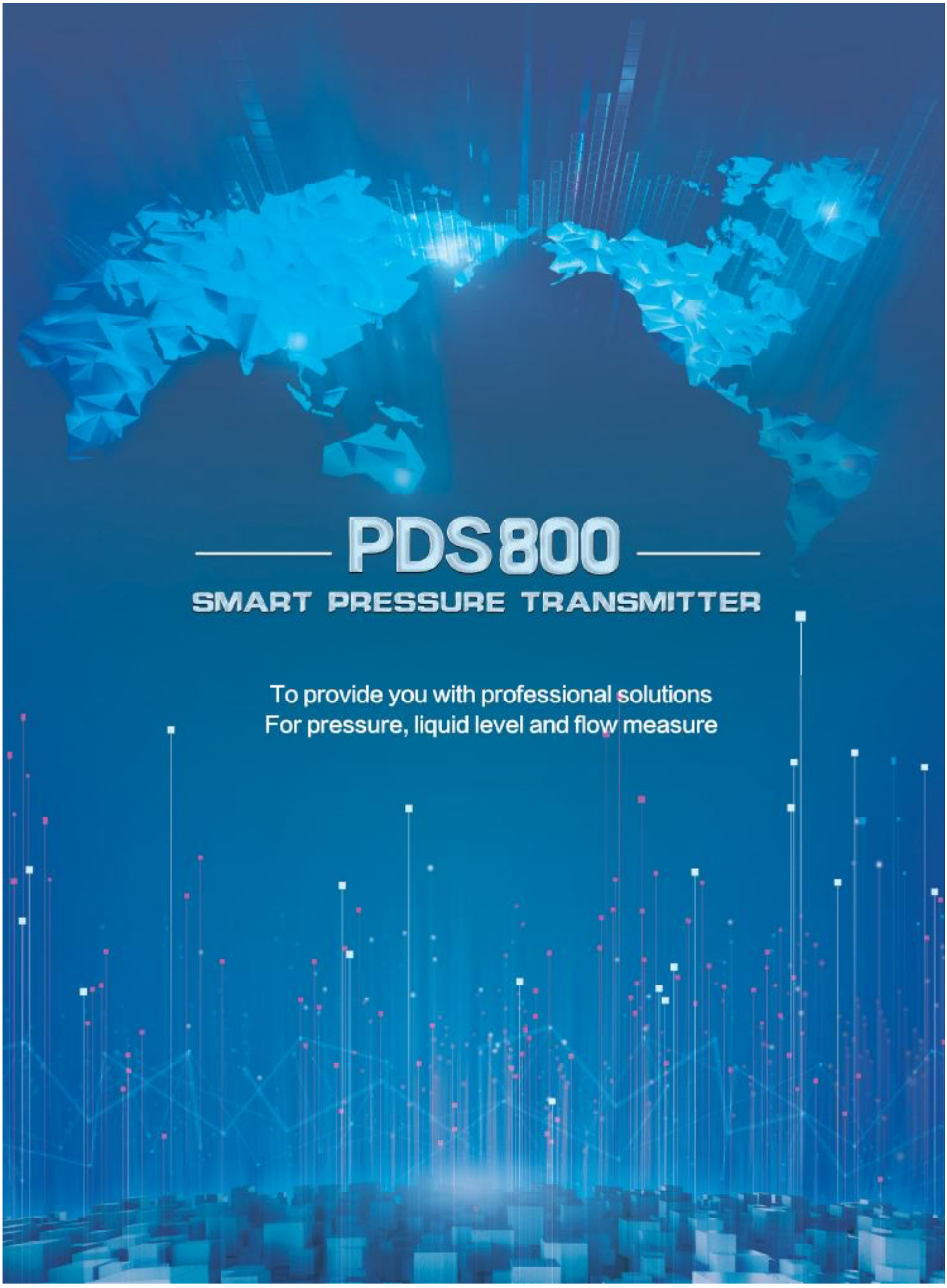
CHONGQING CHUANYI AUTOMATION CO.,LTD.



PDS800

SMART TRANSMITTER

Chongqing Silian Measure&control Technology Co.,ltd.


PDS800
SMART PRESSURE TRANSMITTER
To provide you with professional solutions
For pressure, liquid level and flow measure

Catalogue

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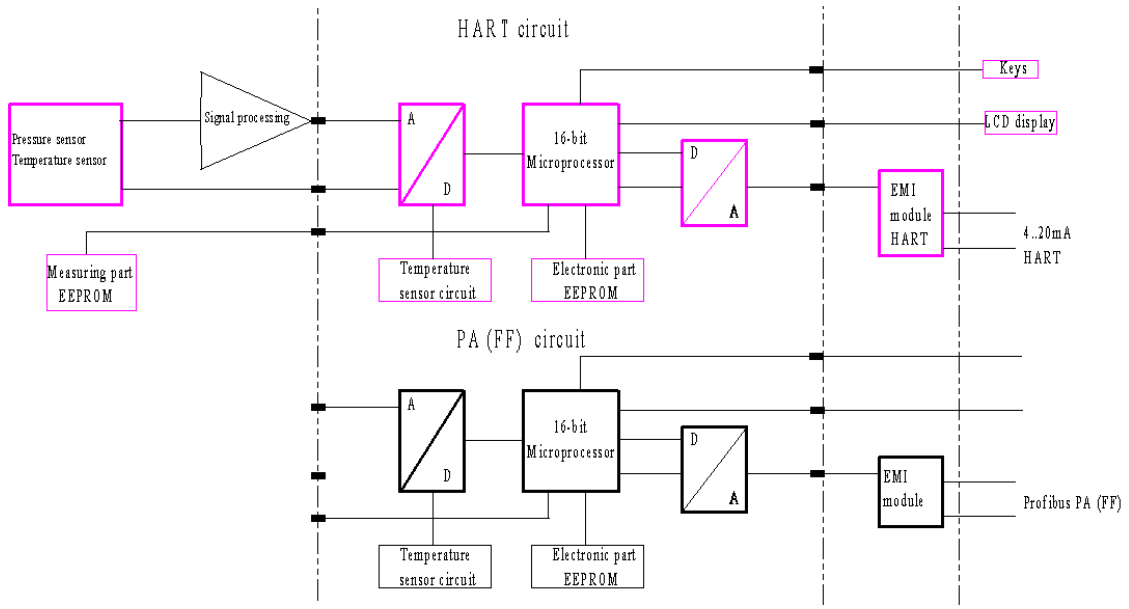
Product Introduce

Product Background

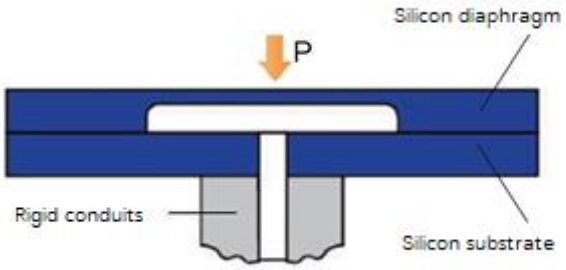
PDS smart transmitter is a high-precision smart pressure/differential pressure transmitter developed by Chongqing Chuanyi Automation co., LTD., which integrates advanced design concepts and technology. The product adopts advanced monocrystalline silicon composite sensor, highly reliable electronic modular design, precision temperature and linear correction system and smart manufacturing technology, to ensure the product's high precision, high stability and consistency.

Products are characteristic of complete smart diagnosis, simulation, monitoring, the unit state and a variety of communication functions, complete specifications of wetted materials, high indicators of electromagnetic compatibility and lightning protection, which have been widely used in power, metallurgy, chemical, coal chemical, petroleum, petrochemical, environmental protection, building materials, light industry, nuclear industry and other industries.

Working Principle



PDS smart transmitter adopts advanced monocrystalline silicon composite sensor and modular design. The signals generated by the sensor are converted to digital signals by amplifying and high-speed double A/D converters, which are then linearly and temperature-corrected in the microprocessor. For HART transmitter, it is converted into 4-20mA.dc superposition HART signal by D/A converter. For PROFIBUS-PA and FF transmitters, full digital PROFIBUS-PA and FF signals are directly output.



The data of the measurement unit and the functional parameters of the transmitter are stored in two EEPROM. You can directly adjust the parameters in the measurement field through three adjustment buttons, and read the measurement results, fault information and working mode in the LCD display. Of course, parameters can also be set through HART, PROFIBUS-PA or FF protocols

Excellent Quality

- Basic Accuracy: ±0.04%FS (Max.±0.025%FS)
- Ranges Ratio: 100:1
- Response Time: ≤90ms (data refresh time: 50ms)
- Measuring ranges:
  Differential pressure 0 ~ 100Pa-14MPa
  Pressure 0 ~ 1kPa-70MPa
- Output Signal:
  4 ~ 20mA superposition HART Protocol communication (version HART6.0)
  PROFIBUS-PA fieldbus communication (version 3.02)
  FF fieldbus communication (version 6.1.1)
- Overload Limit:
  Differential Pressure 42MPa
  Pressure 105MPa
- Static Pressure Influence: ≤0.03%FS/16MPa
- Temperature Ranges:
  Ambient Temperature -40℃ ~ 80℃ (for explosion-proof type, see explosion-proof grade)
  Process Temperature -90℃ ~ 700℃
  LCD Temperature -35℃ ~ 80℃
- Long-*term* Drift: ≤±0.1%FS/10 years
- Temperature Influence:
  ≤ (0.06*r+0.1) %/120℃ (-40 ℃ ~ 80℃) sensor maximum ranges< 3MPa
  ≤ (0.04*r+0.1) %/120℃ (-40 ℃ ~ 80 ℃)sensor maximum ranges ≥3MPa
- Explosion-proof grade:
  NEPSI: Intrinsically safe Ex iaIICT4 Ga (note 1) (applicable ambient temperature -40 ℃ ~ +60 ℃)
  NEPSI: Intrinsically safe Ex iaIICT6 Ga (note 1) (applicable ambient temperature -40℃ ~ +40℃)
  NEPSI: Flameproof Ex dIICT6 Gb (applicable ambient temperature -40℃~+ 60℃)
  NEPSI: Dust explosion-proof Ex tD A21 IP67 T85℃(applicable ambient temperature -40℃~ + 60℃)
  NEPSI: “n” explosion-proof Ex nA IICT6 Gc (applicable ambient temperature -40℃~+ 60℃)
  ATEX: Intrinsically safe Ex II1G Ex iaIICT4 Ga,
  ATEX: Flameproof Ex II1/2G Ex db IICT6…T4Ga/Gb
  IECEx: Intrinsically safe Ex iaIICT4 Ga
  IECEx: Flameproof Ex dbIICT6…T4 Ga/Gb

ATEX IECEx comparison table of ambient temperature and temperature grade

Ambient temperature	Temperature grade	Notes
-40℃~+ 70℃	T6	Only applicable to "db" type applications
-40℃~+ 80℃	T5	
-40℃~+ 80℃	T4	applicable to "db" and “ia” type applications

- Protection grade: IP66/IP67
- Lightning protection function:

  Dc breakdown voltage: ± 20% @ 100v /s: 600V

  Pulse discharge current: 20000A, 8/20μs.....1(times of impact)

  10000A, 8/20μs .....＞10(times of impact)

  200A, 10/1000μs .....＞300(times of impact)

  200A, 10/700μs .....＞500(times of impact)

Note 1: according to GB3836 standard, when the transmitter is set in lightning protection, the protection grade of this safety explosion-proof equipment (EPL) is Gb.

Product Features

● High stability

PDS smart transmitter basic accuracy 0.04%FS (up to 0.025%FS) can still maintain 99.9% accuracy after 10 years of continuous use, saving considerable maintenance cost. PDS smart transmitter with a strong metal shell and fully sealed measuring components can calmly deal with extreme chemical and mechanical loads, and has a strong ability to resist electromagnetic interference and lightning protection, ensuring high stability and high reliability of the PDS transmitter.

● Intelligent diagnosis and simulation

★ Intelligent diagnosis

PDS smart transmitter has integrated diagnostic function, real-time monitoring the running process and its own state. After exceeding the defined number of events, the transmitter enters a fault alarm state and outputs an alarm current (3.6 or 22.8mA) to provide control signals for the system interlock or SIS safety system. In case of fault, the LCD display automatically displays "Err", and automatically analyzes and displays the fault components, which makes the maintenance, repair and replacement of the instrument more convenient.

The diagnosis function can also be started through HART, FF, PA and other protocols. The alarm can be expressed in the form of warning or fault protection current. It can also automatically diagnose running status of SENSOR, ROM, RAM, EEPROM, and software. When the electronic unit or measuring element is damaged, the defective part can be replaced on the spot with no need for re-adjustment.

★ Simulation

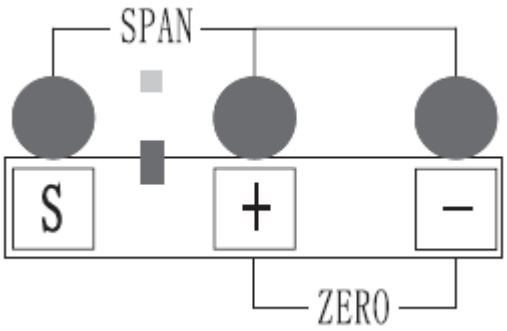
The simulation function of the transmitter can simulate the process state to obtain the measurement data, and can also be used to check the connection and output state of the transmitter circuit. Simulation output parameters include pressure, sensor temperature, and electronic temperature. Simulation output

modes include fixed value simulation or linear function imitation. During the simulation, the output of the transmitter does not change with the change of the field pressure. After the key operation or the shut-down and restart, the transmitter will return to the normal measurement state.

● Configuration mode diversification

★ Strong local configuration

With 3 buttons and a high contrast LCD display, all parameters can be entered quickly and easily on site. Without opening the transmitter cover, you can set the minimum, maximum, damping, and output signals of error.



Events on the spot. This means that moisture does not enter into the transmitter and ensures Exd explosive-proof protection. By pressing the button, you can adjust the measuring ranges, characteristic curve and electrical resistance in the ranges of 100:1 (up to 100s). At the same time, a variety of display units can be also chosen on site, such as liquid level measurement: mmH2O, inH2O, mmHg. PDS's powerful simulation and online diagnostic functions can help you a lot in system coordination or loop detection.

★ HART or fieldbus communication configuration

With HART, PA, FF bus communication protocols, you can adjust all parameters using a PC or laptop, handheld communicator, or any compatible process control system software, which means that the measurements and transmitter parameters are transparent at any point in the signal circuit. Using process device management software (PDM) based on the familiar Windows operating system can save a lot of time regardless of user experience.

HART® FIELD-COMMUNICATION-PROTOCOL

Fieldbus Foundation

PROFI BUS

● Various anticorrosive materials

Even when measuring highly corrosive substances, you can find a suitable solution in the PDS smart transmitter. There are a variety of isolation diaphragms such as stainless steel, Hartz, Tantalum alloy, Monel alloy, nickel material or 316L gold-plated. The parts and components between the transmitter and the measuring medium such as the chamber, drain and exhaust plug, inserted barrel can also choose corresponding anticorrosive materials according to the measuring medium, which can ensure the reliable operation of PDS even in strong corrosive environment such as Chlor-alkali, salt making and seawater.



Stainless steel Hastelloy Monel Tantalum Gold Titanium Teflon

- Authoritative attestation

PDS smart transmitter can deal with all kinds of extreme pressure, temperature, explosion, and corrosive substances. PDS transmitter has obtained various international certifications such as NEPSI, CCS, and CENELEC, SIL, PROFIBUS-PA, Fieldbus Foundation, and HART.

TüV-SIL2/3 | IEC Ex | CE | CU-TR | CCS | Ex iaIICT4\T6 Ga
Ex dIICT6 Gb

Functional Specifications

- Power supply and load

Ranges of DC supply voltage U (unit V) of transmitter: 10.5≤U≤45,

Ranges of DC supply voltage U (unit V) of PA、FF bus: 9≤U≤32

For intrinsically safe transmitters, the power supply shall be drawn from the safety grid, and the safety grid used shall obtain the relevant explosion-proof certification

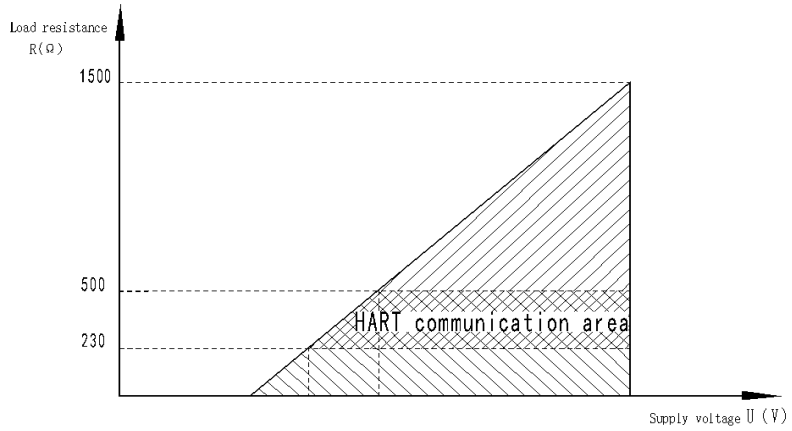
The load resistance of the transmitter loop

$$R \leq \frac{U - 10.5}{0.023} \quad (\Omega)$$

(Safety grid resistance shall be included in the intrinsically safe circuit R)

In the loop requiring HART communication:

230Ω≤R≤500Ω; 15.8V≤U≤45V



Power load diagram

- ## Power load effect

In the ranges of 10.5V≤U≤45V and 230Ω≤R≤500Ω, the influence of power change shall not exceed 0.005%/V of the calibration ranges

- ## Electromagnetic compatibility

EMC conforms to the relevant requirements of GB/T18268 and IEC61326.

- ## Operating humidity

Long-term relative humidity ≤95%

- ## Display

LCD display contains five main variables, five units and other symbol segment codes.

- ## Configuration

Setting of the local key or configuration through communication

- ## Damping setting

0 ~ 100 seconds (by communication or local setting)

- ## Handheld terminals

The corresponding handheld communicator in accordance with HART, PA and FF protocols can be selected. The communicator must contain program packets for the pressure transmitter.

- ## Low and high value adjustments

It can be set by upper computer, handheld terminal or local key. Under the condition that the ranges are not less than the minimum ranges, the ranges can be set arbitrarily between the lower limit and the upper limit.

- ## Fault alarm

When the transmitter fails, the self-diagnostic program automatically outputs a warning message or an alarm current set by the user. The fault information can be checked by using the handheld terminal.

- ## Communication distance

HART protocol adopts multi-core twisted pair with the maximum communication distance up to 1.5km. The specific communication distance varies according to the cable type. PA and FF protocol adopts twisted pair with shield, whose cable resistance is less than 44Ω/km. The cable cross-sectional area is 0.32 mm2, and the maximum communication distance is up to 1.9km (EEx shall use the longest 1.0km).

Physical Specification

- Electrical connector

  M20×1.5 internal thread; 1/2 NPT internal thread

- Process joint

  1/2 NPT internal thread, 1/2 NPT external thread, G1/2 external thread, M20×1.5 external thread
  Note: see the selection of the corresponding model guide table for detailed configuration

- Wetted part

  Isolation Diaphragm: 316L, HC-276, Tantalum, Monel alloy, 316L gold-plated, PTFE, PFA, EN1.4466
  Wetted Parts: 316, HC-276, Monel
  Sealing Ring: ptfe, nitrile rubber, fluorine rubber, metal sealing ring
  Mounting Flange: S25C, 304,316,316L

Note: see the selection of the corresponding model guide table for detailed configuration

- Weight

Series	Name of product	Aluminum shell(kg)	Stainless steel case(kg)
PDS803	Direct connection pressure transmitter	1.6	4.0
PDS805	Pressure transmitter	3.6	6.0
PDS843L、M	Differential pressure transmitter	3.6	6.0
PDS843H	Differential pressure transmitter (high static pressure)	4.0	6.4
PDS863\883	Flanged transmitter (differential pressure type)	Differential pressure transmitter standard weight + flange part	
PDS873	Flanged transmitter (pressure type)	Pressure transmitter standard weight + flange part	

- Installation

  Mounting with bracket, direct mounting, flange mounting

Transmitter valve group

Transmitter valve group is used for start-up, shut-down and balance operation of the input pressure signal of pressure transmitter, differential pressure transmitter, flow transmitter, and liquid level transmitter input pressure, which mainly includes globe valve, two valve group, three valve group, and five valve group.

PDS transmitter has G8 series of conventional valve group and SICV series of high-end valve group (see valve group guide for specific options). 304, 316, 316L, hc-276 or Monel valve group can also be selected based on the dielectric corrosion. Max. pressure of Valve group is 42MPa and its applicable temperature ranges from -40 to 230℃.

PDS transmitter can be integrated with valve groups in the factory, and leakage inspection and verification can also be completed there, which can save installation cost and improve installation resolution rate for the site or project.

Series	Type	Applicable object
G8	Two valve group, globe valve	PDS803 series
	Three valve group	PDS843 series
SICV	Two valve group	PDS803\805\843 series
	Three valve group, five valve group	PDS843 series

Standard Mode Guide

PDS803 Direct connection pressure transmitter

PDS803 pressure transmitter is used to measure the pressure of liquid, gas or steam and converts them into 4-20mA d.c. current (superposition HART communication) or PROFIBUS-PA communication signal and FF communication signal for output. Remote setting and monitoring can be realized through communication equipment.



Performance specification

Ranges ratio

Max. ranges ratio r (r= Max. ranges/ranges in use) = 100:1

Long-term stability

δ≤±0.1%FS/10 years

Sensor ranges

Range code	PDS803G gage pressure				PDS803A absolute pressure			
	Min. ranges	Max. ranges	Measuring range	Overload limit	Min. ranges	Max. ranges	Measuring range	Overload limit
B	1.0kPa	100kPa	-100kPa～100kPa	600kPa	0.5kPa	25kPa	0kPa～25kPa(A)	300kPa(A)
C	4.0kPa	400kPa	-100kPa～400kPa	1.5MPa	2.6kPa	130kPa	0kPa～130kPa(A)	500kPa(A)
D	0.03MPa	3MPa	-0.1MPa～3MPa	4.5MPa	5.0kPa	500kPa	0kPa～500kPa(A)	1.0MPa(A)
E	0.2MPa	20MPa	-0.1MPa～20MPa	30MPa	0.03MPa	3MPa	0MPa～3MPa(A)	6.0MPa(A)
F	0.4MPa	40MPa	-0.1MPa～40MPa	60MPa	0.2MPa	20MPa	0MPa～20MPa(A)	30MPa(A)
G	0.7MPa	70MPa	-0.1MPa～70MPa	105MPa	——			

Note: the recommended long-term working pressure of PDS803G gauge pressure type is higher than 50kPa (ABS)

Reference accuracy δ

PDS803G gage pressure Ranges code	PDS803A absolute pressure Ranges code	Accuracy δ
B	B、C	δ≤±0.04% δ≤±(0.004+0.0036*r)%，ranges ratio＞10:1
C、F、G	D、F	δ≤±0.04% δ≤±(0.015+0.0025*r)%，ranges ratio＞10:1
D、E	E	δ≤±0.025% δ≤±(0.01+0.0015*r)%，ranges ratio＞10:1

Temperature influence

δ≤（0.06*r+0.1）%/120℃， -40℃～+80℃ (applicable to ranges B, C of 803G and ranges B, C, D of 803A)

δ≤（0.04*r+0.1）%/120℃， -40℃～+80℃ (applicable to ranges D, E, F, G of 803G and ranges E, F of 803A)

Process temperature ranges

-40℃～+120℃

Mode guide

Model	Specification code	Description		
PDS803	----------	Pressure transmitter		
Type	G—————	Gage pressure		
	A—————	Absolute pressure		
Communication Protocol	※H—————	HART (6.0) communication		
	P—————	PROFIBUS-PA(3.02)field bus communication		
	F—————	FF (6.1.1) field bus communication		
Capsule sealed liquid		Sealed liquid	Measured part cleaning	
	※-1—————	Silicone oil	Conventional cleaning	
	-2—————	Silicone oil	Degreasing cleaning	
	-3—————	Fluorine oil	Degreasing cleaning	
Measuring Ranges		G Gage pressure type		A Absolute pressure type
		Ranges	Measuring range	Ranges / Measuring range
	B—————	1kPa～100kPa	-100kPa～100kPa	0.5kPa～25kPa / 0kPa～25kPa(A)
	C—————	4kPa～400kPa	-100kPa～400kPa	2.6kPa～130kPa / 0kPa～130kPa(A)
	D—————	0.03MPa～3MPa	-0.1MPa～3MPa	5.0kPa～500kPa / 0kPa～500kPa(A)
	E—————	0.2MPa～20MPa	-0.1MPa～20MPa	0.03MPa～3.0MPa / 0MPa～3.0MPa(A)
	F—————	0.4MPa～40MPa	-0.1MPa～40MPa	0.2MPa～20MPa / 0MPa～20MPa(A)
	G—————	0.7MPa～70MPa	-0.1MPa～70MPa	—————
Wetted Material		Isolation diaphragm		Related wetted parts
	※S—————	316L		316
	H—————	HC-276		316
	C—————	HC-276		HC-276
	G—————	316L gold-plated		316
Process Connector	※0—————	G1/2 external thread		
	1—————	1/2 NPT internal thread		
	3—————	M20 x 1.5 external thread		
	4—————	1/2 NPT external thread		
Explosion-proof	-A—————	Non-explosion proof		
	-B—————	NEPSI: Intrinsically safe Exia Ⅱ CT4 Ga		
	-C—————	NEPSI: Intrinsically safe Exia Ⅱ CT6 Ga		
	-D—————	NEPSI: Flame-proof Exd Ⅱ CT6 Gb		
	-F—————	NEPSI: Dust explosion proof Ex tD A21 IP67 T85℃		
	-G—————	ATEX: Intrinsically safe Ex II1G Ex ia Ⅱ CT4 Ga		
	-H—————	ATEX: Flameproof Ex II1/2G Ex db IICT6…T4Ga/Gb		
	-J—————	IECEx: Intrinsically safe Ex iaIICT4 Ga		
	-K—————	IECEx: Flameproof Ex dbIICT6…T4 Ga/Gb		
	-N—————	NEPSI: “n” explosion-proof Ex nA IICT6 Gc		
Shell (Note 1)		Material	Electrical interface	
	※1—————	Aluminum	1/2NPT internal thread, two electrical interfaces	
	2—————	Aluminum	M20×1.5 internal thread, two electrical interfaces	
	3—————	Stainless steel	1/2NPT internal thread, two electrical interfaces	
	4—————	Stainless steel	M20×1.5 internal thread, two electrical interfaces	
Display Meter	N—————	No display meter		
	D—--(note 2)	LCD display meter		
Mounting Bracket		Type		Material
	A—————	Horizontal (type I) bracket		Q235
	B—————	Horizontal (type I) bracket		304
	E—————	Horizontal (type I) bracket		316
	C—————	Vertical (L) bracket		Q235
	D—————	Vertical (L) bracket		304
	F—————	Vertical (L) bracket		316
	N—————	No mounting bracket		
Additional Options	/××—————	See table of additional options		

Additional options

Item	Specification		Code (note 3)
Protective Treatmentect	External protective treatment of transmitter (for external strongly corrosive environment)		P10
Electrical Connector	Dimension	Material	
	M20×1.5 electrical connector + one seal plug	Plastic	G60
	1/2 NPT electrical connector + one seal plug	Plastic	G61
	M20×1.5 seal plug one	304	G62
	M20×1.5 flameproof electrical connector + one seal plug (NEPSI)	316	G70
	1/2NPT flameproof electrical connector + one seal plug (NEPSI)	316	G71
	1/2 NPT seal plug one	304	G72
	1/2 NPT seal plug one	316	G73
	M20×1.5 seal plug one	316	G74
	M20×1.5 flameproof electrical connector + one seal plug (ATEX/IECEx)	316	G75
	1/2NPT flameproof electrical connector + one seal plug (ATEX/IECEx)	316	G76
Process Joint	Joint Type	Material	
	1/2NPT external thread - welded pipe joint	304	G81
	1/2NPT external thread - welded pipe joint	316	H81
	1/2NPT external thread - welded pipe joint	316L	K81
	1/2NPT external thread - welded pipe joint	Q235	G91
	G1/2 internal thread -- welded pipe joint	304	G83
	G1/2 internal thread -- welded pipe joint	316	H83
	G1/2 internal thread -- welded pipe joint	316L	K83
	G1/2 internal thread -- welded pipe joint	Q235	G93
	M20×1.5 internal thread -- welded pipe joint	304	G80
	M20×1.5 internal thread -- welded pipe joint	316	H80
	M20×1.5 internal thread -- welded pipe joint	316L	K80
Assembly Of Valve Group	Delivery after valve group and transmitter integrated assembly test		S
Lightning Proof	Lightning protection terminal plate		F20
Quality Assurance System	Comply with the company's nuclear quality assurance system (if this option is not selected, the default is to comply with the ISO9001 quality assurance system)		NP
Alarm	Alarm current: 22.8mA (if not selected, the alarm current defaults to 3.6mA)		A1
Document	Delivery acceptance document (note 4)		D1
Languages	English(instruction, packing list, cargo list, main nameplate in English)		L01
	Russian(instruction, packing list, cargo list in Russian, main nameplate in English)		L02
	French(instruction, packing list, cargo list in French, main nameplate in English)		L03
Display Unit	Unit	Code	
	%	U01	
	mA	U20	
	Pa	U21	
	KPa	U22	
	MPa	U23	
	gf/cm^2	U24	
	kgf/cm^2	U25	
	mmH_2O	U26	
	Unit	Code	
	ftH_2O	U29	
	mbar	U30	
	bar	U31	
	psi	U32	
	mmHg	U33	
	inHg	U34	
	Torr	U35	
	Atm	U36	

	mH_2O	U27	$i4H_2O$(inch of water 4℃)	U37
	inH_2O	U28	$m4H_2O$(millimeter of water 4℃)	U38
Valve Group	G8 Series valve group SICV series valve group		See valve group options	

Special note

※: Recommended option: If you have special requirements, please add "Z" after the order code with the text description.

