CS

CODE AND SPECIFICATIONS SHEET

Ceramic diaphragm pressure transmitter

JUN-E21

JUN-E21 ceramic diaphragm pressure transmitter adopts non-oil-filled ceramic sensor. The ceramic has extremely high corrosion resistance and wear resistance, and the pressure of the measured medium directly acts on the surface of the ceramic diaphragm. The DC 4 ～ 20mA signal between the transmitter export and the measured pressure,The measurement accuracy was ± 0.1%.

The product is suitable for gas, liquid, steam and other process fluid pressure measurement, can be used in the environment with explosion-proof requirements.By mutual communication with intelligent terminals, various functions can be set, adjusted and monitored for export signals.

Standard layout

Export

Export Signal: DC 4 ～ 20mA

Output signal range: DC3.8～20.8mA (maximum)

Supply voltage

DC16.5～55V (See Figure 1 for details)

Load impedance

0～2199 Ω is the working status (See Figure 1 for details)

250～600 Ω HART communication

Communication mode

HART、PROFIBUS-PA、Foudation Field-bus

Determine the pressure range

Scope code	Range	Measurement range
G06	6kPa	Minimum range 2kPa,-6～6kPa
G40	40kPa	Minimum range 4kPa,-40～40kPa
G250	250kPa	Minimum range 12.5kPa,-100～250kPa
G1K	1MPa	Minimum range 50kPa,-0.1～1MPa
G3K	3MPa	Minimum range 150kPa,-0.1～3MPa
G6K	6MPa	Minimum range 300kPa,-0.1～6MPa

Overload capacity; surge capability

1.5 times the upper limit of the range

Use the temperature range

Use range: -40～85℃

Integrated LCD display: -20～70℃

Determine the medium temperature range: -40 to 120 ℃

Use humidity range

5%～100%RH@ 40℃

Storage temperature range

-40～110℃,Integrated LCD display: -40～85℃

Levels of protection

IP67

Failure alarm signal

When the added pressure exceeds the upper limit of range, export alarm current value, lower limit to 3.8mA and upper limit to 20.8mA.

Precision:

±0.1%

Temperature characteristic

Total impact in-20 to 80℃: ± (0.1 + 0.2 TD)% range upper limit

Time index

The total damping time constant is equal to the sum of the damping time constants of the electronic circuit component and the sensing membrane box. Damping time of electronic circuit components: 0～100S range adjustable. Damping time of the sensing membrane box: 0.2S.

Long-term stability

±0.15%range Upper limit / 10 years

Quick operation menu

Function	Explain
PV zero clearing	So that the current simulation export corresponds to the zero pressure value
Zero (point) adjustment	The actual export was set to 4mA using the reference pressure
Full point adjustment	The actual export was set to 20mA using the reference pressure
Factory data reset	During a debugging error, restore the factory backup data

Material quality :

Joint fluid section diaphragm material quality: ceramic

Wiring box material quality: aluminum alloy exterior spraying epoxy resin

Distribution interface:

M20*1.5 、1/2NPT

Weight

About 2kg (excluding mounting bracket, process connection accessories)

Additional instructions

ATEX, explosion-proof certification

Grade 1, Zone 1 / 2, Group G, Ex d IC T6

-30℃≤Tamb≤+75℃ Process temperature =85℃

Grade, Zone 1 / 2, Group G, Ex d IIC T5 degree

-30℃≤Tamb≤+80℃Process temperature =100℃

Grade, Zone 1 / 2, Group G, Ex d IIC T5 degree

-30℃≤Tamb≤+80℃ Process temperature=100℃

Grade, Zone 1 / 2, Group G, Ex d IIC T5 degree

-30℃≤Tamb≤+75℃ Process temperature=100℃

Grade, Zone 1 / 2, Group G, Ex d IIC T5 degree

-30℃≤Tamb≤+75℃ Process temperature=100℃

Grade, Zone 1 / 2, Group G, Ex d IIC T5 degree

-30℃≤Tamb≤+75℃ Process temperature =100℃

（Note-Use a power cord suitable for working at a temperature 5℃ higher than the ambient temperature）

