UNI900 A3

Weighing Indicator

Instruction Manual

V00.14/2014.07

LONGTEC

Process Weighing Expert

CONTENTS

Notes:

Please read this instruction manual before you using it for the first time because you can find lots of answer about some common problems in it.

Please check the weighing system accessories whether match this instrument.

When using the instrument, please prepare the installment and repairing tools, such as: the mini-type single, file screwdriver, digital multi-meter, load cell simulator (mV signal generator).

Chapter 1.Overview

1.1 Introduction

The OLED display (max display value up to 9,999,999) of UNI900-A3 indicator.The display part can be separated with the indicator to 100m. The indicator support the single material batching and compare function.
This indicator support key ,external input keys DI/DO signals ,the communication order to tare, clear G/W, reset.
It can choose differernt kinds of extended moudle connect with PLC as following:
The analog output module：0~20mA、4~20mA、0~5V、0~10V；
Communication module：Modbus–RTU（RS232）、Modbus–RTU（RS485）、Modbus-TCP、EtherNet/IP、CANopen、DeviceNet、Profibus-DP、CC-link；

1.2 The characteristics

The indicator can be used for all of the load and resistance strain type weighing sensor;
Display screen can be separated from the indicator;
Use 32-bit microprocessor control operation;
With 256 x64 lattice OLED display, clear interface, simple and fast operation
Rich PLC interface configuration, support analog output, support the profibus-dp, Modbus, EtherNet, DeviceNet, CANopen, CC - Link interface.It can be simple integrated into all kinds of industrial control system;
Powerful fixed value control and weight function with functions of flow monitoring;
Input/output function can be used to choose through the menu or communication and hardware adopts photoelectric isolation, greatly enhance the anti-interference ability;
The communication order to tare, clear G/W, reset.
With functions of self-diagnosis and error reminder
Weight display value can choose different degree value, overload display "OL", automatic zero tracking, and other functions;
Adopts DC 24 v power supply, full metal jacket with strong resistance to electromagnetic radiation ability;

1.3 Specification

Power supply：AC24V(18V-36V)
Power consumption：maybe 3.5W（350Ohm sensor /4pcs）;
Work temperature：from-5℃ to 45℃（23℉to 117℉）
Weight：1kg；
Dimension：check“1.7～1.8section”

1.4 Technical Parameters

a. Voltage ：DC10V±5%，Max power200 ma（connect ohm sensors/6PCS）
b.Output sensitivity ：0.5μV/d 至 200μV/d
c.Zero point adjustable range ：From 0.05 to 18.5 mill volt
d. Effective signal voltage range：From 0.05 to 20 mill volt
e. Stability range ：±10ppm/k
f. Zero stability ：±（0.5 microvolt ±0.006% initial zero offset voltage）/K
g.Nonlinear error ：No more than 0.005% of full scale
h.Sampling method ：Delta - sigma approach
i.The sampling rate ：The highest about 100 times per second
j.Internal resolution ：16,000,000
k.Biggest display degree ：100,000 degrees
l. Control output refresh cycle ：About 100 times per second

1.5 Type Options

UNI900A3 developed a variety of extended mounting plate in order to meet complex requirment on site for the user selected.The indicator can provide 3 extension interfaces,but this indicator standard configuration without extension plate; Each extension interface can only choose a kind of extended board, extended 1 is mainly used for PLC bus to connect with different manufacturers ; Extension 2 for serial port expansion board which can be through the menu to select different communication protocols.It is mainly used to connect computers, large screen display, touch screen display etc.Extend 3main designed to extend the switch input and output.As following:

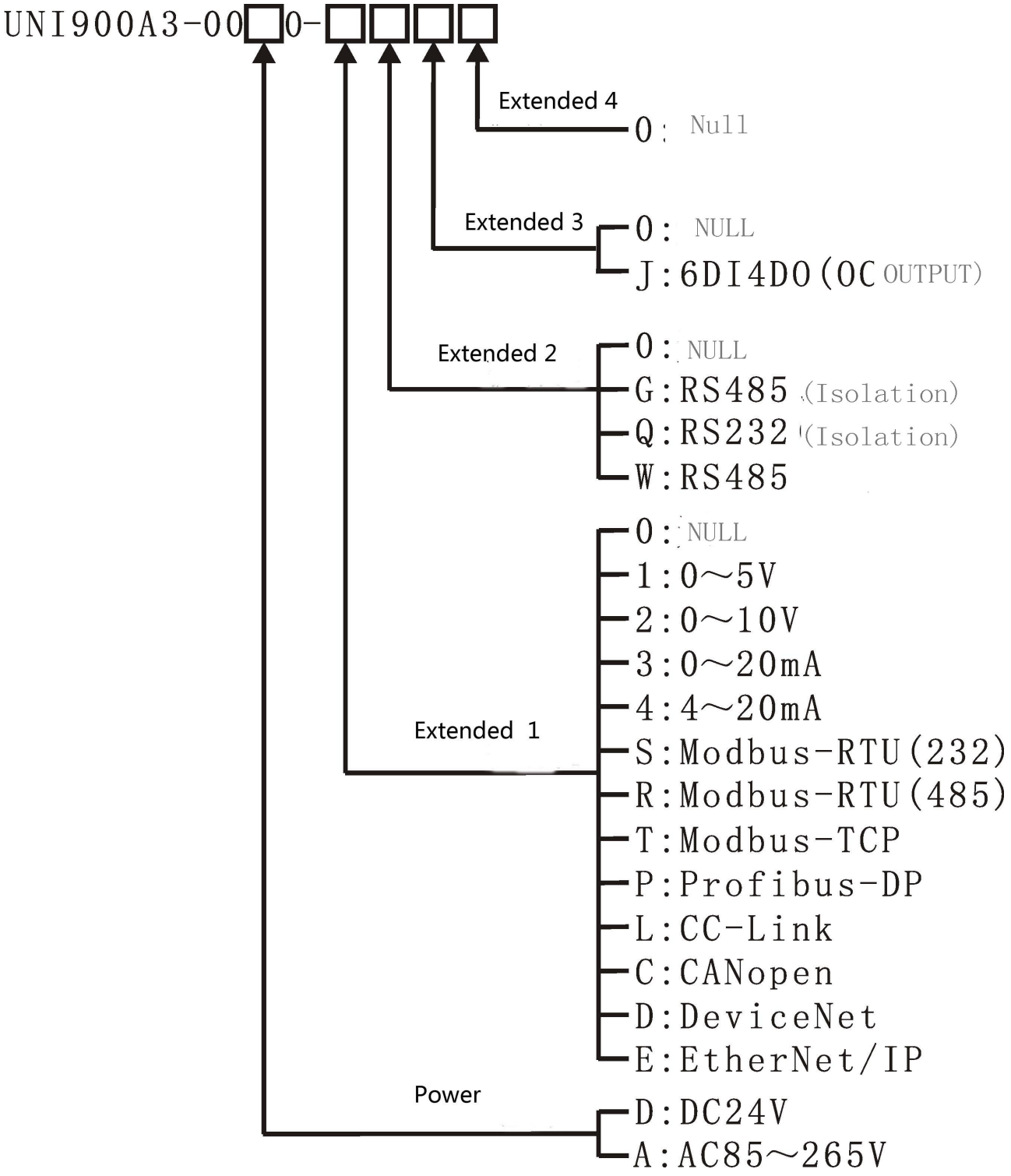
Extended board type choose table

Extend Interface	Name	Order NO.	Description
Extended NO.1 (Choose 1 type from this 12 types)	OP1-AO（0～5V）	A3-OP1-1	Apply for PLC analog input of different manufacturers
	OP1-AO（0～10V）	A3-OP1-2	Apply for PLC analog input of different manufacturers
	OP1-AO（0～20mA）	A3-OP1-3	Apply for PLC analog input of different manufacturers
	OP1-AO（4～20mA）	A3-OP1-4	Apply for PLC analog input of different manufacturers
	OP1-Modbus-RTU(RS232)	A3-OP1-S	Apply for PLC communication connection with most companies
	OP1-Modbus-RTU(RS485)	A3-OP1-R	Apply for PLC communication connection with most companies
	OP1-Modbus-TCP	A3-OP1-T	Apply for PLC communication connection with most companies
	OP1-Profibus-DP	A3-OP1-P	Apply for DP bus connection, such as Siemens PLC
	OP1-CCLink	A3-OP1-L	Apply for connect with CC - Link bus , such as Mitsubishi PLC
	OP1-CANopen	A3-OP1-C	Apply for with CANopen bus connection, such as Schneider PLC
	OP1-DeviceNet	A3-OP1-D	Apply for DeviceNet bus connection, such as AB PLC
	OP1-EtherNet/IP	A3-OP1-E	Apply to connected with the EtherNet/IP network, such as AB PLC
Extended NO. 2(choose one type from 2)	OP2-RS485(isolation)	A3-OP2-G	Can choose protocol the connect computers, large screen display, touch screen display
	OP2-RS232(isolation)	A3-OP2-Q	
Extended NO. 2	OP3-6DI4DO-OC	A3-OP3-J	6 choose DI/DO output ,4 channel DI/DO OC output

The indicator standard configuration：

Main board	Display	Extended NO.1	Extended NO.2	Extended NO.3	Extended NO.4
DC24 supply	RS485	无	无	无	无

The indicator order list：



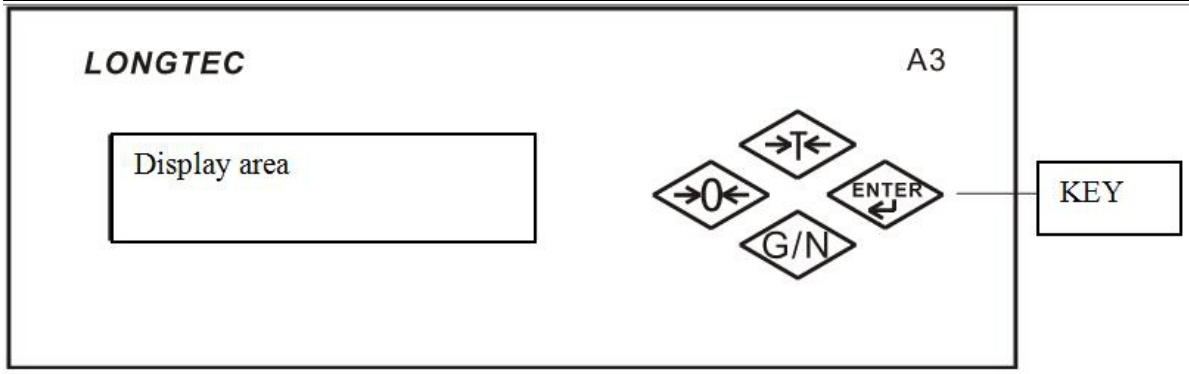
NotesLCC-LINK and AC power need confirm the delievy time before order.

