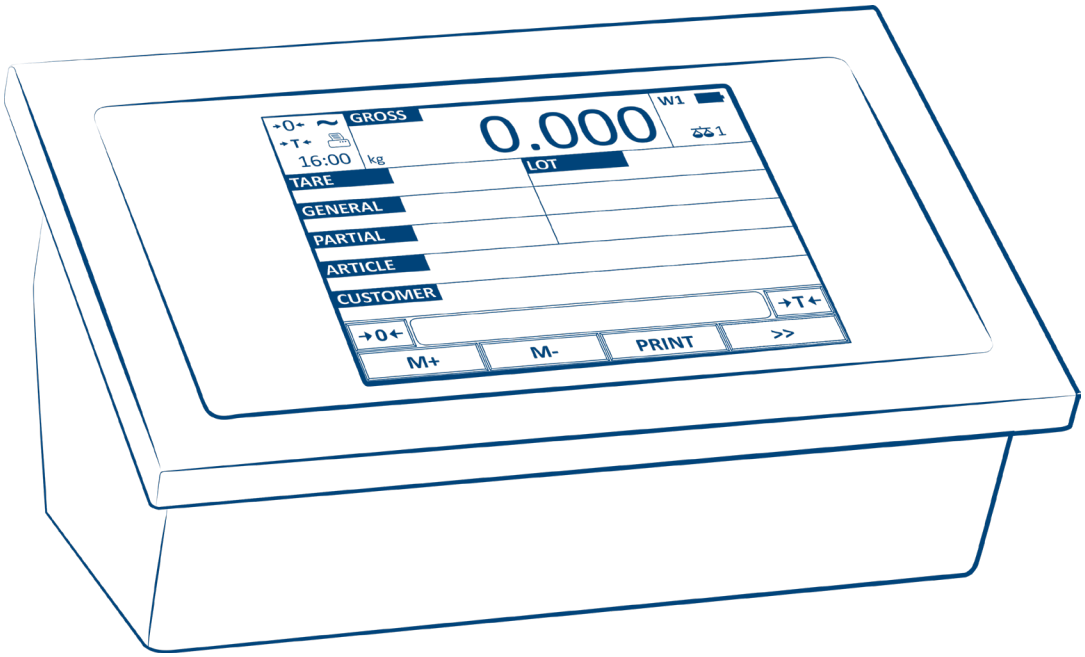
DINI ARGEO
Scales - Weighing systems

AF03GT

Program for weighbridges

CALIBRATION METHOD - v7

ENGLISH



For 3590 series touch screen indicators

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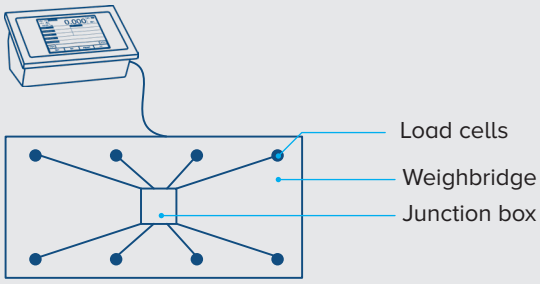
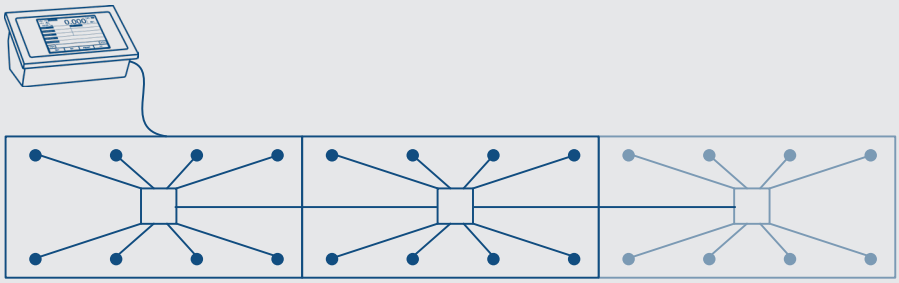
Calibration of a channel connected analogue weighbridge

PREMISE

CASE 1: An indicator connected to a weighbridge.

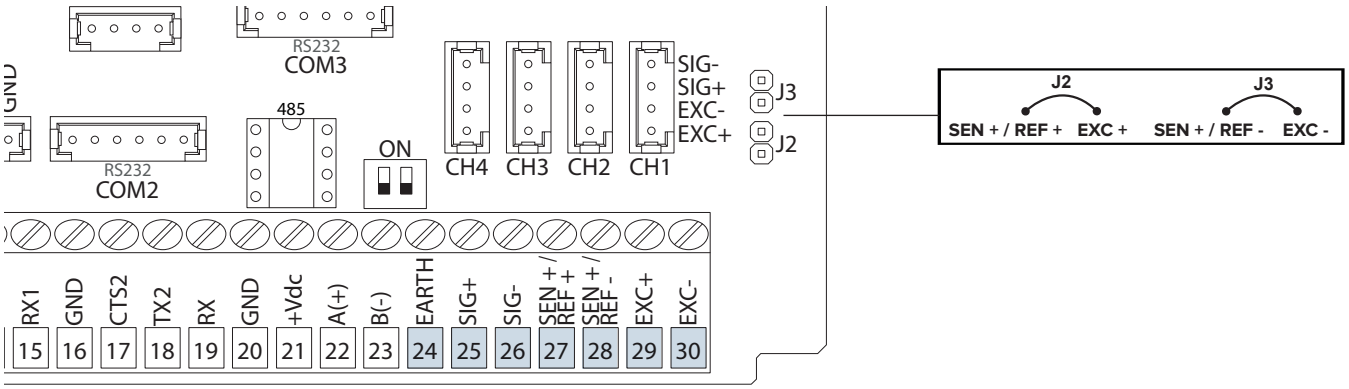


CASE 2: An indicator connected to a scale composed of several weighbridges in series (up to 48 1000 Ohm cells).



Procedure:

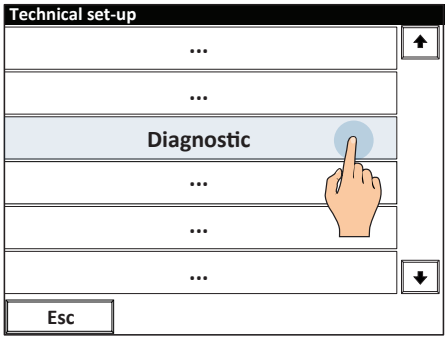
A. With switched-off indicator and power supply unplugged, connect the weighbridge to the indicator.



B.

Turn on the indicator, enter the setup menu and check that the signal coming from the weighbridge is stable and increases with weight increase.

1.



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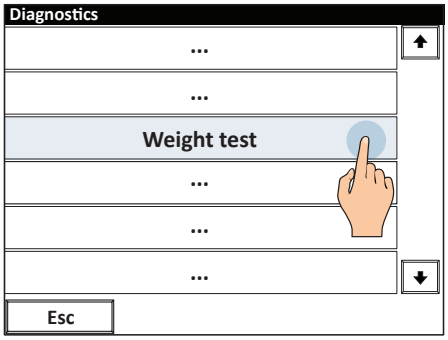

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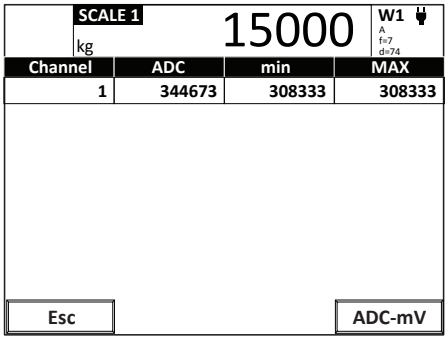
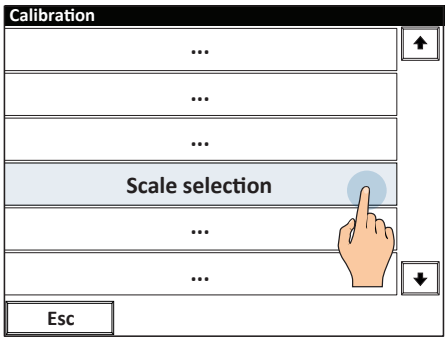


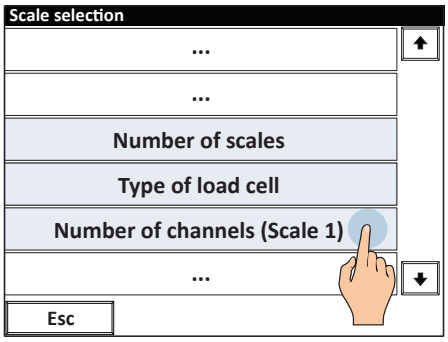
C.

Select the number of weighbridges and each weighbridge load cell type.

1.



2.



= 1

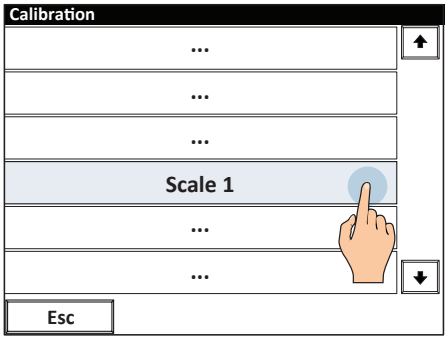
= Analogue

= 1

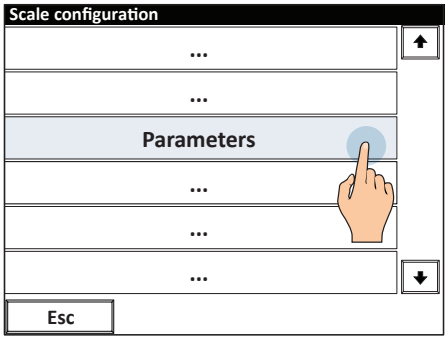
D.

Set scale metric parameters (capacity / division, etc.)

1.



2.



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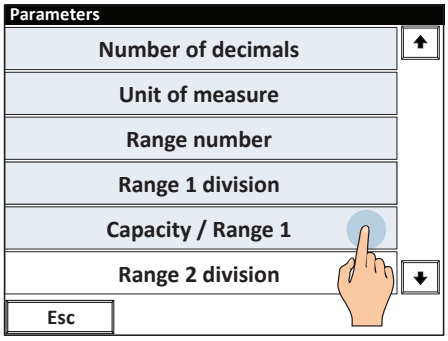
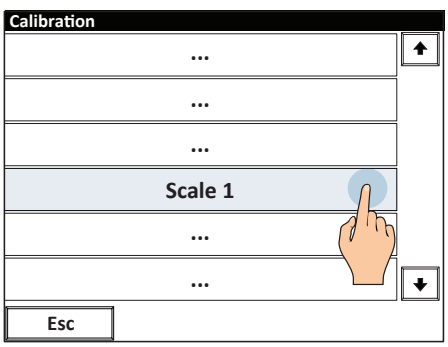


Example of dual scale weighbridge configuration: Number of decimals = 0; Unit of measure = kg; Range number = 2; Range 1 division = 10; Capacity / Range 1 = 30000; Range 2 division = 20; Capacity / Range 2 =60000.

E.

Perform calibration.

1.



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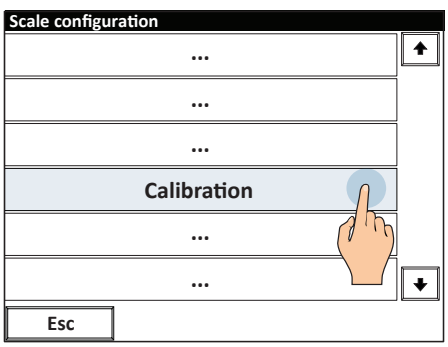

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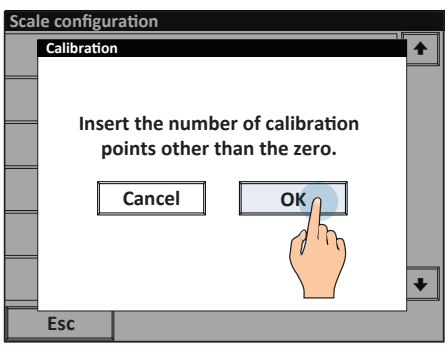

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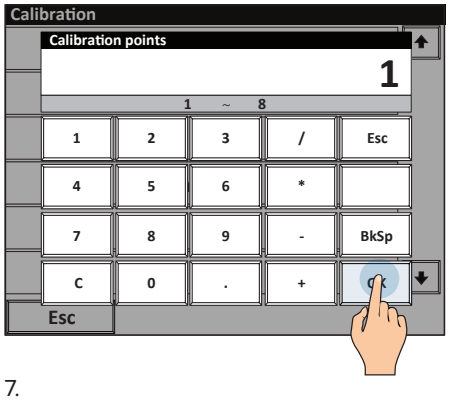
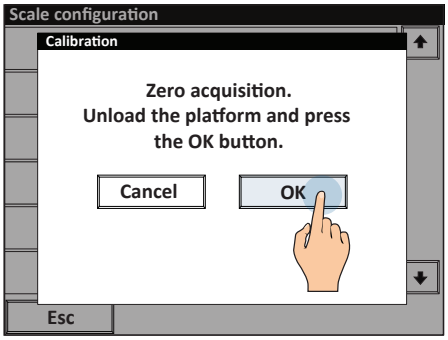


5.



