

CE

Approved for Digital  
Weigh Indicator

# Digital Weighing Indicator SI 4630

(For both External Display and Indicator)

Instruction Manual



 **SEWHACNM**  
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# CONTENTS

<b>1. Before Installation</b>	- - - - -	<b>3</b>
<b>2. Introduction</b>	- - - - -	<b>4</b>
<b>3. Specification</b>	- - - - -	<b>5</b>
3-1. Specification	- - - - -	<b>5</b>
3-2. Front Panel (display)	- - - - -	<b>6</b>
3-3. Key pad	- - - - -	<b>6</b>
<b>4. Bottom Panel</b>	- - - - -	<b>7</b>
4-1. Bottom Panel connect	- - - - -	<b>7</b>
<b>5. Set-up</b>	- - - - -	<b>10</b>
5-1. Calibration	- - - - -	<b>10</b>
5-2. TEST Weight Calibration Mode	- - - - -	<b>12</b>
5-3. F-Function Setting	- - - - -	<b>15</b>
5-4. F-Function List	- - - - -	<b>16</b>
5-5. Test Mode	- - - - -	<b>20</b>
<b>6. Interface</b>	- - - - -	<b>22</b>
6-1. Serial Interface (RS-232C)	- - - - -	<b>22</b>
6-2. Current Loop Interface	- - - - -	<b>24</b>
<b>7. Error &amp; Treatment</b>	- - - - -	<b>25</b>
7-1. Load Cell Installation	- - - - -	<b>25</b>
7-2. Indicator Error & Treatment	- - - - -	<b>26</b>
7-3. Digital Weighing Indicator	- - - - -	<b>27</b>
<b>8. Warrantee Certification</b>	- - - - -	<b>28</b>

# 1. BEFORE INSTALLATION

## 1-1. Caution / Warning Marks



Warning

This mark warns the possibility to arrive death or serious injury in case of wrongly used.



Caution

This mark cautions the possibility to arrive serious human body injury or product lose in case of wrongly used.

## 1-2. Other Marks



Warning for Electric Shock or Damage.

Please do not touch by hand



Protective Ground(Earth) terminal



Prohibition of Operation process

## 1-3. Copy Rights

- 1). All Right and Authority for this Manual is belonged to Sewhacnm Co.,Ltd.
- 2). Any kinds of copy or distribution without Sewhacnm Co.,Ltd's permission will be prohibited.

## 1-4. Inquiries

If you have any kinds of inquiries for this model, please contact with your local agent or Head Office.

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## 2. INTRODUCTION

Thank you for your choice, this “SI 4630” Industrial Digital Weighing Controller.

This SI4630, External Display Controller, is the most applied equipment for industrial weighing applications, like Platform Scale, Truck Scale, and Animal Scale.

This SI4630 has serial interface(RS232+Current Loop) as a standard, and 3.0 inch RED FND Display to maximize indicating capacity from far distance.

Enjoy your process efficiency with “SI 4630” Weighing controller.

### 2-1. Feature

- 3.0 inch RED FND Display to maximize indicating capacity.
- Strong for electric noise from outside.
- Self-Diagnosis function with several test modes.
- Display Resolution 1/20,000.
- Data-Back up Function.
- 4pcs External input terminal, as a standard.
- Serial interface(RS-232+Current Loop) standard built-in.
- Watch-Dog function.
- Full Automatic Zero adjustment (Without Dip switch adjustment).
- Tow different kinds of Calibration modes (Span Calibration and Simulating Calibration)
- Wireless Remote Control Key pad (Option).

### 2-2. Cautions



#### Cautions

- 1). Don't drop on the ground or avoid serious external damage on item.
- 2). Don't install under sunshine or heavy vibrated condition.
- 3). Don't install place where high voltage or heavy electric noise condition.
- 4). When you connect with other devices, please turn off the power of item.
- 5). Avoid from water damage.
- 6). For the improvement of function or performance, we can change item specification without prior notice or permission.
- 7). Item's performance will be up-dated continuously base on previous version's performance.

### 2-3. Components

#### Standard

- SI4630 Controller
- Power Cable (AC220V) : 1pcs
- Load Cell Connector (N-16 connector) : 1pcs
- Wire Key Pad : 1pcs
- Operating Manual : 1pcs
- Mount Guide : 1pcs

#### Option

- Wireless Key Pad
- Rs-422/485

### 3. SPECIFICATION

#### 3-1. Specification

Content		Specification	
Performance	External Resolution	1/20,000	
	Internal Resolution	1/2,097,152 (±1,048,576)	
	Input Sensitivity	0.1μV/V	
	Max. Input Signal	Max.3.2mV/V	
	Load cell Excitation	+5VDC	
	A/D Conversion Method	Sigma-Delta	
	Decimal Point	0, 0.0, 0.00, 0.000	
	Drift	Offset	<5PPM/°C
		Span	<5PPM/°C
	Linearity	0.001% of Full Scale	
	Analog Sampling(sec)	Max. 60times / sec	
Environment	Operating Temperature Range	-10°C ~ +40°C [14°F ~ 104°F]	
	Operation Humidity Range	40% ~ 85% RH, Non-condensing	
Function	Calibration Mode	Test Weight Calibration Mode Simulation Calibration Mode(Without Test Weight)	
	Display	5 digit, 73.5mm(3inch) Red Color FND	
	Key Pad	6EA Standard Key Select Key Function at F-Function 11	
Communication	Serial Interface(RS-232)	Standard Installed (Only trans communication data) - Only support serial print (Not parallel print)	
	Current Loop Interface	Standard Installed (Only trans communication data)	
Option	Serial Interface(RS-485)	Factory Installed default (Not Installed locus)	
	Remote Key Pad	Remote Control (Seem like SI 3060A)	
Power Cable	ISOLATED Serial Communication		
	Input Power	AC 110V ~ 220V 1.0A ~ 0.55A 50~60Hz	
	Internal Use Power	DC 24V 1,300mA	
Size	461(L)x200(H)x160(W)mm Body:400(L)x148(H) ×160(W)	Weight : About 2.0kg	

### 3-2. Front Panel (Display)



**Weight Display**  
(Use the height of 73.5mm LED)

**Status Display LED**  
(Indicator display the status of the action)

<b>ZERO</b>	When the current weight is Zero, "0" Lamp is turn on.
<b>TARE</b>	Tare function is set, Lamp is turn on.
<b>STEADY</b>	When the weight is Steady, Lamp is turn on.
<b>CHECK</b>	When key pad input, Lamp is blink.