Note 1: when selecting flameproof transmitters, flameproof electrical connectors must be used. See additional options.

Note 2: the pressure value is displayed by default, and the rest of the display modes are described in "additional options".

Note 3: the options are separated by "/", such as "/P10/G61/K81"

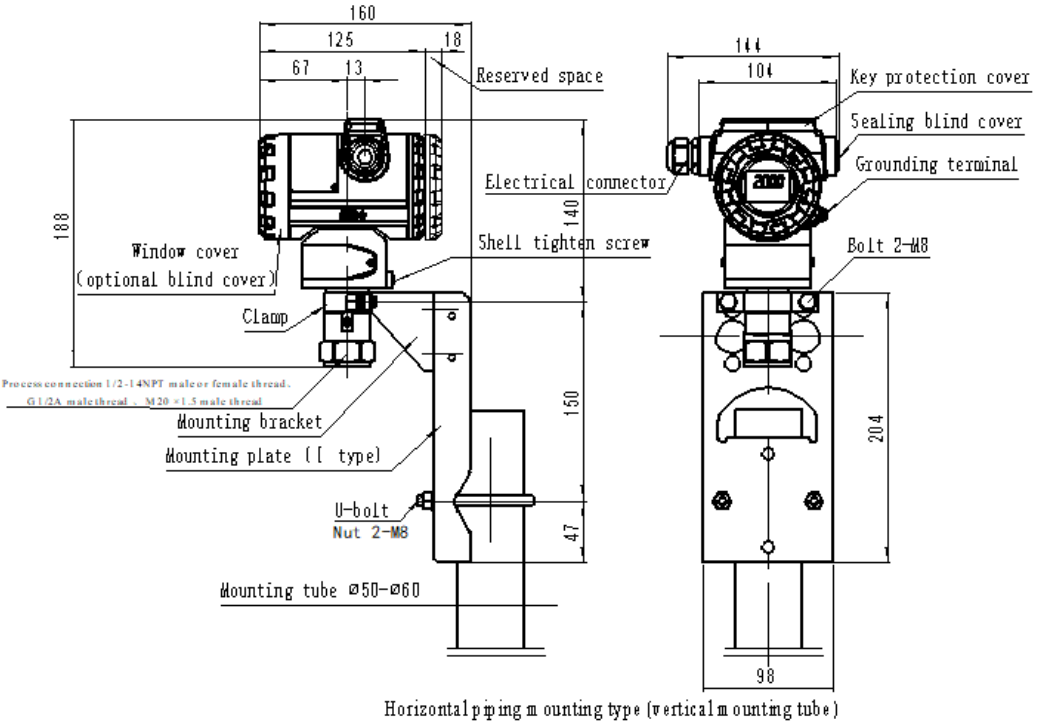
Note 4: in addition to the standard delivery documents (original certificate of conformity, specification, packing list), the detailed list of the commonly used information provided by the manufacturer for the acceptance of the products shall be provided when ordering. If third party test report or other special requirements are needed, it will be quoted separately.

Selection of the sample

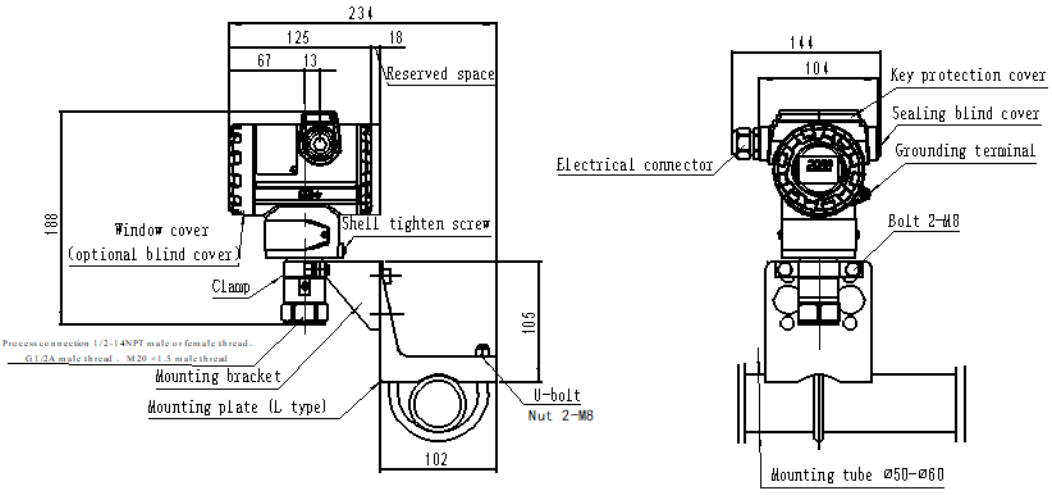
PDS803GH-1DS1-A1DE/G61/SG87-M1NL/D2/T, transmitter and type of valve group are separated by space.

PDS803 shape and mounting dimension

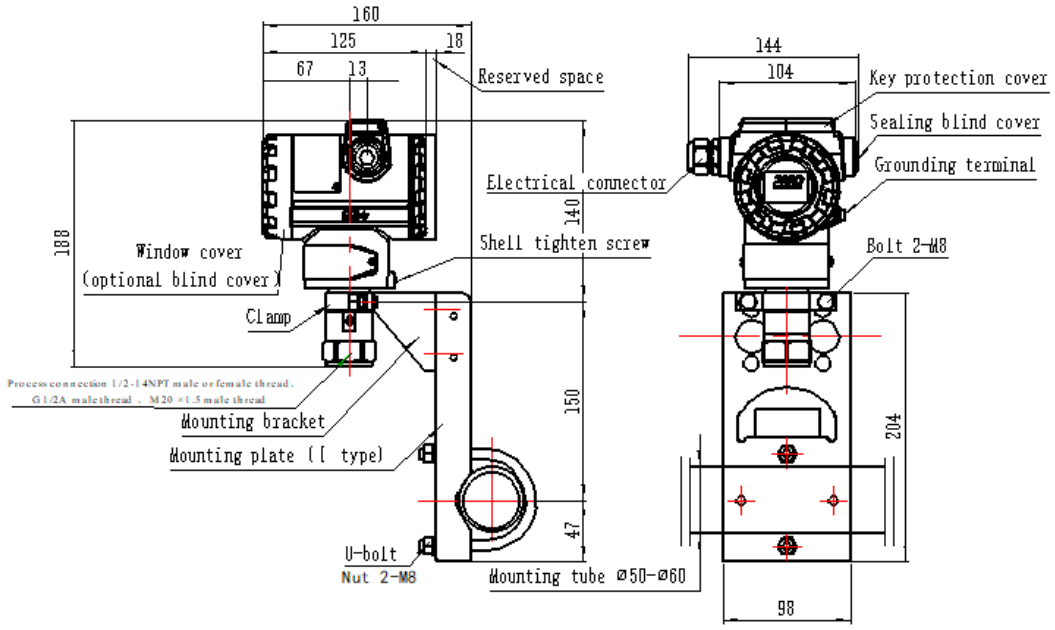
Unit: mm



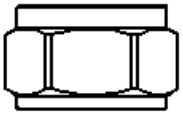
Horizontal piping mounting type (vertical mounting tube)



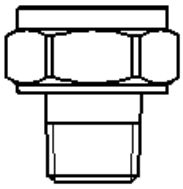
Horizontal piping mounting type (horizontal mounting tube)



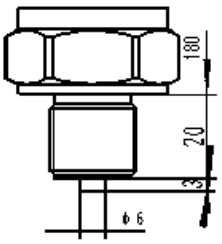
Horizontal piping mounting type (horizontal mounting tube)



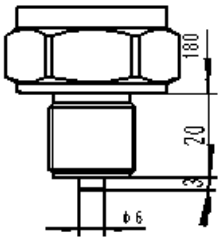
Process connection: 1/2 NPT internal thread



Process connection: 1/2 NPT external thread



Process connection: G 1/2 external thread



Process connection: M20x1.5 external thread

PDS805 Pressure transmitter



PDS805 pressure transmitter is used to measure the pressure of liquid, gas or steam and convert them into 4-20mA d.c. current (superposition HART communication) or PROFIBUS-PA communication signal and FF communication signal for output. Remote setting and monitoring can be realized through communication equipment.

Performance specification

Ranges ratio

Max. Ranges ratio (r= Max. ranges/ranges in use) = 100:1

Long-term stability

δ≤0.1%FS/10 years

Sensor ranges

Range code	PDS805G gage pressure				PDS805A absolute pressure			
	Min. ranges	Max. ranges	Measuring range	Overload limit	Min. ranges	Max. ranges	Measuring range	Overload limit
B	1.0kPa	100kPa	-100kP～100kPa	600kPa	0.5kPa	25kPa	0kPa～25kPa(A)	300kPa(A)
C	4.0kPa	400kPa	-100kP～400kPa	1.5MPa	2.6kPa	130kPa	0kPa～130kPa(A)	500kPa(A)
D	0.03MPa	3MPa	-0.1MPa～3MPa	4.5MPa	5.0kPa	500kPa	0kPa～500kPa(A)	1.0MPa(A)
E	0.2MPa	16MPa	-0.1MPa～16MPa	24MPa	0.03MPa	3.0MPa	0MPa～3.0MPa(A)	6.0MPa(A)
F	0.4MPa	40MPa	-0.1MPa～40MPa	60MPa	0.2MPa	16MPa	0MPa～20MPa(A)	24MPa(A)

Note: the recommended long-term working pressure of PDS805G gauge pressure type is higher than 50kPa (ABS)

Reference accuracy δ

PDS805G gage pressure Ranges code	PDS805A absolute pressure Ranges code	Accuracy δ
B	B、C	δ≤±0.04% δ≤±(0.004+0.0036*r)%，ranges ratio＞10:1
C、F	D、F	δ≤±0.04% δ≤±(0.015+0.0025*r)%，ranges ratio＞10:1
D、E	E	10:1δ≤±0.025% δ≤±(0.01+0.0015*r)%，ranges ratio＞10:1

Temperature Influence

δ≤(0.06*r+0.1)%/120℃, -40℃～+80℃ (Applicable to ranges B and C of 805G and ranges B, C, D of 805A)

δ≤(0.04*r+0.1)%/120℃, -40℃～+80℃ (Applicable to ranges D,E and F of 805G and ranges E and F of 805A)

Process temperature ranges

- 40 ℃~ + 120 ℃

Model guide

Model	Specification code	Description			
PDS805	----------	Pressure transmitter			
Type	G————	Gage pressure			
	A————	Absolute pressure			
Communication Protocol	※H————	HART (6.0) communication			
	P————	PROFIBUS-PA(3.02)field bus communication			
	F————	FF(6.1.1) field bus communication			
Capsule sealed liquid		Sealed liquid	Measured part cleaning		
	※-1————	Silicone oil	Conventional cleaning		
	-2————	Silicone oil	Degreasing cleaning		
	-3————	Fluorine oil	Degreasing cleaning		
Measuring Ranges		G Gage pressure type		A Absolute pressure type	
		Ranges	Measuring range	Ranges	Measuring range
	B————	1kPa～100kPa	-100kPa～100kPa	0.5kPa～25kPa	0kPa～25kPa
	C————	4kPa～400kPa	-100kPa～400kPa	2.6kPa～130kPa	0kPa～130kPa
	D————	0.03MPa～3MPa	-0.1MPa～3MPa	5.0kPa～500kPa	0kPa～500kPa
	E————	0.2MPa～20MPa	-0.1MPa～20MPa	0.03MPa～3.0MPa	0MPa～3.0MPa
	F————	0.4MPa～40MPa	-0.1MPa～40MPa	0.2MPa～20MPa	0MPa～20MPa
Wetted Material		Isolation diaphragm		Related wetted parts	
	※S————	316L		316	
	H————	HC-276		316	
	C————	HC-276		HC-276(note 1)	
	T————	Tantalum		316	
	M————	Monel		316	
	G————	316L gold-plated		316	
	R————	Tantalum		HC-276(note 1)	
	L————	316L gold-plated		HC-276(note 1)	
	K————	Monel		Monel(note 1)	
Process Connector (note 2)	※0————	Interior flange up 1/4NPT internal thread, exhaust fluid at the back			
	1————	Interior flange up 1/4NPT internal thread, exhaust liquid on the side			
	2————	Process sub with 1/2NPT internal thread, exhaust at the back			
	3————	Process sub with 1/2NPT internal thread, exhaust on side			
	4————	Pressure port down, interior flange up 1/4NPT internal thread (not applicable to F cartridge 805G)			
	5————	Pressure port down, interior flange up 1/2NPT internal thread (not applicable to F cartridge 805G)			
Interior Bolt	※1————	SCM435(35CrMo)			
	2————	304			
	3————	316			
Explosion-proof	-A————	Non-explosion proof			
	-B————	NEPSI: Intrinsically safe Exia Ⅱ CT4 Ga			
	-C————	NEPSI: Intrinsically safe Exia Ⅱ CT6 Ga			
	-D————	NEPSI: Flame-proof Exd Ⅱ CT6 Gb			
	-F————	NEPSI: Dust explosion proof Ex tD A21 IP67 T85℃			
	-G————	ATEX: Intrinsically safe Ex II1G Ex ia Ⅱ CT4 Ga			
	-H————	ATEX: Flameproof Ex II1/2G Ex db IICT6…T4Ga/Gb			
	-J————	IECEx: Intrinsically safe Ex iaIICT4 Ga			
	-K————	IECEx: Flameproof Ex dbIICT6…T4 Ga/Gb			
	-N————	NEPSI: “n” explosion-proof Ex nA IICT6 Gc			
Shell (note 3)		Material	Electrical interface		
	※1————	Aluminum	1/2NPT internal thread, two electrical interfaces		
	2————	Aluminum	M20×1.5 internal thread, two electrical interfaces		
	3————	Stainless steel	1/2NPT internal thread, two electrical interfaces		
	4————	Stainless steel	M20×1.5 internal thread, two electrical interfaces		
Display Meter	N————	No display meter			
	D——-(note 4)	LCD display meter			

Mounting Bracket		Type	Material
	A—————	Horizontal (type I) bracket	Q235
	B—————	Horizontal (type I) bracket	304
	E—————	Horizontal (type I) bracket	316
	C—————	Vertical (L) bracket	Q235
	D—————	Vertical (L) bracket	304
	F—————	Vertical (L) bracket	316
	N—————	No mounting bracket	
Additional Options	/××	See table of additional options	

Additional options

Item	Specification		Code (note 5)
Protective Treatmentect	External protective treatment of transmitter (for external strongly corrosive environment)		P10
Electrical Connector	Dimension	Material	
	M20×1.5 electrical connector + one seal plug	Plastic	G60
	1/2 NPT electrical connector + one seal plug	Plastic	G61
	M20×1.5 seal plug one	304	G62
	M20×1.5 flameproof electrical connector + one seal plug	316	G70
	1/2NPT flameproof electrical connector + one seal plug	316	G71
	1/2 NPT seal plug one	304	G72
	1/2 NPT seal plug one	316	G73
	M20×1.5 seal plug one	316	G74
	M20×1.5 flameproof electrical connector + one seal plug	316	G75
	1/2NPT flameproof electrical connector + one seal plug	316	G76
Process Joint	Joint Type	Material	
	1/2NPT external thread - welded pipe joint	304	G81
	1/2NPT external thread - welded pipe joint	316	H81
	1/2NPT external thread - welded pipe joint	316L	K81
	1/2NPT external thread - welded pipe joint	Q235	G91
	1/4NPT external thread - welded pipe joint	304	G82
	1/4NPT external thread - welded pipe joint	316	H82
	1/4NPT external thread - welded pipe joint	316L	K82
	1/4NPT external thread - welded pipe joint	Q235	G92
	1/2NPT external thread -- M20×1.5 external thread	304	G84
	1/2NPT external thread -- M20×1.5 external thread	316	H84
	1/2NPT external thread -- M20×1.5 external thread	316L	K84
Assembly Of Valve Group	Delivery after valve group and transmitter integrated assembly test		S
Lightning Proof	Lightning protection terminal plate		F20
Quality Assurance System	Comply with the company's nuclear quality assurance system (if this option is not selected, the default is to comply with the ISO9001 quality assurance system)		NP
Alarm	Alarm current: 22.8mA (if not selected, the alarm current defaults to 3.6mA)		A1
Document	Delivery acceptance document (note 6)		D1
Process Connector Mounting Thread	7/16-20UNF Inch thread		E1
Languages	English (instruction, packing list, cargo list, main nameplate in English)		L01
	Russian (instruction, packing list, cargo list in Russian, main nameplate in English)		L02
	French (instruction, packing list, cargo list in French, main nameplate in English)		L03
Display Unit	Unit	Code	Unit / Code
	%	U01	ftH_2O U29
	mA	U20	mbar U30
	Pa	U21	bar U31
	KPa	U22	psi U32
	MPa	U23	mmHg U33

	gf/cm^2	U24	inHg	U34
	kgf/cm^2	U25	Torr	U35
	mmH_2O	U26	Atm	U36
	mH_2O	U27	$i4H_2O$(inch of water 4℃)	U37
	inH_2O	U28	$m4H_2O$(millimeter of water 4℃)	U38
Valve Group	G8 Series valve group SICV series valve group		See valve group options	

Special note

※ : Recommended option: If you have special requirements, please add "Z" after the order code with the text description.

Note 1:when mounting thread 7/16-20unf, maximum measured pressure is 32MPa.

Note 2: the high voltage side (H) is on the right by default.

Note 3: the flameproof electrical connector must be used when selecting flameproof transmitters. See additional options.

Note 4: the pressure value is displayed by default, and the rest of the display modes are described in "additional options".

Note 5: the options are separated by "/", such as "/P10/G61/K81".

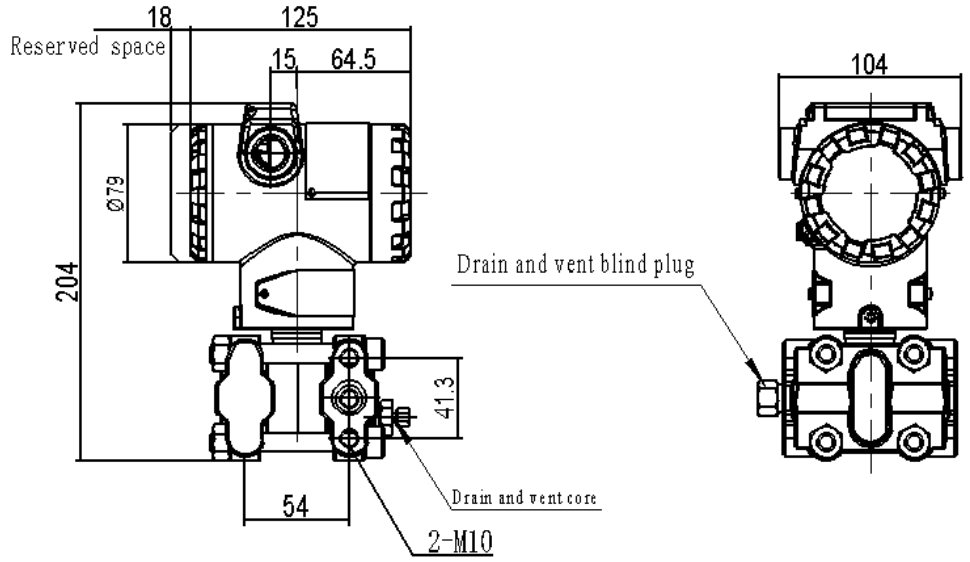
Note 6: in addition to the standard delivery documents (original certificate of conformity, specification, packing list), the detailed list of the commonly used information provided by the manufacturer for the acceptance of the products shall be provided when ordering. If third party test report or other special requirements are needed, it will be quoted separately.

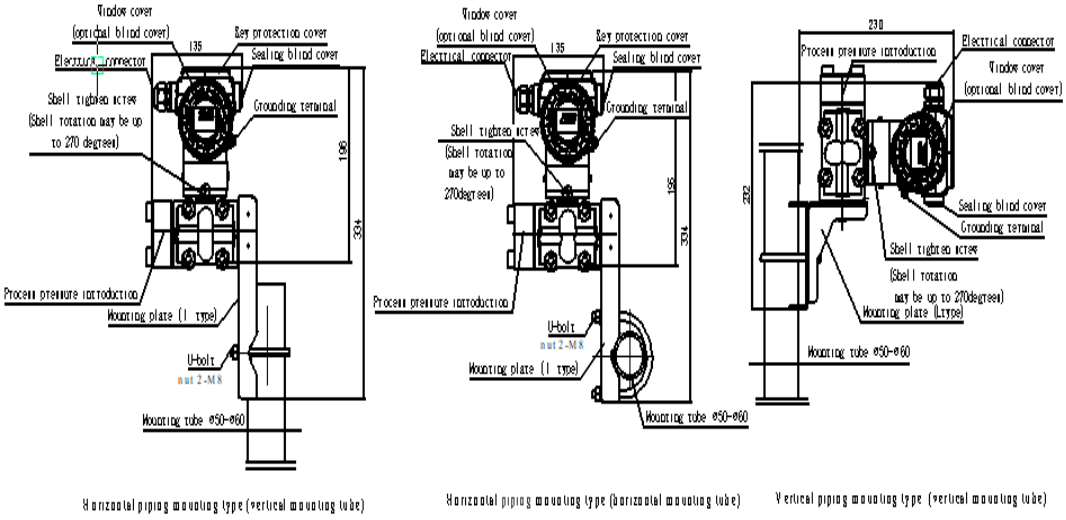
Selection of the sample

PDS805GH-1DS23-A1DE/G61/SSICV2-NC5ML/D2/T, transmitter and valve group models are separated by space.

PDS805 shape and mounting dimension

Unit: mm





PDS843 Differential pressure transmitter

PDS843 differential pressure transmitter is used to measure the differential pressure and flow of liquid, gas and steam, and convert them into 4-20mA d.c. current (superposition HART communication) or PROFIBUS-PA communication signal and FF communication signal for output. Remote setting and monitoring can be realized through communication equipment.



Performance specification

Ranges ratio

Max. ranges ratio (r= Max. ranges/ranges in use) = 100:1

Long-term stability

δ≤±0.1%FS/10 years

δ≤±0.2%/FS10 years，PDS843Lmicro differential pressure

Sensor ranges

Range code	PDS843M differential pressure, PDS843H high static pressure					PDS843L micro differential pressure			
	Min. ranges	Max. ranges	Measuring range	M differential pressure overload limit	H High static pressure overload limit	Min. ranges	Max. ranges	Measuring range	Overload limit
C	0.5kPa	10kPa	-10kPa～10kPa	16MPa	42MPa	0.1kPa	2.0kPa	-2kPa～2kPa	200kPa
D	1.0kPa	100kPa	-100kpa～100kPa	16MPa	42MPa	0.1kPa	2.0kPa	-2kPa～2kPa	3.2MPa
E	5.0kPa	500kPa	-500kpa～500kPa	16MPa	42MPa	——	——	——	——
F	0.03MPa	3.0MPa	-0.5MPa～3.0MPa	16MPa	42MPa	——	——	——	——
G	0.14MPa	14MPa	-0.5MPa～14MPa	16MPa	——	——	——	——	——

Note: negative numbers in the table represent the maximum negative migration of the corresponding ranges

Reference accuracy δ

843M differential pressure ranges code	843H high static pressure ranges code	843L micro differential pressure ranges code	Accuracy δ
E、F、G	E、F	——	δ≤±0.025% δ≤±(0.01+0.0015*r)%，ranges ratio＞10:1
C	C	——	δ≤±(0.013+0.027*r)%，ranges ratio≤20:1
D	D	——	δ≤±0.04% δ≤±(0.004+0.0036*r)%，ranges ratio＞10:1
——	——	C、D	δ≤±(0.05+0.025*r)%，ranges ratio ≤20:1

Temperature Influence

δ≤(0.06*r+0.1)%/120℃, -40℃～+80℃

(843L is multiplied by 2 on this indicator)

δ≤(0.04*r+0.1)%/120℃, -40℃～+80℃

(applicable to ranges F, G of 843)

Process temperature ranges

- 40℃ ~ + 120℃

Static pressure effect

δ≤±0.03r%/16MPa

δ≤±0.1r%/3.2MPa，applicable for ranges C of PDS843M and 843H(10kPa)

δ≤±0.2r%/3.2MPa，applicable for PDS843L micro differential pressure(2kPa)

Model guide

Model	Specification code	Description			
PDS843	----------	Differential pressure transmitter			
Type	L————	Micro differential pressure			
	※M————	Differential pressure			
	H————	High static pressure			
Communication Protocol	※H————	HART (6.0) communication			
	P————	PROFIBUS-PA(3.02)field bus communication			
	F————	FF(6.1.1) field bus communication			
Capsule sealed Liquid		Sealed liquid	Measured part cleaning		
	※-1————	Silicone oil	Conventional cleaning		
	-2————	Silicone oil	Degreasing cleaning		
	-3————	Fluorine oil	Degreasing cleaning		
Measuring Ranges		M differential pressure, H High static pressure		L micro pressure	
		Ranges	Measuring range	Ranges	Measuring range / Overload
	C————	05kPa～10kPa	-10kPa～10kPa	0.1kPa～2kPa	-2kPa～2kPa / 200kPa
	D————	1kPa～100kPa	-100kpa～100kPa	0.1kPa～2kPa	-2kPa～2kPa / 3.2MPa
	E————	5kPa～500kPa	-500kPa～500kPa	————	
	F————	0.03MPa～3MPa	-0.5MPa～3MPa	————	
	G—-(note 1)	0.14MPa～14MPa	-0.5MPa～14MPa	————	
Wetted Material (note 3)		Isolation diaphragm		Related wetted parts	
	※S————	316L		316	
	H————	HC-276		316	
	C————	HC-276		HC-276(note 2)	
	T————	Tantalum		316	
	M————	Monel		316	
	G————	316L gold-plated		316	
	R————	Tantalum		HC-276(note 2)	
	L————	316L gold-plated		HC-276(note 2)	
	K————	Monel		Monel(note 2)	
Process Connector (note 4)	※0————	Interior flange up 1/4NPT internal thread, exhaust fluid at the back			
	1————	Interior flange up 1/4NPT internal thread, exhaust liquid on the side			
	2————	Process sub with 1/2NPT internal thread, exhaust at the back			
	3————	Process sub with 1/2NPT internal thread, exhaust on side			
	4————	Pressure port down, interior flange up 1/4NPT internal thread (Not applicable to 843H high static pressure)			
	5————	Pressure port down, process sub with 1/2NPT internal thread (Not applicable to 843H high static pressure)			
Interior Bolt	※1————	SCM435(35CrMo)			
	2————	304			
	3————	316			
Explosion-proof	-A————	Non-explosion proof			
	-B————	NEPSI: Intrinsically safe Exia Ⅱ CT4 Ga			
	-C————	NEPSI: Intrinsically safe Exia Ⅱ CT6 Ga			
	-D————	NEPSI: Flame-proof Exd Ⅱ CT6 Gb			
	-F————	NEPSI: Dust explosion proof Ex tD A21 IP67 T85℃			
	-G————	ATEX: Intrinsically safe Ex II1G Ex ia Ⅱ CT4 Ga			
	-H————	ATEX: Flameproof Ex II1/2G Ex db IICT6…T4Ga/Gb			
	-J————	IECEx: Intrinsically safe Ex iaIICT4 Ga			
	-K————	IECEx: Flameproof Ex dbIICT6…T4 Ga/Gb			
	-N————	NEPSI: “n” explosion-proof Ex nA IICT6 Gc			
Shell (note 5)		Material	Electrical interface		
	※1————	Aluminum	1/2NPT internal thread, two electrical interfaces		
	2————	Aluminum	M20×1.5 internal thread, two electrical interfaces		
	3————	Stainless steel	1/2NPT internal thread, two electrical interfaces		
	4————	Stainless steel	M20×1.5 internal thread, two electrical interfaces		

