TENDER Weight Indicator and Controller with six Programmable Output

Model WI606
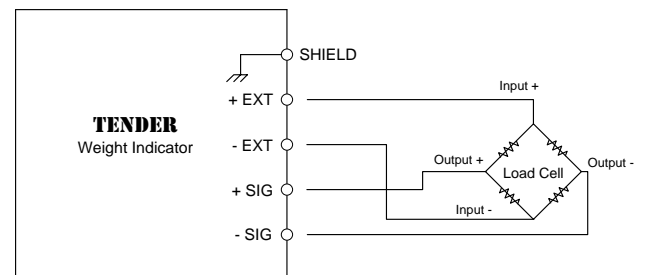
Specifications

Operating Voltage	230VAC,50Hz
Power Consumption	Approx. 3VA
Operating Temperature	-20º C ~ 60º C
Load Cell Excitation	DC 5V , 120mA
Relay Outputs	5 A, <250 VAC
Digital Inputs (AC)	220 VAC
A/D Sampling speed	50 times/sec
Display	5 Digit LED 7-segment
Analog Input range	±20mV
Input impedance	10MΩ
Size	96 X 96 X 72 mm

Pin Configuration

IN 2   IN 1   INCOM | Shield   EXC +   EXC -   SIG +   SIG -

Type:WI606

S/N:6060121

OUT 6B   OUT 6A   OUT 5   OUT 4   OUT 3   OUT 2   OUT 1   COM   Supply L   Supply N
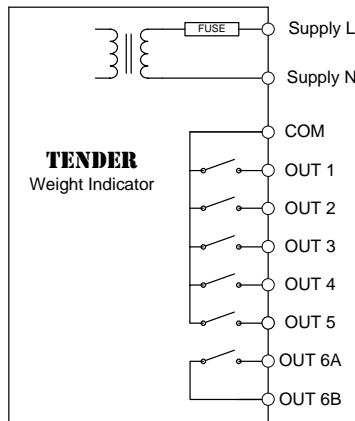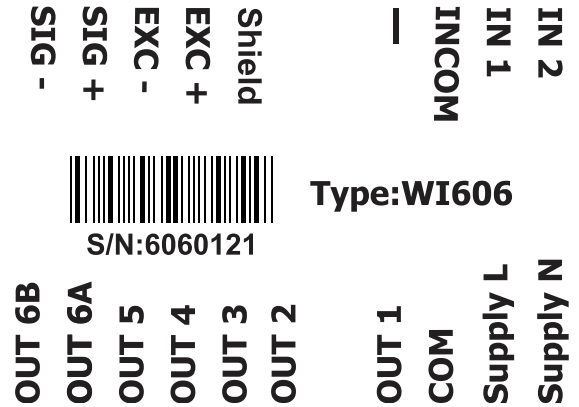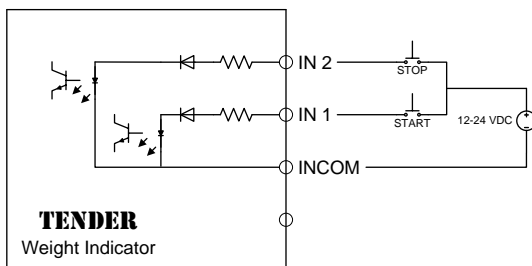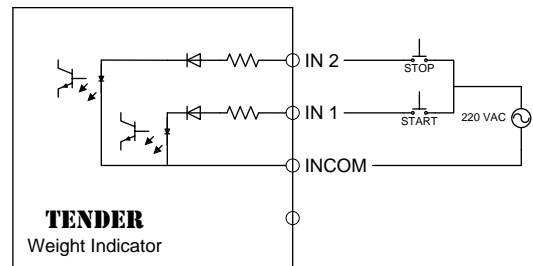

Supply and relay connection

Load cells connection

DC digital input connection

AC digital input connection

1) Load cell error messages

• n.CELL : It indicates disconnection or displacement of load cell wires or load cell failure.

• S.CELL : It indicates short circuit of load cell wires.

2) Function modes of device (FUnCt menu)

FUn=0 **Simple mode:** In this mode, six relays of device operate separately, i.e. relays state will change when the weight goes over their set points, and they will return to their normal state when it's lower than setpoints. Normal mode of relays can be determined via no-nC menu. In this mode IN1 digital input operates as an external tare and IN2 is inactive.

FUn= 1 to FUn=6 **Automatic loading and discharging mode:** In this mode, the digital input IN1 starts loading and the outputs will be activated automatically, and each of them perform the loading up to the set point value. Finally, OUT6 (*) will be activated to command discharging completion. The number of required outputs for automatic loading can be set from one to six via FUnCt menu and other outputs will operate independently. IN2 digital input stops or inactivates outputs.

