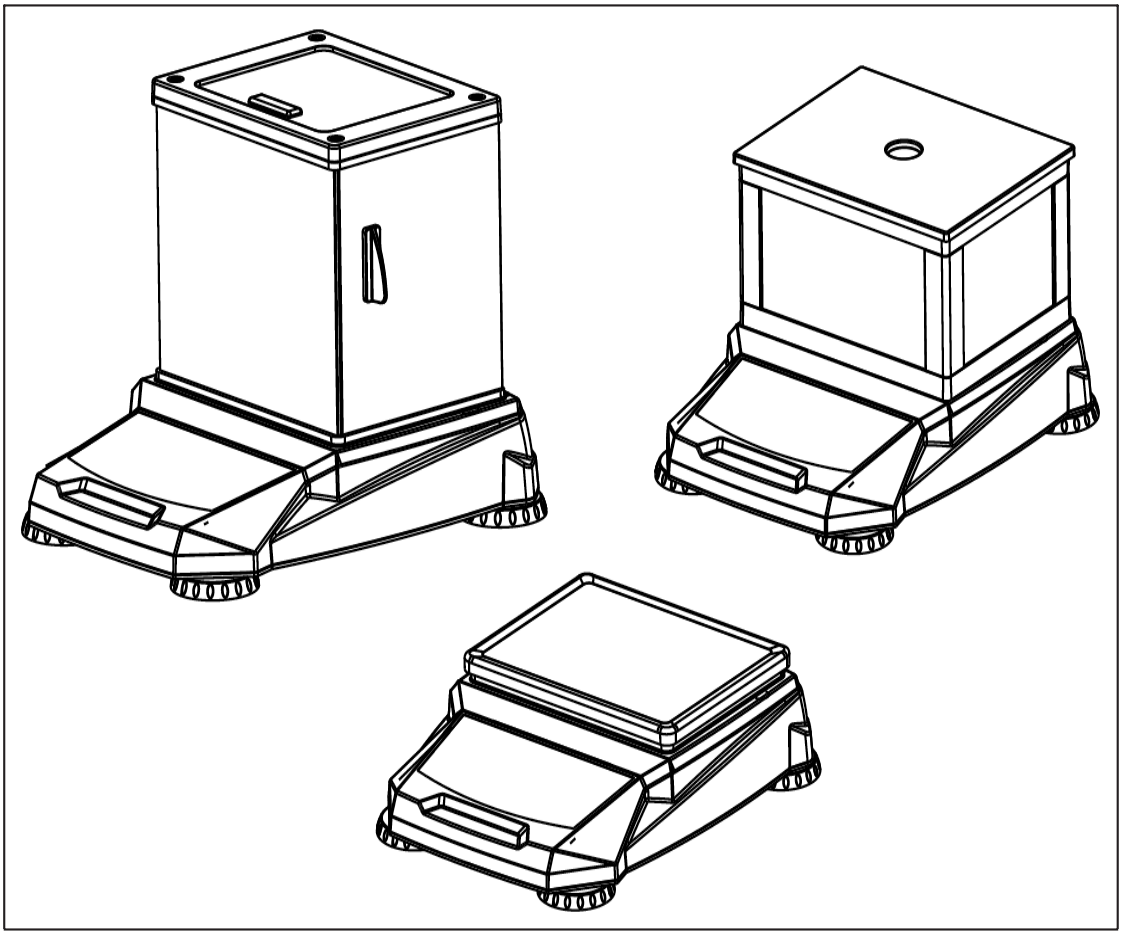
User's Manual

Excellent series



Contents

1.Introduction

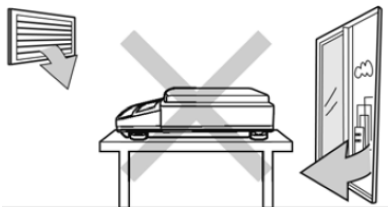
1.1 Safety Precautions

Please use these Safety Precautions

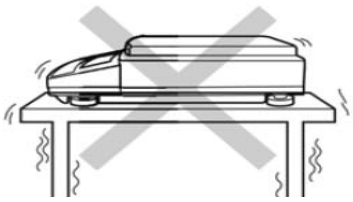
- Verify that the AC Adapter input voltage matches the local AC power supply.
- Install and dismantle the balance, need to cut off the power
- Using the balance only in correct environment , work temperature 10℃-40℃
- Avoid strong wind and vibration
- Don't operate the balance in harmful environment
- Don't drop object to the scale
- Don't inversion the balance by tray or supporting
- Service should be performed only by authorized personnel.
- Before using the balance, should warm-up 20-30 minutes

