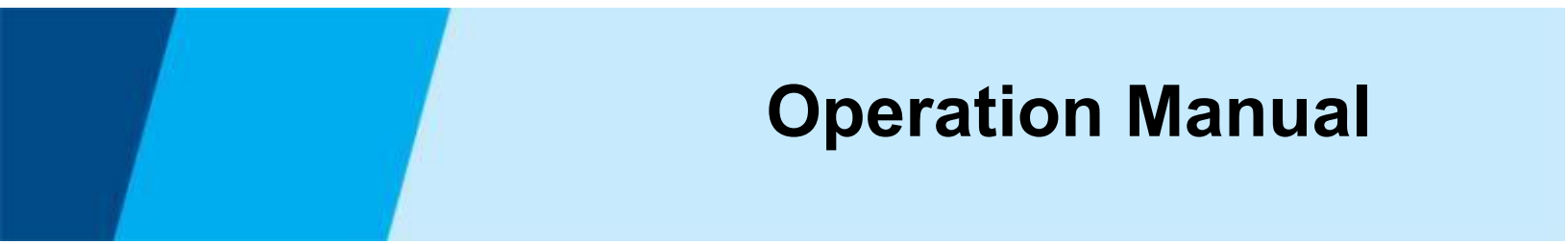


T-Scale



Operation Manual

TW20_NS20_EW20

Weighing Indicator

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1. PRECAUTIONS

	 WARNING
	DISCONNECT ALL POWER TO THIS UNIT BEFORE INSTALLING, CLEANING, OR SERVICING. FAILURE TO DO SO COULD RESULT IN BODILY HARM OR DAMAGE THE UNIT.

 CAUTION
• Permit only qualified persons to service the instrument • Before connecting or disconnecting any components, remove the power. • Failure to observe these precautions bodily harm or damage to or destruction of the equipment.

	SAFTEY INSTRUCTION
	The weighing scale is a precision electronic instrument, handle it carefully. The device must only be operated by personnel trained in the operation of this equipment. The operating personnel must read and understand the safety instructions in these operating instructions. To prevent any accident, only qualified service personnel is authorized to open this device! Verify the local voltage and receptacle type are correct for the scale. Only use original adaptor, other could cause damage to the scale. Pluggable equipment must be installed near an easily accessible socket outlet. To prevent load cell ,Avoid load the weight exceed the maximum capacity on the platform To prevent the keys, Do not scratch the keypad with a sharp object Avoid unstable power sources. Do not use near large users of electricity such as welding equipment or large motors. Avoid sudden temperature changes, vibration, wind and water. Avoid heavy RF noise. Do not install the scale in direct sunlight.

2. PRODUCT DESCRIPTION

2.1 General

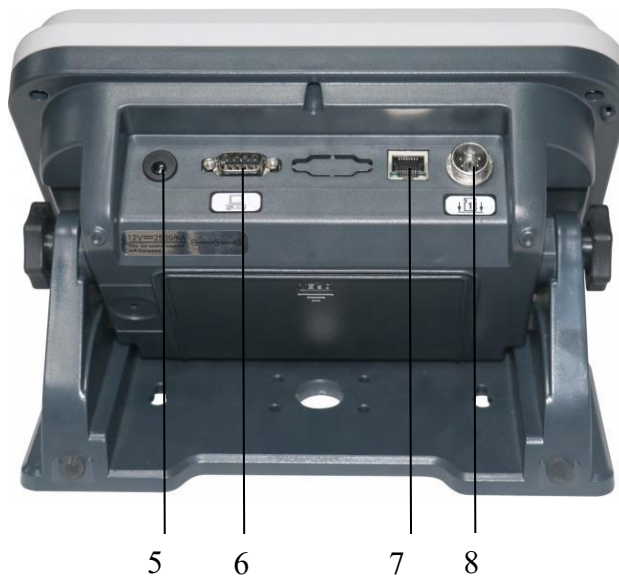
The TW20_NS20_EW20 Series weighing indicators series include full-fledged features, interfaces, they can be developed to meet the Industrial applications.

Major Features

- 4.3" color display with graphic interface
- Multi-user permission management
- Weighing units conversion (kg/g/lb/oz/tj/hj/t)
- Membrane keyboard
- Counting by sampling or entering unit weight; percentage weighing; tolerance checking
- Accumulation mode with manual accumulation, auto load accumulation and auto unload accumulation
- Up to 999 PLUs capacity ,6 direct PLUs ,supported to display alphanumeric PLU information
- Reports Management: Daily, weekly,Monthly, Product reports
- Built-in printer for printing receipt or label
- Multiple language selection
- Different methods of communications: RS232 , Ethernet, Wi-Fi, Bluetooth, USB2.0 Host for Scanner interface
- Data management with backup and restore
- Back office management software could update to the indicator with networking
- All options are controlled from menu. No spec list provided and easy to operate

2.2 Over View

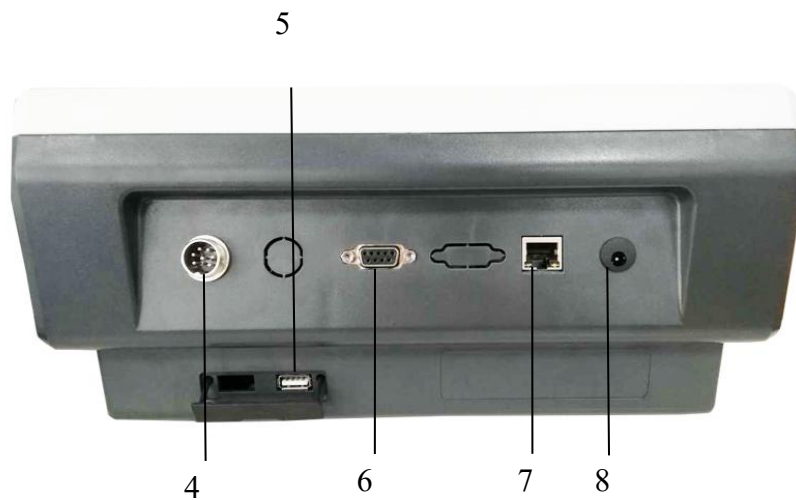
TW20



- 1 Keyboard
- 2 Preset keys
- 3 Indicator Holder
- 4 4.3" LCD display
- 5 AC adapter jack
- 6 RS232 port
- 7 RJ45 LAN port
- 8 Load cell connector

NS20

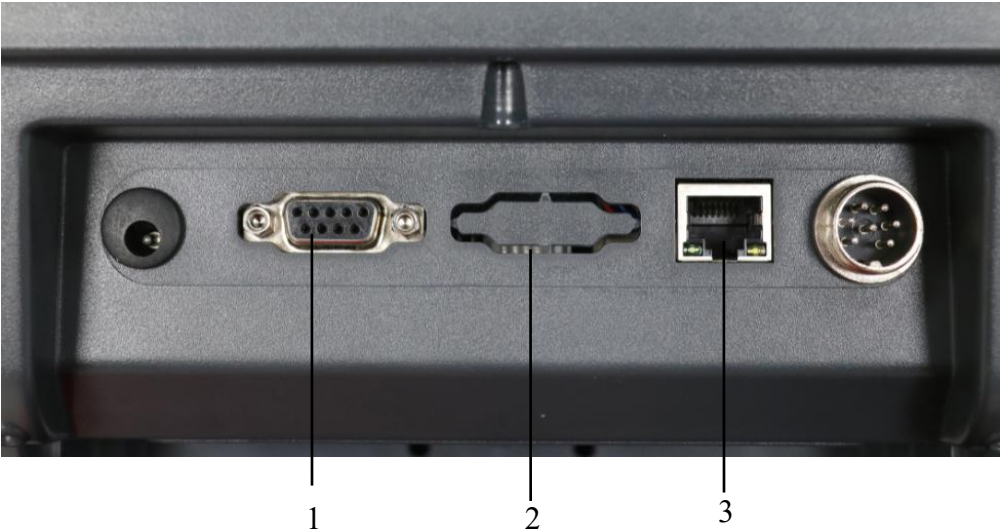
- 1 Keyboard
- 2 Preset keys
- 3 Indicator Holder
- 4 4.3" LCD display

EW20

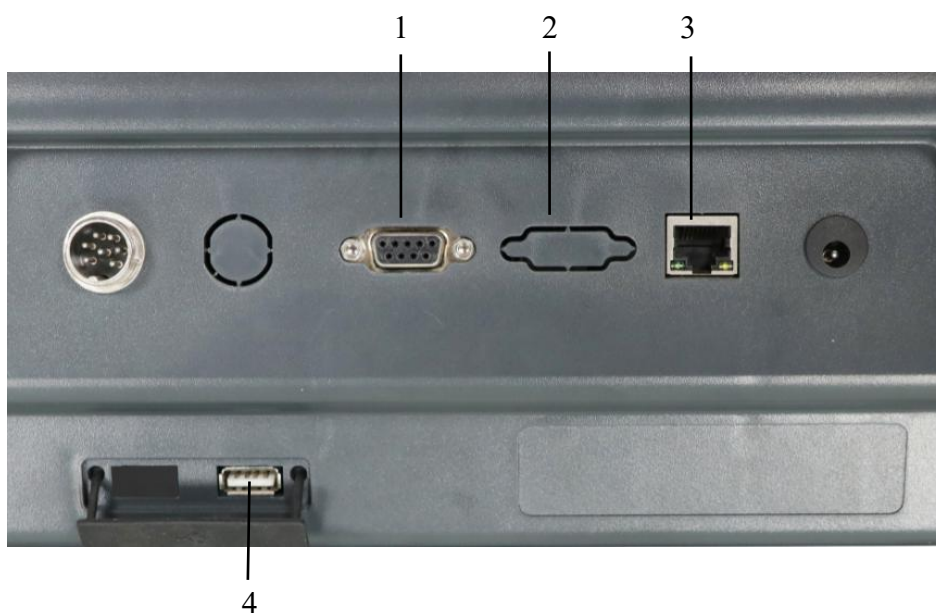
1. Keyboard
2. Preset keys
3. Indicator Holder
4. 4.3" LCD display
5. AC adapter jack
6. RS232 port
7. RJ45 LAN port
8. Load cell connector

2.3 Interfaces

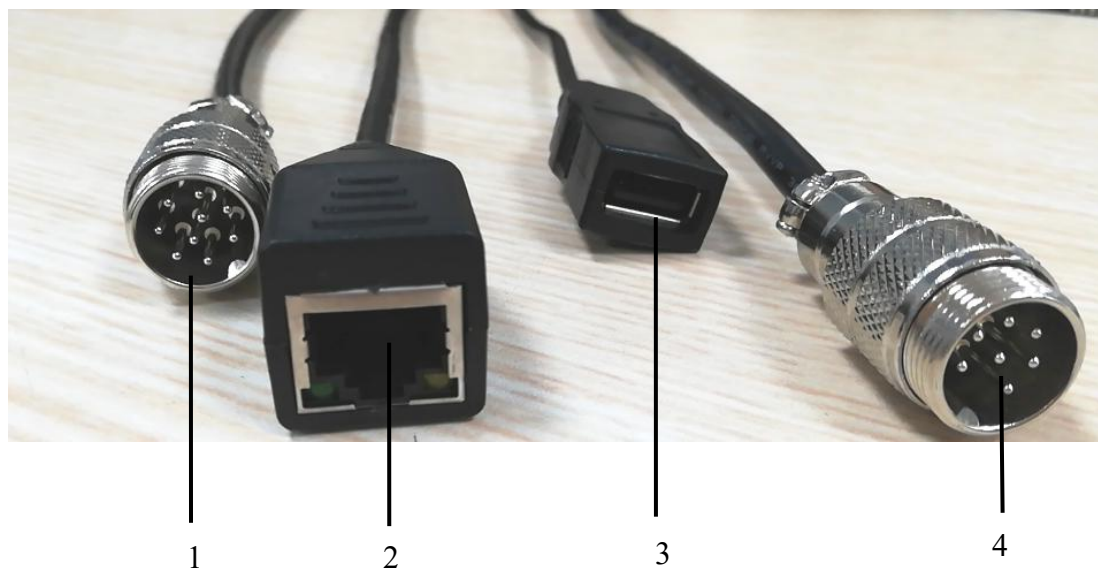
TW20



No	Interface	Description
1	RS-232	For connecting computer / printer / alarm light/ Remote display
2	RS485 / RS-232 (option)	For connecting computer / Second platform
3	RJ45	Support 10M/100M Ethernet
4	USB2.0	For USB disk/ scanner /data transfer,don't use for charging other device

EW20

No	Interface	Description
1	RS-232	For connecting computer / printer/alarm light/ Remote display
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NS20

No	Interface	Description
1	RS-232	For connecting computer / printer /alarm light/ Remote display
2	RJ45	Support 10M/100M Ethernet
3	USB2.0	For USB disk/ scanner /data transfer,don't use for charging other device
4	Load cell connector	For connecting load cell

3. INSTALLATION

3.1 Unpacking

- Remove the scale from the carton.
- Remove the protective covering. Store the packaging and to use if you need to transport the scale later.
- Inspect the scale for damage.
- Make sure all components are included.
 1. Indicator
 2. Adaptor
 3. Manual

3.2 Installation

- Place the Indicator on a table or use indicator holder to connect with stand.
- Connect the platform load cell cable in to the indicator load cell connector. Load cell connector is locating back side of the indicator.

