



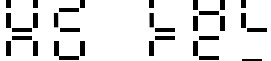
*A Higher Level of Precision...
A Higher Level of Performance*

Intell-Weigh 10™ Indicator NTEP Approved 10,000 Divisions, COC # 10-010



User Operation Manual

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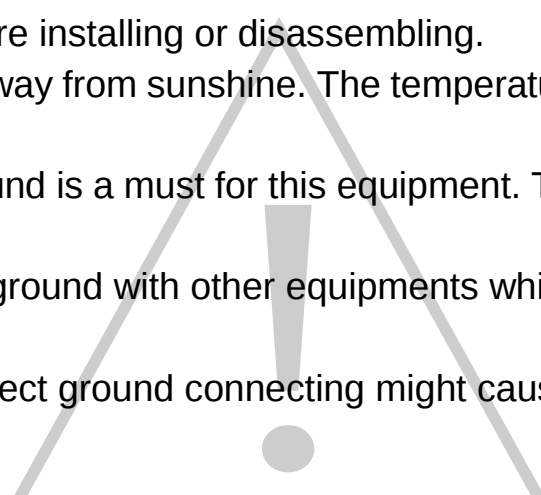
Before using the product

Thank you for purchasing EXCELL FM / FMR indicator.

In order to operate smoothly, to last the durability, and to reduce the chance of breakdown for this product, please read this User Manual carefully.

Safety Precaution

-  Turn off power before installing or disassembling.
-  Keep the product away from sunshine. The temperature range for operation is 0 ~ +40 °C
-  To connect the ground is a must for this equipment. The ground impedance is less than 100 Ω.
-  Never connect the ground with other equipments which are huge in power consumption.
-  No ground or incorrect ground connecting might cause the electric shocks or breakdowns.



Reminder of Battery Use:

-  New batteries or batteries that have been stored for a long time may require a longer initial charge time. Suggest having a full charge for at least 8 hours before operation.

Notes about charging the NiMH (Nickel-Metal Hydride) battery:

Status	LED Description
Ready to charge	Once the scale is connected with AC power mains, the green and red LEDs will be inter-flashing for 3 seconds as a self-diagnosis.
During charging	The red LED will be ON.
Finish charging	The green LED will be ON.
Battery fault	The green and red LEDs keep inter-flashing without stop.
Without battery	The red LED will be ON.
Battery voltage is below 2.5 V	The green and red LEDs keep inter-flashing without stop.

Chapter 1 Keypad Instruction

Function	Operation	Description
General Function Setting	Press and hold  , and then press 	Refer to <Chapter 5> External Function Parameter Setting for details
Weighing Parameter Setting	Adjust calibration switch to ON	Setting for decimal point, capacity, division, zero tracking, and unstable detection, etc. Refer to 6-1 Specification Setting for details.
Calibration	Adjust calibration switch to ON	Refer to 6-2 Weight Calibration for details.
Self-diagnosis Mode	While turning on with count hold  , press and hold	Refer to 9-3 Self-diagnosis Mode for details.
Default Recovery for All Parameters	Adjust calibration switch to ON, and then press and hold  	Refer to 9-1 for details.
Default Recovery for General Function Parameters	While turning on with countdown, press and hold  	Refer to 9-2 for details.

 During the operation  , the following keys to complete all the works.



⇒ Increase the flash value by one



⇒ Move the cursor rightward



⇒ Decrease the flash value by one



⇒ Save setting



⇒ Move the cursor leftward



⇒ Abort setting / Exit

Chapter 2 Specifications

Analog Specification

- ◆ Load Cell Current : DC 5 V $\pm$ 5% 60 mA (Up to Four 350 Ω Load Cells)
- ◆ Max. Load Cell Input Voltage : 16 mV

- ◆ Input Sensitivity : 0.15 μ V/d or more
- ◆ Conversion Rate : Approximately 120 times/s (max.)
- ◆ Resolution : 20 bits

Digital Specification

- ◆ Display : LCD, 6 digits, 25.4 x 10 mm (W x H), LED backlight
(Black digits for FM; Red digits for FMR)
- ◆ Display Frequency : 50 times/s (max)
- ◆ Display Range : - 999 999 ~ 999 999
- ◆ Min. Division : 1, 2, 5, 10, 20, 50
- ◆ Decimal Point : 0, 0.0, 0.00, 0.000, 0.0000
- ◆ Memory : Calibration parameter and function setting are all stored in EEPROM.

Optional Interface Card

- ◆ OP-01 RS-232 / RS-485 (Includes RTC Function)

Power Requirement

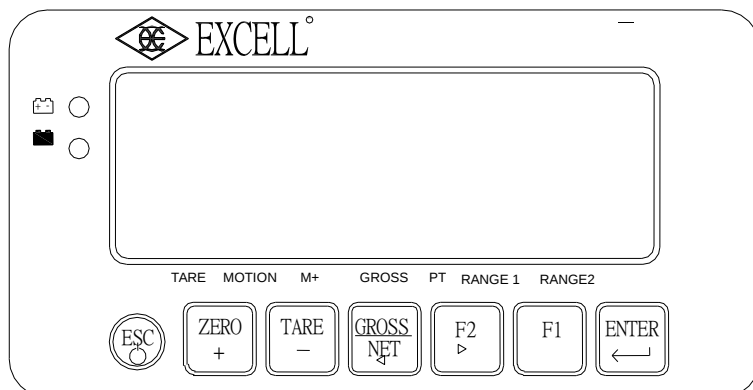
- ◆ Adaptor Spec : Input 120 / 230 V AC 50 ~ 60 Hz
Output 9 V / 1000 mA
- ◆ Optional 2 types of batteries : 6 V NiMH rechargeable battery kit (5 pcs) (1800 mA/hr) or general batteries (5 pcs)
- ◆ Max. Power Consumption : 110 mA (with 4 Load Cells + backlight + RS-232 interface)
NiMH battery → 15 hours
General battery → 24 hours
45 mA (with 1 Load Cell + no backlight + no RS-232 interface)
NiMH battery → 36 hours
General battery → 60 hours

Others

- ◆ Operation Temperature : 0 ~ 40 °C
- ◆ Operation Humidity : < 85% R.H.
- ◆ Dimensions (W × D × H) (mm) : 193 × 49.5□ × □ 94.4 (excluding protrusions)
225 × 60□ × □ 134.7 (including protrusions)
- ◆ Weight : 700 g

Chapter 3 Front and Rear Panels

3-1 Front Panel



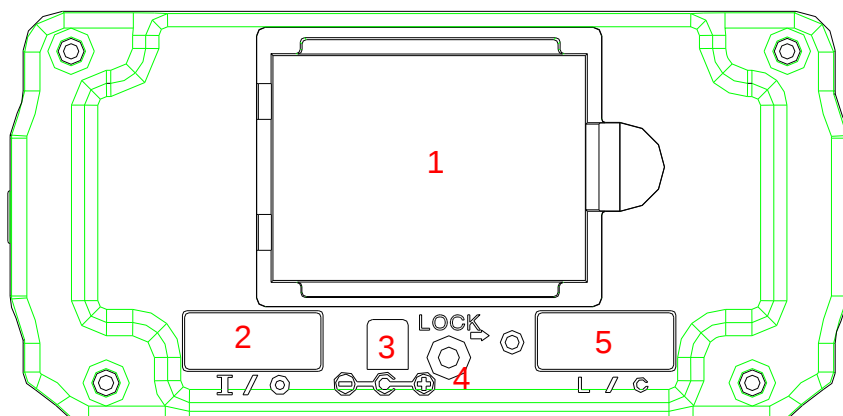
Indication:

-  : Battery charged status (only available to charged model)
-  : Battery charging status (only available to charged model)
- TARE : Tare mode
- MOTION : Unstable weighing indication
- M+ : Accumulation mode indication
- GROSS : Gross weight
- PT : Pre-Tare
- RANGE1 : Dual-range resolution indication (1)
- RANGE2 : Dual-range resolution indication (2)

Keypad:

- 
 - 1) Power ON / OFF. Press and hold this key for 3 seconds to shut down.
 - 2) Abort or exit when setting.
- 
 - 1) Weight re-zero.
 - 2) Increase the flash value by one when setting.
- 
 - 1) Eliminate the gross weight.
 - 2) Decrease the flash value by one when setting.
- 
 - 1) Switch Gross / Net weight shown on display.
 - 2) Move the cursor leftward when setting.
- 
 - 1) Keypad function (FNC-02 & FNC-03).
 - 2) Move the cursor rightward when setting.
-  Keypad function (FNC-02 & FNC-03).
-  Confirm key.

