Low Power Consumption Voltage Current LED Display Meter

SY LED 6 Intelligent Programmable Voltage/Current 4-digit LED Meter

Features

- Low cost module design, easy to be embedded into other meters and instruments.
- High measuring accuracy, 4 byte display, ±2 digit.
- LED display panel, can be used in different lighting conditions.
- Small size: 79x43x23mm
- Cut-out size: 76.5×39.2 (+0.1mm） Weight: 40g
- Industrial grade temperature range: -40℃～+85℃, high reliability.

Applications

- Sensor, transmitter operation status display.
- Industrial equipment operating monitoring, measurement and remote controlling.
- Oil, chemistry, environment protection, mining system monitoring.
- Temperature, pressure, flow, level signal monitoring and display.
- PLC, DCS system operation data acquisition and display.
- Meters & instrument, medical devices, industrial controlling device design.

Introduction

SunYuan SY LED6 Digit display meter is a current voltage meter with wiring socket used in transmitter measuring circuit. It can display current voltage signal (0~5V, 0~10V, 1~5V, 0~±200mV, 0~20mA, 4~20mA, etc signal) in linearity and in decimal base based on the pre-setting range.

That LED display meter operates in equal and stable brightness and its LED panel is driven by constant current. It has reverse polarity and over current protection circuit, and widely used in temperature, pressure, flow, level signal controlling and monitoring system in industrial site, oil industry, environment monitoring, mining industry, etc. Usually, the temperature sensor, pressure sensor, flow sensor, level sensor signal are converted into standard voltage current signal, and then connect it into that LED meter to display the sensor signal to make it easy to monitoring and controlling.

There are two types of connection: 2-wire passive connection, it is applied for 4-20ma signal, no external power supply required. 3-wire active connection, it is applied for 0-5V, 0-10V, 1-5V, 0-20mA, etc signal, external power supply required, the power supply can be 5V, 12V, 15V, 24V. There is 2 buttons on the backside of the panel meter; it is used to set zero, span, decimal points, alarm, delay, etc parameters.
The input signal and the digits displayed are in linearity. For example, input signals 0-10V, the panel display 0-1000, the linear relationship: 0V displays 0, 5V displays 500, 10V displays 1000. If input is 4-20mA current signal, the LED panel displays 40-200, the linear relationship is 4mA displays 40, 12mA displays 120, 20mA displays 200. The max. display range is 9999, the min. display range is -1999.

SY LED6 LED Display meter has alarm function and 2-channel isolation switching quantity output, and can display, control, alarm output signal synchronously. That alarm function can be realized through programming. There are 2 wielding pad preset for user, if alarm function required, user needs to add 2 pieces of PC452 optical coupler. That LED meter has two alarm points, and positive, negative alarm direction setting. The alarm points is set based on the digits displayed in the LED panel, when it alarms, the last decimal point in LED panel is flashing, the alarm signal data output can drive the alarm unit of optical coupler. SYLED external shell is ABS plastic shell, external dimension is 72x36mm, height or thickness is 23mm.

Note:

1. Do not do reverse connection between input and power supply, otherwise is may cause permanent damages.
2. Do not use it in high humidity and corrosive gas conditions; otherwise it may affect the durability of the meter.

Technical Specification

1. Power supply: DC regulated power supply, rippl≤5mV, 5V, 12V, 15V, 24V or other value.
   Input signal is 4~20mA, no external power supply is required; it operates in loop powered mode.
2. Input signal: 0~5V, 0~10V, 1~5V, 0~±200mV, 0~20mA, 4~20mA, other customized input.
3. Operating temperature range: -40℃～+85℃
4. Relative humidity: 20%～90%RH
5. Shock vibration: in compliance with industrial ministry environment test II meters requirements.
6. Panel display mode: Red LED display, font height 14.2mm (0.56in), decimal point is settable.
7. Average sampling rate: 2.5times/second.
8. Digit display setting range:

⑴ 4mA:－1999～9999

⑵ 20mA:－1999～9999

9. Polarity conversion: lower than the ZERO value, it display "--", higher than the ZERO value, it does not display polarity symbol.
10. Accuracy: full range linearity error ±2 digits (relative to 2000).
11. Temperature influence error: ≤80PPM／℃
12. Exceed the measuring range displays "oHH" or "oLL".
13. Net weight: 35g. External dimension: 79×43×23mm. Panel cut-out dimension: 76.5×39.2 (+0.1 mm).

(Note: ZERO and SPAN value are related to input signal, eg.: input signal is 0-10V, the ZERO is 0V, SPAN is 10V; if input signal is 0~±200mV, ZERO is -200mV, SPAN is 200mV. The other signal inputs follow the same calculation.)