3.3 Load cell connections

- Connect the load cell cables to the terminal as shown below.
- It can connect four 350 ohm load cells.
- The load cell drive voltage is 5V DC $\pm 5\%$ between Excitation + and Excitation -.
- Connect the dual load cell cables to the terminal as shown below.(optional)

7Pin Connection	
Pin 1	Signal -
Pin 2	Signal +
Pin 3	Shield
Pin 4	Exc -
Pin 5	Sen -
Pin 6	Sen +
Pin 7	Exc +

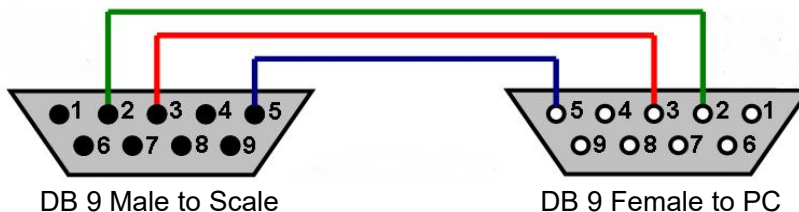
9 Pin	Connection
1	Excitation +
2	Sense +
3	Shield
4	Sense -
5	Excitation -
6	NC
7	Signal -
8	Signal +
9	NC

7 Pin	Connection
1	Signal -
2	Signal +
3	Shield
4	Excitation -
5	Sense -
6	Sense +
7	Excitation +

3.4 RS232 wire connection

Pin 2	RXD	Input	Receiving data
Pin 3	TXD	Output	Transmission data
Pin 5	GND	—	Signal ground

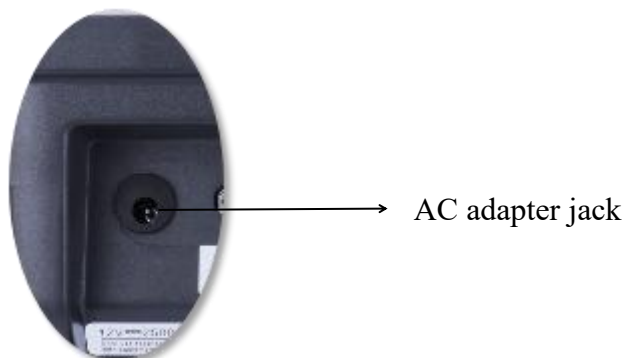
9pin Connector:



Note: if data is not getting, interchange one of the connector Pin 2 & Pin 3 connections.

3.5 Power Connection

- Connect the adaptor pin in to the indicator adaptor jack.
- Adaptor jack is locating back side of the indicator.



- Adaptor connects into your AC power socket. Pluggable equipment must be installed near an easily accessible socket outlet with a protective ground/ earth contact.

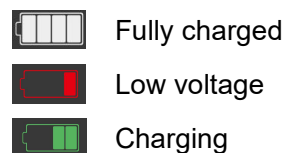
3.6 Rechargeable battery

Note: Please charge the battery before using the scale for the first time.

- The low voltage battery symbol on the weight display indicates that the battery is getting low. It's time to charge the battery with the AC power. If scale goes on being used without proper charging, <BAT-LOW> words will flicker on the display.
- Approximately 30 minutes of instrument usage are left; afterwards it will shut off automatically.
- Please use the supplied battery charger for charging the battery immediately, or scale cannot be used.

3.6.1 Charging the battery

- Before the first use, the battery should be charged by connecting it to the mains power supply for at least 5 hours.
- When the scale is plugged into the mains power the internal battery will be recharged.
- Verify that the AC power socket outlet is properly protected.
- There is an battery symbol at the upper side of display to indicate the status of battery charging.



3.7 Label Paper Roll Installation (EW20)

1. Press the button.
2. Open the printer cover.
3. Load / unload Paper rolls .
4. Close Cover group, Press both side to close correctly.
5. Pull the paper outside of the printer cover.



1



2



3



4



5

3.8 Receipt Paper Roll Installation (EW20)

- 1.Press the button.
- 2.Open the printer cover.
- 3.Load / unload Paper rolls .
- 4.Close Cover group, Press both side to close correctly.
- 5.Pull the paper outside of the printer cover.



1



2



3



4

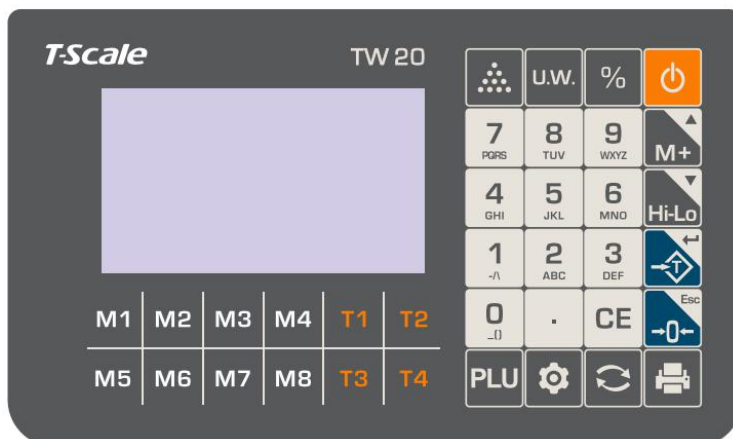


5

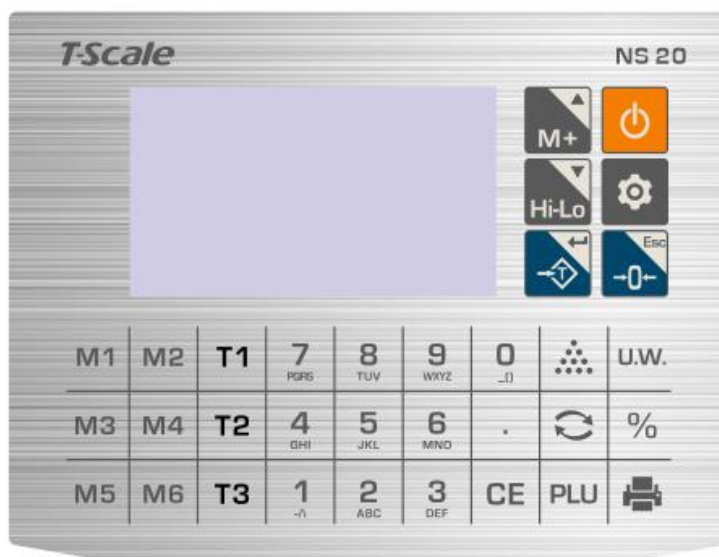
4. DISPLAY&KEYS FUNTION

4.1 Key Board

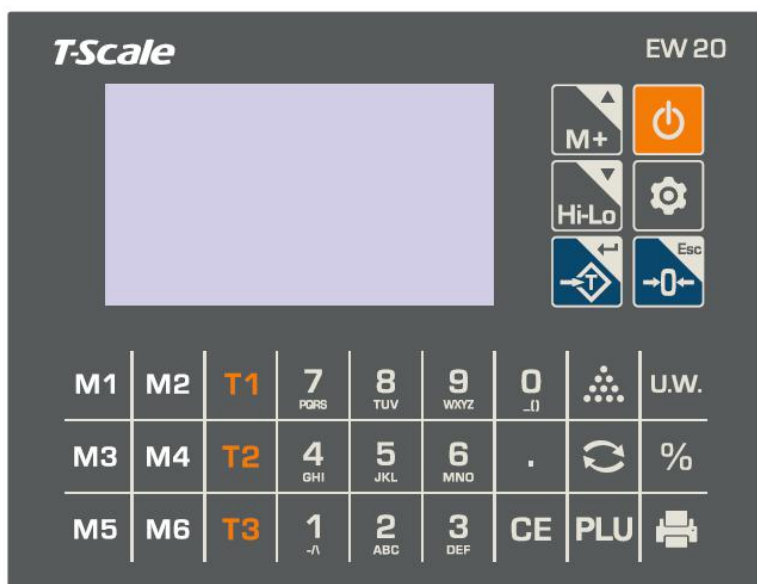
TW20

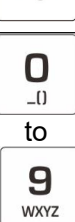


NS20



EW20



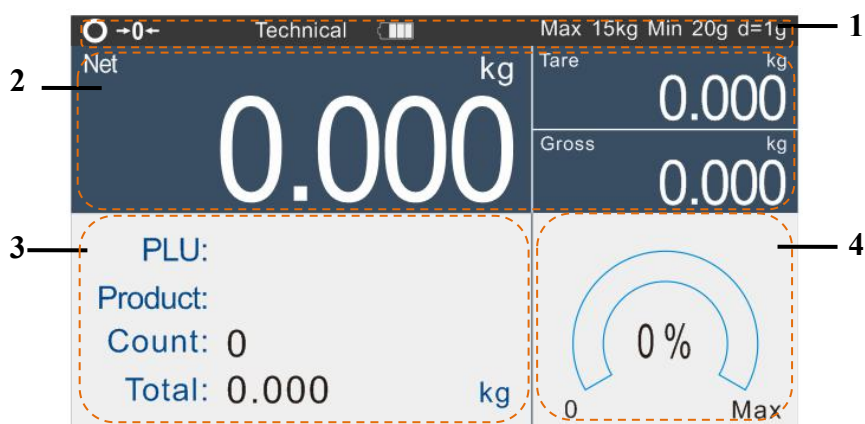
Icon	Name	Description
	On/OFF key	- Press the key to turn the scale on - Long press to turn the scale off
	Print key	- Used to print weighing data in normal weighing mode - Used to print reports when in report mode
	Percentage key	Used to enter percentage mode in normal weighing mode
	Unit Weight key	- Used to store the known average piece weight of item - Long press to change the average piece weight value of item
	Sampling key	Used to enter the counting operation
	Product key	- Used to recall product information - Long press to search product information from list
	Menu key	- Used to enter parameter setting - Long press to check the set parameter information
	Local/Remote key	- Used to change weighing units - Shift to capital letter / small letter when entering characters - Long press to switch local scale to remote scale
	Numeric and alphabetic keys	- Input number in weighing mode - Input numeric and alphabet in parameters and PLU setting
	Decimal point key	Used to input decimal point
	Clear key	- Used to clear selected products and numeric keys - When entering characters, short press to clear one bit, long press to clear all
	Zero key	- Used to zero the scale. - Long press to exit other modes (counting or percentage mode) and back to weighing mode
	Tare key	Used to perform a tare function, Subtracts weights.
	Limit key	- Used to enter check weighing mode - Long press to set HI and Low limits
	Accumulation key	- Used to store the accumulation weights in memory - Used to recall accumulation records
	Direct PLU (M1~M8 available for TW20)	- To recall direct PLU - Long press to store direct PLU

T1 to T3	Pre-tare key (T1~T4 available for TW20)	- To recall the pre-tare value - Long press to store pre-tare value
------------------------------	--	--

Keys in the parameter settings

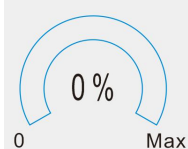
	Used as confirm key ,to enter into the function and parameter settings
	Scroll up to enter different item page
	Scroll down to enter different item page
	Escape from the parameter settings and return to the normal weighing mode

4.2 Indication Description



- 2 Weight display
3 Product Information display
4 Check weighing Display Bar

Icon	Name	Description
	Stable indicator	Indicates the scale weight is stable.
	Zero indicator	Indicates the scale is at zero.
	Tare indicator	Indicates the scale is in tare operation
	Battery symbol	Current remaining power
	Battery shortage	Indicates the battery gets low
	Battery charging	Indicates the battery is charging
	Bluetooth indicator*	Indicates Bluetooth connection
	WIFI indicator*	Indicates WIFI connection

	Ethernet indicator	Indicates Ethernet network connection
	Local scale*	Indicates weighing in the local scale
	Remote scale*	Indicates weighing in the remote scale
Technical	User name	Indicates current operator account
Net	Net weight	Indicates scale is displaying the net weight.
Tare	Tare weight	Indicates scale is displaying the tare weight.
Gross	Gross weight	Indicates scale is displaying the gross weight.
	Lack of unit weight	Indicates piece below minimum weight of piece
	Lack of sample	Indicates number of parts placed on balance too small
Animal	Animal indicator	Indicates in animal weighing mode
Peak	Peak hold indicator	Indicates in peak hold weighing mode
PLU	PLU number	Indicates scale is displaying the PLU number.
Product	Product name	Displays product name
Count	Count	Displays accumulated counts
Total	Total	Displays accumulated total weight
	Range Display Bar	Displays the range of capacity

Optional symbol is marked by *

5. OPERATION

5.1 Power On/Off

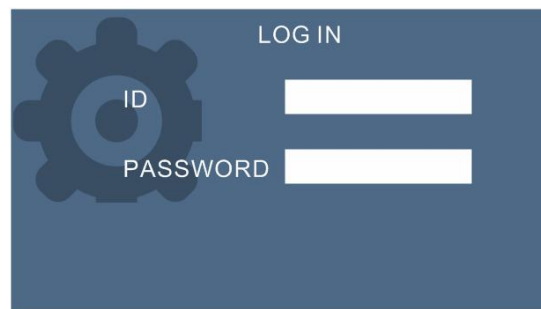
Press  key to switch power-up, it will be heard “beep” sound ,the scale show company logo, and come to normal weighing mode.