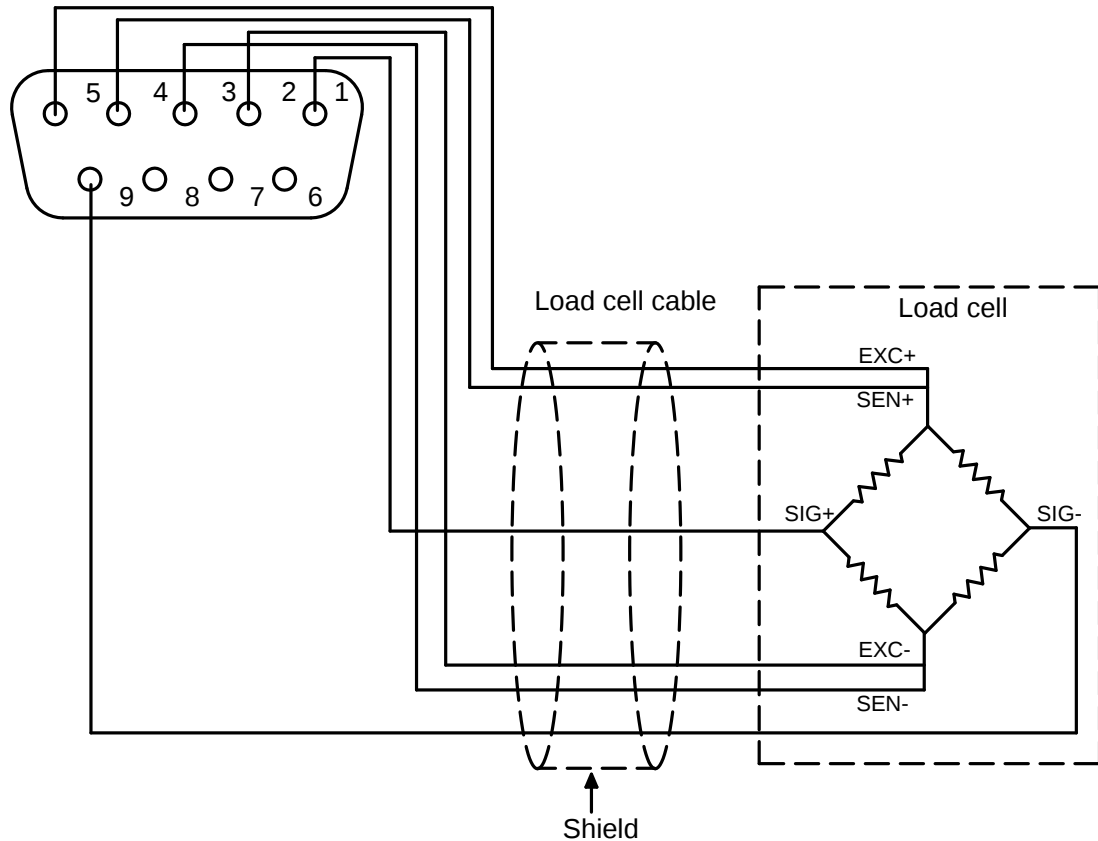
3-2 Rear Panel



- 1. Battery Case
- 2. RS-232 / RS-485 Input / Output
- 3. DC 9 V Power Input
- 4. Calibration Switch
- 5. Load Cell Connect Socket

Chapter 4 Installation

4-1 Load Cell



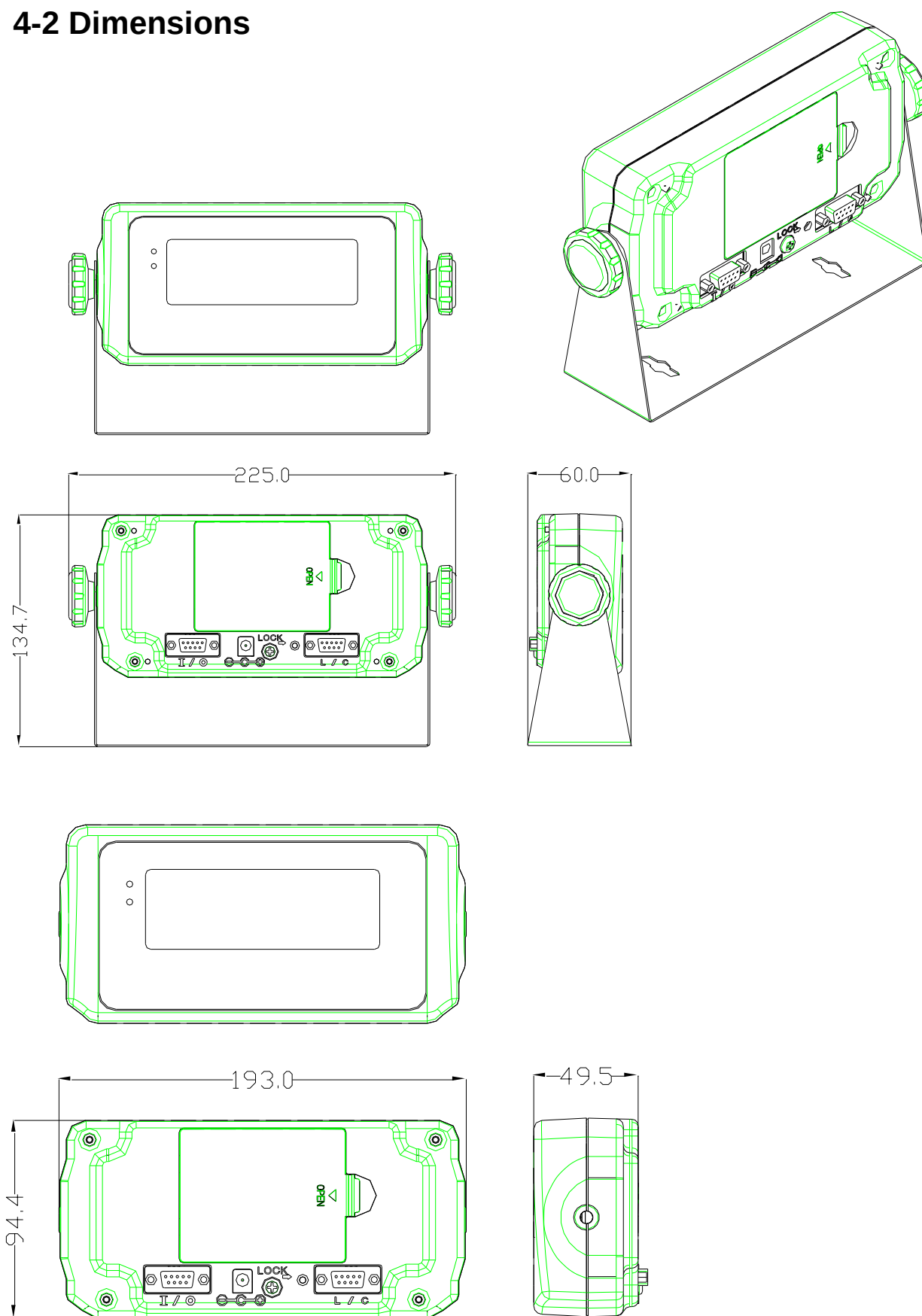
4-wired (5-wired) Load Cell

- Pin 1 connects with SIG+
- Pin 2, 3 short to connect with EXC-
- Pin 4, 5 short to connect with EXC+
- Pin 6, 7, 8 connects with shield
- Pin 9 connects with SIG-

