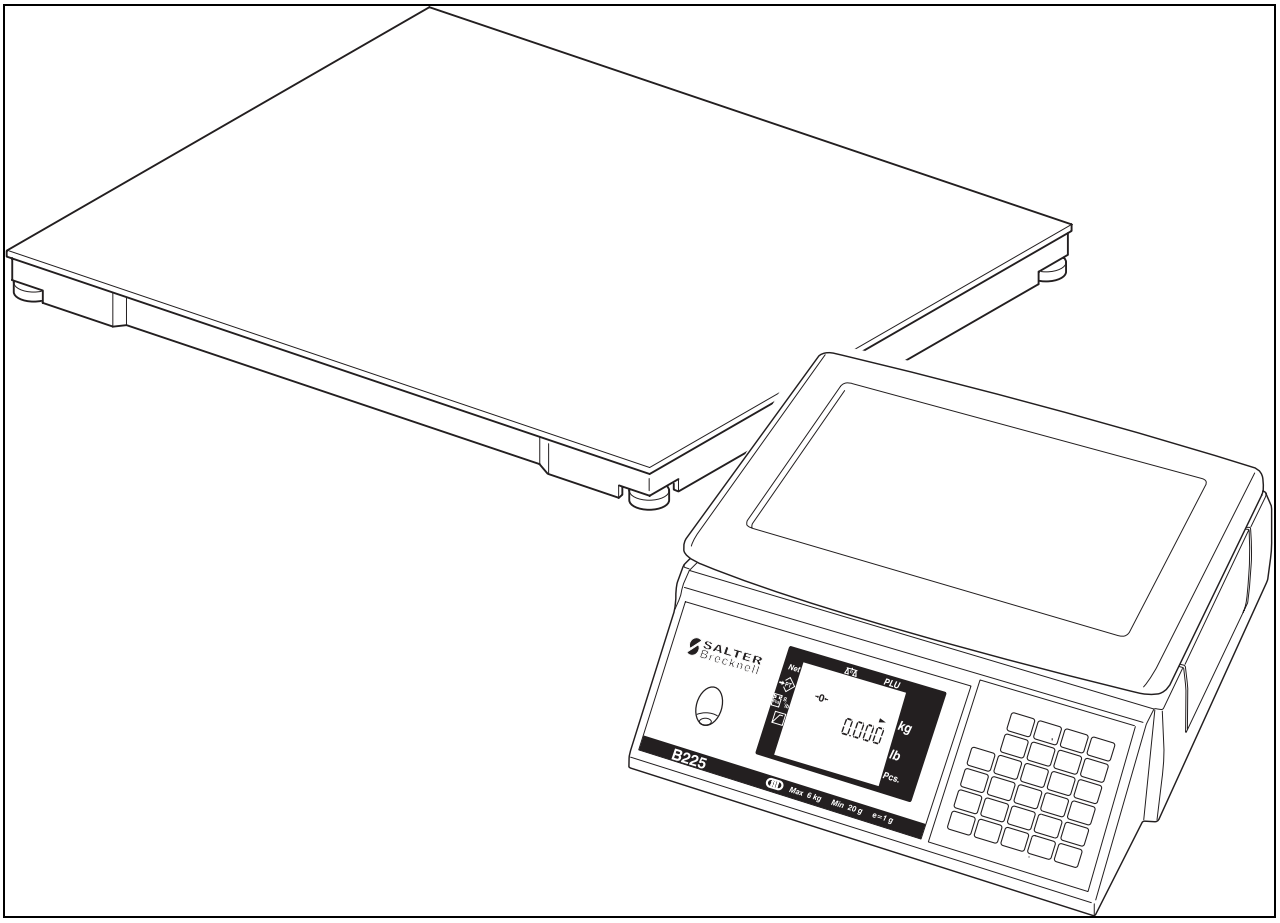
SALTER Brecknell

B220 / B225

Counting scales



Service Instructions

ENGLISH

76103-382 Issue 3 *20.05.2004*

Contents

page no.

1 Safety

1.1 Electrical installation

The mains lead must be connected to a supply outlet with a protective earth contact. The electrical supply at the socket outlet must provide over current protection of an appropriate rating.

Pluggable equipment must be installed near an easily accessible socket outlet. Permanently connected equipment must have a readily accessible disconnect device incorporated in the fixed wiring.

For your protection all mains (110V or 230V) equipment used out of doors or in wet or damp conditions should be supplied from a correctly fused source and protected by an approved RCD to BS7071 or BS7288 or BS4293. **IF IN DOUBT SEEK ADVICE FROM A QUALIFIED ELECTRICIAN.**

1.2 Risk of electric shock

This equipment is powered by a mains voltage which presents an electric shock hazard.

Always completely disconnect the power supply:

- Before removing the machine cover(s).
- Before performing any routine maintenance.
- Before cleaning the machine.

1.3 Additional service precautions

- When the covers are removed, do not apply power to the unit unless specifically instructed to do in this handbook.
- When working on live equipment, exercise great care, use insulated tools and test equipment, and do not work alone.
- When testing or fault finding, exercise extreme care. Ensure that any test equipment used is in good condition and capable of withstanding the existing voltages.
- All tools used must have insulated handgrips. Test probes and jumper leads must be in good condition with adequate insulation. Test probes with claw ends and jumper leads must not have insecure parts that may fail during use.

1.4 Replacing batteries

CAUTION: RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

1.5 Safe handling

When lifting, moving or supporting the machine, take its weight into consideration.

1.6 ESD handling precautions

When handling printed circuit boards and electronic components, observe the following ESD handling precautions:

- Wear an earthed antistatic wrist strap.
- Ensure that all electronic components/boards are stowed appropriately, by use of conductive/antistatic work surfaces and packaging.

2 Displays and keys

2.1 Display

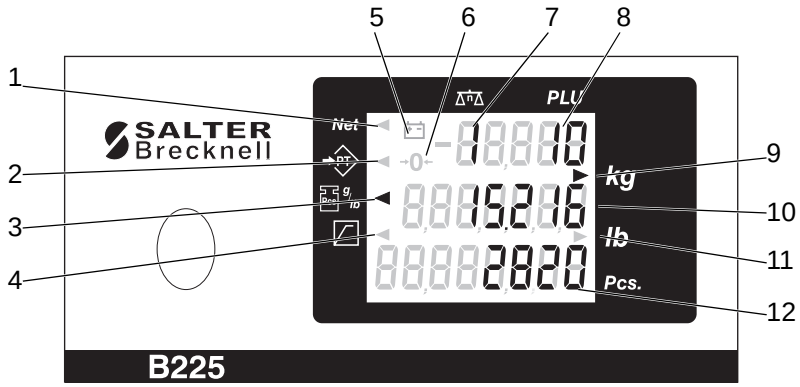


Figure 2.1 B225 Display overlay (EU model)

1. **Net.** Indicates an active tare (weight displays net value).
2. **PB Tare.** Indicates a keyboard entered tare.
3. **Piece weight.** Weight displayed is the current piece weight.
4. **Target (or high limit).** Value displayed in line 2 is the target count, as set by the operator.
5. **Battery.** Scale is operating on battery power.
6. **Zero.** Indicates zero gross weight.
7. **Display line 1.** Current base (platform) number. (1= local, 2=remote)
8. **Display line 1.** Current PLU number.
9. **kg.** Weight displayed is in kg.
10. **Display line 2.** Weight display.
11. **lb.** Weight displayed is in lb.
12. **Display line 3.** Count / total value.

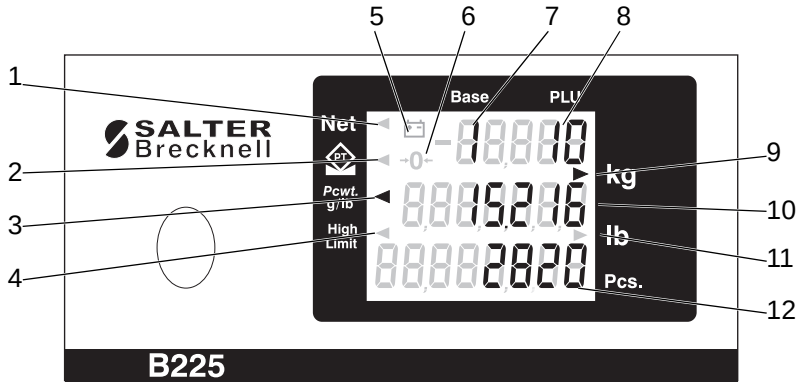
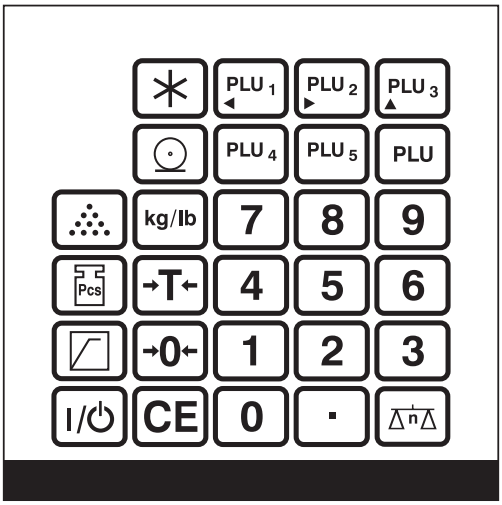


Figure 2.2 B225 Display overlay (USA model)

2.2 Keys



Sample

Sample. Calculate piece weight from a sample quantity.

Pcwt Rcl

Piece weight. Set / view piece weight value.

High Limit

Check / High Limit. Set / view the count target value.

ACC

Total/ Accumulate. View total / add current count to stored total.

Sleep / Reset. On/off, reset or display test button.

Print

Print. Print the current weight.

Unit select. Select between lb or kg as the displayed unit of weight.

Tare

Tare. Set a tare value.

Zero

Zero. Zero the scale.

Clear

CE. Clear / Cancel.

Base

Base. Dual platform scales - select active platform.

PLU. Select a PLU.