Hold  key 1.5 seconds to switch off the scale.

5.2 Log in

It allows multiple users to operate the same indicator

1 When power is on ,it may be asked to input the account and password to log in.



2 Input the account by using numeric keys ,

press  key to confirm.

3 Input the password by using numeric keys ,

press  key to confirm.

4 Display show log in success and come to normal weighing mode.



Note:

1. To enable Login function, see parameters 1.System settings >4. Require login > Yes.
2. Account and password need to be set on the scale in advance, the scale needs to restart after setting up to enter the login .
3. Technician account number is 1000, password is 000000.

5.3 Zero Setting

Zero setting allows to do by pressing  key, only it's possible when the load receptor is not in motion.

5.4 Tare

5.4.1 Semi-automatic tare

The indicator is provided with a semi-automatic subtractive tare.

The weight of any container can be tared by pressing  button so that with subsequent weighing the net weight of the object being weighed is always displayed.

Tare Operation:

- 1 Load weight on the platform.



- 2 Press  key. Zero is displayed, and tare is subtracted.
- 3 Remove weight on the platform. Tared weight is displayed. It can set only one tare value. It will be shown with a minus value.



- 4 This Tare value can be cleared by pressing  key, when there is no load on the platter. This tare entry cannot take place, if the platter is in motion.

5.4.2 Automatic tare

The weight of any container can be tared automatically ,to enable automatic tare function, see parameters 2.ADVANCED SETTINGS >3. TARE SETTINGS > 1.AUTO TARE >ON.

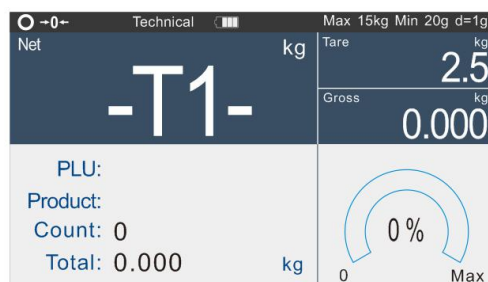
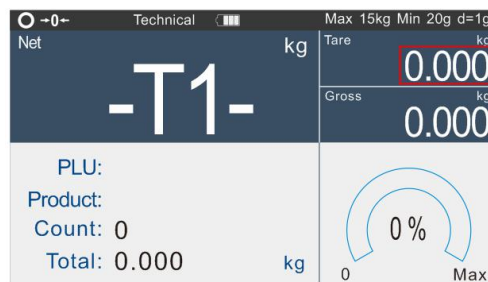
- 1 Load a container on the platform, it will be heard a “beep” sound.
- 2 ZERO indicator and TARE indicator appears.
- 3 Zero is displayed in NET window,the subtracted value appears in the tare window.
- 4 Load the weight in the container,the NET window shows net value with a “beep” sound.
- 5 Remove weight from the platform. Tared weight is displayed. It can set only one tare value.
- 6 Remove the container from the platform,display show zero with a “beep” sound.

5.4.3 Pre-set tare**5.4.3.1 Store Pre-set Tare****Direct pre-set tare:**

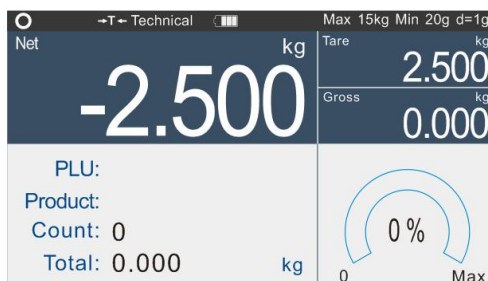
- 1 Hold T key (**T1** to **T3**) 2 seconds in normal Weighing mode,the digits in Tare window will be active.

(T1~T4 available for TW20)

- 2 Using numeric keys to input the tare value.



- 3 Press  key to confirm,the preset tare value appears.

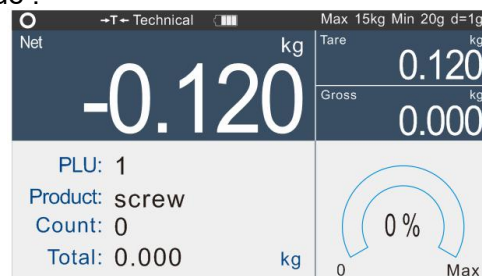


Indirect pre-set tare:

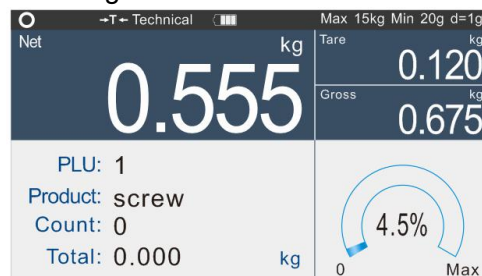
The scale has a pre-set tare function, it can be combined with PLU information, the pre-set tare value can be dedicated to the products in the PLU individually, using numeric keys see parameters **3.PRODUCT INFO > 2. ADD/EDIT PRODUCT > 3.TARE**

5.4.3.2 Recall Pre-set Tare**Recall indirect pre-tare**

- 1 Select a Weight PLU configured with pre-tare value from Indirect PLU list .
- 2 Display will be show selected product name & number & pre-tare value .



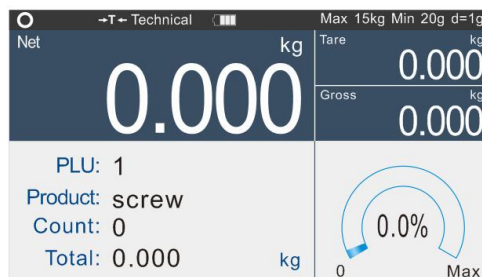
- 3 Place the item on the pan and wait to get weight stable, display show net weight.



- 4 Remove item from the pan, the net window show negative value.



- 5 Press  key to clear tare value.

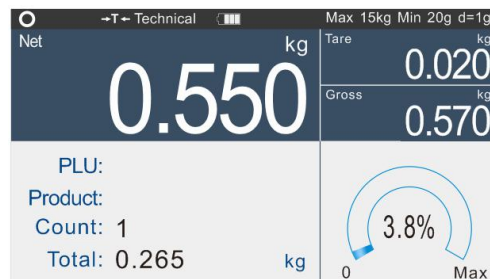


Recall direct pre-tare

- 1 Press T key (selected from **T1** to **T3**) to recall pre-tare value .
- 2 Display shows pre-tare value .



- 3 Place the item on the pan and wait to get weight stable, display show net weight.

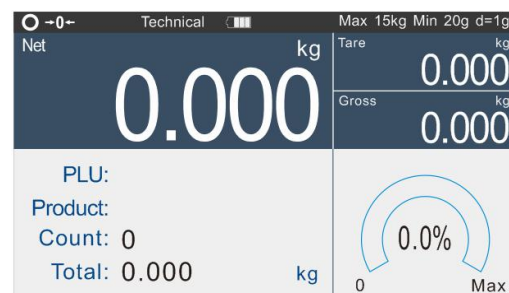


- 4 Remove item from the pan ,the net window show negative value.

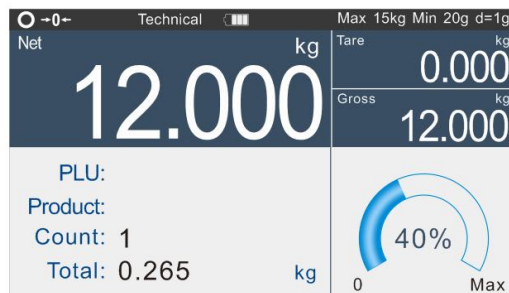
- 5 Press  key to clear tare value.

**5.5 Weighing Operation**

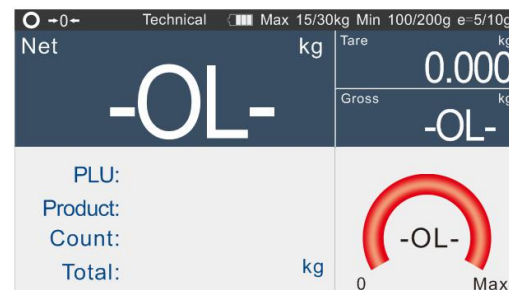
Switch on the scale, display show normal weighing mode.



Load the weight on the pan, display shows weight .



To avoid damaging the load cell ,please do not add the weight over the full capacity,otherwise display shows -OL-.



5.6 Weighing Units Conversion

By pressing  key in turn in normal weighing mode,it can convert the weighing units (kg/g/lb/oz/tj/hj),the relative units symbol will turn on in the display.

To enable the weighing units, please see parameter 2.ADVANCED SETTINGS >1.DISPLAY UNIT

- 1 Press  key to enter setup menu.

- 2 Press  key to select 2.ADVANCED SETTINGS

And confirm by pressing  key.

- 3 Press  key to enter DISPLAY UNIT.

- 4 Press  key to enter the option.

- 5 Press  key to select on/off.

- 6 Press  key 3 times to back to normal weighing mode.

1/1	
MAIN	
1.SYSTEM SETTINGS	
2.ADVANCED SETTINGS	
3.PRODUCT INFO	
4.PRINT,REPORTS&DATA	
5.INTERFACE	
6.SERVICE	

1/2	
ADVANCED SETTINGS	
1.DISPLAY UNIT	
2.ZERO SETTINGS	
3.TARE SETTINGS	
4.WEIGHING MODE	SLOW
5.ANIMAL WEIGH	NORMAL
6.BEEP MODE	BEYOND LIMITS

1/2	
DISPLAY UNIT	
1.g	ON
2.kg	ON
3.lb	ON
4.oz	ON
5.t	OFF
6.tj	OFF

5.7 PLU Information Store and Recall

It allows for searching Product names by pressing Direct PLU M1~M8 or by using  key.

5.7.1 Store Indirect PLU information

please refer to setup menu > 2.PRODUCT INFO > 2.ADD/EDIT PRODUCT

Operation:

- 1 Press  key to enter setup menu.
- 2 Press  key 2 times to select 2.PRODUCT INFO.
- 3 Press  key to enter
- 4 Press  key to select 2.ADD/EDIT PRODUCT.
- 5 Press  key to enter product information
- 6 Please input PLU number by using numeric keys
And confirm by pressing  key .
- 7 Now you can start to edit product information.
- 8 Press  key 3 times to back to normal weighing mode.

