



Australian Government  
Department of Industry,  
Innovation and Science

## National Measurement Institute

36 Bradfield Road, West Lindfield NSW 2070

### Certificate of Approval NMI 6/4D/389

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.

Dibal Model CS-1155 Weighing Instrument

submitted by Rollex Australia Pty Ltd  
Unit 1, 51 Overlord Place  
Acacia Ridge QLD 4110

**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 becomes subject to review on 1/03/24, and then every 5 years thereafter.

#### DOCUMENT HISTORY

| Rev | Reason/Details  | Date    |
|-----|---|---------|
| 0   | Pattern & variants 1 to 8 approved – certificate issued | 8/02/19 |
|     |   |         |

## CONDITIONS OF APPROVAL

### General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 6/4D/389' 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.

### Special Conditions of Approval

Certain aspects of this instrument (in particular transaction record printing formats) are able to be configured by the user. Whilst NMI believes that acceptable formats can be achieved for typical basic sales modes, it is also possible for the instrument to be configured to produce unacceptable formats, and use of some formats may be inappropriate for different sales modes. It is the responsibility of the user to ensure that acceptable and appropriate formats are used in any particular situation.

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  
Pattern Approval, Policy and  
Licensing Section

TECHNICAL SCHEDULE No 6/4D/389

**1. Description of Pattern**

**approved on 8/02/19**

A Dibal model CS-1155 Double Body, class  non-automatic self-indicating price-computing multiple range weighing instrument (Figure 1 and Table 1) with a verification scale interval ( $e_1$ ) of 0.002 kg for the low range which has a minimum capacity of 0.04 kg and a maximum capacity of 6 kg, and with a verification scale interval ( $e_2$ ) of 0.005 kg for the high range which has a minimum capacity of 0.1 kg and a maximum capacity of 15 kg.

Instruments are configured so that the weighing range changes automatically with increasing load and when the indication remains at rest at zero. The range symbol changes from  $e=2g$  to  $e=5g$  whenever the instrument is in the high range.

Instruments are fitted with a pole-mounted 15 inch TFT colour touchscreen operator display/keyboard and a pole-mounted 7 inch TFT customer display. For each side, the screen display consists of displays for the presentation of tare, weight, unit price and price information, zero and net indications. Functions relating to product look up (PLU) items are integrated in the operator display.

Instruments display unit price to \$9999.99/kg and price to \$149999.85, and have a product look up (PLU) facility.

The instrument operates from mains AC power (240 V AC, 50 Hz).

The instrument has a 360 x 280 mm receptor plate.

Instruments are fitted with an integral printer, for printing of receipts or labels (#).

Any measurement data generated by the printer shall only be used for trade in compliance with Supplementary Certificate No S1/0/B (in particular in regard to the data and its format).

Instruments may be fitted with output sockets (output interfacing capability) for the connection of auxiliary and/or peripheral devices (see clause 1.5 below).

(#) Refer to the Special Conditions of Approval in the certificate.

**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 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 and/or non-automatic keyboard-entered pre-set subtractive tare device, each of up to 14.995 kg, may be fitted.

Pre-set tare values may be associated with product look up (PLU) items.

A separate display is provided for both pre-set tare and semi-automatic tare.

**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 Networking

A number of instruments may be connected in a network to share common PLU data, for totalisation across instruments, and to accumulate and retrieve management information.

In addition, the instrument may be interfaced with a computer for the collection of management data, the downloading of PLU data.

Note: The weighing and price computing functions of each weighing instrument in the network are independent, and the removal, repair or replacement of a particular weighing instrument does not necessitate re-verification of any other weighing instrument in the network.

## 1.5 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 S1/0/B (in particular in regard to the data and its format).

Instruments may be fitted with Ethernet, USB, RS232, Scanner and cash drawer interfaces.

