ID510 *WEIGHING CONTROLLER*

OPERATION MANUAL

BAGGING VERSION

Contents

Version Change History

Version	Changes	Date
V0.1	First version	2010/09
V0.2	Increase 4-20mA analog output control function	2015/12

Terminal Configuration Guide

<table>
<tr><th colspan="7">ID510 Configurator</th></tr>
<tr><th></th><th>Housing</th><th>Hardware</th><th>IO Option</th><th>PLC Option</th><th>Application</th><th>Language</th></tr>
<tr><td>511</td><td>X</td><td>X</td><td>X</td><td>X</td><td>X</td><td>0</td></tr>
<tr><td rowspan="2">ID510</td><td rowspan="2">P - Panel
H -Harsh
E - Exd</td><td>C – COM1(RS232)
+COM2(RS232/485)</td><td rowspan="2">0 – None
1 – 8/12 OC OUT
2- 8/12 Relay OUT</td><td>0 - None
A - 4~20mA x 1
B - 4~20mA x 2
P – PROFIBUS-DP
E-EtherNet/IP
F-PROFINET
C-CC-LINK</td><td rowspan="2">0 – Basic Weighing
1 –BAGGING
2 – BLEND
3 – Checking
4 – Filling
5 – Bagging</td><td rowspan="2">0– Chinese
1– English</td></tr>
<tr><td>E – COM1(RS232)
+COM2(RS485)
+ LAN(100M)</td><td>0 - None</td></tr>
</table>

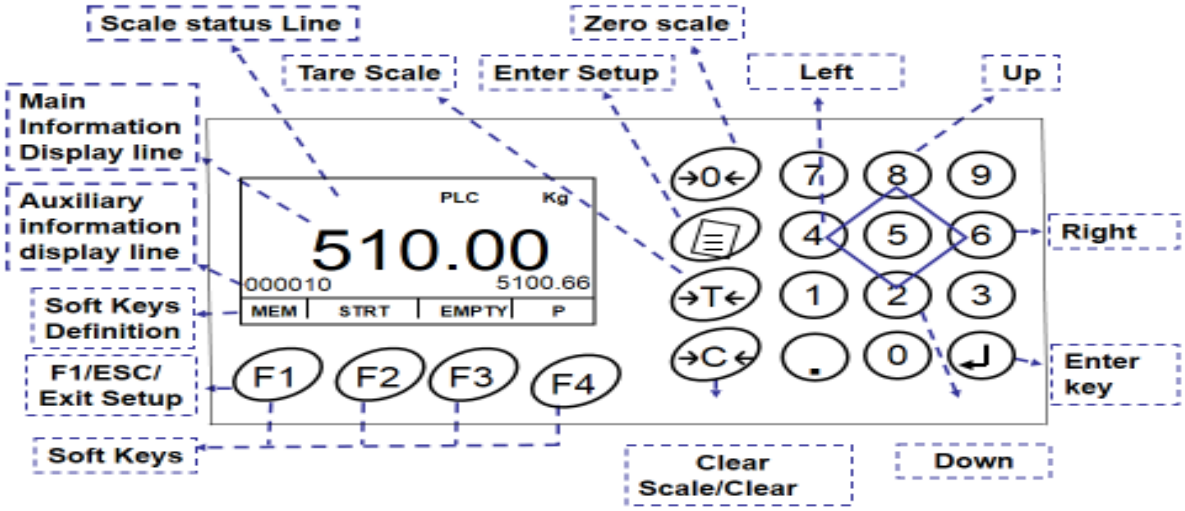
1 Overview

- One analog load cell I/F, support up to ten 350 Ohm(**350 Ohm x 10**) load cells
- Up to 150,000 display Division
- 128X64 green dot matrix OLED display
- RTC (Date & Time)
- Two serial ports
  - COM1 - RS232
  - COM2 - RS232/485
- 10/100M Ethernet port
  - Continuous Output Weight (TCP/UDP)
  - Demand Input and Output (TCP/UDP)
  - MODBUS-TCP Server (TCP)
- 8-Input/12-Output OC type
- 10/100M Ethernet port
- 4 packaging Control Mode
  - No Bucket packaging
  - Bucket packaging
  - Target Controller Mode
- 3-Speed Bagging Control
- Auto Zero / Auto Spill / Totalization / Preset Total Bags
- Auto Empty / Clamp Bag control / Double Scale Work Interlock
- Out of Tol. Alarm / Error Alarm
- Remote configuration, calibration and lock keypad via COM1,COM2 and PLC I/F
- **200Hz** weight updating speed
- **200Hz** target comparison speed
- **100Hz** PLC I/F (PROFIBUS-DP) weight updating speed
- **50Hz** MODBUS-RTU updating speed
- **IP65** – Panel mount version,
- **IP69K** – Harsh version
- **Power In** : 85-264VAC，49-61Hz, Maximum Power consumption less than 6W
- **Explosion-Proof**: IP65 Protection, Ex d ib[ia II C Ga] IIB T6 Gb/DIP A21 TA,T6Exd IIB T6
- Option Board
  - PROFIBUS-DP P for Siemens PLC
  - 16-bit DAC analog output option: **4-20mA**
- **Operating Environment Conditions**

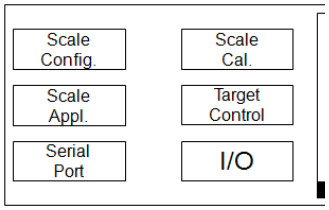
Operating Temperature: -10^{0}C~40^{0}C Humidity: 10％~95％ No Condensation
Storage Temperature: -40^{0}C~60^{0}C Humidity: 10％~95％ No Condensation

2 Keypad and Setup Menu

2.1 Keypad Operation



2.2 Operator Manu

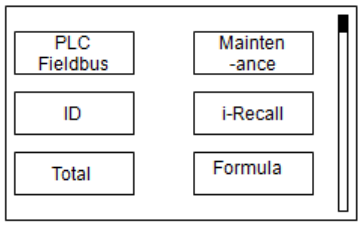


2.2.1 Top Manu

1) Page 1

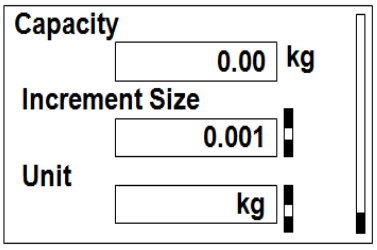
- **Scale Configuration :**
  Enter Scale Calibration Configuration Page
- **Scale Cal. :**
  Enter Scale Calibration Page
- **Scale Appl. :**
  Enter Scale Application Configuration Page
- **Target Control :**
  Enter Target Controller Configuration Page
- **Serial Port :**
  Enter Serial Port Configuration Page
- **I/O :** Enter I/O Application Configuration Page

2) Page 2



- **PLC Fieldbus :**
  Enter PLC Field Bus Configuration Page
- **LAN (Ethernet) :**
  Parameters set into LAN interface
- **Maintenance :**
  Enter Maintenance Page
- **ID**: Enter Input Scale ID Page
- **i-Recall :** Enter Recall Information Page
- **Total** : Enter View Total page
- **Formula :**
  Edit and load formula

2.2.2 Scale Configuration. (Scale Calibration Config.)



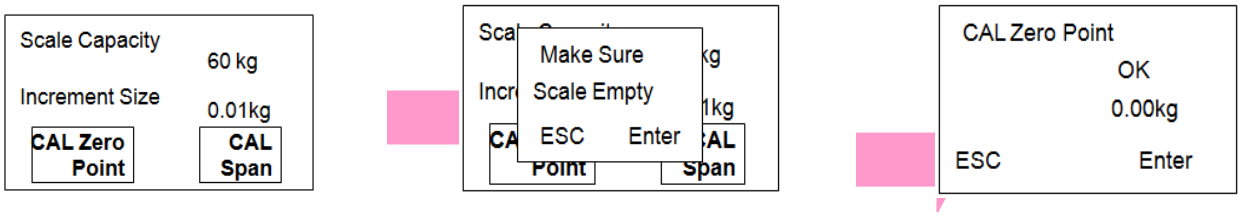
- **Capacity :** Input the capacity of the scale
- **Increment Size : 0.001, 0.002, 0.005, 0.01, 0.02 0.05 0.1, 0.2, 0.5, 1, 2, 5,**

