



Yantai Auto Instrument Making Co.,Ltd.

Pressure Transmitter

User Manual



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➤ First.Summary

SP pressure transmitter,SH liquid level transmitter,2088 pressure/liquid level transmitter is developed via international key component and advanced technology.Used to measure the pressure,level etc parameter of process fluid

(liquid,gas,steam) continuously,then transfer to 4-20mA standard signal and can be combined with unit instrument or DCS system,PLC,constitute automatic control system,widely used for control and measurement in food, petroleum,chemical, metallurgy,electric power,beer,spinning,medicine etc various industries.

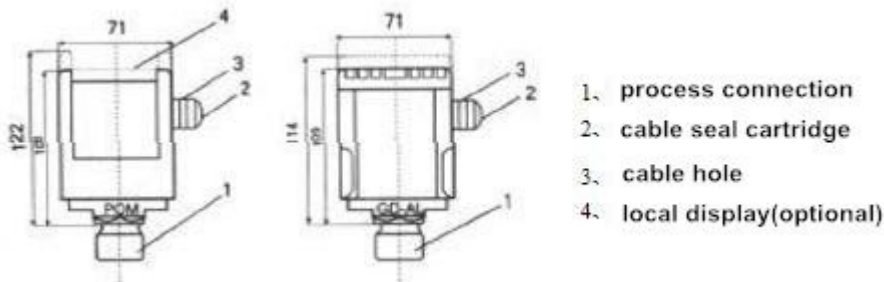
➤ Second.Technical parameter

Accuracy	0.2%FS,0.5%FS
Stability	Better than 0.25%FS annually
Installation location influence	No impact
Temperature influence(-50~50℃)	Less $\pm 0.15\%/10^\circ\text{C}$
Working voltage	15V~30V DC
Ambient temperature	-20~85℃
Medium temperature	-40~120℃
Storage temperature	-40~110℃
Compensation temperature	-15~50℃
Wetted diaphragm	SS316L, ceramic
Process connection element	Stainless steel
Sealing element	fluororubber
Shell/housing	Plastic,molded cast aluminium, aluminium alloy
Protection	IP65

