



**NATIONAL STANDARDS COMMISSION**  
**WEIGHTS & MEASURES (PATTERNS OF INSTRUMENTS) REGULATIONS**

**REGULATION 9**

**SUPPLEMENTARY CERTIFICATE OF APPROVAL No S177**

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

Analogic Model AN5316 Digital Indicator

submitted by Australian Measurement & Control Pty Ltd  
240 Bay Street  
Port Melbourne Victoria 3207

are suitable for use for trade in any Commission-approved weighing instrument.

This approval is subject to review on or after 1/9/89.

Instruments purporting to comply with this approval shall be marked NSC No S177 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This approval may be withdrawn if instruments are constructed and used other than as described in the drawings and specifications lodged with the Commission.

Condition of Approval

The number of scale intervals applicable to the weighing instrument in which this indicator is used shall be no greater than the number of verification scale intervals approved for the basework, or the load cell(s) or the indicator (10 000e) whichever is the smallest.

Signed

  
Executive Director

Descriptive Advice

Pattern: approved 7/6/84

. Analogic model AN5316 digital indicator.

Variant: approved 7/6/84

1. In alternative housings.

Technical Schedule No S177 describes the pattern and variant 1.

Filing Advice

The documentation for this approval comprises:

Certificate of Approval No S177 dated 11/9/84  
Technical Schedule No S177 dated 11/9/84  
Test Procedure No S177 dated 11/9/84  
Figure 1 dated 11/9/84.



# NATIONAL STANDARDS COMMISSION

## TECHNICAL SCHEDULE No S177

Pattern: Analogic Model AN5316 Digital Indicator

Submitter: Australian Measurement & Control Pty Ltd  
240 Bay Street  
Port Melbourne Victoria 3207.

### 1. Description of Pattern

A digital mass indicator (Figure 1) approved for use with up to 10 000 scale intervals.

The indicator may be provided with output sockets for the connection of auxiliary and/or peripheral devices and may incorporate relay outputs for up to 4 keyboard-programmable set points.

#### 1.1 Zero

The instrument may be zeroed to within 0,25e, indicated by the zero light illuminating steadily, by operating the zero button.

An automatic zero tracking device resets zero to within 0,25e whenever the indicator returns to zero within 0,5e.

#### 1.2 Tare

- (a) The TARE IN button actuates a semi-automatic subtractive taring device which allows a mass on the load receptor of up to maximum capacity to be tared to within 0,25e. This is indicated by the letter T being illuminated and the indicator displaying net mass (designated by the letter N on the display).
- (b) The TARE OUT button cancels a tare and the unit then displays gross mass (designated by the letter G on the display).
- (c) A digital tare is entered via a keyboard when the unit is in either Gross or Net mode. The entered value is displayed (flashing) for up to 4 seconds. Actuation of TARE IN during that time will cause the flashing value to be stored as Tare. This is indicated by the letters T<sub>E</sub> being illuminated and the unit will display Net mass.

#### 1.3 Display Check

Applying power or pressing the CHECK button initiates a display check.

#### 1.4 Marking

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

Manufacturer's name or mark	
Accuracy class	(III)
Serial number of instrument	
Maximum capacity in the form:	Max .....*
Minimum capacity in the form:	Min .....*
Verification scale interval in the form:	e = d = .....*
Maximum subtractive tare in the form:	T = - .....*
NSC approval numbers - Indicator	NSC No S177
- Basework	) as appropriate
- Other components	
Load cell serial number(s)	

\*Repeated adjacent to each reading face, if not already there.

1.5 Verification Mark

Provision is made for a verification mark to be applied.

2. Description of Variant 1

In alternative housings.

TEST PROCEDURE No S177

The following tests should be carried out in conjunction with any test procedures in the Technical Schedule of the instrument to which this indicator 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;
- ±1.0e 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). With zero balance indicated, apply a load of, say, 2.5% of maximum capacity to the instrument, and adjust the zero control; the instrument should not rezero.

2. Zero Test

- (a) Check by means of Document 104, that when the zero light is lit, zero is set within 0.25e.
- (b) As the automatic zero tracking device resets zero when the weighing mechanism is in equilibrium within 0.5 scale interval of zero, zero should be checked with a load equal to, say, 10 scale intervals 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 or show non-numerical characters.
- (b) Below zero the indication may blank or the mass will be indicated, prefixed by a minus sign.

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 semi-automatic 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 under 2(a) - 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 more than one indicating system is used 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.

FIGURE S177 - 1



Analogic Model AN5316 Indicator