1.2 Avoid Installing and using occation

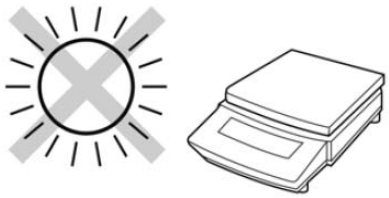
Assure that the stability and reliability, Please to avoid follow occation:

1） 

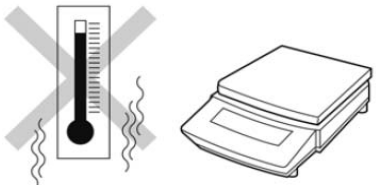
Avoid the gate with the wind (air-condition, window)

2） 

No vibration

3） 

Avoid direct sunlight

4） 

Avoid excessive temperature and humidity

1.3 Product features

1.Appearance style hale, fashion and brief, sporty powerful;

2.The body is made of PC alloy materials, hard and durably;

3.Scale is made of high quality stainless steel with SUS304, simply and fluency;

4.Large screen LCD display, backlight is soft and easy to read;

5.Humanization design, fast responce;
6.With the features of easy counting weighing mode, easy to operate;
7.Equipped with the unit g, ct, oz etc. Total 21 kinds international unit;
8.Full range taring function;
9.Standard RS232 function, can connect with the printer, computer or others equipment;
10. AC/DC multiple function, rechargeable battery(option);
11.The windshield with pure white glass is used to ensure the stability of the weighing accuracy.

