Intelligent pressure / different pressure transmitter

Option Manual

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【WIDE PLUS HP 3000 series intelligent transmitter palm configuration unit】

➢ Outline diagram

➢ Product summary

WIDE PLUS HP3000 intelligent transmitter palm configuration unit is the first palm configuration unit that adopted high-performance Jornada Pocket PC. The product integrates palm computer and configuration with advantages of multifunction, micromation and high cost performance.

➢ Main features

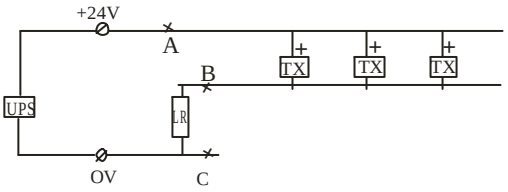
- Built-in WIDE PLUS series HART debugging process
- MP3 player (stereo) function infrared connection function
- Built-in Microsoft Outlook 2000 program
- May receive and send email function
- Browsing Web
- Transcribing pronunciation short note
- The schedule, linkman and task function in step with PC machine
- Random carried Word or Excel file in Microsoft Office
- Note: 1. All input data and letters must be half-angle mode in the program otherwise HART does not support. The letters must be capitals and Chinese input would be not support.

2. Modify any parameter of the instrument by this program, users must be pressed corresponding DOWNLOAD button after the modification completes and modified the parameter to save to the instrument. Because of communication speed for HART protocol is slower, please wait for 2 s and again carries on other operations after pressed "DOWNLOAD" button. If the instrument returned parameter is not accordance with setting value, needs to input number afresh and "DOWNLOAD".

➢ Explanation for connection of the instrument and communication facility

The conventional connection circuit as the figure shows for two-wired transmitter: Handhold terminal (palm computer and circumscribed communication interface) or mainframe communication circuit cannot directly bridges in the ends of power source. But may either meet on field ends A and B or meet the ends of load resistance B and C. (In the above-mentioned case, the circuit are supplied by power source). HART specification allows load resistance for 230～1100 Ω.

In chart, UPS for power source, LR for load resistance, TX for intelligent transmitter. The graphical representation is on-line way of HART specification and stipulated every loop connects with 15 intelligent instruments most.



Schematic diagram for manipulator connection

- **Technical index**

Communication: RS-232 port and HART serial port connect

Display: TFT true color displaying palm computer configuration unit

Memory: program memory: 16 M

Storage memory: 16 M

Handwriting touch screen

System: Microsoft Windows CE 3.1

【WIDE PLUS – 9 Series Pressure Transmitter】

➢ Outline Drawing

➢ Product Summary

WIDEPLUS -9 series pressure transmitter established a model of new price-performance ratio for civil and industrial product of mass low cost. These products are widely adopted for the detection in gas pressure, liquid pressure and even bad medium environment such as pollution water, lightly corrosive liquid and gas.

9 series pressure cavity is made of stainless steel single unit integration structure by processing so may guarantee for the better seal performance. The characteristic of product is O-ring, no welded, no silicon oil or other organic, structural durability; the most apply to pump and compressor, liquid pressure and pneumatic system, go-anywhere vehicle, energy and water processing system, pressure instrument, refrigerating equipment, agricultural machinery device, locomotive braking system.

> Main Features

- Stainless steel single unit integration structure
- High accuracy
- Working temperature scope is wide
- Leakage-proof
- Low cost
- No silicon oil, no welding
- Electromagnetic proof /radio interference suppression

➢ Technical parameter

Measuring range	0～1～20 MPa
Accuracy	±0.5%FS, 1%FS
Medium compatibility	17-4PH stainless steel
Pressure circulation	$>10^8$ full pressure circulation
Overload pressure	2 times rated pressure
Disruption pressure	5 times rated pressure
Long-term stability	±0.25%FS/year
Supply power	24V DC
Output signal	4～20 mA
Noise	< 2mv RMS
Frequency band width	DC to 1 KHz (-3db)

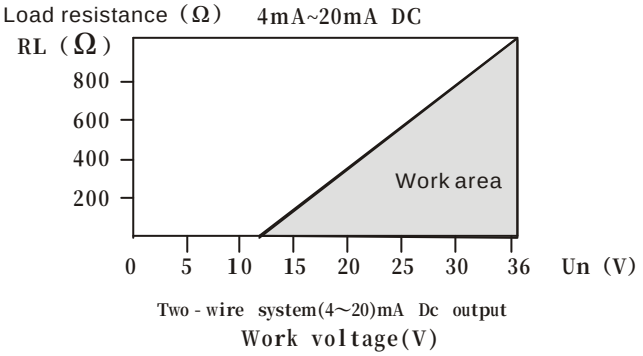
➢ Ambient request

Working temperature range	-40℃～85℃
Compensation temperature range	0℃～70℃
Zero temperature influence	<±1.5%FS
Range temperature effect	< ±1.5%FS
Storage temperature range	-40℃～100℃
Impulse	50g, 11 msec, 1 /2 positive chord wave
Vibration	±20g

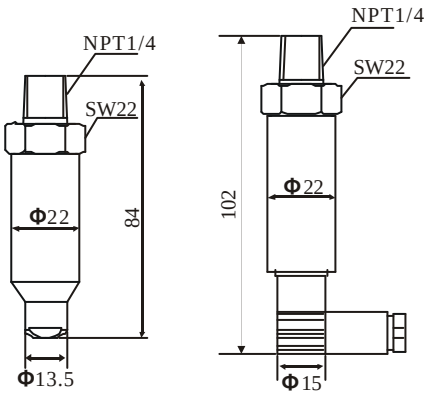
➢ Work principle

The sensor adopted micro melts technology and introduce aviation application science and technology; using high temperature glass would be the micro processing silicon voltage dependent resistance strain gauge to the melt on the stainless steel diaphragm. The glass adherence craft has avoided the temperature, humidity, machinery fatigue and medium to the glue water and material influence, and then improved the sensor long-term stability in the industry ambient, at the meanwhile also avoided the sensor p-N effect phenomenon that appeared in the traditional micro machining operation manufacture process .

➢ Load characteristic



➢ Outline dimension (Unit: mm)



➢ Spectrum table for WIDE PLUS -9 Series pressure transmitter

Model										Illustration
WIDEPLUS-9	□	□	□	□□	□	□	□□	□	□	
Explosion-proof rank	S									Standard (no explosion –proof)
Material of process connection		1								17-4PH stainless steel
Mode of process connection			N							Outer thread M20×1.5 (inner hole Φ10 mm)
			R							Outer thread G1/2 (inner hole Φ10 mm)
			P							Outer thread 1/4NPT
			Y							Special requirement
Mode of electric connection				1F						Hertzman connector
				2F						Integrated cable output, L=500 mm
Signal output					2					(4～20)ma DC two-wire system
Display						A				Without field indication
Accuracy grade							5			0.5 grade
							10			1 grade
Measuring range								□		See the standard range table for WIDEPLUS -9 Series pressure transmitter
Others									G	Gauge pressure
Option with example	**WIDEPLUS-9S1N1F2A10G17G**									

➢ Standard range table for WIDEPLUS -9 series pressure transmitter

Gauge pressure code	Absolute pressure	Measuring range	Range	Overload
G17	A13	0～1.0 MPa	0.4 MPa～1.0 MPa	2 MPa
G18	A14	0～1.6 MPa	0.64 MPa～2.0 MPa	3.2 MPa

【WIDE PLUS –8 series miniature pressure transmitter】

- **Outline drawing**

- **Product summary**

WIDE PLUS –8 series miniature pressure transmitter is widely applied for industrial process field pressure measurement and control such as aerospace, petroleum, chemical industry, metallurgy, electric power and water conservancy by its fine reliability and wide applicability and flexibility and multiplicity of the product.

- **Main characteristics**

・Range covers scope is wide

・All stainless steel construction, all kinds of pressure interface forms, has the flush diaphragm, the tantalum diaphragm and so on. Protection grade IP65

・All kinds of output signal forms, field may both regulating and displaying.

・Reversed polarity protection and instantaneous passed current and cross-voltage protection, is in accordance with EMI protection requirement.

・ Explosion-proof product conforms to GB3836.4 standard ExiaIICT6 requirements, explosion-proof certificate number is CNEX03.823.

- **Working principles**

This product adopts OEM pressure transducer with stainless steel isolation diaphragm as signal measure element and automatic testing by the computer. Using adjustment resistant technology carries on zero point of width temperature scope and sensibility temperature compensation. Amplification circuit locates in stainless steel housing where would transfer sensor signal into standard output signal. The whole product passed through strictly test and aged screening in primary device, half-finished product, and its performance is stable and reliable.

- **Technical parameters**

Measuring range －0.1～0—0.01～60 MPa

Overload 1.5 times full range pressure

The type of pressure gauge pressure or absolute pressure or sealed reference pressure

Accuracy typical: ±0.25%FS Max.：±0.5%FS (including non-linearity, sluggishness and repeatability

Long-term stability typical: ±0.1%FS Max.: ±0.2%FS

Temperature drift for zero point 0.03%FS/℃ (≤100 KPa) 0.02%FS/℃ (＞100 KPa)

Temperature drift for full scale 0.03%FS/℃ (≤100 KPa) 0.02%FS/℃ (＞100 KPa)

Permissive temperature

・Normal operation temperature –20～70℃

- Diaphragm –20～80℃ (short time may arrive at 130℃)
- Storage temperature –20～80℃
- high-low temperature type –65～150℃ 10～200℃ 10～350℃

Supply power (12.5～36) V DC

Output signal (4～20) mA DC

Transmission mode two wire system

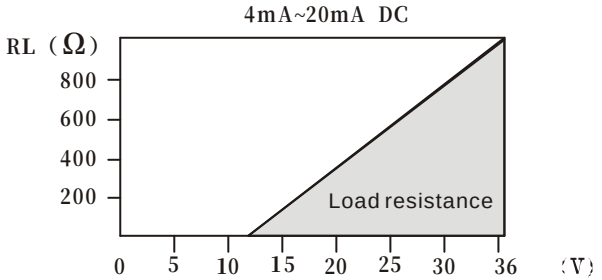
Shell protection cable line and connector are both IP65

Electric connection import explosion-proof plug socket or cable 1.5 m

Shell 1Cr18Ni9Ti stainless steel O-type ring: fluorine rubber, Nitrile rubber

Membrane 316 L stainless steel

➢ **Load characteristic**

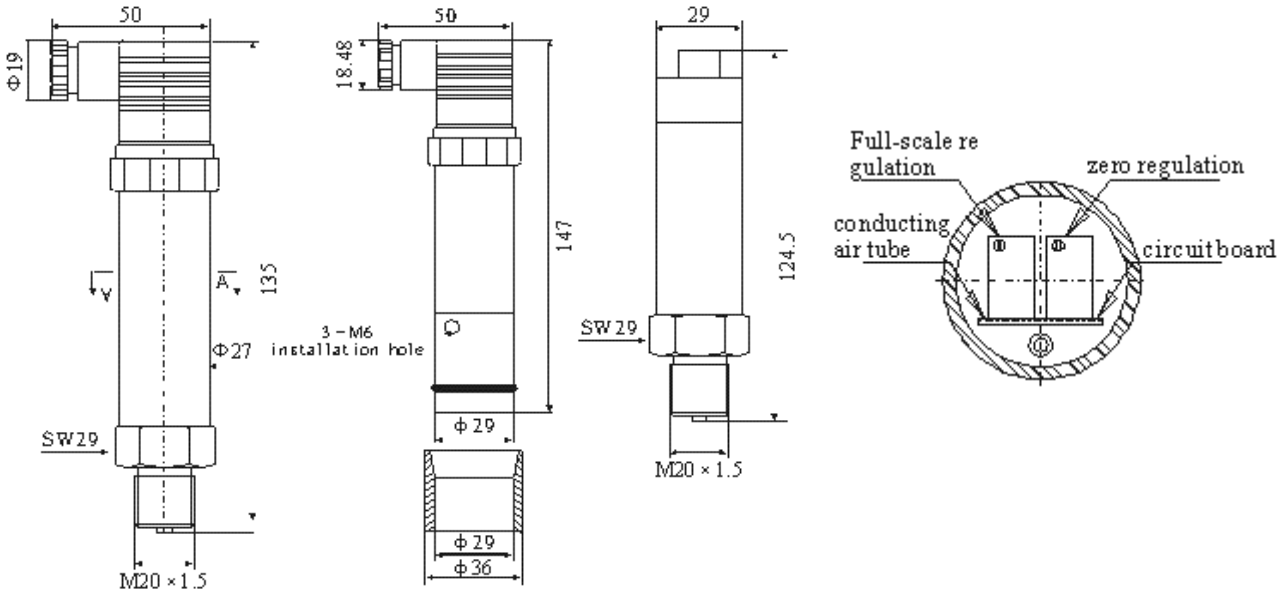


Two-wire system (4～20) mA DC output

Working voltage (V)

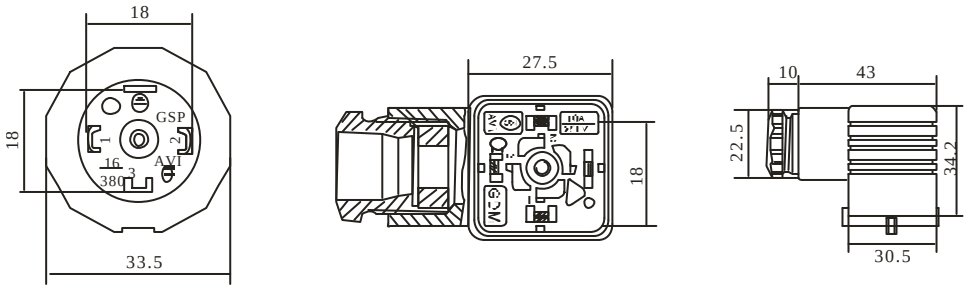
➢ **Outline construction and installation dimension**

>> Connected outline construction and installation dimension for connector



Standard type **Cassette type** **aerospace junction type**

>> Outline and array for connector



Definition for connected insertion foot of Herdsman junction

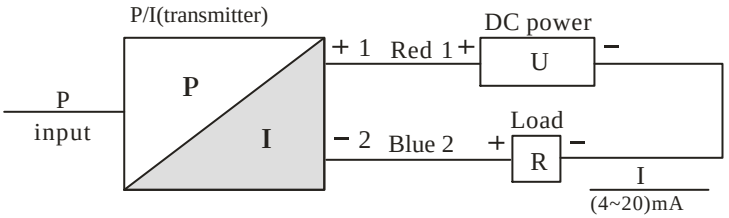
Insertion foot	Two wire
1	Positive power source: +
2	Negative power source: −
3	Blank

Definition for connected connection of aerospace plug

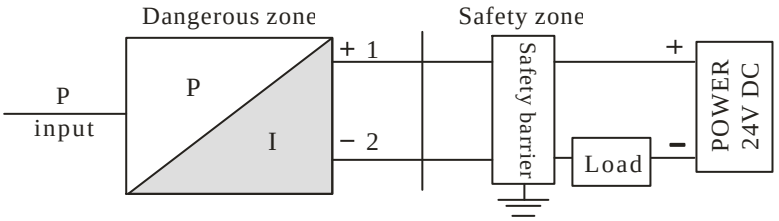
Lead	Two wire
Red lead	Positive power source: +
Blue lead	Negative power source: −
Shield lead	Ground

> > Electric connection mode

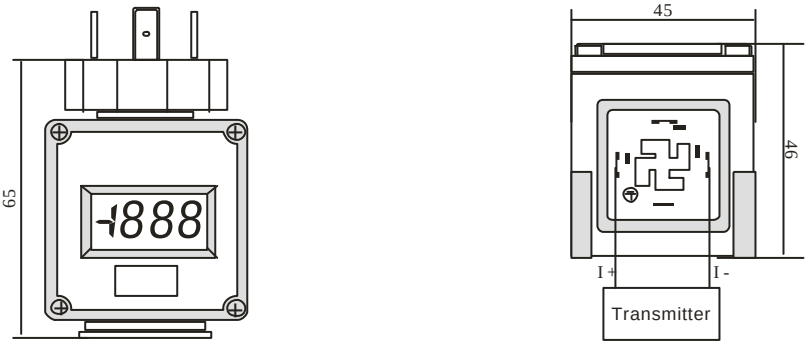
Transmitter electric connection method for two wire system (4 ~ 20) mA DC output



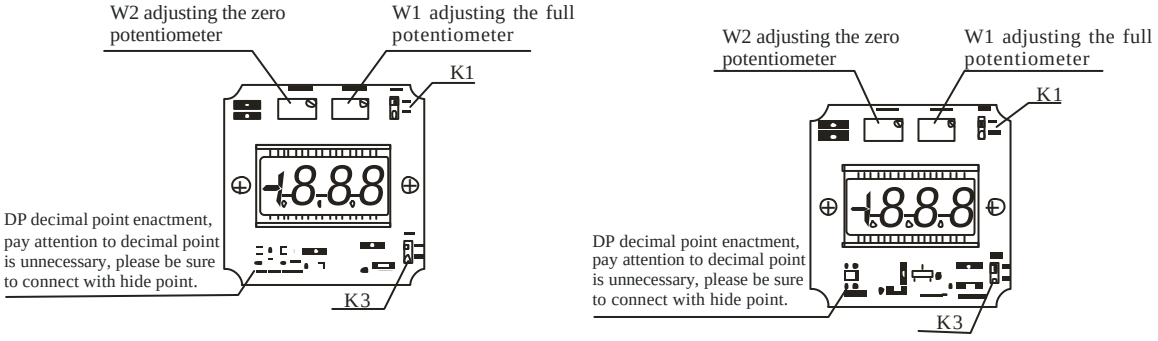
Intrinsic safety system for two-wired (4 ~ 20) mA DC output:



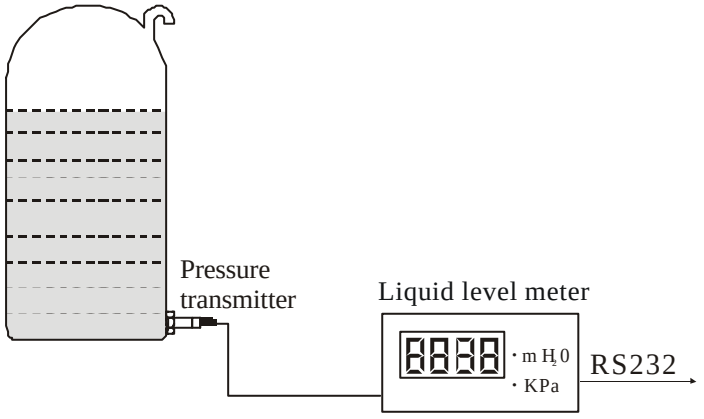
Operating manual for two-wire system (4 ~ 20) mA 8 series additional indicating head:



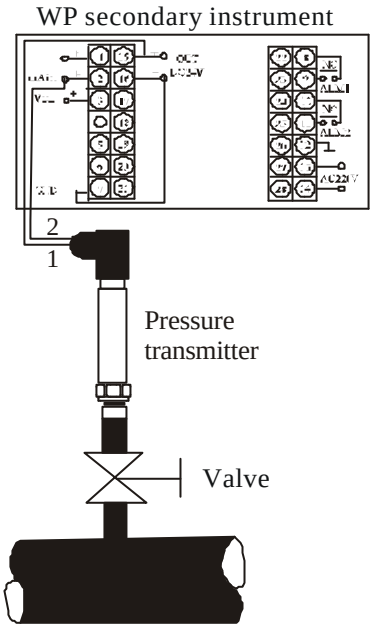
Display head outline dimension



LCD (liquid crystal) displays head



LED (digital) displays head



➢ **Spectrum table for WIDE PLUS –8 series miniature pressure transmitter**

Mozdel												Explanation	
WIDEPLUS-8	□	□	□	□	□□	□	□	□	□	□	□□		
Membrane material	A											Diffusion silicon (note 1)	A1: standard type
													A2: super stable type
													A3: cleaning type
													A4: corrosion-proof type
	B											Sapphire (note 2)	B1: (-65℃～150℃)
													B2: (10℃～200℃)
													B3: (10℃～350℃)
Explosion-proof grade		S										Standard type (no explosion-proof)	
		I										Intrinsic safety type Exiall CT6 (note 3)	
Material of process connection			1									316 L Stainless steel	
			2									304 Stainless steel	
			3									1Gr18Ni9Ti SS	
			4									Hutchinson Alloy C	
Mode of process connection				R								Outer thread G1/2 (in holeϕ10 mm)	
				G								Outer thread M 20×1.5 (in holeϕ3 mm)	
				M								Outer thread G1/2 (in holeϕ3 mm)	
				A								Outer thread 1/2 – 14 NPT	
				N								Outer thread M 20×1.5 (in holeϕ10 mm)	
				P								Cassette type (range ≤1 MPa)	
				Y								Special requirement	
Material of seal element					1F							Fluorine rubber	
					2F							Nitrile rubber	
					4F							Full sealing weld	
						2						Two wire system (4～20) mA DC	

Signal output mode		2						Two wire system (4～20) mA DC
Signal output mode		3	A					Three wire system (4～20) mA DC or (1～5) V DC output (5V DC supply power)
			C					LCD digital range display (liquid crystal)
Display mode			D					LED digital range display (numeral tube)
			E					0～100% of LCD digit display
			F					0～100% of LED digit display
			Y					Special requirement
Accuracy grade				1				0.1 grade (note 4)
				2				0.2 grade
				5				0,5 grade
Measuring range					□			See the standard range table for WIDE PLUS –8 miniature pressure transmitter
Others						G		Gauge pressure
						A		Absolute pressure
						B		Sealing gauge pressure type (please provide reference pressure value)
							J	Aerospace plug connect (cannot carry head)
							J1	Hessman joint connection (note 5)
Option gives an example	WIDEPLUS-8AS1G1F2A5G17GJ							

- Note 1: measuring range for diffusion silicon standard type is: the minimum 0～10 KPa, the max. 0～35 MPa, measuring range for diffusion silicon super stable type is: the minimum 0～6 KPa, the max. 0～60 MPa.
- Note 2: The guide-pressure hole in the process connection mode of sapphire transmitter only to be able to choose **ϕ**3.
- Note 3: The intrinsic safety transmitter cannot take the heads.
- Note 4: 0.1 grade precision can be realized only if it is employed the membrane material of super stable diffusion silicon (A2).
- Note 5: Electric connection mode of Hessman joint would be defaulted without specially indication.
- Standard range table for WIDE PLUS –8 series miniature pressure transmitter

Code	**Absolute pressure**	**Measuring range**	**Range**	**Temperature overload for diffusion silicon or high-low type**	**Diffusion silicon**	**High-low temperature type**
G01	×	0～4KPA	1.6KPa-5KPa	6.0Kpa	√	√
G02	×	0～6KPA	4KPa-10KPa	9.0Kpa	√	√
G03	×	0～10KPA	4KPa-20KPa	15Kpa	√	√
G04	×	0～16KPA	6.4KPa-20KPa	25Kpa	√	√
G05	A1	0～20KPA	8KPa-35KPa	30Kpa	√	√
G06	A2	0～25KPA	12KPa-35KPa	40Kpa	√	√
G07	A3	0～30KPA	14KPa-35KPa	45Kpa	√	√

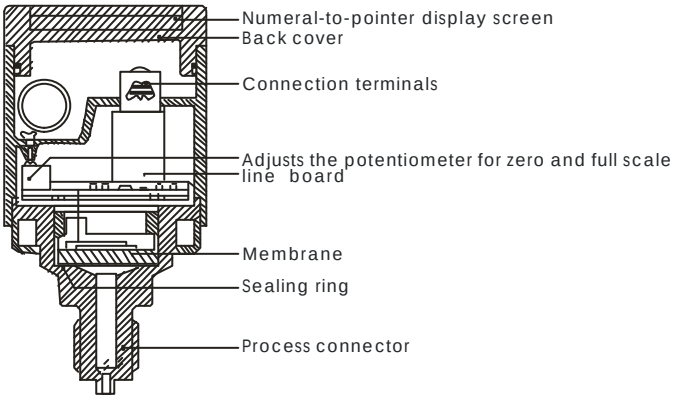
G08	A4	0～35KPA	16KPa-70KPa	55Kpa	√	√
G09	A5	0～40KPA	24KPa-70KPa	60Kpa	√	√
G10	A6	0～60KPA	40KPa-100KPa	90Kpa	√	√
G11	A7	0～100KPA	64KPa-200KPa	150Kpa	√	√
G12	A8	0～160KPA	80KPa-200KPa	250Kpa	√	√
G13	A9	0～200KPA	100KPa-350KPa	300Kpa	√	√
G14	A10	0～250KPA	160KPa-700KPa	400Kpa	√	√
G15	A11	0～400KPA	240KPa-700KPa	600Kpa	√	√
G16	A12	0～600KPA	0.4MPa-1.0MPa	1.0Mpa	√	√
G17	A13	0～1.0MPa	0.64MPa-2.0MPa	1.5Mpa	√	√
G18	A14	0～1.6MPa	0.8MPa-2.0MPa	2.5Mpa	√	√
G19	A15	0～2.0MPa	1.0MPa-3.5MPa	3.0Mpa	√	√
G20	A16	0～2.5MPa	1.6MPa-4.0MPa	4.0Mpa	√	√
G21	A17	0～4.0MPa	2.4MPa-7.0MPa	6.0Mpa	√	√
G22	A18	0～6.0MPa	4.0MPa-10MPa	9.0Mpa	√	√
G23	A19	0～10MPa	8.0MPa-20MPa	15Mpa	√	√
G24	A20	0～20MPa	12MPa-35MPa	30Mpa	√	√
G25	A21	0～30MPa	16MPa-40MPa	45Mpa	√	√
G26	A22	0～40MPa	24MPa-60MPa	60Mpa	√	√
G27	A23	0～60MPa	-1.6KPa-2.5KPa	90Mpa	√	√
G28	×	-2KPA-2KPA	-3KPa-5KPa	×	×	√
G29	×	-5KPA-5KPA	-6KPa-10KPa	×	×	√
G30	×	-10KPA-10KPA	-13KPa-20KPa	30Kpa	√	√
G31	×	-20KPA-20KPA	-33KPa-50KPa	60Kpa	√	√
G32	×	-50KPA-50KPA	-66KPa-100KPa	150Kpa	√	√
G33	×	-100Kpa-60Kpa	-66Kpa-100Kpa	250Kpa	√	√
G34	×	-100Kpa-100Kpa	-100Kpa-200Kpa	300Kpa	√	√
G35	×	-100Kpa-150Kpa	-100Kpa-200Kpa	400Kpa	√	√

G36	×	-100Kpa-300Kpa	-100Kpa-350Kpa	600Kpa	√	√
G37	×	-100Kpa-500Kpa	150Kpa-500Kpa	1.0Mpa	√	√
G38	×	-100Kpa-900Kpa	0.24Mpa-1.0Mpa	1.5Mpa	√	√
G39	×	_100Kpa-1.5Kpa	0.5Mpa-1.9Mpa	3.0Mpa	√	√
G40	×	-100Kpa-2.0Mpa	0.5Mpa-2.0Mpa	3.0MPa	√	√
Note: mark "×" expression does not supply; Mark "" expression provides according to the standard measuring range.						

【WIDE PLUS –K series universal pressure transmitter】

- **Outline drawing**

- **Product structure**



- **Product summary**

WIDE PLUS –K series universal pressure transmitter adopt internationally advanced sensor and are assembled of it with high-accurate electronic components, it is become after strict technological process. It uses dry type pressure survey technology without intermediary fluid and ring into full play technical superiority of the sensor, so WIDE PLUS –K series universal pressure transmitter has outstanding technical performance. Its anti-overload and anti-impact ability strong, temperature drift slightly, the stability is high, has the very high measuring accuracy.

WIDE PLUS –K series universal pressure transmitters have multi- models, multi- measuring ranges, many kinds of processes connection form and material, which can widely used in petroleum, chemical industry, power, metallurgy, Pharmacy and food and so on many industries field and may also adapt to various fields and medium in the industries. Therefore, they are becoming the ideal as well as pressure measurement instrument for industrial automation perfect substitutes or upgrading products for conventional pressure gauges or pressure transmitters.

- **Main features**

・Anti-overload and anti-impact strong

・High stability: fine than 0.1% full scale in every year

・Anti-interference ability strong: waterproof, dust-proof, vibration-proof, explosion-proof, corrosion-proof

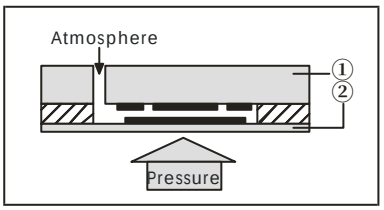
・Wide applicability: the products have many kinds of models and process connection form and material, which is adaptable to various field during the measuring.

・Easy installation: reasonable product structure with small volume and weight light, can be direct installed at any position.

➢ **Working principle**

Measured medium — sensor — electronic circuit — output signal

Measured medium direct contacts with membrane of the sensor, after pressed, the membrane could be produced tiny displacement in direct proportion to medium pressure, electronic circuit may detect any time to variation of this displacement quantity changing. the displacement quantity can be transform into corresponding standard industrial measuring signal, when in a certain overpressure, the membrane could be direct stuck on the solid matrix. If overload pressure is increased the membrane also cannot be made the greater distortion, then be sure that the membrane cannot be damaged because of overpressure, so that the sensor has the very strong anti-impact and anti-overload ability.