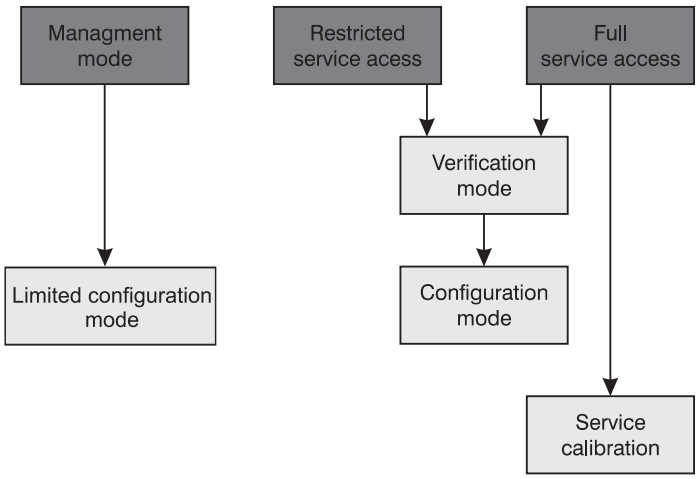
0 - 9. Numeric keys.

3 Configuration

WARNING:

Incorrect configuration can render the scale inoperable and in such cases the only remedy is to reload the configuration file, this will require the scale to be returned to the appropriate service support centre with this facility.

There are three levels of configuration access:

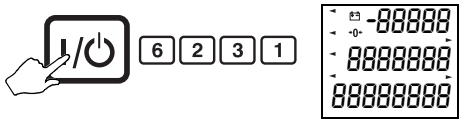


Each level of access offers a varying number of features to configure the scale.

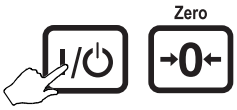
3.1 Management mode

This mode allows limited configuration of the scale, with the low level features locked out.

To enter management mode:



To exit management mode:



Note: *If you do not exit management mode correctly you will see an E 30 error message.*

E200 error.

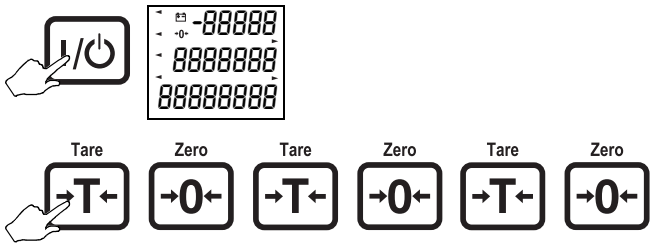
Some changes to configuration will cause the scale to bleep rapidly and display an E200 error for up to 10 seconds. This happens whilst the scale updates its configuration files, and is a normal part of its operation.

3.2 Restricted service access

A greater level of configuration than management mode, this option will also allow you to view all of the scales configuration.

Some aspects of the configuration will be read only (can be edited in full service mode only - see page 17, if you attempt to change these configurations you will see an error message (E152).

Enter restricted service access:



The scale will now be in verification mode (see page 14).

Exit restricted service access

To exit restricted service access:

Press and hold the reset key until a double bleep is heard. The display will show all segments and then return to normal mode

Note: *If you do not exit service mode correctly you will see an E 30 error message.*

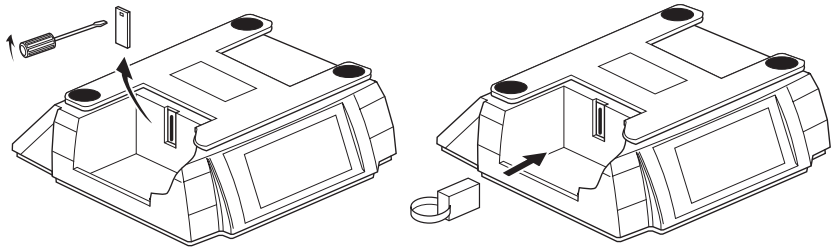
E200 error.

Some changes to configuration will cause the scale to bleep rapidly and display an E200 error for up to 10 seconds. This happens whilst the scale updates its configuration files, and is a normal part of its operation.

3.3 Full service access

This will give full access to the scales configuration.

1. Unplug the scale from the power supply.
2. Break the security seal and carefully remove the blanking plate.



3. Plug the service tool (part number 18165-140) into the side of the scale.
4. Replace the weighplate and re-connect the power supply. The scale will now be in verification mode (see page 14).
5. To go to the configuration menus:

Exit full service access

For the **service tool only**: Remove the service tool, then press the reset button.

CAUTION: If using the service download tool you will need to disconnect the power supply BEFORE removing the tool. Failure to do so could damage the service download tool electronics.

Note: *If you do not exit service mode correctly you will see an E 30 error message.*

E200 error.

Some changes to configuration will cause the scale to bleep rapidly and display an E200 error for up to 10 seconds. This happens whilst the scale updates its configuration files, and is a normal part of its operation.

3.4 Verification mode

Verification mode will display the weight to four decimal places, and zero tracking will be disabled.

To go to the configuration menus:

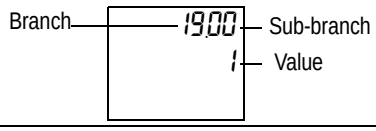
If you need to return to verification mode at any time, press:

3.5 Navigating the menus

Each configuration setting consists of a value and a location, the location consists of a Branch number and a Sub-branch number

Access and navigation

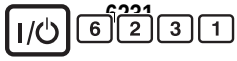
Typical display



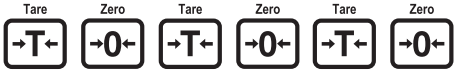
Navigation / key functions

When in management or service mode, the following keys are used:

Enter management mode:



Enter service mode:



Next sub-branch.

Press and hold until double beep

Next branch / Accept entry.

Previous sub-branch.

Press and hold until double beep

Previous branch.

Select value to be changed.

Press and hold until double beep

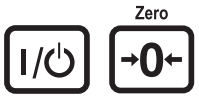
Return to branch 00.

Increment value (by 1).

Press and hold until double beep

Multiply value by 10.

Change value.



Exit management mode.

Press and hold until double beep

Exit service mode. (Caution see page 13)

Important: *Make a note of your configuration settings before making any changes. In the event of a mistake you can then easily return to the previous configuration.*

E30 error.

If you do not exit management mode correctly you will see an E30 error message. See page 56 for error message details.

E200 message

Some changes to configuration will cause the scale to bleep rapidly and display an E200 error for up to 10 seconds. This happens whilst the scale updates its configuration files, and is a normal part of its operation.

Example: Updating your settings in management mode

1. Enter management mode.

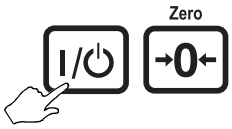
2. Use the arrow keys to select the required branch & sub-branch.

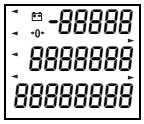
3. Make the required change.

4. Press right arrow to accept entry.

Repeat steps 2 - 4 until all required changes have been made.

5. Exit management mode when finished.





3.6 Configuration summary

The following is a summary table detailing the configuration options available. See section 3.7, *Configuration branches* for more details

Manager access (Test C)	Restricted access (T0 T0 T0) *=Read only	Full access (Tool Rqd)	Description	Notes
	00*	00*	Edit counter	
	4*	4	Remote platform capacity	B225 Only
	05*	05	Typical weighing configurations	
06**	06*	06	Weighing functionality	
	07*	07	Weighing limits	
	08*	08	Gravity compensation	
	09*	09	Weight display	
19	19	19	Bleeper functions	
20	20	20	Power saving	
29	29	29	Key press duration	
36	36	36	Serial port set up	B225 Only
38	38	38	Printer formats	B225 Only
	60	60	Tares	
61	61	61	Sampling	B225 Only
64	64	64	Remote platform filter	B225 Only
	65*	65	Remote platform, calibration config.	B225 Only
100+	100+	100+	PLUs	
		CAL	Calibration sequence	

** =Some sub-branches will not be present

Note: *For older application block versions (0-5-0 or earlier) some branches or sub-branches are not available.*

3.7 Configuration branches

Scale divisions

Several of the management mode settings require the entry of a value in divisions. These are a unit of measure of the scale's weighing resolution.

Example:

Typical 30,000 division scale	
Weighing capacity	**Division size (1 div =)**
6kg	0.2g (0.0002kg)
15kg	0.5g (0.0005kg)
30kg	1g (0.001kg)

Branch 0 - Edit counter

Sub-branch	Value
00 -Default user mode	This counter is automatically incremented whenever the product configuration has been altered.

Branches 4 & 5 - scale capacity

- Branch 4 - Remote platform capacity (B225 only)
- Branch 5 - Local platform capacity

When configuring the capacities, the following sub-branches apply.

Sub-branch	Value	Notes
00 - Primary capacity - range 1.	3000 - 99990. (see example tables page 21 & page 23)	The number of weighing divisions is the capacity divided by the increment. The Maximum number of weighing divisions is 30000. E.g Capacity = 30000 Increment = x5 **No Divisions = 10000 = OK** Capacity = 60000 Increment = x1 **No Divisions = 60000 = NOT OK**
01 - NOT AVAILABLE	SET TO 0	
02 - NOT AVAILABLE	SET TO 0	
03 - Increment. Configures the displayed increment for weight readings. (i.e. The last 1 or 2 digits of the weight reading	0 - x1 1 - x2 2 - x5 3 - x10	
04 - Decimal places. The number of decimal places to which the weight will be displayed.	0 - (e.g. 123456) 1 - (e.g. 12345.6) 2 - (e.g. 1234.56) 3 - (e.g. 123.456)	
05 - Units. Select the weighing units	0 - g 1 - kg 128 - oz 129 - lb (decimal lb)	
06 - Secondary capacity - range 1. For dual capacity machines.	3000 - 99990 (see example tables page 21 & page 23)	For secondary capacity machines, the weighing units and increment will be automatically selected. I.E. If the primary capacity has metric units, then the secondary will be imperial equivalents, and vice versa.
07 - NOT AVAILABLE	SET TO 0	
08 - NOT AVAILABLE	SET TO 0	
09 - NOT AVAILABLE	SET TO 0	
10 - Suppress trailing zero FOR USA USE ONLY	NORMALLY 0 FOR USA USE ONLY	See tables on page 21 & page 23
11 - NOT AVAILABLE	SET TO 0	
12 - Tare range. Enter the valid tare range for the machine.	0-200. = % scale capacity / 2 e.g. 100 = 50% **200 = 100%**	

Branch 4 - Remote platform capacity -example configurations

Note: *If you enter an incorrect value for these configurations you will see an E 30 or E35 error - re-enter the correct values.*

