Australian Government
Department of Industry, Science and Resources

National Measurement Institute

36 Bradfield Road, West Lindfield NSW 2070

Supplementary Certificate of Approval

NMI S845

Issued by the Chief Metrologist under Regulation 60
of the
National Measurement Regulations 1999

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

Correct Weight Scales Model CWS318 PlusC Digital Indicator

submitted by Correct Weight Scales Pty Ltd
3 Pumice Court
Keilor East, Victoria 3033

NOTE: This Certificate relates to the suitability of the pattern of the instrument for use for trade only in respect of its metrological characteristics. This Certificate does not constitute or imply any guarantee of compliance by the manufacturer or any other person with any requirements regarding safety.

This approval has been granted with reference to document NMI R 76, *Non-automatic weighing instruments, Parts 1 and 2*, dated October 2015.

This approval is subject to review at the decision of the Chief Metrologist in accordance with the conditions specified in the document NMI P 106.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern & variants 1 to 3 approved – certificate issued	09/06/23

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI S845' and only by persons authorised by the submittor.

Instruments incorporating a component purporting to comply with this approval shall be marked 'NMI S845' in addition to the approval number of the instrument, and only by persons authorised by the submittor.

It is the submittor's responsibility to ensure that all instruments marked with this approval number are constructed as described in the documentation lodged with the National Measurement Institute (NMI) 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 document NMI P 106.

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

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.

Signed by a person authorised by the Chief Metrologist to exercise their powers under Regulation 60 of the *National Measurement Regulations 1999*.

Darryl Hines
Manager
Policy and Regulatory Services

TECHNICAL SCHEDULE No S845

1. Description of Pattern approved on 09/06/23

A Correct Weight Scales model CWS318 PlusC digital mass indicator (Figure 1a) which may be configured to form part of:

- A class (III) weighing instrument with a single weighing range of up to 6000 verification scale intervals; or
- A class (IIII) weighing instrument with a single weighing range of up to 1000 verification scale intervals.

The instrument has an ABS enclosure with a 7-Segment LCD display for display of the weight value.

Instruments may be fitted with output sockets (output interfacing capability) for the connection of auxiliary and/or peripheral devices (see **clause 1.6** below).

TABLE 1 – Specifications

Maximum number of verification scale intervals	6000 (class (III))
	1000 (class (IIII))
Minimum sensitivity	1 µV/scale interval
Excitation voltage	5 V DC
Maximum excitation current	57 mA
Fraction of maximum permissible error	$p_i = 0.5$
Minimum load cell impedance	87.5 Ω
Maximum load cell impedance	1050 Ω
Measuring range minimum voltage	0 mV
Measuring range maximum voltage	15 mV
Maximum tare range	-100% Max
Operating temperature range	-10°C to +40°C
Load cell connection	4 or 6 wire plus shield
Maximum value of load cell cable length per wire cross section(*)	1510.7 m/mm^2 (6-wire only)

(*) Additional connection cable between indicator and load cell or load cell junction box. In case of a 4-wire connection is used, the load cell(s) is (are) connected to the indicator directly without using a junction box or lengthening the load cell(s) cable.

This approval does not include the use of the indicator as an automatic weighing instrument, unless specifically mentioned in a certificate of approval for such an instrument.

1.1 Zero

A zero-tracking device may be fitted.

The initial zero-setting device has a nominal range of not more than 20% of the maximum capacity of the instrument.

The instrument has a semi-automatic zero-setting device with a nominal range of not more than 4% of the maximum capacity of the instrument.

1.2 Tare

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

1.3 Display Check

A display check is initiated whenever power is applied.

1.4 Power supply

Power may be supplied by either a 7 V AC/DC mains adapter or an optional rechargeable 6 V DC sealed lead-acid battery.

Note: The AC/DC mains adaptor supplied was a model LKC-070100-S (output 7 V DC, 1 A) adaptor – the submittor should be consulted regarding the acceptability of alternative power supply units.

1.5 Additional Features

The instrument may be fitted with a number of additional functions including check functions () and counting. The additional functions (other than the indications of measured mass, i.e. gross, tare, net, totals, displayed either on the indicator or on an auxiliary or peripheral device) are not approved for trade use.

Note: In particular circumstances (e.g. in regard to weighbridge or public weighbridge operation), Trade Measurement legislation or other NMI Certificates of Approval may impose requirements in regard to specific features, methods of operation, or records to be provided (and in what form).

Certain features of this instrument are able to be configured by the installer or user. Whilst NMI believes that an acceptable configuration can be achieved for typical basic modes of operation, it may also be possible for the instrument to be configured to produce unacceptable configurations, and use of some configurations may be inappropriate in different situations. It is the responsibility of the installer and user to ensure that the configuration is acceptable and meets relevant requirements for any particular situation.

