

# A6-SG Load cell controller Operating Manual

Thank you for purchasing this controller, please read instructions before starting use of the controller.

## Safety Tips:

- 📖 Turn off power before installation or removal of controller
- 📖 Do not use under direct sunlight (ambient temperature 0 to +60 degrees Celsius)
- 📖 Properly ground controller (grounding resistance <10 ohms) · Do not share common ground with other large electrical loads. Unground or wrongly grounding may cause electric shock or malfunction.
- 📖 When using high-precision weighing controller, the sensors' copper plate and controller must be grounded.

## Product Description

A6-SG The load cell controller is a high-precision measurements (24bit A / D) up to 6-digits display having a variety of input and output (I / O) functions with installation depth (120mm) only · fullfill distribution panel, mechanical equipment etc. needs of compact size.

Main use in weight display and control with 7 kinds of comparison mode control. To solve load cell sensor "zero drift" and "value drift" characteristics it is designed having "zero tracking" and "unstable judge" functions · greatly improve on accuracy and stability compare to general load cell instruments. A6-SG is absolutely developed for used with all high accuracy load cell sensor.

This instrument provides 4 external control input (standard feature) and a variety of outputs: 4 relay outputs, RS-485 communication interface, AO analog output · flexible option choices for user to select according to requirement.

## Features

### ◎ 7 weighting comparison mode for control process

- ◆ PUTIN: General input measurement
- ◆ LOSE: General dispense measurement
- ◆ CHECK-1: Comparison of output value
- ◆ CHECK-2: Comparison when value exceed set Z.BAND
- ◆ CHECK-3: Comparison only exceeding Z. BAND + activating signal
- ◆ PEAK-1: Peak hold (manual reset)
- ◆ PEAK-2: Peak hold (automatic reset)
- ◆ PEAK-3: Peak hold (automatic reset) (average value)

### ◎ Meet variety display application needs.

- ◆ Switch between different display screen: (By CH.DSP Function)
- Mn: Net/GROSS Weight
- Cn: Total number of measurements
- An: Total measurement values
- Pk: Peak hold
- ◆ LED lights to indicate each status
- ZERO, MD, NET, COM, EC11~EC14, RL1~RL4

### ◎ 2 panel key and 4 external control input (E. C. I.)

- ◆ Multiple function for different applications
- OFF Off all function
- ZERO Value zero
- TARE Tare
- NTGS Switch between NT/GS
- MA M+ accumulated value
- M- M-previous accumulated value
- MC Clear total accumulated weight and number
- CLRT Clear Tare
- START Batch Start
- END Batch End
- CH.DSP Switch display
- D.HOLD Datd Hold
- P.TARE Preset Tare Value

### ◎ 2 flexible calibration methods

- ◆ 2-points weight calibration mode
- Calibration points can be adjusted independently
- Enter desire value with reference point
- ◆ Voltage calibration mode
- According to load cell output mV/V specification.
- According to maximum weight of the load specifications
- Memory of system voltage zero point
- ◆ Restore factory default setting function

### ◎ Variety of output modules

- ◆ 16 Bit analog output module:
- 3 selectable outputs 0~5V/0~10V/4-20mA
- ◆ RS485 communication interface
- Modbus RTU Mode

### ◎ High-performance A/D convertor

- ◆ 24Bit A/D convertor
- ◆ Measuring range -1mV~35mV (Excite power: 5V)
- ◆ High sensitive input: 0.3μV/D
- ◆ Adjustable sampling frequency: 6.25Hz~100Hz
- ◆ With two sets of multi-stage digital filter for efficient noise canceling.

### ◎ 4 relay outputs (Relay1~Relay4)

- ◆ Multiple output functions selection for different applications
- OFF Off all function
- ZBAND Output when within Zero Band
- HI Output when exceeds set value (HI)
- OK Output when between the set value (HI, LO)
- LO Output when below the set value (LO)
- SP1 Output when below the set value (Sp1)
- SP2 Output when below the set value (Sp2)
- SP3 Output when below the set value (Sp3)
- FINSH Output when complete set batch value
- UART Control output by Rs485 communication

### ◎ Self-test function to convenience for the site maintenance

## Applications

- Packaging machinery weighing measurement control
- Different product weight determine control
- The weighing of gas tank management system
- Truck weighting management system
- Weighing of chemical tank management system
- Test Equipment weight management System

## Detailed Specifications

### ◎Input Specifications:

Input Sensitivity: 0.3uV/D  
 Input voltage range: -1mV~35mV  
 Excite power for loadcell : DC 5V± 5%  
 Excite power current:60mA (Maximum 4 350Ω Load Cell)  
 Temperature coefficient: <50PPM/°C  
 Nonlinearity: ≤ 0.01%  
 Input noise: 12nV/√Hz  
 Input impedance: 69KΩ  
 Internal resolution: 24Bit  
 External maximum resolution: ±999999  
 Conversion speed: Max 100Hz

### ◎Display Specifications:

LED Display: 6 digits 0.5 "(12.5mm) high  
 brightness 7 segment  
 Relay Indicator light: high-brightness square red LED  
 ECI Indicator light: high-brightness square green LED  
 ZERO、MD、NET light: high-brightness square red LED  
 Communication COM Indicator light : High-brightness square  
 yellow LED  
 Display Range: -99999~999999  
 the decimal point set: 0、0.0、0.00、0.000  
 Overload display: - OL-Display

### ◎Output Specifications:

Control Relay:RL1~RL4, FORM-A, 1A/230Vac, 2A/115V  
 Up to 9 output functions

### ◎External control input(ECI):

Input mode : 4 contact input、ONE-SHOUT Control  
 Up to 11 input functions

### ◎Analog output specifications:

Accuracy: ≤±0.1% F.S.、16Bit DA Converter  
 Output signal: Selectable0-5V、0-10V、4-20mA  
 Ripple: ≤±0.1% F.S.  
 Response time: ≤200mS(10~90%)

### ◎Communication output specifications:

Communication format:Modbus RTU Mode  
 Baud rate :Selectable 9600/19200/38400/57600 bps  
 Data format:Selectable 8,N,1/8,n,2  
 Address:Selectable1~255

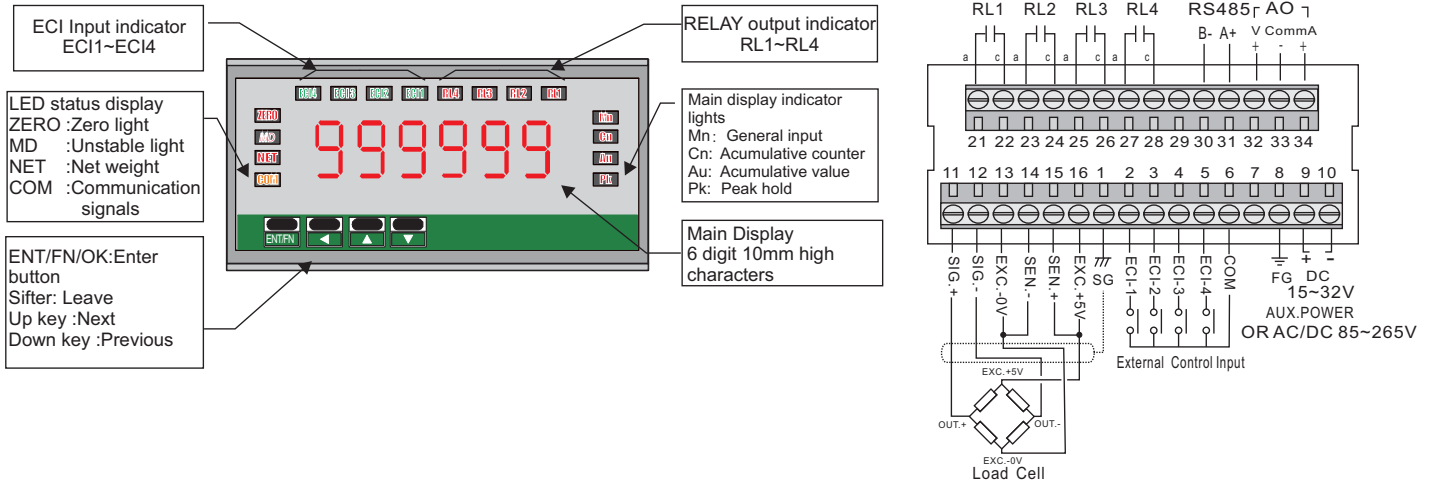
### ◎General Specifications:

