# Two-wire 4-20mA signal generator

User manual(201701version)

1、 Characteristic：
  a) Liquid crystal display (with backlight)；
  b) 9 Segment programmable output (simulative real environment dynamic testing, each segment setting: "t" run time/"A" starting current/"b" ending current)；
  c) Digital rotary encoder (if using the potentiometer, easily affected by temperature and humidity, and the resistance maybe changes)；
  d) Rejoinable (two-wire, no matter how the wiring, can work properly, will not burn meter)；
  e) High precision and linear (display precision "0.05", two decimal points, actual output accuracy $\pm$ 0.5%)；
  f) Low power consumption, no fever, more stable output；
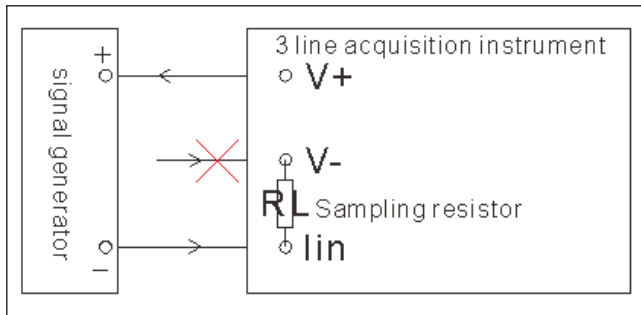 **g)** The shell is full and elegant and easy to install；
2、 The principle of the two wire (the signal generator connection is not positive and negative, the following picture is only for the convenience of understanding)：
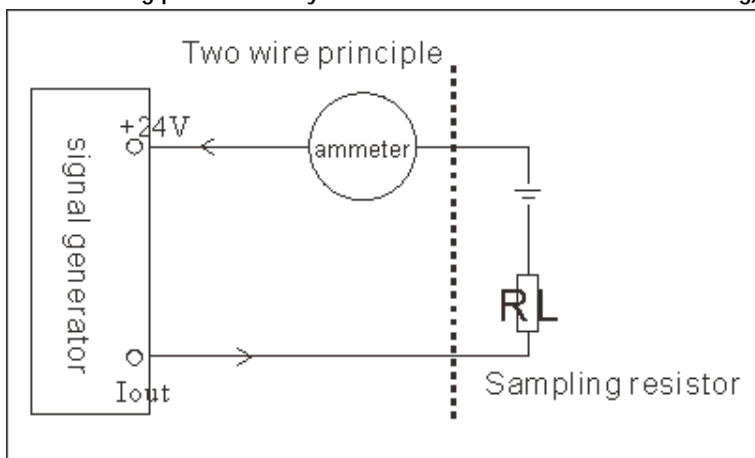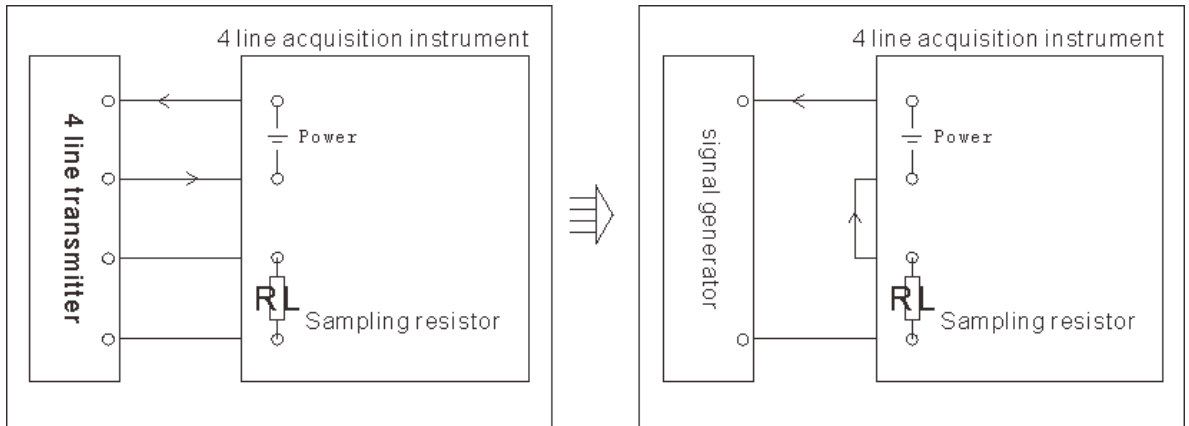