① Matrix ② Membrane

➢ **Technical parameters**

Working voltage (12.5～36) V DC

Output signal (4～20) mA DC (analog, two wire system)

Measuring ranges relative pressure: max. 0～60 MPa min. 0～1.6 KPa

Absolute pressure: max. 0～60 MPa min. 0～20 KPa

Negative relative pressure –0.1 MPa～1 MPa

Accuracy: accuracy grade: 0.1 grade, 0.2 grade, 0.5 grade

Temperature influence: ±0.15%FS/10℃

Stability: fine than 0.1%FS/year

Position influence: the installation position does not affect zero point

Permission temperature normal working temperature: -20℃～70℃

Membrane: -20℃～80℃ (short-time may reached 130℃)

Storage temperature: -20℃～80℃

High-low temperature type: -65℃～150℃

10℃～200℃

10℃～350℃

Relative humidity 0～98% RH

Explosion-proof grade intrinsic safety type ExibIICT6 or ExiaIICT6

Protection grade IP65

A part of material makes contacted with measured medium

Process connection: 316 L/304/1Gr18Ni9Ti stainless steel /Hutchinson Alloy C

Seal element: fluorine rubber/Nitrile rubber/PTEE/full sealing weld

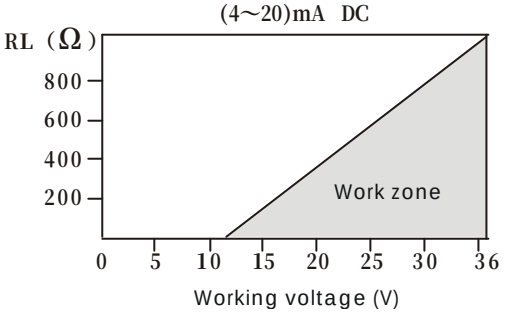
Connection lead-out mode

may be lead-out from any outlet according to requirement, it is advised to use Φ10 industrial cable as lead so that it is sealed. Lead-out joint is a universal cable joint PG16, no lead end should be sealed with terminal cover.

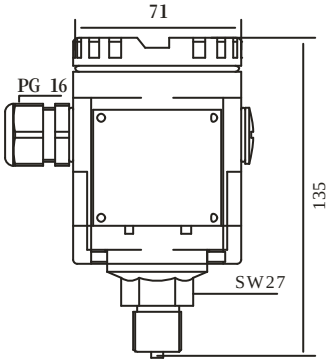
Adjustment scope Adjustment scope for zero point: ±5%

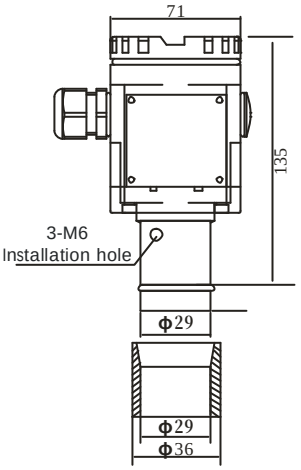
Adjustment scope for full range: ±20%

- **Load characteristics**



- **Outline dimension (unit: mm)**





Cassette type

- **Process connection**
- **Type spectrum table for WIDE PLUS –K series universal pressure transmitter**

Model										Explanation	
WIDE PLUS-K	□	□	□	□	□□	□	□	□	□		
Membrane material	A									Diffusion silicon (note 1)	A1: standard type
											A2: super stable
											A3: cleaning type
											A4: corrosion-proof type
	B									Sapphire (note 2)	B1: (-65℃～150℃)
											B2: (10℃～200℃)
											B3: (10℃～350℃)
	C									Ceramic capacitance (note 1)	
Explosion-proof grade		S								Standard type (no explosion-proof)	
		I								Intrinsic safety type Exib IICT6 or Exia IICT 6 (note 3)	
Material of process connection			1							316 SS	
			2							304 SS	
			3							1Gr18Ni9Ti SS	
			4							Hutchinson Alloy C	
Mode of process				R						Outer thread G1/2 (inner hole Φ10 mm)	
				G						Outer thread M 20×1.5 (inner hole Φ3 mm)	

connection		M						Outer thread G1/2 (inner holeϕ3 mm)
		A						Outer thread 1/2 – 14 NPT
		N						Outer thread M 20×1.5 (inner holeϕ10 mm)
		P						Cassette type (range ≤1 MPa)
		Y						Special requirement
Material of seal element			1F					Fluorine rubber
			2F					Nitrile rubber
			3F					PTEE (do not adaptable to diffusion silicon)
			4F					Full sealing weld (only use for diffusion silicon)
Mode of signal output				2				(4～20) mA DC two wire system
				9				Special requirement
Display mode					A			Without field indication
					B			0～100% linear display
					C			LCD digital range display (liquid crystal)
					D			LED digital range display (numeral tube)
					E			0～100% of LCD digital display
					F			0～100% of LED digital display
					Y			Special requirement
Accuracy grade						1		0.1 grade (note 4)
						2		0.2 grade
						5		0.5 grade
Measuring range							□	See the standard range table for WIDE PLUS –K series universal pressure transmitter
Others							G	Gauge pressure
							A	Absolute pressure
							B	Sealed gauge pressure type (please provides reference pressure value)
Option gives an example	WIDE PLUS –KA1S1G1F2A5G18G							

- Note 1: measuring range of diffusion silicon standard type is: the min. 0～10 kPa, the max. 0～35 MPa, cleaning type measuring range is: the min 0～10 kPa, the max 0～1 MPa. Diffusion silicon super stable type measuring range is: min 0～6 kPa, max 0～60 MPa; Ceramic capacitive measuring range is: the min 0～1 kPa, the max 0～4 MPa.
- Note 2: The guide-pressure hole in the process connection mode of sapphire transmitter only to be able to choose ϕ3.
- Note 3: If chooses explosion-proof intrinsic safety products, which needs to carry the meter then only can select choose 0～100% linear display (code is "B")
- Note 4: 0.1 grade precision can be realized only if it is employed the membrane material of super stable diffusion silicon (A2).

- Standard range table for WIDE PLUS –K series universal pressure transmitter

Code	Absolute pressure	Measuring range	Range	Capacitive overload	Temperature overload for diffusion silicon or high-lowtype	Capacitance	Diffusion silicon	High-low temperature type
G01	×	0～4KPA	1.6KPa-5KPa	0.6Mpa	6.0Kpa	√	×	√
G02	×	0～6KPA	4KPa-10KPa	0.6Mpa	9.0Kpa	√	√	√
G03	×	0～10KPA	4KPa-20KPa	0.6Mpa	15Kpa	√	√	√
G04	×	0～16KPA	6.4KPa-20KPa	0.6Mpa	25Kpa	√	√	√
G05	A1	0～20KPA	8KPa-35KPa	0.6Mpa	30Kpa	√	√	√
G06	A2	0～25KPA	12KPa-35KPa	1.0MPa	40Kpa	√	√	√
G07	A3	0～30KPA	14KPa-35KPa	1.0MPa	45Kpa	√	√	√
G08	A4	0～35KPA	16KPa-70KPa	1.0MPa	55Kpa	√	√	√
G09	A5	0～40KPA	24KPa-70KPa	1.0MPa	60Kpa	√	√	√
G10	A6	0～60KPA	40KPa-100KPa	1.0MPa	90Kpa	√	√	√
G11	A7	0～100KPA	64KPa-200KPa	1.0MPa	150Kpa	√	√	√
G12	A8	0～160KPA	80KPa-200KPa	1.8Mpa	250Kpa	√	√	√
G13	A9	0～200KPA	100KPa-350KPa	1.8MPa	300Kpa	√	√	√
G14	A10	0～250KPA	160KPa-700KPa	2.5Mpa	400Kpa	√	√	√
G15	A11	0～400KPA	240KPa-700KPa	2.5Mpa	600Kpa	√	√	√
G16	A12	0～600KPA	0.4MPa-1.0MPa	4.0Mpa	1.0Mpa	√	√	√
G17	A13	0～1.0MPa	0.64MPa-2.0MPa	4.0Mpa	1.5Mpa	√	√	√
G18	A14	0～1.6MPa	0.8MPa-2.0MPa	8.0Mpa	2.5Mpa	√	√	√
G19	A15	0～2.0MPa	1.0MPa-3.5MPa	8.0Mpa	3.0Mpa	√	√	√
G20	A16	0～2.5MPa	1.6MPa-4.0MPa	9.0Mpa	4.0Mpa	√	√	√
G21	A17	0～4.0MPa	2.4MPa-7.0MPa	9.0Mpa	6.0Mpa	√	√	√
G22	A18	0～6.0MPa	4.0MPa-10MPa	×	9.0Mpa	×	√	√
G23	A19	0～10MPa	8.0MPa-20MPa	×	15Mpa	×	√	√

G24	A20	0～20MPa	12MPa-35MPa	×	30Mpa	×	√	√
G25	A21	0～30MPa	16MPa-40MPa	×	45Mpa	×	√	√
G26	A22	0～40MPa	24MPa-60MPa	×	60Mpa	×	√	√
G27	A23	0～60MPa	-1.6KPa-2.5KPa	×	90Mpa	×	√	√
G28	×	-2KPA-2KPA	-3KPa-5KPa	0.6Mpa	×	√	×	√
G29	×	-5KPA-5KPA	-6KPa-10KPa	0.6Mpa	×	√	√	√
G30	×	-10KPA-10KPA	-13KPa-20KPa	0.6Mpa	30Kpa	√	√	√
G31	×	-20KPA-20KPA	-33KPa-50KPa	0.6Mpa	60Kpa	√	√	√
G32	×	-50KPA-50KPA	-66KPa-100KPa	0.6Mpa	150Kpa	√	√	√
G33	×	-100Kpa-60Kpa	-66Kpa-100Kpa	1.0Mpa	250Kpa	√	√	√
G34	×	-100Kpa-100Kpa	-100Kpa-200Kpa	1.0Mpa	300Kpa	√	√	√
G35	×	-100Kpa-150Kpa	-100Kpa-200Kpa	2.5Mpa	400Kpa	√	√	√
G36	×	-100Kpa-300Kpa	-100Kpa-350Kpa	2.5Mpa	600Kpa	√	√	√
G37	×	-100Kpa-500Kpa	150Kpa-500Kpa	4.0Mpa	1.0Mpa	√	√	√
G38	×	-100Kpa-900Kpa	0.24Mpa-1.0Mpa	4.0Mpa	1.5Mpa	√	√	√
G39	×	_100Kpa-1.5Kpa	0.5Mpa-1.9Mpa	8.0Mpa	3.0Mpa	√	√	√
G40	×	-100Kpa-2.0Mpa	0.5Mpa-2.0Mpa	8.0Mpa	3.0MPa	√	√	√
Note: mark “×” expression does not supply; Mark “” expression provides according to the standard measuring range.								

【WIDE PLUS –K1 / AK series pressure transmitter】

- **WIDE PLUS –K1 series universal pressure transmitter**
- **Outline drawing**

- **Product summary**

WIDE PLUS –K1 series universal pressure transmitter adopt internationally advanced sensor and are assembled of it with high-accurate electronic components, by strict technological process. It bring into full play technical superiority of the sensor, so WIDE PLUS –K series universal pressure transmitter has outstanding technical performance. Its anti-overload and anti-impact ability strong, temperature drift slightly, the stability is high, has the very high measuring accuracy.

The selected pressure sensor in WIDE PLUS –K1 series universal pressure transmitter, is a fully welding stainless steel structure which built-in solid pressure sensing chip with stainless steel isolation membrane. The steel structure is filled with silicon oil. When the measured pressure acts on the membrane and transferred on the sensing chip by the silicon oil. The sensing chip is connected with special amplification circuit of the transmitter by the conductor, and using piezo-resistance effect of semi-conductor silicon material and can realize the transformation between pressure and electric signal. As electric signal of Whetstone Bridge on the sensing chips have good linear relation with action pressure, so they may realize the accurate measurement of the pressure.

- **Main features**

・Anti-overload and anti-impact strong

・High stability: fine than 0.1% full scale in every year

・Anti-interference ability strong: waterproof, dust-proof, vibration-proof, explosion-proof, corrosion-proof

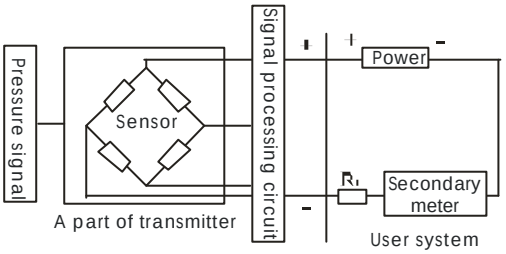
・Wide applicability: the products have many kinds of models and process connection form and material, which is adaptable to various field during the measuring.

・Easy installation: Reasonable product structure with small volume and weight is light, can be direct installed at any position.

- Working principle

Measured medium — sensor — electronic circuit — output signal

The transmitter is composed of sensor and signal processing circuit. Among sensing surface of sensor should be established Whetstone Bridge, when the pressure is increased, resistance value of each bridge arm takes place change. The change would be transformed through signal processing circuit, to variation of voltage and transformed standard (4～20) mA DC signal output at last, its principle see the figure:



➢ **Technical parameters**

Working voltage (12.5～36) V DC

Output signal (4～20) mA DC (analog, two wire system)

Measuring ranges relative pressure: max. 0～60 MPa min. 0～1.6 KPa

Absolute pressure: max. 0～60 MPa min. 0～20 KPa

Negative relative pressure –0.1 MPa～1 MPa

Accuracy: accuracy grade: 0.1 grade, 0.2 grade, 0.5 grade

Temperature influence: ±0.15%FS/10℃

Stability: fine to 0.1%FS/year

Position influence: the installation position does not affect zero point

Permission temperature normal working temperature: -20℃～70℃

Membrane: -20℃～80℃ (short-time may reached 130℃)

Storage temperature: -20℃～80℃

High-low temperature type: -65℃～150℃

10℃～200℃

10℃～350℃

Explosion-proof grade isolated explosion type ExdⅡBT5 or ExdⅡCT6

intrinsic safety type ExibⅡCT6 or ExiaⅡCT6

Protection grade IP67

A part of material contacted with be measured medium

Process connector: 316 L/304/1Gr18Ni9Ti stainless steel /Hutchinson Alloy C

Seal element: fluorine rubber/Nitrile rubber/PTEE/full sealing weld

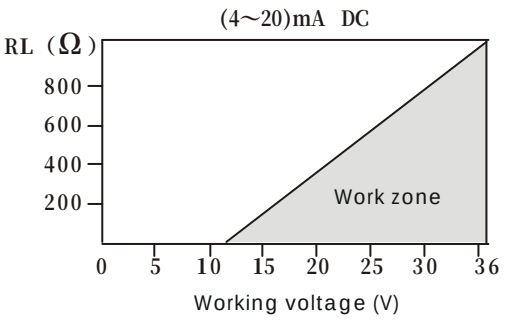
Lead-out mode of wiring

may be lead-out from any outlet according to requirement, it is advised to use φ7.5 industrial cable as lead in the minimum so that it is sealed. Lead-out joint selected universal cable joint M20×1.5, without lead end should be sealed with terminal cover.

Adjustment scope adjustment scope for zero point: ±5%

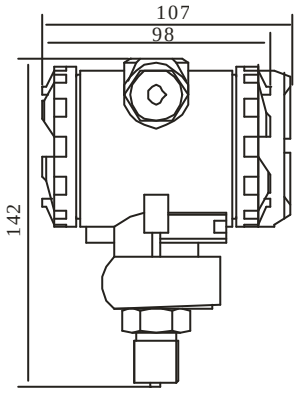
Adjustment scope for full range: ±20%

➢ **Load characteristics**

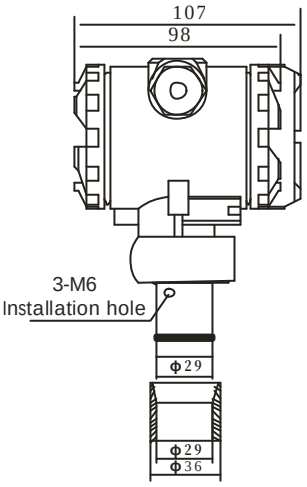


- Note: it must added load resistance when above 30V

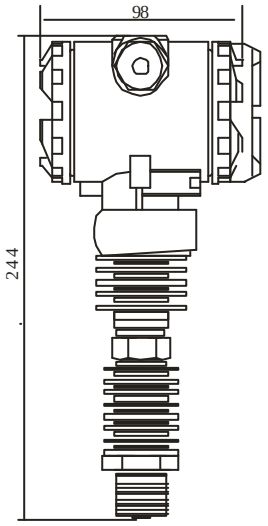
➢ **Outline dimension (unit: mm)**



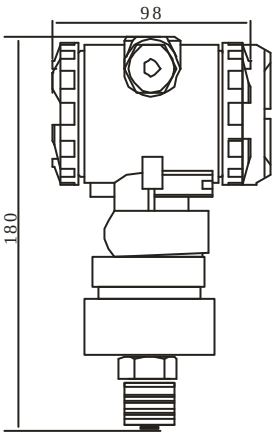
Diffusion silicon type



Cassette type of diffusion silicon

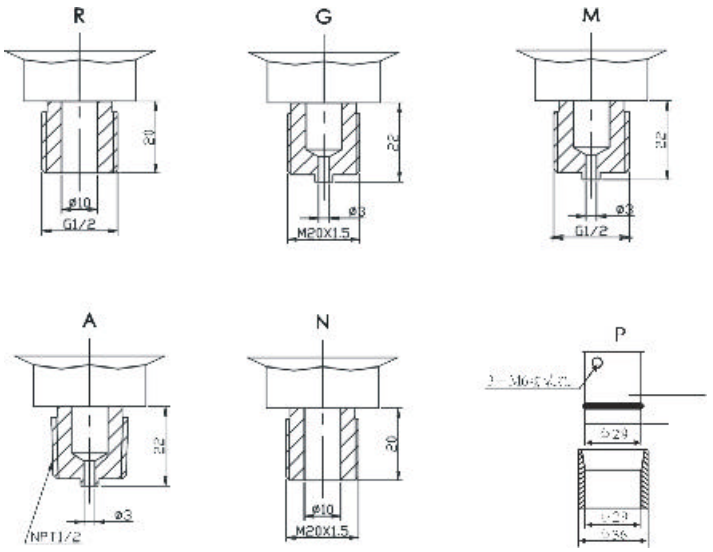


High-low temperature type



Ceramic capacitance type

➢ **Process connection**



- **AK series intelligent pressure transmitter**
- **Outline drawing**

- **Product summary**

WIDE PLUS –AK series intelligent pressure transmitter and adopts the world leading technique, which is universal intelligent series transmitter, it introduced advanced production technology from America and Japan pass through strict quality control. This kind of transmitter is searched and developed independently by our company that is pressure detect transmit unit in the industrial automation control system. it measures fluid pressure in the industry process and converts it into 4～20 mA DC signal output; at the same time, it may be remote parameter setup, remote control, self-diagnosis by field HART protocol.

- **Main features**

・Good reliability
・High precision
・Temperature influence slightly
・Stability ±0.1%FS / year
・Intelligention, miniaturization
・control parameter is locked ciphere code so that to ensure the safety
・measuring range
・Display for LCD digital range or percentage
・Software compensation
・When the range is changed, it may not introduce pressure
・Self-diagnosis in the failure, remote setting communication, remote control
・Waterproof, dust-proof, shake-proof, explosion-proof, corrosion-proof
・Field bus HART protocol communication

- **Technical parameters**

Measuring range relative pressure max 0～60 MPa min 0～1.6 KPa
Absolute pressure max 0～60 MPa min 0～20 KPa
Negative relative pressure (-0.1～1) MPa

Power voltage (12～45) V DC

Communication output communication distance: 2 Km, using CEV cable
Load capacitance: below 0.22μF
Load inductance: below 3.3 mH
Space with power line: above 15 cm
Connect to input impedance of the receiving instrument on the receiving resistance: for the above 10 KΩ in the 2.4 KHz

Accuracy ・accuracy grade 0.1 grade, 0.2 grade, 0.5 grade

・Temperature influence: ±0.1%FS / 10℃

・Stability fine to 0.1% FS/year

・Position influence: Installation position not affect zero point

Permission temperature normal working temperature: -20℃～70℃

Membrane: -20℃～80℃ (short-time may reached 130℃)

Storage temperature: -20℃～80℃

High-low temperature type: -65℃～150℃

10℃～200℃

10℃～350℃

Relative humidity 0～100% RH

Explosion-proof grade isolated explosion type ExdⅡBT5 or ExdⅡCT6

Protection grade IP67

Material contacted with measured medium

Process connection: 316 L/304/1Gr18Ni9Ti stainless steel /Hutchinson Alloy C

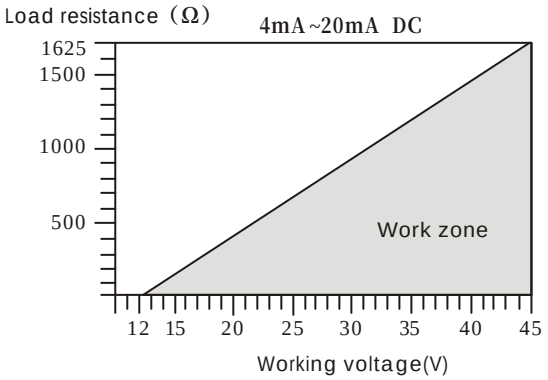
Seal element: fluorine rubber/Nitrile rubber/PTEE/full sealing weld

Lead-out mode of wiring may be lead-out from any outlet according to requirement, it is advised to use Φ7.5 industrial cable as lead in the minimum so that it is sealed. Lead-out joint selected universal cable joint, without lead end should be sealed with terminal cover.

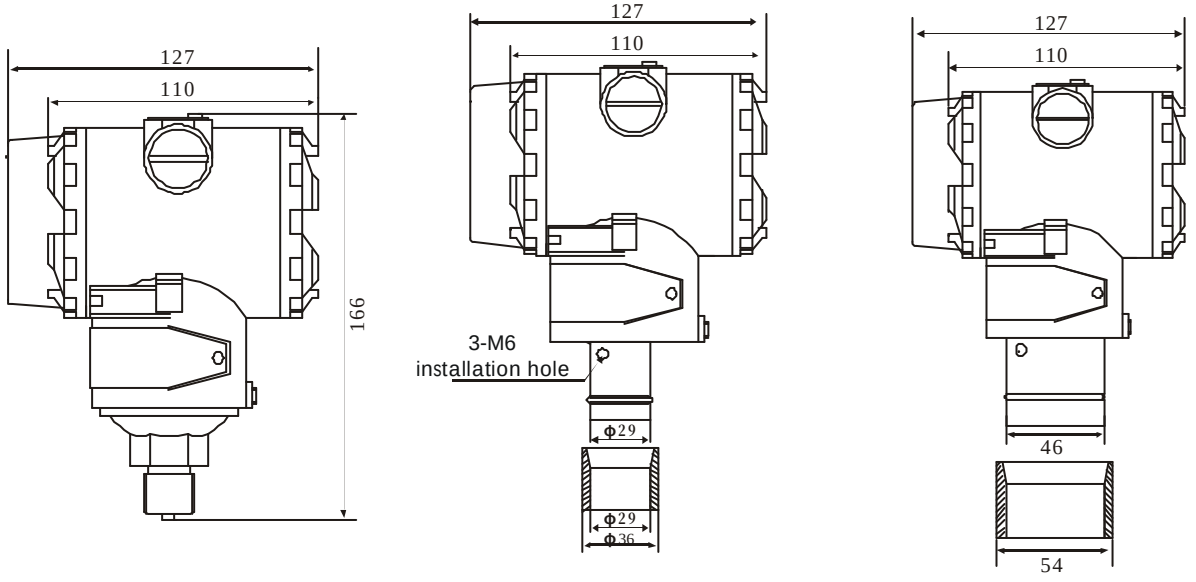
Field indicating LCD liquid crystal digital display (selection part)

External adjustment zero resolution: 0.05% of the range is setting within measuring range

➢ **Load characteristics**

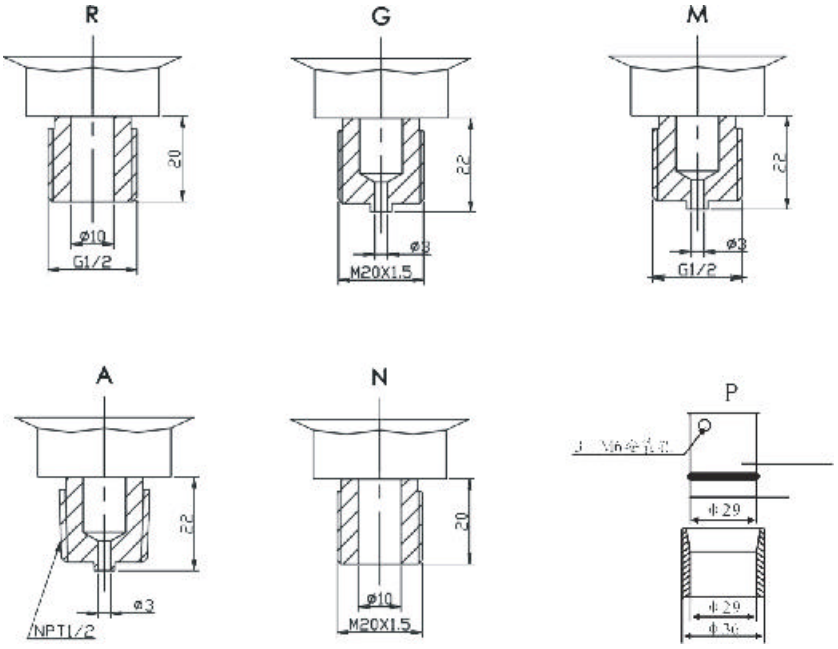


➢ **Outline dimension (unit: mm)**



General type **Cassette type (diffusion silicon)** **Cassette type (ceramic capacitance)**

➢ Process connection



➢ Type spectrum table for WIDE PLUS –K1/AK series pressure transmitter

Model											Explanation	
WIDE PLUS	□	□	□	□	□□	□	□	□	□	□		
-K1											General pressure transmitter	
-AK											Intelligent pressure transmitter	
Membrane material	A										Diffusion silicon (note 2)	A1: standard type
												A2: super stable
												A3: cleaning type
												A4: corrosion-proof type
	B										Sapphire (note 3)	B1: (-65℃～150℃)
												B2: (10℃～200℃)
												B3: (10℃～350℃)
	C										Ceramic capacitance (note 3)	
Explosion rank		S									Standard type (no explosion-proof)	
		D									Isolated explosion type ExdIIBT5 or ExdIICT6	
		I									Intrinsic safety type Exib IICT6 or Exia IICT 6 (note 4)	
Material of process connection			1								316 stainless steel	
			2								304 stainless steel	
			3								1Gr18Ni9Ti stainless steel	
			4								Hutchinson Alloy C	
Mode of process connection				R							Outer thread G1/2 (inner holeϕ10 mm)	
				G							Outer thread M 20×1.5 (inner holeϕ3 mm)	
				M							Outer thread G1/2 (inner holeϕ3 mm)	
				A							Outer thread 1/2 – 14 NPT	

		N						Outer thread M 20×1.5 (inner holeϕ10 mm)
		P						Cassette type (range ≤1 MPa)
		Y						Special requirement
Material of seal element			1F					Fluorine rubber
			2F					Nitrile rubber
			3F					PTEE (do not adaptable to diffusion silicon)
			4F					Full sealing weld (only use for diffusion silicon)
Mode of signal output				E				General analog type (4～20) mA two wire system)
				I				Standard intelligent type with (4～20) mA two wire system (has field bus HART protocol)
Display mode					A			Without field indication
					B			0～100% linear display
					C			LCD digital range display (liquid crystal)
					D			LED digital range display (numeral tube)
					E			0～100% of LCD digital display
					F			0～100% of LED digital display
					Y			Special requirement
Accuracy grade						1		0.1 grade (note 5)
						2		0.2 grade
						5		0.5 grade
Measuring range							□	See the standard range table for WIDE PLUS pressure transmitter
Others								G Gauge pressure
								A Absolute pressure
								B Sealed gauge pressure type (please provides reference pressure value)
Option gives an example	WIDE PLUS –K1AS1G1F2A5G17G							

- Note 1: If AK series need to take the meter, then only to be able to select LCD liquid crystal meter (code for "C" or "E"), does not provide the explosion-proof product temporarily.
- Note 2: diffusion silicon for Standard and cleaning measuring range is: min 0～10 KPa, max 0～35 MPa, super stable measuring range of diffusion silicon is min 0～6 KPa, max 0～60 MPa, ceramic capacitance measuring range is: min 0～1 KPa, max 0～4 MPa.
- Note 3: The guide-pressure hole in the process connection mode of sapphire transmitter only to be able to choose ϕ3.
- Note 4: If choose explosion-proof product, which needs with meter, it only to be able to select 0～100% linear indication (code for "B")
- Note 5: 0.1 grade precision can be realized only if it should be employed the membrane material of super steady diffusion silicon (A2).

