



Australian Government  
Department of Industry, Science,  
Energy and Resources

**National  
Measurement  
Institute**

36 Bradfield Road, West Lindfield NSW 2070

**Certificate of Approval**

**NMI 6/4C/316**

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 SWII-15C Weighing Instrument

submitted by CAS Corporation  
#262, Geurugogae-ro, Gwangjeok-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 1/07/25, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern & variants 1 to 3 approved – certificate issued	25/06/20

## CONDITIONS OF APPROVAL

### General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 6/4C/316' and only by persons authorised by the submitter.

It is the submitter'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 Certificate 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.*



**Darryl Hines**  
Manager  
Policy and Regulatory  
Services

TECHNICAL SCHEDULE No 6/4C/316

**1. Description of Pattern**

**approved on 25/06/20**

A CAS model SWII-15C class  $\text{III}$  self-indicating self-indicating multi-interval non-automatic weighing instrument (Figure 1 and Table 1) with a verification scale interval ( $e_1$ ) of 0.002 kg up to 6 kg and with a verification scale interval ( $e_2$ ) of 0.005 kg from 6 kg up to 15 kg. The minimum capacity is 0.04 kg.

Instruments are fitted with two integral 7-segment LCD displays for the operator and customer.

Instruments are fitted with a 226 mm x 187 mm platform.

Power for the SWII-15C instrument may be supplied by:

- an AC/DC mains adaptor; or/and
- an internal 4 V rechargeable battery; or/and
- 3 x 1.5 V D size dry battery.

Note: The AC/DC mains adaptor supplied for the instrument was a JFEC model JF005WR-0600050SH (6 V DC, 0.5 A) – the submitter should be consulted regarding the acceptability of alternative power supply units.

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

**1.1 Zero**

A zero-tracking device may be fitted.

The initial zero-setting device of the pattern has a nominal range of approximately 20% of the maximum capacity of the instrument.

The instrument maybe fitted with 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 5.998 kg capacity may be fitted.

**1.3 Levelling**

The Instrument is provided with adjustable feet and a level indicator.

The instrument is to be used in a level condition as indicated by the level indicator.

**1.4 Display Check**

A display check is initiated whenever power is applied.

**1.5 Verification Provision**

Provision is made for the application of a verification mark.

## 1.6 Interfaces


Instruments 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 Supplementary Certificate No S1/0B (in particular in regard to the data and its format).

Instruments may be fitted with RS232C and USB interfaces.

## 1.7 Descriptive Markings and Notices

Instruments carry the following markings:

Manufacturer's mark, or name written in full	CAS Corporation
Indication of accuracy class	
Pattern approval number for the instrument	NMI 6/4C/316
Maximum capacity	<i>Max</i> ..... g or kg #1
Minimum capacity	<i>Min</i> ..... g or kg #1
Verification scale interval	<i>e</i> = ..... g or kg #1
Maximum subtractive tare	<i>T</i> = - ..... g or kg #2
Serial number of the instrument	.....

#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*.

Notes:

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	<i>Max</i> ...../..... g or kg
Verification scale interval	<i>e</i> = ...../..... g or kg

## 1.8 Sealing Provision

Provision is made for the calibration adjustments to be sealed by means of lead and wire type seals of housing (Figure 3a) and destructible adhesive labels placed over the screws on the cover plate underneath the instrument (Figure 3b).

The ability to change calibration parameters is inhibited when the calibration jumper pins 1 and 2 remain open as shown in Figure 3c.

## 1.9 Software

The software is designed V 1.xx or AU 1.xx, where xx reflecting non-legally relevant part of the software.

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

**2. Description of Variant 1**

**approved on 25/06/20**

The CAS model SWII-C multi-interval instruments in certain other capacities as listed in Table 1 (the pattern is shown in **bold**).

Table 1

Maximum Capacity ( <i>Max<sub>1</sub>/Max<sub>2</sub></i> )	Minimum Capacity ( <i>Min</i> )	Verification Scale Interval ( <i>e<sub>1</sub>/e<sub>2</sub></i> )	Subtractive Tare Capacity ( <i>T = -...</i> )
1.5/3 kg	0.010 kg	0.0005/0.001 kg	1.4995 kg
3/6 kg	0.020 kg	0.001/0.002 kg	2.999 kg
<b>6/15 kg</b>	<b>0.040 kg</b>	<b>0.002/0.005 kg</b>	<b>5.998 kg</b>
15/30 kg	0.100 kg	0.005/0.010 kg	14.995 kg

**3. Description of Variant 2**

**approved on 25/06/20**

The CAS model SWII-C single interval instruments in certain capacities as listed in Table 2.

Table 2

Maximum Capacity ( <i>Max</i> )	Minimum Capacity ( <i>Min</i> )	Verification Scale Interval ( <i>e</i> )	Subtractive Tare Capacity ( <i>T = -...</i> )
3 kg	0.020 kg	0.001 kg	2.999 kg
6 kg	0.040 kg	0.002 kg	5.998 kg
15 kg	0.100 kg	0.005 kg	14.995 kg
30 kg	0.200 kg	0.010 kg	29.990 kg

**4. Description of Variant 3**

**approved on 25/06/20**

CAS model SWII-E (Figure 2) which is similar to the pattern and variants 1 to 2, except having LED displays for the operator and customer.

## TEST PROCEDURE No 6/4C/316

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 and multiple range instruments with verification scale intervals of  $e_1, e_2 \dots$ , apply  $e_1$  for zero adjustment, and maximum permissible errors apply  $e_1, e_2 \dots$ , as applicable for the load.

FIGURE 6/4C/316 – 1



CAS Model SWII-C Weighing Instrument (Pattern)

FIGURE 6/4C/316 – 2

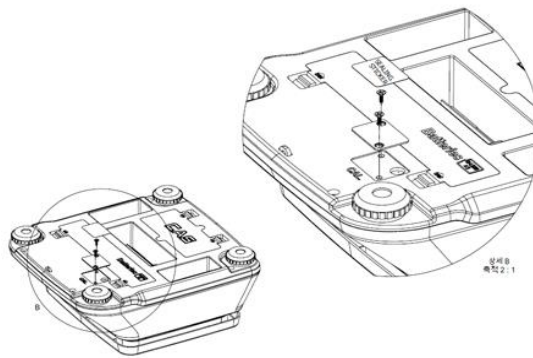


CAS Model SWII-E Weighing Instrument (Variant 3)

FIGURE 6/4C/316 – 3



(a) Sealing Arrangements - Lead and Wire Type (Housing)



(b) Sealing Arrangements – Destructible Adhesive Labels (Cover Plate)



(c) Showing Jumper Pins

Typical Sealing Method

~ End of Document ~