YAMATAKE Specifications

ST3000 Ace Smart Transmitter JTE Series of Remote-sealed Type Differential Pressure Transmitters

JTE929A/JTE930A

General

The ST3000 Ace* Smart Transmitter is a microprocessor-based smart transmitter that features high performance and excellent stability. Capable of measuring gas, liquid, and vapor flow rates, and liquid levels, it transmits 4 to 20 mA DC analog and digital signals according to the measured differential pressure.

It can also execute two-way communications between the SFC (Smart Field Communicator), and, via DE protocol, with the TDCS3000 or 3000^{X} and a database, thus facilitating self-diagnosis, range resetting, and automatic zero adjustment.

Remote-sealed differential pressure transmitters are suitable for the measurement of differential pressures (flow rates, liquid levels, etc.) of process fluids that are highly corrosive, tend to condense, precipitate metal, etc.

Features

(1) Excellent stability and high performance
- Long-term stability has been proven in 500,000 installations worldwide.
- Unique characterization and composite semiconductor sensors realize excellent temperature and static pressure characteristics.

(2) A diverse lineup
- A diverse flange lineup, ranging from small diameter 1.5in. (40mm) and 2in. (50mm) to 3in. (80mm), is available to meet user requirements.
- A wide range of models, including those for general purpose and high-temperature service, is available to meet user requirements. In addition, the working temperature range of general purpose models has been expanded to 180°C maximum to allow you greater freedom in instrumentation.
- A wide variety of corrosion-resistant materials for wetted parts is also available.
- These differential pressure transmitters can be mounted in various ways, including direct mounting on tanks without using 2in. stanchion pipes.

(3) Function to correct the temperature of the fill fluid of the capillary section:
- Changes in the density of the fill fluid caused by temperature fluctuations are calculated, and output is corrected accordingly. This function substantially reduces (to 1/5—1/10) the effect of seasonal fluctuations in temperature.

(4) Multiprotocol communication
- Either analog output (4 to 20 mA DC), analog FSK output (4 to 20 mA DC) or digital output (DE protocol) is possible.
- Two-way communication using digital output facilitates self-diagnosis, range resetting, automatic zero adjustment, and other operations.

(5) Full after-sales service program
- From product delivery to replacement, we will service all your needs. Our nationwide service network provides all the backup you require, including trial operation support and regular maintenance.

Applications

Petroleum/Petrochemical/Chemical
- For the measurement of liquid levels including corrosive fluids at high temperatures, and high temperatures under vacuum
- For the control of flow rates as used with tapless venturi tubes
- For replacement of displacement type level gauges
- For materialization of instrumentation without connecting tubes

Electric Power/City Gas/Other Utilities
- For measurement applications that require a high degree of stability and accuracy

Pulp and Paper
- For lines that need transmitters resistant to chemical liquids, corrosive fluids and the like
- For the measurement of liquid levels in small tanks

Iron and Steel/Nonferrous Metal/Ceramics
- For lines that require stable measurement under strictly controlled (temperature, humidity, etc.) conditions

Machinery/Shipbuilding
- For lines that require stable measurement under strictly controlled (temperature, humidity, vibration, etc.) conditions

Specifications

Measuring span/setting range/working pressure range:

See Table 1.

Output/communication:

Analog output (4 to 20 mA DC)

Analog FSK output (4 to 20 mA DC)

(Frequency shift keying signal transmission system)

Digital output (DE protocol)

Supply voltage and load resistance:

10.8 to 45 V DC. A load resistance of 250 Ω or more is necessary between loops. (See Figure 1)

Fill Fluid: Silicone oil for general purpose and high-temperature models

Fluorine oil for oxygen and chlorine models

For specific gravity, see Table 2.

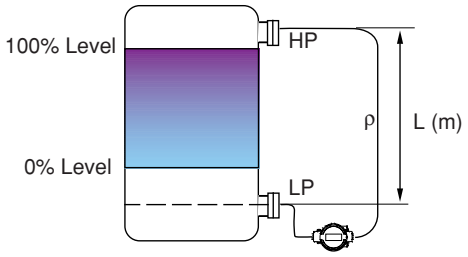
Function to correct the temperature of the capillary section fill fluid : (Patent No.1978534)

Changes in the density of the fill fluid (ρ) caused by temperature fluctuations are calculated, and the output is corrected accordingly. This function substantially reduces the effect of seasonal fluctuations in temperature.

<How to set this function>

Set the inter-flange height L (m) according to the SFC. If the height L (m) is already known, let us know, so, this function can be set before shipment.

If the high pressure side (HP) of your transmitter is located under the tank, place a minus (-) sign before the height L setting.



Temperature ranges of wetted parts:

See Table 2.

Ambient temperature ranges:

See Table 2, except for explosion-proof models with digital indicators, which have to be used within the following ranges:

Models with digital indicators:

Normal operating conditions: -20 to 70°C

Operative limits: -30 to 80°C

JIS pressure-resistant special explosion-proof models: -20 to 60°C

JIS intrinsically safe explosion-proof models: -10 to 60°C

Ambient humidity range:

5 to 100% RH

Stability against supply voltage change:

±0.005% FS/V

Lightning protection:

Peak value of voltage surge: 100 kV

Peak value of current surge: 1000 A

Dead time: Approx. 0.4 sec

Damping time constant:

Selectable from 0 to 32 sec in ten stages

Waterproof/dustproof structure:

JIS C0920 watertight: NEMA3 and 4X

JIS F8001 class 2 watertight: IEC IP67

Explosion-proof structure:

JIS special explosion-proof models: (Exd II CT4X)

JIS intrinsically safe models: (i3aG4)

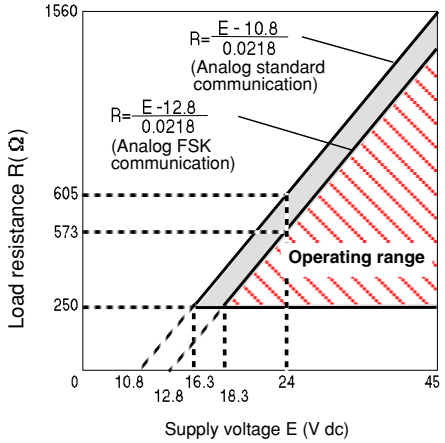
	Measuring Span	Setting Range	Working Pressure Range
JTE929A	2.5～100kPa {250～10160mmH_2O}	-100～100kPa {-10160～10160mmH_2O}	Up to the smaller value of either setting range or flange rating (For negative pressures, see Figures 2, 3, and 4.) (For flange rating, see "Max Working Pressure")
JTE930A	35～700kPa {0.35～7kgf/cm^2}	-100～700kPa {-1～7kgf/cm^2}	Up to the smaller value of either setting range or flange rating (For negative pressures, see Figures 2, 3, and 4.) (For flange rating, see "Max Working Pressure")

Table 1 Measuring Span, Setting Range, and Working Pressure Range

		Temperature Range (℃) Note 1), Note 4)				
		General-purpose models	High-temperature models	High-temperature vacuum models	High-temperature high vacuum models	Oxygen and chlorine models
Wetted parts section	Normal operating range	-40～180	-5～280 Note 5)	-5～280 Note 5)	10～280 Note 5)	-10～120
	Operative limit range	-50～185	-10～310 Note 6)	-10～310 Note 6)	-10～310 Note 6)	-40～125
Ambient temperature Note 2) Flange diameter: Flush diaphragm type 3in.（80mm） Extended diaphragm type 4in.（100mm）	Normal operating range	-30～75	-5～55	-5～55	10～55	-10～75
	Operative limit range	-50～80	-10～60	-10～60	-10～60	-40～80
Ambient temperature Note 2) Flange diameter: Flush diaphragm type 2in.（50mm）/1.5in.（40mm） Extended diaphragm type 3in.（80mm）/2in.（50mm）	Normal operating range	-15～65	-5～45	-5～55	10～55	-10～75
	Operative limit range	-30～80	-10～55	-10～55	-10～60	-40～80
Specific gravity of fill liquid Note 3)		0.935	1.07	1.07	1.09	1.87

Table 2 Temperature Range of Wetted Parts Section and Ambient Temperature Range

Note 1) See the working pressures and temperatures of the wetted parts section in Figure 2, Figure 3, and Figure 4.
Note 2) Ambient temperatures of the transmitter itself
Note 3) Approximate values at the temperature of 25°C
Note 4) Note that if the operating temperature falls below the lower limit of the normal operating range, the response of the transmitter becomes slower.
Note 5) When the wetted parts material is tantalum, the upper limit is 180°C.
Note 6) When the wetted parts material is tantalum, the upper limit is 200°C.



Note: For communication with SFC, a load resistance of 250 Ω or more is necessary.

Figure 1 Supply Voltage vs. Load Resistance Characteristics

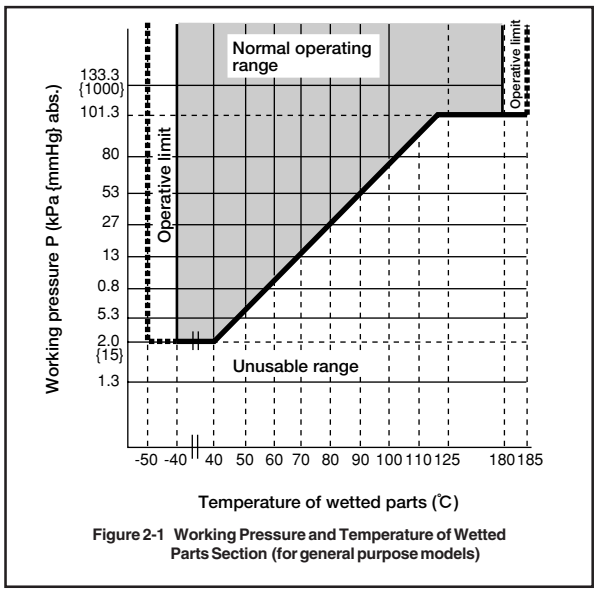


Figure 2-1 Working Pressure and Temperature of Wetted Parts Section (for general purpose models)

Note) In the case of dual diaphragm, the lower limit value of working pressure becomes 53 kPa abs.

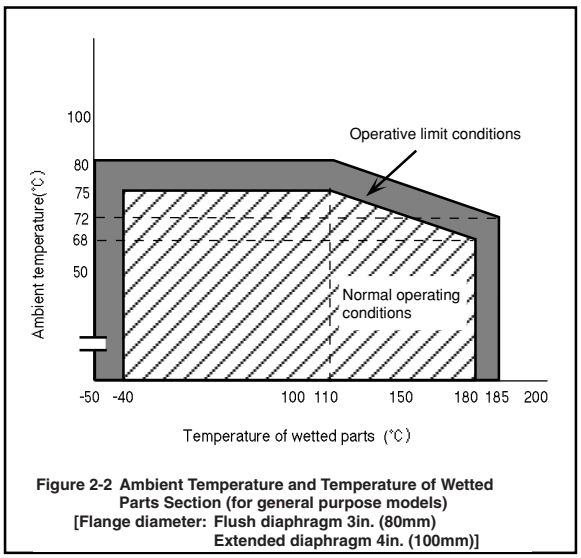


Figure 2-2 Ambient Temperature and Temperature of Wetted Parts Section (for general purpose models)
[Flange diameter: Flush diaphragm 3in. (80mm)
Extended diaphragm 4in. (100mm)]

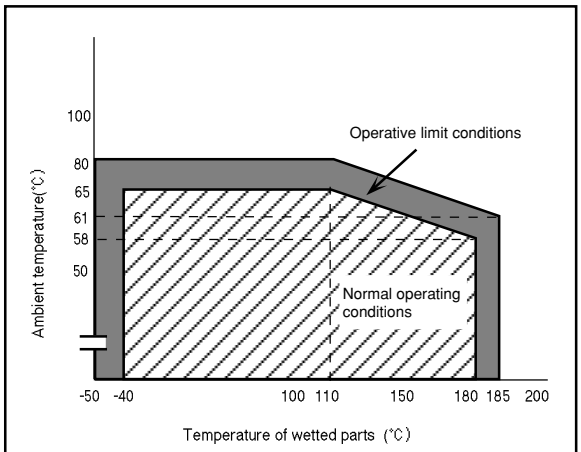


Figure 2-3 Ambient Temperature and Temperature of Wetted Parts Section (for general purpose models)
[Flange diameter: Flush diaphragm 2in. (50mm)/1.5in (40mm)
Extended diaphragm 3in. (80mm)/2in. (50mm)]

Note) When the fill liquid is for general purposes, make sure before using your transmitter that the conditions in both Figure 2-1,2-2 and Figure 2-3 are met.

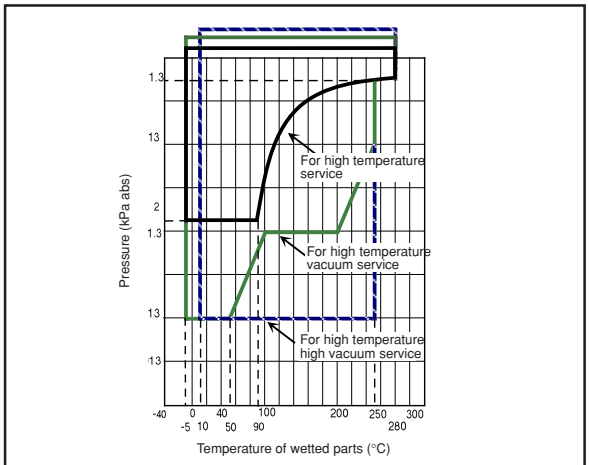


Figure 3-1 Working Pressure and Temperature of Wetted Parts Section (for high temperature service/high temperature vacuum service/high temperature high vacuum service)

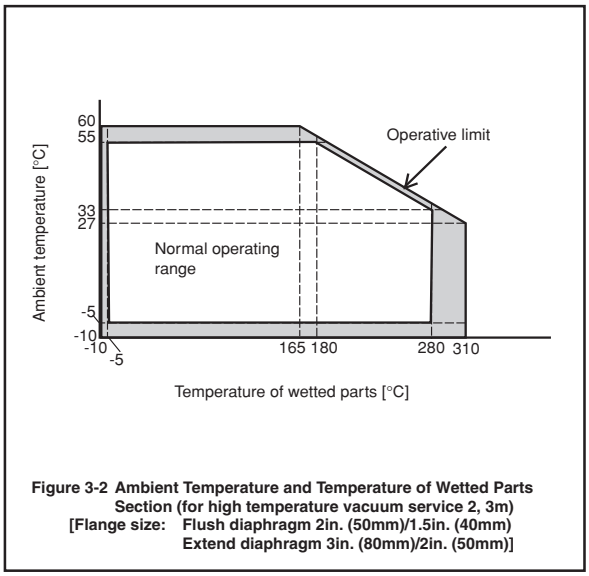


Figure 3-2 Ambient Temperature and Temperature of Wetted Parts Section (for high temperature vacuum service 2, 3m)
[Flange size: Flush diaphragm 2in. (50mm)/1.5in. (40mm)
Extend diaphragm 3in. (80mm)/2in. (50mm)]

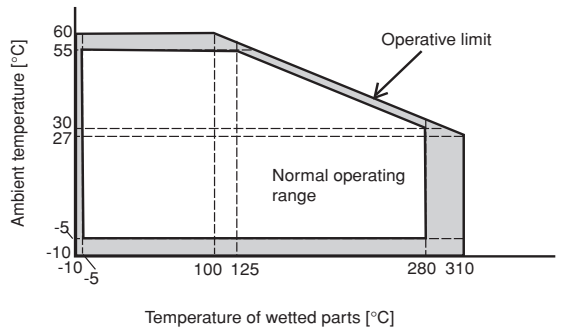


Figure 3-3 Ambient Temperature and Temperature of Wetted Parts Section (for high temperature vacuum service 4,5m) [Flange size: Flush diaphragm 2in. (50mm)/1.5in. (40mm) Extend diaphragm 3in. (80mm)/2in. (50mm)]

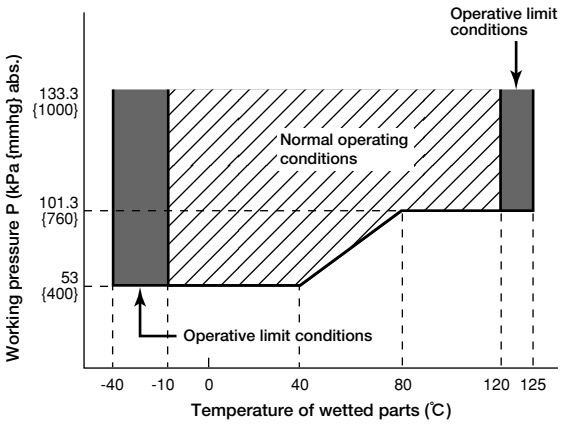


Figure 4 Working Pressure and Temperature of Wetted Parts Section (for oxygen and chlorine models)

Note) In the case of dual diaphragm, the lower limit value of working pressure becomes 53 kPa abs.