➢ Standard range table for WIDE PLUS –K1/AK series pressure transmitter

Code	Absolute pressure	Measuring range	Range	Capacitive overload	Temperature overload for diffusion silicon or high-lowtype	Capacitance	Diffusion silicon	High-low temperature type
G01	×	0～4KPA	1.6KPa-5KPa	0.6Mpa	6.0Kpa	√	×	√
G02	×	0～6KPA	4KPa-10KPa	0.6Mpa	9.0Kpa	√	√	√
G03	×	0～10KPA	4KPa-20KPa	0.6Mpa	15Kpa	√	√	√
G04	×	0～16KPA	6.4KPa-20KPa	0.6Mpa	25Kpa	√	√	√
G05	A1	0～20KPA	8KPa-35KPa	0.6Mpa	30Kpa	√	√	√
G06	A2	0～25KPA	12KPa-35KPa	1.0MPa	40Kpa	√	√	√
G07	A3	0～30KPA	14KPa-35KPa	1.0MPa	45Kpa	√	√	√
G08	A4	0～35KPA	16KPa-70KPa	1.0MPa	55Kpa	√	√	√
G09	A5	0～40KPA	24KPa-70KPa	1.0MPa	60Kpa	√	√	√
G10	A6	0～60KPA	40KPa-100KPa	1.0MPa	90Kpa	√	√	√
G11	A7	0～100KPA	64KPa-200KPa	1.0MPa	150Kpa	√	√	√
G12	A8	0～160KPA	80KPa-200KPa	1.8Mpa	250Kpa	√	√	√
G13	A9	0～200KPA	100KPa-350KPa	1.8MPa	300Kpa	√	√	√
G14	A10	0～250KPA	160KPa-700KPa	2.5Mpa	400Kpa	√	√	√
G15	A11	0～400KPA	240KPa-700KPa	2.5Mpa	600Kpa	√	√	√
G16	A12	0～600KPA	0.4MPa-1.0MPa	4.0Mpa	1.0Mpa	√	√	√
G17	A13	0～1.0MPa	0.64MPa-2.0MPa	4.0Mpa	1.5Mpa	√	√	√
G18	A14	0～1.6MPa	0.8MPa-2.0MPa	8.0Mpa	2.5Mpa	√	√	√
G19	A15	0～2.0MPa	1.0MPa-3.5MPa	8.0Mpa	3.0Mpa	√	√	√
G20	A16	0～2.5MPa	1.6MPa-4.0MPa	9.0Mpa	4.0Mpa	√	√	√
G21	A17	0～4.0MPa	2.4MPa-7.0MPa	9.0Mpa	6.0Mpa	√	√	√
G22	A18	0～6.0MPa	4.0MPa-10MPa	×	9.0Mpa	×	√	√
G23	A19	0～10MPa	8.0MPa-20MPa	×	15Mpa	×	√	√
G24	A20	0～20MPa	12MPa-35MP	×	30Mpa	×	√	√

			a					
G25	A21	0～30MPa	16MPa-40MPa	×	45Mpa	×	√	√
G26	A22	0～40MPa	24MPa-60MPa	×	60Mpa	×	√	√
G27	A23	0～60MPa	-1.6KPa-2.5KPa	×	90Mpa	×	√	√
G28	×	-2KPA-2KPA	-3KPa-5KPa	0.6Mpa	×	√	×	√
G29	×	-5KPA-5KPA	-6KPa-10KPa	0.6Mpa	×	√	√	√
G30	×	-10KPA-10KPA	-13KPa-20KPa	0.6Mpa	30Kpa	√	√	√
G31	×	-20KPA-20KPA	-33KPa-50KPa	0.6Mpa	60Kpa	√	√	√
G32	×	-50KPA-50KPA	-66KPa-100KPa	0.6Mpa	150Kpa	√	√	√
G33	×	-100Kpa-60Kpa	-66Kpa-100Kpa	1.0Mpa	250Kpa	√	√	√
G34	×	-100Kpa-100Kpa	-100Kpa-200Kpa	1.0Mpa	300Kpa	√	√	√
G35	×	-100Kpa-150Kpa	-100Kpa-200Kpa	2.5Mpa	400Kpa	√	√	√
G36	×	-100Kpa-300Kpa	-100Kpa-350Kpa	2.5Mpa	600Kpa	√	√	√
G37	×	-100Kpa-500Kpa	150Kpa-500Kpa	4.0Mpa	1.0Mpa	√	√	√
G38	×	-100Kpa-900Kpa	0.24Mpa-1.0Mpa	4.0Mpa	1.5Mpa	√	√	√
G39	×	_100Kpa-1.5Kpa	0.5Mpa-1.9Mpa	8.0Mpa	3.0Mpa	√	√	√
G40	×	-100Kpa-2.0Mpa	0.5Mpa-2.0Mpa	8.0Mpa	3.0MPa	√	√	√
Note: mark "×" expression does not supply; Mark "" expression provides according to the standard measuring range.								

【WIDE PLUS –L series universal static liquid level transmitter】

- **Product summary**

  WIDE PLUS –L series universal static liquid level transmitter adopts high-performance pressure sensor, which has many kinds of structure form, material, transmitter type and wide applicability.

- **Main features**

・Stability: high sensitiveness, good long-term stability

・Reliability strong: Without mechanical rotation part, without mechanical wear, without mechanical failure

・Anti-interference ability is strong: waterproof, dust-proof, explosion-proof, corrosion-proof, acid-proof

・Wide applicability: have many kinds of structure form, installation mode and structure material, and suit to various industrial field liquid level measurement.

・Easy installation: usage is reliable, have many kinds of optional installation mode, users may install and use conveniently

- **Working principle**

Some point of static pressure in the liquid is directly related to the distance from this point to liquid surface, that is:

$$h = \frac{P}{rg}$$

Among P ～ pressure (stress) of be measured point

ρ～ medium density

g ～ gravity acceleration

h ～ height from be measured point to liquid surface

For has determined measured medium and the place, ρ, g is constant, so variation position from measured point to liquid surface is only associated with measured pressure. (stress)

WIDE PLUS –L series static liquid level transmitter, is that is confirmed the position in liquid surface is determined by measuring the measured point of static pressure.

- **Measuring system**

WIDE PLUS –L static liquid level transmitter ---- WP digital display

WIDE PLUS –L series static liquid level transmitter is fitting with WP series digital display that is, constitute of static liquid-level meter. The liquid-level transmitter can transforms measured liquid-level pressure signal to digital display, the display would be transferred and indicated corresponding liquid-level number according to special gravity of the medium parameter and so on.

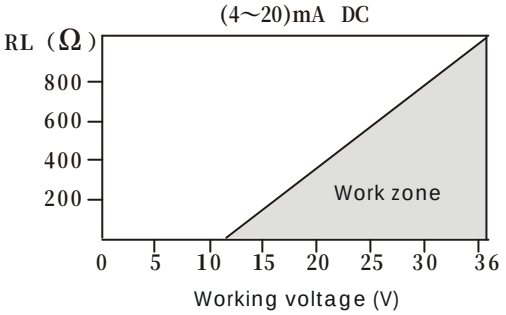
Choose in the display please refer to "intelligent digital displaying instrument of WIDE PLUS intelligent instrumentation" and correlation technical documents.

Lead-out mode of wiring it may be lead-out from any exit according to requirement, it is advise to employ φ10 industrial cable as lead, sealing lead-out head selected universal cable joint PG16, Without lead-out end cover by end-sealing

Regulation Regulating zero ±5% FS

Regulating scope of full range is ±20% FS

- Load characteristics



- **Installation (cable type, pole type)**

The static liquid-level transmitter has two kinds of standard installation mode such as G11/2 thread and flange:

Threaded installation for the transmitter which directly employ G11/2 threaded installation, it will provides a G11/2 round nut while supplying. Generally, the installation has two modes.

1. Has had G11/2 thread in the position of installation. The liquid-level transmitter can be directly screw-plugged then, additional round nut may be both not using and used to loose-proof by screw on it.
2. There was not G11/2 thread in the position of installation, the liquid-level transmitter can be install by utilizing for current unthreaded hole of Φ50～60 or mounting a bracket with the mount of Φ50～60, then screwed the round nut, to fixed.

Flange installation when standard supplying, the installation dimension of the flange correspond to DN20 PN0.6. if the position of installation has others flange installation hole, please noted the flange dimension or corresponding specification and standard code while ordering, in order to satisfy the needs of the installation.

- **Counterweight (cable type)**

When measured media is unstable, probe in the cable type liquid-level transmitter produce easily displacement, which the measuring accuracy, this time the probe should be fixed; if the field has not fixing probe condition, then can chooses counterweight to increase weight of probe, thus the probe would be stable ; if need to use counterpoise, please explaine it while ordering.

- **Debugging (WIDE PLUS –L series)**

Must explain is, that cable type, pole type, direct-mounting type liquid-level transmitter, full-scale calibration is a dry-calibration by calculation that is based on the special gravity of measured media provided by users. As the calibration is hard to fully consistent with operation condition, the indication of full scale may be has various difference, so it should be corrected to the full scale after the static liquid-level transmitter is installed. When correction, it makes the surface of measured media to reach the highest value, full range potentiometer of regulating transmitter to make output 20.000 mA. If the field condition does not allow media liquid surface to reach the highest value, which may be calculated corresponding output current value by the following formula according to actual numerical value of liquid surface, and regulated the full range potentiometer of the transmitter to make the output is required value.

$$In = \frac{hn}{h_{\max}} \times 16 + 4$$

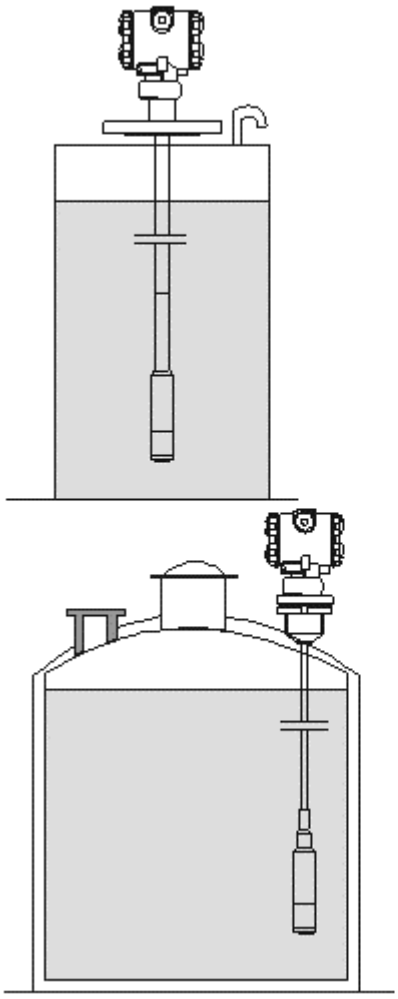
Among: In when liquid level is at the n point, the transmitter should be output current value (unit: mA)

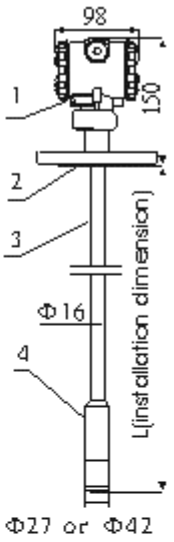
Hn at n point the height of liquid level (unit: m)

Hmax is the max liquid level height of measured media (that is full range, unit: m)

In order to improve the correction accuracy, please refer to calibrated recording when the transmitter leaves the factory and suitable for revise it.

➢ **The schematic diagram for installation (unit: mm)**

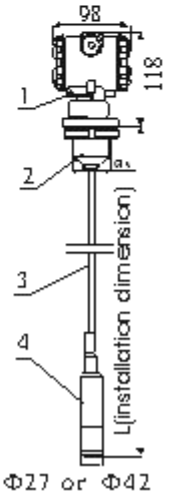




Installation dimension

Flange connection

1. transmitter shell
2. flange
3. conducting gas cable
4. probe



threaded connection

1. transmitter shell
2. thread process connection
3. conduction air cable
4. sonde

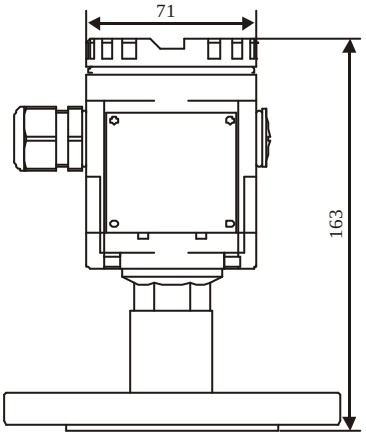
★ Note: the probe diameter of ceramic capacitance and diffusion silicon is respectively **ϕ**42 and**ϕ**27

According to the different construction, WIDE PLUS –L series static liquid transmitter falls into:

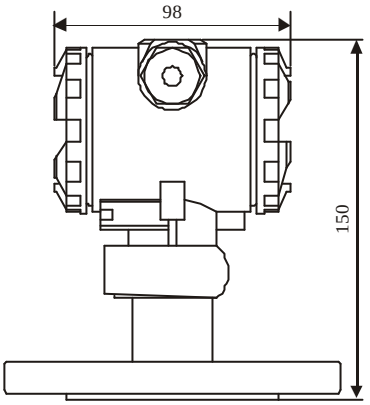
※ **WIDE PLUS –LD direct-mounting static liquid level transmitter**

> > Outline drawing

K series outline



K1 series outline



>> **Outline dimension (unit: mm)**

>> **Technical parameters**

working voltage 12.5～36 V DC

output signal 4 mA～20 mA two wire system

measuring range 0～100 m (max.)

accuracy 0.2 grade, 0.5 grade

stability exceed 0.1% FS/year

permission temperature normal temperature type

media –20℃～70℃

environment –20℃～70℃

storage –20℃～80℃

relative humidity 0～95% RH

material can be contacted with the medium

process connection 1Gr18Ni8Ti stainless steel

seal fluorine rubber

PTEE

Sealed weld

Membrane 316 L stainless steel

Ceramic capacitance

Mode of process connection flange (approves DN50 PN1.6 MPa)

Protection grade IP65 K1 shell is IP67

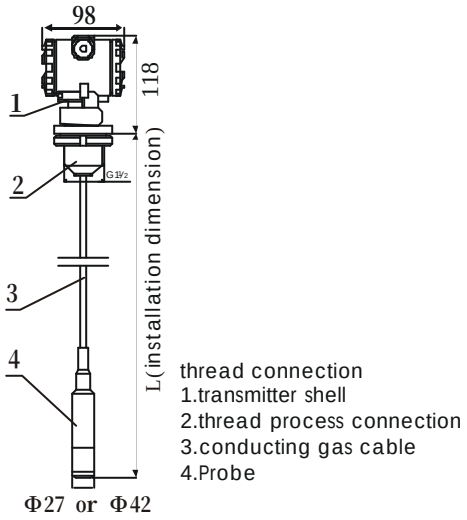
※ **WIDE PLUS –LC series cable type static liquid-level transmitter**

Cable type (standard type)

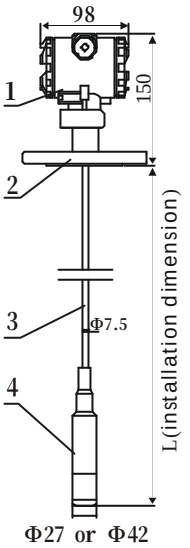
Cable type (integrated type)

Armor type

>> Outline dimension (unit: mm)



thread connection
1.transmitter shell
2.thread process connection
3.conducting gas cable
4.Probe



★ **Note: Note: the probe diameter of ceramic capacitance and diffusion silicon is respectively ϕ42 and ϕ27**

>> Technical parameters

working voltage 12.5～36 V DC

output signal 4 mA～20 mA DC

measuring range 0～100 m (max.)

accuracy 0.2 grade, 0.5 grade

stability exceed 0.1% FS/year

permission temperature

media –20℃～60℃

environment –20℃～70℃

storage –40℃～80℃

material contacted with the medium

shell 1Gr18Ni8Ti stainless steel

seal fluorine rubber

PTEE

Sealed weld

Membrane 316 L stainless steel

Ceramic capacitance

Material of guide gas cable combination of polyethylene chloride and nitride rubber

Mode of process connection outer thread $G1\frac{1}{2}$

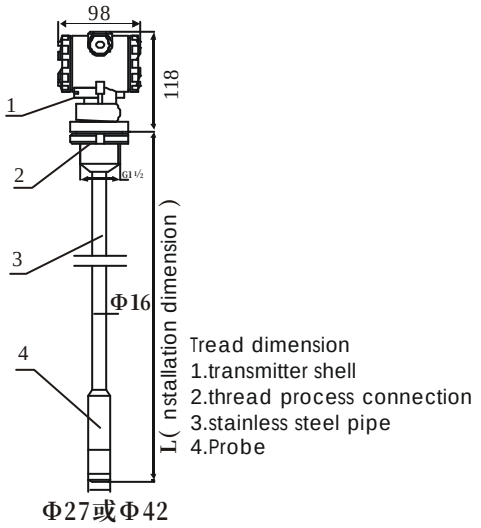
flange (approves DN50 PN0.6)

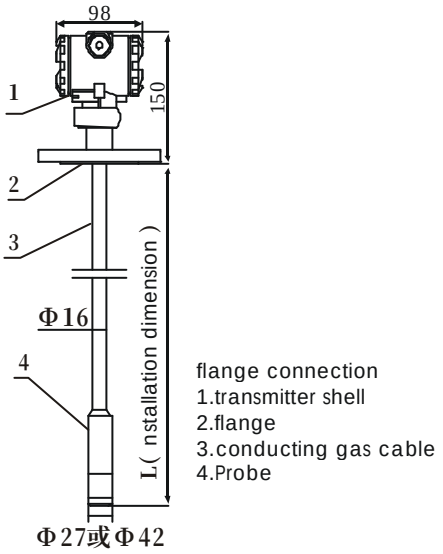
Protection grade the part of sensor is IP68, connection box is IP65 (K1 shell is IP67)

※ WIDE PLUS –LR pole static liquid-level transmitter

Pole type

>> Outline dimension (unit: mm)





★ Note: the probe diameter of ceramic capacitance and diffusion silicon is respectively ϕ42 and ϕ27

>> Technical parameter

working voltage 12.5～36 V DC

output signal 4 mA～20 mA DC

measuring range 0～4 m (max.)

accuracy 0.2 grade, 0.5 grade

stability exceed 0.1% FS/year

permission temperature normal temperature type

media –20℃～70℃

environment –20℃～70℃

storage –40℃～80℃

material contacted with the medium

shell	1Gr18Ni8Ti SS
seal	fluorine rubber
	PTEE
	Sealed weld
Membrane	316 L SS
	Ceramic capacitance

Mode of process connection outer thread G11/2

flange (approves DN20 PN0.6)

Protection grade The part of sensor is IP68, connection box is IP65 (K1 shell is IP67)

- **Type spectrum table for WIDE PLUS –L series universal static liquid-level transmitter**

Model													Explanation	
WIDE PLUS–L	□	□	□	□	□	□	□	□	□	□	□	□□		
Type	C												C standard cable type (cable temperature ≤70℃) note 1	
													C1 integrated does not carry the connection box (note 1)	
													C2 integrated carries the connection box (note 1)	
	R												Pole type (note 1)	
	D												Direct-mounting type (note 1)	
	G												Armored cable type (note 1)	G1 armored pipe for 1 Gr18Ni9Ti
														G2 armored pipe for 316 SS
Explosion-pr of rank		S											Standard type (no explosion-proof	
		D											Isolated explosion type Exd IIBT6 or Exd IICT6 (K1 outline)	
		I											Intrinsic safety type ExibIICT6 or ExiaIICT6	
Material of process connection			1										316 L SS	
			2										304 SS	
			3										1Gr18Ni9Ti SS	
			9										Special requirement	
Mode of process connection				T									Outer thread G11/2	
				F									Flange (note 2)	
				Y									Special appointed	
Membrane material					A								Membrane of diffusion silicon	A1: standard type
														A2: super stable type
					C								Ceramic capacitance membrane	
Material of seal element						1F							Fluorine rubber	
						2F							Nitrile rubber	
						3F							PTEE (does not apply for diffusion silicon)	
						4F							Full sealed weld (only used to diffusion silicon)	
Mode of signal output							2						(4～20) mA DC two wire system	
							9						Special requirement	
Display mode								A					No field indication	
								B					0～100% linear display	
								C					LCD digital range display (liquid crystal)	
								D					LED digital range display (numeral tube)	

		E					0～100% LCD digital display
		F					0～100% LED digital display
Accuracy grade			1				0.1 grade (note 3)
			2				0.2 grade
			5				0.5 grade
Counterpoise				H			No counterpoise
				Z			Standard counterpoise (please provides flow rate, density)
				Y			Special requirement
Installation dimension					□		It only limited cable type and pole type (note 4)
Measuring range						□□	See the standard range table for WIDE PLUS –L series universal pressure transmitter
Option gives an example	WIDE PLUS –LCS1FA1F2A5H						

- Note: approves K1 outline
- Notice to the order: density of liquid medium (), temperature ()
  The range of liquid level h = ()m
  Cable type: cable length L = () m
  Pole type: insert depth L = () m (distance from the probe to flange)
- Note 1: The integration is that mode for which adopts import the sensor with stainless steel isolation membrane and high-performance special amplification circuit liquid-level transmitter.
- Note 2: cable and pole type liquid-level flange approves DN 20 PN 0.6 MPa, direct-mounted liquid-level flange approves DN 50 PN 1.6 MPa, threaded approves the thread is G1 1/2, special demand please noted it when ordering.
- Note 3: 0.1 grade precision can be realized only if it should be employed the membrane material of super steady diffusion silicon (A2).
- Note 4: Installation dimension used in the cable and pole transmitter, if measuring range of well water-level is 10 m, installation dimension is 11 m, then extra 1 m use to installation regulating use, actual measurement is 10 m and does not notice. Cable type approves height regulation is 1 m, pole users should be detail noted the installation dimension.
- Note: Guide gas cable of cable liquid-level transmitter adopts high-performance environmental protection material such as import abrasion-proof, weak acid-proof (concentration), anti-low temperature, and may apply to food, medicine and other survey field.

➢ **Standard range table for WIDE PLUS –L series universal static liquid-level transmitter**

[illegible]	[illegible]	RANGE	[illegible]	[illegible]	[illegible]	[illegible]
G0 3	0-10kPa	4kPa-20kPa	0. 6MPa	15kPa	✓	×
G0 4	0-16kPa	6.4kPa-20kPa	0. 6MPa	25kPa	✓	✓
G0 5	0-20kPa	8kPa-35kPa	0. 6MPa	30kPa	✓	✓
G0 6	0-25kPa	10kPa-35kPa	11. 0MPa	40kPa	✓	✓
G0 7	0-30kPa	12kPa-35kPa	1. 0MPa	45kPa	✓	✓
G0 8	0-35kPa	14kPa-35kPa	1. 0MPa	55kPa	✓	✓
G0 9	0-40kPa	16kPa-70kPa	1. 0MPa	60kPa	✓	✓
G1 0	0-60kPa	24kPa-70kPa	1. 0MPa	90kPa	✓	✓
G11	0-100kPa	40kPa-100kPa	1. 0MPa	150kPa	✓	✓
G1 2	0-160kPa	64kPa-200kPa	1. 8MPa	250kPa	✓	✓
G1 3	0-200kPa	80kPa-200kPa	1. 8MPa	300kPa	✓	✓
G1 4	0-250kPa	100kPa-350kPa	2. 5MPa	400kPa	✓	✓
G1 5	0-400kPa	160kPa-700kPa	2. 5MPa	600kPa	✓	✓
G1 6	0-600kPa	240kPa-700kPa	4. 0MPa	1. 0MPa	✓	✓
G1 7	0-1. 0MPa	0. 4MPa-1. 0MPa	4. 0MPa	1. 5MPa	✓	✓
Note : "×" means do not provide; "✓" means provide by standard range.						

【WIDE PLUS –AL series intelligent static liquid level transmitter】

➢ **Product summary**

WIDE PLUS –AL series intelligent static liquid level transmitter in the 1990s, which is universal intelligent series transmitter, it introduced advanced production technology from America and Japan adopts the leading technology pass through strict quality control. This kind of transmitter is searched and developed independently by our company that is pressure detect transmit unit in the industrial automation control system. it measures fluid pressure in the industry process and converts it into 4～20 mA DC signal output; at the same time, it may be remote parameter setup, remote control, self-diagnosis function and so on by field bus HART protocol. Artificial intellectualized management can make your automation control system reach to a new higher level.

➢ **Main features**

- Good reliability
- High precision
- Temperature influence slightly
- Stability ±0.1%FS / year
- Intellectualization, miniaturization
- control parameter is locked by cipher code ensure the safety
- measuring range
- Display for LCD digital range or percentage
- Software compensation
- When the range is changed, it may not introduce pressure
- Self-diagnosis in the failure, remote setting communication, remote control
- Waterproof, dust-proof, shake-proof, explosion-proof, corrosion-proof
- Field bus HART protocol communication

➢ **Working principle**

Some point static pressure in the liquid is directly related to the space from this point to liquid surface, that is:

$$P = rgh$$

Among P ～ pressure (stress) of measured point

ρ～ medium density

g ～ gravity acceleration

h ～ height from be measured point to liquid surface

To has determined measured medium and the place, ρ,g is constant, so position change from measured point to liquid surface is only associated with measured pressure.

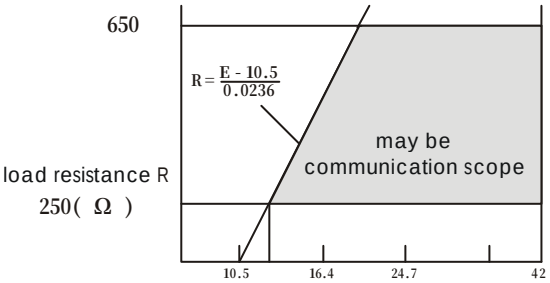
WIDE PLUS –AL series static liquid level transmitter, is that the position in liquid surface is determine by measuring static pressure of measured point.

According to the different construction, WIDE PLUS –AL series static liquid transmitter falls into:

※ **WIDE PLUS –ALD direct-mounting static liquid level transmitter**

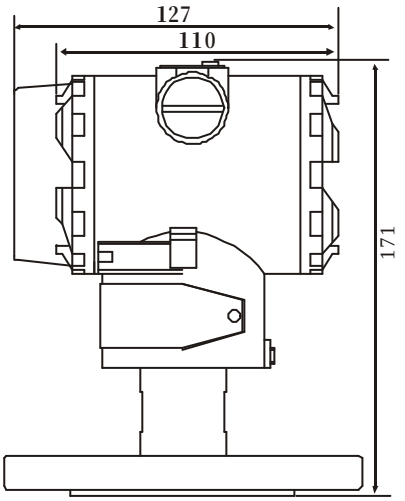
>> Outline drawing

>> Load characteristics



relation of power voltage and load resistance

>> Outline dimension (unit: mm)



>> Technical parameters

working voltage 12～45 V DC

measuring range 0～100 m (max)

Communication output

communication distance: 2 Km when use CEV cable

load capacitance: the below 0.22μF

load inductance: the below 3.3 mH

pitch with power line: the above 15 cm connects to input impedance of the receiving instrument on the receiving resistance: above 10 KΩ when frequency is 2.4 KHz

Accuracy Accuracy grade 0.1 grade, 0.2 grade, 0.5 grade

Temperature influence: ±0.15%FS / 10℃

Stability exceed 0.1% FS/year

Position influence: installation position not effect on zero

Permission temperature normal working temperature: -20℃～70℃

Membrane: -20℃～80℃ (short-time may reached 130℃)

Storage temperature: -20℃～80℃

Relative humidity 0～100% RH

Protection grade IP67

Material contacted with measured medium

Shell: 1Gr18Ni9Ti stainless steel

Seal: fluorine rubber/ PTEE/full sealing weld

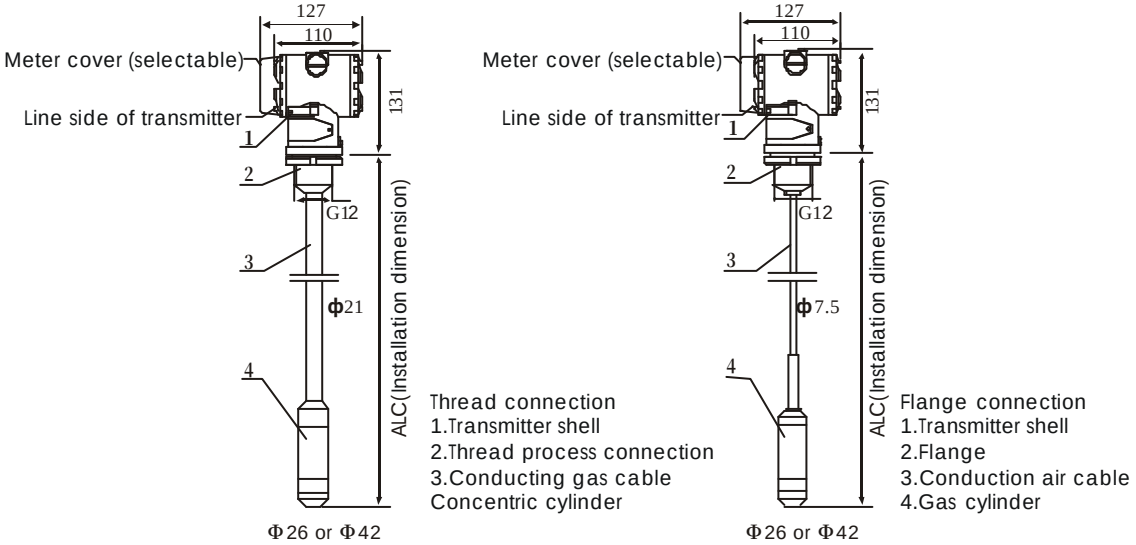
Membrane 316L stainless steel

Ceramic capacitance

※ **WIDE PLUS –ALC cable static liquid-level transmitter**

>> Outline drawing

>> Outline dimension (unit: mm)



>> Technical parameters

power voltage 12～45 V DC

measuring range 0～100 m (max)

communication output 1 communication distance for (4～20) mA DC output + field bus HART protocol: 2 Km (when using CEV cable)