Display Meter	N———————— D—--(note 6)	No display meter LCD display meter	
Mounting Bracket		Type	Material
	A————————	Horizontal (type I) bracket	Q235
	B————————	Horizontal (type I) bracket	304
	E————————	Horizontal (type I) bracket	316
	C————————	Vertical (L) bracket	Q235
	D————————	Vertical (L) bracket	304
	F————————	Vertical (L) bracket	316
	N————————	No mounting bracket	
Additional Options	/××————————	See table of additional options	

Additional options

Item	Specification		Code (note 7)
Protective Treatmentect	External protective treatment of transmitter (for external strongly corrosive environment)		P10
Electrical Connector	Dimension	Material	
	M20×1.5 electrical connector + one seal plug	Plastic	G60
	1/2 NPT electrical connector + one seal plug	Plastic	G61
	M20×1.5 seal plug one	304	G62
	M20×1.5 flameproof electrical connector + one seal plug (NEPSI)	316	G70
	1/2NPT flameproof electrical connector + one seal plug (NEPSI)	316	G71
	1/2 NPT seal plug one	304	G72
	1/2 NPT seal plug one	316	G73
	M20×1.5 seal plug one	316	G74
	M20×1.5 flameproof electrical connector + one seal plug (ATEX/IECEx)	316	G75
	1/2NPT flameproof electrical connector + one seal plug (ATEX/IECEx)	316	G76
Process Joint	Joint Type	Material	
	1/2NPT external thread - welded pipe joint	304	G81
	1/2NPT external thread - welded pipe joint	316	H81
	1/2NPT external thread - welded pipe joint	316L	K81
	1/2NPT external thread - welded pipe joint	Q235	G91
	1/4NPT external thread - welded pipe joint	304	G82
	1/4NPT external thread - welded pipe joint	316	H82
	1/4NPT external thread - welded pipe joint	316L	K82
	1/4NPT external thread - welded pipe joint	Q235	G92
	1/2NPT external thread -- M20×1.5 external thread	304	G84
	1/2NPT external thread -- M20×1.5 external thread	316	H84
	1/2NPT external thread -- M20×1.5 external thread	316L	K84
Assembly Of Valve Group	Delivery after valve group and transmitter integrated assembly test		S
Lightning Proof	Lightning protection terminal plate		F20
Quality Assurance System	Comply with the company's nuclear quality assurance system (if this option is not selected, the default is to comply with the ISO9001 quality assurance system)		NP
Alarm	Alarm current: 22.8mA (if not selected, the alarm current defaults to 3.6mA)		A1
Document	Delivery acceptance document (note 8)		D1
Process Connector Mounting Thread	7/16-20UNF Inch thread		E1
Languages	English (instruction, packing list, cargo list, main nameplate in English)		L01
	Russian (instruction, packing list, cargo list in Russian, main nameplate in English)		L02
	French (instruction, packing list, cargo list in French, main nameplate in English)		L03

Display Unit	Unit	Code	Unit	Code
	%	U01	ftH_2O	U29
	mA	U20	mbar	U30
	Pa	U21	bar	U31
	KPa	U22	psi	U32
	MPa	U23	mmHg	U33
	gf/cm^2	U24	inHg	U34
	kgf/cm^2	U25	Torr	U35
	mmH_2O	U26	Atm	U36
	mH_2O	U27	$i4H_2O$(inch of water 4℃)	U37
	inH_2O	U28	$m4H_2O$(millimeter of water4℃)	U38
Valve Group	G8 series valve group SICV series valve group			See valve group options

Special note

※: Recommended option: if you have special requirements, please add "Z" after the order code with the text description.

Note 1: ranges G are only applicable to PDS843M type.

Note 2: mounting thread 7/16-20 UNF, maximum overload pressure 32MPa.

Note 3: PDS843L (differential pressure) isolation diaphragm can only be used for 316L and HC-276.

Note 4: the high voltage side (H) is on the right by default.

Note 5: the flameproof electrical connector must be used when selecting flameproof transmitters. See additional options.

Note 6: the pressure value is displayed by default, and the rest of the display modes are described in "additional options".

Note 7: the options are separated by "/", such as "/P10/G61/K81".

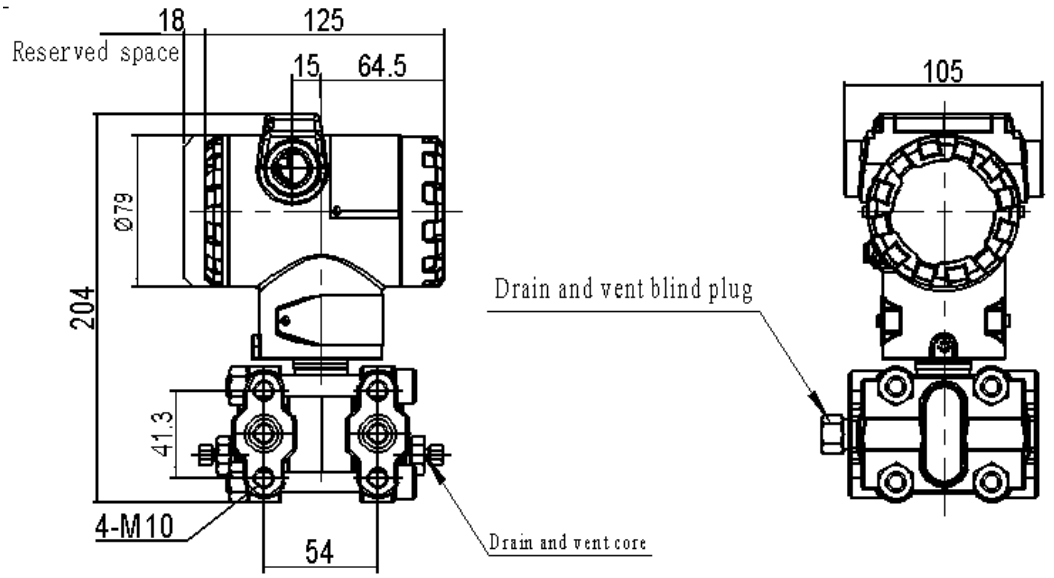
Note 8: in addition to the standard delivery documents (original certificate of conformity, specification, packing list), the detailed list of the commonly used information provided by the manufacturer for the acceptance of the products shall be provided when ordering. If third party test report or other special requirements are needed, it will be quoted separately.

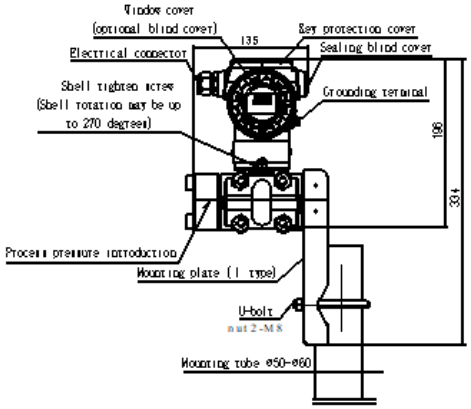
Selection of the sample

PDS843MH-1DS23-A1DE/G61/SG85-NB5MLD2/T, transmitter and valve group type shall be separated by space, or PDS843MH-1DS23-A1DE/G61/SSICV5-NCMLD2/N, transmitter and valve group type shall be separated by space

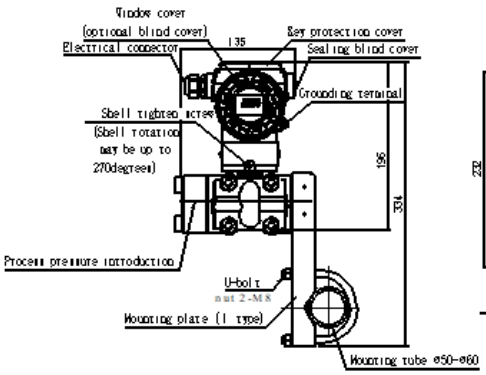
PDS843 shape and mounting dimension

Unit: mm

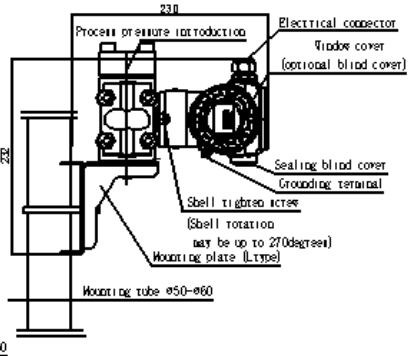




Horizontal piping mounting type (vertical mounting tube)



Horizontal piping mounting type (horizontal mounting tube)



Vertical piping mounting type (vertical mounting tube)

PDS863 Level transmitter

PDS863 liquid level transmitter is used to measure liquid level and convert it into 4-20mA d.c. electric current (superposition HART communication) or PROFIBUS-PA communication signaland FF communication signal for output. Remote setting and monitoring can be realized through communication equipment.



Performance specification

Ranges ratio

Max. ranges ratio r (r= Max. ranges/ranges in use) = 30:1

Long-term stability

δ≤±0.1%FS/10 years

Sensor ranges

Range code	Min. ranges	Max. ranges	Measuring range
C	2.0kPa	10kPa	-10kPa～10kPa
D	5.0kPa	100kPa	-100kPa～100kPa
E	16kPa	500kPa	-500kPa～500kPa
F	0.1MPa	3.0MPa	-0.5MPa～3.0MPa
G	0.4MPa	10MPa	-0.5MPa～10MPa

Note: HC-276 is not recommended when the measuring ranges is less than 10kPa and the flange size is less than or equal to DN50.

The negative umber in the table represents the maximum negative migration of the corresponding ranges.

Reference accuracy δ

PDS863Ranges code	Accuracy δ
C	δ≤±（0.04+0.035*r）%， ranges ratio≤5:1
D、E、F、G	δ≤±0.04% δ≤±（0.02+0.002*r）%，ranges ratio＞10:1

Temperature Influence:

δ≤(0.06*r+0.2)%/28℃, -40℃～+80℃(main body),

Please refer to the selected membrane box for sealed liquid for the lowest temperature

Overpressure and static pressure limits:

Flange nominal pressure

Model guide

Model	Specification code	Description		
PDS863	----------	Level transmitter		
Type	W————	Single flange level		
Communication Protocol	※H————	HART (6.0) communication		
	P————	PROFIBUS-PA(3.02)field bus communication		
	F————	FF(6.1.1) field bus communication		
Capsule Sealed Liquids		Sealed liquid	Measured part cleaning	Temperature range (note 1)
	※-1————	Silicone oil	Conventional cleaning	-30℃ ~ 150℃
	-2————	Silicone oil	Degreasing cleaning	-30℃ ~ 150℃
	-3————	Fluorine oil	Degreasing cleaning	-50℃ ~ 150℃
Measuring Ranges		Ranges	Measuring range	
	C————	2kPa～10kPa	-10kPa～10kPa	
	D————	5kPa～100kPa	-100kPa～100kPa	
	E————	16kPa～500kPa	-500kPa～500kPa	
	F————	0.1MPa～3MPa	-0.5MPa～3MPa	
	G————	0.4MPa～10MPa	-0.5MPa～10MPa	
L side Wetted Material		Isolation diaphragm	Related wetted parts	
	※S————	316L	316	
	H————	HC-276	316	
	T————	Tantalum	316	
	M————	Monel	316	
	C————	HC-276	HC-276	
	K————	Monel	Monel	
L side process connector	1————	Interior flange up 1/4NPT internal thread, thread, exhaust liquid on the side		
	3————	Process sub with 1/2NPT internal thread, exhaust liquid on side		
Interior bolt	※1————	SCM435(35CrMo)		
	2————	304		
	3————	316		
Explosion-proof	-A————	Non-explosion proof		
	-B————	NEPSI: Intrinsically safe Exia Ⅱ CT4 Ga		
	-C————	NEPSI: Intrinsically safe Exia Ⅱ CT6 Ga		
	-D————	NEPSI: Flame-proof Exd Ⅱ CT6 Gb		
	-F————	NEPSI: Dust explosion proof Ex tD A21 IP67 T85℃		
	-G————	ATEX: Intrinsically safe Ex II1G Ex ia Ⅱ CT4 Ga		
	-H————	ATEX: Flameproof Ex II1/2G Ex db IICT6…T4Ga/Gb		
	-J————	IECEx: Intrinsically safe Ex iaIICT4 Ga		
	-K————	IECEx: Flameproof Ex dbIICT6…T4 Ga/Gb		
	-N————	NEPSI: “n” explosion-proof Ex nA IICT6 Gc		
Shell (note 2)		Material	Electrical interface	
	※1————	Aluminum	1/2NPT internal thread, two electrical interfaces	
	2————	Aluminum	M20×1.5 internal thread, two electrical interfaces	
	3————	Stainless steel	1/2NPT internal thread, two electrical interfaces	
	4————	Stainless steel	M20×1.5 internal thread, two electrical interfaces	
Display meter	N————	No display meter		
	D——-(note 3)	LCD display meter		
Mounting bracket	N————	No mounting bracket		
Flange type	-P————	Flat flange		
	-T————	Convex flange		
Flange dimension		P flat flange	T Convex flange	Inserted diameter
	-1————	DN25(1inch)embedded	——	——
	-2————	DN50(2inch)	DN50(2inch)	48mm
	-3————	DN80(3inch)	DN80(3inch)	71mm
	-4————	DN100(4inch)	DN100(4inch)	96mm
The convex	0————	X_2=0mm(select this for P flat flange)		

length of the diaphragm	2————	X_2=50mm
	4————	X_2=100mm
	6————	X_2=150mm
	8————	X_2=200mm
	9————	X_2=250mm
H side diaphragm material	※S————	316L
	H————	HC-276
	T————	Tantalum
	M————	Monel
	G————	316L gold-plated
	N————	Nickel
	K————	Urea grade EN 1.4466
	R————	Titanium
Inserted barrel material	F————	No insertedbarrel (P flat flange selected)
	※S————	316L
	H————	HC-276
	M————	Monel
	K————	Urea grade 316L
	D————	2205 dual phase steel
Flange seal form	※1————	RF surface
	2————	RJ ring connector
	3————	M convex
	4————	FM concave
Flange standard (Note 4)		Standard — Pressure
	A————	ANSI150 — 2.0MPa
	B————	ANSI300 — 5.0MPa
	C————	ANSI600 — 11MPa
	D————	DINPN10/16 — 1.6MPa
	E————	DINPN25/40 — 4.0MPa
	F————	DINPN64 — 6.4MPa
	K————	DINPN100 — 10MPa
Flange material	A————	S25C
	B————	304
	C————	316
	D————	316L
Additional Options	/××————	See table of additional options

Additional options

Item	Specification			Code (note 5)
Structure form	High-temperature direct connection (applicable to process temperature range 150℃-200℃)			G01
Protective treatment	External protective treatment of transmitter (for external strongly corrosive environment)			P10
Flushing ring	Material 304 316L 304 316L	Flushing hole thread 1/4 NPT+ plug 1/4 NPT+ plug 1/2 NPT+ plug 1/2 NPT+ plug	X: 1 means 1 flushing hole and 2 means 2 flushing holes	 G30X G31X G32X G33X
Diaphragm anticorrosive coating	Teflon diaphragm (only applicable to DN50 and DN80 flat flanges with working pressure≥0kPa) can be coated with PTFE (only applicable to 316L and HC-276, only applicable to weak corrosive medium under negative pressure) and PFA (only applicable to 316L and HC-276 with working pressure≥0kPa)			G40 G41 G42
Companion flange	Type		Material	
	WN neck butt welding		S25C 304 316 316L	F50 G50 H50 K50
	PL plate flat welding		S25C 304 316 316L	F52 G52 H52 K52
	SO neck flat welding		S25C 304 316 316L	F53 G53 H53 K53
	TH thread flange		S25C 304 316 316L	F54 G54 H54 K54
Flange mounting accessories	Carbon steel bolt + metal winding pad Carbon steel bolt + teflon Carbon steel bolt + octagon pad Stainless steel bolt + metal winding pad Stainless steel bolt + teflon Stainless steel bolt + octagon pad (note: stainless steel is 304 by default)			G56 G57 H56 G58 G59 H58
Electrical Connector	Dimension		Material	
	M20×1.5 electrical connector + one seal plug		Plastic	G60
	1/2 NPT electrical connector + one seal plug		Plastic	G61
	M20×1.5 seal plug one		304	G62
	M20×1.5 flameproof electrical connector + one seal plug (NEPSI)		316	G70
	1/2NPT flameproof electrical connector + one seal plug (NEPSI)		316	G71
	1/2 NPT seal plug one		304	G72
	1/2 NPT seal plug one		316	G73
	M20×1.5 seal plug one		316	G74
	M20×1.5 flameproof electrical connector + one seal plug (ATEX/IECEx)		316	G75
	1/2NPT flameproof electrical connector + one seal plug (ATEX/IECEx)		316	G76
L side process joint	Joint Type		Material	Process Joint
	1/2NPT external thread - welded pipe joint		304	G81
	1/2NPT external thread - welded pipe joint		316	H81
	1/2NPT external thread - welded pipe joint		316L	K81
	1/2NPT external thread - welded pipe joint		Q235	G91
	1/4NPT external thread - welded pipe joint		304	G82

	1/4NPT external thread - welded pipe joint		316	H82
	1/4NPT external thread - welded pipe joint		316L	K82
	1/4NPT external thread - welded pipe joint		Q235	G92
	1/2NPT external thread -- M20×1.5 external thread		304	G84
	1/2NPT external thread -- M20×1.5 external thread		316	H84
	1/2NPT external thread -- M20×1.5 external thread		316L	K84
Lightning protection	Lightning protection terminal plate			F20
Quality assurance system	Comply with the company's nuclear quality assurance system (if this option is not selected, the default is to comply with the ISO9001 quality assurance system)			NP
Alarm	Alarm current: 22.8mA (if not selected, the alarm current defaults to 3.6mA)			A1
Document	Delivery acceptance document (note 6)			D1
Languages	English (instruction, packing list, cargo list, main nameplate in English) Russian (instruction, packing list, cargo list in Russian, main nameplate in English) French (instruction, packing list, cargo list in French, main nameplate in English)			L01 L02 L03
Display Unit	Unit	Code	Unit	Code
	%	U01	ftH_2O	U29
	mA	U20	mbar	U30
	Pa	U21	bar	U31
	KPa	U22	psi	U32
	MPa	U23	mmHg	U33
	gf/cm^2	U24	inHg	U34
	kgf/cm^2	U25	Torr	U35
	mmH_2O	U26	Atm	U36
	mH_2O	U27	$i4H_2O$(inch of water 4℃)	U37
	inH_2O	U28	$m4H_2O$(millimeter of water 4℃)	U38

Special note

※: Recommended option: if you have special requirements, please add "Z" after the order code with the text description.

Note 1: if the temperature is greater than 150℃, the high-temperature structure shall be selected. See additional options.

Note 2: flameproof electrical connectors must be used when selecting flameproof transmitters. See additional options.

Note 3: the default display is the pressure value, and the rest of the display modes are described in "additional options".

Note 4: serial number A, B and C are applicable to the American system in HG20615-2009～HG20635-2009 and GB/T9112-2000～GB/T9131-2000. Serial number D, E, F and K are suitable for the European system in HG20592-2009～HG20614-2009 and GB/T9112-2000～GB/T9131-2000.

Note 5: the options are separated by "/", such as "/P10/G61/K81".

Note 6: in addition to the standard delivery documents (original certificate of conformity, specification, packing list), the detailed list of the commonly used information provided by the manufacturer for the acceptance of the products shall be provided when ordering. If third party test report or other special requirements are needed, it will be quoted separately.

DN25 Dimensions for flat flanges (embedded)

Flange standard	D1	D2	D3	D4	T1	Bolt number n	Bolt diameter d
ANSI150	110	79.4	66	34	12.7	4	16
ANSI300	125	88.9	66	34	15.9	4	18
ANSI600	125	88.9	66	34	17.5	4	18
DINPN10/16	115	85	66	34	18	4	14
DINPN25/40	115	85	66	34	18	4	14
DINPN64/100	140	100	66	34	24	4	18

DN50 Dimensions for flat flanges

Flange standard	D1	D2	D3	D4	T1	Bolt number n	Bolt diameter d
ANSI150	150	120.7	100	61	19.5	4	18
ANSI300	165	127	100	61	22.7	8	18
ANSI600	165	127	100	61	32.4	8	18
DINPN10/16	165	125	100	61	18	4	18
DINPN25/40	165	125	100	61	20	4	18
DINPN64	180	135	100	61	26	4	22
DINPN100	195	145	100	61	28	4	26

DN80 dimensions for flat flanges

Flange standard	D1	D2	D3	D4	T1	Bolt number n	Bolt diameter d
ANSI150	190	152.4	130	89	24.3	4	18
ANSI300	210	168.3	130	89	29	8	22
ANSI600	210	168.3	130	89	38.8	8	22
DINPN10/16	200	160	130	89	20	8	18
DINPN25/40	200	160	130	89	24	8	18
DINPN64	215	170	130	89	28	8	22
DINPN100	230	180	130	89	32	8	26

DN100 dimensions for flat flanges

Flange standard	D1	D2	D3	D4	T1	Bolt number n	Bolt diameter d
ANSI150	230	190.5	155	115	24.3	8	18
ANSI300	255	200	155	115	32.2	8	22
ANSI600	275	215.9	155	115	45.1	8	26
DINPN10/16	220	180	155	115	20	8	18
DINPN25/40	235	190	155	115	24	8	22
DINPN64	250	200	155	115	30	8	26
DINPN100	265	210	155	115	36	8	30

DN50 dimensions for convex flanges

Flange standard	D1	D2	D3	D4	T1	Bolt number n	Bolt diameter d
ANSI150	150	120.7	100	48	19.5	4	18
ANSI300	165	127	100	48	22.7	8	18
ANSI600	165	127	100	48	32.4	8	18
DINPN10/16	165	125	100	48	18	4	18
DINPN25/40	165	125	100	48	20	4	18
DINPN64	180	135	100	48	26	4	22
DINPN100	195	145	100	48	28	4	26

DN80 dimensions for convex flanges

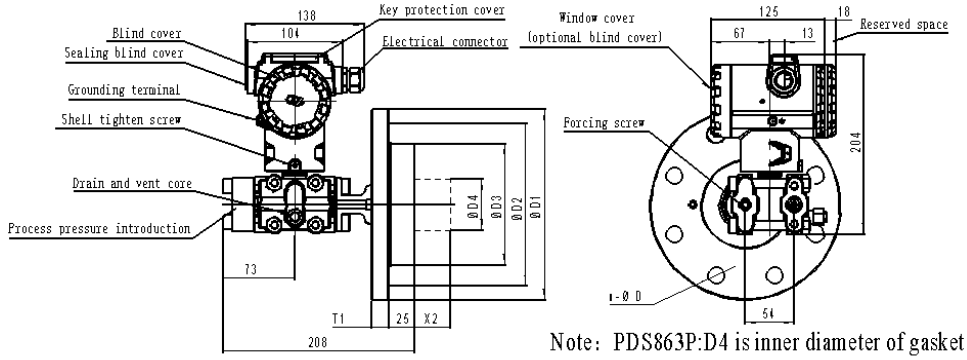
Flange standard	D1	D2	D3	D4	T1	Bolt number n	Bolt diameter d
ANSI150	190	152.4	130	71	24.3	4	18
ANSI300	210	168.3	130	71	29	8	22
ANSI600	210	168.3	130	71	38.8	8	22
DINPN10/16	200	160	130	71	20	8	18
DINPN25/40	200	160	130	71	24	8	18
DINPN64	215	170	130	71	28	8	22
DINPN100	230	180	130	71	32	8	26

DN100 dimensions for convex flanges

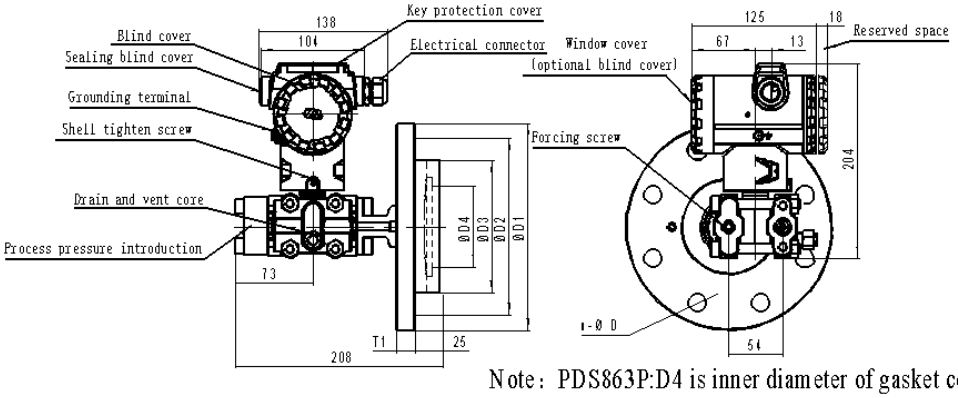
Flange standard	D1	D2	D3	D4	T1	Bolt number n	Bolt diameter d
ANSI150	230	190.5	155	96	24.3	8	18
ANSI300	255	200	155	96	32.2	8	22
ANSI600	275	215.9	155	96	45.1	8	26
DINPN10/16	220	180	155	96	20	8	18
DINPN25/40	235	190	155	96	24	8	22
DINPN64	250	200	155	96	30	8	26
DINPN100	265	210	155	96	36	8	30

PDS863 shape and mounting dimension

Unit: mm

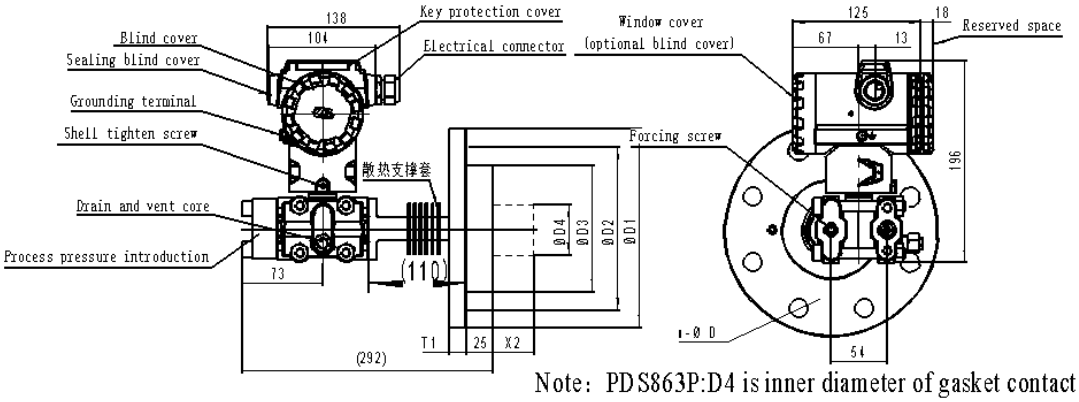


Note：PDS863P:D4 is inner diameter of gasket contact face
PDS863T:D4 is external diameter of plug-in cartridge
X2 is protrude length of plug-in cartridge



Note：PDS863P:D4 is inner diameter of gasket contact face

PDS863P DN25 diaphragm embedded type



Note：PDS863P:D4 is inner diameter of gasket contact face
PDS863T:D4 is external diameter of plug-in cartridge
X2 is protrude length of plug-in cartridge

PDS863 high temperature straight connection type

Note: D4 is the inner diameter of flat flange gasket contact surface or the outer diameter of insertedbarrel.