	Sub-branch numbers												
Capacity	**00**	**01**	**02**	**03**	**04**	**05**	**06**	**07**	**08**	**09**	**10**	**11**	**12**
Single capacity													
20 lb x 0.002 lb	20000	0	0	1	3	129	0	0	0	0	0	0	200
40 lb x 0.005 lb	40000	0	0	2	3	129	0	0	0	0	0	0	200
60 lb x 0.01 lb	6000	0	0	0	2	129	0	0	0	0	0	0	200
120 lb x 0.02 lb	12000	0	0	1	2	129	0	0	0	0	0	0	200
600 lb x 0.1 lb	6000	0	0	0	1	129	0	0	0	0	0	0	200
1200 lb x 0.2 lb	12000	0	0	1	1	129	0	0	0	0	0	0	200
3000 lb x 0.5 lb	30000	0	0	2	1	129	0	0	0	0	0	0	200
5000 lb x 1 lb	5000	0	0	0	0	129	0	0	0	0	0	0	200
6000 lb x 1 lb	6000	0	0	0	0	129	0	0	0	0	0	0	200
12000 lb x 2 lb	12000	0	0	1	0	129	0	0	0	0	0	0	200
12000 lb x 5 lb	12000	0	0	2	0	129	0	0	0	0	0	0	200
Dual capacity													
10 kg x 0.002 kg / 20 lb x 0.002 lb	10000	0	0	1	3	1	20000	0	0	0	0	0	200
15 kg x 0.002 kg / 40 lb x 0.005 lb	15000	0	0	1	3	1	40000	0	0	0	0	0	200
30 kg x 0.005 kg / 60 lb x 0.01 lb	30000	0	0	2	3	1	60000	0	0	0	0	0	200
60 kg x 0.01 kg / 120 lb x 0.02 lb	6000	0	0	0	2	1	12000	0	0	0	0	0	200
150 kg x 0.02 kg / 300 lb x 0.05 lb	15000	0	0	1	2	1	30000	0	0	0	0	0	200
300 kg x 0.05 kg / 600 lb x 0.1 lb	30000	0	0	2	2	1	60000	0	0	0	0	0	200
600 kg x 0.1 kg / 1200 lb x 0.2 lb	6000	0	0	0	1	1	12000	0	0	0	0	0	200
1000 kg x 0.2 kg / 2000 lb x 0.5 lb	10000	0	0	1	1	1	20000	0	0	0	0	0	200
1500 kg x 0.2 kg / 3000 lb x 0.5 lb	15000	0	0	1	1	1	30000	0	0	0	0	0	200
6000 kg x 1 kg / 12000 lb x 2 lb	6000	0	0	0	0	1	12000	0	0	0	0	0	200
6000 kg x 2 kg / 12000 lb x 5 lb	6000	0	0	1	0	1	12000	0	0	0	0	0	200
20 lb x 0.002 lb / 10 kg x 0.001 kg	20000	0	0	1	3	129	10000	0	0	0	0	0	200
40 lb x 0.005 lb / 15 kg x 0.002 kg	40000	0	0	2	3	129	15000	0	0	0	0	0	200
60 lb x 0.01 lb / 30 kg x 0.005 kg	60000	0	0	3	3	129	30000	0	0	0	1	0	200

	Sub-branch numbers												
Capacity	**00**	**01**	**02**	**03**	**04**	**05**	**06**	**07**	**08**	**09**	**10**	**11**	**12**
120 lb x 0.02 lb / 60 kg x 0.01 kg	12000	0	0	1	2	129	6000	0	0	0	0	0	200
600 lb x 0.1 lb / 300 kg x 0.05 kg	60000	0	0	3	2	129	30000	0	0	0	1	0	200
1200 lb x 0.2 lb / 600 kg x 0.1 kg	12000	0	0	1	1	129	6000	0	0	0	0	0	200
3000 lb x 0.5 lb / 1500 kg x 0.2 kg	30000	0	0	2	1	129	15000	0	0	0	0	0	200
5000 lb x 1 lb / 2000 kg x 0.5 kg	50000	0	0	3	1	129	20000	0	0	0	1	0	200
5000 lb x 1 lb / 2500 kg x 0.5 kg	50000	0	0	3	1	129	25000	0	0	0	1	0	200
6000 lb x 1 lb / 3000 kg x 0.5kg	60000	0	0	3	1	129	30000	0	0	0	1	0	200
12000 lb x 2 lb / 6000 kg x 1 kg	12000	0	0	1	0	129	6000	0	0	0	0	0	200
12000 lb x 5 lb / 6000 kg x 2 kg	12000	0	0	2	0	129	6000	0	0	0	0	0	200

Branch 5 - Local platform capacity - example configurations

Full service access only

Note: *If you enter an incorrect value for these configurations you will see an E 30 or E35 error - re-enter the correct values.*

	Sub-branch numbers												
Capacity	**00**	**01**	**02**	**03**	**04**	**05**	**06**	**07**	**08**	**09**	**10**	**11**	**12**
Single capacity													
6 kg x 0.0002 kg	60000	0	0	1	4	1	0	0	0	0	0	0	200
6 kg x 0.001 kg	6000	0	0	0	3	1	0	0	0	0	0	0	200
12 kg x 0.002 kg	12000	0	0	1	3	1	0	0	0	0	0	0	200
15 kg x 0.0005 kg	150000	0	0	2	4	1	0	0	0	0	0	0	200
15 kg x 0.002 kg	15000	0	0	1	3	1	0	0	0	0	0	0	200
30kg x 0.001 kg	30000	0	0	0	3	1	0	0	0	0	0	0	200
30kg x 0.005 kg	30000	0	0	3	3	1	0	0	0	0	0	0	200
15 lb x 0.0005 lb	150000	0	0	2	4	129	0	0	0	0	0	0	200
30 lb x 0.001 lb	30000	0	0	0	3	129	0	0	0	0	0	0	200
60 lb x 0.002 lb	60000	0	0	1	3	129	0	0	0	0	0	0	200
Dual capacity													
15 lb x 0.0005 lb / 6 kg x 0.0002 kg	150000	0	0	2	4	129	60000	0	0	0	0	0	200
30 lb x 0.001 lb / 15 kg x 0.0005 kg	30000	0	0	0	3	129	15000	0	0	0	0	0	200
60 lb x 0.002 lb / 30 kg x 0.001 kg	60000	0	0	1	3	129	30000	0	0	0	0	0	200
6 kg x 0.0002 kg / 12 lb x 0.0005 lb	60000	0	0	1	4	1	120000	0	0	0	0	0	200
15 kg x 0.0005 kg / 30 lb x 0.001 lb	150000	0	0	2	4	1	30000	0	0	0	0	0	200
30 kg x 0.001 kg / 60 lb x 0.002 lb	30000	0	0	0	3	1	60000	0	0	0	0	0	200

Branch 6 - Weighing functionality

Full service access only.

Sub-branch	B225 Value	B220 Value
00 - Zero indicator. This determines at what range (around gross zero weight) zero indicator will be displayed.	0 - Zero appears when the weight is ±0.25 divisions of 0. **1 - Zero appears when the weight is ±0.5 divisions of 0.**	0 - Zero appears when the weight is ±0.25 divisions of 0. **1 - Zero appears when the weight is ±0.5 divisions of 0.**
01 - Zero tracking. This allows the scale to compensate for drift in the zero weight position (e.g. due to temperature changes or dust build up)	0 Disabled **1 Fast wide mode** 3 Slow wide mode 5 Fast narrow mode 7 Slow narrow mode	0 Disabled 1 Enabled
02 - Balance on power up. When powered up, the scale determines if it is within its previous balance range, if it is, it looks at sub-branch 03. If it is not a balance failed indicator will appear. A typical example of an error is if the scale is powered up without the weighplate on the scale.	0 - Disabled. No test performed. **1 - -5 to 15%.** 3 - -2 to 2%.	0 - Disabled. No test performed. **1 - -5 to 15%.** 3 - -2 to 2%.
03 - Automatic zero. If enabled, the scale will automatically perform a balance.	0 - Disabled. **1 - Enabled.**	0 - Disabled. **1 - Enabled.**
04 - Dual capacity switching.	0 - Allowed for all weight ranges. **1 - Only allowed at gross zero.**	0 - Allowed for all weight ranges. **1 - Only allowed at gross zero.**
05 - Weight return to zero. When a weight has been removed from the scale, this determines how near to zero the scale must be before displaying the zero indicator.	**0 - Gross zero division.** 1 - Between 0 and 20 divisions.	**0 - Gross zero division.** 1 - Between 0 and 20 divisions.
06 - Hysteresis (Anti flicker). This is used to prevent the weight display from flickering between the top of one weight increment and the bottom of the next.	0 - Disabled. **1 - Enabled.**	0 - Disabled. **1 - Enabled.**
07 - Normal balance range. This is percentage of the capacity that the zero can move away from the power up balance due to zero tracking, automatic or manual balance.	0 - **200** Primary capacity (%) multiplied by 2. **Default: 200 = 100%** For example: **4 = -2% to +2%** 10 = -5% to +5%	0 - **200** Primary capacity (%) multiplied by 2. **Default: 200 = 100%** For example: **4 = -2% to +2%** 10 = -5% to +5%
08 - Filters. If the scale is in an environment where there is vibration, for example in a mechanical workshop, filters can be applied so that the weight display remains steady. The stronger the filter the longer the display will take to display a weight.	0 - **Default filter: (4)** 1 - 6 1 = Slight filter, 6 = Strong filter.	0 - **Default filter: (4)** 1 - 6 1 = Slight filter, 6 = Strong filter.
09 - Minimum test weight for customer calibration. (Local platform only).	**0 -** 200 Capacity (%) multiplied by 2.	**0 -** 200 Capacity (%) multiplied by 2.