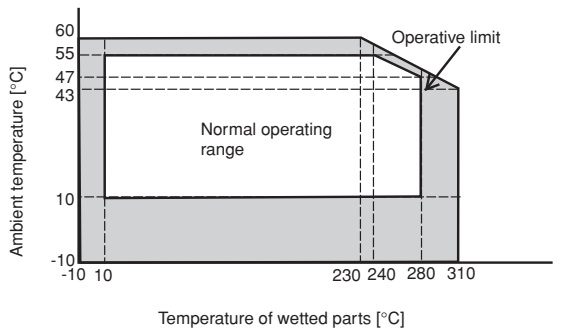


Figure 3-4 Ambient Temperature and Temperature of Wetted Parts Section (for high temperature high vacuum service 2,3m) [Flange size: Flush diaphragm 2in. (50mm)/1.5in. (40mm) Extend diaphragm 3in. (80mm)/2in. (50mm)]

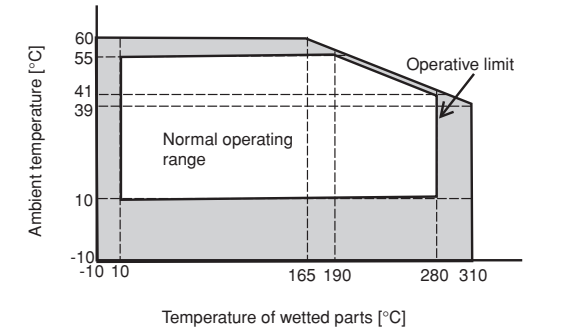
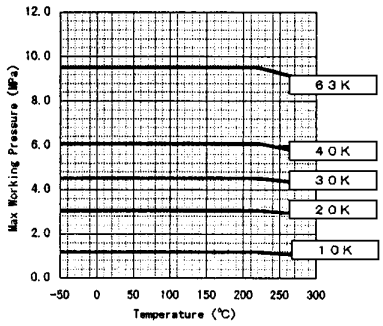
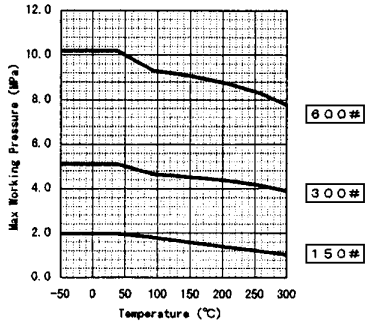
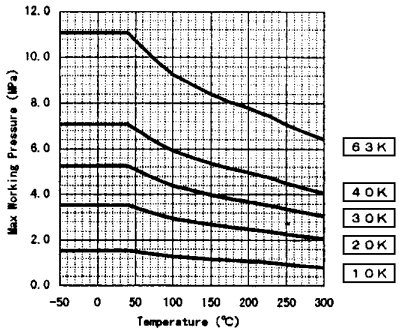
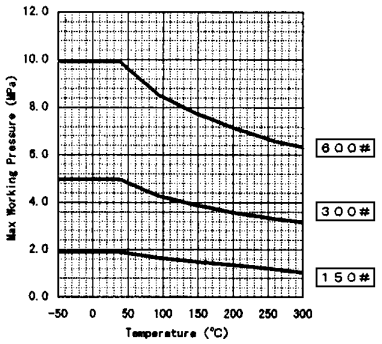
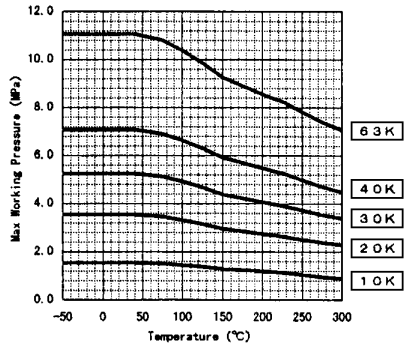
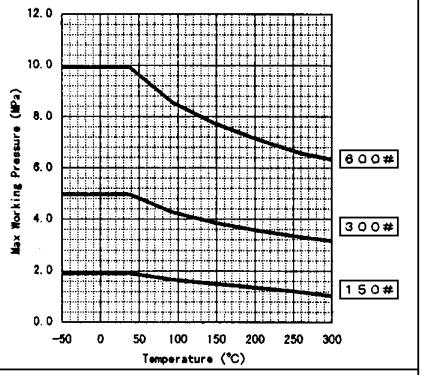
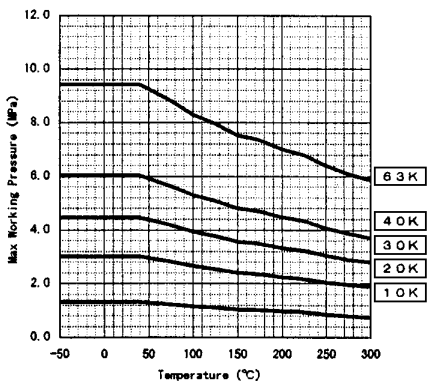
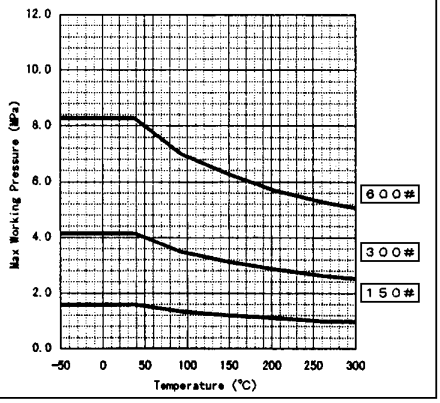


Figure 3-5 Ambient Temperature and Temperature of Wetted Parts Section (for high temperature vacuum service 4,5m) [Flange size: Flush diaphragm 2in. (50mm)/1.5in. (40mm) Extend diaphragm 3in. (80mm)/2in. (50mm)]

Max Working Pressure

Note 1. Max Working Pressure depends on flange rating, flange materials and operating temperature. Please refer to the following data.
Operating range of temperature depends on the specifications of transmitter.
Note 2. In the case of flange type (JTF940□, JTC940□) and remote sealed type (JTU940□, JTH940□),
Max Working Pressure depends on the smaller value of either 3.5MPa or following data.
Note 3. In the case of absolute remote sealed type (JTS940□),
Max Working Pressure depends on the smaller value of either 3.5MPa abs or following data.
As for the following data, the vertical axis represent gauge pressure.
Note 4. In the case of remote sealed type (JTH960□), Max Working Pressure depends on the smaller value of either 10MPa or following data.
Note 5. In the case of 1/2in. remote sealed type (JTE929□, JTE930□, JTH960□),
Max Working Pressure depends on the smaller value of either 5.1MPa or the following data as for adapter flange (HF).

	JIS	JPI/ANSI
Carbon steel		
SUS304		
SUS316		
SUS316L		

Process pipe connection:

Flanges (both higher and lower pressure sides)

Flush diaphragm:

JIS10K, 20K, 30K, and 63K-80mm/50mm/40mm (RF) equivalents

ANSI150, 300, and 600-3in./2in./1.5in. (RF) equivalents

JPI150, 300, and 600-3in./2in./1.5in. (RF) equivalents

Extended diaphragm:

JIS10K, 20K, and 30K-100mm/80mm/50mm (RF) equivalents

ANSI150 and 300-4in./3in./2in. (RF) equivalents

JPI150 and 300-4in./3in./2in. (RF) equivalents

Electrical conduit connection:

G1/2 internal thread

1/2NPT internal thread (Not usable with JIS explosion-proof models)

Materials:

Center body: SUS316

Transmitter case: Aluminum alloy

Meter body cover: SUSF304

Wetted parts materials:

SUS316 (SUS316L for diaphragm only)
SUS316L
Hastelloy C, tantalum, etc.

Flange materials:

Carbon steel (SF440A), SUS304, SUS316, SUS316L

Bolts and nuts materials (for fastening meter body cover):

Carbon steel (SNB7), SUS630

Capillary section:

Capillary tube length: 2, 3, 4, 5, 6, 7, 8, 9, and 10 m

2, 3, 4, and 5 m when

flange diameters:

flush diaphragm 2in. (50mm)/1.5in. (40mm)
extended diaphragm 3in. (80mm)/2in. (50mm)

Capillary tube material: SUS316

Armored tube material: SUS304

Coating (optional): Olefin coating to improve corrosion resistance

(Not available for high-temperature vacuum or high-temperature high vacuum models)

Finish: Housing: light beige (Munsell 4Y7.2/1.3)

Cap: dark beige (Munsell 10YR4.7/0.5)

Corrosion-resistant finish:

Standard: Corrosion-resistant paint (Baked acrylic paint)

Corrosion-resistant finish:

Corrosion-resistant paint (Baked acrylic paint), fungus-proof finish

Corrosion-proof finish:

Corrosion-proof paint (Baked epoxy paint), fungus-proof finish

Corrosion-resistant finish (silver paint):

Transmitter case is silver-coated in addition to the above corrosion-resistant finish.

Built-in indicating meter:

The digital LCD indicator (optional) indicates actual flow rates (in SI units) and can be set freely between -19999 and 19999 (4.5 digits). For actual calibration, specify the following items when placing your order:

- Actual calibration range
- Actual calibration unit
- Proportional representation and instructions about square-root extraction

Various kinds of data can be set using the SFC smart communicator (Ver. 7.1 or newer).

Burnout feature:

Choice of three states at abnormal condition:

Burnout of output values: none
upper limit
lower limit

Grounding: Grounding resistance 100 Ω max.

Mounting: Direct mounting on the process side

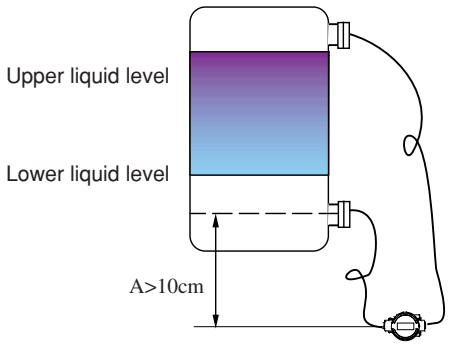
For mounting the transmitter body, choose between the following two methods:

(1) Using 2-inch pipe mounting brackets: Mount the transmitter on a horizontal or vertical 2-inch pipe, then use the brackets.

Materials: Brackets: carbon steel
U bolts and nuts: SUS304

(2) Direct mounting (for general purpose model only)

Mounting Notes



1) If the fluid to be measured contains hydrogen, please consult a Yamatake representative.
2) When mounting the transmitter, leave a space of at least 10 cm under the lower nozzle of the tank. If no space is available, please consult a Yamatake representative.

Mount the transmitter directly on the tank using the direct mounting kit supplied.

<Features>

- Direct mounting saves space.
- Capillary tubes can be neatly arranged using tube clamps. This also improves temperature characteristics.

Direct mounting kit (weight: approx. 600 g)

Component	Material
Adaptor	SUS13 (SUS304 equivalent)
Adaptor fastening bolt	SUS304 (M8)
Tube clamp	Brass + nickel plating

Weight: Approx. 19.8 kg
(including JIS10K-80mm flange and capillary 5 m long)

Tank Level Setting by Direct Mounting Method

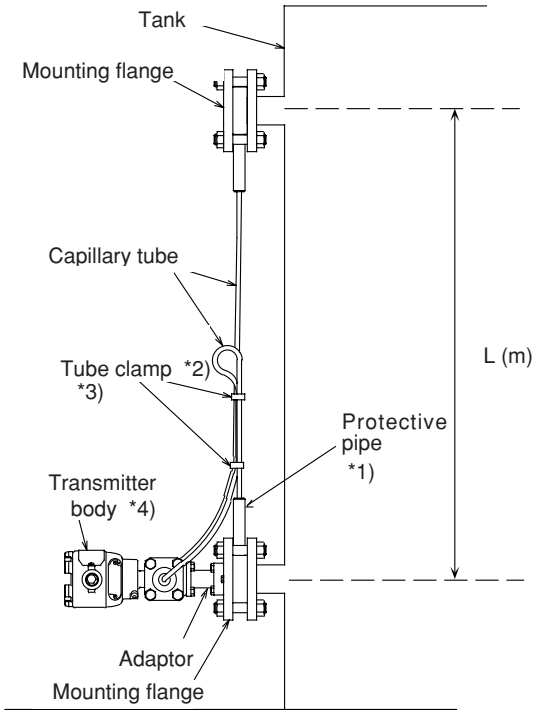
Notes)

*1) When fitting a protective pipe upward as shown in the figure, be sure to specify a capillary tube with olefin coating. If a capillary tube without olefin coating is to be used, set the capillary withdrawal direction slightly downward.

*2) When bending a capillary tube, as shown in the figure, do not twist it. Also note that the minimum bending diameter is about 5 cm. Do not bend it more by applying excessive force.

*3) Three tube clamps are supplied as an option. Referring to the figure, fix the tube at appropriate places. Do not tighten the clamps to the extent in which the tube is deformed.

*4) Before zero adjusting using the SFC, be sure to set the inter-flange height L (m) and use the capillary fill fluid temperature correction function.



Optional Specifications

External zero adjustment function:

The transmitter can be easily zero-adjusted in the field with a flat-head screwdriver.

Additional lightning protection:

It is possible to achieve a lightning protection performance of 200 kV, 2000 A, twice the standard performance (100 kV, 1000 A). This is advisable when the transmitter is to be used in lightning-prone areas such as mountains, hills or wherever high-performance lightning protection is required.

Elbow: This is an adaptor for changing the electrical conduit connection port from the horizontal to the vertical direction, if called for by wiring conditions in the field. One or two elbows may be used as needed.

Dual diaphragm:

Diaphragm can be changed when the adapter for dual diaphragm is used.

Water free treatment (including oil free treatment):

The transmitter is shipped with dry and oil-free wetted parts.

Oil free treatment:

The transmitter is shipped with oil-free wetted parts. (The vent drain plug is coated with a small amount of fluorine oil to prevent galling.)

FEP protective film:

Use FEP protective films when corrosive fluids are used or to inhibit ion migration from metal diaphragms.

Working temperature range:

0 to 110°C

Working pressure range:

atmospheric pressure to flange rating

(up to JIS10K, ANSI/JPI150)

(Not usable under negative pressure)

Electric power specification:

This specification applies to where stringent quality control is required, such as in the electric power and city gas industries.