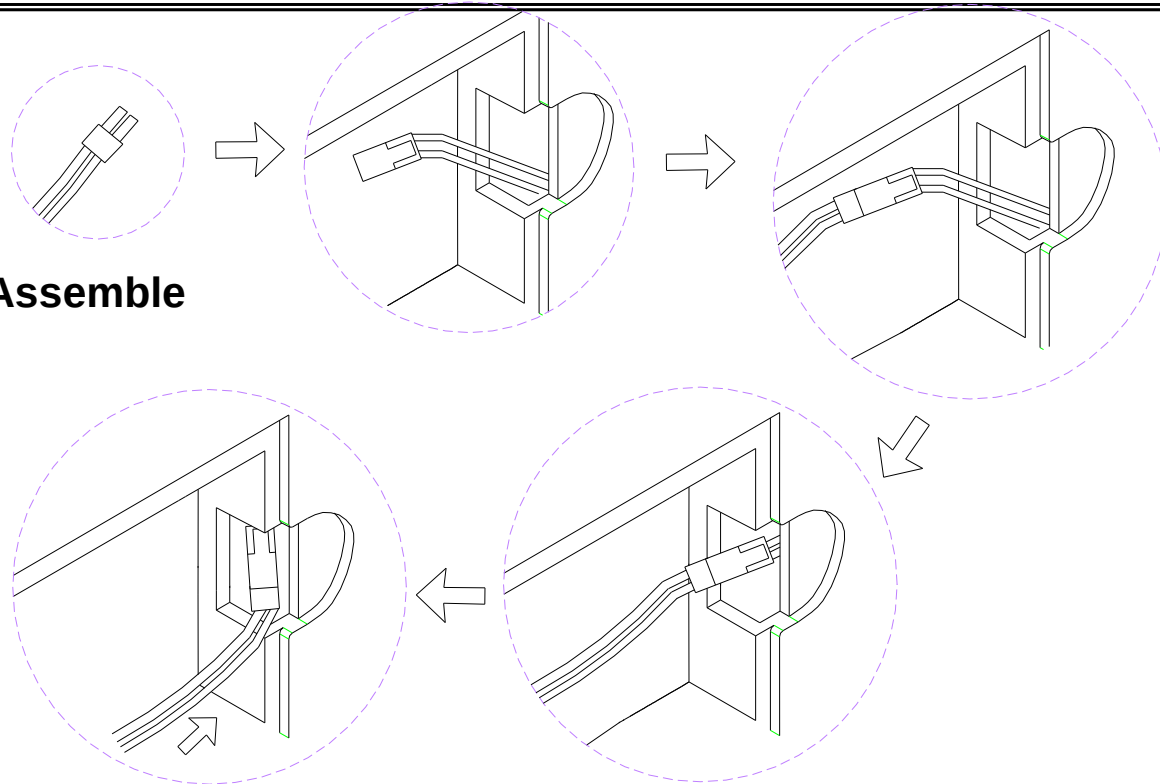
6-wired (7-wired) Load Cell

- Pin 1 connects with SIG+
- Pin 2 connects with EXC-
- Pin 3 connects with SEN-
- Pin 4 connects with SEN+
- Pin 5 connects with EXC+
- Pin 6, 7, 8 connect with shield
- Pin 9 connects with SIG-

4-2 Dimensions



Assemble

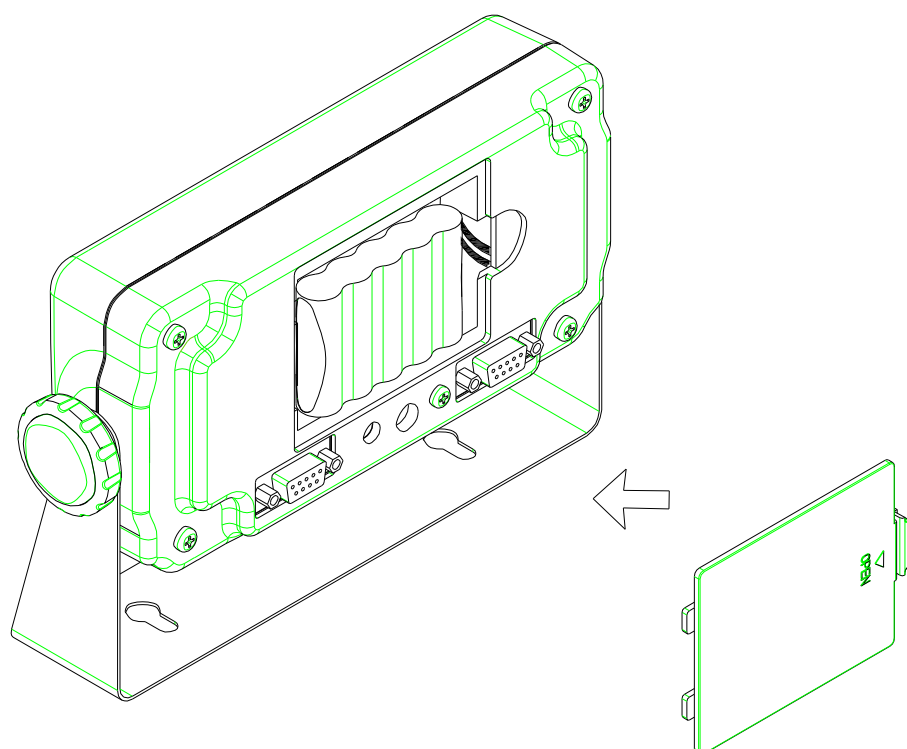


4-3

Battery

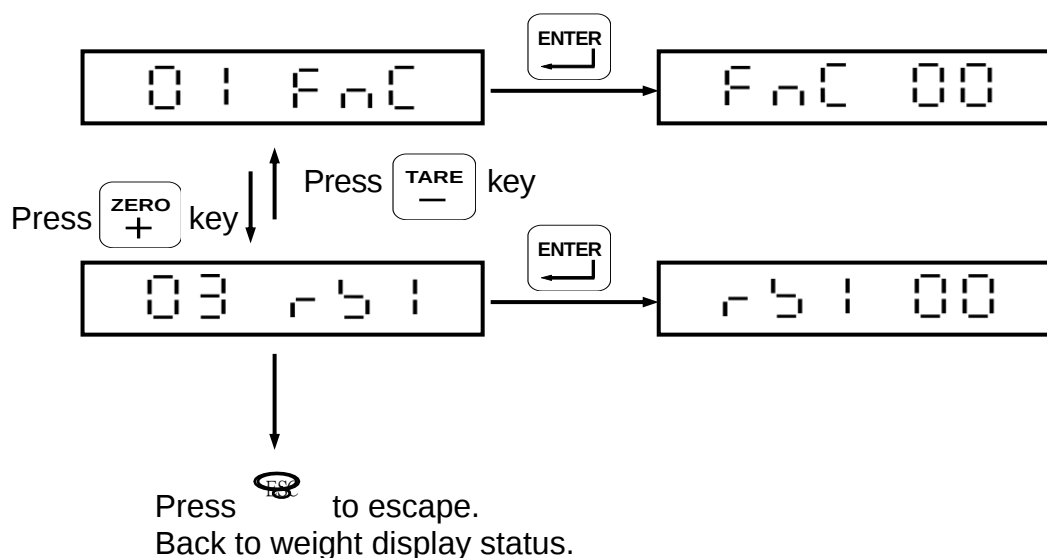
將多餘的電線塞入電池孔中

Stuff the surplus wires into the battery case.



Chapter 5 External Function Parameter Setting

Under general weight display status, press **F1** **ENTER** and the screen will show:



01 F n C ⇒ External function setting

03 r 5 1 ⇒ RS-232 / RS-485 interface function

5-1 0 1 F n C b External Function Setting

0 1 F n C

Press 

F n C - 0 0

Select the desired parameter code with

 / 

F n C - 0 1

Press 

0 0 0 0 0 0

The screen shows previous parameter setting.