## 1.6 Descriptive Markings and Notices

Instruments are marked with the following data, together in one location, in the form shown at right:

|  |  |
|--|--|
| Manufacturer's mark, or name written in full | Dibal  |
| Name or mark of manufacturer's agent         | Rollex Australia Pty Ltd   |
| Indication of accuracy class                 |  |
| Pattern approval number for the instrument   | NMI 6/4D/389   |
| 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              | .....  |
| Special temperature range                    | 0° C to 40° C  |

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

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

Note:

For multiple range instruments, the maximum capacity, minimum capacity and verification scale interval for each range shall be marked, with an indication of the range to which they apply, e.g.

| Range (*)               | 1       |                         | 2       |
|-------------------------|---------|-------------------------|---------|
| <i>Max</i> <sub>1</sub> | .... kg | <i>Max</i> <sub>2</sub> | .... kg |
| <i>Min</i> <sub>1</sub> | .... kg | <i>Min</i> <sub>2</sub> | .... kg |
| <i>e</i> <sub>1</sub> = | .... kg | <i>e</i> <sub>2</sub> = | .... kg |

## 1.7 Verification Provision

Provision is made for the application of a verification mark.



## 1.8 Sealing Provision

Provision is made for the calibration adjustments to be sealed by means of destructible adhesive labels placed over the securing screws on the cover plate underneath the instrument as shown in Figure 2a.

## 1.9 Software

The instrument may be fitted with Windows XP Embedded or Windows 7 embedded operating software.

The Legally relevant software parts include:

- Firmware AD board (SW00.01) version 101.
- PC software (SW03, SW04, SW05) version 210-Q. The software version 210-Q is identified by a checksum number B389AFBD. The software version and checksum number are displayed after clicking the “version” button in the electronic descriptive markings screen on the top left corner (Figure 3a).
- Dibal CS1100 application software. For checking the software version, firstly double click the  icon (Figure 3b) to open the application and then press the  button in the main screen of the application. The Dibal CS1100 software version will be displayed as shown in Figure 3c.

## 2. Description of Variant 1

**approved on 8/02/19**

Certain other capacities of the Dibal model CS-1155 multiple range instruments as listed in Table 1:

Table 1

| Maximum Capacity<br>( $Max_1 / Max_2$ )<br>(kg) | Minimum Capacity<br>( $Min_1 / Min_2$ )<br>(kg) | Verification Scale Interval<br>( $e_1/e_2$ )<br>(kg) | Subtractive Tare Capacity<br>(kg) | HBM Load Cell Model       |
|---|---|--|-----------------------------------|---------------------------|
| <b>6/15</b>                                     | <b>0.04/0.1</b>                                 | <b>0.002/0.005</b>                                   | <b>14.995</b>                     | <b>PW2CC3MR<br/>18 kg</b> |
| 15/30   | 0.1/0.2   | 0.005/0.010  | 29.990                            | PW2CC3MR<br>36 kg         |

Note: The Bold text indicates the specification of pattern.

## 3. Description of Variant 2

**approved on 8/02/19**

Dibal model CS-1155 Double Body instrument (Figure 4) is similar to the pattern and variant 1 but with a 15 inch TFT customer display.

## 4. Description of Variant 3

**approved on 8/02/19**

Dibal model CS-1157 Double Body instrument (Figure 5) is similar to the pattern and variant 1 but fitted with additional printer mounted beside the operator for receipt only.

**5. Description of Variant 4** **approved on 8/02/19**

Dibal model CS-1157 Double Body instrument (Figure 6) is similar to variant 3 but with a 15 inch TFT customer display.

**6. Description of Variant 5** **approved on 8/02/19**

Dibal model CS-1155 Hanging weighing instrument (Figure 7a and 7b) which is similar to pattern and variants 1 and 2, but in single interval instrument as listed in Table 2 and having a suspended load receptor. The instrument is firmly mounted to a mounting rod and in a fixed position. The diameter of the load receptor plate is 310 mm.

Provision is made for the calibration adjustments to be sealed by means of a destructible adhesive label placed over the securing screw on the cover plate underneath the instrument as shown in Figure 2b.

Table 2

| Maximum Capacity<br>( <i>Max</i> )<br>(kg) | Minimum Capacity<br>( <i>Min</i> )<br>(kg) | Verification Scale Interval<br>( <i>e</i> )<br>(kg) | Subtractive Tare Capacity<br>(kg) | HBM Load Cell Model |
|--|--|---|-----------------------------------|---------------------|
| 15   | 0.1  | 0.005   | 14.995                            | PW2CC3MR<br>18 kg   |
| 30   | 0.2  | 0.010   | 29.990                            | PW2CC3MR<br>36 kg   |

**7. Description of Variant 6** **approved on 8/02/19**

Dibal model CS-1157 Hanging weighing instrument (Figure 8a and Figure 8b) which is similar to variant 5 except the instrument has 2 printers.