1.6 Panel terminals

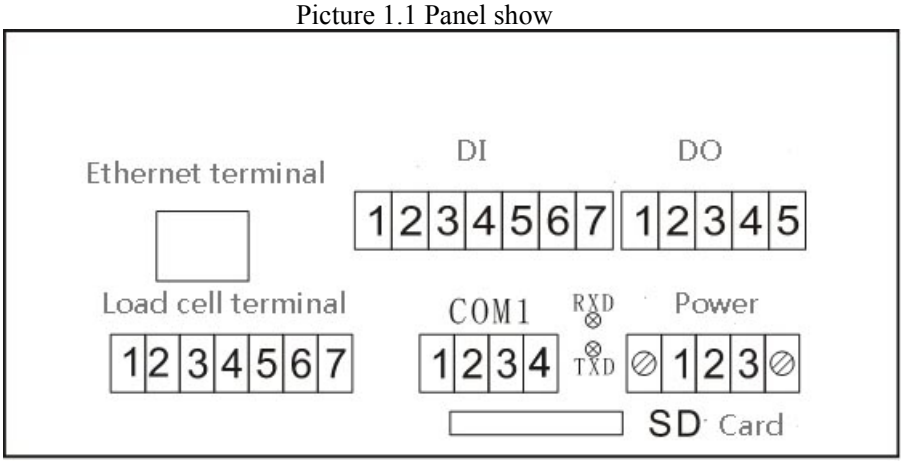
The display can be sperate with indictor.The display include the display and key two part.The main board dimention:**137mm*125mm*68mm**，the display demention:**168mm*10mm*68mm**

The display as picture 1.1,

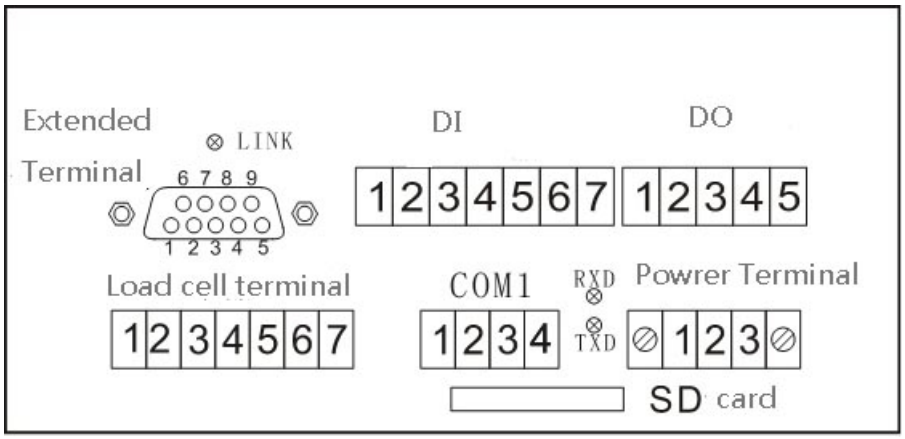
The back of the indicator as picture 1.2



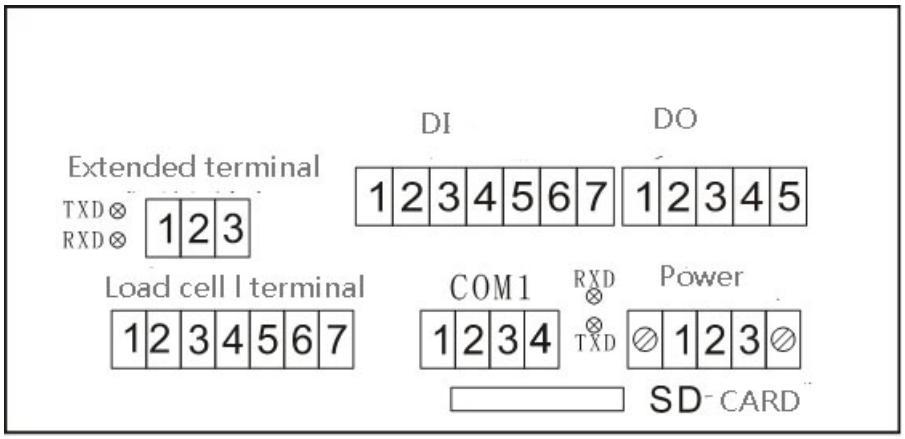
Picture 1.1 Panel show



（a）



（b）



（c）

Picture 1.2 Back terminal show

Load cell terminal ——1：SIG-，2：SIG+，3：SHD，4：SEN+，5：EXC+，6：SEN-，7：EXC-

COM1(RS232) ——1：TXD， 2：RXD ，3：GND1，4：Reserve

COM1(RS485) ——1：A， 2：B 3：SHD1, 4：Reserve

Power terminal ——1：24V， 2：0V， 3：PE

D/I ——1：GND2，2：DI1， 3：DI2，4：DI3， 5：DI4， 6：DI5， 7：DI6

D/O ——1：GND3，2：DO1， 3：DO2，4：DO3， 5：DO4

LINK、TXD、RXD (communication status light)

GND2 is the D/I public side，DI1～DI6 is the D/I terminals ；

GND3 is the D/O public side，DO1～DO4is the D/I terminals；

The back of fuction have the relevent withe the indicator setting,can check “3.5 extented” section.

The back of indicator as picture 1.2 (a) if the user choose Modbus-TCP fuction.

The back of indicator as picture 1.2 (b) if the user choose Profibus-DP、CC-Link.

The back of indicator as picture 1.2 (c) if the user choose Modbus-RTU 、 CANopen 、 DeviceNet 、 4~20mA/0~20mA、0~5V/0~10V.

The extended terminal is the Ethernet interface and use RJ45 if the user choose the function is Modbus-TCP.

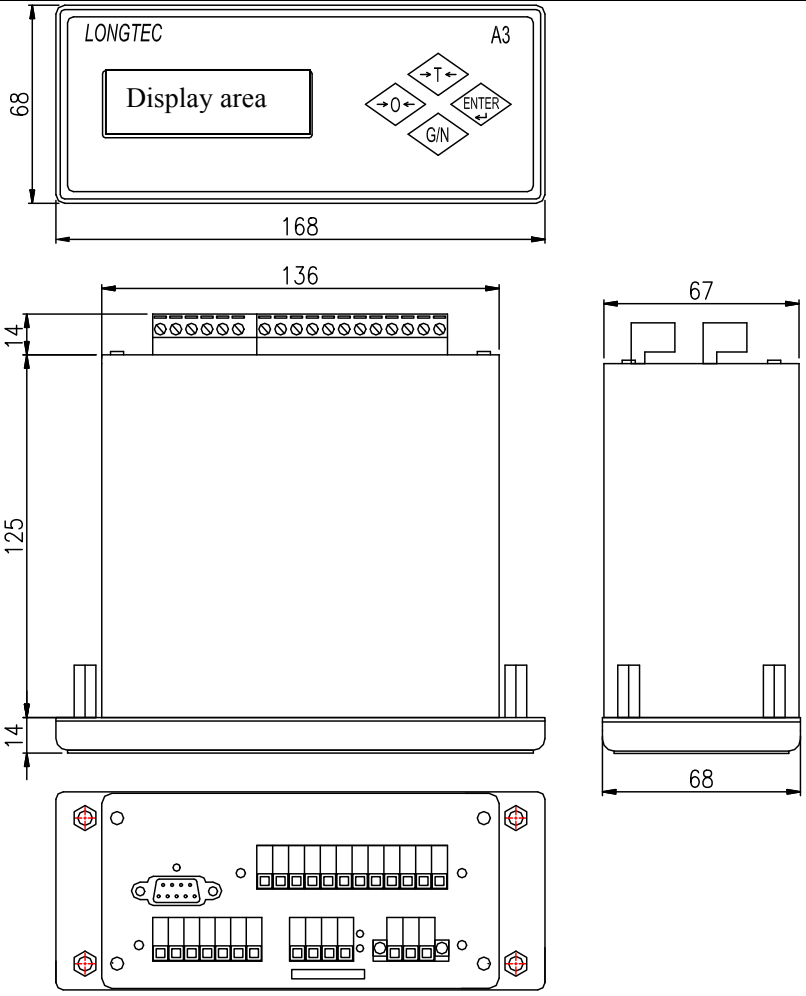
Picture 1.2(c) extended terminal definition

Function	No.1 Terminal	No.2Terminal	No.3Terminal
0/4~20mA	AO-	AO+	SHD2
0~5V/10V	VO-	VO+	SHD2
Modbus-RTU(485)	A	B	SHD2
Modbus-RTU(232)	TXD	RXD	SHD2(GND)
CANopen	CANH	CANL	SHD2
DeviceNet	CANH	CANL	SHD2

Picture 1.2(b) extended terminal definition

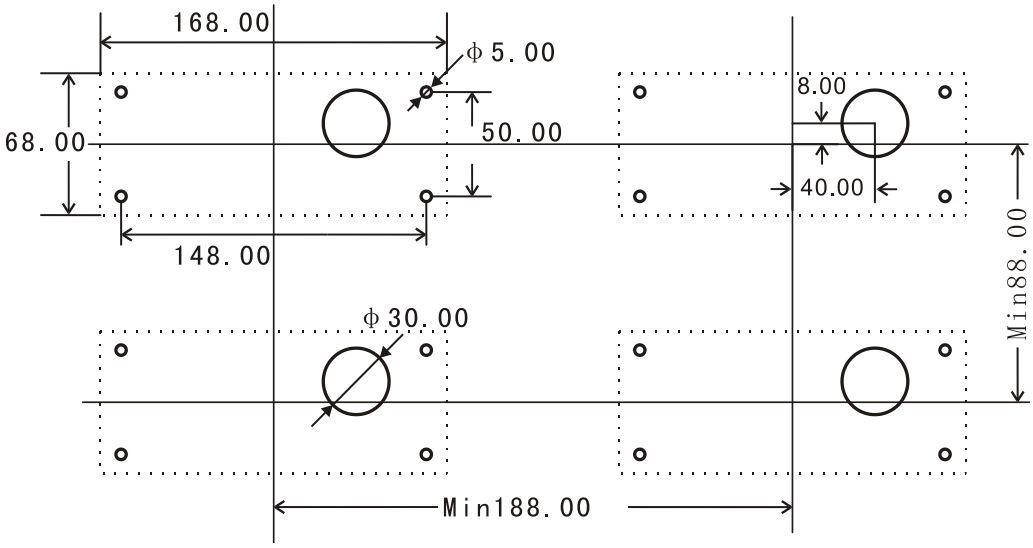
Function	PIN1	PIN2	PIN 3	PIN 4	PIN 5	PIN 6	PIN 7	PIN 8	PIN 9	Notes
Profibus-DP	NC	NC	A	RTS	GND	5V	NC	B	NC	NC means no
CC-Link	NC	NC	A	RTS	GND	5V	NC	B	NC	

1.7 Demention



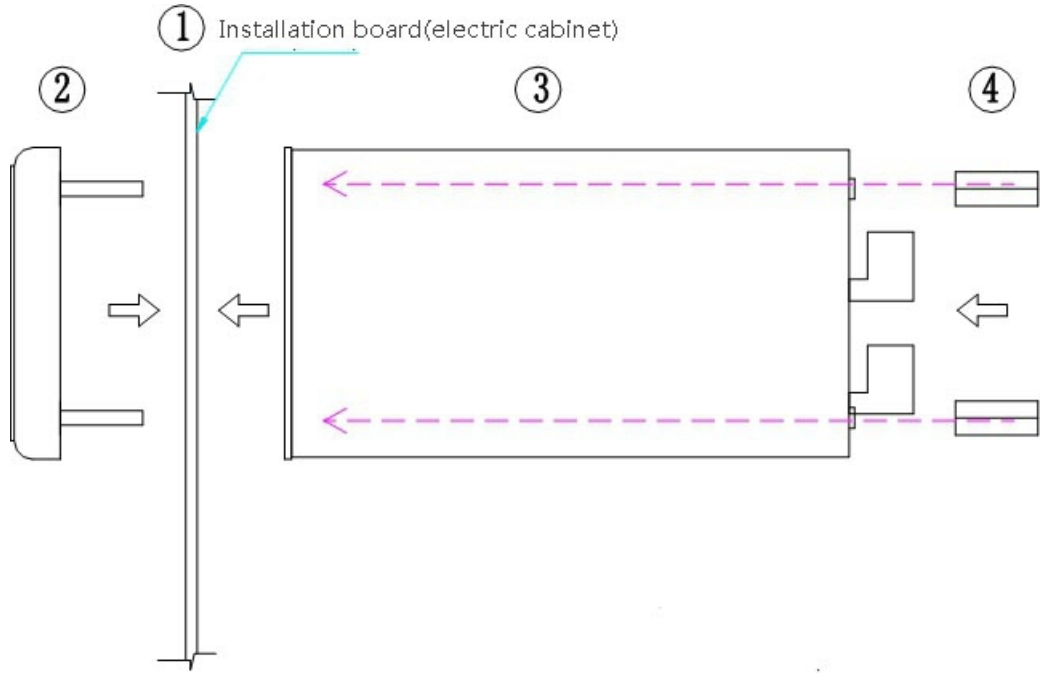
Picture 1.3 Demention

1.8 Installation hole pictures



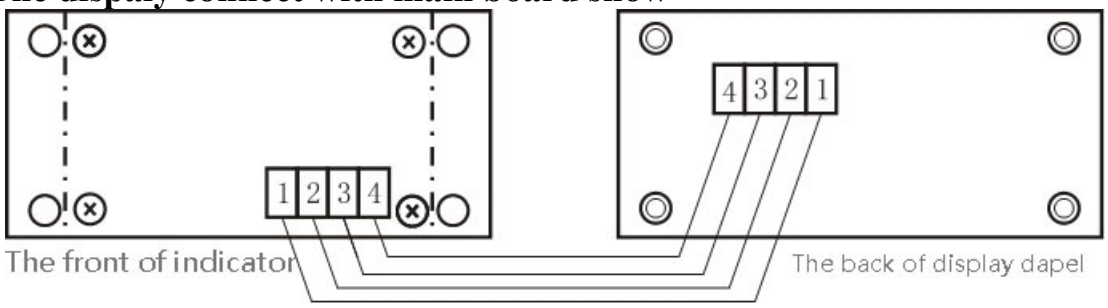
Picture1.4 Installation hole picture

1.9 Installation show



Picture 1.5 Indicator installation show

1.10 The dispaly connect with main board show



Picture 1.6 The display connect withe the main board show

1.11 Load cell interface

（1）Introduction for load cell connection

This interface USES 10 v dc excitation voltage supply power for weighing sensor (group). There are 10 v voltage differencebetween EXC + (or SEN +) and EXC (or - SEN) in normal circumstances. the voltage difference between SIG + and SIG - about dozens of millivolt voltage-difference, the voltage difference SIG + (or SIG -) and EXC - about 5 v.