Special burnout (3.2 mA):

The burnout output value (in the lower-limit direction) under abnormal conditions shall be 3.2 mA (-5%) or less.

Test report: The test report indicates the results of appearance, I/O characteristics, insulation resistance, and breakdown voltage tests.

Material certificate:

The certificate shows the chemical composition, heat-treatment conditions, and mechanical properties of the materials used for the wetted parts.

Strength calculation sheet:

The strength calculation sheet indicates the strength of the meter body cover, flanges, bolts, etc.

Withstand pressure and airtight tests (for general purposes):

The withstand pressure and airtight test result sheet shows the results of a pressure resistance test (under water pressure for 10 minutes) performed on the wetted parts.

Traceability certificate:

This certificate consists of three parts: the transmitter's measurement control system configuration diagram, a calibration certificate, and a test report.

Conformance to non-SI units:

We deliver transmitters set to any non-SI unit you specify.

Transmitter Handling Notes

To get the most from the performance this transmitter can offer, please use it properly noting the points mentioned below. Before using it, please read the Instruction Manual.

Transmitter Installation Notes

⚠ Warning

- **When installing the transmitter, ensure that gaskets do not protrude from connecting points into the process (such as adapter flange connection points and connecting pipes and flanges). Gasket protrusion may result in leaks and output errors.**
- **Do not use the transmitter outside its defined pressure, temperature, and connection specifications. A serious accident may otherwise occur due to damage and leaks.**
- **When performing wiring work in explosion-proof areas, follow the work method specified in the explosion-proof guidelines. In addition, when the wiring for an explosion-proof product is a pull-in pressure-resistant packing-cable, be sure to use a pressure-resistant packing-cable adapter certified by Yamatake Corporation.**
- **Be sure to use the cable which allowable temperature is more than 65 °C.**

⚠ Caution

- **After installing the transmitter, do not stand on it. Using it as a foothold could cause it to collapse and cause physical injury.**
- **Be careful not to hit the glass indicator with tools etc. This could break the glass and cause injury.**
- **This transmitter is heavy. Wear safety shoes and take care when installing it.**

Wiring Notes

⚠ Warning

- **To avoid shocks, do not perform electrical wiring work with wet hands or with live wires.**

⚠ Caution

- **Do wiring work properly in conformance with the specifications. Wiring mistakes may result in malfunction or irreparable damage to the instrument.**
- **Use a power supply that conforms to the specifications. Use of an improper power supply may result in malfunction or irreparable damage to the instrument.**

Performance

Shown for each item are the upper limit (URV) (*1) and the lower limit (LRV) (*2) of the calibration range or the percentage ratio of the maximum value of the span to χ (kPa).

JTE929A (for general purpose and high-temperature models)
Material for Wetted Parts: SUS316
Flange diameter: Flush diaphragm 3in. (80mm) Extended diaphragm 4in. (100mm)

Accuracy	Linear output:	$\pm$ 0.3%	($\chi \geqq 12.5$kPa {1250mmH$_2$O})
		$\pm (0.3 \times \frac{12.5}{\chi})$ %	($\chi < 12.5$kPa {1250mmH$_2$O})
	Square-root output:	When output is 50 to 100%: same as linear output When output is 7.1 to 50%: linear output $\times \frac{50}{\text{square-root output \%}}$ When output is less than 7.1%: dropout	
Temperature characteristics (Shift from the set range) **Change of 55°C**	Zero shift:	$\pm 0.75\%$	($\chi \geqq 25$kPa {2500mmH$_2$O})
		$\pm 0.75 \times \frac{25}{\chi}\%$	($\chi < 25$kPa {2500mmH$_2$O})
	Combined shift: (including zero and span shifts)	$\pm 1.6\%$	($\chi \geqq 25$kPa {2500mmH$_2$O})
		$\pm 1.6 \times \frac{25}{\chi}$ %	($\chi < 25$kPa {2500mmH$_2$O})
Static pressure effect (Shift in respect to setting range) **Change of 7MPa {70kgf/cm^2}**	Zero shift:	$\pm 0.75\%$	($\chi \geqq 25$kPa {2500mmH$_2$O})
		$\pm (0.75 \times \frac{25}{\chi})\%$	($\chi < 25$kPa {2500mmH$_2$O})
	Combined shift: (including zero and span shifts)	$\pm 1.00\%$	($\chi \geqq 25$kPa {2500mmH$_2$O})
		$\pm (1.00 \times \frac{25}{\chi})\%$	($\chi < 25$kPa {2500mmH$_2$O})

JTE930A (for general purpose and high-temperature models)
Material for Wetted Parts: SUS316
Flange diameter: Flush diaphragm 3in. (80mm) Extended diaphragm 4in. (100mm)

Accuracy (*3)	Linear output:	$\pm 0.2\%$	($\chi \geqq 210$kPa {2.1kgf/cm^2})
		$\pm (0.05+0.15 \times \frac{210}{\chi})\%$	($\chi < 210$kPa {2.1kgf/cm^2})
	Square-root output:	When output is 50 to 100%: same as linear output When output is 7.1 to 50%: linear output $\times \frac{50}{\text{square-root output \%}}$ When output is less than 7.1%: dropout	
Temperature characteristics (Shift from the set range) (*3) **Change of 55°C**	Zero shift:	$\pm (0.25+0.5 \times \frac{210}{\chi})\%$	
	Combined shift: (including zero and span shifts)	$\pm 1.6\%$	($\chi \geqq 210$kPa {2.1kgf/cm^2})
		$\pm (1.0+0.6 \times \frac{210}{\chi})\%$	($\chi < 210$kPa {2.1kgf/cm^2})
Static pressure effect (Shift in respect to setting range) (*3) **Change of 7MPa {70kgf/cm^2}**	Zero shift:	$\pm (0.75 \times \frac{700}{\chi})\%$	
	Combined shift:	$\pm (1.00 \times \frac{700}{\chi})\%$	

Notes) (*1): URV denotes the value for 100% (20 mA DC) output.
(*2): LRV denotes value for 0% (4 mA DC) output.
(*3): Within a range of URV $\geqq$ 0 and LRV $\geqq$ 0

JTE929A (for general purpose and high-temperature models)
Material for Wetted Parts: Hastelloy C, Tantalum
Flange Diameter: Flush diaphragm 3in. (80mm)

Accuracy	Linear output:	$\pm 0.4\%$	$(\chi \geqq 12.5\text{kPa} \ \{1250\text{mmH}_2\text{O}\})$
		$\pm(0.4\times\frac{12.5}{\chi})\%$	$(\chi < 12.5\text{kPa} \ \{1250\text{mmH}_2\text{O}\})$
	Square-root output:	When output is 50 to 100%: same as the linear output When output is 7.1 to 50%: linear output $\times \frac{50}{\text{square-root output \%}}$ When output is less than 7.1%: dropout	
Temperature characteristics (Shift from the set range) Change of 30°C (Range from -5 to 55°C)	Zero shift:	$\pm 2.15\%$	$(\chi \geqq 25\text{kPa} \ \{2500\text{mmH}_2\text{O}\})$
		$\pm 2.15\times\frac{25}{\chi}\ \%$	$(\chi < 25\text{kPa} \ \{2500\text{mmH}_2\text{O}\})$
	Combined shift: (including zero and span shifts)	$\pm 3.0\%$	$(\chi \geqq 25\text{kPa} \ \{2500\text{mmH}_2\text{O}\})$
		$\pm 3.0\times\frac{25}{\chi}\ \%$	$(\chi < 25\text{kPa} \ \{2500\text{mmH}_2\text{O}\})$
Static pressure effect (Shift in respect to setting range) Change of 7MPa {70kgf/cm²}	Zero shift:	$\pm 6.00\%$	$(\chi \geqq 25\text{kPa} \ \{2500\text{mmH}_2\text{O}\})$
		$\pm(6.00\times\frac{25}{\chi})\%$	$(\chi < 25\text{kPa} \ \{2500\text{mmH}_2\text{O}\})$
	Combined shift: (including zero and span shifts)	$\pm 7.00\%$	$(\chi \geqq 25\text{kPa} \ \{2500\text{mmH}_2\text{O}\})$
		$\pm(7.00\times\frac{25}{\chi})\%$	$(\chi < 25\text{kPa} \ \{2500\text{mmH}_2\text{O}\})$

JTE930A (for general purpose and high-temperature models)
Material for Wetted Parts: Hastelloy C, Tantalum
Flange Diameter: Flush diaphragm 3in. (80mm)

Accuracy (*3)	Linear output:	$\pm 0.2\%$	$(\chi \geqq 210\text{kPa} \ \{2.1\text{kgf/cm}^2\})$
		$\pm(0.05+0.15\times\frac{2.1}{\chi})\%$	$(\chi < 210\text{kPa} \ \{2.1\text{kgf/cm}^2\})$
	Square-root output:	When output is 50 to 100%: same as the linear output When output is 7.1 to 50%: linear output $\times \frac{50}{\text{square-root output \%}}$ When output is less than 7.1%: dropout	
Temperature characteristics (Shift from the set range) Change of 30°C (*3) (Range from -5 to 55°C)	Zero shift:	$\pm(0.15+0.7\times\frac{210}{\chi})\%$	
	Combined shift: (including zero and span shifts)	$\pm 1.75\%$	$(\chi \geqq 210\text{kPa} \ \{2.1\text{kgf/cm}^2\})$
		$\pm(1.00+0.75\times\frac{210}{\chi})\%$	$(\chi \geqq 210\text{kPa} \ \{2.1\text{kgf/cm}^2\})$
Static pressure effect (Shift in respect to setting range) (*3) Change of 7MPa {70kgf/cm²}	Zero shift:	$\pm(0.75\times\frac{700}{\chi})\%$	
	Combined shift: (including zero and span shifts)	$\pm(1.00\times\frac{700}{\chi})\%$	

Notes) (*1): URV denotes the value for 100% (20 mA DC) output.
(*2): LRV denotes value for 0% (4 mA DC) output.
(*3): Within a range of URV ≧ 0 and LRV ≧ 0

JTE929A (for general purpose models)

Material for Wetted Parts: SUS316

Flange Diameter: Flush diaphragm 2in. (50mm)/1.5in. (40mm) Extended diaphragm 3in. (80mm)/2in. (50mm)

Accuracy	Linear output:	$\pm$ 0.3%	($\chi \geqq 12.5$kPa {1250mmH$_2$O})
		$\pm$ $(0.3 \times \frac{12.5}{\chi})$ %	($\chi < 12.5$kPa {1250mmH$_2$O})
	Square-root output:	When output is 50 to 100%: same as the linear output When output is 7.1 to 50%: linear output $\times \frac{50}{\text{square-root output \%}}$ When output is less than 7.1%: dropout	
Temperature characteristics (Shift from the set range)	Zero shift:	$\pm$0.75%	($\chi \geqq 25$kPa {2500mmH$_2$O})
		$\pm 0.75 \times \frac{25}{\chi}$ %	($\chi < 25$kPa {2500mmH$_2$O})
Change of 55°C	Combined shift: (including zero and span shifts)	$\pm$1.6%	($\chi \geqq 25$kPa {2500mmH$_2$O})
		$\pm 1.6 \times \frac{25}{\chi}$ %	($\chi < 25$kPa {2500mmH$_2$O})
Static pressure effect (Shift in respect to setting range)	Zero shift:	$\pm$1.47%	($\chi \geqq 25$kPa {2500mmH$_2$O})
		$\pm (1.47 \times \frac{25}{\chi})$%	($\chi < 25$kPa {2500mmH$_2$O})
Change of 7MPa {70kgf/cm^2}	Combined shift: (including zero and span shifts)	$\pm$1.97%	($\chi \geqq 25$kPa {2500mmH$_2$O})
		$\pm (1.97 \times \frac{25}{\chi})$%	($\chi < 25$kPa {2500mmH$_2$O})

JTE929A (for high-temperature models)

Material for Wetted Parts: SUS316

Flange Diameter: Flush diaphragm 2in. (50mm)/1.5in. (40mm) Extended diaphragm 3in. (80mm)/2in. (50mm)

Accuracy	Linear output:	$\pm$ 0.3%	($\chi \geqq 12.5$kPa {1250mmH$_2$O})
		$\pm$ $(0.3 \times \frac{12.5}{\chi})$ %	($\chi < 12.5$kPa {1250mmH$_2$O})
	Square-root output:	When output is 50 to 100%: same as the linear output When output is 7.1 to 50%: linear output $\times \frac{50}{\text{square-root output \%}}$ When output is less than 7.1%: dropout	
Temperature characteristics (Shift from the set range)	Zero shift:	$\pm$0.36%	($\chi \geqq 25$kPa {2500mmH$_2$O})
		$\pm 0.36 \times \frac{25}{\chi}$%	($\chi < 25$kPa {2500mmH$_2$O})
Change of 10°C	Combined shift: (including zero and span shifts)	$\pm$2.18%	($\chi \geqq 25$kPa {2500mmH$_2$O})
		$\pm 2.18 \times \frac{25}{\chi}$ %	($\chi < 25$kPa {2500mmH$_2$O})
Static pressure effect (Shift in respect to setting range)	Zero shift:	$\pm$2.7%	($\chi \geqq 25$kPa {2500mmH$_2$O})
		$\pm (2.7 \times \frac{25}{\chi})$%	($\chi < 25$kPa {2500mmH$_2$O})
Change of 7MPa {70kgf/cm^2}	Combined shift: (including zero and span shifts)	$\pm$3.5%	($\chi \geqq 25$kPa {2500mmH$_2$O})
		$\pm (3.5 \times \frac{25}{\chi})$%	($\chi < 25$kPa {2500mmH$_2$O})

JTE930A (for general purpose and high-temperature models)
Material for Wetted Parts: SUS316
Flange Diameter: Flush diaphragm 2in. (50mm)/1.5in. (40mm) Extended diaphragm 3in. (80mm)/2in. (50mm)

Accuracy (*3)	Linear output:	$\pm 0.2\%$ ($\chi \geqq 210$kPa {2.1kgf/cm^2})
		$\pm(0.05+0.15\times\frac{210}{\chi})\%$ ($\chi < 210$kPa {2.1kgf/cm^2})
	Square-root output:	When output is 50 to 100%: same as the linear output When output is 7.1 to 50%: linear output $\times \frac{50}{\text{square-root output \%}}$ When output is less than 7.1%: dropout
Temperature characteristics (Shift from the set range) (*3) **Change of 55°C**	Zero shift:	$\pm(0.25+0.5\times\frac{210}{\chi})\%$
	Combined shift: (including zero and span shifts)	$\pm 2.8\%$ ($\chi \geqq 210$kPa {2.1kgf/cm^2})
		$\pm(2.2+0.6\times\frac{210}{\chi})\%$ ($\chi < 210$kPa {2.1kgf/cm^2})
Static pressure effect (Shift in respect to setting range) (*3) **Change of 7MPa {70kgf/cm^2}**	Zero shift:	$\pm(0.03+0.47\times\frac{700}{\chi})\%$
	Combined shift:	$\pm(0.03+0.72\times\frac{1400}{\chi})\%$

JTE929A (for general purpose and high-temperature models)
Material for Wetted Parts: Hastelloy C, Tantalum, SUS316L
Flange Diameter: Flush diaphragm 2in. (50mm)/1.5in. (40mm)