X2 can be selected as the insertion depth of 50mm, 100mm, 150mm, 200mm, 250mm, or customized according to the field conditions.

PDS873 Remote pressure transmitter

PDS873 remote pressure transmitter is used to measure pressure and convert it into 4-20mA d.c. current (superposition HART communication) or PROFIBUS-PA communication signal and FF communication signal for output. Remote setting and monitoring can be realized through communication equipment.



Performance specification

Ranges ratio

Max. Ranges ratio r (r= Max. ranges/ranges in use) = 30:1

Long term stability

δ≤±0.1%FS/10years

Sensor ranges

Range code	PDS873G gage pressure			PDS873A absolute pressure		
	Min. ranges	Max. ranges	Measuring range	Min. ranges	Max. ranges	Measuring range
B	5.0kPa	100kPa	-100kPa～100kPa	5.0kPa	25kPa	0kPa～25kPa(A)
C	20kPa	400kPa	-100kPa～400kPa	10kPa	130kPa	0kPa～130kPa(A)
D	0.15MPa	3MPa	-0.1MPa～3MPa	25kPa	500kPa	0kPa～500kPa(A)
E	0.6MPa	20MPa	-0.1MPa～20MPa	0.15MPa	3.0MPa	0MPa～3.0MPa(A)
F	2.0MPa	40MPa	-0.1MPa～40MPa	1.0MPa	20MPa	0MPa～20MPa(A)

Note: HC-276 is not recommended when the measuring ranges is less than 10kPa and the flange size is less than or equal to DN50.

The long-term working pressure of PDS873G gauge pressure type (except PDS873A absolute pressure type) shall not be lower than 50kPa (ABS).

Reference accuracy δ

PDS873G Gage pressure Ranges code	PDS873A absolute pressure Ranges code	Accuracy δ
B、C、D、E、F	B、C、D、E、F	δ≤±0.1% δ≤±(0.04+0.012*r)%，ranges ratio＞5:1

Temperature influence

δ ≤± (0.06r+0.35) %/28℃ -40℃ ~ +80℃ (main body), for the minimum temperature please refer to the selected overpressure limit of remote sealed liquid

Overvoltage limit

Is the minimum value between flange nominal pressure and the maximum range of transmitter.

Model guide

Model	Specification code	Description
PDS873	----------	Single flange pressure transmitter
Type	G————	Gage pressure
	A————	Absolute pressure
Communication Protocol	※H————	HART (6.0) communication
	P————	PROFIBUS-PA(3.02)field bus communication
	F————	FF(6.1.1) field bus communication
Capsule sealed liquid	-1————	Silicone oil

Measuring Ranges

	G Gauge pressure		A Absolute pressure	
	Ranges	Measuring range	Ranges	Measuring range
B————	5.0kPa～100kPa	-100kPa～100kPa	5.0kPa～25kPa(A)	0kPa～25kPa(A)
C————	20kPa～400kPa	-100kPa～400kPa	10kPa～130kPa(A)	0kPa～130kPa(A)
D————	0.15MPa～3MPa	-0.1MPa～3MPa	25kPa～500KPa(A)	0kPa～500KPa(A)
E————	0.6MPa～20MPa	-0.1MPa～20MPa	0.15MPa～3.0MPa(A)	0MPa～3.0MPa(A)
F————	2.0MPa～40MPa	-0.1MPa～40MPa	1.0MPa～20MPa(A)	0MPa～20MPa(A)

Explosion-proof	-A————	Non-explosion proof
	-B————	NEPSI: Intrinsically safe Exia Ⅱ CT4 Ga
	-C————	NEPSI: Intrinsically safe Exia Ⅱ CT6 Ga
	-D————	NEPSI: Flame-proof Exd Ⅱ CT6 Gb
	-F————	NEPSI: Dust explosion proof Ex tD A21 IP67 T85℃
	-G————	ATEX: Intrinsically safe Ex II1G Ex ia Ⅱ CT4 Ga
	-H————	ATEX: Flameproof Ex II1/2G Ex db IICT6…T4Ga/Gb
	-J————	IECEx: Intrinsically safe Ex iaIICT4 Ga
	-K————	IECEx: Flameproof Ex dbIICT6…T4 Ga/Gb
	-N————	NEPSI: “n” explosion-proof Ex nA IICT6 Gc

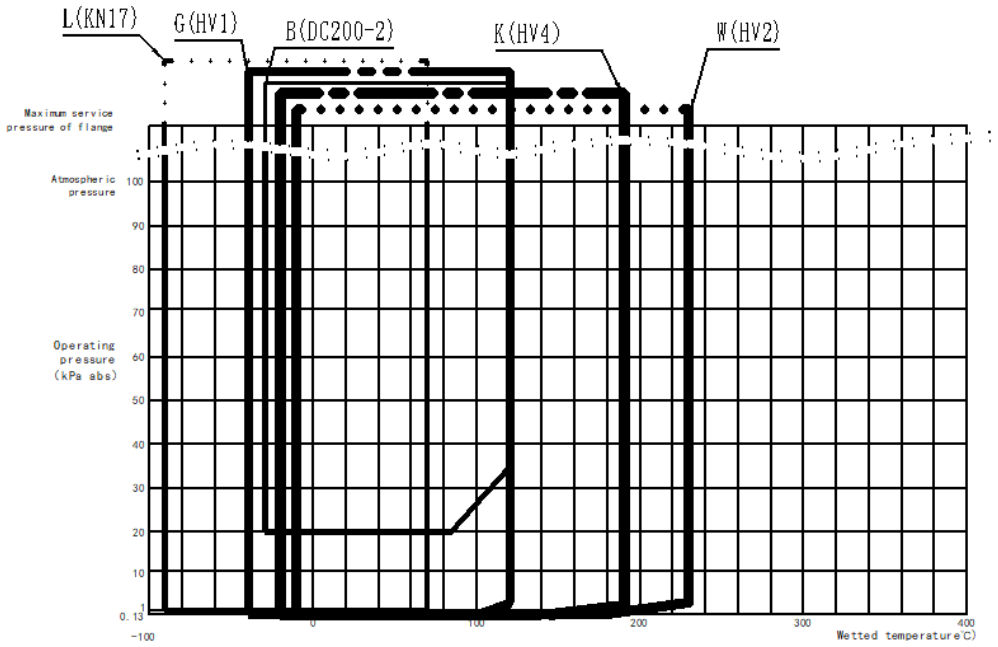
		Material	Electrical interface
Shell (note 1)	※1————	Aluminum	1/2NPT internal thread, two electrical interfaces
	2————	Aluminum	M20×1.5 internal thread, two electrical interfaces
	3————	Stainless steel	1/2NPT internal thread, two electrical interfaces
	4————	Stainless steel	M20×1.5 internal thread, two electrical interfaces
Display meter	N————	No display meter	
	D—--(note 2)	LCD display meter	

		Type	Material
Mounting bracket	A————	Horizontal (type I) bracket	Q235
	B————	Horizontal (type I) bracket	304
	E————	Horizontal (type I) support	316
	C————	Vertical (L) bracket	Q235
	D————	Vertical (L) bracket	304
	F————	Vertical (L) support	316
	N————	No mounting bracket	
Flange type	-P————	Flat flange	
	-T————	Convex flange	
Capillary length	-□□(00～15m)	When the length is 0 m, the pressure must be less than 10MPa and the medium temperature less than 150℃ (note 3)	

Remote sealed fluid

		Sealed liquid	Wetted temperature	Density
G Gage pressure	A————	DC200-1 silicon oil	-10℃～250℃	1.07g/cm^3
	B————	DC200-2 silicon oil	-30℃～180℃	0.94g/ cm^3
	C————	DC704 High temperature silicon oil	10℃～300℃	1.09g/ cm^3
	F————	Fluorine oil	-50℃～150℃	1.87g/ cm^3
	L————	KN17 low temperature oil	-90℃～120℃	0.914g/ cm^3
	H————	KN3.2 super high temperature oil	-20℃～400℃	1.07g/ cm^3
	M————	Ultra-high temperature II silicone oil	-10℃～380℃	1.1g/ cm^3

Remote sealed fluid	A Absolute pressure	B————	DC200-2 Silicone oil	-30℃～120℃(note4)	1.07g/ cm^3
		L————	KN17 low temperature oil	-90℃～70℃	0.914g/ cm^3
		G————	HV1	-40℃～120℃	0.96g/ cm^3
		W————	HV2	-10℃～230℃	1.09g/ cm^3
		K————	Fluorine oil HV4	-20℃～190℃	1.83g/ cm^3
Flange dimension (note5)			P flat flange	T convex flange	Inserted
		-1————	DN25(1inch)embedded	——	——
		-2————	DN50(2inch)	DN50(2inch)	48mm
		-3————	DN80(3inch)	DN80(3inch)	71mm
		-4————	DN100(4inch)	DN100(4inch)	96mm
The convex length of the diaphragm		0————	X_2=0mm(select this for P flat flange)		
		2————	X_2=50mm		
		4————	X_2=100mm		
		6————	X_2=150mm		
		8————	X_2=200mm		
		9————	X_2=250mm		
Flange diaphragm material		※S————	316L		
		H————	HC-276		
		T————	Tantalum		
		M————	Monel		
		G————	316L gold-plated		
		N————	Nickel		
		K————	Urea grade EN 1.4466		
		R————	Titanium		
Inserted barrel material		F————	No insertedbarrel (P flat flange selected)		
		※S————	316L		
		H————	HC-276		
		M————	Monel		
		K————	Urea grade 316L		
		D————	2205 dual phase steel		
Flange seal form		※1————	RF surface		
		2————	RJ ring connector		
		3————	M convex		
		4————	FM concave		
Flange standard (Note 5)			Standard		Pressure
		-A————	ANSI150		2.0MPa
		-B————	ANSI300		5.0MPa
		-C————	ANSI600		11MPa
		-L————	ANSI900		15MPa
		-P————	ANSI1500 (Inserted diameter shall be indicated when ordering)		26MPa
		-R————	ANSI2500 (Inserted diameter shall be indicated when ordering)		40MPa
		-D————	DIN PN 10/16		1.6MPa
		-E————	DIN PN 25/40		4.0MPa
		-F————	DIN PN 64		6.4MPa
		-K————	DIN PN 100		10MPa
		-M————	DIN PN 160		16MPa
Flange material		A————	S25C		
		B————	304		
		C————	316		
		D————	316L		
Measuring part cleaning		A————	Conventional		
		B————	Degreasing		
Additional Options		/××————	See table of additional options		



Vacuum and temperature curve of filling fluid

Additional options

Item	Specification			Code (note 7)
Structure form	High-temperature direct connection (applicable to H side capillary 0 m, medium temperature range 150℃-200℃)			G01
Protective treatment	External protective treatment of transmitter (for external strongly corrosive environment)			P10
Flushing ring	Material 304 316L 304 316L	Flushing hole thread 1/4 NPT+ plug 1/4 NPT+ plug 1/2 NPT+ plug 1/2 NPT+ plug	X: 1 means 1 flushing hole and 2 means 2 flushing holes	 G30X G31X G32X G33X
Diaphragm anticorrosive coating	Teflon diaphragm (only applicable to DN50 and DN80 flat flanges with working pressure≥0kPa) can be coated with PTFE (only applicable to 316L and HC-276, only applicable to weak corrosive medium under negative pressure) and PFA (only applicable to 316L and HC-276 with working pressure≥0kPa)			G40 G41 G42
Companion flange	Type		Material	
	WN neck butt welding		S25C 304 316 316L	F50 G50 H50 K50
	PL plate flat welding		S25C 304 316 316L	F52 G52 H52 K52
	SO neck flat welding		S25C 304 316 316L	F53 G53 H53 K53
	TH thread flange		S25C 304 316 316L	F54 G54 H54 K54
Flange mounting accessories	Carbon steel bolt + metal winding pad Carbon steel bolt + teflon Carbon steel bolt + octagon pad Stainless steel bolt + metal winding pad Stainless steel bolt + teflon Stainless steel bolt + octagon pad (note: stainless steel is 304 by default)			G56 G57 H56 G58 G59 H58
Electrical Connector	Dimension		Material	
	M20×1.5 electrical connector + one seal plug		Plastic	G60
	1/2 NPT electrical connector + one seal plug		Plastic	G61
	M20×1.5 seal plug one		304	G62
	M20×1.5 flameproof electrical connector + one seal plug (NEPSI)		316	G70
	1/2NPT flameproof electrical connector + one seal plug (NEPSI)		316	G71
	1/2 NPT seal plug one		304	G72
	1/2 NPT seal plug one		316	G73
	M20×1.5 seal plug one		316	G74
	M20×1.5 flameproof electrical connector + one seal plug (ATEX/IECEx)		316	G75
	1/2NPT flameproof electrical connector + one seal plug (ATEX/IECEx)		316	G76
Lightning protection	Lightning protection terminal plate			F20
Quality assurance system	Comply with the company's nuclear quality assurance system (if this option is not selected, the default is to comply with the ISO9001 quality assurance system)			NP
Alarm	Alarm current: 22.8mA (if not selected, the alarm current defaults to 3.6mA)			A1

Document	Delivery acceptance document (note 8)			D1
Languages	English (instruction, packing list, cargo list, main nameplate in English) Russian (instruction, packing list, cargo list in Russian, main nameplate in English) French (instruction, packing list, cargo list in French, main nameplate in English)			L01 L02 L03
Display Unit	Unit	Code	Unit	Code
	%	U01	ftH_2O	U29
	mA	U20	mbar	U30
	Pa	U21	bar	U31
	KPa	U22	psi	U32
	MPa	U23	mmHg	U33
	gf/cm^2	U24	inHg	U34
	kgf/cm^2	U25	Torr	U35
	mmH_2O	U26	Atm	U36
	mH_2O	U27	$i4H_2O$(inch of water 4℃)	U37
	inH_2O	U28	$m4H_2O$(millimeter of water 4℃)	U38

Special note

※ : Recommended option: for special orders, please add "Z" after the order code and write down the description.

Note 1: When selecting flameproof transmitters, flameproof electrical connections must be used. See additional options.

Note 2: The pressure value is displayed by default, and the rest of the display modes are described in "additional options".

Note 3: L, P, R and M are not optional in flange standard.

Note 4: When operating temperature is ≤80℃, the minimum operating pressure is 20k Pa (abs). When operating Temperature is higher than 80℃ and lower than or equal to 120℃, it shall not be lower than 50k Pa(abs).

Note 5: When the filling liquid of PDS873P flat flange and DN50 and PDS873T flange DN80 is Oil B, the capillary is ≤ 10m; When filling liquid is other oil, then capillary is ≤8 m. when DN50 flange capillary of PDS873T is ≤ 3m, please consult for special length.

Note 6: Serial number A, B, C, L, P, R are applicable to the American system in HG20615-2009～HG20635-2009 and GB/T9112-2000～GB/T9131-2000.

Serial number D, E, F, K and M are suitable for the European system in HG20592-2009～HG20614-2009 and GB/T9112-2000～GB/T9131-2000.

Note 7: The options are separated by "/", such as "/P10/G61/F20".

Note 8: In addition to the standard delivery documents (original certificate of conformity, specification, packing list), a detailed list of the commonly used information needs to be provided by the manufacturer when ordering. If third party test report or other special requirements are need, it will be quoted separately.

DN25 dimensions for flat flanges (embedded)

Flange standard	D1	D2	D3	D4	T1	Bolt number n	Bolt diameter d
ANSI 150	110	79.4	66	34	12.7	4	16
ANSI 300	125	88.9	66	34	15.9	4	18
ANSI 600	125	88.9	66	34	17.5	4	18
ANSI 900	150	101.6	66	34	28.6	4	26
DIN PN10/16	115	85	66	34	18	4	14
DIN PN25/40	115	85	66	34	18	4	14
DIN PN64/100	140	100	66	34	24	4	18

DN50 dimensions for flat flanges

Flange standard	D1	D2	D3	D4	T1	Bolt number n	Bolt diameter d
ANSI 150	150	120.7	100	61	19.5	4	18
ANSI 300	165	127	100	61	22.7	8	18
ANSI 600	165	127	100	61	32.4	8	18
ANSI 900	215	165.1	100	61	45.1	8	26
ANSI 1500	215	165.1	100	61	45.1	8	26
ANSI 2500	235	171.4	100	61	57.9	8	30
DIN PN10/16	165	125	100	61	18	4	18
DIN PN25/40	165	125	100	61	20	4	18
DIN PN64	180	135	100	61	26	4	22
DIN PN100	195	145	100	61	28	4	26
DIN PN160	195	145	100	61	30	4	26

DN80 dimensions for flat flanges

Flange standard	D1	D2	D3	D4	T1	Bolt number n	Bolt diameter d
ANSI 150	190	152.4	130	89	24.3	4	18
ANSI 300	210	168.3	130	89	29	8	22
ANSI 600	210	168.3	130	89	38.8	8	22
ANSI 900	240	190.5	130	89	45.1	8	26
ANSI 1500	265	203.2	130	89	54.7	8	33
ANSI 2500	305	228.6	130	89	73.7	8	36
DIN PN10/16	200	160	130	89	20	8	18
DIN PN25/40	200	160	130	89	24	8	18
DIN PN64	215	170	130	89	28	8	22
DIN PN100	230	180	130	89	32	8	26
DIN PN160	230	180	130	89	36	8	26

DN100 dimensions for flat flanges

Flange standard	D1	D2	D3	D4	T1	Bolt number n	Bolt diameter d
ANSI 150	230	190.5	155	115	24.3	8	18
ANSI 300	255	200	155	115	32.2	8	22
ANSI 600	275	215.9	155	115	45.1	8	26
ANSI 900	290	235	155	115	51.5	8	33
ANSI 1500	310	241.3	155	115	61.0	8	36
ANSI 2500	355	273	155	115	83.2	8	42
DIN PN10/16	220	180	155	115	20	8	18
DIN PN25/40	235	190	155	115	24	8	22
DIN PN64	250	200	155	115	30	8	26
DIN PN100	265	210	155	115	36	8	30
DIN PN160	265	210	155	115	40	8	30

DN50 dimensions for convex flanges

Flange standard	D1	D2	D3	D4	T1	Bolt number n	Bolt diameter d
ANSI 150	150	120.7	100	48	19.5	4	18
ANSI 300	165	127	100	48	22.7	8	18
ANSI 600	165	127	100	48	32.4	8	18
ANSI 900	215	165.1	100	48	45.1	8	26
ANSI 1500	215	165.1	100	48	45.1	8	26
ANSI 2500	235	171.4	100	48	57.9	8	30
DIN PN10/16	165	125	100	48	18	4	18
DIN PN25/40	165	125	100	48	20	4	18
DIN PN64	180	135	100	48	26	4	22
DIN PN100	195	145	100	48	28	4	26
DIN PN160	195	145	100	48	30	4	26

DN80 dimensions for convex flanges

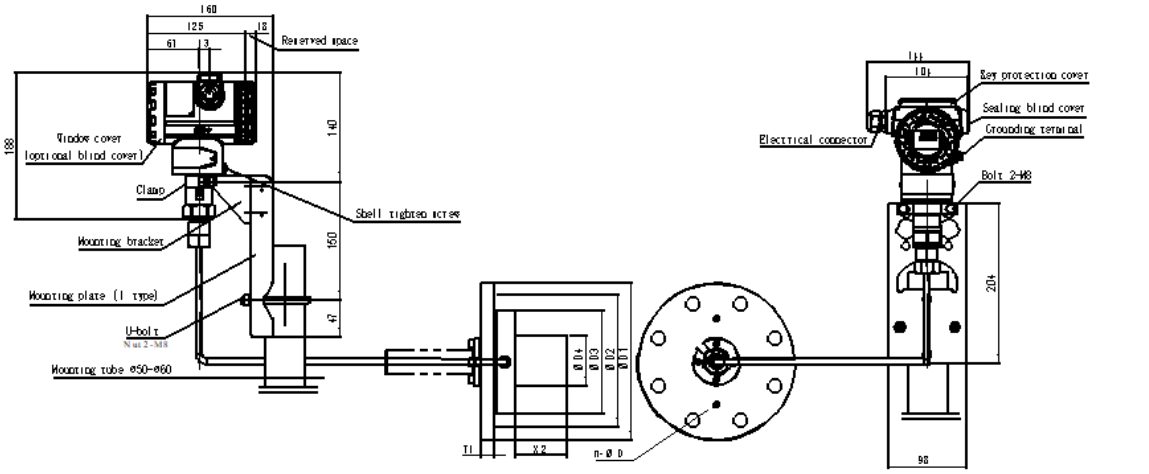
Flange standard	D1	D2	D3	D4	T1	Bolt number n	Bolt diameter d
ANSI 150	190	152.4	130	71	24.3	4	18
ANSI 300	210	168.3	130	71	29	8	22
ANSI 600	210	168.3	130	71	38.8	8	22
ANSI 900	240	190.5	130	71	45.1	8	26
ANSI 1500	265	203.2	130	71	54.7	8	33
ANSI 2500	305	228.6	130	71	73.7	8	36
DIN PN10/16	200	160	130	71	20	8	18
DIN PN25/40	200	160	130	71	24	8	18
DIN PN64	215	170	130	71	28	8	22
DIN PN100	230	180	130	71	32	8	26
DIN PN160	230	180	130	71	36	8	26

DN100 dimensions for convex flanges

Flange standard	D1	D2	D3	D4	T1	Bolt number n	Bolt diameter d
ANSI 150	230	190.5	155	96	24.3	8	18
ANSI 300	255	200	155	96	32.2	8	22
ANSI 600	275	215.9	155	96	45.1	8	26
ANSI 900	290	235	155	96	51.5	8	33
ANSI 1500	310	241.3	155	96	61.0	8	36
ANSI 2500	355	273	155	96	83.2	8	42
DIN PN10/16	220	180	155	96	20	8	18
DIN PN25/40	235	190	155	96	24	8	22
DIN PN64	250	200	155	96	30	8	26
DIN PN100	265	210	155	96	36	8	30
DIN PN160	265	210	155	96	40	8	30

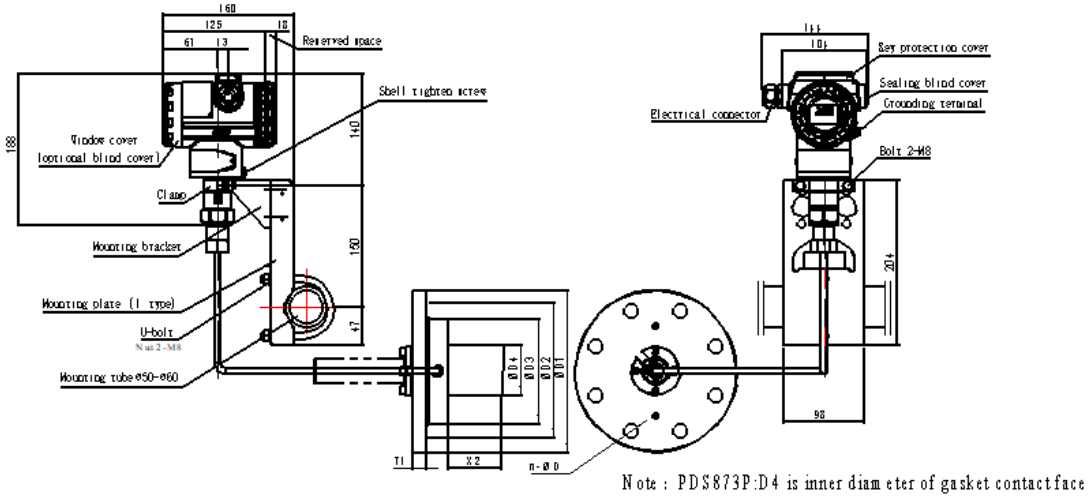
PDS873 shape and mounting dimension

Unit: mm



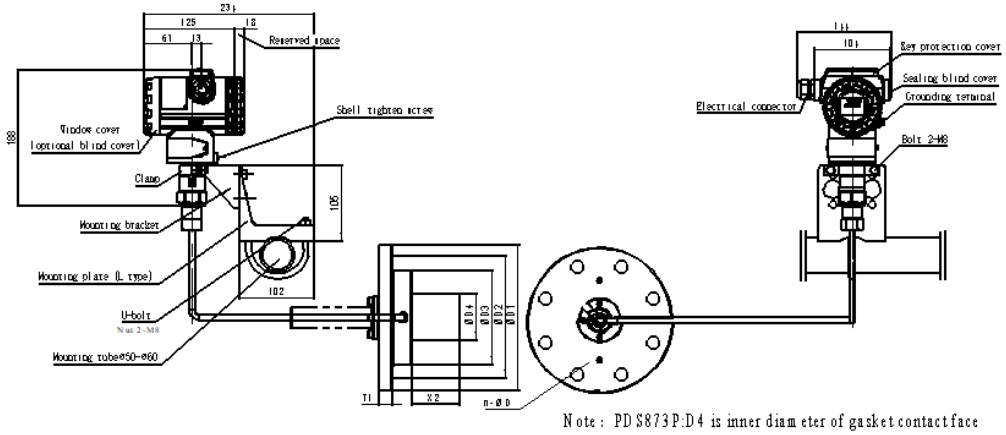
Horizontal piping mounting type (vertical mounting tube)

Note: PDS873P:D4 is inner diameter of gasket contact face
PDS873T:D4 is external diameter of plug-in cartridge
X2 is protrude length of plug-in cartridge



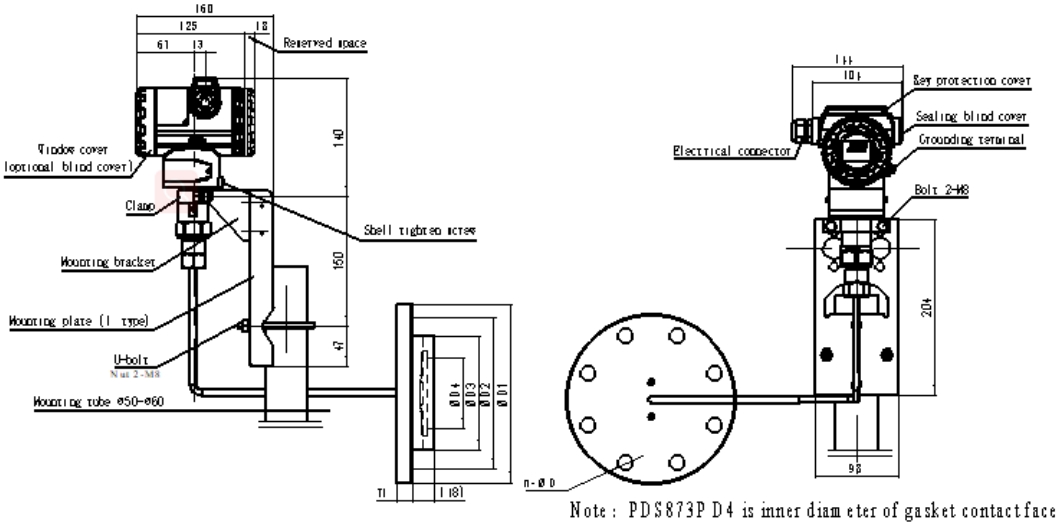
Horizontal piping mounting type (horizontal mounting tube)

Note: PDS873P:D4 is inner diameter of gasket contact face
PDS873T:D4 is external diameter of plug-in cartridge
X2 is protrude length of plug-in cartridge



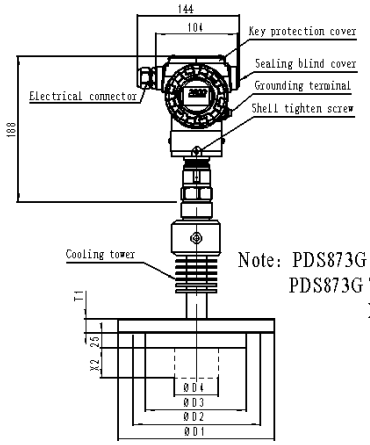
Note: PDS873P:D4 is inner diameter of gasket contact face
PDS873T:D4 is external diameter of plug-in cartridge
X2 is protrude length of plug-in cartridge

Horizontal piping mounting type (horizontal mounting tube)



Note: PDS873P D4 is inner diameter of gasket contact face

Horizontal piping mounting type (vertical mounting tube)



Note: PDS873G P:D4 is inner diameter of gasket contact face
PDS873G T:D4 is external diameter of plug-in cartridge
X2 is protrude length of plug-in cartridge

PDS873G high temperature straight connection type

Note: D4 is the inner diameter of flat flange gasket contact surface or the outer diameter of inserted barrel.

