



Australian Government  
Department of Industry,  
Science and Resources

**National  
Measurement  
Institute**

36 Bradfield Road, West Lindfield NSW 2070

**Certificate of Approval**

**NMI 6/4C/329**

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.

Ohaus Defender 3000 model i-D33P15B1R1AU Weighing Instrument

submitted by Ohaus Australia Pty Ltd  
Unit 3, 220 Turner Street  
Port Melbourne VIC 3207

**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 5 approved – certificate issued	24/08/23

## CONDITIONS OF APPROVAL

### General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 6/4C/329' 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 of Approval No S1/0B.

This approval shall NOT be used in conjunction with General Certificate of Approval No 6B/0.

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/329

**1. Description of Pattern**

**approved on 24/08/23**

An Ohaus Defender 3000 model i-D33P15B1R1AU class  $\text{III}$  single interval self-indicating non-automatic weighing instrument (Figure 1a) of 15 kg maximum capacity with a verification scale interval of 0.005 kg, and with a minimum capacity of 0.1 kg.

Instruments are marked 'NOT FOR TRADING DIRECT WITH THE PUBLIC' (or similar wording) unless the maximum capacity of the instrument is greater than 100 kg (i.e. as may be the case for variant 1).

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

**1.1 Basework**

The Ohaus model i-D15B1RAU basework has the load receptor directly supported by a single load cell. The load receptor has a nominal dimension of 305 mm × 355 mm, and uses a B1 type platform (stainless steel platform supported by a painted steel frame) as shown in Figure 1c.

**1.2 Load cell**

An Ohaus model LBZ3-D-C3-30kg load cell of 30 kg maximum capacity is used.

**1.3 Indicator**

An Ohaus Defender 3000 model i-DT33P (Figure 2a) digital indicator is used.

The indicator has an ABS enclosure with an LCD display for display of the weight value.

The indicator is mounted on a column attached to the base (Figures 1a).

**1.4 Zero**

A zero-tracking device may be fitted.

The initial zero-setting device of the pattern 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.

**1.5 Tare**

An automatic subtractive tare device and/or semi-automatic subtractive tare device and/or pre-set tare device, each of up to maximum capacity of the instrument, may be fitted.

**1.6 Display Check**

A display check is initiated whenever power is applied.

**1.7 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.

## 1.8 Power Supply

The instrument operates from AC mains power (100 – 240 V AC, 50/60Hz), or an internal rechargeable 6 V DC sealed lead-acid battery.

## 1.9 Additional Features

Instruments may be fitted with certain additional functions including counting, check weighing and totalisation. 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.

The counting and the check weighing functions shall not be used for trade use.

## 1.10 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 R 76 (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 RS232.

## 1.11 Verification Provision

Provision is made for the application of a verification mark.

## 1.12 Descriptive Markings and Notices

Instruments carry the following markings:

Manufacturer's mark, or name written in full	Ohaus Corporation
Indication of accuracy class	
Pattern approval number for the instrument	NMI 6/4C/329
Maximum capacity	Max ...../..... g or kg #1
Minimum capacity	Min ..... g or kg #1
Verification scale interval	e = ...../..... g or kg #1
Serial number of the instrument	.....

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

In addition, instruments shall carry a notice stating NOT TO BE USED FOR TRADING DIRECT WITH THE PUBLIC, or similar wording (see 1. *Description of Pattern* above).

## 1.13 Sealing Provision

Provision is made for the calibration to be sealed by setting the calibration switch on the main board within the instrument to 'ON' position (Figure 6a), and then preventing access within the instrument housing.

The switch status can be seen in the switch-on display sequence when the power is first applied to the instrument.

- If the switch is in the 'ON' position, the instrument will display 'LFt ON' as shown in Figure 6b. In this case the instrument may be verified.
- Otherwise the instrument will not display 'LFt ON' in the switch-on display sequence in which case the instrument should not be verified until the switch has been correctly set to the 'ON' position.

Sealing to prevent access within the instrument housing may be achieved by the application of using a destructive label placed over the securing screw, or wire seal through the drilled screw as shown in Figure 4.

#### 1.14 Software

The legally relevant software is designated Sr 1.xx, where 'xx' refers to the identification of non-legally relevant 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 24/08/23**

The Ohaus Defender 3000 model i-D33P series single interval instruments in certain other capacities as listed in Table 1 (the pattern is shown in **bold**).