2. (4～20) mA DC output

Accuracy accuracy grade: 0.1 grade, 0.2 grade, 0.5 grade

Stability exceed 0.1% FS / year

Permission temperature medium: –20℃～60℃

Environment–20℃～70℃

Storage temperature -20℃～80℃

Relative humidity 0～100% RH

Material contacted with the material shell 1Gr18Ni9Ti stainless steel

Seal fluorine rubber

PTEE

Full sealing weld

Membrane 316 L stainless steel

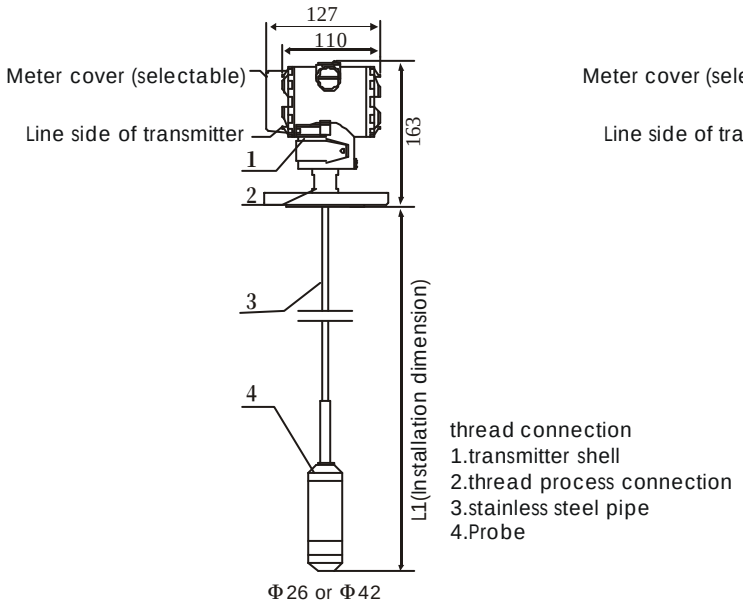
Ceramic capacitance

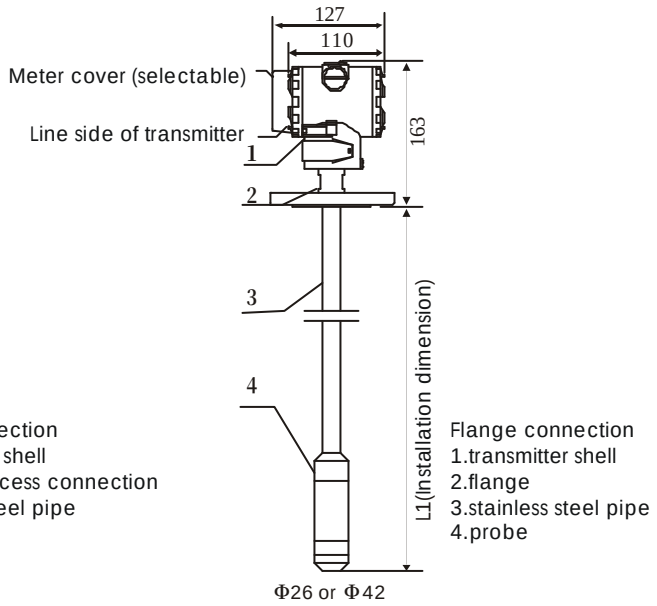
Material of guide gas cable combination from polyethylene chloride and nitrile rubber

Mode of process connection outer thread G11/2 flange DN20PN0.6

※ **WIDE PLUS –ALR pole type static liquid-level transmitter**

> > Outline dimension (unit: mm)





> > Technical parameter

power voltage 12～45 V DC

measuring range 0～100 m (max)

communication output 1. communication distance for (4～20) mA DC output + field bus HART protocol: 2 Km (when using CEV cable)

2. (4～20) mA DC output

Accuracy 0.1 grade, 0.2 grade, 0.5 grad

Stability exceed 0.1% FS / year

Permission temperature medium: –20℃～60℃

Environment–20℃～70℃

Storage temperature -40℃～80℃

Relative humidity 0～100% RH

Material contacted with the medium shell 1Gr18Ni9Ti SS

Seal fluorine rubber

PTEE

Full sealing weld

Membrane 316 L SS

Ceramic capacitance

Material of guide gas cable combination from polyethylene chloride and nitrile rubber

Mode of process connection outer thread G11/2 flange DN20PN0.6

➢ Type spectrum table for WIDE PLUS –AL series intelligent static liquid-level transmitter

Model													Explanation	
WIDE PLUS–AL	□	□	□	□	□□	□	□	□	□	□	□	□		
Type	C												Standard cable type (cable temperature ≤70℃)	
	R												Pole type	
	D												Direct-mounting type	
	G												Armoring type	G1 armored pipe for 1 Gr18Ni9Ti
														G2 armored pipe for stainless steel
Type of transmitter		S											Standard type	
Material of process connection			1										316 L SS	
			2										304 SS	
			3										1Gr18Ni9Ti SS	
Mode of process connection				T									Outer thread G11/2	
				F									Flange (note 1)	
				Y									Special requirement	
Material of sealed element					1F								Fluorine rubber	
					2F								Nitrile rubber	
					3F								PTEE (do not apply for diffusion silicon	
					4F								Full sealing weld (only employ diffusion silicon)	
Type of membrane						A							Diffusion silicon	A1 standard type
														A2 super stable type
						C							Ceramic capacitance	
							E						(4～20) mA DC two wire system	

Mode of signal output		E						(4～20) mA DC two wire system
		P						(4～20) mA DC two wire system (key field setting) with HART protocol
Display mode			A					No field indication
			C					LCD digital range display (liquid crystal)
			D					0～100% of LCD digital display (liquid crystal)
Accuracy grade				1				0.1 grade (note 2)
				2				0.2 grade
				5				0.5 grade
					H			No counterpoise
					Z			Standard counterpoise (please provides flow rate, density)
					Y			Special requirement
Installation dimension						□		Installation dimension only limits to cable and pole type (note 3)
Measuring range							□	See standard range table for WIDE PLUS –AL series static liquid-level transmitter
Option gives an example	WIDE PLUS –ALCS1T1FAIC2H							

- Note in order: liquid medium density ( )
  Range of liquid-level h = ( ) m
  Cable type: cable length L = ( ) m
  Pole type: plug-in depth L1 = ( ) m (distance from probe to flange)
- Note 1: Liquid-level flange for cable and pole type approves DN 20 PN 0.6 MPa, direct-mounted liquid-level flange approves DN 50 PN 1.6 MPa, please noted it when special ordering.
- Note 2: 0.1 grade precision can be realized only if it should be employed the membrane material of super steady diffusion silicon (A2).
- Note 3: Installation dimension used in the cable and pole transmitter, for example measuring range in water-level of well is 10 m, installation dimension is 11 m, then extra 1 m acts as installation regulating use. Actual measurement is 10 m and does not notice. Cable type approves height regulation is 1 m, pole users should be detail noted the installation dimension. that is distance from probe to flange
- Note: Guide gas cable of cable liquid-level transmitter adopts high-performance environmental protection material such as import abrasion-proof, weak acid-proof (contraction), anti-low temperature, and may apply for food, medicine and other survey field.

➢ Standard range table for WIDE PLUS –AL series static liquid-level transmitter

GAUGE PRESSURE	MEASURING RANGE	RANGE	CAPACITANCE OVERLOAD	DIFFUSER SILICON OVERLOAD	CAPACITY	DIFFUSER SILICON
G03	0-10kPa	4kPa-20kPa	0.6MPa	15kPa	√	×
G04	0-16kPa	6.4kPa-20kPa	0.6MPa	25kPa	√	√
G05	0-20kPa	8kPa-35kPa	0.6MPa	30kPa	√	√
G06	0-25kPa	10kPa-35kPa	11.0MPa	40kPa	√	√
G07	0-30kPa	12kPa-35kPa	1.0MPa	45kPa	√	√
G08	0-35kPa	14kPa-35kPa	1.0MPa	55kPa	√	√
G09	0-40kPa	16kPa-70kPa	1.0MPa	60kPa	√	√
G10	0-60kPa	24kPa-70kPa	1.0MPa	90kPa	√	√
G11	0-100kPa	40kPa-100kPa	1.0MPa	150kPa	√	√
G12	0-160kPa	64kPa-200kPa	1.8MPa	250kPa	√	√
G13	0-200kPa	80kPa-200kPa	1.8MPa	300kPa	√	√
G14	0-250kPa	100kPa-350kPa	2.5MPa	400kPa	√	√
G15	0-400kPa	160kPa-700kPa	2.5MPa	600kPa	√	√
G16	0-600kPa	240kPa-700kPa	4.0MPa	1.0MPa	√	√
G17	0-1.0MPa	0.4MPa-1.0MPa	4.0MPa	1.5MPa	√	√
Note ：“ × ”means do not provide ；“ √ ”means provide by standard range。						

【WIDE PLUS –CT series pressure transmit controller】

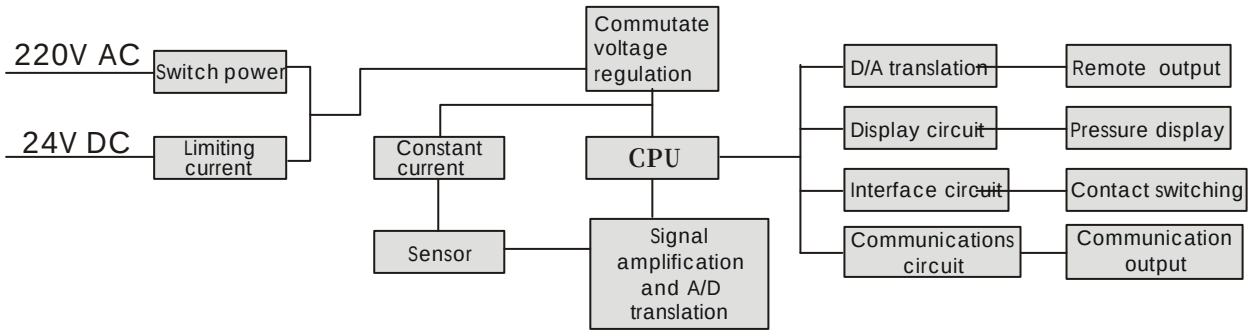
➢ **Outline drawing**

normal type **waterproof type**

➢ **Product summarize**

WIDE PLUS –CT series pressure transmit controller is a multifunction product which integrated pressure measure, display, control, microcomputer communications. in which its front-end this product is a full electron construction adopts pressure sensor with baffle filled oil chip. Output signal is sent the data to microprocessor from high-precision, low temperature drift and high-reliability amplification circuit and A/D convert circuit, after operating, to transform by high-precision D/A convert circuit into standard signal output. it with five independent relay contact outputs may direct replace the pressure meter of electric contact. Its advantage of flexible usage, easy to operation and convenient regulation make it widely suitable for use in power, water supply, hydro treatment, petroleum, chemical industries and metallurgy. This intellectualized digital pressure measuring instrument is best suitable for pressure measurement, display, control and remote transmit the pressure of liquid medium.

➢ **Working principle**



➢ **Technical parameter**

Analog quantity output DC 4 mA～20 mA (load resistance ≤500 Ω)
DC 0～10 mA (load resistance ≤750 Ω)
DC 1V～5 V (output resistance ≤ 250 Ω)
DC 0～5 V (output resistance ≤ 2250 Ω)

Switch quantity output relay control output --- ON /OFF (with return difference)

Contact capacity
- AC 220 V/3A, DC 24 V /5A (resistive load)
- Silicon controlled rectifier output ---- SCR (passage zero trigger pulse) output, AC 400 V/0.5A
- Solid state relay output ---- SSR (solid state relay control signal) output; DC

5～24 V/30 mA

Communication output ・standard serial bi-directional communication interface
・Communications agreement: RS-232C, RS-485
・Baud rate: 300～9600 bps (free set)

Measuring range relative pressure max 0～60 MPa, min 0～20 KPa
Absolute pressure max 0～60 MPa, min 0～20 KPa
Negative relative pressure –0.1～1 MPa

Measuring accuracy ±0.2% FS or ±0.5% FS

Resolution ±1 word

Measuring range –1999～9999

Control / alarm may select high limit, lower limit or high-higher limit, low-lower limit control /alarm output

Mode relay ON/OFF with return difference (may be free set)

Parameter setup ・soft push keystroke digital set on the panel
・Setting value of the parameter would be permanent maintenance after power to fail,
・Setting value of the parameter is locked with password

Protection mode ・LED indicate in the relay output situation,
・Input super/owe range alarm
・Power under-voltage or normal operation automatic reset

Environmental temperature 0～50℃

Relative humidity ≤85% RH (avoids corrosive gas strong)

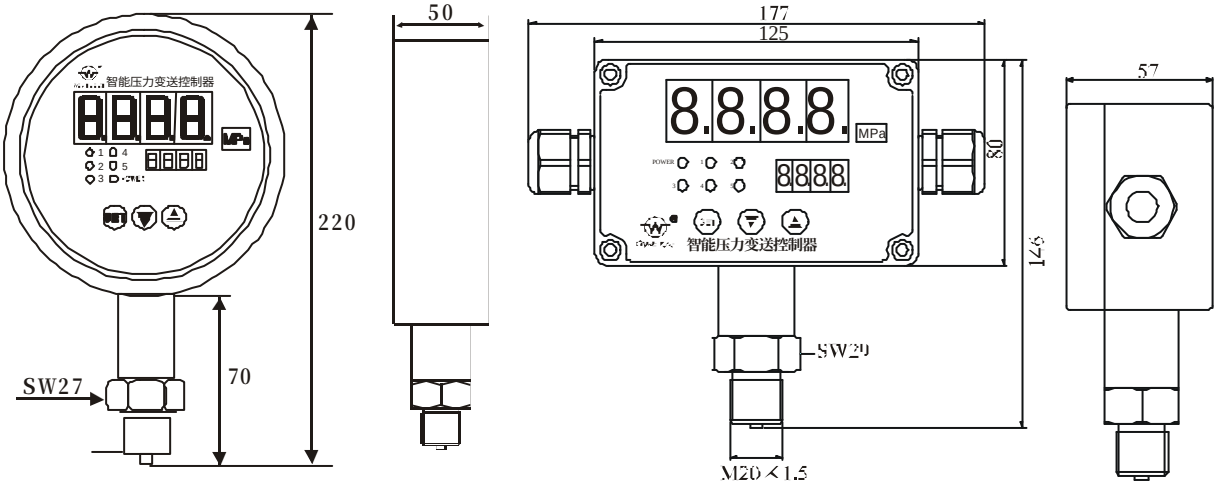
Supply voltage AC 90 V～265 V (switch power) DC 24V±2 V (switch power)

Power consumption ≤4 W (AC 90 V ～265 V switch power)
≤4 W (DC 24 V switch power)

Structure material pressure interface: stainless steel
inductive membrane: 316 L stainless steel
electric shell: Aluminum Alloy or iron clad
sealed rubber ring: fluorine rubber, nitrile rubber or full sealed weld

➢ **Outline dimension (unit: mm)**

normal type **waterproof type**



Direct-mounting type

➢ Spectrum table for WIDE PLUS –CT series pressure transmit controller

Model												Explanation	
WIDE PLUS-CT	□	□	□	□	□	□□	□	□	□	□	□		
Membrane material	A											Diffusion silicon (note 1)	A1: standard type
													A2: super stable type
													A3: cleaning type
													A4: corrosion-proof type
	B											Sapphire	B1: (-65℃～150℃)
													B2: (10℃～200℃)
													B3: (10℃～350℃)
	C											Ceramic capacitance	
Signal output (may secondary elect)		E										(4～20) mA DC	
		F										(1～5) V DC	
		U										0～20 mA DC	
		Q										0～5 V DC	
		Jn										Contact number n =0～5 (relay output) (note 2)	
		N										No output signal	
Communications mode			0									No communication	
			2									RS – 232 C	
			8									RS – 485	
Material of process connection				1								316 L SS	
				2								304 SS	
				3								1Gr18Ni9Ti SS	
				4								Hutchinson Alloy C	
Mode of process connection					R							Outer thread G1/2 (in holeϕ10 mm)	
					G							Outer thread M 20×1.5 (in holeϕ3 mm)	
					M							Outer thread G1/2 (in holeϕ3 mm)	
					A							Outer thread 1/2 – 14 NPT	
					N							Outer thread M 20×1.5 (in holeϕ10 mm)	
					P							Cassette type (range ≤1 MPa)	
					Y							Special requirement	
Material of seal element						1F						Fluorine rubber	
						2F						Nitrile rubber	
						3F						PTEE (do not apply for diffusion silicon	
						4F						Full sealing weld (only employ diffusion silicon)	
Display mode							D					Four LED digital double-screen display (note 3)	
							Y					Special requirement	
Accuracy grade								2				0.2 grade	
								5				0.5 grade	

Measuring range		□			See the standard range table for WIDE PLUS –CT series
Others code			G		Gauge pressure
			A		Absolute pressure
			B		Sealed gauge pressure
Product outline					Circle type (normal type)
			F		Square type (waterproof type), IP 65
Mode of supply power				W	DC 24V
				T	AC 220 V
Option gives an example	WIDE PLUS-CTA1EJ502G1FD2G17GW				

- Note 1: Standard and hygiene type measuring range for diffusion silicon is: min 0～10 KPa, max 0～35 MPa

  Super stable measuring rang for diffusion silicon is: min 0～6KPa, max 0～60 MPa

  Φ32 mm of ceramic capacitive measuring range is: min 0～1 KPa, max 0～4 MPa
- Note 2: Pressure transmit controller with five independent relay contact output may direct replace electric contact pressure meter
- Note 3: one screen displays pressure value, the other displays alarm value.

➢ Standard range table for WIDE PLUS –CT series pressure transmit controller

Code	Absolute pressure	Measuring range	Range	Capacitive overload	Temperature overload for diffusion silicon or high-low	Capacitance	Diffusion silicon	High-low temperature
G01	×	0～4KPA	1.6KPa-5KPa	0.6Mpa	6.0Kpa	√	×	√
G02	×	0～6KPA	4KPa-10KPa	0.6Mpa	9.0Kpa	√	×	√
G03	×	0～10KPA	4KPa-20KPa	0.6Mpa	15Kpa	√	√	√
G04	×	0～16KPA	6.4KPa-20KPa	0.6Mpa	25Kpa	√	√	√
G05	A1	0～20KPA	8KPa-35KPa	0.6Mpa	30Kpa	√	√	√
G06	A2	0～25KPA	12KPa-35KPa	1.0MPa	40Kpa	√	√	√
G07	A3	0～30KPA	14KPa-35KPa	1.0MPa	45Kpa	√	√	√
G08	A4	0～35KPA	16KPa-70KPa	1.0MPa	55Kpa	√	√	√
G09	A5	0～40KPA	24KPa-70KPa	1.0MPa	60Kpa	√	√	√
G10	A6	0～60KPA	40KPa-100KPa	1.0MPa	90Kpa	√	√	√
G11	A7	0～100KPA	64KPa-200KPa	1.0MPa	150Kpa	√	√	√
G12	A8	0～160KPA	80KPa-200KPa	1.8Mpa	250Kpa	√	√	√
G13	A9	0～200KPA	100KPa-350KPa	1.8MPa	300Kpa	√	√	√
G14	A10	0～250KPA	160KPa-700KPa	2.5Mpa	400Kpa	√	√	√
G15	A11	0～400KPA	240KPa-700KPa	2.5Mpa	600Kpa	√	√	√
G16	A12	0～600KPA	0.4MPa-1.0MPa	4.0Mpa	1.0Mpa	√	√	√
G17	A13	0～1.0MPa	0.64MPa-2.0MPa	4.0Mpa	1.5Mpa	√	√	√
G18	A14	0～1.6MPa	0.8MPa-2.0MPa	8.0Mpa	2.5Mpa	√	√	√
G19	A15	0～2.0MPa	1.0MPa-3.5MPa	8.0Mpa	3.0Mpa	√	√	√
G20	A16	0～2.5MPa	1.6MPa-4.0MPa	9.0Mpa	4.0Mpa	√	√	√
G21	A17	0～4.0MPa	2.4MPa-7.0MPa	9.0Mpa	6.0Mpa	√	√	√

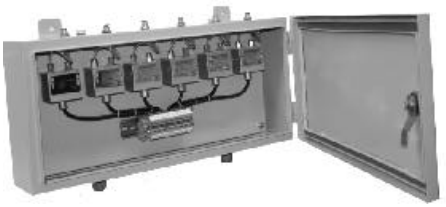
G22	A18	0～6.0MPa	4.0MPa-10MPa	×	9.0Mpa	×	√	√
G23	A19	0～10MPa	8.0MPa-20MPa	×	15Mpa	×	√	√
G24	A20	0～20MPa	12MPa-35MPa	×	30Mpa	×	√	√
G25	A21	0～30MPa	16MPa-40MPa	×	45Mpa	×	√	√
G26	A22	0～40MPa	24MPa-60MPa	×	60Mpa	×	√	√
G27	A23	0～60MPa	-1.6KPa-2.5KPa	×	90Mpa	×	√	√
G28	×	-2KPA-2KPA	-3KPa-5KPa	0.6Mpa	×	√	×	√
G29	×	-5KPA-5KPA	-6KPa-10KPa	0.6Mpa	×	√	×	√
G30	×	-10KPA-10KPA	-13KPa-20KPa	0.6Mpa	30Kpa	√	√	√
G31	×	-20KPA-20KPA	-33KPa-50KPa	0.6Mpa	60Kpa	√	√	√
G32	×	-50KPA-50KPA	-66KPa-100KPa	0.6Mpa	150Kpa	√	√	√
G33	×	-100Kpa-60Kpa	-66Kpa-100Kpa	1.0Mpa	250Kpa	√	√	√
G34	×	-100Kpa-100Kpa	-100Kpa-200Kpa	1.0Mpa	300Kpa	√	√	√
G35	×	-100Kpa-150Kpa	-100Kpa-200Kpa	2.5Mpa	400Kpa	√	√	√
G36	×	-100Kpa-300Kpa	-100Kpa-350Kpa	2.5Mpa	600Kpa	√	√	√
G37	×	-100Kpa-500Kpa	150Kpa-500Kpa	4.0Mpa	1.0Mpa	√	√	√
G38	×	-100Kpa-900Kpa	0.24Mpa-1.0Mpa	4.0Mpa	1.5Mpa	√	√	√
G39	×	_100Kpa-1.5Kpa	0.5Mpa-1.9Mpa	8.0Mpa	3.0Mpa	√	√	√
G40	×	-100Kpa-2.0Mpa	0.5Mpa-2.0Mpa	8.0Mpa	3.0MPa	√	√	√
Note: mark "×" means that does not supply; Mark "" means that provides according to the standard measuring range.								

【WIDE PLUS –DS series single-channel / FYD multi-channel wind pressure measure transmitter】

➢ Outline drawing

A type

B type



DS single-channel wind pressure measure transmitter FYD multi-channel wind pressure measure transmitter

➢ Product summary

WIDE PLUS –DS series single-channel / FYD multi-channel wind pressure measure transmitter employ import high precision and stability chip and adopts surface treatment technology of special aluminum alloy and stress isolated technology in the sensor transfer differential pressure signal into (4～20) mA DC standard signal by precise temperature compensation and amplification treatment which choice of. high quality sensor, unique stress isolated technology and flexible installation and debugging method has ensure the best ratio of performance price for WIDE PLUS –DS series differential pressure transmitter make it suitable for use in wide industrial field or laboratory to measured and controlled the furnace pressure, air flue pressure and air pressure.

➢ Main characteristics

- Measuring ranges broad: min range 0.5 KPa, max range 700 KPa
- Anti-interference ability strong, output signal stable
- Structural ingenuity, easy to install and use
- High-precision, high reliability
- Precise temperature compensation
- High ratio of performance price

➢ Technical parameter

Overload pressure 2 times of high limit value of the max measuring range

Measuring medium non-corrosion, no powder, and arid gas

Working voltage (12.5～36) V DC (two wire system)
Standard voltage 24 V DC ±5% ripple is less than 1%

Output signal (4～20) mA DC (two wire system)

Environmental temperature –20℃～85℃

Storage temperature –40℃～125℃ (if user want to measure the gas with wet or powder, please you choose to dust-proof and ripple filter)

Housing material hard aluminum alloy

Interface form φ8 mm with M12×1 outer thread (B type structure)

Lead mode cable line (the length is approved 1 m) or aerospace plug

Load resistance (4～20) mA, see load characteristic diagram

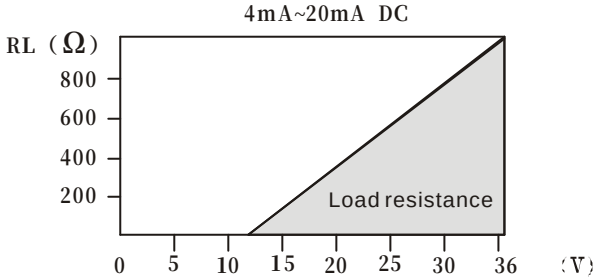
Static pressure influence the transmitter inputs static pressure, its effect is not beyond 0.5% of the maximum range

Temperature coefficient ±0.25% FS /10℃ (0.25 grade)
±0.25% FS /10℃ (0.5 grade)

stability ±0.25% FS /1 year (0.25 grade)
±0.25% FS /1 year (0.5 grade)

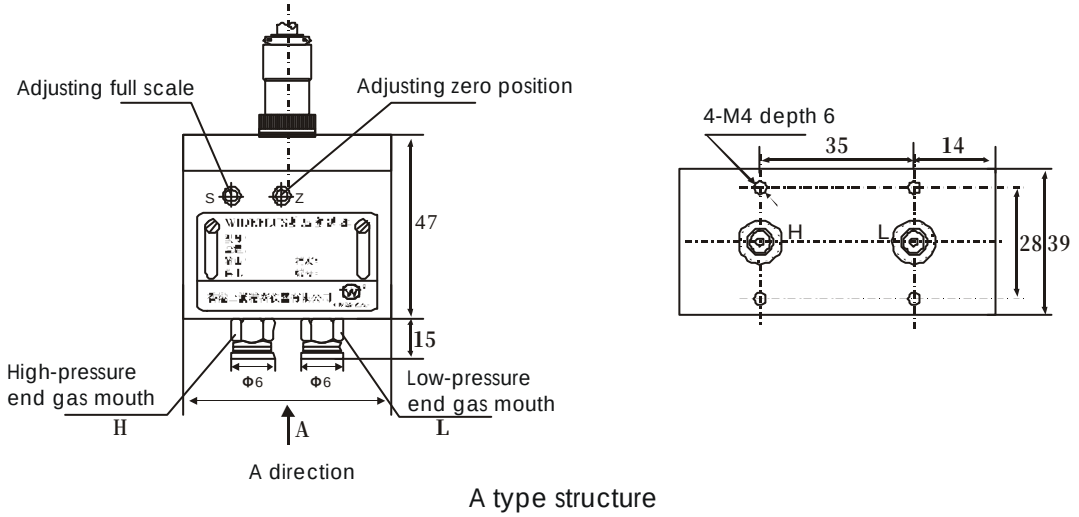
Note: must match with φ6 external plastic hose

- **Load characteristic**

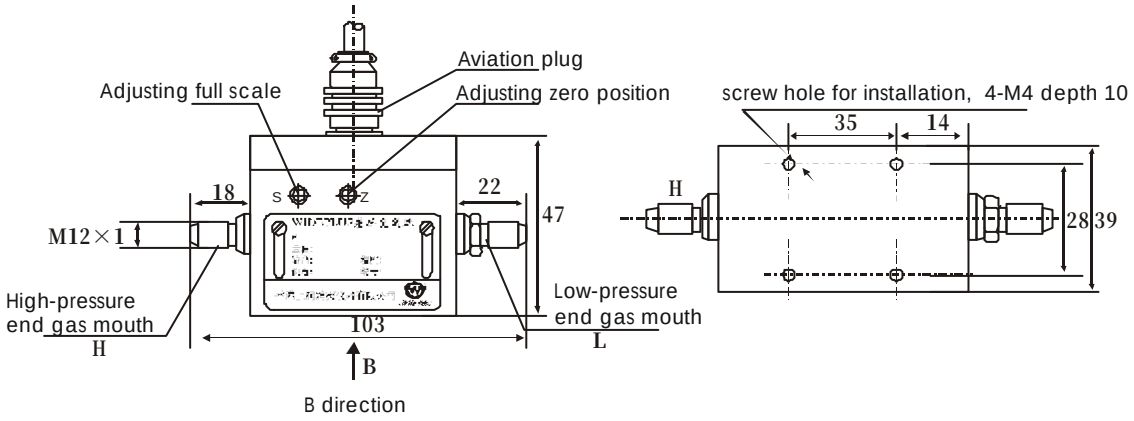


Working voltage

- **Outline dimension for WIDE PLUS –DS single-channel wind pressure measure transmitter (unit: mm)**

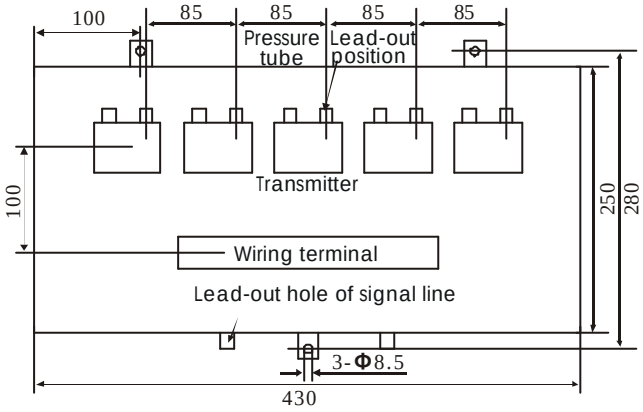


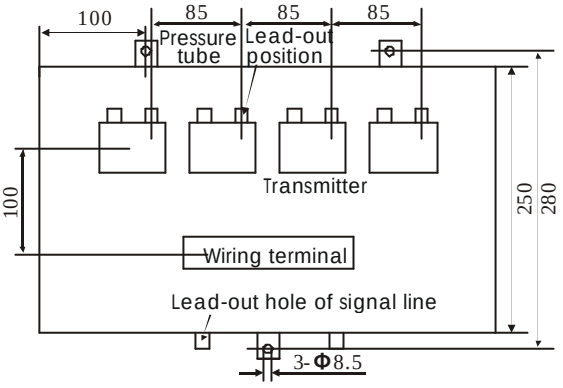
A type structure



B type structure

- **Outline dimension for WIDE PLUS –FYD series multi-channel wind pressure measure transmitter (unit: mm)**





5-channel wind pressure measure transmitter **4-channel wind pressure measure transmitter**

- **Type spectrum table for WIDE PLUS –DS series single-channel wind pressure measure transmitter**

Mode									Explanation			
WIDE PLUS –DS	□	□	□	□	□	□□	□	□				
Structure form	A								A type structure (lead-pressure joint is located in the same side of housing)			
	B								B type structure (lead-pressure joint is located in two side of housing)			
Pressure category		D							Differential pressure			
		G							Gauge pressure			
Measuring range									Measuring range		Static	Overload
									Min	Max		
			01						0～0.5 KPa	0～1.0 KPa	35 Kpa	1.5 KPa
			02						0～1.0 KPa	0～2.5 KPa	70 KPa	3.75 KPa
			03						0～2.5 KPa	0～7 KPa	100 KPa	10.5 KPa
			04						0～7.0 KPa	0～30 KPa	250 KPa	45 KPa
			05						0～30 KPa	0～100 KPa	0.3 MPa	150 KPa
			06						0～100 KPa	0～200 KPa	0.5 MPa	300 KPa
			07						0～200 KPa	0～700 KPa	1 MPa	1.05 MPa
Output mode				E					4 mA～20 mA DC two wire system			
Process interface					P1				Φ8 mm gas mouth (with M12×1) installation thread			
					P2				Φ6 quick joint (match φ6 mm external diameter of plastic soft tube)			
					P3				Φ8 quick joint (match φ8 mm external diameter of plastic soft tube)			
					P4				M12×1 thread			
					P5				Self-setting by users			
Lead mode						C1			Aviation plug			
						C2			Cable line (normal length 1 m)			
Explosion-proof rank							S		Standard type			
Accuracy grade								2	0.2			
								5	0.5			
Option gives an example	WIDE PLUS –DSAD01EP1C1S2											

➢ **Type spectrum table for WIDE PLUS –FYD series multi-channel wind pressure measure cabinet**

Model			Explanation
WIDE PLUS –FYD	□	□	Multi-channel wind pressure measure cabinet
Measuring channel	2		Two measurement point
	3		Three measurement point
	4		Four measurement point
	5		Five measurement point
	6		Six measurement point
Cabinet shape		E	Cold rolled plate curved system painting
		D	Stainless steel plate curved system

【WIDE PLUS FY type wind pressure sampling Stop-proof dust blow-sweep devices】

- **WIDE PLUS –FY type wind pressure sampling stop-proof dust blow-sweep devices**

> > Outline diagram

- **blow-sweep cabinet dust blower**

> > Product outline

coal of coal-fired boiler produced coal powder by powder making system and sent into furnace to burn, pass through the duster on the boiler rear and chimney exclude into atmosphere. Due to technology demand would carry out multi-place measure of wind pressure or negative pressure. Because measured medium include high concentration coal powder and coal dust grain, often makes sample pulse pipe to stop up, and effect on correct measure of wind pressure, so to safety production causes serious menace. Especially, boiler internal explosion-proof technology has widely been gained attention, need to prevent to stop up the furnace negative pressure sampling, as to take correct signal.

our company introduce advanced technology of stop-proof wind pressure sampling from America and Japan, has successfully searched and developed FY type wind pressure sample stop-proof blow sweep devices. This kind of device effect fine, specially offer to heat power plant use for such as fluidized bed furnace, coal powder pipe line, furnace negative pressure and flue negative pressure measuring to blow continually, as to prevent coal powders and bacco ashes stop up the sampler, ensure automation instrument of power plant normally running and production security. FY series wind pressure sampling stop-proof blow-sweep devices can be divided into two kinds:

1. FY type wind pressure sampling stop-proof blow-sweep devices.
2. FY type wind pressure blow-sweep cabinet

Technical condition and requirement for FY series wind pressure sampling stop-proof blow-sweep devices:

1. FY type wind pressure sampling stop-proof blow-sweep devices

This device demand offer 0.5～10 Kg gas source for which net instrument gas source would be best quality, it have not high quality instrument gas source, general gas source also can be use. This gas source enter oil water separator (imports) in this device to carry out gas source purification. And pass through depressure, pressure stabilizing into instrument, till sampler. This device may form a complete set with FY type wind pressure blow-sweep cabinet to use.