3) Automatic loading and discharging continuously

In automatic loading mode, the loading and discharging cycle will repeat automatically until the IN1 input is active. In this case, the OUT6 starts the load discharging to achieve the minimum tare value. Two tunable timers are also used to help the cycle persistence. oF_dLY Timer is used to delay the OUT6 shut down in order to achieve the complete discharge. St_dLY is applied to delay between the former batch discharge completion and the next batch loading initiation.
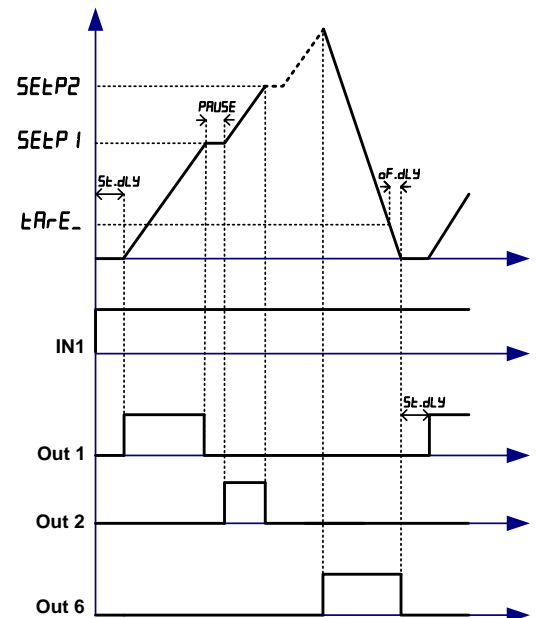

4) Final tuning system for reducing "load in air" error

This device is equipped with a system that can reduce significantly the "load in air" error by cutting and connecting continuously (pulse generation) in the output and reducing the infusion rate, until achieving the set point value.

* In FUn=6 the OUT6 does not perform as a discharging relay. It commands to sixth material's loading.

5) Main setting menu of the device

In order to enter this section, hold [⟳] while the device is off, then turn it on.

Start

Hold [⟳]

Turn On
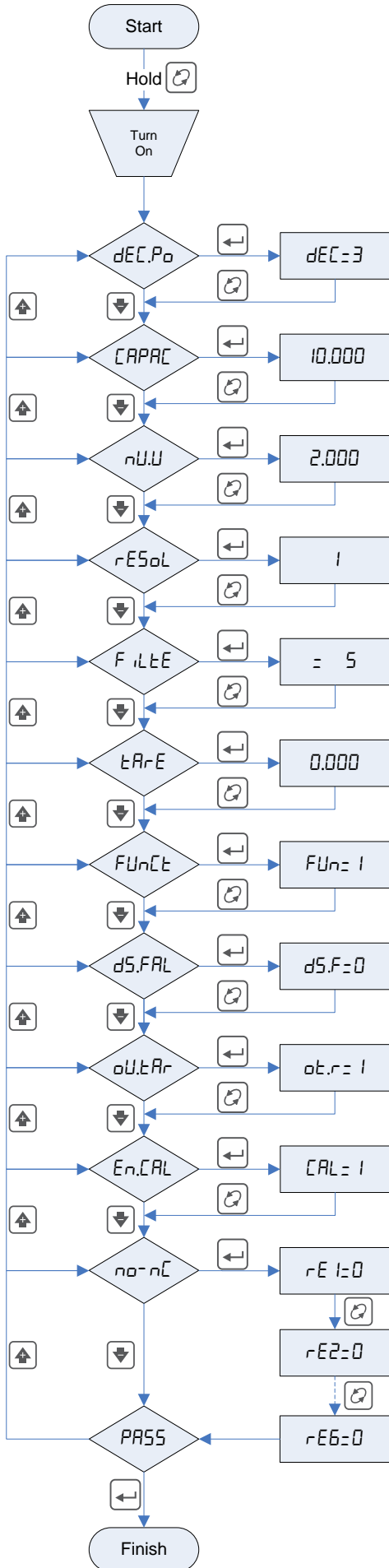
dEC.Po → [↵] → **dEC=3** [⟳]
Enter the desired float number.

CAPAC → [↵] → **10.000** [⟳]
Enter the maximum capacity of load cells.

nU.U → [↵] → **2.000** [⟳]
Enter the MV/V value or load cells sensitivity.

rESoL → [↵] → **1** [⟳]
Select the resolution value from $1, 2, 5$ … and 100.

F iLtE → [↵] → **= 5** [⟳]
Enter the digital filter level or updating time per second from 5 to 50.

tArE → [↵] → **0.000** [⟳]
Enter the tare value or dead weight, if required.