10, 20, 50, 100

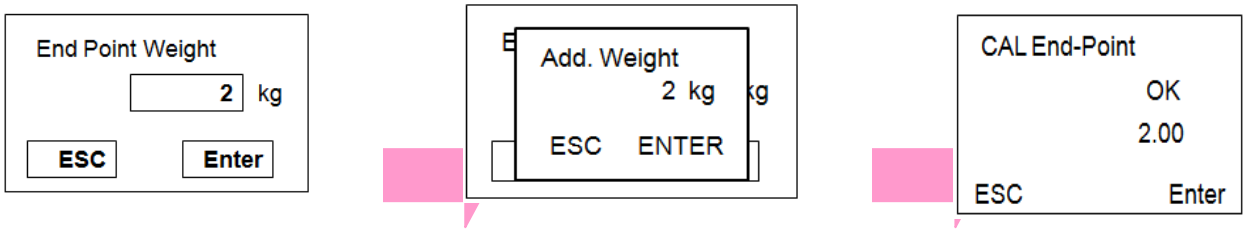
- **Unit : None, g, kg, t**

2.2.3 Scale Calibration

1) Zero Point Calibration

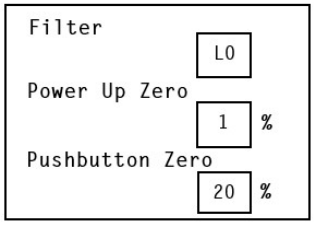


2) End-Point Calibration



2.2.4 Scale App. (Scale Application Configuration)

1) Page 1



- **Filter : L** – Lightest filter **M** – Centre filter **H** - Heaviest filter
- **Power Up Zero :**

  0 – Disable power up zero, pre-zero point will be used after power on

  1~50% - The range of enable power up zero

  ※ Not more than ±10% automatically in W&M sealing mode

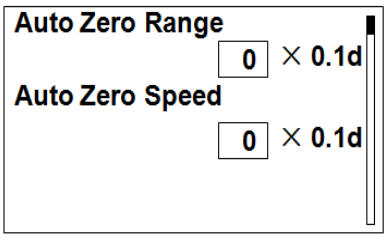
- **Pushbutton Zero :**

  0 – Disable Pushbutton Zero

  1~50% - Enable pushbutton zero range

※ Not more than ±2% automatically in W&M sealing mode

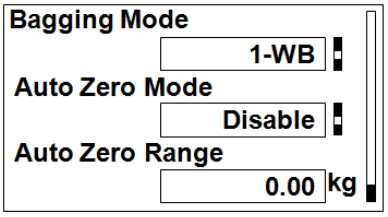
2) Page 2



- **Auto Zero Range** :
  0 – Disable Auto Zero

  (1~99)x0.1d – The range of enable auto zero

2.2.5 Target Control. (Target Controller Configuration)



1）**Page 1**

- **Work Mode**：

1- WB(Bucket Packaging)：With weighing bucket, Fill into bucket first and then empty into bag.

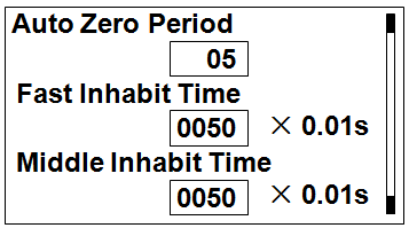
2- NB.(No Bucket packaging): Without bucket and directly filling into bag with clamp bag control.

3- TGT(Target Controller Mode)：External start command from discrete Input or PLC communication to start filling and support 3-speed filling control.

4- SC(Simple Comparator Mode): No need external start command, 3-speed comparator

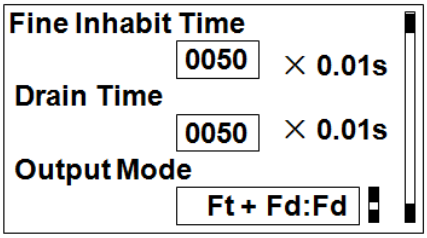
- **Auto Zero Mode**：
  Disable – Disable **Auto Zero** before filling,
  Enable – Enable **Auto Zero** before filling
- **Auto Zero Range**:
  If auto return zero is enabled, Auto Zero is only processed when scale gross weight is less than **Auto Zero Range**.

2) Page 2



- **Auto Zero Period**: 0 - 99
  0 or 1 – Check Auto Zero before each filling cycle
  2 – 99 – Check Auto Zero only before setting cycles.
- **Fast Inhabit Time**：0~9999 x0.01S
  Fast Inhabit Time is used to inhabit compare some time when start **Fast Feed**
- **Middle Inhabit Time:** 0~9999 x0.01S
  Middle Inhabit Time is used to inhabit compare some time when start **Middle Feed**

3) Page 3



- **Fine Inhabit Time:** 0~9999 x0.01S
  Fine Inhabit Time is used to inhabit compare some time when start **Fine Feed**

- **Drain Time:** 0~9999 x0.01S
  Drain Time is to make sure drain weight totally go into scale and scale become stable

- **Output Mode**：

	Fast Feed State	**Middle Feed State**	**Fine Feed State**
Ft+Fd : Fd	**Fast Feed**= ON, **Middle Feed** = ON **Fine Feed**= ON	**Fast Feed** = OFF **Middle Feed** = ON **Fine Feed** = ON	**Fast Feed** = OFF **Middle Feed** = OFF **Fine Feed** = ON
Ft : Fd	**Fast Feed**= ON, **Middle Feed** = OFF **Fine Feed** = OFF	**Fast Feed** = OFF **Middle Feed** = ON **Fine Feed** = OFF	**Fast Feed** = OFF, **Middle Feed** = OFF **Fine Feed** = ON
4-20mA	**Fast Feed** = ON, **Middle Feed** =ON **Fine Feed** = ON **Fast Feed - mA**	**Fast Feed** = OFF **Middle Feed** = ON **Fine Feed** = ON **Middle Feed - mA**	**Fast Feed** = OFF **Middle Feed** = OFF **Fine Feed** = ON **Fine Feed - mA**

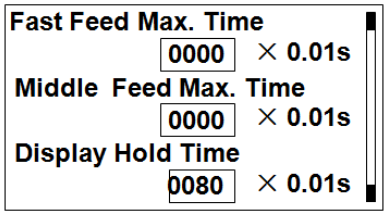
4) Page 4

- **Fast Feed - mA:** 0~999 x0.1mA
  4-20mA analog output control signal for fast feed state
- **Middle Feed - mA:** 0~999 x0.1mA

4-20mA analog output control signal for middle feed state.

- **Fine Feed - mA:** 0~999 x0.1mA
  4-20mA analog output control signal for fine feed state

5) Page 5

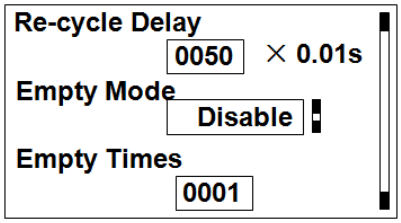


- **Fast feed Max. time**: 0~9999 x0.1 **S**econd
  the maxim time of keeping fast feed,
  0: disable fast feed maxim time checking.
  >0: Enable fast feed maxim time checking,

- **Middle feed Max. time**: 0~9999 x0.1 **S**econd
  the maxim time of keeping middle feed,
  0: disable middle feed maxim time checking.
  >0: Enable middle feed maxim time checking,

- **Hold Display Time：**0~9999 x0.1 **S**econd
  After fill completely, keep display weight some time (**Hold Time**) although scale is starting empty .

6) Page 6

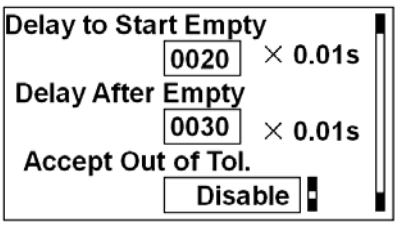


- **Re-cycle Delay:**0~9999 x0.1 **S**econd
  After fill completely and empty completely, delay some time(**Cycle Delay**) to start next cycle.

- **Empty Mode：**
  Disable – After filling completed, no empty
  Manual – After filling completed, wait external start empty command to start empty.
  Timer – After filling completed, delay some time and then start empty automatically.

- **Empty Times：** 1-9999:
  1 - Empty after each time complete filling.
  >1 Empty after complete filling setting **Empty Times**.

7) Page 7



- **Delay to Start Empty：** 0 – 9999 x 0.01Second
  After complete filling, delay setting time and then start empty.