2.Install

2.1 Install list

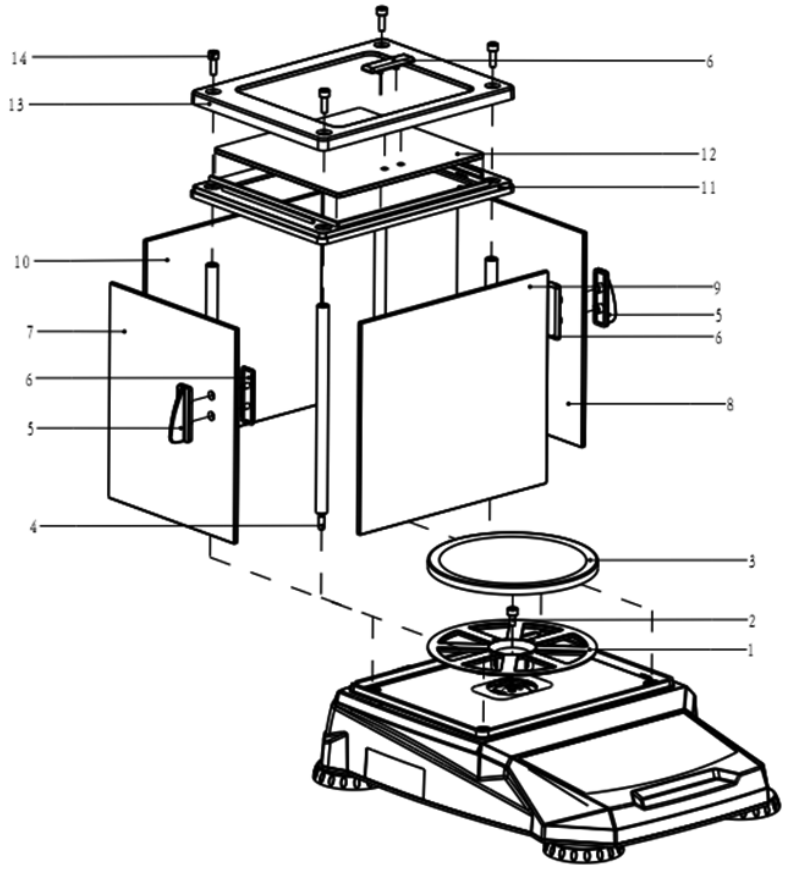
Balance install list

No.	Part	Specification	qty	EXA	EXB/STE	EXC/STC
1	Circular pan	Stainless steel 304, Ø118(mm)	1	●	□	–
2	Pan Support	PC alloy Ø117.2(mm)	1			
3	M4 Hexagon screw	M4x8(flat cushion、spring washer)	1	●	●	–
4	glass(left Door)	Pure white glass(Include handle assembly)157.5x132x3.2(mm)	1	●	–	–
5	glass(right Door)	Pure white glass(Include handle assembly)157.5x132x3.2(mm)	1	●	–	–
6	glass(front Door)	Pure white glass 173.5x155.5x3.2(mm)	1	●	–	–
7	glass(back Door)	Pure white glass 163.5x155.5x3.2(mm)	1	●	–	–
8	glass(top Door)	Pure white glass(handle2) 136x131x3.2(mm)	1	●	–	–
9	Support pillar	Stainless steel Ø8x164(mm)	4	●	–	–
10	M4 Hexagon screw	Stainless steel M4x12	4	●	–	–
11	Top holder	PC alloy 179.4x139.4x8.5(mm)	1	●	–	–
12	Bottom holder	PC alloy 179.4x139.4x10.5(mm)	1	●	–	–
13	Square pan	Stainless steel 304, 145x115x7(mm)	1	–	□	–
14	Square pan support	PC alloy 144x114x15(mm)	1			
15	Top,Bottom fixed base	PC alloy 188x148x15(mm)	2	–	□	–
16	L type support	PC alloy 91x20x20(mm)	4	–	□	–
17	cover	PC alloy 193x153x6(mm)	1	–	□	–
18	PMMA(left, right)	117x90.5x2(mm)	2	–	□	–
19	PMMA(font,back)	157x90.5x2(mm)	2	–	□	–
20	Large square pan	Stainless steel 304, 188x148x11(mm)	1	–	–	●
21	Large square pan support	PC alloy 186.9x146.9x24(mm)	1			
22	M5 Hexagon screw	M5x10(Include flat washer, spring washer)	2	–	–	●

Note: Please check accessories according to product type, "●"means have, "-"means none, "□" is option

2.2 Accessories assembly Process

2.2.1 EXA series assembly procedure(with glass windshield)



1.Circle tray support
2.M4x8 screw(Include flat washer,spring washer)
3.Stainless steel tray
4.Support pillar(Qty:4)
5.Handle1(Qty:2)
6.Handle2(Qty:3)
7.Left glass
8.Right glass
9.Front glass
10.Back glass
11.Bottom fix frame
12.Top glass
13.Top fix frame
14.M4x12 screw(Qty:4)

Install process:

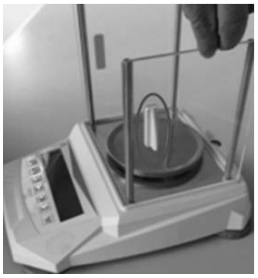
1) Tightening circle support

2 Put down circle tray

3) Screwing stainless steel support pillar

4) Insert glass fully into Frame(left, right, front, back),Pay attention to the handle set direction as follow picture show:

a

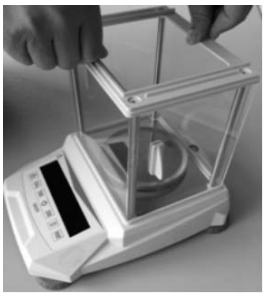


b

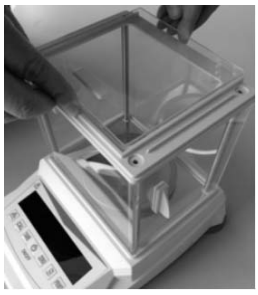
c

d

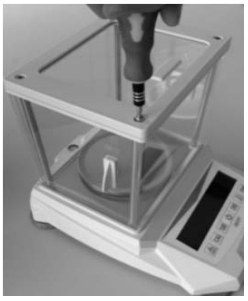
5) Cover bottom fix frame, make sure the glass edge and support pillar end into the slot of frame.



