

SF Series Intelligent Sensor Display Meter User's Manual



Features :

- ⊙Dual rows of LED display , the below row LED display the unit of measuring value
- ⊙Two alarm output
- ⊙Multiple linear signal input can be ordered

For your safety, please read the below content carefully before you use the meter !

■ Safe Caution

※ Please read the manual carefully before you use the meter

※ Please comply with the below important points:

⚠ Warning An accident may happen if the operation does not comply with the instruction.

⚠ Notice An operation that does not comply with the instruction may lead to product damage.

※ The instruction of the symbol in the manual is as below.

⚠ An accident danger may happen in a special condition.

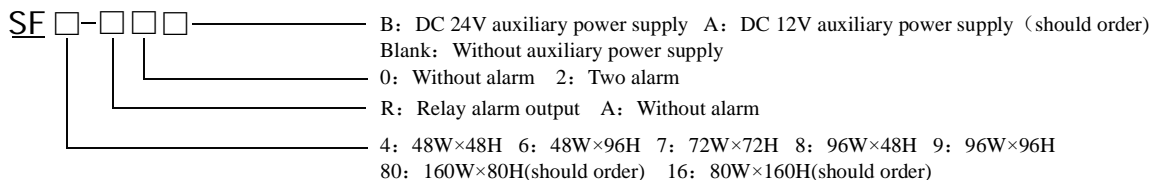
⚠ Warning

1. A safety protection equipment must be installed or please contact with us for the relative information if the product is used under the circumstance such as nuclear control, medical treatment equipment, automobile, train, airplane, aviation, equipment, etc. Otherwise, it may cause serious loss, fire or person injury.
2. A panel must be installed, otherwise it may cause creepage (leakage).
3. Do not touch wire connectors when the power is on, otherwise you may get an electric shock.
4. Do not dismantle or modify the product. If you have to do so, please contact with us first. Otherwise it may cause electric shock and fire.
5. Please check the connection number while you connect the power supply wire or input signal, otherwise it may cause fire.

⚠ Caution

1. This product cannot be used outdoors. Otherwise the working life of the product will become shorter, or an electric shock accident may happen.
2. When you connect wire to the power input connectors or signal input connectors, the moment of the No.20 AWG (0.50 mm²) screw tweaked to the connector is 0.74n.m - 0.9n.m. Otherwise the connectors may be damaged or get fire.
3. Please comply with the rated specification. Otherwise it may cause electric shock or fire, and damage the product.
4. Do not use water or oil base cleaner to clean the product. Otherwise it may cause electric shock or fire. and damage the product.
5. This product should be avoid working under the circumstance that is flammable, explosive, moist, under sunshine, heat radiation and vibration. Otherwise it may cause explosion.
6. In this unit it must not have dust or deposit, otherwise it may cause fire or mechanical malfunction.
7. Do not use gasoline, chemical solvent to clean the cover of the product because such solvent can damage it. Please use some soft cloth with water or alcohol to clean the plastic cover.

1.Code Illustration

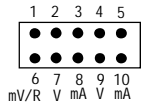


Note: SF8-R2 is the former name of SF8-R2B , with DC 24V/30mA auxiliary power supply

2. Ordering Code

Code	Input signal	Alarm	Auxiliary power supply
SF□-A0 (ordinary code)	DC 0~10V or 4~20mA(other input signal shoul order)	Without alarm	without
SF□-R2B (ordinary code)	DC 0~10V or 4~20mA(other input signal shoul order)	Two relay output	DC 24V/30mA
SF□-R2A (should order)	DC 0~10V or 4~20mA(other input signal shoul order)	Two relay output	DC 12V/30mA

Special indication: In ordinary code of the meter, 4~20mA、0~10V signal have been adjusted. If want to shift between the two signal, it needs to change the "INP" menu (see as the user's menu), and change the position of the contact pins as the below figure:

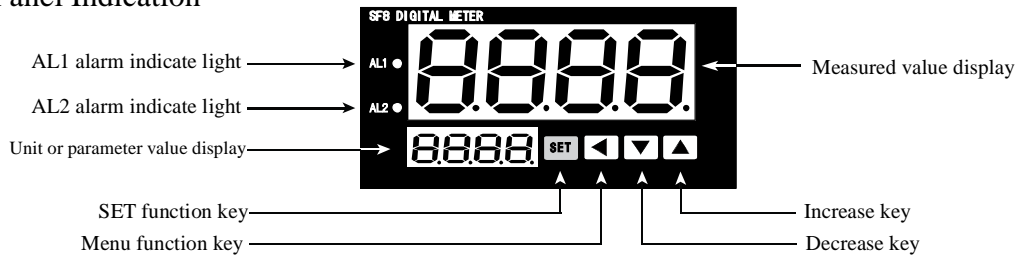


0~10V input: short connect 2-7、4-9; 4~20mA input: short connect 3-8、5-10 (short connect by the cap of the contact pin)