Press  to finish your any changes

F n C - 0 2

Press  to escape the setting

*Parameter Code

F n C - 0 0 ⇒ Key Disable

F n C - 0 1 ⇒ DSP Update (Display Update)

F n C - 0 2 ⇒ F1 Key Function Setting

F n C - 0 3 ⇒ F2 Key Function Setting

F n C - 0 4 ⇒ ENTER+F2 Function Setting

F n C - 0 5 ⇒ Backlight Function Setting

F n C - 0 6 ⇒ Beeper Setting

	⇒ Increase the flash value by one
	⇒ Decrease the flash value by one
	⇒ Move the cursor leftward
	⇒ Move the cursor rightward
	⇒ Save setting
	⇒ Abort setting or exit

External Function Parameter Setting

Parameter Code	Function	Setting Value				Default Setting
		Parameter	Description			
FNC-00	Key disable	0000 ↓ 1111	0	ON	0000 is corresponding to:(from left to right) ZERO + TARE — GROSS NET ⬅ F2 ➡	0000
FNC-01	DSP Update	0	No Limit			1
		1	20 times/s			
		2	10 times/s			
		3	5 times/s			
		4	1 times/s			
FNC-02	F1 Key Function Setting	0	Print (printing)			5
		1	Units (units switch)			
		2	M+ (accumulation and printing)			
		3	MC (memory clearing)			
		4	Weight / Weight Accumulation / Times Accumulation Display Switch			
		5	HR (high resolution switch)			
		6	Pre-Tare (Pre-Tare function)			
FNC-03	F2 Key Function Setting	0	Print (printing)			1
		1	Units (units switch)			
		2	M+ (accumulation and printing)			
		3	MC (memory clearing)			
		4	Weight / Weight Accumulation / Times Accumulation Display Switch			
		5	HR (high resolution switch)			
		6	Pre-Tare (Pre-Tare function)			
FNC-04	ENTER+F2 Function Setting	0	Print Function (Print)			0
		1	Units Shift (Units)			
		2	Accumulation and Print (M+)			
		3	Clean the Accumulation Value (MC)			
		4	Weight / Accumulation Value / Accumulation Times Shift Display			
		5	Resolution Conversion			
FNC-05	Backlight Setting	0	Auto Backlight On (backlight on in operation only)			1
		1	Backlight On (backlight always on)			
		2	Backlight Off			
FNC-06	Beeper Setting	0	Beeper off			1
		1	Beeper on			

5-2 03 r 5 1 RS-232 Setting

03 r 5 1

Press 

r 5 1-00

Select the desired parameter code with

 / 

r 5 1-01

Press 

000000

The screen shows previous parameter setting

Press  to finish your any changes

r 5 1-02

Press  to escape the setting.

*Parameter Code

- r 5 1-00 ⇒ Information Pattern
- r 5 1-01 ⇒ Transmission Method
- r 5 1-02 ⇒ Transmission Rate
- r 5 1-03 ⇒ Parity, Bit Length, Stop Bit
- r 5 1-04 ⇒ Unstable or Over Load
- r 5 1-05 ⇒ Auto Transmission Condition
- r 5 1-06 ⇒ Command Address
- r 5 1-07 ⇒ Output Format
- r 5 1-08 ⇒ Transmission Times
- r 5 1-09 ⇒ Date Setting
- r 5 1-10 ⇒ Time Setting

	⇒ Increase the flash value by one
	⇒ Decrease the flash value by one
	⇒ Move the cursor leftward
	⇒ Move the cursor rightward
	⇒ Save setting
	⇒ Abort setting or exit

OP-01 / RS-232 / RS-485 Interface Function

Parameter Code	Function	Setting Value		Default Setting
		Parameter	Description	
RS1-00	Information Pattern (Please refer to page 16)	0	Display Correspondingly	0
		1	Gross Weight	
		2	Net Weight	
		3	Tare	
		4	Weight Accumulation Value	
		5	Times Accumulation Value	
		6	Output with Date & Time	
RS1-01	Transmission Method	0	Continuous Transmission	0
		1	Auto Transmission	
		2	Press  or  to transmit	
		3	Command Mode (no address)	
		4	Command Mode (with address)	
RS1-02	Transmission Rate	0	1 200	1
		1	2 400	
		2	4 800	
		3	9 600	
		4	19 200	
RS1-03	Parity, Bit Length, Stop Bit	0	N、8、1 No Parity 8 Bits Length 1 Stop Bit	2
		1	O、7、1 Odd Parity, 7 Bits Length, 1 Stop Bit	
		2	E、7、1 Even Parity, 7 Bits Length, 1 Stop Bit	
RS1-04	Unstable or Over Load	0	Continuous Output	0
		1	Stop Output	
RS1-05	Auto Transmission Condition	0	Positive (over + 10d)	0
		1	Positive / Negative (over + 10d, under – 10d)	
RS1-06	Command Address	00 ↓ 99	Available only if RS1-01 setting is “4”	0
RS1-07	Output Format	0	Standard Format	0
		1	UMC 600	

RS1-08	Transmission Times	0	No Limit	4
		1	1 times/s	
		2	2 times/s	
		3	5 times/s	
		4	10 times/s	
		5	20 times/s	
RS1-09	Date Setting		YY.MM.DD	
RS1-10	Time Setting		HH.MM.SS	

☐ Transmission Format

RS1-00 ⇒ 0 ~ 3

S	T	,	G	S	,	+	1	2	3	4	.	5	6		g	CR	LF
Header 1		Header 2		Weight Data (8 digits)								Unit		Terminators			

Header 1

ST: Stable Weight / US: Unstable Weight / OL: Weight Overload

Header 2

GS: Gross Weight / NT: Net Weight / TR: Tare

Weight Data (8 digits)

The first digit of weight data represents “+ / -” indication for weight value. The other 7 digits, including decimal point, represent the weight value. If the weight is over load (Header 1: OL), the screen turns into “blank” except “+ / -” indication and decimal point.

Unit

kg, lb, t or “blank”

Terminators

CR and LF are data termination code.

RS1-00 = 4

T	N	,	1	2	3	CR	LF
---	---	---	---	---	---	----	----

RS1-00 = 5

T	W	,	+	1	2	3	4	.	5	6	k	g	CR	LF
---	---	---	---	---	---	---	---	---	---	---	---	---	----	----

RS1-00 = 6

D	A	T	E		:	2	0	X	X	/	X	X	/	X	X	CR	LF
T	I	M	E		:	X	X	:	X	X	:	X	X	CR	LF		
G	R	O	S	S	:	+	1	2	3	4	.	5	6	k	g	CR	LF
N	E	T			:	+	1	2	3	4	.	5	6	k	g	CR	LF
T	A	R	E		:	+	1	2	3	4	.	5	6	k	g	CR	LF
T	N				:	X	X	X	CR	LF							
T	W				:	+	1	2	3	4	.	5	6	k	g	CR	LF

