



Australian Government
Department of Industry,
Science and Resources

National Measurement Institute

36 Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

NMI 6/4D/364

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.

Teraoka DIGI Model DPS-5000 Weighing Instrument

submitted by W. W. Wedderburn Pty. Limited
101 Williamson Road
Ingleburn NSW 2565

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	3/11/11
1	Pattern & variants 1 to 3 amended & reviewed , variant 4 approved – certificate issued	12/07/17
2	Pattern & variant 4 amended, variants 5 to 8 approved – certificate issued	12/04/22
3	Variant 9 approved – certificate issued	17/06/24

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with approval number 'NMI 6/4D/364' and only by persons authorised by the submitter.

Instruments incorporating a component purporting to comply with this approval shall be marked 'NMI 6/4D/364' in addition to the approval number of the instrument, 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 Certificates of Approval No S1/0/A or No S1/0B.

Special

Certain aspects of this instrument (in particular label and ticket formats) are able to be configured by the user. Whilst NMI believes that acceptable label and ticket 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
Policy and Regulatory Services

TECHNICAL SCHEDULE No 6/4D/364

1. Description of Pattern

**approved on 3/11/11
amended on 12/04/22**

A Teraoka DIGI model DPS-5000 class  non-automatic self-indicating price-computing multi-interval weighing instrument (Figure 1) with a verification scale interval (e_1) of 0.002 kg up to 6 kg and a verification scale interval (e_2) of 0.005 kg from 6 kg up to the maximum capacity of 15 kg. The instrument has a minimum capacity of 0.04 kg. Instruments may also be known as model DIGI DPS-5000.

Instruments are fitted with a TFT SVGA touchscreen with backlit display. The operator display panel is able to rotate left/right and in up/down direction. A direct thermal printer for label printing is integrated in the housing.

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

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

Instruments may be fitted with data ports for wired and wireless interfaces for the connection of auxiliary and/or peripheral devices.

Instruments use a Teraoka SX-C series basework, with a platform size of 350 × 300 mm, and are fitted with a Teraoka K series load cell.

The instrument operates from mains AC power (220-240 V AC, 50/60 Hz).

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 and/or non-automatic keyboard-entered pre-set subtractive tare device, each of up to 5.998 kg maximum tare capacity, may be fitted.

Pre-set tare values may be associated with product look up (PLU) items. A separate display of tare values is provided.

1.3 Display Check

A display check is initiated whenever power is applied. The display check of the operator display is carried out whenever a weigh item PLU has been selected and then the ZERO button is pressed.


1.4 Levelling

The instrument has adjustable feet and a level indicator.

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

1.5 Descriptive Markings and Notices

Instruments carry the following markings:

Manufacturer's mark, or name written in full	Teraoka or DIGI Singapore PTE LTD WEDDERBURN
Name or mark of manufacturer's agent	
Indication of accuracy class	
Pattern approval mark for the instrument	NMI 6/4D/364
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*.

Instruments are marked 'NOT FOR TRADING DIRECT WITH THE PUBLIC' (or similar wording).

1.6 Verification Provision

Provision is made for the application of a verification mark.

1.7 Sealing Provision

Provision is made for the calibration adjustments to be sealed by means of destructible adhesive labels placed over the access to the calibration switch on the display/printer body (Figure 2)

2. Description of Variant 1

approved on 3/11/11

The pattern or variants as multi-interval instruments of certain other capacities as listed in Table 1 below (the pattern is shown in **bold**).

TABLE 1– Multi-interval Instruments

Maximum Capacity (<i>Max</i> ₁ / <i>Max</i> ₂)	Minimum Capacity (<i>Min</i>)	Verification Scale Interval (<i>e</i> ₁ / <i>e</i> ₂)	Maximum Subtractive Tare Capacity (<i>T</i> = - ...)
3 / 6 kg	0.020 kg	1 / 2 g	2.999 kg
6 / 15 kg	0.040 kg	2 / 5 g	5.998 kg
15 / 30 kg	0.100 kg	5 / 10 g	14.995 kg
30 / 60 kg	0.200 kg	10 / 20 g	29.99 kg

3. Description of Variant 2

approved on 3/11/11

The pattern or variants as single interval instruments of certain capacities as listed in Table 2 below.