#### 3. Description of Variant 2 **approved on 24/08/23**

The Ohaus Defender 3000 model i-D33P series instruments which are similar to the pattern but with an i-DT33P indicator attached to the basework in certain capacities as listed in Table 2 and as shown in Figure 1b.

#### 4. Description of Variant 3 **approved on 24/08/23**

The Ohaus Defender 3000 model i-DT33XW series instruments which are similar to the pattern but with an Ohaus i-DT33XW digital indicator (Figure 2b) and uses a stainless steel construction C1 type platform (Figure 3c) which has the load receptor directly supported by a Mettler Toledo SLP 532 or SLP 533 load cell in certain single interval capacities as listed in Table 3 and as shown in Figure 3a.

The indicator has a stainless steel enclosure with an LCD display for display of the weight value.

#### 4.1 Sealing Provision

Provision is made for the calibration to be sealed by setting the calibration switch on the main board within the instrument to 'ON' position (Figure 6a), and then preventing access within the protective cover.

The switch status can be seen in the switch-on display sequence when the power is first applied to the instrument.

- If the switch is in the 'ON' position, the instrument will display 'LFt ON' as shown in Figure 6b. In this case the instrument may be verified.
- Otherwise the instrument will not display 'LFt ON' in the switch-on display sequence in which case the instrument should not be verified until the switch has been correctly set to the 'ON' position.

Sealing to prevent access within the protective cover may be achieved by the application of using a destructive label placed over the securing screw in the protective cover, or 'lead and wire' type seal with drilled screws as shown in Figure 5.

## 5. Description of Variant 4

approved on 24/08/23

The Ohaus Defender 3000 model i-DT33XW series instruments which are similar to variant 3 but with an i-DT33XW indicator attached to the basework in certain capacities as listed in Table 4 and as shown in Figure 3b.

## 6. Description of Variant 5

approved on 24/08/23

Single load cell baseworks of this approval used with a compatible approved indicator (Supplementary approval with reference to document **NMI R 76 dated October 2015 or later**) provided the conditions set out below are met. In this case instruments may be known according to the basework model number (e.g., model i-D15B1RAU). Any devices and features described in the approval for the indicator shall apply to this instrument.

Note: Only submitor-authorized manufacture or conversion is permitted under this variant.

The basework is connected to the indicator directly without lengthening the load cell cable.

The minimum temperature limit of the instrument is equal to the greater of the lower temperature limit of the basework or indicator. The maximum temperature limit is equal to the lesser of the upper temperature limit of the basework or indicator. The temperature range of the instrument shall be a minimum of 30 °C (e.g., 0 °C to 40 °C or 5 °C to 35 °C).

Note: Where no special temperature limits are given in the **Descriptive Markings and Notices**, then the temperature limits are -10 °C to 40 °C. If the temperature limits of the instrument are other than -10 °C to +40 °C, additional marking of special temperature limits must be added to the existing descriptive markings.

In addition to the markings specified in clause **1.12 Descriptive Markings and Notices**, instruments are marked with the NMI approval number for the indicator used, together in the same location. Where the resulting instrument is a multiple range instrument, appropriate markings regarding the ranges and scale intervals shall be provided in accordance with the Supplementary Certificate for the indicator.

The approved single load cell baseworks and their limiting characteristics are given in Tables 5a to 6b.

The conditions to be met are given below, and include calculations using the following terms:

$E_x$  = Excitation voltage from indicator (V)

$LC\_Sens$  = Load cell sensitivity (mV/V)

$E_{max}$  = Load cell maximum capacity (kg)

$IZSR$  = Initial zero setting range for the indicator (kg) (positive range only)

$DL$  = Dead load of load receptor (kg)

$T^+$  = Additive tare capacity (kg)

$U_{min}$  = Minimum input voltage for the indicator (mV)

Indicator Sensitivity = Minimum sensitivity value per verification scale interval for the indicator ( $\mu$ V)

$e$  = verification scale interval of the instrument (kg). ***In the case of multiple range or multi-interval instruments, any reference to 'e' refers to the smallest verification scale interval (i.e.  $e_1$ ).***

$e_1, e_2, \dots$  = verification scale interval of each range for multiple range instruments (or partial weighing ranges for multi-interval instruments),  $e_1$  refers to the smallest verification interval.