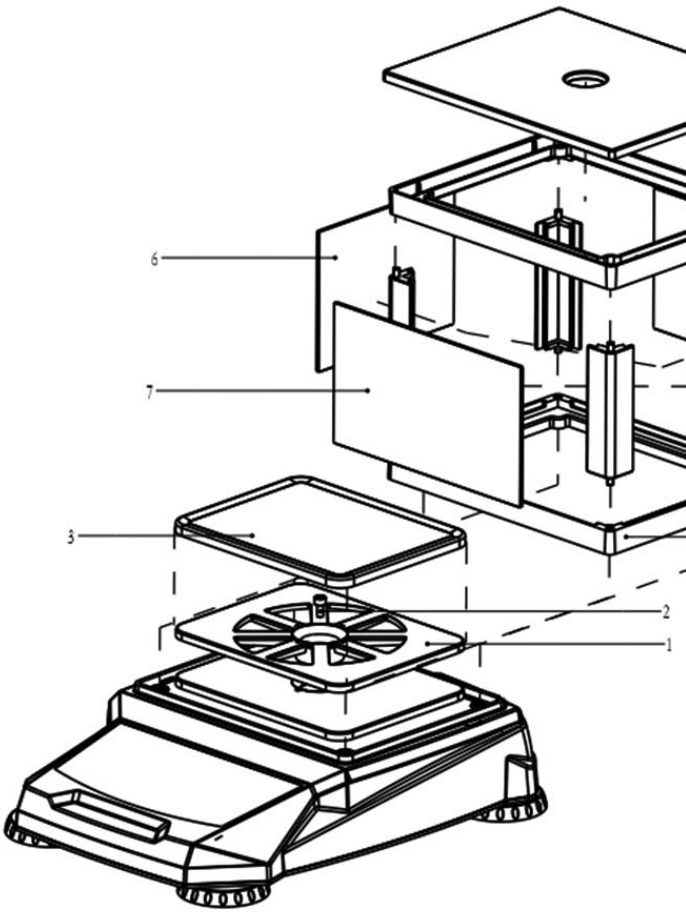
6) Put top glass into door



7) Put top frame down, Tightening screws



2.2.2EXB/STE series assemly procedure (simple windshield)



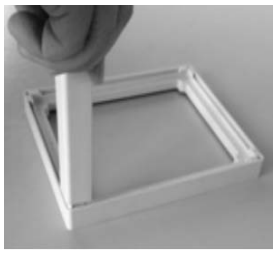
1. Square tray support
2. M4x8 screw(Include flat washer 、spring washer)
3. Stainless steel square tray
4. Top、Bottom fix base
5. L type support(Qty:4)
6. Left、Right organic glass
7. Front、Back organic glass
8. Cap

Install process:

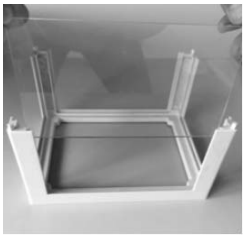
1) Tightening square tray support

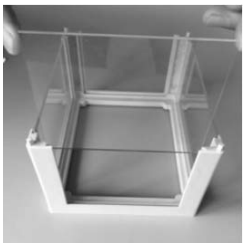
2) Put down square tray

3) Install L type support to fix frame



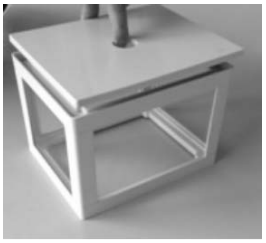
4) Install organic glass into the groove (left& right, front& back)





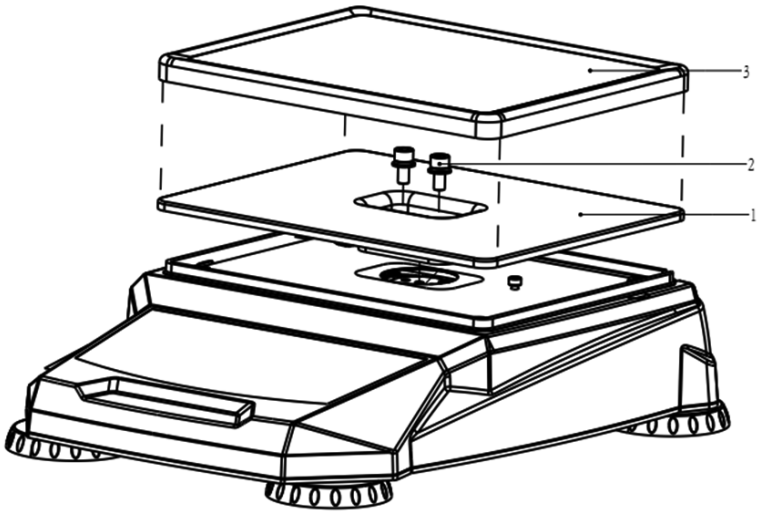
5) Press the top fix frame

6) Put down the cap



7) Put the simple windshield on the balance

2.2.3EXC/STC series assembly procedure



1. Large square tray support
2. M5x10 screw(Include flat washer、spring washer,Qty:2)
3. Large stainless steel tray

Install process:
1) Tightening large square support (using cross screwdriver)
2) Put down large square tray