AUX.Power:ADH:AC85~264;DC 10V ~ 300V  
 ADL:AC/DC 20~65V  
 Operating Temperature:0~ 60°C  
 Operating Humidity :< 85 %RH (no-condensing)  
 Dimensions: 96mm(W)x48mm(H)x120mm(D)  
 Installation: Panel mounting  
 Panel Size: 92mm(W)x44mm(H)  
 Weight: 250g

## Seven-segment display (LED) display font table

A	b	C	d	E	F	G	H	i	J	K	L	M	n	o	p	q	r	S	t	U	v	W	X	y	Z
À	á	â	ã	ä	å	æ	ç	è	é	ê	ë	ì	í	î	ï	ð	ñ	ò	ó	ô	õ	ö	÷	¸	¸
1	2	3	4	5	6	7	8	9	/	.															
ı	2	3	4	5	6	7	8	9	ı	.															

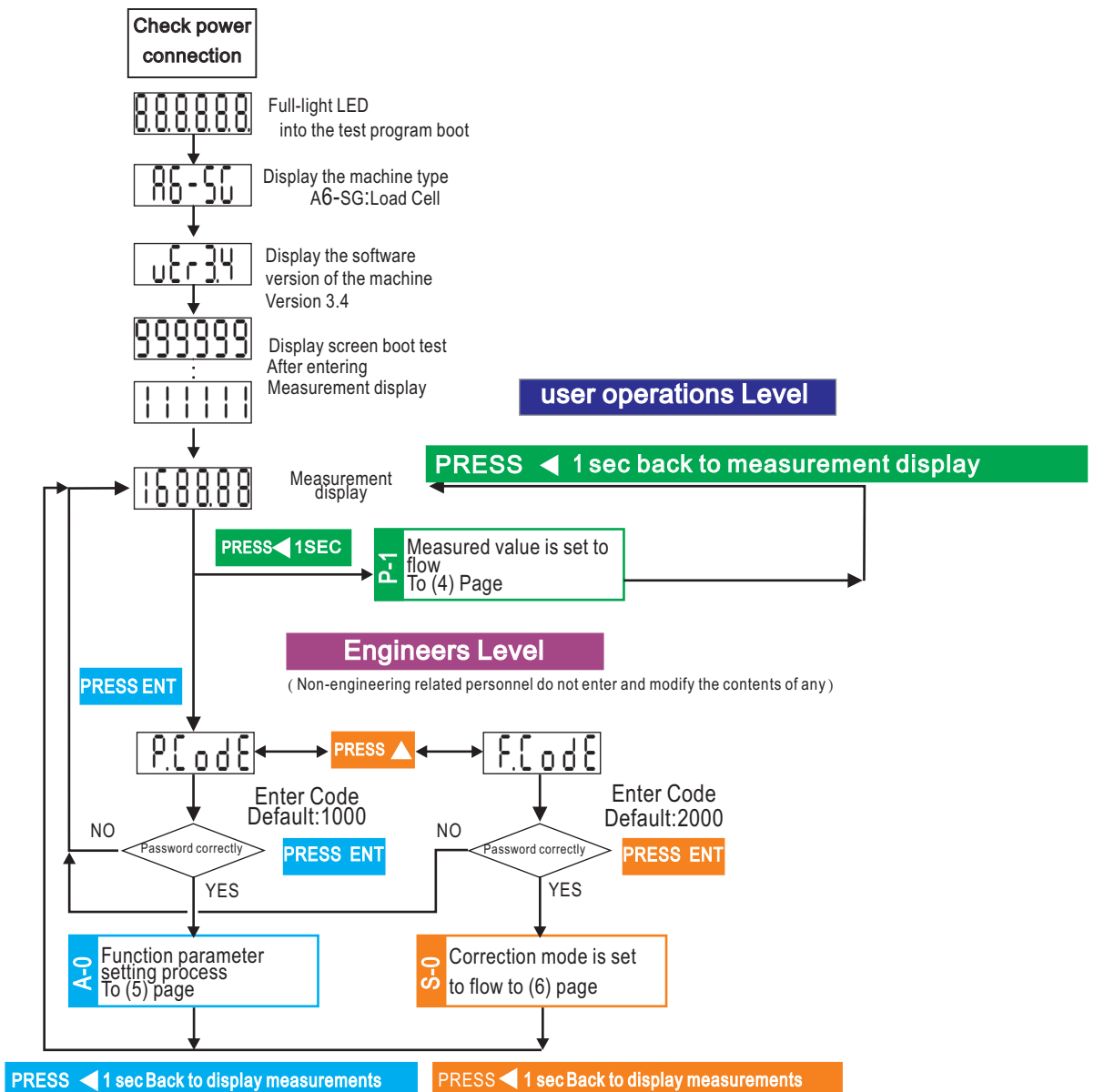
# Panel display instructions



# Operation flow chart

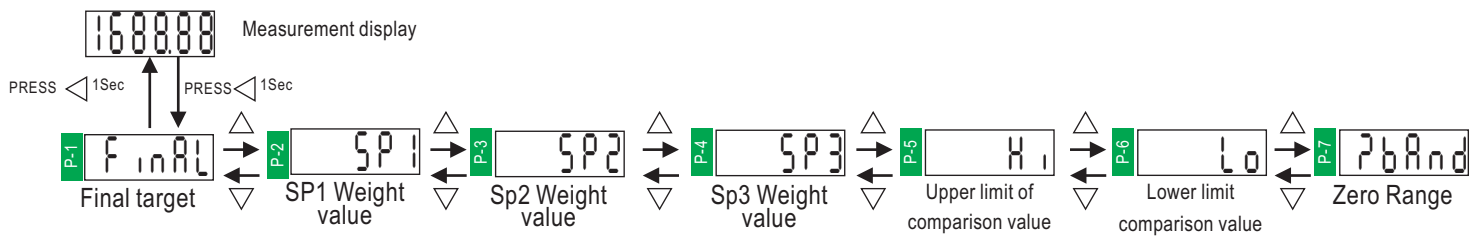
Please read the instructions before formal operation:

- 1.Instrument setting is divided into "user level " and "engineers level ".
- 2.Do not allow non-engineering personnel to modify within "Engineer level ",to avoid system anomalies caused by improper setting or damage.
- 3.Please read the process description below fully, understand the process flow chart, set the appropriate parameters according to needs.



