




## Instruction Manual

RS-212398

## Counting Weighing Scale



## Table of Contents

<b>1. Brief introduction</b>	<b>page 4</b>
1.1 Description	
1.2 Main function and features	
1.3 System operation chart	
<b>2. Keyboard function and indicators</b>	<b>page 5</b>
2.1 RS-212398 keyboard chart	
2.2 keyboard description	
2.3 “  ” Indications	
<b>3. Operation</b>	<b>page 6</b>
3.1 Points for attention	
3.2 Basic operation	
3.2.1 Zero	
3.2.2 Tare	
3.2.3 Fore-deducting weight function	
3.2.4 Overload warning	
3.3 Counting operation	
3.3.1 Setting quantity	
3.3.2 Single weight setting	
3.3.3 Single weight automatic correction	
3.3.4 Quantity warning	
3.3.5 Canceling quantity warning	
3.4 Accumulation	
3.4.1 Attentions before accumulating	
3.4.2 Accumulating operation	
3.4.3 Accumulation display	
3.4.4 Clearing accumulation	
3.4.5 Automatic accumulating	
3.5 Backlight	

<b>4. Printing and Communication</b>	<b>page 9</b>
4.1 Description for printing and communication	
4.2 Connection	
4.3 Printing	
4.4 Description of serial communication	
<b>5. Specifications</b>	<b>page 10</b>
5.1 General specification	
5.2 Dimensions	
<b>6. Appendix</b>	<b>page 10</b>
6.1 Troubleshooting	
6.2 Error codes	
6.3 print sample	

## 1. Brief introduction

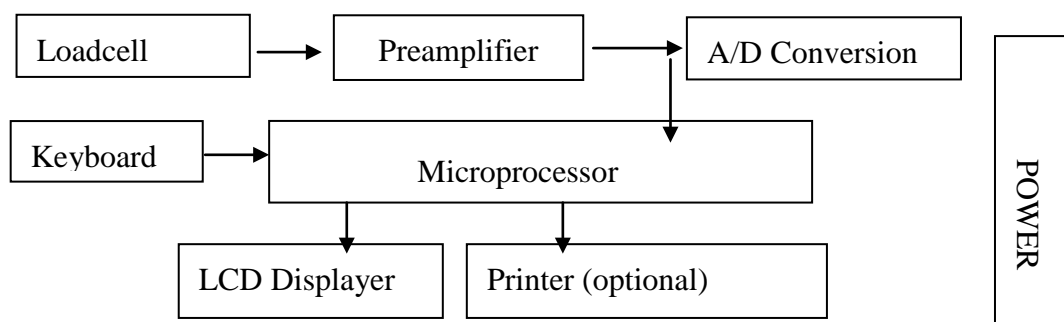
### 1.1 Description

Thanks for purchasing our 212398 series high precision electronic counting weighing scale. This product adopting 8-bit microprocessor and high precision loadcell, does quick and accurate measuring and counting and provides stable and reliable functions as accumulating, quantity setting and warning and so on. Big display screen of liquid crystal with backlight makes the scale easy to read. DC12V outlet or rechargeable batteries can be used for power supply.

### 1.2 Main function and features

- \* Dust and damp proof keyboard
- \* Big LCD displayer with backlight
- \* AC/DC power source
- \* Single weight setting and quantity setting functions for sampling
- \* Quantity warning function
- \* Single weight automatic correcting
- \* Linearity correction
- \* Accumulating function
- \* Options for backlight status

### 1.3 System operation chart



## RS212398 series high precision counting weighing scale

## 2. Keyboard function and Indicators

### 2.1 ES-KCC keyboard chart

1	2	3	.	MR
4	5	6	C	M+
7	8	9	0	SAM PLE
QUANT LIMIT	PRINT	UNITS	TARE	ZERO

### 2.2 Keyboard description

Numeric keys 0~9 and decimal point: Input single weight and quantity

M+: accumulating key, accumulating quantities

MR: displays accumulation result

C: canceling key, clears present data, cancels present operations

QUANT LIMIT: sets quantity setting warning

UNIT: unit conversion, shift between kg(g) and lb

ZERO: press this key to return zero

TARE: deducting the weight present

QUANT LIMIT: setting quantities, use in the counting procession for unknown single weight.