This indicator can drive up to 5 pcs 350 Ω resistance strain type weighing transducer (parallel after the equivalent resistance of = 350/5 = 70 Ω). This weighing terminal can join more than four high resistance of weighing sensor, but equivalent resistance of paralleled sensors not less than 70 Ω . All sensor should be use the same type.

The minimum input signal can distinguish voltage of 0.15 uV.

It must use special sensor junction box when the controller is connected to more than one sensor. Multiple adjustable resistor sensor junction box (corresponding to the connection of sensors, the adjustable resistor, to adjust the proportion of each sensor signal input relationship (that is, the Angle difference adjustment), sensor junction box are not included in the indicator.

（2）Wire terminal definition for Load cell

Termin al NO.	Terminal mark	Connect with 6 wires load cell	Connect with 4 wires load cell	Other company’s laod cell or junction box

1	SIG-（负信号）	黄线 Yellow wire	黄 线 Yellow wire	Please connect with Longtec indicator according to the load cell or juction box terminal definition,Please connect SEN+ with SEN- and connect EXC+ with EXC- if you use 4 wires load cell or juction box.
2	SIG+（正信号）	绿线 Green wire	绿 线 Green wire	
3	SHD（屏蔽地）	屏蔽层 shielding layer	屏 蔽 层 shielding layer	
4	SEN+（正反馈）	白线 White wire	红线（应短接此两个端子）Red wire(should be connect this two terminals)	
5	EXC+（正激励）	红线 Red wire		
6	SEN-（负反馈）	兰线 Blue wire	黑线（应短接此两个端子）Black wire(should be connect this two terminals)	
7	EXC-（负激励）	黑线 Black wire		

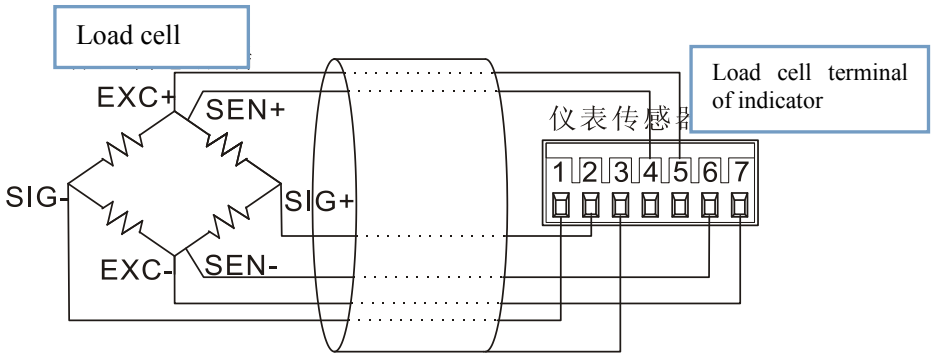
◆ **Note:Not all the load cell use the color as the table show.Please connect withe the load cell according the manufatures' introduction.**

（3）Wire length for weighing signal

When connecting multiple sensors, the sensor should through the junction box form a weighing signal connected to weighing indicator. There has a metal shield cable requirements from the junction box to indicator.

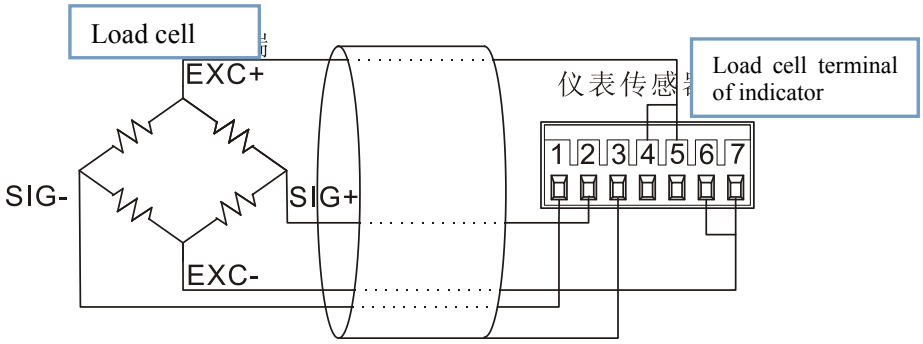
The QTY for connect with 350Ω Load cell	Max wire length (m)for the load cell		
	24 号线 wire[0.21mm^2] wire	20 号线 wire[0.52mm^2]	16 号线 wire[1.31mm^2]
1	240	600	1200
3	60	180	300
4	40	120	200

（4） Connection show for 6 wires load cell



Picture 1.7 Connection show for 6 wires load cell

（5） Connection show for 4 wires load cell



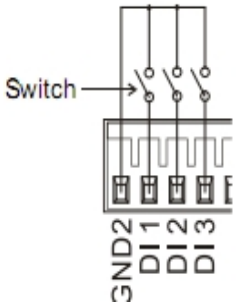
Picture 1.8 Connection show for 4 wires load cell

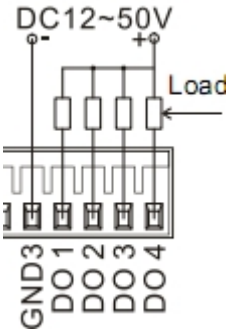
Notes: The load cell shielding wire must not connect with PE or other signal wire.The multimeter to measure sensor shielded wire and signal lines and the resistance between the earth should be infinite.

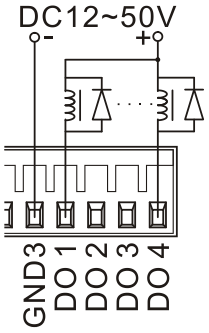
1.12 DI/DO control interface

（1） DI Input

The control interface as picture 1.9 show







Picture 1.9 DI control show　　Picture 1.10 DO control show　　Picture 1.11 Diode protection load diagram

Notes: The input interface distance is not more than 5 m when connecting with the external devices.Please do not connecting with other equipment power wire(including positive and negative power supply) ; In addition, the input signal is sensitive, it is suggested that don't get close to the power cord and power line communication.

The input signal can be DI/DO and TTL logic.

（2）DO output

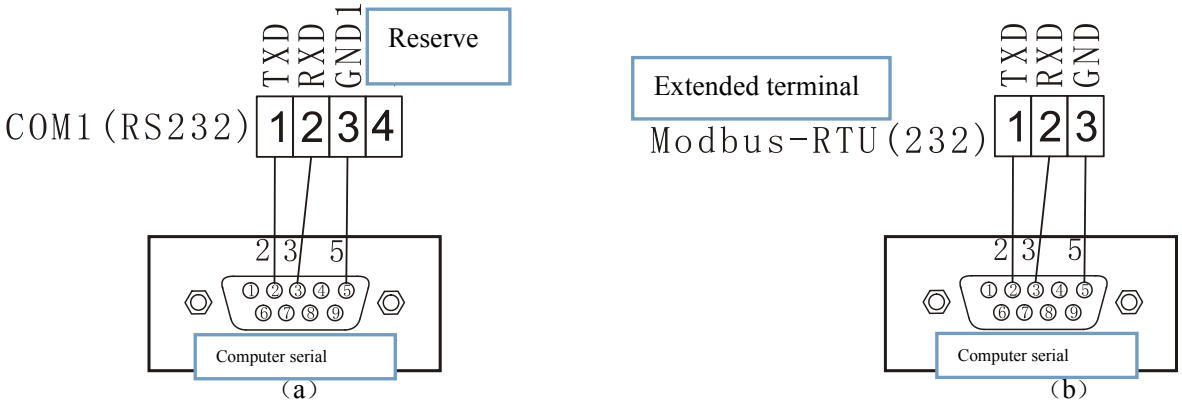
DO output using optical coupling isolation output,D01 ～ DO4 and GND-OUT terminal formed OC door .Each interface maximum load can be 50VDC/0.3A.

The DO output control interface as 1.10 show

Output control interface when the load is behind the perceptual load must increase reverse diode load at both ends.

Outlet can connect 12 v to 50 v dc voltage, maximum drive current is 0.3 A. UNI900 A3 should adopt DC supply buffer relay with isolated from external control equipment to reduce interference.The diode and dc power supply of the buffer should be relay coil in parallel and be care about the polarity of the diode disconnect the noise of the moment caused by the discharge.The connection as shown in figure 1.11.Please be careful about the connection must be correct,otherwise may damage the indicator.

1.13 Serial Interface Connection Picture



Picture 1.12 Serial Interface Connection

Chapter 2. Instrument Functions and Operation

This chapter will introduce UNI900-A3’s function and basic operation. The instrument’s operation main depends on the configuration function and parameters setting. The parameters of the instrument settings detailed in chapter 3.

2.1 Main Function

UNI900-A3 main function including：

• 清零 Zero • 预置点 Target setting • 去皮 Tare • 信息查看Disp
• 清除皮重 Clear the G/W • 比较器 Comparator • 密码保护 Password protect

Please check chapter 3 for more content of the calibration and parameter setting.

2.1.1 Zero

Zero function is used to set or reset the initial zero reference point, within the scope of the reset can be reset for many times. This indicator has the three zero modes

- Auto-zero tracking
- Zero reset after starting up
- Zero reset by key

2.1.2 Tare weight removing

Tare weight is the weight of the empty container. Gross weight minus the tare weight is the net weight. Tare function can also be used to track the container to increase or decrease the tare weight. In the second case, the weight of the objects in the container includes a container tare weight. The display screen shows the increase or decrease tare weight of the container.

UNI900-A3 operation including：

- Tare weight removing by key
- Negative net weight amending

2.1.3 Tare weight/G/W、N/W shift

The mark 

can set as tare weight removing,then shift to the G/W、N/W shift function.It can be the G/W、N/W display shift when this mark set in the the G/W、N/W shift function.This function can be use with the tare removing key.Dynamic switch will not affect the display status

Press 

key can realize the tare removing function when the UNI900-A3 be in the N/W status and be setting the tare removing,then the indicator enter the G/W moudle.

2.1.5 Disp (check the information)

Press the Disp key enter the check the information function.It can check the indicator type,NO,ID,softeware and hardware setting

2.1.6 Target setting

Target setting function can compared the preset target value with actual gross weight or net weight values on scale. This function has typical applications in automatic control. For example, automatic filling system can provide a start signal to the indicator, UNI900 - A3 will control feeding system will shut down after filling a container to preset target output. Target comparison rate equivalent sampling rate, would be 100 times per second.

If you are using a preset point comparison function to control the material flow known as the material transfer application. This kind of application for the automatic control mode but usually can also choose to manually. The indicator can real-time monitoring the changes in weight and

compared with preset target and other control parameters,then make further action.

2.1.7 The comparator

The indicator can set 4 comparators.It can be compared the display absolute value, flow absolute value , weight, gross weight, flow. After activation in setting can be modified directly by shortcuts menu comparator lower limit and upper limit of the comparator. The switch(DI,DO) output terminals must be assigned to the comparator (the "Settings" = > "extensded" = > "switch(DI/DO) output" = > "output n application" is set to the comparator, n is 1, 2, 3, 4).