ATEX Intrinsic Safety Certification

Grade 1, Zone 1, Group G, Ex ia IIC T4

-30℃≤Tamb≤+60℃ Process temperature =105℃

Electrical parameters：

Ui=30V,Li=93mA,Pi=1W,Ci=5nF,Li=0.5mH

Grade 1, Zone 1, Group D, and Ex iaD 20 T105

-30℃≤Tamb≤+60℃ Process temperature=105℃

NEPSI explosion certification

Ex d IIC T6 DIP A21 TA85℃

-30℃≤Tamb≤+75℃ Process temperature=80℃

Ex d IIC T5 DIP A21 TA 100℃

-30℃≤Tamb≤+80℃ Process temperature= 95℃

Ex d IIC T4 DIP A21 TA 115℃

-30℃≤Tamb≤+80℃ Process temperature=110℃

NEPSI Intrinsic Safety Certification

Ex ia IIC T4

-30℃≤Tamb≤+60℃ Process temperature=105℃

Electrical parameters：

Ui=30V,Li=100mA,Pi=1W,Ci=13nF,Li=0.5mH

IECEX Explosion certification

Ga/Gb Ex d IC T6

-30℃≤Tamb≤+75℃ Process temperature=85℃

Ga/Gb Ex d IIC T5

-30℃≤Tamb≤+80℃ Process temperature=100℃

Ga/Gb Ex d IIC T4

-30℃≤Tamb≤+80℃ Process temperature=110℃

Ex tD A21 T85

-30℃≤Tamb≤+75℃ Process temperature=85℃

Ex tD A21 T100

-30℃≤Tamb≤+75℃ Process temperature=100℃

Ex tD A21 T110

-30℃≤Tamb≤+75℃ Process temperature=110℃

Note-Use a power cord suitable for working at a temperature 5℃ above the surroundings

IECEX safety safety safety certification

0 District, Ex ia IIC T4

-30℃≤Tamb≤+60℃ Process temperature=105℃

Electrical parameters：

Ui=30V,Li=93mA,Pi=1W,Ci=5nF,Li=0.5mH Ex iaD 20 T105

-30℃≤Tamb≤+60℃ Process temperature= 105℃

Electromagnetic compatibility (EMC)

EN 61326- 1:2013

EN 61326-2-3:2013

EN 61326-2-5: 2013

Electromagnetic compatibility directive：2014/30/EU

RoHS attestation

EN 50581:2012

EN 62321:2013

Debug method

HART hand operator, local button

The HART manipulator can configure almost all instrument parameters.

The local button can perform various functional configurations of

the transmitter: zero (point) adjustment, plus

Set the upper and lower limits of the pressure and unpressure measurement, unit selection and damping setting

Ding, export selection, etc.

Display interface

Identification	Explain
PV	The main screen displays process variables, the secondary screen displays percentage and progress bar.
mA	The main screen shows the current value, and the secondary screen shows the percentage and progress bar。
%	Home screen display percentage, secondary screen display percentage and progress bar.

R(2) load resistance

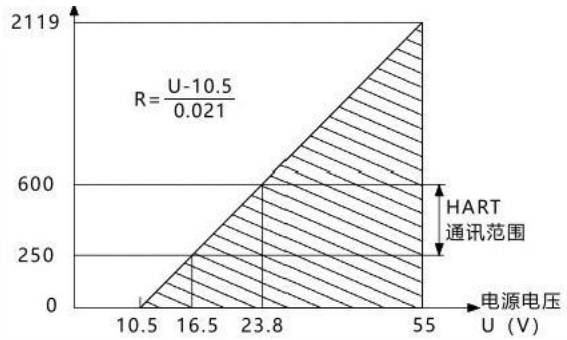
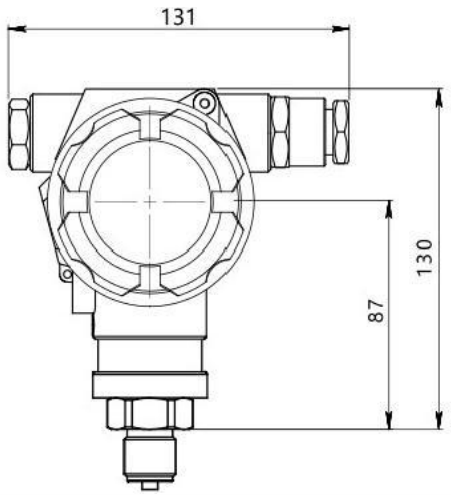
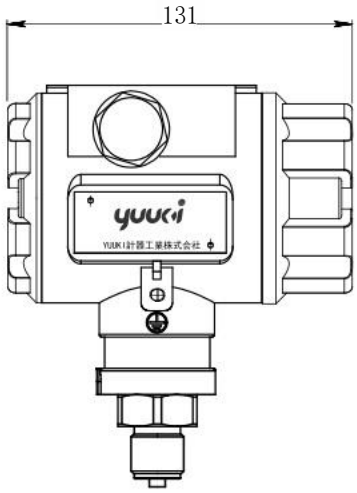