Main Features

Prevent thoroughly measure pipe line such as coal powder pipe line, furnace negative pressure and flue negative pressure to be stop-up.

Has not effect on accuracy of original measure value.

Unneed to carry out artificial blow-sweep, has lightened lab our strength of worker

Can ensure furnace negative pressure automatic and relative protection to normally running

This device size small, easy installation

Structure concise, shape beautiful, price lower

2. FY type wind pressure blow-sweep cabinet

This equipment is gas source supplementary device for which form a complete set with FY type wind pressure sample stop-proof blow-sweep device, or use to blow-sweep for which form a complete set with other equipment.

FY type wind pressure blow-sweep cabinet is most advance gas source supplementary device now, which absorb and integrate merits form internal and external many products, and it is good helper for pneumatic instrument installation and usage, wide apply to electric power, metallurgy, chemical industry, medicine, spinning and weaving industry and in automation line.

Employ import oil water separator, integrate depressure, oil water separate, automatic drain, ensure instrument high pure of gas source

Inside adopt stainless steel cut-off valve, long lived

Inside instrument pipe line all adopt import pull-plug type element, max, withstand pressure 1MPa

Instrument box structure closely arranged and reasonable, unneed occupy very big space.

> > Outline and installation dimension of blow-sweep cabinet

FY type wind pressure blow-sweep cabinet

Four line

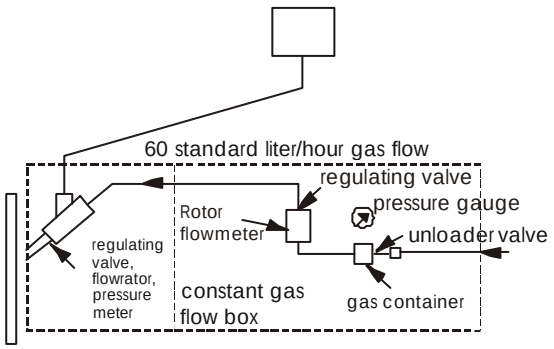
Six line

> > working principle

FY type wind pressure sample stop-proof blow-sweep device is composed of two parts: constant gas flow control box and pressure sampler

Constant gas flow control box is composed of pressure stabilizing valve, pressure meter, flow control valve and flowrator, gas contain and regulating valve and so on.

(0.5～8.5) Kgf/cm^2 oilless compressed-air pass through depressure, pressure stabilizing valve to keep its pressure constant, indicate by pressure meter, its pressure control flow, gas flowrator can indicate its gas valve (genally at 60 standard liter/hour). Compressed air of constant pressure and flow continually blow and sweep the sampler, reached stop-proof effect, so gain correct wind pressure measuring value. As diagram 1



➢ Type spectrum table

Model				Explanation
WIDE PLUS –FY	□	□	□	Wind pressure blow sweeping configuration
Blow channel	1			For one measurement point blow air (built-in one rotor flow meter)
	2			For two measurement point blow air (built-in two rotor flow meter)
	3			For three measurement point blow air (built-in three rotor flow meter)
	4			For four measurement point blow air (built-in four rotor flow meter)
	5			For five measurement point blow air (built-in five rotor flow meter)
	6			For six measurement point blow air (built-in six rotor flow meter)
Cabinet shape		E		Cold rolled plate curved system painting
		D		Stainless steel plate curved system
Blow sweeping sampler			A	Made of stainless steel
			B	Made of carbon steel tube
			C	No blow sweeping sampler

【WIDE PLUS capacitance pressure, differential pressure transmitter (1151 shape)】

- **Outline drawing**

- **Main characteristics**

・Pressure / differential pressure transmitter should a wide application
・Range from 0.1 KPa to 40 MPa
・Easy to maintenance and may upgrade
・Solid state, pull-insert type line board
・Damping may be adjusting
・Local zero and range adjustment
・The construction is dainty, hardness and easy to install
・Long-term stability
・Intelligent, analog quantity may select, may be conform to various application requirement
100：1 range rate
・Range rate of new improved intelligent pressure / differential pressure transmitter may reached 100：1
・Accuracy = checking range of +/－[0.02 (URL/range)－0.1] %

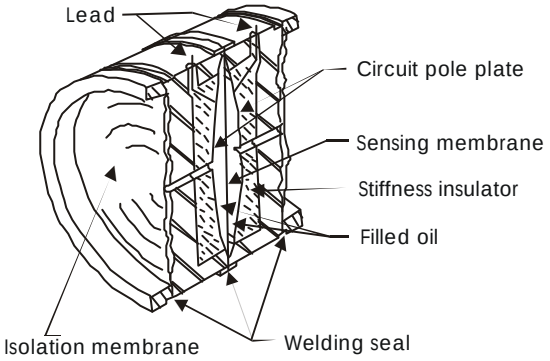
- **Product summary**

Capacitance pressure / differential pressure transmitter has many forms that can used to measurement field for differential pressure, flow, gauge pressure, absolute pressure, degree of vacuum, liquid level and specific gravity. according to ordering information table the transmitter model, and appointed such as pressure scope, output mode and basic structure member material of the transmitter. In addition, the option in appendix, certification, and special manufacture program all may choose.

- **Working principle**

When operating, filled oil will translates the process pressure to the center filled oil on high-low pressure side isolation membrane, and the center of filled oil will translates the pressure to the in δ – room sensing membrane of sensor center. The sensing membrane is a strained elastic component, which displacement changing as differential pressure (for GP gauge transmitter, atmospheric pressure may be brought to bear as well as low-pressure side on the sensing membrane). Low-pressure side on the AP absolute pressure transmitter has always remained a reference pressure. The max displacement on the sensing membrane is 0.0004 inch (0.10 mm), its displacement is proportion to pressure. By amplified circuit linearly of two capacity stationary pole plate on the measuring membrane would be linearly converted to 4～20 mA DC two wire system current / voltage or digital HART output signal (high-speed addressable

remote sender data road)。



- **Module of circuit board (intelligent type)**

Module of circuit board in the transmitter adopts specific integrated circuit (ASICS) and surface packaging technique. Signal panel receiving the signal that came from digital signal and modified factor on the sensor modular head, and modify and linearize to the signal Output part of the circuit board module transfer the digital signal to an analog signal output and which can be communicated with HART manipulator. Selectable liquid crystal head inserts the circuit board on which may show number output with pressure engineering or unit percentage.

- **Data configuration (intelligent type)**

Configuration data was stored in the permanent EPROM memory on transmitter's circuit board. Though the transmitter causes power to fail, the data can be still remained, so the electricity has yet been laid on to the transmitter may operate instantly it makes contact.

- **D/A conversion and signal transmission (intelligent type)**

Process variable was stored in digital data mode that may be revising precisely and changing in engineering unit, after revised data will be transformed into an analog output signal. HART manipulator may direct access the digital signal of the transducer, but not need the D/A conversion then arrive at higher precision.

- **Communication mode (intelligent type)**

Capacitive intelligent pressure / differential pressure transmitter adopts HART protocol communication, of which employs industrial standard BELL202 frequent shift key (FSK) technology, remote communication was realized by one high-frequent signal was superimposed on the current output signal, then the consistency of loop could not be affected.

- **Software function**

HART protocol makes users easily to being configuration, testing and concrete establishment for capacitive intelligent pressure / differential pressure transmitter.

- **Configuration**

Capacitive intelligent type may be easily configured by HART manipulator. The configuration has two sides: First, to the transmitter may operate the parameter establishment, includes establishment: choice of linear or square root output damping engineering unit in the zero and range establishment point. Second, informational data of the transmitter may be stored in order to distinguishe the transmitter and to make the physical description for the transmitter. These data covers:

Tag : 8 letter numeric characters

Descriptor: 16 letter numeric characters

Information: 32 letter numeric characters

Flange type

Flange material

Material of liquor drainage / outlet valve

Material of O-type ring

Unless the above configurable the parameter, it is still contains many revisable information that user may not revise in the software for capacitive intelligent pressure / differential pressure transmitter such as transmitter's type, sensor limit, minimum range, filled oil, isolated membrane material, serial number of membrane head and software version number of transmitter.

- **Testing**

Capacitive intelligent pressure / differential pressure transmitter may continue to self-checking. If you find the problem, then the transmitter will activate which is analog output alarm selectable for users. Using HART manipulator may check the transmitter to confirmed the existent problem, the transmitter outputs specific information to the manipulator so as to distinguishes the problem and quickly and easy to maintenance and repair.

> Concrete establishment

Concrete establishment uses for the transmitter when the first time establish and the digital circuit service, it permits to the sensor and analog output carries on the trimming, conform to the factory pressure standard. in addition, characterization functions make the users to avoid the event or intentionally adjusting analog output establishment point.

- **Technical parameter**

Measuring medium liquid, gas and stream

Measuring range differential pressure: 0～0.1 KPa to 0～10 MPa
Relative pressure: max. 0～40 MPa, min 0～0.16 KPa
Absolute pressure: max 0～10 MPa, min 0～10 KPa

Working voltage 12 V～45 V DC (general use 24 V DC)

Output signal 4 mA～20 mA DC

Explosion rank isolated explosion type (ExdIIBT5 or ExdIICT6),
intrinsic safety type (ExibIICT6 or ExiaIICT6)

Range and zero external continuously adjustable

Positive and negative removal even if its range how to output, after positive and negative removed, high/lower limit do not have to beyond range limit
The maximum postive direct removal is the 500% of minimum adjusting range
The maximum negative direct removal is the 600% of minimm adjusting range

Damp when filled the silicon oil, it can continuously adjust from 0.25 s to 1.67 s

Start time 2S (dont need to preheat)

Temperature scope environmental temperature –20℃～70℃

Accuracy 0.2 grade, 0.5 grade

Relative humidity 0～100% RH

Stability exceed 0.1 FS/year

Variable of sensor volume less than 0.16 cm

Field indictor LED digital display
LCD liquid crystal display
Linearity indicator display

Power variation influence less than 0.0059%/V of output range

Vibration effect n any axis, frequency for 200 Hz, causes the biggest error is ±0.05%/g of range

Medium temperature –40℃～100℃

Storage temperature –40℃～100℃

Temperature influence 1 maximum range

Zero error: <±0.5%/55℃ of range

Total error: <± 1%/55℃ of range

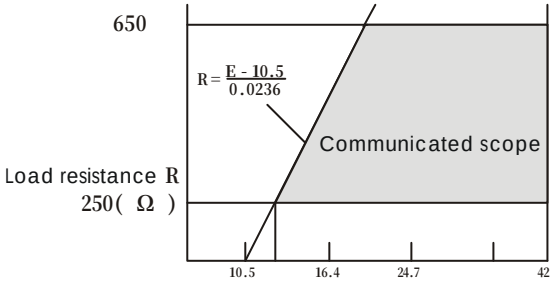
2. minimum range

Zero error: <±3.0%/55℃ of range

Total error: <± 3.5%/55℃ of range

Weight 4.9 Kg (do not include the option)

- **Load characteristics**



Relation between power voltage and load resistance

- **Process connection**

D1 side the top liquor drain/vent valve

Liquor drain / vent valve would be installed to flange side

In the liquid process application field, when the transmitter vertically installs, the top valve uses to vent the gas cork material demand sama as flange other end contrary to joint on the flange

D2 bottom side drain/vent

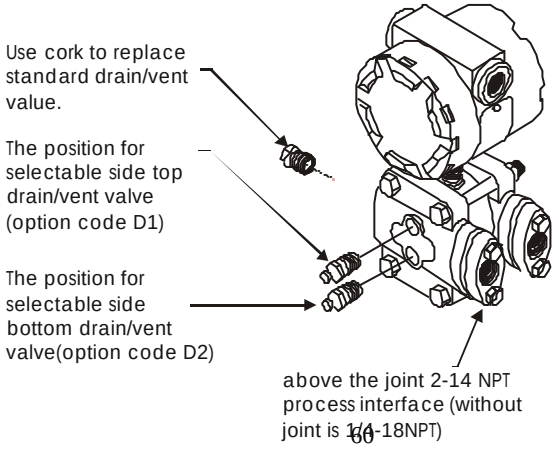
Drain /vent valve be installed to flange side. In gas process application field when transmitter vertically install, the bottom valve uses to drain the liquid in gas, cork material demand same as flange material, block the other end contrary to joint on the flange

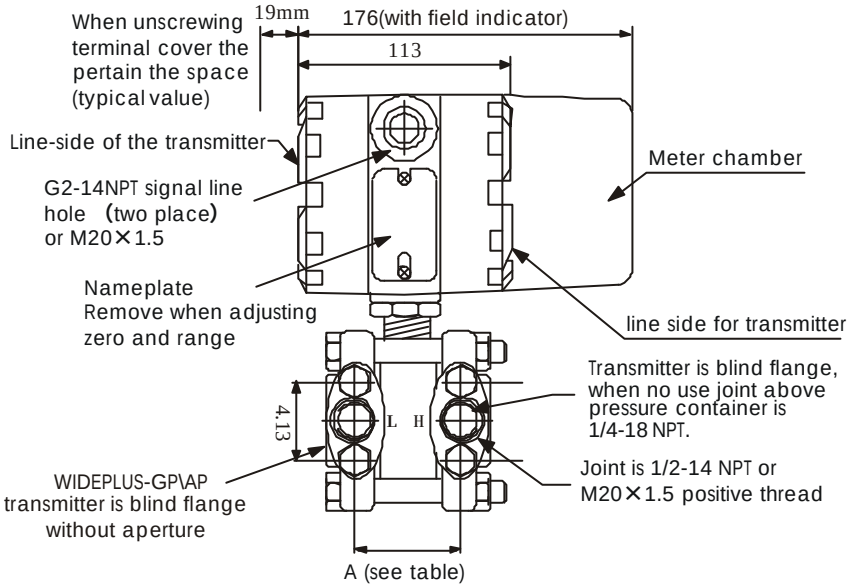
N 1/2-14 NPT process interface this option provide a joint makes process interface is 1/2-14 NPT cone tube thread.

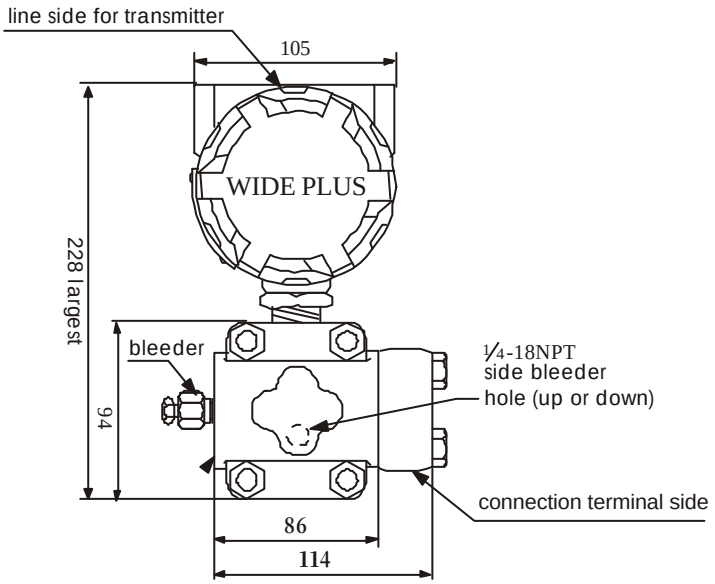
Use cork to replace standard drain/vent value. The position for selectable side top drain/vent valve (option code D1)

The position for selectable side bottom drain/vent valve above the joint 2-14 NPT process interface (without joint is 1/4 –18NPT)

- **Outline dimension (1151 shape, unit: mm)**







Range(MPa)	0~0.001 to 0~0.006	0~0.16 to 0~1	0~0.4 to 0~2.5	0~1.6 to 0~10	0~4 to 0~25
A (mm)	54	55.2	55.6	57.2	57.6

- **Production scope**

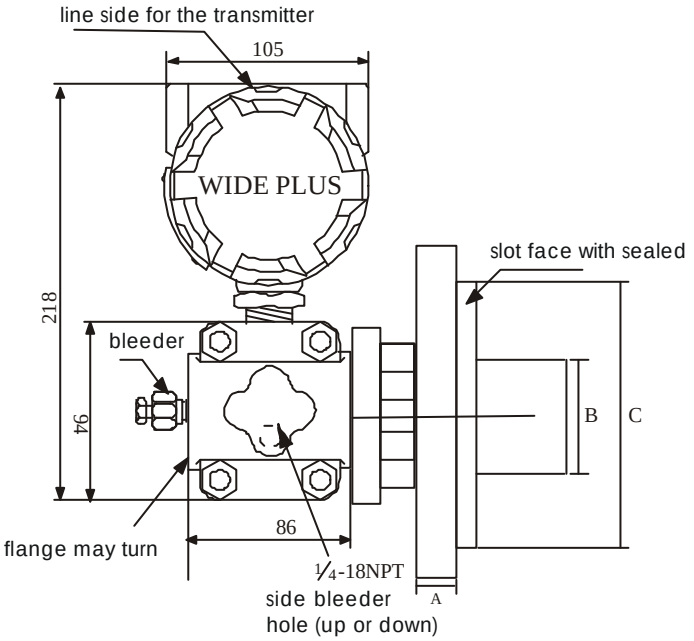
※ WIDE PLUS –LT series flange liquid-level transmitter

>> Outline drawing

> > Features

- Measuring object: liquid level from opening or sealed vessel
- Measuring accuracy for liquid level is 0.25%
- measuring range: 6 KPa ～ 2000 KPa
- 3-/4-inch flat diaphragm type or overhanging type diaphragm
- Many filled oil choose, where may conform to various application requirements
- Damping is adjustable
- Meet liquid-level material: stainless steel, Hutchison Alloy C-276 and Tantalum

> > Outline dimension (unit: mm)



specification of flange dimension and bolt-hole

Flanged dimension (mm)							Bolt hole (mm)		
Order code	Dimension	Rated pressure	External diameter	A	B	C	Number	Hole diameter	Hole distribute diameter
A	3"	150 lb	190.5	30	66	127	4	19	152
B	4"	150 lb	228.6	30	89	157	8	19	190
C	3"	300 lb	209.6	35	66	127	8	22.2	168
D	4"	300 lb	254.0	38	89	157	8	22.2	200

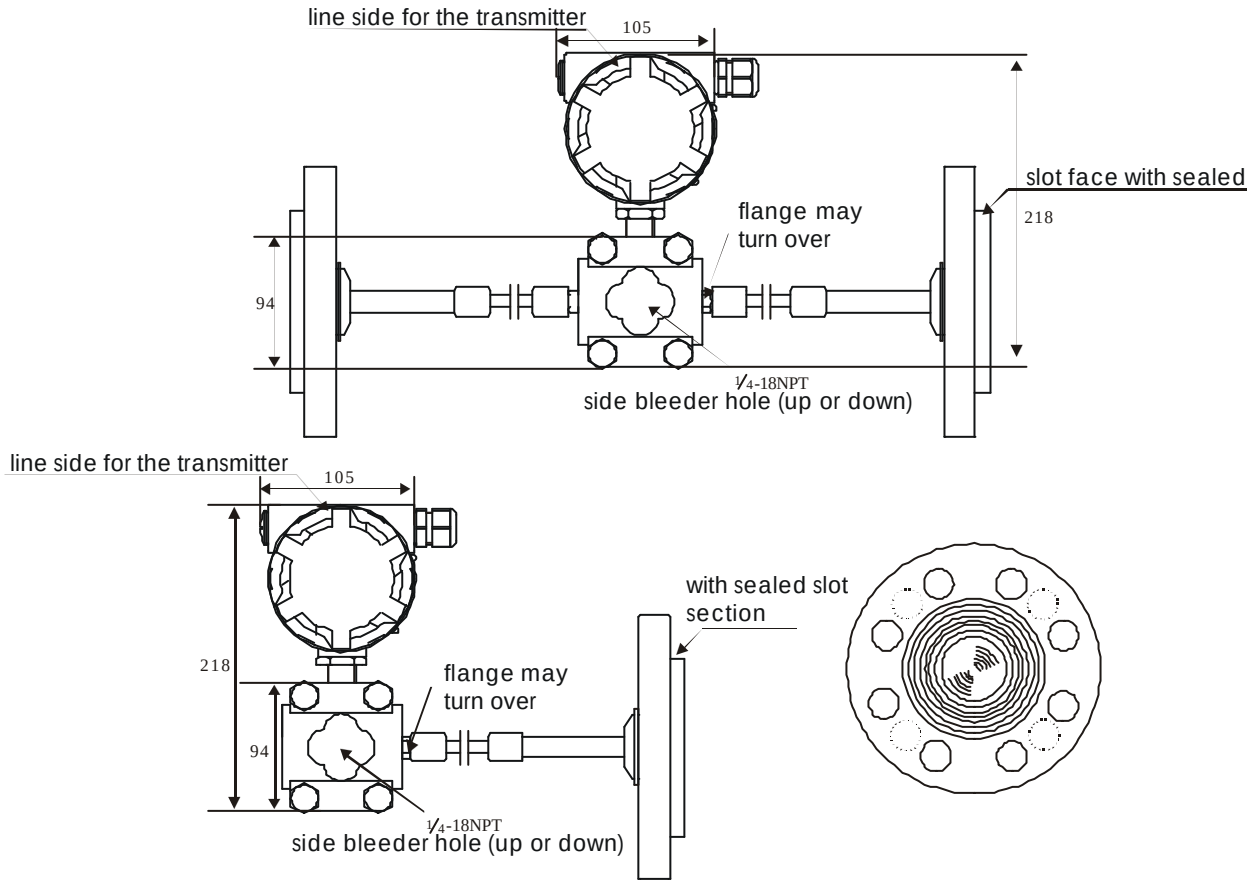
※ WIDE PLUS –DP / GP series remote pressure / differential pressure transmitter

> > Outline drawing

> > Characteristic

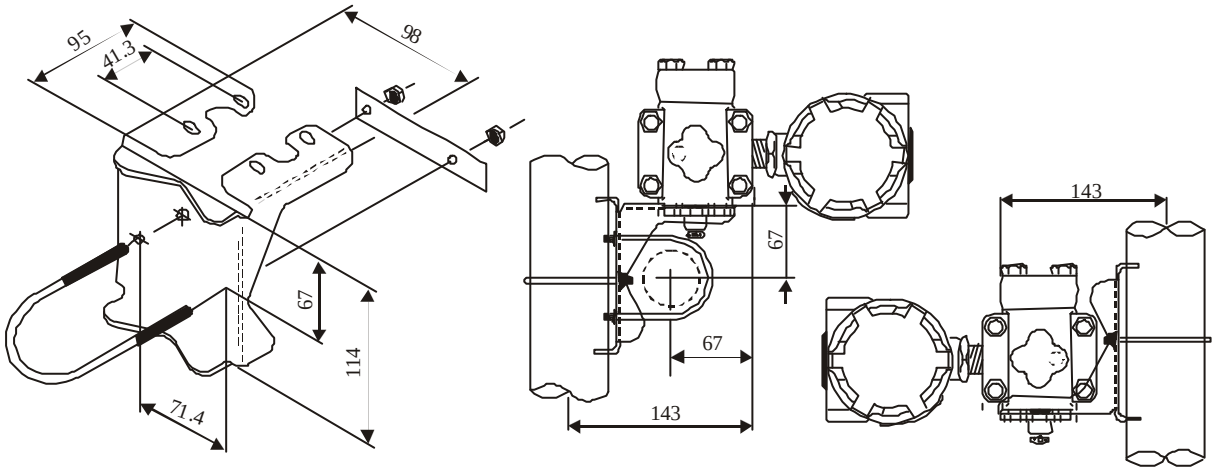
- measuring object: high temperature corrosion or viscous fluid
- measuring accuracy for liquid level is 0.25%
- measuring range: 6 KPa～2000 KPa
- 3-/4-inch of flat diaphragm type or overhanging type diaphragm
- many filled oil choose, where may conform to various application requirements
- damping is adjustable
- meet liquid-level material: stainless steel, Hutchison Alloy C-276 and Tantalum

> > Outline dimension (unit: mm)

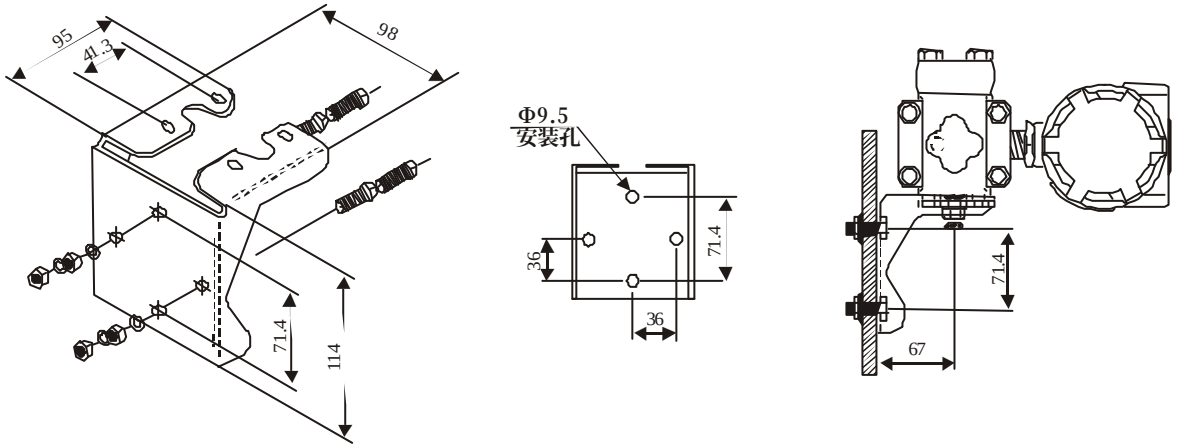


➢ **Enclosure**

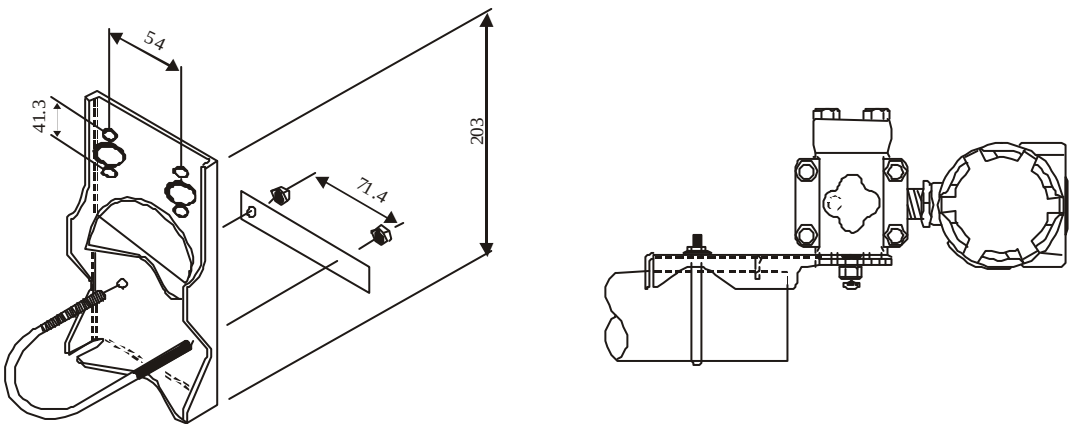
> > Installation support



Tube-mounting bended support

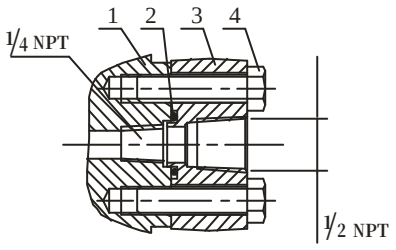


disk-mounting bended support



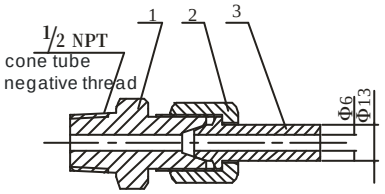
tube-mounting flat support

➢ **Lead pressure connector as follows**



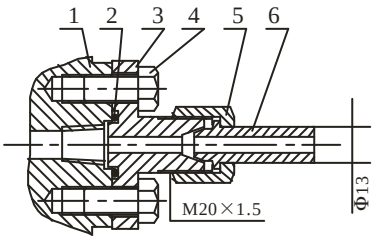
A1. connection of cone tube negative thread (option code "/N")