☞ Command Mode

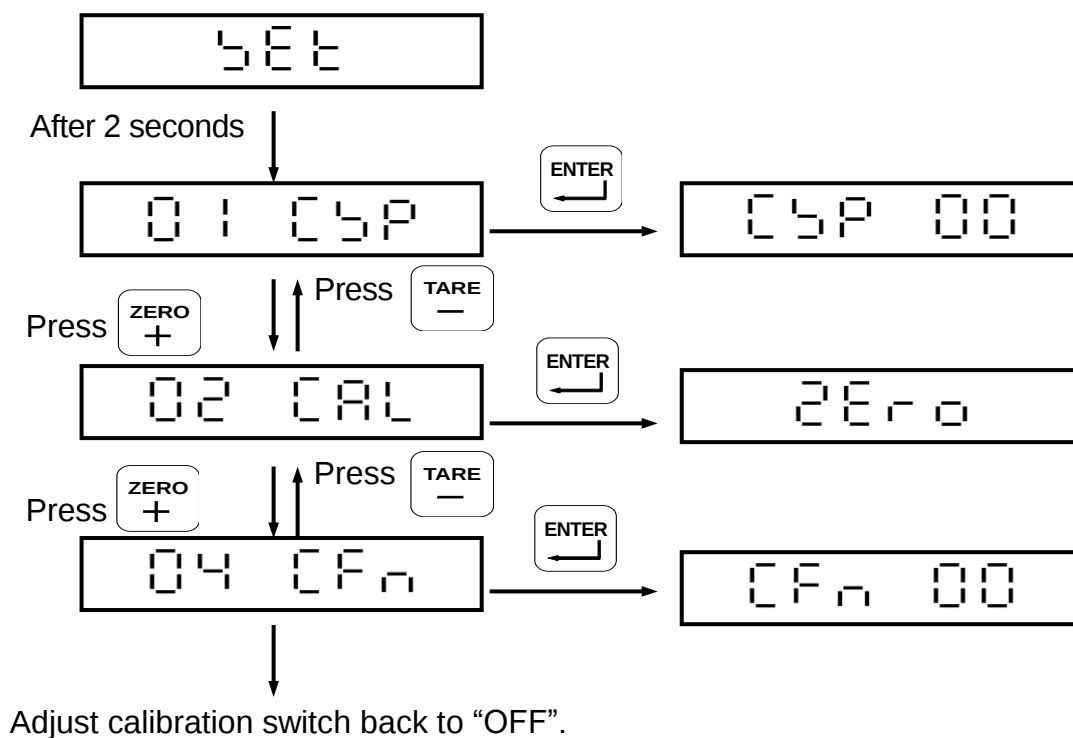
Command	Function	Command	Function
READ / RW	Weight Reading	CT	Tare Clearing
ZERO / MZ	Weight Re-zeroing	RI	Weight Accumulation
TARE / MT	Gross Weight Deducting	Rm	Times Accumulation
NTGS	Gross / Net Switch	Rn	Date
MG	Gross Weight Indicating	Ro	Time
MN	Net Weight Indicating	AT	Weight and Times Accumulation
		DT	Weight and Times Accumulation Clearing

- ❶ After setting the commands mentioned above, it's a must to add the termination code "CR (0DH) and LF (0AH)".
- ❷ If the command is not correct, it will reply "E" + "Command Unidentified".
- ❸ If setting command mode with address (RS1-01 = 4), add "@ address" in front of each command.

Example: When RS1-06 = 1, for reading weight value, the whole complete command should be "@01RW (CR) (LF)".

Chapter 6 Internal Calibration

Adjust calibration switch to “ON”, and the screen displays:

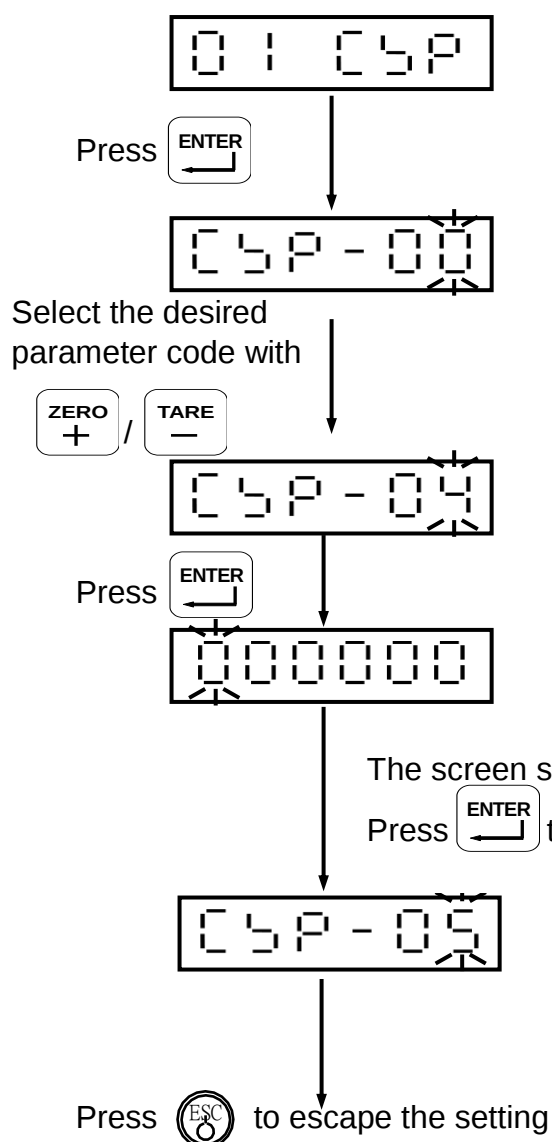


01 C5P ⇒ Specification Calibration

02 CAL ⇒ Weight Calibration

04 CFn ⇒ Internal Function Setting

6-1 0 1 C5P Specification Calibration



*Parameter Code

- C5P-00 ⇒ Decimal Point
- C5P-01 ⇒ Maximum Weighing Capacity
- C5P-02 ⇒ Division 1
- C5P-03 ⇒ Division 2
- C5P-04 ⇒ Zero Tracking Setting
- C5P-05 ⇒ Unstable Detection Setting

	⇒ Increase the flash value by one
	⇒ Decrease the flash value by one
	⇒ Move the cursor leftward
	⇒ Move the cursor rightward
	⇒ Save setting
	⇒ Abort setting or exit

Specification Parameter Description

Parameter Code	Function	Setting Value		Default Setting
		Parameter	Description	
CSP-00	Decimal Point		Refer to the description on next page	0
CSP-01	Maximum Weighing Capacity	999 999 ↓ 000 000	Max. value for weight display	999 999
CSP-02	Division 1	1	Min. value for weight display	1
		2		
		5		
		10		
		20		
		50		
CSP-03	Division 2	1	Min. value for weight display	1
		2		
		5		
		10		
		20		
		50		
CSP-04	Zero Tracking Setting		Refer to the description on next page	
CSP-05	Unstable Detection Setting		Refer to the description on next page	

Parameter Display Description

CSP-00 Decimal Point

Display	Decimal Point Digit
d 0	None
d 00	1 digit
d 000	2 digits
d 0000	3 digits
d 00000	4 digits

CSP-04 Zero Tracking Setting

Display	Division/Time
0.25 d	0.25 d / 1 s
0.5 d	0.5 d / 1 s
0.75 d	0.75 d / 1 s
1 d	1d / 1 s
1.25 d	1.25 d / 2 s
1.5 d	1.5 d / 2 s
1.75 d	1.75 d / 2 s
2 d	2 d / 2 s
no	No Zero Tracking

CSP-05 Unstable Detection Setting

Display	Division / Time
0.25 d	0.25 d / 1 s
0.5 d	0.5 d / 1 s
0.75 d	0.75 d / 1 s
1 d	1d / 1 s
1.25 d	1.25 d / 2 s
1.5 d	1.5 d / 2 s
1.75 d	1.75 d / 2 s
2 d	2 d / 2 s
no	No Unstable Detection