2.3 Adjust level

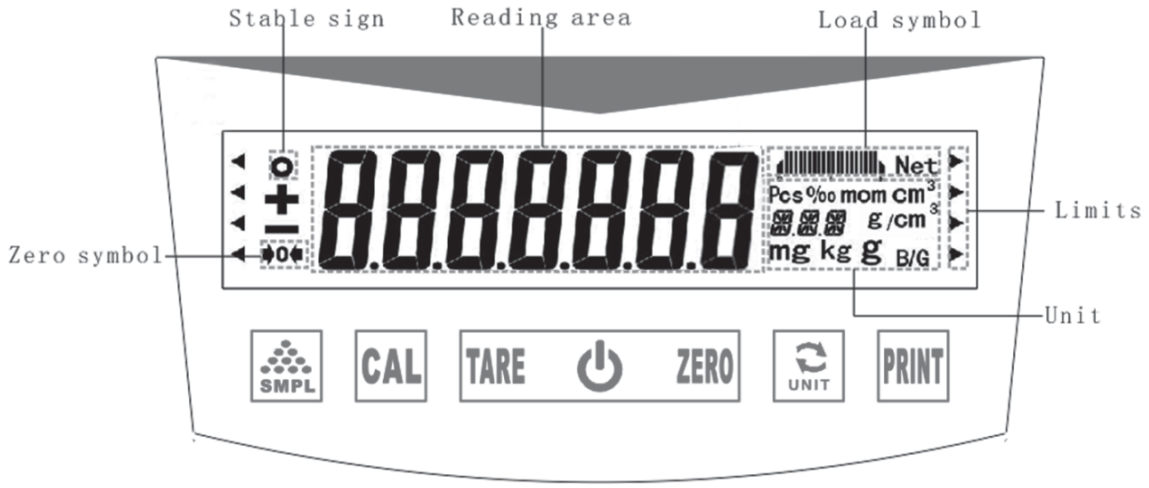
Level the balance on a stable desk. When the bubble is in the center of the circle, balance is leveled. Avoid locations with excessive air current, vibrations, heat sources or rapid temperature changes. As follow picture:

2.4 Connect to power

Power adapter one end is connected to balance, the other end to AC base

3. Operation panel and key functions definition

3.1 Operation panel introduction



3.2 Key definition

Key	Operation	Function description
SMPL	Short press	In the mode of PCS/%/‰ / BG to operate
CAL	Long press 3s	Initiates Span Calibration by long press 3s
TARE	Short press	Tare the weighing
⏻	Short press	Turns balance on/off,
ZERO	Short press	sets display to zero
UNIT	Short press	Steps through active units and modes
PRINT	Short press	Sends data

4. Operating instructions

4.1 Powerboot

Short press ⏻ on/off switch, LCD、EL、LED all light,

Screen display about 1.5s, as follow:  ,Then screen display from 9999999 to 1111111, with beeper, need on 600ms, Off 400ms, then display "version","model", finally LCD show: 

4.2 Time setting

1) On the opening state, press ZERO 3sec, enter the user setting, LCD display: rtC-SEt (RTC-SET), then display" YEAr 88", press ZERO set Years, press TARE change digital position to set years, press SMPL confirm;

2) LCD jump to set Months, display " Mon 88", press set months, press ZERO change digital position to set months, press SMPL confirm;

3) LCD jump to set Days, display" dAY 88", press ZERO set days, press TARE change digital position to set days, press TARE confirm;

4) LCD jump to set hours, display"hour 88", press ZERO set hours, press TARE change digital position to set hours, press SMPL confirm;

5) LCD jump to set minutes, display" Min 88", press ZERO set minutes, press TARE change digital position to set minutes, press SMPL confirm, finish the time setting.

4.3 Initial calibration

To assure the balance accuracy, The first time to using the balance, must to do calibration, This product calibration with external, Before calibration, it need to adjust the balance level.

Calibration as follow:

1) Press ⏻ to open balance , firstly warm-up 20-30 minutes;

2) Calibration, press CAL 3sec, LCD display"CAL 0", waiting for a sign " ------ ", then LCD display twinkling numerical data (Remark: press CAL can change different corresponding weights), At this time, put down the corresponding weight, then waiting for a sign again" ------ ", then LCD display corresponding weight, when LCD display " 0 ", remove weight, LCD display 0, completed calibration.