***Max*** = the maximum capacity of the instrument. This refers to the maximum capacity of the highest range (i.e.  $Max_r$  for multiple range instruments).

***Max<sub>r</sub>*** = the maximum capacity of the instrument for a multiple range instrument, i.e. the maximum capacity of the highest range.

***Max<sub>1</sub> Max<sub>2</sub> ...*** = the maximum capacity of the various ranges for a multiple range instrument.  $Max_1$  refers to the maximum capacity of the smallest range.

***n<sub>LC</sub>*** = the maximum number of verification intervals for which the load cell or basework is approved (e.g. 3000 for a 'class C3' load cell).

***DR*** = dead load output return value for the load cell. Note: Many load cells do not have a specified DR value.

The conditions are:

- The excitation voltage used is within the range approved for the baseworks.
- The load cell input impedance is within the impedance range approved for the indicator.
- The maximum load applied to the load cell (live load plus any dead load) does not exceed the load cell maximum capacity, i.e.

$$Max + DL + IZSR + T^+ \leq E_{max}$$

- The verification scale interval is not less than the minimum value specified. ***In the case of multiple range or multi-interval instruments, the verification scale interval refers to the smallest verification scale interval (i.e.  $e_1$ ).***
- The number of verification scale intervals of the instrument is less than or equal to the *maximum number of verification intervals* specified for the load cell and also for the approved indicator. ***In the case of multiple range or multi-interval instruments, the number of verification scale intervals refers to the largest number in any weighing range or partial weighing range (i.e. the largest of  $Max_1/e_1, Max_2/e_2$  etc).***
- The signal voltage per verification scale interval is not less than the minimum sensitivity value per verification scale interval for the indicator (as specified in the approval documentation for the indicator), i.e.

$$\text{Indicator Sensitivity} \leq 1000 \times Ex \times LC\_Sens \times e / E_{max}$$

In the case of multiple range or multi-interval instruments,  $e$  is replaced by  $e_1$ .

- The input voltage for the indicator (when the basework is unloaded) is not less than the minimum input voltage for the indicator (as specified in the approval documentation for the indicator), i.e.

$$U_{min} \leq Ex \times LC\_Sens \times DL / E_{max}$$

Where  $U_{min}$  is not given in the Supplementary Certificate of Approval for the indicator,  $U_{min} = 0$  mV.

**Additional requirement for multiple range operation:**

***In the case of indicators which are configured to form a multiple range weighing instrument the instrument shall comply with the following conditions:***

***(i) The smallest verification scale interval ( $e_1$ ) shall satisfy the following:***

$$e_1 \geq DR \times Max_r / E_{max}$$

***Of course (i) cannot apply where a value of 'Dead load output return' DR is not given. In this case the smallest verification scale interval ( $e_1$ ) shall satisfy the following:***

$$e_1 \geq 0.4 \times Max_r / n_{LC}$$

***Additional requirement for multi-interval operation:***

***In the case of indicators which are configured to form a multi-interval weighing instrument the instrument shall comply with the following conditions:***

***(i) The smallest verification scale interval ( $e_1$ ) shall satisfy the following:***

$$e_1 \geq 2 \times DR \times Max / E_{max}$$

***Of course (i) cannot apply where a value of 'Dead load output return' DR is not given. In this case the smallest verification scale interval ( $e_1$ ) shall satisfy the following:***

$$e_1 \geq Max / n_{LC}$$

***(ii) The instrument shall also satisfy the following condition with the exception of the last partial weighing range:***

$$Max_i / e_{i+1} \geq 500 \text{ (e.g. } Max_1/e_2 \geq 500 \text{ and } Max_2/e_3 \geq 500)$$

#### TEST PROCEDURE No 6/4C/329

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

The instrument shall not be adjusted to anything other than as close as practical to zero error, even when these values are within the maximum permissible errors.

#### **Maximum Permissible Errors**

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

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.



