

National Standards Commission



Supplementary Certificate of Approval

No S209

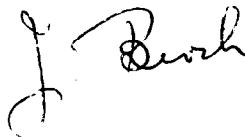
Issued under Regulation 9
of the
National Measurement (Patterns of Instruments) Regulations

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

Avery L200 Series Digital Indicator

submitted by Avery Australia Limited
3 Birmingham Avenue
Villawood NSW 2163.

Signed and sealed by a person authorised
under Regulation 9 of the National
Measurement (Patterns of Instruments)
Regulations to exercise the powers and
functions of the Commission under this
Regulation.



CONDITIONS OF APPROVAL

This approval is subject to review on or after 1/8/91.

This approval expires in respect of new instruments on 1/8/92.

Instruments purporting to comply with this approval shall be marked NSC No S209 and only by persons authorised by the submitter.

Instruments incorporating a component purporting to comply with this approval shall be marked NSC No S209 in addition to the approval number of the instrument.

It is the submitter's responsibility to ensure that all instruments marked with this approval number are constructed as described in the drawings and specifications lodged with the Commission and with the relevant Certificate of Approval and Technical Schedule. Failure to comply with this Condition may attract penalties under Section 19B of the National Measurement Act and may result in cancellation or withdrawal of the approval, in accordance with the Commission's Document 106.

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

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

The Commission reserves the right to examine any instrument or component of an instrument purporting to comply with this approval.

DESCRIPTIVE ADVICE

Pattern: approved 24/7/86

- . An Avery L200 series digital mass indicator.

Technical Schedule No S209 describes the pattern.

Variants: approved 9/8/90

1. Model L204 (and L206) indicator.
2. Model L205 indicator.

Technical Schedule No S209 Variation No 1 describes variants 1 and 2.

FILING ADVICE

Supplementary Certificate of Approval No S209 dated 5/1/87 is superseded by this Certificate and may be destroyed.

The documentation for this approval now comprises:

Supplementary Certificate of Approval No S209 dated 3/10/90
Technical Schedule No S209 dated 5/1/87 (incl. Table 1 and Test
Procedure)
Technical Schedule No S209 Variation No 1 dated 3/10/90
Figure 1 dated 5/1/87
Figure 2 dated 3/10/90



NATIONAL STANDARDS COMMISSION

S209
5/1/87

TECHNICAL SCHEDULE No S209

Pattern: Avery L200 Series Digital Indicator

Submittor: Avery Australia Limited
3 Birmingham Avenue
Villawood NSW 2163.

1. Description of Pattern

A digital mass indicator approved for use with up to 7500 verification scale intervals. The indicator may be connected to up to 12 load cells and incorporates a facility for up to nine-point linearisation. It may be used with Commission-approved Avery load cells requiring linearisation.

The instrument is approved as either model L200 or in an alternative housing as model L202.

The instrument (Figure 1) has additional displays for tare mass values and management data, and may be fitted with output sockets for the connection of auxiliary and/or peripheral devices. When not fitted with tare the displays and keyboard are modified accordingly.

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 set within $\pm 0.25e$.

1.2 Display Check

A display check is initiated by pressing the TEST button.

1.3 Tare

A semi-automatic taring device and/or a non-automatic (preset) taring device may be fitted. Operation of the taring device is indicated by the NET indicator illuminating and the alphanumeric display showing either PRESET TARE or SEMI-AUTO TARE.

On instruments with more than one taring device an attempt to enter tare by the use of one device, with a tare having already been acquired by use of the other, shall have no effect or shall override or cancel the tare already entered.

a) Semi-automatic Tare

This taring device allows a mass on the load receptor of up to maximum capacity to be tared to within $\pm 0.25e$.

b) Non-automatic (Preset) Tare

This taring device allows up to 9 tare values to be entered via the keyboard and stored in memory and tared to within $\pm 0.5e$.

...../2

1.4 Markings

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

Manufacturer's name or mark	
Serial number	
Accuracy class	III
Maximum capacity	Max ... kg *
Minimum capacity	Min ... kg *
Verification scale interval	e = d = ... kg *
Maximum subtractive tare	T = - ... kg
NSC approval numbers - Indicator	NSC No S209
- Other components (as applicable)	
Load cell serial number(s)	

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

1.5 Verification Provision

Provision is made for a verification mark to be applied.



NATIONAL STANDARDS COMMISSION

S209
5/1/87

TEST PROCEDURE No S209

Note: No attempt should be made to alter the linearisation characteristic during a verification test.

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

As the automatic zero setting device, where fitted, 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 ($\pm 2\%$ approximately). With zero balance indicated apply a load of, say, 2.5% of maximum capacity to the instrument 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

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

5. Taring

- (a) The semi-automatic device (where fitted) should be able to reset the mass indicator to zero, 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.
- (b) The non-automatic device (where fitted) should be able to reset the mass indicator to zero within $\pm 0.5e$ at any load within its capacity.