## 2.1 User operations level Operation process and display

### Measurement values parameter setting process



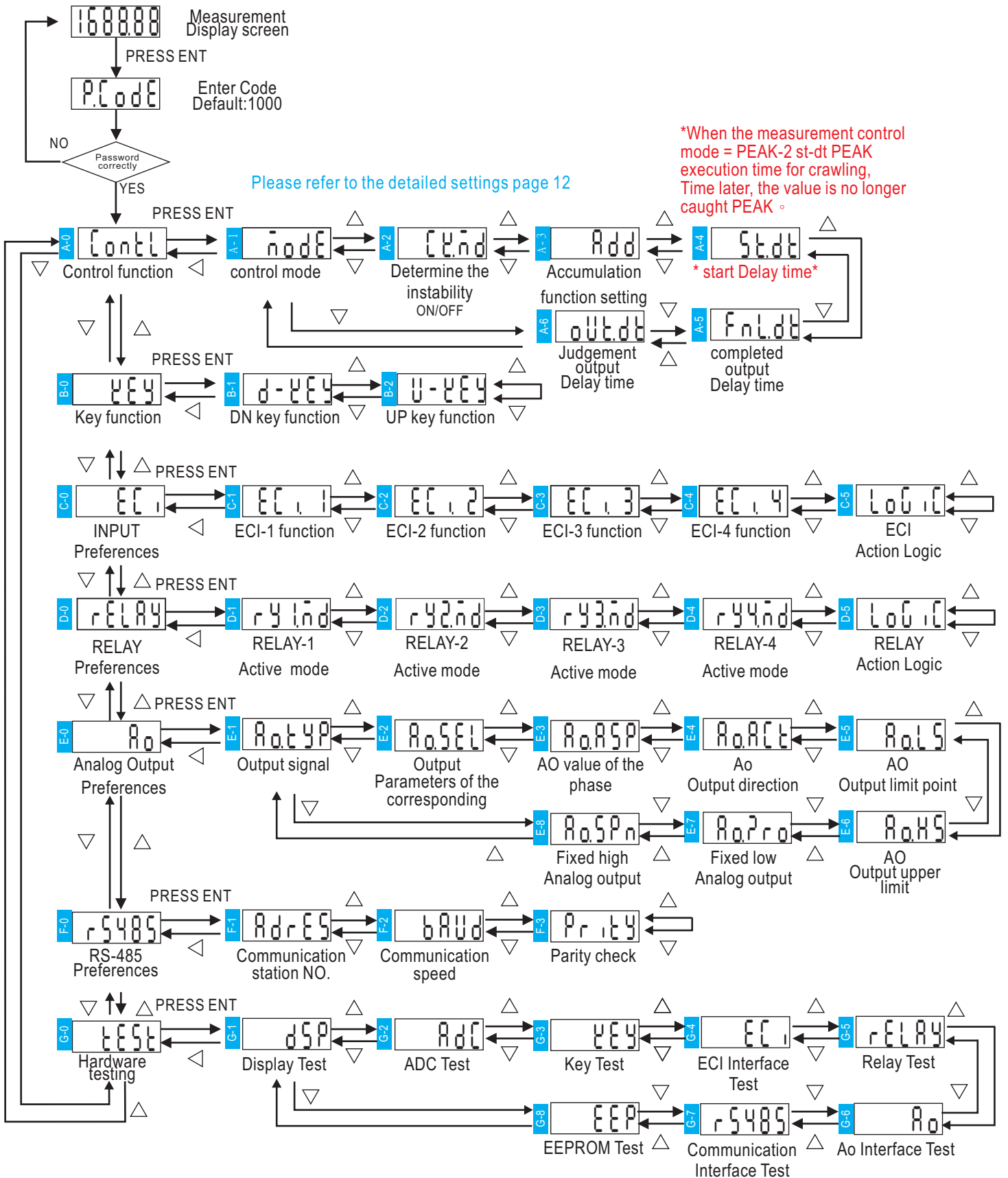
### Parameter setting flow chart

\*\* The measurement Display screen, Press <1 Sec Into the measured value parameters display and modify

Screen	Parameter name and scope	Modify the parameters and processes description	Function
P-1 F in RL △↓↑▽	Final target 0~999999	PRESS ENT Key into Enter the desired measurement set Final target:0~999999 Press ENT to leave the setup is complete	On the timing of parameter setting and content Please refer to measurement model description(P.9~P.11) 1.PUTIN Mode 2.LOSEOUT Mode 3.CHECK-1 Mode 4.CHECK-2 Mode 5.CHECK-3 Mode 6.PEAK-1 Mode (Manual restore) 7.PEAK-2 Mode(Auto restore) 8.PEAK-3 Mode(Auto restore)average value
P-2 SP1 △↓↑▽	SP1 Weight value 0~999999	PRESS ENT Key into Set the input First control settings:0~999999 Press ENT to leave the setup is complete	
P-3 SP2 △↓↑▽	SP2 Weight value 0~999999	PRESS ENT Key into Set the input Second paragraph of the control settings:0~999999 Press ENT to leave the setup is complete	
P-4 SP3 △↓↑▽	SP3 Weight value 0~999999	PRESS ENT Key into Set the input Third paragraph of the control settings:0~999999 Press ENT to leave the setup is complete	
P-5 H L △↓↑▽	Upper limit of comparison value 0~999999	PRESS ENT Key into Set the input Upper limit comparison value:0~999999 Press ENT to leave the setup is complete	
P-6 L o △↓↑▽	Lower limit comparison value 0~999999	PRESS ENT Key into Set the input Lower limit comparison value:0~999999 Press ENT to leave the setup is complete	
P-7 Z b Rnd △↓↑▽	Zero Range 0~999999	PRESS ENT Key into Set the input Value of zero range:0~999999 Press ENT to leave the setup is complete	

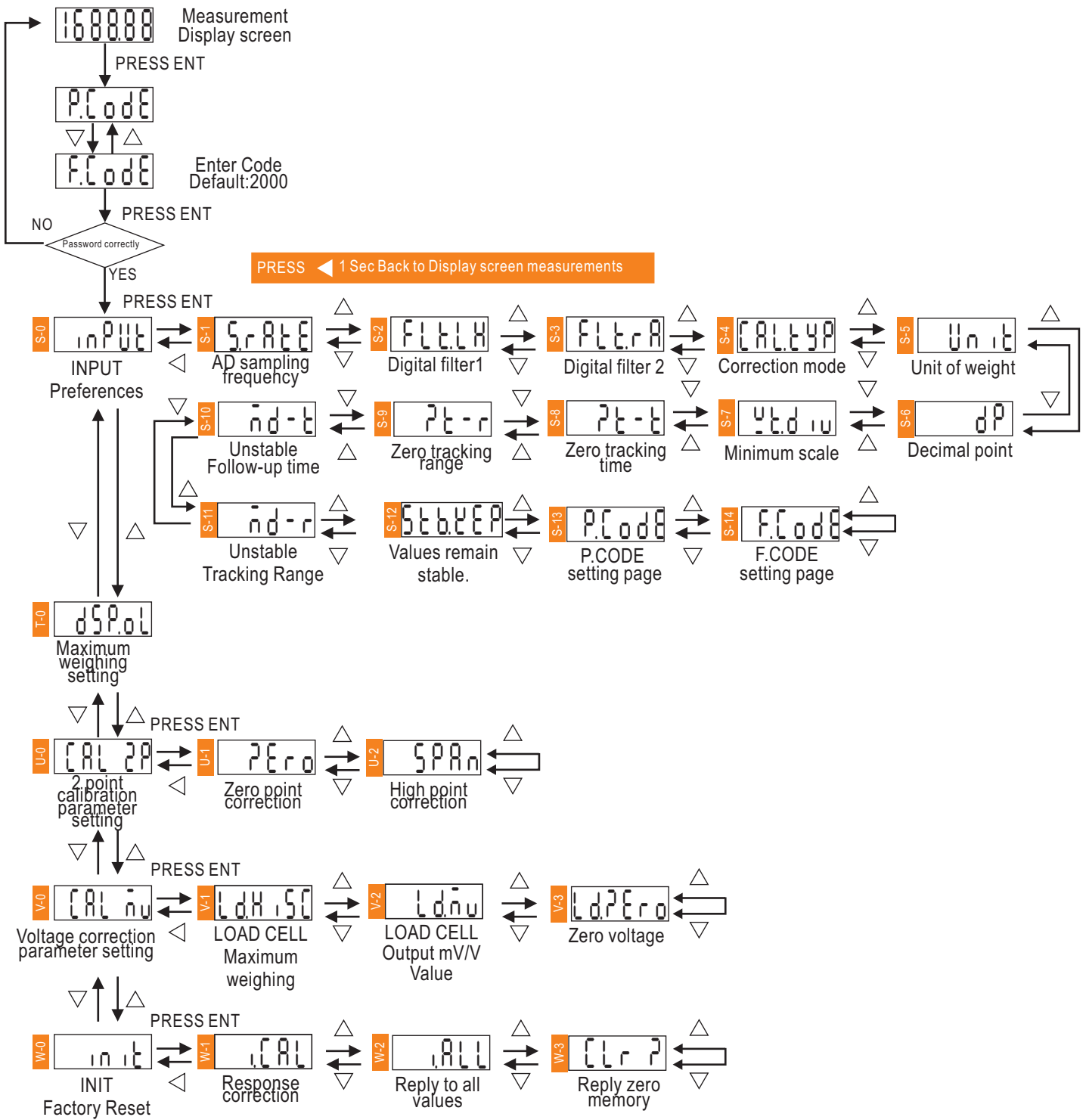
# 2.2 Engineers level Operation process and display