### 3-3. Key Pad

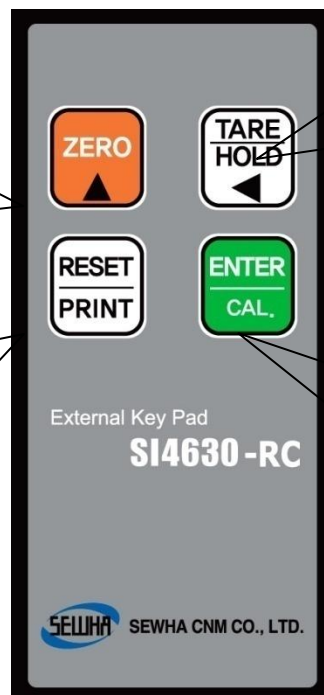
Make Current Weight value as Zero.

Under F08, you can set the Zero key operation range, from Min.2% to Max.100% of Capacity.

Regarding to under F-Function 11, you can set Tare or Hold.

**Under F11-00/01: Tare Reset / Hold Reset Key.**

**Under F11-02/03: Print Key.**



Under F-Function 11, you can set the Tare or Hold key.

**Under F11-00 :** Tare key.

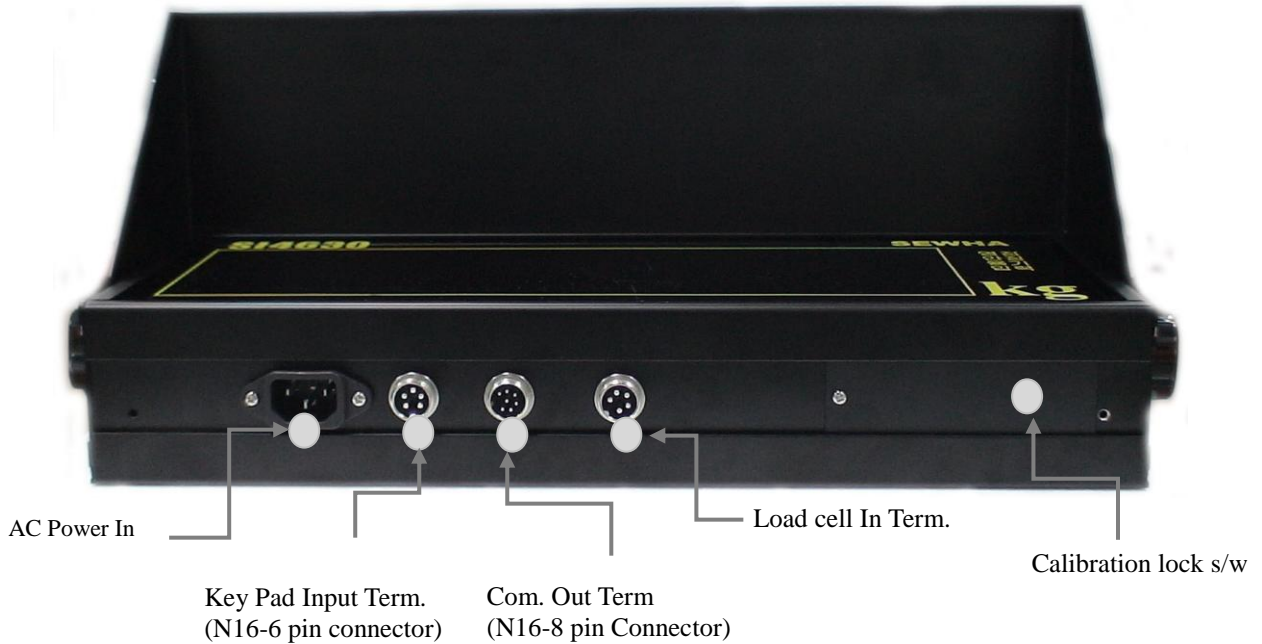
**Under F11-01 :** Hold key.

1. Save set value during setting process.

2. Enter F-Function Mode

**3. In case of press continuously 4 times, Enter SET-UP Mode.**

## 4. BOTTOM PANEL



### 4-1. Bottom Panel connector

#### 4-1-1. AC POWER INPUT <R/T/E>

- AC Power IN < AC110V ~ 240V 50/60Hz >



**For protection of electric shock or wrong action must be earth, please.**

If this product not use earth, it can be wrong action by electric damage or electric static.

#### 4-1-2. Communication Output(SERIAL I/F)

-Standard install RS232C/CURRENT LOOP (N16-8)

Pin No.	Content	Pin No.	Content
1	Receive Data(RX)	2	Transmit Data(TX)
3	Signal Ground(GND)	4	Current Loop +
5	Current Loop -	6	RS-485(RTX+) RS-422(TX+)
7	RS-485(RTX-)RS-422(TX-)	8	

(FEMALE)