1/1	
MAIN	
1.SYSTEM SETTINGS	
2.ADVANCED SETTINGS	
3.PRODUCT INFO	
4.PRINT,REPORTS&DATA	
5.INTERFACE	
6.SERVICE	

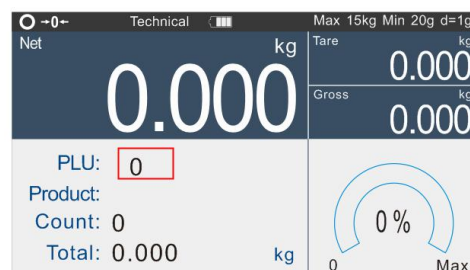
1/1	
PRODUCT INFO	
1.SEARCH	
2.ADD/EDIT PRODUCT	
3.DELETE PRODUCT	
4.CHANGE PLU NUMBER	

1/1	
PRODUCT INFO	
1.SEARCH	
2.ADD/EDIT PRODUCT	
3.DELETE PRODUCT	
4.CHANGE PLU NUMBER	
PLU NUMBER	1

PLU 1 1/2	
PRODUCT	
1.NAME	
2.CODE	
3.TARE	0.000 kg
4.TYPE	WEIGH
5.MIN.WEIGHT	0.000 kg
6.MAX.WEIGHT	0.000 kg

5.7.2 Recall indirect PLU

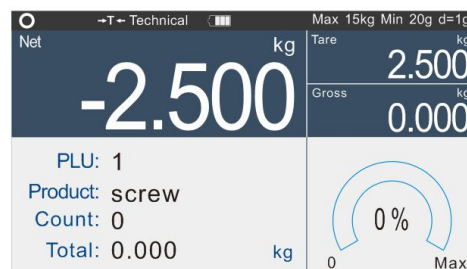
- 1 Press  key to recall the indirect PLU information in normal weighing mode.
- 2 It will be asked to input PLU number
- 3 Using numeric number keys on the keypad to input PLU number to select products.
- 4 Press  key to confirm.
- 5 Display will be show selected product name & number .



Note: By pressing  key allows clearing the current product number & name, or by selecting a new PLU key will be clear existing PLU number & name automatically.

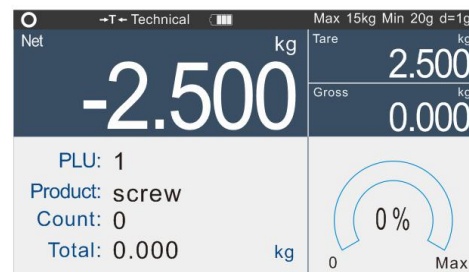
5.7.3 Store Direct PLU information

- 1 Press  key to recall the indirect PLU information in normal weighing mode.
- 2 It will be asked to input PLU number
- 3 Using numeric number keys on the keypad to input PLU number to
- 4 Press  key to confirm.
- 5 Display will be show selected product name & number .
- 6 Hold M keys (selected one of direct PLU from **M1** to **M6**) for storing product information.
- 7 The PLU information will be stored in the direct PLU with a “beep” sound.



5.7.4 Recall direct PLU

In normal weighing mode, press M key (selected from **M1** to **M6**) to recall direct PLU.



5.8 Parts Counting

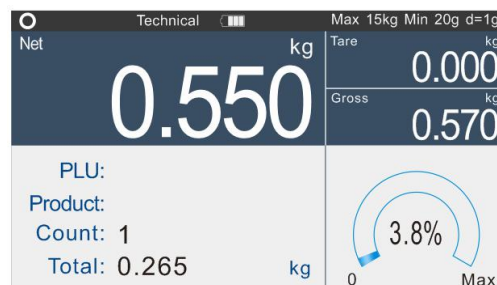
Weigh a sample to calculate the unit weight to determine the average weight of items to count, put a known number of pieces on the scale. The balance of the total weight divided by the number of samples and displays the unit weight.

Note: Before operation scale should be stable and return to zero, sampling available only when weight more than 20d.

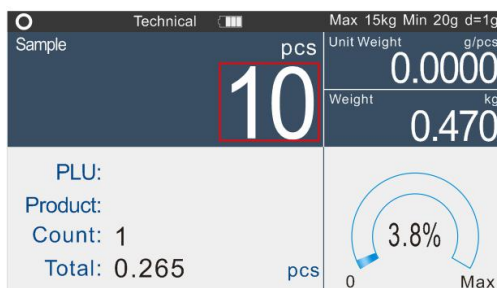
5.8.1 Manual Sampling for counting procedure

5.8.1.1 Simple Sampling

- Make sure platter empty and display return to zero.
- Put a container on platter and press  key if necessary.
- Place a unknown amount of pieces on the scale.

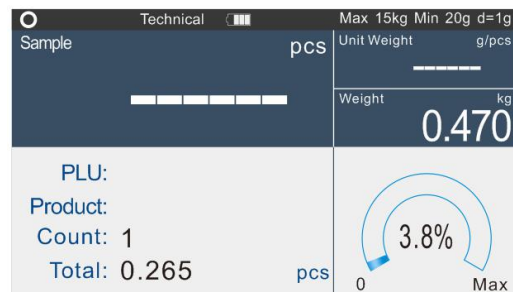


- Press  key to confirm when scale stable.
- The digits in the sample window will be active.



- If necessary press  key to change the parts quantity (10/20/50/100).

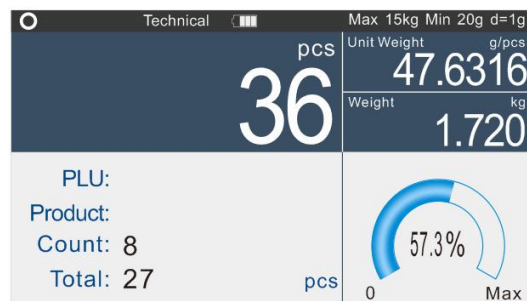
- Press  key to confirm, display show dotted line.



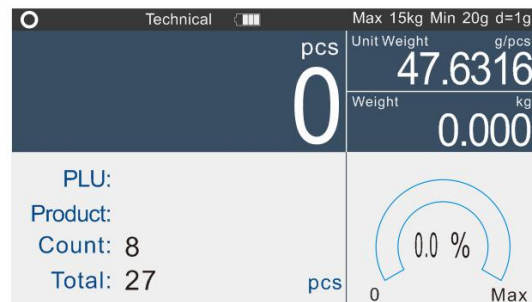
- The average piece weight of item will be calculated and then the number of items displayed in count window.



- Add the rest of items on the platter, weight and number of items will be increased.



- Remove the items, the average piece weight will remain stored in memory for the next counting of similar pieces.



- Press and hold  key to back to normal weighing mode.

5.8.1.2 Enter Counting Number

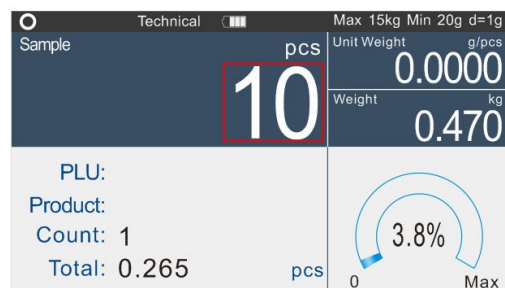
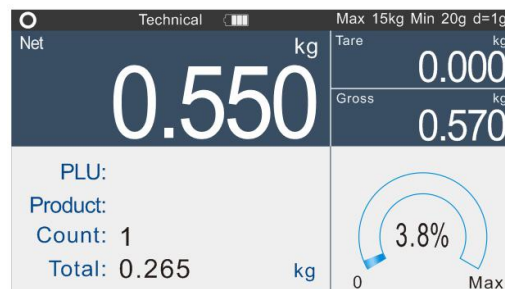
- Make sure platter empty and display return to zero.



- Put a container on platter and press  key if necessary.
- Place a unknown amount of pieces on the scale.

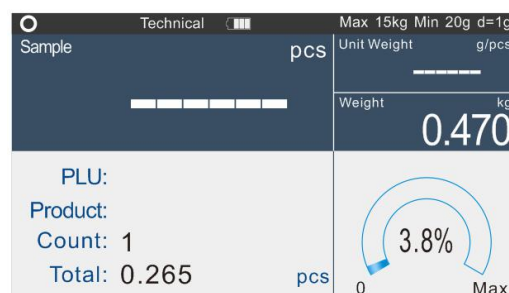


- Press and hold  key to confirm when scale stable.
- The digits in the sample window will be active.

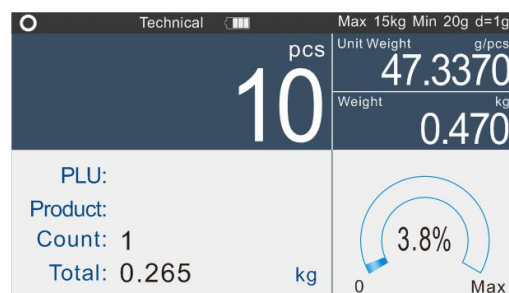


- Using numeric keys to input the count number, eg: 10

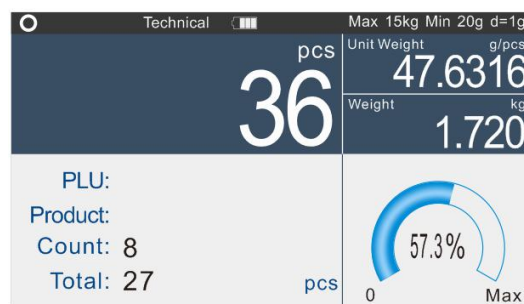
- Press  key to confirm, display show dotted line.



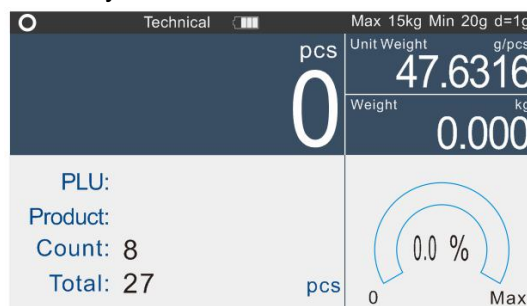
- The average piece weight of item will be calculated and then the number of items displayed in count window.



- Add the rest of items on the platter, weight and number of items will be increased.



- Remove the items, the average piece weight will remain stored in memory for the next counting of similar pieces.



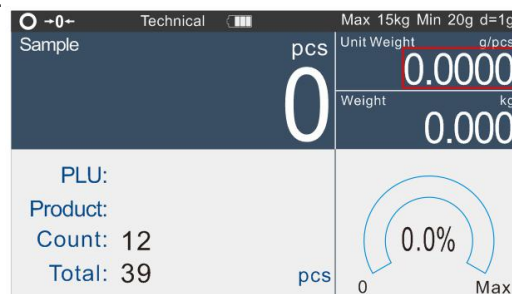
- To execute a new reference operation repeat the operations as described .

- Press and hold  key to back to normal weighing mode.

Note: The weighing may be amended on the basis of greater numbers of samples improves the accuracy of counting large quantities

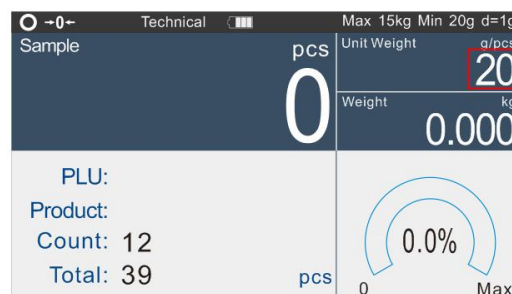
5.8.2 To input the known average piece weight of item

- Make sure platter empty and display return to zero.
- Press  key ,the digits in unit weight window will be active.

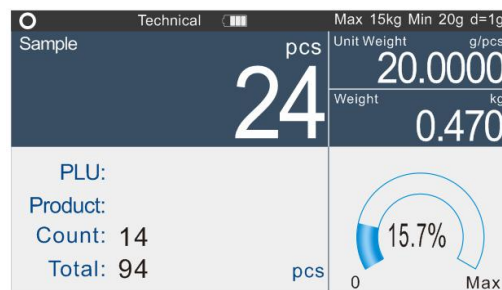


- Input the average piece weight of item with numeric keys.

- Press  key to confirm.



- Add new items on the platter, weight and number of items will be displayed.



- **To execute a new reference operation** repeat the operations as described .

- Press and hold  key to back to normal weighing mode.

- Press  key to display the last set unit weight.

- Press and hold  key to update the average piece weight of item, and confirmed by pressing  key.

5.8.3 Automatic Part Weight Updates

- To optimize the calculated average piece weight automatically, add further parts whose number is smaller than that of the first reference determination.

For each reference optimization the average piece weight is newly calculated.

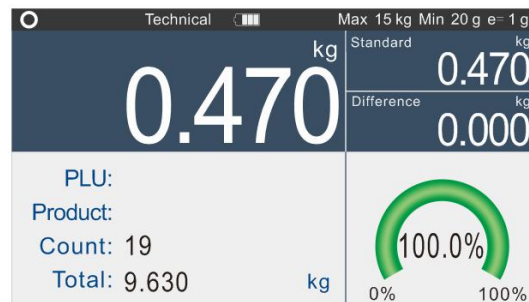
As the additional pieces increase the base for the calculation, the reference also becomes more exact.