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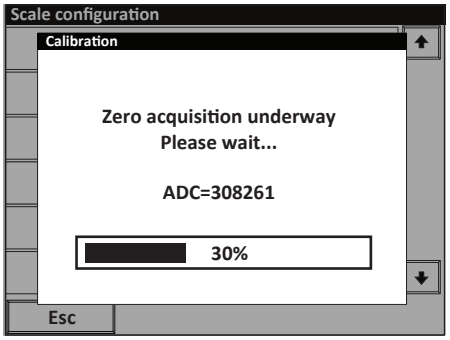

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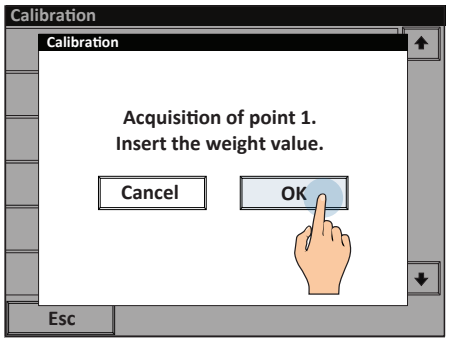
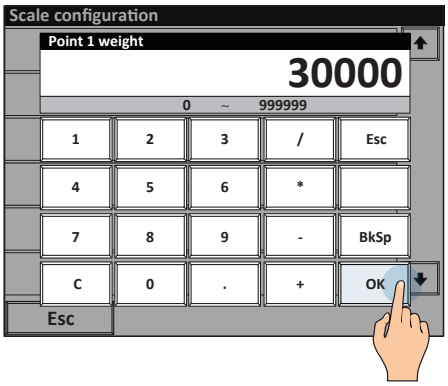
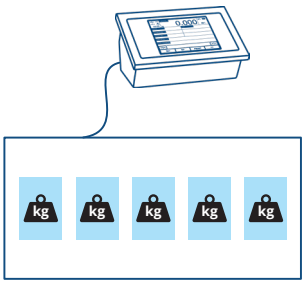


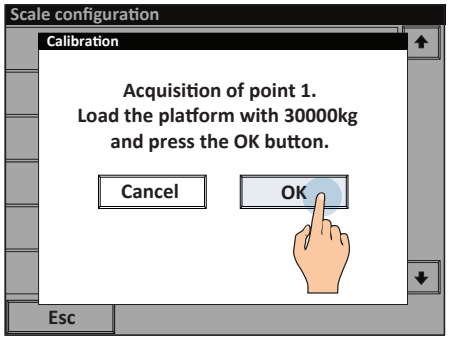
8.



9. Load the weighbridge and distribute the mass evenly.



10.



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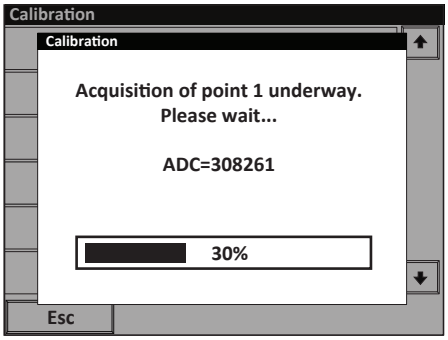
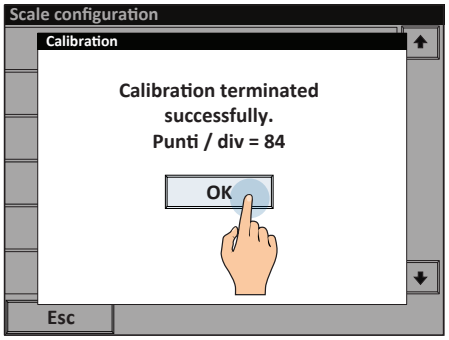


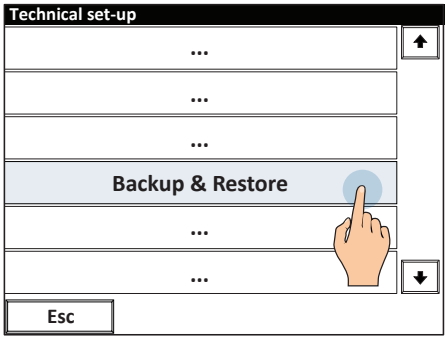
12.



F. Repeat the procedure from step **C** for calibration of the second weighbridge (if present).

G. Perform backup

1.



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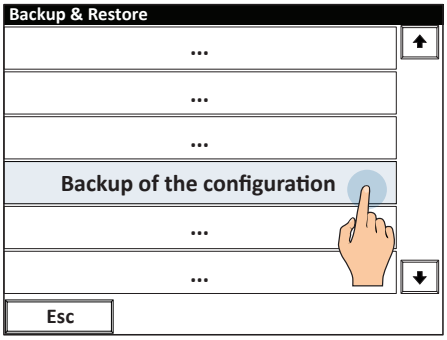
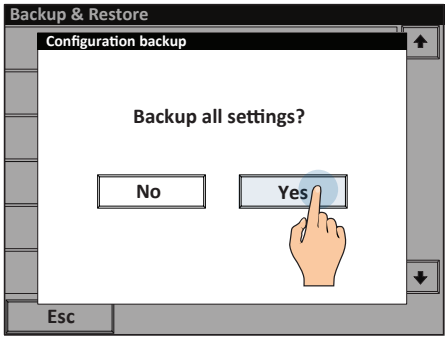


3.



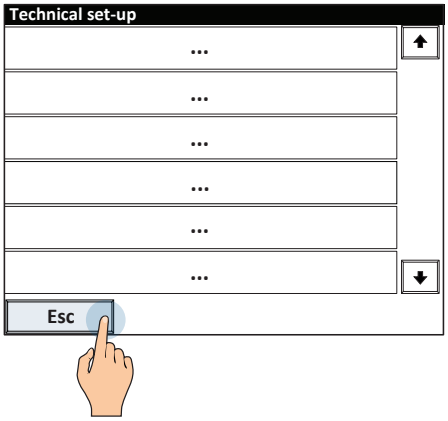
i It is possible to enter a protection password to restore the stored parameters.

i Saving has completed correctly only if the asterisk is present: **Backup of the configuration (*)**

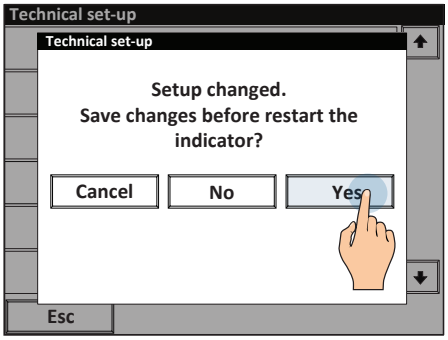
H. Receive calibration with Dinitools.

I. Exit setup and save.

1.



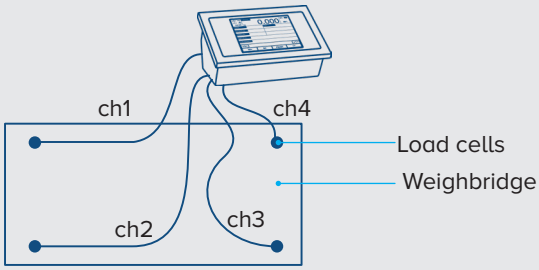
2.



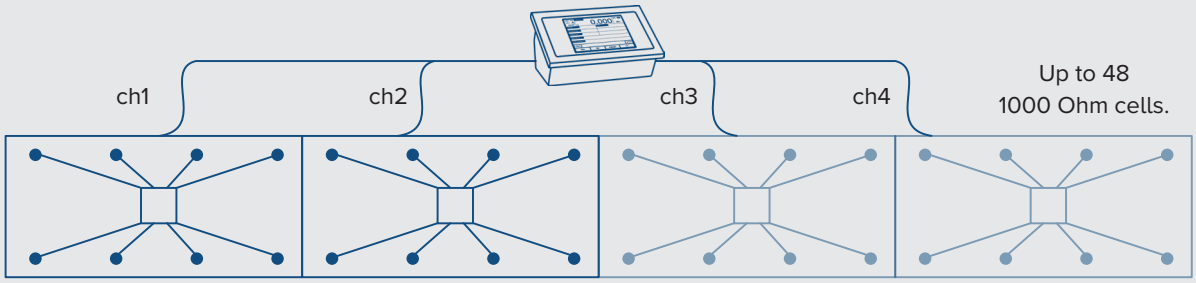
Analogue calibration with equalisation

PREMISE

CASE 1: The weighbridge load cells are connected to the 4 indicator channels.



CASE 2: Scale composed of various weighbridges in sequence, each connected to a channel of the indicator.



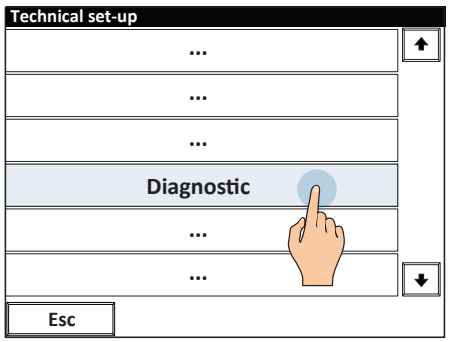
i Each weighbridge shall be individually equalised via junction box.

Procedure:

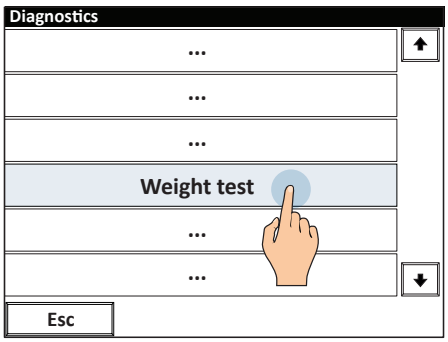
A. With switched-off indicator and power supply unplugged, connect the scale to the indicator.

B. Turn on the terminal, enter the setup menu and check that the signal coming from the scale is stable and increases with weight increase.

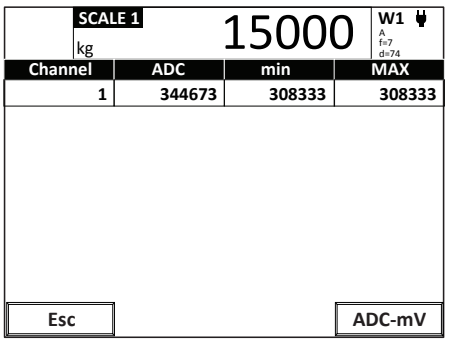
1.



2.

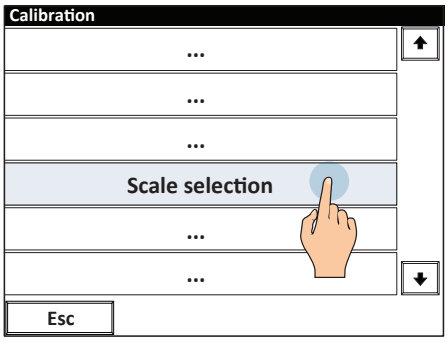


3.

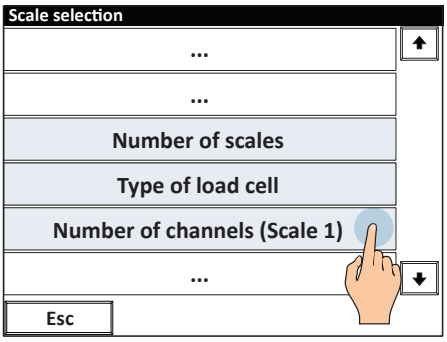


C. Select the number of scales and load cell type.

1.



2.



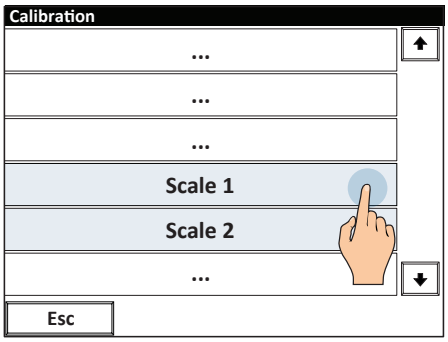
= 1

= Analogue

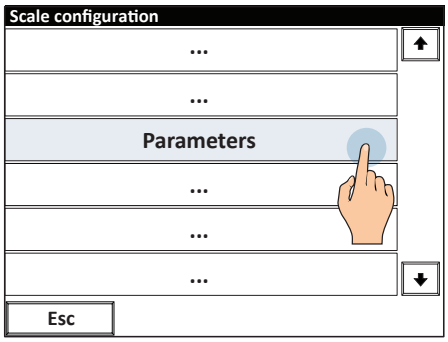
= 2 ... 4

D. Set scale metric parameters (capacity/division) etc.

1.



2.



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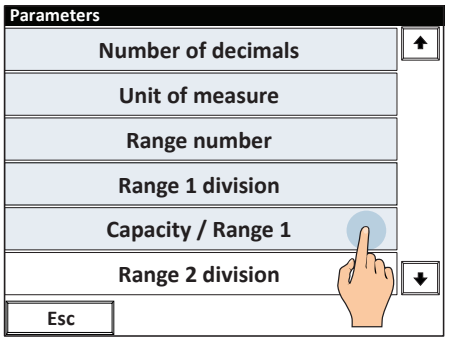
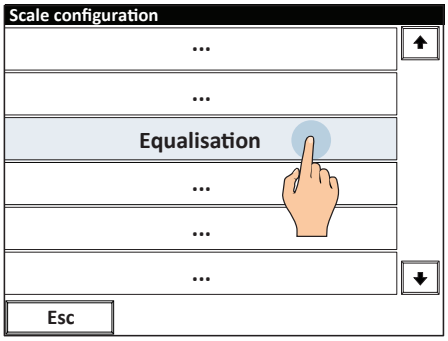
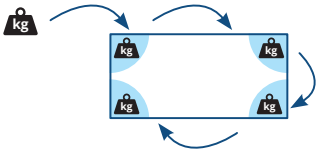


E. Perform the guided equalisation procedure.

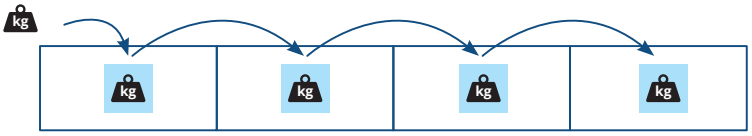


For CASE 1: equalisation aims to optimise the angles of the scale.



kg = 1/8 Max (kg)

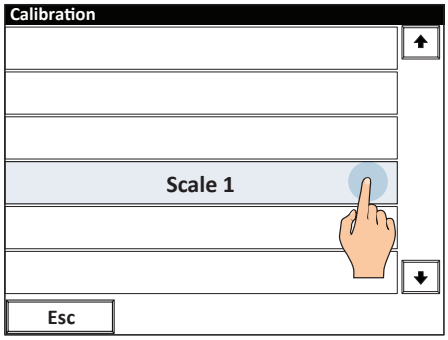
For CASE 2: equalisation aims to make each weighbridge the same, in order for the weight measured on each individual one to be the same.