X2 can be selected as the insertion depth of 50mm, 100mm, 150mm, 200mm, 250mm, or customized according to the field conditions.

PDS883 Remote differential pressure transmitter

PDS883 remote differential pressure transmitter is used to measure differential pressure, liquid level or flow, and convert them into 4-20mA d.c. current (superposition HART communication) or PROFIBUS-PA communication signal and FF communication signal for output. Remote setting and monitoring can be realized through communication equipment.



Performance specification

Ranges ratio

Max. ranges ratio r (r= Max. ranges/ranges in use) = 20:1

Long term stability

δ≤±0.1%FS/10 years

Sensor ranges

Ranges code	Min. ranges	Max. ranges	Measuring range
C	2.5 kPa	10 kPa	-10kPa～10 kPa
D	5 kPa	100 kPa	-100kPa～100 kPa
E	25 kPa	500 kPa	-500kPa～500 kPa
F	0.15 MPa	3 MPa	-0.5MPa～3 MPa
G	0.7 MPa	14 MPa	-0.5MPa～14 MPa

Note: HC-276 is not recommended when the measuring ranges is less than 10kPa and the flange size is less than or equal to DN50.

The negative number of the measurement ranges in the table represents the maximum negative migration of the corresponding ranges.

Reference accuracy δ

PDS883Ranges code	Accuracy δ
C	δ≤±(0.2+0.019*r)%
D	δ≤±0.1% δ≤±(0.04+0.012*r)%，ranges ratio＞5:1
E、F、G	δ≤±0.1% δ≤±(0.05+0.01*r)%， ranges ratio＞5:1

Temperature influence

δ ≤± (0.06r+0.35) %/28℃ -40℃ ~ +80℃ (main body)

Please refer to the selected remote sealed liquid for the lowest temperature

Overpressure and static pressure limits

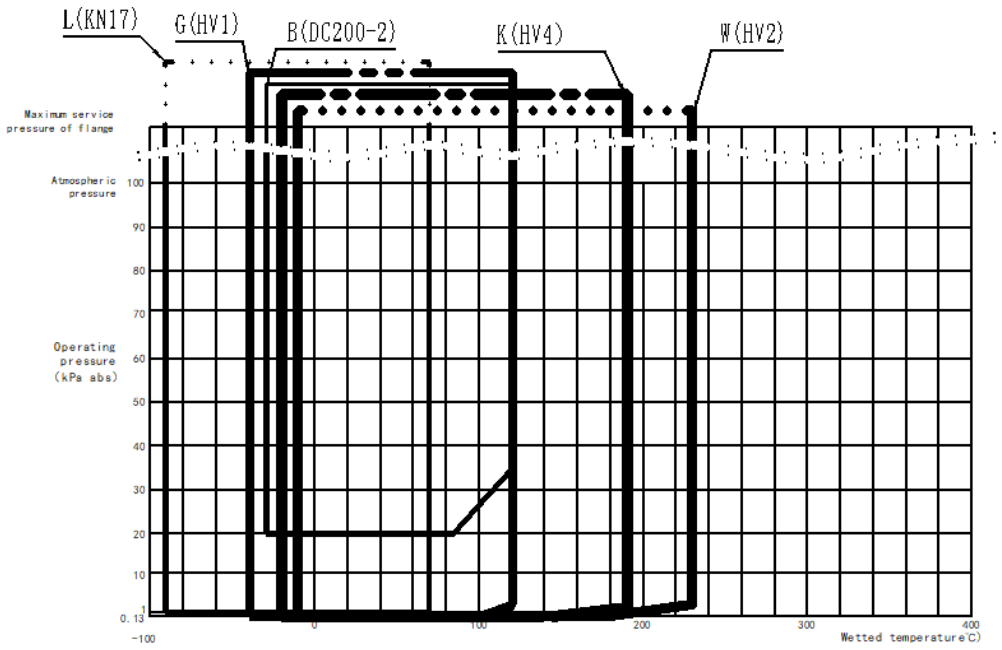
Is the minimum value between flange nominal pressure and the maximum range of transmitter.

Model guide

Model	Specification code	Description	
PDS883	----------	Double flange differential pressure transmitter	
Type	※G————	Standard	
	A————	Vacuum	
Communication Protocol	※H————	HART (6.0) communication	
	P————	PROFIBUS-PA(3.02)field bus communication	
	F————	FF(6.1.1) field bus communication	
Capsule sealed liquid	-1————	Silicone oil	
Measuring Ranges		Ranges	Measuring range
	C————	2.5kPa～10kPa	-10kPa～10kPa
	D————	5kPa～100kPa	-100kPa～100kPa
	E————	25kPa～200kPa	-500kPa～500kPa
	F————	0.15MPa～3MPa	-0.5MPa～3MPa
	G————	0.7MPa～14MPa(note1)	-0.5MPa～14MPa
Transmitter diaphragm		Isolation diaphragm	
	※S————	316L	
	H————	HC - 276	
	T————	Tantalum	
	M————	Monel	
Connection type	※1————	H (high pressure) side with 1 flange assembly, L (low pressure) side with 1/2NPT internal threaded interface	
	2————	With 2 flanged assemblies of the same form	
	3————	With 2 different forms of flange assemblies	
Interior bolt	※1————	SCM435(35CrMo)	
	2————	304	
	3————	316	
Explosion-proof	-A————	Non-explosion proof	
	-B————	NEPSI: Intrinsically safe Exia Ⅱ CT4 Ga	
	-C————	NEPSI: Intrinsically safe Exia Ⅱ CT6 Ga	
	-D————	NEPSI: Flame-proof Exd Ⅱ CT6 Gb	
	-F————	NEPSI: Dust explosion proof Ex tD A21 IP67 T85℃	
	-G————	ATEX: Intrinsically safe Ex II1G Ex ia Ⅱ CT4 Ga	
	-H————	ATEX: Flameproof Ex II1/2G Ex db IICT6…T4Ga/Gb	
	-J————	IECEx: Intrinsically safe Ex iaIICT4 Ga	
	-K————	IECEx: Flameproof Ex dbIICT6…T4 Ga/Gb	
	-N————	NEPSI: “n” explosion-proof Ex nA IICT6 Gc	
Shell (note 2)		Material	Electrical interface
	※1————	Aluminum	1/2NPT internal thread, two electrical interfaces
	2————	Aluminum	M20×1.5 internal thread, two electrical interfaces
	3————	Stainless steel	1/2NPT internal thread, two electrical interfaces
	4————	Stainless steel	M20×1.5 internal thread, two electrical interfaces
Display meter	N————	No display meter	
	D———(note 3)	LCD display meter	
Mounting bracket		Type	Material
	A————	Horizontal (type I) bracket	Q235
	B————	Horizontal (type I) bracket	304
	E————	Horizontal (type I) support	316
	C————	Vertical (L) bracket	Q235
	D————	Vertical (L) bracket	304
	F————	Vertical (L) support	316
	N————	No mounting bracket	
Flange type	-P————	Flat flange	
	-T————	Convex flange	
	-Y————	Flat flange and onvex flange	

Capillary length	-□□□□ (four digits)		The first and second places are length of H side: 00-15m (0 m is direct installation, temperature ≤150℃) (note 4) the third and fourth places are length of L side: 00-15m (0-m adaptable connection type 1, no flange on L side)		
Remote seal fluid	G standard type		Sealed Liquid	Wetted Temperature	Density
		A——	DC200-1 silicone oil	-10℃～250℃	1.07g/cm3
		B——	DC200-2 silicone oil	-30℃～180℃	0.94g/cm3
		C——	DC704 high-temperature silicone oil	10℃～300℃	1.09g/cm3
		F——	Fluorine oil	-50℃～150℃	1.87g/cm3
		L——	KN17 low-temperature oil	-90℃～120℃	0.914g/cm3
		H——	N3.2 ultra-high temperature oil	-20℃～400℃	1.07g/cm3
		M——	Ultra-high temperature Ⅱ silicone oil	-10℃～380℃	1.1g/cm3
	A Vacuum type	B——	DC200-2 silicone oil	-30℃～120℃(note 5)	1.07g/cm3
		L——	KN17 low-temperature oil	-90℃～70℃	0.914g/cm3
		G——	HV1	-40℃～120℃	0.96 g/cm3
		W——	HV2	-10℃～230℃	1.09 g/cm3
		K——	Fluorine oil HV4	-20℃～190℃	1.83 g/cm3
Flange dimension	P flat flange		Flange dimension		
		-1——	DN 25(1 inch embedded) (Note 6)		
		-2——	DN 50(2 inch)		
		-3——	DN 80(3 inch		
		-4——	DN 100(4 inch)		
	T Convex flange		Flange dimension	Inserted diameter	
		-2——	DN50(2 inch)	48mm (note 7)	
		-3——	DN80(3 inch)	71mm (note 8)	
		-4——	DN100(4 inch)	96mm	
	Y A flat flange A convex flange		L side flat flange	H side convex flange	Inserted diameter
		-1——	DN50	DN80(3 inch)	71mm(note 8)
		-2——	DN80	DN100(4 inch)	96mm
		-3——	DN80	DN80(3 inch)	71mm
		-4——	DN100	DN100(4 inch)	96mm
Protruding length of H side diaphragm	0——		X2=0mm(Select this option for P flat flange)		
	2——		X2=50mm		
	4——		X2=100mm		
	6——		X2=150mm		
	8——		X2=200mm		
	9——		X2=250mm		
Protruding length of L side	0——		X2=0mm(Select this option for P flat flange and Y a flat flange and a convex flange)		
	2——		X2=50mm		
	4——		X2=100mm		
	6——		X2=150mm		
	8——		X2=200mm		
	9——		X2=250mm		
Flange diaphragm material	※S——		316L		
	H——		HC-276		
	T——		Tantal		
	M——		um Monel		
	G——		316L Gold plated		
	N——		Nickel		
	K——		Urea grade EN 1.4466		
	R——		Titanium		
Inserted barrel material	F——		No P Inserted barrel material(Select this option for P flat flange)		
	※S——		316L		
	H——		HC-276		
	M——		Monel		
	K——		Urea grade 316L		
	D——		2205 dual phase steel		

Flange seal form	※1————	RF surface	
	2————	RJ ring connector	
	3————	M convex	
	4————	FM concave	
Flange standard (Note 9)		Standard	Pressure
	-A————	ANSI150	2.0MPa
	-B————	ANSI300	5.0MPa
	-C————	ANSI600	11MPa
	-L————	ANSI900	15MPa
	-P————	ANSI1500(Inserted diameter shall be indicated when ordering)	26MPa
	-R————	ANSI2500(Inserted diameter shall be indicated when ordering)	40MPa
	-D————	DIN PN 10/16	1.6MPa
	-E————	DIN PN 25/40	4.0MPa
	-F————	DIN PN 64	6.4MPa
	-K————	DIN PN 100	10MPa
	-M————	DIN PN 160	16MPa
Flange material	A————	S25C	
	B————	304	
	C————	316	
	D————	316L	
Measuring part cleaning	A————	Conventional	
	B————	Degreasing	
Additional Options	/××————	See table of additional options	



Vacuum and temperature curve of filling fluid

Additional options

Item	Description			Code (note 10)
Structure form	High-temperature direct connection (applicable to H side capillary 0 m, medium temperature range 150-200℃)			G01
Protective treatment	External protective treatment of transmitter (for external strongly corrosive environment)			P10
Flushing ring	Material 304 316L 304 316L	Flushing hole thread 1/4 NPT+ plug 1/4 NPT+ plug 1/2 NPT+ plug 1/2 NPT+ plug	X: 1 means 1 flushing hole and 2 means 2 flushing holes	 G30X G31X G32X G33X
Diaphragm anticorrosive coating	Teflon diaphragm (only applicable to DN50 and DN80 flat flanges with working can be coated with PTFE (only applicable to 316L and HC-276, only applicable to and PFA (only applicable to 316L and HC-276 with working pressure≥0kPa)			G40 G41 G42
Companion flange	Type		Material	
	WN neck butt welding		S25C 304 316 316L	F50 G50 H50 K50
	PL plate flat welding		S25C 304 316 316L	F52 G52 H52 K52
	SO neck flat welding		S25C 304 316 316L	F53 G53 H53 K53
	TH thread flange		S25C 304 316 316L	F54 G54 H54 K54
Flange mounting accessories	Carbon steel bolt + metal winding pad			G56
	Carbon steel bolt + teflon			G57
	Carbon steel bolt + octagon pad			H56
	Stainless steel bolt + metal winding pad			G58
	Stainless steel bolt + teflon			G59
	Stainless steel bolt + octagon pad (note: stainless steel is 304 by default)			H58
Electrical Connector	Dimension		Material	
	M20×1.5 electrical connector + one seal plug		Plastic	G60
	1/2 NPT electrical connector + one seal plug		Plastic	G61
	M20×1.5 seal plug one		304	G62
	M20×1.5 flameproof electrical connector + one seal plug (NEPSI)		316	G70
	1/2NPT flameproof electrical connector + one seal plug (NEPSI)		316	G71
	1/2 NPT seal plug one		304	G72
	1/2 NPT seal plug one		316	G73
	M20×1.5 seal plug one		316	G74
	M20×1.5 flameproof electrical connector + one seal plug (ATEX/IECEx)		316	G75
	1/2NPT flameproof electrical connector + one seal plug (ATEX/IECEx)		316	G76
Lightning protection	Lightning protection terminal plate			F20
Quality assurance	Comply with the company's nuclear quality assurance system (if this option is not selected, the default is to comply with the ISO9001 quality assurance system)			NP

system				
Alarm	Alarm current: 22.8mA (if not selected, the alarm current defaults to 3.6mA)			A1
Document	Delivery acceptance document (note 11)			D1
Languages	English (instruction, packing list, cargo list, main nameplate in English)			L01
	Russian (instruction, packing list, cargo list in Russian, main nameplate in English)			L02
	French (instruction, packing list, cargo list in French, main nameplate in English)			L03
Display Unit	Unit	Code	Unit	Code
	%	U01	ftH_2O	U29
	mA	U20	mbar	U30
	Pa	U21	bar	U31
	KPa	U22	psi	U32
	MPa	U23	mmHg	U33
	gf/cm^2	U24	inHg	U34
	kgf/cm^2	U25	Torr	U35
	mmH_2O	U26	Atm	U36
	mH_2O	U27	$i4H_2O$(inch of water 4℃)	U37
	inH_2O	U28	$m4H_2O$(millimeter of water 4℃)	U38

Special note

※: Recommended option: in case of special order, please add "Z" after the order code and give the text description.

Note 1: Flange standard not optional P, R.

Note 2: when selecting flameproof transmitters, flameproof electrical connections must be used. See additional options.

Note 3: the pressure value is displayed by default, and the rest of the display modes are described in "additional options".

Note 4: when H side length is 0, the pressure shall be less than 10MPa and the process temperature shall be less than 150℃. If the temperature is 120-200℃, annex G01 can be selected.

Note 5: when operating temperature is ≤80℃, the minimum operating pressure is 20kPa (abs). When operating temperature is higher than 80℃ and lower than or equal to 120℃, it shall not be lower than 50kPa (abs).

Note 6: when the flush flange type and DN50 filling liquid is Oil B, the capillary is ≤ 10m; Filling fluid for other oil, the capillary ≤8 m.

Note 7: capillary ≤3 m, special length requirements, please consult.

Note 8: if the filling liquid is Oil B, the capillary shall be ≤ 10m; if the filling liquid is other oils, the capillary shall be ≤ 8m.

Note 9: serial number A, B, C, L, P, R are suitable for the American system in HG20615-2009 ~ HG20635-2009 and GB/ T9112-2000 ~ GB/ T9131-2000. Serial number D, E, F, K, M are suitable for HG20592-2009 ~ HG20614-2009 and GB/ T9112-2000 ~ GB/ T9131-2000 in Europe system.

Note 10: the options are separated by "/", such as "/P10/G61/F20".

Note 11: in addition to the standard delivery documents (original certificate of conformity, specification, packing list), the detailed list of the commonly used information provided by the manufacturer for the acceptance of the products shall be provided when ordering. If third party test report or other special requirements are needed, it will be quoted separately.

DN25 dimensions for flat flanges (embedded)

Flange standard	D1	D2	D3	D4	T1	Bolt number n	Bolt diameter d
ANSI 150	110	79.4	66	34	12.7	4	16
ANSI 300	125	88.9	66	34	15.9	4	18
ANSI 600	125	88.9	66	34	17.5	4	18
ANSI 900	150	101.6	66	34	28.6	4	26
DIN PN10/16	115	85	66	34	18	4	14
DIN PN25/40	115	85	66	34	18	4	14
DIN PN64/100	140	100	66	34	24	4	18

DN50 dimensions for flat flanges

Flange standard	D1	D2	D3	D4	T1	Bolt number n	Bolt diameter d
ANSI 150	150	120.7	100	61	19.5	4	18
ANSI 300	165	127	100	61	22.7	8	18
ANSI 600	165	127	100	61	32.4	8	18
ANSI 900	215	165.1	100	61	45.1	8	26
ANSI 1500	215	165.1	100	61	45.1	8	26
ANSI 2500	235	171.4	100	61	57.9	8	30
DIN PN10/16	165	125	100	61	18	4	18
DIN PN25/40	165	125	100	61	20	4	18
DIN PN64	180	135	100	61	26	4	22
DIN PN100	195	145	100	61	28	4	26
DIN PN160	195	145	100	61	30	4	26

DN80 dimensions for flat flanges

Flange standard	D1	D2	D3	D4	T1	Bolt number n	Bolt diameter d
ANSI 150	190	152.4	130	89	24.3	4	18
ANSI 300	210	168.3	130	89	29	8	22
ANSI 600	210	168.3	130	89	38.8	8	22
ANSI 900	240	190.5	130	89	45.1	8	26
ANSI 1500	265	203.2	130	89	54.7	8	33
ANSI 2500	305	228.6	130	89	73.7	8	36
DIN PN10/16	200	160	130	89	20	8	18
DIN PN25/40	200	160	130	89	24	8	18
DIN PN64	215	170	130	89	28	8	22
DIN PN100	230	180	130	89	32	8	26
DIN PN160	230	180	130	89	36	8	26

DN100 dimensions for flat flanges

Flange standard	D1	D2	D3	D4	T1	Bolt number n	Bolt diameter d
ANSI 150	230	190.5	155	115	24.3	8	18
ANSI 300	255	200	155	115	32.2	8	22
ANSI 600	275	215.9	155	115	45.1	8	26
ANSI 900	290	235	155	115	51.5	8	33
ANSI 1500	310	241.3	155	115	61.0	8	36
ANSI 2500	355	273	155	115	83.2	8	42
DIN PN10/16	220	180	155	115	20	8	18
DIN PN25/40	235	190	155	115	24	8	22
DIN PN64	250	200	155	115	30	8	26
DIN PN100	265	210	155	115	36	8	30
DIN PN160	265	210	155	115	40	8	30

DN50 dimensions for convex flange

Flange standard	D1	D2	D3	D4	T1	Bolt number n	Bolt diameter d
ANSI 150	150	120.7	100	48	19.5	4	18
ANSI 300	165	127	100	48	22.7	8	18
ANSI 600	165	127	100	48	32.4	8	18
ANSI 900	215	165.1	100	48	45.1	8	26
ANSI 1500	215	165.1	100	48	45.1	8	26
ANSI 2500	235	171.4	100	48	57.9	8	30
DIN PN10/16	165	125	100	48	18	4	18
DIN PN25/40	165	125	100	48	20	4	18
DIN PN64	180	135	100	48	26	4	22
DIN PN100	195	145	100	48	28	4	26
DIN PN160	195	145	100	48	30	4	26

DN80 dimensions for convex flange

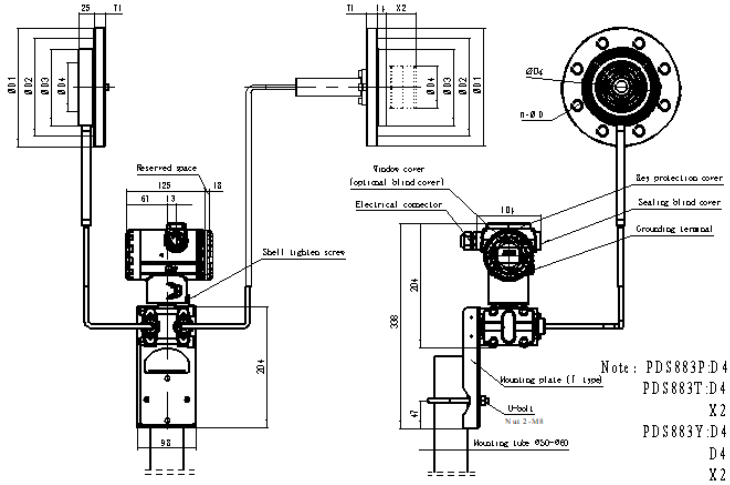
Flange standard	D1	D2	D3	D4	T1	Bolt number n	Bolt diameter d
ANSI 150	190	152.4	130	71	24.3	4	18
ANSI 300	210	168.3	130	71	29	8	22
ANSI 600	210	168.3	130	71	38.8	8	22
ANSI 900	240	190.5	130	71	45.1	8	26
ANSI 1500	265	203.2	130	71	54.7	8	33
ANSI 2500	305	228.6	130	71	73.7	8	36
DIN PN10/16	200	160	130	71	20	8	18
DIN PN25/40	200	160	130	71	24	8	18
DIN PN64	215	170	130	71	28	8	22
DIN PN100	230	180	130	71	32	8	26
DIN PN160	230	180	130	71	36	8	26

DN100 dimensions for convex flange

Flange standard	D1	D2	D3	D4	T1	Bolt number n	Bolt diameter d
ANSI 150	230	190.5	155	96	24.3	8	18
ANSI 300	255	200	155	96	32.2	8	22
ANSI 600	275	215.9	155	96	45.1	8	26
ANSI 900	290	235	155	96	51.5	8	33
ANSI 1500	310	241.3	155	96	61.0	8	36
ANSI 2500	355	273	155	96	83.2	8	42
DIN PN10/16	220	180	155	96	20	8	18
DIN PN25/40	235	190	155	96	24	8	22
DIN PN64	250	200	155	96	30	8	26
DIN PN100	265	210	155	96	36	8	30
DIN PN160	265	210	155	96	40	8	30

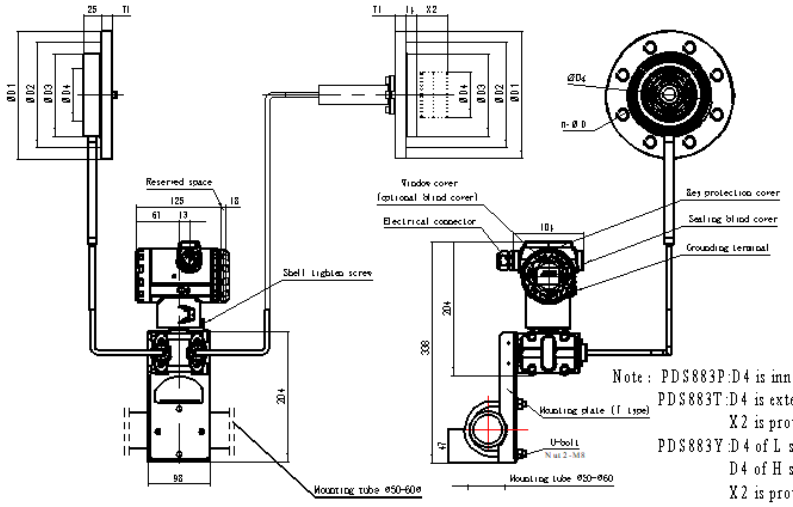
PDS883 shape and mounting dimension

Unit: mm



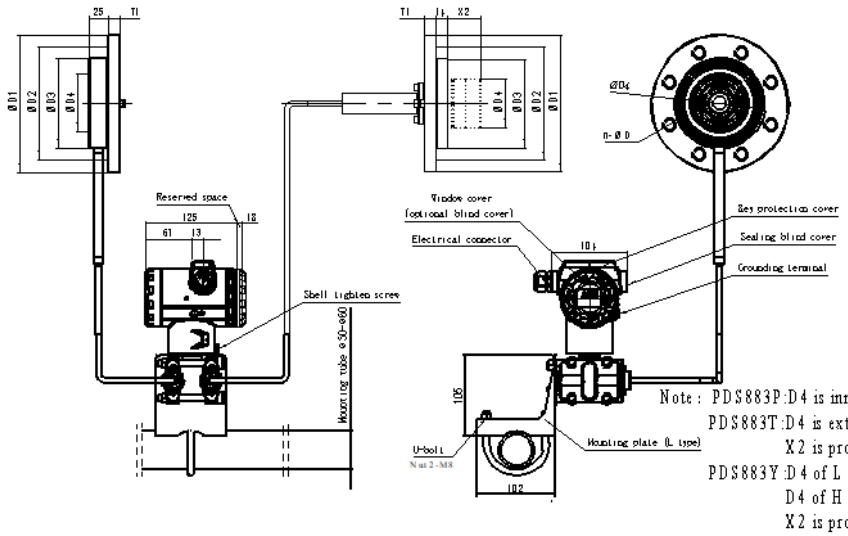
Note: PDS883P:D4 is inner diameter of gasket contact face
PDS883T:D4 is external diameter of plug-in cartridge
X2 is protrude length of plug-in cartridge
PDS883Y:D4 of L side is inner diameter of gasket contact face
D4 of H side is external diameter of plug-in cartridge
X2 is protrude length of plug-in cartridge

Horizontal piping mounting type (vertical mounting tube)



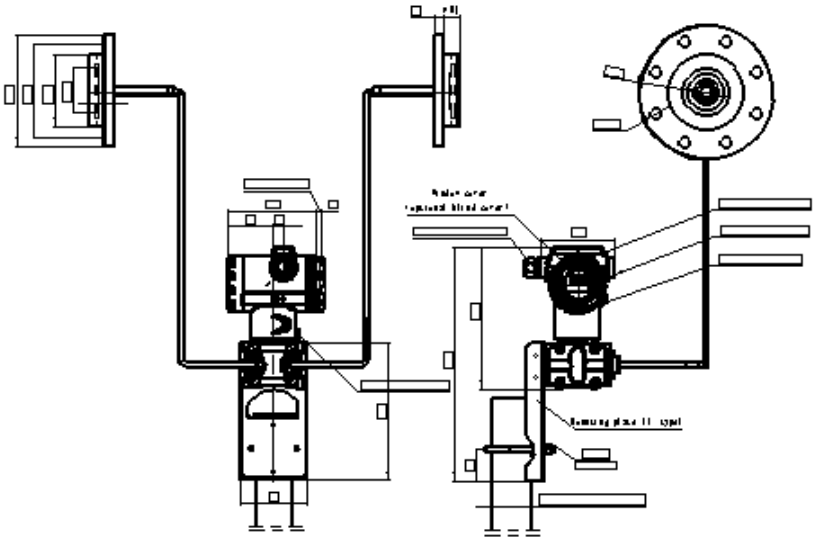
Note: PDS883P:D4 is inner diameter of gasket contact face
PDS883T:D4 is external diameter of plug-in cartridge
X2 is protrude length of plug-in cartridge
PDS883Y:D4 of L side is inner diameter of gasket contact face
D4 of H side is external diameter of plug-in cartridge
X2 is protrude length of plug-in cartridge

Horizontal piping mounting type (horizontal mounting tube)



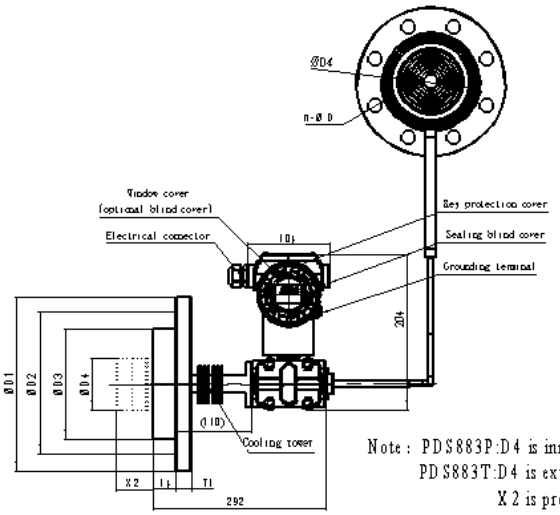
Note: PDS883P:D4 is inner diameter of gasket contact face
PDS883T:D4 is external diameter of plug-in cartridge
X2 is protrude length of plug-in cartridge
PDS883Y:D4 of L side is inner diameter of gasket contact face
D4 of H side is external diameter of plug-in cartridge
X2 is protrude length of plug-in cartridge

Horizontal piping mounting type (horizontal mounting tube)



Note : PDS883P D4 is inner diameter of gasket contact face

Horizontal piping mounting type (vertical mounting type)



PDS883 high temperature straight connection type

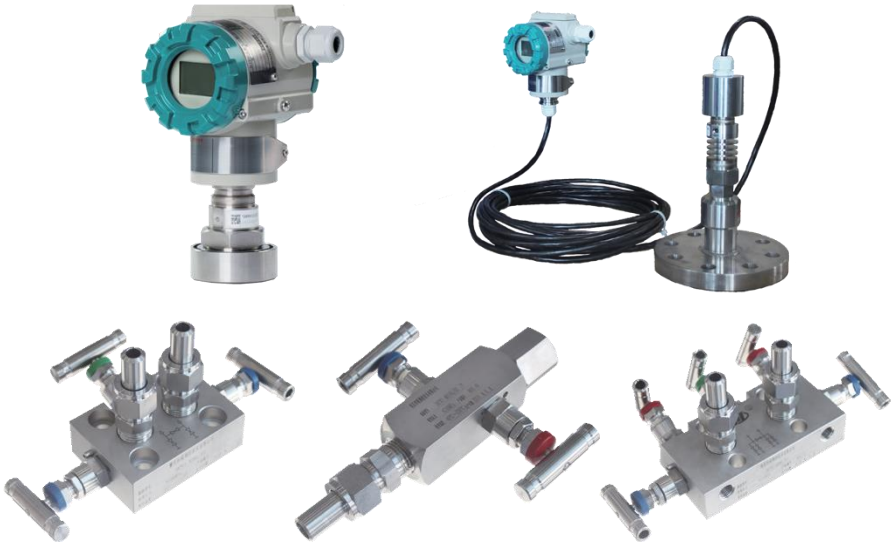
Note : PDS883P:D4 is inner diameter of gasket contact face
PDS883T:D4 is external diameter of plug-in cartridge
X2 is protrude length of plug-in cartridge
PDS883Y:D4 of L side is inner diameter of gasket contact face
D4 of H side is external diameter of plug-in cartridge
X2 is protrude length of plug-in cartridge

Note: D4 is the inner diameter of flat flange gasket contact surface or the outer diameter of inserted barrel.