3、 Simple test method：
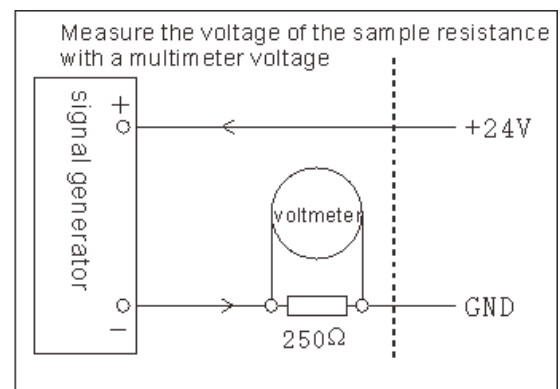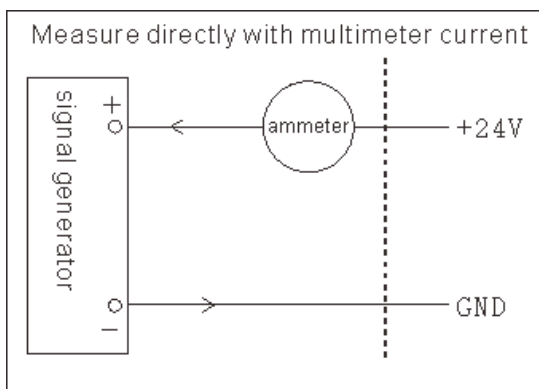
4、 Access to the three-wire analog quantity input module wiring diagram:

5、 Change the wiring diagram for four lines:

6、 Primary technical parameter indicator

    a) Output current：3mA---21mA；

    b) Power supply voltage：15V---30V；

    c) Sampling resistor：10Ω---500Ω；

    d) Display precision：0.05mA；

    e) Output precision：±0.5％；

    f) Physical size (front)：79.5X42mm

    g) Physical size (back)：72.5X39.5mm

    h) Install panel size：77X40mm

7、 System operation

    a) This signal generator has two modes: 1, manual adjustment mode; Dynamic output mode；

    b) Manual mode adjust the output current: rotary encoder knob, clockwise current increases, counterclockwise current decreases；

    c) Manual mode saves the output value, short press the encoder knob, let loose, the screen displays "..." Save the success, and the output value of the next boot is the saved value; When debugging the device, we need to adjust the output value at random, so long as we don't press down the encoder knob, it's the same value we saved when we reboot；

    d) Dynamic output mode: it is the automatic output of a programmable curve loop , following is the setup method；

    e) Parameter Settings：Long press encoder knob, after 5 seconds, enter the set state, the first argument is "work mode" ,screen display "FUNX" X is the curve Section number, rotary encoder knob to adjust the value of X, X = 0 indicates no curve and use the

manual mode, X > 0 is using dynamic output mode；

f) After adjusting the first parameter "work mode", press down the encoder knob, if X = 0, exit the Settings mode and enter the manual mode. If X > 0, we go to the first curve set；

g) Each curve has three parameters Settings ： "tXXX" running time /"AXXX"starting current /"bXXX"ending current, so after entering the first curve set, screen display "t1XX," rotary encoder knob to adjust the value of the XX ,time adjusting range 1-99 seconds；

h) Press down the encoder knob to enter the "start current" setting of the first curve. The screen displays "A1XX" and the current setting range is 3-21 mA；

i) Then press down the encoder knob to enter the "end current" setting of the first curve. The screen displays "b1XX" and the current setting range is 3-21 mA；

j) The second part of the curve is the same, until you set the number of Settings, and then automatically exit the set state；

k) If next time just need to change one of the parameters, other parameters remain the same, long press down encoder knob 5 seconds to directly exit set state；

l) Examples of the parameters of various curves：

FUN=1 t1=10
A1=4
b1=20

FUN=2 t1=10 t2=10
A1=12 A2=6
b1=12 b2=6

FUN=2 t1=10 t2=10
A1=4 A2=4
b1=20 b2=12

FUN=4 t1=10 t2=10 t3=5 t4=5
A1=12 A2=6 A3=12 A4=6
b1=12 b2=6 b3=12 b4=6

FUN=1 t1=10
A1=20
b1=4

FUN=2 t1=10 t2=10
A1=4 A2=20
b1=20 b2=4

FUN=8 t1=2 t2=3 t3=3 t4=2 t5=2 t6=3 t7=3 t8=2
A1=9 A2=11 A3=12 A4=11 A5=9 A6=11 A7=12 A8=11
b1=11 b2=12 b3=11 b4=9 b5=11 b6=12 b7=11 b8=9