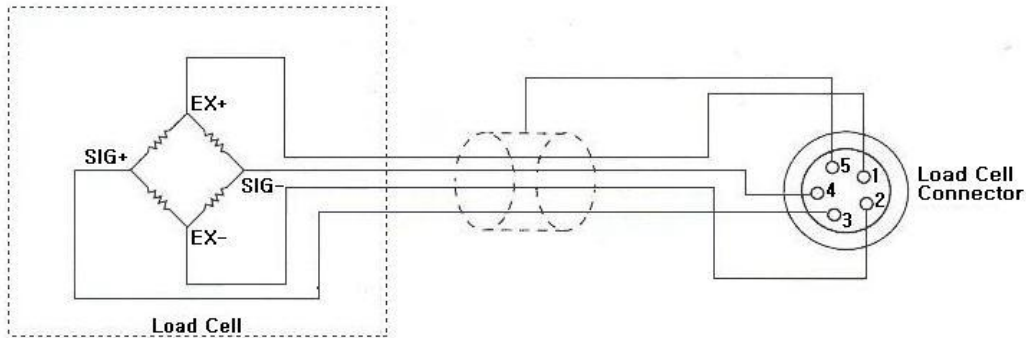
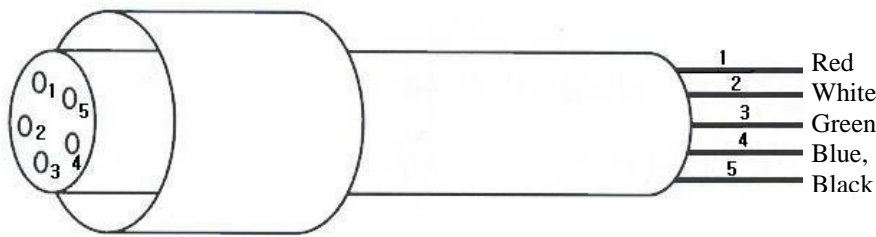
#### 4-1-3. Key Input Terminal(N16-6)

Pin No.	Content	Pin No.	Content
1	KEY1	2	KEY2
3	KEY3	4	KEY4
5	COMMON		


(FEMALE)

#### 4-1-4. Load Cell Connector Specification

# Digital Weighing Indicator SI 4630



EXC+	.....	PIN 1(Red)
EXC-	.....	PIN 2(White)
SIG +	.....	PIN 3(Green)
SIG -	.....	PIN 4(Blue, Black)
SHIELD	.....	PIN 5(Shield)

	<p><b>주의</b> When connect Load cell, If short Ex+, Ex- of Load cell cable, it can be damage in Indicator.</p> <p>When connect Load cell, Please Indicator power off.</p>
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- 1). You can connect Max. 8pcs of same capacity Load cells at once. (350Ω)
- 2). You have to make horizontal balance on the ground.
- 3). If you install more than 2pcs of Load cells, use Summing box and adjust output signal difference as minimum.  
It can make wrong weighing process caused by each load cell's variation.
- 4). If there is some temperature difference around Load cell, it can cause wrong weight measurement.
- 5). Don't do Welding job or Arc discharge around installation place. But, there is no choice, please disconnect power cable and Load cell cable.
- 6). If you measure static electricity material, please make earth between down part and up part of Load cell.



## Digital Weighing Indicator SI 4630

**\* Load Cell Wire Connection**

- 1). Please connect Indicator's connector and Load cell cable basis on each color.
- 2). It is possible to connect Max. 8pcs same capacity load cells with parallel. (350Ω)
- 3). LOAD CELL Connector Standard : N16 - 05
- 4). The load cell cable color can be different from each manufacturer, please refer following data sheet.
- 5). Load Cell Wire Color Chart (Sorted by Manufacturer)


<b>Manufacturers</b>	<b>EXC+</b>	<b>EXC-</b>	<b>SIG+</b>	<b>SIG-</b>	<b>SHIELD</b>
Sewha CNM	Red	White	Green	Blue	Black
Bongshin, CAS ,TMI ,AND	Red	White	Green	Blue	Yellow(Shield)
Daesung	Red	Black	White	Green	Shield
Power MNC	Red	White	Green	Black	Shield
Disocell	Red	Blue	Green	White	Black
Dacell	Red	White	Green	Blue	Shield
BLH	Green	Black	White	Red	Yellow
INTERFACE	Red	Black	Green	White	Shield
KYOWA	Red	Black	Green	White	Shield
P.T	Red	Black	Green	White	Shield
SHOWA	Red	Blue	White	Black	Shield
SHINKOH	Red	Black	Green	White	Shield
TML	Red	Black	White	Green	Shield
TEAC	Red	Blue	White	Black	Yellow
HUNTLEIGH	Green	Black	Red	White	Shield





**※ Each Wire's color specification can be changed without prior notice.**

## 5. SET-UP

### Calibration

Adjust weight balance between “Real weight” on the load cell(Weight Part) and “Displayed weight of Indicator”. When you replace LOAD CELL or Indicator, you have to do Calibration process once again.

 <b>주의</b> <b>Caution</b>	<b>Before adjust weight, for accurate weight measurement, please Indicator make warm-up more than 15minutes throughout input power. (If omit this process, it can make cause wrong weight measurement.)</b>
--	---

Key Function							
	Division position move		Division value setting		Save		Move to Previous step

Before calibration – Check Point	
<b>L-OFF</b>	Before enter to SET-Up mode, please turn off the calibration lock switch. If the calibration lock switch is not off, Display shows “L-OFF” sign.

### 5-1. TEST WEIGHT CALIBRATION MODE

#### 5-1-1 Enter Test Weight Calibration Mode


Please you have to press at the start  Key continuously 4 times.


In the condition ,  Key press 1 time.

In the condition ,  Key press 1 time.

(※ If you press  key, Enter  Simulation Calibration Mode [Refer 5-2])

#### 5-1-2 Display Max. Weight Capacity Setting


After  will be display about 2 second,




In the condition  blink display, after input Max. Weight Capacity,

Press  Key and then save.

(If you input Max Weight Capacity 100kg, just input “100”, Ignore decimal point)

5-1-3 Setting “Division (Division value) and Decimal Point”

After  will be display about 2 second

In the condition  blink display, after setting press  Key and  Key for decimal

point and division value, Press  Key and then will save.

 (Setting Division value),  (Move Decimal point)

※ Division value will be changed to 1-2-5-10-20-50



5-1-4 Measurement the “DEAD Weight of Weighing Scale”

In the condition , when you press  Key, the indicator started measurement and find optimal “Dead weight value of Scale” automatically saved.

※ Caution: This “DEAD Weight” is very important to make “ZERO” value of weighing scale, so please make sure that the weighing scale is empty and free from other external variations.

It is automatically count from  to .

