ST3000 Series 900 Smart Transmitter

Remote-sealed type of Differential Pressure Transmitters

Model STE929 / STE930

OVERVIEW

The ST3000 Smart Transmitter is a microprocessor-based smart transmitter that features high performance and excellent stability. Capable of measuring gas, liquid, and vapor, 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) or HART® 275 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

Excellent stability and high performance

- Long-term stability is proven in 500,000 installations worldwide.
- Unique characterization and composite semiconductor sensors realize excellent temperature and static pressure characteristics.

A diverse lineup

- A diverse flange lineup, ranging from small diameter 1.5 inch (40 mm) and 2 inches (50 mm) to 3 inches (80 mm), is available to meet user requirements.
- A wide range of models, including those for general purposes, high-temperature, and high temperature and high-vacuum 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 instrumentation.
- A wide variety of corrosion-resistant materials for wetted parts is also available.

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 the output is corrected accordingly. This function substantially reduces (to 1/5 - 1/10) the effect of seasonal fluctuations in temperature.

Remote communication

- Either analog 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.
- HART® protocol communication is available. (Option)

APPLICATION

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 high degrees 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

Iron and steel / Nonferrous metal / Ceramics

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

Machinery / Shipbuilding

For lines that require stable measurement under strictly controlled (temperature, humidity, etc.) conditions.

FUNCTIONAL SPECIFICATIONS

Type of protection

JIS C0920 watertight: NEMA3 and 4X
JIS F8001 class 2 watertight: IEC IP67

FM Explosionproof approval

Explosionproof for Class I (Gas, steam), Division 1, Group A, B, C, D
Dust-ignition for Class II (Inflammable dust), Division 1, Group E, F, G
Suitable for Class III (inflammable fiber), Division 1
Nonincendive for Class I, Division 2, Group A, B, C, D

FM Intrinsically safe approval

Intrinsically safe for Class I, II, III, Division 1, Group A, B, C, D, E, F, G

ATEX Flameproof approval

Certificate number: INERIS99ATEX0010 X

⟨Ex⟩ II 2 GD EExd IIC T6 at -20 ≤ Tamb ≤ +60°C

ATEX Intrinsic safety

Certificate number: KEMA03ATEX1225 X

⟨Ex⟩ II 1 G EEx ia IIC T4 at -20 ≤ Tamb ≤ +60°C

Electrical data: Ui = 30V
Ii = 100 mA
Pi = 1W
Ci = 3 nF
Li = 0.5 mH

SPECIAL CONDITIONS FOR SAFE USE (X)
Because the enclosure of the Smart Pressure Transmitter is made of aluminium, if it is mounted in an area where the use of category 1 G apparatus is required, it must be installed such, that, even in the event of rare incidents, ignition sources due to impact and friction sparks are excluded.

NEPSI Flameproof approval

Ex d IIC T6, with NEPSI Dust ignition DIP A20 T6
Approval No. GYJ 06204

NEPSI Intrinsically safe approval

NEPSI Intrinsically safe approval
Ex ia IIC T4 at -20 ≤ Tamb ≤ +60°C
The barriers should be NEPSI recognized types and comply with the following conditions as follows.
Safety Parameters : Ui=28V, Ii=93mA, Pi=0.651W, Li=0, Ci=0.0uF
Approval No. GYJ 06176

CSA Explosion-proof Approval

CSA Explosion-proof for Class I, (Division 1), Groups A, B, C and D
CSA Flameproof for Class I, Zone 1, Ex d IIC T6 at ambient temp. = -20°C to +60°C
CSA Dust-ignitionproof for Class II and III, (Division 1), Groups E, F and G

EMC Conformity

89/336/EEC, 92/31/EEC, 93/68/EEC Electromagnetic Compatibility (EMC) Directive

PED Conformity (97/23/EC)

Comply with Module H (with "H1" option), or SEP (Sound Engineering Practice) for models of which maximum working pressure is 200 bar or lower.

Measuring span / Setting range / Working pressure range

	Measuring Span	Setting Range	Working Pressure Range
STE 929	2.5 to100 kPa {250 to 10160 mmH_2O}	-100 to 100 kPa {-10160 to 10160 mmH_2O}	Up to flange rating (For negative pressures, see Figure 1, Figure 2 and Figure 4.)
STE 930	35 to 700 kPa {0.35 to 7 kgf/cm^2}	-100 to 700 kPa {-1 to 7 kgf/cm^2}	

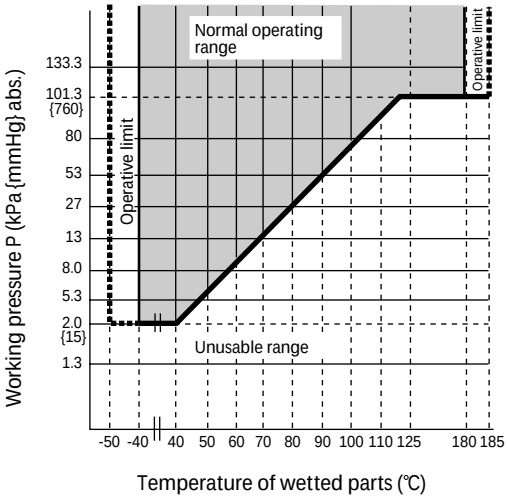


Figure 1 Working pressure and temperature of wetted parts section (for general purpose models)

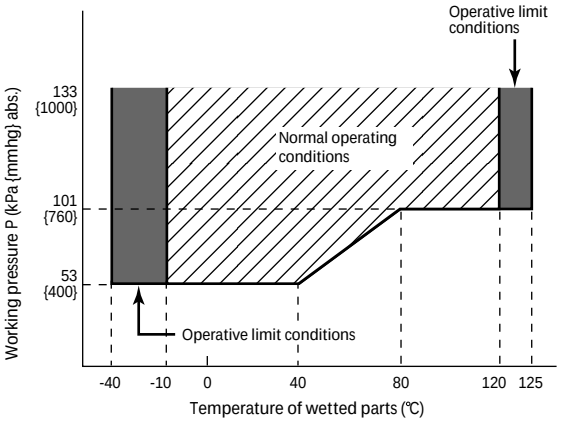
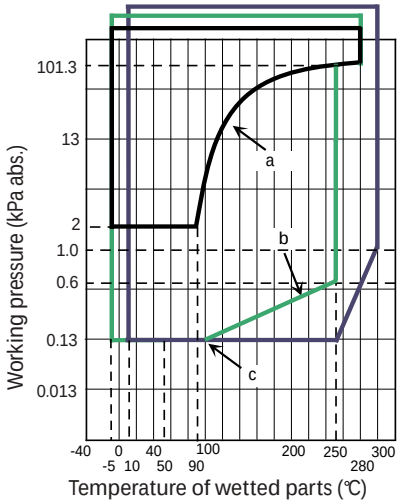


Figure 2 Working pressure and temperature wetted parts section (for oxygen and chlorine service)



a. For high temperature b. For high temperature and vacuum,
c. For high temperature and high vacuum

Figure 3 Working pressure temperature of wetted parts section (For high temperature / high temperature and vacuum / high temperature and high vacuum)

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 4.

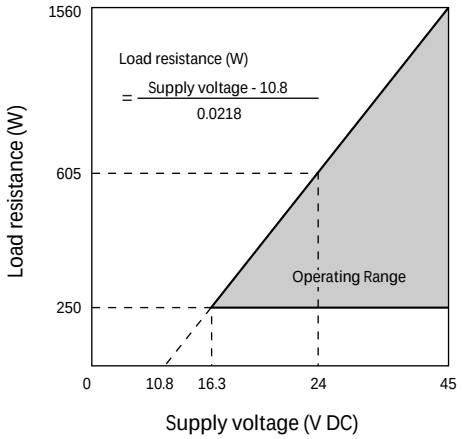


Figure 4 Supply voltage vs. load resistance characteristics

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

For ATEX Intrinsic safety model, minimum voltage of 18.0V is required.

Output

Analog output (4 to 20 mA DC) with DE protocol
Analog output (4 to 20 mA DC) with HART protocol
Digital output (DE protocol)

Ambient temperature limits / Temperature ranges of wetted parts

		Temperature range (°C) *1, *4				
		General purpose model	High-temperature model	High-temperature vacuum models	High-temperature high-vacuum models	Oxygen and chlorine models
Wetted parts section	Normal operating range	-40 to 180	-5 to 280 *5	-5 to 280 *5	10 to 300 *5	-10 to 120
	Operative limit range	-50 to 185	-10 to 310 *6	-10 to 310 *6	-10 to 310 *6	-40 to 125
Ambient temperature *2 Flange size: Flush diaphragm type 3 inches (80 mm) Extended diaphragm type 4 inches (100 mm)	Normal operating range	-30 to 75	-5 to 55	-5 to 55	10 to 55	-10 to 75
	Operative limit range	-50 to 80	-10 to 60	-10 to 60	-10 to 60	-40 to 80
Ambient temperature Note 2 Flange size: Flush diaphragm type 2 inches (50 mm) / 1.5 inch (40 mm) Extended diaphragm type 3 inches (80 mm) / 2 inches (50 mm)	Normal operating range	-15 to 65	-5 to 45	-5 to 55	10 to 55	-10 to 75
	Operative limit range	-30 to 80	-10 to 55	-10 to 60	-10 to 60	-40 to 80
Specific gravity of fill fluid *3		0.935	1.07	1.07	1.09	1.87

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

For Explosion proof models with digital indicators, which have to be used within the following ranges

Normal operating condition
-20 to 70°C

Operative limit
-30 to 80°C

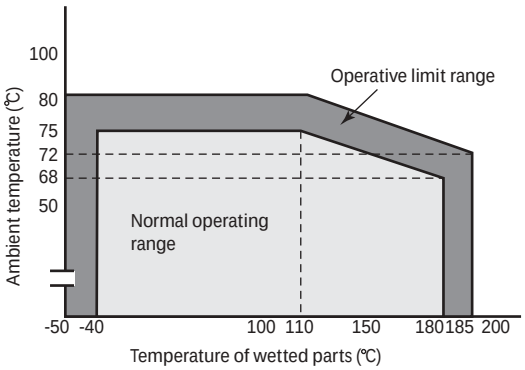


Figure 5 Ambient temperature and temperature of wetted parts section (for general purpose models)

[Flange diameter: Flush diaphragm 2 inches (50 mm) / 1.5 inch (40 mm)
Extended diaphragm 3 inches (80 mm) / 2 inches (50 mm)]

Note) When the fill liquid is for general purposes, make sure before using your transmitter that the conditions in both Figure 1, Figure 5 and Figure 6 are met.