TABLE 2 – Single Interval Instruments

Maximum Capacity (<i>Max</i>)	Minimum Capacity (<i>Min</i>)	Verification Scale Interval (<i>e</i>)	Maximum Subtractive Tare Capacity (<i>T</i> = - ...)
3 kg	0.020 kg	1 g	2.999 kg
6 kg	0.020 kg	1 g	5.999 kg
6 kg	0.040 kg	2 g	5.998 kg
12 kg	0.040 kg	2 g	11.998 kg
15 kg	0.040 kg	2 g	14.998 kg
15 kg	0.100 kg	5 g	14.995 kg
30 kg	0.100 kg	5 g	29.995 kg
30 kg	0.200 kg	10 g	29.99 kg
60 kg	0.200 kg	10 g	59.99 kg
60 kg	0.400 kg	20 g	59.98 kg

4. Description of Variant 3

approved on 3/11/11

The pattern and variants with alternative baseworks. The approved baseworks (Figure 3) are shown in the Tables 3a, 3b and 4 below.

TABLE 3a – Single Interval Baseworks

Make	Teraoka						
Basework model	S-YA			S-YB			
Platform size, mm	380 × 380			480 × 480			
<i>Max</i> , kg	30	60	150	30	60	150	300
<i>Min</i> , kg	0.20	0.40	1.00	0.20	0.40	1.00	2.0
<i>e</i> , kg	0.01	0.02	0.05	0.01	0.02	0.05	0.1
<i>T</i> , kg	29.99	59.98	149.95	29.99	59.98	149.95	299.9
Load cell make	Teraoka						
Load cell model	P			PM			
Load cell E_{max} , kg	45	90	225	45	90	225	450
No of load cell	1			1			
Load cell sensitivity at E_{max}	1.5 mV/V			1.5 mV/V			
Input impedance	1100 Ω			1100 Ω			
Excitation voltage (maximum)	20 V DC			20 V DC			
Cable length (#)	3 m			3 m			
No of leads (plus shield)	4			4			

TABLE 3b – Additional Single Interval Baseworks

Make	Teraoka					
Basework model	S-YC					
Platform size, mm	341 × 284					
<i>Max</i> , kg	6		15		30	
<i>Min</i> , kg	0.020	0.040	0.040	0.100	0.100	0.200
<i>e</i> , kg	0.001	0.002	0.002	0.005	0.005	0.010
<i>T</i> , kg	5.999	5.998	14.998	14.995	29.995	29.99
Load cell make	Teraoka					
Load cell model	K type					
Load cell E_{max} , kg	9		22.5		45	
No of load cell	1					
Load cell sensitivity at E_{max}	1.5 mV/V					
Input impedance	350 Ω					
Excitation voltage (maximum)	20 V DC					
Cable length (#)	3 m					
No of leads (plus shield)	4					

Max = maximum capacity of the instrument

e = verification scale interval

T = maximum subtractive tare capacity (*T* = - ...)

(#) The load cell cable length supplied with the basework shall not be shortened.

TABLE 4 – Multi-interval Baseworks

Make	Teraoka			
Basework model	S-YC			
Platform size, mm	341 × 284 (for S-YC)			
Max_1/Max_2 , kg	3/6	6/15	15/30	30/60
<i>Min</i> , kg	0.020	0.040	0.100	0.020
e_1/e_2 , kg	0.001/0.002	0.002/0.005	0.005/0.010	0.010/0.020
<i>T</i> , kg	2.999	5.998	14.995	29.99
Load cell make	Teraoka			
Load cell model	K type			
Load cell E_{max} , kg	9	22.5	45	90
No of load cell	1			
Load cell sensitivity at E_{max}	1.5 mV/V			
Input impedance	430 Ω			
Excitation voltage (maximum)	20 V DC			
Cable length (#)	3 m			
No of leads (plus shield)	4			

Max = maximum capacity of the instrument

e = *verification* scale interval

T = *maximum* subtractive tare capacity (*T* = - ...)

