EDI-312 Series
Weighing Display Controller

Operation Instruction

Please read this manual in detail before installation.

Content

§1 Overview

EDI-312 series weighing display controller is a new-style intellectualized instrument which is designed based on abundant experience by our designers, it combines new technology of electronics, controller, and communication and so on. It can be widely used in the field of petroleum industry, steel smelt, industry and mining enterprises, food packing, storage and other business.

Trait list

Model	EDI-312 series
Cover/Weight	Stainless steel, Seal type size:304*194*120mm weight:<3kg;
Fixing way	Flat & stand & hang
Degree of precision	1/6000 F.S
Display	6 digits fresh green fluorescent screen，character size:20*9.5mm (Length * width)
Keyboard	18 touch keystroke, easily setting parameter
I/O	DI:Standard 4/10 points input (Opto-Isolator), DO 6 /12 points output (OC door)
Communication interface	RS485
Excitation power supply	DC 5V/1A，It could drive 1-12 piece 350Ω sensor，remote differential input.
A/D transfer	A/D Type :24 digit-Σ-$\triangle$，resolution:600,000C/10mv sampling rate :>300/second Zero point variation :$\pm$0.1V/℃ Range variation:$\pm$5ppm/℃
Power supply	AC220$^{+10\%}_{-15\%}$ V， Frequency:50HZ±2%, power consumption:≤10W
Working condition	-10～45℃;10～90%RH,no condensation
Deposited condition	-40～60℃;10～95%RH,no condensation

Function and character	◇ Zero setting: Manual or automatic(Turn on manual,automatic after bag off) ◇ Automatic zero tracking. ◇ Panel calibration：full range or optional range calibration. ◇ Input upper limit value and lower limit value,realize big flow and small flow filling. ◇ High speed digital output channel controls CNC servo system. ◇ Counting output function : bag falling model. ◇ I/O solid state relay interface board with photoelectric isolation.

§2 Weighing Display Controller Panel Layout
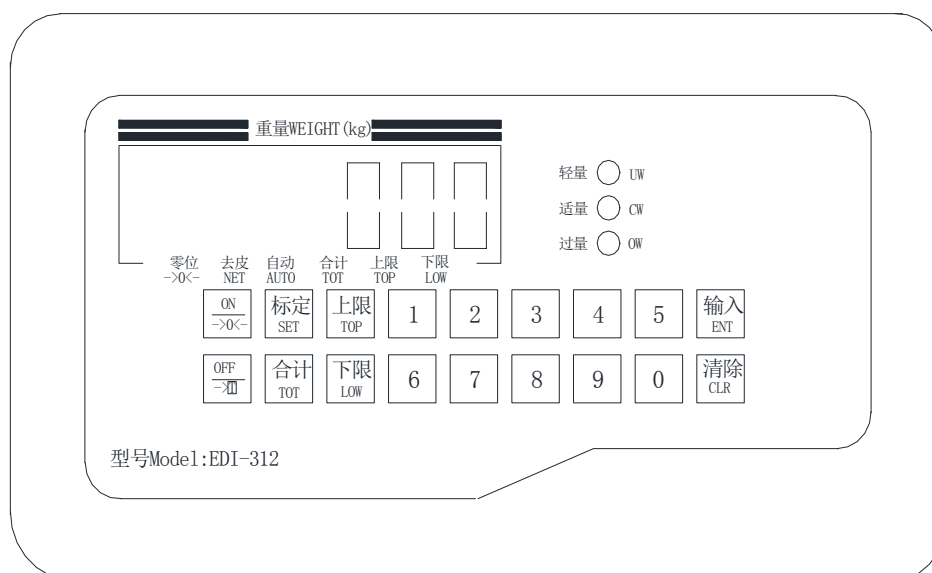
EDI-312 Series Instrument panel layout

§3 Weighing Display Controller Operation Method

Scale operation is done by key operation of indicator, key operation is introduced as follows:

1.【ON/→0←】KEY

A．【**ON**】: Press this button to start under the state of power off, after flicker "888888", on the indicator shows all of zero, and the zero position indicator light lights up .

B.【**→0←**】: Press this button to set zero after starting (zero setting manually).

2.【**OFF/→T**】**KEY**

Press this key, all showing will disappear, the power supply of sensor will stop, press 【**ON**】 key to start again.

3.【**TOP**】**KEY**

Press【**TOP**】key,show"- - - - - - ",please input set password(Initial password "8888"),then enter TOP setup state. The TOP limit indicator light on,then set value via number keys to finish the setup of TOP limit. Press 【**TOP**】key, display back to weighing state, if the weight of material larger than the set value of TOP limit, the red indicator of display panel will light, Then reset the value according to the site situation. The factory setup is 48.5.

Note: If press【TOP】key,then show number value,that is mean no password,you can amend directly.