## Function parameter setting process



# 2.3 Engineers setting level Operation process and display

## Calibration mode setting process



## INPUT Parameter Description Table

Items	Function	Setting Description	Default
1.S.RATE	Sample Rate AD Sampling frequency	Options:100Hz/50Hz/25Hz/12.5Hz/6.25Hz selectable If set the sampling frequency slower, the reaction will be slower,display more stable	25Hz
2.FLT.LH	Fillert Leach Digital filter 1	Options:FH L1~FH L6 selectable Digital filter 1, the greater the value, the reaction will be slower,display more stable	FH L1
3.FLT.RA	Fillert Rate Digital filter 2	Options:FR L1~FR L5 selectable Digital filter 2, the greater the value, the reaction will be slower, display more stable	FR L1
4.CAL.TYP	Calbration Type Correction mode	Options:2PT/MV selectable 2PT: Two weight point calibration mode Load cell output according to site, set the high point and zero point to reference weight for calibration. MV: Analog voltage calibration mode Header in appearance to an analog voltage signal before the correction, when used according to the specifications input mV / V value and the largest weighing, and zero input voltage value °	2PT
4.UNIT	Unit of weight	Options:kg/lb/t/g selectable (The instructions for the selection of units, no unit conversion functions)	KG
5.DP	Decimal Point	Options:0/0.0/0.00/0.000 selectable	0.000
6.WT.DIV	Divide Minimum scale	Options:1/2/5/10/20/50 selectable Minimum scale value for each hop	1
7.ZT-T	Zero Track Time	00.0 ~10.0 Sec	1.0 Sec
8.ZT-R	Zero Track Range	00.0 ~ 10.0 D The scope of the actual track=This parameterxMinimum scale(WT.DIV)	0.5D
9.MD-T	Motion Detect Time Follow-up time instability	00.0 ~10.0 Sec	1.0 Sec
10.MD-R	Motion Detect Range Range of follow-up time instability	00.0 ~ 10.0 D The scope of the actual track=This parameterxMinimum scale(WT.DIV)	0.5D
11.STB.KEP	Stable Keep Values remain stable.	OFF:Stable within the normal display ON:Stable within the displayed value remained stable display	OFF
12.P.CODE	P.CODE Code setting	0000 ~ 9999	1000
13.F.CODE	F.CODE Code setting	0000 ~ 9999	2000

## CAL 2P Two point weight calibration method parameter description

Items	Function	Setting Description	Default
DSP.OL	Display Over Load Shows the maximum weighing overload	0 ~ 999999 If the weight exceeds the set value, the meter will show-OL-	999999
Zero	Input Zero Point Zero calibration value	0 ~ 999999 To calibrate the zero value, then make sure the weight of the zero point and press ENT, Until the screen shows "PASS" show, that means the zero calibration is completed, °	0
Span	Input Span Point High point value correction	0 ~ 999999 To calibrate the high point value, please place the weight and enter the weight value and press ENT, Until the screen shows "PASS" show, that means the high point calibration is completed, °	20.000

## CAL mV Voltage calibration mode parameter description

Items	Function	Setting Description	Default
Ld.HiSC	Load Cell High Scale Maximum load cell weighing	0 ~ 999999 Please enter the specifications of the value of the weight LOAD CELL	999999
Ld.mV	Load Cell mV/V Load cell output mV / V specification	0 ~ 7.0000 mV/V Please enter the LOAD CELL output mV / V value	2.0000
Ld.Zero	Load Cell Zero Point Zero voltage	0 ~ 999999 The parameters of the system to record the output voltage of zero value, if there is no record of the value of past experience, you can enter 00000 and press the ENT key, the first table will automatically record the current value when the zero voltage	00000

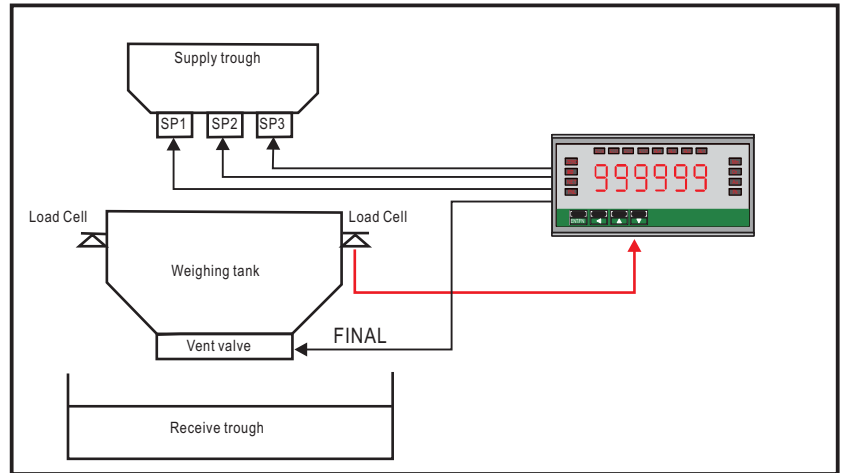
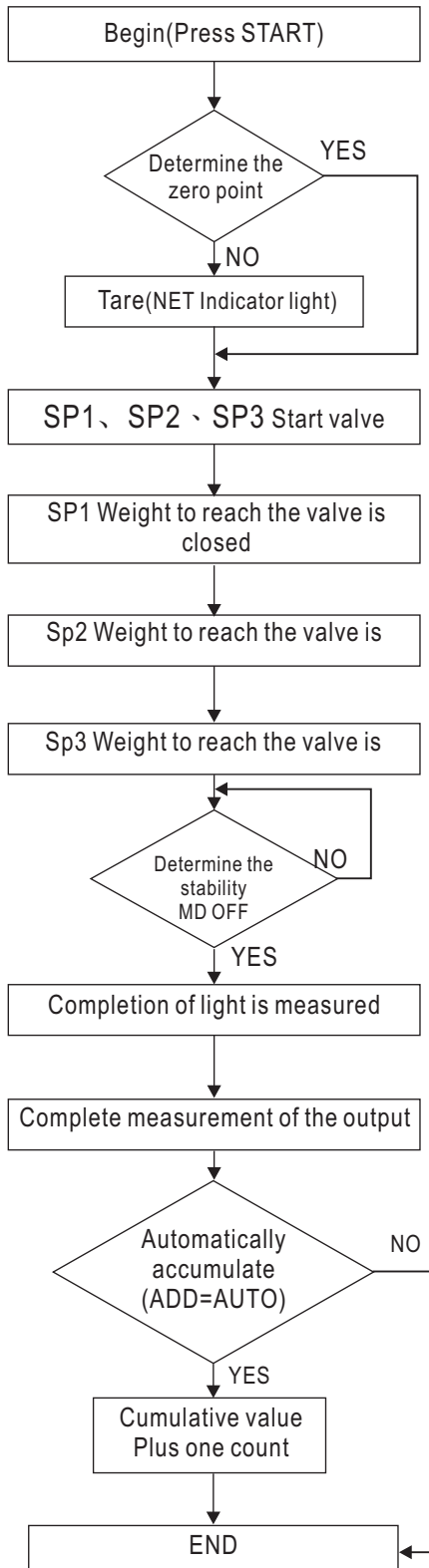
## INIT Restore factory default operating description