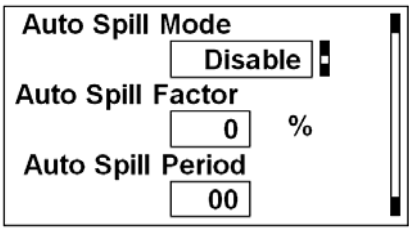
- **Delay After Empty**：0~9999 x0.1 Second

  When scale is empty and keep **Empty** output ON some time to make sure scale is really empty and then close **Empty** output.

- **Accept Out of Tol.**：

  Disable – no need wait Accept out of tolerance command if scale is out of tolerance.

  Enable – if scale is out of tolerance, only when external **Accept Out of Tolerance** command input and then clear out of tolerance alarm and complete filling



8) Page 8

- **Auto Spill Mode**：

  Disable – Disable Auto Spill Mode, after filling no auto spill adjustment checking.

  Enable – auto spill adjustment is enabled after filling.

- **Auto Spill Factor**：

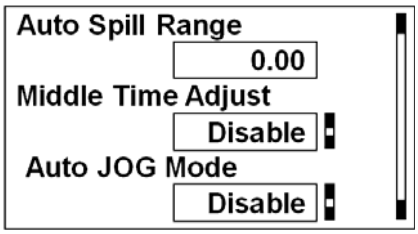
  0 – Auto Spill adjustment according internal rules, if filling result error is big and adjustment range is big, if filling result error is small and adjustment range is small.

  1~100 – Auto Spill adjustment according setting value

- **Auto Spill Period**：0 -99

  0 or 1 - Auto Spill in each cycle. After filling completed.

  >1 – Auto Spill after each setting filling times.



9) Page 9

- **Auto Spill Range**：

  0 – no auto spill range checking

  >0 – Auto spill adjustment is only when filling result error is less than Auto Spill Range, or ignore auto spill adjustment.

- **Middle Time Adjust**：

  Disable – Disable **Middle feed Max. time** adjustment**.**

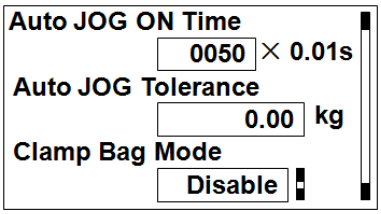
  Enable – Enable **Middle feed Max. time** adjustment**.**

- **Auto JOG Mode**：

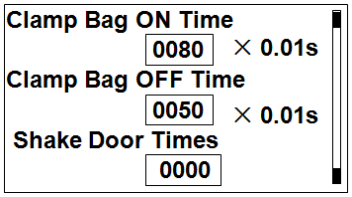
  Disable – Disable auto JOG after filling.

  Enable – Enable auto JOG after filling

10) Page 10



- **Auto JOG ON Time**： 0 – 9999 x 0.01 **S**econd
  Keep fine feed output ON time for auto JOG for each auto JOG cycle.
- **Auto JOG Tolerance**：
  Auto JOG is only running when filling result error is more than Auto JOG Tolerance, or Auto JOG stop.



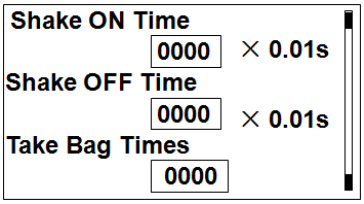
- **Clamp Bag Mode**：
  Disable – Disable Clamp bag control
  Enable – Enable Clamp bag control.

11) Page 11

- **Clamp Bag ON Time**： 0 – 9999 x 0.01 Second
  Make sure keep Clamp Bag ON setting time and then start filling
- **Clamp Bag OFF Time**： 0 – 9999 x 0.01 Second
  keep Clamp Bag OFF setting time to make sure bag drop down.

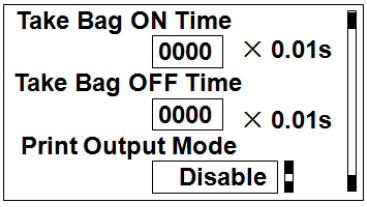
- **Shake Door Times**
  0 – Disable shake door control
  >0 - Enable shake door control, shake empty door times to make sure empty scale. 1 – shake one time, 2 – shake two times

12) Page 12

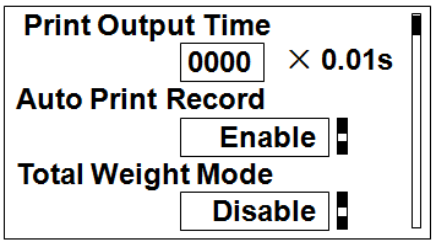


- **Shake ON Time**：
  Keep Shake output ON timing
- **Shake OFF Time**
  Keep shake output OFF timing
- **Take Bag Times**
  0 – Disable take bag control
  >0 – Enable take bag control and output take bag ON/OFF setting times.

13) Page 13



- **Take Bag ON Time**： 0 – 9999 x 0.01 **Se**cond
  Keep Take Bag ON timing
- **Take Bag OFF Time**： 0 – 9999 x 0.01 **S**econd
  Keep Take Bag OFF Timing
- **Print Output Mode**:
  Disable – Disable Print output control after complete filling.
  Enable – Enable Print output control after complete filling



14) Page 14

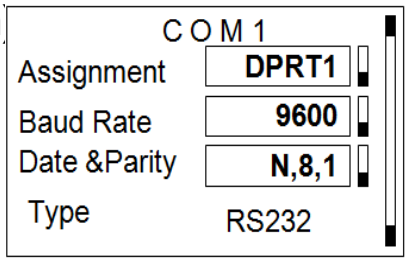
- **Print Output Time**：0 – 9999 x 0.01 **Se**cond
  Keep Print Output ON time
- **Auto Print Record**:

Disable – Disable Auto Spill Mode, after filling no auto spill adjustment checking.
Enable – auto spill adjustment is enabled after filling.

- **Total Weight Mode**：
  Disable – disable total weight after filling completed
  Always - always total weight after filling completed including in tolerance and out of tolerance.

Intol - total weight only for in tolerance after filling completed.

2.2.6 Serial Port (Serial Port Configuration)



1) Page 1 (COM1)

- **Assignment**

None

CRPT1: 17 bytes continuous output including display weight and tare weight

CRPT2: 26 bytes continuous output including display, total bags, total weight

DPRT-1: Demand Input/Output Format-1(one line packing records including Data & Time)

DPRT-2: Demand Input/Output Format-2(Multi-line packing records including Date & Time)

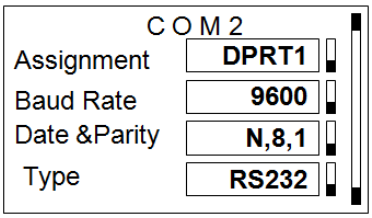
Modbus : MODBUS-RTU Communications, see specific data definition 4.4 Modbus-RTU

- **Baud Rate : 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200**
- **Data and Parity :**

N,8,1 : No Parity,8 data bit, 1 stop bit

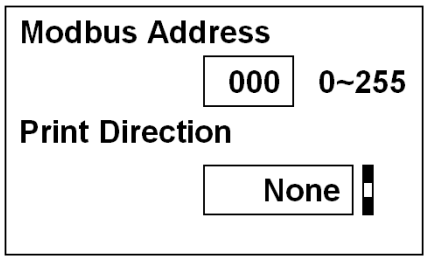
EVEN,7,1 : Even Parity,7 data bit, 1 stop bit

ODD,7,1 : Odd Parity,7 data bit, 1 stop bit



2）Page 2 (COM2)

- **Assignment** : Same to COM1
- **Baud Rate** : Same to COM1
- **Data & Parity** : Same to COM1
- **Type** : **RS232** or **RS485**



3) Page 3 (**MODBUS-RTU Node Address**)

If COM1 or COM2 assigned as MODBUS-RTU，MODBUS-RTU Address is necessary.

