

1) The Function

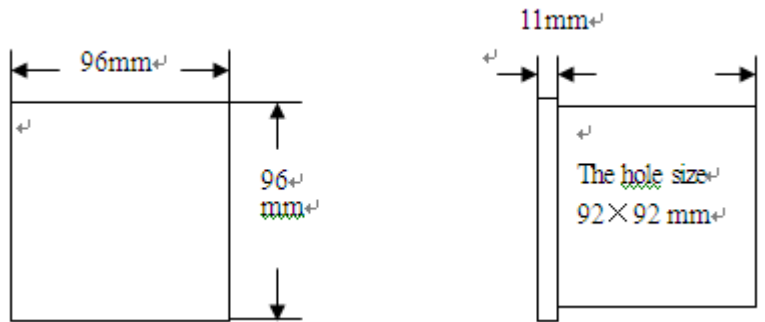
N60/N50/N10 digital indicator is the new developed product of our company. It has much advanced technology in the world ,such as the technology in electron, singlechip, computer erasure, anti-jamming and so on. To make the indicator have the strong point of high precision of measure and control,as well as the well fuction of anti-jamming.The whole machine has three cases of 96*96*100(N60)/ 96*48*100(N50) 48*96*100 (N10). So it is small in volume, light in height and save power and completed function and reliable task. Flexible and easy to use. It can be widely used not only in situation of display and autocontrol in hydraulic pressure, oil, plastics, latex, printing and dyeing, textile industry but also can be compound with resistance strain guage press sensor of other manufactory. If it is used with our model PT124- series melt pressure transducers and normal pressure transducer. As high precision pressure of measure and control, it can be set upper limit and lower limit alarm.It has the indicator light on alarm,relay touch output control peripheral equipment, high precision of voltage output module, current output module and relay output control modult for user to choose.The machine adopts the operation of humanism,so it is easy for operating.

2) Specification and performance

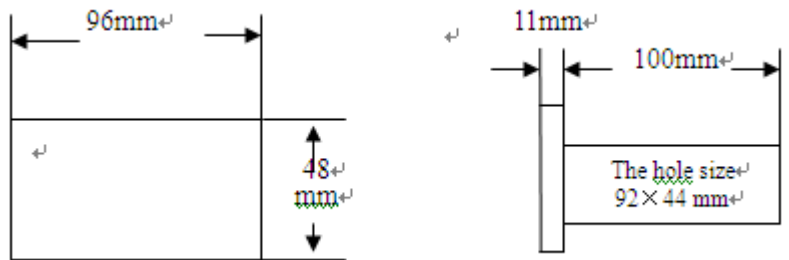
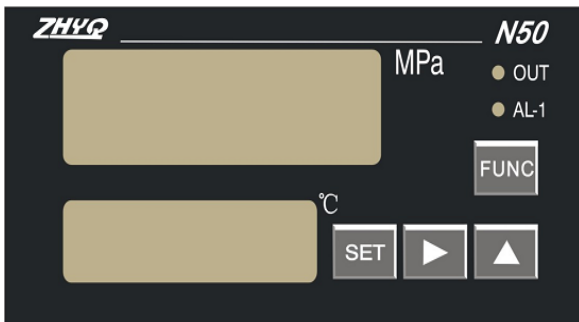
- | | |
|---|---|
| (1).display | double four digits high brightness green and ren radiation numeral pipe |
| (2).display exculation rate | 0001 |
| (3).the range of display | 0001-9999Mpa (radix point alterable) |
| (4).the precision of metre | 0.2%FS+-1bit |
| (5).the display of indicator light | adjust indicator light,OUT output indicator light,AL1,AL2 alarm indicator light |
| (6).output signal statoscopo | 2mV/V ;3.3mV/V (Optional) |
| (7).sampling speed | 20 times/second |
| (8).sensor opeiating voltage | 9V high precision DC |
| (9).output control | the pressure or electric current output with full singal rult |
| (10).main alarm output | upper limit alarm has relay output (220V 1A) upper limit alarm display (out) |
| (11).assistant output | assistant output can be compound with different function module and set by the meter to meet the difference output need.The content in detail please read 1 (3) the explain of module function.Assistant output can be choosed from.(order for explain) |
| (12).the range of alarm | 0001-9999Mpa (radix point alterable) |
| (13).Calibration display | display 80% of full ranges (the sensor should be no load) CAE light |
| (14).the temperature and humidity of work | 0-55°C, ≥80%RH |
| (15).power demand | 85-265VAC 50Hz-60Hz |
| (16).exterior size | N60: 96mm x 96mm x 100 mm (W x H x D) ;
N50: 96mm×48mm×100 mm (W x H x D)
N10: 48mm×96mm×100 mm (W x H x D) |
| (17).placket size | N60: 96mm x 96mm x 100 mm (W x H x D)
N50: 96mm×48mm×100 mm (W x H x D)
N10: 48mm×96mm×100 mm (W x H x D) |
| (18).itsele height | approximately 400g/200g/200g |