1. pressure chamber flange for the transmitter
2. "O"-type ring
3. cone tube connector of negative thread connection
4. bolt



A2. –14 NPT lead pressure transition joint and back welding lead-pressure tube (code "C12")

1. 1/2 –14 NPT transition joint connects with spherical cone
2. nut M20 ×1.5
3. spherical joint (**Φ**13 place may be welded with lead pressure tube)



A3. T shape joint connection (code "J")

1. pressure chamber flange for the transmitter
2. "O"-type ring
3. spherical cones connection joint M20 × 1.5 positive thread
4. bolt
5. nut
6. spherical joint (**Φ**13 place may be welded with lead pressure tube)

➢ **Spectrum table for WIDE PLUS –GP/AGP series pressure transmitter**

Model							**explanation**
WIDEPLUS	□	□	□□	□□	□	□	
-GP							1151 shape pressure transmitter
-AGP							1151 shape intelligent pressure transmitter
Measuring range	3						0～1～6kpa
	4						0～6～40kpa
	5						0～40～200kpa
	6						0～160～700kpa
	7						0～0.4～2MPa
	8						0～1.6～6.8MPa
	9						0～4～25MPa
Output		E					General analog type (4～20mADC with adjustable damping)

		I					Standard intelligent type (4～20mADC (keystroke setting with HART protocol)		
Construction materials							Flange joint	Drain/vent valve	Isolation diaphragm
			12				Carbon steel with cadmium plating	316 stainless steel	316 stainless steel
			13				Carbon steel with cadmium plating	Hutchinson alloy C	Hutchinson alloy C
			14				Carbon steel with cadmium plating	Monel metal	Monel
			15				Carbon steel with cadmium plating	316 stainless steel	Tantalum
			22				316 stainless steel	316 stainless steel	316SST
			23				316 stainless steel	316 stainless steel	Hutchinson alloy C
			24				316 stainless steel	316 stainless steel	Monel
			25				316 stainless steel	316 stainless steel	Tantalum
			33				Hutchinson alloy C	Hutchinson alloy C	Hutchinson alloy C
			35				Hutchinson alloy C	Hutchinson alloy C	Tantalum
			44				Monel	Monel	Monel
Option				M1			linear indicator (0～100% scale)		
				M3			LCD digital range display (liquid crystal)		
				M4			LED digital range display (numeral tube)		
				M5			0～100% of LCD digital range display (liquid crystal)		
				M6			0～100% of LED digital range display (numeral tube		
				B1			Bending bracket for pipe installation (2" pipe)		
				B2			Bending bracket for panel installation		
				B3			Flat bracket for pipe installation (2"pipe)		
				D0			Drain/vent valve at the face of flange back		
				D1			side drain/vent valve on the top of flange		
				D2			drain/vent valve under the flange side		
				P			1/4-18NPT cone tube negative thread		
				J			Joint of "丁" shape: positive tread of m20×1.5 and back welded lead-pressure tube (stainless steel)		
				N			"Waist"-type joint: 1/2-14NPT cone tube negative thread		
				C12			1/2-14NPT lead pressure transition joint and back welded lead pressure tube (stainless steel)		
Explosion proof rank					S		Standard (without explosion proof)		
					I		Intrinsic safety ExiaIICT6 or ExibIICT6 (commonly choice)		
					D		Isolated explosion ExdIIBT5 or ExdIICT6		
Accuracy rank						2	o.2		
						5	0.5		
						7	0.075 (intelligent can be select)		
Option gives an example	WIDE PLUS –GP3E22M4B3D0JS2								

● Note: If choose the product of explosion-proof intrinsic safety which need to take the meter, only can take the pointer meter

➢ **Type spectrum table for WIDE PLUS –AP/AAP series absolute pressure transmitter**

MODEL							explanation
WIDEPLUS	□	□	□□	□□	□	□	
-AP							1151 shape absolute pressure transmitter
-AAP							1151 shape intelligent absolute pressure transmitter
Measuring range	4						0～6～40kpa
	5						0～40～200kpa
	6						0～160～700kpa
	7						0～0.17～2Mpa
	8						0～0.67～6.8Mpa
Output		E					General analog type (4～20mADC with adjustable damping)

		I					Standard intelligent type (4～20mADC (keystroke setting with HART protocol)		
Construction material							Flanged joint	Drain/vent valve	Isolation diaphragm
			12				Carbon steel with cadmium plating	316 stainless steel	316 stainless steel
			13				Carbon steel with cadmium plating	Hutchinson alloy C	Hutchinson alloy C
			14				Carbon steel with cadmium plating	Monel metal	Monel
			15				Carbon steel with cadmium plating	316 stainless steel	Tantalum
			22				316 stainless steel	316 stainless steel	316 stainless steel
			23				316 stainless steel	316 stainless steel	Hutchinson alloy C
			24				316 stainless steel	316 stainless steel	Monel
			25				316 stainless steel	316 stainless steel	Tantalum
			33				Hutchinson alloy C	Hutchinson alloy C	Hutchinson alloy C
			35				Hutchinson alloy C	Hutchinson alloy C	Tantalum
			44				Monel	Monel	Monel
Option				M1			Linear indicator (0～100% scale)		
				M3			LCD digital range display (liquid crystal)		
				M4			LED digital range display (numeral tube)		
				M5			0～100% of LCD digital range display (liquid crystal)		
				M6			0～100% of LED digital range display (numeral tube		
				B1			Bending bracket for pipe installation (2" pipe)		
				B2			Bending bracket for panel installation		
				B3			Flat bracket for pipe installation (2"pipe)		
				D0			Drain/vent valve at the face of flange back		
				D1			side drain/vent valve on the top of flange		
				D2			side drain/vent valve under the flange		
				P			1/4-18NPT cone tube negative thread		
				J			Joint of "丁" shape: positive tread of m20×1.5 and back welded lead-pressure tube (stainless steel)		
				N			N-type joint: 1/2-14NPT cone tube negative thread		
				C12			1/2-14NPT lead pressure transition joint and back welded lead pressure pipe (stainless steel)		
Explosion proof rank					S		Standard (without explosion proof)		
					I		Intrinsic safety ExiaIICT6 or ExiaIICT6 (ordinary)		
					D		Isolated explosion ExdIIBT5 or ExdIICT6		
Accuracy rank						2	o.2		
						5	0.5		
						7	0.075(intelligent) can be selected		
Option gives an example	WIDE PLUS-AP5E22M4B1D0JS2								

- Note: If choose the product of explosion-proof intrinsic safety which need to take the meter, only can take the pointer meter

➢ **Type spectrum table for WIDE PLUS –DR / ADR series micro differential pressure transmitter**

Model							**Explanation**
WIDEPLUS	□	-□	□□	□□	□	□	

-DR							1151 micro differential pressure transmitter		
-ADR							11151 intelligent micro differential pressure transmitter		
Measuring range							Measuring range		Working static pressure
	2A						0～0.11～1.6kpa		1Mpa
	2B						0～0.11～1.6kpa		2.5Mpa
	2C						0～0.11～1.6kpa		4Mpa
Output		E					General analog type (4～20mADC with adjustable damping)		
		I					Standard intelligent type (4～20mADC (keystroke setting with HART protocol)		
		J					Standard intelligent type (4～20mADC output is √△P with adjustable damp)		
Construction material							Flanged joint	Drain/ vent valve	Isolation diaphragm
			12				Carbon steel with cadmium plating	316 stainless steel	316stainless stee
			13				Carbon steel with cadmium plating	Hutchinson alloy C	Hutchinson alloy C
			14				Carbon steel with cadmium plating	Monel metal	Monel
			15				Carbon steel with cadmium plating	316stainless steel	Tantalum
			22				316stainless steel	316stainless steel	316SST
			23				316stainless steel	316stainless steel	Hutchinson alloy C
			24				316stainless steel	316stainless steel	Monel
			25				316stainless steel	316stainless steel	Tantalum
			33				Hutchinson alloy C	Hutchinson alloy C	Hutchinson alloy C
			35				Hutchinson alloy C	Hutchinson alloy C	Tantalum
			44				Monel	Monel	Monel
Option				M1			linear indicator (0～100% scale)		
				M2			square root pointer meter (0～100% scale)		
				M3			LCD digital range display (liquid crystal)		
				M4			LED digital range display (numeral tube)		
				M5			0～100% of LCD digital range display (liquid crystal)		
				M6			0～100% of LED digital range display(numeral tube)		
				B1			Bending bracket for pipe installation (2" pipe)		
				B2			Bending bracket for panel installation		
				B3			Flat bracket for pipe installation (2"pipe)		
				D0			Drain/vent valve at the fore-end of flanged back		
				D1			side drain/vent valve on the top of flange		
				D2			side drain/vent valve at the under part of flange		
				P			1/4-18NPT cone tube negative thread		
				J			Joint of "丁" shape: positive tread of M20×1.5 and back welded lead-pressure tube (stainless steel)		
				N			N-type joint: 1/2-14NPT cone tube negative thread		
				C12			1/2-14NPT lead pressure transition joint and back welded lead pressure pipe (stainless steel)		
Explosion proof rank					S		Standard (without explosion proof)		
					I		Intrinsic safety ExiaIICT6 or ExibIICT6 (ordinary)		
					D		Isolated explosion ExdIIBT5 or ExdIICT6		
Accuracy rank						2	o.2		
						5	0.5		
						7	0.075(intelligent) can be selected		
Option gives an example	WIDE PLUS-DR2AEM4B3D2JS2								

● Note: If choose the product of explosion-proof intrinsic safety which need to take the meter,

only can take the pointer meter

- **Spectrum table for WIDE PLUS-DP/ADP series low, medium, high differential pressure transmitter**

Model							Explanation		
WIDE PLUS	□	□	-□□	□□	□	□			
-DP							1151 shape of low、medium and high differential transmitter		
-ADP							1151 shape of low、medium and high differential transmitter (HART agreement)		
Measuring range							Measuring range	Working static pressure	
	3						0～1～6kpa	4MPa	
	4						0～6～40kpa	10MPa	
	5						0～40～200kpa	10MPa	
	6						0～160～700kpa	10MPa	
	7						0～0.4～2MPa	10MPa	
	8						0～1.6～6.8MPa	10MPa	
Output		E					General analog type (4～20mADC with adjustable damping)		
		I					Standard intelligent type (4～20mADC (keystroke setting with HART protocol)		
		J					Standard intelligent type (4～20mADC output is √△P with adjustable damp)		
Construction material							Flanged joint	Drain/vent valve	Isolation diaphragm
			12				Carbon steel with cadmium plating	316 stainless steel	316SST
			13				Carbon steel with cadmium plating	Hutchinson alloy C	Hutchinson alloy C
			14				Carbon steel with cadmium plating	Monel metal	Monel
			15				Carbon steel with cadmium plating	316 stainless steel	Tantalum
			22				316 stainless steel	316 stainless steel	316 stainless steel
			23				316 stainless steel	316 stainless steel	Hutchinson alloy C
			24				316 stainless steel	316 stainless steel	Monel
			25				316 stainless steel	316 stainless steel	Tantalum
			33				Hutchinson alloy C	Hutchinson alloy C	Hutchinson alloy C
			35				Hutchinson alloy C	Hutchinson alloy C	Tantalum
			44				Monel	Monel	Monel
Option				M1			linear indicator (0～100% scale)		
				M2			square root pointer meter (0～100% scale)		
				M3			LCD digital range display (liquid crystal)		
				M4			LED digital range display (numeral tube)		
				M5			0～100% of LCD digital range display (liquid crystal)		
				M6			0～100% of LED digital range display(numeral tube)		
				B1			Bending bracket for pipe installation (2" pipe)		
				B2			Bending bracket for panel installation		
				B3			Flat bracket for pipe installation (2"pipe)		
				D0			Drain/vent valve at the fore-end of flanged back		
				D1			side drain/vent valve on the top of flanged		
				D2			side drain/vent valve at the under part of flanged		

		P			1/4-18NPT cone tube negative thread
		J			Joint of "丁" shape: positive tread of m20×1.5 and back welded lead-pressure tube (stainless steel)
		N			N-type joint: 1/2-14NPT cone tube negative thread
		C12			1/2-14NPT lead pressure transition joint and back welded lead pressure pipe (stainless steel)
Explosion –proof rank			S		Standard (without explosion proof)
			I		Intrinsic safety ExiaIICT6 or ExibIICT6 (ordinary)
			D		Isolated explosion ExdIIBT5 or ExdIICT6
Accuracy rank				2	o.2
				5	0.5
				7	0.075(intelligent)
Option gives an example	WIDE PLUS-DP3E22M4B1D0JS2				

● Note: If choose the product with explosion-proof intrinsic safety which need to take the head, only can take the pointer head

.> Spectrum table for WIDE PLUS –HP/AHP series high static differential pressure transmitter

Model							**Explanation**		
WIDEPLUS	□□	□	-□□	□□	□	□			
-BHP							1151 high static pressure transmitter		
-BAHP							1151Intelligent high static pressure transmitter		
Measuring range							Measuring range	Working static	
	3A						0～1～6kpa	4MPa	
	4A						0～6～40kpa	25MPa	
	5A						0～40～200kpa	25MPa	
	6A						0～160～1MPa	25MPa	
	7A						0～0.4～2.5MPa	25MPa	
	4B						0～6～40kpa	32MPa	
	5B						0～40～200kpa	32MPa	
	6B						0～160～1MPa	32MPa	
	7B						0～0.4～2.5MPa	32MPa	
Output		E					General analog type (4～20mADC with adjustable damping)		
		I					Standard intelligent type (4～20mADC (keystroke setting with HART protocol)		
		J					Standard intelligent type (4～20mADC output is √△P with adjustable damp)		
Construction material							Flanged joint	Drain/vent valve	Isolation diaphragm
			12				Carbon steel with cadmium plating	316 SST	316SST
			13				Carbon steel with cadmium plating	Hutchinson alloy C	Hutchinson alloy C
			14				Carbon steel with cadmium plating	Monel metal	Monel
			15				Carbon steel with cadmium plating	316SST	Tantalum
			22				316SST	316SST	316SST
			23				316SST	316SST	Hutchinson alloy C
			24				316SST	316SST	Monel
			25				316SST	316SST	Tantalum
			33				Hutchinson alloy C	Hutchinson alloy C	Hutchinson alloy C
			35				Hutchinson alloy C	Hutchinson alloy C	Tantalum
			44				Monel	Monel	Monel
Option				M1			linear indicator (0～100% scale)		
				M2			square root pointer meter (0～100% scale)		
				M3			LCD digital range display (liquid crystal)		
				M4			LED digital range display (numeral tube)		
				M5			0～100% of LCD digital range display (liquid crystal)		
				M6			0～100% of LED digital range display(numeral tube)		

		B1			Bending bracket for pipe installation (2" pipe)
		B2			Bending bracket for panel installation
		B3			Flat bracket for pipe installation (2"pipe)
		D0			Drain/vent valve at the fore-end of flanged back
		D1			side drain/vent valve on the top of flanged
		D2			side drain/vent valve at the under part of flanged
		P			1/4-18NPT cone tube negative thread
		J			Joint of "丁" shape: positive tread of m20×1.5 and back welded lead-pressure tube (stainless steel)
		N			N-type joint: 1/2-14NPT cone tube negative thread
		C12			1/2-14NPT lead pressure transition joint and back welded lead pressure pipe (stainless steel)
Explosion –proof rank			S		Standard (without explosion proof)
			I		Intrinsic safety ExiaIICT6 or ExibIICT6 (ordinary)
			D		Isolated explosion ExdIIBT5 or ExdIICT6
Accuracy rank				2	o.2
				5	0.5
				7	0.075(intelligent may be choose)
Option gives an example	WIDE PLUS –HP3AE22M1B3D0JS2				

Note: If choose the product of explosion-proof intrinsic safety which need to take the meter, only can take the pointer meter.

- **Type spectrum table for WIDE PLUS –LT/ALT single-flange pressure / liquid-level transmitter**

Model										**Explanation**			
WIDEPLUS	□	□	□□	□	□□	□	□□	□	□				
-LT										1151 shape single-flange pressure transmitter			
-ALT										1151 shape intelligent single-flange pressure transmitter			
Measuring range	4									0～6～40kpa			
	5									0～40～200kpa			
	6									0～160～700kpa			
	7									0～0.4～2Mpa			
Output		E								General analog type (4～20mADC with adjustable damping)			
		I								Standard intelligent type (4～20mADC (keystroke setting with HART protocol)			
inserted length										Dimension	inserted length	High pressure side membrane	
			A0							3″	0	316L SST	
			A2							3″	50mm (¢66)	316L SST	
			A4							3″	100mm (¢66)	316L SST	
			A6							3″	150mm (¢66)	316L SST	
			B0							4″	0	316L SST	
			B2							4″	50mm (¢89)	316L SST	
			B4							4″	100mm (¢89)	316L SST	
			B6							4″	150mm (¢89)	316L SST	
Flange dimension				A						3″ ,150lb			
				B						4″ ,150lb			
				C						3″ ,300lb			
				D						4″ ,300lb			
Construction material										Low pressure side flange joint	Drain/vent valve	Low pressure side isolation diaphragm	Filled liquid

		12					Carbon steel with cadmium plating	316 SST	316 SST	Silicon oil
		22					316SST	316 SST	316 SST	Silicon oil
		1A					Carbon steel with cadmium plating	316 SST	316 SST	Inert liquid
		2A					316 SST	316 SST	316 SST	Inert liquid
Filled liquid at high pressure side			D				Silicon oil			
			F				Inert liquid			
Option				M1			linear indicator (0～100% scale)			
				M3			LCD digital range display (liquid crystal)			
				M4			LED digital range display (numeral pipe)			
				M5			0～100% LCD digital range display (liquid crystal)			
				M6			0～100% LED digital range display (numeral pipe)			
Explosion-pr of rank					S		Standard (without explosion proof)			
					I		Intrinsic safety ExiaIICT6 or ExibIICT6 ordinary)			
					D		Isolated explosion ExdIIBT5 or ExdIICT6			
Accuracy grade						2	0.2			
						5	0.5			
Option gives an example	WIDE PLUS –LT4EA0A22DM4S2									

Note: If choose the product of explosion-proof intrinsic safety which need to take the meter, only can take the pointer meter.

- **Type spectrum table for WIDE PLUS –DP/ADP remote pressure/differential pressure transmitter**

Model									**Explanation**		
WIDEPLUS	-□□□	□	□	□□	□□	□□	□	□			
Measuring type	DP								1151 shape remote differential pressure transmitter		
	GP								1151 shape remote pressure transmitter		
	ADP								1151 shape intelligent remote differential pressure transmitter (HART agreement)		
	AGP								1151 shape intelligent remote pressure transmitter (HART agreement)		
Measuring range		4							0～6～40kpa		
		5							0～40～200kpa		
		6							0～160～700kpa		
		7							0～0.4～2Mpa		
Output			E						General analog type (4～20mADC with adjustable damping)		
			I						Standard intelligent type (4～20mADC (keystroke setting with HART protocol)		
			J						Standard intelligent type (4～20mADC output is √△P with adjustable damp)		
Construction material									Flanged joint	Plug	Isolation diaphragm
				22					316SST	316SST	316L SST
Remote-transmitter device					S1				One remote device		
					S2				Two remote devices		
Option						M1			linear indicator (0～100% scale)		
						M2			square root pointer meter (0～100% scale)		

		M3			LCD digital range display (liquid crystal)
		M4			LED digital range display (numeral tube)
		M5			0～100% of LCD digital range display (liquid crystal)
		M6			0～100% of LED digital range display(numeral tube)
		B1			Bending bracket for pipe installation (2" pipe)
		B2			Bending bracket for panel installation
		B3			Flat bracket for pipe installation (2"pipe)
Explosion-proof grade			S		Standard (without explosion proof)
			I		Intrinsic safety ExiaIICT6 or ExibIICT6 (ordinary)
			D		Isolated explosion ExdIIBT5 or ExdIICT6
Accuracy grade				2	0.2
				5	0.5
Option gives an example	WIDE PLUS –DP4E22S2M4B3S2				

- Note: If choose the product of explosion-proof intrinsic safety which need to take the meter, only can take the pointer meter.
- Note: DP/GP remote pressure transmitter provides a reliable survey method of which can avoid measured medium direct contacts with isolation membrane of the transmitter. It applies for the following some condition:

1. When measured medium has corrosion action on transmitter joint and pressure sensing component
2. When need to isolate between high-temperature measured medium and transmitter
3. There are fixed suspension or highly viscous in the measured medium and easily clogged transmitter
4. As change of environmental temperature or flow temperature, be measured medium occurs solidification or crystallization.
5. Be measured medium is changed which need to flush, but not cross mixture
6. Must remain hygiene condition:
   DP/GP type remote pressure transmitter with remote diaphragms has still various characteristics for differential pressure/pressure transmitter. Various type of remoter device on which provides model to users, please look into it while ordering

【WIDE PLUS remote device meter (1151 shape)】

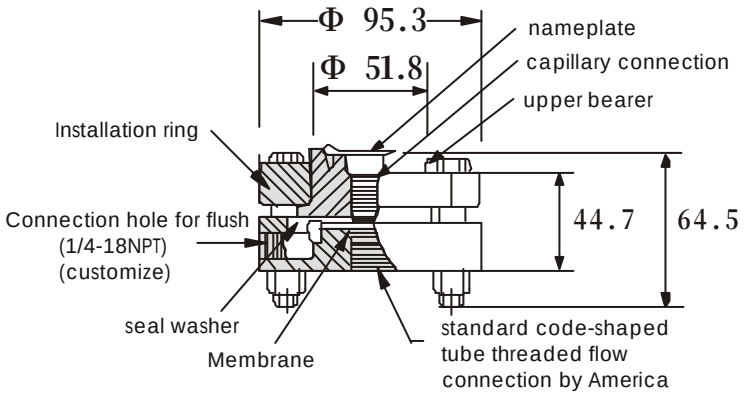
➢ **WIDE PLUS-RTW thread type remote device meter**

Place an order for transmitter from the model specification, choosing the "fill oil" from sheet Ⅵ, choosing the capillary from Ⅶ .

model					Explanation
WIEPLUS-RTW					
Hole use for flush	11				No
	12				have
Membrane material for remote device		A			316 stainless steel
		B			Hutchinson C-276
		C			Tantalum
Structural material			11		Upper bearing is 316 stainless-steel, the install ring is galvanized carbon steel, and the gasket is white asbestos or fluorine rubber
			21		Upper bearing is 316 stainless-steel, the install ring is 316 stainless- steel, and the gasket is white asbestos or fluorine rubber
Material of lower bearer				A	316 stainless steel
				B	Hutchinson C
Connection hole of lead pressure				11	1/4-18" NPT(cone-shaped tube thread)
				12	3/8NPT
				13	1/2-14"NPT
				15	1"NPT
				17	1 1/2" NPT(not have hole for flush)
Example for model	WIDEPLUS-RTW21A21A13				

Note: if need special material , please contact our company to customize it.

➢ **Dimension drawing for WIDEPLUS-RTW series thread installation remote device (unit: mm)**



➢ Type spectrum table for WIDEPLUS-RFW flange type remote device

Place an order for transmitter from the model specification, choosing the "fill oil" from sheet Ⅵ, choosing the capillary from Ⅶ.

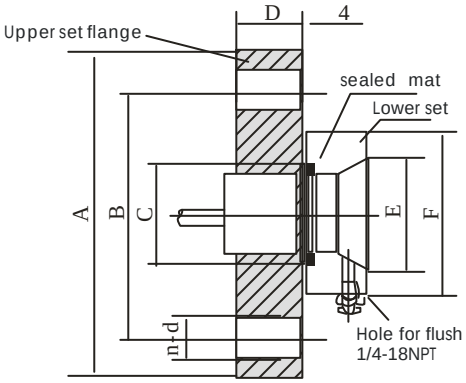
Model					Instruction		
WIEPLUS-RTW	□□	□	□□	□□□			
Spare hole for flush	11				no		
	21				Have		
Membrane material of remote device		A			316L stainless-steel		
		B			Hutchinson C-276		
		C			Tantalum		
Structural			11		Upper bearer is 316 stainless-steel, the install ring is galvanized carbon steel, and the gasket is white asbestos or fluorine rubber		
Material			21		Upper bearer is 316 stainless-steel, the install ring is 316 stainless-steel, and the gasket is white asbestos or fluorine rubber		
Measure and materials of lower set				Code	Measure of low set dimension	The max working pressure	Low set material
				A21	1"	150lb	316 stainless steel
				B21	1"	150lb	Hutchinson C-276
				E21	1"	150lb	Carbon steel
				A41	1-1 1/2"	150lb	316stainless-steel
				B41	1-1 1/2"	150lb	HutchinsonC-276
				E41	1-1 1/2"	150lb	Carbon steel
				A51	2"	150lb	316stainless-steel
				B51	2"	150lb	HutchinsonC-276
				E51	2"	150lb	Carbon steel
				A71	3"	150lb	316stainless-steel
				B71	3"	150lb	HutchinsonC-276
				E71	3"	150lb	Carbon steel
				A22	1"	300lb	316stainless-steel
				B22	1"	300lb	HutchinsonC-276
				E22	1"	300lb	Carbon steel
				A42	1-1 1/2"	300lb	316stainless-steel
				B42	1-1 1/2"	300lb	HutchinsonC-276
				E42	1-1 1/2"	300lb	Carbon steel
				A52	2"	300lb	316stainless-steel
				B52	2"	300lb	HutchinsonC-276
				E52	2"	300lb	Carbon steel
				A72	3"	300lb	316stainless-steel
				B72	3"	300lb	HutchinsonC-276
				E72	3"	300lb	Carbon steel
Example				WIDEPLUS-RFW11A11A51			

NOTE: if need special material , please contact our company to customize it.

➢ Type spectrum table for WIDEPLUS-RFW series flange remote device

common caliber (inch)	Pressure (class/Mpa)	Diameter of Protruding platform C	Outside diameter	Thickness D	Center distance Between Screw B	Screw quantity n	Diameter of keyhole	Diameter E(mm)	Diameter F(mm)
1"	150/2	61.4	108	14.3	79.4	4	16	26.9	66.5
	300/5	66.9	124	17.2	88.9	4	20		
1 1/2"	150/2	73	127	17.2	98.4	4	16	41.9	78.7
	300/5	73	156	20.7	114.5	4	23		
2"	150/2	92.1	152	19.1	120.6	4	20	52.5	95.2
	300/5	92.1	165	22.2	127.0	8	20		
3"	150/2	127	191	23.8	152.4	4	20	79	127
	300/5	127	210	25.5	168.3	8	22		

➢ Dimension drawing for WIDEPLUS-RTW series threaded installation remote device (unit: mm)

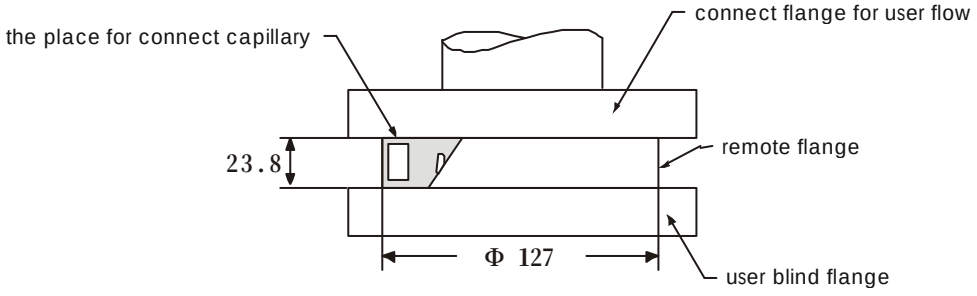


➢ Type spectrum table for WIDEPLUS-PFW series tabular type remoter device

Model				Explanation
WIDEPLUS-PFW	□□	□	□□	
Hole for flush	11			Standard 3"-1501b and 300lb
Membrane material for remote device		A		316stainless-steel
		B		Hutchison C-276
		C		tantalum
Shell material			11	316SST
Example for model	WIDEPLUS-PFW11A11			

NOTE: if need special material , please contact our company to customize it.