2.1.8 Flow calculation

The flow refers to the change rate of weight with the weight of per unit time.The flow function can be done using the comparator or PLC interface . Flow calculation can choose weight, time, measuring the cycle , the average output cycle.

2.1.9 Password protection

After the user set the parametr as ‘allow’(设置setting=>仪表indicator=>用户user),then start the password protection function.The setting menu will prompt you input 6 bit password.The calibration ,target setting and comparator no password protection in the fast menu.You can amend the fast menu parameter.

2.2 Basic operation

Basic operation including:display screen,key,fast operation menu.

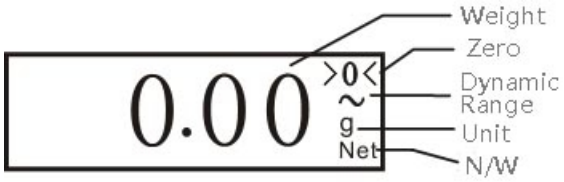
2.2.1 Display screen

In the weighing modle,the display screen can show the weight value and other weight information.
• Weight unit（无(no)，g，kg，lb，t，ton，N，kN）
• Dynamic/static value range
• Zero
• G/W,N/W

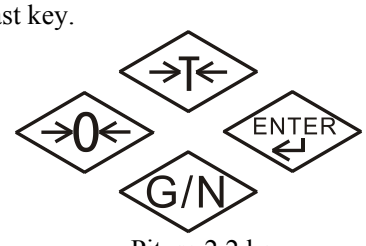
As shown in picture 2.1 "Net" is expressed as the weight value of the Net weight, if the position display "GR" indicates the current value of gross weight; Zero center mark is "> 0 <" ,only when the weight value is close to zero; The dynamic value range"~"will flash on the screen when scale platform in a stable state. In the "Settings" = > "weighing platform" = > "steady state" dynamic range can be set up, such as choosing "1 d " according to the weight value within a dividing jitter is judged to be weighing platform within the dynamic setting value range.

2.2. Key

The UNI900-A3 can though the key for operation.Picture 2.2 show four function key in the UNI900-A3 panel.The table 2-2 introducte the four keys function in the fast key.



Piture 2.1 Screen show



Piture 2.2 key

Table 2-2 The introduction about the key function

Mark	Key name	Function descrption
	清零 Zero	The scale platform is empty and display is zero. The indicator will default to that point as the gross weight after the completion of zero calibration. When open the button reset function.Press the reset function keys will capture a new gross zero reference poinand within the scope of the reset button. To use the reset button must ensure that the setting has been activated in the button reset

		function.
→T←	去皮 Tare remo vig	Tare weight is the weight of empty container.Gross weight minus tare weight is equal to the net weight. After press the tare removing key,the indicator will display the net weight zero when the container is empty . The indicator shows the net weight of object when the container holding object.The tare removing keys must ensure that it has been activated in the button reset function.
G/N	清皮或毛净切换 Clear the tare weig ht or G/W and N/W shift	This key can set as *G/W and N/W shift* or *clear the tare weight* function.This two function can finish the tare removing status in the net weight modle.The *G/W and N/W shift* function can record Press again,it will back in the net weight modle. Whether is the weighing platform in dynamic value range has no effect on the operation of the clear tare removing key.The clear tare removing keys must ensure that it has been activated in the button reset function.
ENTER	Enter	Press on this key hold on 2second to enter the fast operation menu and setting menu.

It can not be carry our zero,tare removing when the scale platform in daymatic range status.The order will keep 2 second for indicator recover static if you press the zero or tare removing key.The indicator executive order of recover static within 3 second,otherwish, not executive the order.

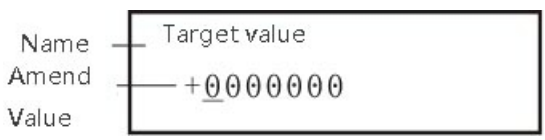
The key operation can divide into menu visit,value amending and parameter option wgeb you enter different menu.

Table 2-3 key function

Mark	menu visit	Parameter option	Value amend
→0←	返回上一级菜单 Back to next higher level menu	无效 Invalid	数据位右移 Data bit right remove
→T←	菜单上翻 Page up (menu)	上一参数 The last parameter	增大数值 Increase the value
G/N	菜单下翻 Page down (menu)	下一参数 The next parameter	减小数值 Reduce the value
ENTER	进入下一级菜单 Enter next level menu	参数确认 Parameter confirmed	数值确认 Value confirmed

Picture 2.3 is the example for menu visit,the key use as piture 2.6.
Picture 2.4 is the example for value amend ,the key use as piture 2.7.
Picture 2.5 is the example for parameter option,the key use as piture 2.8.
In front of some part of value +/-mark in value enter step also can amend by "**T**"or "**G/N**"keys.

Picture 2.3 Fast menu



Picture 2.4 目标量输入窗口Taget value enter window

Picture 2.5 Parameter option

Picture 2.6 menu vist

Picture 2.7 Value amend

2.8 Parameter option

2.2.2 Menu

UNI900-A3 indicator have some usually use fast function to enter the toppest fast menu,including target setting,comparator input,Disp(check information),calibration,setting and maintenance.Press ENTER key almost 2 senconds to enter the fast menu,then press tare removing key →T← or clear tare key G/N to up and down option,then the mark as following .

Table 2-4 Fast operation menu list

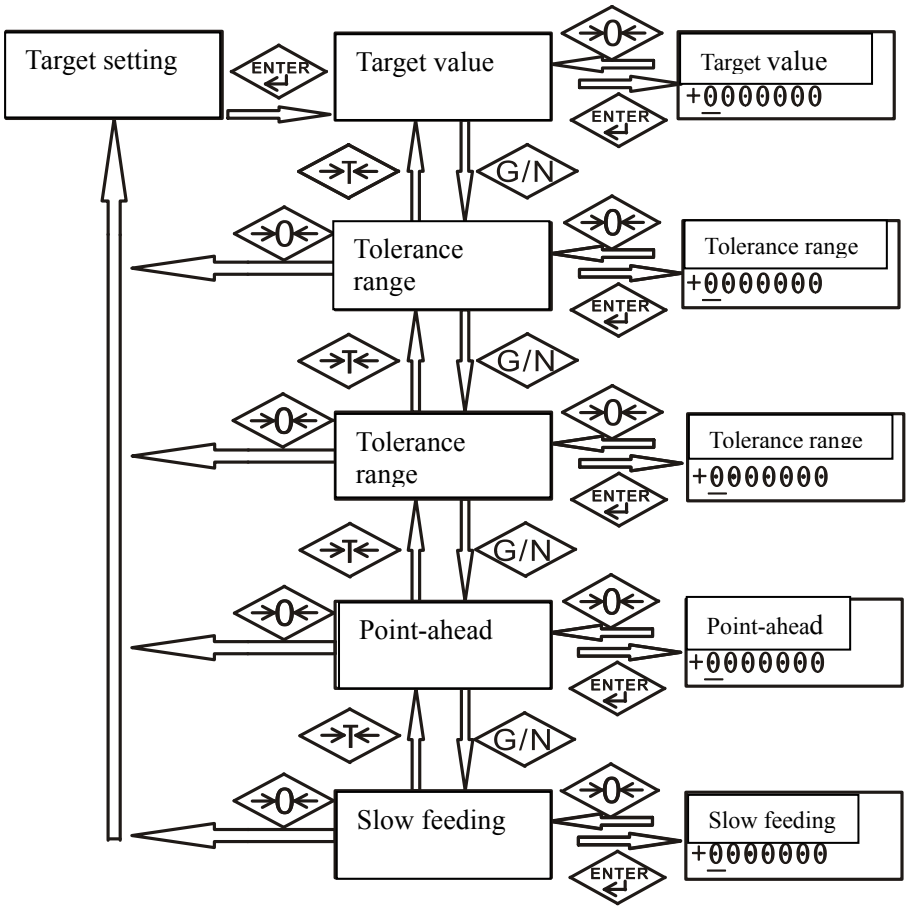
中文 Chinese	Function description	备注 Notes
预置点 Target setting	To enter the target value,tolerance,slow feed material and prset value.	Can hidden
比较器 comparator	To enter the max limit value and mix limit value for comparator	Can hidden
信息查看 Disp(check information)	Check the indicator’s all information	
标定 Calibration	for zero,weighing range calibration	Can hidden
设置 Setting	All parameter setting,including the platfrom,application,indicator and entended.	
维 护	Relevent hardware testing and software updating	

Maintenance		

You can setting in fast menu to define wheather the target value,comparator,calibration in it.

（1）Shortcut menu for target setting

If set shortcut menu activation in the preset point, then enter the shortcuts menu can be directly modified preset target value some related parameters. Its operation is shown in picture 2.9. Preset point type "tolerance", "output type", "preset data source" and "preset point latches" parameter is required in the "set point = = > application preset Settings" .

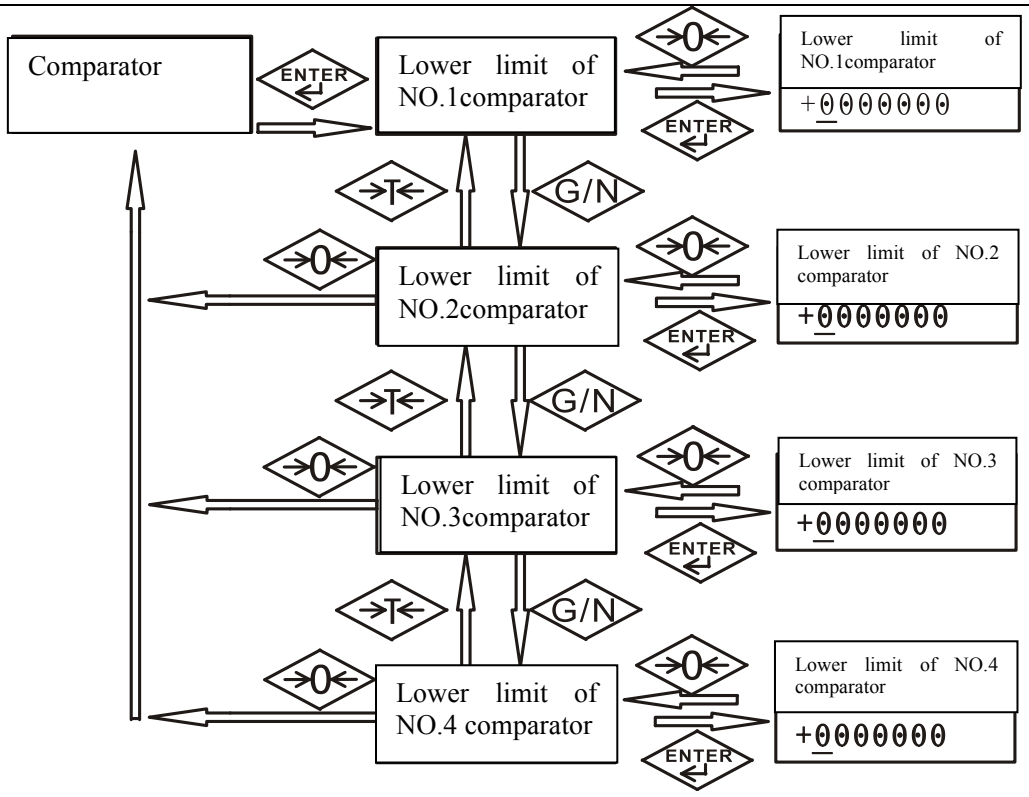


Picture 2.9 Shortcut menu for target setting

（2）Shortcut menu for comparator

If active comparator in the shortcut menu,then you can modify the lower limit and upper limit of the comparator in the shortcuts menu. And comparator "source" and "condition" is required in the "set = > application= > comparator" .