3) N60/N50/N10 Indicator Panel description

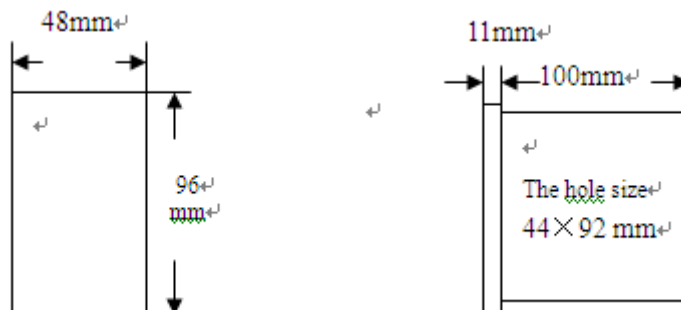
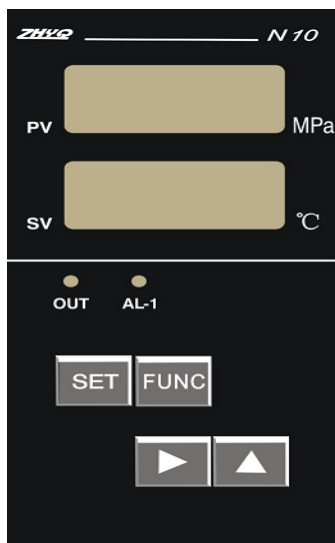
N60



N50



N10



(4) Module function

N60/N50/N10 digital instrument has two sockets of function module and 2 extended module plugs. It can carry out different function and type of output by setup different module. There are some optional modules: relay output module, current output module (4-20mA/0-10mA), tension output module (0-5V/0-10V) and communication module (RS485).

Alarm 1 (AL-1): Optional three output modules

1) Relay module output

When the pressure or temperature over the seted value (alarm value + loop difference value), the relay will close (cut). When pressure lower than the seted value (alarm value - loop difference value), the relay will cut (close). To achieve this function, you should setup the alarm module with socket relay output modult and set alarm value and loop difference value in the indicator.

Relay module open and close can select short circuit on CON1

When there is a short circuit between AB, it is close output.

When there is shout circuit between BC, it is open output.

Referenced set value:

a, when the range is 50.00MPa, the alarm value AL-1 is 35.00MPa, the loop difference of AL-1 is 0.2MPa, and the pressure over 35.20MPa, then the relay will close (cut). The relay will cut (close) if the pressure is lower than 34.80MP.

b, when the range is 15.00MPa, the alarm value AL-1 is 10.00MPa, AL-1 loop difference is 0.2MPa and the pressure over 10.20MPa, then the relay will close (cut). The relay will cut (close) if the pressure lower than 9.8MPa.

c, set temperature alarm output 20.0°C, loop difference is 0.2°C. When the temperature is high than 20.0°C, AL-1 relay will close (cut), if the temperature is lower than 19.8°C, AL-1 relay will cut (close).