Items	Function	Setting Description	Default
i.CAL	init CAL Reply factory correction	To restore the original factory calibration value, please "press ENT key" Until the screen shows "PASS" show, that means the complete response °	
i.ALL	init ALL Reply to all the default values	To restore all factory defaults, please "press ENT key" Until the screen shows "PASS" show, that means the complete response °	
CLr Z	Clear Zero Clear memory of the value of zero	To clear the memory value is zero, please "press ENT key" Until the screen shows "PASS" show, that means the complete removal °	



# Description of various measurement model

## General investment measures

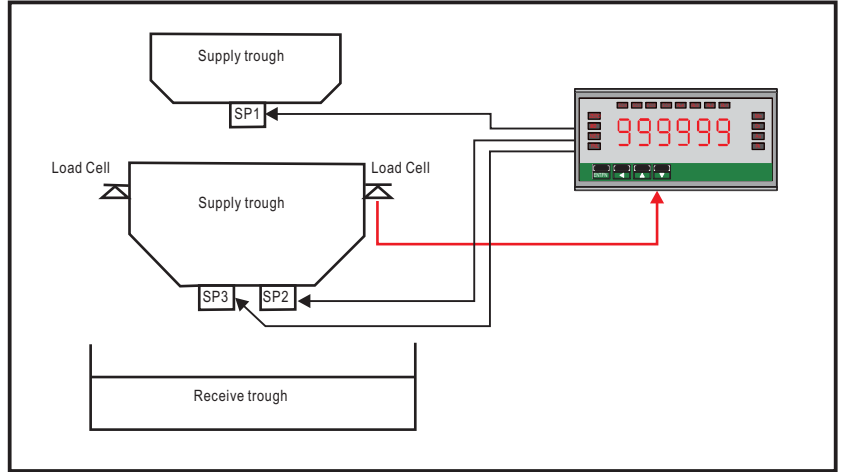
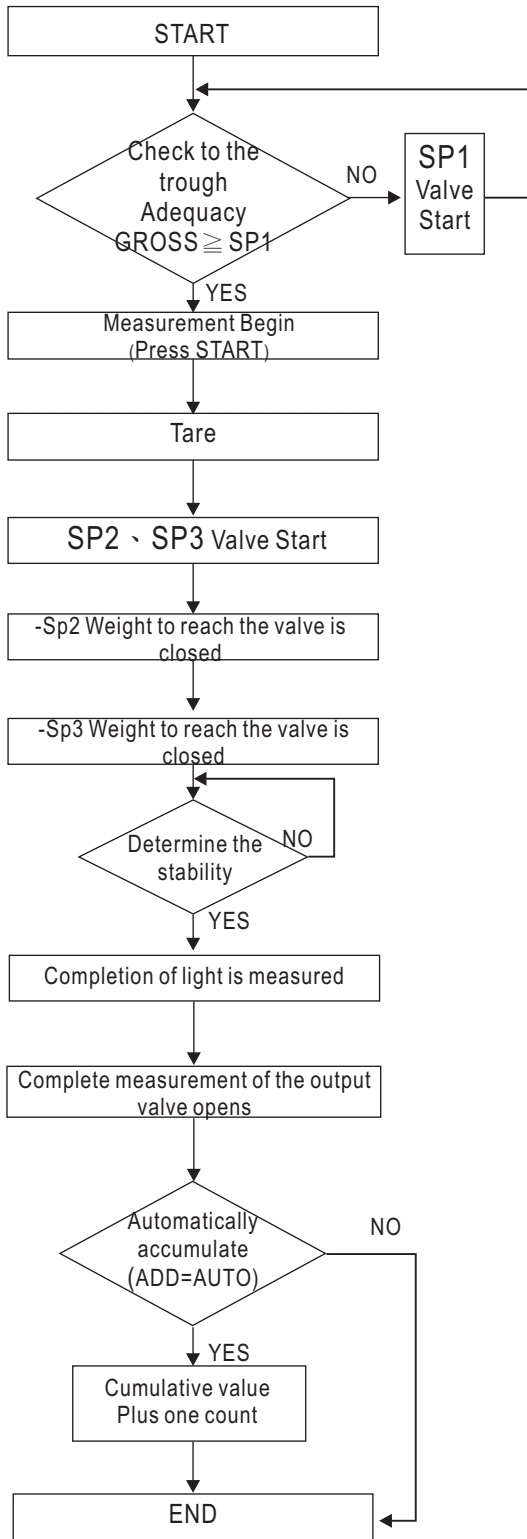


Setting Rules:  $FINAL \geq SP3 \geq SP2 \geq SP1 \geq ZERO$  (A "0" for no effect!!)

Sign	Output conditions	Relay out	LED light
FINAL	$NET \geq SP3$	ON	ON
SP1	$NET \leq SP1$	ON	ON
SP2	$NET \leq SP2$	ON	ON
SP3	$NET \leq SP3$	ON	ON