Accuracy	Linear output:	$\pm 0.4\%$ ($\chi \geqq 12.5$kPa {1250mmH$_2$O})
		$\pm(0.4\times\frac{12.5}{\chi})\%$ ($\chi < 12.5$kPa {1250mmH$_2$O})
	Square-root output:	When output is 50 to 100%: same as the linear output When output is 7.1 to 50%: linear output $\times \frac{50}{\text{square-root output \%}}$ When output is less than 7.1%: dropout
Temperature characteristics (Shift from the set range) **Change of 30°C** **(Range from -5 to 55°C)**	Zero shift:	$\pm 2.15\%$ ($\chi \geqq 25$kPa {2500mmH$_2$O})
		$\pm 2.15\times\frac{25}{\chi}\%$ ($\chi < 25$kPa {2500mmH$_2$O})
	Combined shift: (including zero and span shifts)	$\pm 6.55\%$ ($\chi \geqq 25$kPa {2500mmH$_2$O})
		$\pm 6.55\times\frac{25}{\chi}\%$ ($\chi < 25$kPa {2500mmH$_2$O})
Static pressure effect (Shift in respect to setting range) **Change of 7MPa {70kgf/cm^2}**	Zero shift:	$\pm 6.00\%$ ($\chi \geqq 25$kPa {2500mmH$_2$O})
		$\pm(6.00\times\frac{25}{\chi})\%$ ($\chi < 25$kPa {2500mmH$_2$O})
	Combined shift: (including zero and span shifts)	$\pm 7.00\%$ ($\chi \geqq 25$kPa {2500mmH$_2$O})
		$\pm(7.00\times\frac{25}{\chi})\%$ ($\chi < 25$kPa {2500mmH$_2$O})

JTE930A (for general purpose and high-temperature models)
Material for Wetted Parts: Hastelloy C, Tantalum, SUS316L
Flange Diameter: Flush diaphragm 2in. (50mm)/1.5in. (40mm)

Accuracy (*3)	Linear output:	$\pm 0.2\%$ ($\chi \geqq 210$kPa {2.1kgf/cm^2})
		$\pm(0.05+0.15\times\frac{210}{\chi})\%$ ($\chi < 210$kPa {2.1kgf/cm^2})
	Square-root output:	When output is 50 to 100%: same as the linear output When output is 7.1 to 50%: linear output $\times \frac{50}{\text{square-root output \%}}$ When output is less than 7.1%: dropout
Temperature characteristics (Shift from the set range) **Change of 30°C** (*3) **(Range from -5 to 55°C)**	Zero shift:	$\pm(0.15+0.7\times\frac{210}{\chi})\%$
	Combined shift: (including zero and span shifts)	$\pm 3.0\%$ ($\chi \geqq 210$kPa {2.1kgf/cm^2}) $\pm(2.2+0.8\times\frac{210}{\chi})\%$ ($\chi \geqq 210$kPa {2.1kgf/cm^2})
Static pressure effect (Shift in respect to setting range) (*3) **Change of 7MPa {70kgf/cm^2}**	Zero shift:	$\pm(0.03+0.47\times\frac{700}{\chi})\%$
	Combined shift: (including zero and span shifts)	$\pm(0.03+0.72\times\frac{1400}{\chi})\%$

Notes) (*1): URV denotes the value for 100% (20 mA DC) output.
(*2): LRV denotes value for 0% (4 mA DC) output.
(*3): Within a range of URV ≧ 0 and LRV ≧ 0

Dual diaphragm JTE930A/JTE930A (for general, oxygen and chlorine service)
Material for Wetted Parts: SUS316, SUS316L, Hastelloy C, Tantalum
Flange Size: Flush diaphragm 3in. (80mm)/2in. (50mm)

Accuracy	(Original accuracy ± 0.1) %	
Temperature characteristics	(Original temperature characteristics $\times$ 2) %	
Static pressure effect	(Original Static pressure characteristics $\times$ 2) %	* For original accuracy, temperature characteristics and static pressure characteristic, refer to pages 9 to 12.

JTE929A (for high temperature vacuum model and high temperature high vacuum model)
Material for Wetted Parts: SUS316/SUS316L
Flange Size: Flush diaphragm 3in. (80mm) Extended diaphragm 4in. (100mm)

Accuracy	Linear output:	$\pm 0.3\%$ ($\chi \geqq 12.5$kPa) $\pm(0.3\times\frac{12.5}{\chi})\%$ ($\chi < 12.5$kPa)
	Square-root output:	When output is 50 to 100%: same as the linear output When output is 7.1 to 50%: linear output $\times \frac{50}{\text{square-root output \%}}$ When output is less than 7.1%: dropout
Temperature characteristics (Shift from the set range) **Change of 55°C**	Zero shift:	$\pm 1.5\%$ ($\chi \geqq 25$kPa) $\pm(1.5\times\frac{25}{\chi})\%$ ($\chi < 25$kPa)
	Combined shift: (including zero and span shifts)	$\pm 2.5\%$ ($\chi \geqq 25$kPa) $\pm(2.5\times\frac{25}{\chi})\%$ ($\chi < 25$kPa)
Static pressure effect (Shift in respect to setting range) **Change of 7MPa {70kgf/cm^2}**	Zero shift:	$\pm 6.0\%$ ($\chi \geqq 25$kPa) $\pm(6.0\times\frac{25}{\chi})\%$ ($\chi < 25$kPa)
	Combined shift: (including zero and span shifts)	$\pm 7.0\%$ ($\chi \geqq 25$kPa) $\pm(7.0\times\frac{25}{\chi})\%$ ($\chi < 25$kPa)

JTE930A (for high temperature vacuum model and high temperature high vacuum model)
Material for Wetted Parts: SUS316/SUS316L
Flange Size: Flush diaphragm 3in. (80mm) Extended diaphragm 4in. (100mm)

Accuracy (*3)	Linear output:	$\pm 0.2\%$ $\pm(0.05+0.15\times\frac{210}{\chi})\%$	$(\chi \geqq 210\text{kPa})$ $(\chi < 210\text{kPa})$
	Square-root output:	When output is 50 to 100%: same as the linear output When output is 7.1 to 50%: linear output $\times \frac{50}{\text{square-root output \%}}$ When output is less than 7.1%: dropout	
Temperature characteristics (Shift from the set range) (*3) **Change of 30°C (Range from -5 to 55°C)**	Zero shift:	$\pm(0.15+0.7\times\frac{210}{\chi}\%)$	
	Combined shift: (including zero and span shifts)	$\pm 1.75\%$ $\pm(1.00+0.75\times\frac{210}{\chi}\%)$	$(\chi \geqq 210\text{kPa})$ $(\chi < 210\text{kPa})$
Static pressure effect (Shift in respect to setting range) (*3) **Change of 7MPa {70kgf/cm²}**	Zero shift:	$\pm(0.75\times\frac{700}{\chi})\%$	
	Combined shift:	$\pm(1.0\times\frac{700}{\chi})\%$	

JTE929A (for high temperature vacuum model and high temperature high vacuum model)
Material for Wetted Parts: Hastelloy C, Tantalum
Flange Size: Flush diaphragm 3in. (80mm)

Accuracy	Linear output:	$\pm 0.4\%$ $\pm(0.4\times\frac{12.5}{\chi})\%$	$(\chi \geqq 12.5\text{kPa})$ $(\chi < 12.5\text{kPa})$
	Square-root output:	When output is 50 to 100%: same as the linear output When output is 7.1 to 50%: linear output $\times \frac{50}{\text{square-root output \%}}$ When output is less than 7.1%: dropout	
Temperature characteristics (Shift from the set range)	Zero shift:	$\pm 2.15\%$ $\pm(2.15\times\frac{25}{\chi})\%$	$(\chi \geqq 25\text{kPa})$ $(\chi < 25\text{kPa})$
Change of 30°C (Range from -5 to 55°C)	Combined shift: (including zero and span shifts)	$\pm 3.0\%$ $\pm 3.0\times\frac{25}{\chi}\%)$	$(\chi \geqq 25\text{kPa})$ $(\chi < 25\text{kPa})$
Static pressure effect (Shift in respect to setting range)	Zero shift:	$\pm 6.00\%$ $\pm(6.00\times\frac{25}{\chi})\%$	$(\chi \geqq 25\text{kPa})$ $(\chi < 25\text{kPa})$
Change of 7MPa {70kgf/cm²}	Combined shift: (including zero and span shifts)	$\pm 7.00\%$ $\pm(7.00\times\frac{25}{\chi})\%$	$(\chi \geqq 25\text{kPa})$ $(\chi < 25\text{kPa})$

JTE930A (for high temperature vacuum model and high temperature high vacuum model)
Material for Wetted Parts: Hastelloy C, Tantalum
Flange Size: Flush diaphragm 3in. (80mm)

Accuracy (*3)	Linear output:	$\pm 0.2\%$	$(\chi \geqq 210\text{kPa})$
		$\pm(0.05+0.15\times \frac{2.1}{\chi})\%$	$(\chi < 210\text{kPa})$
	Square-root output:	When output is 50 to 100%: same as the linear output When output is 7.1 to 50%: linear output $\times \frac{50}{\text{square-root output \%}}$ When output is less than 7.1%: dropout	
Temperature characteristics (Shift from the set range) Change of 30°C (*3) **(Range from -5 to 55°C)**	Zero shift:	$\pm(0.15+0.7\times \frac{210}{\chi})\%$	
	Combined shift: (including zero and span shifts)	$\pm 1.75\%$	$(\chi \geqq 210\text{kPa})$
		$\pm(1.00+0.75\times \frac{210}{\chi}\ \%)$	$(\chi < 210\text{kPa})$
Static pressure effect (Shift in respect to setting range) (*3) **Change of 7MPa**	Zero shift:	$\pm(0.75\times \frac{700}{\chi})\%$	
	Combined shift: (including zero and span shifts)	$\pm(1.0\times \frac{700}{\chi})\%$	

Notes) (*1): URV denotes the value for 100% (20 mA DC) output.
(*2): LRV denotes value for 0% (4 mA DC) output.
(*3): Within a range of URV ≧ 0 and LRV ≧ 0

JTE929A (for high temperature vacuum model and high temperature high vacuum model)
Material for Wetted Parts: SUS316L
Flange Size: Flush diaphragm 2in. (50mm)/1.5in. (40mm)

Accuracy	Linear output:	$\pm 0.3\%$	$(\chi \geqq 12.5\text{kPa})$
		$\pm(0.3\times \frac{12.5}{\chi})\%$	$(\chi < 12.5\text{kPa})$
	Square-root output:	When output is 50 to 100%: same as the linear output When output is 7.1 to 50%: linear output $\times \frac{50}{\text{square-root output \%}}$ When output is less than 7.1%: dropout	
Temperature characteristics (Shift from the set range) Change of 30°C (Range from -5 to 55°C)	Zero shift:	$\pm 1.8\%$	$(\chi \geqq 25\text{kPa})$
		$\pm(1.8\times \frac{25}{\chi})\%$	$(\chi < 25\text{kPa})$
	Combined shift: (including zero and span shifts)	$\pm 6.5\%$	$(\chi \geqq 25\text{kPa})$
		$\pm(6.5\times \frac{25}{\chi})\%$	$(\chi < 25\text{kPa})$
Static pressure effect (Shift in respect to setting range) Change of 7MPa	Zero shift:	$\pm 6.0\%$	$(\chi \geqq 25\text{kPa})$
		$\pm(6.0\times \frac{25}{\chi})\%$	$(\chi < 25\text{kPa})$
	Combined shift: (including zero and span shifts)	$\pm 7.0\%$	$(\chi \geqq 25\text{kPa})$
		$\pm(7.0\times \frac{25}{\chi})\%$	$(\chi < 25\text{kPa})$

JTE929A (for high temperature vacuum model and high temperature high vacuum model)
Material for Wetted Parts: SUS316/SUS316L
Flange Size: Flush diaphragm 3in. (80mm)/2in. (50mm)

Accuracy	Linear output:	$\pm 0.3\%$ ($\chi \geqq 12.5$kPa) $\pm(0.3\times\frac{12.5}{\chi})\%$ ($\chi < 12.5$kPa)
	Square-root output:	When output is 50 to 100%: same as the linear output When output is 7.1 to 50%: linear output $\times \frac{50}{\text{square-root output \%}}$ When output is less than 7.1%: dropout
Temperature characteristics (Shift from the set range) Change of 55°C	Zero shift:	$\pm 1.8\%$ ($\chi \geqq 25$kPa) $\pm(1.8\times\frac{25}{\chi})\%$ ($\chi < 25$kPa)
	Combined shift: (including zero and span shifts)	$\pm 4.0\%$ ($\chi \geqq 25$kPa) $\pm(4.0\times\frac{25}{\chi})\%$ ($\chi < 210$kPa)
Static pressure effect (Shift in respect to setting range) Change of 7MPa	Zero shift:	$\pm 6.0\%$ ($\chi \geqq 25$kPa) $\pm(6.0\times\frac{25}{\chi})\%$ ($\chi < 25$kPa)
	Combined shift: (including zero and span shifts)	$\pm 7.0\%$ ($\chi \geqq 25$kPa) $\pm(7.0\times\frac{25}{\chi})\%$ ($\chi < 25$kPa)

JTE930A (for high temperature vacuum model and high temperature high vacuum model)
Material for Wetted Parts: SUS316/SUS316L
Flange Size: Flush diaphragm 2in. (50mm)/1.5in. (40mm) Extended diaphragm 3in. (80mm)/2in. (50mm)

Accuracy (*3)	Linear output:	$\pm 0.2\%$ ($\chi \geqq 210$kPa) $\pm(0.2\times\frac{210}{\chi})\%$ ($\chi < 210$kPa)
	Square-root output:	When output is 50 to 100%: same as the linear output When output is 7.1 to 50%: linear output $\times \frac{50}{\text{square-root output \%}}$ When output is less than 7.1%: dropout
Temperature characteristics (Shift from the set range) Change of 30°C (*3) (Range from -5 to 55°C)	Zero shift:	$\pm(0.15+0.7\times\frac{210}{\chi})\%$
	Combined shift: (including zero and span shifts)	$\pm 1.87\%$ ($\chi \geqq 210$kPa) $\pm(1.2+0.67\times\frac{210}{\chi})\%$ ($\chi < 210$kPa)
Static pressure effect (Shift in respect to setting range) (*3) Change of 7MPa	Zero shift:	$\pm(0.75\times\frac{700}{\chi})\%$
	Combined shift: (including zero and span shifts)	$\pm(1.0\times\frac{700}{\chi})\%$

Notes) (*1): URV denotes the value for 100% (20 mA DC) output.
(*2): LRV denotes value for 0% (4 mA DC) output.
(*3): Within a range of URV ≧ 0 and LRV ≧ 0

JTE929A (for high temperature vacuum model and high temperature high vacuum model)
Material for Wetted Parts: Hastelloy C, Tantalum
Flange Size: Flush diaphragm 2in. (50mm)/1.5in. (40mm)

Accuracy	Linear output:	$\pm 0.4\%$ $\pm(0.4\times\frac{12.5}{\chi})\%$	$(\chi \geqq 12.5\text{kPa})$ $(\chi < 12.5\text{kPa})$
	Square-root output:	When output is 50 to 100%: same as the linear output When output is 7.1 to 50%: linear output $\times \frac{50}{\text{square-root output \%}}$ When output is less than 7.1%: dropout	
Temperature characteristics (Shift from the set range) **Change of 30°C (Range from -5 to 55°C)**	Zero shift:	$\pm 2.15\%$ $\pm(2.15\times\frac{25}{\chi})\%$	$(\chi \geqq 25\text{kPa})$ $(\chi < 25\text{kPa})$
	Combined shift: (including zero and span shifts)	$\pm 6.55\%$ $\pm(6.55\times\frac{25}{\chi})\%$	$(\chi \geqq 25\text{kPa})$ $(\chi < 25\text{kPa})$
Static pressure effect (Shift in respect to setting range) **Change of 7MPa**	Zero shift:	$\pm 6.00\%$ $\pm(6.00\times\frac{25}{\chi})\%$	$(\chi \geqq 25\text{kPa})$ $(\chi < 25\text{kPa})$
	Combined shift: (including zero and span shifts)	$\pm 7.00\%$ $\pm(7.00\times\frac{25}{\chi})\%$	$(\chi \geqq 25\text{kPa})$ $(\chi < 25\text{kPa})$