TABLE 1

Instrument Model	Maximum Capacity ( <i>Max</i> ) (kg)	Minimum Capacity ( <i>Min</i> ) (kg)	Verification Scale Interval ( <i>e</i> ) (kg)	Basework Model	Platform Size (mm x mm)	Ohaus Load Cell Model	Load Cell Maximum Capacity, $E_{max}$ (kg)
<b>i-D33P15B1R1AU</b>	<b>15</b>	<b>0.1</b>	<b>0.005</b>	<b>i-D15B1RAU</b>	<b>305 x 355</b>	<b>LBZ3-D-C3-30kg</b>	<b>30</b>
i-D33P30B1R1AU	30	0.2	0.01	i-D30B1RAU	305 x 355	LBZ3-A-C3-50kg	50
i-D33P60B1R1AU	60	0.4	0.02	i-D60B1RAU	305 x 355	LBZ3-A-C3-100kg	100
i-D33P60B1L2AU	60	0.4	0.02	i-D60B1LAU	420 x 550	LBZ3-B-C3-100kg	100
i-D33P150B1L2AU	150	1	0.05	i-D150B1LAU	420 x 550	LBZ3-B-C3-250kg	250
i-D33P150B1X2AU	150	1	0.05	i-D150B1XAU	500 x 650	LBZ3-C-C3-250kg	250
i-D33P300B1X2AU	300	2	0.1	i-D300B1XAU	500 x 650	LBZ3-C-C3-500kg	500
i-D33P300B1V3AU	300	2	0.1	i-D300B1VAU	600 x 800	LBZ3-C-C3-500kg	500
i-D33P600B1V3AU	600	4	0.2	i-D600B1VAU	600 x 800	LBZ3-C-C3-750kg	750

TABLE 2

Instrument Model	Maximum Capacity ( <i>Max</i> ) (kg)	Minimum Capacity ( <i>Min</i> ) (kg)	Verification Scale Interval ( <i>e</i> ) (kg)	Basework Model	Platform Size (mm x mm)	Ohaus Load Cell Model	Load Cell Maximum Capacity, $E_{max}$ (kg)
i-D33P15B1R5AU	15	0.1	0.005	i-D15B1RAU	305 x 355	LBZ3-D-C3-30kg	30
i-D33P30B1R5AU	30	0.2	0.01	i-D30B1RAU	305 x 355	LBZ3-A-C3-50kg	50
i-D33P60B1R5AU	60	0.4	0.02	i-D60B1RAU	305 x 355	LBZ3-A-C3-100kg	100
i-D33P60B1L5AU	60	0.4	0.02	i-D60B1LAU	420 x 550	LBZ3-B-C3-100kg	100
i-D33P150B1L5AU	150	1	0.05	i-D150B1LAU	420 x 550	LBZ3-B-C3-250kg	250
i-D33P150B1X5AU	150	1	0.05	i-D150B1XAU	500 x 650	LBZ3-C-C3-250kg	250
i-D33P300B1X5AU	300	2	0.1	i-D300B1XAU	500 x 650	LBZ3-C-C3-500kg	500

TABLE 3

Instrument Model	Maximum Capacity ( <i>Max</i> ) (kg)	Minimum Capacity ( <i>Min</i> ) (kg)	Verification Scale Interval ( <i>e</i> ) (kg)	Basework Model	Platform Size (mm x mm)	Mettler Toledo Load Cell Model	Load Cell Maximum Capacity, $E_{max}$ (kg)
i-D33XW15C1R6AU	15	0.1	0.005	i-D15C1RAU	305 x 355	SLP532-30	30
i-D33XW30C1R6AU	30	0.2	0.01	i-D30C1RAU	305 x 355	SLP532-50	50
i-D33XW60C1R6AU	60	0.4	0.02	i-D60C1RAU	305 x 355	SLP532-100	100
i-D33XW60C1L7AU	60	0.4	0.02	i-D60C1LAU	420 x 550	SLP532-100	100
i-D33XW150C1L7AU	150	1	0.05	i-D150C1LAU	420 x 550	SLP532-300	300
i-D33XW150C1X7AU	150	1	0.05	i-D150C1XAU	500 x 650	SLP533-300	300
i-D33XW300C1X7AU	300	2	0.1	i-D300C1XAU	500 x 650	SLP533-500	500