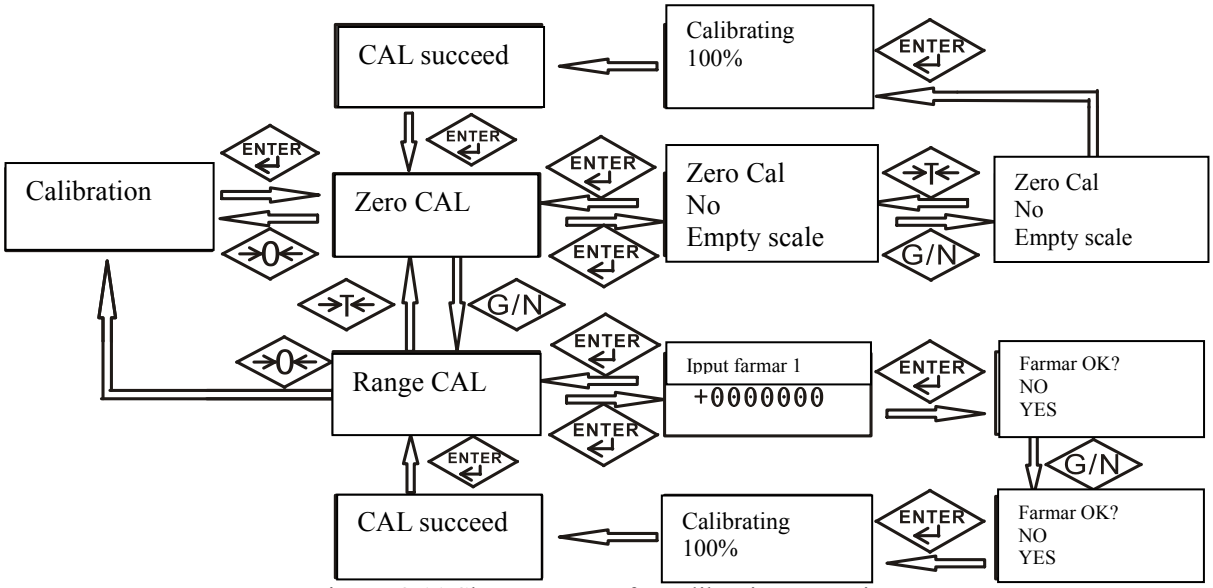
Please set the comparator lower limit when the comparator conditions on behalf of a single value, as shown in picture 2.10. Please set the upper value of the comparator in the boundary value window if the comparator conditions is a range.



Shortcut menu for comparator

（3）Shortcut menu for calibration

If active calibration in the shortcut menu,then you can modify the lower limit and upper limit of the calibration in the shortcuts menu. As picture 2.11



Picture 2.11 Shortcut menu for calibration operation

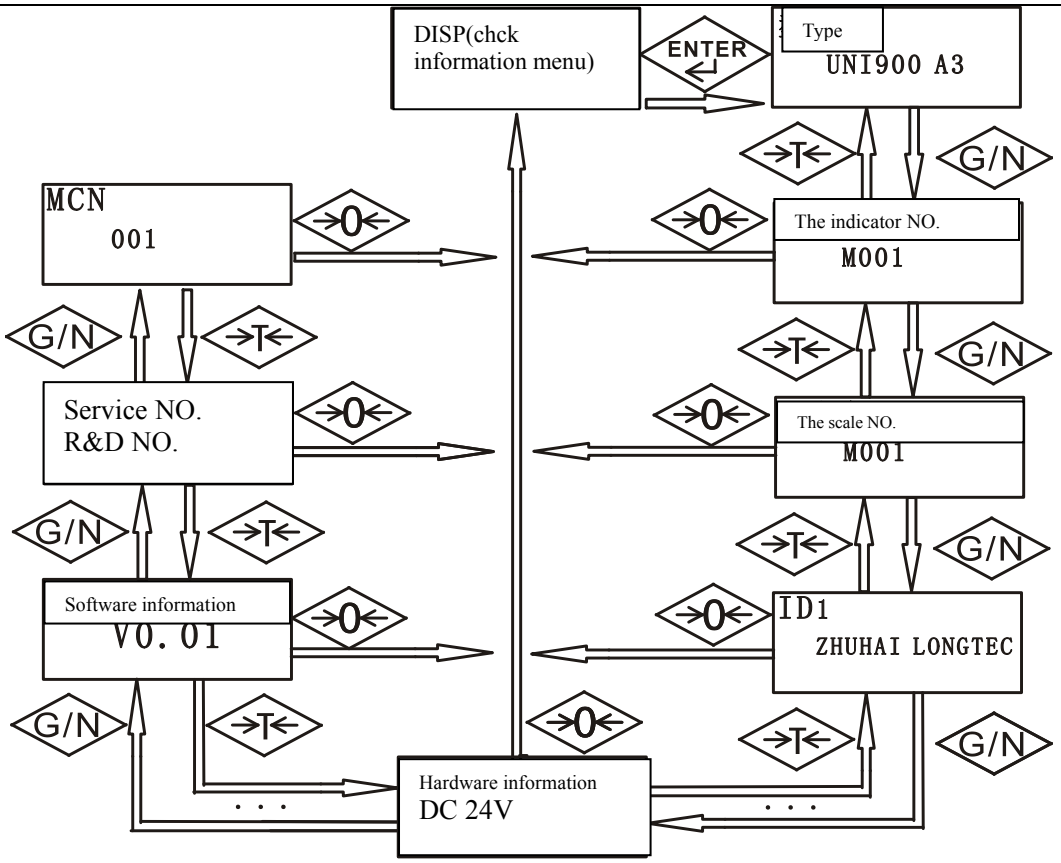
Zero CAL:The platform steady and empty,then enter *Zero CAL*->choose empty scale->press ENTER key,then the indicator enter the CAL,press ENTER key finished the calibration until the screen display ‘CAL succeed’

After entering **"weighing range calibration"**, input calibration of the weight *in input farmar 1*, press the "ENTER" button, placed on the scale of the weight of corresponding weights.Please select the "confirm" in "farmar OK?".The indicator into the calibration step when you press "ENTER" key , then the interface display "calibration" press "ENTER" to exit the range after calibration.

Please press "ENTER" key at this time, there will be a "input weight 2" interface when the "linear" parameter is set to "allow".Its operating process is the same as the "input fammar 1" of range calibration.Please determine whether values in the "range" (" set "= >" range and the index value "= >" range "within the set of parameters) within the scope of numerical modification method to view" key operation "section.

（4）Disp(check information menu)

The Disp(check operation)as picture2.12,the defination as table 2-5



Picture 2.12 Disp(check information menu)intriduction

NO.		Description
1	The sensor signal Millivolt values	Input voltage reference value of sensor signal
2	Type	Display the type of the indicator： UNI900 A3
3	The indicator NO.	Each indicator have one serial NO.
4	The scale NO.	To enter the scale NO. with the connected scale in setting modle of the indicator
5	ID1	Through the upper machine configuration tool to input three ID string（no key input）; The default value：ZHUHAI LONGTEC /Industrial / Termin
6	ID2	
7	ID3	
8	Hardware information	Display the mainboard power: ACor DC
9	Hardware information	Display the PLC type
10	Hardware information	Display the I/O type
11	Hardware information	Display the Load cell type
12	Hardware information	Display the serial port type
13	Software information	Version information
14	Service NO.	
15	MCN	Measuring control times for the indicator

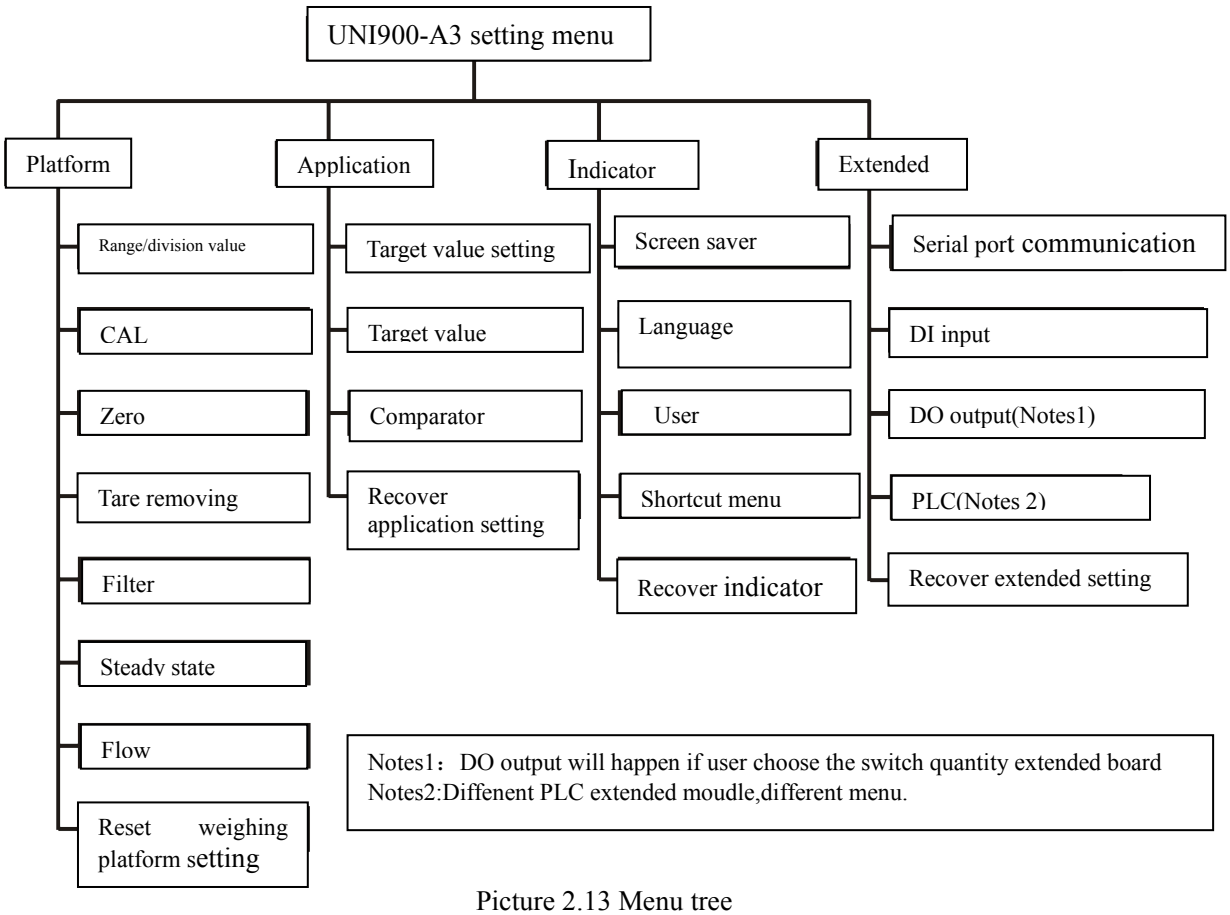
（5）Maintance menu

There are two menu(software updating and recover all)in it.The recover all can recover all parameter except the calibration information.

（6）Setting menu

The settings menu can be found that it contains "weighing platform, application, indicator, extended," four menu,as shown in picture 2.13. The extended of the PLC item menu according to different board will have different, specific parameters meaning and setting for each menu will be in the next chapter.

（7）Menu tree picture

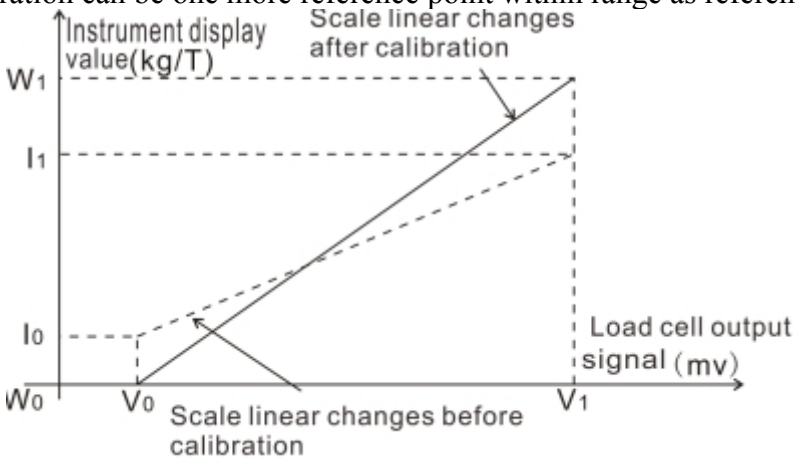


Picture 2.13 Menu tree

Chapter 3. Scale Calibration and Parameter Setting

3.1 Scale Calibration

As gathering weight (mV) signal processor, it need build corresponding relationship with standard weight value from cell load signals, thus requiring calibration. Calibration can be divided into two steps (the zero and span calibration).Span calibration range can be divided into linear calibration and nonlinear calibration .Nonlinear calibration is the common used method in full scale calibration. It is only in the process of calibration range to select a reference point (usually in the range), linear calibration can be one more reference point within range as reference.