6-2 02 CAL Weight Calibration

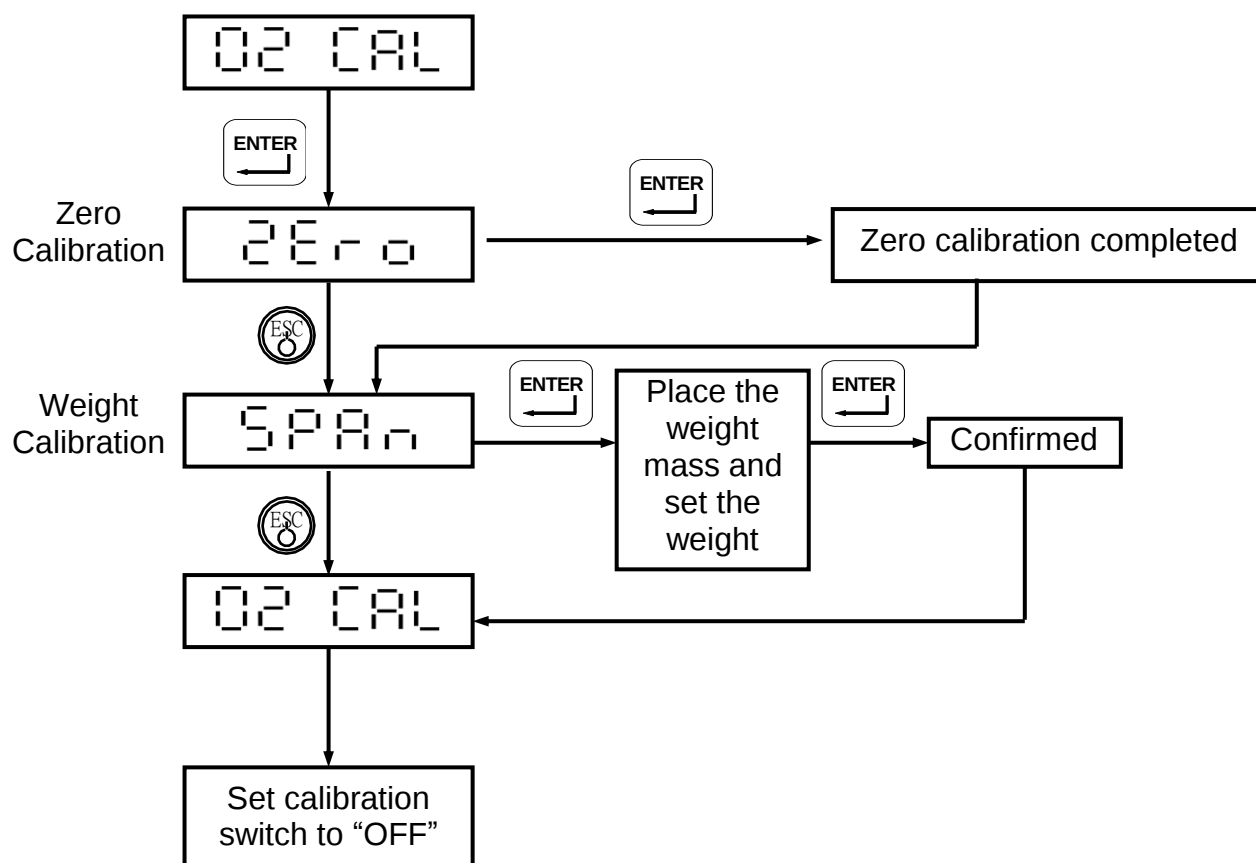
Turn on and warm up the machine for 15 to 30 minutes before calibration.

Adjust the calibration switch to “ON”, and the screen will show **Set**.



Press **TARE** or **ZERO** to select **02 CAL**.

Procedure



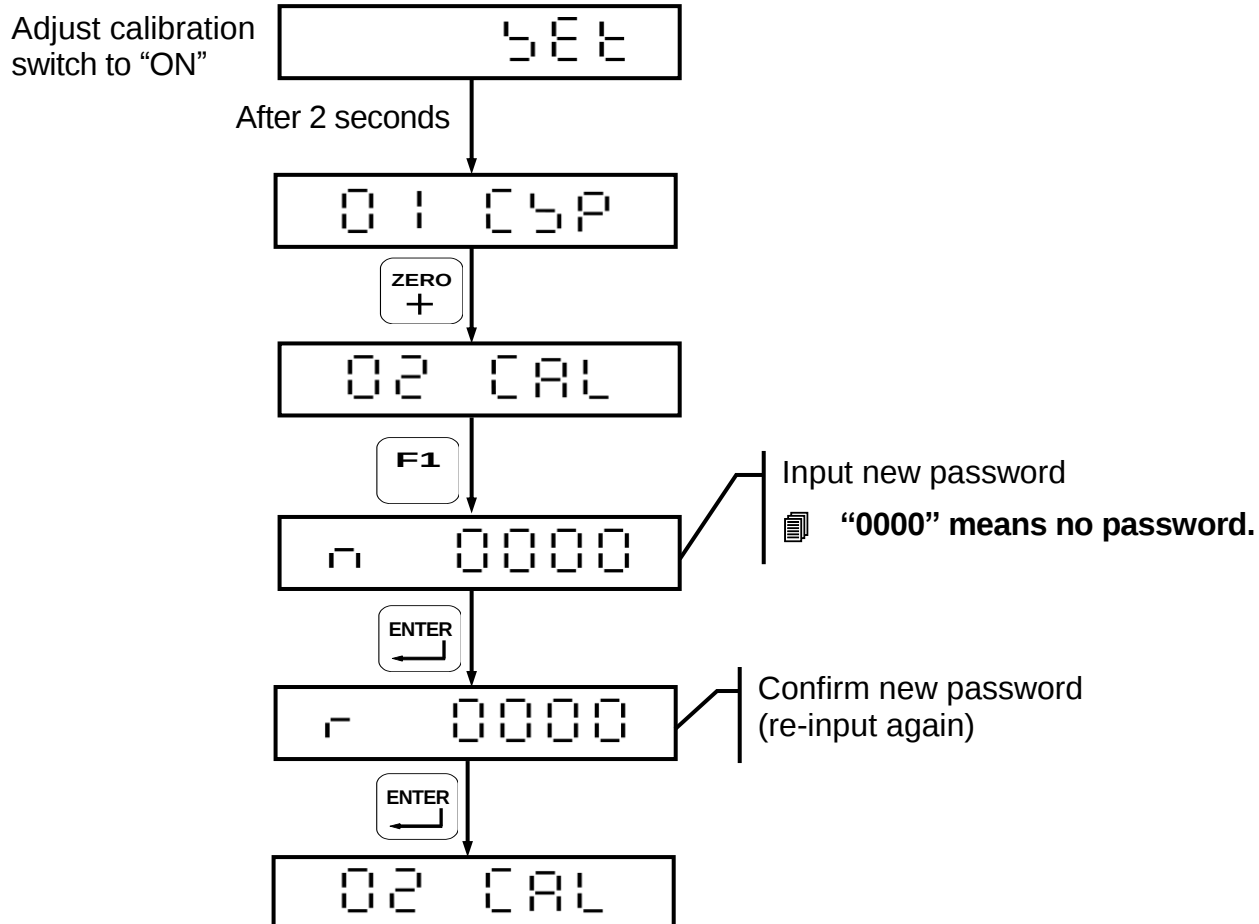
Zero Calibration

- Ensure nothing on the platter; after being stable, press , and the screen will display “.....”. The zero calibration will be complete 5 seconds later.
- To abort zero calibration, just press .

Weight Calibration

- Place an object, whose weight is known, on the platter, and input the weight value from front panel. After being stable, press  and the screen will show “.....”. The weight calibration will be complete 5 seconds later.
- To abort weight calibration, just press .

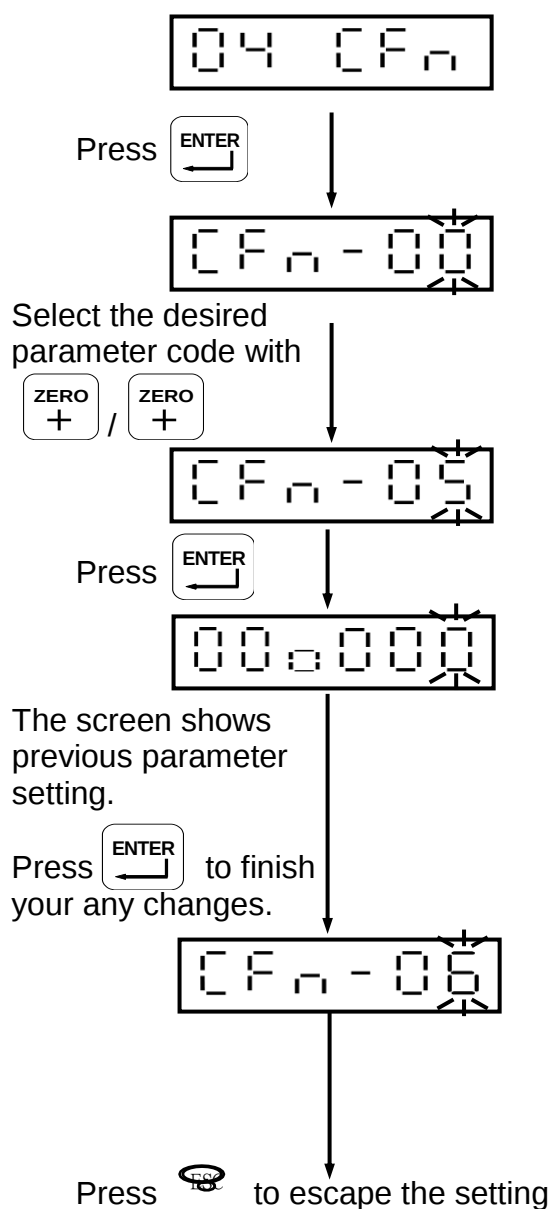
Password Setting



After complete password setting, when entering calibration mode or function setting mode, the screen shows $P \bar{C}$ for 1 second, and then 0000 . It's necessary to input the correct password to continue each setting.