5-1-5 Input Test Weight value and Calculate SPAN value

In the condition , Input “Test weight” capacity, and press  Key.



※ When the Setting “Test Weight”, Recommendation.



(Digit/Division)	Weight of “Test Weight”
1/1000	Use more than 10% span of Capa
1/3000	Use more than 20% span of Capa
1/5000	Use more than 30% span of Capa
1/10000	Use more than 40% span of Capa
1/20000	Use more than 50% span of Capa

If you setting as above content, you can adjust weight calibration more accuracy.



EX

- ▶ When setting Capacity with 100.00kg  
If you have not prepared 100.00kg of “Test Weight”, you can adjust weight with 10.00kg more than 10% of “Test Weight” by input SPAN’s value as 10.00kg.

In the condition , after load “Test Weight” through prepared “Test Weight”, Press  key.

After automatically count from  to , it is calculated weight calibration the inside. **If calculated value is normal, it will be display SPAN value.**  
**And if calculated value is abnormal, it will be display error and then return to Input Span Process (5-1-5).**  
**(Refer 7-3 Calibration Process)**

In the condition , after check SPAN value, press  Key.

In the condition , down “Test Weight”, Press  Key and make default.

※ After make default, please return Calibration Lock S/W “ON”.

## 5-2 Simulation Calibration Mode (Calibrate without Test weight)

Through this “Simulation Calibration Mode” you can make simple calibration **without Test weight**.

This calibration mode uses “Load cells’ max. capacity” and “Max. Output Rate(mV)”, the weight adjustment degree might be less than “Test weight Calibration”.

The guaranteed resolution of this “Simulation Calibration” is 1/3,000.

### 5-2-1 SIMULATION CALIBRATION MODE

Please you have to press at the start  Key continuously 4 times.


In the condition ,  Key press 1 time.


In the condition ,  Key press 1 time.

In the condition ,  Key press 1 time.

### 5-2-2 Display Max. Weight Capacity Setting

After  will be display about 2 second,

In the condition  blink display, after input Max. Weight Capacity,

Press  Key and then will save.  
(If you input Max Weight Capacity 100kg, just input “100”, Ignore decimal point)





#### ※ Caution

**If the plural No. of load cells are installed, please make sum the all load cells capacity and input.**

Ex) There are 4pcs of load cells are installed, and each load cell's Max. capacity is 1,000kg. Then, total Max. Capacity will be 4,000kg and you have to input 4,000kg.

### 5-2-3 Setting “Division (Division value) and Decimal Point”

After  will be display about 2 second,

In the condition  blink display, after setting press  Key and  Key for decimal point and division value, Press  Key and then will save.

 (Setting Division value),  (Move Decimal point)

※ Division value will be changed to 1-2-5-10-20-50

### 5-2-4 Measurement the “DEAD Weight of Weighing Scale”


In the condition , when you press  Key, the indicator started measurement and find optimal “Dead weight value of Scale” automatically saved.

※ Caution: This “DEAD Weight” is very important to make “ZERO” value of weighing scale, so please make sure that the weighing scale is empty and free from other external variations.

It is automatically count from  to .

### 5-2-5 Input Rated output voltage (mV/V) of Load cell


After  will be display about 2 second,

In the condition  blink display, input Max. Rated output of Load cell.

※ Rated output (R.O) of Load cell is displayed the Load cell label or Calibration Certificate.

Under this step, input Max. Output rate(mV) of load cell.

The Output rate is stated on “Test report” or “Label” and please input this value with No. keys. Normally, the Output rate will be 4digits under Zero, then input 4digits and input “0” additionally and make full 6digits.

After press  Key and then save, it is calculated weight calibration the inside.

#### ※ Caution



Due to some variation between “State output rate” and “Real Output rate” of load cell, there might be some weight difference after finishing calibration.



If you want to make more precise weighing process, please measure real output rate of load cell and input the measured value.

Then the weight measurement will be more precise than before.

If calculated value is abnormal, it will be display , and then return to default of simulation Calibration Mode.

If calculated value is normal, it will be display  and SPAN value.

In the condition , after check SPAN value and press  Key.

In the condition , down “Test Weight”, Press  Key and make default.

※ After make default, please return Calibration Lock S/W “ON”.

## 5-3 F-Function Setting

### 5-3-1 Enter F-Function Mode

Please you have to press at the start



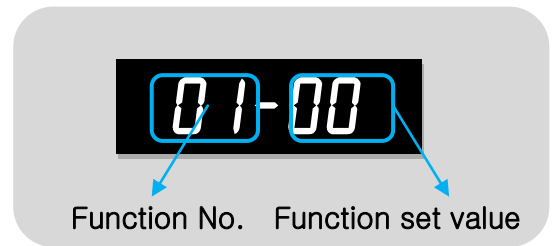
Key continuously 4 times.



In the condition



Key press 1 time.



After will be display about 2 second,



In the condition, blink “—” display



Whenever press Key, the Function No. will be increased one by one.

### 5-3-2 F-Function No. Change



In the condition display, if you move to certain function No., press f-function no. with



Key and



Key,



And press Key then, you can call “Fxx-xx” directly under F-Function Mode.

### 5-3-3 F-Function Set value Change



After you move Function set value to want, press



Key and



Key.



And press Key. If you don't press, the new set value will not be memorized.



Then display will be, and set value will save.