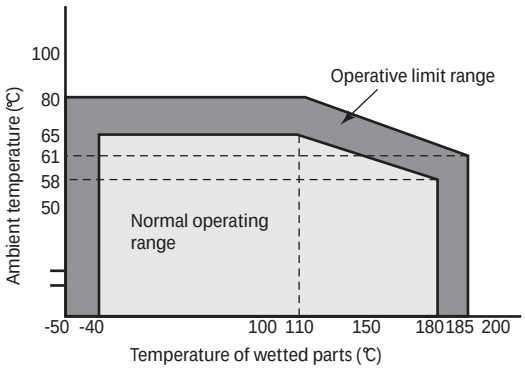


Figure 6 Ambient temperature and temperature of wetted parts section (for general purpose models)

[Flange diameter: Flush diaphragm 3 inches (80 mm)
Extended diaphragm 4 inches (100 mm)]

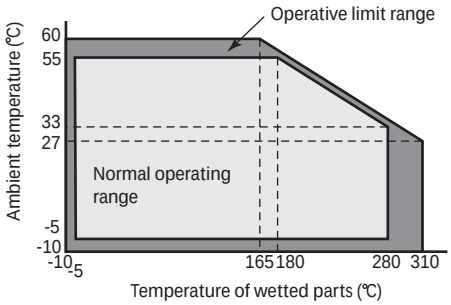


Figure 7 Ambient temperature and temperature of wetted parts section (for high temperature and vacuum 2, 3 m)

[Flange diameter: Flush diaphragm 2 inches (50 mm) / 1.5 inch (40 mm)]

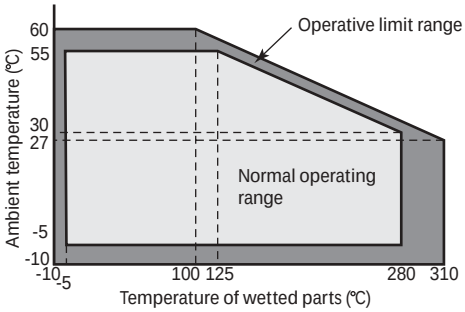


Figure 8 Ambient temperature and temperature of wetted parts section (for high temperature and vacuum 4, 5 m)

[Flange diameter: Flush diaphragm 2 inches (50 mm) / 1.5 inch (40 mm)]

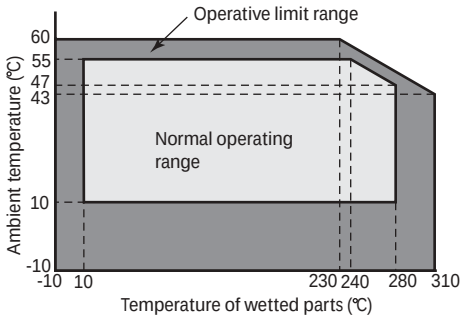


Figure 9 Ambient temperature and temperature of wetted parts section (for high temperature and high vacuum 2, 3 m)

[Flange diameter: Flush diaphragm 2 inches (50 mm) / 1.5 inch (40 mm)]

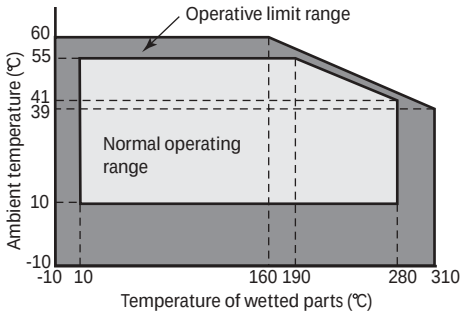


Figure 10 Ambient temperature and temperature of wetted parts section (for high temperature and high vacuum 4, 5 m)

[Flange diameter: Flush diaphragm 2 inches (50 mm) / 1.5 inch (40 mm)]

Ambient humidity limits

5 to 100% RH

Stability against supply voltage change

± 0.005% FS/V

Dead time

Approximately 0.4 sec.

Damping time

Selectable from 0 to 32 sec. in ten stages

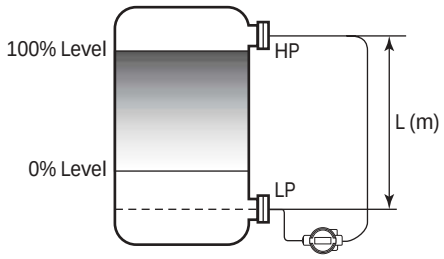
Correcting temperature of the capillary section fill fluid

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.



OPTIONAL SPECIFICATIONS

Lightning protection

Peak value of voltage surge: 200 kV
Peak value of current surge: 2000 A

Built-in indicating meter

The digital LCD indicator (optional) indicates engineering units and can be set freely between -19999 and 19999 (4.5 digits). For meter calibration, specify the following items when placing your order

- Meter calibration range
- Meter 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 later) or HART®275 communicator.

Bolts and nuts materials (for fastening meter body cover)

Carbon steel (SNB7), SUS304, SUS630

Corrosion-resistant finish

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 coated with silver paint in addition to the above corrosion-resistant finish.

FEP protective film

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

Working temperature range
0 to 110°C

Working pressure range
Atmospheric pressure to flange rating
(up to JIS10K, ANSI / JPI 150)
(Not usable under negative pressure)

Oil free finish
The transmitter is shipped with oil-free wetted parts.

External zero/span adjustment function
The transmitter can be easily zero/span adjusted in the field.

Burnout feature
Choice of three states at abnormal condition
Burnout of output values: None, upper limit, lower limit

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

Conformance to SI units
We deliver transmitters set to any SI units as specified.

PHYSICAL SPECIFICATIONS

Materials

Fill fluid
Silicone oil for general purpose and high-temperature vacuum models
Fluorine oil for oxygen and chlorine models
For specific gravity, refer to “Ambient temperature limits / Temperature ranges of wetted parts” on page 4.

Center body
SUS316

Transmitter case
Aluminum alloy

Meter body cover
SCS14A (SUS316L for diaphragm only)
Hastelloy C, Tantalum, SUS316L

For wetted parts
SCS14A (SUS316L for diaphragm only)
Hastelloy C, Tantalum, SUS316L

Flange materials
Carbon steel (SF440A), SUS304, SUS316, SUS316L

Capillary section

Capillary tube length
2, 3, 4, 5, 6, 7, 8, 9 and 10 m
2, 3, 4 and 5 m when flange diameter is flush diaphragm
2 inches (50 mm) / 1.5 inch (40 mm) extended diaphragm
3 inches (80 mm) / 2 inches (50 mm)

Capillary tube material
SUS316

Armored tube material
SUS304

Coating (optional)
Olefin coating to improve corrosion resistance
(Not applicable for high-temperature / Vacuum service type and High-temperature / High-vacuum service type.)

Finish
Baked acrylic paint
Housing light beige (Munsell 4Y7.2/1.3)
Cap dark beige (Munsell 10YR4.7/0.5)

Weight
Approx. 19.8 kg
(Including JIS10K-80A flange and capillary 5 m long)

INSTALLATION

Electrical connection
1/2NPT internal thread

Grounding
Resistance 100 Ω max.

Mounting
Direct mounting on the process side
Using 2-inch pipe mounting brackets: Mount the transmitter on a horizontal or vertical 2-inch pipe.

Bracket
Carbon steel

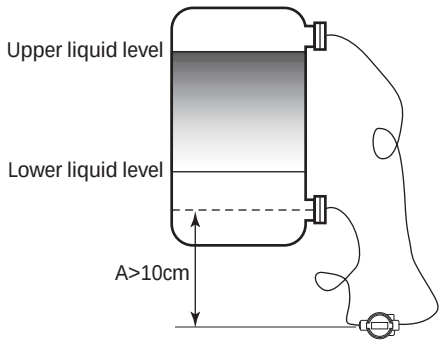
U-bolt and nuts
SUS304

Process connection
Flange (both higher and lower pressure sides)

Flush diaphragm
JIS 10K, 20K and 30K: 80 / 50 / 40 mm (RF) equivalent
ANSI 150, 300 and 600: 3 / 2 / 1.5 inches (RF) equivalents
JPI 150, 300 and 600: 3 / 2 / 1.5 inches (RF) equivalents

Extended diaphragm
JIS 10K, 20K and 30K: 100 / 80 / 50 mm (RF) equivalents
ANSI 150 and 300: 4 / 3 / 2 inches (RF) equivalents
JPI 150 and 300: 4 / 3 / 2 inches (RF) equivalents

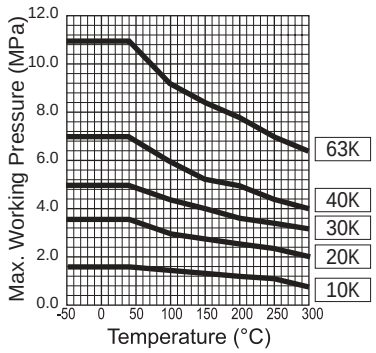
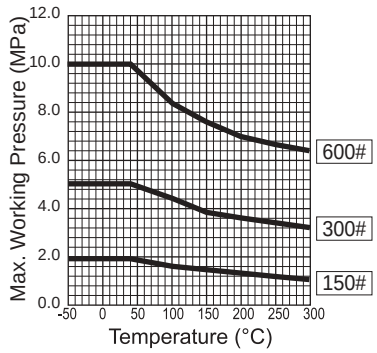
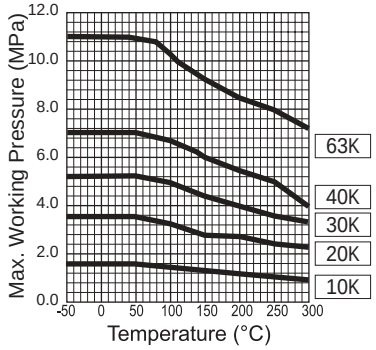
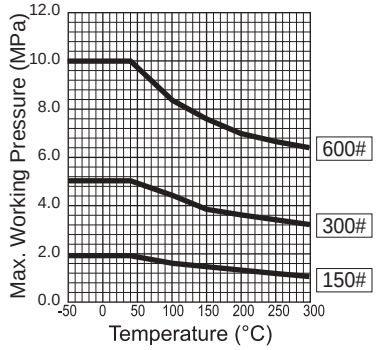
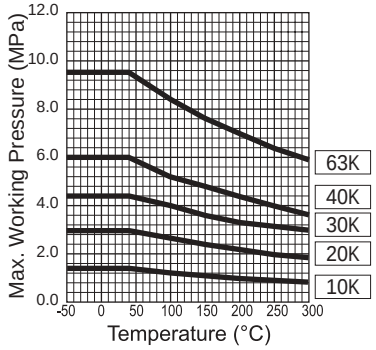
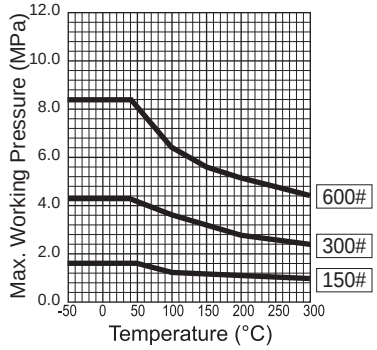
Mounting notes
1) If the fluid to be measured contains hydrogen, please consult us.
2) When mounting the transmitter, leave a space of at least 10 cm under the lower nozzle of the tank. If no space is available, please consult us.