JTE930A (for high temperature vacuum model and high temperature high vacuum model)
Material for Wetted Parts: Hastelloy C, Tantlum
Flange Size: Flush diaphragm 2in. (50mm)/1.5in. (40mm)

Accuracy (*3)	Linear output:	$\pm 0.2\%$ $\pm(0.05+0.15\times\frac{210}{\chi})\%$	$(\chi \geqq 210\text{kPa})$ $(\chi < 210\text{kPa})$
	Square-root output:	When output is 50 to 100%: same as the linear output When output is 7.1 to 50%: linear output $\times \frac{50}{\text{square-root output \%}}$ When output is less than 7.1%: dropout	
Temperature characteristics (Shift from the set range) **Change of 30°C (*3) (Range from -5 to 55°C)**	Zero shift:	$\pm(0.15+0.7\times\frac{210}{\chi})\%$	
	Combined shift: (including zero and span shifts)	$\pm 3.0\%$ $\pm(2.2+0.8\times\frac{210}{\chi})\%$	$(\chi \geqq 210\text{kPa})$ $(\chi < 210\text{kPa})$
Static pressure effect (Shift in respect to setting range) (*3) **Change of 7MPa**	Zero shift:	$\pm(0.75\times\frac{700}{\chi})\%$	
	Combined shift: (including zero and span shifts)	$\pm(1.0\times\frac{700}{\chi})\%$	

Notes) (*1): URV denotes the value for 100% (20 mA DC) output.
(*2): LRV denotes value for 0% (4 mA DC) output.
(*3): Within a range of URV ≧ 0 and LRV ≧ 0

Model Number Configuration Table

DSTJ3000 Ace Electric Differential Pressure Transmitter Remote-sealed diaphragm style

Model	Pressure range/style		Service (Fill fluid)	Process connection
JTE929A	2.5 to 100kPa (250 to 10,160mmH2O)	Medium differential pressure	Regular service(Silicon oil), High temperature (Silicon oil), Oxygen service(Fluorine oil)	Flush diaphragm 3 in. (80mm)
JTE930A	35 to 700kPa (0.35 to 7kgf/cm2)	High differential pressure	Regular service(Silicon oil), High temperature (Silicon oil), Oxygen service(Fluorine oil)	Flush diaphragm 3 in. (80mm)

Selections Options 1

Basic model No. - I II III IV V VI VII VIII - IX X XI XII XIII XIV -Options 2 Options 1, 2: Refer to page 31

Basic Model No.

	Measuring span	2.5 to 100kPa(250 to 10,160mmH2O)	JTE929A
		35 to 3500kPa(0.35 to 35kgf/cm2)	JTE930A

Selections

I	Output	4 to 20mA	1	
		4 to 20mA(Analog FSK Communication)	2	*3
		Digital output (DE protocol)	3	*1, *2
II	Material of wetted part	SUS316 (Diaphragm : SUS316L)	2	
		Tantalum *15	4	
		Hastelloy C	H	
		SUS316L	8	
III	Fill Fluid	Regular type (Silicone oil)	1	
		For oxygen service (Fluorine oil)	2	
	*11, *15	For High temperature service (Silicon oil)	3	
IV	Flange rating	JIS 10K	A	
		JIS 20K	C	
		JIS 30K	D	
	*11	JIS 63K	F	
		ANSI 150	G	
		ANSI 300	H	
	*11	ANSI 600	J	
		JPI 150	N	
		JPI 300	P	
	*11	JPI 600	Q	
V	Flange size	3 in. /80 mm	2	
VI	Flange type	Standard	1	
VII	Flange material/bolt and nut	Carbon steel	A	
		Cargon steel/SUS304	B	
		Carbon steel/SUS630	C	
		SUS304/Carbon steel	D	
		SUS304/SUS304	E	
		SUS304/SUS630	F	
		SUS316/Carbon steel	G	
		SUS316/SUS304	H	
		SUS316/SUS630	J	
		SUS316L/Carbon steel	K	
		SUS316L/SUS304	L	
		SUS316L/SUS630	M	
VIII	Length of Capillary tube	2m	2	
		3m	3	
		4m	4	
		5m	5	
		6m	6	
		7m	7	
		8m	8	
		9m	Q	
		10m	A	
	Length of capillary tube with Olefin coating	2m	B	
		3m	C	
		4m	H	
		5m	D	
		6m	J	
		7m	E	
		8m	F	
		9m	K	
		10m	G	

Notes

1 Digital output (DE protocol) should be selected with upper/lower direction of burn out feature.

2 Digital output (DE protocol) can not be combined with an external zero adjustment function.

3 Analog FSK Communication can not be combined with Intrinsically safe.

11 Dual diaphragm is not available for JIS63K, ANSI600 and JPI600 for a flange rating.

15 If the fill fluid is for high temperature service and wetted part material is Tantalum, the applicable temperature range of wetted part is from -10 to 180 deg.C

DSTJ3000 Ace Electric Differential Pressure Transmitter Remote-sealed diaphragm style

Model	Pressure range/style		Service (Fill fluid)	Process connection
JTE929A	2.5 to 100 kPa (250 to 10,160mmH2O)	Medium differential pressure	Chlorine service (Fluorine oil)	Flush diaphragm 3 in. (80 mm)
JTE930A	35 to 700 kPa (0.35 to 7 kgf/cm2)	High differential pressure	Chlorine service (Fluorine oil)	Flush diaphragm 3 in. (80 mm)

	Selections	Options 1		
Basic model No.	- I II III IV V VI VII VIII	- IX X XI XII XIII XIV	-Options 2	Options 1, 2: Refer to page 31

Basic moden No.

	Measuring span	2.5 to 100kPa(250 to 10,160mmH2O)	JTE929A
		35 to 3500kPa(0.35 to 35kgf/cm2)	JTE930A

Selections

I	Output	4 to 20mA	1	
		4 to 20mA(Analog FSK Communication)	2	*3
		Digital output (DE protocol)	3	*1, *2
II	Material of wetted part	Tantalum	4	
III	Fill Fluid	For chlorine service (Fluorine oil)	5	
IV	Flange rating	JIS 10K	A	
		JIS 20K	C	
		JIS 30K	D	
	*11	JIS 63K	F	
		ANSI 150	G	
		ANSI 300	H	
	*11	ANSI 600	J	
		JPI 150	N	
		JPI 300	P	
	*11	JPI 600	Q	
V	Flange size	3 in. /80 mm	2	
VI	Flange type	Standard	1	
VII	Flange material/bolt and nut	Carbon steel	A	
		Cargon steel/SUS304	B	
		Carbon steel/SUS630	C	
		SUS304/Carbon steel	D	
		SUS304/SUS304	E	
		SUS304/SUS630	F	
		SUS316/Carbon steel	G	
		SUS316/SUS304	H	
		SUS316/SUS630	J	
		SUS316L/Carbon steel	K	
		SUS316L/SUS304	L	
		SUS316L/SUS630	M	
VIII	Length of Capillary tube	2m	2	
		3m	3	
		4m	4	
		5m	5	
		6m	6	
		7m	7	
		8m	8	
		9m	Q	
		10m	A	
	Length of capillary tube with Olefin coating	2m	B	
		3m	C	
		4m	H	
		5m	D	
		6m	J	
		7m	E	
		8m	F	
		9m	K	
		10m	G	

Note

1 Digital output (DE protocol) should be selected with upper/lower direction of burn out feature.
2 Digital output (DE protocol) can not be combined with an external zero adjustment function.
3 Analog FSK Communication can not be combined with Intrinsically safe.
11 Dual diaphragm is not available for JIS63K, ANSI600 and JPI600 for a flange rating.

DSTJ3000 Ace Electric Differential Pressure Transmitter Remote-sealed diaphragm style

Model	Pressure range/style		Service (Fill fluid)	Process connection
JTE929A	2.5 to 100kPa (250 to 10,160mmH2O)	Medium differential pressure	High temperature and vacuum(Silicon oil), High temperature and high vacuum(Silicon oil)	Flush diaphragm 3 in. (80mm)
JTE930A	35 to 700kPa (0.35 to 7kgf/cm2)	High differential pressure	High temperature and vacuum(Silicon oil), High temperature and high vacuum(Silicon oil)	Flush diaphragm 3 in. (80mm)

Selections Options 1

Basic model No. - I II III IV V VI VII VIII - IX X XI XII XIII XIV -Options 2 Options 1, 2: Refer to page 31

Basic Model No.

	Measuring span	2.5 to 100kPa(250 to 10,160mmH2O)	JTE929A
		35 to 3500kPa(0.35 to 35kgf/cm2)	JTE930A

Selections

I	Output	4 to 20mA	1	
		4 to 20mA(Analog FSK Communication)	2	*3
		Digital output (DE protocol)	3	*1, *2
II	Material of wetted part	SUS316L	8	
		Tantalum *15	4	
		Hastelloy C	H	
III	Fill Fluid	For high temperature vacuum (Silicon oil)	4	
		For high temperature high vacuum (Silicon oil)	7	
IV	Flange rating	JIS 10K	A	
		JIS 20K	C	
		JIS 30K	D	
	*11	JIS 63K	F	
		ANSI 150	G	
		ANSI 300	H	
	*11	ANSI 600	J	
		JPI 150	N	
		JPI 300	P	
	*11	JPI 600	Q	
V	Flange size	3 in. /80 mm	2	
VI	Flange type	Standard	1	
VII	Flange material/bolt and nut	Carbon steel	A	
		Cargon steel/SUS304	B	
		Carbon steel/SUS630	C	
		SUS304/Carbon steel	D	
		SUS304/SUS304	E	
		SUS304/SUS630	F	
		SUS316/Carbon steel	G	
		SUS316/SUS304	H	
		SUS316/SUS630	J	
		SUS316L/Carbon steel	K	
		SUS316L/SUS304	L	
		SUS316L/SUS630	M	
VIII	Length of Capillary tube	2m	2	
		3m	3	
		4m	4	
		5m	5	
		6m	6	
		7m	7	
		8m	8	
		9m	Q	
		10m	A	

Notes

1 Digital output (DE protocol) should be selected with upper/lower direction of burn out feature.
2 Digital output (DE protocol) can not be combined with an external zero adjustment function.
3 Analog FSK Communication can not be combined with Intrinsically safe.
11 Dual diaphragm is not available for JIS63K, ANSI600 and JPI600 for a flange rating.
15 If the fill fluid is for high temperature service and wetted part material is Tantalum, the applicable temperature range of wetted part is from -10 to 180 deg.C

DSTJ3000 Ace Electric Differential Pressure Transmitter Remote-sealed diaphragm style

Model	Pressure range/style		Service (Fill fluid)	Process connection
JTE929A	2.5 to 100kPa (250 to 10,160mmH2O)	Medium differential pressure	Regular service(Silicon oil), High temperature (Silicon oil), Oxygen service(Fluorine oil)	Flush diaphragm 2 in. (50mm)/1.5 in.(40mm)
JTE930A	35 to 700kPa (0.35 to 7kgf/cm2)	High differential pressure	Regular service(Silicon oil), High temperature (Silicon oil), Oxygen service(Fluorine oil)	Flush diaphragm 2 in. (50mm)/1.5 in.(40mm)

Selections Options 1

Basic model No. - I II III IV V VI VII VIII - IX X XI XII XIII XIV -Options 2 Options 1, 2: Refer to page 31

Basic model No.

	Measuring span	2.5 to 100kPa(250 to 10,160mmH2O)	JTE929A
		35 to 3500kPa(0.35 to 35kgf/cm2)	JTE930A

Selections

I	Output	4 to 20mA	1	
		4 to 20mA(Analog FSK Communication)	2	*3
		Digital output (DE protocol)	3	*1, *2
II	Material of wetted part	SUS316 (Diaphragm : SUS316L)	2	
		Tantalum *15	4	
		SUS316L	8	
	*11	Hastelloy C	H	
III	Fill Fluid	Regular type (Silicone oil)	1	
		For oxygen service (Fluorine oil)	2	
	*11, *15	For High temperature service (Silicon oil)	3	
IV	Flange rating	JIS 10K	A	
		JIS 20K	C	
		JIS 30K	D	
	*11	JIS 63K	F	
		ANSI 150	G	
		ANSI 300	H	
	*11	ANSI 600	J	
		JPI 150	N	
		JPI 300	P	
	*11	JPI 600	Q	
V	Flange size	2 in. /50mm	3	
		1.5 in. /40mm *11	4	
VI	Flange type	Standard	1	
VII	Flange material/bolt and nut	Carbon steel	A	
		Cargon steel/SUS304	B	
		Carbon steel/SUS630	C	
		SUS304/Carbon steel	D	
		SUS304/SUS304	E	
		SUS304/SUS630	F	
		SUS316/Carbon steel	G	
		SUS316/SUS304	H	
		SUS316/SUS630	J	
		SUS316L/Carbon steel	K	
		SUS316L/SUS304	L	
		SUS316L/SUS630	M	
VIII	Length of Capillary tube	2m	2	
		3m	3	
		4m *25	4	
		5m *25	5	
	Length of capillary tube with Olefin coating	2m	B	
		3m	C	
		4m *25	H	
		5m *25	D	

Notes

1 Digital output (DE protocol) should be selected with upper/lower direction of burn out feature.

2 Digital output (DE protocol) can not be combined with an external zero adjustment function.

3 Analog FSK Communication can not be combined with Intrinsically safe.

11 Dual diaphragm is not available for JIS63K, ANSI600 and JPI600 for a flange rating.

15 If the fill fluid is for high temperature service and wetted part material is Tantalum, the applicable temperature range of wetted part is from -10 to 180 deg.C

25 The performance is as follows. Temperature characteristics and static pressure effect becomes 1.5 x high temperature model. For details, refer to specification sheets.

DSTJ3000 Ace Electric Differential Pressure Transmitter Remote-sealed diaphragm style

Model	Pressure range/style		Service (Fill fluid)	Process connection
JTE929A	2.5 to 100kPa (250 to 10,160mmH2O)	Medium differential pressure	Chlorine service(Fluorine oil)	Flush diaphragm 2 in. (50mm)/1.5 in.(40mm)
JTE930A	35 to 700kPa (0.35 to 7kgf/cm2)	High differential pressure	Chlorine service(Fluorine oil)	Flush diaphragm 2 in. (50mm)/1.5 in.(40mm)

Selections Options 1

Basic model No. - I II III IV V VI VII VIII - IX X XI XII XIII XIV -Options 2

Options 1, 2: Refer to page 31

Basic model No.