FUnCt → [↵] → **FUn= 1** [⟳]
Select the device mode from 0 to 6, considering the aforementioned explanations.

dS.FAL → [↵] → **dS.F=0** [⟳]
In order to display the "load in air" or infusion menu, enter 1 and to hide it, enter 0.

oU.tAr → [↵] → **ot.r= 1** [⟳]
For the activation of automatic resetting at the loading initiation, enter 1.

En.CAL → [↵] → **CAL= 1** [⟳]
In order to activate the manual calibration, enter 1 and to inactivate it, enter 0

no-nC → [↵] → **rE 1=0** [⟳]
For the normally close state of first output relay, enter 0 and for the normally open state, enter 1.

rE2=0 [⟳]

rE6=0
Repeat these actions for other five relays.

PASS ← [↵]

Finish
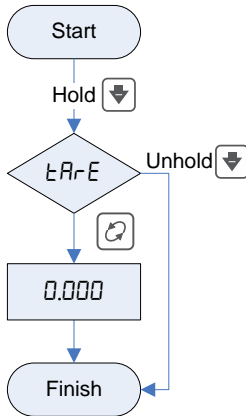
6) Manual Tare

Hold ⬇, the term **tArE** is displayed, while holding the key

Push ⟳. The display will show zero.

7) Manual calibration

If the indicated weight is not equal to the real load value, it can be calibrated manually as following. It is obvious that after performing the manual calibration, the Capacity parameter value (in the main setting section) will change automatically.

After tare, put the weight with the determined value on the balance, and start the calibration.
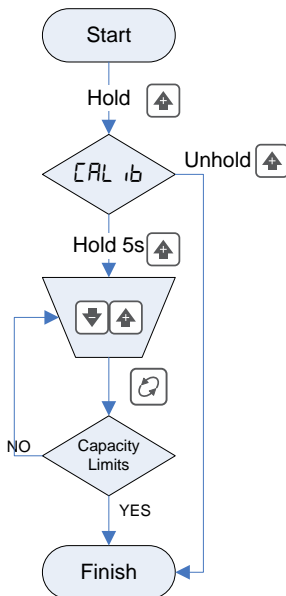
Hold ⬆ for 5 seconds.

The display starts to blink.

By using ⬆ and ⬇ , enter the desired weight and push ⟳

If the calculated new load cell capacity is not in the admissible range, the system will return to the previous step and will not quit the blinking state.
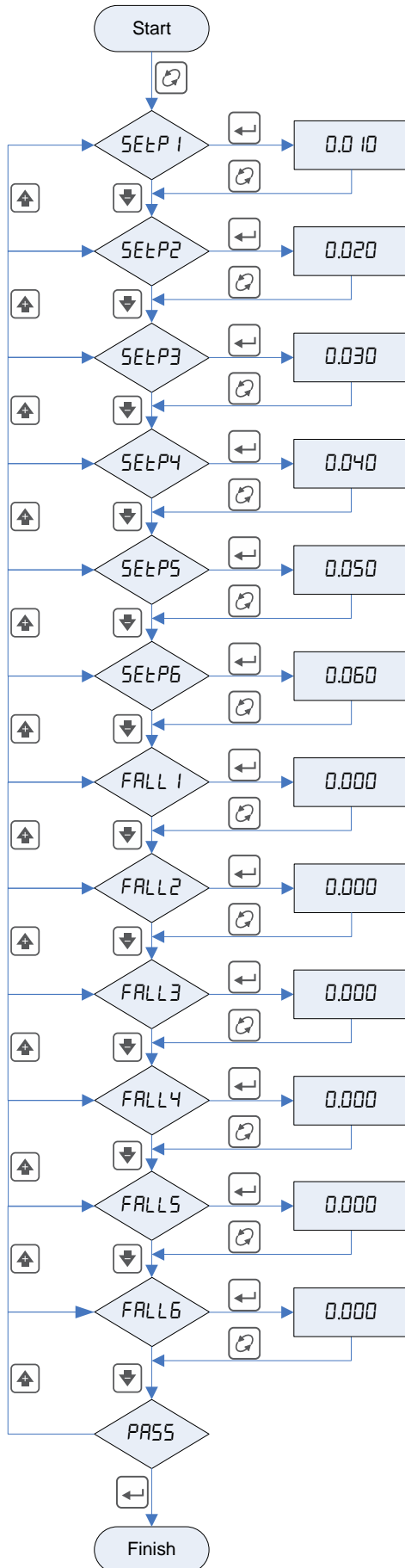
8) Reset factory

Hold ⬇ for 12 seconds to display **FCrSt** (blinker), then press ⟳

9) Formula selection

Push ↵ and hold it. The term **Prog=** is displayed, while holding ↵. By using ⬆ and ⬇, select the desired formula.