PERFORMANCE SPECIFICATIONS

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 specification of transmitters.
2. Max. working pressure depends on the smaller value of either 1.5 MPa or following data.
3. Max. working pressure depends on the smaller value of either 10 MPa or following data.

	JIS	JPI/ANSI
SUS304		
SUS316		
SUS316L		

Accuracy

Shown for each item are the percentage ratio for χ (kPa), which is the greatest value of either the upper range value (URV)[*1], the lower range value (LRV)[*2] or the span.

Model STE929 (for regular type / high-temperature service / oxygen service)

Material of wetted parts: SUS316, SUS316L
Flange size: Flush diaphragm 3 inches (80 mm) Extended diaphragm 4 inches (100 mm)

Accuracy	± 0.2%	(For $\chi \geq 12.5$ kPa (1250 mmH_2O))
	± $(0.05 + 0.15 \times \frac{12.5}{\chi})$%	(For $\chi < 12.5$ kPa (1250 mmH_2O))

Temperature characteristics (Shift from the set range) Change of 30ºC (Range from -5 to 55ºC)	Zero shift	$\pm (0.14 + 0.27 \times \frac{25}{\chi})\%$	χ: kPa
	Combined shift	± 0.71%	(For $\chi \geq 25$ kPa (2500 mmH_2O))
		$\pm (0.38 + 0.33 \times \frac{25}{\chi})\%$	(For $\chi < 25$ kPa (2500 mmH_2O))
Static pressure effect (Shift from the set range) Change of 7 MPa (70 kgf/cm^2)	Zero shift	± 0.75%	(For $\chi \geq 25$ kPa (2500 mmH_2O))
		$\pm (0.75 \times \frac{25}{\chi})\%$	(For $\chi < 25$ kPa (2500 mmH_2O))
	Combined shift	± 1.00%	(For $\chi \geq 25$ kPa (2500 mmH_2O))
		$\pm (1.00 \times \frac{25}{\chi})\%$	(For $\chi < 25$ kPa (2500 mmH_2O))

Model STE930 (for regular type / high-temperature service / oxygen service)

Material of wetted parts: SUS316, SUS316L

Flange size: Flush diaphragm 3 inches (80 mm) Extended diaphragm 4 inches (100mm)

Accuracy (*3)		± 0.2%	(For $\chi \geq 210$ kPa (2.1 kgf/cm^2))
		$\pm (0.05 + 0.15 \times \frac{210}{\chi})\%$	(For $\chi < 210$ kPa (2.1 kgf/cm^2))
Temperature characteristics (Shift from the set range) Change of 30ºC (*3) (Range from -5 to 55ºC)	Zero shift	$\pm (0.14 + 0.27 \times \frac{210}{\chi})\%$	χ: kPa
	Combined shift	± 0.71%	(For $\chi \geq 210$ kPa (2.1 kgf/cm^2))
		$\pm (0.38 + 0.33 \times \frac{210}{\chi})\%$	(For $\chi < 210$ kPa (2.1 kgf/cm^2))
Static pressure effect (Shift from the set range) Change of 7 MPa (70 kgf/cm^2)	Zero shift	$\pm (0.75 \times \frac{700}{\chi})\%$	χ: kPa
	Combined shift	$\pm (1.00 \times \frac{700}{\chi})\%$	χ: kPa

*Note) *1 URV denotes the process value for 100% (20 mA DC) output*

**2 LRV denotes the process value for 0% (4 mA DC) output*

**3 Within a range of URV $\geq$ 0 and LRV $\geq$ 0*

Model STE929 (for regular type / high-temperature / oxygen / chlorine service)

Material of wetted parts: Hastelloy C, Tantalum
Flange size: Flush diaphragm 3 inches (80 mm)

Accuracy		± 0.4%	(For $\chi \geq 12.5$ kPa (1250 mmH_2O))
		$\pm (0.4 \times \frac{12.5}{\chi})\%$	(For $\chi < 12.5$ kPa (1250 mmH_2O))
Temperature characteristics (Shift from the set range) Change of 30ºC (Range from -5 to 55ºC)	Zero shift	± 2.15%	(For $\chi \geq 25$ kPa (2500 mmH_2O))
		$\pm (2.15 \times \frac{25}{\chi})\%$	(For $\chi < 25$ kPa (2500 mmH_2O))
	Combined shift	± 3.0%	(For $\chi \geq 25$ kPa (2500 mmH_2O))
		$\pm (3.0 \times \frac{25}{\chi})\%$	(For $\chi < 25$ kPa (2500 mmH_2O))
Static pressure effect (Shift from the set range) Change of 7 MPa (70 kgf/cm^2)	Zero shift	± 6.00%	(For $\chi \geq 25$ kPa (2500 mmH_2O))
		$\pm (6.00 \times \frac{25}{\chi})\%$	(For $\chi < 25$ kPa (2500 mmH_2O))
	Combined shift	± 7.00%	(For $\chi \geq 25$ kPa (2500 mmH_2O))
		$\pm (7.00 \times \frac{25}{\chi})\%$	(For $\chi < 25$ kPa (2500 mmH_2O))

Model STE930 (for regular type / high-temperature / oxygen / chlorine service)

Material of wetted parts: Hastelloy C, Tantalum
Flange size: Flush diaphragm 3 inches (80 mm)

Accuracy (*3)		± 0.2%	(For $\chi \geq 210$ kPa (2.1 kgf/cm^2))
		$\pm (0.05 + 0.15 \times \frac{210}{\chi})\%$	(For $\chi < 210$ kPa (2.1 kgf/cm^2))
Temperature characteristics (Shift from the set range) Change of 30ºC (*3) (Range from -5 to 55ºC)	Zero shift	$\pm (0.15 + 0.7 \times \frac{210}{\chi})\%$	χ: kPa
	Combined shift	± 1.75%	(For $\chi \geq 210$ kPa (2.1 kgf/cm^2))
		$\pm (1.00 + 0.75 \times \frac{210}{\chi})\%$	(For $\chi < 210$ kPa (2.1 kgf/cm^2))
Static pressure effect (Shift from the set range) Change of 7 MPa (70 kgf/cm^2)	Zero shift	$\pm (0.75 \times \frac{700}{\chi})\%$	χ: kPa
	Combined shift	$\pm (1.00 \times \frac{700}{\chi})\%$	χ: kPa

*Note) *3 Within a range of URV $\geq$ 0 and LRV $\geq$ 0*

Model STE929 (for regular type / high-temperature service / oxygen service)

Material of wetted parts: SUS316, SUS316L
Flange size: Flush diaphragm 2 inches (50 mm) Extended diaphragm 3 inches (80mm)

Accuracy		± 0.2%	(For $\chi \geq$ 12.5 kPa (1250 mmH_2O))
		± (0.05 + 0.15 × $\frac{12.5}{\chi}$)%	(For χ < 12.5 kPa (1250 mmH_2O))
Temperature character-istics (Shift from the set range) Change of 30ºC (Range from -5 to 55ºC)	Zero shift	± (0.14 + 0.27 × $\frac{25}{\chi}$)%	χ: kPa
	Combined shift	± 0.88%	(For $\chi \geq$ 25 kPa (2500 mmH_2O))
		± (0.55 + 0.33 × $\frac{25}{\chi}$)%	(For χ < 25 kPa (2500 mmH_2O))
Static pressure effect (Shift from the set range) Change of 7 MPa (70 kgf/cm^2)	Zero shift	± 1.47%	(For $\chi \geq$ 25 kPa (2500 mmH_2O))
		± (1.47 × $\frac{25}{\chi}$)%	(For χ < 25 kPa (2500 mmH_2O))
	Combined shift	± 1.97%	(For $\chi \geq$ 25 kPa (2500 mmH_2O))
		± (1.97 × $\frac{25}{\chi}$)%	(For χ < 25 kPa (2500 mmH_2O))

Model STE929 (for regular type / oxygen service)

Material of wetted parts: SUS316, SUS316L
Flange size: Flush diaphragm 1.5 inch (40 mm)

Accuracy		± 0.3%	(For $\chi \geq$ 12.5 kPa (1250 mmH_2O))
		± (0.3 × $\frac{12.5}{\chi}$)%	(For χ < 12.5 kPa (1250 mmH_2O))
Temperature character-istics (Shift from the set range) Change of 30ºC (Range from -5 to 55ºC)	Zero shift	± 0.41%	(For $\chi \geq$ 25 kPa (2500 mmH_2O))
		± (0.41 × $\frac{25}{\chi}$)%	(For χ < 25 kPa (2500 mmH_2O))
	Combined shift	± 0.88%	(For $\chi \geq$ 25 kPa (2500 mmH_2O))
		± (0.88 × $\frac{25}{\chi}$)%	(For χ < 25 kPa (2500 mmH_2O))
Static pressure effect (Shift from the set range) Change of 7 MPa (70 kgf/cm^2)	Zero shift	± 1.47%	(For $\chi \geq$ 25 kPa (2500 mmH_2O))
		± (1.47 × $\frac{25}{\chi}$)%	(For χ < 25 kPa (2500 mmH_2O))
	Combined shift	± 1.97%	(For $\chi \geq$ 25 kPa (2500 mmH_2O))
		± (1.97 × $\frac{25}{\chi}$)%	(For χ < 25 kPa (2500 mmH_2O))

Model STE929 (for high-temperature service)

Material of wetted parts: SUS316, SUS316L
Flange size: Flush diaphragm 1.5 inch (40 mm)

Accuracy		± 0.3%	(For $\chi \geq$ 12.5 kPa (1250 mmH_2O))
		± (0.3 × $\frac{12.5}{\chi}$)%	(For χ < 12.5 kPa (1250 mmH_2O))
Temperature character-istics (Shift from the set range) Change of 30ºC (Range from -5 to 55ºC)	Zero shift	± 1.08%	(For $\chi \geq$ 25 kPa (2500 mmH_2O))
		± (1.08 × $\frac{25}{\chi}$)%	(For χ < 25 kPa (2500 mmH_2O))
	Combined shift	± 6.54%	(For $\chi \geq$ 25 kPa (2500 mmH_2O))
		± (6.54 × $\frac{25}{\chi}$)%	(For χ < 25 kPa (2500 mmH_2O))
Static pressure effect (Shift from the set range) Change of 7 MPa (70 kgf/cm^2)	Zero shift	± 2.7%	(For $\chi \geq$ 25 kPa (2500 mmH_2O))
		± (2.7 × $\frac{25}{\chi}$)%	(For χ < 25 kPa (2500 mmH_2O))
	Combined shift	± 3.5%	(For $\chi \geq$ 25 kPa (2500 mmH_2O))
		± (3.5 × $\frac{25}{\chi}$)%	(For χ < 25 kPa (2500 mmH_2O))

*Note) *3 Within a range of URV $\geq$ 0 and LRV $\geq$ 0*

Model STE929 (for regular type / high-temperature service / oxygen service)

Material of wetted parts: SUS316, SUS316L
Flange size: Extended diaphragm 2 inches (50 mm)

