



## FARA 1 SET

### Basic information

1. Never connect the display screen to the electricity before connecting loadcell and other wirewraps.
2. If you want to connect more than more than one loadcell to the display screen it is better to use a junction box of the company.
3. Loadcell cable should be away from electricity cable.
4. Loadcell cable which connected to the display screen should be accrete and without any terminal. (if you add wire to it you must soldered it )
5. Select a safe and far from mechanical dangers path for wiring.
6. It is better to establish earth and also loadcell shield be connected to the display screen to avoid noise in display screen.
7. Never install the display screen near a electromagnetic environment.
8. you must select appropriate fuse for displayers.

**Notice:** Before any display screen wiring study the guidance booklet.



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## ***Display Screen Features :***

FARA 1 SET display screen is a four relay display weight display screen ,these relays are adjustable by means of keyboard .This screen display capable of working manually or automatic.

## ***TECHINICAL FEATURE***

Power supply : 220-230 volt with 50-60 frequency

Power consumption: 3 VA

Load cell stimulus voltage: 50 DC  $\pm$  3%

Max number of load cell : four 350  $\Omega$  load cell

Ambient temperature: -20 ~ +70 Celsius

Working temperature: -10 ~ +50

Scale display: 10000 fragment

Internal scale: 24bit

Display mode: 5digit 7segment with height of 17milimeter

Display units: ton and kilogram



## ***Electrical connection:***

If using more than one load cell ,it is better to use water proof junction box . shielded wire should be use for load cell and shield must be connected to the display screen .section of cable's wires not be less than 0.5mm<sup>2</sup> and connect it to display screen in a safe place and away from electricity wire.

also select the closest path to connecting it to display screen and length of wire should not exceed 20meter.


1. *SHIELD*
2. *+EXCITATION*
3. *-EXCITATION*
4. *+SIGNAL*
5. *-SIGNAL*
8. *COM*
9. *OUT1*
10. *OUT2*
11. *OUT3*
12. *OUT4*
16. *DIGITAL STOP*
17. *DIGOTAL START*
18. *COM(N)*
19. *NC*
20. *NO*
21. *COM*
22. *SUPPLY (N)*



### 23. SUPPLY (L)

## **Start working with device**

First connect the device to the electricity then it is better wait for 5-10 minutes until all parts of device get ready to work.

At this moment put a bit weight on device, this weight must be increase positively, if it fell to negative you should check the load cell connection to display screen. Now you should enter the display screen basic settings till get ready to work.

## **Display screen basic setting**

Get sure that connections and display wiring is correct then connect to the power supply. At this time device will show its name and model for 5 seconds after that it will go to weight show status.

If it's the first time using the device, depends on usage you might need to change the device setting. These settings are in following:

Push 'up(+)' button and then down '(-)' button at the same time and hold them for 3 seconds till setting menu appear on the screen.

At each step of the process press 'enter' button to enter the step and by using 'menu' button confirm the setting and enter the next step.

### **1. primary password (ps):**

First enter the system password by 'enter' button and then 'up' and 'down' buttons to enter. This primary password will be provided by manufacture.

### **2. weight unit setting (unit) :**

At this step the weight unit can be adjusted according to kilogram and ton. As unit=0 for kilogram and unit=1 for ton.



### **3.decimal digit adjustment (dc.p) :**

Press 'enter' button then use 'up' and 'down' buttons to select the desired decimal digit.

### **4.load cell mv/v adjustment :**

At this step enter the number of mv/v that has been written on the load cell or at its written identification.

### **5.device scale adjusting :**

At this step you should select the device scale (1,2,5,10,20,50,100) depends on usage and working accuracy.

### **6.set the device capacity ( acp) :**

At this step you should enter the total capacity of weight device .for example ,if there are four load cell with capacity of three tons ,you should enter  $4 \times 3000 = 12000$  or if there is fulcrum weighting system ,find fulcrum's coefficients and then enter the total capacity of system.

### **7.set the output numbers :**

On this menu you can change the number of desired output relays in automatic mode .This number can increase up to 4.

### **8.tare set up :**

You can change the machine tare by using this menu and also can see the last counterweight rested to zero.(It isn't recommended to change this menu)

### **9.accuracy of work adjusting (flt):**



This machine have 20filtering level that you can reduce or increase the sensitivity and in each system depends on environmental condition and sensitivity of the work can consider a private number.

### **10.relays no-nc set out :**

you can specify relays modes before 'set point' mode by this menu.

Rly=0 or normally open

Rly=1 or normally close

### **11.change menu password :**

Use this menu if you want to change the password

### **12.change calibration password :**

A password considered for this menu to prevent outsiders from tampering calibration and changing it .you can change it from this menu.

### **13.set menu :**

This menu is to do device's some internal settings .there is also a password to inter .these setting are be used only once after manufacturing .password will be just as manufacturer.

Completing this procedure means the display scéen setting is done and **pass** message will be shown .by pressing 'enter' button you will enter weight display mode.



### **Counter weight rest to zero (tare) :**

If you want to rest the counterweight to zero ,first press 'up' button then 'menu' button in weight display mode .also you can press and hold zero button for 3second to rest the counterweight to zero.

### **Manual *calibration*:**

Current device is one of few the professional weighting display screen that have manual calibration .it is citable that if load cell mv/v and bascule total capacity had been inter correctly ,the display screen automatically will show the correct weight on the bascule and manual calibration is only for accurate the errors caused by this issue.

In order to calibrate the bascule manually first make sure that it is completely free of charge .first put a specific weight on the bascule press 'down' button then 'menu' button and inter the case's weight then press 'set' button .after that unload the weight and reset to zero the counterweight .again put the weight on bascule and control the accuracy of display to get sure.

### **Set point regulation:**

first press 'menu' button to adjust display screen set point .at this time 'set p1' message appear .press inter button and inter the desired weight by using (+),(-) and 'enter' button .at this step 'enter' button just guide the blinker to the left and by using that ,you can adjust unit ,decimal,... digits .then press 'menu' button to save the changes .After that 'set p2' appear and if you need you can change till 'set p4'.

His device is one of the few devices that has the ability to disconnect relay before reaching to set point status (voll).as you calculate valve drainage experimentally after disconnecting relay and inter in 'voll' section.

Voll setting can be done for all of four relays.





### ***Changing Integration Plan:***

This display screen is the only displayer that can hold several integration plane .for operator and employer convenience you can inter up to 8 different plan .at weight display mode press and hold enter button to change the integration plan to another .at this time device show 'prog=' message and by using 'up' and 'down' buttons you can change the 'pro' .bright LED indicator for each program means it is active .it is obvious that to adjust set point in each program should do the defined method.

### ***Side settings for more accurate weighting in automatic mode***

Above settings are individual for this display screen and are from the most special setting for more accuracy .to complete the setting procedure do as described below:

First press and hold 'menu' button then hold 'enter' button for 3 seconds, display screen show 'pause' message now press 'enter' button.

***Pause:*** it is set out to create a delay between the transmission of one output to another one.

It is used to establish weight in last output ,by pressing 'menu' button displayer enter the next step.

***Pulse1:*** the first relay's connect and disconnect time at weight mode (Set-voll) is pulse1.at this step regulate the open and close time of valves at automatic mode .during this weight device open and close valves automatically to reach the desired weight .after regulating all of four valve's pause pass message appear and by pressing 'enter' button display screen enter weight display mode.



**Point** : at any step of the primary and side setting if you want to skip the step simply press 'down' button to enter the next step, or by pressing 'up' button you can access the before menu.