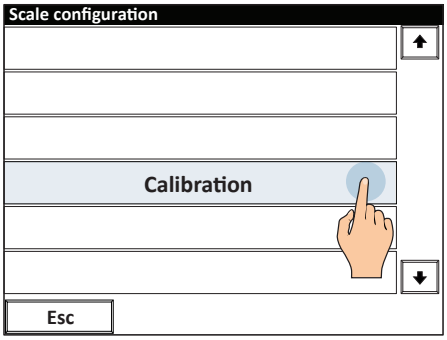
kg = 1/8 Max (kg)

F.

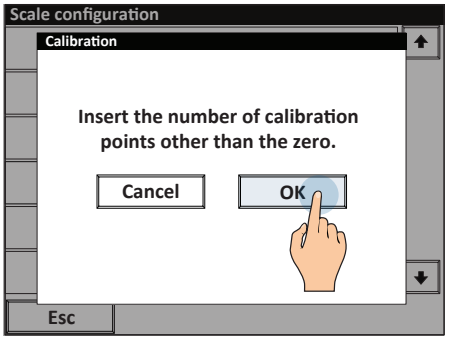
1.



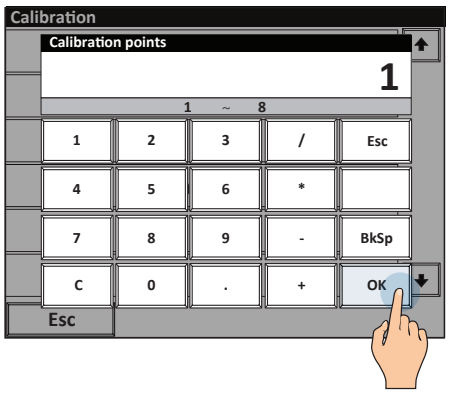
2.



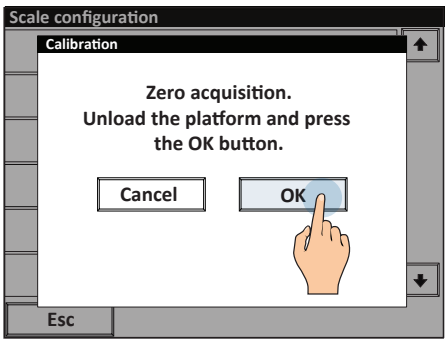
3.



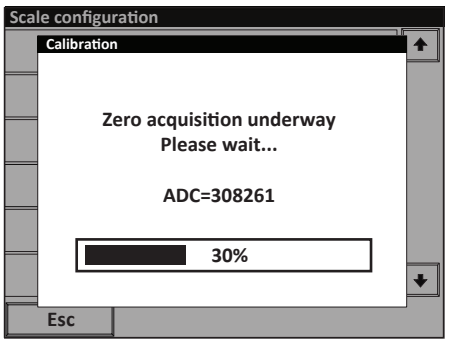
4.



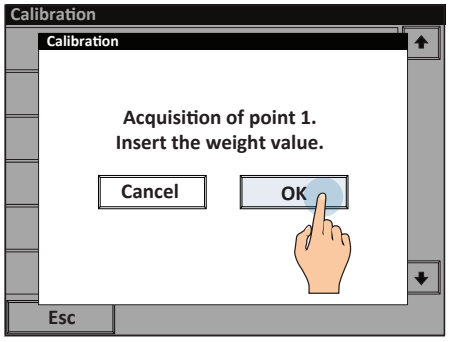
5.



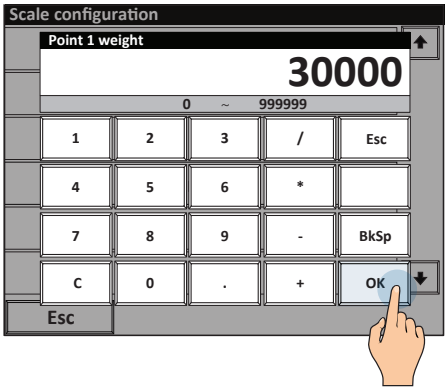
6.



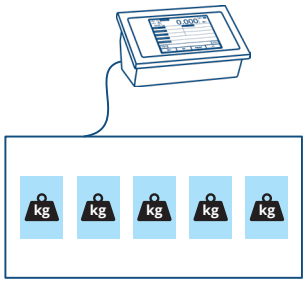
7.



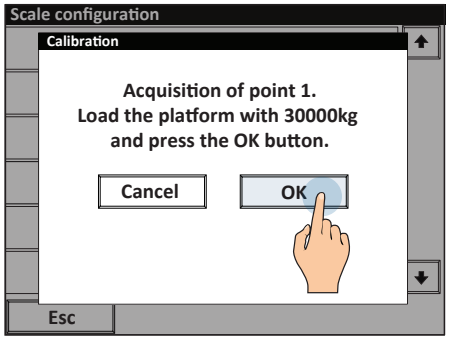
8.



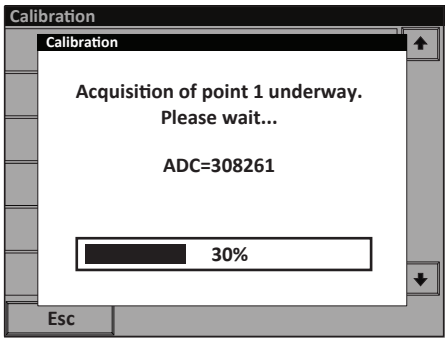
9. Load the weighbridge and distribute the mass evenly.



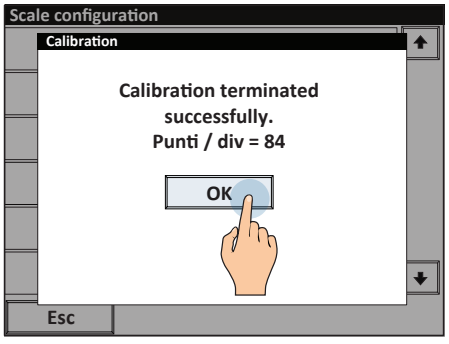
10.



10.



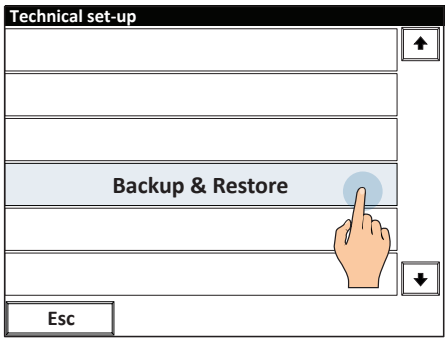
11.



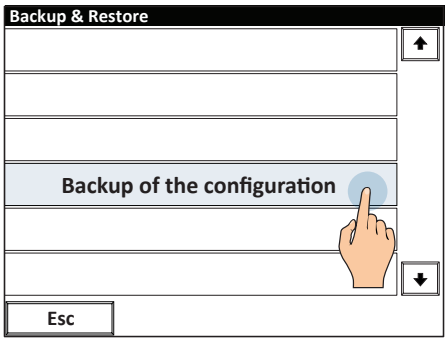
i Perform the procedure for each channel.

G. Perform backup

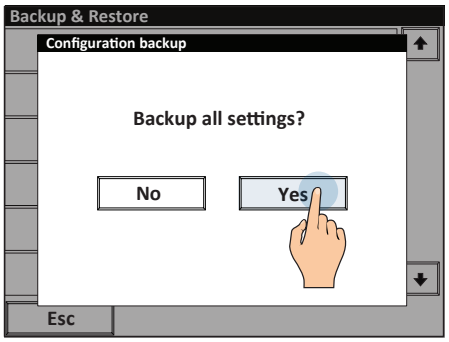
1.



2.



3.

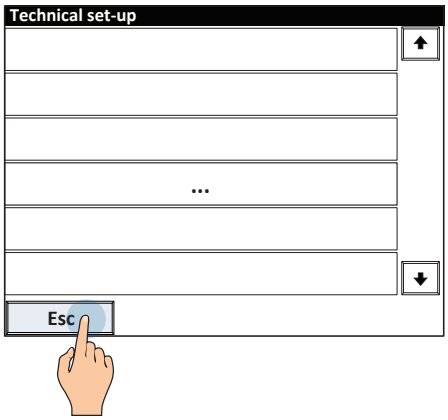


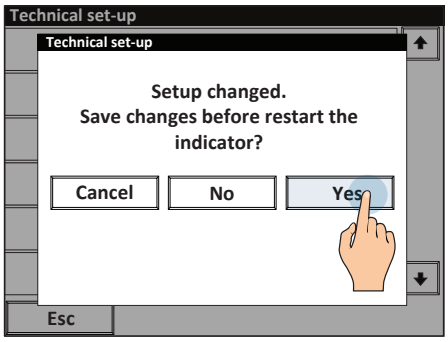
i It is possible to enter a protection password to restore the stored parameters.

i Saving has completed correctly only if the asterisk is present: **Backup of the configuration (*)**

H. Receive calibration with Dinitools.

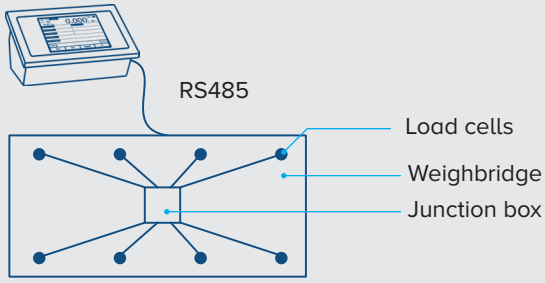
I. Exit setup and save.



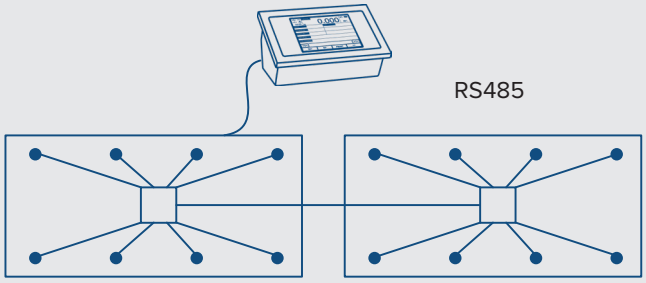


Setting and calibration of digital cell weighbridges

PREMISE

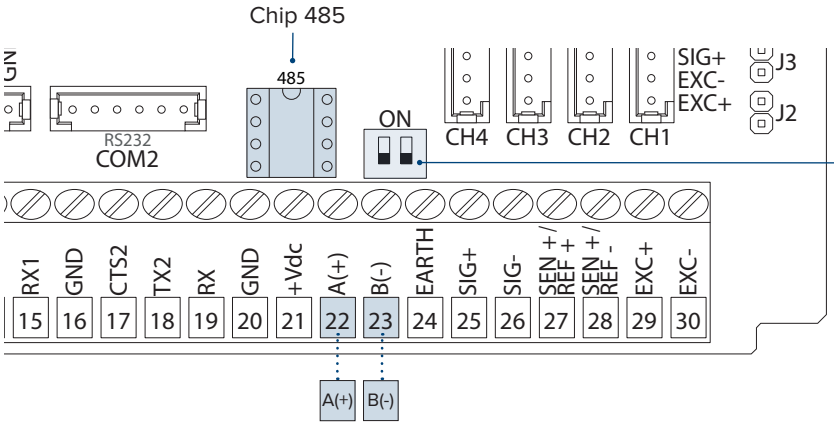


CASE 2:



Procedure:

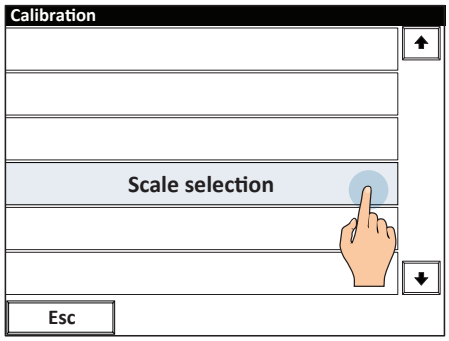
A. With switched-off indicator and power supply unplugged, connect the scale to the weighing terminal 3590.



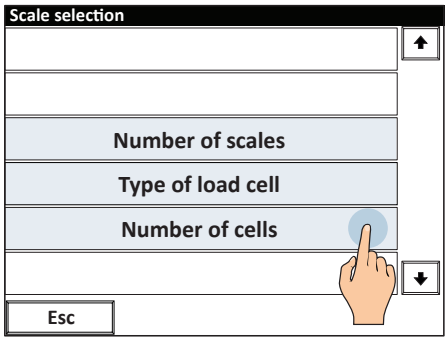
i For digital cells operation installation of chip 485 is required.

B. Select the number of scales and load cell type.

1.



2.



= 1

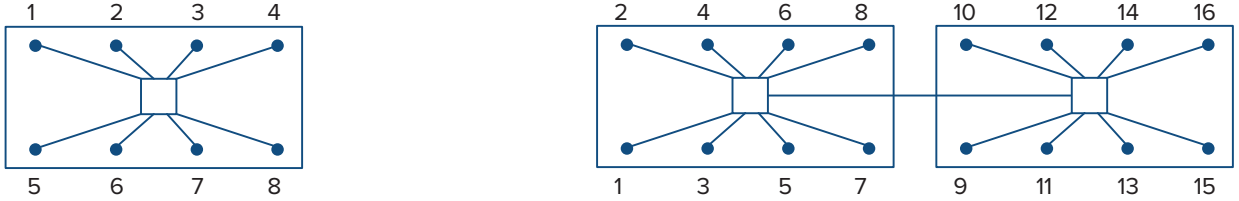
= RCPTD, RCD, SP/CS, CB50X-DL, RC3D RL5426/RL5416, C16i, ZSFD, DGX, WWS

= 1 - 16

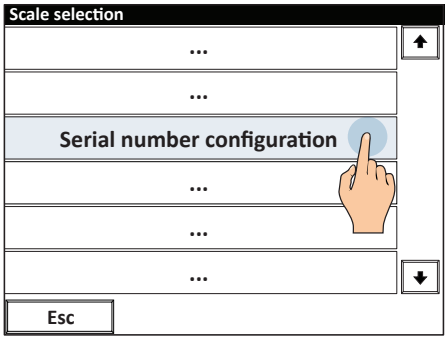
C. Set digital cell serial number.