PRINT: key to print weighing or counting results (this function is optional, additional printing components needed).


### 2.3 “▶” Indicators

- ▶ **kg** : When this indicator appears, read the result in kg;
- ▶ **lb**: When this indicator appears, read the result in lb;
- ▶ **g**: When this indicator appears, read the result in g;
- ▶ **ACC: This indicates an accumulating operation exists;**
- ▶ **+** : Indicates weak battery, recharge the battery promptly;
- ▶ **Sample**: insufficient samples, put more samples onto the weighing pan to re-sample;

- ▶ **U.W:** Insufficient single weight. When this indicator appears, re-input single weight, or use a higher precision product;
- ▶ **Zero:** Zero indicator. This indicates the scale is at zero status;
- ▶ **NET:** This indicates weights deducted, net weight is displayed;
- ▶ **Alarm:** Indicates the scale is in the state of quantity setting operation and buzzer sounds when the quantity is out of range.

### 3. Operation

#### 3.1 Points for attention

1. Please read this manual carefully before using.
2. The storage batteries in the scale must be well recharged before its first use.
3. When “ ” appears indicating low battery, the backlight flashes reminding you to plug the power outlet and recharge the battery promptly, providing the backlight is set in the status of “automatic” or “ always on”. If you continue to use the scale instead of recharging, the backlight will automatically shutdown so as to save energy, meanwhile the scale displays “Bat L0” every one minute for reminding, and then automatically cut off the power in 5 minutes to protect the battery not to be over used. At this time, recharging is essential for future use.
4. The recharging light (Charge) shows red color when the battery is being recharged, and gradually turns to orange-green indicating that the recharging process finishes.
5. To prolong service life of the battery, do not short circuit the battery.
6. Recharge the battery continuously for more than 12 hours before the first use of the scale.
7. If the scale is not used for a long term, please recharge the battery once for every three months.
8. In case the battery is completely damaged or short circuited and the voltage of the battery is lower than 5.7V, please push the switch at the bottom of the scale to the location of “OFF” before turning on the scale with 220V AC power. Otherwise replace the battery.

#### 3.2 Basic operation

##### 3.2.1 Zero

In case the scale displays numerals instead of zero when there is no load on the scale, press “ZERO” key to make it return to zero, and the “Zero” indicator also appears at

the time. This zero function will be invalid if the load on the scale exceeds 20% of full load specified.

### 3.2.2 Tare

Place a pack onto the weighing pan, wait till the indication of stability (kg) lights, press “TARE” key to deduct the weight of the pack, the “N.W” indicator appears. If the deducted weight value is no longer needed, take the pack off the weighing pan and clear it with another touch on the key “TARE”.

### 3.2.3 Fore-deducting weight function

This applies when the weight of the pack to be deducted is known, input the fore-deducting weight with the numeric keys 0~9 and the decimal point, press the “TARE” key. Seeing the “N.W” indicator appear, put onto the weighing pan the object to be weighed together with the pack, the displayer shows the net weight of the object weighed.

### 3.2.4 Overload warning

Do not try to load objects heavier than the full load specified for the scale. When the scale displays “—OL—”, the buzzer sounds at the same time, please unload the object immediately to avoid damaging the loadcell.

## **3.3 Counting operation**

### 3.3.1 Setting quantity

Load the object to be weighed, wait till the indicator of stability (kg) appears, input the quantity of the object weighed, and press the key “SAMPLE”, the quantity window displays the quantity you have just inputted, the single weight window shows the weight of the object loaded at the same time.

If the “Sample” indicator lights, please load more samples onto the weighing pan, and then re-sample.

### 3.3.2 Single weight setting

Load the object to be weighed, wait till the indicator of stability appears, and then input the single weight of the object in “kg” or “lb” with the numeric keys. The inputted numerals will flash for about three seconds, the quantity window displays the quantity of the present object loaded, meanwhile the single weight window shows the single weight you have just inputted, thus quantity setting finishes.

## **Counting Weighing Scale/English**

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### 3.3.3 Single weight automatic correction

After finishing sampling, the scale is capable of automatically correcting the single weight during object counting. For example: if the quantity added every time during object counting is less than or equal to that on the pan, then the single weight can be automatically corrected.

