

# NATIONAL STANDARDS COMMISSION

## NATIONAL MEASUREMENT (PATTERNS OF INSTRUMENTS) REGULATIONS

#### **REGULATION 9**

# SUPPLEMENTARY CERTIFICATE OF APPROVAL No S229

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

Yamato Model EDI-303 Digital Indicator

submitted by Yamato Scale (Australia) Pty Ltd 16 Gertrude Street Arncliffe NSW 2205.

CONDITIONS OF APPROVAL

This approval is subject to review on or after 1/8/92. This approval expires in respect of new instruments on 1/8/93.

Instruments purporting to comply with this approval shall be marked NSC No S229.

This approval may be withdrawn if instruments are constructed other than in accordance with the drawings and specifications lodged with the Commission.

The values of the performance criteria (maximum number of scale intervals etc.) applicable to an instrument incorporating this indicator shall be within the limits specified in this approval or in any approval documentation for the other components.

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

Signed J. Berk

Executive Director

Descriptive Advice

Pattern:

approved 24/7/87

Yamato model EDI-303 digital mass indicator.

Technical Schedule No S229 describes the pattern.

## Filing Advice

The documentation for this approval comprises:

Supplementary Certificate of Approval No S229 dated 4/1/88 Technical Schedule No S229 dated 4/1/88 Test Procedure No S229 dated 4/1/88 Figure 1 dated 4/1/88 \$229 4/1/88



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#### TECHNICAL SCHEDULE No S229

Pattern: Yamato Model EDI-303 Digital Indicator

<u>Submittor</u>: Yamato Scale (Australia) Pty Ltd 16 Gertrude Street Arncliffe NSW 2205

## 1. Description of Pattern

A digital mass indicator (Figure 1) approved for use with up to 3100 verification scale intervals. The indicator shall be connected to a maximum of 2 load cells, and may be fitted with an output socket for the connection of an auxiliary or a peripheral device.

## 1.1 Zero

Zero is automatically set to within  $\pm$  0.25e whenever the instrument comes to rest within  $\pm$  0.5e. If the instrument comes to rest outside that range but within the zero setting range, zero may be set by pressing the zero button. The zero light illuminates whenever zero is within  $\pm$  0.25e.

# 1.2 Display Check

A display check is initiated whenever power is applied to the instrument.

1.3 Tare

A semi-automatic subtractive taring device may be fitted, of up to maximum capacity of the instrument.

### 1.4 Gross/Net\_Control

Operation of the Gross/Net control (marked INC) selects the display of either gross or net mass.

#### 1.5 Markings

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

Manufacturer's name or mark Serial number Accuracy class Maximum capacity Verification scale interval Maximum subtractive tare NSC approval numbers - Indicator - Other components (as applicable) Load cells serial number(s)

\* These markings are repeated in the vicinity of each reading face.

### 1.6 Verification Provision

Provision is made for a verification mark to be applied.

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### TEST PROCEDURE No S229

The following tests should be carried out in conjunction with any tests in the approval documentation for any instrument in which this indicator is used.

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 Test

Check by means of Document 104, that when the zero light is lit, zero is set within  $\pm$  0.25e.

As the automatic device may reset 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 be 10e and 11e respectively.

#### 2. Zero Range

The maximum range of operation of the zero setting device should not exceed 4% of the maximum capacity. The device shall be capable of both negative and positive adjustments of at least one-quarter of the zero adjustment range. With zero balance indicated apply a load of, say, 3.5% of maximum capacity and press the zero button; the instrument should not rezero.

#### 3. Load Test

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

# 4. Range of Indication

The maximum mass indicated should not exceed the marked maximum capacity by more than 10e; above this indicated mass the indication should be blank or show non-numerical characters.

Below zero the indication should be blank, show non-numerical characters, or the mass will be indicated prefixed by a minus sign.

# 5. Taring

The semi-automatic taring device (where fitted) shall be able to reset tare to within  $\pm$  0.25e at any load within its capacity. This may be checked as described for Zero Test. A tare should not be able to be acquired above the marked tare capacity.

FIGURE S229 - 1