Figure 1. Power supply and load conditions

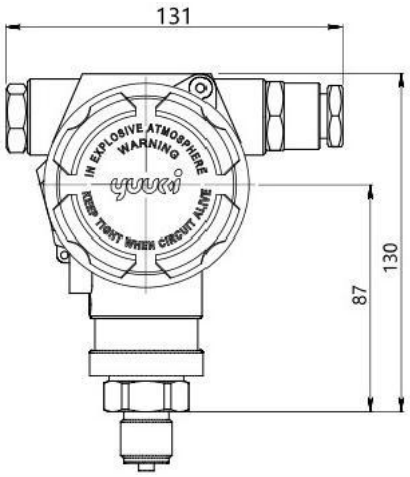
Overall dimension drawing (in mm)

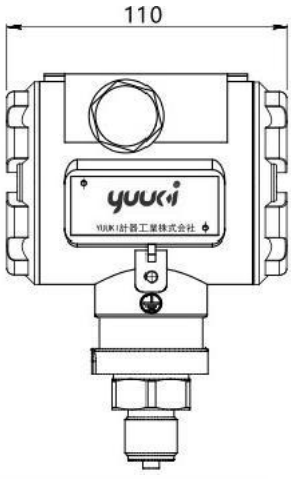
JUN-E21 Overall size drawing with display function