Accuracy		± 0.3%	(For $\chi \geq 12.5$ kPa (1250 mmH_2O))
		± $(0.3 \times \frac{12.5}{\chi})$%	(For $\chi < 12.5$ kPa (1250 mmH_2O))
Temperature characteristics (Shift from the set range) Change of 30ºC (Range from -5 to 55ºC)	Zero shift	± 1.08%	(For $\chi \geq 25$ kPa (2500 mmH_2O))
		± $(1.08 \times \frac{25}{\chi})$%	(For $\chi < 25$ kPa (2500 mmH_2O))
	Combined shift	± 6.54%	(For $\chi \geq 25$ kPa (2500 mmH_2O))
		± $(6.54 \times \frac{25}{\chi})$%	(For $\chi < 25$ kPa (2500 mmH_2O))
Static pressure effect (Shift from the set range) Change of 7 MPa (70 kgf/cm^2)	Zero shift	± 2.7%	(For $\chi \geq 25$ kPa (2500 mmH_2O))
		± $(2.7 \times \frac{25}{\chi})$%	(For $\chi < 25$ kPa (2500 mmH_2O))
	Combined shift	± 3.5%	(For $\chi \geq 25$ kPa (2500 mmH_2O))
		± $(3.5 \times \frac{25}{\chi})$%	(For $\chi < 25$ kPa (2500 mmH_2O))

Model STE929 (for regular type / high-temperature / oxygen / chlorine service)

Material of wetted parts: Hastelloy C, Tantalum
Flange size: Flush diaphragm 2 inches (50 mm), 1.5 inch (40 mm)

Accuracy		± 0.4%	(For $\chi \geq 12.5$ kPa (1250 mmH_2O))
		± $(0.4 \times \frac{12.5}{\chi})$%	(For $\chi < 12.5$ kPa (1250 mmH_2O))
Temperature characteristics (Shift from the set range) Change of 30ºC (Range from -5 to 55ºC)	Zero shift	± 2.15%	(For $\chi \geq 25$ kPa (2500 mmH_2O))
		± $(2.15 \times \frac{25}{\chi})$%	(For $\chi < 25$ kPa (2500 mmH_2O))
	Combined shift	± 6.55%	(For $\chi \geq 25$ kPa (2500 mmH_2O))
		± $(6.55 \times \frac{25}{\chi})$%	(For $\chi < 25$ kPa (2500 mmH_2O))
Static pressure effect (Shift from the set range) Change of 7 MPa (70 kgf/cm^2)	Zero shift	± 6.00%	(For $\chi \geq 25$ kPa (2500 mmH_2O))
		± $(6.00 \times \frac{25}{\chi})$%	(For $\chi < 25$ kPa (2500 mmH_2O))
	Combined shift	± 7.00%	(For $\chi \geq 25$ kPa (2500 mmH_2O))
		± $(7.00 \times \frac{25}{\chi})$%	(For $\chi < 25$ kPa (2500 mmH_2O))

*Note) *3 Within a range of URV $\geq$ 0 and LRV $\geq$ 0*

Model STE930 (for regular type / high-temperature service / oxygen service)

Material of wetted parts: SUS316, SUS316L
Flange size: Flush diaphragm 2 inches (50 mm), 1.5 inch (40 mm) Extended diaphragm 3 inches (80 mm), 2 inches (50 mm)

Accuracy (*3)		± 0.2%	(For $\chi \geq 210$ kPa (2.1 kgf/cm^2))
		± (0.05 + 0.15 × $\frac{210}{\chi}$)%	(For $\chi < 210$ kPa (2.1 kgf/cm^2))
Temperature character-istics (Shift from the set range) Change of 30ºC (*3) (Range from -5 to 55ºC)	Zero shift	± (0.14 + 0.27 × $\frac{210}{\chi}$)%	χ: kPa
	Combined shift	± 1.53%	(For $\chi \geq 210$ kPa (2.1 kgf/cm^2))
		± (1.2+ 0.33 × $\frac{210}{\chi}$)%	(For $\chi < 210$ kPa (2.1 kgf/cm^2))
Static pressure effect (Shift from the set range) Change of 7 MPa (70 kgf/cm^2)	Zero shift	± (0.03 + 0.47 × $\frac{700}{\chi}$)%	χ: kPa
	Combined shift	± (0.03 + 0.72 × $\frac{700}{\chi}$)%	χ: kPa

Model STE930 (for regular type / high-temperature / oxygen / chlorine service)

Material of wetted parts: Hastelloy C, Tantalum
Flange size: Flush diaphragm 2 inches (50 mm), 1.5 inch (40 mm)

Accuracy (*3)		± 0.2%	(For $\chi \geq 210$ kPa (2.1 kgf/cm^2))
		± (0.05 + 0.15 × $\frac{210}{\chi}$)%	(For $\chi < 210$ kPa (2.1 kgf/cm^2))
Temperature character-istics (Shift from the set range) Change of 30ºC (*3) (Range from -5 to 55ºC)	Zero shift	± (0.15 + 0.7 × $\frac{210}{\chi}$)%	χ: kPa
	Combined shift	± 3.0%	(For $\chi \geq 210$ kPa (2.1 kgf/cm^2))
		± (2.2+ 0.8 × $\frac{210}{\chi}$)%	(For $\chi < 210$ kPa (2.1 kgf/cm^2))
Static pressure effect (Shift from the set range) Change of 7 MPa (70 kgf/cm^2)	Zero shift	± (0.03 + 0.47 × $\frac{700}{\chi}$)%	χ: kPa
	Combined shift	± (0.03 + 0.72 × $\frac{700}{\chi}$)%	χ: kPa

*Note) *3 Within a range of URV $\geq$ 0 and LRV $\geq$ 0*

Model STE929 (for high temperature and vacuum / high temperature and high vacuum)

Material of wetted parts: SUS316, SUS316L
Flange size: Flush diaphragm 3 inches (80 mm) Extended diaphragm 4 inches (100mm)

Accuracy		± 0.3%	(For $\chi \geq$ 12.5 kPa (1250 mmH_2O))
		± (0.3 × $\frac{12.5}{\chi}$)%	(For χ < 12.5 kPa (1250 mmH_2O))
Temperature characteristics (Shift from the set range) Change of 30ºC (Range from -5 to 55ºC)	Zero shift	± 0.81%	(For $\chi \geq$ 25 kPa (2500 mmH_2O))
		± (0.81 × $\frac{25}{\chi}$)%	(For χ < 25 kPa (2500 mmH_2O))
	Combined shift	± 1.36%	(For $\chi \geq$ 25 kPa (2500 mmH_2O))
		± (1.36 × $\frac{25}{\chi}$)%	(For χ < 25 kPa (2500 mmH_2O))
Static pressure effect (Shift from the set range) Change of 7 MPa (70 kgf/cm^2)	Zero shift	± 6.0%	(For $\chi \geq$ 25 kPa (2500 mmH_2O))
		± (6.0 × $\frac{25}{\chi}$)%	(For χ < 25 kPa (2500 mmH_2O))
	Combined shift	± 7.0%	(For $\chi \geq$ 25 kPa (2500 mmH_2O))
		± (7.0 × $\frac{25}{\chi}$)%	(For χ < 25 kPa (2500 mmH_2O))

Model STE930 (for high temperature and vacuum / high temperature and high vacuum)

Material of wetted parts: SUS316, SUS316L
Flange size: Flush diaphragm 3 inches (80 mm) Extended diaphragm 4 inches (100mm)

Accuracy (*3)		± 0.2%	(For $\chi \geq$ 210 kPa (2.1 kgf/cm^2))
		± (0.05 + 0.15 × $\frac{210}{\chi}$)%	(For χ < 210 kPa (2.1 kgf/cm^2))
Temperature characteristics (Shift from the set range) Change of 30ºC (*3) (Range from -5 to 55ºC)	Zero shift	± (0.15 + 0.7 × $\frac{210}{\chi}$)%	χ: kPa
	Combined shift	± 1.75%	(For $\chi \geq$ 210 kPa (2.1 kgf/cm^2))
		± (1.00+ 0.75 × $\frac{210}{\chi}$)%	(For χ < 210 kPa (2.1 kgf/cm^2))
Static pressure effect (Shift from the set range) Change of 7 MPa (70 kgf/cm^2)	Zero shift	± (0.75 × $\frac{700}{\chi}$)%	χ: kPa
	Combined shift	± (1.00 × $\frac{700}{\chi}$)%	χ: kPa

Model STE929 (for high temperature and vacuum / high temperature and high vacuum)

Material of wetted parts: Hastelloy C, Tantalum
Flange size: Flush diaphragm 3 inches (80 mm)

Accuracy		± 0.4%	(For $\chi \geq$ 12.5 kPa (1250 mmH_2O))
		± (0.4 × $\frac{12.5}{\chi}$)%	(For χ < 12.5 kPa (1250 mmH_2O))
Temperature characteristics (Shift from the set range) Change of 30ºC (Range from -5 to 55ºC)	Zero shift	± 2.15%	(For $\chi \geq$ 25 kPa (2500 mmH_2O))
		± (2.15 × $\frac{25}{\chi}$)%	(For χ < 25 kPa (2500 mmH_2O))
	Combined shift	± 3.0%	(For $\chi \geq$ 25 kPa (2500 mmH_2O))
		± (3.0 × $\frac{25}{\chi}$)%	(For χ < 25 kPa (2500 mmH_2O))
Static pressure effect (Shift from the set range) Change of 7 MPa (70 kgf/cm^2)	Zero shift	± 6.00%	(For $\chi \geq$ 25 kPa (2500 mmH_2O))
		± (6.00 × $\frac{25}{\chi}$)%	(For χ < 25 kPa (2500 mmH_2O))
	Combined shift	± 7.00%	(For $\chi \geq$ 25 kPa (2500 mmH_2O))
		± (7.00 × $\frac{25}{\chi}$)%	(For χ < 25 kPa (2500 mmH_2O))

*Note) *3 Within a range of URV $\geq$ 0 and LRV $\geq$ 0*

Model STE930 (for high temperature and vacuum / high temperature and high vacuum)

Material of wetted parts: Hastelloy C, Tantalum
Flange size: Flush diaphragm 3 inches (80 mm)

Accuracy (*3)		± 0.2%	(For $\chi \geq$ 210 kPa (2.1 kgf/cm^2))
		± (0.05 + 0.15 × $\frac{210}{\chi}$)%	(For χ < 210 kPa (2.1 kgf/cm^2))
Temperature character-istics (Shift from the set range) Change of 30ºC (*3) (Range from -5 to 55ºC)	Zero shift	± (0.15 + 0.7 × $\frac{210}{\chi}$)%	χ: kPa
	Combined shift	± 1.75%	(For $\chi \geq$ 210 kPa (2.1 kgf/cm^2))
		± (1.00+ 0.75 × $\frac{210}{\chi}$)%	(For χ < 210 kPa (2.1 kgf/cm^2))
Static pressure effect (Shift from the set range) Change of 7 MPa (70 kgf/cm^2)	Zero shift	± (0.75 × $\frac{700}{\chi}$)%	χ: kPa
	Combined shift	± (1.00 × $\frac{700}{\chi}$)%	χ: kPa

