



Multi parameter differential pressure transmitter

JUN-E60

JUN-E60 multi-parameter differential pressure transmitter is a differential pressure transmitter with the use of the world's advanced pressure sensor technology and packaging process, The highest measurement accuracy is $\pm 0.075\%$, and the range ratio can reach 100:1. The transmitter has a built-in mono-crystalline silicon sensor, export, DC 4 ~ 20mA, pulse signal or RS485 digital signal.

Products are suitable for gas, liquid, steam and other process fluid flow measurement, can be used for explosion-proof requirements of the environment.

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 + HART pulsing signal
RS485 MOUDBUS-RTU

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

Determine the pressure range

Scope code	Range	Measurement range
G06	6kPa	Minimum range 200Pa, -6~6kPa
G40	40kPa	Minimum range 400Pa, -40~40kPa
G250	250kPa	Minimum range 2.5kPa, -250~250kPa
G1K	1MPa	Minimum range 10kPa, -0.5~1MPa
G3K	3MPa	Minimum range 30kPa, -0.5~3MPa
G10K	10MPa	Minimum range 100kPa, -0.5~10MPa

Maximum working pressure

See Table 1 for details

Withstand voltage

See Table 1 for details



Levels of protection

IP67

Use the temperature range

Use range: -40~85°C

Temperature range: silicone oil-filled sensor-40-120°C filled with inert filling fluid-45-160°C

Use humidity range

5%~100%RH@ 40°C

Storage temperature range

-40~110°C

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

$\pm 0.075\%$ 、 $\pm 0.1\%$ (See Table 2 for details)

Precision

Temperature compensation is achieved by connecting the external three-wire system PT 100 thermal resistance.

Temperature characteristic

Total impact volume in the range of -20 to 80°C: $\pm (0.1+0.1TD)\%$ 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

Provide liquid solution for various anti-corrosive material quality.

material quality: 316L stainless steel, 316L stainless steel gold-plated, Harbin alloy C

O-sealing ring material quality: nitrile rubber, fluorine rubber, PFE

Wiring box material quality: aluminum alloy exterior spraying epoxy resin

Flanged and exhaust drain valve material quality: 316 stainless Steel

Seal into the liquid

Silicone oil, inert filling fluid, etc

Pressure import interface

Inner thread 1 / 4-18 NPT

Distribution interface

M20*1.5 、 1/2NPT

Weight

About 4kg

(excluding mounting bracket, process connection accessories)

Additional instructions

ATEX explosion-proof certification

Grade 1, zone 1 / 2, Group G, and Ex db IIC T6 Ga/Gb

-30°C ≤ Tamb ≤ +75°C Process temperature ≤ 85°C

Grade 1, zone 1 / 2, Group G, and Ex db IIC T5 Ga/Gb

-30°C ≤ Tamb ≤ +80°C Process temperature ≤ 100°C

Grade 1, zone 1 / 2, Group G, and Ex db IIC T4 Ga/Gb

-30°C ≤ Tamb ≤ +80°C Process temperature ≤ 110°C

Grade 1, zone 2, Group D, and Ex tb IIIC T85°C Db

-30°C ≤ Tamb ≤ +75°C Process temperature ≤ 85°C

Grade 1, zone 2, Group D, and Ex tb IIC T100°C Db

-30°C ≤ Tamb ≤ +75°C Process temperature ≤ 100°C

Grade 1, Zone 2, Group D, and Ex tb IIIC T110°C Db

-30°C ≤ Tamb ≤ +75°C Process temperature ≤ 110°C

(Note-Use a power cord suitable for working at a temperature 5°C above the surroundings)