- Automatic reference optimization will be deactivated as soon as the number of added parts exceeds the saved reference quantity.

5.9 Percentage Weighing

The scale can set a sample weight to be shown as 100%. Then any other weights place on the scale, it will be displayed as a percentage of the original sample.

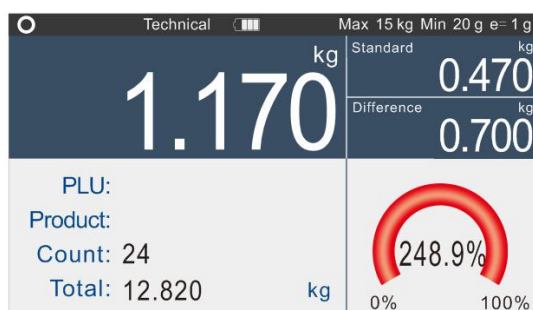
- 0.47 kg weight place on the scale and follow by press the  key is pressed the display will show 100.00%.



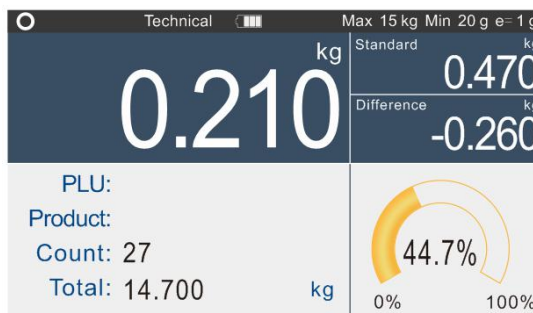
- Remove the weight, and ensure display is zero.



- Place 1.17kg weight on the platform, display will be show 248.9 % as per the percentage of 0.47kg (100%).

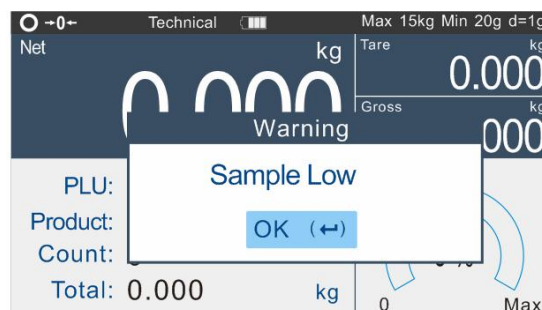


- Place 0.210kg weight on the platform, display will be show 44.7 % as per the percentage of 0.470kg (100%).



- Press and hold  key to back to normal weighing mode.
- The weighing may be amended on the basis of greater numbers of samples, improves the accuracy of percentage large quantities.

Note: If the weight is less than 20d, it will pop up a prompt "sample low"



5.10 Accumulation

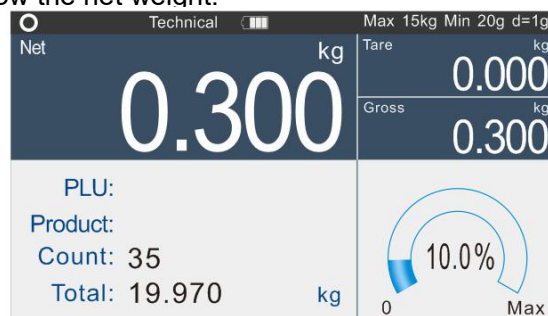


The scale can be set to accumulate manually by pressing **M+** key. Only the total counts will be saved in memory.

Before operation scale should be stable and return to zero, accumulation available only when weight more than 20d

5.10.1 Manual Accumulation

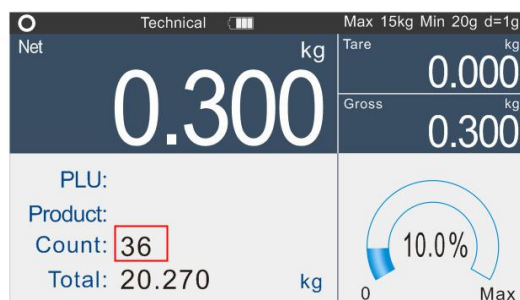
- 1 Place the load on the platform, the weight display will show the net weight.



- 2 Press **M+** key, when STABLE indicator on.
- 3 Total counts and weight will be displayed with beep sound.

- 4 Remove the weight from the pan.
- 5 When display get zero and stable then place the second weight.

- 6 Press **M+** key, when STABLE indicator on.



- 7 It can continue until the memory gets fully.

5.10.2 Auto Load Accumulation

To enable the auto-load accumulation, please refer to parameters 2. ADVANCED

SETTINGS > 7.ACCUMULATION MODE > AUTO-LOAD

1/2	
ACCUMULATION	
1.TYPE	AUTO-LOAD
2.ALLOW ALL PRODUCTS	NO
3.PRINT EVERY RECORD	YES
4.MIN.LOAD	20D

- 1 Place the load on the platform, the weight display will show the net weight.
- 2 When stable indicator on, a "beep" sound will be heard, display shows the count and total weight.
- 3 Remove the item and the scale will return to zero;
- 4 When display get zero and stable then place the second weight.
- 5 It can continue until the memory gets fully.

5.10.3 Auto Unload Accumulation

To enable the auto-unload accumulation ,please refer to parameters 2. ADVANCED

SETTINGS >7.ACCUMULATION >1.ACCUMULATION MODE > AUTO-UNLOAD

1/2	
ACCUMULATION	
1.TYPE	AUTO-UNLOAD
2.ALLOW ALL PRODUCTS	NO
3.PRINT EVERY RECORD	YES
4.MIN.LOAD	20D

- 1 Place the load on the platform,the weight display will be show the net weight.
- 2 When stable indicator on ,a "beep" sound will be heard.
- 3 Remove the item and the scale will return to zero.
- 4 Display shows the count and total weight, a beep sound will be heard.
- 5 When display get zero and stable then place the second weight.
- 6 It can continue until the memory gets fully .

5.10.4 Accumulation Recall

- 1 In the normal weighing mode,when the load weight is less than 20d.

- 2 Press  key ,the accumulation records will be show.

- 3 Press  key or  key to scroll up or scroll down to view the records.

- 4 If connected with printer, press  key to print out the accumulation records.

- 5 Press  key to back to normal weighing mode.

11/25/20

1/3

ACC RECORDS

NO.	TIME	PRODUCT	NET
001	22:54	Screw	5.545kg
002	22:54	Screw	5.545kg
003	22:54	Screw	5.545kg
004	22:54	Screw	5.545kg
005	22:54	Screw	5.545kg
006	22:55	Screw	5.545kg
TOTAL	14		70.570kg

Welcome			
11/25/20		22:54	
OPERATOR		Ada	
No.	Net	Counts	Result
1. Screw	6.130 kg	0.000 kg	NONE
2. Screw	6.410 kg	0.000 kg	HIGH
3. Screw	6.110 kg	0.000 kg	HIGH
4. Screw	6.070 kg	0.000 kg	HIGH
5. Screw	6.060 kg	20 pcs	OK
6. Screw	6.110 kg	20 pcs	OK
7. Screw	6.170 kg	21 pcs	HIGH
8. Screw	1.080 kg	4 pcs	LOW
9. Screw	0.980 kg	3 pcs	LOW
10.Screw	0.960 kg	0.000 kg	NONE
11.Screw	6.090 kg	40.4 %	NONE
12.Screw	6.110 kg	40.5 %	NONE
13.Screw	6.130 kg	40.6 %	NONE
14.Screw	6.160 kg	40.8 %	NONE
Total Items		14	
T.Net		70.570 kg	
T.Counts		68 pcs	
T.Over		4	
T.OK		2	
T.Under		2	

5.10.5 Accumulation Clear

1 In the normal weighing mode,press  key to recall accumulation records.

2 Press and hold  key to clear the accumulation memory.

5.10.6 Accumulation and Printing

If connected with printer, the data will be print out in accumulation mode, see parameters 2. ADVANCED SETTINGS >7.ACCUMULATION >3. PRINT EVERY RECORD >YES

MANUAL	Load the weight ,after stable indicator on,press  key ,the count and total appears ,the data will be printed out
AUTO-LOAD	Load the weight ,after stable indicator on,the count and total appears ,the data will be printed out
AUTO-UNLOAD	Load the weight ,after stable indicator on,the count and total appears ,remove the weight ,data will be printed out

5.10.7 Accumulation and No Printing

If connected with printer, the data will be print out in accumulation mode, see parameters 2. ADVANCED SETTINGS >7.ACCUMULATION >3. PRINT EVERY RECORD >NO

MANUAL	Load the weight ,after stable indicator on,press  key ,the count and total appears ,the data will not be printed out
AUTO-LOAD	Load the weight ,after stable indicator on,the count and total appears ,the data will not be printed out
AUTO-UNLOAD	Load the weight ,after stable indicator on,the count and total appears ,remove the weight ,data will not be printed out

5.10.8 Accumulation for Same Product

see parameters 2. ADVANCED SETTINGS >7.ACCUMULATION >2.ALLOW ALL PRODUCTS > NO

1/2	
ACCUMULATION	
1.TYPE	AUTO-UNLOAD
2.ALLOW ALL PRODUCTS	NO
3.PRINT EVERY RECORD	YES
4.MIN.LOAD	20D

1Select a PLU from the direct PLU list or Indirect PLU list.

2The same product could be accumulated in weighing mode percentage mode.

3When switching between products, the total is automatically cleared.

4Press  key to view the records,only show the same product accumulation records in different operation mode.

5.10.9 Accumulation for Different Product

see parameters 2. ADVANCED SETTINGS > 7. ACCUMULATION > 2. ALLOW ALL PRODUCTS > YES

1/2	
ACCUMULATION	
1. TYPE	AUTO-UNLOAD
2. ALLOW ALL PRODUCTS	YES
3. PRINT EVERY RECORD	YES
4. MIN. LOAD	20D

1 Select a PLU from the direct PLU list or Indirect PLU list.

2 The different product could be accumulated in weighing mode and percentage mode.

3 Press  key to view the records, the different product accumulation records appears.

NOTE: When switching between products with counting modes, there will be warning window to clear the total. The user has to clear the total by pressing long CE from the ACC report.

5.11 Printing

5.11.1 Label Printing

It allows for printing the weighing result to external label printer. To enable the function, please refer to setup menu

2. ADVANCED SETTINGS > 7. ACCUMULATION > 1. ACCUMULATION MODE > MANUAL

5. INTERFACE > 1. SERIAL > 1. TYPE > RS232

5. INTERFACE > 1. SERIAL > 2. MODE > PRINTER

5. INTERFACE > 1. SERIAL > 4. EXTERNAL PRINTER > 2. OS2130D or 4. RP80VI

5. INTERFACE > 1. SERIAL > 6. BAUD RATE > 115200

5. INTERFACE > 1. SERIAL > 7. DATA BITS > 8

5. INTERFACE > 1. SERIAL > 8. STOP BITS > 1

5. INTERFACE > 1. SERIAL > 9. PARITY > NONE

The printer option should be selected as per connected printer model

- Load the weight on the platform.

- Press  key to print out the data.

5.11.2 Receipt Printing

It allows for printing the weighing records to external receipt printer. To enable the function, please refer to setup menu

2. ADVANCED SETTINGS > 7. ACCUMULATION > 1. ACCUMULATION MODE > MANUAL

5. INTERFACE > 1. SERIAL > 1. TYPE > RS232

5. INTERFACE > 1. SERIAL > 2. MODE > PRINTER

5. INTERFACE > 1. SERIAL > 4. EXTERNAL PRINTER > TPuP

5. INTERFACE > 1. SERIAL > 6. BAUD RATE > 115200

5. INTERFACE > 1. SERIAL > 7. DATA BITS > 8

5. INTERFACE > 1. SERIAL > 8. STOP BITS > 1

5. INTERFACE > 1. SERIAL > 9. PARITY > NONE

- Load the weight on the platform.



- Press key to print out the data.

5.11.3 Built-in printer Printing

It allows for printing the weighing records to built-in printer (only available for EW20 model). To enable the function, please refer to setup menu

2.ADVANCED SETTINGS > 7.ACCUMULATION >1. ACCUMULATION MODE >MANUAL
5.INTERFACE >1.SERIAL >4.BUILT-IN PRINTER > ON
5.INTERFACE >1.SERIAL >6.BAUD RATE > 115200
5.INTERFACE >1.SERIAL >7.DATA BITS > 8
5.INTERFACE >1.SERIAL >8.STOP BITS > 1
5.INTERFACE >1.SERIAL >9.PARITY > NONE

- Load the weight on the platform.