Sub-branch	B225 Value	B220 Value
10 - Maximum correction from customer calibration. Not available.	**0** - 255 divisions.	**0** - 255 divisions.
11 Dynamic filter. Filters out vibrations / noise which cause weight changes below the value entered.	**0** - 255 Divisions Enter the value below which the scale will filter as noise / vibration.	**0** - 255 Divisions Enter the value below which the scale will filter as noise / vibration.
12 - Weight steady. The weight must remain within the given ± range for a set amount of time before the weight is displayed.	0 - ± 0.1 divisions. **1 - ± 0.25 divisions.** 2 - ± 0.5 divisions. 3 - ± 1 divisions. 4 - ± 1.5 divisions. 5 - ± 2 divisions. 6 - ± 3 divisions. 7 - ± 5 divisions.	0 - ± 0.1 divisions. **1 - ± 0.25 divisions.** 2 - ± 0.5 divisions. 3 - ± 1 divisions. 4 - ± 1.5 divisions. 5 - ± 2 divisions. 6 - ± 3 divisions. 7 - ± 5 divisions.
13 - Tare increment. This sets the tare value that can be accepted by the scale. For example, on a 15kg x 5g scale if the tare increment is set to 1, then the tare weight must be a multiple of 5g. If the tare weight is not a multiple, then the scale will not accept the tare.	0 - Allow any tare increment. **1 - Tare increment must be a multiple of the weight increment.**	0 - Allow any tare increment. **1 - Tare increment must be a multiple of the weight increment.**
14 - Automatic re-tare. This sets the percentage of a tare within which subsequent tares will also be allowed without having to press the tare key. This is generally used where there is minor weight variation between containers. For example, cardboard boxes.	**0 - Disable automatic re-tare.** 1 200 tare range (%) multiplied by 2. For example: 200 = 100% 50 = 25%	**0 - Disable automatic re-tare.** 1 200 tare range (%) multiplied by 2. For example: 200 = 100% 50 = 25%

Branch 7 - Weighing limits

Full service access only.

Sub-branch	B225 Value	B220 Value
00 - Minimum weight. This restricts the weight display so that it remains blank until the minimum weight has been exceeded.	0 - 65535 divisions. **(default = 20)** This is the minimum weight (shown on the overlay) divided by the minimum weight increment (e).	0 - 65535 divisions. **(default = 20)** This is the minimum weight (shown on the overlay) divided by the minimum weight increment (e).
01 - Under range limit. If the scale is set to display negative values (Branch 9 sub-branch 00) the weight display remains blank until the negative weight has been exceeded.	0 - 65535 divisions. **(default = 20)** This is the minimum weight (shown on the overlay) divided by the minimum weight increment (e).	0 - 65535 divisions. **(default = 20)** This is the minimum weight (shown on the overlay) divided by the minimum weight increment (e).

Branch 08 - Gravity compensation

Full service access only.

Sub-branch	Value	B220 Value
00 - Calibration gravity factor. This is the gravity factor of the location where the scale has been calibrated.	As published by the support office of your national distributor. Minimum value = 975000 Maximum value = 985000 You must enter a six digit value as the gravity factors are automatically set to five decimal places.	As B225
01 - Site gravity factor. This is the gravity factor of the location where the scale is to be used.		

If the scale is to be calibrated and used in the same gravity zone, then both gravity factors should be set to 0.

If you intend to calibrate the scale and then send the scale to a different gravity zone, you must enter the calibration and site gravity factors.

If you do not know the site gravity factor, you must enter the calibration gravity factor and send a note with the scale stating that the site gravity factor is to be entered and needs to be re-verified and stamped before being sold to the customer.

Note: *Once the calibration and site gravity factors have been entered, the scale may not weigh correctly until the scale is at the site.*

Branch 09 - Weight display

Full service access only.

Sub-branch	Value	B220 Value
00 - Blank net weight display. This sets the display to either show a negative net weight or to blank the display when a tare is created and then removed from the scale.	**0 - Negative net weight display.** 1 - Blank net weight display.	As B225
01 - Weight decimal marker type.	0 - Comma. **1 - Decimal point.**	As B225

14 - Indicator functions

READ ONLY

This branch contains non-editable display maps (not listed).

Branch 19 - Bleeper functions

Sub-branch	Value	B220 Value
00 - Bleep when below zero.	0 - Disabled. **1 - Enabled.**	0 - Disabled. **1 - Enabled.**
01 - Keyboard bleep.	0 - Disabled. **1 - Enabled.**	0 - Disabled. **1 - Enabled.**
02 - Target bleep.	0 - Disabled. **1 - Enabled.**	0 - Disabled. **1 - Enabled.**
03 - Error bleep.	0 - Disabled. **1 - Enabled.**	0 - Disabled. **1 - Enabled.**
04 - Bleeper volume (NOT USED)	0 - Quiet. 1 - Loud.	0 - Quiet. 1 - Loud.

Branch 20 - Power saving

Sub-branch	Value	B220 Value (If different)
00 - Backlight timeout. This is the length of time between the last scale activity and the backlight being deactivated.	**0 - Permanently off.** 1 - 5 seconds. 2 - 1 minute. 3 - 5 minutes. 4 - Permanently on.	**0 - Permanently off.** 1 - 5 seconds. 2 - 1 minute. 3 - 5 minutes. 4 - Permanently on.
01 - Sleep timeout. This is the length of time between the last scale activity and the scale going into 'SLEEP' mode.	**0 - No sleep timeout.** 1 - 1 minute. 2 - 5 minutes. 3 - 30 minutes.	**0 - No sleep timeout.** 1 - 1 minute. 2 - 5 minutes. 3 - 30 minutes.
02 - Sleep / Reset key operation (Long keypress of display test)	0 - Reset. **1 - Sleep mode.** 2 - With batteries = Sleep or 2 - With mains = Reset	NOT APPLICABLE
03 - LED Brightness	NOT APPLICABLE	NOT APPLICABLE

Branch 29 - Key press duration

Sub-branch	Value	B220 Value (If different)
00 - 'Long' key press duration.	1 - 255 Value = time in 100ths of a second e.g: **50 1/2 second** 150 1.5 seconds	1 - 255 Value = time in 100ths of a second e.g: **50 1/2 second** 150 1.5 seconds

30 - Keyboard functions

READ ONLY

This branch contains non-editable keyboard maps (not listed).

Branch 36 - Serial port 1 configuration

This branch allows the values associated with the serial interface (if fitted) to be set as appropriate for connection of peripheral equipment (e.g. printer).

Sub-branch	Value
00 - **Interface hardware fitted.** This determines the type of interface module fitted inside the scale.	0 - None 1 - RS232 2 - RS485) 3 - RS422 4 - USB) 5 - 20mA current loop 6 - 4 bit parallel 7 - 4 bit serial 8 - OCIA 9 - Trips board 10 - DUART
01 - **Baud rate.** The values indicated are only applicable for RS232 hardware.	0 - 300 baud 1 - 600 baud 2 - 1,200 baud 3 - 2,400 baud 4 - 4,800 baud 5 - 9,600 baud 6 - 19,200 baud 7 - 38,400 baud 8 - 125,000 baud (remote UI) 9 - 166,667 baud (remote UI) 10 - 250,000 baud (remote UI)
02 - **Data bits.** The values indicated are only applicable for RS232 hardware.	0 - Seven data bits (parity enabled only, see sub-branch 03) 1 - Eight data bits
03 - **Parity.** The values indicated are only applicable for RS232 hardware.	0 - None (Eight data bits) 1 - Even 2 - Odd
04 - **Half/Full duplex mode.** Sets the RTS/CTS handshaking protocols. The values indicated are only applicable for RS232/RS485 hardware.	0 - Full duplex mode - no RTS/CTS handshaking 1 - **Remote user interface setting** - Half duplex operation - RTS line set high when transmitting - else low (remote user use with RS485 interface) 2 - Half duplex operation - RTS line set low when transmitting - else high (remote user use with RS485 interface) 3 - RTS low, CTS ignore 4 - RTS high, CTS ignore 5 - RTS raise, CTS wait 6 - RTS raise, CTS ignore 7 - RTS low, CTS wait 8 - RTS high, CTS wait

Branch 37 - Serial port 2 configuration

This branch allows the values associated with serial interface 2 (if fitted) to be set as appropriate.

Note: *FACTORY SET - DO NOT ALTER.*

Branch 38 - Printer formats

Select printer type 38.00

Select the print format.
Value 35 - 42

35 PC protocol (see *PC protocol on page 47*)
40 IMP 42 ZEBRA See notes on page 37

Note: *For further information on compatible printers and configuration, contact your local Salter Brecknell centre.*

Select print format 38.01

ASCII (IMP) PRINTERS ONLY

Select the print format.
Value 1 - 8 (Default = 6)

Definitions and examples

		Examples
1.	Net weight only WWWW.WW<CR><LF>	0042.50
2.	Net weight with units WWWW.WW<SP>UU<CR><LF>	0042.50 kg
3.	GTN with units 'G'<SP>GGGG.GG<SP>UU<CR><LF> 'T'<SP>TTTT.TT<SP>UU<CR><LF> 'N'<SP>WWWW.WW <SP>UU<CR><LF>	'G' 0052.50 kg 'T' 0010.00 kg 'N' 0042.50 kg
4.	Displayed count or weight with identifier In COUNT MODE, <SP> CCCCCCC<SP>PCS<CR><LF> In WEIGH MODE, I<SP>WWWW.WW<CR><LF>	0000010 PCS
5.	Displayed weight with identifier and units In COUNT MODE, <SP> CCCCCCC<SP>PCS<CR><LF> In WEIGH MODE, I<SP>WWWW.WW<SP>UU<CR><LF>	'G' 0052.50 kg
6.	Net weight with units, count and piece weight WWWW.WW<SP>UU<CR><LF> CCCCCCC<CR><LF> PPPPPP<SP>UU<CR><LF>	0042.50 kg 0000010 004.250 kg
7.	Count only with a fixed field format COUNT:<SP>CCCCCCC<SP>PCS<CR><LF	0000010 PCS
8.	Net weight with units, count, piece weight, grand total and transaction count WWWW.WW<SP>UU<CR><LF> CCCCCCC<CR><LF> PPPPPP<SP>UU<CR><LF> GTO<CR><LF> TRN<CR><LF>	0042.50 kg 0000010 004.250 kg 1390 168

Print line feed 38.02

Select the number of line feeds after each print operation. **Value** - 255 (Default = 6)

Zebra printers

ONLY APPLICABLE IF BRANCH 38.00 IS SET FOR ‘ZEBRA’ PRINTER TYPES.

Zebra printers store print formats locally. The printerhas its own ‘Creator Label’ software to manipulate the print format.

The B225 will transmit the following information to a Zebra printer, (to be formatted at the printer):

- Net weight
- Gross Weight
- Tare Weight
- Count
- Piece weight
- Grant total
- Transaction count

39 - Communication interface 2 configuration

This allows configuration of the interface protocol.

Note: *FACTORY SET - DO NOT ALTER.*

40 - 47 - I/O devices configuration

This defines the types of devices connected to the scale via the I2C bus, or the remote user interface.