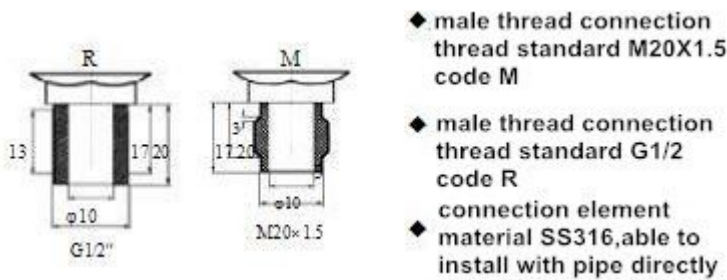


➤ Third. Structure and process connection

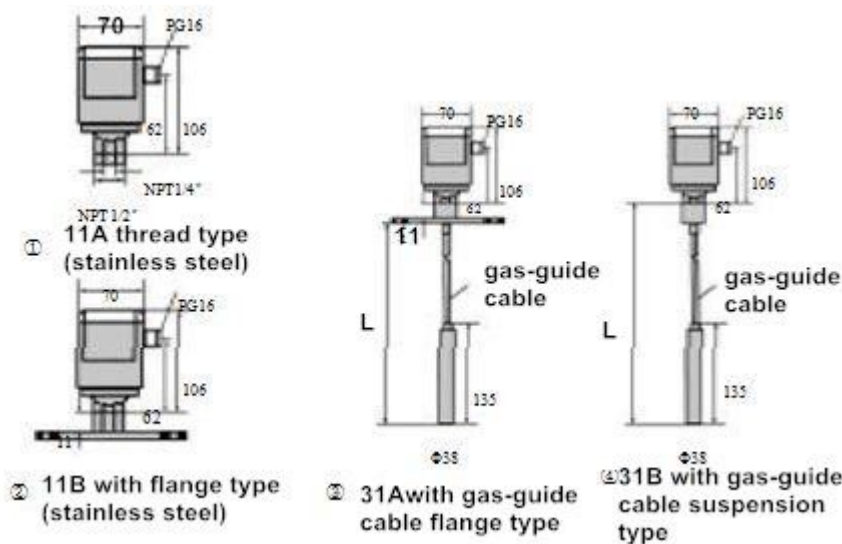
1.SP pressure transmitter structure



2.SP pressure transmitter process connection



3.SH liquid level structure



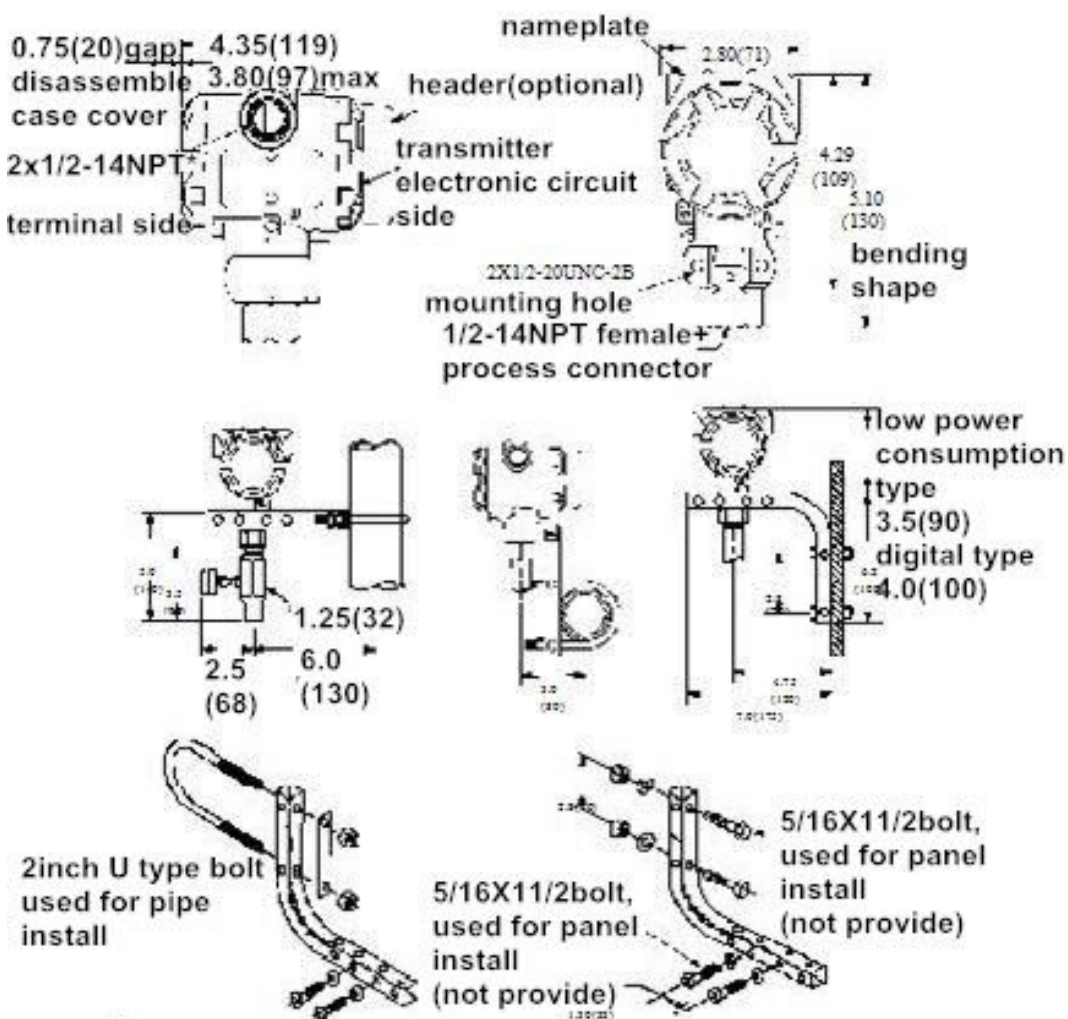


4.SH liquid level installation type



- 1、 thread type bottom install
- 2、
- 3、 flange type side intall
- 4、 gas-guide cable suspension install