2) Current module output

According to pressure straight line output electric current (4-20mA/0-10mA), when the pressure value is smaller or tants amount to 0, the electric current output is the set og DL. If the pressure more than or be equal to the full rult, the electric current output is the set of DH. The set of DL, DH, please read PY500/PY500-H operation process. When the deviation between the reality electric current output and the number of set, they are indentical by adjusting the electric potential equipment on the electric current module. (having adjused before leaving the factory)

3) Voltage module output

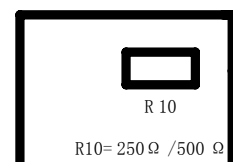
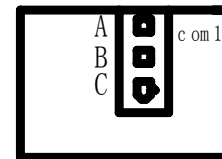
According to pressure straight line output tension (0-5V, 0-10V). The module of tension has 0-5V side and 0-10V side. The principle of it is that when electric current module set 0-20mA output, put a 250Ω or 500Ω resistant on the end of output. When the deviation between reality tension and set value, they can be dentical by adjusting the electric protential equipment on the tension module (having adjusted before leaving the factory).

0- 5V output:

choose 0-5V tension module, the selection of AL-1 is "1", the number of DL is 0mA, the number of DH is 20.00mA. Put a 250Ω resistance on the end of output, changing the electric current signal from 0-20mA to 0-5V.

0- 10V output:

choose 0-10V tension module, the selection of AL-1 is "1", the number of DL is 0mA, the number of DH is 20.00mA. Put a 500Ω resistance on the end of output, changing the electric current signal from 0-20mA to 0-10V.



Alarm 2 (AL-2): you can choose four output module.

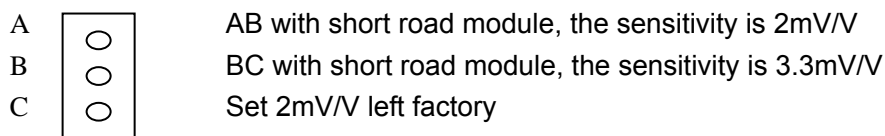
- a, Relay module output is same to AL-1.
- b, Current module output is same to AL-1.
- c, Voltage module output is same to AL-1.

d, Communication module output:pass the data of parameter and hits by meeting 485 with equipment.

*When you haven't set up the releant AL-1 or AL-2 to "J" of relay and set the alarm "0000" of relevant AL-1 or AL-2.

4) Signal input sensitivity set

PY500/PY500H/PY500S has tow kinds of sensitivity as 2mV/V, 3.3mV/V optional, it can come true via placing the short road module on the mainboard.



(5) Wiring connection

- 1, Signal + (blue)
- 2, Excitation + (red)
- 3, Signal - (green)
- 4, Excitation - (Yellow & Brown)
- 5, Calibration (black)
- 6, Screen cable
- 7, Temperature (input) +
- 8, Temperature (input) -
- 9, AL-1 voltage, current, relay alarm output+ , RS485 output - B port
- 10, AL-1 voltage, current, relay alarm output-, RS485 output + A port
- 11,12, OUT relay close
- 12,13, OUT relay open
- 14,15, Alternating current input
- 16, Earth