**8. Description of Variant 7** **approved on 8/02/19**

The pattern and variants may be connected in a network with compatible approved Dibal instruments, to share common PLU data, for totalisation across instruments ('floating system'), and to accumulate and retrieve management information.

In addition, the network may be interfaced with a computer for the collection of management data, or the downloading of PLU data.

Note 1: The weighing and price-computing functions of each weighing instrument in the network are independent, and the removal, repair or replacement of a particular weighing instrument does not necessitate reverification of any other weighing instrument in the network.

Note 2: The use of a totalisation across instruments ('floating system') arrangement in this variant is not approved for use in self-service arrangement.

**9. Description of Variant 8**

**approved on 8/02/19**

The pattern or variants without a customer display (Figure 9) in which case instruments are either:

- (a) NOT FOR TRADING DIRECT WITH THE PUBLIC in which case instruments carry a notice to this effect; or
- (b) Used in a self-service arrangement which provides a product look up (PLU) touch screen display, as well as providing mass, unit price, price displays.

Note 1: It is not required that access to the zero setting facility be available to customers in a self-service arrangement. However access to the zero setting facility shall be available to staff of the particular store, and it is expected that measures will be in place to ensure that the zero condition of the instrument is checked regularly.

Note 2: When used in a self-service arrangement, all keys on the touch screen keyboard, other than the REZERO key, may be disabled or removed. The TARE key is not functional with this arrangement. The use of totalisation across instruments ('floating system') arrangement is not approved for use in self-service arrangement.

**10. Description of Variant 9**

**approved on 8/02/19**

The pattern and variants 2 to 4 and variant 8 may be configured to single interval instruments with the specifications as listed in Table 3.

Table 3

| Maximum Capacity<br>(Max)<br>(kg) | Minimum Capacity<br>(Min)<br>(kg) | Verification Scale Interval<br>(e)<br>(kg) | Subtractive Tare Capacity<br>(kg) | HBM Load Cell Model |
|-----------------------------------|-----------------------------------|--|-----------------------------------|---------------------|
| 6                                 | 0.04                              | 0.002                                      | 5.998                             | PW2CC3MR<br>18 kg   |
| 15                                | 0.1                               | 0.005                                      | 14.995                            | PW2CC3MR<br>18 kg   |
| 30                                | 0.2                               | 0.01                                       | 29.990                            | PW2CC3MR<br>36 kg   |

**11. Description of Variant 10**

**approved on 8/02/19**

The pattern or variants, having its software separated into 'legally relevant software' and 'application program(s)' (Figure 10a and 10b).

The 'legally relevant software' interfaces with the weighing hardware, carries out zeroing, computation of price based on the weight and unit price values, tare and pre-set tare functions, and displays results on the indicator(s) of the instrument (including tare value, weight value, unit price and price). The 'legally relevant software' includes

- Firmware AD board (SW00.01) version 101,
- PC software (SW03, SW04, SW05) version 210-Q (Figure 3a).

An 'application program' interfaces to the legally relevant software to initiate zero and tare operations and pre-set tare functions and to provide unit price information

(including providing applicable pre-set tare and unit price values). The 'application program' controls the instrument touch screen (other than the area controlled by the 'legally relevant software' mentioned above), and the printing of label or transaction records. It may provide, or interface to, other software for the storage of product-look-up (PLU) data (including pre-set tare and unit price values), and other purposes.

#### **11.1 Notes/Conditions:**

- The legally relevant software and scale integration tool must be provided.
- Only submitter-authorized application software is permitted.
- Regardless of the application software used, the instrument operation must comply with this approval and relevant NMI requirements.
- Totalisation of items shall not occur without a transaction being provided.

### TEST PROCEDURE No 6/4D/389

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 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.