2.2.7 I/O (I/O Option Assignment)

1）Input 1~8 : Each input can select the functions listed below

Input Function	1-WB(Bucket Packaging)
None	No configuration function
Start	ON – Auto state OFF – Manual status
Stop	None
Clamp Bag	OFF→ON trigger Clamp Bag output switch between ON and OFF
Manual Fast feed	ON Under Manual state , force fast feed
Manual Slow feed	ON Under Manual state , force slow feed
Dis. WT-IN	ON –Disable WT-IN , in general connect to upper bunker material position checking
Dis. WT-OUT	ON – Disable weight out OFF – Enable weight out
Reset Alarm	OFF→ON: Clear error alarm and out of tolerance alarm and accept out of tolerance
Interlock IN	Interlock for double scale work together
Key LOCK	ON – disable keypad operation
Cancel Last	OFF→ON cancel last bag weight from total weight
Clear ALL	OFF→ON Clear all total weight and total bag counters
Start Empty	OFF→ON trigger to start empty scale
Last Bag	OFF→ON inform scale stop filling and total weight, and then empty scale

Input Function	2-NB(No bucket packing)
None	No configuration function
Start	ON – Auto state OFF – Manual status
Clamp Bag	OFF→ON trigger Clamp Bag output switch between ON and OFF
Manual Fast feed	ON Under Manual state , force fast feed
Manual Slow feed	ON Under Manual state , force slow feed
Dis. WT-IN	ON –Disable WT-IN , in general connect to upper bunker material position checking
Dis. WT-OUT	ON – Disable weight out OFF – Enable weight out
Reset Alarm	OFF→ON: Clear error alarm and out of tolerance alarm and accept out of tolerance
Key LOCK	ON – disable keypad operation
Cancel Last	OFF→ON cancel last bag weight from total weight
Clear ALL	OFF→ON Clear all total weight and total bag counters
Start Empty	OFF→ON trigger to start empty scale
Last Bag	OFF→ON inform scale stop filling and total weight, and then empty scale

Input Function	3-TGT(Target Control)
None	No configuration function
Start	OFF→ON control bag ON/OFF
Stop	OFF→ON Stop feed
Clamp Bag	Not available
Manual Fast feed	ON , Under Stop state, force fast feed
Manual Slow feed	ON Under Stop state, force Slow feed
Dis. WT-IN	ON –Disable WT-IN , in general connect to upper bunker material position checking
Dis. WT-OUT	Not available
Reset Alarm	OFF→ON clear return zero fail error
Key LOCK	ON – disable keypad operation
Cancel Last	OFF→ON cancel last bag weight from total weight
Clear ALL	OFF→ON Clear all total weight and total bag counters
Last Bag	OFF→ON inform scale stop filling and total weight, and then empty scale

Input Function	4-SC(Simple Comparator Mode)
None	No configuration function
Return Zero Scale	
Zero Scale	
Tare Scale	
Clear Tare	
Ask Complete	

2）Output 1~12 : Each output can select the functions listed below

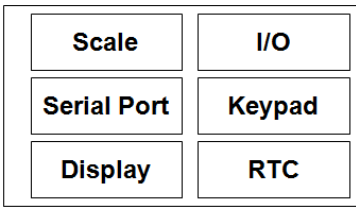
Output Function	1-WB(Bucket Packaging)
None	No configuration function
Fast Feed	Fast Feed speed output
Middle Feed	Middle feed speed output
Fine Feed	Fine feed speed output
Empty-Out	Empty scale output
WT-IN Filling	ON: WT-IN Filling in progress
WT-IN complete	ON: WT-IN Filling complete and close all three speed outputs
Interlock Out	Double scale work interlock output, connect to peer scale interlock input
Clamp Bag Out	Control clamp bag ON or OFF
Out of Tol.	Out of tolerance alarm output
Print Control	Trigger outside device to print
Take Bag	Take Bag control output
Running	Scale is Running
Speed Switch	Fast to middle or middle to fine, output one pulse holding ON 100ms
Error Alarm	Including below errors : return zero fail error， disable WT-IN filling error , disable Empty-out error , wait for accepting out of tolerance alarm

Output Function	2-NB(No bucket packing)
None	No configuration function
Fast Feed	Fast Feed speed output
Middle Feed	Middle feed speed output
Fine Feed	Fine feed speed output
Empty-Out	Empty scale output
WT-IN Filling	ON: WT-IN Filling in progress
WT-IN complete	ON: WT-IN Filling complete and close all three speed outputs
Clamp Bag Out	Control clamp bag ON or OFF
Out of Tol.	Out of tolerance alarm output
Print Control	Trigger outside device to print
Take Bag	Take Bag control output
Running	Scale is Running
Speed Switch	Fast to middle or middle to fine, output one pulse holding ON 100ms
Error Alarm	Including below errors : return zero fail error , disable WT-IN filling error , disable Empty-out error , wait for accepting out of tolerance alarm

Output Function	3-TGT(Target Control)
None	No configuration function
Fast Feed	Fast Feed speed output
Middle Feed	Middle feed speed output
Fine Feed	Fine feed speed output
WT-IN Filling	ON: WT-IN Filling in progress
WT-IN complete	ON: WT-IN Filling complete and close all three speed outputs
Out of Tol.	Out of tolerance alarm output
Under	Filling result is under target lower limit value
Over	Filling result is over target upper limit value
OK	Filling result is in tolerance
Running	Scale is Running
Speed Switch	Fast to middle or middle to fine, output one pulse holding ON 100ms
Error Alarm	Including below errors：return zero fail error

Output Function	4-SC(Simple Comparator Mode)
None	No configuration function
Fast Feed	Fast Feed speed output
Middle Feed	Middle feed speed output
Fine Feed	Fine feed speed output
Motion	Scale in motion
Fill Complete	
Out of Tol.	Out of tolerance alarm output
Under	Filling result is under target lower limit value
Over	Filling result is over target upper limit value
OK	Filling result is in tolerance
Zero Tolerance OK	Gross weight is not more than zero tolerance
Speed Switch	Fast to middle or middle to fine, output one pulse holding ON 100ms
Error Alarm	Including below errors : return zero fail error

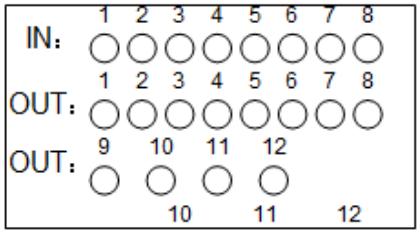
2.3 Maintenance



1) Scale:

- View Current A/D Code to check terminal Load Cell I/F and Load Cells
- View scale over capacity counter

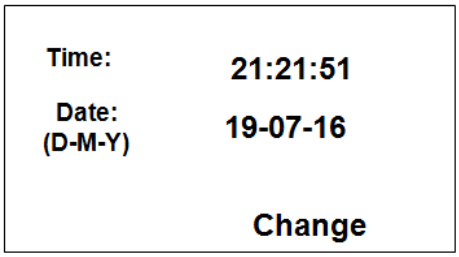
2) I/O:

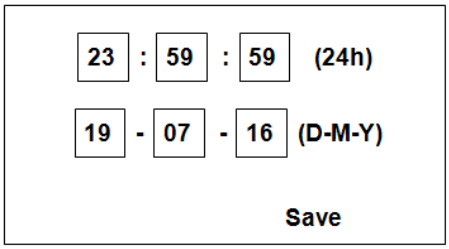


- View Inputs status, Light – ON, Dark – OFF
- Control Output, press key: 1 to 9 and F2(10), F3(11), F4(12) to control output ON/OFF