- Press key to print out the data.

5.12 Tolerance checking

The weighing scales allow weighing goods according to a target quantity or target weight or target percentage within specified tolerances. With this function one can also check if the weighing good is within a defined tolerance range. Reaching target quantity is indicated by an audio sound (if enabled in menu) and a visual color bar.

Note: Check weighing or counting available only when weight more than 20d

5.12.1 Beep Mode

The beep sound depends on the settings made in menu block

Options:

6.Beep mode	1.OFF	Beep sound turned off
	2.BEYOND LIMITS	Beep sound will ring out when load is beyond tolerance range
	3.WITHIN LIMITS	Beep sound will ring out when load is within tolerance range
	4.BELOW MIN.LIMIT	Beep sound will ring out when load is below low limit
	5.ABOVE MAX.LIMIT	Beep sound will ring out when load is exceed high limit

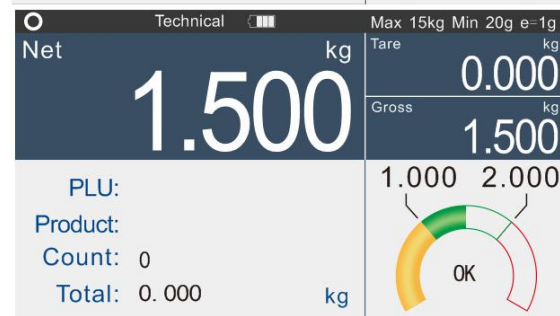
Optical signal:

The curve bar in the display shows whether the goods to be weighed are within the two tolerance limits.

Target quantity/target weight/target percentage
below minimum tolerance limit



Target quantity/target weight/target percentage
within tolerance range

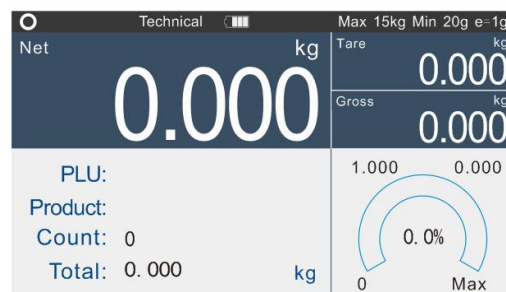


Target quantity/target weight/target percentage
exceeds maximum tolerance limit



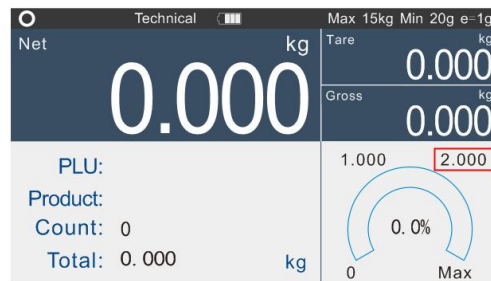
5.12.2 Limits setting for target weight

- 1 Press and hold key to enter limits setting in Normal weighing mode.
- 2 The lower limit value and LOW words in the display will be active in turn.
- 3 Press key to confirm when entered the lower limits with numeric keys.



- 4 The upper limit value and HI words in the display will be active.

- 5 Press  key to confirm when entered the upper limits with numeric keys.



- 6 Limits setting completed, Load the weight on platter, the check weighing control will start.



- 7 To disable the check weighing function, enter zero in both limits.

5.12.3 Limits setting for target quantity

- 1 To enter counting mode by sampling or inputting the known unit weight of item.

- 2 Press and hold  key to enter limits setting.

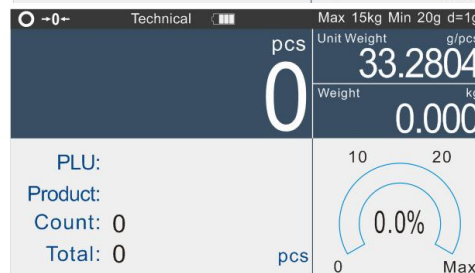
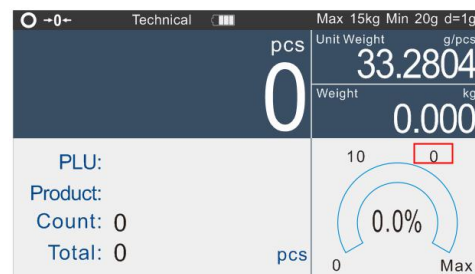
- 3 The lower limit value and LOW words in the display will be active in turn.

- 4 Press  key to confirm when entered the lower limits with numeric keys.



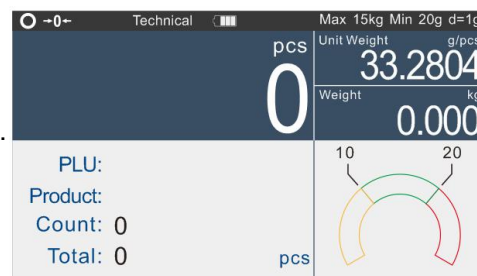
- 5 The upper limit value and HI words in the display will be active in turn.

- 6 Press  key to confirm when entered the upper limits with numeric keys.



7 Limits setting completed, Load the weight on platter, the check counting control will start .

8 To disable the check counting function, enter zero in both limits.



5.12.4 Limits setting for target percentage

1 Press  key to enter percentage weighing in normal weighing mode.

2 Press  key to enter limits setting.



3 The lower limit value and LOW words in the display will be active in turn.

4 Press  key to confirm when entered the lower limits with numeric keys.

5 The upper limit value and HI words in the display will be active in turn.



6 Press  key to confirm when entered the upper limits with numeric keys.



7 Limits setting completed, Load the weight on platter, the check percentage weighing control will start .

8 To disable the check percentage weighing function, enter zero



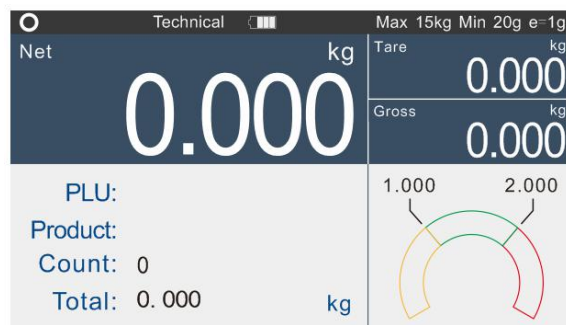
Notes

- Check weighing available only when weight more than 20d
- The function is not valid when one enters a lower limit greater than the upper limit.
- When lower limits are the same with upper limits, display only shows one set value

5.12.5 Tolerance Checking Mode

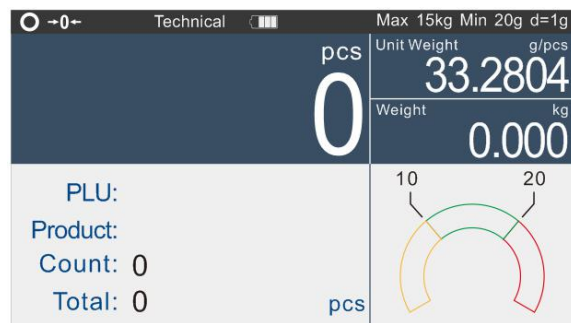
Target weight checking

In normal weighing mode, press  key to enter check weighing mode



Target quantity checking

In counting mode, press  key to enter check counting mode



Target percentage checking

In percentage mode, press  key to enter check percentage mode



5.13 Backlight Setting

It allows for setting backlight for the scale, To enable the function, please refer to setup menu.

Operation:

1 Press  key to enter setup menu.

2 Press  key to enter to system settings.

1/1	
MAIN	
1.SYSTEM SETTINGS	
2.ADVANCED SETTINGS	
3.PRODUCT INFO	
4.PRINT,REPORTS&DATA	
5.INTERFACE	
6.SERVICE	

3 Press  key until to select the backlight.

4 Press  key to enter the menu.

5 Press  key to change the setting.

- LOW--Backlight turn to be low light
- NORMAL--Backlight turn to be medium light
- BRIGHT--Backlight turn to be high light

6 Press  key to confirm.

7 Press  key two times to exit the setup menu and back to normal weighing mode.

Note:If the battery is getting low,the backlight function will not be available.

5.14 Auto Power Off

When the auto power-off time is enabled, the scale will automatically turn off when there has been no load on the platform and the scale is stable at zero position for a specified period of time in minutes.

Operation:

1 Press  key to enter setup menu.

2 Press  key to enter to system settings.

3 Press  key until to select the power&sleep.

4 Press  key to enter the menu.

5 Press  key to change the setting.

- OFF--Auto power-off is off.
- 0.5 HOUR--Auto power-off at 30 minutes.
- 5 HOURS--Auto power-off at 5 hours.
- 10 HOURS--Auto power-off at 10 hours.

1/2	
SYSTEM SETTINGS	
1.TERMINAL INFO	
2.DATE/TIME	
3.LANGUAGE	ENGLISH
4.REQUIRE LOGIN	NO
5.BACKLIGHT	NORMAL
6.POWER&SLEEP	OFF

1/1	
MAIN	
1.SYSTEM SETTINGS	
2.ADVANCED SETTINGS	
3.PRODUCT INFO	
4.PRINT,REPORTS&DATA	
5.INTERFACE	
6.SERVICE	

1/2	
SYSTEM SETTINGS	
1.TERMINAL INFO	
2.DATE/TIME	
3.LANGUAGE	ENGLISH
4.LOGIN	NO
5.BACKLIGHT	NORMAL
6.AUTO POWER OFF	OFF

6 Press  key to confirm.

7 Press  key two times to exit the setup menu and back to normal weighing mode.

5.15 Animal Weighing

Use this mode to weigh moving items.

Operation:

1 Press  key to enter setup menu.

2 Press  key to select ADVANCED SETTINGS.

3 Press  key to enter settings.

4 Press  key until select 4. WEIGHING MODE sub menu.

5 Press  key to enter settings.

6 Press  key to change the settings until display show ANIMAL WEIGH.

7 Once selected the animal weighing mode, it could enter 5. ANIMAL WEIGH sub menu to set the relative range settings for animal weighing.

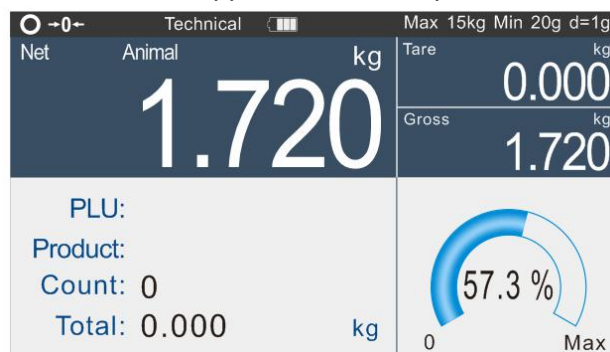
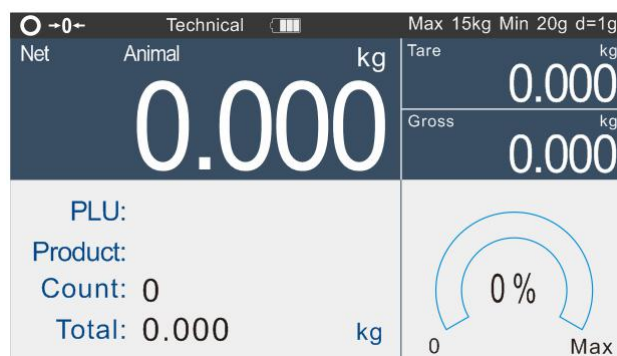
1/1	
MAIN	
1.SYSTEM SETTINGS	
2.ADVANCED SETTINGS	
3.PRODUCT INFO	
4.PRINT,REPORTS&DATA	
5.INTERFACE	
6.SERVICE	

1/2	
ADVANCED SETTINGS	
1.DISPLAY UNIT	
2.ZERO SETTINGS	
3.TARE SETTINGS	
4.WEIGHING MODE	ANIMAL WEIGH
5.ANIMAL WEIGH	NORMAL
6.BEEP MODE	BEYOND LIMITS

1/1	
ANIMAL WEIGH	
1.FLOATING RANGE	1D
2.STABLE TIME	5 SEC
3.JUMP RANGE	1D

- FLOATING RANGE:1D/2D/5D/10D/20D/50D
- STABLE TIME: 5 SEC/10 SEC/ 20 SEC/ 30 SEC/ 40 SEC/50 SEC
- JUMP RANGE:1D/2D/5D/10D/20D/50D

- Press  key to confirm you desired.
- Press  key three times to exit the setup menu and enter animal weighing mode.
- The Animal indicator will appear in the upper side of the weight display.
- Place item to be weighed on the scale platform. Once the stable indicator appears with a beep sound, the final weight will be shown on the display.