ATEX Intrinsic Safety Certification

Grade 1, zone 1, Group G, and Ex ia IIC T4 Ga

-30°C ≤ Tamb ≤ +60°C Process temperature = 105°C

Electrical parameters: Ui = 30 V, Li = 93mA,

Pi = 1W, Ci = 5nF, Li = 0.5mH

Grade 1, Zone 1, Group D, Ex ia IIIC T105°C Da

-30°C ≤ Tamb ≤ +60°C Process temperature = 105°C

Group G Ex ic IIC T4 Gc in level 3

-30°C ≤ Tamb ≤ +60°C Process temperature = 110°C

Electrical parameters: Ui = 30V, Ci = 5nF, Li = 0.5mH

NEPSI Explosion certification

Ex d IC T6 Gb; Ex tD A21 T85°C

-30°C ≤ Tamb ≤ +75°C Process temperature = 80°C

Ex d IC T5 Gb; Ex tD A21 T100°C

-30°C ≤ Tamb ≤ +80°C Process temperature = 95°C

Ex d IIC T4 Gb; Ex tD A21 T115°C

-30°C ≤ Tamb ≤ +80°C Process temperature = 110°C

NEPSI Intrinsic Safety Certification

Ex ia IIC T4 Ga

-40°C ≤ Tamb ≤ +60°C Process temperature = 105°C

Ex ia IIC T4Gc

-40°C ≤ Tamb ≤ +60°C Process temperature = 105°C

Electrical parameters:

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

(Use a power cord suitable for working at a

temperature 5°C higher than the ambient temperature)

IECEX Explosion certification

Exd IC T6 Ga/Gb

-30°C ≤ Tamb ≤ +75°C Process temperature ≤ 85°C

Ex d IC T5 Ga/Gb

-30°C ≤ Tamb ≤ +80°C Process temperature ≤ 100°C

Exd IIC T4 Ga/Gb

-30°C ≤ Tamb ≤ +80°C (Process temperature ≤ 110°C)

Ex tb IIIC T85°C Db

-30°C ≤ Tamb ≤ +75°C Process temperature ≤ 85°C

Ex tb IIIC T100°C Db

-30°C ≤ Tamb ≤ +75°C Process temperature ≤ 100°C

Ex tb IIC T110°C Db

-30°C ≤ Tamb ≤ +75°C Process temperature ≤ 110°C

(Note—Use a power cord suitable for working at a temperature 5 °C above the surroundings)

IECEX safety safety safety certification

Ex ia IIC T4 Ga

-30°C ≤ Tamb ≤ +60°C Process temperature = 105°C

Electrical parameters:

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

Ex ia IIIIC T105°C Da

-30°C ≤ Tamb ≤ +60°C Process temperature = 105°C

Ex ic IIC T4 Gc

-30°C ≤ Tamb ≤ +60°C Process temperature = 110°C

Electrical parameters: Ui=30V, Ci=5nF, Li=0.5mH

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 for the transmitter: zero (point) adjustment, setting the upper and lower limits of pressurized and unpressurized measurement, unit selection, damping setting, export selection, etc.

Display interface

Identification	Explain
DP	Differential pressure value
P	Pressure value
T	temperature scale
Q	Transient flow value
Σ	Cumulative traffic value