### 3.3.4 Quantity warning

This function can be used in fixed quantity packing process. Input the upper limit with the numeric keys, and push the key “”QUANT LIMIT” to finish setting. The buzzer makes warning sounds if the parts quantity exceeds the set value.

### 3.3.5 Canceling quantity warning

Set the quantity warning value as 0.

## **3.4 Accumulation**

### 3.4.1 Attentions before accumulating

Please make sure that the scale is completely unloaded, and the indicators for zero and stability light.

### 3.4.2 Accumulating operation

Load the object to be weighed, wait till the indicator of stability appears, press the key “M+” to see that the single weight window displays “≡XX≡” which is the times of accumulation.

### 3.4.3 Accumulation display

Press the key “MR” to see the weight window displays total weight and the single weight window “≡XX≡” which means the times of accumulation, also the quantity window shows “YYYYY” which indicates the quantity accumulated.

### 3.4.4 Clearing accumulation

Press the “MR” key to set the scale in the state of accumulating, then another touch on “C” key to find the weight window displays “≡0≡”, and clear the accumulation memory.

### 3.4.5 Automatic accumulating

When using the automatic accumulating function, load the object to be weighed onto the pan and unload the object after seeing the indication of stability light. Wait till

the scale returns to zero and start automatic accumulating.

### **3.5 Backlight**

Three options for backlight state: automatic, always on and always off. To shift among these three options, hold the “QUANT LIMIT” continuously for 3 seconds to find the scale displays “EL XX” in which “XX” stands for the present status of backlight use, press the numeric keys “1~3” to set backlight state (“AU”: automatic, “oFF”: Always off, “on”: always on). Finishing the setting, press “TARE” to confirm.

## **4.Printing and Communication**

### **4.1 Description for printing and communication**

Printing and communication function for the ES-KCC series Scale needs additional components. To use these functions, you must purchase the optional components for these functions in addition.

### **4.2 Connection**

Serial communication with 9-pin socket output

Connecting to PC\printer, big screen displayer: 2#--TXD 3#--RXD 7#--GND

Connecting to 9-pinPC: pin2→pin2, pin3→pin3, pin5→pin7

Connecting to a 25-pinPC serial interface: pin2→pin2, pin3→pin3, pin7→pin7,

If a big screen displayer is to be connected, set the communication condition as CONT.

### **4.3 Printing**

#### **4.3.1 Automatic printing**

Always make sure that the scale is in the state of zero and the indicators of zero and stability appear on the screen before this operation. Load an object to wait the indicator of stability lights, and then unload. The automatic printing process begins after the scale returns zero.

#### **4.3.2 Manual printing**

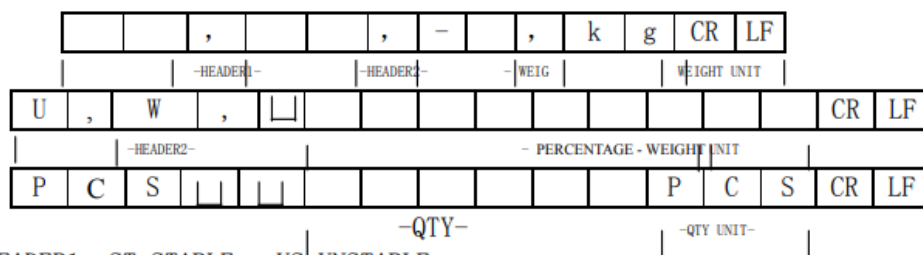
Load the object to be weighed and wait the indicator of stability lights, press “PRINT” to start printing.

### **4.4 Description of serial communication**

Communication features: RS232 communication interface, all segments belong to

## Counting Weighing Scale/English

ASC II ,baud rate=9600,8-bit data, no check.. Communication protocols are as below