4.4 Unit setting

4.4.1 Set unit

1) Started balance, long press UNIT 3sec, enter the user settings, LCD display " UnitSEt " (UNITSET), then LCD display" On g ";

3) Then press UNIT changing weighing unit, if confirm, press SMPL to confirm. When changing weighing unit, can press PRINT to close or open the unit, after setting the unit, press SMPL to confirm.

4.4.2Unit detail

1) g
2) ct MET.CARAT
3) lb AVORIRDUPOIS POUND
4) oz AVORIRDUPOIS OUNCE
5) ozt TROY OUNCE
6) dr AVOIRDUPOIS DRAM
7) GN GRAIN
8) dwt PENNY WEIGHT
9) mom MOMME
10) K.tl HONG KONG JEWELRY TAEL
11) T.tl TAEL (TWN)
12) H.tl HONG KONG TAEL
13) S.tl SINGAPORE TAEL
14) t TOLA
15) M Mesghai
16) cl Tical
17) PCS
18) %
19) ‰
20) B/G
21) Kg

4.5 Zero

No load on the balance, short press ZERO , LCD firstly display " ZEro " (ZERO), then display 0, Zero effect is inside of the maximum 4%

4.6 Taring

When there is a load on the balance, short press TARE , LCD firstly display " tArE " (TARE), then display 0, Have the full range taring function.

4.7 Sample

1) On the opening state, At the mode of PCS, %, ‰ to sample, short press SMPL , LCD display " S- 5", short press ZERO , chose numerical data, place specific objects, press SMPL , then load-off the objects, finish sampling

2) On the opening state, At the mode of B/G unit, short press SMPL , into B/G mode, LCD display proportion value" 1000000 ", press ZERO to set numerical data, press TARE to change the digital position, after setting proportional value, press SMPL to confirm.

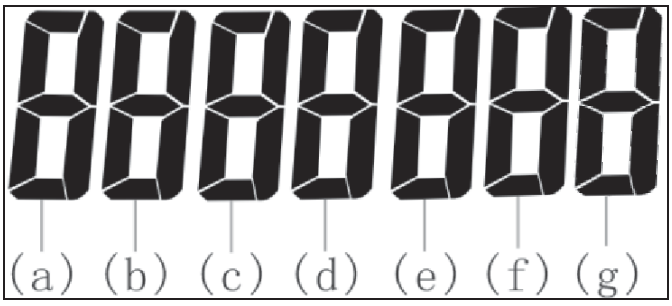
5. RS232 print setting

5.1 RS232 print set

1) Connect RS232 to the adaptor, Analysis weighing data, through RS232 sending out. Press PRINT 3sec, enter the user settings, LCD display " rS--SEt " (rs—set), then LCD display 8888888 ;

2) Press ZERO to set numerical data, press TARE to change the digital position. According to the definition about (a), (b), (c), (d) , (e), (f), (g) to setting. after setting, press SMPL to confirm.

(a), (b), (c), (d), (e), (f), (g) definition:



(a) 0=9600 1=19200
(b) 0=continuous output 1=stable output 2=press PRINT output
(c) 0=none 1=output date
(d) 0=none 1=output ITEM
(e) 0=PC work 1=print by tag paper 2=print by continuous paper 3=Micro printer
(f) 0
(g) 0

5.2 Item setting

Item setting can make for managing product number, clause, logo or print data.

Setting as follow:

1) On the opening state, long press TARE 3s, LCD display ITEMSET (ITEMSET), leave TARE , LCD display 1234567;

2) Press ZERO to set numerical data, press TARE to change the digital position, set by user, press SMPL to confirm.

6. Normal fault and solving countermeasure

Error information	Reasons analysis	Solution
Can't turn on	No power	Check adaptor connect or battery voltage is ok ?
Reading not correct	No calibration balance by right way Work environment not stable	calibration balance Put the balance by stable
Can't calibration the balance	No calibration balance by right way Work environment not stable	calibration balance Put the balance by stable
Auto turn off	Battery voltage too low (only cell supply power)	charge
OVER	Check the weighing (if over the max capacity 9e)	Check the weighing Check the pan whether interference with the limit screw or support block