(#) The load cell cable length supplied with the basework shall not be shortened.

5. Description of Variant 4

**approved on 12/07/17
amended on 12/04/22**

The Digi model DPS-5000e instrument which is similar to the pattern and variants 1 to 3 but with an alternative I/O board and base board.

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 the following interfaces:

- PS2 port;
- Ethernet port;
- USB-A ports;
- Printer port.

5.1 Software

The legally relevant software is identified by scale driver version number 7.1.1.18 and checksum number 4C78A1C8.

The instructions for accessing the legally relevant version are as follows (starting from the normal weighing mode):

- Press the 'MENU' key, then the 'MAINTENANCE' key, and then the 'SYSTEM INFO' key.
- The system information is displayed.

6. Description of Variant 5

approved on 12/04/22

The DPS-5000e (Variant 4) instrument may be fitted with the SX-C (Figure 3) basework with a Minebea C2G1 load cell as shown in Tables 5 and 6.

Note:

- 1) When a Minebea C2G1 load cell is fitted, the manufacturer will indicate this by the addition of an 'N' on the basework nameplate as shown on Figure 4.
- 2) If the number of verification scale intervals is greater than 3000, the operating temperature range shall be 0 °C to 40 °C, and is so marked on the descriptive markings or on a separate label grouped to the descriptive markings.

Table 5 – Single Interval SX-C Basework with Minebea C2G1 Load Cell

Make	Teraoka					
Basework model	SX-C					
Platform size, mm	341 x 284					
Max, kg	6		15		30	
Min, kg	0.020	0.040	0.040	0.100	0.100	0.200
e, kg	0.001	0.002	0.002	0.005	0.005	0.01
T, kg	2.999	2.998	5.998	5.995	14.995	14.99
Load cell make	Minebea					
Load cell model	C2G1					
Load cell E_{max} , kg	10		30		50	
V_{min} , kg	0.001		0.002		0.003333	
No. of load cell	1					
Load cell sensitivity at E_{max}	2 mV/V					
Input impedance	425 Ω					
Excitation voltage	20 V					
Cable length (#)	0.4 m					
No of leads (Plus shield)	4					

Max = maximum capacity of the instrument

e = verification scale interval

T = maximum subtractive tare capacity ($T = - \dots$)

(#) The load cell cable length supplied with the basework shall not be shortened.

Table 6 – Multi-interval SX-C Basework with Minebea C2G1 Load Cell

Make	Teraoka					
Basework model	SX-C					
Platform size, mm	341 x 284					
Max_1/Max_2 , kg	3/6		6/15		15/30	
Min, kg	0.020		0.040		0.100	
e_1/e_2 , kg	0.001/0.002		0.002/0.005		0.005/0.01	
T, kg	2.999		5.998		14.995	
Load cell make	Minebea					
Load cell model	C2G1					
Load cell E_{max} , kg	10		30		50	
V_{min} , kg	0.001		0.002		0.003333	
No. of load cell	1					
Load cell sensitivity at E_{max}	2 mV/V					
Input impedance	425 Ω					
Excitation voltage	20 V					
Cable length (#)	0.4 m					
No of leads (Plus shield)	4					

Max = maximum capacity of the instrument

e = verification scale interval

T = maximum subtractive tare capacity ($T = - \dots$)

(#) The load cell cable length supplied with the basework shall not be shortened.

7. Description of Variant 6

approved on 12/04/22

The DPS-5000e (variant 4) instrument may be fitted with the S-WR basework (Figure

3). The S-WR basework may be fitted with either a Minebea C2G1 load cell or a PS type load cell.