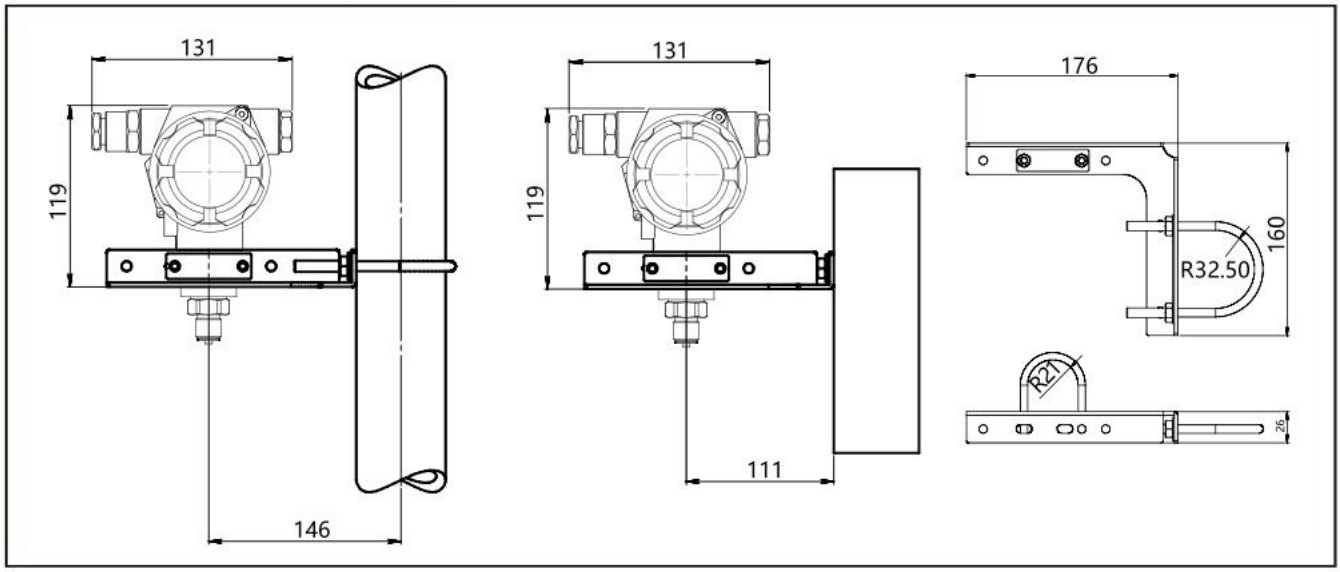


JUN-E21 Size drawing of the whole machine without display function

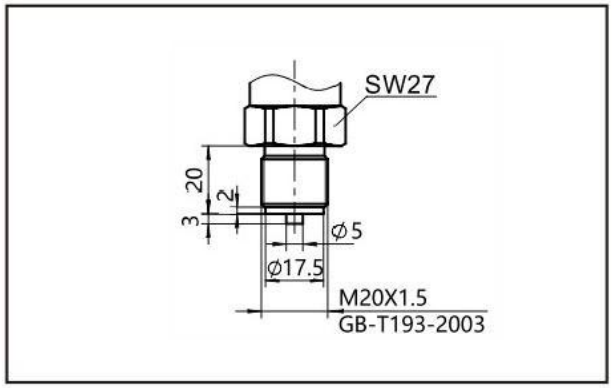




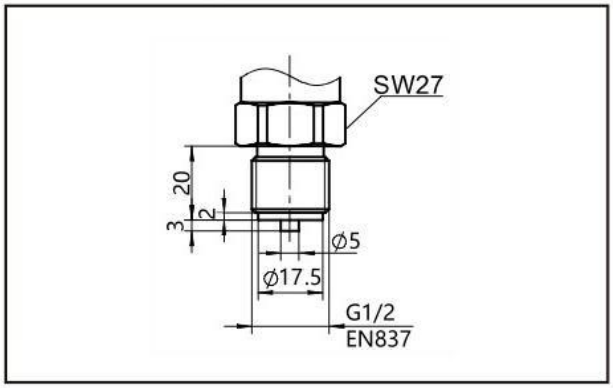
JUN-E21 mounting mount (B4)



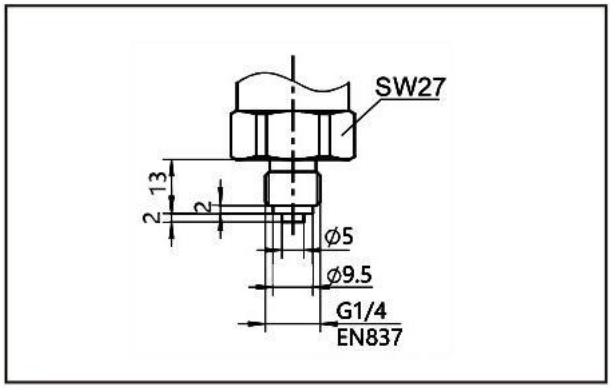
Pressure import into M01 dimension drawing



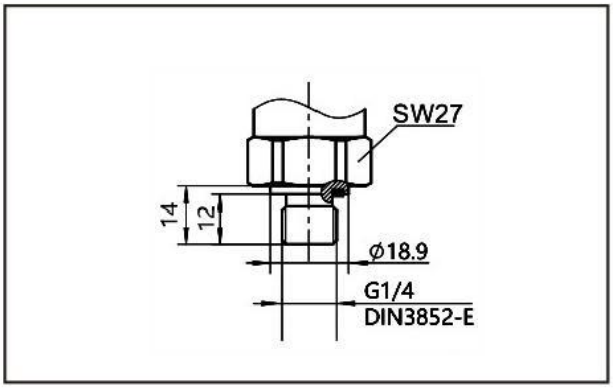
Pressure import into G01 dimension drawing