Premise

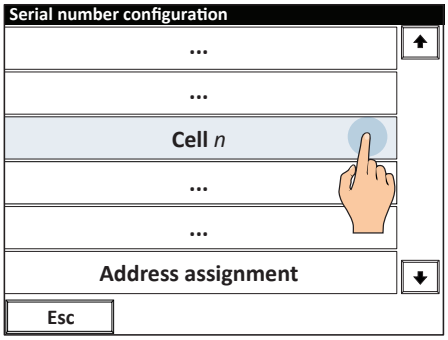
Number the load cells for easier identification during maintenance, for example:



1.



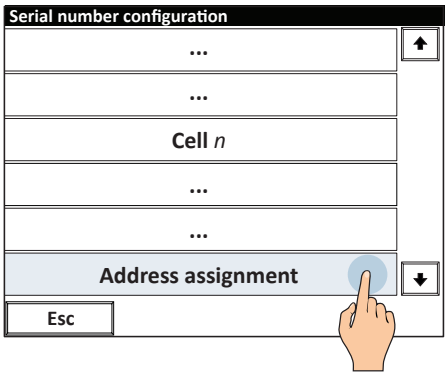
2.



= Enter for each load cell its serial number, displayed on the casing of the cell.

D. Perform the load cell automatic numbering procedure:

1.



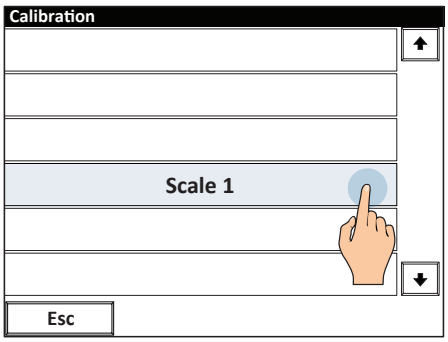
= The indicator assigns to each load cell its number, which will identify it in each programming or diagnostics menu.

If the operation does not succeed, check connection between cells and indicator.

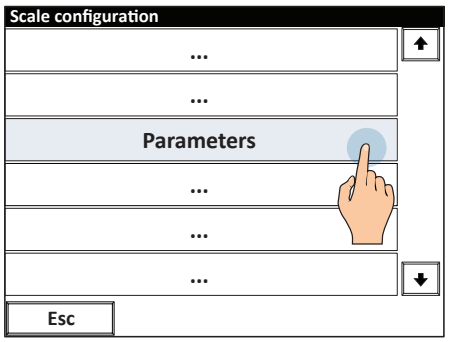
i If the operation succeeds, set the dip switch to “ON” to enable termination resistor.

E. Set scale metric parameters (capacity/division) etc.

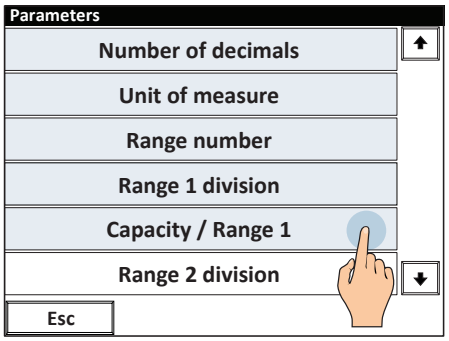
1.



2.

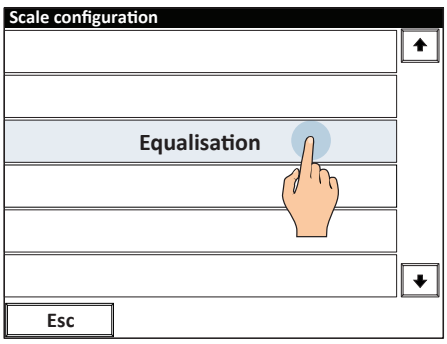


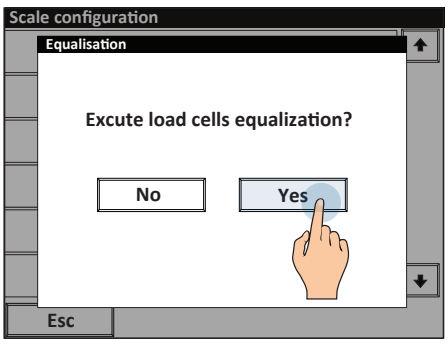
3.



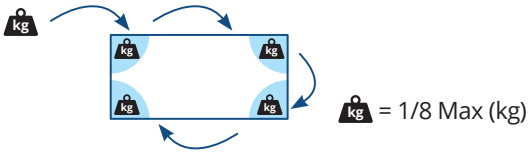
F. Perform equalisation following the indicator’s guided procedure.

1.

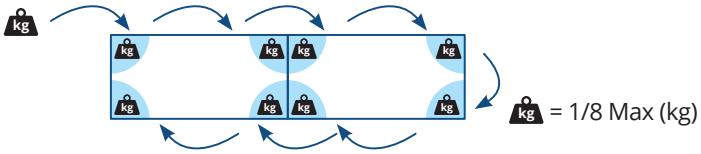




Example of a 4 cell weighbridge: equalisation aims to optimise each cell of the scale.

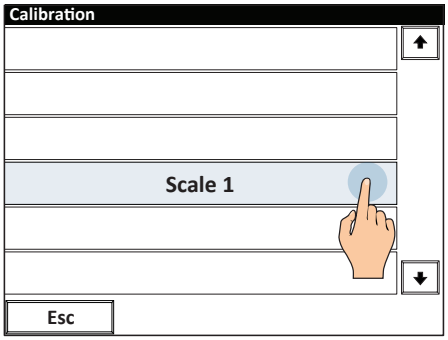


Example of an 8 cell weighbridge: equalisation aims to optimise each cell of the scale

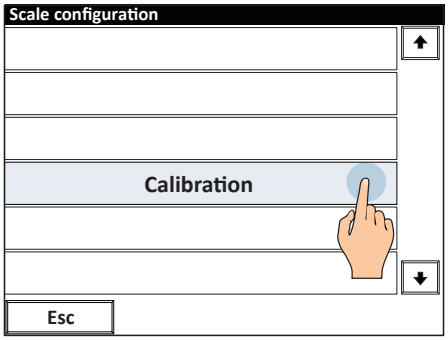


G. Perform calibration.

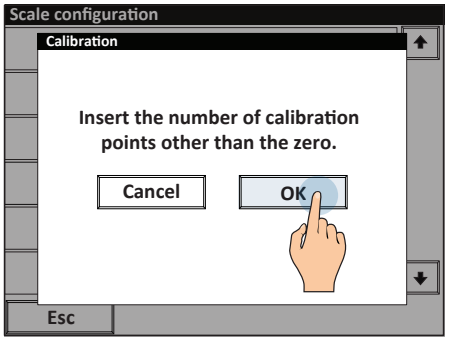
1.



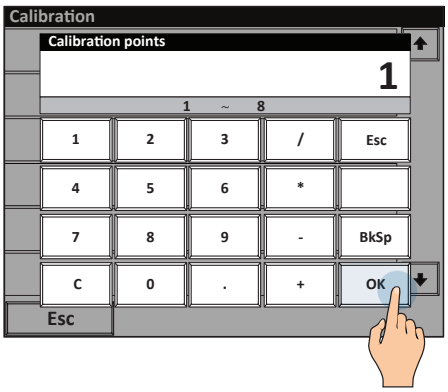
2.



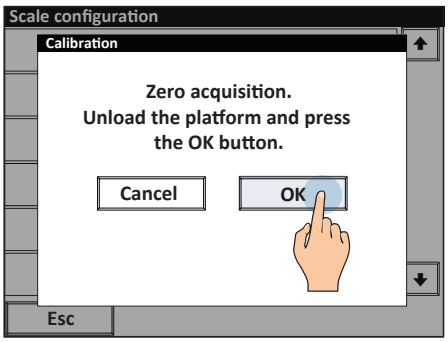
3.



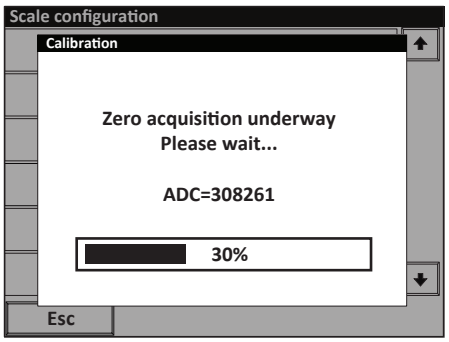
4.



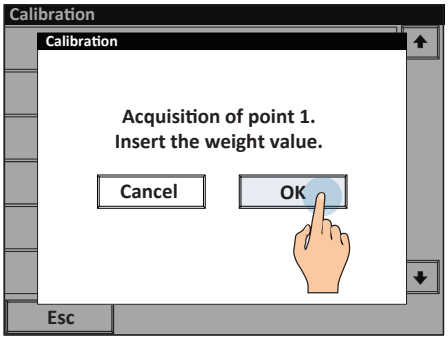
5.



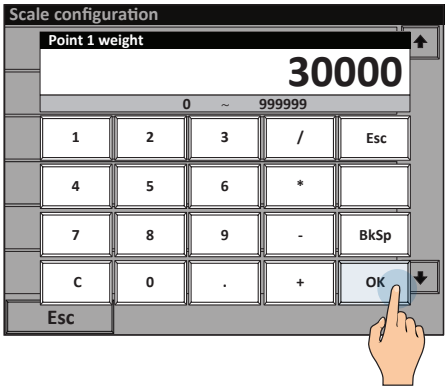
6.



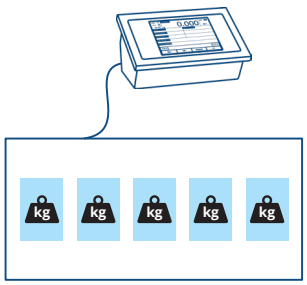
7.



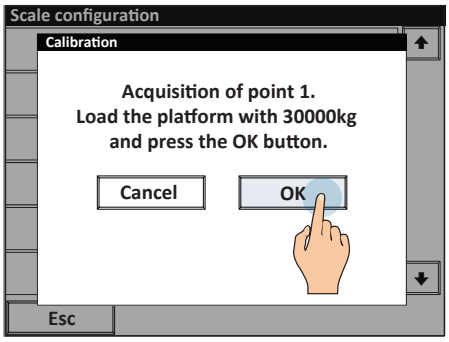
8.



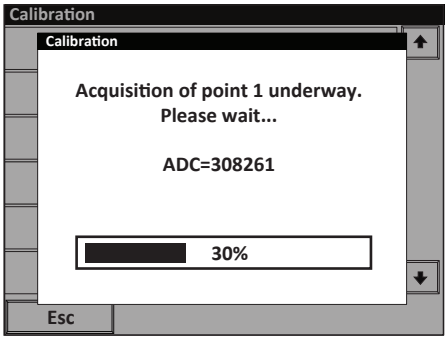
9. Load the weighbridge and distribute the mass evenly.



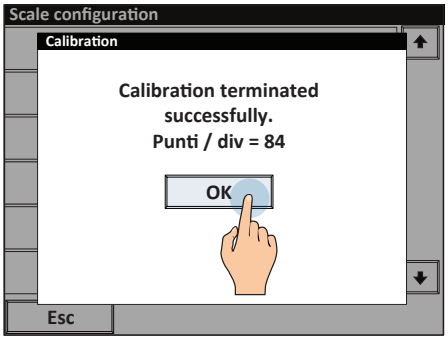
10.



11.



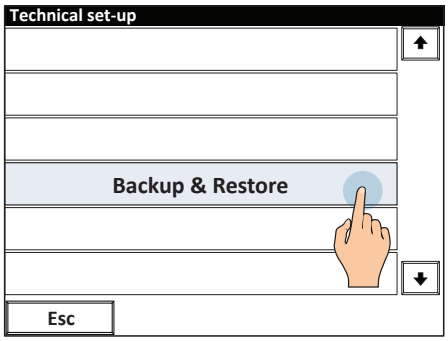
12.



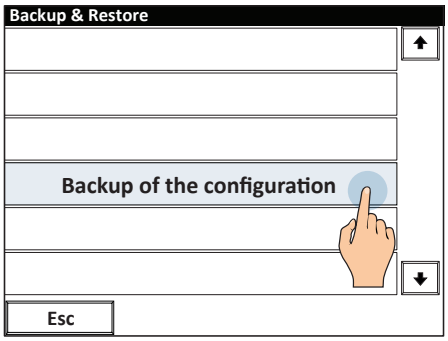
i Perform the procedure for each scale.

H. Perform backup

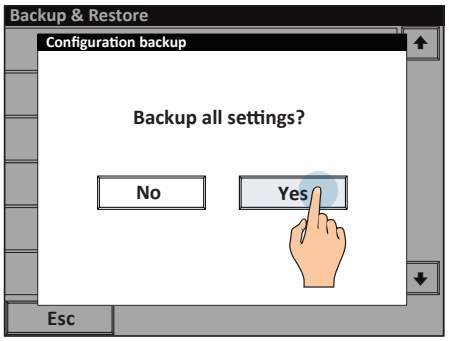
1.



2.



3.