# Description of various measurement model

## ◆ General discharge measurement

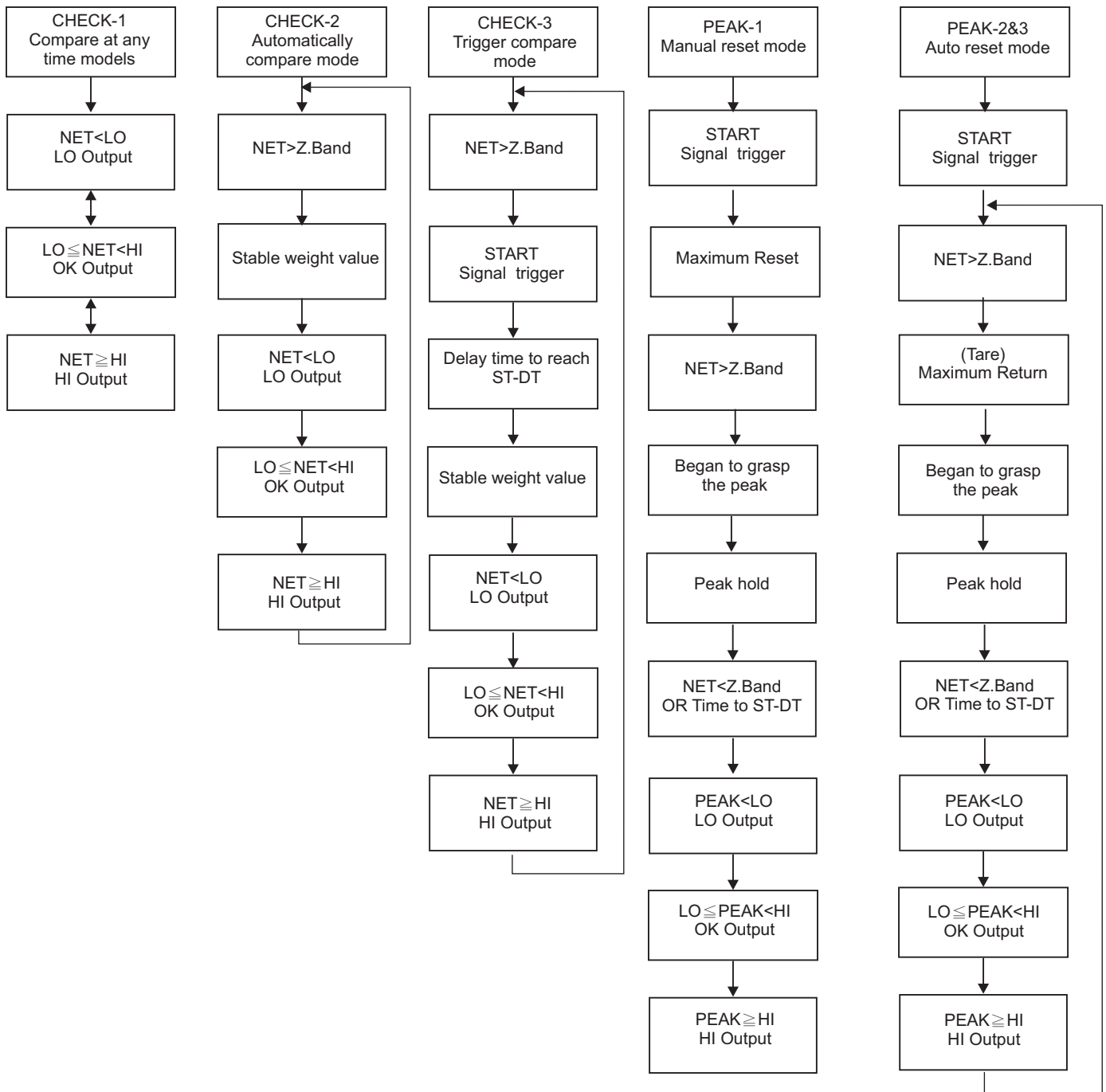


Setting Rules:  $SP1 \geq FINAL \geq SP3 \geq SP2 \geq ZERO$  (A "0" for no effect!!)

Sign	Output conditions	Relay out	LED light
FINAL	$NET \geq SP3$	ON	ON
SP1	$GROSS \leq SP1$	ON	ON
SP2	$NET \leq SP2$	ON	ON
SP3	$NET \leq SP3$	ON	ON

# Description of various measurement model

◆ Comparison of the 3 mode and 2 Peak mode, as follows:



\*PEAK-3: Sampling 10 document average for large values

## Control mode parameter description table

Items	Function	Setting Description	Default
MODE	MODE Measurement control mode	There are 7 selectable control modes **Please refer to a variety of measurement mode description:P9~P11**	OFF
CK.MD	Check MD Determine the instability	Options:OFF/ON select	OFF
ADD	ADD Automatic accumulation	Options:OFF/ADD select	OFF
ST.DT	Start Delay Time	Options:0~25.5 Sec setting	1.0
FNL.DT	Final Output Delay Time	Options:0~25.5 Sec setting	0.0
OUT.DT	Output Delay Time	Options:0~25.5 Sec setting	0.0

## Panel key and ECI input port parameters instruction sheet

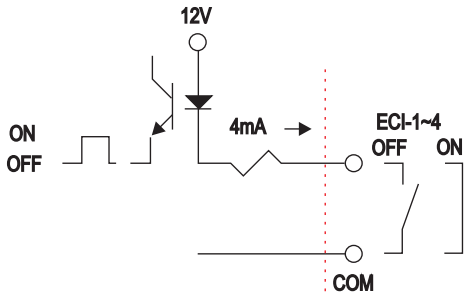
Items	Function	Setting Description	Default
D-KEY	D-KEY Panel DOWN key function	0. OFF NONE	2. TARE
U-KEY	U-KEY Panel UP key function	1. ZERO Zero	7. CLR T
ECI-1	External control input -1 Function	2. TARE Tare	1. ZERO
ECI-2	External control input -2 Function	3. NTGS NT/GS Switch	2. TARE
ECI-3	External control input -3 Function	4. MA M+ Cumulative weight	3. NTGS
ECI-4	External control input -4 Function	5. M- M- Minus the sum of values	7. CLR T
LOGIC	Input Logic	6. MC MC Clear the cumulative total weight and the number of times	0. EQU
		7. CLR T Clear Tare	
		8. START Batch Start	
		9. END Batch End	
		10. CH.DSP Chang Display	
		11. CLR.H Clear Hold Value	
		12. D.HOLD Datar Hold	
		13. P.TARE Preset Tare Value	
		0. EQU Eqal Forward Contacts short-circuit input is <ON>	
		1. OPP Opposite Reverse Open contact input is <ON>	

## RELAY output port parameter description sheet

Items	Function	Setting Description	Default
RY1.MD	Relay 1 Mode	0. OFF NONE	FINSH
RY2.MD	Relay 2 Mode	1. ZBAND Zero Band	SP1
RY3.MD	Relay 3 Mode	2. HI When measured weight of more than setting (HI)	SP2
RY4.MD	Relay 4 Mode	3. OK Weight between the measurement settings (HI, LO)	SP3
		4. LO Weight below the set value (LOW)	
		5. SP1 Weight below the set value (SP1)	
		6. SP2 Weight below the set value (Sp2)	
		7. SP3 Weight below the set value (Sp3)	
		8. FINSH Measurement completed	
		9. UART Socket to control by the state of output port	
LOGIC	Output Logic	0. EQU Eqal Forward When <ON >the REALY Short contacts	0. EQU
		1. OPP Opposite Reverse When <ON >the REALY Open contact	

### ◆ ECI input port function setting

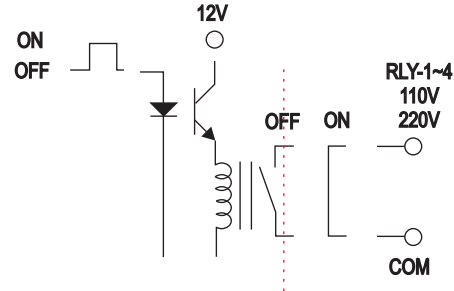
Adjustable setting content, control input port ◦  
 INPUT Contact 12V , 4mA Output ◦



◆ INPUT Equivalent circuit      LOGIC = 0.EQU

### ◆ RELAY output port function setting

Adjustable setting content, control input port ◦  
 Output Relay Contact AC 110V / 220V



◆ OUTPUT Equivalent circuit      LOGIC = 0.EQU

### ◆ Set analog output

Adjustable setting content, control analog output

#### Analog output parameter description sheet

Items	Function	Setting description	Default
1.AO.TYP	AO Output Type	0. NO                      NONE 1. 0 ~ 5V                Voltage output 0 ~ 5V 2. 0 ~ 10V              Voltage output 0 ~ 10V 3. 4 ~ 20mA             Current output 4 ~ 20mA	0. NO
2.AO.SEL	AO Source Select	0. MAIN                 Main Display 1. GROSS                Gross value 2. NET                    Net value 3. PEAK                 The maximum maintained value 4. DO                    Control output from the socket	0. MAIN
3.AO.ASP	AO Weight Aspect	0. POS                    Positive 1. NEG                    Negative 2. ALL                    All            Absolute value	0. POS
4.AO.ACT	AO Action Logic	0. EQU                  Equal With Measured same direction 1. OPP                  Opposite With reverse Measured	0. EQU
5.AO.LS	AO Low Scale Point	0 ~ 9999999	0
6.AO.HS	AO High Scale Point	0 ~ 9999999	20000
7.AO.ZRO	AO Zero Point Calibration	0 ~ 65535	0
8.AO.SPN	AO Span Point Calibration	0 ~ 65535	65535

## ◆ Rs485 communication settings

Adjustable setting content, control the port.