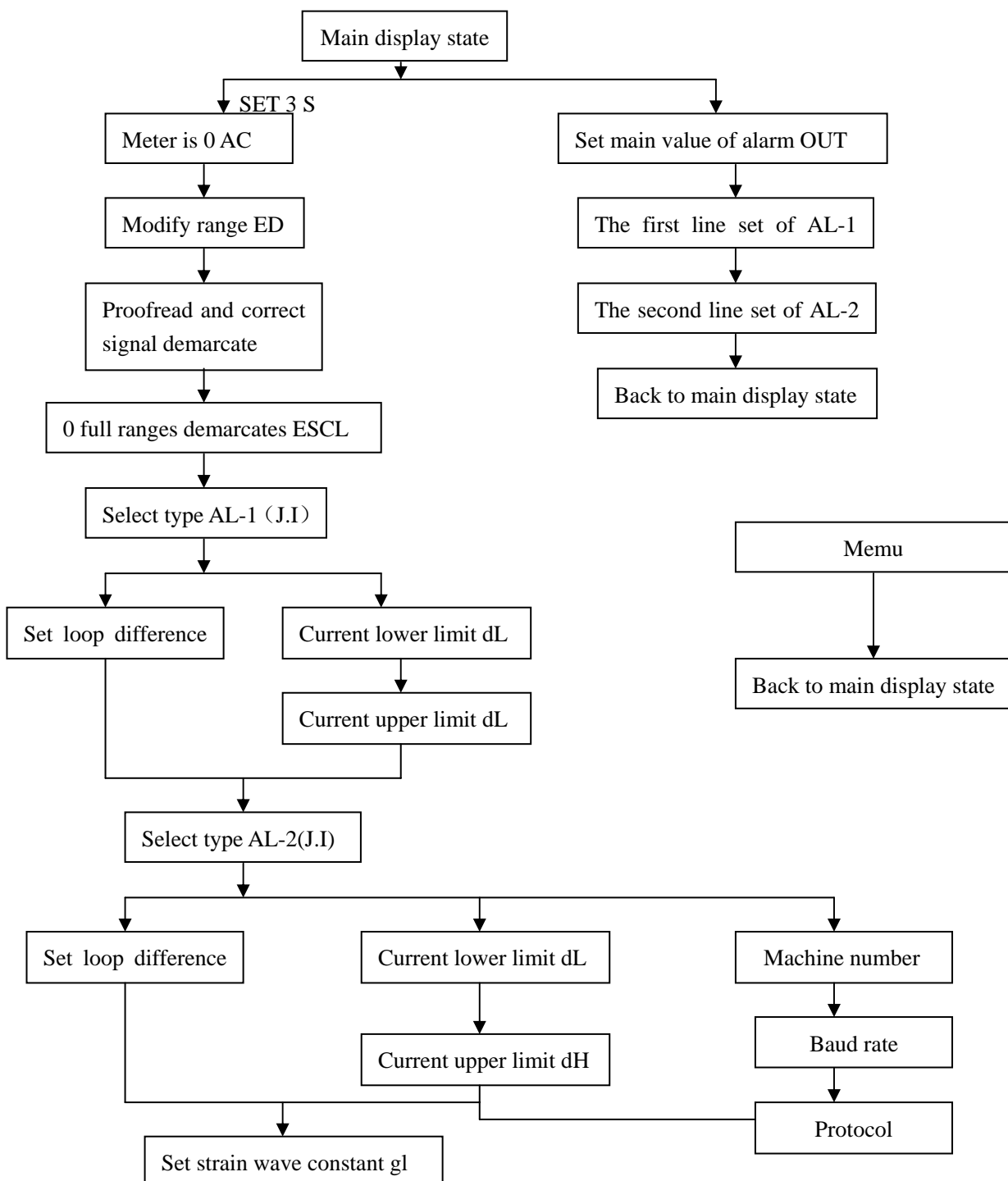
(6) Instruction of the panel

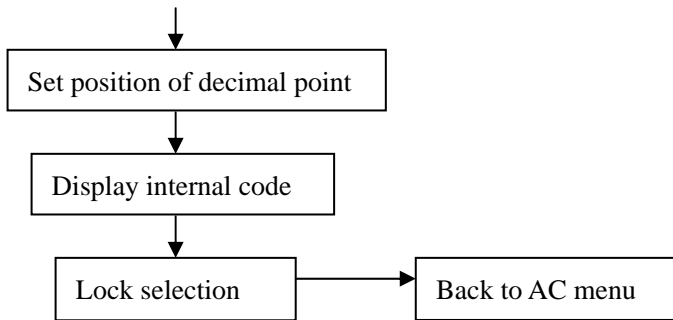
- 1) When the press over the alarm value of upper limit, the OUT alarm light will be bright. When the press over the alarm value of AL-1, the AL-1 alarm light will be bright. When the press over the alarm value of AL-2, the AL-2 alarm light will be light.
- 2) When you press the CAE key of sensor for cheeking, proofread and correct, the lamp of instruct will be bright.
- 3) The window of PV displays the reality of work pressure
- 4) The window of SV displays the reality of set parameter
- 5) When the sensor is empty, the number of display is not 0. If you press the AC key, the indicator will be 0.(It is effective under the state of set ,when the signal of sensor 0 over the full signal rult +20%、-10%, the key is to no avail)