The S-WR basework with a Minebea C2G1 load cell has the same parameters and descriptive markings as in variant 5 for either single interval or multi-interval instruments, except the S-WR basework has the platform size of 355 mm x 295 mm.

The S-WR basework with the PS type load cell has the specification as shown in Tables 7 and 8.

Table 7 – Single Interval S-WR Basework with PS Type Load Cell

Make	DIGI Singapore					
Basework model	S-WR					
Platform size, mm	355 mm x 295 mm					
<i>Max</i> , kg	6		15		30	
<i>Min</i> , kg	0.020	0.040	0.040	0.100	0.100	0.20
<i>e</i> , kg	0.001	0.002	0.002	0.005	0.005	0.01
<i>T</i> , kg	2.999	2.998	5.998	5.995	14.995	14.99
Load cell make	Teraoka					
Load cell model	PS-Type					
Load cell E_{max} , kg	9		22.5		45	
V_{min} , kg	0.00064		0.0016		0.0032	
No. of load cell	1					
Load cell sensitivity at E_{max}	1.5 mV/V					
Input impedance	1230 Ω					
Excitation voltage	20 V					
Cable length (#)	0.4 m					
No of leads (Plus shield)	4					

Max = maximum capacity of the instrument

e = verification scale interval

T = maximum subtractive tare capacity (*T* = - ...)

(#) The load cell cable length supplied with the basework shall not be shortened.

Table 8 – Multi-interval S-WR Basework with PS Type Load Cell

Make	DIGI Singapore					
Basework model	S-WR					
Platform size, mm	355 x 295					
Max_1/Max_2 , kg	3/6		6/15		15/30	
<i>Min</i> , kg	0.020		0.040		0.100	
e_1/e_2 , kg	0.001/0.002		0.002/0.005		0.005/0.01	
<i>T</i> , kg	2.999		5.998		14.995	
Load cell make	Teraoka					
Load cell model	PS-Type					
Load cell E_{max} , kg	9		22.5		45	
V_{min} , kg	0.00064		0.0016		0.0032	
No. of load cell	1					
Load cell sensitivity at E_{max}	1.5 mV/V					
Input impedance	1230 Ω					
Excitation voltage	20 V					
Cable length (#)	0.4 m					
No of leads (Plus shield)	4					

Max = maximum capacity of the instrument

e = verification scale interval

T = maximum subtractive tare capacity (*T* = - ...)

(#) The load cell cable length supplied with the basework shall not be shortened.

8. Description of Variant 7 **approved on 12/04/22**

The DPS 5000e may be fitted with alternative legally relevant software and it is identified by scale driver version number 7.1.1.25 and checksum number F43E2E4E.

The instructions for accessing the legally relevant version are as follows (starting from the normal weighing mode):

- Press the 'MENU' key, then the 'MAINTENANCE' key, and then the 'SYSTEM INFO' key.
- The system information is displayed.

9. Description of Variant 8 **approved on 12/04/22**

The pattern or variants may be marked 'DIGI Singapore PTE Ltd' as the manufacturer identification, due to manufacturer's name change since the original approval.

10. Description of Variant 9 **approved on 17/06/24**

The DIGI model DPS-5000 ePLUS instrument (Figure 6) which is similar to the pattern and variant 4. The maximum capacities of DPS-5000 ePLUS are as listed in variants 1 to 3. The baseworks are the same as listed in the pattern and variants 3, 5 and 6 with the manufacturer as stated in variant 8.

The instrument is fitted with upgraded printed circuit boards and with a 10.1 inch or 12.1 inch touchscreen operator display panel.

The legally relevant software is identified by scale driver version 10.1.1.40 and checksum number 9389AAD3.

The instrument may also have the 10.1 inch or 12.1 inch display panel mounted remote to the body of the housing containing the printer.

