pattern and variants of the

Ultra Series 85 Digital Indicator

submitted by Ultra Scales Pty Ltd
33-35 Judge Street
Sunshine, Victoria, 3020

will expire in respect of new instruments on 1/3/84.

Instruments purporting to comply with Provisional Variant 4 (i.e. with symbols replacing text on the facia) and which were verified on or before that date are to have the facia altered to comply with the pattern prior to their next verification.

Signed

Executive Director

18/11/83



NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No S151

VARIATION No 1

Pattern: Ultra Series 85 Digital Indicator

Submitter: Ultra Scales Pty Ltd
33-35 Judge Street
Sunshine, Victoria, 3020.

1. Description of Variants

1.1 Variant 5

With a digital tare facility.

1.2 Variant 6

With a tare recall facility for both semi-automatic and digital tare.

1.3 Variant 7

With "two weighing" facility, with or without an alphanumeric keyboard. With this variant fitted, the instrument is capable of obtaining mass information from two separate sources (e.g. 2 weighbridges) for processing by a computer to provide an itemised ticket. This facility may be used for IN/OUT weighing or GROSS/NET weighing using one or two weighing instruments. Refer Conditions of Approval.

Figure 3 shows a typical variant 7 instrument including printer, but also includes the facilities described for variants 5, 6 and 8.

1.4 Variant 8

With modified semi-automatic tare indication. The GROSS/NET button is removed and the tare indicator light is now incorporated into the TARE button.



NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No S151

VARIATION No 2

Pattern: Ultra Series 85 Digital Indicator

Submitter: Ultra Scales Pty Ltd
33-35 Judge Street
Sunshine Vic 3020

1. Description of Variant 9

With the calibration and parameter setup facilities operated by the keyboard, and subject to the following conditions:

- a) The maximum capacity is to be at least 1 kg; and
- b) The zero range may be -1% to +3%.

Note: Test Procedure

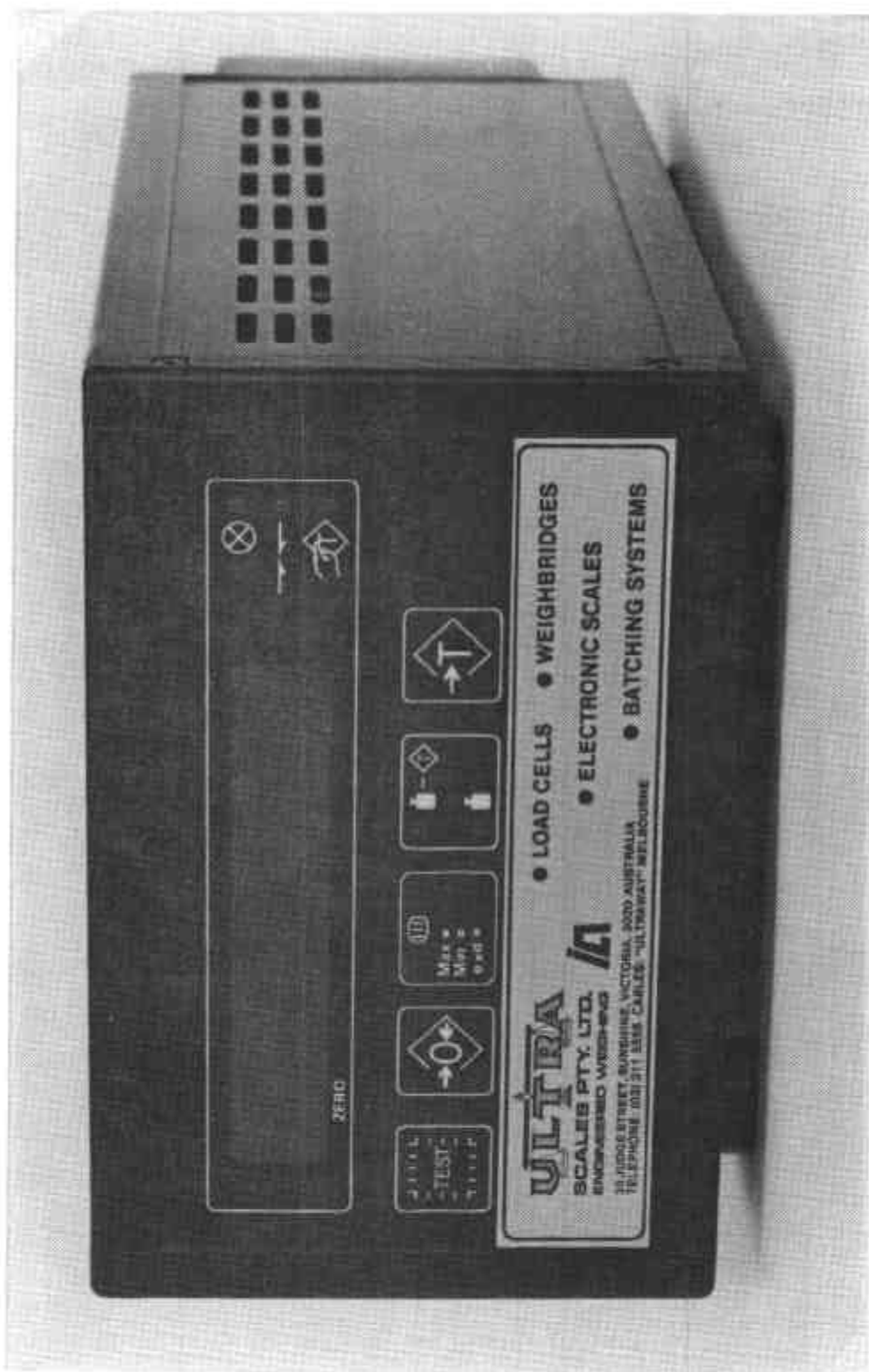
For this instrument the zero range should be tested by applying a load greater than 3.1% of maximum capacity. It should then not be possible to obtain zero by means of the zero button.