The weight will be update when the load weight exceed the floating range and jump range.

To disable the animal weighing function, it's required to enter set up menu to change 4.WEIGHING MODE to NORMAL setting .

5.16 Peak Hold

Operation:

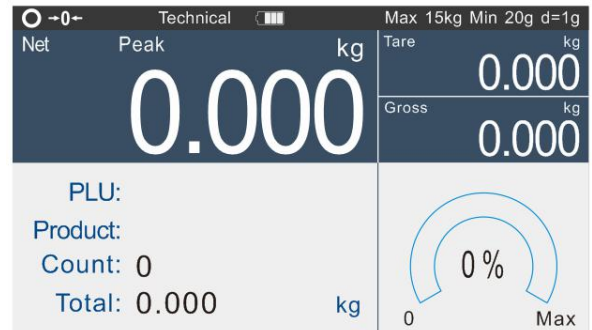
- Press  key to enter setup menu.

1/1	
MAIN	
1.SYSTEM SETTINGS	
2.ADVANCED SETTINGS	
3.PRODUCT INFO	
4.PRINT,REPORTS&DATA	
5.INTERFACE	
6.SERVICE	

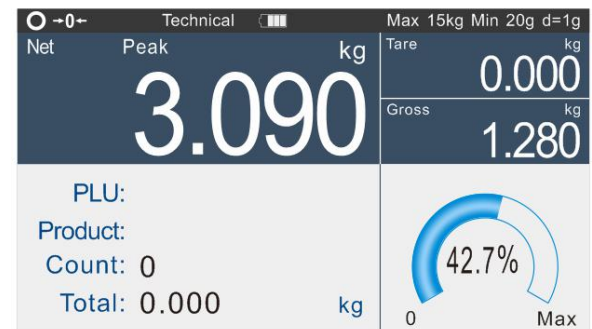
- Press  key to select ADVANCED SETTINGS.
- Press  key to enter settings.
- Press  key until select 4. WEIGHING MODE sub menu.
- Press  key to enter settings.

1/2	
ADVANCED SETTINGS	
1.DISPLAY UNIT	
2.ZERO SETTINGS	
3.TARE SETTINGS	
4.WEIGHING MODE	PEAK HOLD
5.ANIMAL WEIGH	
6.BEEP MODE	BEYOND LIMITS

- 6 Press  key to change the settings until display show PEAK HOLD.
- 7 Press  key to confirm.
- 8 Press  key two times to exit the setup menu and back to peak hold weighing mode.
- 9 The Peak indicator will appear in the upper side of the weight display.



- 10 Load the weight on the platform, the maximum reading will be hold.



6. PARAMETERS

6.1 Enter into the Menu

- Turn on the scale. Then come to the normal weighing mode



- Press  key to enter menu parameters setting
- Press numeric keys to enter the corresponding menu options

For example:

Press numeric key 1 to access basic settings in the main menu

Press numeric key 1 to access Device info in the sub-menu

6.2 Keys in the parameter settings

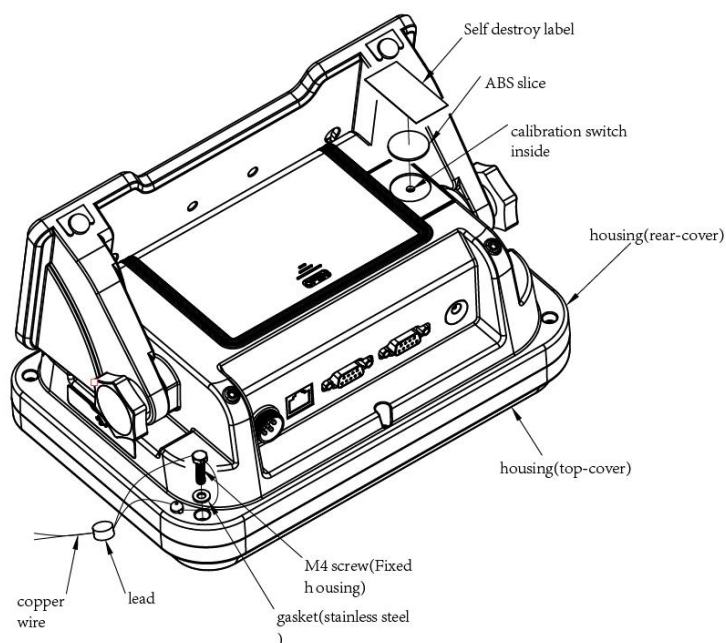
	To enter into the function and parameter settings
	Escape from the parameter settings and return to the normal weighing mode

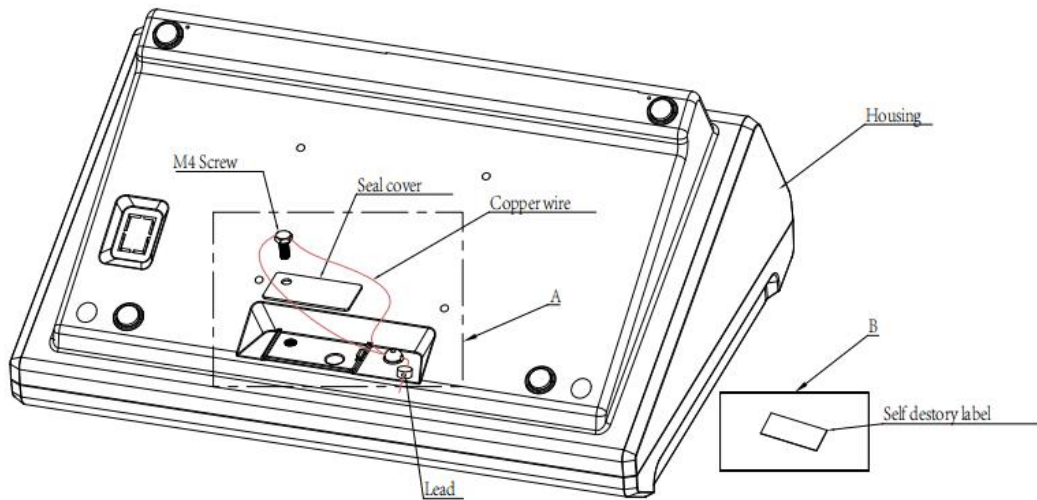
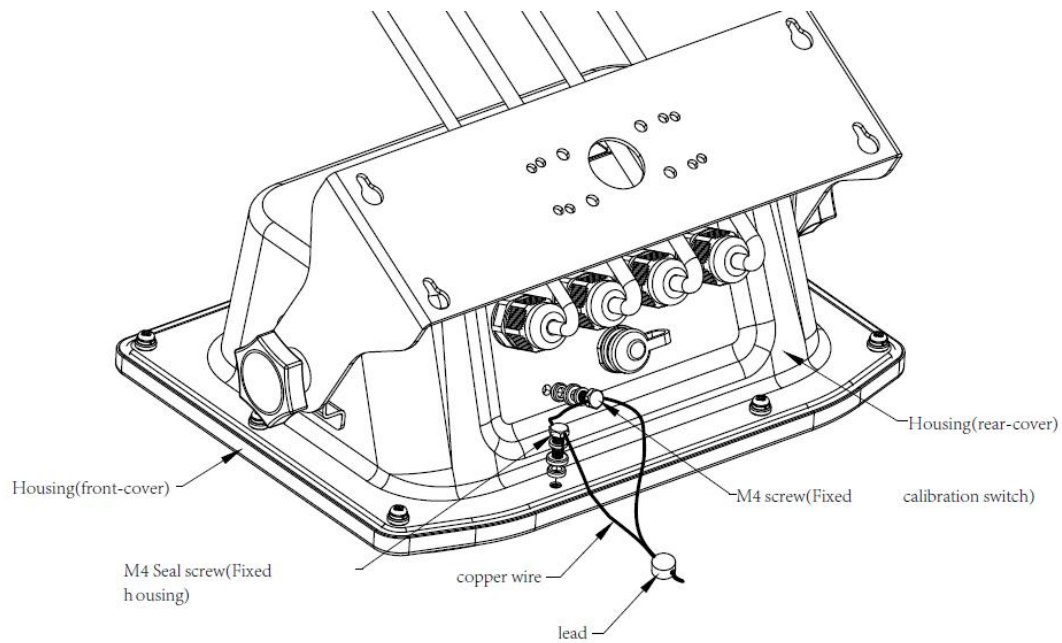
6.3 Active Parameter

Note: If want to change the settings for approval version: **2.Advance settings; 6.Service**

Before enter the parameters, Press CAL switch to enable parameters to access. CAL switch is locating back side of the indicator

TW20



EW20**NS20**

Setting has the following items for configuring

Menu	Sub Menu			Description
1.SYSTEM SETTINGS	1.TERMINAL INFO	1.COMPANY		Used to set device information
		2.DEPARTMENT		
		3.SCALE NUMBER		
		4.PHONE		
		5.ADDRESS		
	2.DATE / TIME	1.SET DATE		Used to set date and time
		2.SET TIME		
		3.SEPARATOR	-	
			/	
		4.DATE FORMAT	YYMMDD	
			DDMMYY	
			MMDDYY	
	3.LANGUAGE	简体中文		Used to change different languages
		ENGLISH		
	4.LOGIN	NO		There is no need to login when power is on
		YES		It's required to login when power is on
	5.BACKLIGHT	LOW		Used to set luminance of backlight
		NORMAL		
		BRIGHT		
	6.AUTO POWER OFF	OFF		Used to set power auto off time
		0.5 HOUR		
		1 HOUR		
		5 HOURS		
		10 HOURS		
	7.USER	1.Admin 1	ID	Used to set ID \NAME \password for administrator,including 2 admin information
			NAME	
			PASSWORD	
		2.Admin 2	ID	
			NAME	
			PASSWORD	
		3.Operator 1	ID	Used to set ID \NAME \password for operator,including 7 operators information
			NAME	
			PASSWORD	
4.Operator 2		ID		
		NAME		
		PASSWORD		
5.Operator 3		ID		
		NAME		
		PASSWORD		

2.ADVANCED SETTINGS		6.Operator 4	ID		
			NAME		
			PASSWORD		
			7.Operator 5		ID
					NAME
					PASSWORD
			8.Operator 6		ID
					NAME
					PASSWORD
		9.Operator 7	ID		
			NAME		
			PASSWORD		
	8.RESET TO DEFAULT			Reset system setting to default	
	1.WEIGHING UNIT	1. g		To set weighing units on/off	
		2. kg			
		3. lb			
		4. oz			
		5. t			
		6. tj			
		7. hj			
	2.ZERO SETTINGS	1.INITIAL ZERO	OFF	To set initial zero range ,the default range is 10%	
			2%		
			5%		
			10%		
			20%		
			50%		
		2. SEMI- AUTO ZERO	OFF	To set semi-auto range ,the default range is 2%	
			2%		
			5%		
			10%		
			20%		
			50%		
		2. ZERO TRACKING	OFF	To set zero tracking range ,the default range is 0.5d	
			0.5d		
			1d		
			2d		
			4d		
	3.TARE SETTINGS	1.AUTO TARE	ON	Used to set auto tare function on	
			OFF	Used to set auto tare function off	
		2.MULTI TARE	ON	Used to set multi tare function on	

			OFF	Used to set multi tare function off
	4.WEIGHING MODE	NORMAL		Used to set different weighing mode
		FAST		
		SLOW		
		ANIMAL WEIGH		
		PEAK HOLD		
	5.ANIMAL WEIGH	1.FLOATING RANGE	1d	For animal weigh setting,it's required to set 4.weighing mode to animal weigh
			2d	
			5d	
			10d	
			20d	
			50d	
		2.STABLE TIME	5 SEC	
			10 SEC	
			20 SEC	
			30 SEC	
			40 SEC	
			50 SEC	
		3.JUMP RANGE	1d	
			2d	
			5d	
			10d	
			20d	
			50d	
	6.BEEP MODE	OFF		Used to select beep mode for limit tolerance
		WITHIN LIMITS		
		BELOW MIN. LIMIT		
ABOVE MAX. LIMIT				
BEYOND LIMITS				
7.ACCUMULATION	1.ACCUMULATION MODE	MANUAL	Used to select different accumulation mode	
		AUTO-LOAD		
		AUTO-UNLOAD		
	2.ALLOW ALL PRODUCTS	YES	Used to set the accumulation method for different products	
		NO		