TABLE 4

Instrument Model	Maximum Capacity ( <i>Max</i> ) (kg)	Minimum Capacity ( <i>Min</i> ) (kg)	Verification Scale Interval ( <i>e</i> ) (kg)	Basework Model	Platform Size (mm x mm)	Mettler Toledo Load Cell Model	Load Cell Maximum Capacity, $E_{max}$ (kg)
i-D33XW15C1R5AU	15	0.1	0.005	i-D15C1RAU	305 x 355	SLP532-30	30
i-D33XW30C1R5AU	30	0.2	0.01	i-D30C1RAU	305 x 355	SLP532-50	50
i-D33XW60C1R5AU	60	0.4	0.02	i-D60C1RAU	305 x 355	SLP532-100	100
i-D33XW60C1L5AU	60	0.4	0.02	i-D60C1LAU	420 x 550	SLP532-100	100
i-D33XW150C1L5AU	150	1	0.05	i-D150C1LAU	420 x 550	SLP532-300	300
i-D33XW150C1X5AU	150	1	0.05	i-D150C1XAU	500 x 650	SLP533-300	300
i-D33XW300C1X5AU	300	2	0.1	i-D300C1XAU	500 x 650	SLP533-500	500

Table 5a – Basework with Ohaus Load Cell

Basework Model	i-D15B1RAU	i-D30B1RAU	i-D60B1RAU	i-D60B1LAU	i-D150B1LAU
Platform Size	305 mm x 355 mm			420 mm x 550 mm	
Basework Maximum Capacity	15 kg	30 kg	60 kg	60 kg	150 kg
Typical Verification Scale Interval	0.005 kg	0.01 kg	0.02 kg	0.02 kg	0.05 kg
Maximum Number of Verification Scale Intervals ( $n_{max}$ )	3000				
Dead Load of Platform	4 kg	4 kg	4 kg	8.4 kg	8.4 kg
Load Cell Used	LBZ3-D-C3-30kg	LBZ3-A-C3-50kg	LBZ3-A-C3-100kg	LBZ3-B-C3-100kg	LBZ3-B-C3-250kg
Load Cell Maximum Capacity $E_{max}$	30 kg	50 kg	100 kg	100 kg	250 kg
Maximum Load Cell Scale Interval $n_{LC}$	3000				
Minimum Value of Verification Scale Interval for Basework	0.005 kg	0.01 kg	0.02 kg	0.02 kg	0.05 kg
Minimum Dead Load Output Return DR	0.005 kg	0.0059 kg	0.0119 kg	0.0067 kg	0.0167 kg
Operating Temperature Range	-10 °C to +40 °C				
Output Rating at $E_{max}$	2 mV/V				
Input Impedance	409 $\Omega$	406 $\Omega$			
Excitation Voltage	5 – 12 V (AC / DC)				
Cable Length of Load Cell	2 m				
Number of Leads of Load Cell (plus shield)	4				

Table 5b – Basework with Ohaus Load Cell

Basework Model	i-D150B1XAU	i-D300B1XAU	i-D300B1VAU	i-D600B1VAU
Platform Size	500 mm x 650 mm		600 mm x 800 mm	
Basework Maximum Capacity	150 kg	300 kg	300 kg	600 kg
Typical Verification Scale Interval	0.05 kg	0.1 kg	0.1 kg	0.2 kg
Maximum Number of Verification Scale Intervals ( $n_{max}$ )	3000			
Dead Load of Platform	13.95 kg	14.01 kg	27 kg	27 kg
Load Cell Used	LBZ3-C-C3-250kg	LBZ3-C-C3-500kg	LBZ3-C-C3-500kg	LBZ3-C-C3-750kg
Load Cell Maximum Capacity $E_{max}$	250 kg	500 kg	500 kg	750 kg
Maximum Load Cell Scale Interval $n_{LC}$	3000			
Minimum Value of Verification Scale Interval for Basework	0.05 kg	0.1 kg	0.1 kg	0.2 kg
Minimum Dead Load Output Return DR	0.0417 kg	0.025	0.025	0.0375
Operating Temperature Range	-10 °C to +40 °C			
Output Rating at $E_{max}$	2 mV/V			
Input Impedance	406 $\Omega$			
Excitation Voltage	5 – 12 V (AC / DC)			
Cable Length of Load Cell	3 m			
Number of Leads of Load Cell (plus shield)	6			