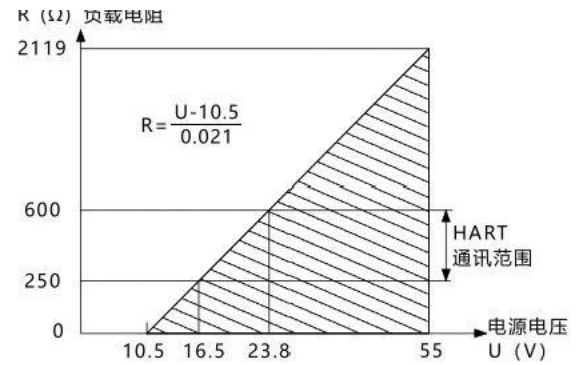


Figure 1. Power supply and load conditions

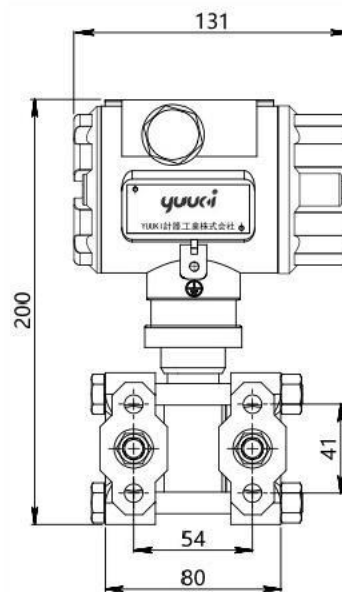
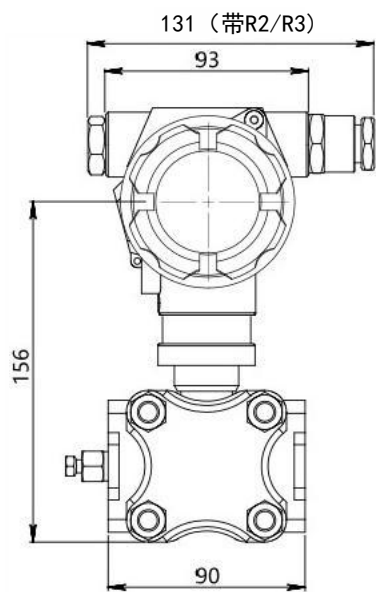
Maximum use pressure and pressure resistance

Range	Static pressure range	One-way high-pressure side overload	One-way LV side overload
6kPa	25MPa	25MPa	16MPa
40kPa	40MPa	25MPa	16MPa
250kPa	40MPa	25MPa	16MPa
1MPa	40MPa	25MPa	16MPa
3MPa	40MPa	25MPa	3MPa
10MPa	40MPa	25MPa	3MPa

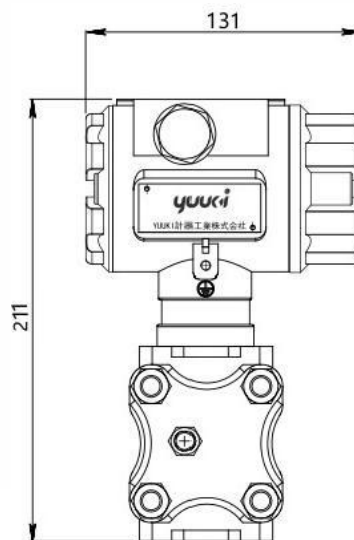
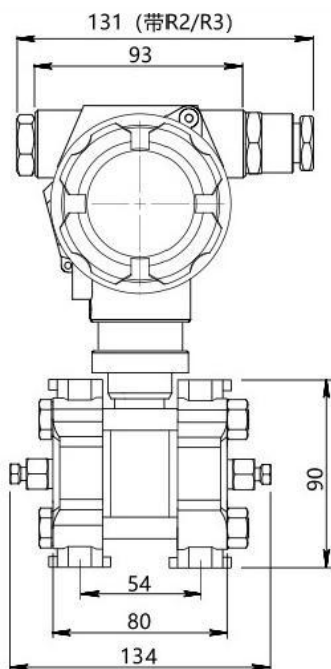
Table 1 Maximum use pressure and pressure resistance

By standards, and test base conditions, including linear, sluggish, and repetitive. Calibration temperature: 20°C ± 5°C	
Linear transmission and output accuracy	± 0.075%, if TD > 10), then ± (0.0075 TD)%
	± 0.1%, ± (0.01 TD) if TD > 10%
The square root export accuracy is 1.5 times the linear reference accuracy	
Note 1: TD= max. range / regulatory range	