X2 can be selected as the insertion depth of 50mm, 100mm, 150mm, 200mm, 250mm, or customized according to the field conditions.

PDS800 Smart Pressure Transmitter

Special Solution



It can provide complete solutions for papermaking, photothermal power generation, petroleum, chemical industry, liquid level measurement and other working conditions

PDS813 Paper pressure transmitter

PDS813 is high accuracy paper type pressure transmitter with special process connection, whose sensor unit is placed in front and its diaphragm is flush with the inner wall of pipeline, solving the problem of high viscosity medium being easily blocked, which can be used for papermaking and other jams. It is functional in converting the pressure signal of detected 4-20 mA d.c. current HART communication (overlay) or PROFIBUS PA letter signal, FF communication signal for output. Remote setting and monitoring can be realized through communication equipment.



Performance specification

Ranges ratio

Max. ranges ratio r (r= max. ranges/ranges in use) =30：1

Long-term stability

δ≤±0.1%FS/10 years

Sensor ranges

Ranges code	Min. ranges	Max. ranges	Measuring range	Overload limit
B	5.0 kPa	100 kPa	-100kPa～100 kPa	600 kPa
C	15 kPa	400 kPa	-100kPa～400 kPa	1.5 MPa
D	0.1 MPa	3.0 MPa	-0.1MPa～3.0 MPa	5.0 MPa
E	0.2 MPa	6.3 MPa	-0.1MPa～6.3 MPa	10 MPa

Note: the recommended long-term working pressure of PDS813 is higher than 50kPa (ABS).

Reference accuracy

PDS813 ranges code	Accuracy δ
B	δ≤±0.04% δ≤±(0.004+0.0036*r)%， ranges ratio＞10:1
C	δ≤±0.04% δ≤±(0.015+0.0025*r)%， ranges ratio 10:1
D、E	δ≤±0.025% δ≤±(0.01+0.0015*r)%， ranges ratio＞10:1

Temperature influence

δ≤±(0.06r+0.1)%/120℃ -40℃～+80℃

Process temperature ranges

-40～+120℃

Model guide

Model	Specification code	Description
PDS813	----------	Paper pressure transmitter
Type	G————	Gage pressure type
Communication Protocol	※H————	HART (6.0) communication
	P————	PROFIBUS-PA(3.02)field bus communication
	F————	FF(6.1.1) field bus communication
Capsule sealed liquid		Sealed liquid / Measured part cleaning
	※-1————	Silicone oil / Conventional
	-2————	Silicone oil / Degreasing cleaning
Measuring Ranges		Ranges / Measuring range / Overload limit
	B————	5kPa～100kPa / -100kPa～100kPa / 600kPa
	C————	15kPa～400kPa / -100kPa～400kPa / 1.5MPa
	D————	0.1MPa～3MPa / -0.1MPa～3MPa / 4.5MPa
	E————	0.2MPa～6.3MPa / -0.1MPa～6.3MPa / 10MPa
wetted material		Isolation diaphragm / Related wetted parts
	※S————	316L / 316
	H————	HC-276 / 316
process connector	※0————	1 "short pipe joint without welded short casing (for range C only)
	1————	1 "short pipe joint with welded short casing (for range C only)
	2————	1-1/2”(M44×1.25)threaded joint, short shell welded without thread
	3————	1-1/2”(M44×1.25)threaded joint, short shell welded with thread
Explosion-proof	-A————	Non-explosion proof
	-B————	NEPSI: Intrinsically safe Exia Ⅱ CT4 Ga
	-C————	NEPSI: Intrinsically safe Exia Ⅱ CT6 Ga
	-D————	NEPSI: Flame-proof Exd Ⅱ CT6 Gb
	-F————	NEPSI: Dust explosion proof Ex tD A21 IP67 T85℃
	-G————	ATEX: Intrinsically safe Ex II1G Ex ia Ⅱ CT4 Ga
	-H————	ATEX: Flameproof Ex II1/2G Ex db IICT6…T4Ga/Gb
	-J————	IECEx: Intrinsically safe Ex iaIICT4 Ga
	-K————	IECEx: Flameproof Ex dbIICT6…T4 Ga/Gb
	-N————	NEPSI: “n” explosion-proof Ex nA IICT6 Gc
Shell (note 1)		Material / Electrical interface
	※1————	Aluminum / 1/2NPT internal thread, two electrical interfaces
	2————	Aluminum / M20×1.5 internal thread, two electrical interfaces
	3————	Stainless steel / 1/2NPT internal thread, two electrical interfaces
	4————	Stainless steel / M20×1.5 internal thread, two electrical interfaces
Display meter	N————	No display meter
	D—--(note 2)	LCD display meter
Mounting bracket	N————	No mounting bracket
Additional Options	/××————	See table of additional options

Additional options

Item	Specification			Code (note 3)
Protective treatment	External protective treatment of transmitter (for external strongly corrosive environment)			P10
Electrical connector	Dimension		Material	
	M20×1.5 electrical connector + one seal plug		Plastic	G60
	1/2 NPT electrical connector + one seal plug		Plastic	G61
	M20×1.5 seal plug one		304	G62
	M20×1.5 flameproof electrical connector + one seal plug (NEPSI)		316	G70
	1/2NPT flameproof electrical connector + one seal plug (NEPSI)		316	G71
	1/2 NPT seal plug one		304	G72
	1/2 NPT seal plug one		316	G73
	M20×1.5 seal plug one		316	G74
	M20×1.5 flameproof electrical connector + one seal plug (ATEX/IECEx)		316	G75
	1/2NPT flameproof electrical connector + one seal plug (ATEX/IECEx)		316	G76
Lightning proof	Lightning protection terminal plate			F20
Quality assurance system	Comply with the company's nuclear quality assurance system (if this option is not selected, the default is to comply with the ISO9001 quality assurance system)			NP
Alarm	Alarm current: 22.8mA (if not selected, the alarm current defaults to 3.6mA)			A1
Document	Delivery acceptance document (note 4)			D1
Languages	English (instruction, packing list, cargo list, main nameplate in English)			L01
	Russian (instruction, packing list, cargo list in Russian, main nameplate in English)			L02
	French (instruction, packing list, cargo list in French, main nameplate in English)			L03
Display Unit	Unit	Code	Unit	Code
	%	U01	ftH_2O	U29
	mA	U20	mbar	U30
	Pa	U21	bar	U31
	KPa	U22	psi	U32
	MPa	U23	mmHg	U33
	gf/cm^2	U24	inHg	U34
	kgf/cm^2	U25	Torr	U35
	mmH_2O	U26	Atm	U36
	mH_2O	U27	$i4H_2O$(inch of water 4℃)	U37
	inH_2O	U28	$m4H_2O$(millimeter of water 4℃)	U38

Special note

※ : The recommended options: for special orders, please add "Z" after the order code and write down the description.

Note 1 when selecting flameproof transmitters, flameproof electrical connections must be used. See additional options.

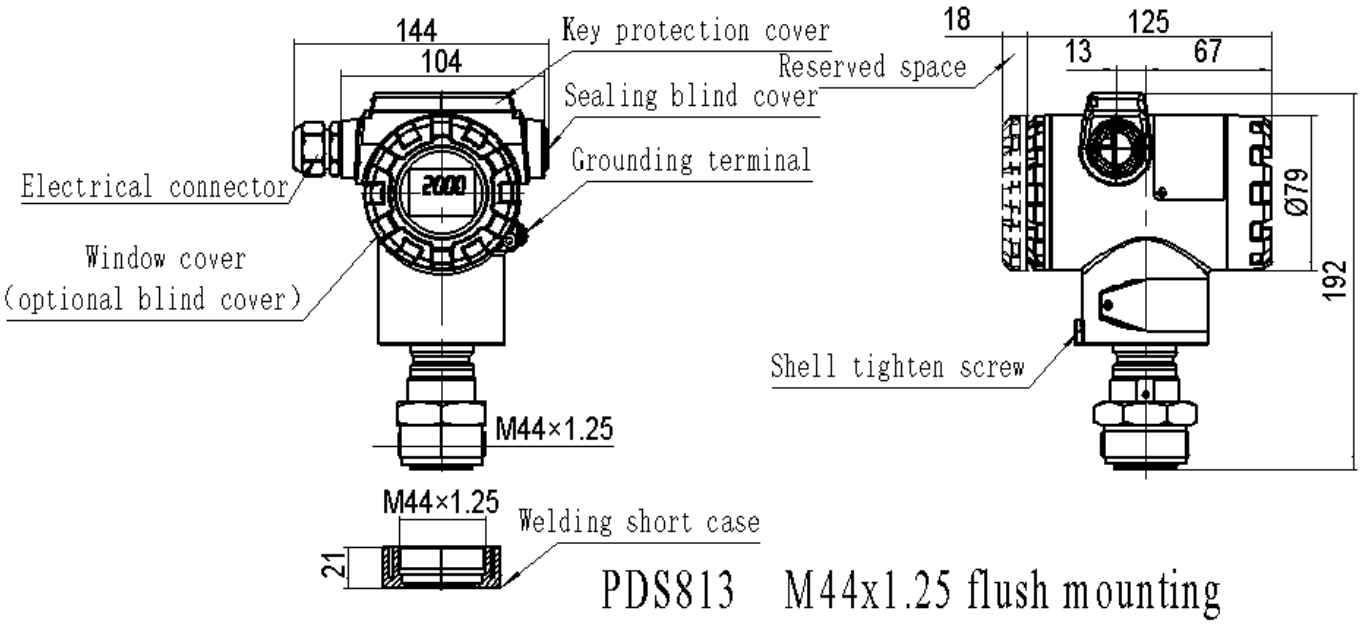
Note 2: the pressure value is displayed by default, and the rest of the display modes are described in "additional options".

Note 3: the options are separated by "/", such as "/P10/ g61/a1".

Note 4: in addition to the standard delivery documents (original certificate of conformity, specification, packing list), the detailed list of the commonly used information provided by the manufacturer for the acceptance of the products and shall be provided when ordering. If third party test report or other special requirements are n eeded, it will be quoted separately.

PDS813 shape and mounting dimension

Unit: mm



PDS879 Ultra-high temperature remote pressure transmitter

PPDS879 ultra-high temperature remote pressure transmitter is used for pressure measurement and can convert it into 4-20mA d.c. current (superposition HART communication) or PROFIBUS-PA communication signal and FF communication signal for output. Remote setting and monitoring can be realized through communication equipment.



Performance specification

Ranges ratio:

Max. ranges ratio r (r= Max. ranges/ranges in use) =20：1

Long-term stability:

δ≤±0.1%FS/10 year

Sensor ranges:

Range code	Min. ranges	Max. ranges	Measuring range
B	5.0 kPa	100 kPa	-100kPa～100 kPa
C	20 kPa	400 kPa	-100kPa～400 kPa
D	0.15 MPa	3.0 MPa	-0.1MPa～3.0 MPa
E	0.6 MPa	10 MPa	-0.1MPa～10 MPa

Note: PDS879 recommended long-term working pressure is higher than 50kPa (ABS).

Hc-276 is not recommended when the measuring ranges is less than 10kPa and the flange size is less than or equal to DN50.

Reference accuracy δ

PDS879Ranges code	Accuracy δ
B、C、D、E	δ≤±0.1% δ≤±(0.04+0.012*r)%，ranges ratio＞5:1

Temperature influence

δ≤±(0.06r+0.35)%/28℃ -40℃～+80℃

Overload limit

Is the minimum value between flange nominal pressure and the maximum range of transmitter

Model guide

Model	Specification code	Description	
PDS879	----------	Ultra-high temperature remote pressure transmitter	
Type	G————	Gage pressure	
Communication Protocol	※H————	HART (6.0) communication	
	P————	PROFIBUS-PA(3.02)field bus communication	
	F————	FF(6.1.1) field bus communication	
Capsule sealed liquid	-1————	Silicone oil	
Measuring Ranges		Ranges	Measuring range
	B————	5kPa～100kPa	-100kPa～100kPa
	C————	20kPa～400kPa	-100kPa～400kPa
	D————	0.15MPa～3MPa	-0.1MPa～3MPa
	E————	0.6MPa～10MPa	-0.1MPa～10MPa
Explosion-proof	-A————	Non-explosion proof	
	-B————	NEPSI: Intrinsically safe ExiaⅡCT4 Ga	
	-C————	NEPSI: Intrinsically safe ExiaⅡCT6 Ga	
	-D————	NEPSI: Flame-proof ExdⅡCT6 Gb	
	-F————	NEPSI: Dust explosion proof Ex tD A21 IP67 T85℃	
	-G————	ATEX: Intrinsically safe Ex II1G Ex iaⅡCT4 Ga	
	-H————	ATEX: Flameproof Ex II1/2G Ex db IICT6…T4Ga/Gb	
	-J————	IECEx: Intrinsically safe Ex iaIICT4 Ga	
	-K————	IECEx: Flameproof Ex dbIICT6…T4 Ga/Gb	
	-N————	NEPSI: “n” explosion-proof Ex nA IICT6 Gc	
Shell (note 1)		Material	Electrical interface
	※1————	Aluminum	1/2NPT internal thread, two electrical interfaces
	2————	Aluminum	M20×1.5 internal thread, two electrical interfaces
	3————	Stainless steel	1/2NPT internal thread, two electrical interfaces
	4————	Stainless steel	M20×1.5 internal thread, two electrical interfaces
Display meter	N————	No display meter	
	D—--(note 2)	LCD display meter	
Mounting bracket		Type	Material
	A————	Horizontal (type I) bracket	Q235
	B————	Horizontal (type I) bracket	304
	E————	Horizontal (type I) support	316
	C————	Vertical (L) bracket	Q235
	D————	Vertical (L) bracket	304
	F————	Vertical (L) support	316
	N————	No mounting bracket	
Flange type	-P————	Flat flange	
Remote length	-□□(00～10m)	Cable length	
Remote sealed fluid (note 3)	U————	Sealed liquid	Wetted liquid temperature
		Ultra-high temperature filler	+12～+700℃
Flange dimension	-2————	DN50(2inch)	
	-3————	DN80(3inch)	
Flange diaphragm material	※S————	316L	
	H————	HC-276	
	M————	Monel	
	C————	INCONEL 625	
Flange seal form	※1————	RF surface	
	2————	RJ ring connector	
	3————	M convex	
	4————	FM concave	
Flange standard (Note 4)		Standard	Pressure
	A————	ANSI150	2.0MPa
	B————	ANSI300	5.0MPa
	C————	ANSI600	11MPa
	L————	ANSI900	15MPa

	P—————	ANSI1500	26MPa
	R—————	ANSI2500	40MPa
	D—————	DIN PN 10/16	1.6MPa
	E—————	DIN PN 25/40	4.0MPa
	F—————	DIN PN 64	6.4MPa
	K—————	DIN PN 100	10MPa
	M—————	DIN PN 160	16MPa
Flange material	A—————	S25C	
	B—————	304	
	C—————	316	
	D—————	316L	
Measuring part cleaning	A—————	Conventional	
	B—————	Degreasing	
Additional Options	/××—————	See table of additional options	

Additional options

Item	Specification		Code (note 5)
Protective treatment	External protective treatment of transmitter (for external strongly corrosive environment)		P10
Companion flange	Type	Material	
	WN neck butt welding	S25C	F50
		304	G50
		316	H50
		316L	K50
	PL plate flat welding	S25C	F52
		304	G52
		316	H52
		316L	K52
	SO neck flat welding	S25C	F53
		304	G53
		316	H53
		316L	K53
	TH thread flange	S25C	F54
		304	G54
		316	H54
		316L	K54
Flange mounting (note 6)	Carbon steel bolt + metal winding pad		G56
	Stainless steel bolt + metal winding pad		G58
Electrical Connector	Dimension	Material	
	M20×1.5 electrical connector + one seal plug	Plastic	G60
	1/2 NPT electrical connector + one seal plug	Plastic	G61
	M20×1.5 seal plug one	304	G62
	M20×1.5 flameproof electrical connector + one seal plug (NEPSI)	316	G70
	1/2NPT flameproof electrical connector + one seal plug (NEPSI)	316	G71
	1/2 NPT seal plug one	304	G72
	1/2 NPT seal plug one	316	G73
	M20×1.5 seal plug one	316	G74
	M20×1.5 flameproof electrical connector + one seal plug (ATEX/IECEx)	316	G75
	1/2NPT flameproof electrical connector + one seal plug (ATEX/IECEx)	316	G76
Lightning protection	Lightning protection terminal plate		F20
Quality assurance system	Comply with the company's nuclear quality assurance system (if this option is not selected, the default is to comply with the ISO9001 quality assurance system)		NP
Alarm	Alarm current: 22.8mA (if not selected, the alarm current defaults to 3.6mA)		A1
Document	Delivery acceptance document (note 7)		D1

Languages	English (instruction, packing list, cargo list, main nameplate in English) Russian (instruction, packing list, cargo list in Russian, main nameplate in English) French (instruction, packing list, cargo list in French, main nameplate in English)			L01 L02 L03
Display Unit	Unit	Code	Unit	Code
	%	U01	ftH_2O	U29
	mA	U20	mbar	U30
	Pa	U21	bar	U31
	KPa	U22	psi	U32
	MPa	U23	mmHg	U33
	gf/cm^2	U24	inHg	U34
	kgf/cm^2	U25	Torr	U35
	mmH_2O	U26	Atm	U36
	mH_2O	U27	i4H_2O(inch of water 4℃)	U37
	inH_2O	U28	m4H_2O(millimeter of water 4℃)	U38

Special note

※ : Recommended option. In case of special order, please add "Z" after the order code and give the text description.

Note 1 when selecting flameproof transmitters, flameproof electrical connections must be used. See additional options.

Note 2: the pressure value is displayed by default, and the rest of the display modes are described in "additional options".

Note 3: ultra-high temperature and ultra-high pressure, please consult.

Note 4 serial Numbers A, B, C, L, P, R are suitable for the American system in HG20615-2009～HG20635-2009 and GB/T9112-2000～GB/T9131-2000. Serial number D, E, F, K, M are suitable for HG20592-2009～HG20614-200 and GB/T9112-2000～GB/T9131-2000 in Europe system.

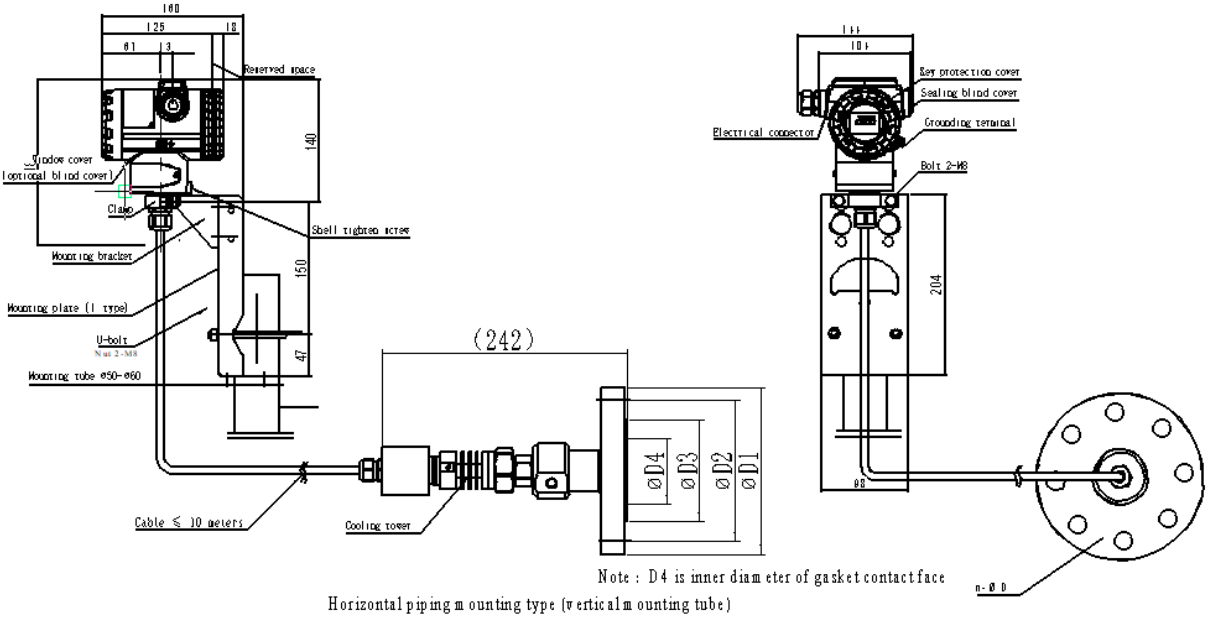
Note 5: the options are separated by "/", such as "/P10/G61/K81".

Note 6: the winding pad metal belt material 316, the filling material flexible graphite belt service temperature 650℃, if used for oxidizing medium, the highest service temperature 450℃. For more than 650 degrees, please make consult.