Model Selection Table

SY LED6- U(A)□ -P□- O8

Input voltage/Current

U1：0-5V	A1：0-1mA
U2：0-10V	A2：0-10mA
U3：0-75mV	A3：0-20mA
U4：0-2.5V	A4：4—20mA
U5：0-±5V	A5：0-±1mA
U6：0-±10V	A6：0-±10mA
U7：0-±100mV	A7：0-±20mA
U8: User-defined	A8: User-defined

Power supply

P1：DC24V P2：DC12V
P3：DC5V P4：DC15V P8: User-defined

Display Value

O8: User-defined.

Model selection examples

E.g. 1: Signal input: 0-5V, display value: 0.0-50.0. Power supply: 24V

Model No: SY LED6-U1-P1-O8

E.g.2: Signal input: 0-10V, display value: 0.0-100.0, Power supply: 5V。

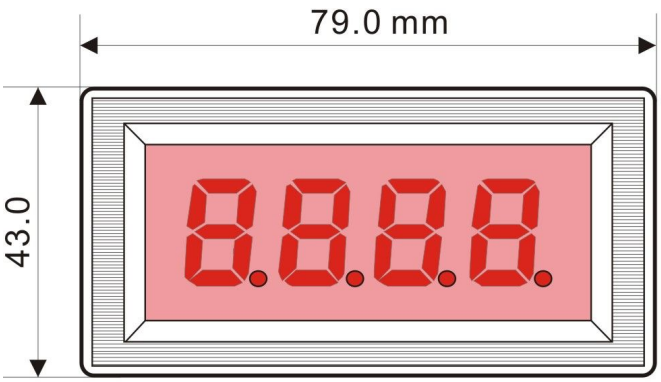
Model No: SY LED6-U2-P3-O8

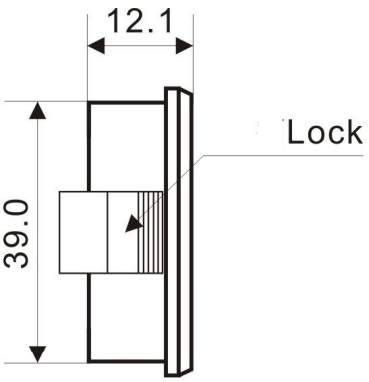
Note: If input signal is 4-20mA, no external power supply is required, the model no is SYLED6

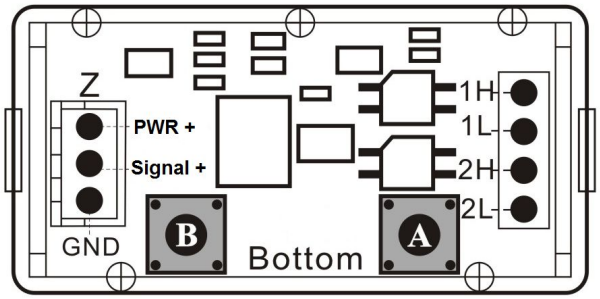
Linearity index

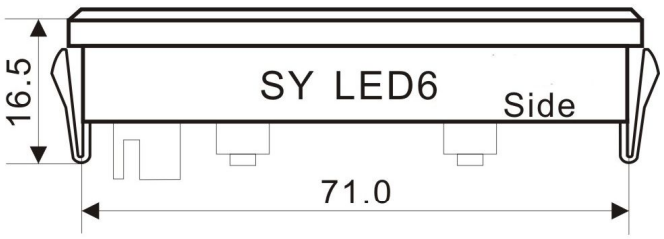
	Input signal	Output display	Linearity
SY LED6	4-20mA	0.0～100.0	Input 4mA displays: 0.0 Input 12mA displays: 50.0 Input 20mA displays:100.0
SY LED6-U1-P1-O8	0-5V	0.0～50.0	Input 0V displays:0.0 Input 2.5 displays: 25.0 Input 5V displays: 50.0
SY LED6-U2-P3-O8	0-10V	0.0～100.0	Input 0V displays: 0.0 Input 5V displays: 50.0 Input 10V displays: 100.0
SY LED6-U8-P2-O8	0~±200mV	-200～200	Input—200mV displays: -200 Input 0mV displays:0 Input 200mV displays:200

External Dimension & Function Description









Z: Power supply and signal input

A: Selection button

B: Adjustment setting button

1L/1H: First channel alarm output (L: Low level)

2L/2H: Second channel alarm output (H: High level)

Cut-out Size:

76.5X39.2 +0.1 mm

Note: When input is 4-20mA current signal, not power supply is required, only connect the “PWR+” and “Signal+” , it can realize signal input and display (As shown above).

External View

Ordering Notes

Please read the data sheet carefully before placing orders to ensure that products to be ordered can meet the requirements in real applications and there are no mistakes in model selection.

1. The default values: 4mA : display"0.0", 20 mA: display "200.0"
2. Any special requirements on display specifications, please notify us. The meter will be calibrated according to user’s requirements before ex-factory.
3. User should notify us the signal input type and the value of parameters below: AC, DC, resistance (displacement or potentiometer), electric-bridge (pressure or weighing).
4. The default setting has not alarm functions.

Note: The specification is subject to change without notice. For details, contact sy@sun-yuan.com.