	Measuring span	2.5 to 100kPa(250 to 10,160mmH2O)	JTE929A
		35 to 3500kPa(0.35 to 35kgf/cm2)	JTE930A

Selections

I	Output	4 to 20mA	1	
		4 to 20mA(Analog FSK Communication)	2	*3
		Digital output (DE protocol)	3	*1, *2
II	Material of wetted part	Tantalum	4	
III	Fill Fluid	For chlorine service (Fluorine oil)	5	
IV	Flange rating	JIS 10K	A	
		JIS 20K	C	
		JIS 30K	D	
	*11	JIS 63K	F	
		ANSI 150	G	
		ANSI 300	H	
	*11	ANSI 600	J	
		JPI 150	N	
		JPI 300	P	
	*11	JPI 600	Q	
V	Flange size	2 in./50mm	3	
		1.5 in./40mm	4	
VI	Flange type	Standard	1	
VII	Flange material/bolt and nut	Carbon steel	A	
		Cargon steel/SUS304	B	
		Carbon steel/SUS630	C	
		SUS304/Carbon steel	D	
		SUS304/SUS304	E	
		SUS304/SUS630	F	
		SUS316/Carbon steel	G	
		SUS316/SUS304	H	
		SUS316/SUS630	J	
		SUS316L/Carbon steel	K	
		SUS316L/SUS304	L	
		SUS316L/SUS630	M	
VIII	Length of Capillary tube	2m		2
		3m		3
		4m *25		4
		5m *25		5
	Length of capillary tube with Olefin coating	2m		B
		3m		C
		4m *25		H
		5m *25		D

Notes

1 Digital output (DE protocol) should be selected with upper/lower direction of burn out feature.

2 Digital output (DE protocol) can not be combined with an external zero adjustment function.

3 Analog FSK Communication can not be combined with Intrinsically safe.

11 Dual diaphragm is not available for JIS63K, ANSI600 and JPI600 for a flange rating.

25 The performance is as follows. Temperature characteristics and static pressure effect becomes 1.5 x high temperature model. For details, refer to specification sheets.

DSTJ3000 Ace Electric Differential Pressure Transmitter Remote-sealed diaphragm style

Model	Pressure range/style		Service (Fill fluid)	Process connection
JTE929A	2.5 to 100kPa (250 to 10,160mmH2O)	Medium differential pressure	High temperature and vacuum(Silicon oil), High temperature and high vacuum(Silicon oil)	Flush diaphragm 2 in. (50mm)/1.5 in.(40mm)
JTE930A	35 to 700kPa (0.35 to 7kgf/cm2)	High differential pressure	High temperature and vacuum(Silicon oil), High temperature and high vacuum(Silicon oil)	Flush diaphragm 2 in. (50mm)/1.5 in.(40mm)

	Selections	Options 1		
Basic model No.	- I II III IV V VI VII VIII	- IX X XI XII XIII XIV	-Options 2	Options 1, 2: Refer to page 31

Basic model No.

	Measuring span	2.5 to 100kPa(250 to 10,160mmH2O)	JTE929A
		35 to 3500kPa(0.35 to 35kgf/cm2)	JTE930A

Selections

I	Output	4 to 20mA	1	
		4 to 20mA(Analog FSK Communication)	2	*3
		Digital output (DE protocol)	3	*1, *2
II	Material of wetted part	SUS316L	8	
		Tantalum *15	4	
		Hastelloy C	H	
III	Fill Fluid	For high temperature vacuum (Silicon oil)	4	
		For high temperature high vacuum (Silicon oil)	7	
IV	Flange rating	JIS 10K	A	
		JIS 20K	C	
		JIS 30K	D	
	*11	JIS 63K	F	
		ANSI 150	G	
		ANSI 300	H	
	*11	ANSI 600	J	
		JPI 150	N	
		JPI 300	P	
	*11	JPI 600	Q	
V	Flange size	2 in. /50mm	3	
		1.5 in. /40mm *11	4	
VI	Flange type	Standard	1	
VII	Flange material/bolt and nut	Carbon steel	A	
		Cargon steel/SUS304	B	
		Carbon steel/SUS630	C	
		SUS304/Carbon steel	D	
		SUS304/SUS304	E	
		SUS304/SUS630	F	
		SUS316/Carbon steel	G	
		SUS316/SUS304	H	
		SUS316/SUS630	J	
		SUS316L/Carbon steel	K	
		SUS316L/SUS304	L	
		SUS316L/SUS630	M	
VIII	Length of Capillary tube	2m	2	
		3m	3	
		4m	4	
		5m	5	

Notes

1 Digital output (DE protocol) should be selected with upper/lower direction of burn out feature.

2 Digital output (DE protocol) can not be combined with an external zero adjustment function.

3 Analog FSK Communication can not be combined with Intrinsically safe.

11 Dual diaphragm is not available for JIS63K, ANSI600 and JPI600 for a flange rating.

15 If the fill fluid is for high temperature service and wetted part material is Tantalum, the applicable temperature range of wetted part is from -10 to 180 deg.C

DSTJ3000 Ace Electric Differential Pressure Transmitter Remote-sealed diaphragm style

Model	Pressure range/style		Service (Fill fluid)	Process connection
JTE929A	2.5 to 100kPa (250 to 10,160mmH2O)	Medium differential pressure	Regular service(Silicon oil), High temperature (Silicon oil), Oxygen service(Fluorine oil)	Extended flange type 4 in. (100mm)
JTE930A	35 to 700kPa (0.35 to 7kgf/cm2)	High differential pressure	Regular service(Silicon oil), High temperature (Silicon oil), Oxygen service(Fluorine oil)	Extended flange type 4 in. (100mm)

Selections Options 1

Basic model No. - I II III IV V VI VII VIII - IX X XI XII XIII XIV -Options 2

Options 1, 2: Refer to page 31

Basic model No.

	Measuring span	2.5 to 100kPa(250 to 10,160mmH2O)	JTE929A
		35 to 3500kPa(0.35 to 35kgf/cm2)	JTE930A

Selections

I	Output	4 to 20mA	1	
		4 to 20mA(Analog FSK Communication)	2	*3
		Digital output (DE protocol)	3	*1, *2
II	Material of wetted part	SUS316 (Diaphragm : SUS316L)	2	
		SUS316L	8	
III	Fill Fluid	Regular type (Silicone oil)	1	
		For oxygen service (Fluorine oil)	2	
	*11, *15	For High temperature service (Silicon oil)	3	
IV	Flange rating	JIS 10K	A	
		JIS 20K	C	
		JIS 30K	D	
		ANSI 150	G	
		ANSI 300	H	
		JPI 150	N	
		JPI 300	P	
V	Flange size	4 in./100mm	1	
VII	Flange type	Length of extended part 50mm	2	
		Length of extended part 100mm	3	
		Length of extended part 150mm	4	
		Length of extended part 200mm	5	
		Length of extended part 250mm	6	
		Length of extended part 300mm	7	
VIII	Flange material/bolt and nut	Carbon steel	A	
		Cargon steel/SUS304	B	
		Carbon steel/SUS630	C	
		SUS304/Carbon steel	D	
		SUS304/SUS304	E	
		SUS304/SUS630	F	
		SUS316/Carbon steel	G	
		SUS316/SUS304	H	
		SUS316/SUS630	J	
		SUS316L/Carbon steel	K	
		SUS316L/SUS304	L	
		SUS316L/SUS630	M	
VIII	Length of Capillary tube	2m		2
		3m		3
		4m		4
		5m		5
		6m		6
		7m		7
		8m		8
		9m		Q
		10m		A
	Length of capillary tube with Olefin coating	2m		B
		3m		C
		4m		H
		5m		D
		6m		J
		7m		E
		8m		F
		9m		K
		10m		G

Notes

1 Digital output (DE protocol) should be selected with upper/lower direction of burn out feature.

2 Digital output (DE protocol) can not be combined with an external zero adjustment function.

3 Analog FSK Communication can not be combined with Intrinsically safe.

11 Dual diaphragm is not available for JIS63K, ANSI600 and JPI600 for a flange rating.

15 If the fill fluid is for high temperature service and wetted part material is Tantalum, the applicable temperature range of wetted part is from -10 to 180 deg.C

DSTJ3000 Ace Electric Differential Pressure Transmitter Remote-sealed diaphragm style

Model	Pressure range/style		Service (Fill fluid)	Process connection
JTE929A	2.5 to 100kPa (250 to 10,160mmH2O)	Medium differential pressure	High temperature and vacuum(Silicon oil), High temperature and high vacuum(Silicon oil)	Extended flange type 4 in. (100mm)
JTE930A	35 to 700kPa (0.35 to 7kgf/cm2)	High differential pressure	High temperature and vacuum(Silicon oil), High temperature and high vacuum(Silicon oil)	Extended flange type 4 in. (100mm)

Options 1, 2: Refer to page 31

	Selections	Options 1	
Basic model No.	- I II III IV V VI VII VIII	- IX X XI XII XIII XIV	-Options 2

Basic model No.

	Measuring span	2.5 to 100kPa(250 to 10,160mmH2O)	JTE929A
		35 to 3500kPa(0.35 to 35kgf/cm2)	JTE930A

Selections

I	Output	4 to 20mA	1	
		4 to 20mA(Analog FSK Communication)	2	*3
		Digital output (DE protocol)	3	*1, *2
II	Material of wetted part	SUS316 (Diaphragm : SUS316L)	2	
		SUS316L	8	
III	Fill Fluid	For high temperature vacuum (Silicon oil)	4	
		For high temperature high vacuum (Silicon oil)	7	
IV	Flange rating	JIS 10K	A	
		JIS 20K	C	
		JIS 30K	D	
		ANSI 150	G	
		ANSI 300	H	
		JPI 150	N	
		JPI 300	P	
V	Flange size	4 in./100A	1	
VI	Flange type	Length of extended part 50mm	2	
		Length of extended part 100mm	3	
		Length of extended part 150mm	4	
		Length of extended part 200mm	5	
		Length of extended part 250mm	6	
		Length of extended part 300mm	7	
VII	Flange material/bolt and nut	Carbon steel	A	
		Cargon steel/SUS304	B	
		Carbon steel/SUS630	C	
		SUS304/Carbon steel	D	
		SUS304/SUS304	E	
		SUS304/SUS630	F	
		SUS316/Carbon steel	G	
		SUS316/SUS304	H	
		SUS316/SUS630	J	
		SUS316L/Carbon steel	K	
		SUS316L/SUS304	L	
		SUS316L/SUS630	M	
VIII	Length of Capillary tube	2m	2	
		3m	3	
		4m	4	
		5m	5	
		6m	6	
		7m	7	
		8m	8	
		9m	Q	
		10m	A	

Notes

1 Digital output (DE protocol) should be selected with upper/lower direction of burn out feature.

2 Digital output (DE protocol) can not be combined with an external zero adjustment function.

3 Analog FSK Communication can not be combined with Intrinsically safe.

DSTJ3000 Ace Electric Differential Pressure Transmitter Remote-sealed diaphragm style

Model	Pressure range/style		Service (Fill fluid)	Process connection
JTE929A	2.5 to 100kPa (250 to 10,160mmH2O)	Medium differential pressure	Regular service(Silicon oil), High temperature (Silicon oil), Oxygen service(Fluorine oil)	Extended flange type 3 in. (80mm)/2 in. (50mm)
JTE930A	35 to 700kPa (0.35 to 7kgf/cm2)	High differential pressure	Regular service(Silicon oil), High temperature (Silicon oil), Oxygen service(Fluorine oil)	Extended flange type 3 in. (80mm)/2 in. (50mm)

Options 1, 2: Refer to page 31

Selections Options 1

Basic model No. - I II III IV V VI VII VIII - IX X XI XII XIII XIV -Options 2

Basic model No.

	Measuring span	2.5 to 100kPa(250 to 10,160mmH2O)	JTE929A
		35 to 3500kPa(0.35 to 35kgf/cm2)	JTE930A

Selections

I	Output	4 to 20mA	1	
		4 to 20mA(Analog FSK Communication)	2	*3
		Digital output (DE protocol)	3	*1, *2
II	Material of wetted part	SUS316 (Diaphragm : SUS316L)	2	
		SUS316L	8	
III	Fill Fluid	Regular type (Silicone oil)	1	
		For oxygen service (Fluorine oil)	2	
	*11, *15	For High temperature service (Silicon oil)	3	
IV	Flange rating	JIS 10K	A	
		JIS 20K	C	
		JIS 30K	D	
		ANSI 150	G	
		ANSI 300	H	
		JPI 150	N	
		JPI 300	P	
V	Flange size	3 in./80 mm	2	
		2 in./ 50 mm	3	
VI	Flange type	Length of extended part 50mm	2	
		Length of extended part 100mm	3	
		Length of extended part 150mm	4	
		Length of extended part 200mm	5	
		Length of extended part 250mm	6	
		Length of extended part 300mm	7	
VII	Flange material/bolt and nut	Carbon steel	A	
		Cargon steel/SUS304	B	
		Carbon steel/SUS630	C	
		SUS304/Carbon steel	D	
		SUS304/SUS304	E	
		SUS304/SUS630	F	
		SUS316/Carbon steel	G	
		SUS316/SUS304	H	
		SUS316/SUS630	J	
		SUS316L/Carbon steel	K	
		SUS316L/SUS304	L	
		SUS316L/SUS630	M	
VIII	Length of Capillary tube	2m		2
		3m		3
		4m *25		4
		5m *25		5
	Length of capillary tube with Olefin coating	2m		B
		3m		C
		4m *25		H
		5m *25		D

Notes

1 Digital output (DE protocol) should be selected with upper/lower direction of burn out feature.

2 Digital output (DE protocol) can not be combined with an external zero adjustment function.

3 Analog FSK Communication can not be combined with Intrinsically safe.

11 Dual diaphragm is not available for JIS63K, ANSI600 and JPI600 for a flange rating.

15 If the fill fluid is for high temperature service and wetted part material is Tantalum, the applicable temperature range of wetted part is from -10 to 180 deg.C

25 The performance is as follows. Temperature characteristics and static pressure effect becomes 1.5 x high temperature model. For details, refer to specification sheets.

DSTJ3000 Ace Electric Differential Pressure Transmitter Remote-sealed diaphragm style

Model	Pressure range/style		Service (Fill fluid)	Process connection
JTE929A	2.5 to 100kPa (250 to 10,160mmH2O)	Medium differential pressure	High temperature and vacuum(Silicon oil), High temperature and high vacuum(Silicon oil)	Extended flange type 3 in. (80mm)/2 in. (50mm)
JTE930A	35 to 700kPa (0.35 to 7kgf/cm2)	High differential pressure	High temperature and vacuum(Silicon oil), High temperature and high vacuum(Silicon oil)	Extended flange type 3 in. (80mm)/2 in. (50mm)

Options 1, 2: Refer to page 31

	Selections	Options 1	
Basic model No.	- I II III IV V VI VII VIII	- IX X XI XII XIII XIV	-Options 2

Basic Model No.

	Measuring span	2.5 to 100kPa(250 to 10,160mmH2O)	JTE929A
		35 to 3500kPa(0.35 to 35kgf/cm2)	JTE930A

Selections

I	Output	4 to 20mA	1	
		4 to 20mA(Analog FSK Communication)	2	*3
		Digital output (DE protocol)	3	*1, *2
II	Material of wetted part	SUS316 (Diaphragm : SUS316L)	2	
		SUS316L	8	
III	Fill Fluid	For high temperature vacuum (Silicon oil)	4	
		For high temperature high vacuum (Silicon oil)	7	
IV	Flange rating	JIS 10K	A	
		JIS 20K	C	
		JIS 30K	D	
		ANSI 150	G	
		ANSI 300	H	
		JPI 150	N	
		JPI 300	P	
V	Flange size	3 in. /80 mm	2	
		2 in./50 mm	3	
VI	Flange type	Length of extended part 50mm	2	
		Length of extended part 100mm	3	
		Length of extended part 150mm	4	
VII	Flange material/bolt and nut	Carbon steel	A	
		Cargon steel/SUS304	B	
		Carbon steel/SUS630	C	
		SUS304/Carbon steel	D	
		SUS304/SUS304	E	
		SUS304/SUS630	F	
		SUS316/Carbon steel	G	
		SUS316/SUS304	H	
		SUS316/SUS630	J	
		SUS316L/Carbon steel	K	
		SUS316L/SUS304	L	
		SUS316L/SUS630	M	
VIII	Length of Capillary tube	2m	2	
		3m	3	
		4m	4	
		5m	5	

Notes

1 Digital output (DE protocol) should be selected with upper/lower direction of burn out feature.

2 Digital output (DE protocol) can not be combined with an external zero adjustment function.

3 Analog FSK Communication can not be combined with Intrinsically safe.

DSTJ3000 Ace Electric Differential Pressure Transmitter Remote-sealed diaphragm style

Model	Pressure range/style		Service (Fill fluid)	Process connection
JTE929A	2.5 to 100 kPa (250 to 10,160mmH2O)	Medium differential pressure	Regular service (Silicon oil), High temperature (Silicon oil), Oxygen service (Fluorine oil)	Combination flange of flush 3 in. (80 mm) and extended 4 in. (100 mm)
JTE930A	35 to 700 kPa (0.35 to 7 kgf/cm2)	High differential pressure	Regular service (Silicon oil), High temperature (Silicon oil), Oxygen service (Fluorine oil)	Combination flange of flush 3 in. (80 mm) and extended 4 in. (100 mm)

Selections Options 1

Basic model No. - I II III IV V VI VII VIII - IX X XI XII XIII XIV -Options 2

Options 1, 2: Refer to page 31

Basic model No.