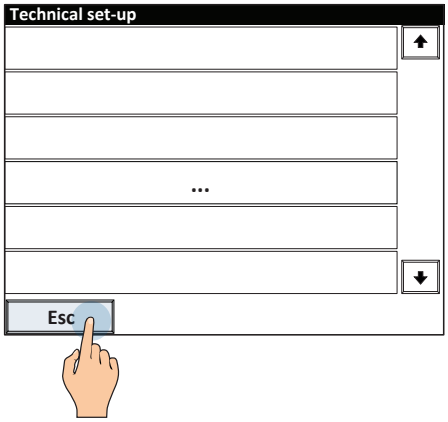


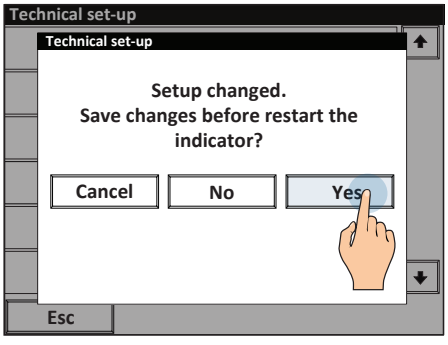
i It is possible to enter a protection password to restore the stored parameters.

i Saving has completed correctly only if the asterisk is present: **Backup of the configuration (*)**

J. Receive calibration with Dinitools.

K. Exit setup and save.

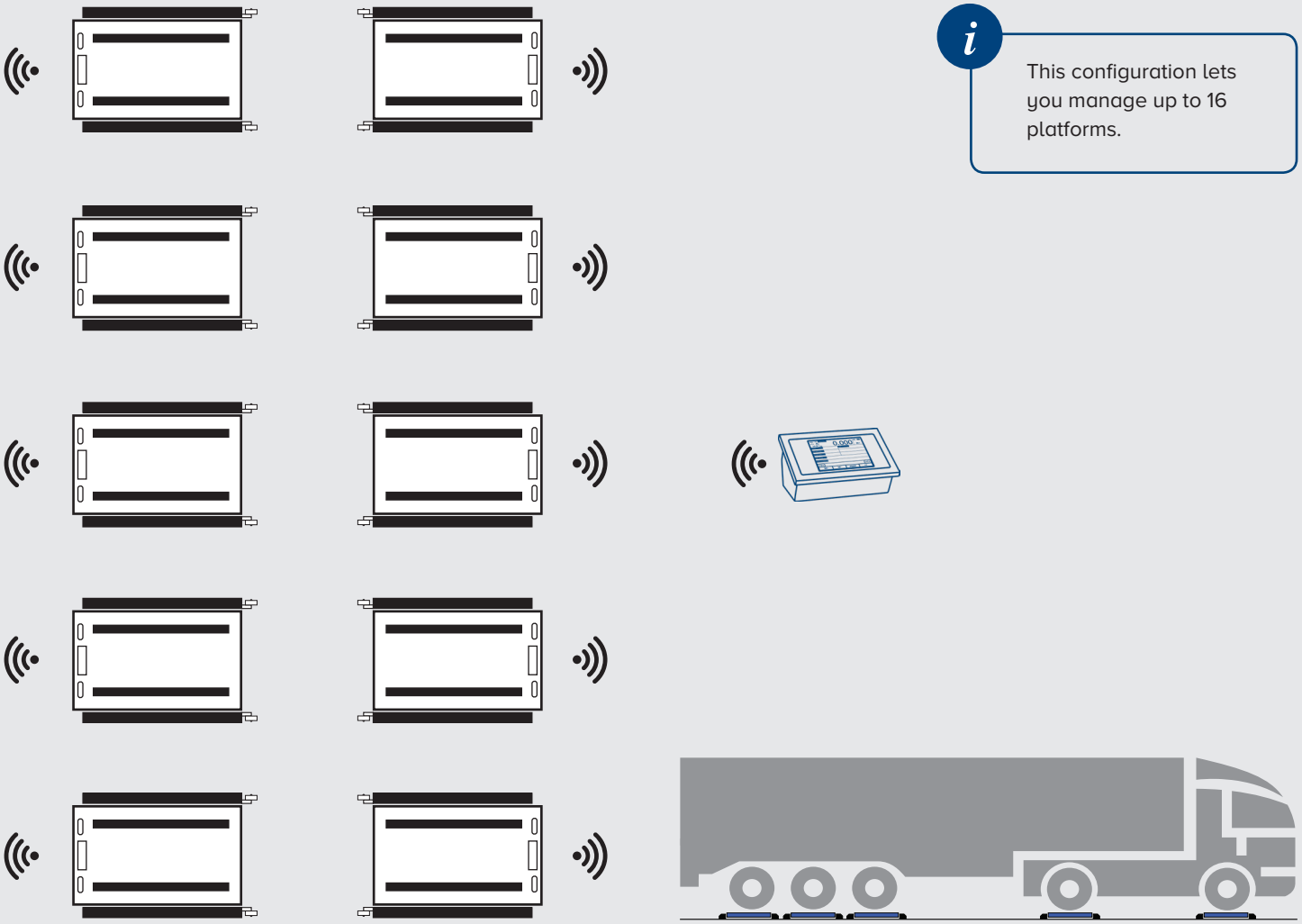




Calibration of a WWS wireless weighing system

PREMISE

System diagram:

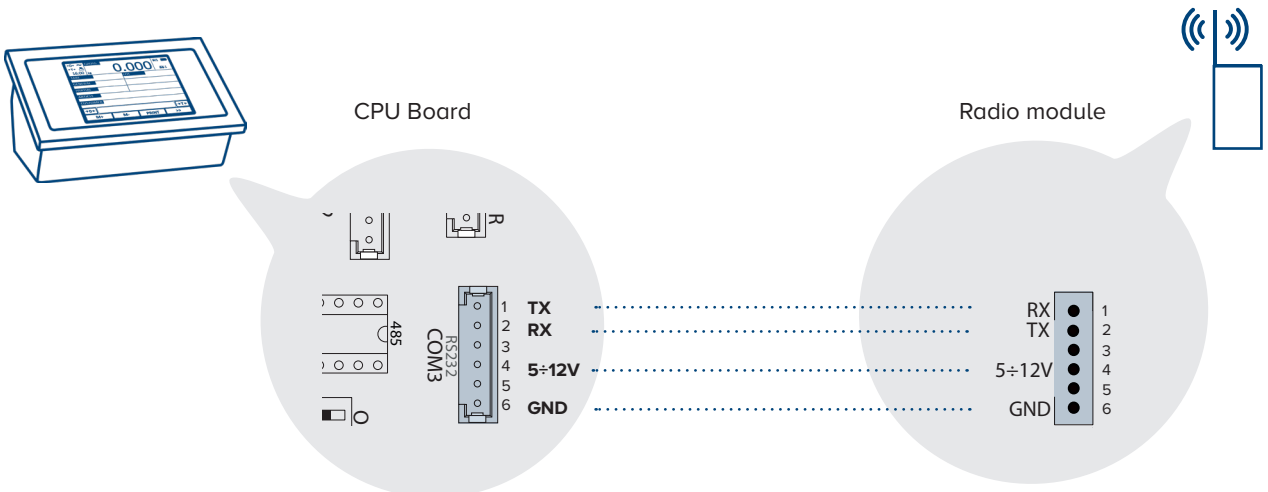


> This configuration lets you manage up to 16 platforms.

Procedure :

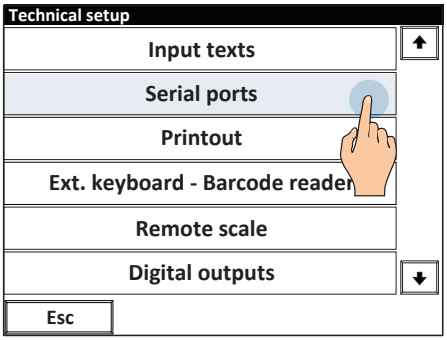
A. Calibrate and set metric parameters of each WWS platform. Check that each platform is configured on the same radio channel (channel “0”)

B. With indicator switched-off and disconnected from the electrical grid, connect the radio module to the AUX port.

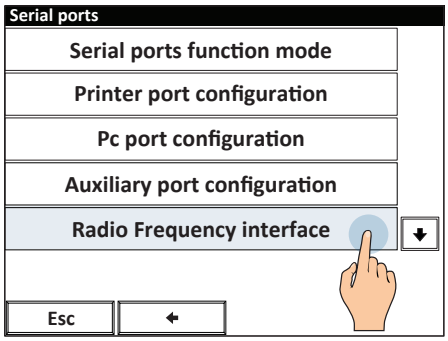


C. Set the instrument's radio channel

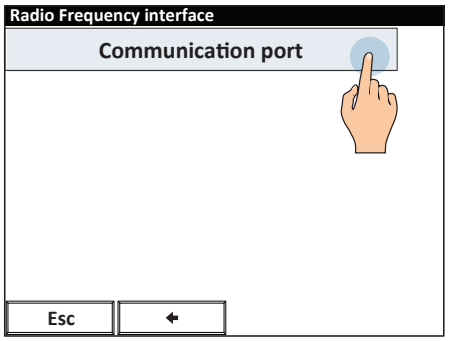
1.



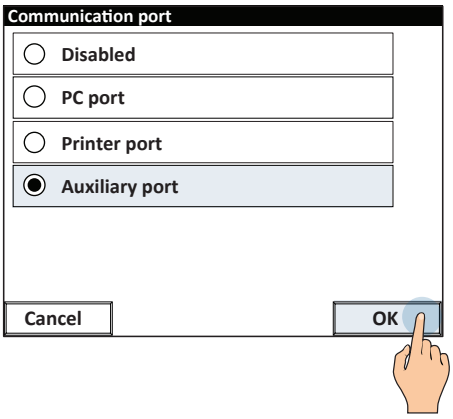
2.



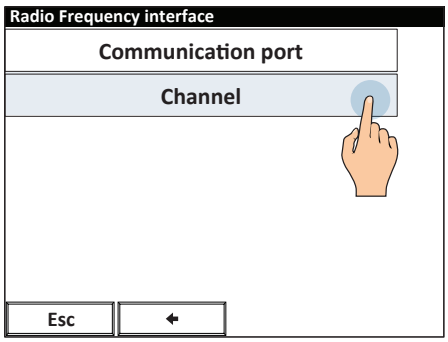
3.



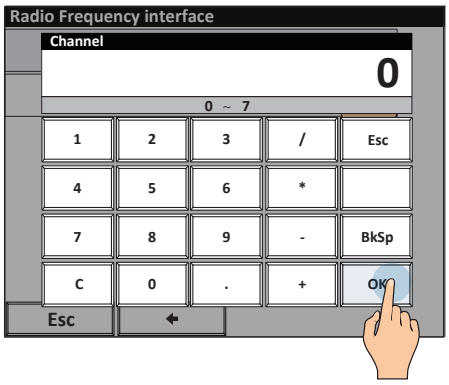
4.



5.

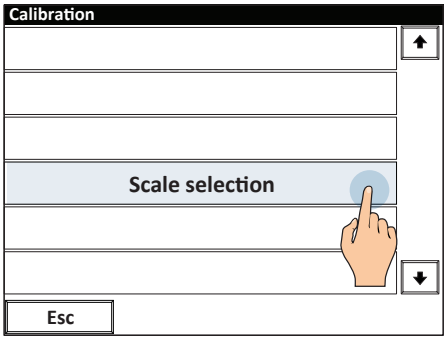


6.

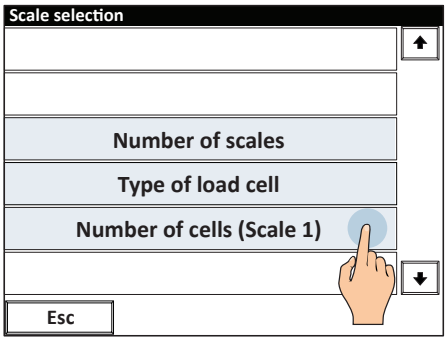


D. Select the number of WWS which make up the system.

1.



2.



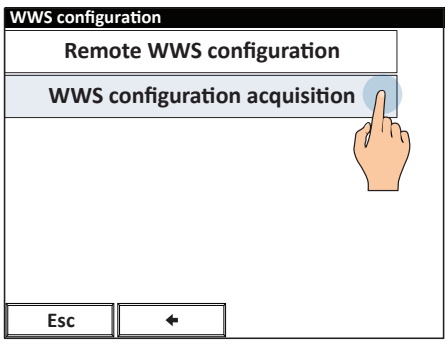
= 1

= WWS

= Corresponds to the number of WWS platforms which make up the system, set from 1 - 16.

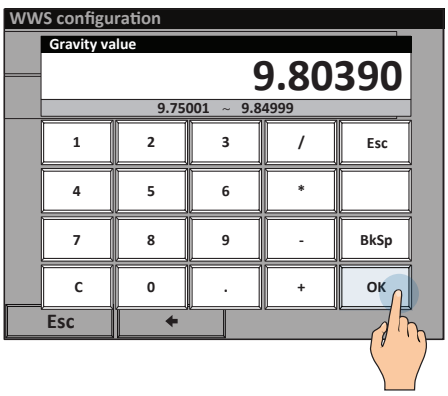
E. Establish communication between indicator and WWS platform.

1.



= Acquires metric parameters from the WWS and modifies them on the indicator.
If the operation does not succeed, check connection with the platforms.

2. Set the gravity value of the area of use.



This operation overwrites the data in the memory.

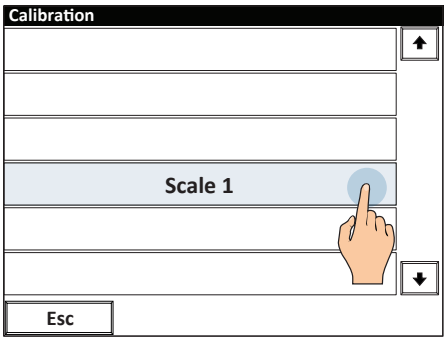
If WWS platforms are approved for use in relation with third parties:
• total system capacity must be equal to the sum of each individual WWS platform's capacity.
• system division must be equal to the sum of each individual WWS platform's division rounded up to the highest one.
• set these parameters to be able to approve the system.
E.g.: in a system consisting of 8 WWS platforms with "Max.=15,000kg" and "e=5kg", maximum capacity will be "Max.=120,000kg" and the division "e=50kg".

If the platforms are not approved:
• total system capacity must be equal to the sum of each individual WWS platform's capacity.
• system division equals division of the single WWS platform.
E.g.: in a system consisting of 8 WWS platforms with "Max.=15,000kg" and "e=5kg", maximum capacity will be "Max.=120,000kg" and the division "e=5kg".