Picture 3.1 Calibration show picture

V0: The load cell output signal when empty scale weighing system

V1: The load cell output signal when body load to a certain weight

I0: No calibration, where V0 display value input of the instrument.

I1: No calibrations, V1 display value input to the instrument.

W0: V0 value (i.e., zero) input to the instrument after calibration

W1: V1 display value of the input to the instrument (or load weighing spacing corresponding standard value) after calibration

Note:

A.Resolution (V1 - V0)/(W1 - W0) is greater than or equal to 0.15 uV/d;

B.UNI900A3 load cell input signals meet the condition: 0.05 mV≤V0≤18.5 mV，V0＜V1≤20mV

C. Make sure between 1000 ~ 100000 degree in the input weight value

Please check the NO.3 calibration operation menu of 2.2.3 shortcut menu.

Notes:

A. Please preheating 30 minutes before calibration.

B. It must be maintain the stability of the weighing platform in the zero and span calibration process, otherwise the calibration parameter may appear error.

C.The Angle difference adjustment needs to be done if a platform scale pick up a few sensors . Adjustment method is completed after the calibration, and then the weights to each sensor, and keep track of the number of values, the instrument shows again after finishing read each set of measured value compared with the full-scale value of the calibration, if you don't need to adjust the error small, if the error is too big, need to adjust the junction box (the meter does not include the junction box) internal Angle difference of the potentiometer, and calibration again, until the Angle difference error adjustment within the error range (error range by the users themselves according to the actual situation to determine); In addition, after the complete calibration, still need to do linear detection, the concrete method is the calibration weights, just a few to a copy of a split in turn to join, the actual landed weight and the instrument display values are consistent, such as the error is too big, need to find the problem, and solve.

Before calibration, the first to enter the Settings menu weighing platform (Scale) = > range and the index value set the instrument unit, range, and dividing values.

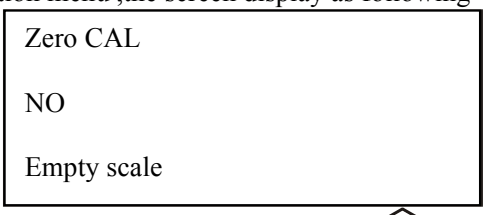
Into the path of the calibration has two kinds: one is direct access to calibrate shortcut menu operation, 2 it is to enter the Settings menu of the weighing platform = > calibration.

3.1.1 Zero and full weighing range calibration

The most traditional and accurate calibration method is use farmar calbration which involve zero and weighing range Calibration two menu operation. This two calibration are independed.

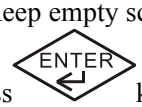
1. Zero CAL

（1）To enter zero calibration menu ,the screen display as following



（2）Keep empty scale,then press the tare removing key 

or clear tare key 

for choose *empty scale*.Press 

key，the screen display *calibrating*.....for a real time CAL process.

（3）The screen display Cal sucess or failed，press 

key to exit the zero CAL.

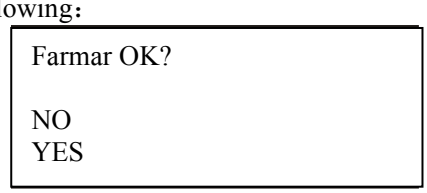
。Notes:It will have infuence the CAL accurate if the platform shaked in the calibration process.

2. Range CAL

（1）To enter range CAL menu.

（2）Input the farmar weight(the value must be 1000 to 100000 division value),then press ENTER key

（3）The screen show as following：



Please put the farmar in the platform and keep the platform steady 

or clear tare weight key 

to choose OK，then press 

key.

（4）Press 

key to finished the range CAL after the screen display the SUCCESS.

3.2 The basic parameter setting

Table 3-1 The platform menu parameter setting list

	Menu list in basic parameter setting	The next level menu	Parameter option	Default Parameter
The basic parameter setting	Load cell Parameter	signal type	2mV/V、3mV/V	2mV/V
		Negative signals	Invalid, allow	Invalid
	Weighing range and division value	Unit	None、g、kg、lb、t、ton、N、Kn	g
		Span	1~9999999	2000
		Division value	0.001、0.002、0.005、0.01、0.02、0.05、0.1、0.2、0.5、1、2、5、10、20、50、100	
	CAL	Zero CAL	Please check *charper 3.1 CAL* for detail information	NO
		Weighing range CAL		NO
		Digital CAL		NO
	Clear zero	Auto-zero tracking	Invalid,G/W,G/W&N/W	G/W

		Auto-zero tracking scope	0.5d、1d、2d、5d、10d	0.5d
		Auto-zero tracking tine	1、2、5、10	10
		Underload scope	Invalid,5d	5d
		Clear zero in start indictor	Invalid,+/-2%,+/-10%	Invalid
		Clear zero by key	Invalid,+/-2%,+/-20%	+/-20%
	Tare weight removing	Tare removing by key	Invalid,allow	allow
		G/N key function	G/W AND N/W shift,clear tare weigt shift ti the G/W	G/W AND N/W shift
		N/W correction	Invalid,allow	Invalid
	Filter	Low-pass filtering	Low, medium and high	medium
		Steady filter	OFF,2Times/SEC,4Times/SEC,8Times/SEC,16Times/SEC,32Times/SEC,64 Times/SEC	2 Times/SEC
	The steady state	Undating speed rate	1Times/SEC,2Times/SEC,4Times/SEC,8 Times/SEC,16Times/SEC,20 Times/SEC	20Times/ second
		Dynamic range	Off,1d,2d,3d,5d	2d
	Flow	Weight unit	Invalid,main unit	Invalid
		Time unit	Second,minute,hour	second
		Testing cycle	0.5 second,1 second,5 second	1 second
		Output average value	1 second,5 second,10 second,30 second,60 second	1 second
	basic parameter setting		NO,recover	

3.2.1 Unit

You can choose following unit：**None**（不显示单位），**g**（克），**kg**（千克），**lb**（英磅），**t**（吨）或**ton**（公吨），**N**(牛顿)，**kN**(千牛)；UNI900-A3不支持单位自动换算功能。

3.2.2 Weighing range

The weighing range can set within 1~9,999,999.The weighing range more than 10 division value will be display overload in screen.It will be check the division value if change the weighing range by each time.The indicator will prompt error if you the division value more than 1000~100,000 after you input weighing range.

Whether need calibration according to the weighing range.

3.3.3 Division value

Please choose the division value within 0.001~100.The candidate division value have close relation with the weighing range the user setted.So the display value must within 1000~100,000(Display division =weighing range/display division value)

0= 0.001 4= 0.02 8= 0.5 12= 10
1= 0.002 5= 0.05 9= 1 13= 20
2= 0.005 6= 0.1 10= 2 14= 50
3= 0.01 7= 0.2 11= 5 15= 100

3.2.4 Zero

The setting introduction of the zero tracking,clear zero after power on and clear zero by key in this charpter.

Zero tracking

The auto-zero tracking function can deal with the little change influence about the environment(such as drop some debris on stage).Auto tracking zero within small range when the platform are empty.You can check the table3-2 for setting about the auto-zero tracking method,range and time.

Clear zero after power on

You can setting the range is ±2％or ±10％.The indicator will carry out the clear zero order after power on the indicator.

Clear zero by key

You can setting the clear zero by key range is ±2％or ±10％.You can carry out the clear zero by key order,off and beyond the range is invalid.

3.2.5 Tare weight removing

The gross weight minus tare weight get the net weight.You can shift G/W modle to N/W modle for the tare weight removing operation.

Tare weight removing by key

The indicator store recent weight as the tare weight after you press tare removing key 

when the tare weight removing activated (default value) and the platform is empty container.The value is O.The tare removing key no use if you off this function.

G/W and N/W shift

This menu can choose *G/W and N/W shift* and *clear tare weight shift to the G/W*.Press 

key can display the shift of the G/W and N/W.This function can use with the tare removing by key.It will clear the tare weight ,then shift to the G/W when you choose tare weight removing.

Net weight amend

Net weight correction function can exchange of gross weight and tare weight values. Serial data output format in negative net weight is not correct. This feature can be activated or closed (default).

3.2.6 Filter

Using low-pass filter and multilevel dynamic filtering technology to meet the diverse use of analog sensor environment. The filtering is higher, the weight shows more stable.

Low pass filter

You can set the low pass filter grade.The grade more higher ,the weight more stable,but the time more longer for weight show.You can choose low, medium and high.

The steady state filtering

Low-pass filtering combining steady-state filtering can provide more stable weight readings, but screen response will rust. Steady state filtering applies only to trade weighing applications, because the quantitative filling of the application of nonlinear filtering may cause errors. The steady state filtering can be turned off (default) or activated.

3.2.7 The steady state

UNI900-A3 can carry out the steady state testing.You can setting the scope and updating rate.

Scope

When the weight range within the scope of this dynamic, then wll be think the weighing platform is stable. It will affect the reset function of the tare removing function. The reset the tare removing is unable to respond immediately under the dynamic value.

3.2.8 Flow

The weight change rate is the flow.It will use the weight change in the limit time.The weight unit is option.The flow value is 0,no flow caculation when you choose invalid,otherwise,the weight unit as the main unit.

The time unit can choose：second，minute and hour

Testing cycle can choose：0.5s，1s and 5s；

Output can choose：1s，5s，10s，30s，60s；

3.2.9 Recover basic setting

The parameter of the platform can recover in factory setting except for the CAL coefficient ,weight range,division value ans steady state.As table3-1

3.3 The application parameter setting

The menu including:target setting,setting point,comparatar,recover application setting.The next menu as the table3.3.You should set the revent parameters in the switch(DI/DO)appliction before you use the target point and comparator.(as the charpter *3.4 entended)*

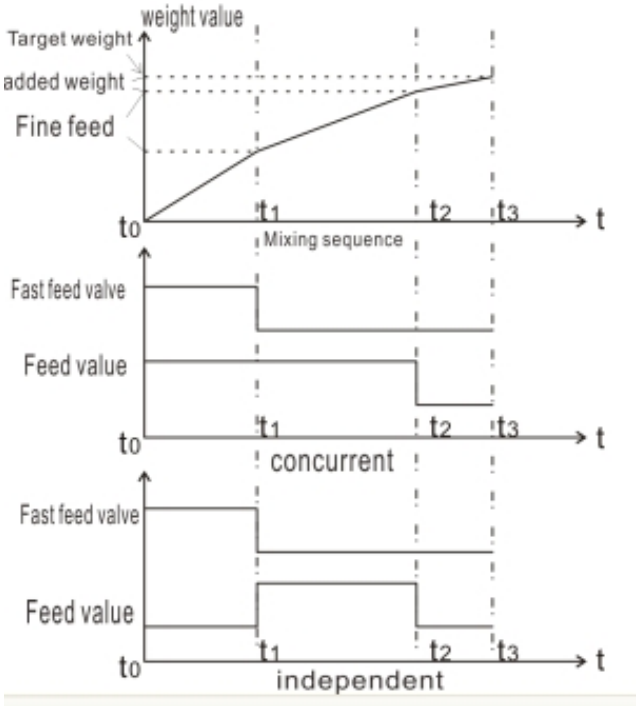
Table3-3 Application menu parameter list