5. 2088structure and installation

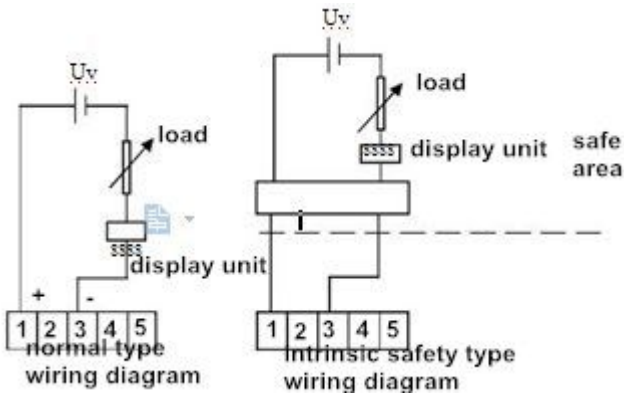


remark:
size unit is inch(mm)

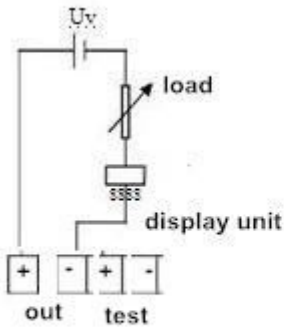


➤ Fourth .Electrical connection

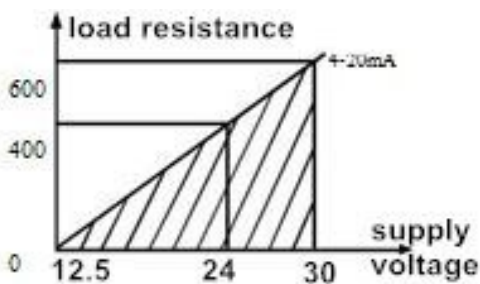
1.SP electrical connection



2.SP(2088)SH electrical connection

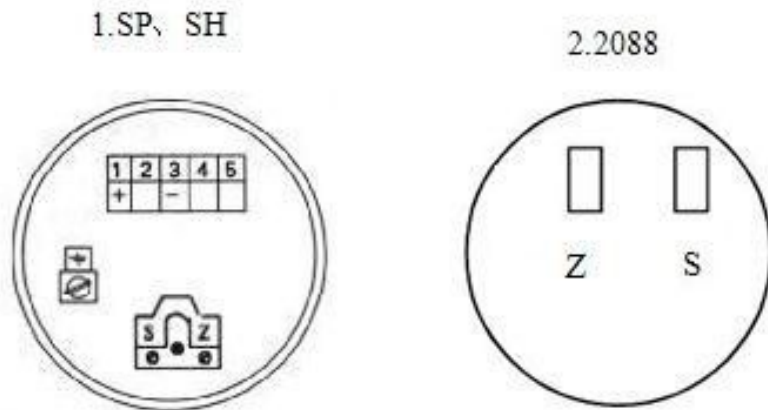


➤ Fifth .Load feature





➤ Sixth. Calibrate method



- A.before calibration,check the polarity of power and voltage,once it is normal,plug in the power,5minutes after stabilization,first adjust zero potentiometerZ,make the output 4mA.
- B.Add full range pressure or liquid level,adjust potentiometer S,make the output 20mA.
- C.Adjust potentiometer S,Z repeatedly for two or three times,until zero span is correct.
- D.Linear regulator:before delivery has been adjusted,no need adjustment.