This instrument may also be known as DIGI model DPS-5000 XPLUS, and be marked with this model name in the descriptive markings plate.

TEST PROCEDURE No 6/4D/364

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*.

For multi-interval 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/364 – 1



(a) With rear cover fitted



(b) Without rear cover fitted

Teraoka DIGI Model DPS-5000 Weighing Instrument (The pattern)

FIGURE 6/4D/364 – 2



Under the instrument



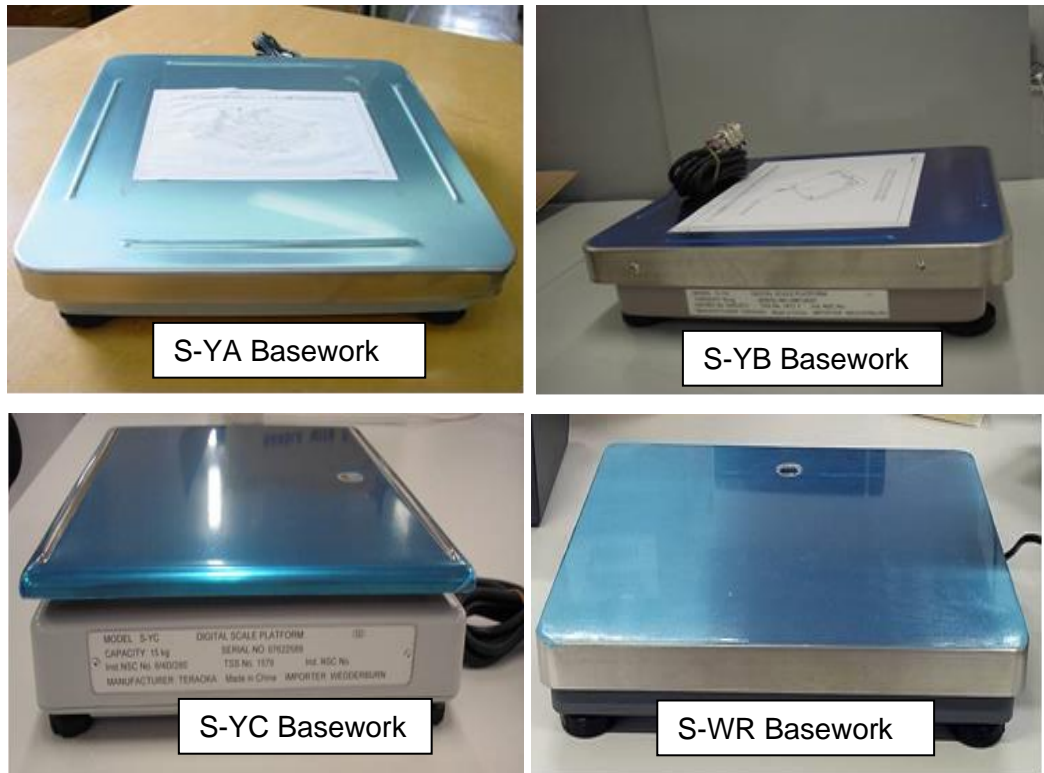
Showing destructible adhesive label seal over switch cover plate to prevent access to SPAN switch.



Underneath view showing destructible adhesive label seals over join of rear and side covers to prevent internal access.

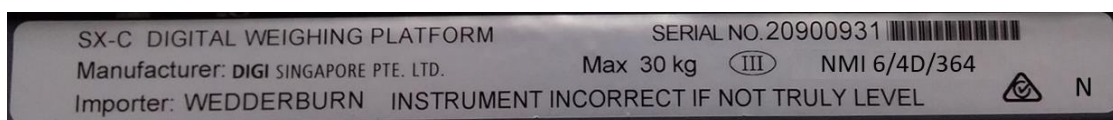
Typical Sealing of the Calibration Access