Model STE929 (for high temperature and vacuum / high temperature and high vacuum)

Material of wetted parts: SUS316, SUS316L
Flange size: Flush diaphragm 2 inches (50 mm), 1.5 inch (40 mm)

Accuracy		± 0.3%	(For $\chi \geq$ 12.5 kPa (1250 mmH$_2$O))
		± (0.3 × $\frac{12.5}{\chi}$)%	(For χ < 12.5 kPa (1250 mmH$_2$O))
Temperature character-istics (Shift from the set range) Change of 30ºC (Range from -5 to 55ºC)	Zero shift	± 1.8%	(For $\chi \geq$ 25 kPa (2500 mmH$_2$O))
		± (1.8 × $\frac{25}{\chi}$)%	(For χ < 25 kPa (2500 mmH$_2$O))
	Combined shift	± 6.5%	(For $\chi \geq$ 25 kPa (2500 mmH$_2$O))
		± (6.5 × $\frac{25}{\chi}$)%	(For χ < 25 kPa (2500 mmH$_2$O))
Static pressure effect (Shift from the set range) Change of 7 MPa (70 kgf/cm^2)	Zero shift	± 6.0%	(For $\chi \geq$ 25 kPa (2500 mmH$_2$O))
		± (6.0 × $\frac{25}{\chi}$)%	(For χ < 25 kPa (2500 mmH$_2$O))
	Combined shift	± 7.0%	(For $\chi \geq$ 25 kPa (2500 mmH$_2$O))
		± (7.0 × $\frac{25}{\chi}$)%	(For χ < 25 kPa (2500 mmH$_2$O))

Model STE929 (for high temperature and vacuum / high temperature and high vacuum)

Material of wetted parts: SUS316, SUS316L
Flange size: Extended diaphragm 3 inches (80 mm), 2 inches (50 mm)

Accuracy		± 0.3%	(For $\chi \geq$ 12.5 kPa (1250mmH2O))
		± (0.3 × $\frac{12.5}{\chi}$)%	(For χ < 12.5 kPa (1250 mmH$_2$O))
Temperature character-istics (Shift from the set range) Change of 30ºC (Range from -5 to 55ºC)	Zero shift	± 1.8%	(For $\chi \geq$ 25 kPa (2500 mmH$_2$O))
		± (1.8 × $\frac{25}{\chi}$)%	(For χ < 25 kPa (2500 mmH$_2$O))
	Combined shift	± 4.0%	(For $\chi \geq$ 25 kPa (2500 mmH$_2$O))
		± (4.0 × $\frac{25}{\chi}$)%	(For χ < 25 kPa (2500 mmH$_2$O))
Static pressure effect (Shift from the set range) Change of 7 MPa (70 kgf/cm^2)	Zero shift	± 6.0%	(For $\chi \geq$ 25 kPa (2500 mmH$_2$O))
		± (6.0 × $\frac{25}{\chi}$)%	(For χ < 25 kPa (2500 mmH$_2$O))
	Combined shift	± 7.0%	(For $\chi \geq$ 25 kPa (2500 mmH$_2$O))
		± (7.0 × $\frac{25}{\chi}$)%	(For χ < 25 kPa (2500 mmH$_2$O))

*Note) *3 Within a range of URV $\geq$ 0 and LRV $\geq$ 0*

Model STE930 (for high temperature and vacuum / high temperature and high vacuum)

Material of wetted parts: SUS316, SUS316L
Flange size: Flush diaphragm 2 inches (50 mm), 1.5 inch (40 mm) Extended diaphragm 3 inches (80mm), 2 inches (50 mm)

Accuracy (*3)		± 0.2%	(For $\chi \geq$ 210 kPa (2.1 kgf/cm^2))
		± (0.2 × $\frac{210}{\chi}$)%	(For χ < 210 kPa (2.1 kgf/cm^2))
Temperature characteristics (Shift from the set range) Change of 30ºC (*3) (Range from -5 to 55ºC)	Zero shift	± (0.15 + 0.7 × $\frac{210}{\chi}$)%	χ: kPa
	Combined shift	± 1.87%	(For $\chi \geq$ 210 kPa (2.1 kgf/cm^2))
		± (1.2+ 0.67 × $\frac{210}{\chi}$)%	(For χ < 210 kPa (2.1 kgf/cm^2))
Static pressure effect (Shift from the set range) Change of 7 MPa (70 kgf/cm^2)	Zero shift	± (0.75 × $\frac{700}{\chi}$)%	χ: kPa
	Combined shift	± (1.0 × $\frac{700}{\chi}$)%	χ: kPa

Model STE929 (for high temperature and vacuum / high temperature and high vacuum)

Material of wetted parts: Hastelloy C, Tantalum
Flange size: Flush diaphragm 2 inches (50 mm), 1.5 inch (40 mm)

Accuracy		± 0.4%	(For $\chi \geq$ 12.5 kPa (1250 mmH$_2$O))
		± (0.4 × $\frac{12.5}{\chi}$)%	(For χ < 12.5 kPa (1250 mmH$_2$O))
Temperature characteristics (Shift from the set range) Change of 30ºC (Range from -5 to 55ºC)	Zero shift	± 2.15%	(For $\chi \geq$ 25 kPa (2500 mmH$_2$O))
		± (2.15 × $\frac{25}{\chi}$)%	(For χ < 25 kPa (2500 mmH$_2$O))
	Combined shift	± 6.55%	(For $\chi \geq$ 25 kPa (2500 mmH$_2$O))
		± (6.55 × $\frac{25}{\chi}$)%	(For χ < 25 kPa (2500 mmH$_2$O))
Static pressure effect (Shift from the set range) Change of 7 MPa (70 kgf/cm^2)	Zero shift	± 6.00%	(For $\chi \geq$ 25 kPa (2500 mmH$_2$O))
		± (6.00 × $\frac{25}{\chi}$)%	(For χ < 25 kPa (2500 mmH$_2$O))
	Combined shift	± 7.00%	(For $\chi \geq$ 25 kPa (2500 mmH$_2$O))
		± (7.00 × $\frac{25}{\chi}$)%	(For χ < 25 kPa (2500 mmH$_2$O))

Model STE930 (for high temperature and vacuum / high temperature and high vacuum)

Material of wetted parts: Hastelloy C, Tantalum
Flange size: Flush diaphragm 2 inches (50 mm), 1.5 inch (40 mm)

Accuracy (*3)		± 0.2%	(For x $\geq$ 210 kPa (2.1 kgf/cm^2))
		± (0.05 + 0.15 × $\frac{210}{\chi}$)%	(For x < 210 kPa (2.1 kgf/cm^2))
Temperature characteristics (Shift from the set range) Change of 30ºC (*3) (Range from -5 to 55ºC)	Zero shift	± (0.15 + 0.7 × $\frac{210}{\chi}$)%	x: kPa
	Combined shift	± 3.0%	(For x $\geq$ 210 kPa (2.1 kgf/cm^2))
		± (2.2+ 0.8 × $\frac{210}{\chi}$)%	(For x < 210 kPa (2.1 kgf/cm^2))
Static pressure effect (Shift from the set range) Change of 7 MPa (70 kgf/cm^2)	Zero shift	± (0.75 × $\frac{700}{\chi}$)%	x: kPa
	Combined shift	± (1.0 × $\frac{700}{\chi}$)%	x: kPa

*Note) *3 Within a range of URV $\geq$ 0 and LRV $\geq$ 0*

MODEL SELECTION

ST3000 series 900 electric difference pressure transmitter
Model STE929 / STE930 (Remote-sealed diaphragm type)
Flush diaphragm 3 inches (80 mm) for regular / high-temperature service

Model No.: STE9XX - **I II III IV V VI VII VIII** - Option I - Option II

Basic Model No.

	Measuring span	2.5 to 100 kPa (250 to 10,160 mmH_2O)	STE929	Flush diaphragm flange type: 3 inches (80 mm)
		35 to 700 kPa (0.35 to 7 kgf/cm^2)	STE930	

Selection				Code	Fill fluid code			
I	Fill fluid	Model No.	Fill fluid		1	2	3	5
		STE929 Flush diaphragm 3 inches (80 mm)	Regular type service (Silicone oil)	1				
			For oxygen service (Fluorine oil) *3	2				
			For high-temperature service (Silicone oil) *17	3				
			For chlorine service (Fluorine oil) *3	5				
		STE930 Flush diaphragm 3 inches (80 mm)	Regular type service (Silicone oil)	1				
			For oxygen service (Fluorine oil) *3	2				
			For high-temperature service (Silicone oil) *17	3				
			For chlorine service (Fluorine oil) *3	5				
II	Flange standard	ANSI flange		A	✔	✔	✔	✔
		JIS flange		J	✔	✔	✔	✔
		JPI flange		P	✔	✔	✔	✔
III	Flange type & rating	JIS 10K, ANSI/JPI 150 (RF) equivalent		A	✔	✔	✔	✔
		JIS 20K, ANSI/JPI 300 (RF) equivalent		B	✔	✔	✔	✔
		JIS 30K, ANSI/JPI 600 (RF) equivalent		C	✔	✔	✔	✔
IV	Flange material	SUS304		7	✔	✔	✔	✔
		SUS316		2	✔	✔	✔	✔
		SUS316L		8	✔	✔	✔	✔
V	Material of wetted parts	SUS316 (Diaphragm: SUS316L, others: SUS316)		2	✔	✔	✔	
		SUS316L (Diaphragm: SUS316L, others: SUS316L)		8	✔	✔	✔	
		Tantalum (Diaphragm: Tantalum, others: Tantalum) *17		4	✔	✔	✔	✔
		Hastelloy C (Diaphragm: Hastelloy C, others: Hastelloy C)		9	✔	✔	✔	
VI	Finish of gasket face	Standard (JIS Ra3.2 (12.5S))		J	✔	✔	✔	✔
VII	Length of extended parts	Flush diaphragm 3 inches (80 mm)		00	✔	✔	✔	✔
VIII	Length of capillary tube	2 m		2	✔	✔	✔	✔
		3 m		3	✔	✔	✔	✔
		4 m		4	✔	✔	✔	✔
		5 m		5	✔	✔	✔	✔
		6 m		6	✔	✔	✔	✔
		7 m		7	✔	✔	✔	✔
		8 m		8	✔	✔	✔	✔
		9 m		9	✔	✔	✔	✔
		10 m		A	✔	✔	✔	✔
	Length of capillary tube with olefin coating	2 m		B	✔	✔	✔	✔
		3 m		C	✔	✔	✔	✔
		4 m		H	✔	✔	✔	✔
		5 m		D	✔	✔	✔	✔
		6 m		J	✔	✔	✔	✔
		7 m		E	✔	✔	✔	✔
		8 m		F	✔	✔	✔	✔
		9 m		K	✔	✔	✔	✔
		10 m		G	✔	✔	✔	✔

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Model No.: STE9XX - I II III IV V VI VII VIII - **Option I** - **Option II**