Note 7: in addition to the standard delivery documents (original certificate of conformity, specification, packing list), the detailed list of the commonly used information provided by the manufacturer for the acceptance of the products shall be provided when ordering. If third party test report or other special requirements are needed, it will be quoted separately

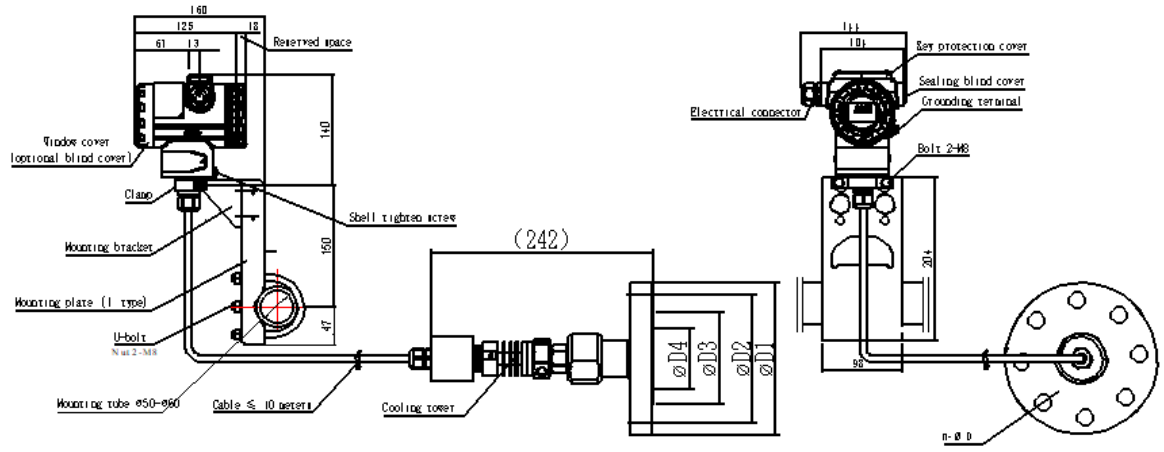
PDS879 shape and mounting dimension

Unit: mm



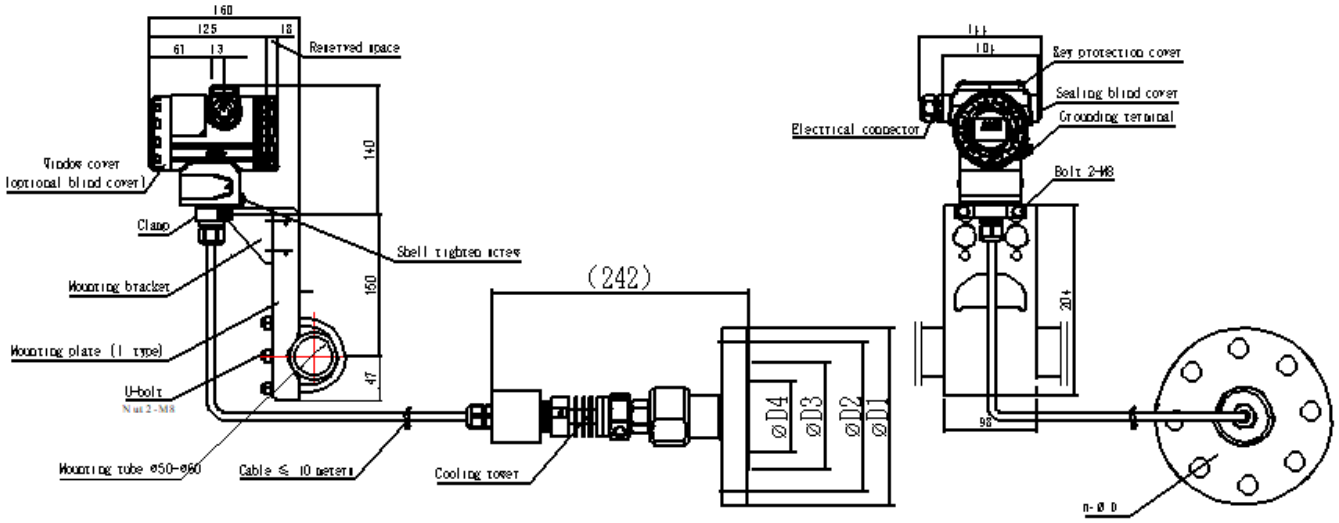
Note: D4 is inner diameter of gasket contact face

Horizontal piping mounting type (vertical mounting tube)



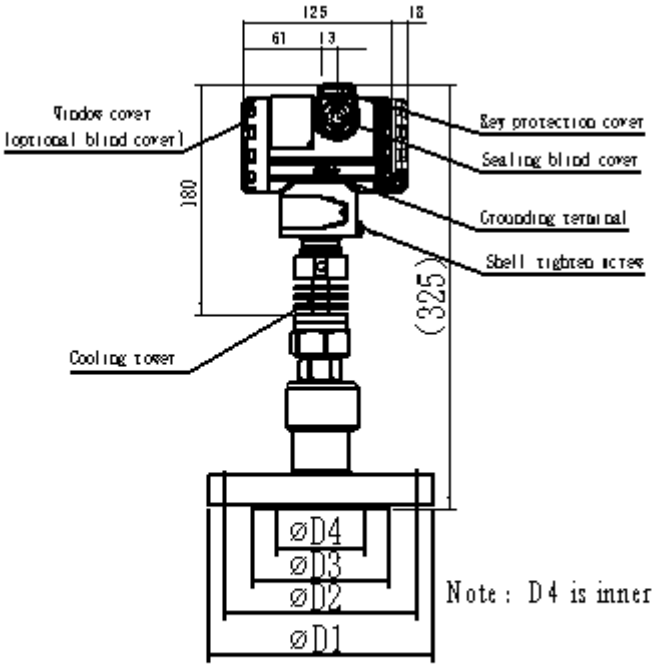
Note: D4 is inner diameter of gasket contact face

Horizontal piping mounting type (horizontal mounting tube)



Note: D4 is inner diameter of gasket contact face

Horizontal piping mounting type (horizontal mounting tube)



Note: D4 is inner diameter of gasket contact face

PDS879 ultrahigh temperature straight connection type

DN50 dimensions for flat flanges

Flange	D1	D2	D3	D4	T1	Bolt number n	Bolt diameter d
ANSI 150	150	120.7	100	61	19.5	4	18
ANSI 300	165	127	100	61	22.7	8	18
ANSI 600	165	127	100	61	32.4	8	18
ANSI 900	215	165.1	100	61	45.1	8	26
ANSI 1500	215	165.1	100	61	45.1	8	26
ANSI 2500	235	171.4	100	61	57.9	8	30
DIN PN10/16	165	125	100	61	18	4	18
DIN PN25/40	165	125	100	61	20	4	18
DIN PN64	180	135	100	61	26	4	22
DIN PN100	195	145	100	61	28	4	26
DIN PN160	195	145	100	61	30	4	26

DN80 dimensions for flat flanges

Flange	D1	D2	D3	D4	T1	Bolt number n	Bolt diameter d
ANSI 150	190	152.4	130	89	24.3	4	18
ANSI 300	210	168.3	130	89	29	8	22
ANSI 600	210	168.3	130	89	38.8	8	22
ANSI 900	240	190.5	130	89	45.1	8	26
ANSI 1500	265	203.2	130	89	54.7	8	33
ANSI 2500	305	228.6	130	89	73.7	8	36
DIN PN10/16	200	160	130	89	20	8	18
DIN PN25/40	200	160	130	89	24	8	18
DIN PN64	215	170	130	89	28	8	22
DIN PN100	230	180	130	89	32	8	26
DIN PN160	230	180	130	89	36	8	26

SIC-H375 HRAT Handheld communicator

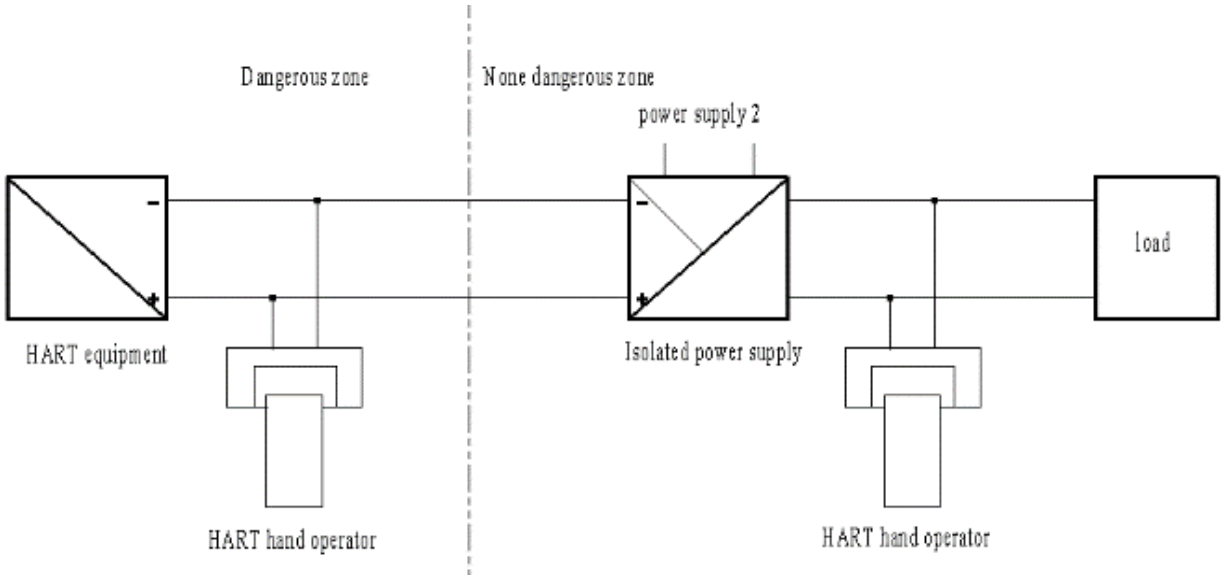
Currently, the device description (DD) software of the following models of transmitters is stored in the manual operator, which can support the operation of its general, common and special commands.

PDS8xxH	Chongqing Chuanyi Automation Co., LTD
7MF4x33	SIEMENS
EJAxxx-E	YOKOGAWA
3051x	ROSEMOUNT
Smart 1151	ROSEMOUNT
FCX-A/X	FUJI
xxx-3151	Made in China 3151

For excluded transmitters, the hand operator provides a common interface to perform general and common command operations.

Working principle

The hand operator is connected in parallel to the transmitter via a communication cable, either directly or via an isolated power supply, connected without regard to the polarity of the lead, but the load resistance must be greater than 250. See the following figure for wiring.



Main functions

- Monitor variable (read test value)
- Diagnose transmitter
- Zero adjustment
- Set pressure unit
- Set the upper limit of ranges (ranges)
- Set the lower limit of ranges (zero)
- Set the damping

Technical data

Dimension

228mm×98mm×60mm；

The hand operator is 70mm wide ×37mm thick

Liquid crystal display

8 lines x 21 characters

HART interface

- HCF protocol, bidirectional half duplex 1200bit/s
- Can withstand the common mode voltage of ±40V
- Communication distance <1500 m
- Automatic amplitude multiplication function

Power consumption

- 4.5 V.D.C., 23.2mA (work status typical value)
- 5uA (typical value of shutdown state))

Battery

Three no.5 batteries (SIZE AA)

Continuous service event

When alkaline batteries are used, the typical value is 100 hours.

When 1000mAH rechargeable batteries are used, the typical value is 43 hours

Environmental conditions

Operating temperature ranges: 0℃ ~ +50℃

Storage temperature ranges: -20℃ ~ +55℃

Relative humidity

0% ~ 95%

Order data

SIC - H375 hand operator

Scope of supply

Hand operator

Communication cable with plug and clip

Portable package

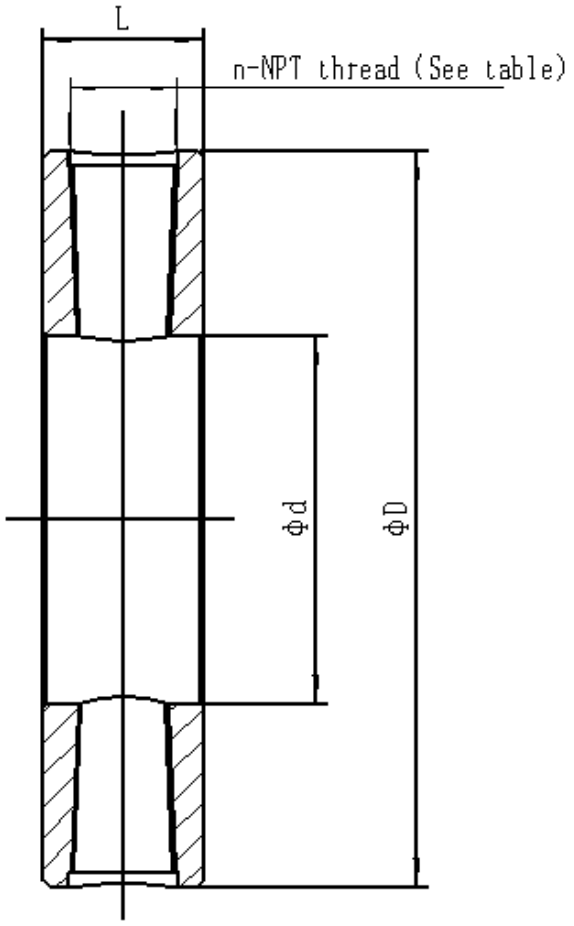
The user manual

Flushing ring

When measuring the media that is easy to crystallize and precipitate, assemble the flushing ring between the matching flange and the transmitter flange and flush regularly in order to solve the pipe plug. It is impossible to measure the flange after scaling.

Material	D	d	L	NPT thread	Suffix name	n
304	100	60	24	1/4NPT	DN50	1or2
316L	100	60	24	1/4NPT	DN50	1or2
304	100	60	35	1/2NPT	DN50	1or2
316L	100	60	35	1/2NPT	DN50	1or2
304	130	90	24	1/4NPT	DN80	1or2
316L	130	90	24	1/4NPT	DN80	1or2
304	130	90	35	1/2NPT	DN80	1or2
316L	130	90	35	1/2NPT	DN80	1or2
304	155	115	24	1/4NPT	DN100	1or2
316L	155	115	24	1/4NPT	DN100	1or2
304	155	115	35	1/2NPT	DN100	1or2
316L	155	115	35	1/2NPT	DN100	1or2

G30X/G31X/G32X /G33X Flushing ring



G8 Series valve group

G8 series valve group is used for turn-on, shut-down and balance operation of input pressure signal of pressure transmitter, differential pressure transmitter, flow transmitter, and liquid level transmitter. Two valve group and globe valve in the table are mainly applicable to PDS803 direct-connected pressure transmitter, and the three valve group is mainly applicable to PDS843 differential pressure transmitter. For HC-276, Monel valve set, please refer to SICV series valve group.

Model and specification code

G8	Specification code	Description	Applicable objects		
			Three valve group	Two valve group	Globe valve
Type of valve group	5————	Three valve group	◆		
	7————	Two valve group		◆	
	8————	Globe valve			◆
Process connection size	-M————	M20×1.5 external thread		◆	◆
	-N————	1/2-14NPT internal thread	◆		
Valve body material	※B————	304	◆	◆	◆
	C————	316	◆	◆	◆
	D————	316L	◆	◆	◆
Connection size with transmitter	1————	1/2-14NPT external thread		◆	◆
	2————	G1/2 internal thread		◆	◆
	3————	M20x1.5 internal thread		◆	◆
	4————	1/2-14NPT internal thread		◆	◆
	5————	Flange	◆		
Mounting screw	N————	No mounting screw		◆	◆
	※M————	M10 metric thread	◆		
	U————	7/16-20UNF inch thread	◆		
Pressure class	L————	16MPa	◆	◆	◆
	M————	32MPa	◆	◆	◆
	H————	42MPa	◆	◆	◆
Additional options /XX					
Process joint	D1————	Pad joint(Φ14×2)	◆	◆	◆
	※D2————	Pad joint(Φ14×3)	◆	◆	◆
	D3————	Pad joint(Φ16×3)	◆	◆	◆
Others	T————	Degreasing cleaning	◆	◆	◆

Note 1: BW butt joint is by default. Please use Z for special requirements.

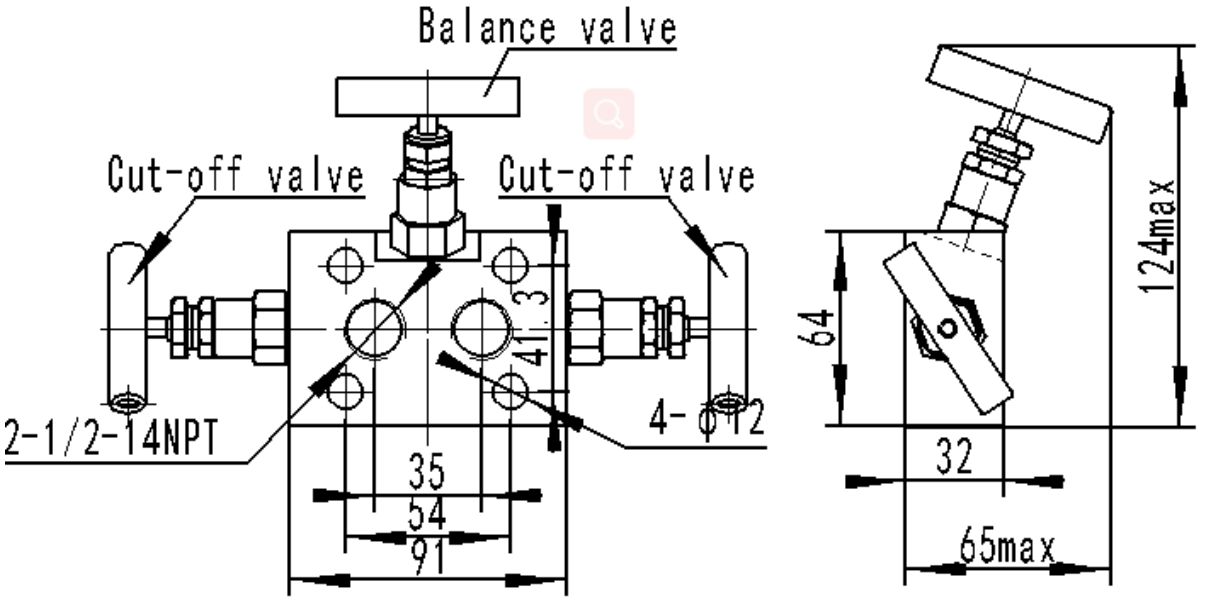
Note 2: operating temperature ranges -40~230℃.

Note 3: two valve group and globe valves are only applicable to PDS803 Direct connection pressure transmitters.

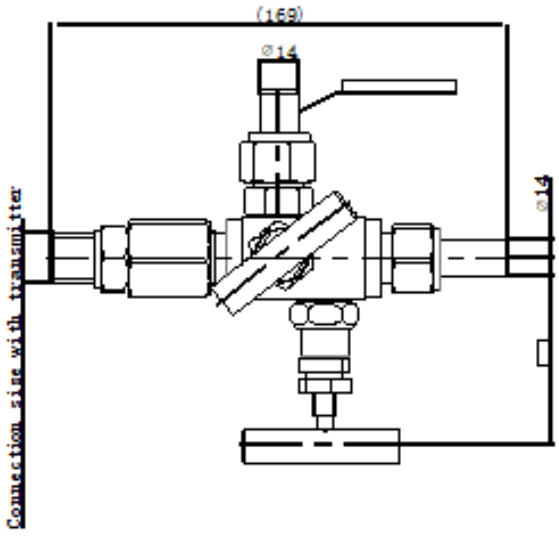
Example: three valve group G85 NB5ML/D2 / T with Φ 14 welding head.

Valve group structure and dimension

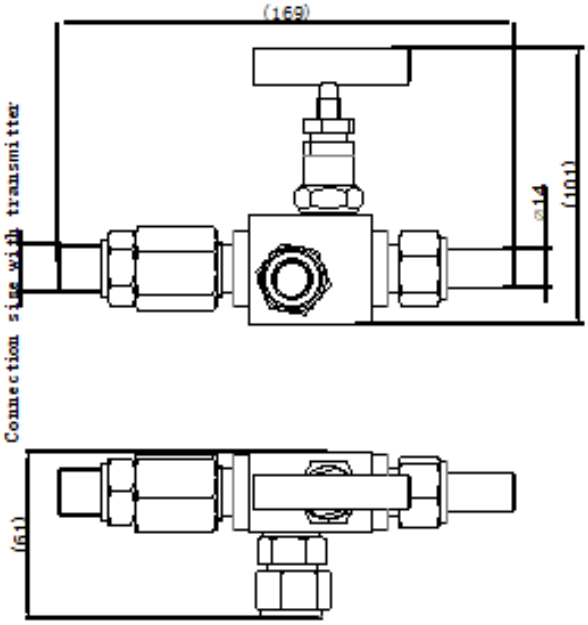
Unit：mm



Three-valve group



Two-valve group



Straight cut-off valve

SICV Series valve group

SICV series valve set is used for turn-on, shut-down and balance operation of input pressure signal of pressure transmitter, differential pressure transmitter, flow transmitter, and liquid level transmitter. Two valve group is mainly applicable to PDS803 and PDS805 pressure transmitters, and the three valve group is mainly applicable to PDS843 differential pressure transmitters.

Two valve group Model and specification code

SICV	Specification code	Description
Valve group type	2————	Two valve group
Process connection size	-N————	1/2-14NPT Internal thread
	-M————	M20×1.5 External thread (only applicable to "option 1, 2, 3, 4 with transmitter connection size for two valve group")
Valve body and wetted material	※C————	316
	D————	316L
	E————	HC-276
	F————	Monel
Connection size with transmitter	1————	1/2-14NPT external thread
	2————	G1/2 Internal thread
	3————	M20×1.5 Internal thread
	4————	1/2-14NPT Internal thread
	5————	Flange
Valve group mounting screw	※M————	M10 Metric thread (only applicable to "5 options for connection size to transmitter")
	U————	7/16-20UNF Inch thread (only applicable to "5 options for connection size to transmitter")
	N————	No mounting screws (only applicable to "option 1, 2, 3, 4 of connection size to transmitter")
Pressure class	L————	16MPa
	M————	32MPa
	H————	42MPa
Additional options /XX		
Process joint	D1————	Pad joint(Φ14×2)
	※D2————	Pad joint(Φ14×3)
	D3————	Pad joint(Φ16×3)
	D4————	Bayonet joint(1/4")
	D5————	Bayonet joint(3/8")
	D6————	Bayonet joint(7/16")
	D7————	Bayonet joint(Φ14)
Others	T————	Degreasing cleaning
	N————	NACE test

Note 1: BW butt joint by default.

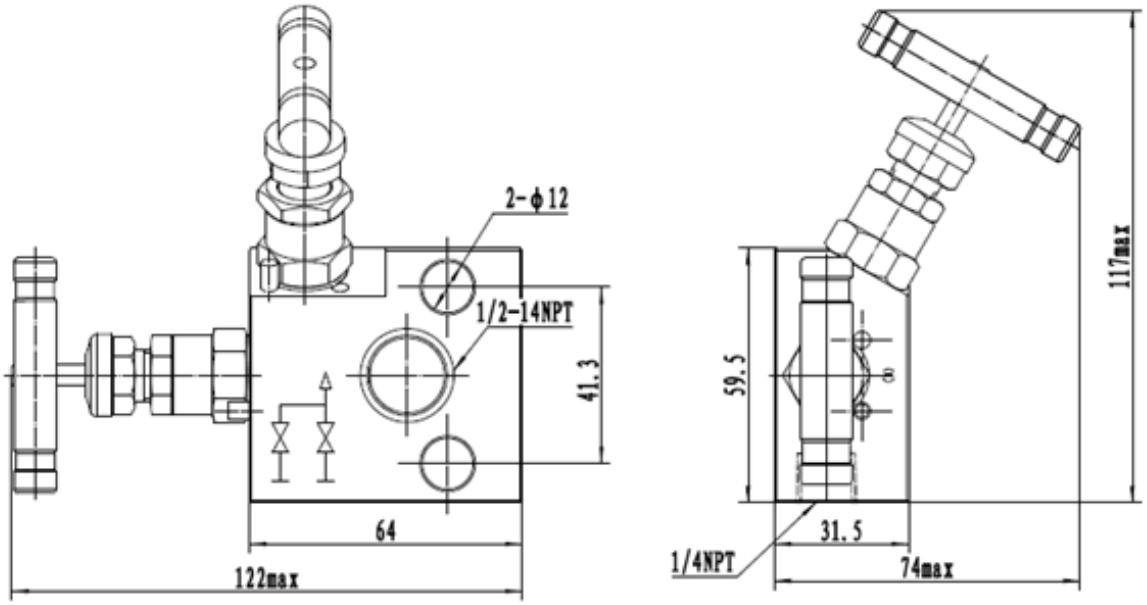
Note 2: operating temperature range -40~230℃.

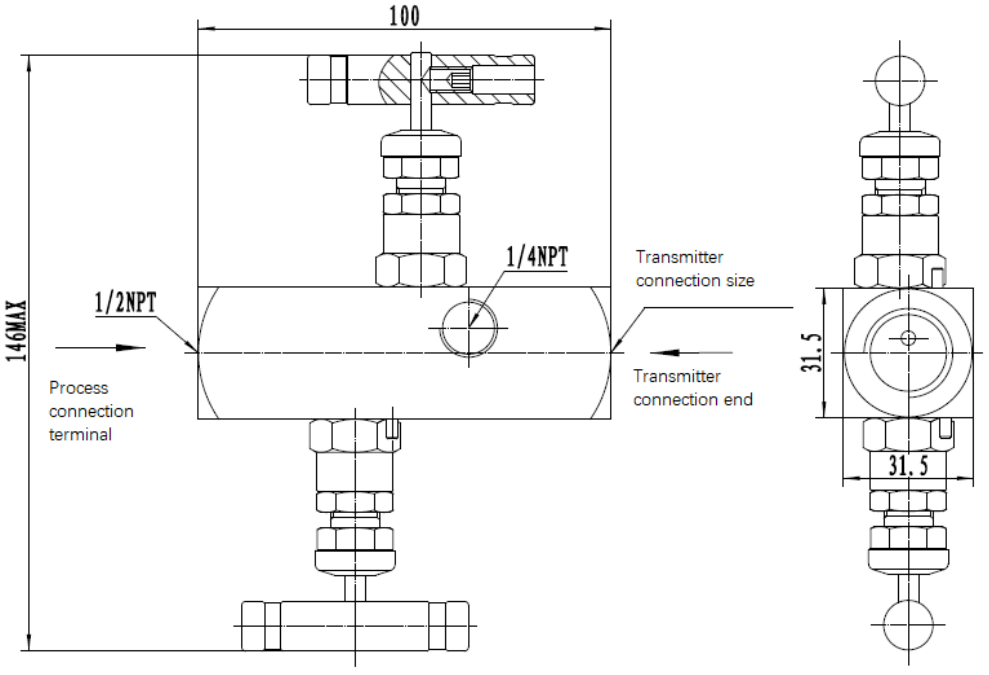
Note 3 for other special requirements, please use Z.

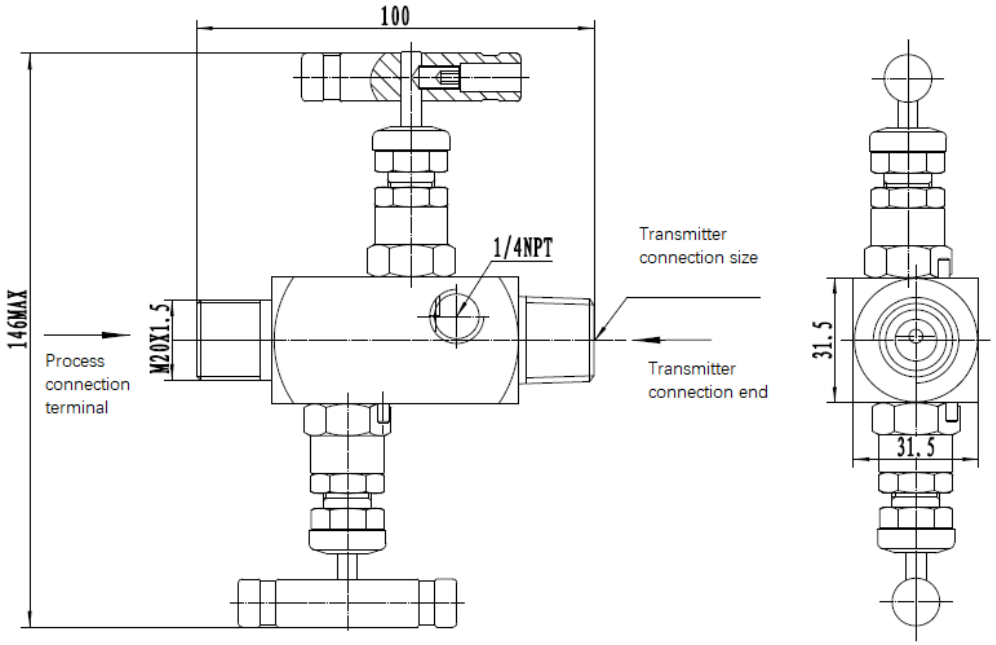
Example: SICV2-NC5ML/D2 or SICV2-NC1NL/D2/T.

Structure and dimension of two valve group

Unit：mm






100
146MAX
M20X1.5
1/4NPT
Transmitter
connection size
Process
connection
terminal
Transmitter
connection end
31.5
31.5

Three or five valve group Model and specification code

SICV	Specification code	Description
Valve group type	3————	Three valve group
	5————	Five valve group
Process connection size	-N————	1/2-14NPT Internal thread
Valve body and wetted material	※C————	316SS
	D————	316LSS
	E————	HC-276
	F————	Monel
Valve set mounting screw	※M————	M10 Metric thread
	U————	7/16-20UNF Inch thread
Pressure class	L————	16MPa
	M————	32MPa
	H————	42MPa
Additional options /XX		
Process joint	D1————	Pad joint(Φ14×2)
	※D2————	Pad joint(Φ14×3)
	D3————	Pad joint(Φ16×3)
	D4————	Bayonet joint(1/4")
	D5————	Bayonet joint(3/8")
	D6————	Bayonet joint(7/16")
	D7————	Bayonet joint(Φ14)
Others	T————	Degreasing cleaning
	N————	NACE test

Note 1: BW butt joint by default.

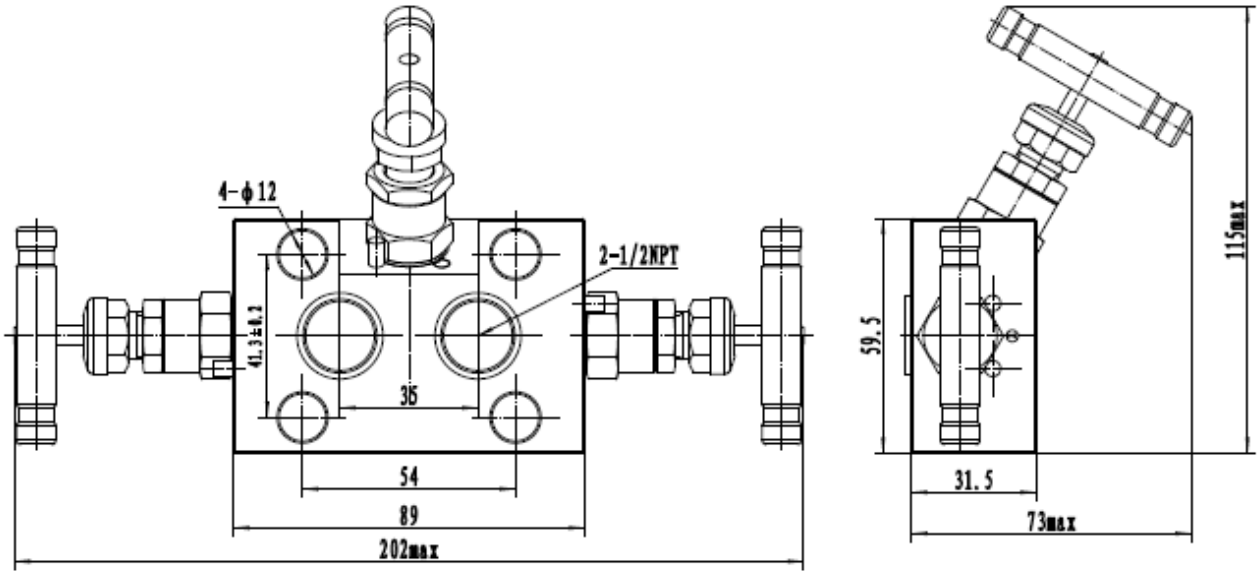
Note 2: operating temperature range -40~230℃.