3. Main Technical Parameter

Accuracy	±0.5% F.S
Display range	-1999~4000 (Beyond 4000 can not make sure the accuracy)
Alarm output	Relay 1 output capacity: AC 1A/250V Relay 2 output capacity: AC 3A/250V
Work voltage	AC 110/220V±10% SF4: AC/DC 100~240V
Total current	<30mA(220V AC)
Ambient temperature	0~50℃
Ambient humidity	45~85%RH
Auxiliary voltage	24V 30mA (If the auxiliary is 12V, it should be ordered)

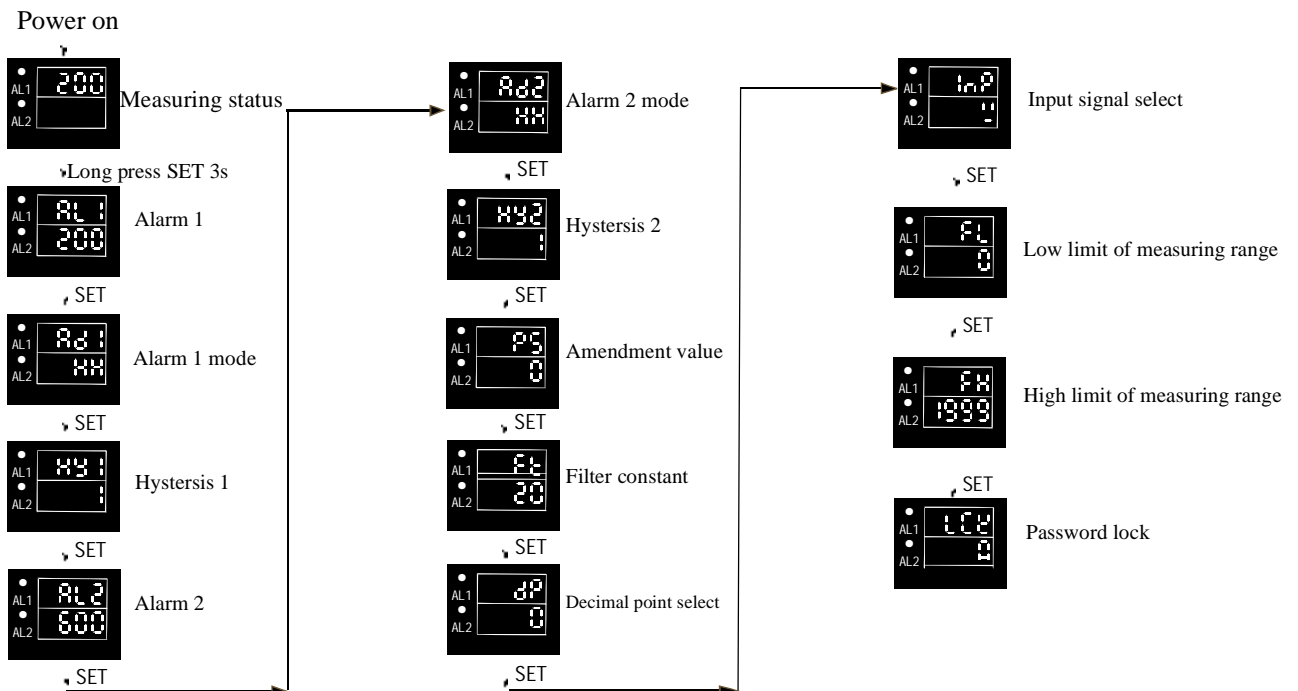
4. Panel Indication



5. Operation for the panel key

- In normal measuring status, short press ◀ key to enter unit selection mode. Press ▲ key or ▼ key can change the unit of the measured value.
- In normal measuring status, long press SET key can enter user setting menu, and long press SET key can exit.
- Press ◀ key, before modify the parameter.
- When modifying the parameter, press ▲ key or ▼ key
- After all the parameters be modified, press SET key to confirm.