			Fill fluid code			
			1	2	3	5
Options I	No options	X	✔	✔	✔	✔
	Lightning arrester	L	✔	✔	✔	✔
	Built-in indicating smart meter (0 to 100% liner scales)	P	✔	✔	✔	✔
	Built-in indicating smart meter (engineering unit scales)	R	✔	✔	✔	✔
	SUS304 bolt and nuts material	W	✔	✔	✔	✔
	SUS630 bolt and nuts material	U	✔	✔	✔	✔
	Corrosion-resistant finish	A	✔	✔	✔	✔
	Corrosion-proof finish	B	✔	✔	✔	✔
	Corrosion-resistant finish, silver paint	D	✔	✔	✔	✔
	Oil free finish	K	✔	✔	✔	✔
	FEP protective film	T	✔	✔		✔
	FM Explosionproof	3	✔	✔	✔	✔
	FM Intrinsically safe	4	✔	✔	✔	✔
	Combination of FM Explosionproof and Intrinsically safe	5	✔	✔	✔	✔
	ATEX Flameproof	6	✔	✔	✔	✔
	ATEX Intrinsic safety	7	✔	✔	✔	✔
	CSA Explosion-proof	8	✔	✔	✔	✔
		-				
Options II	No option	XX	✔	✔	✔	✔
	Burn-out feature (Lower limit of value at abnormal condition) *2	A4	✔	✔	✔	✔
	Burn-out feature (Upper limit of value at abnormal condition) *2	A5	✔	✔	✔	✔
	Water free finish (with oil free finish)	A7	✔	✔	✔	✔
	NEPSI Flameproof	C1	✔	✔	✔	✔
	NEPSI Intrinsically safe	C2	✔	✔	✔	✔
	Custom calibration	C7	✔	✔	✔	✔
	Digital output *38	D5	✔	✔	✔	✔
	HART communication *5 *38	D7	✔	✔	✔	✔
	One elbow	E1	✔	✔	✔	✔
	Two elbows	E2	✔	✔	✔	✔
	External zero/span adjustment	E5	✔	✔	✔	✔
	Mounting bracket	E9	✔	✔	✔	✔
	0.1 mm thickness diaphragm *18	F4	✔	✔	✔	✔
	Material certificate	H2	✔	✔	✔	✔
	Direct mounting kits	R8	✔	✔		✔
	SI unit	U1	✔	✔	✔	✔

Note) **2 The output current value ranges from 3.0 to 3.8 mA for the lower limit and from 20.8 to 21.8 mA for the upper limit.*
**3 In case "For oxygen or chlorine (Fluorine oil) service" is used, "oil free finish - code K" must be selected.*
**5 Intrinsically safe for NEPSI cannot be selected with -D7.*
**17 In case "Tantalum" is used for diaphragm material and in case of "for high-temperature service", normal operating conditions of meter body (process fluid) temperature is -10 to +180 dig.C*
**18 0.1 mm thickness diaphragm option is only available for material of wetted parts: "SUS316" and "SUS316L".*
**38 Either one of "digital output - code D5" or "HART communication - code D7" can be selected at a time.*

ST3000 series 900 electric difference pressure transmitter
Model STE929 / STE930 (Remote-sealed diaphragm type)
Extended diaphragm 4 inches (100 mm)
for regular / high-temperature service

Model No.: STE9XX - **I II III IV V VI VII VIII** - Option I - Option II

Basic Model No.

	Measuring span	2.5 to 100 kPa (250 to 10,160 mmH_2O)	STE929	Extended diaphragm flange type: 4 inches (100 mm)
		35 to 700 kPa (0.35 to 7 kgf/cm^2)	STE930	

Selection				Code	Fill fluid code		
I	Fill fluid	Flange type	Fill fluid		1	2	3
		STE929 Extended diaphragm 4 inches (100 mm)	Regular type service (Silicone oil) *16	1			
			For oxygen service (Fluorine oil) *3 *16	2			
			For high-temperature service (Silicone oil) *19 *20	3			
		STE930 Extended diaphragm 4 inches (100 mm)	Regular type service (Silicone oil) *16	1			
			For oxygen service (Fluorine oil) *3 *16	2			
			For high-temperature service (Silicone oil) *19 *20	3			
II	Flange standard	ANSI flange		A	✔	✔	✔
		JIS flange		J	✔	✔	✔
		JPI flange		P	✔	✔	✔
III	Flange type & rating	JIS 10K, ANSI/JPI 150 (RF) equivalent		A	✔	✔	✔
		JIS 20K, ANSI/JPI 300 (RF) equivalent *19		B	✔	✔	✔
		JIS 30K *16 *20		C	✔	✔	✔
IV	Flange material	SUS304		7	✔	✔	✔
		SUS316		2	✔	✔	✔
		SUS316L *16 *19 *20		8	✔	✔	✔
V	Material of wetted parts	SUS316 (Diaphragm: SUS316L, others: SUS316)		2	✔	✔	✔
		SUS316L (Diaphragm: SUS316L, others: SUS316L) *16 *19 *20		8	✔	✔	✔
VI	Finish of gasket face	Standard (JIS Ra3.2 (12.5S))		J	✔	✔	✔
VII	Length of extended parts	L = 50 mm (4 inches / 100 mm) *20		09	✔	✔	✔
		L = 100 mm (4 inches / 100 mm) *20		14	✔	✔	✔
		L = 150 mm (4 inches / 100 mm) *16 *20		19	✔	✔	✔
		L = 200 mm (4 inches / 100 mm) *16 *20		24	✔	✔	✔
		L = 250 mm (4 inches / 100 mm) *16 *19 *20		29	✔	✔	✔
		L = 300 mm (4 inches / 100 mm) *16 *19 *20		34	✔	✔	✔
VIII	Length of capillary tube	2 m		2	✔	✔	✔
		3 m		3	✔	✔	✔
		4 m		4	✔	✔	✔
		5 m		5	✔	✔	✔
		6 m		6	✔	✔	✔
		7 m		7	✔	✔	✔
		8 m		8	✔	✔	✔
		9 m		9	✔	✔	✔
		10 m		A	✔	✔	✔
	Length of capillary tube with olefin coating	2 m		B	✔	✔	✔
		3 m		C	✔	✔	✔
		4m		H	✔	✔	✔
		5 m		D	✔	✔	✔
		6 m		J	✔	✔	✔
		7 m		E	✔	✔	✔
		8 m		F	✔	✔	✔
		9 m		K	✔	✔	✔
		10 m		G	✔	✔	✔

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Model No.: STE9XX - I II III IV V VI VII VIII - **Option I** - **Option II**

		Code	Fill fluid code		
			1	2	3
Options I	No options	X	✔	✔	✔
	Lightning arrester	L	✔	✔	✔
	Built-in indicating smart meter (0 to 100% liner scales)	P	✔	✔	✔
	Built-in indicating smart meter (engineering unit scales)	R	✔	✔	✔
	SUS304 bolt and nuts material	W	✔	✔	✔
	SUS630 bolt and nuts material	U	✔	✔	✔
	Corrosion-resistant finish	A	✔	✔	✔
	Corrosion-proof finish	B	✔	✔	✔
	Corrosion-resistant finish, silver paint	D	✔	✔	✔
	Oil free finish	K	✔	✔	✔
	FM Explosionproof	3	✔	✔	✔
	FM Intrinsically safe	4	✔	✔	✔
	Combination of FM Explosionproof and Intrinsically safe	5	✔	✔	✔
	ATEX Flameproof	6	✔	✔	✔
	ATEX Intrinsic safety	7	✔	✔	✔
	CSA Explosion-proof	8	✔	✔	✔
		-			
Options II	No option	XX	✔	✔	✔
	Burn-out feature (Lower limit of value at abnormal condition) *2	A4	✔	✔	✔
	Burn-out feature (Upper limit of value at abnormal condition) *2	A5	✔	✔	✔
	Water free finish (with oil free finish)	A7	✔	✔	✔
	NEPSI Flameproof	C1	✔	✔	✔
	NEPSI Intrinsically safe	C2	✔	✔	✔
	Custom calibration	C7	✔	✔	✔
	Digital output	D5	✔	✔	✔
	HART communication *5	D7	✔	✔	✔
	One elbow	E1	✔	✔	✔
	Two elbows	E2	✔	✔	✔
	External zero/span adjustment	E5	✔	✔	✔
	Mounting bracket	E9	✔	✔	✔
	0.1 mm thickness diaphragm *15	F4	✔	✔	✔
	Material certificate	H2	✔	✔	✔
	Direct mounting kits	R8	✔	✔	
	SI unit	U1	✔	✔	✔

Note) **2 The output current value ranges from 3.0 to 3.8 mA for the lower limit and from 20.8 to 21.8 mA for the upper limit.*
**3 In case "for oxygen or chlorine (fluorine oil) service" is used, "oil free finish - code K" must be selected.*
**5 Intrinsically safe for NEPSI cannot be selected with -D7.*
**15 Only available for material of wetted parts: "SUS316" and "SUS316L".*
**16 In case "JIS30K" is used for flange type and rating. "SUS316L" is used for flange material and for regular service or oxygen service, not available for length of extended parts: 150 / 200 / 250 / 300 mm.*
**19 In case fill fluid: for high-temperature service and flange rating: ANSI300 and wetted parts material: SUS316L, extended length of flange 250 / 300 mm are not available.*
**20 In case flange rating: JIS30K and wetted parts material: SUS316L, and for high temperature service, extended diaphragm type is not available.*
**38 Either one of "digital output - code D5" or "HART communication - code D7" can be selected at a time.*

ST3000 series 900 electric difference pressure transmitter
Model STE929 / STE930 (Remote-sealed diaphragm type)
Flush diaphragm 2 inches (50 mm), 1.5 inch (40 mm)
for regular / high-temperature service

Model No.: STE9XX - **I II III IV V VI VII VIII** - Option I - Option II

Basic Model No.