Note: *FACTORY SET - DO NOT ALTER.*

Branch 60 - Tares

B225

Sub-branch	Value
Note: See also, branch 6 sub-branch 13 - tare increment, and branch 6 sub-branch 14 - automatic re-tare.	
00 - Enable stored tares (enables tares included as part of the coin stores)	0 - Disabled. **1 - Enabled.**
01 - Enable positive cumulative tare.	0 - Disabled. **1 - Enabled.**
02 - Enable negative cumulative tare	0 - Disabled. **1 - Enabled.**
03 - Free tare cancels stored tare. (if enabled pressing the tare key will override the stored tare)	0 - Disabled. **1 - Enabled.**
04 - Stored tare cancels free tare (if enabled, selecting a coin store with stored tare will override any existing tare value set with the tare key)	0 - Disabled. **1 - Enabled**
05 - Manual zero cancels tare (If enabled, pressing the zero key will also cancel any free tare)	0 - Disabled. **1 - Enabled.**
06 - Free tare cancelling with tare key	0 - Disabled. **1 - Enabled**
07 - Keyboard tare cancelling with tare key	0 - Disabled. **1 - Enabled**
08 - Stored tare cancelling with tare key	0 - Disabled. **1 - Enabled**
09 - Stored tare cancels tare	0 - Disabled. **1 - Enabled**
10 - Manual zero whilst tare active	0 - Disabled. **1 - Enabled**
11 - Clear key cancels tare	0 - Disabled. **1 - Enabled**
12 - Tare key cancels tare	0 - Disabled. **1 - Enabled**
13 - Programming stored tare	0 - Disabled. **1 - Enabled**

B220

Sub-branch	Value
See also, branch 6 sub-branch 13 - tare increment, and branch 6 sub-branch 14 - automatic re-tare.	
00 - **Manual balance whilst tare active.**	0 - Manual balance disabled whilst any tare is active. 1 - Manual balance clears the tare after a successful balance.
01 - **Minimum piece weight.**	Weight in grams.
02 - **Minimum sample size.**	Weight in grams.
03 - **Item count thousands separator.**	0 - Disabled. 1 - Enabled.
04 - **Keyboard entered (graduated) tare.**	0 - Disabled. 1 - Enabled.
05 - **Cumulative tare.**	0 - Disabled. 1 - Enabled.
06 - **Stored tare.**	0 - Disabled. 1 - Enabled.

Branch 61 - Sampling - B225 ONLY

Full service access only

Minimum sample weight 61.00

Set the minimum sample weight value.

Value in grams e.g:

10	10g	1000	1kg
150	150g		

Manual re-sampling range 61.01

Set the permissible weight range for manual re-sampling.

Value = Function of percentage of initial sample size e.g:

10	100% of original	150	1500% of original
100	1000% of original	0	Disabled

Automatic re-sampling range 61.02

The scale will automatically re-calculate the piece weight value, based on the measured weight and count values.

Set the permissible weight range for automatic re-sampling.

Value = Function of percentage of initial sample size e.g:

10	100% of original	150	1500% of original
100	1000% of original	0	Disabled

Note: Auto re-sample will not work for keyboard entered piece weights.

Count thousands separator 61.03

The scale will display the count value with a thousands separator.

Value			
0	**Disabled**	1	Enabled

Enable PLUs 61.04

Enable / disable the use of PLUs

Value			
0	Disabled	**1**	**Enabled**

Branch 64 - Remote platform filter - B225 only

Standard filter 64.00

Filter out noise from vibration etc.
Value

0 - 5 **(Default = 2)**

0 = Rapid display update, more susceptible to vibration.

5 = Slow display update, less susceptible to vibration.

Branch 65 - Remote platform calibration - B225 only

Calibration method 65.00

Select either 1 step or 5 step remote platform calibration.
Value

0. 5 step.

1. 2 step.

2 step calibration weight 65.01

Specified weight for 2 step calibration.
Value

Enter as value to give a weight in line with the primary capacity set in branch 4.

Example:

For a Value entered = 125

If the platform weighs in kilograms to 2 decimal places then this value corresponds to a calibration weight of 1.25 kg

If the platform weighs in kg to 1 decimal place then the value would correspond to a calibration weight of 12.5 kg.

Branch 101 - 135 - PLUs (B220)

For B225 PLU configuration - see '*Branch 101 - 125 -PLUs (B225)* on page 45'

To program a particular PLU use the PLU number plus 100 to get the required branch.
e.g. PLU 5 = Branch 105.

Sub-branch	Value
00 - **Write protect.** Prevents a PLU from being accidentally deleted or changed. Whilst protection is enabled, any attempt to edit the PLU will result in an error message (E102).	0 - Write enabled. 1 - Write protected.
01 - **Piece weight.**	Weight in grams.
02 - **Stored tare.**	Weight in grams.

Branch 101 - 125 -PLUs (B225)

For B220 PLU config see '*Branch 101 - 135 - PLUs (B220)*' above

Editing PLUs

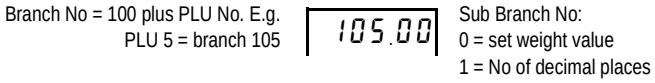
To program a particular PLU use the PLU number plus 100 to get the required branch.

e.g. PLU 5 = Branch 105.

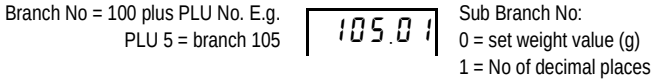
PLU piece weight

The piece weight is entered as a combination of 2 numbers: The weight value and the number of decimal places. Together these give a weight value in grams (or decimal pounds for North America).

Weight value



PLU piece weight - no. of decimal places



Example 1:

for a piece weight of 150g:

Weight value = 150
Decimal places = 0

Example 2:

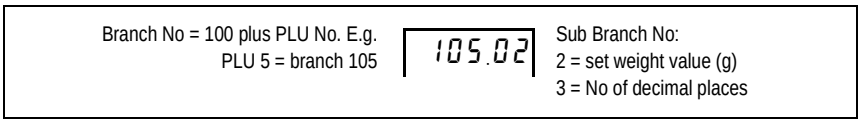
for a piece weight of 1.50kg

Weight value = 1500
Decimal places = 0

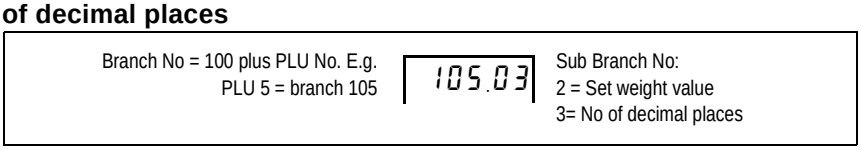
PLU tare weight (integral platform)

The tare weight is entered as a combination of 2 numbers: the weight value and the number of decimal places. Together these give a weight value in kg (or decimal pounds for North America).

Weight value



PLU tare weight - no. of decimal places



Example 1:
for a tare weight of 1.255kg:

Weight value = 1255
Decimal places = 3

Example 2:

for a piece weight of 12.55kg

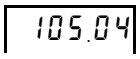
Weight value = 1255
Decimal places = 2

PLU tare weight (remote platform)

The tare weight is entered as a combination of 2 numbers: the weight value and the number of decimal places. Together these give a weight value in kg (or decimal pounds for North America).

Weight value

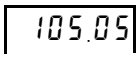
Branch No = 100 plus PLU No. E.g.
PLU 5 = branch 105



Sub Branch No:
2 = set weight value (g)
3 = No of decimal places

PLU tare weight - no. of decimal places

Branch No = 100 plus PLU No. E.g.
PLU 5 = branch 105

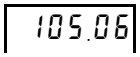


Sub Branch No:
2 = Set weight value
3= No of decimal places

For examples see **PLU tare weight (integral platform)** above.

PLU protect

Branch No = 100 plus PLU No. E.g.
PLU 5 = branch 105



PLU protection prevents a PLU from being accidentally deleted or changed. Whilst protection is enabled, any attempt to edit the PLU will result in an error message (E102).

Value

0	Protection disabled	1	PLU protected

4 PC protocol

B225 ONLY

A PC can be connected to the serial port of the scale. The PC can then act as a remote terminal to control the scale, and display scale / weight information.

To set up the scale for PC protocol you must first configure the following:

- *Branch 36 - Serial port 1 configuration* on page 34
- *Branch 38 - Printer formats* on page 36

PC protocol commands and codes

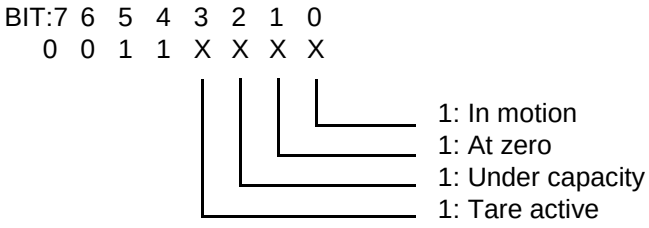
The scale's RS-232 bidirectional communication works in a server/client protocol. A computer server sends a command code to the scale (client) which will return a response to the server device or perform a scale function. Commands to the scale are in uppercase, terminated with a carriage return. Scale responses begin with the lowercase equivalent of the command code.

COMMAND	RESPONSE	DESCRIPTION
CA<CR>	none	Clear Sample
CC<CR>	cc_xxxxx<CR>	Request piece count
CP<CR>	cp_xxxxxx_uu<CR>	Request piece weight value
CM<CR>	none	Switch to count mode
DIxxxxxxxx<CR>	none	Display message xxxx (message is 8 characters max)
IC<CR>	none	Reset Scale (warm start)
PWx.xxxxx_uu<CR>	none	Loads xxsx.x as piece weight
TR<CR>	tr_x.xxx_uu<CR>	Request tare value
TZ<CR>	none	Clear the current tare
Txxxx.x_uu<CR>	none	Loads xxxx.x as tare
WD<CR>	ws_x.xxxx<CR>	Request net weight
WE<CR>	we_x.xxx_uu<CR>	Request net weight with units
W<CR>	we_x.xxxx_uuHML<CR>	Request net weight with units and status
WG<CR>	wg_x.xxx_uu<CR>	Request gross weight with units
WM<CR>	none	Switch to weight mode
WS<CR>	ws_HML<CR>	Request scale status
WZ<CR>	none	Zero the scale

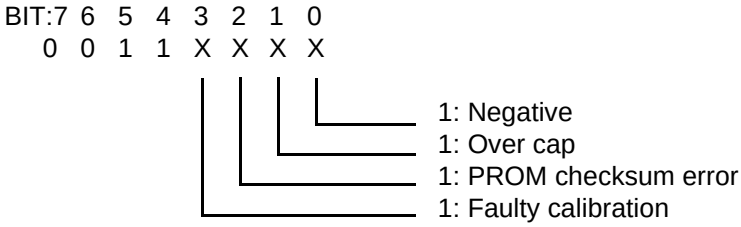
Legend:

1. "_" represents the ASCII space character
2. "u"represents the units of measure character(s):
   "lb" for pounds
   "kg" for kilograms
3. <CR>represents the ASCII carriage return
4. HMLrepresents three bytes of scale status information as described on the next page.
5. Value entered is assumed to be in the same units of measure as those set in the scale.
6. Display messages are limited to seven characters.