### 5-4. F - Function List

■ **General Function Setting** (“●” Factory default set value)

<b>Save Weight Data</b>			
<b>F01</b>	●	0	Save not Weight Data
		1	Save Weight Data
<b>Weight-Back up selection</b>			
<b>F02</b>	●	0	Normal Mode
		1	Weight Back up Mode
<b>Motion Band Range setting</b>			
<b>F03</b>	2	1	This is set “Steady” acceptable range of weighing part. If there is vibration on weighing part, you can set this function and reduce the vibration effect on weighing process. 0 : Weak vibration ~ 50 : Strong Vibration
		9	
<b>Zero Tracking Compensation Range setting</b>			
<b>F04</b>	2	0	Due to external causes(Temperature, wind, and dust), there are small weight difference, indicator will ignore the weight difference and display Zero. For this compensation function, indicator will estimate the weight difference is over the set range during fixed time period. If there is large weight difference over set range within fixed time period, the “Zero” is breaking and will find new zero point.
		9	
<b>Auto Zero Range setting</b>			
<b>F05</b>	00	00	Within the “Auto Zero” range, weighing part is steady, indicator will display current weight as “Zero” If the weighing part is not “Steady”, indicator will display current weight. (Auto Zero Range : ± Set value + weight unit)
		99	
<b>Digital Filter setting</b>			
<b>F06</b>	2	0~9	Weak vibration      Strong Vibration 0 (Weak)      ~      9 (Strong)
<b>Zero / Tare key Operation mode selection</b>			
<b>F07</b>	●	0	Activate when “Steady” condition, only
		1	Activate when “Not Steady” condition
<b>Zero key Operation Range selection</b>			
<b>F08</b>		0	Activated within 2% of Max. Capacity
		1	Activated within 5% of Max. Capacity
	●	2	Activated within 10% of Max. Capacity
		3	Activated within 20% of Max. Capacity
		4	Activated within 50% of Max. Capacity
		5	Activated within 100% of Max. Capacity
		6	Non limited.
<b>Tare key Operation Range selection</b>			
<b>F09</b>		0	Activated within 10% of Max. Capacity
		1	Activated within 20% of Max. Capacity
	●	2	Activated within 50% of Max. Capacity
		3	Activated within 100% of Max. Capacity



<b>“HOLD” Mode selection</b>						
<b>F10</b>	●	0	Sample Hold : Hold current weight and hold on display. (When input Hold Key)			
		1	Peak Hold : Measure Max. weight value and hold on display.			
<b>External Input selection</b>						
<b>F11</b>	<b>Sat value</b>	<b>Input 1</b>	<b>Input 2</b>	<b>Input 3</b>	<b>Input 4</b>	
		0	Zero	TARE	TARE RESET	INPUT
	●	1	Zero	HOLD	HOLD RESET	INPUT
		2	Zero	TARE /RESET	PRINT	INPUT
		3	Zero	HOLD/RESET	PRINT	INPUT
		4	Zero	TARE /RESET	GRAND-Total	INPUT
		5	Zero	HOLD/RESET	GRAND-Total	INPUT
		6	Zero	PRINT	GRAND-Total	INPUT
		7	Zero	TARE	TARE RESET	PRINT
		8	Zero	HOLD	HOLD RESET	PRINT
※ When input Key setting No.7 and 8, If you are power “ON” during press INPUT Key, It will enter SETUP Mode.						
<b>“Steady” condition check time setting (Only for F03)</b>						
<b>F12</b>	3	1 ┆ 9	During the set time period, estimate weighing part’s “STEADY” condition and display. If you set small value, indicator will take “STEADY” fast, if you set large value, indicator will take “STEADY” slow.			
<b>Display Up-Date rate selection (per 1sec)</b>						
<b>F13</b>	●	1	About 60 times			
		2	About 30 times			
		3	About 20 times			
		3	About 15 times			
		5	About 10 times			
		6	About 6 times			
		7	About 3 times			
		8	About 2 times			
		9	About 1 time			
<b>When display Unpass or OL, Weight display setting (Blink)</b>						
<b>F14</b>	●	0	Not Use			
		1	Use			
<b>Equipment No. setting</b>						
<b>F18</b>	01	01 ┆ 99	Equipment No. setting with No. key. (01 ~99 settable)			
<b>“Key TARE” selection</b>						
<b>F19</b>	●	0	Key Tare Not Use			
		1	Key Tare Use			

■ **Communication Mode setting (Serial Port No.1 – Standard installed port)**

<b>Parity Bit Selection Mode</b>			
<b>F30</b>	<input checked="" type="radio"/>	0	DATA Bit (8 Bit)      STOP Bit (1 Bit)      Parity Bit (Non)
	<input type="radio"/>	1	DATA Bit (7 Bit)      STOP Bit (2 Bit)      Parity Bit (Non)
	<input type="radio"/>	2	DATA Bit (7 Bit)      STOP Bit (1 Bit)      Parity Bit (Even)
	<input type="radio"/>	3	DATA Bit (7 Bit)      STOP Bit (1 Bit)      Parity Bit (Odd)
	<input type="radio"/>	4	DATA Bit (8 Bit)      STOP Bit (2 Bit)      Parity Bit (Non)
	<input type="radio"/>	5	DATA Bit (8 Bit)      STOP Bit (1 Bit)      Parity Bit (Even)
	<input type="radio"/>	6	DATA Bit (8 Bit)      STOP Bit (1 Bit)      Parity Bit (Odd)
<b>Serial Communication Speed selection</b>			
<b>F31</b>	<input type="radio"/>	0	2,400bps
	<input type="radio"/>	1	4,800bps
	<input checked="" type="radio"/>	2	9,600bps
	<input type="radio"/>	3	14,400bps
	<input type="radio"/>	4	19,200bps
	<input type="radio"/>	5	28,800bps
	<input type="radio"/>	6	38,400bps
	<input type="radio"/>	7	57,600bps
	<input type="radio"/>	8	76,800bps
	<input type="radio"/>	9	115,200bps
<b>Serial Port setting – Standard installed Serial Port</b>			
<b>F35</b>	<input checked="" type="radio"/>	0	Data Transference Mode(Connect to External Display or P.C)
	<input type="radio"/>	1	Print Mode
<b>DATA Transference Mode selection (Under F32-00, F35-00 setting, only)</b>			
<b>F36</b>	<input checked="" type="radio"/>	0	Stream Mode : Weighing Data will be transferred continuously.
	<input type="radio"/>	1	Steady Mode : When Weight is Steady, one time Data Transference.
<b>DATA Transference Mode Format selection (Under F32-00, F35-00 setting, only)</b>			
<b>F37</b>	<input checked="" type="radio"/>	0	Format 1.
	<input type="radio"/>	1	Format 2. (Format 1 + ID No.)
	<input type="radio"/>	2	CAS Format
<b>Print Setting Selection</b>			
<b>F38</b>	<input checked="" type="radio"/>	0	Hand print (when input key pad, out print)
	<input type="radio"/>	1	When Weight is steady over than Empty Range, Automatically print.
	<input type="radio"/>	2	Over than Empty Range, Steady Lamp is “ON”, Automatically Print.