	Measuring span	2.5 to 100 kPa (250 to 10,160 mmH_2O)	STE929	Flush diaphragm type: 2 inches (50 mm), 1.5 inch (40 mm)
		35 to 700 kPa (0.35 to 7 kgf/cm^2)	STE930	

Selection				Code	Fill Fluid Code			
I	Fill fluid	Flange type	Fill fluid		1	2	3	5
		STE929 Flush diaphragm 2 inches (50 mm) 1.5 inch (40 mm)	Regular type service (Silicone oil)	1				
			For oxygen service (Fluorine oil) *3	2				
			For high-temperature service (Silicone oil) *17	3				
			For chlorine service (Fluorine oil) *3	5				
		STE930 Flush diaphragm 2 inches (50 mm) 1.5 inch (40 mm)	Regular type service (Silicone oil)	1				
			For oxygen service (Fluorine oil) *3	2				
			For high-temperature service (Silicone oil) *17	3				
			For chlorine service (Fluorine oil) *3	5				
II	Flange standard	ANSI flange		A	✔	✔	✔	✔
		JIS flange		J	✔	✔	✔	✔
		JPI flange		P	✔	✔	✔	✔
III	Flange type & rating	JIS 10K, ANSI/JPI 150 (RF) equivalent		A	✔	✔	✔	✔
		JIS 20K, ANSI/JPI 300 (RF) equivalent		B	✔	✔	✔	✔
		JIS 30K, ANSI/JPI 600 (RF) equivalent		C	✔	✔	✔	✔
IV	Flange material	SUS304		7	✔	✔	✔	✔
		SUS316		2	✔	✔	✔	✔
		SUS316L		8	✔	✔	✔	✔
V	Material of wetted parts	SUS316 (Diaphragm: SUS316L, others: SUS316)		2	✔	✔	✔	
		SUS316L (Diaphragm: SUS316L, others: SUS316L)		8	✔	✔	✔	
		Tantalum (Diaphragm: Tantalum, others: Tantalum) *17 *21		4	✔	✔		✔
		Hastelloy C (Diaphragm: Hastelloy C, others: Hastelloy C)		9	✔	✔	✔	
VI	Finish of gasket face	Standard (JIS Ra3.2 (12.5S))		J	✔	✔	✔	✔
VII	Length of extended parts	Flush diaphragm 2 inches (50 mm)		01	✔	✔	✔	✔
		Flush diaphragm 1.5 inch (40 mm) *21		02	✔	✔	✔	✔
VIII	Length of capillary tube	2 m		2	✔	✔	✔	✔
		3 m		3	✔	✔	✔	✔
		4 m *22		4	✔	✔	✔	✔
		5 m *22		5	✔	✔	✔	✔
	Length of capillary tube with olefin coating	2 m		B	✔	✔	✔	✔
		3 m		C	✔	✔	✔	✔
		4 m *22		H	✔	✔	✔	✔
		5 m *22		D	✔	✔	✔	✔

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Model No.: STE9XX - I II III IV V VI VII VIII - **Option I** - **Option II**

		Code	Fill fluid code			
			1	2	3	5
Options I	No options	X	✔	✔	✔	✔
	Lightning arrester	L	✔	✔	✔	✔
	Built-in indicating smart meter (0 to 100% liner scales)	P	✔	✔	✔	✔
	Built-in indicating smart meter (engineering unit scales)	R	✔	✔	✔	✔
	SUS304 bolt and nuts material	W	✔	✔	✔	✔
	SUS630 bolt and nuts material	U	✔	✔	✔	✔
	Corrosion-resistant finish	A	✔	✔	✔	✔
	Corrosion-proof finish	B	✔	✔	✔	✔
	Corrosion-resistant finish, silver paint	D	✔	✔	✔	✔
	Oil free finish	K	✔	✔	✔	✔
	FEP protective film	T	✔	✔		✔
	FM Explosionproof	3	✔	✔	✔	✔
	FM Intrinsically safe	4	✔	✔	✔	✔
	Combination of FM Explosionproof and Intrinsically safe	5	✔	✔	✔	✔
	ATEX Flameproof	6	✔	✔	✔	✔
	ATEX Intrinsic safety	7	✔	✔	✔	✔
	CSA Explosion-proof	8	✔	✔	✔	✔
		-				
Options II	No option	XX	✔	✔	✔	✔
	Burn-out feature (Lower limit of value at abnormal condition) *2	A4	✔	✔	✔	✔
	Burn-out feature (Upper limit of value at abnormal condition) *2	A5	✔	✔	✔	✔
	Water free finish (with oil free finish)	A7	✔	✔	✔	✔
	NEPSI Flameproof	C1	✔	✔	✔	✔
	NEPSI Intrinsically safe	C2	✔	✔	✔	✔
	Custom calibration	C7	✔	✔	✔	✔
	Digital output *38	D5	✔	✔	✔	✔
	HART communication *5 *38	D7	✔	✔	✔	✔
	One elbow	E1	✔	✔	✔	✔
	Two elbows	E2	✔	✔	✔	✔
	External zero/span adjustment	E5	✔	✔	✔	✔
	Mounting bracket	E9	✔	✔	✔	✔
	Material certificate	H2	✔	✔	✔	✔
	Direct mounting kits	R8	✔	✔		✔
	SI unit	U1	✔	✔	✔	✔

Note) **2 The output current value ranges from 3.0 to 3.8 mA for the lower limit and from 20.8 to 21.8 mA for the upper limit.*

**3 In case "for oxygen or chlorine (fluorine oil) service" is used, "oil free finish - code K" must be selected.*

**5 Intrinsically safe for NEPSI cannot be selected with -D7.*

**17 In case "Tantalum" is used for diaphragm material and in case of "For high-temperature service", normal operating conditions of meter body (process fluid) temperature is -10 to +180°C*

**21 In case: basic model is STE929, and Tantalum is used for diaphragm material and flange size is "flush diaphragm 1.5 inch (40 mm)", 2 m or 3 m (Code 2, 3, B, or C) for "length of capillary tube" are applicable and minimum span will be 10 kPa*

**22 Specifications for capillary length 4 m and 5 m are as follows;*

a. Temperature characteristics and static pressure effect will be 1.5 times of those of high-temperature service.
b. Ambient temperature range for regular service: -10 to 55°C, temperature of wetted parts: -30 to 110°C
c. Ambient temperature range for oxygen service: -10 to 55°C, temperature of wetted parts: -10 to 110°C
d. In the case, ambient temperature is 40°C, the highest wetted parts temperature for high-temp service (4 m) will be 280°C.
e. In the case, ambient temperature is 38°C, the highest wetted parts temperature for high-temp service (5 m) will be 280°C.

**38 Either one of "digital output - code D5" or "HART communication - code D7" can be selected at a time.*

ST3000 series 900 electric difference pressure transmitter
Model STE929 / STE930 (Remote-sealed diaphragm type)
Extended diaphragm 3 inches (80 mm), 2 inches (50 mm)
for regular / high-temperature service

Model No.: STE9XX - I II III IV V VI VII VIII - Option I - Option II

Basic Model No.

	Measuring span	2.5 to 100 kPa (250 to 10,160 mmH_2O)	STE929	Extended diaphragm type: 3 inches (80 mm), 2 inches (50 mm)
		35 to 700 kPa (0.35 to 7 kgf/cm^2)	STE930	

Selection I				Code	Fill fluid code		
I	Fill fluid	Flange type	Fill fluid		1	2	3
		STE929 Extended diaphragm 3 inches (80 mm) 2 inches (50 mm)	Regular type service (Silicone oil)	1			
			For oxygen service (Fluorine oil) *3	2			
			For high-temperature service (Silicone oil)	3			
		STE930 Extended diaphragm 3 inches (80 mm) 2 inches (50 mm)	Regular type service (Silicone oil)	1			
			For oxygen service (Fluorine oil) *3	2			
			For high-temperature service (Silicone oil) *31	3			
II	Flange standard	ANSI flange		A	✔	✔	✔
		JIS flange		J	✔	✔	✔
		JPI flange		P	✔	✔	✔
III	Flange type & rating	JIS 10K, ANSI/JPI 150 (RF) equivalent		A	✔	✔	✔
		JIS 20K, ANSI/JPI 300 (RF) equivalent		B	✔	✔	✔
		JIS 30K, ANSI/JPI 600 (RF) equivalent *24 *31		C	✔	✔	✔
IV	Flange material	SUS304		7	✔	✔	✔
		SUS316		2	✔	✔	✔
		SUS316L		8	✔	✔	✔
V	Material of wetted parts	SUS316 (Diaphragm: SUS316L, others: SUS316)		2	✔	✔	✔
		SUS316L (Diaphragm: SUS316L, others: SUS316L) *31		8	✔	✔	✔
VI	Finish of gasket face	Standard (JIS Ra3.2 (12.5S))		J	✔	✔	✔
VII	Length of extended parts	L = 50 mm (3 inches / 80 mm) *24		05	✔	✔	✔
		L = 100 mm (3 inches / 80 mm) *24		10	✔	✔	✔
		L = 150 mm (3 inches / 80 mm) *24		15	✔	✔	✔
		L = 200 mm (3 inches / 80 mm) *24		20	✔	✔	✔
		L = 250 mm (3 inches / 80 mm) *24		25	✔	✔	✔
		L = 300 mm (3 inches / 80 mm) *24		30	✔	✔	✔
		L = 50 mm (2 inches / 50 mm) *24		06	✔	✔	✔
		L = 100 mm (2 inches / 50 mm) *24		11	✔	✔	✔
		L = 150 mm (2 inches / 50 mm) *24		16	✔	✔	✔
		L = 200 mm (2 inches / 50 mm) *24 *31		21	✔	✔	✔
		L = 250 mm (2 inches / 50 mm) *24 *31		26	✔	✔	✔
		L = 300 mm (2 inches / 50 mm) *24 *31		31	✔	✔	✔
VIII	Length of capillary tube	2 m		2	✔	✔	✔
		3 m		3	✔	✔	✔
		4 m *22		4	✔	✔	✔
		5 m *22		5	✔	✔	✔
	Length of capillary tube with olefin coating	2 m		B	✔	✔	✔
		3 m		C	✔	✔	✔
		4 m *22		H	✔	✔	✔
		5 m *22		D	✔	✔	✔

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Model No.: STE9XX - I II III IV V VI VII VIII - **Option I** - **Option II**

		Code	Fill fluid code		
			1	2	3
Options I	No options	X	✔	✔	✔
	Lightning arrester	L	✔	✔	✔
	Built-in indicating smart meter (0 to 100% liner scales)	P	✔	✔	✔
	Built-in indicating smart meter (engineering unit scales)	R	✔	✔	✔
	SUS304 bolt and nuts material	W	✔	✔	✔
	SUS630 bolt and nuts material	U	✔	✔	✔
	Corrosion-resistant finish	A	✔	✔	✔
	Corrosion-proof finish	B	✔	✔	✔
	Corrosion-resistant finish, silver paint	D	✔	✔	✔
	Oil free finish	K	✔	✔	✔
	FM Explosionproof	3	✔	✔	✔
	FM Intrinsically safe	4	✔	✔	✔
	Combination of FM Explosionproof and Intrinsically safe	5	✔	✔	✔
	ATEX Flameproof	6	✔	✔	✔
	ATEX Intrinsic safety	7	✔	✔	✔
	CSA Explosion-proof	8	✔	✔	✔
		-			
Options II	No option	XX	✔	✔	✔
	Burn-out feature (Lower limit of value at abnormal condition) *2	A4	✔	✔	✔
	Burn-out feature (Upper limit of value at abnormal condition) *2	A5	✔	✔	✔
	Water free finish (with oil free finish)	A7	✔	✔	✔
	NEPSI Flameproof	C1	✔	✔	✔
	NEPSI Intrinsically safe	C2	✔	✔	✔
	Custom calibration	C7	✔	✔	✔
	Digital output *38	D5	✔	✔	✔
	HART communication *5 *38	D7	✔	✔	✔
	One elbow	E1	✔	✔	✔
	Two elbows	E2	✔	✔	✔
	External zero/span adjustment	E5	✔	✔	✔
	Mounting bracket	E9	✔	✔	✔
	Material certificate	H2	✔	✔	✔
	Direct mounting kits	R8	✔	✔	
	SI unit	U1	✔	✔	✔

Note) **2 The output current value ranges from 3.0 to 3.8 mA for the lower limit and from 20.8 to 21.8 mA for the upper limit.*

**3 In case "for oxygen or chlorine (fluorine oil) service" is used, "oil free finish - code K" must be selected.*

**5 Intrinsically safe for NEPSI cannot be selected with -D7.*

**22 Specifications for capillary length 4 m and 5 m are as follows;*

a. Temperature characteristics and static pressure effect will be 1.5 times of those of high-temperature service.

b. Ambient temperature range for regular service: -10 to 55°C, temperature of wetted parts: -30 to 110°C

c. Ambient temperature range for oxygen service: -10 to 55°C, temperature of wetted parts: -10 to 110°C

d. In the case, ambient temperature is 40°C, the highest wetted parts temperature for high-temp service (4 m) will be 280°C.

e. In the case, ambient temperature is 38°C, the highest wetted parts temperature for high-temp service (5 m) will be 280°C.