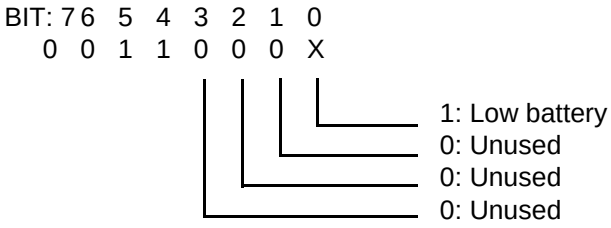
Scale Status Byte H:



Scale Status Byte M:



Scale Status Byte L:

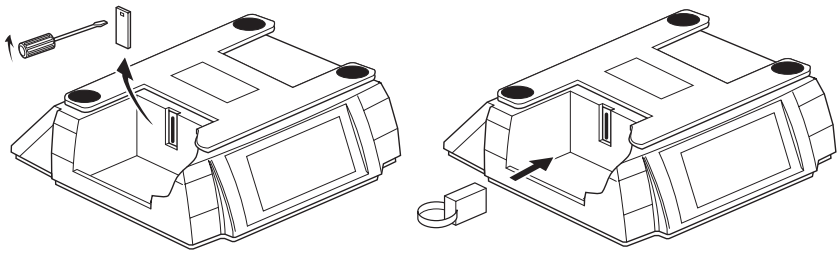


5 Calibration

REQUIRES FULL SERVICE ACCESSS

Before calibrating the scale:

1. Unplug the scale from the power supply.
2. Break the tamper seal, carefully remove the blanking plate and plug the service tool into the side of the scale.

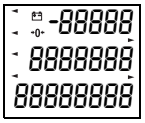


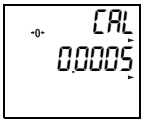
3. Replace the weighplate and re-connect the power supply.
4. Check that the following are set and correct
   Capacities -see page 20.
   Gravity factors - see page 27.
5. For remote platform calibration, the following additional items must also be configured:
   Remote platform calibration configuration - see page 43.

5.1 Normal calibration procedure

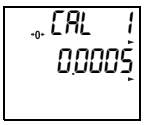
By calibrating the scale any user calibration previously performed will be overridden.

1. Enter full service access (see above).
2. Place a full load on the scale and remove it several times in order to 'exercise the scale'.
3. Enter calibration mode.

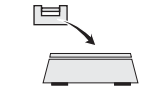


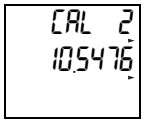


4. With no load on the scale, calibrate for zero.

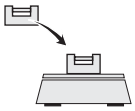


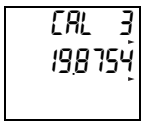
5. Calibrate with half capacity load on the scale.



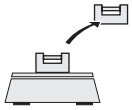


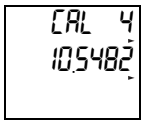
6. Calibrate with full capacity load on the scale.



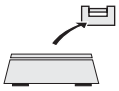


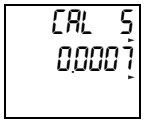
7. Remove half the load.





8. Remove all the load.





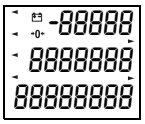
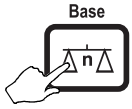
9. The calibration procedure is now complete.
10. Disconnect the scale from the power supply.
11. Remove the service tool from the side of the scale and reconnect the power supply.

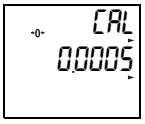
5.2 Calibrate Remote platform - B225 only

Depending upon the configuration of branch 65 (see page 43), the remote platform will be calibrated using either a full load 5 step procedure, or, a partial load 2 step procedure.

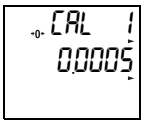
5.2.1 Full load 5 step calibration

1. Enter full service access (see page 49).
2. Place a full load on the remote platform and remove it several times in order to 'exercise the scale'.
3. Enter full load calibration mode.

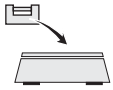
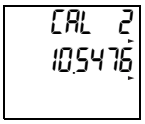






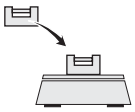
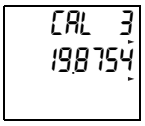

4. With no load on the scale, calibrate for zero.

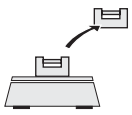
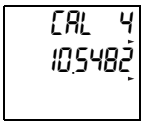

5. Calibrate with half capacity load on the scale.

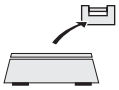

6. Calibrate with full capacity load on the scale.

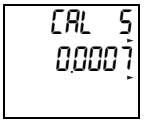




7. Remove half the load.


8. Remove all the load.



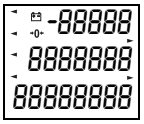


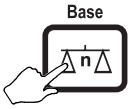
9. The calibration procedure is now complete.
10. Disconnect the scale from the power supply.
11. Remove the service tool from the side of the scale and reconnect the power supply.

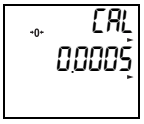
5.2.2 Partial load 2 step calibration

Note: *It is recommended that calibration is performed with the full load. Partial load calibration will result in an increased percentage error when weighing.*

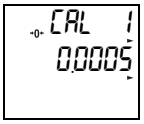
1. Enter full service access (see page 49).
2. Place a load on the remote platform and remove it several times in order to 'exercise the scale'.
3. Enter partial load calibration mode.



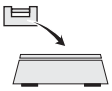




4. With no load on the scale, calibrate for zero.



5. Calibrate with specified load on the scale.

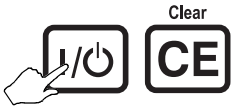


Note: Specified load appears on the bottom row. The specified load can be altered in configuration branch 65 (see page 43).

6. The calibration procedure is now complete.
7. Disconnect the scale from the power supply.
8. Remove the service tool from the side of the scale and reconnect the power supply.

5.3 Aborting calibration

To abort the calibration part way through:

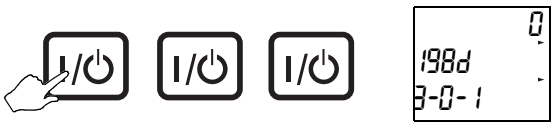


You must start the calibration procedure again.

6 Diagnostics

6.1 Status display

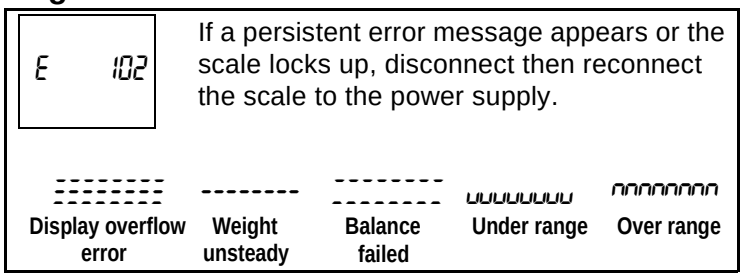
The status display shows some basic information about the scale. to view this information, press the reset key three times:



Top row	Middle row	Bottom row
0	Boot block product code	Boot block version number
1	Application block product code	Application block version number
2	Configuration block product code	Configuration block version number
3	Product configuration checksum status: 0 - OK 1 - Checksum failed	Product configuration edit counter
4	Mains/battery voltage	Blank
5	Secondary calibration counter	Blank
6	Cause of last reset: 0 - Power down 1 - Watchdog 2 - Clock monitor	Blank
7	Successful power up counter	Unsuccessful power up counter
8	Card version on serial channel 0	Blank
9	Card version on serial channel 1	Application version number

If you need to contact your local centre, please make a note of all the settings shown.

6.2 Error messages



E0 Scale requires reset. (Disconnect then reconnect power supply.)

E5 Weight start up error. Disconnect then reconnect the power supply. (A persistent error could be caused by excessive vibration or an incorrect service calibration) (see *Branch 6 - Weighing functionality* on page 24 and *Calibration* on page 49).

E10 Battery failure - recharge or replace the batteries (do not use NiCad batteries).

E11 Power supply voltage too high. Make sure the correct power supply is being used.

E15 Software (multitask) error. Disconnect then reconnect the power supply.

E19 Software download tool error. Try downloading the application again.

E20 Weight error. Disconnect then reconnect the power supply, if the error reappears, you will need to replace the load cell.

E21 Weight start up error. Disconnect then reconnect the power supply. (A persistent error could be caused by excessive vibration or an incorrect service calibration) (see *Branch 6 - Weighing functionality* on page 24 and *Calibration* on page 49).

E22 Transducer, weight supply error. Replace the loadcell

E25 Weight start up error. Disconnect then reconnect the power supply. (A persistent error could be caused by excessive vibration or an incorrect service calibration) (see *Branch 6 - Weighing functionality* on page 24 and *Calibration* on page 49).

E30 Management/service mode not exited correctly. Re-enter service mode, select the value to be changed, change the value and go to the next branch to accept the change.

E35 An invalid configuration for the scale has been given in branch 5, re-enter the configurations
(see *Branches 4 & 5 - scale capacity* on page 20).

E 36 An invalid capacity for the scale has been given in branch 5. Re-enter the configurations (see *Branches 4 & 5 - scale capacity* on page 20).

E40 The weight used for user-calibration is unsteady, re-calibrate the scale.

E41 An incorrect weight is being used for user-calibration, use the correct weights.

E42 Weight error. Remove all weight and restart the scale.

E100 Invalid PLU contents. Re-program the PLU.

E102 PLU write failed. PLU is protected - see page 45.

E103 Tare error. Remove all items from the weighpan, then press and hold the clear key.

