Australian Government
National Measurement Institute
Bradfield Road, West Lindfield NSW 2070

Supplementary Certificate of Approval

NMI S667

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.

CAS Model CI-200SCD Digital Indicator

submitted by CAS Corporation
482-841, 19 Ganap-Ri, Gwangjoek-myeon
Yangju-si, Gyeonggi-Do
Republic of Korea

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 July 2004.

This approval becomes subject to review on 1/11/2019, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern & variants 1 to 4 approved – certificate issued	16/10/14

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with approval number 'NMI S667' and only by persons authorised by the submittor.

Instruments incorporating a component purporting to comply with this approval shall be marked 'NMI S667' 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 General Supplementary Certificates No S1/0B.

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

Dr A Rawlinson

TECHNICAL SCHEDULE No S667

1. Description of Pattern approved on 16/10/14

A CAS model CI-200SCD digital mass indicator (Figure 1) which is approved for use with NMI-approved CAS WBK-D digital load cells only. The indicator may be configured to form part of:

- A single-interval class (III) non automatic weighing instrument with up to 4000 verification scale intervals; or (IIII)
- A multi-interval class (III) non automatic weighing instrument weighing instrument with up to two partial weighing ranges, of up to 4000 verification scale intervals in each range; or
- A single-interval class (IIII) non automatic weighing instrument with up to 1000 verification scale intervals; or
- A multi-interval class (IIII) non automatic weighing instrument weighing instrument with up to two partial weighing ranges, of up to 1000 verification scale intervals in each range.

Note: The maximum number of verification scale intervals (VSI) for an instrument shall be no more than the number of VSI specified in the approval documentation for the load cells used.

The instrument has a stainless steel enclosure with one LED 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).

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 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 for the CAS CS-200SCD instrument may be supplied by:

- an 12 V AC/DC mains adaptor; and/or
- an internal 6 V rechargeable battery.

Note: The AC/DC mains adaptor supplied for the instrument was a Perfect Power mains adaptor model PA-120150SN (12 V DC, 1.5 A) – the submittor should be consulted regarding the acceptability of alternative power supply units.

1.5 Additional Features

Other functions such as counting, percentage, and checkweighing (e.g. HIGH/OK/LOW) are available; however these are not approved for trade use.

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.

Instruments may also be fitted with a 'peak hold' function. This function shall not be used 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 No S1/0/B (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-232C/485 serial data interfaces.

1.7 Linearisation Facility

Instruments are fitted with a linearisation correction facility having up to four correction points.

1.8 Digital Load Cell Facility

The software version number of a CAS WBK-D series digital load cell can be accessed as follows (starting from the normal weighing mode):

- Pressing the ’5’ key for 3 seconds to start DLC mode.
- Press the ‘0’ key twice and then the ‘SET’ key to enter the d00 mode.
- Select a load cell ID number ‘x’.
- Press the ‘x’ key and then the ‘SET’ key. The software version number is displayed.
- Press the ‘SET’ key for 3 seconds to return to the normal weighing mode.

1.9 Verification Provision

Provision is made for the application of a verification mark.

1.10 Sealing Provision

Provision is made for access to the calibration switch within the instrument to be sealed using a ‘lead and wire’ type seal with drilled screws as shown in Figure 2.

1.11 Descriptive Markings and Notices

Instruments carry the following markings:

Manufacturer’s mark, or name written in full	CAS Corp Korea
Indication of accuracy class	(III) or (IIII)
Maximum capacity (for each range)	*Max* ..... kg #1
Minimum capacity (for each range)	*Min* ..... kg #1
Verification scale interval (for each range)	*e* = ... kg #1
Maximum subtractive tare	*T* = - ..... kg #2
Serial number of the instrument	.....
Pattern approval number for the indicator	NMI S667
Pattern approval number for other components	..... #3

#1 These markings are also shown near the display of the result if they are not already located there.

#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 carry a notice stating NOT TO BE USED FOR TRADING DIRECT WITH THE PUBLIC, or similar wording.

Note:

For multi-interval instruments the markings shall be as above, with the exception that the ‘Maximum capacity’ and ‘Verification scale interval’ shall be marked for both interval ranges, e.g. as follows:

Maximum capacity	Max …. / …. kg
Verification scale interval	*e* = ….. / ….. kg

2. Description of Variant 1 approved on 16/10/14

The CAS model CI-200SD (Figure 3) which is similar to the pattern but without a checkweighing function.

3. Description of Variant 2 approved on 16/10/14

The CAS model CI-200D (Figure 4) which is similar to the pattern but having a plastic housing and without a checkweighing function.

4. Description of Variant 3 approved on 16/10/14

The CAS model CI-201SD which is similar to the pattern but having an LCD display.

5. Description of Variant 4 approved on 16/10/14

The CAS model CI-201D (Figure 5) which is similar to the pattern but having a plastic housing and an LCD display.

TEST PROCEDURE

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*.

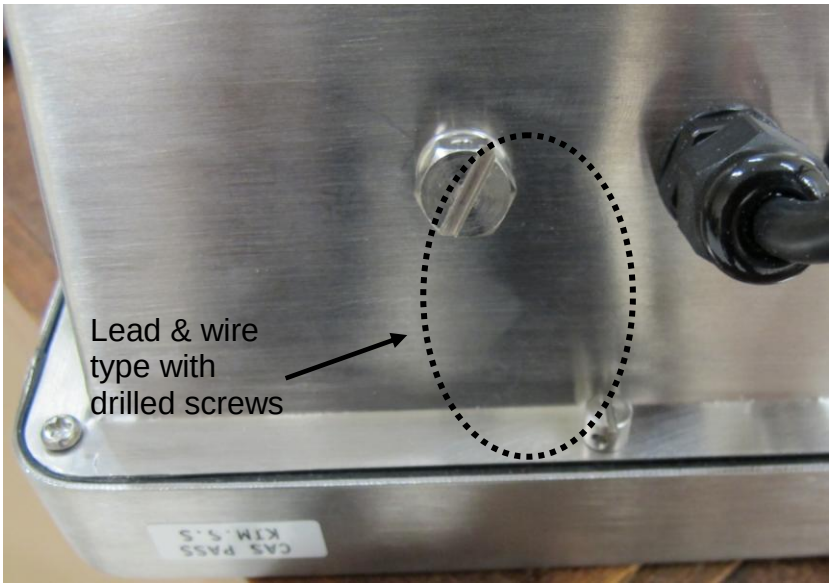
Tests

For multi-interval instruments with verification scale intervals of e_1, e_2 …, apply e_1 for zero adjustment, and maximum permissible errors apply e_1, e_2 …, as applicable for the load.

FIGURE S667 – 1

CAS Model CI-200SCD Digital Indicator (Pattern)

FIGURE S667 – 2



Typical Sealing of CAS Model CI-200SCD Digital Indicator

FIGURE S667 – 3

CAS Model CI-200SD Digital Indicator (Variant 1)

FIGURE S667 – 4

CAS Model CI-200D Digital Indicator (Variant 2)

FIGURE S667 – 5

CAS Model CI-201D Digital Indicator (Variant 4)

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