## RS485 communication parameters description sheet

Items	Function	Setting description	Default
1.ADRES	Address	1 ~ 255	1
2.BAUD	BaudRate	0. 9600 1. 19200 2. 38400 3. 57600	1. 19200
3.PRITY	Parity	0. N.8.1 1. N.8.2	0. N.8.1

## ◆RS485 communication protocol instructions

Modbus protocol

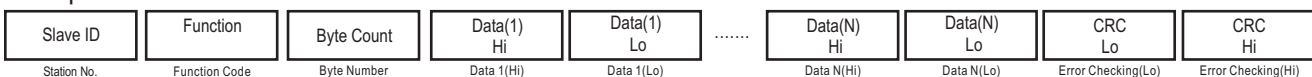
Simple format support Modbus

- ☉Function Code = 1 Read Bit ( Read Bit data )
- ☉Function Code = 5 Write Bit ( Write Bit data )
- ☉Function Code = 3 Read Data ( Read Word/Long data )
- ☉Function Code = 6 Write Word Data ( Weite Word data )

Instruction format



Response format



Function 03 Ex.:Read PV

Instruction:01,03,09,02,00,02,66,57

Response:01,03,04,00,00,00,00,FA,33

Function 01 Ex.:Read Zero Flag

Instruction:01,01,00,09,00,01,2D,C8

Response:01,01,01,01,90,48

Function 06 Ex.:Write DP=2

Instruction:01,06,08,05,00,02,1A,6A

Response:01,06,08,05,00,02,1A,6A

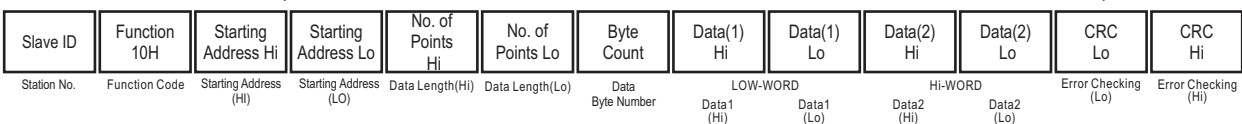
Function 05 Ex.:Write Tare Flag=1

Instruction:01,05,01,01,FF,00,DC,06

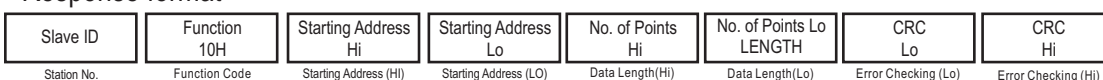
Response:01,05,01,01,FF,00,DC,06

### ☉Function Code = 16(10h) Write LongType Data

Instruction format (Long Type data transmission, data format Low-Word first, Hi-Word in the post)



Response format



Function 16 Ex.:Write SP1=1000

Instruction:01,10,0C,02,00,02,02,03,E8,00,00,2F,06

Response:01,10,0C,02,00,02,E3,58

Address the content of communications and information please refer to Annex (1) MODBUS DATA ADDRESS

## Annex(1)MODBUS DATA ADDRESS

### FUNCTION KEY

Modbus	Register	Name	Setting	Length	Read/Write
40001	0000h	2: D-Key Down key features	0: OFF None 1: Zero Return to zero 2: Tare 3: NT/GS Switch 4: M+ Cumulative weight 5: M- Minus the sum of values	Word	R/W
40002	0001h	3: U-Key Up key features	6: MC Clear the cumulative total weight and the number of times 7: Clear Tare 8: Start Batch Start 9: End Batch End 10: CH.DSP Chang Display 11. CLR.H Clear Hold Value 12. D.HOLD Datd Hold 13. P.TARE Preset Tare Value	Word	R/W

### CONTROL (Control mode parameter table)

Modbus	Register	Name	Setting	Length	Read/Write
40257	0100h	MODE Measurement control mode	0: OFF None (Default) 1: PUTIN General investment measures 2: LOSE General discharge measurement 3: CHECK.1 General HI/OK/LO Comparison at any time 4: CHECK.2 Trigger HI/OK/LO Stable compared 5: CHECK.3 Auto HI/OK/LO Stable compared 6: PEAK.1 Manual Peak hold HI/OK/LO Comparison 7: PEAK.2 Auto Peak hold HI/OK/LO Comparison 8: PEAK.3 Auto Peak hold HI/OK/LO Comparison (average value)	Word	R/W
40258	0101h	CK.MD Determine the stability ON/OFF	OFF/ON (Default OFF)	Word	R/W
40259	0102h	ADD Cumulative function measurement	0: OFF (Default) 1: AUTO Auto cumulative increase	Word	R/W
40260	0103h	ST.DT Start delay time measurement	0.0 ~ 25.0 Sec (Default 1.0 Sec)	Word	R/W
40261	0104h	FNL.DT Completion of the delay time measurement	0.0 ~ 25.0 Sec (Default 0.0 Sec)	Word	R/W
40262	0105h	OUT.DT Determine the point of output delay time	0.0 ~ 25.0 Sec (Default 0.0 Sec)	Word	R/W

### ECI (Enter the port parameter setting table)

Modbus	Register	Name	Setting	Length	Read/Write
40513	0200h	ECI- 1 Function	0: OFF None (Default) 1: Zero Return to zero	Word	R/W
40514	0201h	ECI- 2 Function	2: Tare 3: NT/GS Switch 4: M+ Cumulative weight	Word	R/W
40515	0202h	ECI- 3 Function	5: M- Minus the sum of values 6: MC Clear the cumulative total weight and the number of times 7: Clear Tare	Word	R/W
40516	0203h	ECI- 4 Function	8: Start Batch Start 9: End Batch End 10: CH.DSP Chang Display 11. CLR.H Clear Hold Value 12. D.HOLD Datd Hold 13. P.TARE Preset Tare Value	Word	R/W
40517	0204h	ECI Input Logic	0000 (binary notation) 0: Positive logic 1: Negative logic bit3:RL4, bit2:RL3, bit1:RL2, bit0:RL1	Word	R/W
40518	0205h	ECI Input state	0000 (binary notation) 0:OFF, 1:ON bit3:RL4, bit1:RL3, bit1:RL2, bit0:RL1	Word	R/W

## RELAY (Output port parameter setting table)

Modbus	Register	Name	Setting	Length	Read/Write
40769	0300h	RELAY- 1 Model	0:None (Default) 1: ZeroBand Zero range	Word	R/W
40770	0301h	RELAY- 2 Model	2: HI	Word	R/W
40771	0302h	RELAY- 3 Model	3: OK	Word	R/W
40772	0303h	RELAY- 4 Model	4: LO 5: SP1 6: SP2 7: SP3 8: Finish Measurement completed 9: UART Direct control by the communication output state position 40774	Word	R/W
40773	0304h	RELAY Output Logic	0000 (Binary notation) 0: Positive logic 1: Negative logic bit3:RL4, bit2:RL3, bit1:RL2, bit0:RL1	Word	R/W
40774	0305h	RELAY Output state	0000 (Binary notation) 0:OFF, 1:ON bit3:RL4, bit2:RL3, bit1:RL2, bit0:RL1	Word	R/W