3) RTC: View and Change Date & Time

- **※ Time is in 24 Hour format one day**



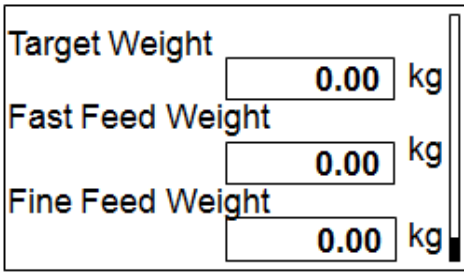


2.3Function Key Operation instructions

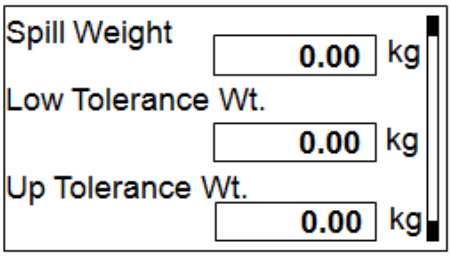
2.3.1 Function Key F1 / MEM

Input / view target value, Zero tolerance and Output threshold

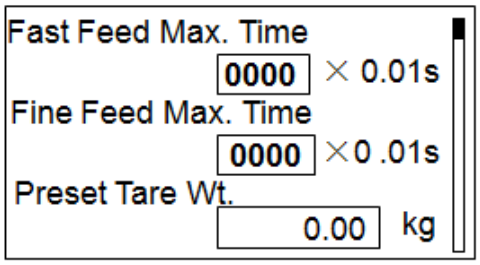
1）Page 1



2) Page 2



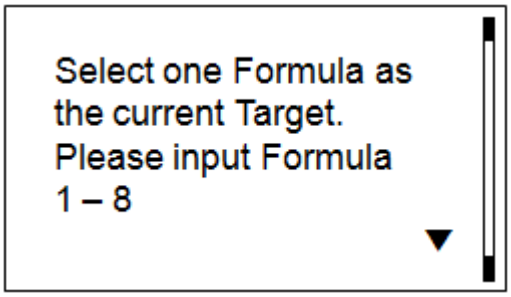
3) Page 3



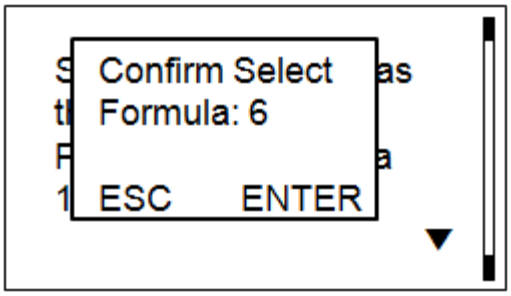
2.3.2 Function Key F2

1) Load formula and modify formula

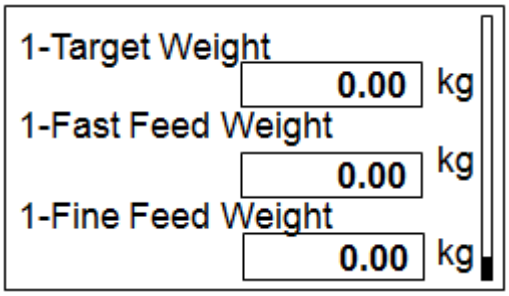
‘



2) F nula, such as ,press key 6 to load 6 formul

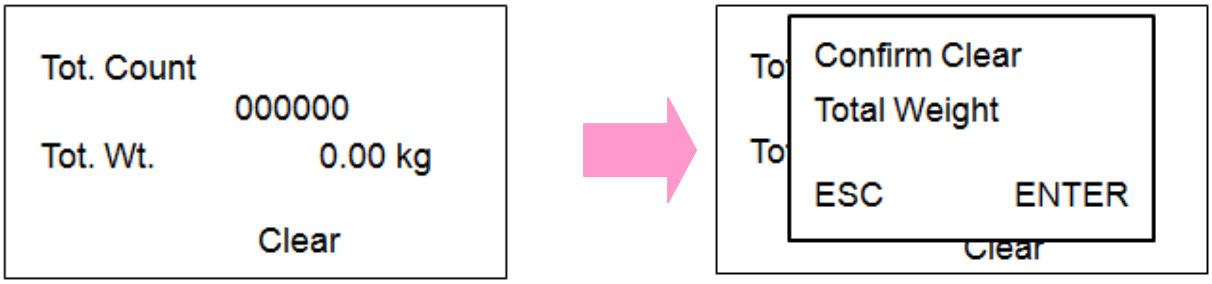


3) Press key F4, you can modify formula.



2.3.3 Function Key F3

Clear Total Weight and Total Num



4 Serial Port Application

4.1 Continuous Output

COM1, COM2 and Ethernet support continuous output weight.

Ethernet support TCP and UDP continuous output weight, TCP port is1025, UDP port is 2025.

18- Byte Continuous Output "CPRT-C"																	
Byte	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Data	STX	STA	STB	STC	W0	W1	W2	W3	W4	W5	TW0	TW1	TW2	TW3	TW4	TW5	CR	CHK
Des.	**A**	**B- Status**			**C- Display Wt.**						**D - Tare Wt.**						**E**	**F**

Description：

A –STX (ASCII 0x02) Start the test character. STA, STB,STC – View next Page

B – State Table

C – Display weight , in gross mode show gross weight, in net mode show net weight, no decimal point in this field, refer Table B to get decimal point position.

D – Tare weight, No decimal point in field, Refer to Table B to get decimal point position.

E –CR (ASCII 0x0D), ASCII Carriage Return character.

F – CHK , Checksum is used to detect errors in the transmitted of data, Checksum is defined as the 2's complement of the seven low order bits of the binary sum of all characters preceding the checksum character, including the STX and CR characters.

B – State

STA	Bit 0~2			Decimal Position	Bit 0,1,2			Decimal Position
	2	1	0		2	1	0	
	0	0	0	XXXX00	1	0	0	XXXX . XX
	0	0	1	XXXXX0	1	0	1	XXX . XXX
	0	1	0	XXXXXX	1	1	0	XX . XXXX
	0	1	1	XXXXX . X	1	1	1	X . XXXXX

Bit3,4		
4	3	Increment Size Factor
0	1	X1
1	0	X2
1	1	X5

Bit-5	Always 1
Bit-6	Always 0
Bit-7	EVEN/ODD Parity bits

STB Bit-0	0 –Gross Mode 1- Net Mode
Bit-1	0 – Positive Display Weight, 1 – Negative Display Weight
Bit-2	0 – None Capacity 1 – Under Capacity or Over Capacity
Bit-3	0 – Stability， 1 – Motion
Bit-4	0 –X10 ON， 1- X10 OFF
Bit-5	Always 1
Bit-6	0
Bit-7	EVEN/ODD Parity bits

Bit-0	0 – Not Continuous Display, 1 – Continuous Display
Bit-1	0
Bit-2	0
Bit-3	0

STC	Bit-4	0
	Bit-5	Always 1
	Bit-6	0
	Bit-7	EVEN/ODD Parity bits

4.2 **Continuous Output** ("CPRT2-C")

26- Byte Continuous Output "CPRT2-C"																	
Byte	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Data	STX	STA	STB	STC	W0	W1	W2	W3	W4	W5	C0	C1	C2	C3	C4	C5	C6
Des.	**A**	**B- State**			**C- Weight**						**G – Total Num**						
Byte	18	19	20	21	22	23	24	25	26								
Data	TW0	TW1	TW2	TW3	TW4	TW5	TW6	CR	CHK								
Des.	**H- Total Weight**							**E**	**F**								

Description :

A –STX (ASCII 0x02) Start the test character.

B – State Table STA, STB,STC – View next Page

C – Display weight , in gross mode show gross weight, in net mode show net weight, no decimal point in this field, refer Table B to get decimal point position.

G – total bag counter.

H – total weight, no decimal point in this field, refer Table B to get decimal point position.

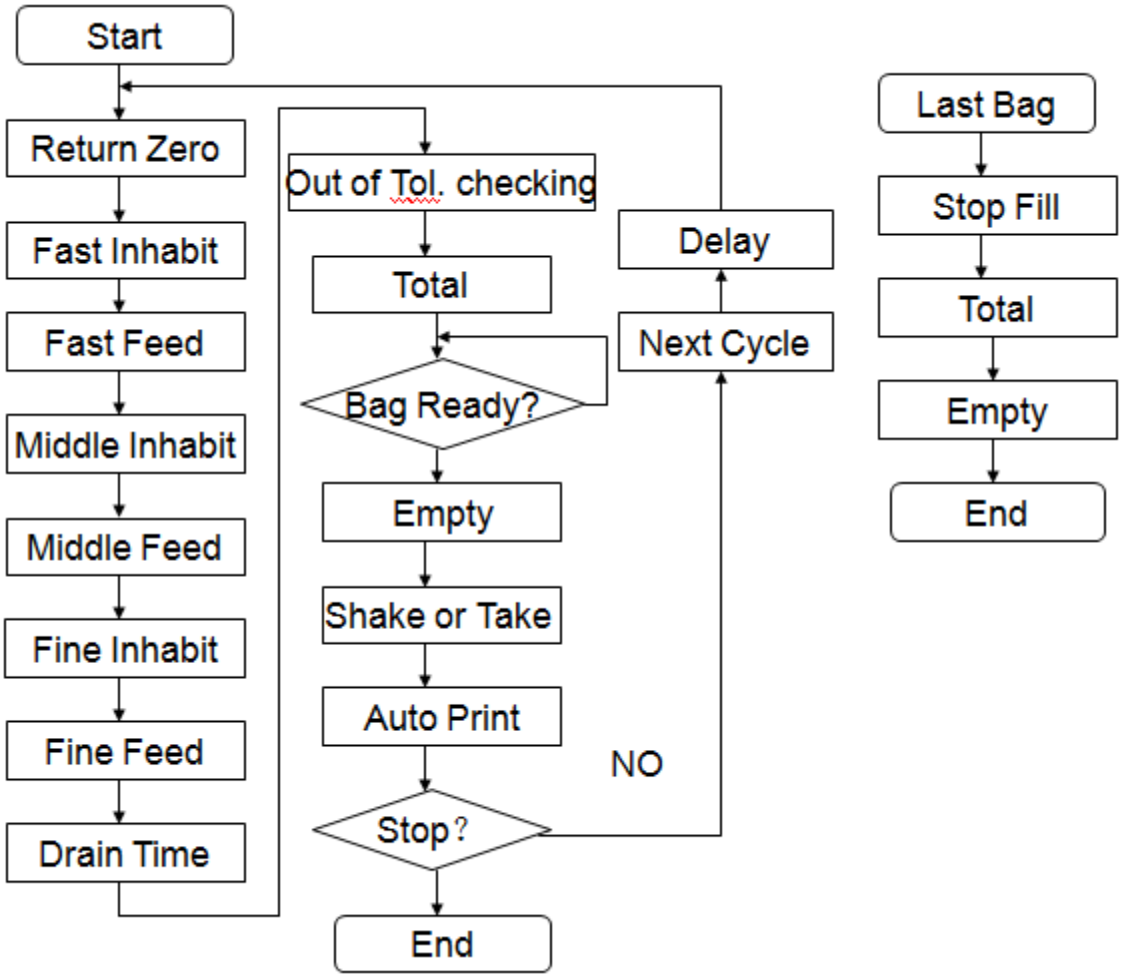
E –CR (ASCII 0x0D), ASCII Carriage Return character.