➢ Dimension drawing for WIDEPLUS-PFW series flanged remote device

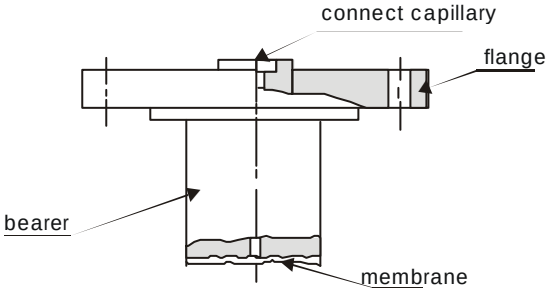


➢ **Type spectrum table for WIDEPLUS-EPW series insert drum type remote device**

Model					Instruction
WIDEPLUS-PFW	□□	□	□□	□□□	
The diameter and material of insert drum	11				3(Φ66 mm) 316 stainless-steel
	12				3"(Φ66 mm)Hutchinson alloy (custom-built)
	13				4"(Φ89 mm) 316 stainless-steel
Membrane material		A			316 stainless-steel
		B			Hutchinson C-276
		C			Tantalum
The length of insert drum			20		50 mm
			40		100 mm
			60		150 mm
Flange specification				A11	The highest working pressure of 150lb is 1.89 MPa
				A12	The highest working pressure of 300lb is 4.9 MPa
Example for choosing model	WIDEPLUS-EPW11A20				

NOTE: if need special material , please contact our company to customize it.

➢ **The diagram for WIDEPLUS-EFW series insert canister type remote device**



➢ **Type spectrum table for WIDEPLUS remote device filled fluid**

Model		Explanation
WIDEPLUS	--□□□□□□□□	
The diameter and material of Insert drum	C10485-007	Silicon oil(lower temperature) Steady range: -29-149
	C61734-0001	Steady range of Inert liquid: -18-204
	C1199-0032-0004	Steady range of Inert liquid: -15-315

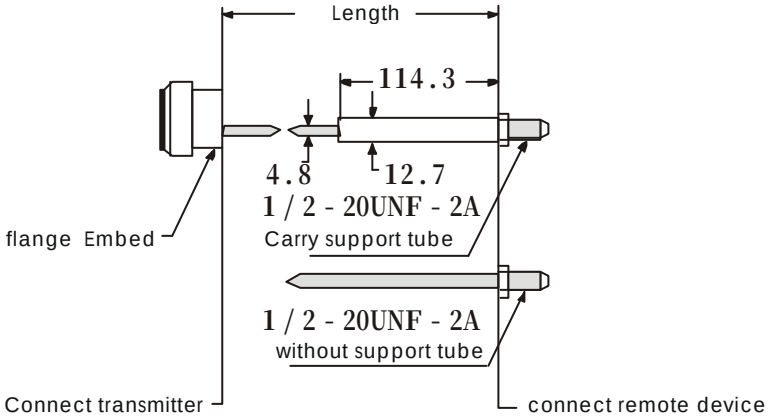
NOTE: if need special material , please contact our company to customize it.

> Spectrum table for WIDEPLUS-CAP capillary

Model					Explanation	
WIDEPLUS-CAP	□□	□□	□	□□		
Measure of material	13				1.09 mm, 316 stainless-steel	
The length of capillary		05			1.5m	This length is just for single side remoter length
		10			3m	
		15			4.5m	
		20			6m	
		25			7.5m	
Terminal accessory of remote device			A			1/2 –20UNF-2A screw without support tube
			B			1/2 –20UNF-2A screw with support tube
Protect tube cover				11		Armored 304 stainless-steel series
				12		Not indicate PVC jacket, armored 304
Example	WIDEPLUS-CAP1305A11					

NOTE: if need special material , please contact our company to customize it.

➢ Dimension drawing for WIDEPLUS-CAP capillary (unit: mm)



【WIDEPLUS-B series pressure/different pressure/ P transmitter (3051 shape)】

- **Outline drawing**

- **Summary of products**

WIDEPLUS-B series pressure/ different pressure/P transmitter adopts the advanced microprocessor technology and digit communication technology. Besides having all the functions of normal intelligent type. It also has a series of enhance function. Such as: zero position automatic regulation, remote control parameter locally reference from far away and adjust control parameter pass number locked. And so on. It also can carry though remote parameter enactment, remote control , self-diagnoses etc function by field bus HART protocal.

- **Main characteristics**

・High accuracy, little temperature impact
・zero automatic regulation
・Stability: micro different pressure: 0.02%FS/year
Usual different pressure: 0.025%FS/year
・Control parameter cipher locked, make sure security.
・Weight lightly, small volume
・The ratio of measuring range is big
・Software compensation
・While changing range may be not lead-in pressure
・The failure self-diagnosis
・Waterproof, dust-proof, shockproof, explosion-proof, corrosion-proof
・Linear and evolution output combine
・Field bus HART protocol communication

- **Technical parameter**

Measuring medium liquid, gas and stream

Measuring range differential pressure 0～0.1 KPa to 0～10 MPa

Relative pressure max 0～40 MPa min 0～0.1 KPa

absolute pressure max 0～25 MPa min 0～20 KPa

negative relative pressure (-0.1～2.0) MPa

rate of range removal 100：1

communications output power voltage: 16.4 V～42 V DC (16.4 V～30 V DC intrinsic safety type)

communications distance: 2 Km when using CEV cable

load capacity: the below 0.22 μF

load induction: the below 3.3 mH

space with power line: above15 cm

connect to input impedance of receiving instrument which the receiving resistance is connected: above 10 KΩ when2.4 KHz

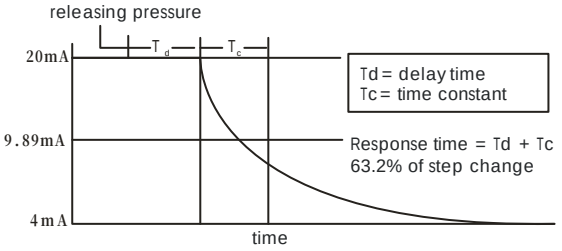
output signal 4 mA～20 mA DC two wire system

accuracy 0.75 grade, 0.2 grade. 0.5 grade

environmental temperature –40℃～85 ℃

storage temperature -50℃～110℃

Explosion-proof rank intrinsic
- safety type ExibⅡCT6 or ExibⅡCT6
- explosion-proof type ExdⅡBT5 or ExdⅡCT6
- Dynamic performance delay time and renovation rate suitable for all models and range for, which only limits analog output
- delay time (Td): 45 ms (normal value)
- renovation rate: 22 times / s
- entire responding time: (Td + Tc)



typical responding time of intelligent transmitter

Effect of environmental temperature change zero drift 0.5%FS/50℃

range drift 0.7%FS/50℃

Measuring medium temperature –40℃～100℃

Relative humidity 0～100% RH

Effect of power voltage variation ±0.005% FS/V

Effect of installation position variation

The maximum may cause 0.25 KPa zero errors, but can adjust, does have not the influence to the measuring range. The survey main body relative flange rotation does not have the influence.

"O" type sealing ring fluorine rubber, nitrile rubber

Filled fluid silicon oil or inert oil

Starting time The transmitter reaches performance index within power up 2 s

Damping time the transmitter reaches performance indication within power up 2 s, the response time of which analog output respond to input is a time constant (0～36 s) selected by user. This software setup damping valve not include response time of sensor membrane.

Bolt stainless steel

Lead-pressure connection unit flange 1/4 –18 NPT center space 54 mm; joint 1/2 –14 NPT or M 20 ×1.5 positive thread; when spherical cone section sealed with joint, the center space is 50.8, 54, 57.2 mm

Connection unit material refer to "type spectrum table"

Shell low copper Alumimium alloy shell, 1/2 –14 NPT, G1/2 and M 20×1.5. HART interface fixed on the terminal piece

Protection grade IP67

Field indication 100% indicating meter (selection)

LCD digital display (selection)

LED digital display (selection)

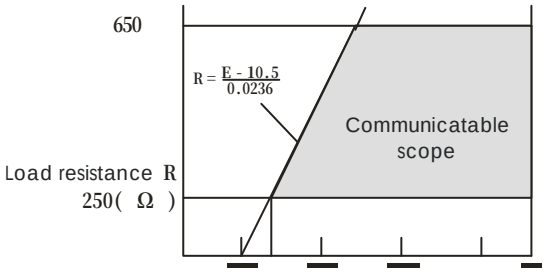
External adjusting zero continuous to regulating or adjustment by software

Resolution: 0.05% of range

The scope of zero removal negative direction removal and positive direction removal both can at lower/upper limit value of measure scope, and setup within measure scope of various sensor

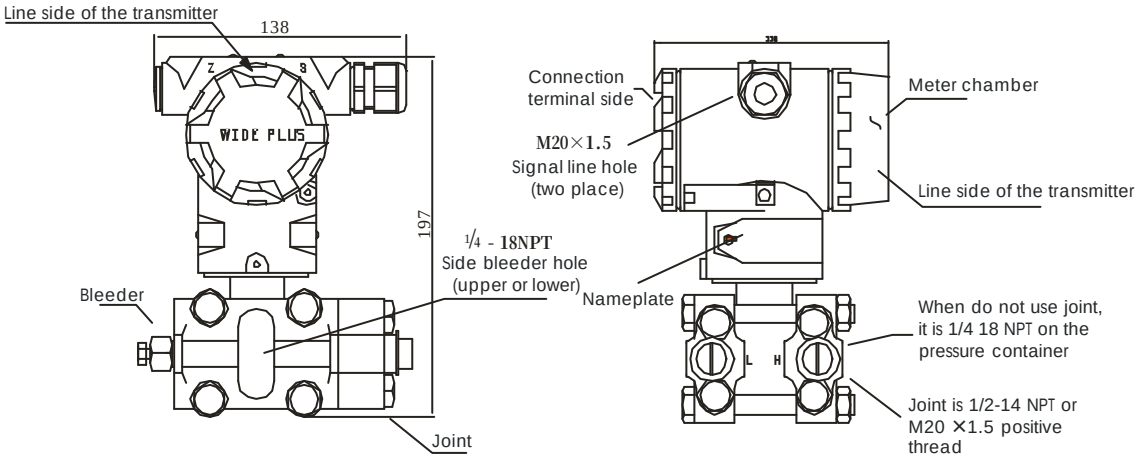
Weight 3.5 Kg (do not include selection)

- **Load characteristics**



Relation between power voltage and load resistance

- **Outline dimension (unit: mm)**



Range (MPa)	0～0.001 to 0～0.006 0～0.006 to 0～0.04 0～0.04 to 0～0.20	0～0.16 to 0～1	0～0.4 to 0～2.5	0～1.6 to 0～10	0～4 to 0～25
A (mm)	54	55.2	55.6	57.2	57.6

- **Application scope**

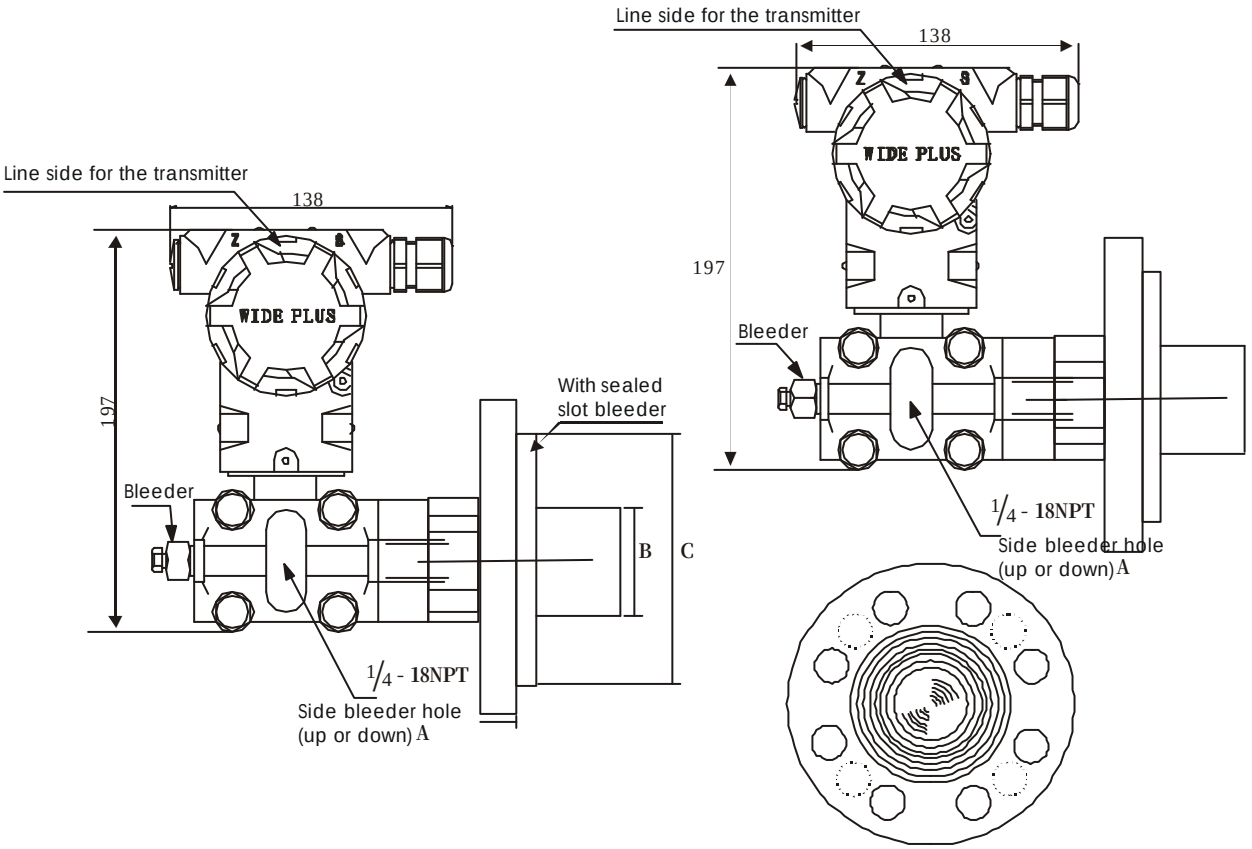
※ WIDE PLUS –BLT series single-flange pressure transmitter (3051 shape)

➢ Outline drawing

➢ Characteristics

- Measuring object: liquid level of open or sealed container
- Measuring accuracy for liquid level is 0.25%
- measuring range: 6 KPa～2000 KPa
- 3-/4-inch flat diaphragm type or extened type diaphragm
- Many filled oil choose, where may conform to various requirements for application
- Damping is adjustable
- Meet liquid-level material: stainless steel, Hutchison Alloy C-276 and Tantalum

➢ Outline dimension (unit: mm)



Flanged dimension and bolthole specification

Flanged dimension (mm)							Bolt hole (mm)		
Order code	Dimension	Rated pressure	External diameter	A	B	C	Number	Hole diameter	Hole distribute diameter
A	3"	150 lb	190.5	30	66	127	4	19	152
B	4"	150 lb	228.6	30	89	157	8	19	190
C	3"	300 lb	209.6	35	66	127	8	22.2	168
D	4"	300 lb	254.0	38	89	157	8	22.2	200

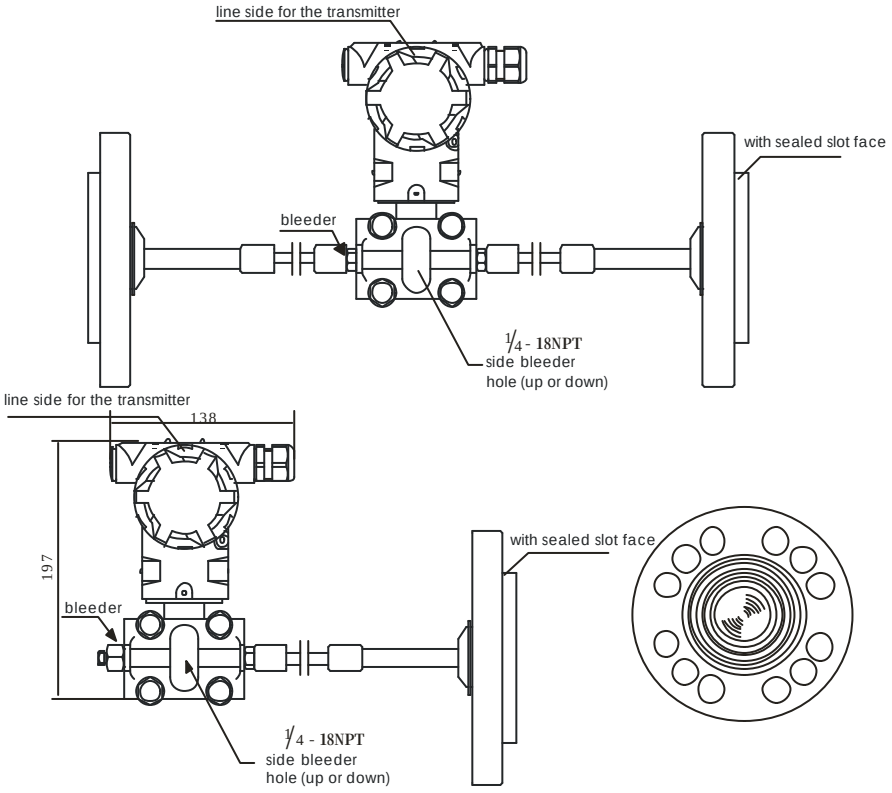
※ WIDE PLUS –BGP/BDP series remote pressure / differential pressure transmitter (3051 shape)

➢ Outline drawing

➢ Characteristics

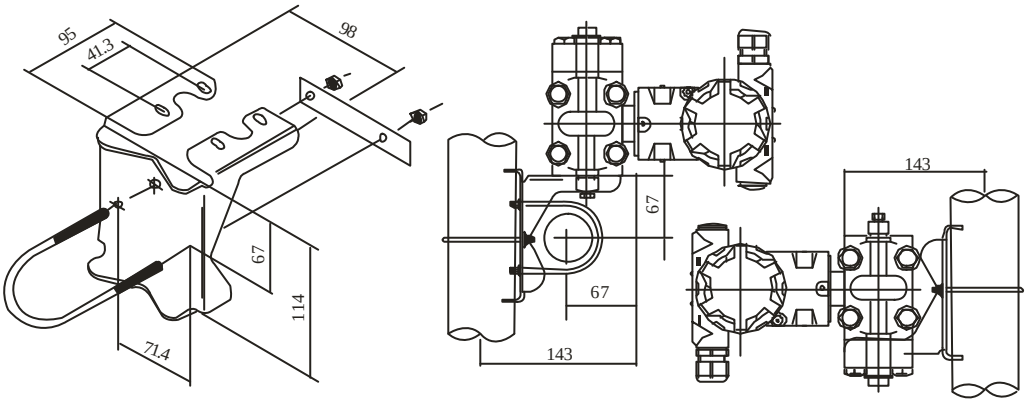
- measuring object: high temperature corrosion or viscous fluid
- measuring accuracy for liquid level is 0.25%
- measuring range: 6 KPa～2000 KPa
- 3-/4-inch flat diaphragm type or extened type diaphragm
- many filled oil choose, where may conform to various application requirements
- damping is adjustable
- meet liquid-level material: stainless steel, Hutchison Alloy C-276 and Tantalum

➢ Outline dimension (unit: mm)

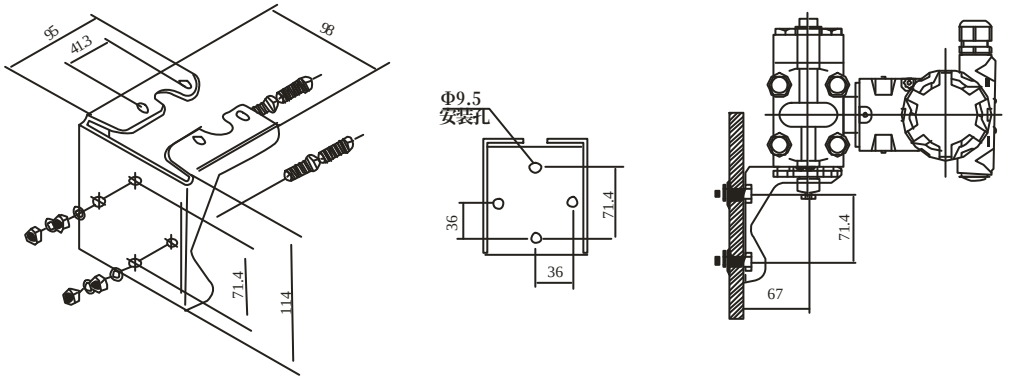


- **Enclosure**

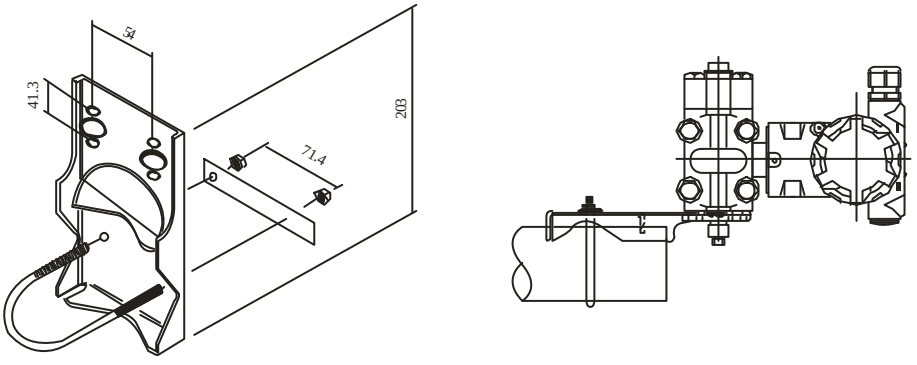
> > Installation support



tube-mounting bended support

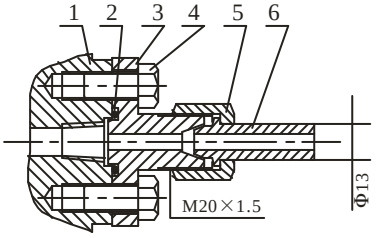


disk-mounting bended support



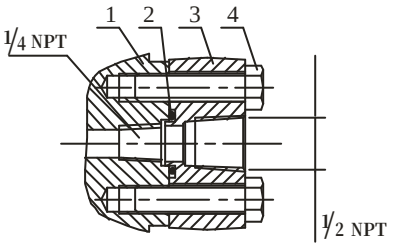
tube-mounting flat support

- **Lead pressure connector as follows**



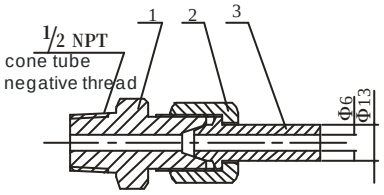
A1. connection of cone tube negative thread (option code "/N")

1. pressure chamber flange for the transmitter
2. "O"-type ring
3. cone tube negative thread with connection joint
4. bolt



A2. 1/2–14 NPT lead pressure transition joint and back welding lead-pressure tube (code "C12")

1. 1/2 –14 NPT transition joint connects with spherical cone
2. nut M20 ×1.5
3. spherical joint (Φ13 place may be welded with lead pressure tube)



A3. T shape joint connection (code "J")

1. pressure chamber flange for the transmitter
2. "O"-type ring
3. spherical cones connect joint M20×1.5 positive thread
4. bolt
5. nut
6. spherical joint (Φ13 place may be welded with lead pressure tube)

➢ **Type spectrum table for WIDE PLUS –BGP/BAGP series pressure transmitter**

Model							Explanation		
WIDEPLUS	□	□	□□	□□	□	□			
-BGP							3051 shape pressure transmitter		
-BAGP							3051 shape intelligent pressure transmitter		
Measuring range	3						0～1～6kpa		
	4						0～6～40kpa		
	5						0～40～200kpa		
	6						0～160～1000kpa		
	7						0～0.4～2.5MPa		
	8						0～1.6～6.8MPa		
	9						0～4～25MPa		
Output		E					General analog type (4～20mADC with adjustable damping)		
		I					Standard intelligent type (4～20mADC (keystroke setting with HART protocol)		
Construction materials							Flanged joint	Drain/vent valve	Isolation diaphragm
			12				Carbon steel with cadmium plating	316 SST	316SST
			13				Carbon steel with cadmium plating	Hutchinson alloy C	Hutchinson alloy C
			14				Carbon steel with cadmium plating	Monel metal	Monel
			15				Carbon steel with cadmium plating	316SST	Tantalum
			22				316SST	316SST	316SST
			23				316SST	316SST	Hutchinson alloy C
			24				316SST	316SST	Monel
			25				316SST	316SST	Tantalum

		33				Hutchinson alloy C	Hutchinson alloy C	Hutchinson alloy C
		35				Hutchinson alloy C	Hutchinson alloy C	Tantalum
		44				Monel	Monel	Monel
Option			M1			linear indicator (0～100% scale)		
			M3			LCD digital range display (liquid crystal)		
			M4			LED digital range display (numeral tube)		
			M5			0～100% of LCD digital range display (liquid crystal)		
			M6			0～100% of LED digital range display (numeral tube		
			B1			Bending bracket for pipe installation (2" pipe)		
			B2			Bending bracket for panel installation		
			B3			Flat bracket for pipe installation (2"pipe)		
			D0			Drain/vent valve at the fore-end of flange back		
			D1			side drain/vent valve on the top of flange		
			D2			side drain/vent valve under the flange		
			P			1/4-18NPT cone tube negative thread		
			J			Joint of "J" shape: positive tread of m20×1.5 and back welded lead-pressure tube (stainless steel)		
			N			N-type joint: 1/2-14NPT cone tube negative thread		
			C12			1/2-14NPT lead pressure transition joint and back welded lead pressure pipe (stainless steel)		
Explosion proof rank				S		Standard (without explosion proof)		
				I		Intrinsic safety ExiaIICT6 or ExibIICT6 (commonly choice)		
				D		Isolated explosion ExdIIBT5 or ExdIICT6		
Accuracy rank					2	o.2		
					5	0.5		
					7	0.075 (intelligent can be select)		
example	WIDE PLUS –BAGP3122M3B1D0JS2							

● Note: If choose the product with explosion-proof intrinsic safety which need to take the meter, only can take the pointer meter

➢ **Spectrum table for WIDE PLUS –BAP/BAAP series absolute pressure transmitter**

MODEL							**Explanation**		
WIDEPLUS	□	□	□□	□□	□	□			
-BAP							3051 shape absolute pressure transmitter		
-BAAP							3051 shape intelligent absolute pressure transmitter		
Measuring range	4						0～6～40kpa		
	5						0～40～200kpa		
	6						0～160～700kpa		
	7						0～0.17～2Mpa		
	8						0～0.67～6.8Mpa		
Output		E					General analog type (4～20mADC with adjustable damping)		
		I					Standard intelligent type (4～20mADC (keystroke setting with HART protocol)		
Construction material							Flanged joint	Drain/vent valve	Isolation diaphragm
			12				Carbon steel with cadmium plating	316 SST	316SST
			13				Carbon steel with cadmium plating	Hutchinson alloy C	Hutchinson alloy C
			14				Carbon steel with cadmium plating	Monel metal	Monel
			15				Carbon steel with cadmium plating	316SST	Tantalum
			22				316SST	316SST	316SST
			23				316SST	316SST	Hutchinson alloy C
			24				316SST	316SST	Monel
			25				316SST	316SST	Tantalum
			33				Hutchinson alloy C	Hutchinson alloy C	Hutchinson alloy C
			35				Hutchinson alloy C	Hutchinson alloy C	Tantalum
			44				Monel	Monel	Monel

Option		M1			Linear indicator (0～100% scale)
		M3			LCD digital range display (liquid crystal)
		M4			LED digital range display (numeral tube)
		M5			0～100% of LCD digital range display (liquid crystal)
		M6			0～100% of LED digital range display (numeral tube
		B1			Bending bracket for pipe installation (2" pipe)
		B2			Bending bracket for panel installation
		B3			Flat bracket for pipe installation (2"pipe)
		D0			Drain/vent valve at the fore-end of flange back
		D1			side drain/vent valve on the top of flange
		D2			side drain/vent valve under the flange
		P			1/4-18NPT cone tube negative thread
		J			Joint of "丁" shape: positive tread of m20×1.5 and back welded lead-pressure tube (stainless steel)
		N			N-type joint: 1/2-14NPT cone tube negative thread
		C12			1/2-14NPT lead pressure transition joint and back welded lead pressure pipe (stainless steel)
Explosion proof rank			S		Standard (without explosion proof)
			I		Intrinsic safety ExiaIICT6 or ExiaIICT6 (ordinary)
			D		Isolated explosion ExdIIBT5 or ExdIICT6
Accuracy rank				2	o.2
				5	0.5
				7	0.075(intelligent)
example	WIDE PLUS-BAAP5I22M3B1D0JS2				

● Note: If choose the product with explosion-proof intrinsic safety which need to take the meter, only can take the pointer meter

➢ **Type spectrum table for WIDE PLUS –BDR / BADR series micro differential pressure transmitter**

Model							**Explanation**		
WIDEPLUS	□	-□	□□	□□	□	□			
-BDR							3051 micro differential pressure transmitter		
-BADR							3051 intelligent micro differential pressure transmitter		
Measuring range							Measuring range		Working static pressure
	2A						0～0.11～1.6kpa		1Mpa
	2B						0～0.11～1.6kpa		2.5Mpa
	2C						0～0.11～1.6kpa		4Mpa
Output		E					General analog type (4～20mADC with adjustable damping)		
		I					Standard intelligent type (4～20mADC (keystroke setting with HART protocol)		
		J					Standard intelligent type (4～20mADC output is √△P with adjustable damp)		
Constructio n material							Flanged joint	Drain/ vent valve	Isolation diaphragm
			12				Carbon steel with cadmium plating	316 SST	316SST
			13				Carbon steel with cadmium plating	Hutchinson alloy C	Hutchinson alloy C
			14				Carbon steel with cadmium plating	Monel metal	Monel
			15				Carbon steel with cadmium plating	316SST	Tantalum
			22				316SST	316SST	316SST
			23				316SST	316SST	Hutchinson alloy C
			24				316SST	316SST	Monel
			25				316SST	316SST	Tantalum
			33				Hutchinson alloy C	Hutchinson alloy C	Hutchinson alloy C