Note 3 for other special requirements, please use Z.

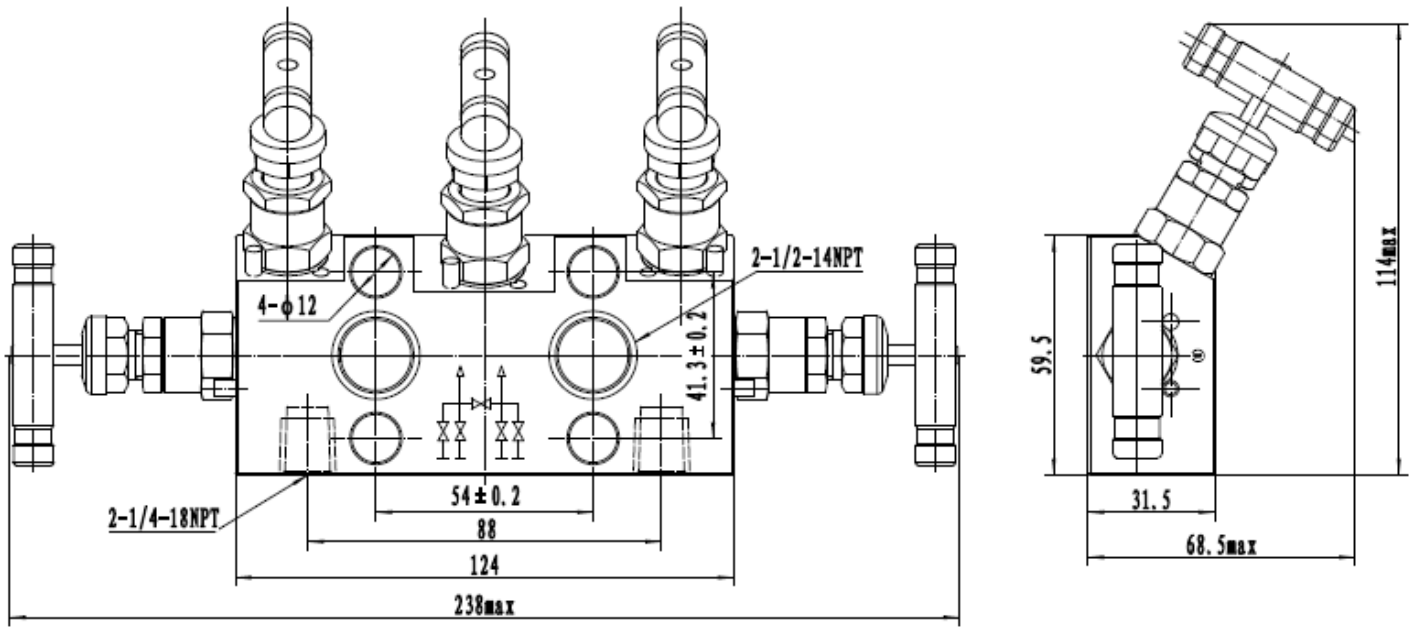
Example: SICV3-NCML/D2 or SICV3-NCML/D2/T.

Valve structure and dimension

Unit：mm



SICV three-valve group

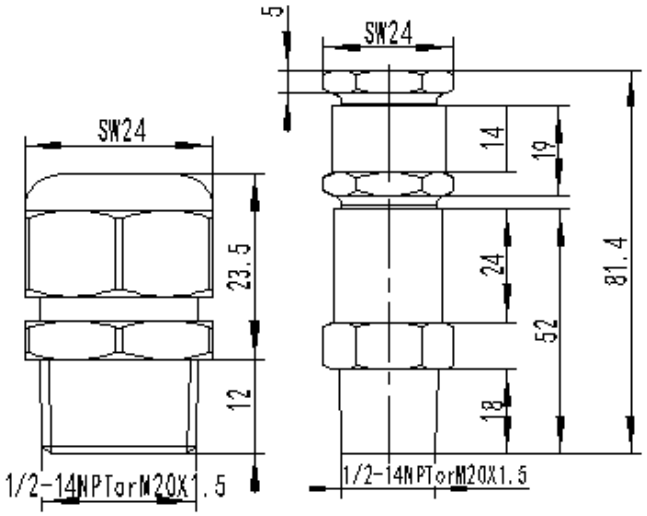


SICV five-valve group

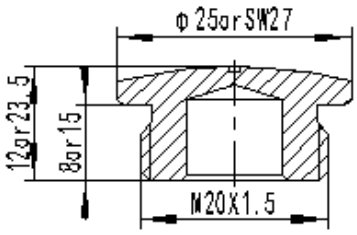
Attached Specifications And Drawings

Unit：mm

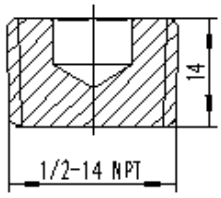
Electrical Connector



G60/G61cable connector　　G70/G71cable gland

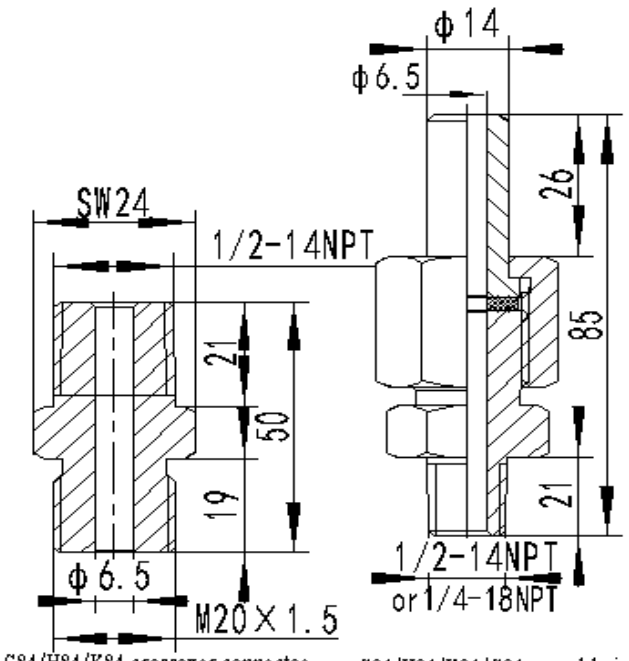


G60/G62/G63/G70/G74 sealing plug



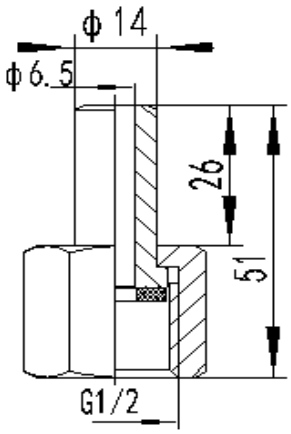
G61/G71G72/G73 sealing plug

Process Joint

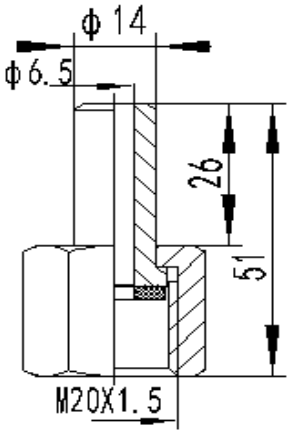


G84/H84/K84 crossover connectoe

G81/H81/K81/G91 movable joint for welded pipe
G82/H82/K82/G92 movable joint for welded pipe

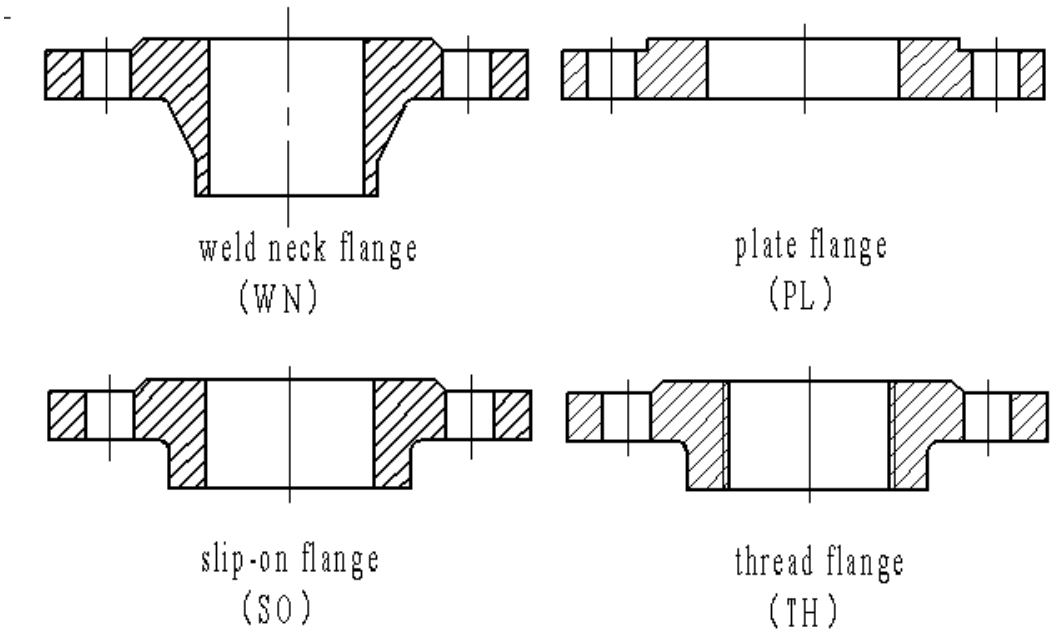


G83/H83/K83/G93 movable joint for welded pipe

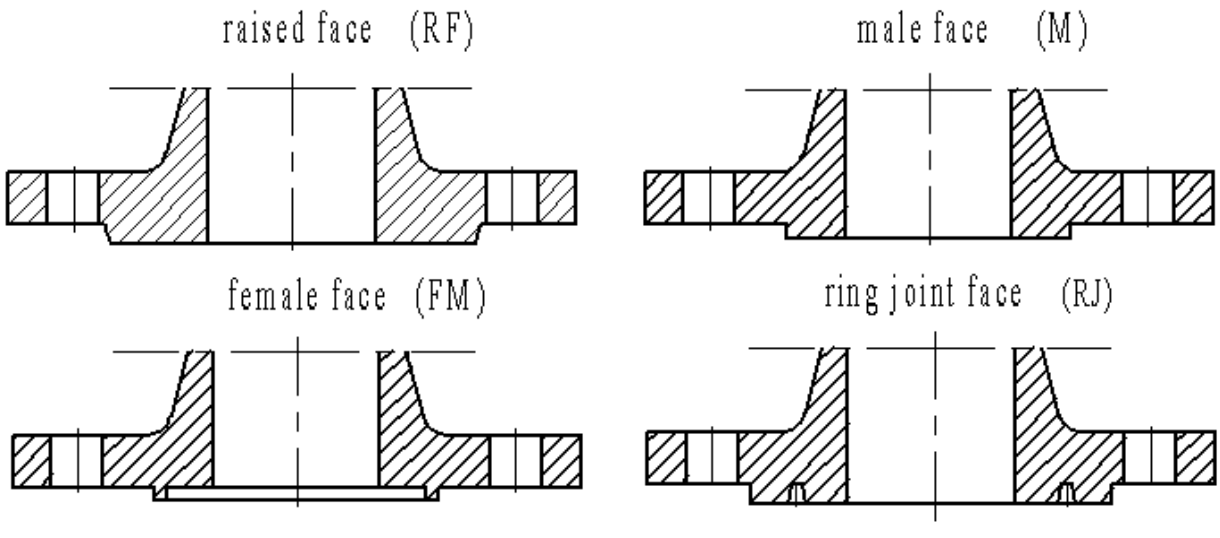


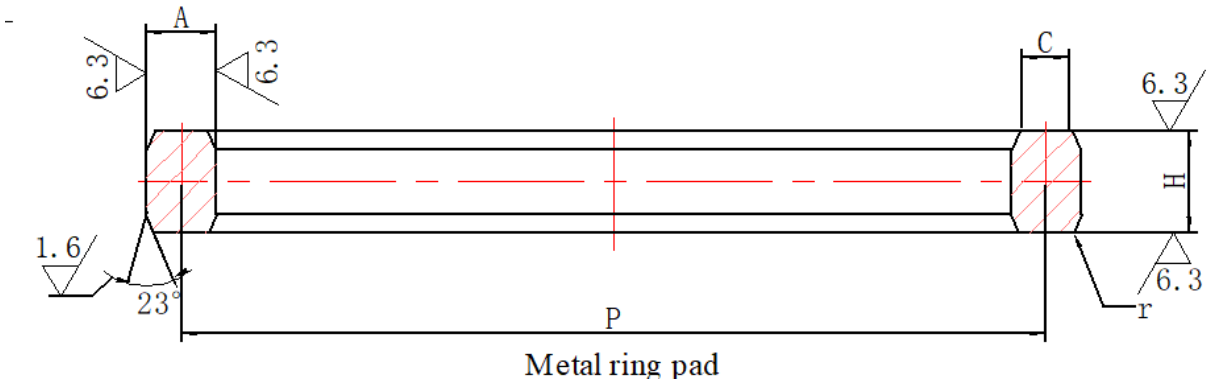
G80/H80/K80/G90 movable joint for welded pip

Companion Flange Type



Flange Seal Form





Metal ring pad

Standards for the chemical industry of the People's Republic of China
HG/T20612—2009 Metal ring gasket for steel pipe flanges (PN series)
Standards for the chemical industry of the People's Republic of China
HG/T20643—2009 Metal ring gasket for steel pipe flanges (Class series)

Nominal pressure	Nominal size DN25				
	Pitch diameter P	Annular ring A	Octagon gasket H	Circular width C	Radius R
PN64/100/160	50	8	13	5.5	1.6
Class150/300/600/900/1500	47.64	7.94	12.70	5.23	
Class2500	60.33	7.94	12.70	5.23	

Nominal pressure	Nominal size DN50				
	Pitch diameter P	Annular ring A	Octagon gasket H	Circular width C	Radius R
PN64/100	85	11	16	8	1.6
PN160	95	11	16	8	
Class150/300/600	82.55	7.94	12.7	5.23	
Class900/1500	95.25	11.11	10.58	7.75	
Class2500	101.60	11.11	10.58	7.75	

Nominal pressure	Nominal size DN80				
	Pitch diameter P	Annular ring A	Octagon gasket H	Circular width C	Radius R
PN64/100	115	11	16	8	1.6
PN160	130	11	16	8	
Class150	114.30	7.94	12.7	5.23	
Class300/600/900	123.83	11.11	10.58	7.75	
Class1500	136.53	11.11	10.58	7.75	
Class2500	127.00	12.70	17.46	8.66	

Nominal pressure	Nominal size DN100				
	Pitch diameter P	Annular ring A	Octagon gasket H	Circular width C	Radius R
PN64/100	145	11	16	8	1.6
PN160	160	11	16	8	
Class150/300/600/900	149.23	11.11	10.58	7.75	
Class900/1500	161.93	11.11	10.58	7.75	
Class2500	157.18	10.58	20.64	10.49	

Pressure Unit Conversion Table

Unit	(kgf/cm^2)	(MPa)	(bar)	(atm)	(mmH_2o)	(mmHg)	(lb/in^2)
kgf/cm^2	1	0.0981	0.981	0.9678	1×10^4	735.6	14.22
MPa	10.2	1	10	9.869	1.02×10^5	7.50×10^3	1.45×10^2
bar	1.02	0.1	1	0.9869	10.2×10^3	750	14.50
atm	1.0332	0.103	1.0133	1	1.0332×10^4	760	14.696
mmH_2o	10^{-4}	9.81×10^{-6}	98.1×10^{-6}	0.9678×10^{-4}	1	73.56×10^{-3}	1.422×10^{-3}
mmHg	1.36×10^{-3}	1.333×10^{-4}	1.333×10^{-3}	1.316×10^{-3}	13.6	1	19.34×10^{-3}
lb/in^2	70.3×10^{-3}	6.89×10^{-3}	68.9×10^{-3}	68.05×10^{-3}	703	51.72	1

1MPa=1000kPa=106Pa=10.1972kgf/cm^2=10bar=9.86927atm=145.038lb/in^2=7500.62mmHg =10.1972×10^4 mmH_2O

1kgf/cm^2=98.0665kPa=9.80665×10^{-2}MPa=0.980665bar=0.967841atm=10mmH O =735.559mmHg

coefficient：mmHg:0℃，g=9.80665m/s^2； mmH_2O:0℃，g=9.80665m/s^2

Anticorrosive Material Reference Table

A—optimal B—usable C— poor ×— not recommended

Category	Medium name	concentration /%	Temperature /℃	Carbon steel	316/316L	Hartz C	Monel	Tantalum	Nickel	Titanium
Inorganic acid	Sulfuric acid	5	25	×	A	A	A	A	C	C
			100	×	C	B	B	A	C	C
		10	25	×	C	A	A	A	C	C
			100	×	C	C	B	A	C	C
		20	25	C	B	A	C	A	×	C
			100	×	C	C	×	A	×	C
		60	25	C	C	A	C	A	C	C
			100	×	×	C	×	A	C	C
		80	25	B	A	A	C	A	C	C
			100	C	C	C	×	B	C	C
		98	25	B	B	A	C	A	×	C
			100	×	×	A	×	A	×	C
		Oleum	25	C	C	B	C	C	×	C
			100	×	C	B	C	C	×	C
	Nitric acid	10	25	C	A	B	C	A	C	A
			100	×	A	B	C	A	C	A
		30	25	C	A	B	C	A	C	A
			100	×	B	C	C	A	C	C
		68	25	C	A	A	×	A	C	A
			100	×	×	×	×	A	C	A
		smoke	25	×	×	×	×	A	C	C
	Hydrochloric acid	5	25	×	C	B	C	A	B	B
			100	×	C	C	C	A	C	C
		10	25	×	C	B	C	A	B	B
			100	×	C	C	C	A	C	C
		20	25	×	C	B	C	A	C	B
			100	×	C	C	C	A	C	C
		35	25	×	C	B	C	A	C	C
			100	×	C	C	C	A	C	C
	Phosphate	20	25	C	A	A	C	A	C	B
			100	×	A	A	C	A	C	C
		30	25	C	A	A	C	A	C	B
			100	C	B	A	C	A	C	×
		50	25	C	A	A	C	A	C	×
			100	C	B	A	C	A	C	×
		70	25	C	A	A	C	A	C	×
			100	C	C	B	C	A	C	×

		85	25	C	A	A	C	A	C	×
			100	C	C	C	C	A	C	×
		90	25	C	C	B	C	A	×	×
			100	×	C	B	C	A	×	×
	Hydrofluoric acid	5	25	C	C	C	A	C	×	×
			100	C	C	C	B	C	×	×
		40	25	C	C	A	A	×	×	×
			100	×	C	C	A	×	×	×
		90	25	B	C	B	×	×	×	×
			100	C	C	×	×	×	×	×
	Hydrobromic acid	<60	25	C	C	×	C	A	C	A
			100	A	C	×	C	A	C	A
	Hydrocyanic acid		25	B	B	B	B	A	×	×
			100	A	B	B	B	A	×	×
	Argon sulfuric acid		25	C	B	B	C	A	B	A
			100	×	B	B	C	A	B	A
	Carbonate	10	25	B	B	A	A	A	B	A
			100	×	C	×	A	A	B	A
		100	25	B	A	A	B	A	B	A
			100	×	A	×	A	A	B	A
	Chromic acid	<50	25	C	C	B	C	A	B	A
			100	×	C	B	C	A	B	A
		>50	25	A	C	B	C	A	B	A
			100	×	C	×	C	A	B	A
	Chlorate	10	25	C	C	B	C	A	×	×
			100	×	C	×	C	A	×	×
	Hypochlorous acid		25	C	C	A	C	A	×	A
			100	×	C	×	C	A	×	×
	Boric acid	0~100	25	C	A	A	B	A	×	A
			100	C	A	A	B	A	×	A
	Chlorosulfonic acid	10	25	C	C	B	C	A	×	×
			100	C	C	×	C	A	×	×
		100	25	B	B	A	C	A	×	×
			100	×	B	A	C	A	×	×
	Chromium water	20	25	×	×	A	×	A	C	×
			100	×	×	×	×	A	C	×
	Aqua regia		25	C	C	C	C	A	×	×
			100	C	C	C	C	×	×	×

Category	Medium name	concentration /%	Temperature /℃	Carbon steel	316/316L	HartzC	Monel	Tantalum	Nickel	Titanium
Salt	Ammonium sulfate	<40	25	×	B	B	B	A	B	A
			100	×	B	B	B	A	C	C
	Ammonium nitrate	10	25	A	A	B	C	A	×	×
			100	A	A	B	C	A	×	×
	Ammonium carbonate	100	25	B	B	B	B	A		A
			100	×	B	B	B	A		A
	Ammonium chloride	<40	25	C	A	A	B	A	A	A
			100	C	A	A	B	A	B	A
		100	25	B	×	B	B	A	×	×
			100	×	×	B	B	A	×	×
	Ammonium acetate	0~100	25	A	A	A	A	×		×
			100	×	A	A	A	×		×
	Ammonium sulfite	<30	25	C	B	B	C	A		×
			100	×	B	B	C	A		×
	Sodium sulfate	<40	25	B	×	×	A	A	×	×
			100	B	×	B	B	A	×	×
	Sodium carbonate	10	25	A	A	A	A	A		A
			100	A	A	A	A	A		A
		100	25	A	B	B	B	A		×
			100	A	B	B	B	A		C
	Sodium hypochlorite	<20	25	B	C	B	C	A		A
			100	×	C	B	C	A		A
	Sodium chloride	<30	25	C	B	B	×	A	A	A
			100	C	C	B	×	A	A	A
	Sodium bicarbonate	<30	25	C	A	B	B	A		A
			100	C	C	B	B	A		A
	Sodium nitrite		25	A	A	A	B	A		A
			100	C	A	A	B	A		A
	Sodium acetate	<60	25	A	A	B	A	A		A
			100	A	A	B	A	A		A
	Sodium benzoate	<60	25	B	B	B	B	B		B
			100	B	B	B	B	B		B
	Potassium sulfate	<20	25	B	A	A	A	A		A
			100	C	A	A	A	A		A
	Potassium nitrate	<100	25	B	B	B	B	A	×	×
			100	×	×	×	B	A	×	×
	Potassium carbonate	<50	25	×	B	B	B	×		A
			100	×	B	B	B	C		A
	Potassium perchlorate	10	25	C	B	B	B	×		A
			100	B	B	B	B	×		A

	Potassium chloride	<30	25	B	A	B	B	A		A
			100	×	A	B	B	A		A
	Potassium bromide	<30	25	×	B	B	B	A		A
			100	×	B	B	B	A		A
	Potassium chromate	<30	25	B	B	A	B	A		A
			100	B	B	A	B	A		A
	Potassium permanganate	10	25	B	B	B	B	×		A
			100	B	B	B	B	×		×
	Aluminum sulfate	<50	25	C	A	A	B	A		A
			100	×	A	A	C	A		A
	Aluminium chloride	0~100	25	C	B	A	A	A		B
			100	×	×	A	C	A		C
	Magnesium sulfate	<50	25	A	A	A	A	A		A
			100	A	A	A	A	A		A
	Magnesium nitrate		25	B	B	B	B	A		B
			100	B	B	B	B	A		B
	Magnesium chloride	<40	25	×	B	A	B	A	×	A
			100	×	B	A	B	A	×	A
	Calcium sulphate	10	25	B	A	B	B	A		A
			100	B	A	B	B	A		A
		100	25	B	B	B	B	A		A
			100	C	B	B	B	A		A
	Calcium carbonate	100	25	B	B	B	B	A		A
			100	B	×	B	B	A		A
	Calcium phosphate	10	25	B	B	B	B	A		A
			100	B	B	B	B	A		A
	Calcium chloride	<80	25	A	B	A	A	A	A	A
			100	A	B	A	A	A	×	A
	Ferric chloride	30	25	C	C	B	C	A	C	A
			100	×	C	C	C	A	×	A

Category	Name of the	Concentration /%	Temperature /℃	Carbon steel	316/ 316L	HartzC	Monel	Tita	Nick	Titani
Elements, gases and their organic compounds	Chlorine	Dry	25	B	B	A	B	A	A	C
			100	B	B	B	B	A	A	C
		Moisture	25	C	C	B	C	A	×	×
			100	C	C	C	C	A	×	×
	Chlorine water	Saturation	RT	×	C	B	B	A	×	×
	Bromine	Dry	25	C	C	A	A	A		C
			100	C	C	B	A	A		C
		Moisture	25	C	×	A	C	A		C
			100	C	×	A	C	A		C
	Phosphorus		25	B	A	A	C	×		×
			100		A	×	C	×		×
	Sodium		370	A	A	A	A	A		A
	Hydrogen chloride	100	25	A	A	A	A	A		B
			100	A	A	A	A	A		B
	Sulfur dioxide	10	25	C	A	A	C	×		A
			100	C	A	A	C	×		A
		90~100	25	A	B	B	C	×		A
			100	B	B	B	C	×		A
	Phosphorus trichloride	Dry	25	A	A	A	A	A		A
			100	A		A	A	A		A
	Trichloride arsenic	10	25	C	C	B	C	×		×
			100	C	C	B	C	×		×
	Sodium peroxide	10	25	B	A	B	B	×		C
			100	B	A	B	B	×		C
	Dichloro sulfur	Moisture		×	A	×	×	A	B	×
	Hydrogen sulfide	Moisture	25	×	A	×	×	A	C	A
Alcohol, Aldehyde, Ether, Ketone, Ester	Methanol		25	B	A	A	A	A		A
			100	A	A	A	A	A		A
	Ethanol		25	A	A	A	A	A		A
			100	A	A	A	A	A		A
	Formaldehyde	<70	25	C	A	B	A	A		A
			100	C	A	B	A	A		A
	Acetaldehyde		25	A	A	A	A	A		A
			100	A	A	×	B	A		A
	Dimethyl ether		25	B	B	B	B	A		A
			100	B	B	B	B	A		A
	Diethylether		25	A	A	B	A	A		A
			100	B	A	B	A	A		A
	Acetone		25	B	A	A	A	A		A

			100	B	A	A	A	A		A
	Butanone	<100	25	B	B	B	B	A		A
			100	B	B	B	B	A		A
	Formic acid armour grease	<30	25	B	B	B	B	B		A
			100	B	B	B	B	B		A
	Acetic acid ethyl ester		25	A	A	B	A	A		A
			100	B	B	B	A	A		A
Hydrocarbon and petroleum products	**Methane**		25	A	A	A	A	A		A
			100	A	A	A	A	A		A
	Benzene		25	B	B	B	A	A		A
			100	B	B	B	A	A		A
	Toluene		25	A	A	A	A	A		A
			100	A	A	A	A	A		A
	Phenol	90	25	A	B	A	B	A		A
			100	×	B	A	B	A		A
	Acrylonitrile		25	A	A	A	A	A		A
			100	A	A	A	A	A		A
	Urea	<50	25	B	B	B	B	A		A
			100	C	B	B	B	A		A
	Nitroglycerin		25	A	A	A	A	A		A
			100	×	A	×	×	A		×
	Nitrotoluene		25	A	A	B	B	A		B
			100	A	A	B	B	A		B
Others	**Brine**		25	C	A	A	A	A	C	A
			80	C	A	A	×	A	×	×
	Salt water		25	B	B	A	A	A	B	A
			80	×	B	A	×	A	×	×
Mixture	**35%HCL+65%HNO3**		25	×	×	×	×	A	×	×
	90%H2SO4+10%HNO3		25	×	×	×	×	A	×	×
	70%H2SO4+30%HNO3		RT	×	×	×	×	A	×	×
	50%H2SO4+50%HNO3		RT	×	×	×	×	A	×	×