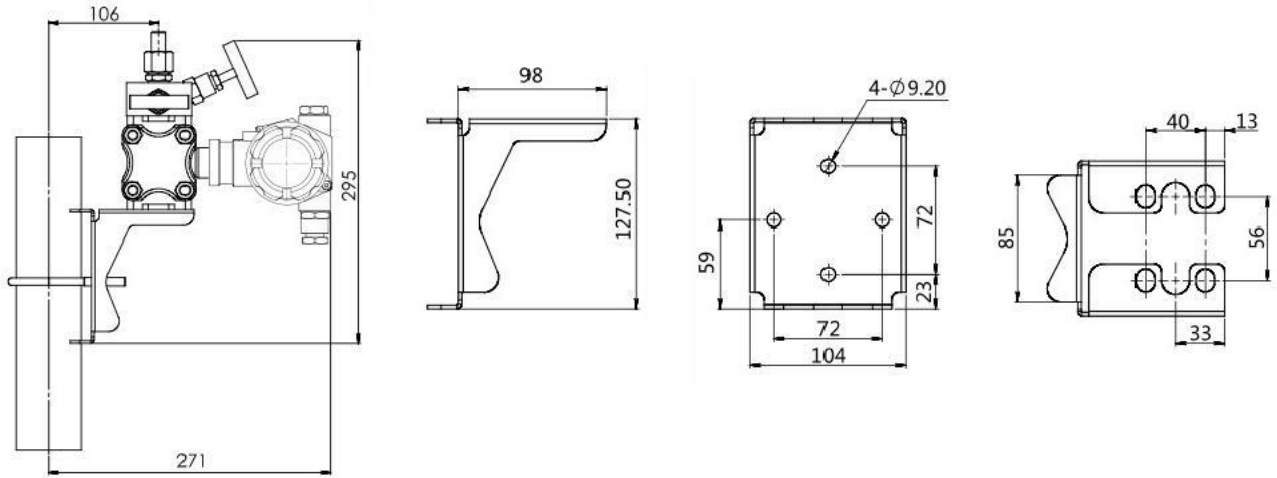
Table 2 refers to the accuracy



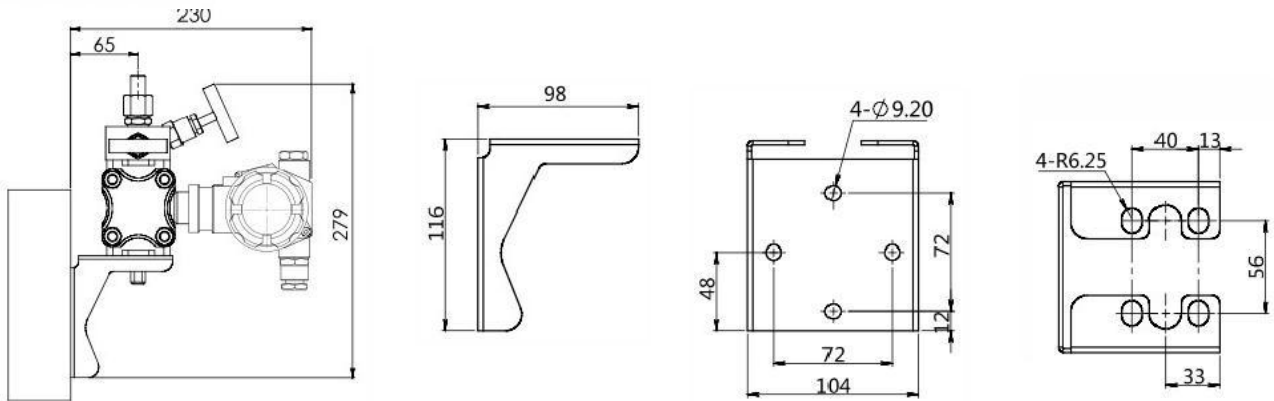
Size drawing of vertically mounted flanges



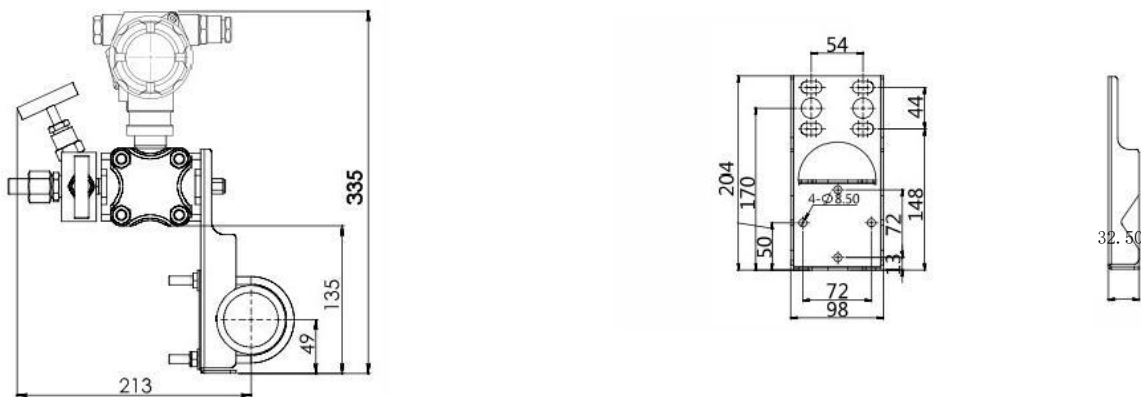
Installation dimensions of pipe bent bracket