F – CHK , Checksum is used to detect errors in the transmitted of data, Checksum is defined as the 2's complement of the seven low order bits of the binary sum of all characters preceding the checksum character, including the STX and CR characters.

7 Bagging PAC Controlling Chart

7.1 WB(Bucket bagging)：with one weighing bucket, filling material into weighing bucket first, and empty into one bag. In general work in two modes: one scale or double scales.

7.1.1 Working Flow Chart



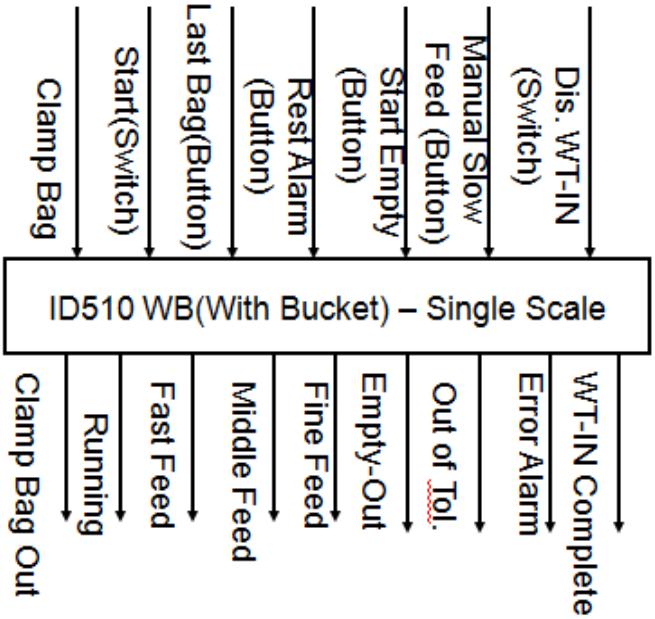
7.1.2 Parameters Configuration Guide

Parameters	Typical Configuration	Description
Work Mode	1-WB(Bucket Packaging)	
Auto Zero Mode	Enable	
Auto Zero Range		
Auto Zero Period	5	
Fast Inhabit Time	60 x0.01S	
Middle Inhabit Time	30 x0.01S	
Fine Inhabit Time	30 x0.01S	
Drain Time	200 x0.01S	
Output Mode	Ft+Fd : Fd	
Fast Feed - mA	0x0.1mA	Only when 4-20mA control motor or screw feeder.
Middle Feed - mA	0x0.1mA	
Fine Feed - mA	0x0.1mA	
Fast feed Max. time	0x0.1S	Not checking
Middle feed Max. time	0x0.1S	Not checking
Hold Display Time	6x0.1S	
Re-cycle Delay	6x0.1S	
Empty Mode	Timer	
Delay to Start Empty	30x 0.01S	
Delay to Start Empty	5x 0.1S	
Accept Out of Tol.	Enable	
Auto Spill Mode	Enable	
Auto Spill Factor	30%	
Auto Spill Period	2	
Auto Spill Range	0.02kg	

Middle Time Adjust	Disable	
Auto JOG Mode	Enable	
Auto JOG ON Time	10 x0.01S	
Auto JOG Tolerance	0	
Clamp Bag Mode	Enable – A-Scale Disable – B-Scale	
Clamp Bag ON Time	30 x 0.01	
Clamp Bag OFF Time	30 x 0.01	
S**hake Door Times**	0	Disable shake door control
Shake ON Time	0x0.01S	
Shake OFF Time	0x0.01S	
Take Bag Times	0	Disable take bag control
Take Bag ON Time	0x0.01S	
Take Bag OFF Time	0x0.01S	
Print Output Mode	Disable	
Print Output Time	0x 0.01S	
Total Weight Mode	Disable	

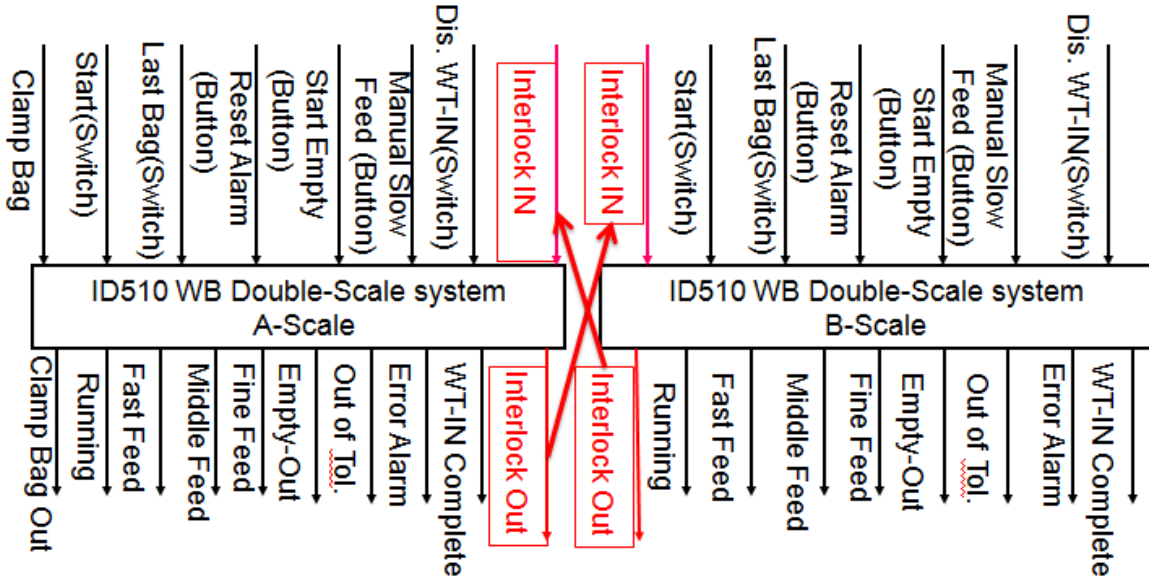
7.1.3 Single-Scale system

Only one scale in bagging scale, one indicator control everything, including clamp bag, checking upper stock bin, 3-speed control filling, empty, out of tolerance alarm, error alarm. If no material in upper stock bin, automatically stop filling and wait until Dis. WT-IN become OFF and then resume bagging