			3.PRINT EVERY RECORD	On	Used to set whether to print when accumulation			
				Off				
			4.MIN. LOAD	2d	Used to select Minimum division for printing			
				5d				
				10d				
				20d				
			8.RESET TO DEFAULT				To reset advanced settings to default	
			3.PRODUCT INFO	1.SEARCH		To search product information		
				2.ADD/EDIT PRODUCT	1.NAME			For more product information,please see section 6.DATABASE PROGRAMMMING
					2.CODE			
3.TARE								
4.TYPE	WEIGH							
	PIECES							
	PERCENT							
5.MIN. WEIGHT								
6.MAX. WEIGHT								
7.TRACE CODE								
8.REMARK								
9.PRINT FORMAT	Format 1							
	Format 2							
	Format 3							
3.DELETE PRODUCT				To delete product information				
4.CHANGE PLU NUMBER				To change PLU number				
4.PRINT ,REPORTS &DATA	1. PRINT CONFIGURATI ON	1.HEADER/ FOOTER	1.HEADER 1		Used to set header or footer for receipt format,it can be printed on the receipt format			
			2.HEADER 2					
			3.HEADER 3					
			4.FOOTER 1					
			5.FOOTER 2					
			6.FOOTER 3					
		2.PRINT FORMAT	1.LABEL FORMAT	FORMAT 1		To select the print format for printing		
				FORMAT 2				
				FORMAT 3				
			2.TOTAL LABEL	FORMAT 1				
				FORMAT 1				
			3.TOTAL RECEIPT	FORMAT 1				

		3.TOTAL PRINT TYPE	LABEL		To select total print type	
			RECEIPT			
		4.NUMBER OF COPIES	1		To select print times for label format	
			2			
			3			
			4			
			5			
	2.PERIODIC REPORT	1.DAILY		To view different periodic reports		
		2.WEEKLY				
		3.MONTHLY				
	3.PRODUCT REPORT				To view product reports	
	4.MANAGE DATA	1.BACKUP		Data import or export management		
		2.RESTORE				
		3.DELETE				
	5.RESET TO DEFAULT				Reset 4.PRINT ,REPORTS &DATA to default	
5.INTERFACE	1.SERIAL	1.TYPE	RS232		To select the serial type	
			RS485			
		2.MODE	CONTINUOUS		Send continuous data	
			ON STABLE		Send data one time when stable	
			CONT.AFTER STABLE		Send continuous stable data	
			ON PRINT KEY		Press PRINT key to get data one time	
			PRINTER		Connect with printer (Only for RS232 mode)	
			ASK		ASK Command R Read data T Tare Z Zero (Only for RS232 mode)	
		3.SEND CONTENT	1.LOCA L/REMO	OFF	Set local or remote sent in the communication protocol to be	

				ON		
			2.DATE/ TIME	OFF	Set date/time sent in the communication protocol to be turned on or off.	
				ON		
			3.PLU NUMBE R	OFF	Set the PLU number sent in the communication protocol to be turned on or off.	
				ON		
	4.PROD UCT NAME	OFF	Set the product name sent in the communication protocol to be turned on or off.			
			5.NET	Net weight in communication protocol		
			6.UNIT WEIGH T	OFF	Set the unit weight sent in the communication protocol to be turned on or off.	
				ON		
			7.QUAN TITY	OFF	Set counts sent in the communication protocol to be turned on or off.	
				ON		
			8.RESU LT	OFF	Set results of limit tolerance sent in the communication protocol to be turned on or off.	
				ON		
			9.OPER ATOR	OFF	Set operator sent in the communication protocol to be turned on or off.	
				ON		
			4.EXTERNAL PRINTER	1.NONE		To select the external printer (Only for RS232 mode)
				2.OS2130D		
				3.TPUP		

				4.RP80VI		
				5.AP58S		
				6.ZEBRA		
		5.BUILT-IN PRINTER		OFF	To set built-in printer on/off (only for EW20)	
				ON		
		6.BAUD RATE		4800	To select baud rate from list ,default is 9600	
				9600		
				19200		
				38400		
				115200		
		7.DATA BITS		7	To select data bits from list ,default is 8	
				8		
				9		
		8.STOP BITS		1	To select stop bits from list ,default is 1	
				2		
		9.PARITY		NONE	To select parity from list ,default is even	
				ODD		
				EVEN		
		2.ETHERNET		1.IP ADDRESS		To configure Ethernet information
				2.MASK		
				3.GATEWAY		
	4.PHYSICAL ADDRESS					
	3.WIFI		1.ON/OFF		To configure WIFI information	
			2.PASSWORD			
			3.SEARCH			
			4.IP ADDRESS			
			5.MASK			
			6.GATEWAY			
			7.PHYSICAL ADDRESS			
			8.TIME OUT			
	4.BLUETOOTH		1.ON/OFF	OFF	To enable or disable Bluetooth function	
				ON		
			2.NAME		To show Bluetooth name	
	5.RESET TO DEFAULT				Reset 5.interface configuration to default	
6.SERVICE	1.VERSION INFO	1.BOOT	1.02	Used for checking version information		
		2.WEIGHIN G	V1.10			

		3.APPLICATION	A1.12			
		4.SCREEN/ KEYBOARD	K1.01			
2.SYSTEM SERVICE	1.SERIAL NUMBER					
	2.TECH PASSWORD		To set password for technician			
	3.GRAVITY		To set the local gravity			
3.CALIBRATIO N PARAMETERS	1.APPROVA L TYPE	NOT	To set different approval type			
		OIML				
		NTEP				
		CPA				
		SRI LANKA				
	2.SHOW SCALE PROPERTI ES	NO	Date and time will be show at the upper side of display in operator interface			
		YES	The properties of capacity will be show at the upper side of display in operator interface			
	3.CALIBRA TION UNIT	kg	To set calibration unit			
		lb				
	4.Scale 1	1.SCALE RANGE SETING	1.RANG E MODE	SINGLE RANGE	To set range mode	
				DUAL RANGE		
				DUAL INTERV AL		
			2.CAPA CITY	To input the scale capacity		
3.DECI MAL POINT				0	To set decimal point	
			0.0			
			0.00			
			0.000			
4.DIVISI ON			1	To set division		
			2			
			5			
			10			
2.CALIBRA TION			1.NORM AL CALIBR ATION	To calibrate the scale in normal calibration		

				2.LINEAR CALIBRATION	To calibrate the scale in linear calibration
				3.ZERO CALIBRATION	To calibrate the scale in zero calibration
			3.LASTCALIBRATION		To view the last calibration info.
			4.INTERNAL COUNT		To show the internal counts
		5.Scale 2	1.ON/OFF		To turn on/off the second platform
			2.SCALE RANGE SETING	1.RANGE MODE	SINGLE RANGE/DUAL RANGE/DUAL INTERVAL
				2.CAPACITY	To input the scale capacity
				3.DECIMAL POINT	To set decimal point 0/0.0/0.00/0.000/0.0000
				4.DIVISION	To set division 1/2/5/10
			3.CALIBRATION	1.NORMAL CALIBRATION	To calibrate the scale in normal calibration
				2.LINEAR CALIBRATION	To calibrate the scale in linear calibration
				3.ZERO CALIBRATION	To calibrate the scale in zero calibration
			4.LAST CALIBRATION		To view the last calibration info.
			5.INTERNAL COUNT		To show the internal counts
	4.UPDATE SOFTWARE	1.UPDATE PRINTER (USB)		To update application software via TTC back office software	

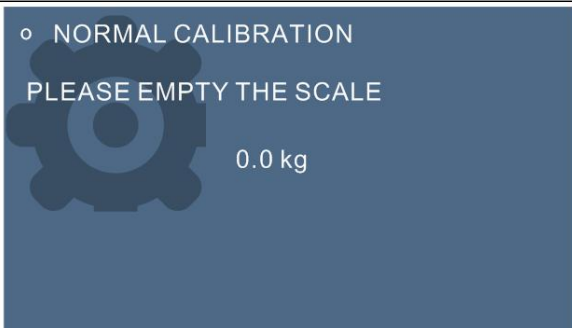
		2.UPDATE FIRMWARE (USB)	To update application software via U disk
	5.HARDWARE TEST	1.KEYBOARD TEST	For more information,please see section
		2.DISPLAY TEST	
		3.RS232 TEST	
		4.ETHERNET TEST	
		5.USB TEST	
		6.LOAD CELL TEST	
		7.BATTERY TEST	
	6.RESET ALL		Used to reset to factory setting,scale will be restart and come to normal weighing mode

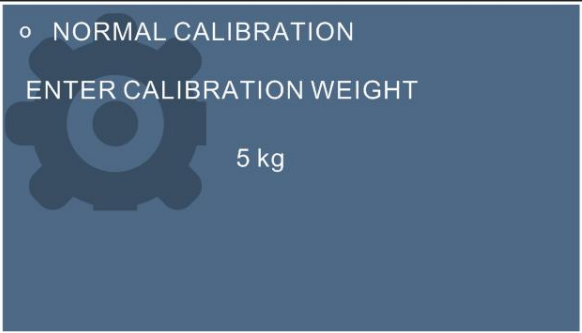
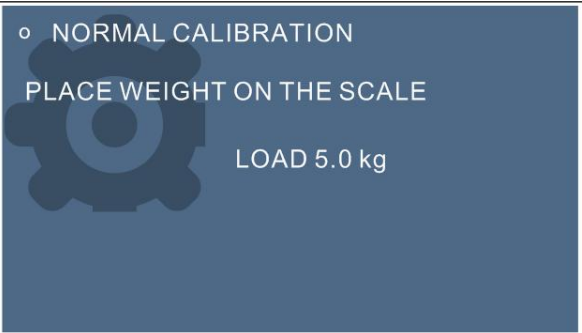
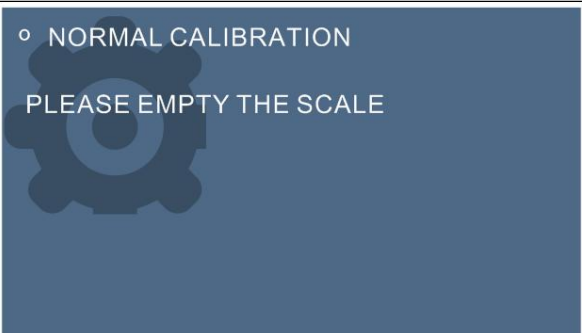
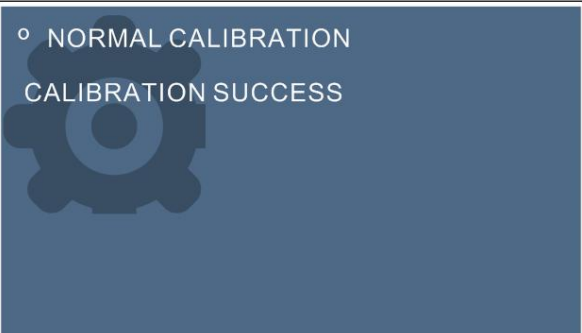
7. CALIBRATION

7.1 Normal Calibration

- Press  key to enter setup menu.
- Using numeric keys , , ,  to enter calibration.
6. Service> 3.calibration parameters > 4.SCALE1 > 2.Calibration> 1.Normal Calibration
- Before access to the parameter,it need to press calibration switch,locating back side of indicator in approval version.

1/1
CALIBRATION
1.NORMAL CALIBRATION
2.LINEAR CALIBRATION
3.ZERO CALIBRATION

Steps	Remark
1 Press  Key to enter. The display will be show "Please empty the scale" 2 Remove goods from the platter.	

3 Press  key to confirm. The display will be show “Enter calibration weight by using numeric keys ”.	
4 Press  key to confirm. 5 Place the test weight on the platter. Better to use minimum 1/3 of the scale capacity)	
6 Press  key to confirm. The display will be show “Please empty the scale”. 7 Remove the test weight from the scale.	
8 Press  key to confirm The display will be show “Calibration success ” (Calibration Completed and back to the normal weighing mode)	



Declaration of Conformity

Manufacturer	TScale Electronics Mfg.(Kunshan) Co., Ltd
Model	TW20_EW20_NS20
Registration No	AT18230EC000312
EMC Directive	2014 / 30 / EU
Applicable Standards	EN 55032: 2015 EN IEC 61000-3-2:2019 EN 61000-3-3: 2013 + A1: 2019 EN 55035:2017

Note: The declaration is only valid if the non-automatic weighing instrument was verified by the manufacturer or with a certificate of conformity issued by a notified body.

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All information contained within this publication was to the best of our knowledge timely, complete and accurate when issued. However, we are not responsible for misimpressions which may result form the reading of this material.

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