	Measuring span	2.5 to 100kPa(250 to 10,160mmH2O)	JTE929A
		35 to 3500kPa(0.35 to 35kgf/cm2)	JTE930A

Selections

I	Output	4 to 20mA	1	
		4 to 20mA(Analog FSK Communication)	2	*3
		Digital output (DE protocol)	3	*1, *2
II	Material of wetted part	SUS316 (Diaphragm : SUS316L)	2	
		SUS316L	8	
III	Fill Fluid	Regular type (Silicone oil)	1	
		For oxygen service (Fluorine oil)	2	
	*11, *15	For High temperature service (Silicon oil)	3	
IV	Flange rating	JIS 10K	A	
		JIS 20K	C	
		JIS 30K	D	
		ANSI 150	G	
		ANSI 300	H	
		JPI 150	N	
		JPI 300	P	
V	Flange size	3 in. (80mm) flush diaphragm type/ 4 in. (100mm) extednded diaphragm type	F	
VI	Flange type	Length of extended part 50mm	2	
		Length of extended part 100mm	3	
		Length of extended part 150mm	4	
		Length of extended part 200mm	5	
		Length of extended part 250mm	6	
		Length of extended part 300mm	7	
VII	Flange material/bolt and nut	Carbon steel	A	
		Cargon steel/SUS304	B	
		Carbon steel/SUS630	C	
		SUS304/Carbon steel	D	
		SUS304/SUS304	E	
		SUS304/SUS630	F	
		SUS316/Carbon steel	G	
		SUS316/SUS304	H	
		SUS316/SUS630	J	
		SUS316L/Carbon steel	K	
		SUS316L/SUS304	L	
		SUS316L/SUS630	M	
VIII	Length of Capillary tube	2m	2	
		3m	3	
		4m	4	
		5m	5	
		6m	6	
		7m	7	
		8m	8	
		9m	Q	
		10m	A	
	Length of capillary tube with Olefin coating	2m	B	
		3m	C	
		4m	H	
		5m	D	
		6m	J	
		7m	E	
		8m	F	
		9m	K	
		10m	G	

Notes

1 Digital output (DE protocol) should be selected with upper/lower direction of burn out feature.

2 Digital output (DE protocol) can not be combined with an external zero adjustment function.

3 Analog FSK Communication can not be combined with Intrinsically safe.

11 Dual diaphragm is not available for JIS63K, ANSI600 and JPI600 for a flange rating.

15 If the fill fluid is for high temperature service and wetted part material is Tantalum, the applicable temperature range of wetted part is from -10 to 180 deg.C

DSTJ3000 Ace Electric Differential Pressure Transmitter Remote-sealed diaphragm style

Model	Pressure range/style		Service (Fill fluid)	Process connection
JTE929A	2.5 to 100kPa (250 to 10,160mmH2O)	Medium differential pressure	Regular service(Silicon oil), High temperature (Silicon oil), Oxygen service(Fluorine oil)	Combination flange of flush 2in.(50mm) And extended 2 in.(50mm), flush 2in.(50mm) And extended 3 in.(80mm), flush 1.5in.(40mm) And extended 2 in.(50mm)
JTE930A	35 to 700kPa (0.35 to 7kgf/cm2)	High differential pressure	Regular service(Silicon oil), High temperature (Silicon oil), Oxygen service(Fluorine oil)	Combination flange of flush 2in.(50mm) And extended 2 in.(50mm), flush 2in.(50mm) And extended 3 in.(80mm), flush 1.5in.(40mm) And extended 2 in.(50mm)

Selections Options 1

Basic model No. - I II III IV V VI VII VIII - IX X XI XII XIII XIV -Options 2 Options 1, 2: Refer to page 31

Basic model No.

	Measuring span	2.5 to 100kPa(250 to 10,160mmH2O)	JTE929A
		35 to 3500kPa(0.35 to 35kgf/cm2)	JTE930A

Selections

I	Output	4 to 20mA	1	
		4 to 20mA(Analog FSK Communication)	2	*3
		Digital output (DE protocol)	3	*1, *2
II	Material of wetted part	SUS316 (Diaphragm : SUS316L)	2	
		SUS316L	8	
III	Fill Fluid	Regular type (Silicone oil)	1	
		For oxygen service (Fluorine oil)	2	
	*11, *15	For High temperature service (Silicon oil)	3	
IV	Flange rating	JIS 10K	A	
		JIS 20K	C	
		JIS 30K	D	
		ANSI 150	G	
		ANSI 300	H	
		JPI 150	N	
		JPI 300	P	
V	Flange size	2in. (50mm) flush diaphragm type/ 2in. (50mm) extednded diaphragm type	H	
		2in. (50mm) flush diaphragm type/ 3in. (80mm) extednded diaphragm type	O	
		1.5in. (40mm) flush diaphragm type/ 2in. (50mm) extednded diaphragm type	Y	
VI	Flange type	Length of extended part 50mm	2	
		Length of extended part 100mm	3	
		Length of extended part 150mm	4	
		Length of extended part 200mm	5	
		Length of extended part 250mm	6	
		Length of extended part 300mm	7	
VII	Flange material/bolt and nut	Carbon steel	A	
		Cargon steel/SUS304	B	
		Carbon steel/SUS630	C	
		SUS304/Carbon steel	D	
		SUS304/SUS304	E	
		SUS304/SUS630	F	
		SUS316/Carbon steel	G	
		SUS316/SUS304	H	
		SUS316/SUS630	J	
		SUS316L/Carbon steel	K	
		SUS316L/SUS304	L	
		SUS316L/SUS630	M	
VIII	Length of Capillary tube	2m		2
		3m		3
		4m	*25	4
		5m	*25	5
	Length of capillary tube with Olefin coating	2m		B
		3m		C
		4m	*25	H
		5m	*25	D

Notes

1 Digital output (DE protocol) should be selected with upper/lower direction of burn out feature.

2 Digital output (DE protocol) can not be combined with an external zero adjustment function.

3 Analog FSK Communication can not be combined with Intrinsically safe.

11 Dual diaphragm is not available for JIS63K, ANSI600 and JPI600 for a flange rating.

15 If the fill fluid is for high temperature service and wetted part material is Tantalum, the applicable temperature range of wetted part is from -10 to 180 deg.C

25 The performance is as follows. Temperature characteristics and static pressure effect becomes 1.5 x high temperature model. For details, refer to specification sheets.

DSTJ3000 Ace Electric Differential Pressure Transmitter Remote-sealed diaphragm style

Options1

IX	Electrical connection / explosion-proof	G1/2, Watertight	X
		G1/2, JIS Flameproof with 1 pc. Of cable gland attached.	2
		G1/2, JIS Flameproof with 2 pcs. Of cable gland attached.	3
		G1/2, intrinsically safe *3	6
		1/2 NPT, Watertight	A
X	Builting indicating smart meter	None	X
		0 to 100 % linear scales	1
		Engineering unit scales	2
XI	Finish	Standard	X
		Corrosion-resistant	A
		Corrosion-proof	B
		Corrosion-resistant (Silver coating)	D
XII	Finish of gasket face	Standard (JISRa3.2(12.5S))	X
XIII	Burnout feature *1	None	X
		Upper limit of output at abnormal condition	U
		Lower limit of output at abnormal condition	D
XIV	Mouting bracket	None	X
		Carbon steel	1
		Direct mounting *14 *11	P
		SUS304	2

Option 2

XX	No options
A2	External Zero adjustment *2
A4	Lightning arrestor
A5	Long vent/drain plugs
A6	1/2 in. remote mounting kit
B7	For mounting a high load resistance smart meter
C1	Color : Red (Munsell 5R4/13)
C2	Color : Yellow (Munsell 2.5Y8/16))
C3	Color : Blue (Munsell 7.5BG7/2)
C7	Process connection ; reverse
D1	Water free finish (included oil free finish) *16 *17
D2	Oil free finish *16 *17
G1	One elbow (left)
G2	One elbow (right)
G3	2 elbows
G6	Adapter for dual diaphragm
J8	Special burn-out feature (3.2mA) *18
T1	Test report
T2	Material certificate *19
T5	Strength calculation sheet *20
T6	Withstand pressure and airtight test (for regular service) *21
T8	Traceability certificate
U2	Non-SI unit conformance

Notes

1 Digital output (DE protocol) should be selected with upper/lower direction of burn out feature.

2 Digital output (DE protocol) can not be combined with an external zero adjustment function.

3 Analog FSK Communication can not be combined with Intrinsically safe.

11 Dual diaphragm is not available for JIS63K, ANSI600 and JPI600 for a flange rating.

14 This selection is not available for high temperature service/high temperature vacuum service/high temperature high vacuum service

16 When the fill fluid is for oxygen or chroline service, there is not needed to select this.

17 The carbon steel for meterbody cover material is not available for this option.

18 This should be selected with upper/lower direction of burn out feature.

19 Available only for material of wetted part.

20 When ordering, designed pressure and designed temperature are required.

21 When ordering, withstand pressure and airtight test pressure are required.

DSTJ3000 Ace Electric Differential Pressure Transmitter Remote-sealed diaphragm style

Dual diaphragm adapter (Flush flange 3 in.),

For regular service (fill fluid : silicon oil), oxygen service and chlorine service(fill fluid : Florine oil)

	Selections	Options
HH	-I II III IV V VI VII	- VIII

Basic Model No.

	Adpater for dual diaphragm		HH

Selections

I	Transimitter model number	JTE with 2 adapters	E				
II	Material of wetted part	SUS316(Diaphragm:SUS316L)	2				
		Tantalum	4				
		Hasterlloy C	H				
		SUS316L	8				
III	Fill fluid	Regular type (Silicone oil)		1			
		For oxygen service (Fluorine oil)		2			
		For Chlorine service (Fluorine oil)		5			
IV	Flange rating	JIS 10K			A		
		JIS 20K			C		
		JIS 30K			D		
		ANSI 150			G		
		ANSI 300			H		
		JPI 150			N		
		JPI 300			P		
V	Flange size	3 in. /80 mm				2	
VI	Flange type	Standard (Flush diaphragm)					1
VII	Finish of gasket face	Standard					X

Options -

VIII		No options	XX
	*13	Water free and oil free treatment	D1
	*13	Oil free treatment	D2
	*13	Material certificate	T2
	*13	Pressure test	T7

Notes

13 When this option is selected, the same option for transimtter must be selected.

DSTJ3000 Ace Electric Differential Pressure Transmitter Remote-sealed diaphragm style

Dual diaphragm adapter (Flush flange 2 in.),

For regular service (fill fluid : silicon oil), oxygen service and chlorine service(fill fluid : Florine oil)

	Selections	Options
HH	-I II III IV V VI VII	- VIII

Basic Model No.

	Adpater for dual diaphragm		HH

Selections

I	Transimitter model number	JTE with 2 adapters	E				
II	Material of wetted part	SUS316 (Diaphragm:SUS316L)		2			
		Tantalum		4			
		SUS316L		8			
III	Fill fluid	Regular type (Silicone oil)			1		
		For oxygen service (Fluorine oil)			2		
		For Chlorine service (Fluorine oil)			5		
IV	Flange rating	JIS 10K				A	
		JIS 20K				C	
		JIS 30K				D	
		ANSI 150				G	
		ANSI 300				H	
		JPI 150				N	
		JPI 300				P	
V	Flange size	2 in. /50 mm					3
VI	Flange type	Standard (Flush diaphragm)					1
VII	Finish of gasket face	Standard					X

Options

			-
VIII		No options	XX
	*13	Water free and oil free treatment	D1
	*13	Oil free treatment	D2
	*13	Material certificate	T2
	*13	Pressure test	T7

Notes

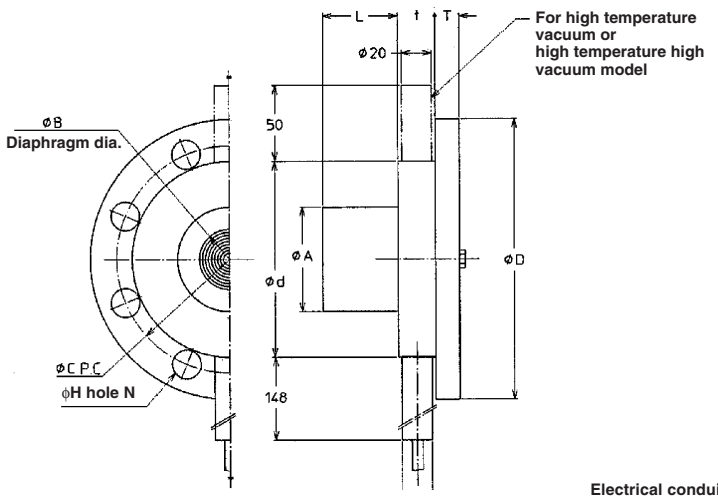
13 When this option is selected, the same option for transimtter must be selected.