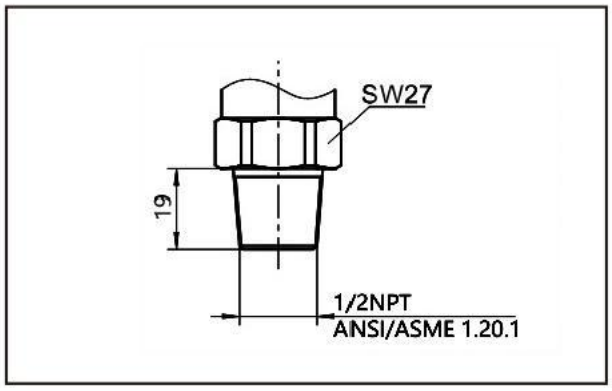
Pressure import G0 size drawing



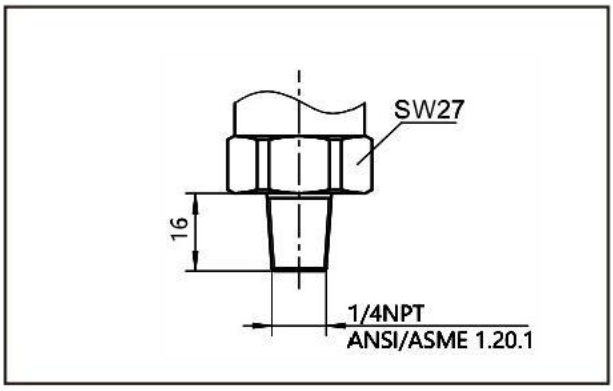
Pressure import G08 size drawing



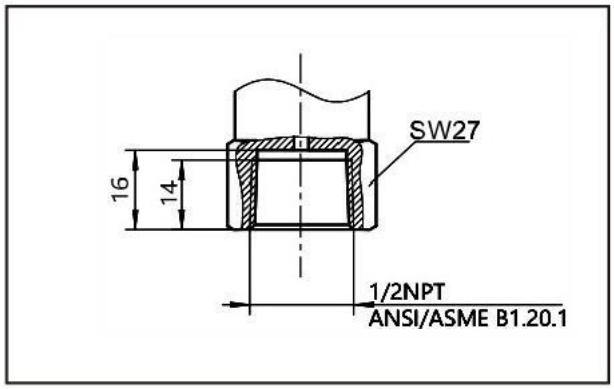
Pressure import into the R01 dimensional drawing



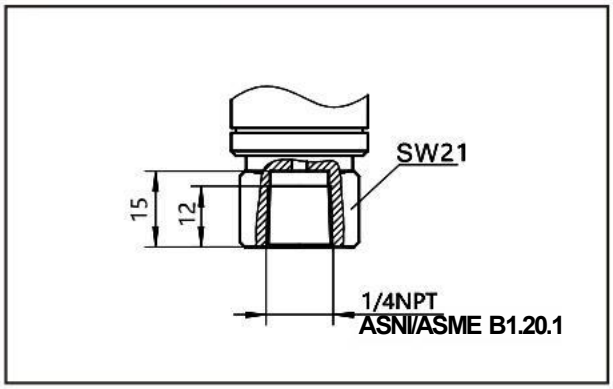
Pressure import into the R02 dimensional drawing



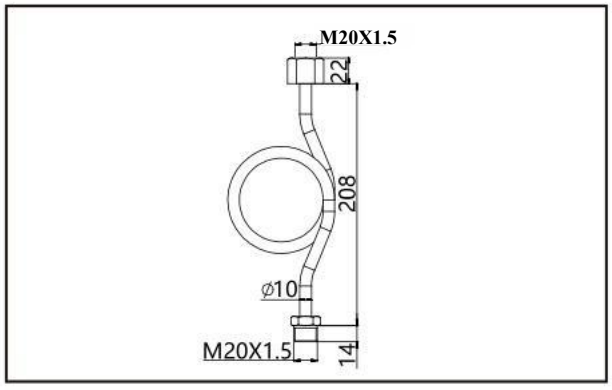
Pressure import into the R03 dimensional drawing