National Standards Commission

TECHNICAL SCHEDULE No S209

VARIATION No 1

Pattern: Avery L200 Series Digital Indicator.

Submittor: Avery Australia Limited
3 Birmingham Avenue
Villawood NSW 2163.

– 1. Description of Variants

1.1 Variant 1

A GEC-Avery model L204 digital indicator which is similar to the pattern but is also fitted with an alphanumeric keyboard for accessing management functions.

The indicator may be in an alternative housing in which case it is known as a model L206.

1.2 Variant 2

A GEC-Avery model L205 indicator (Figure 2) which is similar to the model L204 (variant 1) but without the taring device.

Notification of Change

– In Technical Schedule No S209 dated 5/1/87, the 1st paragraph of cl. 1. Description of Pattern should be amended by rewording the 2nd sentence, in part, as follows:

"... and incorporates a linearisation facility having up to 10 intermediate points."



S209
31/7/87

NATIONAL STANDARDS COMMISSION

NOTIFICATION OF CHANGE

SUPPLEMENTARY CERTIFICATE OF APPROVAL No S209

CHANGE No 1

The following change is made to the approval documentation for the

Avery L200 Series Digital Indicator

submitted by Avery Australia Limited
3 Birmingham Avenue
Villawood NSW 2163.

In Technical Schedule No S209 dated 5/1/87, the first paragraph of clause 1.3 Tare should be amended to read, in part:

"Operation of the taring device is indicated by the NET (or TARE) indicator illuminating"

Signed

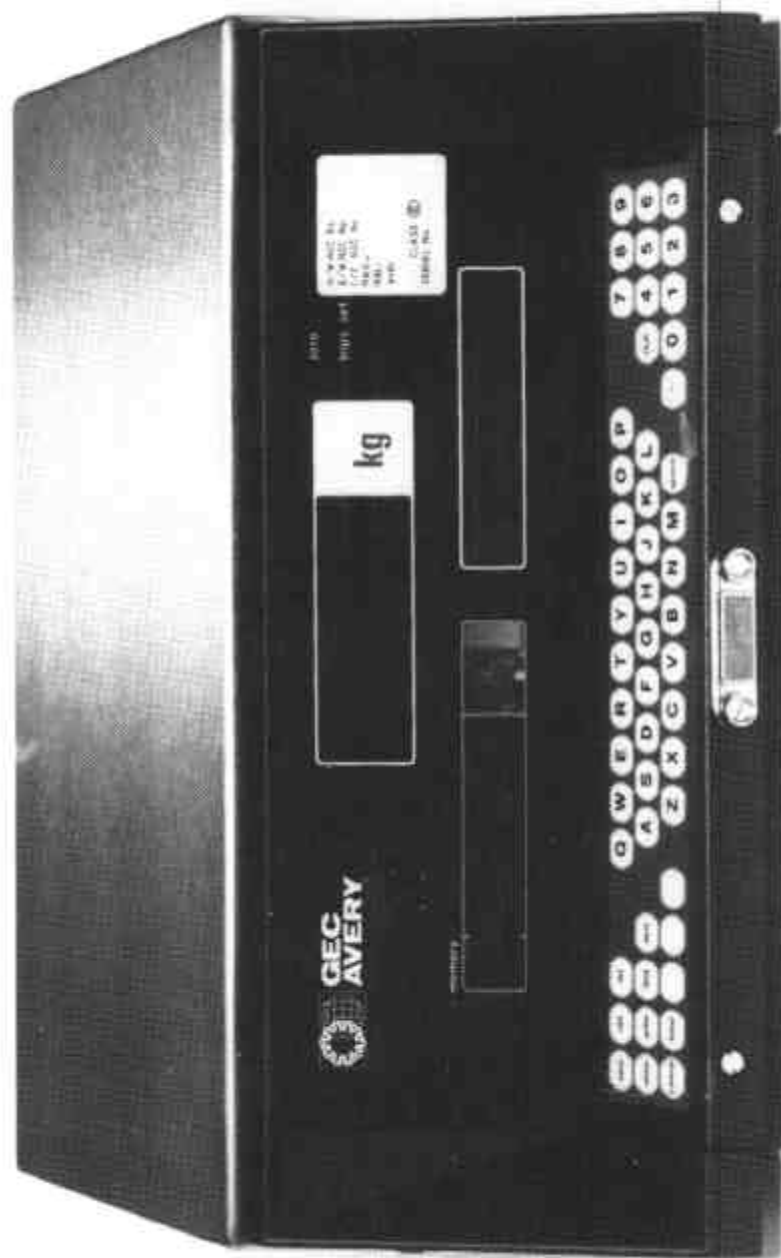
Executive Director

FIGURE S209 - 1



A Typical Avery L200 Indicator

FIGURE S209 - 2



S209
3/10/90

GEC-Avery Model L205 Indicator