

# DS8 SERIES INTELLIGENT SENSOR METER

## Instruction Manual

Thanks a lot for selecting Sanyou products!

Before operating this instrument, please carefully read this manual and fully understand its contents. If have probroms, please contact our sales or distributors whom you buy from. This manual is subject tochange without prior notice.

### PREREAD INSTRUCTIONS

**⚠ SAFETY CAUTIONS:**

- Make sure the power is at "OFF" status before connecting the wires to avoid electric shock and strictly follow the connection diagram given out by the factory.
- Make sure the power OFF when cleaning the product.
- Working beyond the stated power supply (90-260V AC) is prohibited so as to avoid damage to the product or cause fire.
- Make sure the OUTPUT RELAY is used at the rated load and electrical life, if the contact of the output reply works against the electrical life, it may melt or burned or even cause fire.

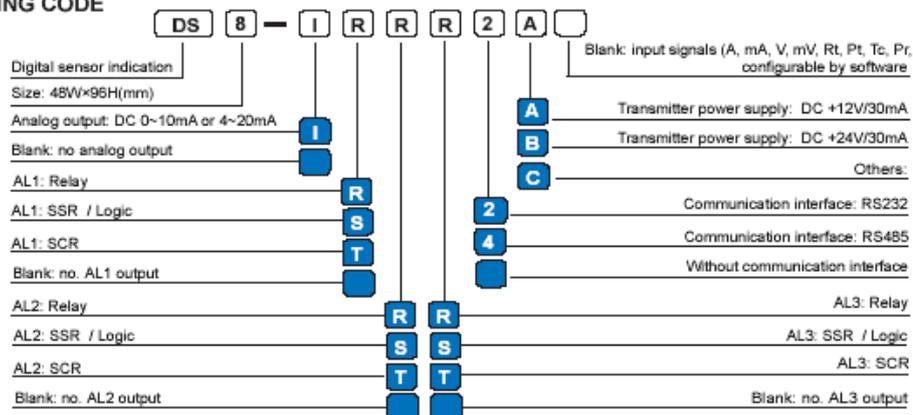
**⚠ INSTALLATION NOTICE:**

- The product can not be installed outdoors, otherwise will shorten the operation life or cause electrical shock accidents.
- Ambient temperature: 0℃(32F) ~ 50℃(122F)
- Avoid to use the product in the such conditions as the dusty, flammable, explosive gas, vapor, water and oil spray environments.
- Prevent from strong surge & impact, high interference or other bad influences conditions.
- The product does not include a switch or fuse, if necessary, user needs to install by themselves, suggested spec. of fuse: rated voltage: 250V AC, rated current: 0.5A, with delay function.
- The output is active after the power ON for 10s, please consider this when configuring control loop.
- Safety devices must be configured when the product is used in the conditions such as nuclear energy control, medical treatment devices, autos, trains, aviation, entertainment...etc, for more details, please contact us.