E110 The counting piece-weight is greater than 10% of the capacity of the scale. Remove all items from the weighpan, then press and hold the clear key

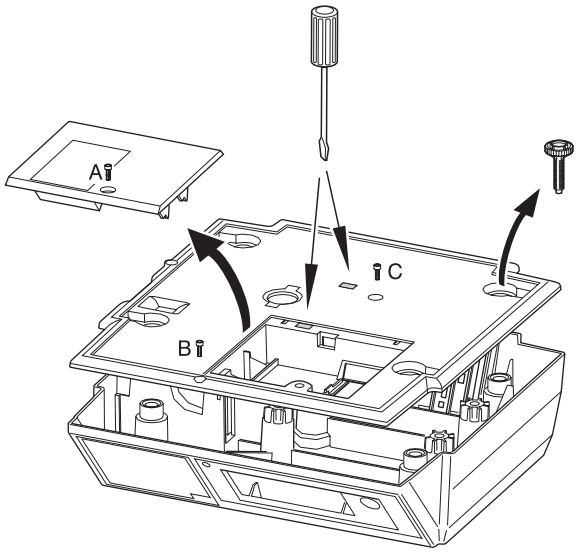
E151 A change to the configuration has failed, reprogram the configuration.

E152 User does not have access to this item (in management mode).

E200 Saving configuration. Some changes to configuration will cause the scale to bleep rapidly and display this error for up to 10 seconds. This happens whilst the scale updates its configuration files, and is a normal part of its operation.

7 Servicing

7.1 Removing the covers



1. Disconnect the power supply from the scale.
2. Remove the weighplate.
3. Break the tamper seal.
4. Remove the screw (A) and remove the expansion board cover.
5. Remove the feet (and the springs if the scale is a 30kg machine).
6. Remove the screw (B) at the front edge of the scale.
7. Carefully lever the clips holding the cover using a flat-bladed screwdriver.

Note: *When replacing the cover, if either of the clips are damaged an M6 machine or self-tapping screw (C) can be used to hold the cover in place.*

7.2 Installing expansion boards

The expansion boards are fitted in the recess on the under side of the scale. They are wired back to the loadcell using the looms supplied.

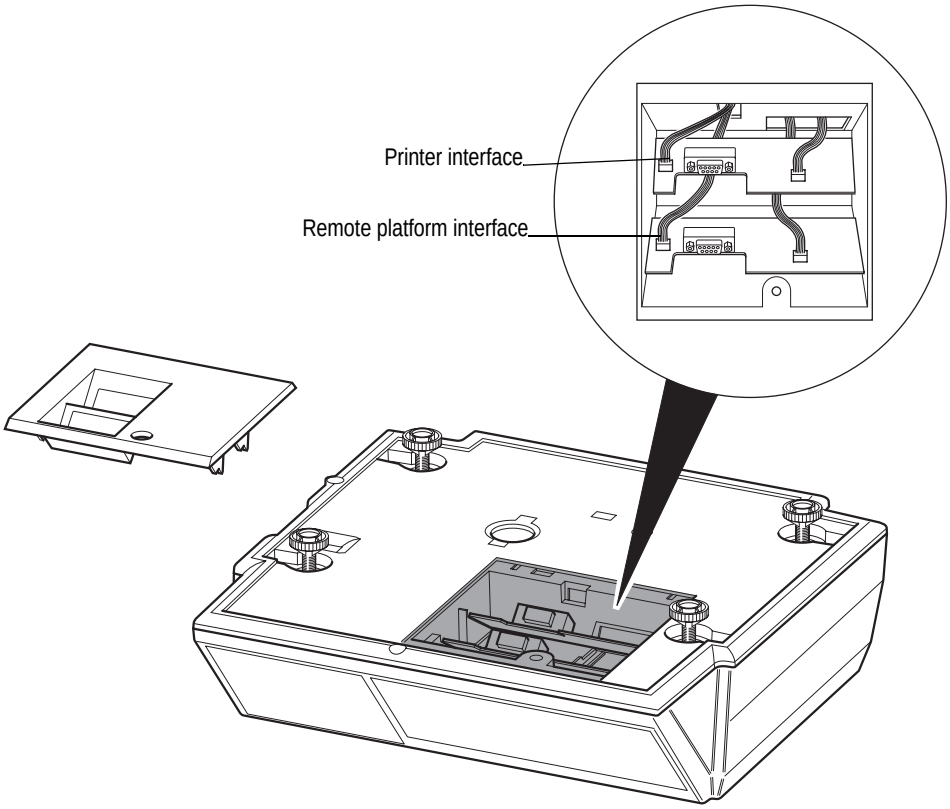


Figure 7.1 Illustration showing standard B225 configuration.

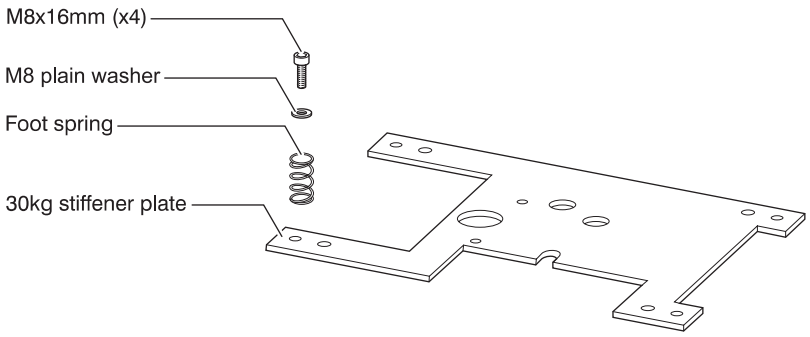
Service notes:

- The looms pass through the slot in the recess, and connect onto the loadcell PCB inside the scale. See page 65 for connection diagram.
- To fit / replace loom will require removal of the main covers and stiffener plate (if fitted).
- When fitting boards for the first time, you will need to remove the appropriate knock out from the expansion board cover.

8 30 kg scales

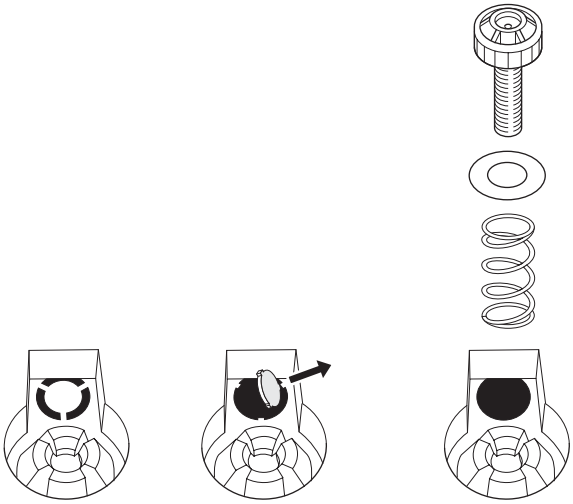
For 30 kg scales, a stiffener plate must be used.

8.1 Stiffener plate

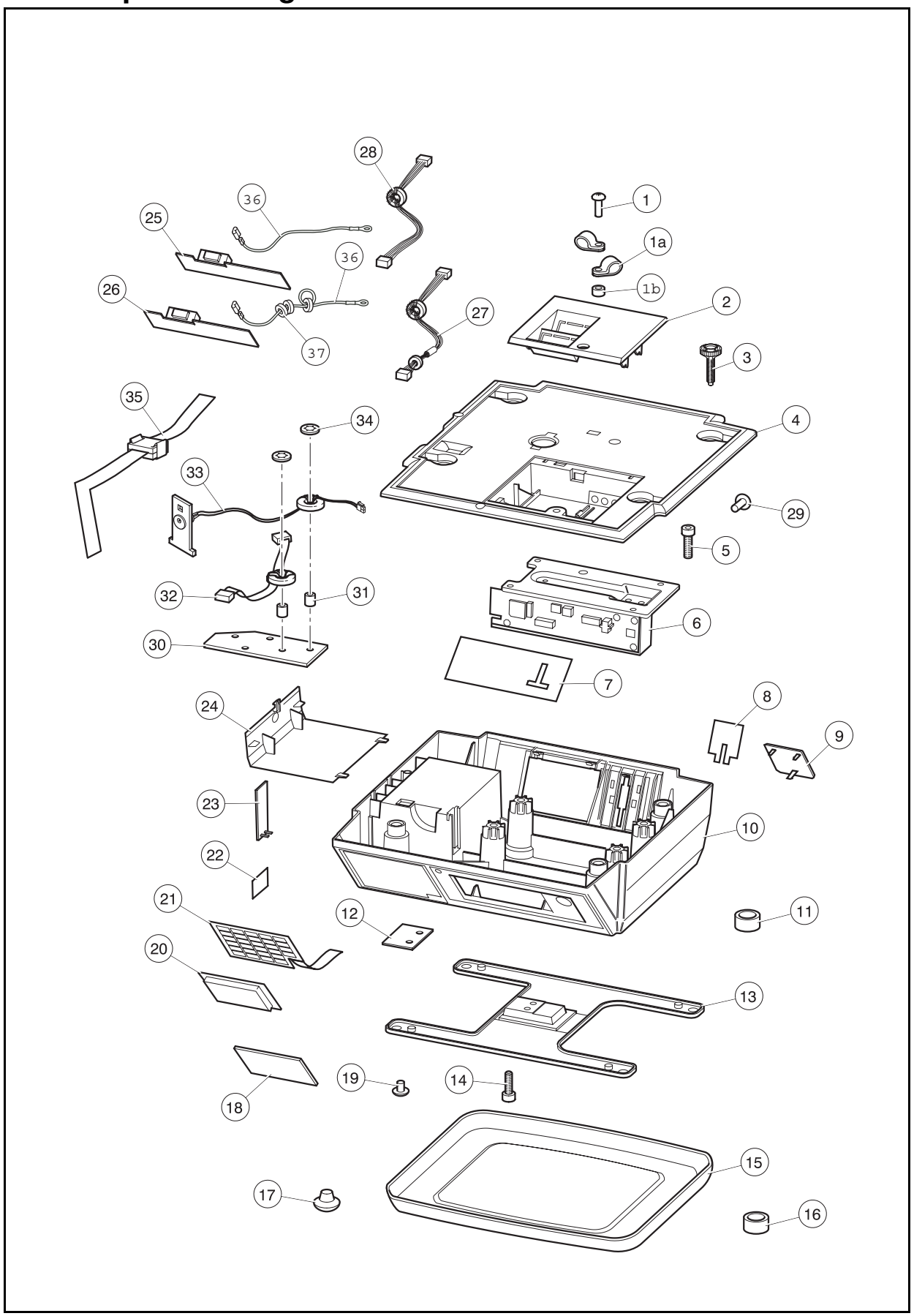


Base covers

If you need to replace a damaged base cover, break off all four cut-outs from the new cover before replacing.