7.1.4 Double –Scale system

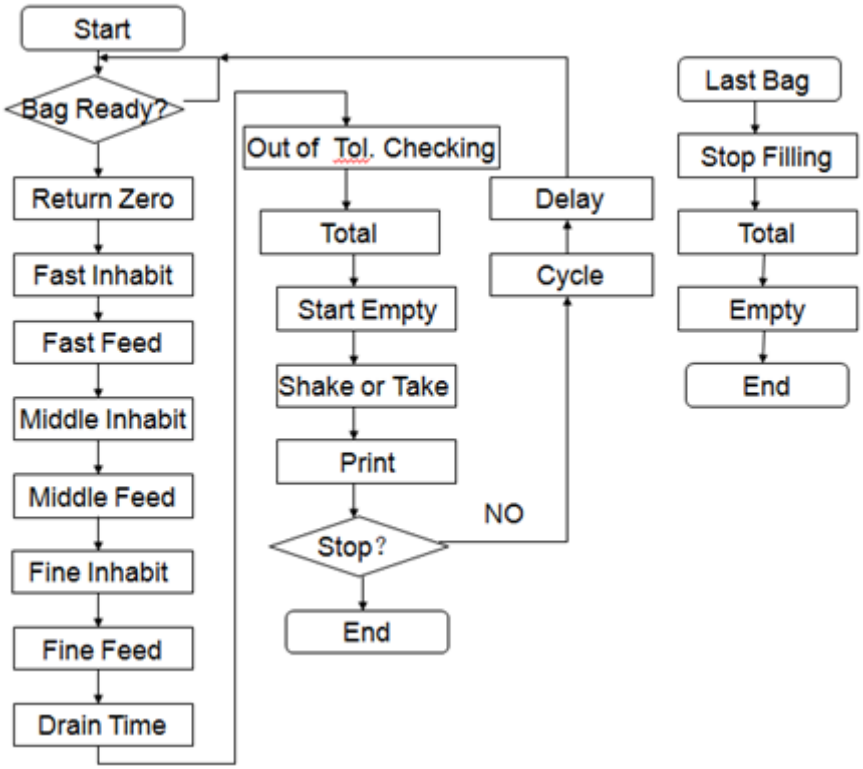
Double scale system have A-Scale and B-Scale, A-Scale control clamp bagging and weighing, B-Scale just control weighing. It is very important to make sure only one scale can empty at the same time, A-Scale Interlock Out connect to B-Scale Interlock IN, and B-Scale Interlock Out connect to A-Scale Interlock IN



7.2 NB.(No Bucket packaging)

Without bucket and directly filling into bag with clamp bag control.

7.2.1 Working Flow Chart



7.2.2 Parameters Configuration Guide

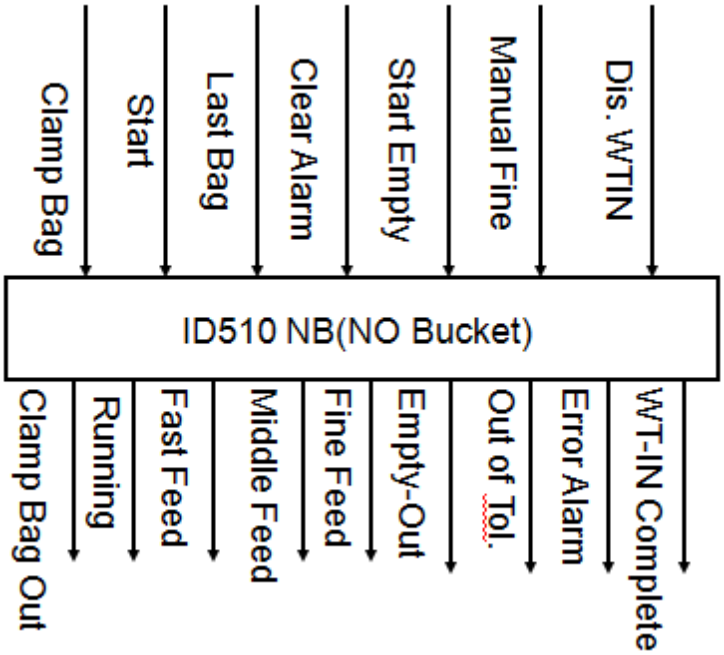
Parameters	Typical Configuration	Description
Work Mode	1-WB(Bucket Packaging)	
Auto Zero Mode	Enable	
Auto Zero Range		
Auto Zero Period	5	
Fast Inhabit Time	60 x0.01S	
Middle Inhabit Time	30 x0.01S	
Fine Inhabit Time	30 x0.01S	

Drain Time	200 x0.01S	
Output Mode	Ft+Fd : Fd	
Fast Feed - mA	0x0.1mA	Only when 4-20mA control motor or screw feeder.
Middle Feed - mA	0x0.1mA	
Fine Feed - mA	0x0.1mA	
Fast feed Max. time	0x0.1S	Not checking
Middle feed Max. time	0x0.1S	Not checking
Hold Display Time	6x0.1S	
Re-cycle Delay	6x0.1S	
Empty Mode	Timer	
Delay to Start Empty	30x 0.01S	
Delay to Start Empty	5x 0.1S	
Accept Out of Tol.	Enable	
Auto Spill Mode	Enable	
Auto Spill Factor	30%	
Auto Spill Period	2	
Auto Spill Range	0.02kg	
Middle Time Adjust	Disable	
Auto JOG Mode	Enable	
Auto JOG ON Time	10 x0.01S	
Auto JOG Tolerance	0	
Clamp Bag Mode	Enable	
Clamp Bag ON Time	30 x 0.01	
Clamp Bag OFF Time	30 x 0.01	
S**hake Door Times**	0	Disable shake door control
Shake ON Time	0x0.01S	
Shake OFF Time	0x0.01S	

Take Bag Times	0	Disable take bag control
Take Bag ON Time	0x0.01S	
Take Bag OFF Time	0x0.01S	
Print Output Mode	Disable	
Print Output Time	0x 0.01S	
Total Weight Mode	Disable	

7.2.3 Single-Scale system

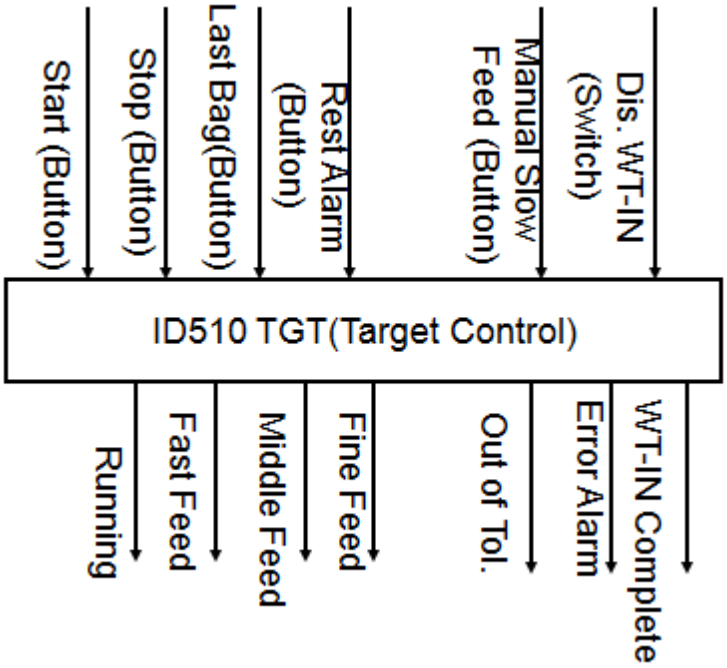
Only one scale in bagging scale, one indicator control everything, including clamp bag, checking upper stock bin, 3-speed control filling, empty, out of tolerance alarm, error alarm. If no material in upper stock bin, automatically stop filling and wait until Dis. WT-IN become OFF and then resume bagging



7.3 TGT(Target Control Mode)

With external START and STOP command to control 3-speed bagging, in general work together with PLC for Bagging PAC.

7.3.1 Working Flow Chart



7.3.2 Parameters Configuration Guide

Parameters	Typical Configuration	Description
Work Mode	2-TGT(Target Control)	
Auto Zero Mode	Enable	
Auto Zero Range		
Auto Zero Period	5	
Fast Inhabit Time	60 x0.01S	
Middle Inhabit Time	30 x0.01S	
Fine Inhabit Time	30 x0.01S	

Drain Time	200 x0.01S	
Output Mode	Ft+Fd : Fd	
Fast Feed - mA	0x0.1mA	Only when 4-20mA control motor or screw feeder.
Middle Feed - mA	0x0.1mA	
Fine Feed - mA	0x0.1mA	
Fast feed Max. time	0x0.1S	Not checking
Middle feed Max. time	0x0.1S	Not checking
Hold Display Time	6x0.1S	
Re-cycle Delay	6x0.1S	
Empty Mode	None	Not support
Delay to Start Empty	0	
Delay to Start Empty	0	
Accept Out of Tol.	Disable	
Auto Spill Mode	Enable	
Auto Spill Factor	30%	
Auto Spill Period	2	
Auto Spill Range	0.02kg	
Middle Time Adjust	Disable	
Auto JOG Mode	Disable	
Auto JOG ON Time	10 x0.01S	
Auto JOG Tolerance	0	
Clamp Bag Mode	Disable	
Clamp Bag ON Time	30 x 0.01	
Clamp Bag OFF Time	30 x 0.01	
S**hake Door Times**	0	Disable shake door control
Shake ON Time	0x0.01S	
Shake OFF Time	0x0.01S	