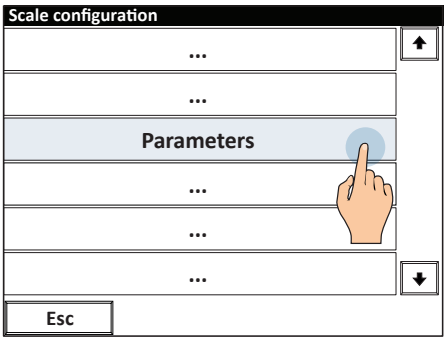
The system's total capacity and division can be modified to create specific internal use systems (see step **F**).

F. Set indicator metric parameters (if required).

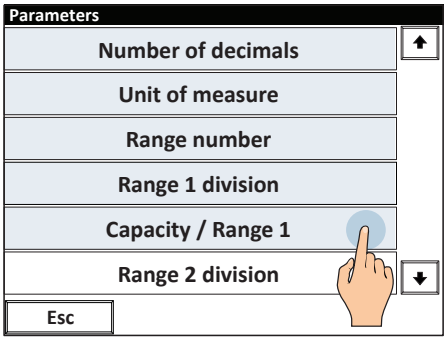
1.



2.

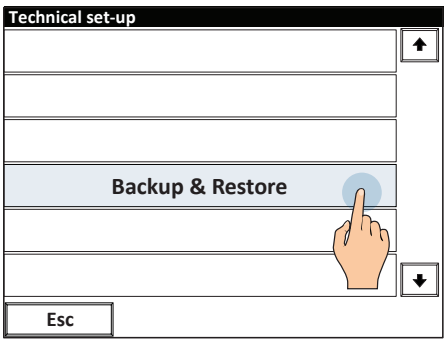


3.

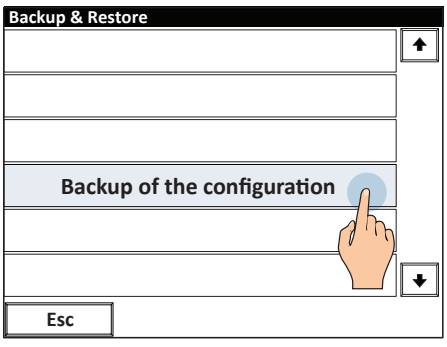


G. Perform backup

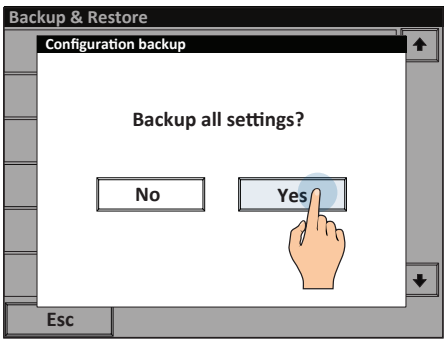
1.



2.



3.

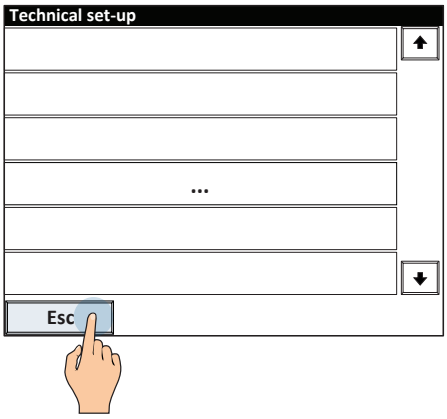


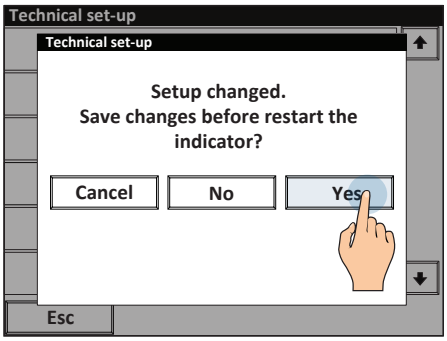
It is possible to enter a protection password to restore the stored parameters.

Saving has completed correctly only if the asterisk is present **Backup of the configuration (*)**

H. Receive calibration with Dinitools.

I. Exit setup and save.

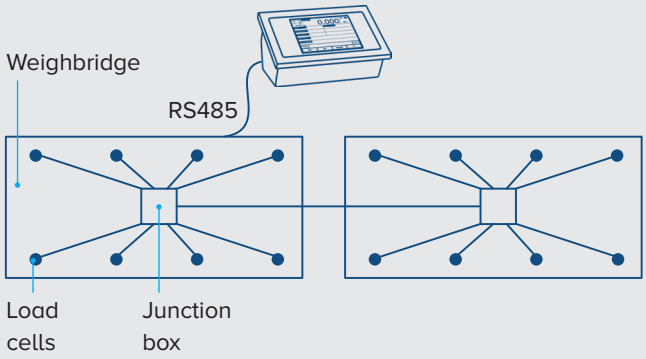




Calibration of a dual digital weighbridge system

PREMISE

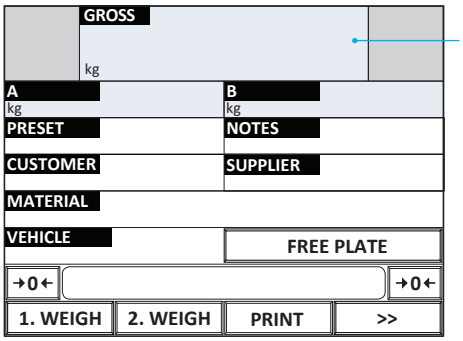
System diagram:



i

It is possible to install weighing systems with more than one weighbridge based on the number of cells of each (Max. 16 digital cells, max. 8 CCI AD cells).

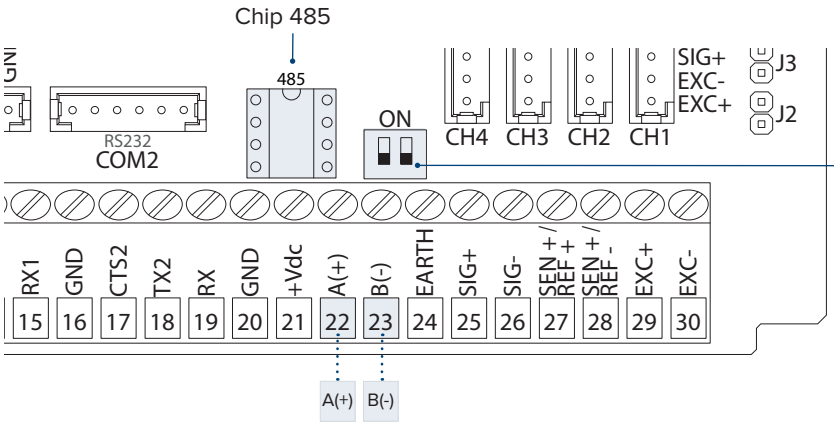
With this configuration the weight of each platform is displayed separately.



Weight “A”, Weight “B” or Sum “A” + “B” (enabling “A+B” function).
See page 23

Procedure:

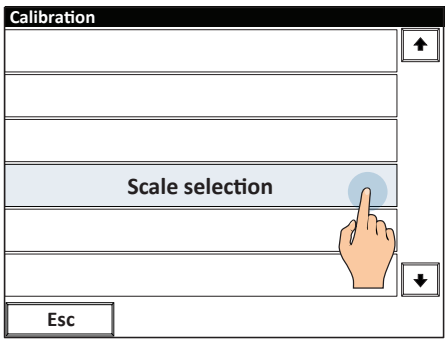
A. With switched-off indicator and power supply unplugged, connect the scale to the weighing terminal 3590.



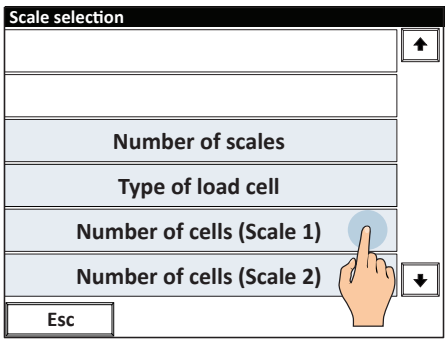
i For digital cells operation installation of chip 485 is required.

B. Select the number of scales and load cell type

1.



2.



= 2

= RCPTD, RCD, SP/CS, CB50X-DL, RC3D RL5426/RL5416, C16i, ZSFD, DGX, WWS

= 1 - 16

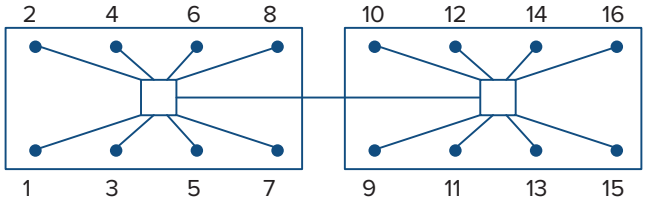
= 1 - 16

i Total of selectable cells in the dual scale configuration is “16”.

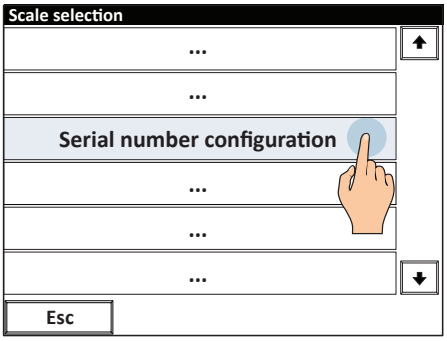
C. Set digital cell serial number.

Premise

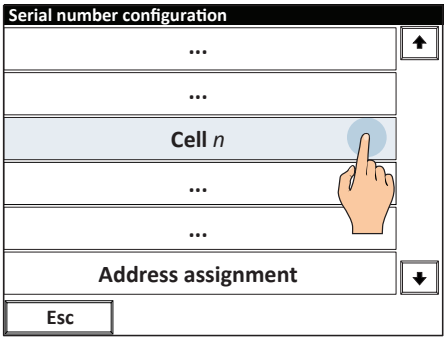
Number the load cells for easier identification during maintenance, for example:



1.



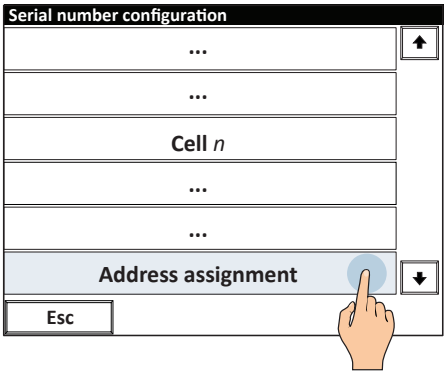
2.



= Enter for each load cell its serial number, displayed on the casing of the cell.

D. Perform the load cell automatic numbering procedure:

1.



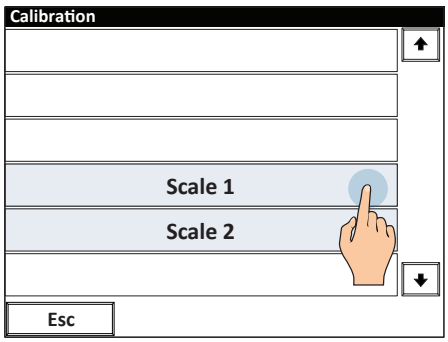
= The indicator assigns to each load cell its number, which will identify it in each programming or diagnostics menu

If the operation does not succeed, check connection between cells and indicator.

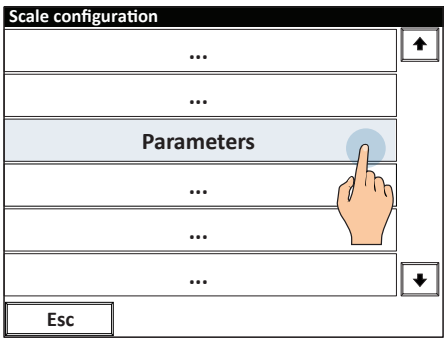
i If the operation does not succeed, set the dip switch to “ON” to enable termination resistor.

E. Set scale metric parameters (capacity/division) etc.

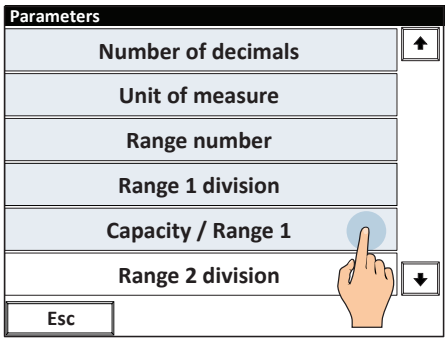
1.



2.



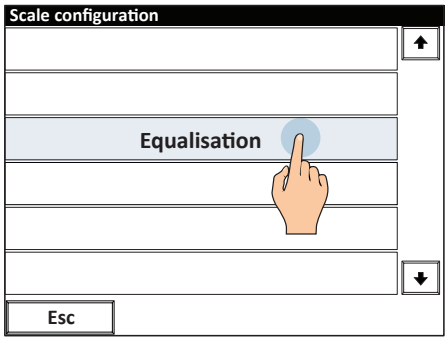
3.

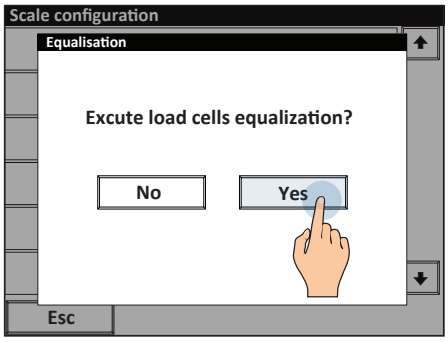


Example of dual scale weighbridge configuration: **Number of decimals** = 0; **Unit of measure** = kg; **Range number** = 2; **Range 1 division** = 10; **Capacity / Range 1** = 30000; **Range 2 division** = 20; **Capacity / Range 2** =60000.

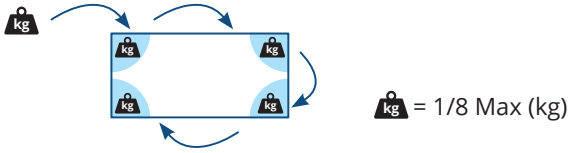
F. Perform equalisation following the indicator's guided procedure.

1.





