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S169
7/5/84

NATIONAL STANDARDS COMMISSION

WEIGHTS & MEASURES (PATTERNS OF INSTRUMENTS) REGULATIONS

REGULATION 9

SUPPLEMENTARY CERTIFICATE OF APPROVAL No S169

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

Gedge Model GS1400 Digital Indicator

submitted by Gedge Systems Pty Ltd
64-66 River Street
South Yarra, Victoria, 3141

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

The approval is subject to review on or after 1/5/89.

Instruments purporting to comply with this approval shall be marked NSC No S169 in addition to the approval numbers of the pattern and components to which they are connected.

The approval may be withdrawn if instruments are used other than as described in the drawings and specifications lodged with the Commission.

Condition of Approval

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 basework, or the load cell(s) or the indicator (5000e) whichever is the smallest.

Signed



Executive Director

Descriptive Advice

Pattern: approved 9/4/84

- Gedge model GS1400 digital indicator approved for use with up to 5000 verification scale intervals.

Technical Schedule No S169 describes the pattern.

Filing Advice

The documentation for this approval comprises:

Certificate of Approval No S169 dated 7/5/84
Technical Schedule No S169 dated 7/5/84
Test Procedure No S169 dated 7/5/84
Figure 1 dated 7/5/84.



NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No S169

Pattern: Gedge Model GS1400 Digital Indicator

Submittor: Gedge Systems Pty Ltd
64-66 River Street
South Yarra, Victoria, 3141

1. Description of Pattern

A digital mass indicator (Figure 1) approved for use with up to 5000 verification scale intervals. The indicator may be provided with output sockets for the connection of auxiliary and/or peripheral devices.

1.1 Zero

- (a) The instrument may be zeroed to within 0.25e, indicated by the zero light, by operating the zero button.
- (b) An automatic zero tracking device may be fitted which resets zero to within 0.25e whenever the indicator returns to zero within 0.5e.

1.2 Tare

- (a) A semi-automatic subtractive taring device allows a mass on the load receptor of up to maximum capacity to be tared to within 0.25e.

Tare may be cleared using either the CHECK/CLEAR TARE button or, if the mass indicator shows zero in GROSS mode, the TARE button.

- (b) The instrument may be fitted with thumbwheel digital tare which may be used to enter any value of tare but is only effective up to the maximum capacity of the instrument.

1.3 Display Check

Pressing the CHECK/CLEAR TARE button initiates a display check.

1.4 Marking

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

Manufacturer's name or mark	
Model number	
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 S169
- Basework	
- Other components (where applicable)	
Load cell serial number(s)	

1.5 Verification Mark

Provision is made for a verification mark to be applied.

TEST PROCEDURE No S169

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:

- $\pm 0.5e$ 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). 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.

Alternatively, the automatic device may be disabled using switch SW402.

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 be 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.

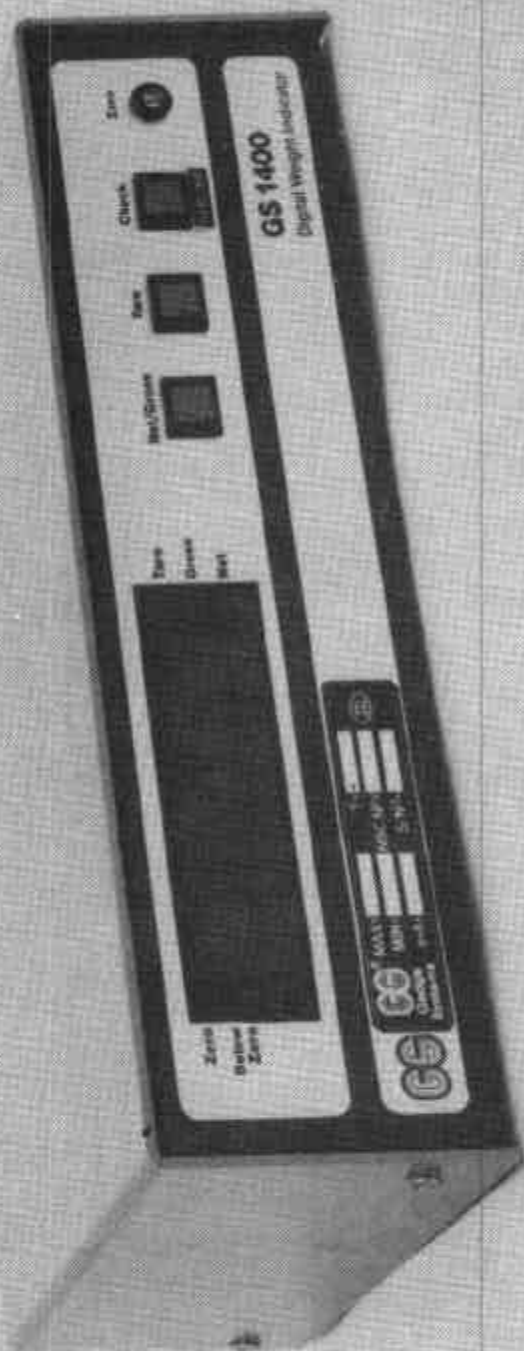
5. Test Loads

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 S169 - 1



Gedge Model GS1400 Indicator