	Menu	Next level menu	Parameter option	Default parameter
APPLICATION	Taraget value setting	Tolerance type	The target value and percentage	Target value difference value
		Output type	The concurrent and independent	The concurrent and independent
		Data resouce target value point	Weight,G/W show	weight show
		Preset point latches	Invalid,allow,batching	allow
		Ingredients way	Add material,reduce material	Add material
		Auto tare removing times	OFF、1~99 times	1
		Amending time for advance value	OFF,1~15 times	1
		Auto-discharge control	Invalid,allow	Invalid
		Start delay time	0.00~60.00(s)	0.10
		Fast feeding ban time	0.00~10.00(s)	0.50
		Slow feeding ban compare time	0.00~10.00(s)	0.20
		Delay time for steady	0.00~10.00(s)	1.00
		Keep parameter 1	0.00~1.00	0.00
		Keep parameter 2	0.00~2.00	0.00
		Delay time befor discharge material	0.00~60.00(s)	0.00
		Delay time after discharge material	0.00~10.00(s)	0.50
		Amend range for target value	0~500	50
		Discharge zero	0~100	50
	Preset target value	Target value	+0000000	
		Tolerance	+0000000	
		Tolerance	+0000000	
		Preset Qty	+0000000	
		Slow feeding	+0000000	
	Comparator	The data source for comparator 1	Invalid,weight absolute value,flow absolute value,weight,G/W,flow	
		comparator 1 condition	<、<=、=、>、>=、<>、_<>_、>_<	<
		Lowest limit of comparator 1	+0000000	

		highest limit of comparator 1	+0000000 （ choose_<>_or >_<will happen this menu）	
		The data source for comparator 2	The same with data source for comparator 1	Invalid
		comparator 2 condition	<、<=、=、>、>=、<>、_<>_、>_<	<
		Lowest limit of comparator 2	+0000000	
		highest limit of comparator 2	+0000000 （ choose_<>_or >_<will happen this menu）	
		The data source for comparator 3	The same with data source for comparator 1	Invalid
		comparator 3 condition	<、<=、=、>、>=、<>、_<>_、>_<	<
		Lowest limit of comparator 3	+0000000	
		highest limit of comparator 3	+0000000 （ choose_<>_or >_<will happen this menu）	
		The data source for comparator 4	The same with data source for comparator 1	Invalid
		comparator 4 condition	<、<=、=、>、>=、<>、_<>_、>_<	<
		Lowest limit of comparator 4	+0000000	
		highest limit of comparator 4	+0000000 （ choose_<>_or >_<will happen this menu）	
	Recover application setting		NO,recover	

3.3.1 Preparation Point Setting

Tolerance type:, Positive or negative tolerance value should not exceed the target data when select the preparation point. Positive or negative tolerance value should not exceed 100 when select preset percentage.
Output type: Including concurrent and independent and the main difference is whether the fast feed valve to open, then the feed valve is opened, and independent output type as picture 3.2.
The batching valve (fast and feeding valve)need a start signal if the preparation point lock is allow.The indicator will carry out the batching output if the setting is invalid and the DIDO ouput setting is fast feeding or feeding.



Picture3.2 concurrent、independent mixing sequence picture

Notes:Fast feeding valve is the fast feeding of the DI DO apllication.The feeding valve is setting as feeding of the DO n application.

3.3.2 Preparation Point (Target) Setting

The relevant terms in the menu are explained as follows

Target quantity: the final expected weight in the process of material transfer. If a container needs to be filled with 5kg material, the target value is 5kg

Tolerance range: the boundary of the target value are considered to have reached the target value in this range.You can set in *the type of the tolerance* of the *preparation poing setting.*

Advance QTY: There are a falling weight in the batching valve close until the scale platform stable.The controlle feed materials in advance QTY to compensate for feeding overshoot or insufficient phenomenon. For example: when the ingredients of the target for 100kg, while the advance amount is 1.5kg, then the weighing terminal closed valves in the feed to 98.5kg.

Slow feeding: The output of slow feeding material weight value.For example:The target value is 100KG,the advance qty is 1.5KG,slow feeding is 3KG.The controller will close the fast feeding valve when the value up to 95.5kg.The slow feeding+avance QTR<Target QTY.

As the picture 3.2,the start batching material (t0),open the fast feeding value and feeding, the material weight reach to target QTY-advance QTY-Slow feeding(t1),the material weight up to target QTY-advance QTY(t2),then close the fast feeding valve,but have some falling material,so the t3 batching finished.

The concurrent and independent mixing diference is only open the fast feeding valve after start batching(t0) until off the fast feeding,then open the feeding valve.

3.3.3The comparator

The comparator data resource can choose off (invalid), display weight absolute value, flow absolute value, display weight, comparator conditions each symbol as table 3-5

Table3-4 the comparator conditions for each symbol

Option	Symbol	Instruction
0	<	The output is good and smoothly when the data resource is less than the marginal value
1	≤	The output is good and smoothly when the data resource is less than and equal to the marginal value
2	=	The output isgood and smoothly when the data resource is equal to the marginal value
3	>	The output is good and smoothly when the data resource is more than the marginal value
4	≥	The output is good and smoothly when the data resource is more than and equal to the marginal value
5	≠	The output is good and smoothly when the data resource is not equal to the marginal value
6	_<>_	The output is good and smoothly when the data resource is out range of the marginal value
7	>_<	The output is good and smoothly when the data resource is out range of the marginal value

Note: To activate the comparator fast menu after the operation in the settings menu. The comparator lower limit and upper limit can be directly modified in fast menu, but comparator data source and the condition must enter the Settings menu changes.

3.3.4 Recover appliction setting

The parameter as table 3-3 for the factory setting

3.4 Indicator parameter setting

"calibration" access, "access to the preparation point ", "the comparator" are set to allow in fast menu, then it shown in fast menu.

Table 3-5 Indicator parameter setting list

	Next Level Menu	Sub-Level Menu	Parameter Choose	Default Parameter
Indicator	Screen saver		OFF,1 minutes,3minutes,5minutes,10minutes,20minutes	10minutes
	Language		Chinese、English、F-Code	Chinese

	User		Invalid、allow	Invalid
	Shortcut menu	Access CAL	Invalid、allow	allow
		Access Target value	Invalid、allow	Invalid
		comparator	Invalid、allow	Invalid
	Recover setting		NO,recover	

3.4.1 Screen saver

The indicator will start up screen saver if the scale no action for a long time.The screen saver can choose the time or off it.

3.4.2 User

The password setting(6 bits) when you choose ALLOW in the USER menu,then enter the SETTING menu for input the password.

3.4.3 Shortcut menu

In the shortcut menu, you will be able to display the shortcut in the shortcut menu for easy operation by setting the "access check", "access preset point", and the "access comparator" to be "allow"operation.

3.4.4 Recover setting

Recover indicator settings to factory settings, as shown in table 3-5

3.5 Extended Parameter Setting

The indicator have expanded function includes the DI / DO, analog output ,Modbus–RTU, Modbus-TCP,CANopen,DeviceNet,Profibus-DP,CC-link and so on.In addition to the "1 serial communication", "DI" and "DO" and "reset the extension settings" menu function only in the hardware after the next menu "appears in the corresponding menu item. All of the" menu "shown in table 3-6.

Table3-6 Extended menu parameter list

	Next menu	Sub-level menu	Parameter choose	Default parameter
Extended	Serial 1 communication	Serial 1 data bit	1.8.n.1、1.8.o.1、1.8.e.1、1.7.o.1、1.7.e.1、1.8.n.2、1.8.o.2、1.8.e.2、1.7.o.2、1.7.e.2	1.8.n.1
		Serial 1 Baud rate	600、1200、2400、4800、9600、19200、38400、57600、115200	9600
		Serial 1 application	no、continuous output 1,Continuous output 2,YHL-5	NULL
		Checkout	invalid、allow	invalid
		Print	Display weight,G/W,N/W,Tare weight one line display,G/W,N/W,Tare weight multi-line display	G/W,N/W,Tare weight multi-line display
	DI input	NO.1 Enter 1 polarity	Positive and negative	NULL
		NO.1 Enter application	NULL,clear tare weight,display/key forbid,forbid the key,keep,remove the alarm,keep,keep,keep,tare reomoving,target(preparetion)value stop,start the target(preparetion)value,zero,discharge material target value	NULL

		NO.2 Enter polarity	Positive and negative	NULL
		NO.2 Enter application	The same with NO. 1Input application	NULL
		NO.3 Enter polarity	Positive and negative	NULL
		NO.3 Enter application	The same with NO.1 Input application	NULL
		NO.4 Enter polarity	Positive and negative	NULL
		NO.4 Enter application	The same with NO.1 Input application	NULL
		NO.5 Enter polarity	Positive and negative	NULL
		NO.5 Enter application	The same with NO.1 Input application	NULL
		NO.6 Enter polarity	Positive and negative	NULL
		NO.6 Enter application	The same with NO. 1 Input application	NULL
	DO output	NO.1 output application	Null,aralm,zero centre,No.1 comparetor,No.2 comparetor,No.3 comparetor,No.4 comparetor,fast feeding,feeding,within the torelance range,dymatic range,N/W,overload,prepartion,underload,finished batching,outout the discharge material	NULL
		NO.2 output application	The same with NO.1 output application	NULL
		NO.3 output application	The same with NO.1 output application	NULL
		NO.4 output application 用	The same with NO.1 output application	NULL
	Analog output	data source	invalid、Display the weight, gross weight, volume, absolute value weight, absolute value of flow	invalid
		Zero Value	+0000000	0
		Full scale value	+0000000	0
		output range	0～20mA、4～20mA This parameter is valid only in the current output	0～20mA
		Zero adjustment	-2.999～+2.999	0
		Full scale adjustment	-2.999～+2.999	0
	Modbus –RTU	Node address	Section address：1～247	
		Baud rate	600、1200、2400、4800、9600、19200、38400、57600、115200	9600
		Format	integer、float	integer
		Byte order	standard、word switch	standard
	Modbus-TCP	Instrument IP address	IP ADD.	192.168.0.200
			Subnet mask	255.255.255.0

			Default gateway		192.168.0.1
		Format		integer、float	integer
		Byte order		standard、word switch	standard
	CANopen	node address		Section address：1～127	1
		Baud rate		1Mbit/s、800kbit/s、500kbit/s、250kbit/s、125kbit/s、50 kbit/s、20kbit/s、10 kbit/s	125kbit/s
		Format		integer、float	integer
		Byte order		standard、word switch	standard
	DeviceNet	Byte order		Section address：0～63	63
		Baud rate		125k、250k、500k	125k
		Format		integer、float、division number	integer
		Byte order		standard、word switch	standard
	EtherNet/IP	Instrument IP address	IP ADD		192.168.0.200
			Subnet mask		255.255.255.0
			Default gateway		192.168.0.1
		Format		integer、float、division numbe	integer
		Byte order		standard、word switch	standard
	Profibus-DP	Byte order		set range：1～125	1
		Format		integer、float、division numbe	integer
		Byte order		standard、word switch	standard
	CC-Link	node address		Section address：1～64	1
		Baud rate		156k、625k、2.5M、5M、10M	156k
		Format		integer、float、division numbe	integer
		Byte order		standard、word switch	standard
	Recobe the extended setting			NO.RECOVER	

Notes: Not include above extended board in our indictator. Please choose appropriately extend board according to the requrement.。

3.5.1 The NO.1 serial communication

The NO.1 serial communication can through the menu to choose different protocol.The main used for connect the computer,big screen display,touch screen display,

The NO.1 serial data bit:you can choose **x1. x2 . x3 . x4**， The x1 is the start bit,x2 is data bit,x3 is the checkout bit(o is the parity,e is the Even parity,n is the null),x4 is the stop bit.

The“**Checksum**” will appear in the next level menu only the NO.1 application is the “Continuous output 1 ” or“Continuous output 2 ” .

3.5.2 DI

Start of the target (preparetion)value ： The target (preparetion)value start signal when it set as the allow.
Stop of the target (preparetion)value ： The target (preparetion)value start signal when it set as the allow.
Display/key prohibition ：The indicator key is null if the DI/DO setting is effectivity,the display and key all no use

operation after enter to the menu.
The indicator key prohibition:The key is null after the DI setting is effectively when enter to the menu.

3.5.3 DO

Zero centre ： The indicator screen will have display when it testing the weight signal in the zero beyond if user choose this fuction ；
Prepartion ： The load cell wire not connected and the **calibration** in setting,maintance and the shortcut menu output no efferent,then the indicator display“+OL”,“-OL”.

3.5.4 Analog Output

0~20mA, 4~20mA, 0 ～ 5V, 0~10V and other functional parameters are set in the menu. The data source can be selected is invalid, display the weight, gross weight, FLOW, the absolute value weight, absolute value of flow.

Example 1： You need to display the weight value of 0 ~ 5000 kg corresponding to 0 ~ 5 v, the parameter settings as table 3-7 if you equipped with 0 ~ 5 v analog output function.