Installation dimensions of plate bending bracket



Installation dimensions of flat bracket



Order number	Project	Code	Content
1	Model	JUN-E60	Multi-parameter differential pressure transmitter
2	Accuracy	B	$\pm 0.075\%$
		C	$\pm 0.1\%$
3	Range	G06	0~6kPa, Minimum range 200Pa
		G40	0~40kPa, Minimum range 400Pa
		G250	0~250kPa, Minimum range 2.5kPa
		G1K	0~1MPa, Minimum range 10kPa
		G3K	0~3MPa, Minimum range 30kPa
		G10K	0~10MPa, Minimum range 100kPa
4	Communication mode	H	4 ~ 20 mA + HART, made in two lines
		M	Pulse of the export
		R	RS485 MODBUS-RTU
5	Explosion-proof	N	No explosion-proof function
		G	PCEC explosion suppression
		D	NEPSI explosion suppression
		A	NEPSI Bennan
		E	ATEX explosion suppression
		B	ATEX Ben Ann
		M	IECEX explosion suppression
W	IECEX Ben Ann		
6	Show	O	OLED show
7	Connect the fluid section diaphragm material quality	S	SUS316L
		U	SUS316L Gold-plated
		H	Hastelloy C
8	Type O sealing ring material quality	N	Acrylonitrile-butadiene rubber
		F	Fluorine-rubber
		P	Teflon

Order number	Project	Code	Content
9	Seal into the liquid	S	Silicone oil, applicable to the direct contact temperature range of-40 to 120°C
		D	Inert filling fluid for direct contact temperature range-45 to 160°C
10	Treatment of the solution site	0	No special treatment
		1	No oil treatment
		2	Water ban treatment
11	Pressure import connection	H1	Process connection internal thread 1 / 4-18 NPT, exhaust drain valve at the rear end of the flange
		H2	Process connection internal thread 1 / 4-18 NPT, exhaust drain valve is located at the lower side of the flange
		H3	Process connection internal thread 1 / 4-18 NPT, exhaust drain valve is located on the upper part of the flange side
		H4	Vertical mounting flange, process connection inner thread 1 / 4-18 NPT, with exhaust drain valve
12	Distribution connection	T1	Two M20 * 1.5 internal threads
		R1	Two M20 * 1.5 internal thread electrical interfaces, with M20 * 1.5 waterproof connector on one side and PVC material quality plug head on the other side
		R2	One inner thread 1 / 2 NPT, the other side with stainless steel material quality plug
		R3	Inner thread M20 * 1.5, with stainless steel material quality plug on the other side
13	Additional options- pressure-in connection accessories	-A1	M20 * 1.5 external thread and lead pipe ϕ 14 * 2 * 30, SUS 304 material quality
		-A2	Adapter 1 / 2-14 NPT inner thread, SUS 304 material quality
14	Additional options-Fixed mounting fittings	-B1	2 " Pipe bending bracket
		-B2	Board bending bracket
		-B3	2 " Pipe flat bracket
		-B4	U-shaped bracket, 2 " tube mounting
15	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
<p>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</p> <p>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.</p> <p>When wiring in dangerous areas, please follow the operation method specified in the explosion-proof standard instructions.</p>

Notice
<p>Please do not stand on the installed transmitter, take it as a foot.foot may occur splash, causing fluid splash injury personnel.</p> <p>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.</p> <p>The transmitter is heavy, please carefully install and wear safety shoes.</p> <p>The collision transmitter may damage the sensor module.</p>

Wiring notice matters

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

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

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.