■ **Print Mode Setting**

<b>Weight Unit selection</b>			
<b>F41</b>	<input checked="" type="radio"/>	0	Kg
	<input type="radio"/>	1	g
	<input type="radio"/>	2	t
<b>Print Format selection (If you install on Standard Serial Port)</b>			
<b>F42</b>	<input checked="" type="radio"/>	0	<b>Single Print</b> Date, Time, S/N, ID No. Weighing Data will be print
	<input type="radio"/>	1	<b>Continuous Print</b> Serial No. and Weight will be printed continuously.

GRAND Total Data Delete selection			
F44	●	0	Not use Automatically Delete Mode
		1	Automatic Delete Mode After GRAND Total Print, Automatically Deleted.
Paper Withdraw Rate setting (After GRAND Total Print)			
F45	3	0~9	Whenever set value increased, 1line will be added.
Paper Withdraw Rate setting (After Single/Continuous Print)			
F46	3	0~9	Whenever set value increased, 1line will be added.
Printing Language Selection (If you install on Standard Serial Port)			
F47	●	0	KOREAN
		1	ENGLISH
Minus(-) symbol Print selection			
F49	●	0	Print minus(-) symbol, if the weight is minus(-).
		1	Ignore minus(-) symbol
Tracking Mode setting			
F50	●	0	Not use(Recommend))
		1	Due to Temperature, indicator will compensation the weight difference(Must be special environment)

#### ■ Other Setting



EMPTY Range setting		
F80	X.X.X.X.X. X.	You can set "EMPTY" Range. Within set range, indicator will not display current weight and just display "Zero". "0.000" setting : When Net Zero, "Zero" status lamp and Near Zero relay will be output. "0.190" setting : Within 190, "Zero" Status lamp and Near Zero relay will be output.
SPAN Calibration Value Check		
F89	X.X.X.X.X. X.	<b>Span Calibration Value Check</b> ※ If you have difficulty to process Calibration again, the best way to matching the net weight and display weight is doing Calibration process once again.
TIME check / Change		
F90	Check Current TIME data or you can Change to new date.	
DATE Check / Change		
F91	Check Current DATE data or you can Change to new date.	

※ As Special Function with F80, F89, F90, F91, it only can by F-Function No change.



[Refer 5-3-2 F-Function No. change]

## 5-5. TEST MODE

### 5-5-1 Enter Test Mode

Please you have to press at the start  Key continuously 4 times. Then, , press Key 1 time again.

### 5-5-2 ANALOGUE VALUE Test Mode1

In the condition  if you press  Key,  
You can check analogue value (0~1,040,000).


If you press  Key,  Key,  Key, you can check analogue value by move digits.



.On the optimal position, stop pressing  Key, and move back to previous mode.

※ If the analogue value is unstable, or there is no change although pressing or loading some force on/in weighing part, please check load cell, load cell cable, connector, A/D board.

### 5-5-3 ANALOGUE VALUE Test Mode2

In the condition , if you press  Key,  
You can check the rate of change analogue's value.


Press  Key, and analogue value is Zero.



Press  Key and  Key, you can check analogue value by move digits.

On the optimal position, stop pressing  Key, and move back to previous mode.

### 5-5-4 Key Test Mode

In the condition , press  Key and then enter KEY – TEST MODE.

Press  Key, it will be displayed  and press  Key, will be displayed .

And press  Key, will be displayed .

On the optimal position, stop pressing  Key, , and move back to previous mode.

※If you have problem Key for remote control, please contact to distributor or Head office for after service(A/S).

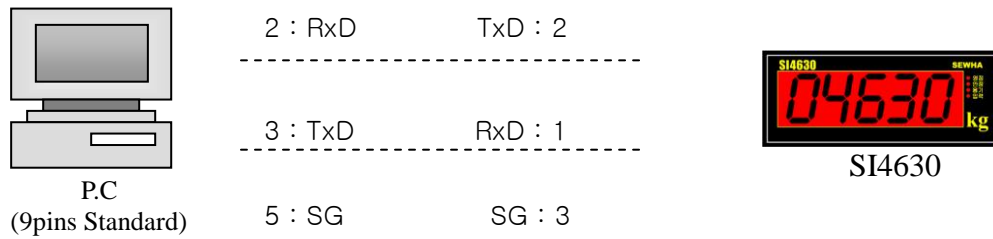
## 6. INTERFACE

### 6-1. Serial Interface (RS-232C, Standard install Serial Port)

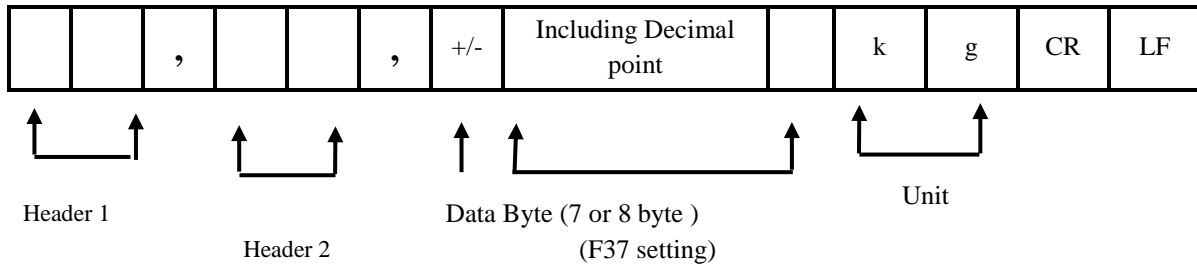
RS-232C Serial Interface is sensitive/weak for electric Noise.

So, please isolate with AC power cable and use shield cable to reduce the electric noise effect.