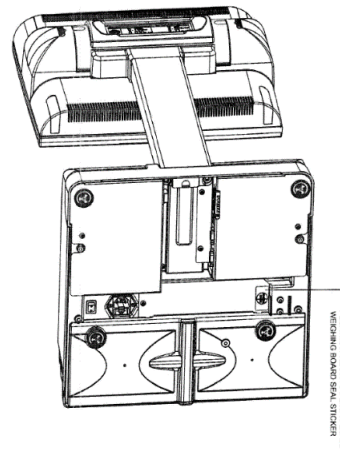


FIGURE 6/4D/389 – 1

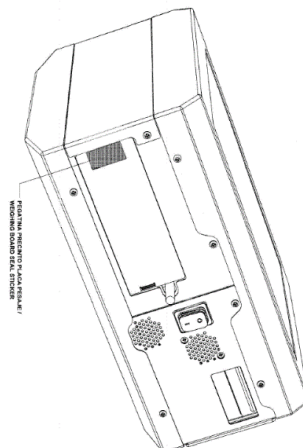


Dibal Model CS-1155 Double Body Weighing Instrument (Pattern)

FIGURE 6/4D/389 – 2

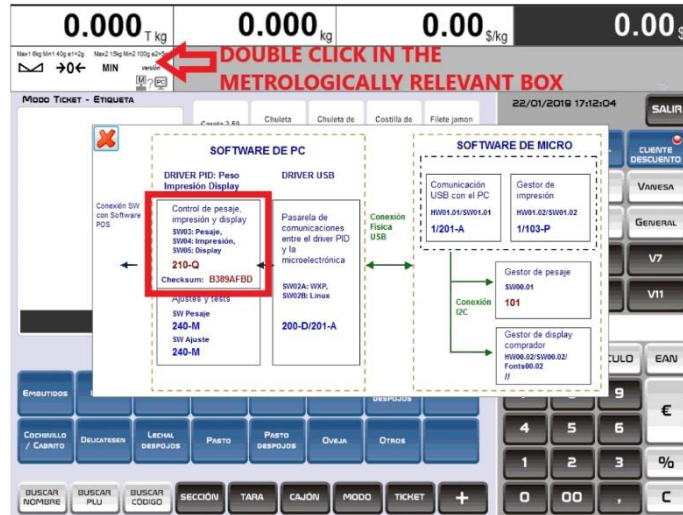


(a) Seal location in Double Body Scale format

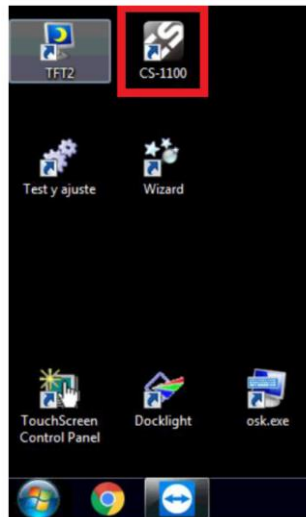


(b) Seal location of hanging scale

FIGURE 6/4D/389 – 3



(3a) 210-Q software version screen



(3b) Dibal CS1100 Software Screen



(3c) Dibal CS1100 Software Version

FIGURE 6/4D/389 – 4



Dibal Model CS-1155 Double Body Weighing Instrument (Variant 2)

FIGURE 6/4D/389 – 5



Dibal Model CS-1157 Double Body Weighing Instrument (Variant 3)

FIGURE 6/4D/389 – 6



Dibal Model CS-1157 Double Body Weighing Instrument (Variant 4)

FIGURE 6/4D/389 – 7



(a) Dibal Model CS-1155 Hanging Weighing Instrument with 7 inch customer screen (Variant 5)



(b) Dibal Model CS-1155 Hanging Weighing Instrument with 15 inch customer screen (Variant 5)

FIGURE 6/4D/389 – 8



(a) Dibal Model CS-1157 Hanging Weighing Instrument with 7 inch customer screen (Variant 6)