If the input password is not correct, the screen shows $E \bar{r} \bar{r}$.

6-3 04 CFn Internal Function Setting



*Parameter Code

- CFn-00 ⇒ Tare or Zero Function under Unstable Status
- CFn-01 ⇒ Re-zeroing after Turning on
- CFn-02 ⇒ Re-zero Range
- CFn-03 ⇒ Filter Strength
- CFn-04 ⇒ Animal Scale Sampling Rate
- CFn-05 ⇒ Animal Scale Mode
- CFn-06 ⇒ Animal Scale Stable Range
- CFn-07 ⇒ Animal Scale Sampling Frequency
- CFn-08 ⇒ Dual Range Resolution Setting
- CFn-09 ⇒ A/D Sampling Rate
- CFn-10 ⇒ Dual Range Resolution Middle Point Setting
- CFn-11 ⇒ G Value Calibration

Internal Function Parameter Description

Parameter Code	Function	Setting Value		Default Setting
		Parameter	Description	
CFN-00	Tare or Zero Function under Unstable Status	0	ON	1
		1	OFF	
CFN-01	Re-zeroing after Turning on	0	OFF	1
		1	ON	
CFN-02	Re-zero Range	0% ~ 30%	0%: Full range re-zero 1% ~ 30%: Capacity × ± setting value%	2
CFN-03	Filter Strength	0 ~ 5	Strength increases by number	2
CFN-04	Animal scale Sampling Rate	0	No limit	0
		1	20 times/s	
		2	10 times/s	
		3	5 times/s	
CFN-05	Animal Scale Mode	0	OFF	0
		1	Mode 1: No weight shows under unstable status	
		2	Mode 2: Weight shows no matter under stable or unstable status	
CFN-06	Animal Scale Stable Range	0 ~ 100	Mode 2: Stable Range Setting	30
CFN-07	Animal Scale Sampling Frequency	0	8 times	2
		1	16 times	
		2	32 times	
		3	64 times	
		4	128 times	
CFN-08	Dual Range Resolution Setting	0	Multi - interval	0
		1	Multi - range	
CFN-09	A / D sampling Rate	0 ~ 9	Strength increases by number	4
CFN-10	Dual Range Resolution Middle Point Setting	0 ~ 999 999	Set point of dual-range resolution	5 000
CFN-11	G Value Calibration	9.78032 9.83218	Adjust G value	9.79585

6-4 Error Messages

- | | | |
|-----|---------|--|
| (1) | E r r 0 | Load Cell or A/D circuit is abnormal |
| (2) | E r r 2 | Real weighing value is lower than or equal to zero value |
| (3) | E r r 6 | Internal resolution is lower than 0.15 μ V/d range |
| (4) | E r r . | Incorrect password |
| (5) | E 1 | Internal value is higher than zero range |
| (6) | E 2 | Internal value is lower than zero range |

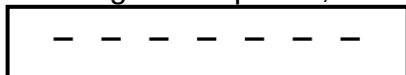
Chapter 7 Special Function

7-1 Animal Scale Setting

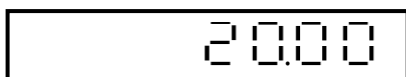
CFN-05 = 1

(Animal Scale Mode1: No weight display under unstable status)

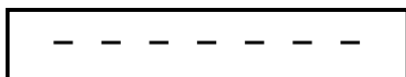
When there is nothing on the platter, the screen will show:



When an object is on the platter, taking an object of 20 g as an example, the screen will show:



If the display weight value keeps being lower than zero plus 10d or press Enter key to start weighing, then the screen will show:



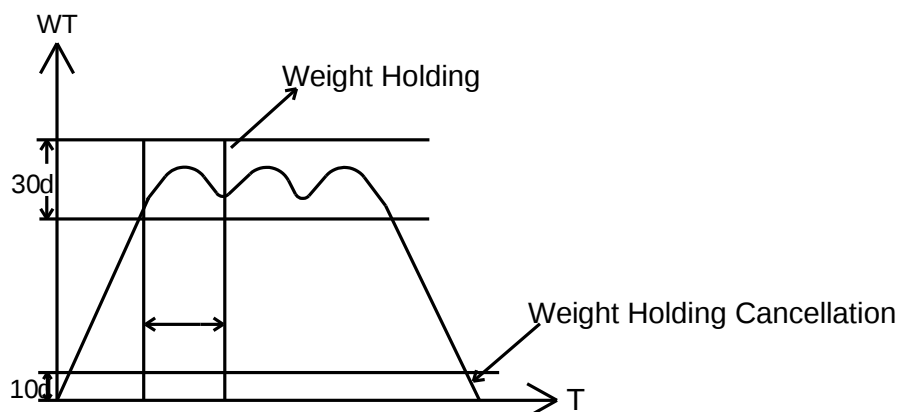
CFN-05 = 2

(Animal Scale Mode 2: Weight display whether under unstable or stable status)

When the weight value reaches the range of CFN-06 and CFN-07 setting, the screen will keep showing the weight value.

When the weight value is over the range of CFN-06 and CFN-07 setting, the screen will show the normal weight measurement.

For example: CFN-06=30 CFN-07=2

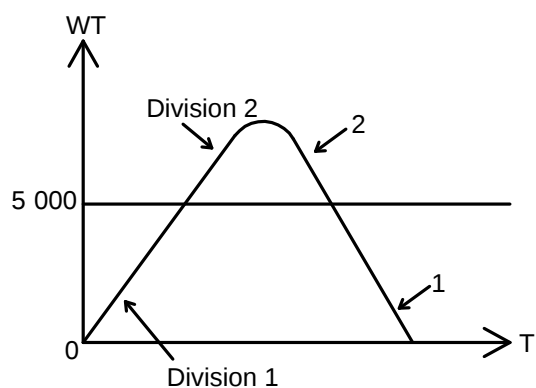


7-2 Dual Range Resolution Switch Function

If the setting of CSP-02 is not the same as CSP-03, the dual range resolution will be available.

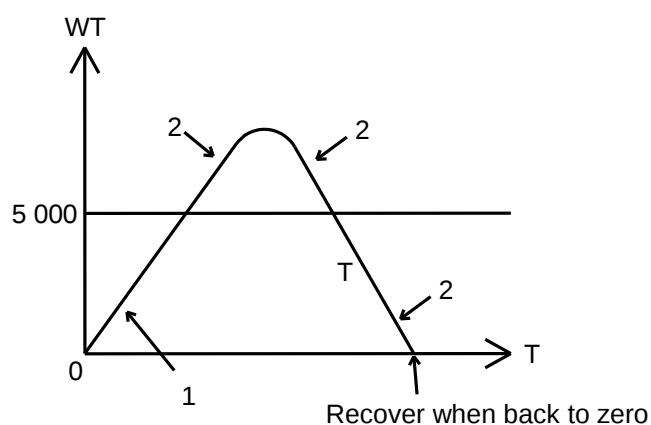
CFN-08 = 0 Multi - interval

If CFN-09 = 5 000



CFN-08 = 1 Multi - range

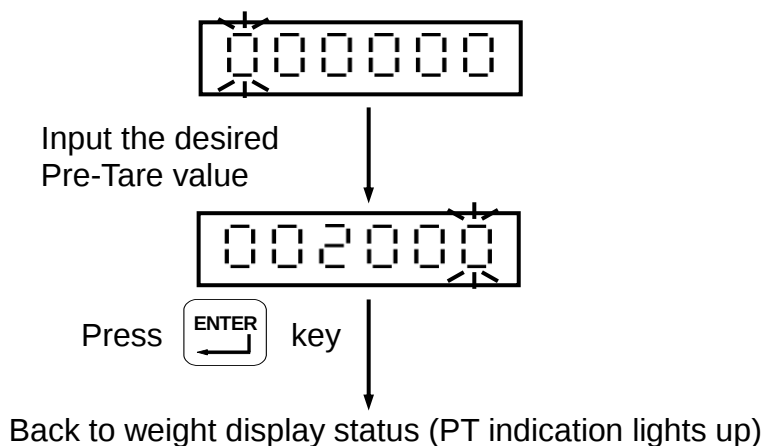
If CFN-09 = 5 000



7-3 Pre-Tare Function

FNC-02 or FNC-03 setting is at parameter 6. (Pre-Tare Function)

Under weight display status, press  or  key (according to FNC setting), the screen will show:



Pre-Tare Cancellation

When the gross weight column shows “0”, press  key to cancel the Pre-Tare value.