➤ Seventh. Trouble removal

If transmitter has no signal output,check whether the connector of instrument is right and pressure tapping hole is blocked by dirt.

If transmitter signal is not stable,check whether the pressure tapping connector has any leak.

Remark:if there is any trouble user can't solve pls feedback to our company in time to check the problems,warranty is 18 months.



➤ Eighth. Ordering information sheet

1.SP pressure transmitter order sheet

Model	Spec Code	Directions
SP pressure transmitter		
Process Connection Material	1.....	Stainless Steel
Process Connection Structure	R..... M..... Y.....	MaleG1/2" MaleM20×1.5 Customize
Sealing Material	1F..... 1H.....	fluoro rubber (standard) fluoro rubber applied to Sensors(Over 10MPa)
Electronic Components of Transmitters	2..... 3.....	Analog signal 4-20mA (two wire) customize
Shell material and structure	A..... B..... C..... D.....	Aluminum shell PG16 cable sealingIP65 Stainless steel shell cylinder structure Spray shell PG16 cable sealing IP65 Other shell
Sensor Type	1..... 2..... 3.....	Diffused Silicon Type Piezoresistive Ceramic Type Ceramic Capacitive Type
Explosion-proof Requirements	D..... E..... F.....	No Proof Required Explosion Proof Type Intrinsically Safe Type
Accuracy	2..... 5.....	0.2% 0.5%
Typical Model	SP1R1F2A1D5	

Order note:

1.mark pressure range:

Ex:0-100kpa, -0.1-0.9Mpa, -50-0kpa

2.advise pressure transmitter installation ambient temperature and medium temperature.

3.Forbid pressure transmitter contact high temperature or strong corrosive gas liquid directly.



2.SH static pressure liquid level meter order sheet

Model	Spec Code	Directions
SH static pressure liquid level meter		
Model	1..... 2..... 3.....	General type(water or other light corrosive liquid) Oil resistance type(crude oil or other refined oil) Corrosion resistance type
Output	A..... B.....	4-20mA 2 wire customized
Structure	11A..... 11B..... 31A..... 31V..... Y.....	Thread type Flange type Flange type with gas-guide cable Suspension type with gas-guide cable Customized
Connection pipe material	A..... B.....	Oil resistance rubber PTFE
Flange standard (JB81-59)	0..... 1..... 2..... 3.....	Without flange Dg=50 Dg=80 Other flangel
Explosion-proof Requirements	A..... B..... C.....	No Proof Required Explosion Proof Type Intrinsically Safe Type
Measurement range	1..... 2..... 3..... 4..... 5..... 6.....	0-5m 0-10m 0-20m 0-40m 0-100m 0-200m
Typical Model	SH1A31BA0C1	(liquid proportion provide by user)



3.SP(2088) order sheet

Model	Spec Code	Directions
SP(2088) pressure transmitter		
Process Connection Material	1.....	Stainless Steel
Process Connection Structure	R..... M..... Y.....	MaleG1/2" bore 10mm MaleM20×1.5 bore 10mm Customize
Display header	M1..... M2.....	Pointer header LCD header
Sealing Material	1F..... 1H.....	fluoro rubber (standard) fluoro rubber applied to Sensors(Over 10MPa)
Electronic Components of Transmitters	2..... 3.....	Analog signal 4-20mA (two wire) customize
Sensor Type	1..... 2..... 3.....	Diffused Silicon Type Piezoresistive Ceramic Type Ceramic Capacitive Type
Explosion-proof Requirements	D..... E..... F.....	No Proof Required Explosion Proof Type Intrinsically Safe Type
Accuracy	2..... 5.....	0.2% 0.5%
Typical Model	SP(2088)1RM11F21D5	

Order note:

- 1.mark pressure range:
Ex:0-100kpa, -0.1-0.9Mpa, -50-0kpa
- 2.advise pressure transmitter installation ambient temperature and medium temperature.
- 3.Forbid pressure transmitter contact high temperature or strong corrosive gas liquid directly.