HEADER1: ST=STABLE, US=UNSTABLE

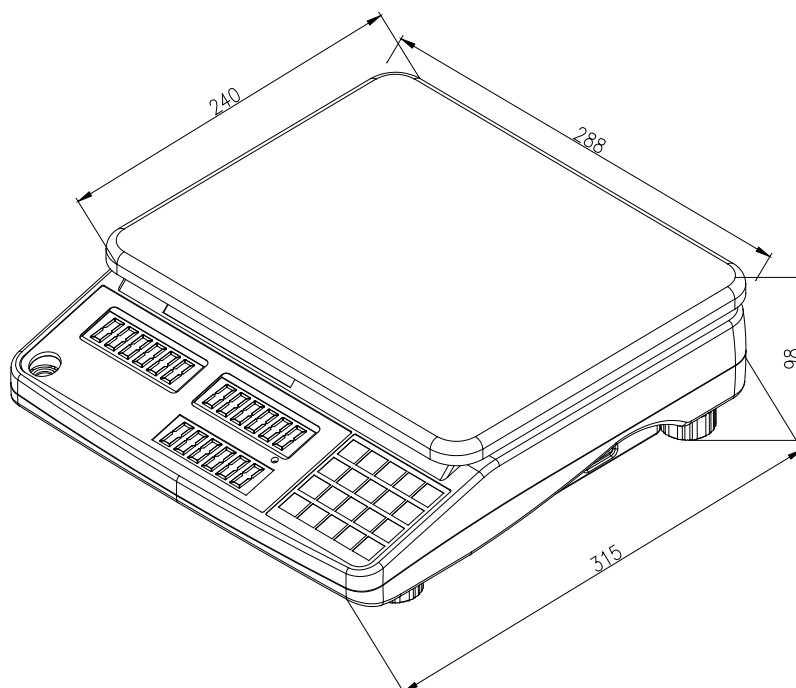
HEADER2: NT=NET, GS=GROSS

## 5. Specifications

### 5.1 General specification

Non linearity	≤0.01%F.S. (Before correction)
A/D conversion	Δ Σ
A/D Analyticity	240,000
A/D converting speed	15times/s
Precision grade	OIMLIII
Operating temperature	0~+40°C
Operating humidity	0~80%
Pan size	240mm×300mm

### 5.2 Dimensions



## 6. Appendix

### 6.1 Troubleshooting

Please refer to the following table and take chance to solve some minor faults before you contact our service technicians:

NO:	Phenomena	Remedy
1	NO display	Low battery results in automatic power-off. Recharge. Check A/C input voltage in compliance with specified.
2	Data displayed are unsteady	Sample on the pan is lighter than the threshold. Interference of vibration or airflow. Check if there is any foreign material touches the weighing pan.
3	Bad linearity	Check if the protective set (a safe bolt beneath the loadcell) for overload touches the loadcell.
4	Invalid accumulating	Make sure that the scale returns zero before accumulating operation
5	Can not print	Check communication connection and power supply on the printer

### 6.2 Error codes

Error codes	Probable cause
ERR 1	Weights loaded exceeds the taring range
ERR 2	Keyboard error
ERR 0	Loadcell is disconnected or damaged

### 6.3 print sample

#### 6.3.1 Normal list

GS 1.234 Kg GS: Gross weight, NT: Net weight

U.W. 123 g Single weight

PCS 10 pcs Quantity

<lf>

<lf>



## Counting Weighing Scale/English

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6.3.2 Accumulation form

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<lf>

TOTAL

No.            5

Wgt        1.234 Kg.

PCS        10 pcs

<lf>

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**Europe**

**RS Group plc.**

PO Box 99, Corby,

Northants.

NN17 9RS

United Kingdom

[www.rs-online.com](http://www.rs-online.com)

**South America**

**RS Group Ltda.**

Av. Pdte. Eduardo Frei M. 6001-71

Centro Empresas El Cortijo

Conchali, Santiago, Chile

[www.rs-online.com](http://www.rs-online.com)

**Africa**

**RS Group**

Vorna Valley, 1686

20 Indianapolis Street,

Kyalami Business Park,

Kyalami, Midrand

South Africa

[www.rs-online.com](http://www.rs-online.com)

**Middle East**

**RS Group.**

Showroom 4 –

Sheikh Majid Building,

Sheikh Zayed Road,

PO Box 5253 UAE

[www.rs-online.com](http://www.rs-online.com)

**Australia.**

**RS Components Pty Ltd**

356, 25 Pavesi St, Smithfield.

NSW. 2164 Australia

[www.rs-online.com](http://www.rs-online.com)

**China**

**RS Components Ltd.**

Unit 501, Building C,

The New Bund World Trade

Center Phase II,

Shanghai, China

[www.rs-online.com](http://www.rs-online.com)