7. Technical Instructions

7.1 Technical data

Working Temperature: 10℃-40℃

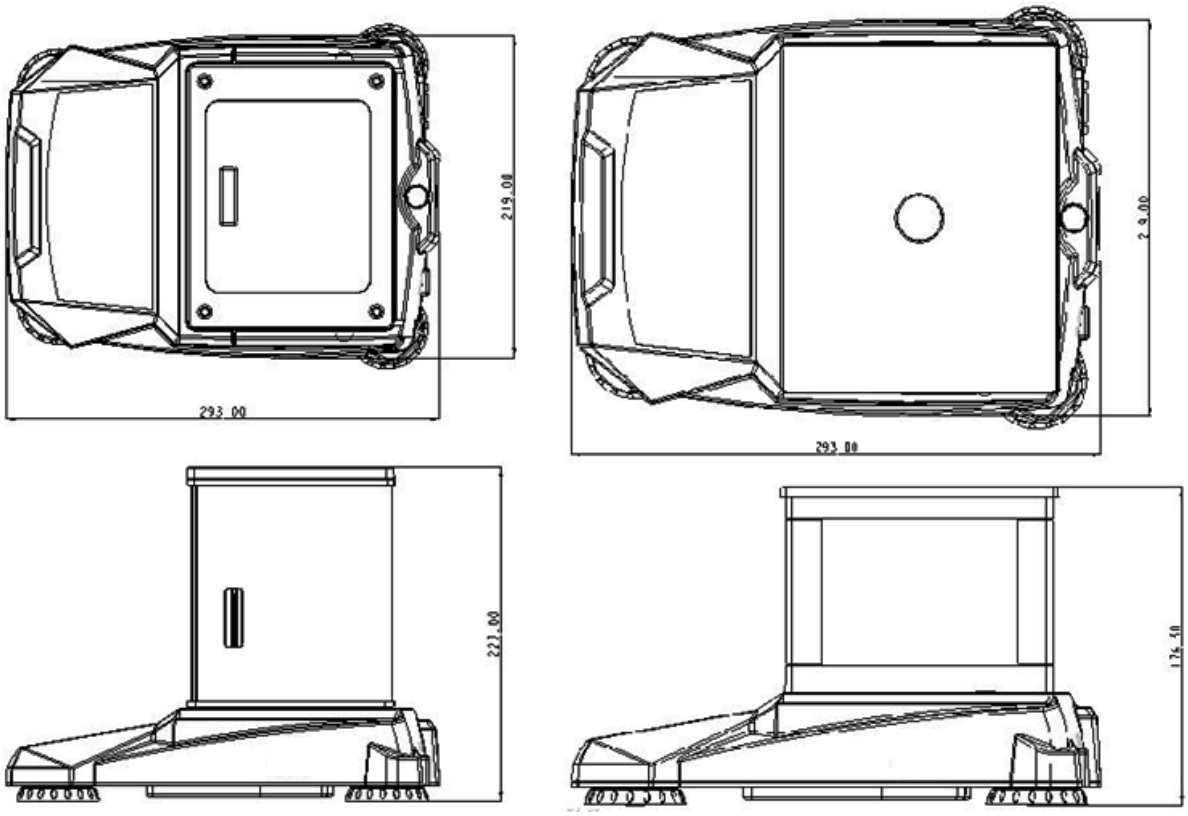
Working Voltage: DC12V

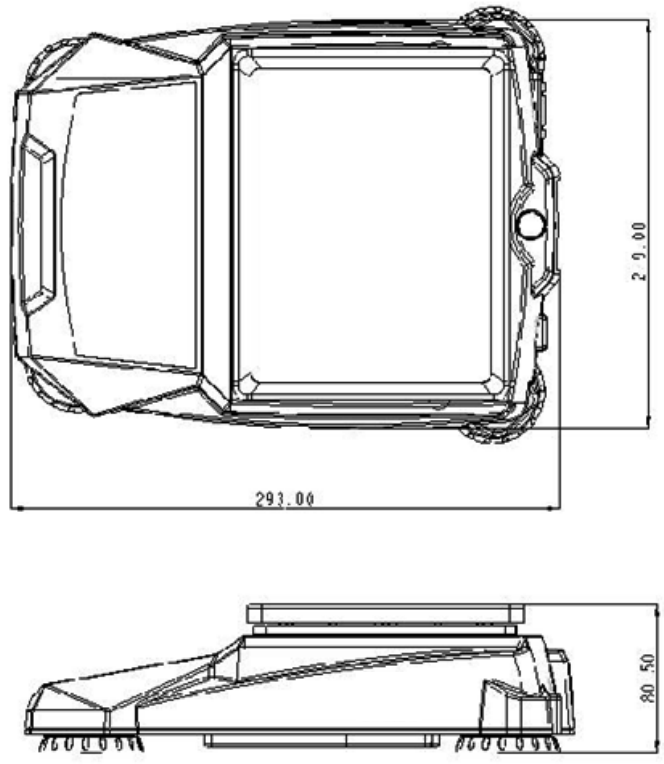
Working humidity range: 40%-85%

Adaptor data: Input: AC100-240V 50/60Hz 0.3A, Output: DC12V 1000mA

7.2 Product engineering drawings

EX series outline dimension, unit: mm





7.3 Specification

Item No.	EXA1003H	EXA2003H	EXA3003H
Capacity(g)	100	200	300
Readability(g)	0.001		
Repeatability(g)	±0.001		
Linearity(g)	±0.002		
Working Temperature(℃)	10-40		
working voltage	DC12V		
CAL	External calibration (weights option)		
RS232 (connector)	have		
Warm-up time(min)	20-30		
Frame Size(LxWxH)(mm)	292x218x227		
Packing Size(LxWxH)(mm)	400x300x200		
Pan Size(mm)	Ø118		
Effective Height(mm)	145		
Weight(kg)	3.1		
Leveling	have		

Item No.	STE3002S	STE6002S	EXB15002S	EXB20002S
Capacity(g)	300	600	1500	2000
Readability(g)	0.01			
Repeatability(g)	±0.01			
Linearity(g)	±0.02			
Working Temperature(℃)	10-40			
working voltage	DC12V			
CAL	External calibration (weights option)			
RS232 (connector)	have			
Warm-up time(min)	20-30			
Frame Size(LxWxH)(mm)	292x218x227			
Packing Size(LxWxH)(mm)	400x300x200			
Pan Size(mm)	Ø118			
Effective Height(mm)	95~185			
Weight(kg)	3.1			
Leveling	have			

Item No.	EXC20002	EXC30002	EXC50002	STC30001	STC60001
Capacity(g)	2000	3000	5000	3000	6000
Readability(g)	0.01			0.1	
Repeatability(g)	±0.01			±0.1	