FIGURE 6/4D/364 – 3



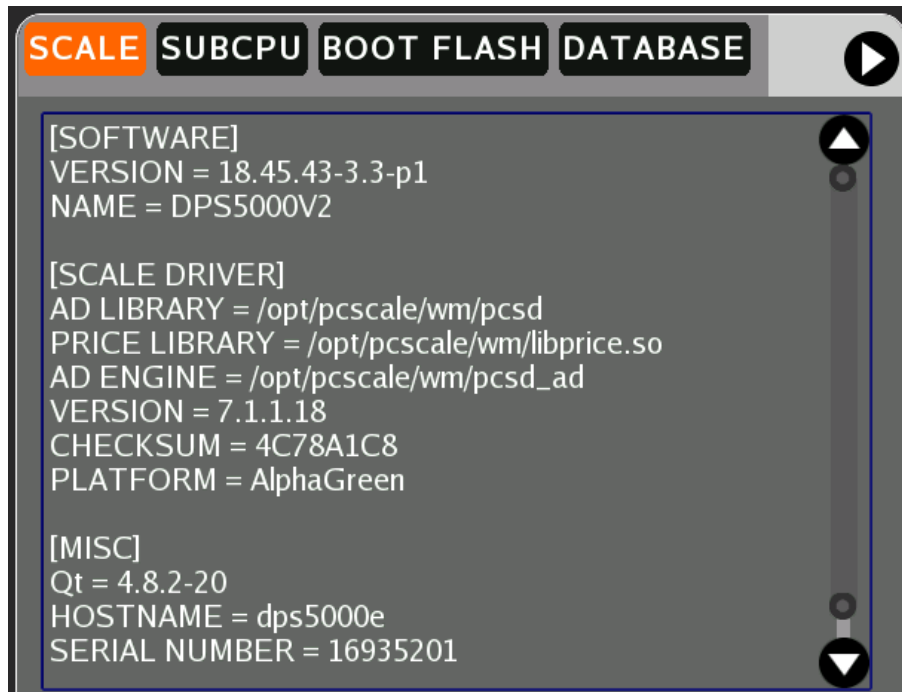
Baseworks Approved for Connecting to DPS 5000 and DPS 5000e