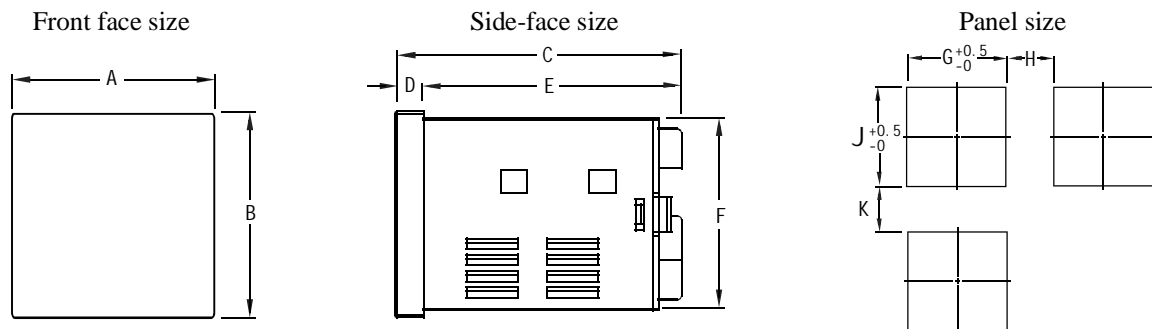
6. Operation Sequence



7. Setting menu

Menu code	Name	Illustration	Setting range	EX-factory setting
Below row LED display value under measuring status	Unit select for measured value	In measuring status, short press ◀ then press ▲ or ▼ can select the following unit: no unit, m, cm, mm, Kg, g, mg, MPa, Pa, ba, Mba, N, W, KW, RPM, Hz, KHz, mV, V, KV, mA, A, KA, Ω, °C, F		No unit display
AL1	Alarm 1	1# alarm value setting	FL~FH	200
AD1	#1 Alarm Mode	1# alarm high limit / low limit select	HH/HL	HH
HY1	#1 Hystersis	Hystersis of #1 alarm	0-1000	1
AL2	#2 Alarm	#2 alarm value setting	FL~FH	600
AD2	#2 Alarm mode	2# alarm high limit / low limit select	HH/HL	HH
HY2	#2 Hystersis	Hystersis of #2 alarm	0~1000	1
PS	Amendment value	Amend the tolerance caused by the sensor	-1000~1000	0
FT	Filter constant	Filter constant	1-250	20
DP	Decial point select	Decimal point select of the display value	0-3	0
FL	Low limit of measuring range	Low limit setting of display range	-1999~9999	-1999
FH	High limit of measuring range	High limti setting of display range	-1999~9999	4000
INP	Input signal select	⌚: 0~10V; ⌚⌚: 4~20mA; ⌚⌚⌚: 0~50mV; ⌚⌚⌚⌚: 0~400 Ω		⌚⌚
LCK	Password lock	Password lock setting, when set to 11,the menu couldn't be modified	0~250	0

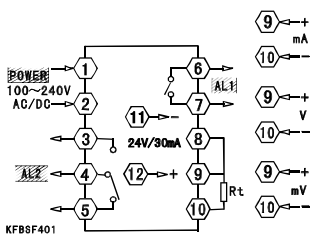
8.Dimension & Mounting Size



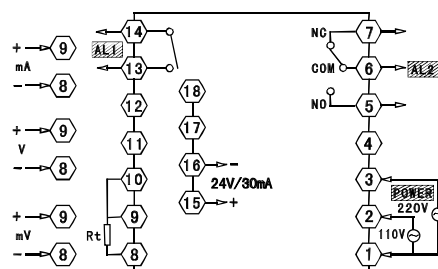
Code	A	B	C	D	E	F	G	H(Minimun)	J	K(Minimun)
4: (48*48)	48	48	101	10	91	45	45.5	25	45.5	25
6: (96*48)	48	96	100	6	94	91	45.5	25	91.5	25
7: (72*72)	72	72	100	10	90	67.5	68	25	68	25
8: (48*96)	96	48	100	6	94	45	91.5	25	45.5	25
9: (96*96)	96	96	101	10	91	90.5	91	25	91	25
80: (80*160)	160	80	102	10	92	76	154	30	76.5	30
16: (160*80)	80	160	102	10	92	153.5	76.5	30	154	30
Remark	Unit: (mm) Tolerance+0.5%(special indication is not included)									

9.Connecting Drawing

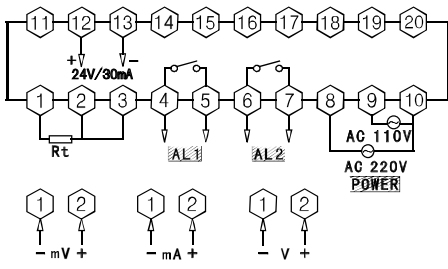
SF4 Power supply:AC/DC 100-240V
Relay output:AC 250V 1A



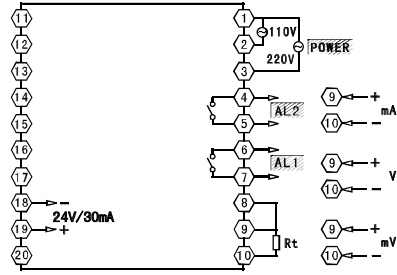
SF7 Power supply: 110/220VAC±10%
Relay output: AC 250V 1A



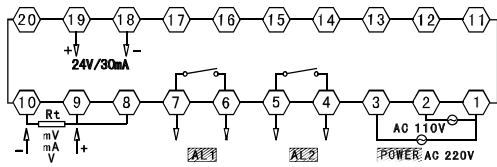
SF6/8 Power supply: 110/220VAC±10%
Relay output: AC 250V 1A



SF9 Power supply: 110/220VAC±10%
Relay output: AC 250V 1A



SF16/80 Power supply: 110/220VAC±10%
Relay output: AC 250V 1A



Note: If there are any changes of the drawing, please subject to the connecting drawing on the actual product .

10. Simple Problem Shooting

Display Message	Shooting Method
Display HHHH / LLLL	<p>To check input signal connecting well or not.</p> <p>To check FH, FL value;</p> <p>To check working temperature is OK or not.</p> <p>To check input signal selection is right or not.</p>