## RS485 (Communication parameter setting table)

Modbus	Register	Name	Setting	Length	Read/Write
41025	0400h	Device Address ID	1 ~ 255 (Default 1)	Word	R/W
41026	0401h	Baud rate	0: 9600 1: 19200 (Default) 2: 38400 3: 57600	Word	R/W
41027	0402h	Parity	0: N,8,1 (Default) 1: N,8,2	Word	R/W

## AO (Analog Output parameter setting table)

(Long Type data transmission need to use FUN-16, data format Low-Word first, Hi-Word in the post)

Modbus	Register	Name	Setting	Length	Read/Write
41281	0500h	Output signal type	0: OFF (Default) 1: 0V ~ 5V 2: 0V ~ 10V 3: 4 ~ 20mA	Word	R/W
41282	0501h	AO Comparison of sources	0: MAIN (Default) 1: GROSS 2: NET 3: PEAK (Maximum) 4: DO Direct control by the communication output position 41291	Word	R/W
41283	0502h	Output phase	0: Positive (Default) 1: Negative 2: Absolute value	Word	R/W
41284	0503h	AO Output direction	0: Same phase (Default) 1: Anti-phase	Word	R/W
41285	0504h	Analog output low	0 ~ 9999999 (Default 0)	Long	R/W
41287	0506h	Analog output high	0 ~ 9999999 (Default 20000)	Long	R/W
41289	0508h	Fixed low analog output value	0 ~ 65535 (Default 0)	Word	R/W
41290	050Ah	High analog output value correction	0 ~ 65535 (Default 65535)	Word	R/W
41291	050Ch	AO Output	0 ~ 65535 (Default 0)	Word	R/W

## ERROR MESSAGE

Modbus	Register	Name	Setting	Length	Read/Write
41793	0700h	Corrected error message	0 :No error (Default 0) 1:AD Fault 2:Calibration span value is lower than Zero 3:Correction High sensitivity	Word	R/W



**INPUT** (Correction parameter setting table)

Modbus	Register	Name	Setting	Length	Read/Write
42049	0800h	AD Sampling frequency	0: 100Hz 1: 50HZ 2: 25Hz (Default) 3:12.5Hz 4:6.25Hz	Word	R/W
42050	0801h	Digital filter 1	0: FH L1 1: FH L2 (Default) 2: FH L3 3: FH L4 4: FH L5 5: FH L6	Word	R/W
42051	0802h	Digital filter 2	0: Fr L1 1: Fr L2 (Default) 2: Fr L3 3: Fr L4 4: Fr L5	Word	R/W
42052	0803h	Correction mode	0: 2PT (Default) 1: mV	Word	R/W
42053	0804h	Units	0: KG (Default) 1: LB 2: T 3: G	Word	R/W
42054	0805h	Decimal	0: None 1: Decimal point one 2: Decimal point two 3: Decimal point three (Default)	Word	R/W
42055	0806h	Minimum scale	0: 1 (Default) 1: 2 2: 5 3: 10 4: 20 5: 50	Word	R/W
42056	0807h	Zero tracking time	0.00 ~ 10.0 Sec (Default 1.0 Sec )	Word	R/W
42057	0808h	Zero tracking range	0.00 ~ 10.0 Calibration (Default 0.5D)	Word	R/W
42058	0809h	Instability follow-up time	0.00 ~ 10.0 Sec (Default 1.0 Sec )	Word	R/W
42059	080Ah	Unstable tracking range	0.00 ~ 10.0 Calibration (Default 0.5D)	Word	R/W

## CALIBRATION (Correction memory locations table)

(Long Type data transmission need to use FUN-16, data format Low-Word first, Hi-Word in the post)

Modbus	Register	Name	Setting	Length	Read and write
42305	0900h	AD Internal value		Long	R
42307	0902h	Display value		Long	R
42309	0904h	Gross value		Long	R
42311	0906h	Net value		Long	R
42313	0908h	Hold value		Long	R
42315	090Ah	Tare value		Long	R
42317	090Ch	Cumulative number of times		Long	R
42319	090Eh	Cumulative weight		Long	R
42321	0910h	Zero compensation value		Long	R
42561	0A00h	Shows the maximum weighing overload	0 ~ 9999999 (Default 9999999)	Long	R/W
42563	0A02h	2 point Zero calibration value within the AD	0 ~ 9999999 (Default 35000)	Long	R/W
42565	0A04h	2 point Span calibration value within the AD	0 ~ 9999999 (Default 250000)	Long	R/W
42567	0A06h	2 point Span calibration weight value	0 ~ 9999999 (Default 20000)	Long	R/W
42817	0B00h	Load Cell weight specified value	0 ~ 9999999 (Default 20000)	Long	R/W
42819	0B02h	Load Cell voltage specification values	0 ~ 6.0000 (Default 20000)	Long	R/W
42819	0B04h	Load Cell Zero voltage	0 ~ 0.0000 (Default 00000)	Long	R/W
43073	0C00h	Variables Final	0 ~ 9999999 (Default 0)	Long	R/W
43075	0C02h	The first point of blanking SP1	0 ~ 9999999 (Default 0)	Long	R/W
43077	0C04h	The second point blanking SP2	0 ~ 9999999 (Default 0)	Long	R/W
43079	0C06h	The third point blanking SP3	0 ~ 9999999 (Default 0)	Long	R/W
43081	0C08h	High weight High	0 ~ 9999999 (Default 0)	Long	R/W
43083	0C0Ah	Low weight Low	0 ~ 9999999 (Default 0)	Long	R/W
43085	0C0Ch	Zero Range	0 ~ 9999999 (Default 0)	Long	R/W

## Flag Memory Map (Flag Locality Table)

Modbus	Register	Name	Length	Read/write	Modbus	Register	Name	Length	Read/write
00001	0000h	Error Message Flags	Bit	R	00513	0200h	Zero calibration key	Bit	R/W
00002	0001h	Overload flag	Bit	R	00514	0201h	Calibration weight key 1	Bit	R/W
00004	0003h	Display maintain the value of the flag	Bit	R					
00005	0004h	Display Gross value of the flag	Bit	R					
00006	0005h	Display Net value of the flag	Bit	R	00769	0300h	Initialization parameter P. CODE	Bit	R/W
00007	0006h	Zero flag	Bit	R	00770	0301h	Initialization parameter F. CODE	Bit	R/W
00008	0007h	Instability flag	Bit	R	00771	0302h	Initialization measurement parameter	Bit	R/W
00009	0008h	Sp1 flag	Bit	R	00772	0303h	Initialize all the parameters	Bit	R/W
00010	0009h	Zero Band flag	Bit	R	00773	0304h	Mandatory storage of all parameters	Bit	R/W
00011	000Ah	Final flag	Bit	R					
00012	000Bh	Low flag	Bit	R					
00013	000Ch	High flag	Bit	R					
00014	000Dh	Sp2 flag	Bit	R					
00015	000Eh	Ok flag	Bit	R					
00016	000Fh	Sp3 flag	Bit	R					
00257	0100h	Zero key	Bit	R/W	01025	0400h	Measurement start	Bit	R/W
00258	0101h	Tare key	Bit	R/W	01026	0401h	Measurement end	Bit	R/W
00259	0102h	GW /NW switch key	Bit	R/W					
00260	0103h	Accumulate key	Bit	R/W					
00261	0104h	Accumulated Less key	Bit	R/W					
00262	0105h	Clear Cumulative data key	Bit	R/W					
00263	0106h	Clear tare key	Bit	R/W					
00264	0107h	Clear zero compensation key	Bit	R/W					