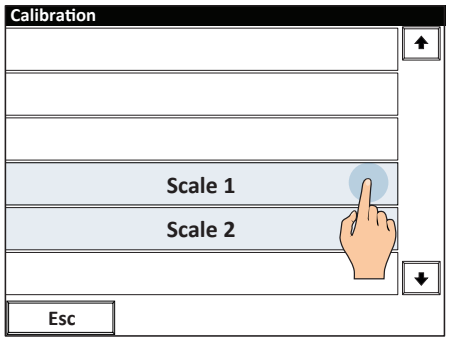
For CASE 1: equalisation aims to optimise the angles of the scale.



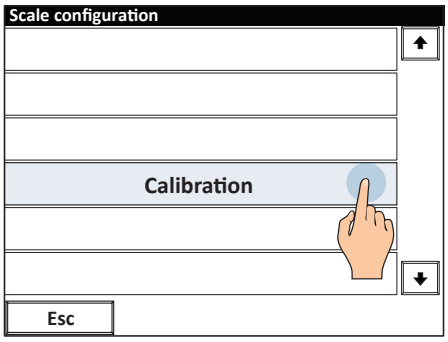
For CASE 2: equalisation aims to make each weighbridge the same, in order for the weight measured on each individual one to be the same.

G. Perform calibration.

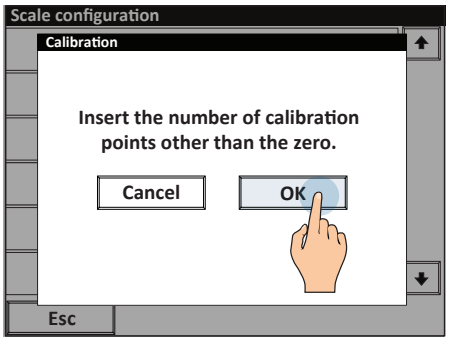
1.



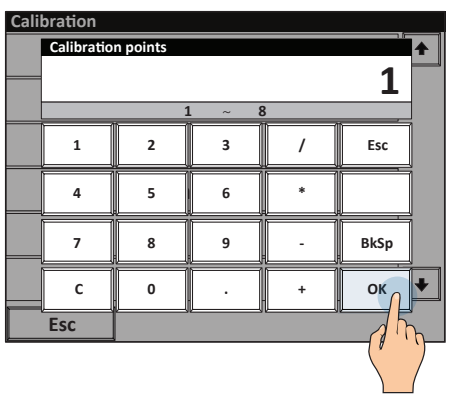
2.



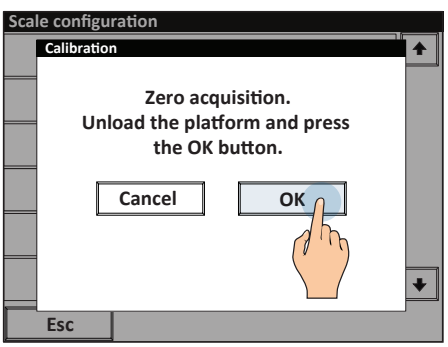
3.



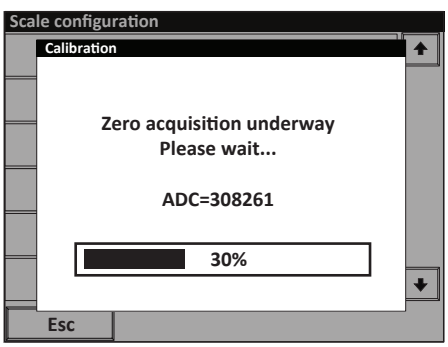
4.



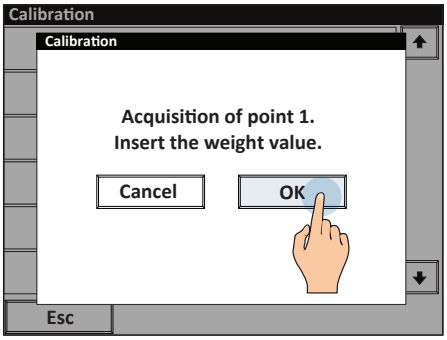
5.



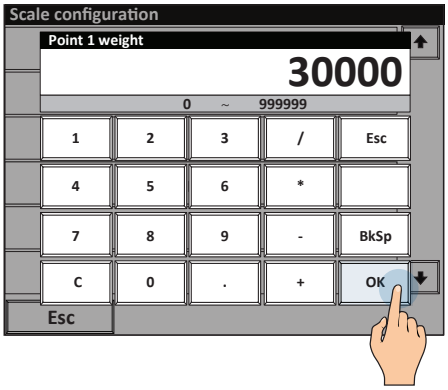
6.



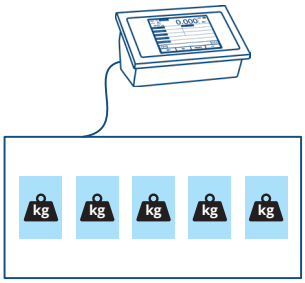
7.



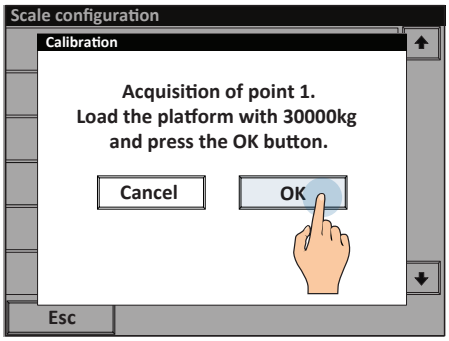
8.



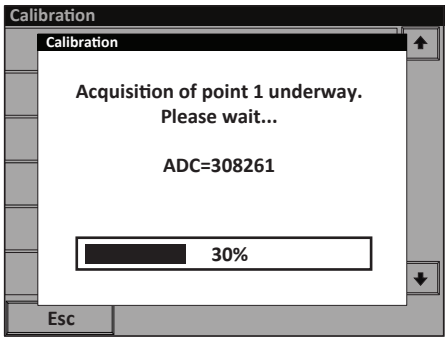
9. Load the weighbridge and distribute the mass evenly.



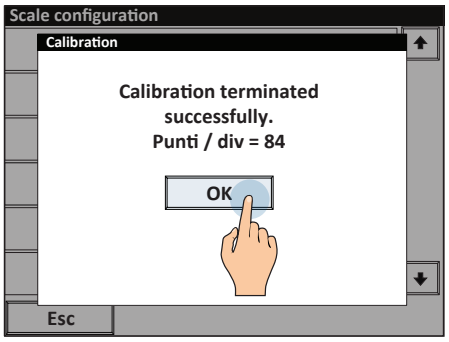
10.



11.



12.

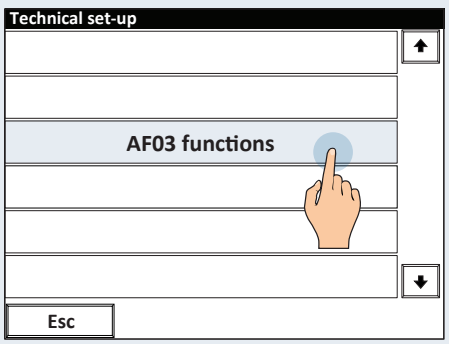


Perform the procedure for each scale.

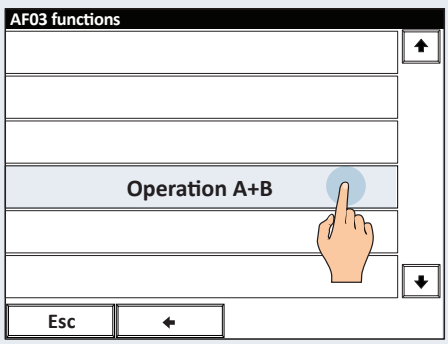
How to display the sum of "A"+"B"

With this configuration it is possible to display simultaneously the weights of the two platforms and their sum.

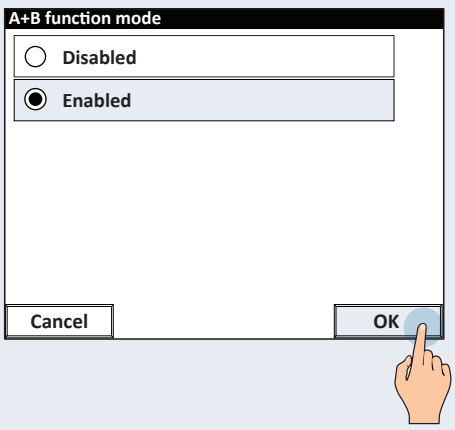
1.



2.

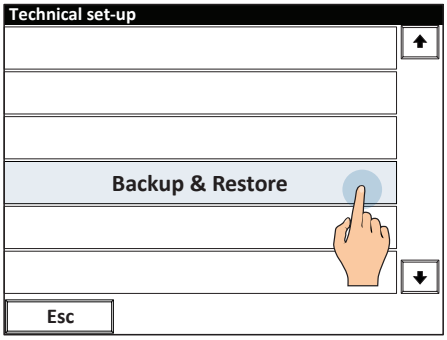


3.

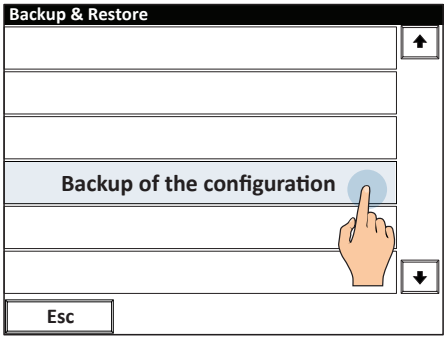


H. Perform backup

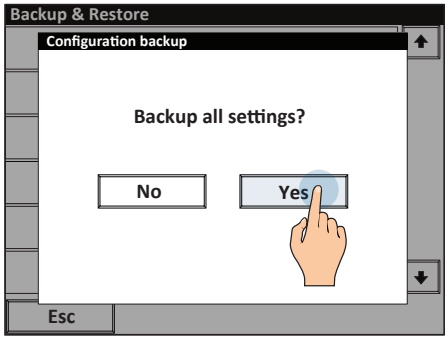
1.



2.



3.

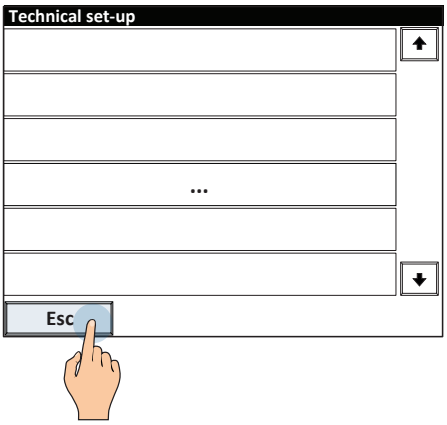


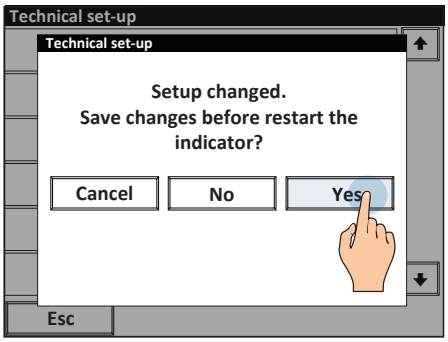
i It is possible to enter a protection password to restore the stored parameters.

i Saving has completed correctly only if the asterisk is present: **Backup of the configuration (*)**

I. Receive calibration with Dinitools.

J. Exit setup and save.

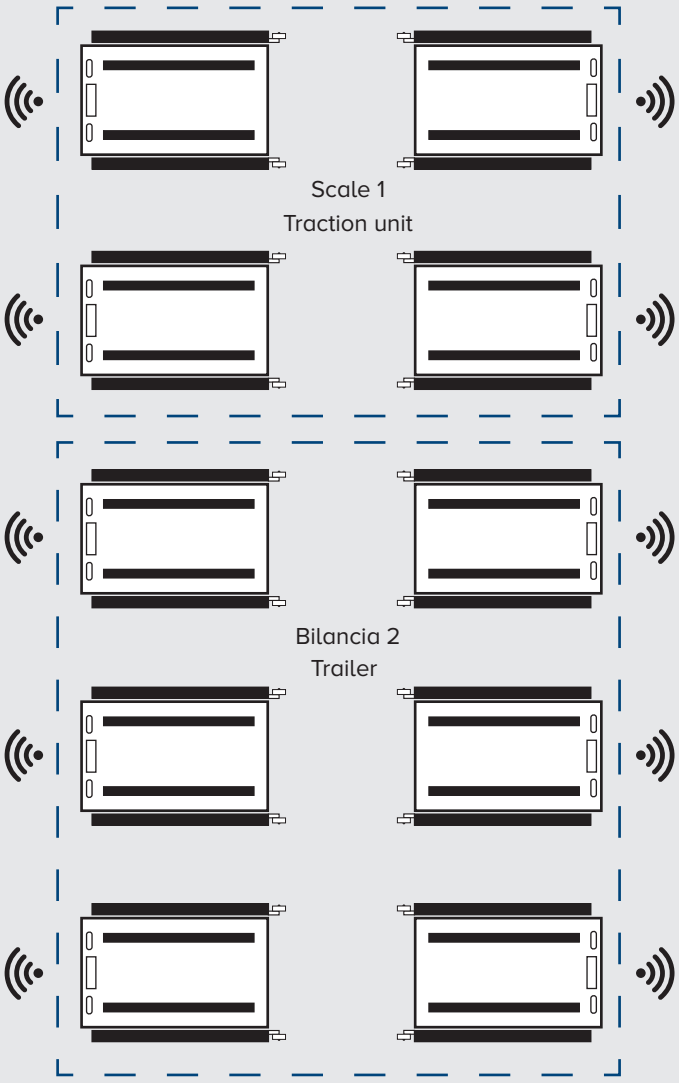


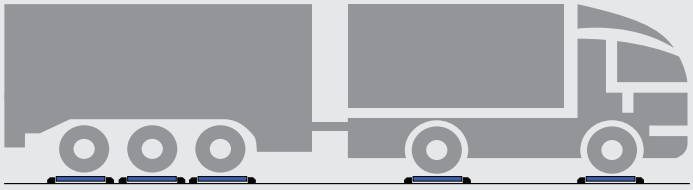


Calibration of a dual scale system consisting of wireless WWS platforms

PREMISE

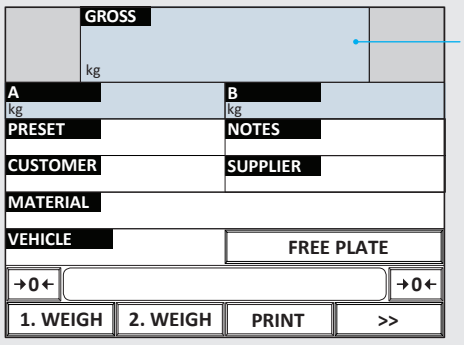
System diagram:





> *i* This configuration lets you manage up to 16 platforms.