Linearity(g)	±0.02			±0.1	
Working Temperature(℃)	10-40				
working voltage	DC12V				
CAL	External calibration (weights option)				
RS232 (connector)	have				
Warm-up time(min)	20-30				
Frame Size(LxWxH)(mm)	292x218x80				
Packing Size(LxWxH)(mm)	400x300x200				
Pan Size(mm)	188x148x11				
Effective Height(mm)	185				
Weight(kg)	2.8				
Leveling	have				

Item No.	EXF104H	EXF204H	EXF304H	EXF604H	EXF1004H
Capacity(g)	10	20	30	60	100
Readability(g)	0.0001			0.0002	0.0005
Repeatability(g)	0.0002			0.0004	0.001
Linearity(g)	0.0002			0.0004	0.001
Working Temperature(℃)	10-40				
working voltage	DC12V				
CAL	External calibration (weights option)				
RS232 (connector)	have				
Warm-up time(min)	20-30				
Frame Size(LxWxH)(mm)	292x218x80				
Packing Size(LxWxH)(mm)	400x300x200				
Pan Size(mm)	∅50				
Effective Height(mm)	185				
Weight(kg)	2.8				
Leveling	have				

8. Unit conversion

No.	Unit	Symbol	Conversion(g)
1	gram	g	1
2	MET.CARAT	ct	0.1999694g
3	AVORIRDUPOIS POUND	lb	453.59237g
4	AVORIRDUPOIS OUNCE	oz	28.349523125g
5	TROY OUNCE	ozt	31.1034768g
6	AVOIRDUPOIS DRAM	dr	1.7718451g
7	GRAIN	GN	0.06479891g
8	PENNY WEIGHT	dwt	1.55517384g
9	MOMME	mom	3.749996g
10	HONG KONG JEWELRY TAEL	K.tl	37.4290018g
11	TAIWAN TAEL	T.tl	37.49995g
12	HONG KONG TAEL	H.tl	37.799375g
13	SINGAPORE TAEL	S.tl	37.799366256g
14	TOLA	t	11.6638038g
15	Mesghai	M	4.6083162g
16	Tical	cl	16.3293g
17		kg	1000g
18		B/G	
19		PCS	
20		%	
21		‰	