FIGURE 6/4D/364 – 4

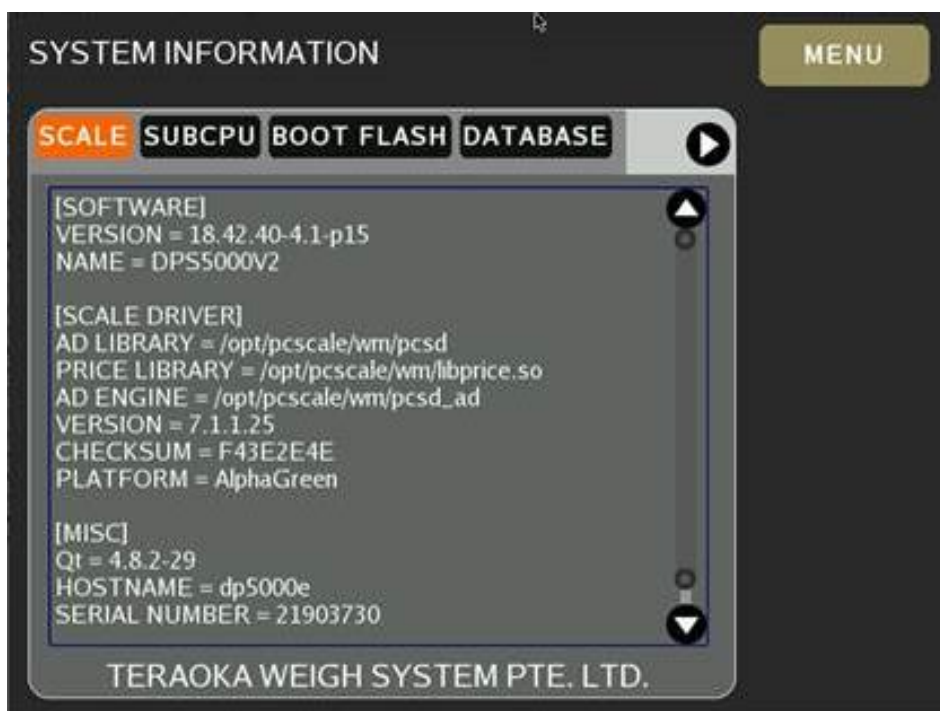


Descriptive Markings for Basework with a Minebea C2G1 Load Cell

FIGURE 6/4D/364 – 5



(a) Software Version Number 7.1.1.18 Identification



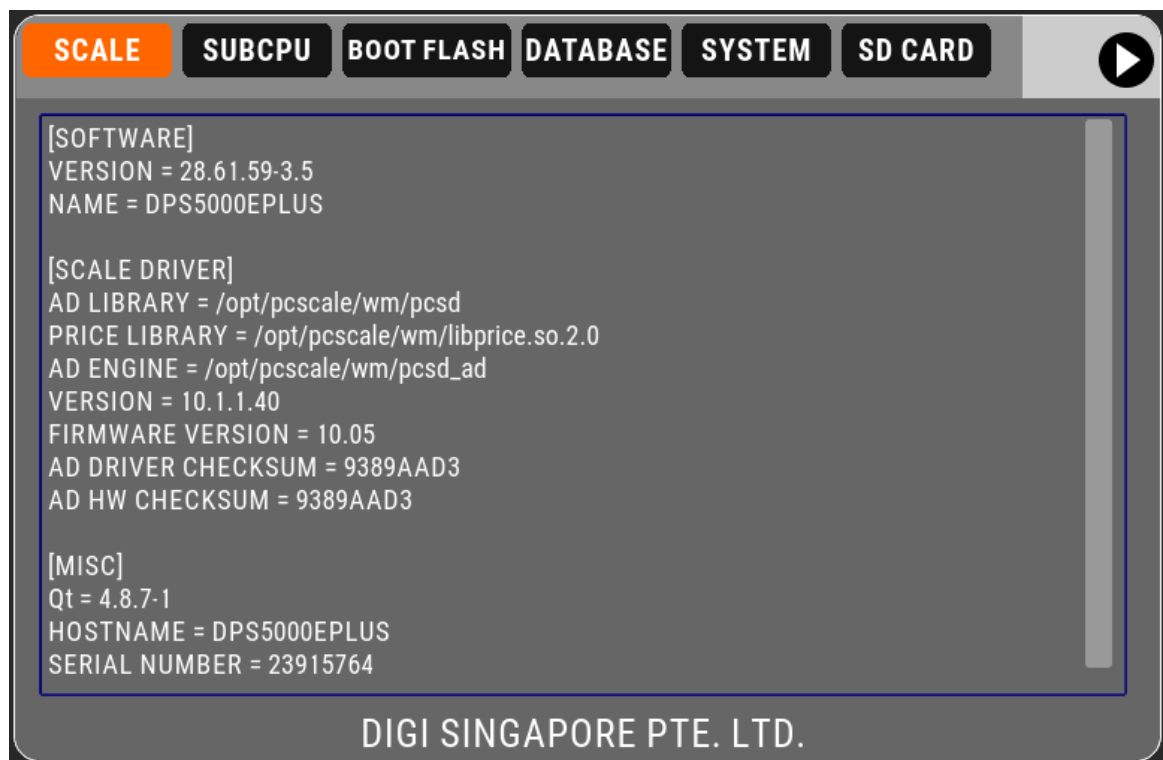
(b) Software Version Number 7.1.1.25 Identification

FIGURE 6/4D/364 – 6



DIGI Model DPS-5000 ePLUS Instrument (Variant 9)

FIGURE 6/4D/364 – 7



Software Version Number 10.1.1.40 Identification

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