With this configuration the weight of each platform is displayed separately.

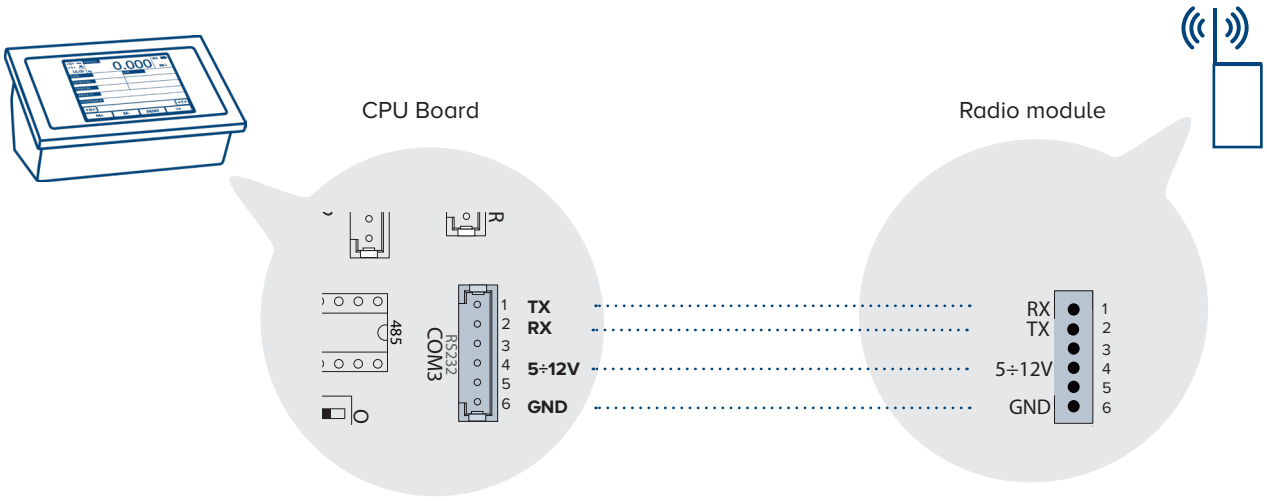


Weight “A”, Weight “B” or Sum “A” + “B” (enabling “A+B” function).
See page 23

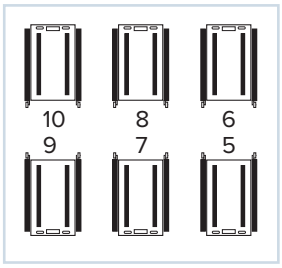
Procedure:

A. Calibrate and set metric parameters of each WWS platform. Check that each platform is configured on the same radio channel (channel “0”)

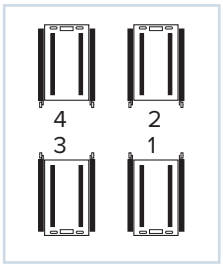
B. With indicator switched-off and disconnected from the electrical grid, connect the radio module to the AUX port.



C. Separate and identify the platforms for weighing the traction unit from those for weighing the trailer.
This division shall be followed for each weighing procedure.



Trailer WWS group

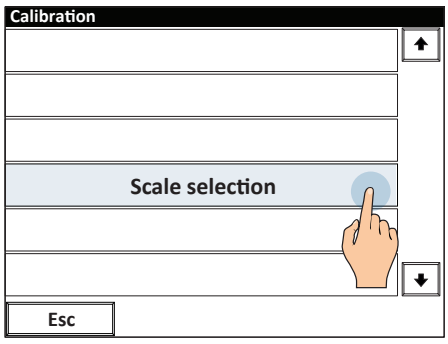


Traction unit WWS group

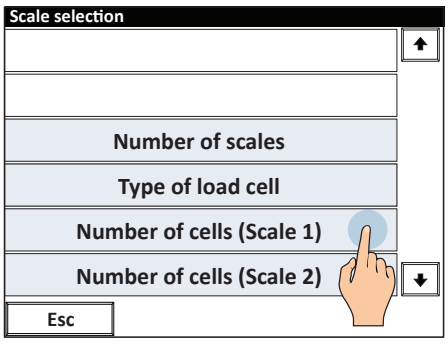
Traction unit WWS group	=	Scale 1
Traile WWS group	=	Scale 2

D. Select the number of scales and number of WWS platforms for each scale.

1.



2.



= 2 (“scale” means a group of WWS)

= WWS

= 1 - 16

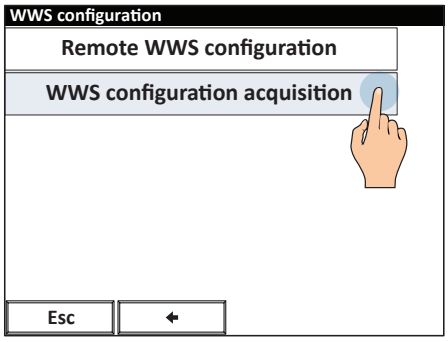
= 1 - 16

Enter the number of cells of the traction unit group and of the trailer group

The total of selectable WWS platforms in the dual scale configuration is “16”.

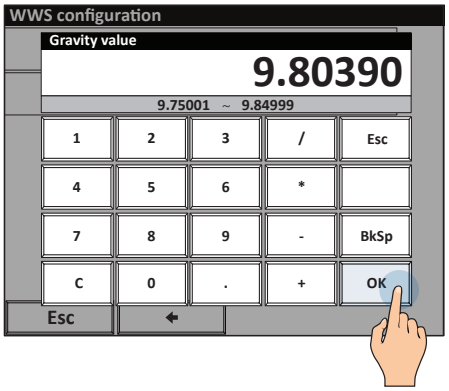
E. Establish communication between indicator and WWS platform.

1.



= Acquires metric parameters from the WWS and modifies them on the indicator.
If the operation does not succeed, check connection with the platforms.

2. Set the gravity value of the area of use.



i This operation overwrites the data in the memory.

i

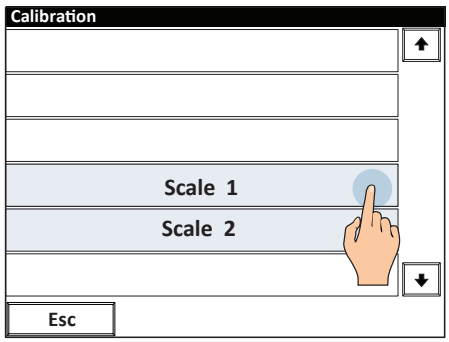
If WWS platforms are approved for use in relation with third parties:
• total system capacity must be equal to the sum of each individual WWS platform's capacity.
• system division must be equal to the sum of each individual WWS platform's division rounded up to the highest one.
• set these parameters to be able to approve the system.
E.g.: in a system consisting of 8 WWS platforms with "Max.=15,000kg" and "e=5kg", maximum capacity will be "Max.=120,000kg" and the division "e=50kg".

If the platforms are not approved:
• total system capacity must be equal to the sum of each individual WWS platform's capacity.
• system division equals division of the single WWS platform.
E.g.: in a system consisting of 8 WWS platforms with "Max.=15,000kg" and "e=5kg", maximum capacity will be "Max.=120,000kg" and the division "e=5kg".

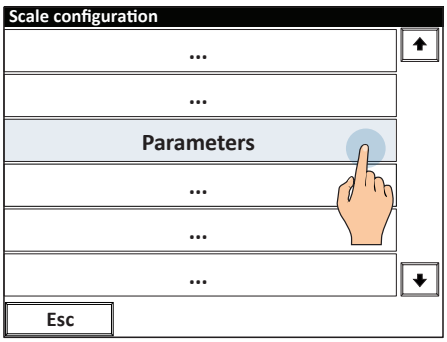
The system's total capacity and division can be modified to create specific internal use systems (see step **F**).

F. Set indicator metric parameters (if required).

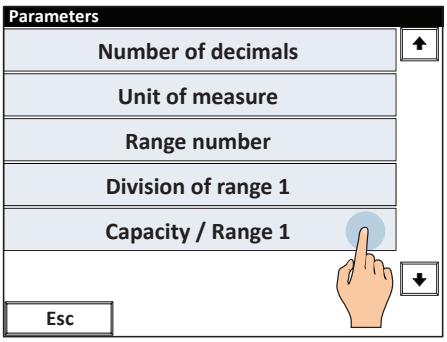
1.



2.



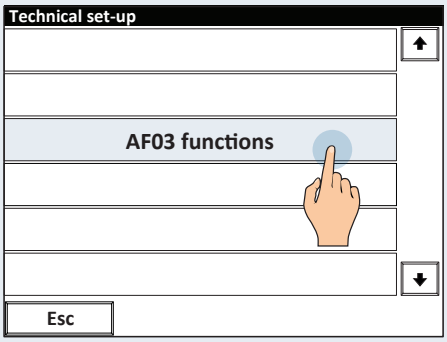
3.



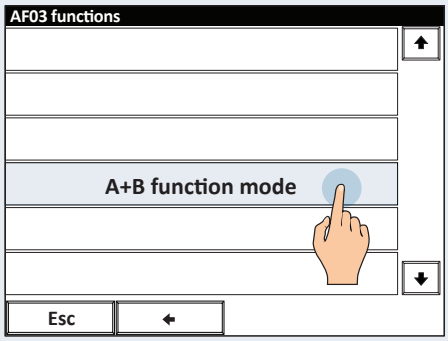
How to display the sum of "A"+"B"

With this configuration it is possible to display simultaneously the weights of the two platforms and their sum.

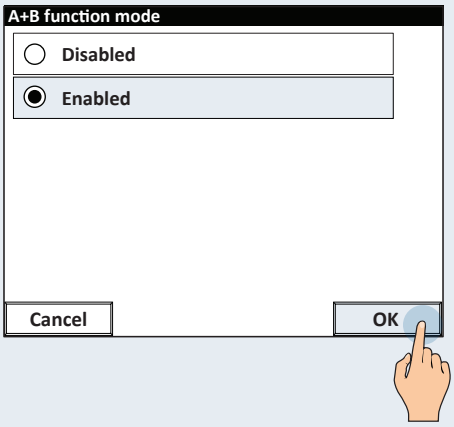
1.



2.

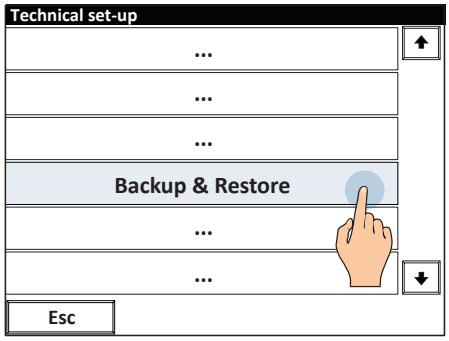


3.

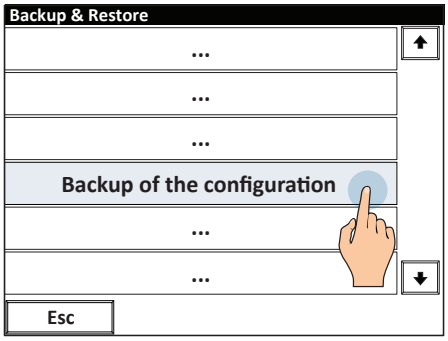


G. Perform backup

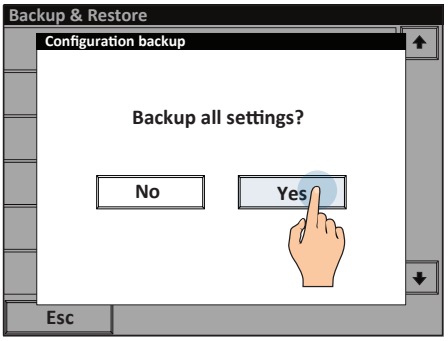
1.



2.



3.

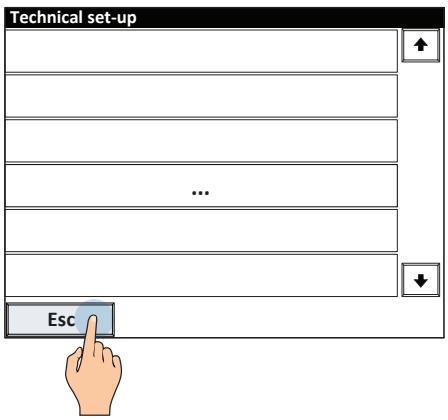


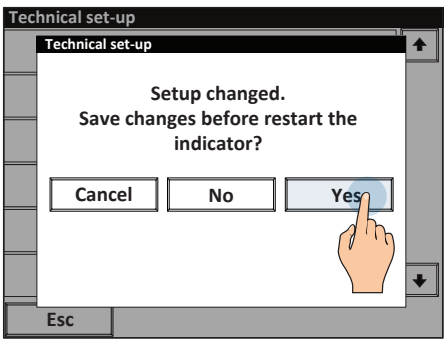
i It is possible to enter a protection password to restore the stored parameters.

i Saving has completed correctly only if the asterisk is present **Backup of the configuration (*)**

H. Receive calibration with Dinitools.

I. Exit setup and save.





Notes

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The individual in charge of operating the scale must ensure that all safety regulations in force in the country of use are applied, ensuring that the appliance is used in accordance with the purpose it is intended for and to avoid any danger for the user.

The Manufacturer declines any liability arising from any weighing operation errors.

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Authorised service centre stamp

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