TABLE 6a – Basework with Mettler Toledo SLP 532 Load Cells

Basework Model	i-D15C1RAU	i-D30C1RAU	i-D60C1RAU	i-D60C1LAU	i-D150C1LAU
Platform Size	305 mm x 355 mm			420 mm x 550 mm	
Basework Maximum Capacity	15 kg	30 kg	60 kg	60 kg	150 kg
Typical Verification Scale Interval	0.005 kg	0.01 kg	0.02 kg	0.02 kg	0.05 kg
Maximum Number of Verification Scale Intervals ( $n_{max}$ )	3000				
Dead Load of Platform	4 kg	4 kg	4 kg	8.4 kg	8.4 kg
Load Cell Used	SLP 532-30	SLP 532-50	SLP 532-100	SLP 532-100	SLP 532-300
Load Cell Maximum Capacity $E_{max}$	30 kg	50 kg	100 kg	100 kg	300 kg
Maximum Load Cell Scale Interval $n_{LC}$	3500				
Minimum Value of Verification Scale Interval for Basework	0.005 kg	0.01 kg	0.02 kg	0.02 kg	0.05 kg
Minimum Dead Load Output Return DR	0.0043 kg	0.0071 kg	0.0143 kg	0.0143 kg	0.0426 kg
Operating Temperature Range	-10 °C to +40 °C				
Output Rating at $E_{max}$	2 mV/V				
Input Impedance	387 $\Omega$				
Excitation Voltage	5 – 15 V (AC / DC)				
Cable Length of Load Cell	2 m				
Number of Leads of Load Cell (plus shield)	6				

TABLE 6b – Basework with Mettler Toledo SLP533 Load Cells

Basework Model	i-D150C1XAU	i-D300C1XAU
Platform Size	500 mm x 650 mm	
Basework Maximum Capacity	150 kg	300 kg
Typical Verification Scale Interval	0.05 kg	0.1 kg
Maximum Number of Verification Scale Intervals ( $n_{max}$ )	3000	
Dead Load of Platform	13.95 kg	14.01 kg
Load Cell Used	SLP 533-300	SLP 533-500
Load Cell Maximum Capacity $E_{max}$	300 kg	500 kg
Maximum Load Cell Scale Interval $n_{LC}$	3000	
Minimum Value of Verification Scale Interval for Basework	0.05 kg	0.1 kg
Minimum Dead Load Output Return DR	0.05 kg	0.0833 kg
Operating Temperature Range	-10 °C to +40 °C	
Output Rating at $E_{max}$	2 mV/V	
Input Impedance	387 $\Omega$	
Excitation Voltage	5 – 15 V (AC / DC)	
Cable Length of Load Cell	2.5 m	
Number of Leads of Load Cell (plus shield)	6	

FIGURE 6/4C/329 – 1



(a) Pole Mount Version

(b) Front Mount Version



(c) B1 Type Platform

Ohaus Defender 3000 Weighing Instrument with i-DT33P Indicator  
(Pattern and Variant 1)

FIGURE 6/4C/329 – 2



(a) Ohaus Model Defender i-DT33P Indicator



(b) Ohaus Model Defender i-DT33XW Indicator



FIGURE 6/4C/329 – 3



(a) Pole Mount Version



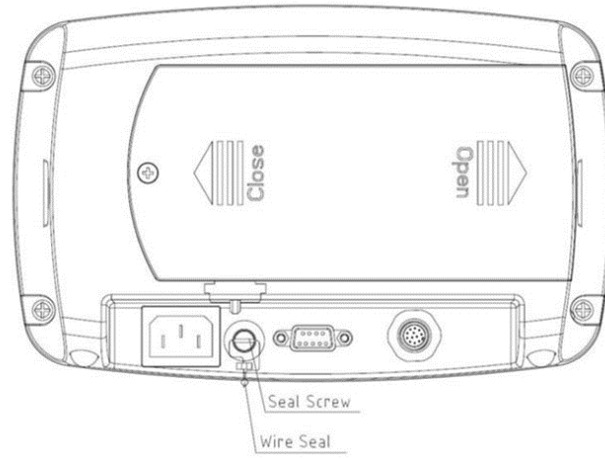
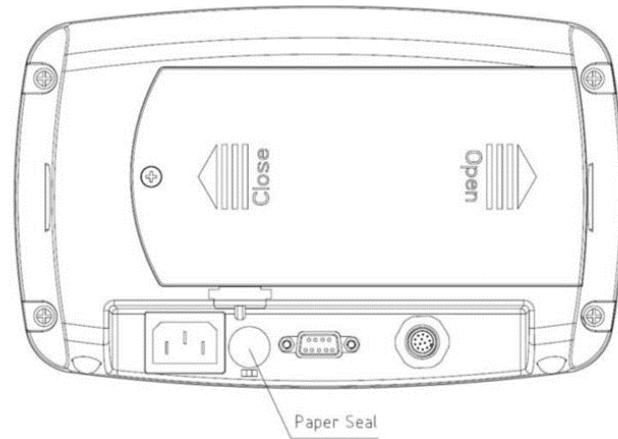
(b) Front Mount Version