9 Exploded diagram



Parts description

Illustrated			
Annoted	Description	Brisch No.	QTY
1	M4 x 16mm Slotted CH HD screw	13755-113	1
1a	Wire harness clip	18137-462	2
1b	Spacer	18137-459	1
2 and 4	Base cover/Expansion board cover assy	70221-172	1
3	Foot	61664-151	4
5	M6 x 20mm Recessed PAN HD screw	13755-147	4
6	T702 15kg Delta LP load cell assy:		1
	Blank cell (15 kg B220)	70718-623	
	Blank cell (30 kg B220)	70718-385	
	Blank cell (15 kg B225)	70718-459	
	Blank cell (30 kg B225)	70718-461	
	Configured cell - Non Verified (15 kg B225)	70718-670	
	Configured cell - Non Verified (30 kg B225)	70718-671	
7	Rear display blanking plate	65379-482	1
8	Stiffener plate	65556-110	1
9	Head up display bracket cover	61225-142	1
10	Structural cover moulding	61333-219	1
11	Overload stops	62837-107	8
12	Spacer	65331-324	1
13	Cross	68481-145	1
14	M6 x 12mm Socket HD CAP screw	13811-138	3
15	Weigh pan	68412-592	1
16	Spirit level	68777-106	1
17	Cross rubber	68488-113	4
18	Display window	61768-104	1
19	Cover plug: M6 tapped hole	18137-598	1
20	LCD		1
	non-backlit	70658-231	
	backlit	70658-232	
21	28 way keyboard	70785-965	1
22	Sealing label	67814-286	1
23	Software sealing plug	61225-141	1
24	Battery box cover assy	61225-153	1
25	Serial interface	71015-204	1
26	Remote platform interface (B225)	71015-298	1
27	Serial interface loom (Black)	70735-128	1
28	Remote platform interface loom (Blue)	70735-129	1
29	Fir tree button	18137-615	2

Illustrated			
Annoted	Description	Brisch No.	QTY
30	Ferrite plate	65658-109	1
31	Spacer	63138-162	2
32	Display loom (short)	70734-894	1
33	Battery socket loom asst	70734-896	1
34	M5 starlock fixing washer	15718-304	2
35	Flat cable ferrite	18137-455	1
36	Earth loom	70611-499	2
37	Ferrite (Toroidal)	18137-466	4

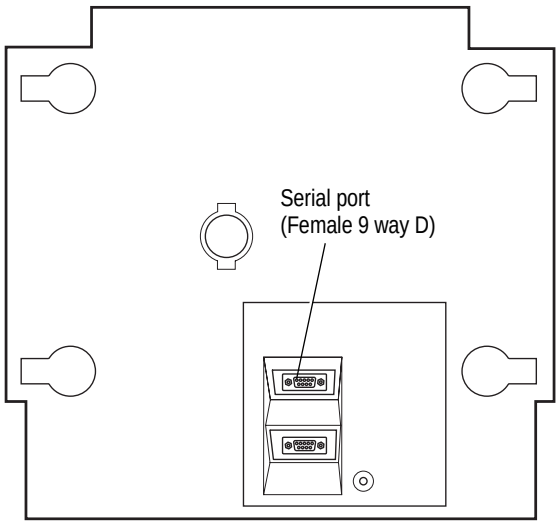
10 Wiring / Connections

10.1 External connections

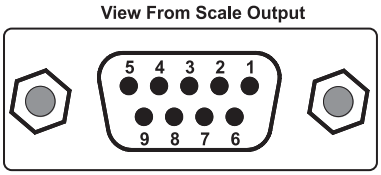
Note: *The external connectors are located behind plastic 'cut-outs' which will need to be removed before connection.*

10.1.1 Serial output (Printer / PC connection)

You can connect an EPSON compatible serial printer to the B225 using the serial (COM) port on the underside of the scale.



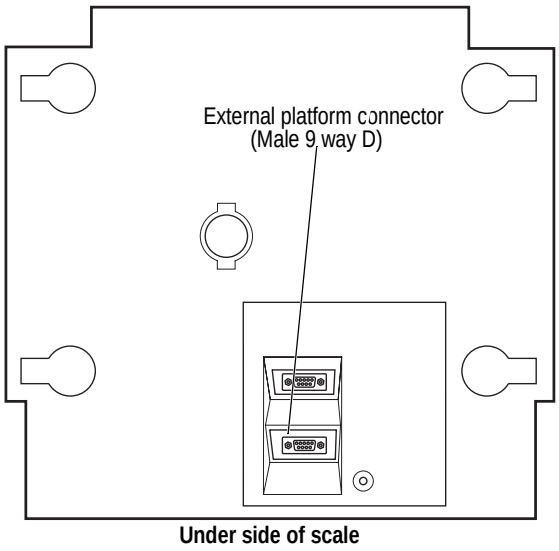
Under side of scale

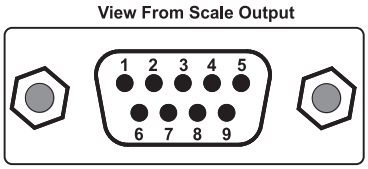


Pin No.	Pin Name
1	+VUN
2	TXD
3	RXD
4	N/C
5	SGND
6	N/C
7	CTS
8	RTS
9	0VS
Shell	0VS

10.1.2 External platform (B225 only)

Connection to an external platform is made via the connector on the underside of the scale.

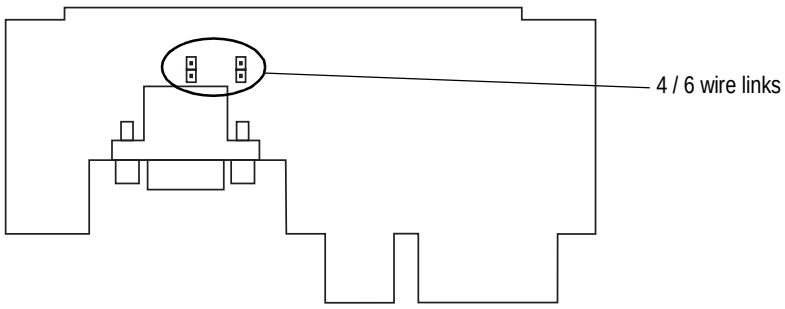




Pin No.	Pin Name	Core Colours (EDA1102 Lead)
1	Sig -	Red
2	Sig +	White
3	Ex +	Green
4	Ex -	Black
5	Sense +	Yellow
6	N/C	
7	N/C	
8	Sense -	Blue
9	GND	
Shell	GND	
NOTE: Sense lines are only used with 6 wire platform connection. See below.		

4/6 wire platform connection

There are 2 links on the remote platform PCB to select either 4 wire or 6 wire connection.

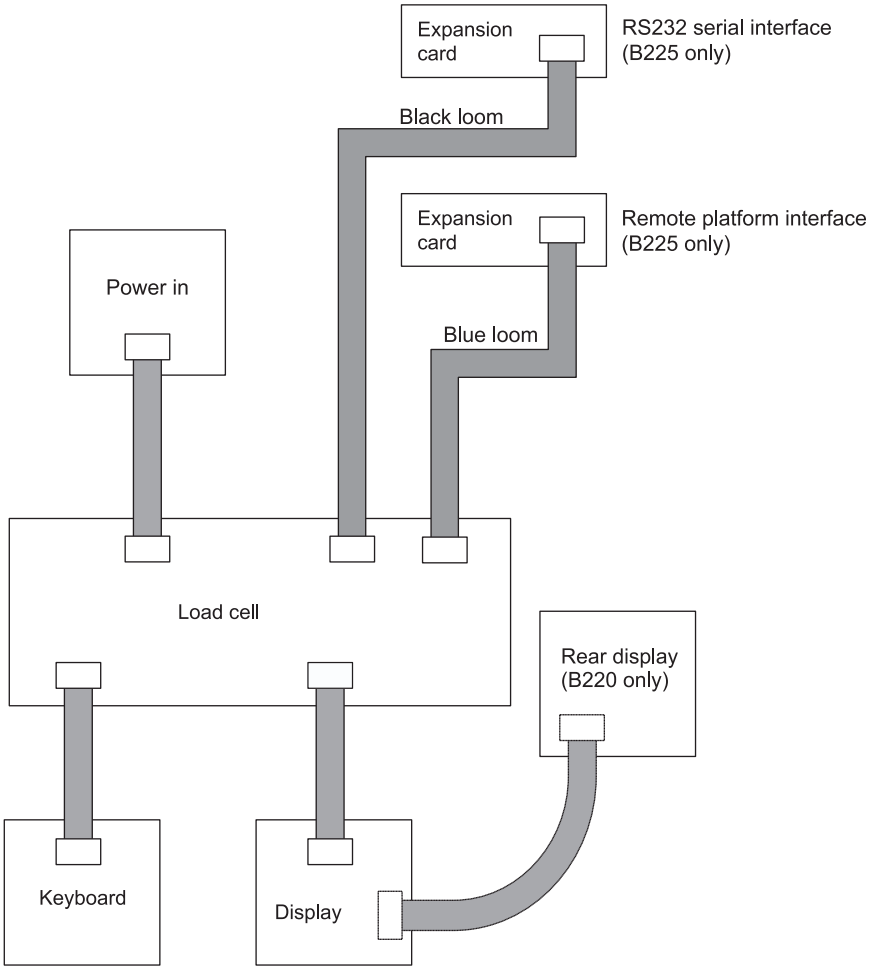


- **Both links present = 4 wire connection (default**)
  The platform connection will not require the sense + & - cores.
- **No links fitted = 6 wire connection**
  The platform connection will use all 6 cores including sense + & -

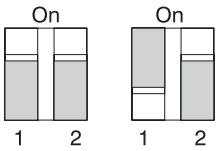
Note: *6 wire connections allow the scale compensate for any voltage variation (due to cable resistance on longer cable runs).*

10.2 Internal connections

Internal block diagram



Display board settings



Front **Rear**

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W

Z

The address of your Salter Brecknell centre is

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Email: sales@salterbrecknell.com

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