Dimensions

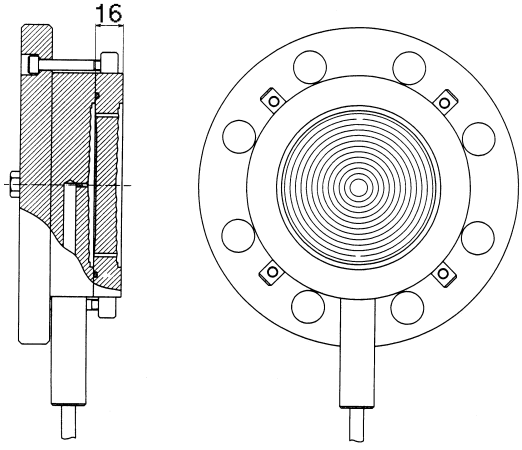
(Unit: mm)

JTE929A/930A General Purpose and High-Temperature/High Temperature Vacuum/High Temperature High Vacuum Models

Extended Diaphragm Flange

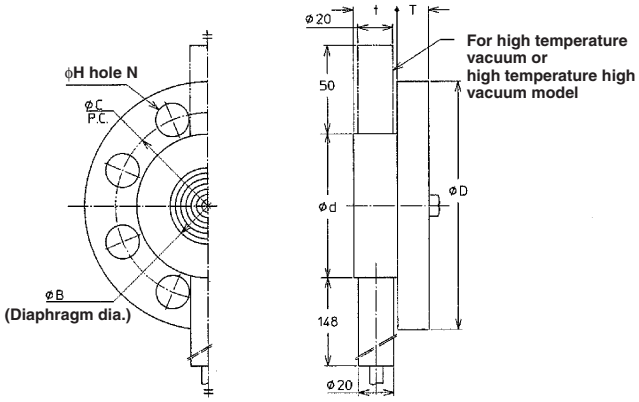


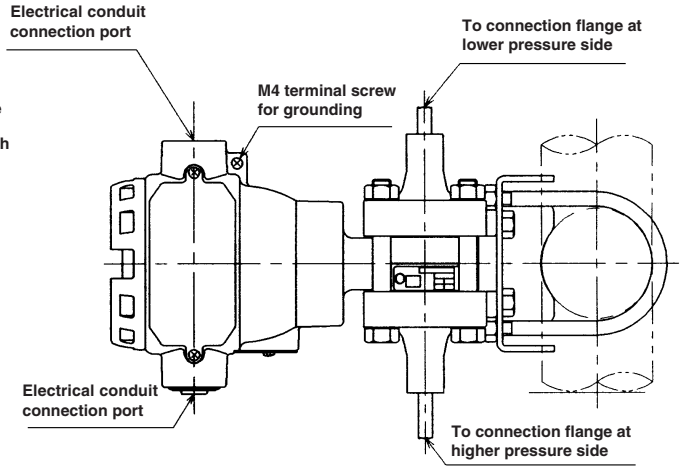
Dual Diaphragm



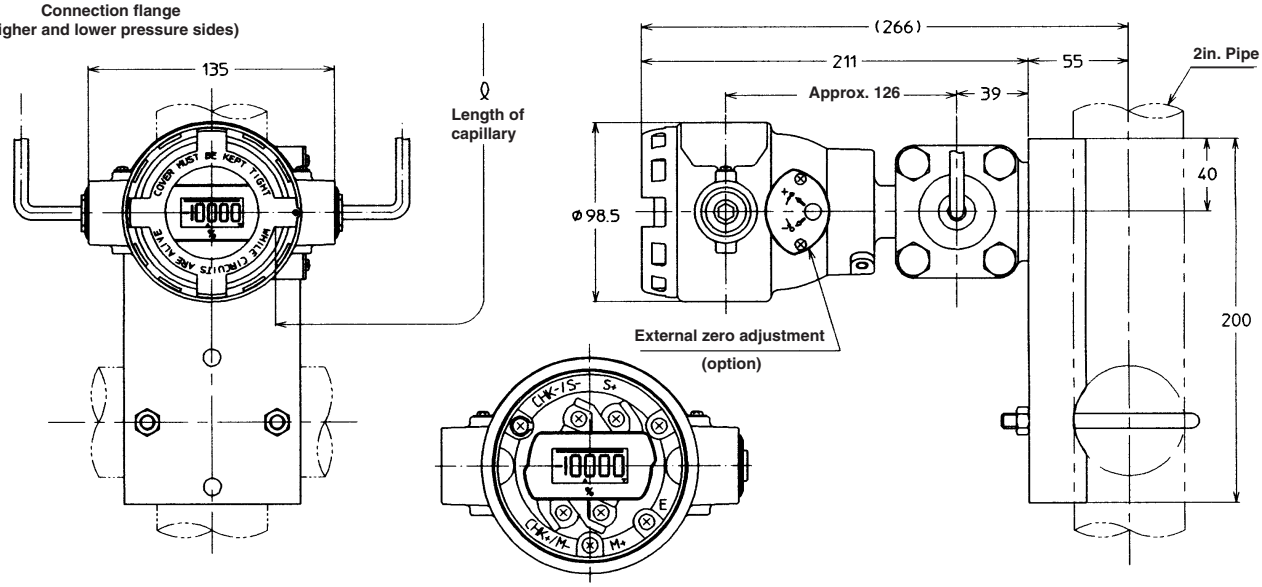
Sizes are same as Flush diaphragm type flange.

Flush Diaphragm Flange





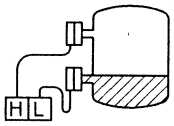
Connection flange (higher and lower pressure sides)



Terminal connection diagram (Terminal screw size: M4)

Notes)

1. The transmitter can be mounted in various ways by changing the position of the mounting bracket. (A typical example is shown in the figure.)
2. To prevent vibration, it is recommended to fasten the capillary tube mid-length.
3. Select a gasket that will not contact the diaphragm after it is tightened.
4. When the volume of suppression is larger than one half of the adjustment span, the higher pressure side and the lower pressure side of the process connection end flange are opposite to those shown in the figure. When using the transmitter to measure liquid levels, connect at H and L marks on the meter body as shown in the figure.



Meter body

JTE929A/930A Flush Diaphragm Flange Dimensions

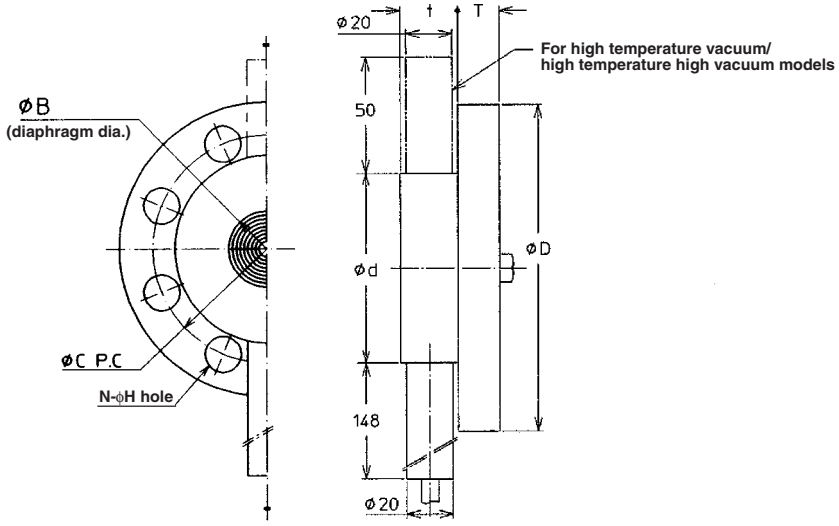


Table of Flush diaphragm flange dimensions

Flange standard	ØD	T	ØC	N	ØH	ød	ØB	t
JIS 10K-40mm	140	16	105	4	19	81	43	25 (Note 2)
JIS 20K-40mm	140	18	105	4	19			
JIS 30K-40mm	160	22	120	4	23			
JIS 63K-40mm	175	32	130	4	25			
ANSI 150 1-½in.	127	18	98.6	4	16			
ANSI 300 1-½in.	155	21	114.3	4	22			
ANSI 600 1-½in.	155	22.5	114.3	4	22			
JPI 150 1-½in.	127	18	98.6	4	16			
JPI 300 1-½in.	155	21	114.3	4	22			
JPI 600 1-½in.	155	22.5	114.3	4	22			
JIS 10K-50mm	155	16	120	4	19	99	62 (Note 1)	
JIS 20K-50mm	155	18	120	8	19			
JIS 30K-50mm	165	22	130	8	19			
JIS 63K-50mm	185	34	145	8	23			
ANSI 150 -2in.	152	19.5	120.6	4	19			
ANSI 300-2in.	165	22.5	127	8	19			
ANSI 600 -2in.	165	25.5	127	8	19			
JPI 150 -2in.	152	19.5	120.6	4	19			
JPI 300-2in.	165	22.5	127	8	19			
JPI 600 -2in.	165	25.5	127	8	19			
JIS 10K-80mm	185	18	150	8	19	129.5	95	25
JIS 20K-80mm	200	22	160	8	23			
JIS 30K-80mm	210	28	170	8	23			
JIS 63K-80mm	230	40	185	8	25			
ANSI 150 -3in.	190	24	152.4	4	19			
ANSI 300-3in.	210	28.5	168.1	8	22			
ANSI 600 -3in.	210	32	168.1	8	22			
JPI 150 -3in.	190	24	152.4	4	19			
JPI 300-3in.	210	28.5	168.1	8	22			
JPI 600 -3in.	210	32	168.1	8	22			

Note 1) The case of the material of the wetted part is Hastelloy C and the fill fluid is for standard/High temperature/oxygen/chlorine service use, ϕB = 43.

Note 2) The case of the material of the wetted part is Hastelloy C and the fill fluid is for standard/High temperature/oxygen/chlorine service use, t = 26.7.

JTE929A/930A Extended Diaphragm Flange Dimensions

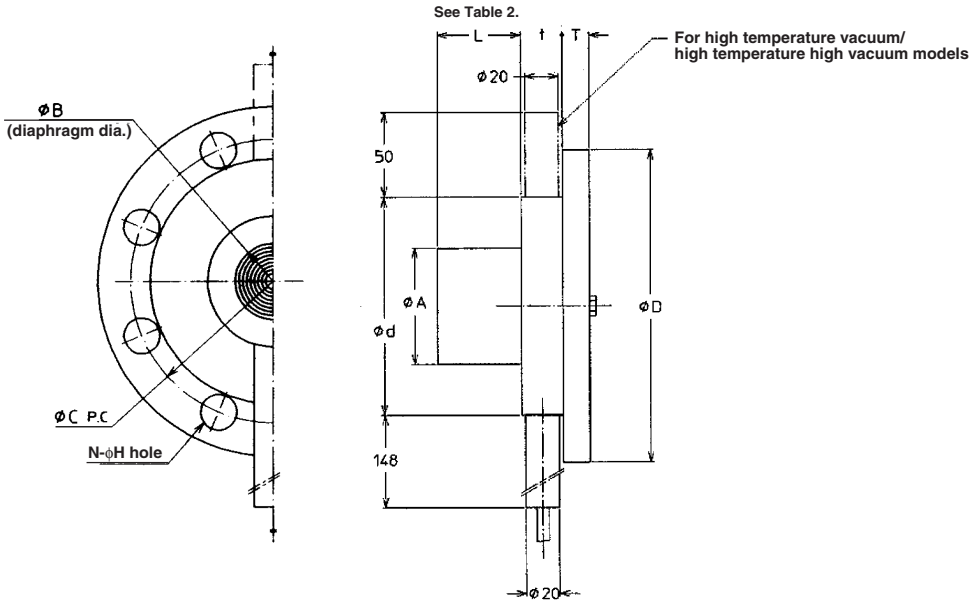
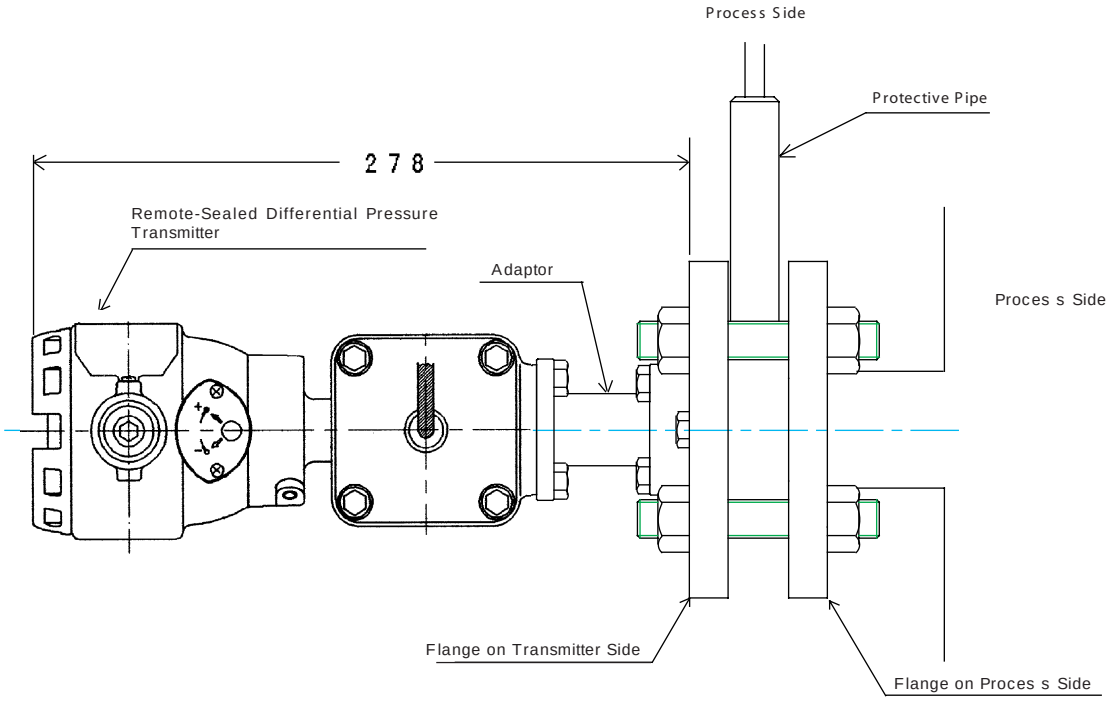


Table 1 Table of Flange Dimension

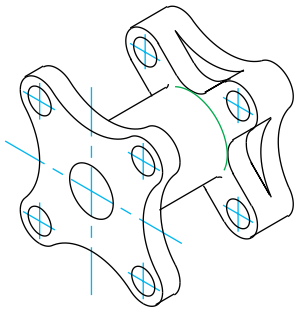
Flange standard	øD	T	t	øC	N	øH	ød	øA	øB
JIS 10K-100mm	210	18	23	175	8	19	157	95±1	90.4
JIS 20K-100mm	225	24		185	8	23			
JIS 30K-100mm	240	32		195	8	25			
ANSI 150-4in.	229	24		190.5	8	19			
ANSI 300-4in.	254	32		200.2	8	22			
JPI 150-4in.	229	24		190.5	8	19			
JPI 300-4in.	254	32		200.2	8	22			
JIS 10K-80mm	185	18	25	150	8	19	129.5	69±1	62
JIS 20K-80mm	200	22		160	8	23			
JIS 30K-80mm	210	28		170	8	23			
JIS 63K-80mm	230	40		185	8	25			
ANSI 150-3in.	190	24		152.4	4	19			
ANSI 300-3in.	210	28.5		168.1	8	22			
ANSI 600-3in.	210	32		168.1	8	22			
JPI 150-3in.	190	24		152.4	4	19			
JPI 300-3in.	210	28.5		168.1	8	22			
JPI 600-3in.	210	32		168.1	8	22			
JIS 10K-50mm	155	16	25	120	4	19	99	47±1	43
JIS 20K-50mm	155	18		120	8	19			
JIS 30K-50mm	165	22		130	8	19			
JIS 63K-50mm	185	34		145	8	23			
ANSI 150-2in.	152	19.5		120.6	4	19			
ANSI 300-2in.	165	22.5		127	8	19			
ANSI 600-2in.	165	25.5		127	8	19			
JPI 150-2in.	152	19.5		120.6	4	19			
JPI 300-2in.	165	22.5		127	8	19			
JPI 600-2in.	165	25.5		127	8	19			

Table 2 Length of Extension

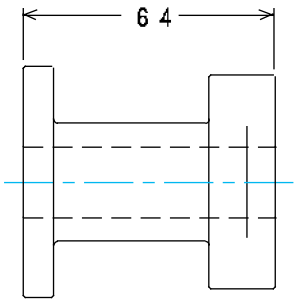
L
50
100
150
200
250
300



Adaptor Assembly Drawing (JTE Type + Adaptor)



Adaptor Outline Drawing



Adaptor Dimension Drawing

Note

YAMATAKE

Savemation

Saving through Automation

Yamatake Corporation

Totate international Building
2-12-19 Shibuya
Shibuya-ku, Tokyo 150-8316
Japan
Tel : 81-3-3486-2310
Fax : 81-3-3486-2593

http://www.yamatake.com/