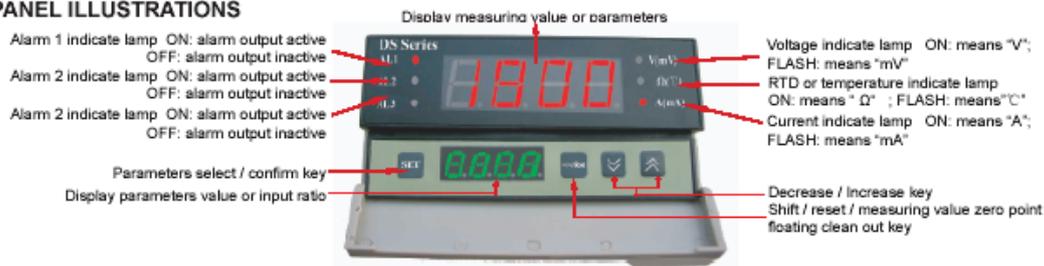
### 1.FEATURES

- Multi-function sensor indicator, size:48\*96\*100mm
- Universal input: TC, RTD, mA, mV, A(AA/DA), V(AV/DV), Rt, 20 segments of customized linear input. (Configurable by software)
- Up to 3 alarm relays, contact capacity: AC 250V/3A or DC 30V/3A (resistance load)
- Isolated analog output: 0~10mA or 4~20mA, configurable by software.
- Transmitter power supply: DC 24V or DC12V / 30mA max.
- RS485 or RS232 interface
- Product power supply: AX 90~260V 50/60HZ, power consumption<5VA
- Applications: DS series multi-function indicator can measure voltage/current signals of any ranges; can select data holding or peak value holding function; applied for 2-wire transformer, pressure sensor, 4-wire weighing sensor, remote pressure meter and other sensor measuring devices; for non-linear input, can provide 20 segments of customized linear process; can measure AC / DC voltage/ current and resistance, isolated input /output and external supply; can link to PC through communication interface.

### 2.ORDERING CODE



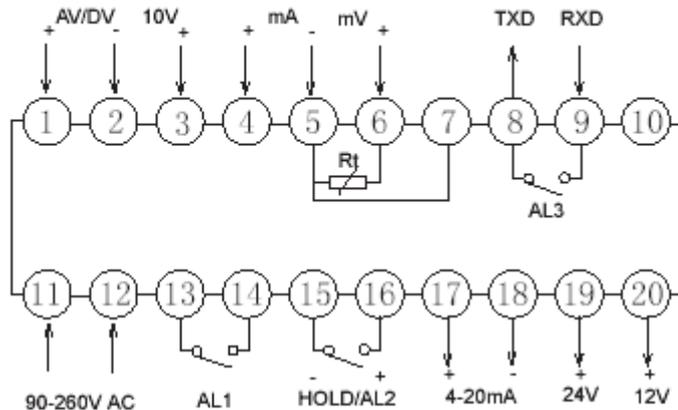
### 3. PANEL ILLUSTRATIONS



#### 4. TECHNICAL SPECIFICATIONS & INPUT SIGNALS

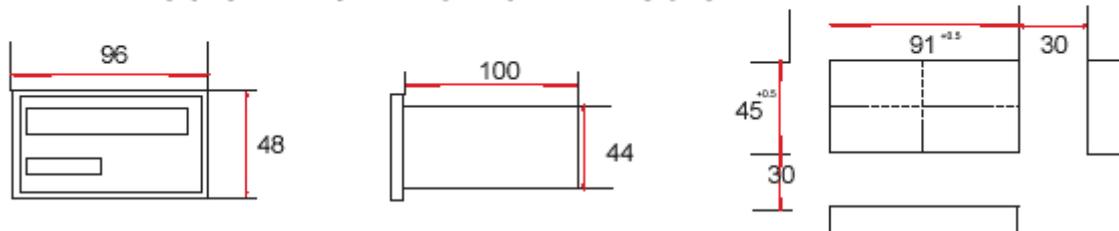
|                            |   |                   |   |                                     |                        |                        |
|----------------------------|---|-------------------|---|-------------------------------------|------------------------|------------------------|
| <b>Power supply:</b>       | 90-260V AC 50/60HZ (+/- 10%)                                      | <b>INPUT TYPE</b> | <b>MEASURING RANGE</b>  | <b>INPUT IMPEDANCE</b>              | <b>FACTORY SETTING</b> |                        |
| <b>Power consumption:</b>  | ≤ 5VA   | <b>A(AA/DA)</b>   | AC 0~5A / 0~20A   | CT configurable                     | 0~5A                   |                        |
| <b>Accuracy:</b>           | ±0.3% F.S (under normal conditions)                               | <b>mA</b>         | 0~1mA / 0~10mA / 4~20mA   | ≤150Ω                               | 4~20mA                 |                        |
| <b>Sampling rate:</b>      | <8 times/s  | <b>V(AV/DV)</b>   | 0~5V / 0~10V / 0~500V   | ≤200KΩ                              | 0~10V                  |                        |
| <b>Input:</b>              | See input signals   | <b>mV</b>         | 0~10mV (± 100mV)  | ≤2MΩ                                | 0~75mV                 |                        |
| <b>Alarm output:</b>       | Relay: NO., contact capacity:<br>AC 250V /3A or DC 30V /3A Cosp=1 | <b>Rt</b>         | 0~400Ω / 0~10K<br>0~1K / 0~50K  | ≤0.2mA<br>≤0.1mA                    | 0~400Ω                 |                        |
| <b>Analog output:</b>      | 4~20mA or 0~10mA, configurable<br>by software                     | <b>Pt</b>         | -200~650 ℃<br>Cu50/Cu100: -50~150 ℃   | ≤0.2mA                              | Pt100                  |                        |
| <b>Transmitter supply:</b> | Isolated DC 24V/30mA or DC 12V/30mA                               | <b>TC</b>         | K: 0~1320 ℃<br>J: 0~1300 ℃<br>E: 0~1000 ℃<br>T: -150~400.0 ℃<br>B: 0~1820 ℃<br>R: 0~1700 ℃<br>S: 0~1600 ℃ | ≤2MΩ                                | K                      |                        |
| <b>Communication:</b>      | RS485 or RS232 interface<br>(Modbus protocol)                     |                   | <b>Pr</b>   | 20 segments customized linear input |                        | Indicate<br>when order |