4.【**LOW**】**KEY**

The setup method is same as 3.【**TOP**】key.The factory setup is 45. **Top limit value must larger than LOW limit value!!!**

5.【**TOT**】**KEY**

Press 【**TOT**】key,it could show cumulative weight and bag falling times.There are 8 digits for the cumulative weight, due to the display only could show 6 digits one time, so the cumulative weight is showed by two times. For example, the cumulative weight is 12345678, it will show the latter 6 digits (345678) by pressing it first time, press it second time, it will show the former 2 digits(12), then press the key third time, it shows cumulative times of bag falling (the max number is 4 digits). Press the key fourth time, it will return to normal weighing state.

6.【**CLR**】**KEY**

When set TOP and LOW limit and calibrate setting value, press this key to clear the display value. When display cumulative weight and times, you could press this key to clear the value.

7.【**ENT**】**KEY**

When input TOP limit value and LOW limit value or calibrate,set value,press this key to confirm the setup value.

When boot-up,after flicker "888888",show model "EDI-312", then show batch number "Fxxxxx" of single chip MCU program, then show DIP6 - DIP1 dial code switch state "111111",then perform automatically zeros,that is clear zero regardless of scale frame with and without the weight,show"0.00".Base on this, the worker should check no bag on the packer after work, then power off,ensure accuracy of first time filling after power on.If the bag hang on the packer when abnormal power outages,should take the bag away after power on,clear zero manual,then insert bag.

Boot automatic zeros, automatic zero after bag fall down, and the combined use of automatic zero tracking, ensure the accuracy of the measurement.

§4 Modify The Code

Factory default password is "8888". Please according to below steps if needs modify.

（1）Press "Stop" key three seconds to power off and press 【ON/→0←】 key to start. Or press 【CLR】 key when the weighing display controller to electrify and show "8888".

（2） Input current password (factory default code is "8888")when weighing display controller shows "- - - - - -".

（3）It will show "P- - 8888" when input correct. Input new password and press 【ENT】 key to keep from this interface.

Remark: In third step ,press 【ENT】 key to quit or quit automatically three seconds if not modify password.

§5 Data Setting, Zero Point and Linearity Calibration

(Note: On the state of calibration, the value display is 10 times than normal value）

When starting up flash "888888", press 【SET】 key to enter calibration interface, display (zero point) as follows:

5.1 Zero point calibration — 【ON/→0←】 key

Check the weighing platform, make sure it is on the state of vacancy, if the display doesn't show (zero point) zero, press【ON/→0←】 key to do zero calibration，store zero in internal memory, the display should show zero, if not, press the【ON/→0←】key again till it shows zero, then turn to the next step.

5.2 Linear calibration — 【SET】key

Put weight on weighing platform, (the weight can not less than 1/3F.S, it is better arrive full range), the display shows relative value "xxxx.xx", when the digital value become stable, press 【SET】key to enter digital transfer state, when it show "0000.00", press "0-9 number" keys again and input relative weight(weighs' weight); Confirm by pressing 【ENT】key, the indicator will correct automatically, later, the display shows relative weight value of the weights (the value is ten times to weights' value).

If it is inconsistent with the weights, take the weights down, and do zero calibration again, then reload weights to calibrate till it correct, after confirming the value right, press【ENT】 and exit calibrate state, then enter into weighing pattern.

5.3 Calibration process（Use 50kg weight to demarcate）

5.3.1 Remove all items from scale.

5.3.2 Instrument power on, the display screen flashing 888888, press the 【SET】key at the same time.

5.3.3 If did not catch up to press the 【SET】key, first press the 【OFF】key 1 second, then press the 【ON】key to start again, operate the last step.

5.3.4 Press the 【ON/→0←】key (regardless of whether display show any digital or not, please proceed to the next step).

5.3.5 Put a 50 kg weight (Display digits don't tally with the actual, don't care, continue next step).

5.3.6 Press 【SET】key (In the indicator shows 0000.00)

5.3.7 Input value 50.00 kg (In the indicator shows 0050.00)

5.3.8 Press 【ENT】key (In the indicator shows 0050.00)

5.3.9 Press 【ENT】key again (In the indicator shows 0050.00)

5.3.10 Remove the weights, the indicator can be normally used.

§6 Maintenance and Troubleshooting

6.1 Maintenance:

It should be strictly water-proof and dust-proof in using and avoid start and close the power frequently, and also keep away from high voltage and high-intensity magnetic field.

6.2 Troubleshooting

	Fault phenomenon	Reason and treatment	Remark
1	Display "- A D L-" Display "- A D H-"	1.Check wire line of sensor 2.Check bridge voltage of sensor 3.Close and restart	
2	Flicker show "888888"	1.Check sensor and its wire line 2.Restart display	
3	Display "- L O D-"	1.Weighing platform on the state of negative stress. 2.Check the weighing platform and spring plate. 3.Check wire line of sensor 4.Cut electric to start again. 5.Restart	
4	Display "- OV -"	1.Overload ordinarily, remove overload object. 2.Or restart the display	
5	No-output action	1.Check input signal 2.Check output solid state relay 3.Check 14 core wire cable and plug 4.Check upper and lower limit value(lower<upper)	
6	Fluorescent direct irregularly	1.Whether flooding water, dust, dirty or being damaged 2.Display module is damaged 3.Fluorescent screen broke	
7	No-input action	1.Check proximity switch 2.Check I/O module 3.Check 14 core wire cable and plug	
8	No display or black screen	1.Check supply voltage 2.Check start button 3.Check display module and power light	
9	Precision unstable	1.Check sensor and structure 2.Zero offset，adjust timely. 3.Check sensor cable, plug and socket 4.Breakdown on module circuit, replace	
10	Other phenomenon	Whether flooding water, dust, debugging by substitution method	