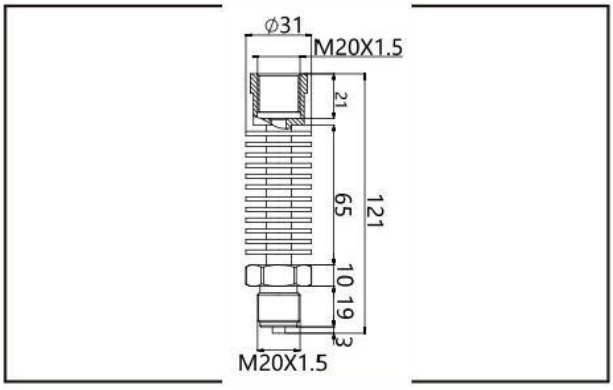
Pressure import into the R04 dimensional drawing



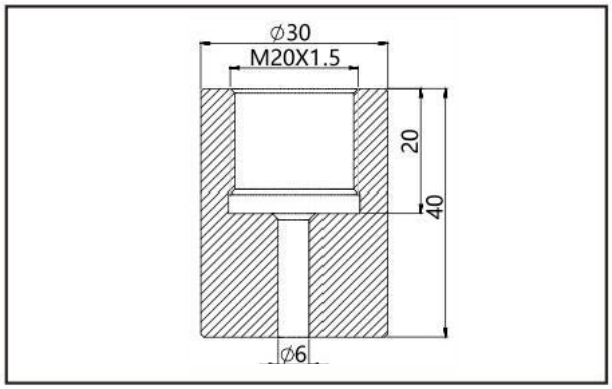
Size diagram of heat switching connector N1



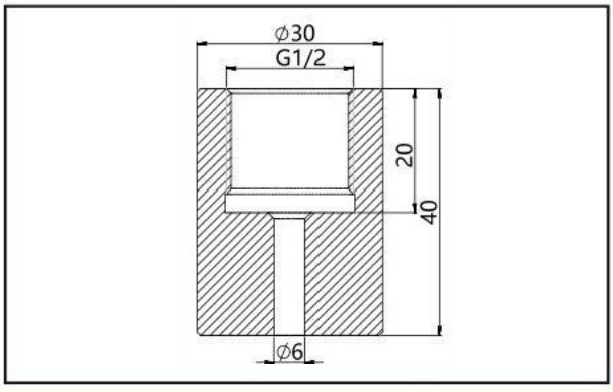
Size diagram of heat exchange connector N2



Pressure import Z1 dimension diagram



Pressure import Z2 dimension diagram



Order number	Project	Code	Content
1	Model	JUN-E21	Ceramic pressure transmitter
2	Accuracy	C	±0.1%
3	Structure	S	normal structure
4	Range	G40	0～40kPa ,Minimum range 4kPa
		G250	0～250kPa,Minimum range 12.5kPa
		G1K	0～1MPa ,Minimum range 50kPa
		G3K	0～3MPa ,Minimum range 150kPa
		G6K	0～6MPa ,Minimum range 300kPa
5	Pressure type	G	Gage pressure
6	Communication mode	H	4～20mA + Hart, made in two lines
		P	PROFIBUS-PA (ask separately for delivery date)
		F	Foudation Field-bus (Request separately)
7	Explosion-proof	N	No explosion-proof function
		G	PCEC explosion suppression
		D	NEPSI explosion suppression
		A	NEPSI Ben Ann
		E	ATEX explosion suppression
		B	ATEX Ben Ann
		M	IECEX explosion suppression
		W	IECEX Ben Ann
8	Show	N	No display
		L	LCD liquid-crystal display
		O	OLED display (ask later)
9	Connect the fluid section diaphragm material quality	C	pottery and porcelain
10	Treatment of the solution site	0	No special treatment
		1	No oil treatment
		2	Water ban treatment
11	Pressure import connection	R01	Outer thread 1 / 2 NPT-14, Φ 3 lead pressure orifice, GB / T12716, ANSI / ASME B1.20.1
		R02	Outer thread 1 / 4 NPT-18, Φ 3 lead hole, GB / T12716, ANSI / ASME B1.20.1
		R03	Inner thread 1 / 2 NPT-14, Φ 3 lead pressure orifice, GB / T12716, ANSI / ASME B1.20.1
		R04	Inner thread 1 / 4 NPT-18, Φ 3 lead pressure orifice, GB / T12716, ANSI / ASME B1.20.1
		M01	Outer thread M20 * 1.5, Φ 3 lead hole, GB / T193-2003, ISO 261
		M02	Inner thread M20 * 1.5, Φ 3 lead pressure orifice, GB / T193-2003, ISO261