Table 3-7 0～5V Analog output parameter settings example

	Parameter setting					Output	
	Data resource	Zero value	full measure range value	Zero adjustment	full measure range adjustment	Zero outpu	full measure range output
Before adjustment	Display weight	0	5000	0	0	0.049V	4.85V
After adjustment	Display weight	0	5000	-0.978	+2.870	0.00V	5.00V

Example 2：You need to display the weight value 0～2000Kg corresponding to 4～20mA， the parameter settings as table 3-8 if you equipped with 4～20mA analog output function.

Table 3-8 4～20mA analog output parameter settings example

	Parameter setting					Output	
	Data resource	Zero value	Full measure range value	Zero adjustment	Full measure range adjustment	Zero output	Full measure range output
Before adjustment	Display weight	0	2000	0	0	4.03mA	20.49mA
After adjustment	Display weight	0	2000	-0.180	-2.859	4.00mA	20.00mA

The zero and full range measurement adjustment must amend according to the output date before adjust it. It must adjust the zero before the full measurement adjustment. The indicator must start again after setting all the parameter.

3.5.5 PLC communication extended board data format

The user can choose different type of extended board for indicator.Different extended board different communication data format.Please contact with the Longtec if you want the detail introduction.

3.5.6 Recover extended setting

The recover factory setting of all extended board as the table3-6 show.

Chapter 4.Maintenance

4.1 Test for Switch Input and Output

When indicator selection switch quantity extension module, in the maintenance menu "maint" can see "i-test" and "o - test" two menu (that is, the switch input and switch output testing), the "i - test" menu, you can see the switch quantity input state, "0" said input is invalid, "1" said enter a valid; In "o - test" menu, through G/N key choice to test the output channel, through →0← key or →T← key to change the output state, "0" said output invalid, output "1" said effective. Press MENU exit test menu.

Note: Please cut off the external control circuit during the test to avoid accidents.

4.2 Software updating

This indicator can be upgraded by SD card, the updating process is divided into the following 4 steps:

（1）To enter *the software upgrade menu* under the maintenance menu.Press →T← Or G/N select " power on test" press ENTER key to enter the software upgrade function, as shown below:

```
Software updating
    Off the test
    Power on test
```

（2)Power off the indicator supply, insert the SD card with the upgraded software file (Notes: the contact point is inserted).Turn on the power of the indicator as follow:

```
Checking the DOC.
    Start
    Updating software
```

（3）Press tare removing →T← or G/N to select “upgrade software",then press ENTER key.The indicator will enter the software automatically upgrade interface, as following:

```
Updating
    Waiting!/
```

（4）After the software upgrade is completed, the indicator will automatically restart

Note: The indicator will automatically select the normal start if no selection within two seconds operation in the first step (3); The picture "/" position will take turns display "-", "" and "|"in the process of upgrading.,otherwise, the indicator need to restart if the interface is unnormal.

Appendix One：Error Signal

The error signal represent the instrument happened wrong status. As following picture。

```
Error    0021
Press enter for exit
```

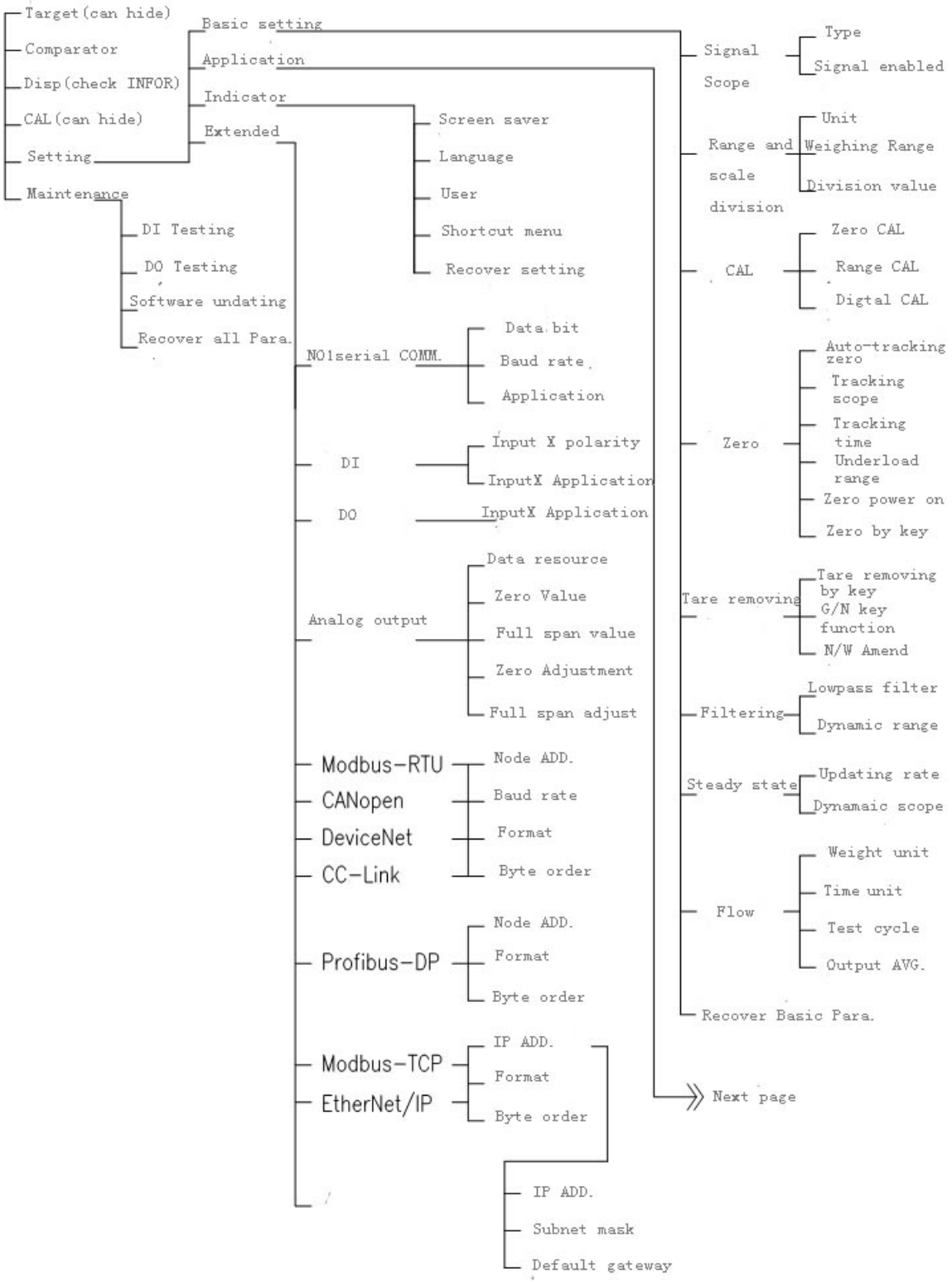
The error signal made by the wrong operation. It will display in screen once happened. Only press **ENTER** to exit. The screen will back to the menu after the mistake signal. The error list as follow:

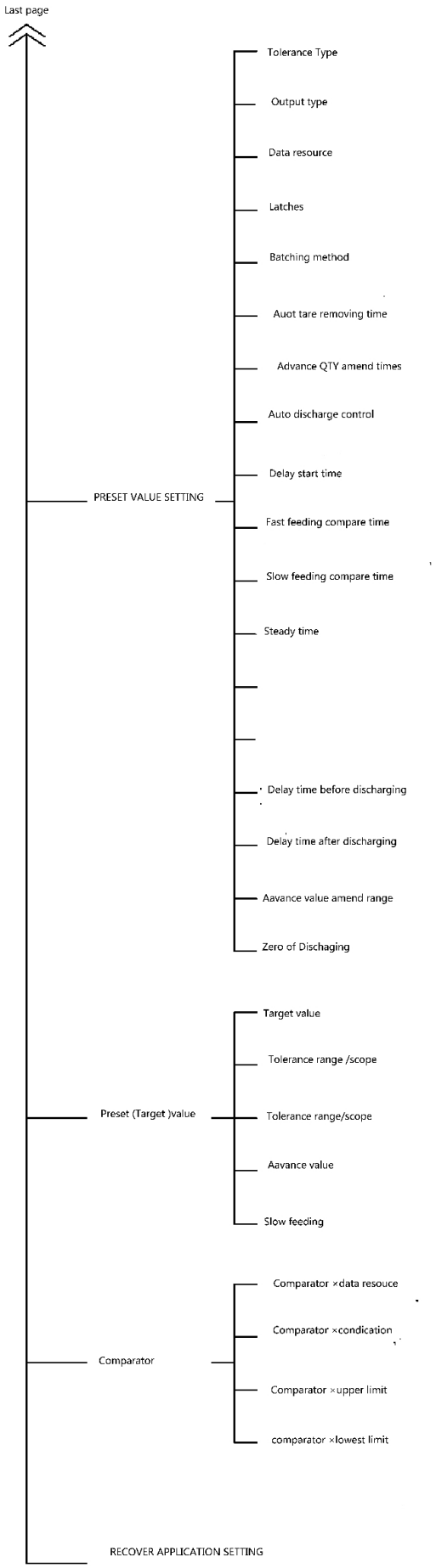
Error Signal	Description
0004	No calibration before Ex-factory
0005	Carry out key make zero and key tare will happen when key make zero or key tare setting are valid
0006	Not support this function
0007	Sealed, the parameter cannot be changed
0008	Input data exceed the range; please check it within the effect division value and measurement range.
0009	Exceed the make zero range
0010	The comparator max value less than the mix value
0011	Make zero /Tare order failed,This error occurs when the net mode or signal overflow is cleared
0012	The dynamic, make zero/tare order failed
0013	reserved
0014	Wrong password
0015	No sealed
0016	Scale range didn’ t match with the division value
0017	PLC station address exceed the range
0018	The scale range much more less than the calibration range
……	……
0020	Material calibration adjust wrong 1: Zero voltage is too high
0021	Material calibration adjust wrong 2: Zero voltage is higher than the span voltage
0022	Material calibration adjust wrong 3：The resolution ratio of the calibration is too high
……	……

Appendix Two：common terms of preset(Target) value

Terms	Description
Start	The allocate material start will need a start signal when the preset point latch is set to allow which is input by the DI/DO, and the " DI/DO" is set to "preset (target)value"
Stop	The *Preset point latches* seetting is allow of the batching material.The stop signal which input by DI for stop batching.The DI application should set as *Preset poingt latches stop*,and the signal only set as allow for *Preset point latches.*
No latch output	The batching ouput can no start signal for carry out,The platform weight(less than the target value),and minus the advance weight.The ouput is START,otherwise is OFF
Latch output	The *Preset point latches* is allow,you will receive *preset point start* signal ,then the fast valve and feeding valve start output.
Concurrent output	The feeding and fast feeding valve open when you choose the latch output.The feeding valve closed when the weight up to the value of the *TARGET VALUE-ADVANCE WEIGHT-SLOW FEEDING.*The fast valve and feeding valve are start same time in each cycle feeding process.
Independent output	The differnet between the concurrent output abd indeoendent output is the fast feeding valve closed,then the feeding valve is open.
Target value;	The value of the target is the expected weight of the material transfer process. Assuming that a container needs to be filled with 5kg material, the target value is 5kg
Advance weight QTY	The platform will add or reduce some material when all the feeding valve are closed.The material add condition is some material in the air fall down the platform.The platform weight is the target value minus the advance value.All valves are closed.
Tolerance	The weight within a range of the target value.The type of the tolerance can set as the preset point difference value or the percent.The target value accuracy more high if the tolerance value more small.
Slow feeding	The slow feeding is the output material weight of the feeding valve,The weight value up to the target value-perset weight-slow feeding,then the fast valve closed.

Appendix Three：Tree Menu




Last page
PRESET VALUE SETTING
Tolerance Type
Output type
Data resource
Latches
Batching method
Auot tare removing time
Advance QTY amend times
Auto discharge control
Delay start time
Fast feeding compare time
Slow feeding compare time
Steady time
Delay time before discharging
Delay time after discharging
Aavance value amend range
Zero of Dischaging
Preset (Target)value
Target value
Tolerance range /scope
Tolerance range/scope
Aavance value
Slow feeding
Comparator
Comparator ×data resouce
Comparator ×condication
Comparator ×upper limit
comparator ×lowest limit
RECOVER APPLICATION SETTING

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