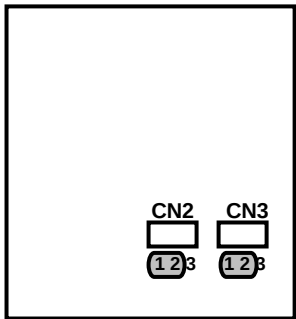
7-4 Resolution Switch Function

FNC-02 or FNC-03 setting is at parameter 5.

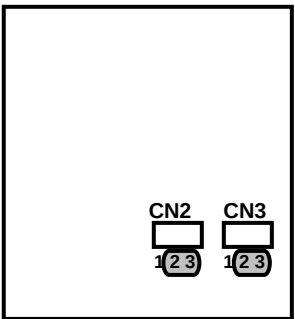
Under weight display status, press  or  key (according to FNC setting), the screen will show 10 times resolution and recover the original resolution after 5 seconds.

Chapter 8 Interface

8-1 OP-01 RS-232 / RS-485 Serial Output with RTC (Real Time Clock)

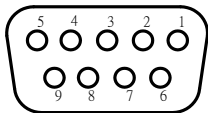


Short 1 and 2 pins to get RS-485 output.



Short 2 and 3 pins to get RS-232 output.

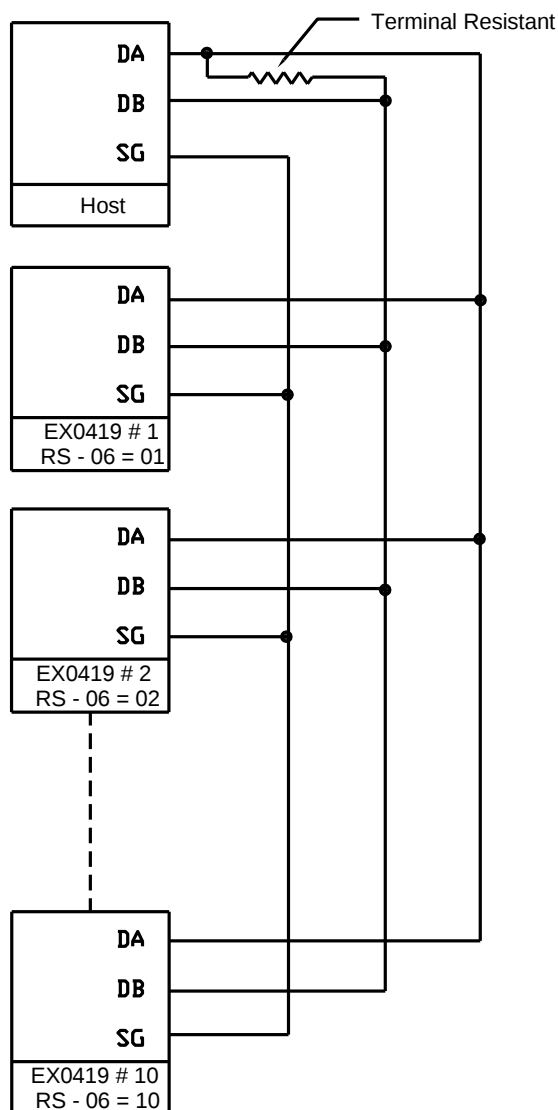
Pin Allocation of Rear Panel



Pin	Function
2	RXD
3	TXD
5	SG
6	DA
7	DB

RS-485 interface is capable to connect up to 10 mini-indicators.

Connection Description (RS-485)

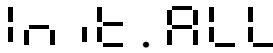


Notice

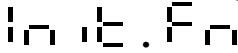
- ◆ If the terminal resistant is built-in the host interface, it's not necessary to connect with another one outside.
- ◆ If the host computer is no signal ground (SG), it's not necessary to connect with it.

Chapter 9 Maintenance

9-1 Default Recovery for All Parameters

- (1) Adjust the calibration switch to “ON”, when re-zeroing after turning on, press   and hold them simultaneously.
- (2) The screen will show 
- (3) To confirm, press  and hold until showing , and then adjust the calibration switch to “OFF”.

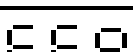
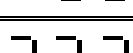
9-2 Default Recovery for General Function Parameters

- (1) When re-zeroing after turning on, press   and hold simultaneously.
- (2) The screen will show 
- (3) To confirm, press  and hold until re-turning on.

9-3 Self-diagnosis Mode

- (1) When re-zeroing after turning on, press  and hold.
- (2) The screen will show , which means entered self-diagnosis mode.
- (3) Use  or  keys to select item intended to test.

Press  key to enter self-diagnosis, and press  key to exit.

Item	Display	Testing Item
1		Program Version Number Displaying
2		7-Segment Display Testing
3		Keypad and Calibration Switch Testing
4		A/D Conversion Value Displaying
5		EEPROM Testing
6		RTC Date & Time Testing
7		OP-1 RS-232 Serial Output Interface Testing

9-3-1 Program Version Number

7-Segment display shows program version number 0000 XX.

9-3-2 7-segment Display Testing

7-Segment display shows 0 to 9 and “.”.

9-3-3 Keypad & Calibration Switch Testing

Adjust calibration switch to “ON”, and press any key, the corresponding bit will be changed from 1 to 0.

9-3-4 A/D Conversion Value

7-Segment display shows the internal value of the scale.

9-3-5 EEPROM Testing

Showing PASS represents in normal condition.

Showing FAIL represents in abnormal condition.

9-3-6 RTC Time & Date Testing

Press  key to enter the testing mode, and the screen will show date YY.MM.DD.

Example: “05.11.03” represents 3rd of November, 2005.

Press  key again to show time HH.MM.SS.

Example: “09.45.50” represents 9 o'clock, 45 minutes and 50 seconds.

9-3-7 RS-232 Serial Output Interface Testing (OP - 01)

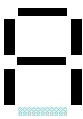
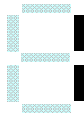
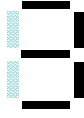
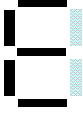
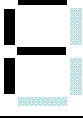
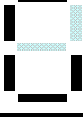
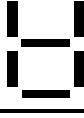
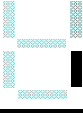
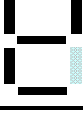
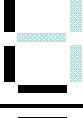
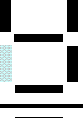
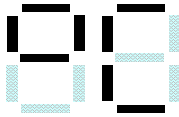
(1) Short Pin 2 and Pin 3 of the 9-pin D-SUB socket of serial output.

Showing PASS represents in normal condition.

Showing FAIL represents in abnormal condition.

(2) If connected with a computer (protocol must be corresponding), the screen will show 0 to 9, which means RS-232 output is in normal condition.

Appendix 7-SEGMENT DISPLAY CHARACTERS

Number	Display	Letter	Display	Letter	Display
0		A		N	
1		B		O	
2		C		P	
3		D		Q	
4		E		R	
5		F		S	
6		G		T	
7		H		U	
8		I		V	
9		J		W	
		K		X	
		L		Y	
°C		M		Z	

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