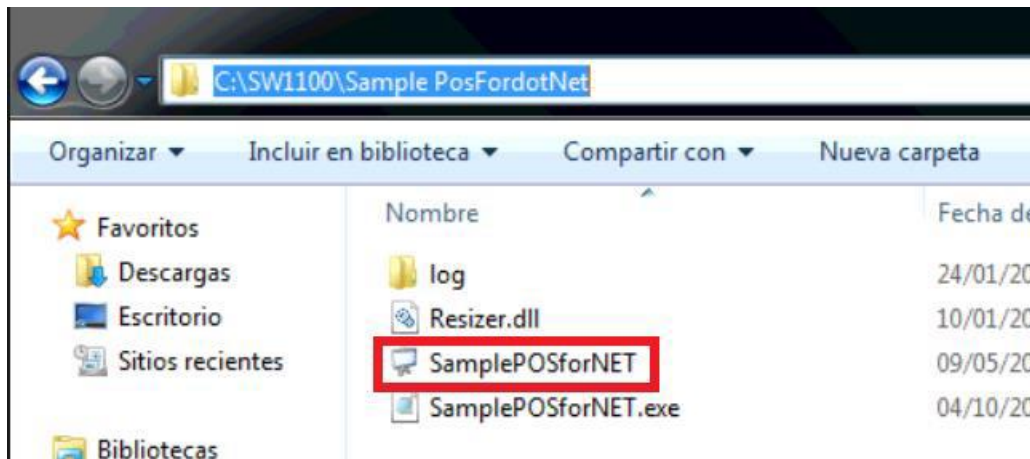
(b) Dibal Model CS-1157 Hanging Weighing Instrument with 15 inch customer screen (Variant 6)

FIGURE 6/4D/389 – 9

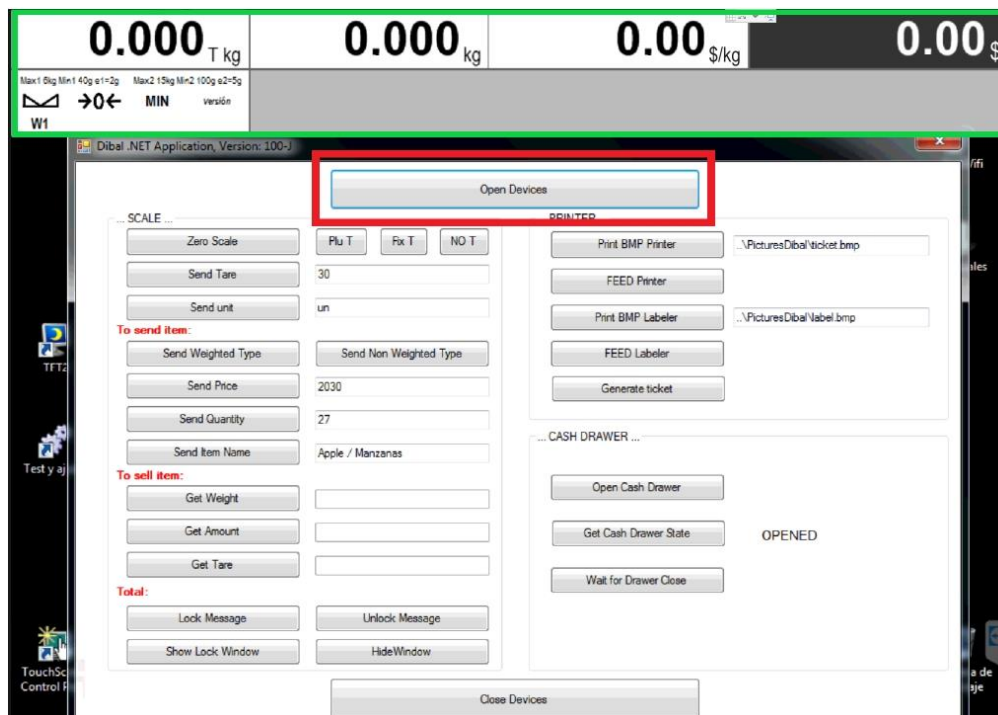


Dibal Model CS-1155 Double Body Weighing Instrument for self-service application (Variant 8)

FIGURE 6/4D/389 – 10



(10a) Sample of interface program for connecting instrument to third party application program.



(10b) Sample of interface program after it is opened. The display inside the green rectangular shape is legal metrological relevant information which shall not be changed by third party application program, and shall be displayed after the “Open Devices” command has been sent by the third party application program. In this sample application is by pressing the “Open Device” button.

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