FIGURE S151 - 1



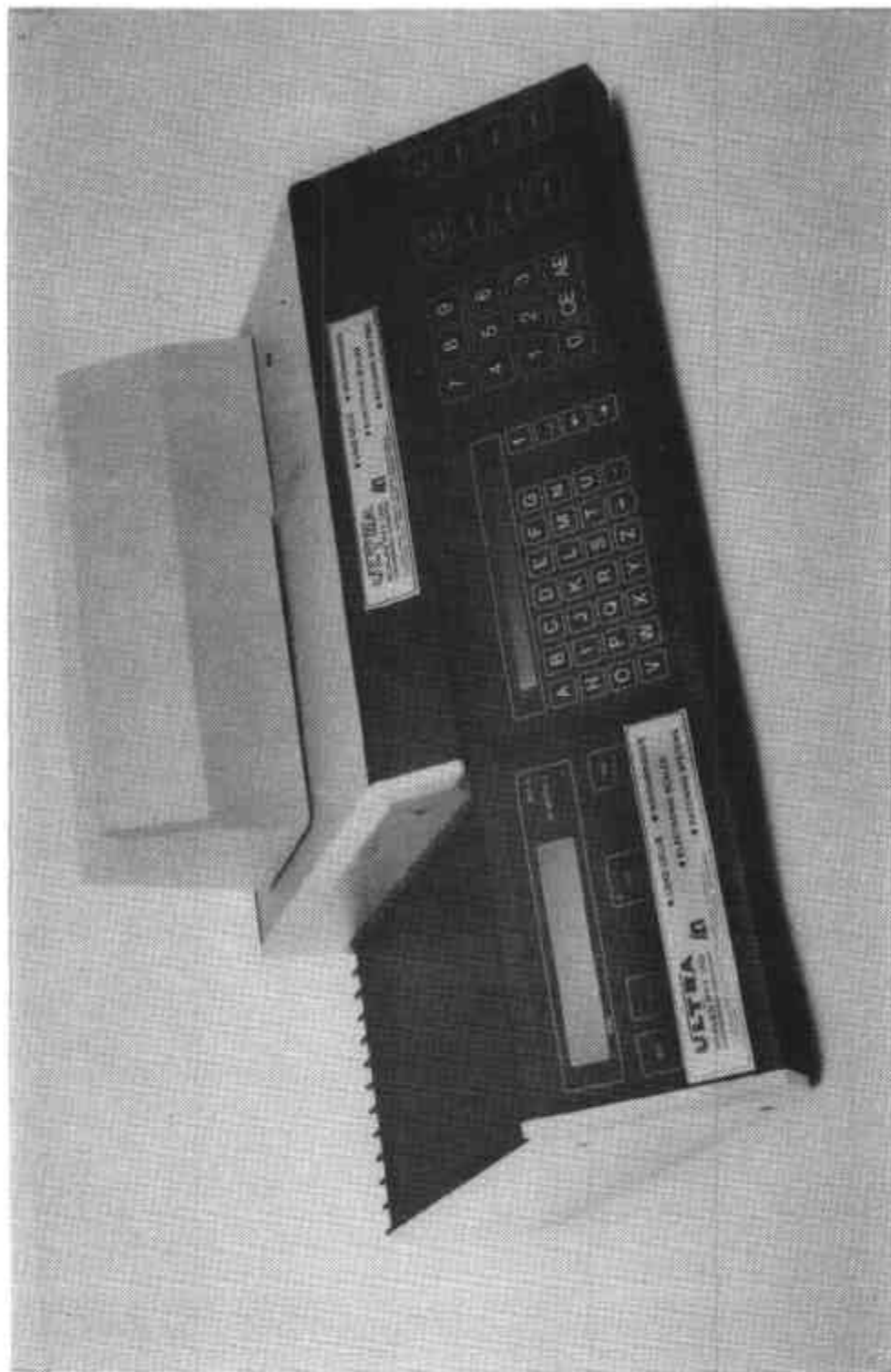
Ultra Series 85 Indicator

FIGURE S151 - 2



Showing Alternative Markings

FIGURE S151 - 3



Ultra Series 85 Indicator In An Alternative Housing