#### 6-1-1. Communication with PC(Personal Computer) or Other devices

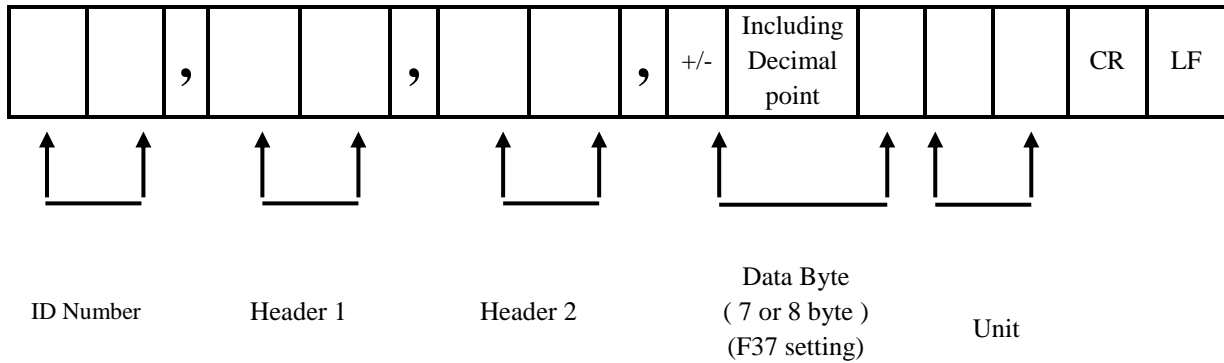


#### 6-1-2. Data Format(1) : ID Number will not be transferred. (Refer “F-function 37”)



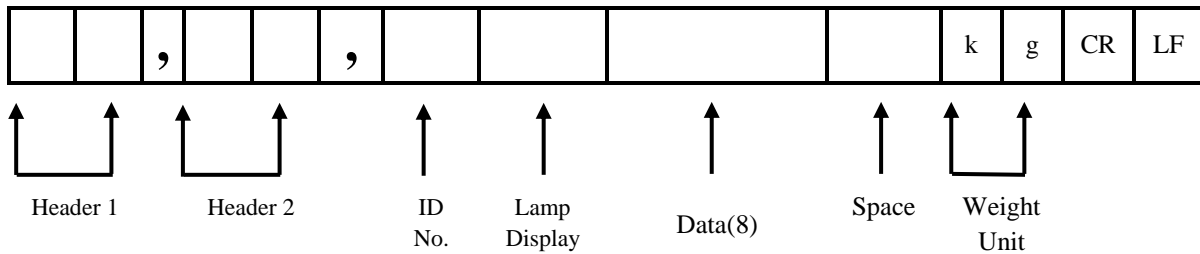
- ①. Header 1. : OL : Over Load, Under Load  
ST : Display weight “Steady”  
US : Display “Un-Steady”
- ②. Header 2. : NT : Net-Weight  
GS : Net-Weight, under TARE
- ③. Data Bit(Number) 2B(H) : “+” Plus  
2D(H) : “-” Minus  
2D(H) : “ ” Space  
2E(H) : “.” Decimal Point
- ④. Unit : kg, g, t

**6-1-3. Data Format(2) : ID Number + Data Transference (Refer “F-function 18,37)**



- ①. Header 1. : OL : Over Load, Under Load  
ST : Display “Steady”  
US : Display “Un-Steady”
- ②. Header 2. : NT : Net-Weight  
GS : Net-Weight, under TARE.
- ③. Data Bit(Number) 2B(H) : “+” Plus  
2D(H) : “-“ Minus  
2D(H) : “ ” Space  
2E(H) : “.” Decimal Point
- ④. Unit : kg, g, t

**6-1-4. Data Format(3) : CAS “CI5101A” Data Transference) – CAS 22byte Format**



- ①. Header 1. : OL : Over Load, Under Load  
ST : Display “Steady”  
US : Display “Un-Steady”
- ②. Header 2. : NT : Net-Weight  
GS : Net-Weight, under TARE.
- ③. Lamp Display : Current Lamp Condition (ON/Off Data)

## Digital Weighing Indicator SI 4630

Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
1	Steady	1	Hold	Print	Gross Weight	Tare	Zero

④. Data Bit(Number) 2B(H) : “+” Plus

2D(H) : “-“ Minus

2D(H) : “ ” Space

2E(H) : “.” Decimal Point

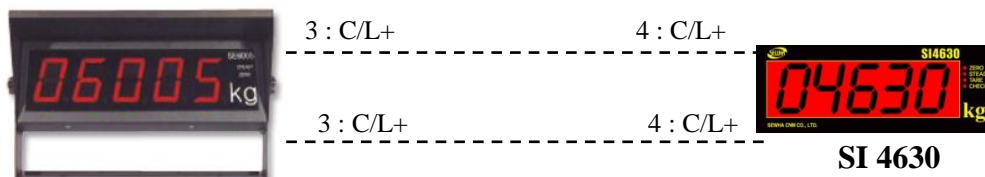
⑤. Unit : kg, g, t

### 6-2. Current Loop Interface

“Current Loop” Interface is stronger for Electric Noise than “RS-232C” interface.  
So, it can be used for long distance communication.(About 100m long distance).

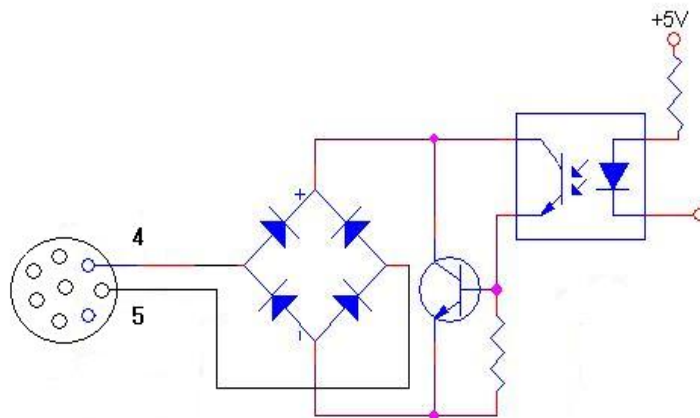
※ **Current Loop Interface supports, up to 9,600 Communication Speed, only.**

#### 6-2-1. Communication with Other Devices (Remote Display / External Display)



(External Display)

#### 6-2-2. Current Loop Circuit




#### 6-2-3. DATA Format

As same as “RS-232C” Interface.