		35				Hutchinson alloy C	Hutchinson alloy C	Tantalum
		44				Monel	Monel	Monel
Option			M1			linear indicator (0～100% scale)		
			M2			square root pointer meter (0～100% scale)		
			M3			LCD digital range display (liquid crystal)		
			M4			LED digital range display (numeral tube)		
			M5			0～100% of LCD digital range display (liquid crystal)		
			M6			0～100% of LED digital range display(numeral tube)		
			B1			Bending bracket for pipe installation (2" pipe)		
			B2			Bending bracket for panel installation		
			B3			Flat bracket for pipe installation (2"pipe)		
			D0			Drain/vent valve at the fore-end of flanged back		
			D1			side drain/vent valve on the top of flange		
			D2			side drain/vent valve under the flange		
			P			1/4-18NPT cone tube negative thread		
			J			Joint of "丁" shape: positive tread of m20×1.5 and back welded lead-pressure tube (stainless steel)		
			N			N-type joint: 1/2-14NPT cone tube negative thread		
			C12			1/2-14NPT lead pressure transition joint and back welded lead pressure pipe (stainless steel)		
Explosion proof rank				S		Standard (without explosion proof)		
				I		Intrinsic safety ExiaIICT6 or ExibIICT6 (ordinary)		
				D		Isolated explosion ExdIIBT5 or ExdIICT6		
Accuracy rank					2	o.2		
					5	0.5		
					7	0.075(intelligent)		
example	WIDE PLUS-BADR2A22M3B3D2JS2							

- Note: If choose the product with explosion-proof intrinsic safety which need to take the meter, only can take the pointer meter
-

➢ **Type spectrum table for WIDE PLUS-BDP/BADP series low, medium, high differential pressure transmitter**

Model							**Explanation**		
WIDE PLUS	□	□	-□□	□□	□	□			
-BDP							3051 shape of low、medium and high differential transmitter		
-BADP							3051 shape of low、medium and high differential transmitter (HART agreement)		
Measuring range							Measuring range	Working static pressure	
	3						0～1～6kpa	4MPa	
	4						0～6～40kpa	10MPa	
	5						0～40～200kpa	10MPa	
	6						0～160～700kpa	10MPa	
	7						0～0.4～2MPa	10MPa	
	8						0～1.6～6.8MPa	10MPa	
Output		E					General analog type (4～20mADC with adjustable damping)		
		I					Standard intelligent type (4～20mADC (keystroke setting with HART protocol)		
		J					Standard intelligent type (4～20mADC output is √△P with adjustable damp)		
Construction material							Flanged joint	Drain/vent valve	Isolation diaphragm
			12				Carbon steel with cadmium plating	316 SST	316SST
			13				Carbon steel with cadmium plating	Hutchinson alloy C	Hutchinson alloy C
			14				Carbon steel with cadmium plating	Monel metal	Monel

		15				Carbon steel with cadmium plating	316SST	Tantalum
		22				316SST	316SST	316SST
		23				316SST	316SST	Hutchinson alloy C
		24				316SST	316SST	Monel
		25				316SST	316SST	Tantalum
		33				Hutchinson alloy C	Hutchinson alloy C	Hutchinson alloy C
		35				Hutchinson alloy C	Hutchinson alloy C	Tantalum
		44				Monel	Monel	Monel
Option			M1			linear indicator (0～100% scale)		
			M2			square root pointer meter (0～100% scale)		
			M3			LCD digital range display (liquid crystal)		
			M4			LED digital range display (numeral tube)		
			M5			0～100% of LCD digital range display (liquid crystal)		
			M6			0～100% of LED digital range display(numeral tube)		
			B1			Bending bracket for pipe installation (2" pipe)		
			B2			Bending bracket for panel installation		
			B3			Flat bracket for pipe installation (2"pipe)		
			D0			Drain/vent valve at the fore-end of flanged back		
			D1			side drain/vent valve on the top of flange		
			D2			side drain/vent valve under the flange		
			P			1/4-18NPT cone tube negative thread		
			J			Joint of "丁" shape: positive tread of m20×1.5 and back welded lead-pressure tube (stainless steel)		
			N			N-type joint: 1/2-14NPT cone tube negative thread		
			C12			1/2-14NPT lead pressure transition joint and back welded lead pressure pipe (stainless steel)		
Explosion –proof rank				S		Standard (without explosion proof)		
				I		Intrinsic safety ExiaIICT6 or ExibIICT6 (ordinary)		
				D		Isolated explosion ExdIIBT5 or ExdIICT6		
Accuracy rank					2	o.2		
					5	0.5		
					7	0.075(intelligent)		
example	WIDE PLUS-BADP4I22M3B1D0JS2							

● Note: If choose the product with explosion-proof intrinsic safety which need to take the meter, only can take the pointer meter

.>Type spectrum table for WIDE PLUS –BHP/BAHP series high static differential pressure transmitter

Model							Explanation	
WIDEPLUS	□□	□	-□□	□□	□	□		
-BHP							3051 high static pressure transmitter	
-BAHP							3051 Intelligent high static pressure transmitter	
Measuring range							Measuring range	Working static
	3A						0～1～6kpa	4MPa
	4A						0～6～40kpa	25MPa
	5A						0～40～200kpa	25MPa
	6A						0～160～1MPa	25MPa
	7A						0～0.4～2.5MPa	25MPa
	4B						0～6～40kpa	32MPa
	5B						0～40～200kpa	32MPa
	6B						0～160～1MPa	32MPa
	7B						0～0.4～2.5MPa	32MPa
Output		E					General analog type (4～20mADC with adjustable damping)	
		I					Standard intelligent type (4～20mADC (keystroke setting with HART protocol)	
		J					Standard intelligent type (4～20mADC output is √△P with adjustable damp)	

Construction material						Flanged joint	Drain/vent valve	Isolation diaphragm
		12				Carbon steel with cadmium plating	316 SST	316SST
		13				Carbon steel with cadmium plating	Hutchinson alloy C	Hutchinson alloy C
		14				Carbon steel with cadmium plating	Monel metal	Monel
		15				Carbon steel with cadmium plating	316SST	Tantalum
		22				316SST	316SST	316SST
		23				316SST	316SST	Hutchinson alloy C
		24				316SST	316SST	Monel
		25				316SST	316SST	Tantalum
		33				Hutchinson alloy C	Hutchinson alloy C	Hutchinson alloy C
		35				Hutchinson alloy C	Hutchinson alloy C	Tantalum
		44				Monel	Monel	Monel
Option			M1			linear indicator (0～100% scale)		
			M2			square root pointer meter (0～100% scale)		
			M3			LCD digital range display (liquid crystal)		
			M4			LED digital range display (numeral tube)		
			M5			0～100% of LCD digital range display (liquid crystal)		
			M6			0～100% of LED digital range display(numeral tube)		
			B1			Bending bracket for pipe installation (2" pipe)		
			B2			Bending bracket for panel installation		
			B3			Flat bracket for pipe installation (2"pipe)		
			D0			Drain/vent valve at the fore-end of flanged back		
			D1			side drain/vent valve on the top of flange		
			D2			side drain/vent valve under the flange		
			P			1/4-18NPT cone tube negative thread		
			J			Joint of "丁" shape: positive tread of m20×1.5 and back welded lead-pressure tube (stainless steel)		
			N			N-type joint: 1/2-14NPT cone tube negative thread		
			C12			1/2-14NPT lead pressure transition joint and back welded lead pressure pipe (stainless steel)		
Explosion –proof rank				S		Standard (without explosion proof)		
				I		Intrinsic safety ExiaIICT6 or ExibIICT6 (ordinary)		
				D		Isolated explosion ExdIIBT5 or ExdIICT6		
Accuracy rank					2	o.2		
					5	0.5		
					7	0.075(intelligent may be choose)		
example	WIDE PLUS –BAHP3AI22M3B3D0JS2							

Note: If choose the product with explosion-proof intrinsic safety which need to take the meter, only can take the pointer meter.

- **Type spectrum table for WIDE PLUS –BLT/BALT single-flange pressure / liquid-level transmitter**

Model										Explanation
WIDEPLUS	□	□	□□	□	□□	□	□□	□	□	
-BLT										Single-flange pressure transmitter (3051 shape)
-BALT										Intelligent single-flange liquid level transmitter (3051 shape)
Measuring range	4									0～6～40kpa
	5									0～40～200kpa
	6									0～160～1000kpa
	7									0～0.4～2.5Mpa
Output		E								General analog type (4～20mADC with adjustable damping)
		I								Standard intelligent type (4～20mADC (keystroke setting with HART protocol)

Extended length									Dimension	Extended length	High pressure side membrane	
		A0							3″	0	316L SST	
		A2							3″	50mm (¢66)	316L SST	
		A4							3″	100mm (¢66)	316L SST	
		A6							3″	150mm (¢66)	316L SST	
		B0							4″	0	316L SST	
		B2							4″	50mm (¢80)	316L SST	
		B4							4″	100mm (¢80)	316L SST	
		B6							4″	150mm (¢80)	316L SST	
Flange dimension			A						3″ ,150lb			
			B						4″ ,150lb			
			C						3″ ,300lb			
			D						4″ ,300lb			
Construction material									Low pressure side flange joint	Drain/vent valve	Low pressure side isolation diaphragm	Filled liquid
				12					Carbon steel with cadmium plating	316 SST	316 SST	Silicon oil
				22					316SST	316 SST	316 SST	Silicon oil
				1A					Carbon steel with cadmium plating	316 SST	316 SST	Inert liquid
				2A					316 SST	316 SST	316 SST	Inert liquid
Filled liquid at high pressure side					D				Silicon oil (may use under the 70℃)			
					F				Inert liquid			
Option						M1			linear indicator (0～100% scale)			
						M3			LCD digital range display (liquid crystal)			
						M4			LED digital range display (numeral pipe)			
						M5			LCD digital range display (liquid crystal)			
						M6			LED digital range display (numeral pipe)			
Explosion-pr of rank							S		Standard (without explosion proof)			
							I		Intrinsic safety ExiaIICT6 or ExibIICT6 ordinary)			
							D		Isolated explosion ExdIIBT5 or ExdIICT6			
Accuracy grade								2	0.2			
								5	0.5			
example	WIDE PLUS –BALT4IA0A22DM3S2											

Note: If choose the product with explosion-proof intrinsic safety which need to take the meter, only can take the pointer meter.

- Type spectrum table for WIDE PLUS –BGP/BDP/BAGP/BADP remote pressure/differential pressure transmitter

Model									**Explanation**
WIDEPLUS	-□□□	□	□	□□	□□	□□	□	□	
Measuring type	-BGP								Remote pressure transmitter (3051 shape)
	-BDP								Remote differential pressure transmitter (3051 shape)
	-BAGP								Intelligent remote pressure transmitter (3051 shape)

	-BADP								Intelligent remote differential pressure transmitter (3051 shape)		
Measuring range		4							0～6～40kpa		
		5							0～40～200kpa		
		6							0～160～1000kpa		
		7							0～0.4～2.5Mpa		
Output			E						General analog type (4～20mADC with adjustable damping)		
			I						Standard intelligent type (4～20mADC (keystroke setting with HART protocol)		
			J						Standard intelligent type (4～20mADC output is √△P with adjustable damp)		
Construction material									Flanged joint	Plug	Isolation diaphragm
				22					316SST	316SST	316L SST
Remote-transmitter device					S1				One remote device		
					S2				Two remote devices		
Option						M1			linear indicator (0～100% scale)		
						M2			square root pointer meter (0～100% scale)		
						M3			LCD digital range display (liquid crystal)		
						M4			LED digital range display (numeral tube)		
						M5			0～100% of LCD digital range display (liquid crystal)		
						M6			0～100% of LED digital range display(numeral tube)		
						B1			Bending bracket for pipe installation (2" pipe)		
						B2			Bending bracket for panel installation		
						B3			Flat bracket for pipe installation (2"pipe)		
Explosion-proof rank							S		Standard (without explosion proof)		
							I		Intrinsic safety ExiaIICT6 or ExibIICT6 (ordinary)		
							D		Isolated explosion ExdIIBT5 or ExdIICT6		
Accuracy grade								2	0.2		
								5	0.5		
example	WIDE PLUS –BADP4I22S2M3B3S2										

- Note: BDP/BGP remote pressure transmitter provides a reliable survey method of which can avoid measured medium direct contacts with isolation membrane of the transmitter. It applies for the following some condition:

1. When measured medium has corrosion action on transmitter joint and pressure sensing component
2. When need to isolate between high-temperature measured medium and transmitter
3. There are fixed suspension or highly viscous in the measured medium and easily clogged transmitter
4. As change of environmental temperature or flow temperature, be measured medium occurs solidification or crystallization.
5. Measured medium is changed which need to flush, but not cross mixture
6. Must remain hygiene condition (pollution-proof):

BDP/BGP type remote pressure transmitter with remote diaphragms has still a variety of characteristics for differential pressure/pressure transmitter. Various type of remoter device on which provides model to users, please look into it while ordering

【WIDE PLUS remote device meter (3051 shape)】

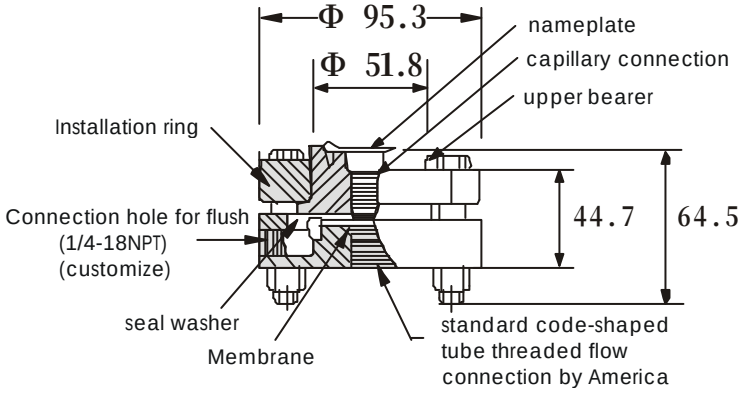
➢ **WIDE PLUS-RTW thread type remote device meter**

Place an order for transmitter from the model specification, choosing the "fill oil" from sheet VI, choosing the capillary from VII .

model					Explanation
WIEPLUS-RTW					
Hole use for flush	11				No
	12				have
Membrane material for remote device		A			316 stainless steel
		B			Hutchinson C-276
		C			Tantalum
Structural material			11		Upper bearing is 316 stainless-steel, the install ring is galvanized carbon steel, and the gasket is white asbestos or fluorine rubber
			21		Upper bearing is 316 stainless-steel, the install ring is 316 stainless- steel, and the gasket is white asbestos or fluorine rubber
Material of lower bearer				A	316 stainless steel
				B	Hutchinson C
Connection hole of lead pressure				11	1/4-18" NPT(cone-shaped tube thread)
				12	3/8NPT
				13	1/2-14"NPT
				15	1"NPT
				17	1 1/2" NPT(not have hole for flush)
Example for model	WIDEPLUS-RTW21A21A13				

Note: if need special material , please contact our company to customize it.

➢ **Dimension drawing for WIDEPLUS-RTW series thread installation remote device (unit: mm)**



➢ Type spectrum table for WIDEPLUS-RFW flange type remote device

Place an order for transmitter from the model specification, choosing the "fill oil" from sheet Ⅵ, choosing the capillary from Ⅶ .

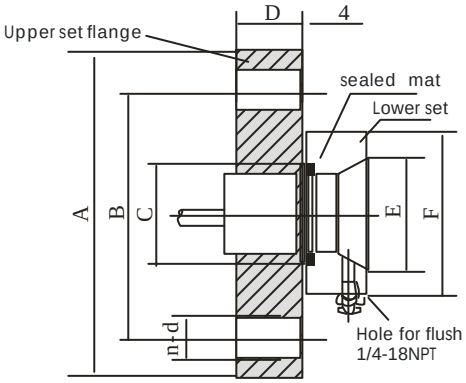
Model					Instruction		
WIEPLUS-RTW	□□	□	□□	□□□			
Spare hole for flush	11				no		
	21				Have		
Membrane material of remote device		A			316L stainless-steel		
		B			Hutchinson C-276		
		C			Tantalum		
Structural			11		Upper bearer is 316 stainless-steel, the install ring is galvanized carbon steel, and the gasket is white asbestos or fluorine rubber		
Material			21		Upper bearer is 316 stainless-steel, the install ring is 316 stainless-steel, and the gasket is white asbestos or fluorine rubber		
Measure and materials of lower set				Code	Measure of low set dimension	The max working pressure	Low set material
				A21	1"	150lb	316 stainless steel
				B21	1"	150lb	Hutchinson C-276
				E21	1"	150lb	Carbon steel
				A41	1-1 1/2"	150lb	316stainless-steel
				B41	1-1 1/2"	150lb	HutchinsonC-276
				E41	1-1 1/2"	150lb	Carbon steel
				A51	2"	150lb	316stainless-steel
				B51	2"	150lb	HutchinsonC-276
				E51	2"	150lb	Carbon steel
				A71	3"	150lb	316stainless-steel
				B71	3"	150lb	HutchinsonC-276
				E71	3"	150lb	Carbon steel
				A22	1"	300lb	316stainless-steel
				B22	1"	300lb	HutchinsonC-276
				E22	1"	300lb	Carbon steel
				A42	1-1 1/2"	300lb	316stainless-steel
				B42	1-1 1/2"	300lb	HutchinsonC-276
				E42	1-1 1/2"	300lb	Carbon steel
				A52	2"	300lb	316stainless-steel
				B52	2"	300lb	HutchinsonC-276
				E52	2"	300lb	Carbon steel
				A72	3"	300lb	316stainless-steel
				B72	3"	300lb	HutchinsonC-276
				E72	3"	300lb	Carbon steel
Example			WIDEPLUS-RFW11A11A51				

NOTE: if need special material , please contact our company to customize it.

➢ type spectrum table for WIDEPLUS-RFW series flange remote device

common caliber (inch)	Pressure (class/Mpa)	Diameter of Protruding platform C	Outside diameter	Thickness D	Center distance Between Screw B	Screw quantity n	Diameter of keyhole	Diameter E(mm)	Diameter F(mm)
1"	150/2	61.4	108	14.3	79.4	4	16	26.9	66.5
	300/5	66.9	124	17.2	88.9	4	20		
1 1/2"	150/2	73	127	17.2	98.4	4	16	41.9	78.7
	300/5	73	156	20.7	114.5	4	23		
2"	150/2	92.1	152	19.1	120.6	4	20	52.5	95.2
	300/5	92.1	165	22.2	127.0	8	20		
3"	150/2	127	191	23.8	152.4	4	20	79	127
	300/5	127	210	25.5	168.3	8	22		

➢ **Dimension drawing for WIDEPLUS-RTW series threaded installation remote device (unit: mm)**

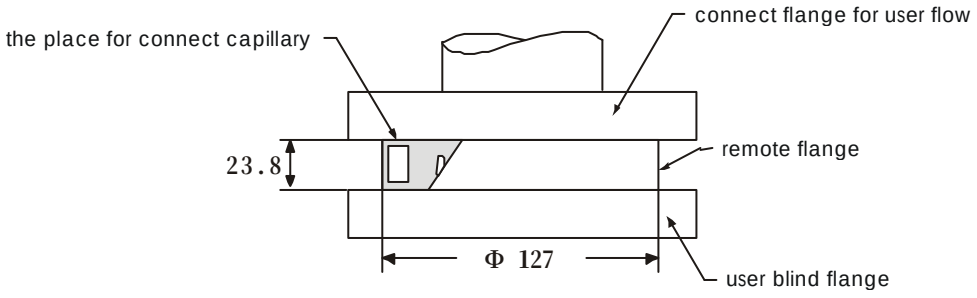


➢ **Type spectrum table for WIDEPLUS-PFW series tabular type remoter device**

Model				Explanation
WIDEPLUS-PFW	□□	□	□□	
Hole for flush	11			Standard 3"-1501b and 300lb
Membrane material for remote device		A		316stainless-steel
		B		Hutchison C-276
		C		tantalum
Shell material			11	316SST
Example for model	WIDEPLUS-PFW11A11			

NOTE: if need special material , please contact our company to customize it.

➢ **Dimension drawing for WIDEPLUS-PFW series flanged remote device**

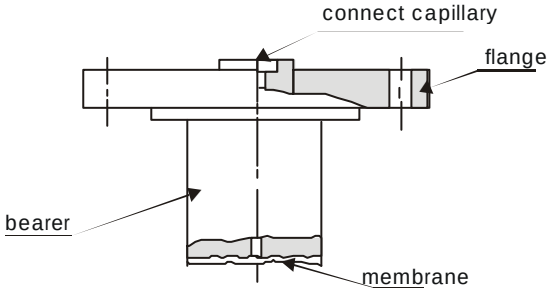


➢ **Type spectrum table for WIDEPLUS-EPW series insert drum type remote device**

Model					Instruction
WIDEPLUS-PFW	□□	□	□□	□□□	
The diameter and material of insert drum	11				3(Φ66 mm) 316 stainless-steel
	12				3"(Φ66 mm)Hutchinson alloy (custom-built)
	13				4"(Φ89 mm) 316 stainless-steel
Membrane material		A			316 stainless-steel
		B			Hutchinson C-276
		C			Tantalum
The length of insert drum			20		50 mm
			40		100 mm
			60		150 mm
Flange specification				A11	The highest working pressure of 150lb is 1.89 MPa
				A12	The highest working pressure of 300lb is 4.9 MPa
Example for choosing model	WIDEPLUS-EPW11A20				

NOTE: if need special material , please contact our company to customize it.

➢ **The diagram for WIDEPLUS-EFW series insert canister type remote device**



➢ **Type spectrum table for WIDEPLUS remote device filled fluid**

Model		Explanation
WIDEPLUS	--□□□□□□□□	
The diameter and material of Insert drum	C10485-007	Silicon oil(lower temperature) Steady range: -29-149
	C61734-0001	Steady range of Inert liquid: -18-204
	C1199-0032-0004	Steady range of Inert liquid: -15-315

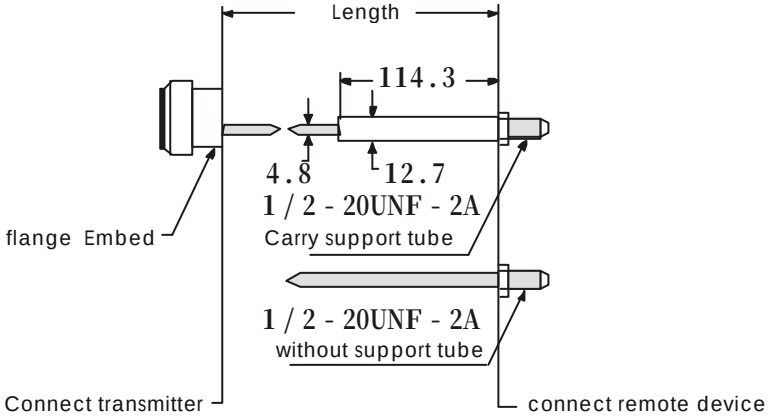
NOTE: if need special material , please contact our company to customize it.

> Spectrum table for WIDEPLUS-CAP capillary

Model					Explanation	
WIDEPLUS-CAP	□□	□□	□	□□		
Measure of material	13				1.09 mm, 316 stainless-steel	
The length of capillary		05			1.5m	This length is just for single side remoter length
		10			3m	
		15			4.5m	
		20			6m	
		25			7.5m	
Terminal accessory of remote device			A			1/2 –20UNF-2A screw without support tube
			B			1/2 –20UNF-2A screw with support tube
Protect tube cover				11		Armored 304 stainless-steel series
				12		Not indicate PVC jacket, armored 304
Example	WIDEPLUS-CAP1305A11					

NOTE: if need special material , please contact our company to customize it.

➢ **Dimension drawing for WIDEPLUS-CAP capillary(unit: mm)**



【Three valve units】

- **Outline drawing**

- **Product summary**

Three valve units that volume is small weight is light, structure is simple, strong and durable, parts exchangeability is good, to temperature, static pressure variation and impulse the whole device have reliable stability, apply to 1151, 3051, FC, K, CFC, SBCC and so on every series differential pressure transmitter: flow transmitter products coordinate usage, can be installed on the product and with product form integratization has simplified product installation structure. Function of three valve units is take signal from lead pressure point introduce the positive-negative pressure measuring container of transmitter, to realize on or off between lead pressure point and measuring container, and on/off between positive and negative pressure container, also can use as differential pressure balance check zero and when remove transmitter as cut-off valve.

- **Technical parameters**

・Working pressure 6.4 MPa, 16 MPa, 32 MPa

・Working medium gas, liquid, stream

・Working environment environmental temperature: -40℃～+90 ℃ medium temperature: ≤200 ℃

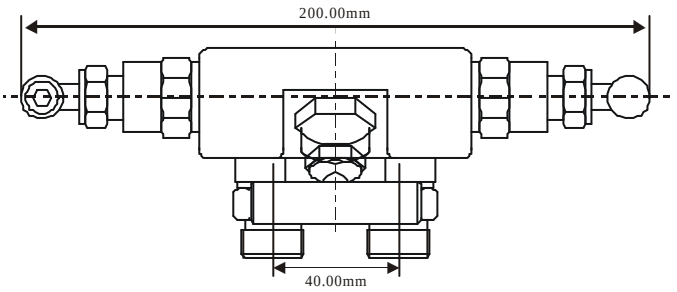
・Weight 1.6 kg

- **Installation and operation**

1. Three valve units can be installed to either vertical pipe line or horizontal pipe line. When install, first the two ellipse oval flange on positive-negative pressure measuring container of transmitter would be take off, then take three valve units install on transmitter, turn tighten four screws, final take ellipse oval flange solidly install on three valve units.
2. Installation dimension: (1) Four hole central distance of valve ends:54×41.3 (mm)

   (2) Four hole diameter of valve: side connected instrument positive-negative pressure container 4-φ12

- **Outline dimension (unit: mm)**

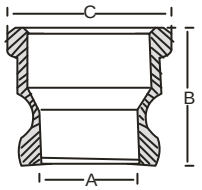


【Quick joint】

Quick joint is a pressure piping quick connect joint make it wide use to power, metallurgy, chemical industries, petroleum chemical, papermaking and printing and dyeing, brewing, tobacco and aerospace base.

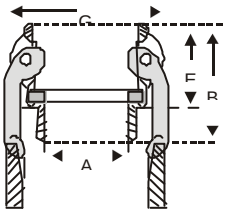
- **A type**

DIM	1/2	3/4	1	1/4	11/2	2
A	14	21.5	25	30	37	40
B	40	43	48	54	56	62
C	31	38	44	55	64	77



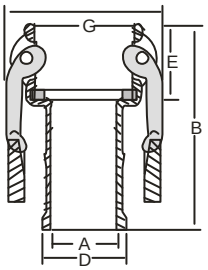
- **B type**

DIM	1/2	3/4	1	11/4	11/2	2
A	12.5	18.5	25	33	38	49
B	44	50	57	65	66	77
E	281	32	37	43	43	51
G	39	54	62	84	91	101



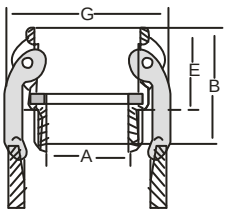
- **C type**

DIM	1/2	3/4	1	11/4	11/2	2
A	8	14	21	27	32	44
B	63	84	94	99	113	130
D	15	21	28	34	40	53
E	28	32	37	43	44	51
G	39	54	62	84	91	101



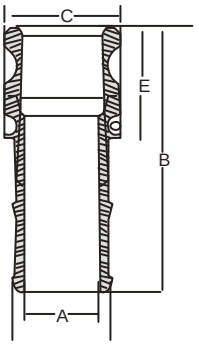
- **D type**

DIM	1/2	3/4	1	11/4	11/2	2
A	14	20.5	25	33	38	48
B	42.5	50	57	65	66	76
E	281	32	37	43	43	51
G	39	54	62	84	91	101



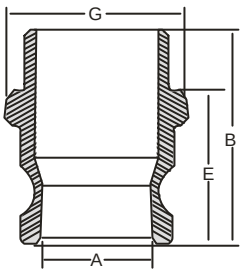
- **E type**

DIM	1/2	3/4	1	11/4	11/2	2
A	8	14	21	27	32	44
B	72	93	102	108	122	139
C	24	32	37	46	54	63
D	15	21	28	34	40	53
E	38	41	46	52	53	60



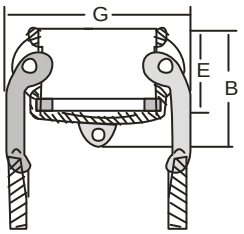
➢ F type

DIM	1/2	3/4	1	11/4	11/2	2
A	14	21.5	25	30	37	46
B	56	61	68	77	79	89
E	31	38	44	55	64	77
G	40	43	48	54	56	62



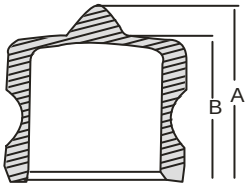
➢ DC type

DIM	1/2	3/4	1	11/4	11/2	2
B	39	43	50	57	60	67
E	30	34	41	41	51	58
G	39	54	62	91	91	101



➢ DP type

DIM	1/2	3/4	1	11/4	11/2	2
A	36	40	47	53	53	60
B	27	31	38	44	44	51



【Appendix 】

- **Ordering notice**

When ordering, you must note the following terms

1. Model, specification code and additional specification code
2. Adjustment scope and unit
   a. Adjustment scope: lower limit value of the scope and numerical value of high limit value
   b. Unit: only can choose one in it (setting value when leaving the factory)
3. Under the Choice output and display mode (linear or square root) has not appointment situation, which establishment is linear mode when be out.
4. display scale and unit (only to have intelligent transmitter with meter)

   to appoint 0～100% or actual scale respectively. When you want to actual scale, please appoint "scope and unit".

   Scale scope: lower limit value of the scope and numerical value of high limit value
5. bit number (only when needs set)
6. medium name and temperature