#### 5. ELECTRICAL CONNECTION DRAWING



NOTE: If any changes, please subject to the connection drawing on the product)

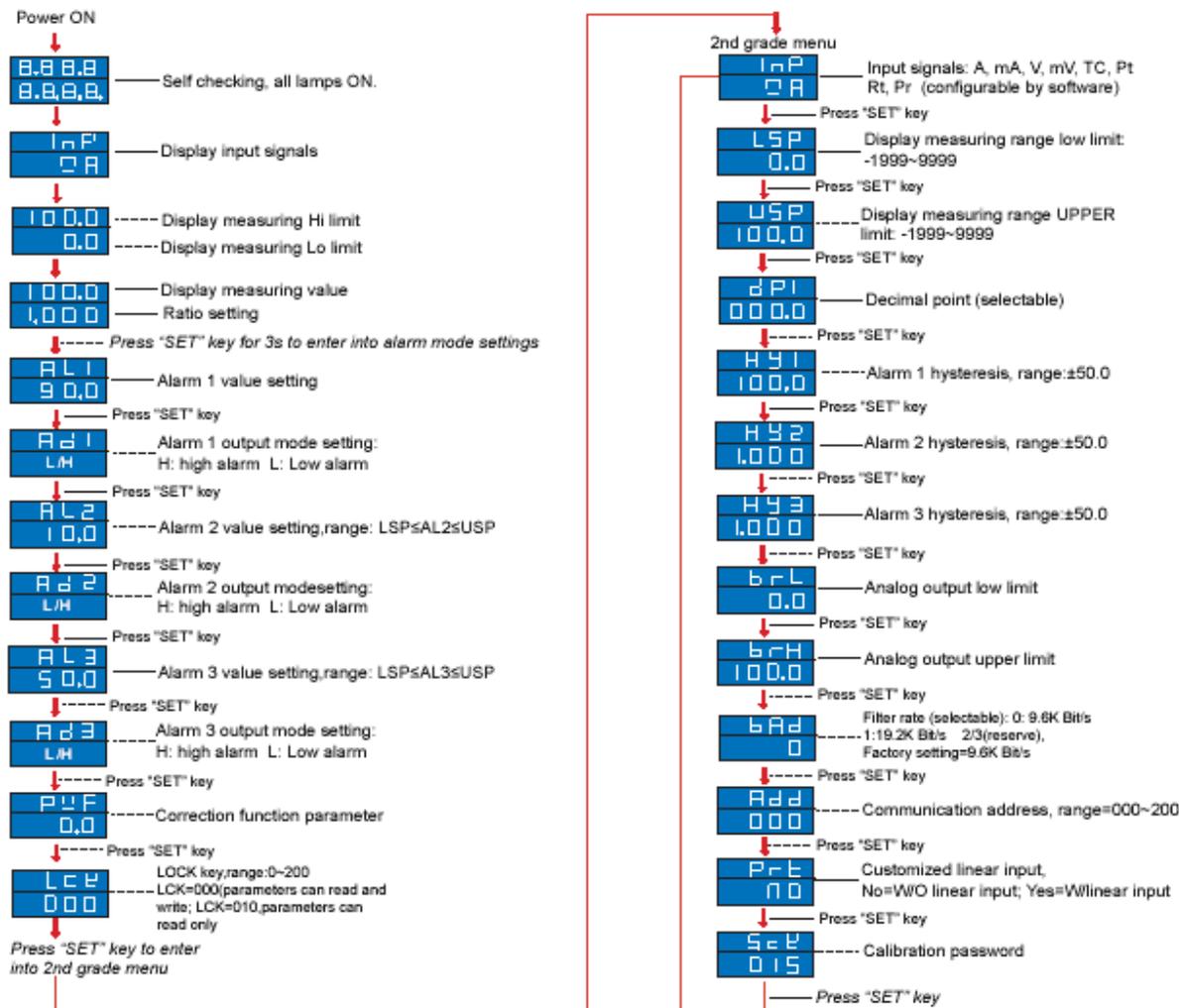
#### 6 PANNEL DIMENSIONS AND INSTALLING HOLE DIMENSIONS



#### 7. OPERATION INSTRUCTIONS:

- At the processing estate, press "SET" key once, the lower LED flashes, at this time, press "▲ / ▼" key can modify the display ratio, factory setting=1.000. If request input=75mV and display=200A, so the ratio should be set 200/75=2.666. At the processing estate, press "<</RST" key >2s can clean out the zero point floating value.
- At the processing estate, press "Set" key > 3s to enter into the alarm mode setting menu. To modify the value, press "<</RST" key, the lower LED flashes, press "▲ / ▼" to modify, at last press "Set" key to confirm the value modified. Press "Set" again to shift to the next parameter.
- In the alarm mode setting menu, when select parameter "LCK", set LCK=0000, the parameters can read and write; set LCK=010, the second-grade menu parameters can read only, can not write.
- At the setting estate, no key operation within 25s, it will go back to the processing estate.

## 8.PARAMETERS MENU:



**Note: the above parameters in the pane are factory settings.**

## 9.Application examples:

- Application with 2-wire pressure sensor: request auxiliary supply "DC 24V/30mA " and with isolated analog 4~20mA output: please refer to page 4 F1
- Application with resistance variable pressure sensor, request auxiliary supply "DC 12V/30mA ", output 2mV/V, and connect with PC: please refer to page 4 F2

## 10.Product maintenance notice:

- The product should be power ON for 15 minutes before operating.
- The appropriate ambient temperature is 0~40°C; relative humidity: 85%
- The product calibration period is 12 months.
- Avoid shock and impact, prevent operation from heavy dust and poisonous chemical materia medica & gas environment.
- If the input signals are with high-frequency interference, the wires must configure a high-frequency filter.
- The input wires should not be too long. If the distance between the signal input terminal and the product can not be shortened, please use shielded twisted-pair and the shielded layer connected with the signal low end.
- Keep from the direct sunlight, the stock temperature is -10~70°C/60%(RH). Do not contact the organic solvent and oil.
- If stock in long terms without operation, please connect to power ever 3 months for min. 4 hours each time.

## 11.Others:

- The complete product contains: product with connection diagram, instruction manual, installing brackets (1 set), inspection certificate and packing box with product label.
- Guarantee: any defected products under normal operation within 12 months can be returned and replaced by us; Damage by user's wrong operation can not be replaced, if request to be returned for repair, buyer should take charge of the freight fee, on conditions that large quantities need to be repaired, repair fee should be considered