- 6) When you press the key of CAE, you can see the number of sensor full rult about 80%.
- 7) When you press the key of SET, you can be in set state. The key of SET can be divided into long key (press 3 second) and short key (touch one time)
- 8) > the key of dislocation
- 9) ^ the key of increment
- 10) v the key of discrement

(7) N60/N50/N10 digital indicator operation flow chart

(1) N60/N50/N10 digital indicator main operation flow chart

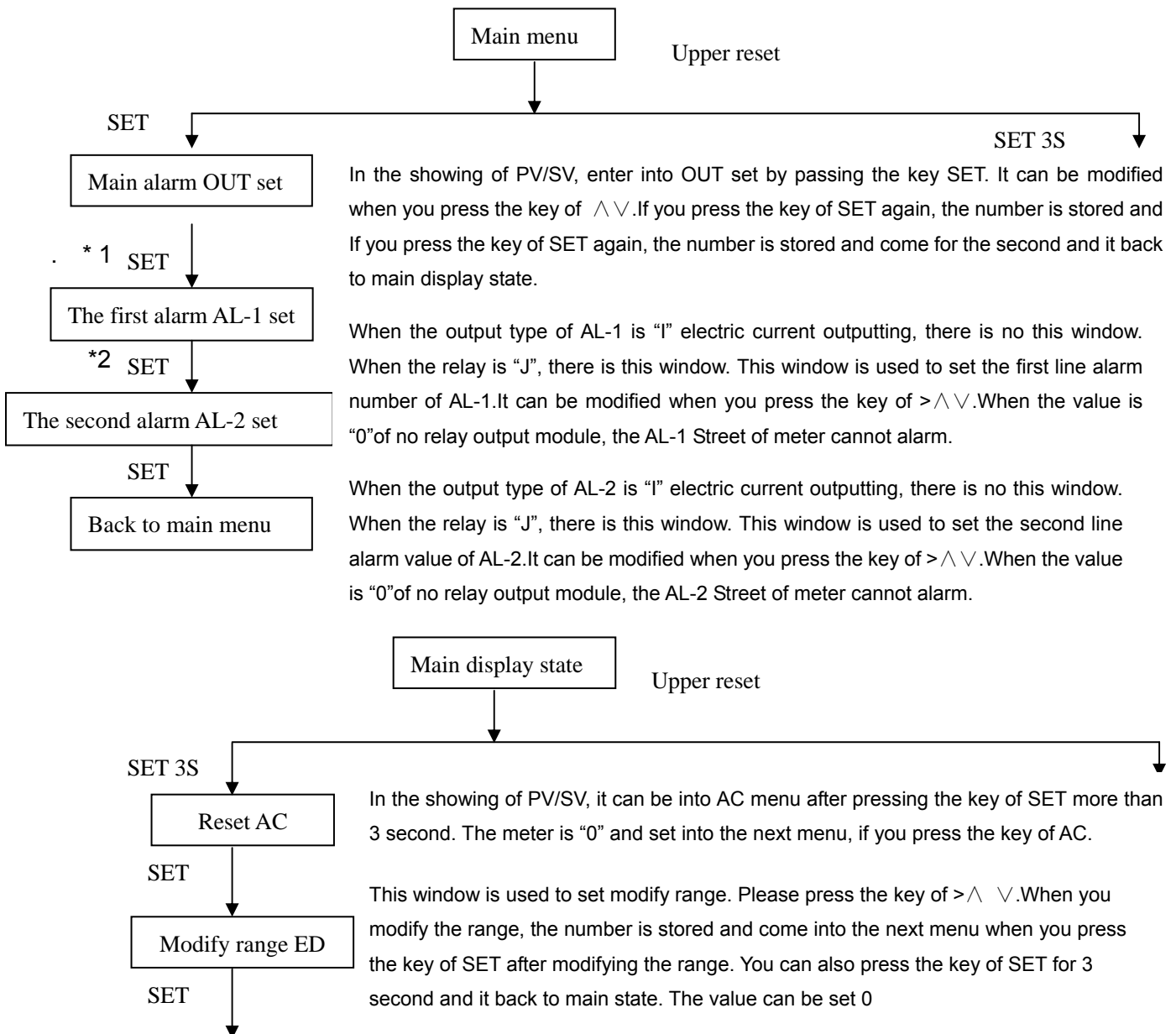




Remarks:

1. In this flow chart. If you press set for 3 second at anytime, it can be back to main display state.
2. *1menu when the selection "I" for AL-1 type, it does not exist . *2menu when the selection "I" for AL-1 type it dees not exist
- 3 The main siaplay state is the PV/SV display state for the meter after electric correct discocation.

(2) The function operation explain of N60/N50/N10 digital indicator



Calibration signal

This window is calibration 80%FS. Press the key of CAE (You should connect the sensor and pit empty, if you want to do it.) After demarcating it can come into the next menu.

SET

Zero and span calibration ESCL

This window is used to calibrate the zero and span. Before you do it, please make sure the indicator contact with the pressure transducer, and make the pressure transducer empty load, then press > key, here the SV window of the indicator display "LOAD", means you should make the pressure transducer fully loaded, then press > key, so finish the calibration and go into the next menu.

AL-1 Selection (J,I), P.°C

This window is used to select of the passage of AL-1. It can be modified via ^ . When you choose "J", the passage of AI-1 is relay output.

SET

Current lower limit dL

This window is used to set The lower Limit of AL-1 Passage electric correct The front two numbers can be modified By moving >^V .

Set loop difference HC

This window is used to set the alarm value Loop difference of the AL-1 passage. It can be modified By pressing >^V key. The loop difference value is less than 0100(besides the decimal point)

SET

Current upper limit dH

This window is used to set the upper Limit of AC-1 passage electric correct. The front two numbers can be modified By pressing >^V key.

SET

AL-2 Selection (HJ. LJ,I,RS485)

RS485

The same as AL-1, select RS485

Machine number

To modify via moving > ^

Current lower limit dL

This window is used to set The lower Limit of AC-2 Passage electric correct.

SET

baud rate

- 0:1200bps
- 1:2400bps
- 2:4800bps
- 3:9600bps
- 4:19200bps

Protocol

Current upper limit dH

this window is used to set the alarm value Loop difference of the modified By pressing >^V

Loop difference HC set

AC-2 passage. It can be modified By pressing >^V key. The loop difference value is less than 0100(besides the decimal point)

SET

Filter constant gl set

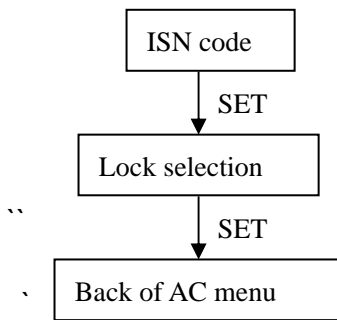
This window is used to set the inertia constant of strain wave. The range is from 1 to 8.It can be modified by pressing the key of >^V .We set the machine before leaving the factory.

SET

Radix point dot set

This window is used to set the position of the radix point, it can be modified by moving >, and it is 2 bits left factory.

SET



This window is used to display ISN code.

This window is used to select whether lock the relevance or not. "1" lock, "0" unlock, press the key of > can be modified.

(8) Maintenance

The operating temperature is 0-55°C, the relative humidity is no more than 80% RH, it can be used in the conditions without dirt or corrosive gas. It can be free repaired in 12 months from leaving our company. If there is something wrong with the use of customer or the beyond the maintenance, we should charge for the service of repair.

(9) Indicator Model Ordering guide

Panal Cutout Size	
N60	96*96
N50	96*48
N10	48*96
4	Number of Display Digits
Alarms	
1	1 Alarm relay
2	2 Alarm relay
3	3 Alarm relay
Retransmission	
R	Retransmission
N	No Retransmission
Communication	
C	Communication RS-485
Power supply	
D	+24VDC
A	+220VAC