(c) C1 Type Platform

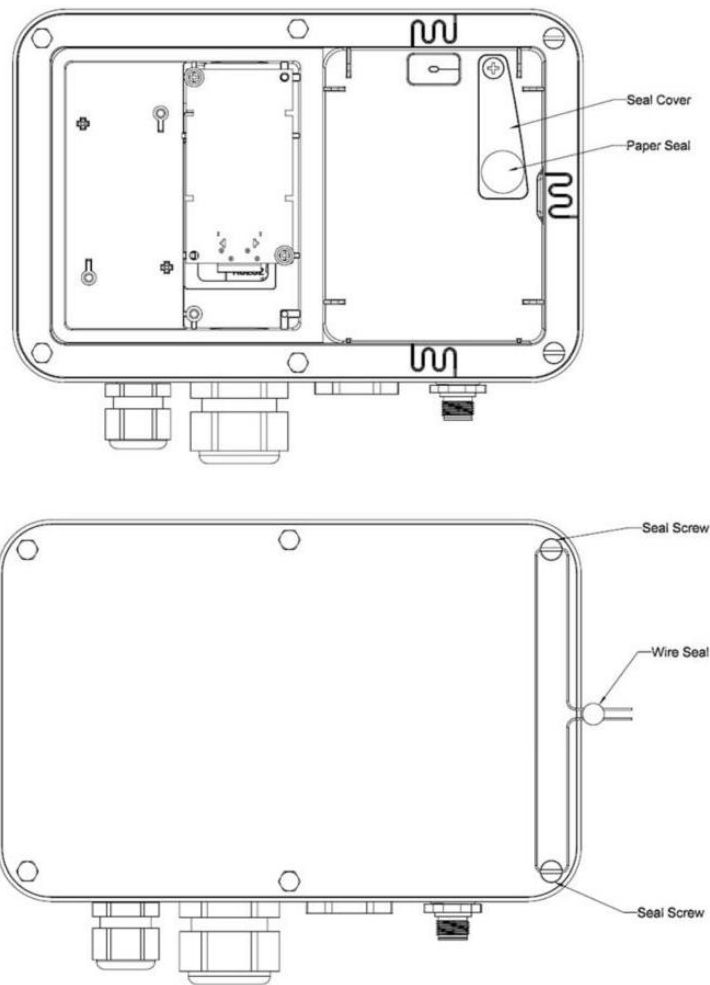
Ohaus Defender 3000 Weighing Instrument with i-DT33XW Indicator  
(Variants 3 & 4)

FIGURE 6/4C/329 – 4



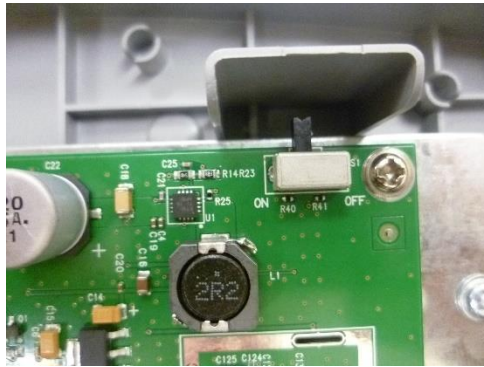
i-DT33P Indicator Sealing Method

FIGURE 6/4C/329 – 5



i-DT33XW Indicator Sealing Method

FIGURE 6/4C/329 – 6



(a) Security Switch at ON Position



(b) Calibration Switch Status

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