Order number	Project	Code	Content
11	Pressure import connection	G01	External thread G 1 / 2, Φ 3 lead hole, EN 837
		G02	External thread G 1 / 4, Φ 3 lead hole, EN 837
		G08	Outer thread G 1 / 4A, Φ 3 lead hole, GB / T7307, ISO 228, DIN 16288, BS 2779, seal reference DIN 3852-E (rear seal)
12	Distribution connection	T1	Two M20 * 1.5 internal thread electrical interfaces
		R1	Two M20 * 1.5 internal thread electrical interfaces, M20 * 1.5 waterproof connector on one side and PVC material quality plug on the other side
		R2	Inner 1 / 2 NPT connector on one side and stainless steel material quality plug on the other side
		R3	One inner thread M20 * 1.5 joint, the other side with stainless steel material quality plug
13	Additional options-Fixed mounting fittings	-B4	U-shaped bracket, 2 ″ tube mounting
14	Additional option-pressure import mounting fitting	-N1	Heat exchange connector, 304 stainless steel bend, M20 * 1.5 inner thread to M20 * 1.5 outer thread
		-N2	Heat exchange connector, 304 stainless steel bellows, M20 * 1.5 inner thread to M20 * 1.5 outer thread
15	Additional option-the pressure import attachment	-Z1	Welded connector, M20 * 1.5,304 stainless steel
		-Z2	Welded connections, G1 / 2,304 stainless steel
16	Additional option-Check the report	-Q2	Provide a nationally recognized third-party verification report

Matters need attention

To better perform the performance of the transmitter, please pay attention to the following before use and read the instructions.

Note for transmitter installation

Notice
When installing the transmitter, ensure that the sealing gasket is connected in the process, not from the transmitter to the process fluid (such as fitting flange connection, connecting pipe Lane, flange) connected prominent, if the sealing gasket protruding outside, may lead to liquid leakage and output errors. Do not use the transmitter beyond the specified pressure, temperature range and operating conditions of the product specification, otherwise it may cause the leakage of the product and cause serious accidents. When wiring in dangerous areas, please follow the operation method specified in the explosion-proof standard instructions.

Notice
Please do not stand on the installed transmitter, take it as a foot.foot may occur splash, causing fluid splash injury personnel. Be careful of the glass display, do not use tools to hit the glass part of the digital watch head, breaking the glass may cause body injury. The transmitter is heavy, please carefully install and wear safety shoes. The collision transmitter may damage the sensor module.

Wiring notice matters

Warning
To prevent a short circuit, please do not use wet hands or in a live state of the wiring work.

Notice
Please connect correctly according to the technical specification. Wrong wiring will cause instrument failure or irreparable damage. Please use the power supply that meets the technical specification. Using the inappropriate power supply can cause instrument failure or irreparable damage.

Use the HART protocol equipment notice matters

If the instrument is operated by the helper (HART Communicator, etc.), set the communication interval of the server (DCS, equipment management system) for more than 8 seconds, or stop the communication between the server and the instrument. If the server communicates with the instrument repeatedly within 8 seconds, the instrument may not accept the request of the helper (may not be able to communicate with the instrument)。

If the electrical noise interference in the surrounding environment affects the HART communication with the server, please take corresponding measures, such as separating the signal cable from the noise source, improving the grounding or replacing the signal shielding cable, etc. If an analog signal of 4-20mA is used, the use will not be affected even if the HART communication is disturbed by the noise。

△ Read the operation manual carefully before using this product.

△ Any change in appearance or specification due to improvement without notice.