If you have trouble during the usage, please call service number: 4008-1111-32

§7 Secondary Menu (optional)

When the weighing display controller is ready for weighing, long press【SET】key for 3 seconds, showing the following 7 kinds of menu (Press【SET】key can cycle show the 7 kinds of menu, note: more than 1 second no operation will automatically exit from the secondary menu):

1. "- - H H - -" upper limit value range modification setting:

When showing "- - H H - -", press【ENT】key, enter to "H - - 0 0 0" menu, then input number【0-9】to modify the upper limit value, press【ENT】key to save and exit.

When match with remote wireless monitoring system(touch screen + remote-controller), remote modifying the upper limit value range via wireless monitoring system can be achieved here. Don't need to operate this if there is no monitoring system.

2. "- - L L - -" lower limit value range modification setting:

When showing "- - L L - -", press【ENT】key, enter to "L - - 0 0 0" menu, then input number【0-9】to modify the lower limit value, press【ENT】key to save and exit.

When match with remote wireless monitoring system(touch screen + remote-controller), remote modifying the lower limit value via wireless monitoring system can be achieved here. Don't need to operate this if there is no monitoring system.

3. "- - R S - -" site setting:

When showing "- - R S- -", press【ENT】key, enter to "C - - 0 0 0" menu, then input number【0-9】to modify, press【ENT】key to save and exit.

Match with remote wireless monitoring system (touch screen + remote-controller). When the wireless monitoring system communicates with weighing display controller,   must set the site, and the value is the same as the unit number of weighing display controller. Don't need to operate this value if there is no monitoring system.

4. "- - I N 1 - -" input check:

5. "- - I N 2 - -" input check:

When showing the above menus, press【ENT】key, respectively enter to "0 0 0 0 0 0" and "- - 0 0 0 0" menus, check the condition of input end IN1-IN10 in weighing display controller, if input end IN1 is closed, will show "0 0 0 0 0 1", if IN10 is closed, will show "-- 1 0 0 0 ".

6. "- - O C 1 - -" output check:

7. "- - O C 2 - -" output check:

When showing the above menus, press【ENT】key, respectively enter to "0 0 0 0 0 0" and "0 0 0 0 0 0" menus, check whether the channel of output end OC1-OC12 in weighing display controller is normal, if you want to make output end OC 1 to move, when showing "0 0 0 0 0 0", press【TOP】key to move left and choose the output channel, press【LOW】key to modify the output state(0, 1). When showing "0 0 0 0 0 1", channel OC1 in output end will close and breakover, its load will make the corresponding action.

Note: Please pay attention to safety when doing input and output testing, and this operation should be done by professionals.

§8 Matters needing attention

8.1 Special warning: In order to prevent damaging the security features of the weighing display controller, strictly prohibit to change circuit and the specification, model and data of relative components during repairing.

8.2 Charged to open the cover of the weighing display controller is prohibited.

8.3 Please ask professionals to set, adjust, debug, test and maintain the weighing display controller.

8.4 The weighing display controller is sensitive to magnetic field and static, please pay attention to the antimagnetic and anti-static prevention in using; Keep stable power supply.

8.5 Please cut off the power before electrical connection; Between two consecutive power outages, please keep for at least 10 seconds time interval, otherwise may cause abnormal working or damage the weighing display controller.

8.6 Please keep the weighing display controller grounding well and far away from AC power source, try to shorten the length of all wire lines or coaxial cable. Wiring signal wire with high tension wire or power line in parallel is prohibited.

8.7 Please don't put the weighing display controller in direct sunlight; Please avoid sudden temperature change and vibration. When the temperature is 20℃ or 68℉ , relative humidity is about 50% RH, the weighing display controller can obtain the best performance.

8.8 The AC voltage stabilizer is necessary when the local AC power source is over +10% of AC220V or lower -15% of AC220V.

§9 Packing, transport and storage

9.1 Packing:

In order to increase the moistureproof and waterproof performance, the inner packing of the weighing indicator we use plastic seal, the outer packing we use carton box. In the carton box marked the product name, outer size, weight and relative important notice.

9.2 Transport:

During transportation should avoid severe impact and vibration, keep away rain, snow and moisture.

9.3 Storage:

Product should be stored in the environment which meets the following conditions:

a. Temperature: -40～+60℃;

b. Relative humidity: ≦95%RH;

c. No corrosive gas to break insulation;

d. No rain and snow erosion.

§10 Technical documents

10.1 Operation Instruction