10) Set point tuning

In order to enter the menu while the device is on, push the key ⟳

Enter the desired final weight in order to load from the first relay.

Enter the desired final weight in order to load from the second relay.

Enter the desired final weight in order to load from the third relay.

Enter the desired final weight in order to load from the fourth relay.

Enter the desired final weight in order to load from the fifth relay.

Enter the desired final weight in order to load from the sixth relay.

- If dS.F=0 it redirects to PASS and the FALL menus won't be displayed.

Enter the leakage value after the stop command for the first output.

Enter the leakage value after the stop command for the second output.

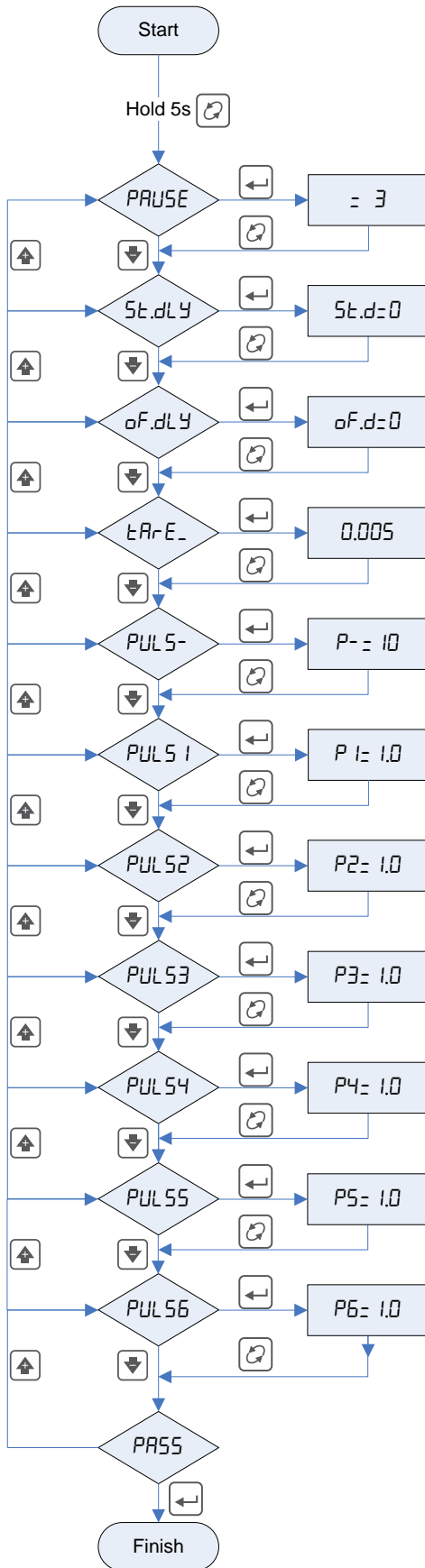Enter the leakage value after the stop command for the third output.

Enter the leakage value after the stop command for the fourth output.

Enter the leakage value after the stop command for the fifth output.

Enter the leakage value after the stop command for the sixth output.

11) Accessory setting

In order to enter the menu hold [⟳] for 5 seconds.

Flowchart	Description
Start	
Hold 5s [⟳]	
PAUSE → [↵] → ⎵ 3 / [⟳]	Enter the required delay time between loadings.
St.dLY → [↵] → St.d=0 / [⟳]	Enter the delay time at be beginning of loading.
oF.dLY → [↵] → oF.d=0 / [⟳]	Enter the delay time in the discharge after achieving the **tArE_** value.
tArE_ → [↵] → 0.005 / [⟳]	Enter the minimum tare value, the discharge system should remain active to achieve that.
PULS- → [↵] → P-= 10 / [⟳]	Enter the maximum admissible pulse number in order to perform the final tuning.
PULS1 → [↵] → P1= 1.0 / [⟳]	Enter the pulse width time of the first output in the final tuning mode.
PULS2 → [↵] → P2= 1.0 / [⟳]	Enter the pulse width time of the second output in the final tuning mode.
PULS3 → [↵] → P3= 1.0 / [⟳]	Enter the pulse width time of the third output in the final tuning mode.
PULS4 → [↵] → P4= 1.0 / [⟳]	Enter the pulse width time of the fourth output in the final tuning mode.
PULS5 → [↵] → P5= 1.0 / [⟳]	Enter the pulse width time of the fifth output in the final tuning mode.
PULS6 → [↵] → P6= 1.0 / [⟳]	Enter the pulse width time of the sixth output in the final tuning mode.
PASS → [↵]	
Finish	