1.6 Interfaces

The indicator may be fitted with interfaces for the connection of auxiliary and/or peripheral devices. Any interfaces shall comply with clause 5.3.6 of document NMI R76 (the basic intent of which is that it shall not be possible to alter weighing results via the interfaces).

Any measurement data output from the instrument or its interfaces shall only be used for trade in compliance with NMI General Supplementary Certificate of Approval No S1/0B (in particular in regard to the data and its format).

Indications other than the indications of measured mass (i.e. gross, tare, net, totals) displayed either on the indicator or on an auxiliary or peripheral device, are not for trade use.

Instruments may be fitted with RS-232 serial data interface.

1.7 Verification Provision

Provision is made for the application of a verification mark.

1.8 Sealing Provision

Provision is made for access to the calibration switch to be sealed by means of a lead and wire type seal or similar with a drilled screw on the cover plate and a hole on the housing or a destructible label placed over the securing screw on the cover plate as shown in Figure 2a.

1.9 Software Version

The embedded software is designated oC1.01.

The software version and number can be seen in the power up display sequence (when the power is first applied to the instrument).

1.10 Descriptive Markings and Notices

Instruments carry the following markings:

Manufacturer's mark, or name written in full	Correct Weight Scales		
Model number	…….		
Indication of accuracy class	III or IIII		
Maximum capacity	*Max*	kg	#1
Minimum capacity	*Min*	kg	#1
Verification scale interval	*e* = ...	kg	#1
Maximum subtractive tare	*T* = -	kg	#2
Serial number of the instrument	……		
Pattern approval mark for the indicator	NMI S845		
Pattern approval mark for other components	……		#3

#1 These markings are shown near the display of the result.

#2 This marking is required if *T* is not equal to *Max*.

#3 May be located separately from the other markings.

In addition, instruments not greater than 100 kg capacity shall carry a notice stating NOT TO BE USED FOR TRADING DIRECT WITH THE PUBLIC, or similar wording.

2. Description of Variant 1 approved on 09/06/23

The model CWS318 PlusSSC (Figure 1b) which is similar to the pattern, except it has a stainless steel enclosure.

2.1 Sealing Provision

Provision is made for access to the calibration switch to be sealed by means of a lead and wire type seal or similar with drilled screws or destructible labels placed over the opposite sides of a join in the instrument housing as shown in Figure 2b.

3. Description of Variant 2 approved on 09/06/23

The model CSW318 PlusE (Figure 1c) which is similar to the pattern, except it has an LED display.

The embedded software is designated oE1.01.

4. Description of Variant 3 approved on 09/06/23

The model CSW318 PlusSSE (Figure 1d) which is similar to variant 1, except it has an LED display.

The embedded software is designated oE1.01.

TEST PROCEDURE No S845

Instruments shall be tested in accordance with any relevant tests specified in the National Instrument Test Procedures.

Maximum Permissible Errors

The maximum permissible errors are specified in Schedule 1 of the *National Trade Measurement Regulations 2009*.

FIGURE S845 – 1

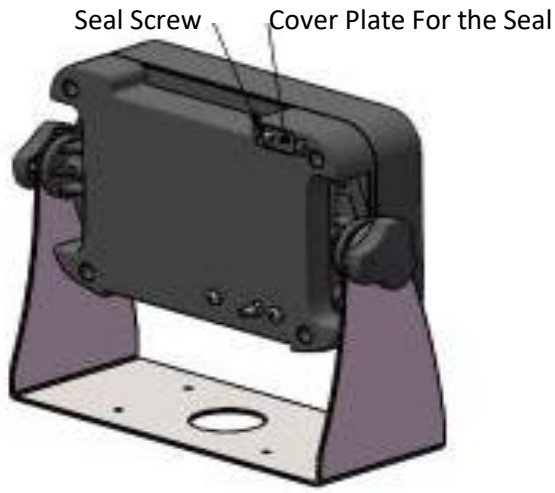
(a) Model CWS318 PlusC – Pattern

(b) Model CWS318 PlusSSC – Variant 1

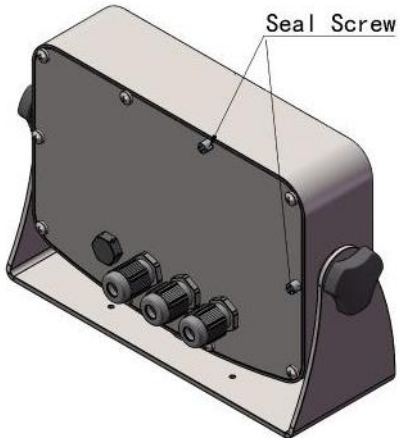
(c) Model CWS318 PlusE – Variant 2

(d) Model CWS318 PlusSSE – Variant 3

FIGURE S845 – 2



(a) Typical Sealing Method – Models CWS318 PlusC and CWS318 PLusE



(b) Typical Sealing Method – Models CWS318 PlusSSC and CWS318 PlusSSE

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