## 7. Error & Treatment

### 7-1. Load Cell Installation

Error	Cause	Treatment	Remark
Weight Value is unstable	1) Load cell broken 2) Load cell isolation resistance error 3) Weighing part touches other devices or some weight is on the weighing part 4) Summing Board Error	1) Measure input/output resistance of Load cell. 2) Measure Load cell isolation resistance 3) Check attach point with other devices. 4) Replacement Summing Board	1) Input Resistance of “EX+” and “EX-“ is about 350Ω~450Ω. 2) Output Resistance of “EX-“ and “EX+” is about 350Ω. 3) Isolate Resistance is more than 100Ω
Weight Value is increased regular rate, but not return to “Zero”	1) Load cell Error 2) Load cell connection Error	1) Check Load cell connection 2) Measure Load cell Resistance	
Weight Value is increased to under Zero	Load cell Output wire (SIG+, SIG-) is switched	Make wire correction	
“UN PASS” display	Load cell broken or Indicator connection Error	Load cell Check Load cell connection Check	
	Power was “ON” when some weight is on the load cell?	1) Press  Key and Check weight. 2) Remove weight on the Load cell	
“OL” or “UL” display	1) Load cell broken or Indicator connection Error 2) Loading over than Max. Capacity	1) Load cell Check 2) Load cell connection Check 3) Remove over loaded weight	

### 7-2. Calibration Process

Error	Cause	Treatment
Err 01	When Max.capacity/digit value is over 20.00	Re-input the Max. Capacity, less than 20.00 (Max. Capacity / Digit)
Err 04	Standard weight value is over than Max. Capacity	Re-input Standard weight value with Number keys, under Max. Capacity
Err 05	Standard weight value is less than 10% of Max. Capacity	Re-input Standard weight value with Number keys, more than 10% of Max. Capacity



Err 06	1. Amp. Gain is too big 2. Sig+ and Sig- wire connection error 3. Test weight is not loaded	Check standard weight's weight with set value. If there is difference between set value and real weight, please re-input the value (set value is too small)
Err 07	1. Amp. Gain is too small 2. Sig+ and Sig- wire connection error 3. Test weight is not loaded	Check standard weight's weight with set value. If there is difference between set value and real weight, please re-input the value (set value is too big)
Err 08	Under "F-function" model, set value is "N.A"	Check the correct value and re-input
Err A	When there is continuous vibration on the weighing part, indicator cannot process calibration any more.	- Find vibration cause and remove - Load cell check - Load cell cable and connecting condition check

### 7-3. Digital Weighing Indicator

Display	Cause	Treatment
"CELL-Er" or "--OL--"	1. Load cell Error 2. Load cell cable Error 3. Load cell connection Error 4. A/D Board Error	1. Under "TEST" mode 1, check analogue value. If you can not get any analogue value or there is no change although adding load, please check load cell, load cell cable, connection conditions first. 2. Replace another load cell, and check the indicator condition. If you have same problem, please replace new indicator and check A/D board error.
"Un-Pass"	1. Power is ON, when some materials are on weighing part. ※ Under "Normal Mode", if there are more than 20% loading of Max. capacity, "Un-Pass" display will be appeared and indicator will stay until removing the load.	1. If you set "Normal Mode", please check weighing part empty or not before turn on the power. If there are some materials in/on weighing part, please remove those materials and turn on the power.
"A-Err"	Analog B/D Error ※ Power is ON, When DISPLAY for Initial is becoming responding slower.	1. Please contact to distributor or Head office.
Whenever power is ON, "Err-0" or "SET"	MEMORY Component Problem	1. Please contact to distributor or Head office.

<b>WARRANTEE CERTIFICATION</b>		
<p>This product is passed “Sewhacnm”’s strict quality test.</p> <p>If there is defect of manufacturing or abnormal detection within warrantee period, please contact our Agent or Distributor with this Warrantee certificate.</p> <p>Then, we will repair or replace free of charge.</p>		
<b>WARRANTEE CLAUSE</b>		
<p><b>1. The Warrantee period, we can guarantee, is one(1) year from your purchasing date</b></p> <p><b>2. Warrantee Exception Clause</b></p> <ul style="list-style-type: none"> <li>- Warrantee period is expired.</li> <li>- Any kinds of Mal-function or defection caused by Modification or Repair without Sewhacnm’s permission.</li> <li>- Any kinds of Mal-function, Defection, or External damage, caused by operator</li> <li>- Any kinds of Mal-function, Defection, caused by using spare part from Non-Authorized Distributor or Agent.</li> <li>- Any kinds of Mal-function, Defection, caused by not following Warnings or Cautions mentioned on this manual.</li> <li>- Any kinds of Mal-function, Defection caused by “Force Majeur”, like Fire, Flood.</li> <li>- Without presentation of this “<b>Warrantee Certification</b>”.</li> </ul> <p><b>3. Other</b></p> <ul style="list-style-type: none"> <li>- Any kinds of “Warrantee Certification” without authorized Stamp is out of validity</li> </ul>		
<p>Manufacturer <b>SEWHACNM Co.,Ltd.</b> 302, 102Dong, Ssangyong 3<sup>rd</sup>, Bucheon Techno Park, Samjeon-Dong, Ojeong-Gu, Bucheon City, GyungGi-Do, KOREA</p> <p>E-mail : info@sewhacnm.co.kr Website: http://www.sewhacnm.co.kr <b>Made in KOREA</b></p>	<b>Product</b>	Digital Weighing Indicator
	<b>Model</b>	SI 4630
	<b>Serial No.</b>	
	<b>AUTHORIZED STAMP</b>	