Take Bag Times	0	Disable take bag control
Take Bag ON Time	0x0.01S	
Take Bag OFF Time	0x0.01S	
Print Output Mode	Disable	
Print Output Time	0x 0.01S	
Total Weight Mode	Disable	

8 Hardware

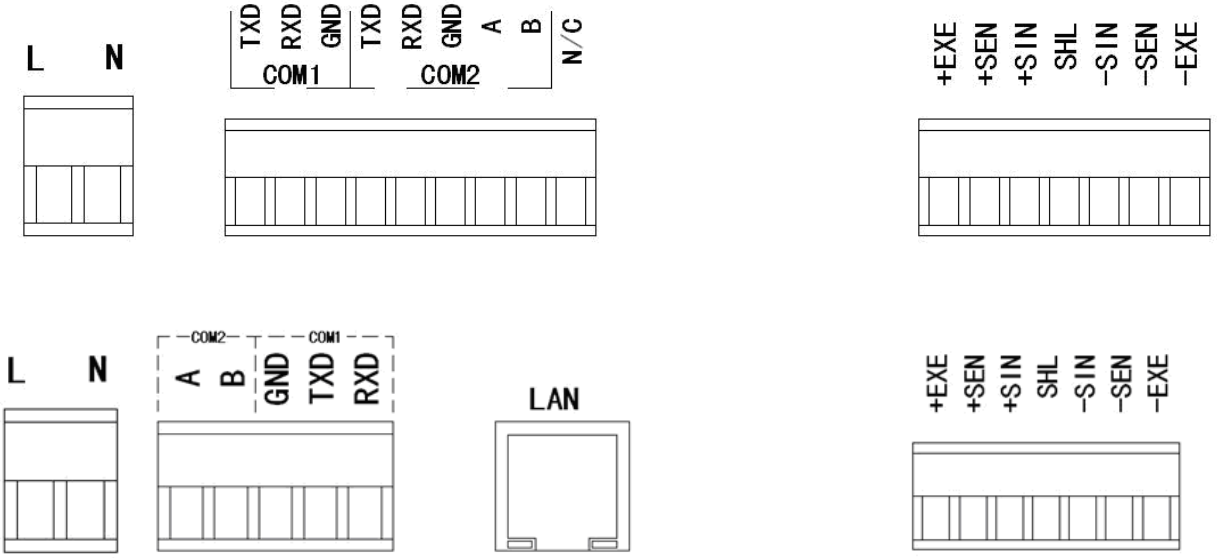
8.1 DIP Switch

Four switches are available on main board.

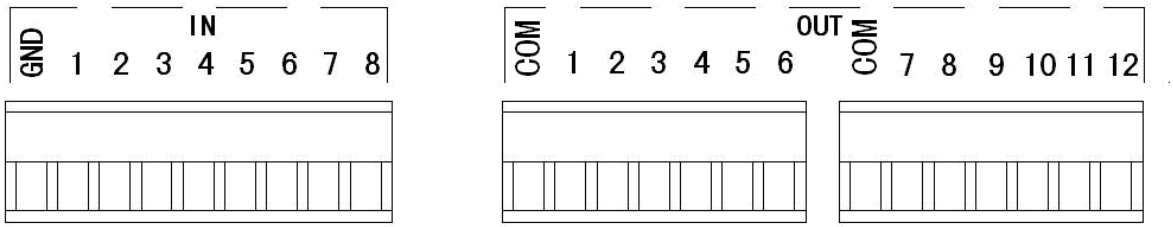
1	2	3	4
ON-Prohibit correction (seals) **OFF-**Allows correction	**ON -** Allows lock the keypad **OFF-**Prohibition lock the keypad	**ON-** The factory default values loaded	**ON-** Update mode must be **OFF** during normal use

8.2 Harness Wiring Guide

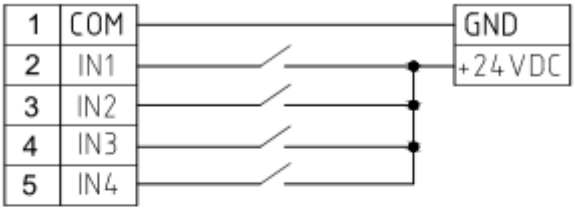
8.2.1 Main Board



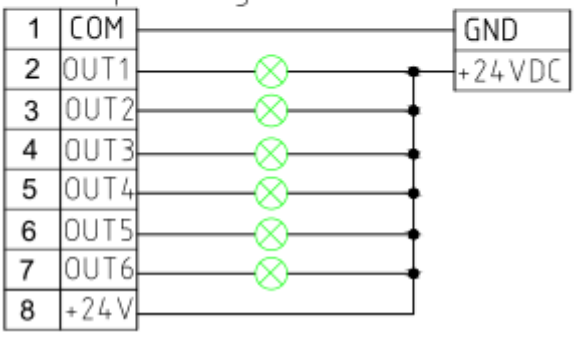
8.2.2 I / O Option Board - Transistor Output Version



Input diagram



OC Output diagram

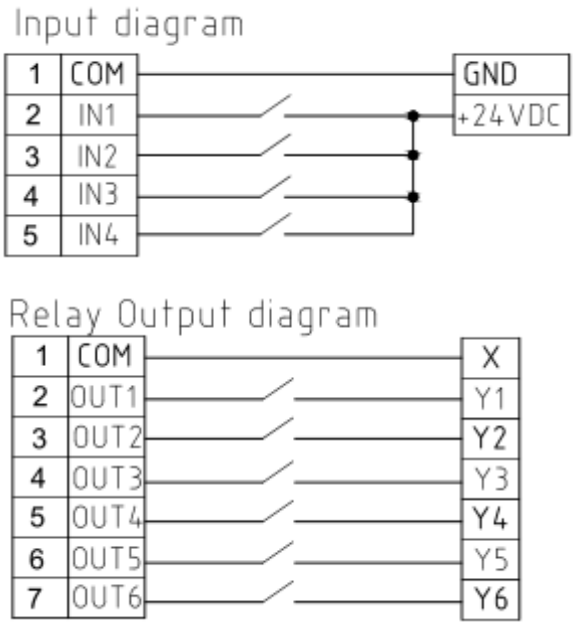


te:

ch OUT can pass
rough not more than
0mA current!

4VDC can be 12~30VDC,
pical power supplier
24VDC

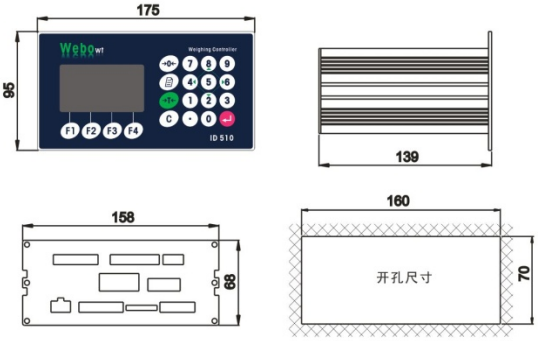
8.2.3 I / O Option Board - Relay Output Version



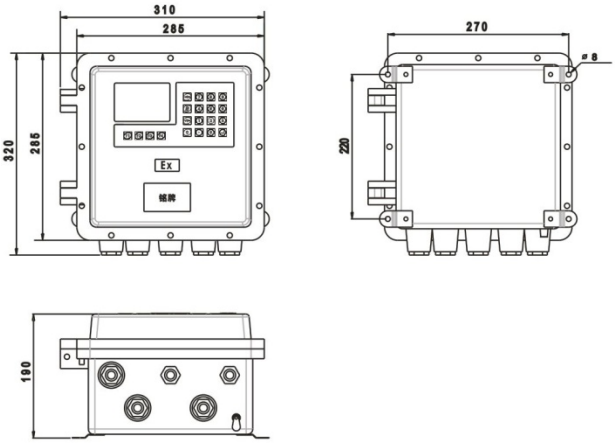
* Note: Relay type COM maybe connect to 220VAC or 24VDC, if connect to 220VAC, each output should less then 1A current output, and total should less than 2A current.。

9 Physical Dimensions

Panel mounting (Panel)



Explosive proof (Exd)



Dust proof version (Harsh)