



~~CANCELLED~~  
**NATIONAL STANDARDS COMMISSION**

WEIGHTS & MEASURES (PATTERNS OF INSTRUMENTS) REGULATIONS - REGULATION 9

SUPPLEMENTARY CERTIFICATE OF APPROVAL No S132

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

Mercury Model 900 Digital Indicator

submitted by Mercury Scale Company Pty Ltd,  
32 Dew Street,  
Thebarton, South Australia, 5031,

are suitable for use for trade when replacing the indicator in any Commission-approved weighing instrument.

The approval of the pattern and variants is subject to review on or after 1/8/87.

All instruments purporting to comply with this approval shall be marked NSC No S132 in addition to the approval number of the pattern to which they are connected.

Relevant drawings and specifications are lodged with the Commission.

Conditions of Approval

1. An instrument fitted with a Mercury model 900 digital indicator shall have a maximum number of 3000 scale intervals.
2. The number of scale intervals applicable to the weighing instrument in which this indicator is used will be no greater than the number of verification scale intervals approved for the basework, or the load cell(s), or the indicator, whichever is the smallest.

Signed

Executive Director

Descriptive Advice

Pattern: approved 26/7/82

- . Mercury model 900 digital indicator.

Variants: approved 26/7/82

1. Without digital tare.
2. Without data output.
3. Without automatic zero tracking.
4. In various enclosures.

Technical Schedule No S132 dated 23/8/82 describes the pattern and variants 1 to 4.

Filing Advice

The documentation for this approval consists of:

Certificate of Approval No S132 dated 23/8/82  
Technical Schedule No S132 dated 23/8/82  
Test Procedure No S132 dated 23/8/82  
Figure 1 dated 23/8/82

23/8/82



# NATIONAL STANDARDS COMMISSION

## TECHNICAL SCHEDULE No S132

Pattern: Mercury Model 900 Digital Indicator

Submittor: Mercury Scale Company Pty Ltd,  
32 Dew Street,  
Thebarton, South Australia, 5031.

### 1. Description of Pattern

A digital mass indicator (Figure 1) approved up to 3000 scale intervals.

#### 1.1 Zero

- (a) The instrument may be zeroed to within 0.25e, by the screwdriver - adjustable ZERO, and this is indicated by the ZERO light illuminating steadily.
- (b) An automatic zero tracking device resets zero within 0.25e, whenever the mass indicator returns to zero within 0.5e.

#### 1.2 Tare

- (a) A digital tare facility using five thumbwheel switches, whereby a tare in 1e increments may be entered. The thumbwheel switches act as a digital tare mass indicator and have a decimal marker correctly positioned to coincide with the scale interval of the instrument.
- (b) 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 Display Check

- (a) On applying power the indicator displays all 9's, all 8's, etc., to all 1's then zero.
- (b) In addition, a push-button CHECK switch on the rear of the indicator initiates a segment check as in (a) above.

#### 1.4 Marking

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	(III)
Maximum capacity	Max .....*
Minimum capacity	Min .....*
Verification scale interval	e = d = .....*
NSC approval numbers	Indicator NSC No S132..
	Headwork NSC No .....¶
	Basework NSC No .....
	Load cell(s) NSC No ...
Load cell serial number(s) - refer para. 1.5(b)	

\* 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.

1.5 Sealing

- (a) A lead and wire seal passes through two retaining screws on each side of the indicator (Figure 1).
- (b) The load cell input plug is sealed or the load cell serial number(s) are marked either on the nameplate or on metal tags which are sealed to the indicator.
- (c) The data output socket is sealed.

2. Description of Variants

2.1 Variant 1

Without digital tare and associated NET/GROSS switch and indicator.

2.2 Variant 2

Without data output.

2.3 Variant 3

Without automatic zero tracking.

2.4 Variant 4

In various enclosures depending on application.

2.4.1

The enclosure is sealed to prevent access to the calibration adjustments.

## TEST PROCEDURE S132

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:

- ± 0.5e for loads between 0 and 500e;
- ± 1e for loads between 501e and 2000e; and
- ± 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 (± 2% approximately). Satisfactory setting may be checked by the following method:

- (a) With zero balance indicated, apply a load of, say, 2.5% of maximum capacity to the instrument; it should not be possible to obtain zero by means of the zero adjustment.
- (b) Reduce the load to, say, 1.5%; it should then be possible to obtain zero by means of the zero adjustment.

### 2. Zero Test

- (a) Check by means of Document 104 that when the ZERO light illuminates steadily, zero is set within 0.25e.
- (b) As the automatic zero tracking, where fitted, resets zero when the weighing mechanism is in equilibrium within 0.5e of zero, zero should be checked as described in Document 104, with a load equal to, say, 10e on the load receptor. The indications with 0.25e and 0.75e additional mass on the load receptor will then be 10e and 11e respectively.

### 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

With any value of digital tare entered, the mass indication should still be blank when gross mass on the load receptor is equal to maximum capacity as determined in 3(a).

### 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.

### 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 on the device with the largest verification scale interval.



25/3/88

## NATIONAL STANDARDS COMMISSION

### NOTIFICATION OF CHANGE

### VARIOUS CERTIFICATES OF APPROVAL

The following changes are made to the approval documentation for the approvals listed overleaf

submitted by      Mercury Weighing and Control Systems Pty Ltd  
                         32 Dew Street  
                         Thebarton SA 5031.

In the Certificates and Technical Schedules listed, the following changes should be made:

1) The submitter should be changed to read;

A & D Mercury Pty Ltd

(the address remains unchanged)

2) Any Mercury instrument or component of an instrument approved in the documentation, may now also be known as "AND Mercury" or similar.

Signed

Executive Director

APPROVAL      PATTERN

**TYPE:** weighing instruments counter scales

6/3/007      Model 92  
6/3/008      Model 131

**TYPE:** counter machines semi-self-indicating

6/4A/012      Model 304A

**TYPE:** counter machines freely-suspended < 30 kg (spring scales)

6/5/011      Model 211 DA

**TYPE:** weighing instruments non-self-indicating

6/9A/001      Models 692 and 682  
6/9A/004      Model 522D  
6/9A/007      Model 211  
6/9A/008      Model 600

**TYPE:** weighing instruments self-indicating

6/9C/005      Model 211D  
6/9C/013      Up to 2500 lb or 1200 kg  
6/9C/066      Model 522 AL  
6/9C/067      Model SM100/479/522D  
6/9C/081      Model SB-LP 1200  
6/9C/088      Model 522D LT-10K

**TYPE:** weighbridges self-indicating

6/10B/040      Model WB-LT  
6/10B/045A      Model RVB-H20

**TYPE:** automatic weighing instruments (except belt conveyors)

6/14B/012      Model HSD automatic hopper

**TYPE:** overhead weighing instrument (suspended load or receptor)

6/18/005      With 211DA headwork  
6/18/017      Model OHT 500

**TYPE:** digital indicators

S114      Model 579  
S128      Model 1300  
S132      Model 900  
S161      Model AD4316  
S199      Model AD-4321

**TYPE:** load cells

S117      Interface model SM25-12 kg  
S163      Transducers model B5112.1K  
S221      HBM model TRT-50 (Mercury model TRT3K-50)

FIGURE S132 - 1



Model 900 Indicator Including Sealing