**24 In case of "ANSI/JPI600" is used for 3 inches flange type and rating, not available for the extended diaphragm flange type.*

**31 In case fill fluid: For high-temperature service, for high-temperature vacuum service or high-temperature high vacuum service and 2 inches flange rating: ANSI/JPI 600 and wetted parts material: SUS316L, extension length of flange 200 / 250 / 300 mm are not available.*

**38 Either one of "digital output - code D5" or "HART communication - code D7" can be selected at a time.*

ST3000 series 900 electric difference pressure transmitter
Model STE929 / STE930 (Remote-sealed diaphragm type)
Flush and extended combination flange type
for regular / high-temperature service

Model No.: STE9XX - **I II III IV V VI VII VIII** - Option I - Option II

Basic Model No.

	Measuring span	2.5 to 100 kPa (250 to 10,160 mmH_2O)	STE929	Combination flush & extended diaphragm flange type
		35 to 700 kPa(0.35 to 7 kgf/cm^2)	STE930	Extended diaphragm: 4 inches (100 mm) - Flush diaphragm: 3 inches (80 mm)

Selection					Code	Fill fluid code					
						STE929			STE930		
I	Fill fluid	Flange type	Model No.	Fill fluid		1	2	3	1	2	3
		Combination flush & extended dia-phragm flange type	STE929 Extended dia-phragm: 4 inches (100 mm) - Flush diaphragm: 3 inches (80 mm)	Regular type service (Silicone oil) *16	1						
				For oxygen service (Fluorine oil) *3 *16	2						
				For high-temperature service (Silicone oil) *19 *20	3						
			STE930 Extended dia-phragm: 4 inches (100 mm) - Flush diaphragm: 3 inches (80 mm)	Regular type service (Silicone oil) *16	1						
				For oxygen service (Fluorine oil) *3 *16	2						
				For high-temperature service (Silicone oil) *19 *20	3						
II	Flange standard	ANSI flange			A	✔	✔	✔	✔	✔	✔
		JIS flange			J	✔	✔	✔	✔	✔	✔
		JPI flange			P	✔	✔	✔	✔	✔	✔
III	Flange type & rating	Combination flush & extended diaphragm flange type JIS 10K, ANSI/JPI 150 (RF) equivalent			G	✔	✔	✔	✔	✔	✔
		Combination flush & extended diaphragm flange type JIS 20K, ANSI/JPI 300 (RF) equivalent:*2 *19			H	✔	✔	✔	✔	✔	✔
		Combination flush & extended diaphragm flange type JIS 30K *2 *16 *20			J	✔	✔	✔	✔	✔	✔
IV	Flange material	SUS304			7	✔	✔	✔	✔	✔	✔
		SUS316			2	✔	✔	✔	✔	✔	✔
		SUS316L *2*3			8	✔	✔	✔	✔	✔	✔
V	Material of wetted Parts	SUS316 (Diaphragm: SUS316L, others: SUS316)			2	✔	✔	✔	✔	✔	✔
		SUS316L (Diaphragm: SUS316L, others: SUS316L) *16 *20 *19			8	✔	✔	✔	✔	✔	✔
VI	Finish of gasket face	Standard (JIS Ra3.2 (12.5S))			J	✔	✔	✔	✔	✔	✔
VII	Length of extended parts	L = 50 mm (4 inches / 100 mm)*20			09	✔	✔	✔	✔	✔	✔
		L = 100 mm (4 inches / 100 mm) *20			14	✔	✔	✔	✔	✔	✔
		L = 150 mm (4 inches / 100 mm) *16 *20			19	✔	✔	✔	✔	✔	✔
		L = 200 mm (4 inches / 100 mm) *16 *20			24	✔	✔	✔	✔	✔	✔
		L = 250 mm (4 inches / 100 mm) *16 *19 *20			29	✔	✔	✔	✔	✔	✔
		L = 300 mm (4 inches / 100 mm) *16 *19 *20			34	✔	✔	✔	✔	✔	✔
VIII	Length of capillary tube	2 m			2	✔	✔	✔	✔	✔	✔
		3 m			3	✔	✔	✔	✔	✔	✔
		4 m			4	✔	✔	✔	✔	✔	✔
		5 m			5	✔	✔	✔	✔	✔	✔
		6 m			6	✔	✔	✔	✔	✔	✔
		7 m			7	✔	✔	✔	✔	✔	✔
		8 m			8	✔	✔	✔	✔	✔	✔
		9 m			9	✔	✔	✔	✔	✔	✔
		10 m			A	✔	✔	✔	✔	✔	✔
	Length of capillary tube with olefin coating	2 m			B	✔	✔	✔	✔	✔	✔
		3 m			C	✔	✔	✔	✔	✔	✔
		4 m			H	✔	✔	✔	✔	✔	✔
		5 m			D	✔	✔	✔	✔	✔	✔
		6 m			J	✔	✔	✔	✔	✔	✔
		7 m			E	✔	✔	✔	✔	✔	✔
		8 m			F	✔	✔	✔	✔	✔	✔
		9 m			K	✔	✔	✔	✔	✔	✔
		10 m			G	✔	✔	✔	✔	✔	✔

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Model No.: STE9XX - I II III IV V VI VII VIII - **Option I** - **Option II**

		Code	Fill fluid code					
			STE929			STE930		
			1	2	3	1	2	3
Options I	No options	X	✔	✔	✔	✔	✔	✔
	Lightning arrester	L	✔	✔	✔	✔	✔	✔
	Built-in indicating smart meter (0 to 100% liner scales)	P	✔	✔	✔	✔	✔	✔
	Built-in indicating smart meter (engineering unit scales)	R	✔	✔	✔	✔	✔	✔
	SUS304 Bolt and nuts material	W	✔	✔	✔	✔	✔	✔
	SUS630 Bolt and nuts material	U	✔	✔	✔	✔	✔	✔
	Corrosion-resistant finish	A	✔	✔	✔	✔	✔	✔
	Corrosion-proof finish	B	✔	✔	✔	✔	✔	✔
	Corrosion-resistant finish, silver paint	D	✔	✔	✔	✔	✔	✔
	Oil free finish	K	✔	✔	✔	✔	✔	✔
	FEP protective film	T	✔	✔		✔	✔	
	FM Explosionproof	3	✔	✔	✔	✔	✔	✔
	FM Intrinsically safe	4	✔	✔	✔	✔	✔	✔
	Combination of FM Explosionproof and Intrinsically safe	5	✔	✔	✔	✔	✔	✔
	ATEX Flameproof	6	✔	✔	✔	✔	✔	✔
	ATEX Intrinsic safety	7	✔	✔	✔	✔	✔	✔
	CSA Explosion-proof	8	✔	✔	✔	✔	✔	✔
		-						
Options II	No option	XX	✔	✔	✔	✔	✔	✔
	Burn-out feature (Lower limit of value at abnormal condition) *2	A4	✔	✔	✔	✔	✔	✔
	Burn-out feature (Upper limit of value at abnormal condition) *2	A5	✔	✔	✔	✔	✔	✔
	Water free finish (with oil free finish)	A7	✔	✔	✔	✔	✔	✔
	NEPSI Flameproof	C1	✔	✔	✔	✔	✔	✔
	NEPSI Intrinsically safe	C2	✔	✔	✔	✔	✔	✔
	Custom calibration	C7	✔	✔	✔	✔	✔	✔
	Digital output *38	D5	✔	✔	✔	✔	✔	✔
	HART communication *5 *38	D7	✔	✔	✔	✔	✔	✔
	One elbow	E1	✔	✔	✔	✔	✔	✔
	Two elbows	E2	✔	✔	✔	✔	✔	✔
	External zero/span adjustment	E5	✔	✔	✔	✔	✔	✔
	Mounting bracket	E9	✔	✔	✔	✔	✔	✔
	Material certificate	H2	✔	✔	✔	✔	✔	✔
	Direct mounting kits	R8	✔	✔		✔	✔	
	SI unit	U1	✔	✔	✔	✔	✔	✔

Note) **2 The output current value ranges from 3.0 to 3.8 mA for the lower limit and from 20.8 to 21.8 mA for the upper limit.*
**3 In case "for oxygen or chlorine (fluorine oil) service" is used, "oil free finish - code K" must be selected.*
**5 Intrinsically safe for NEPSI cannot be selected with -D7.*
**16 In case "JIS30K" is used for flange type and rating, "SUS316L" is used for flange material and for regular service or oxygen service, not available for length of extended parts: 150/200/250/300 mm.*
**19 In case fill fluid: for high-temperature service and Flange Rating: ANSI300 and wetted parts material: SUS316L, extension length of Flange 250mm / 300mm are not available.*
**20 In case flange rating: JIS30K and wetted parts material: SUS316L, extended diaphragm type is not available.*
**38 Either one of "digital output - code D5" or "HART communication - code D7" can be selected at a time.*

Notes of order entry

SH No.	SH8030

Must be specified in "Remarks of order entry sheets

ST3000 series 900 electric difference pressure transmitter
Model STE929 / STE930 (Remote-sealed diaphragm type)
Flush diaphragm 3 inches (80 mm)
for high-temperature / vacuum, high-temperature / high vacuum service

Model No.: STE9XX - **I II III IV V VI VII VIII** - Option I - Option II

Basic Model No.

	Measuring span	2.5 to 100 kPa (250 to 10,160 mmH_2O)	STE929	Flush diaphragm flange type: 3 inches (80 mm)
		35 to 700 kPa (0.35 to 7 kgf/cm^2)	STE930	

Selection				Code	Fill fluid code	
I	Fill fluid	Model No.	Fill fluid		4	7
		STE929 Flush diaphragm 3 inches (80 mm)	For high-temperature / vacuum service (Silicone oil)	4		
			For high-temperature / high-vacuum service (Silicone oil)	7		
		STE930 Flush diaphragm 3 inches (80 mm)	For high-temperature / vacuum service (Silicone oil)	4		
			For high-temperature / high-vacuum service (Silicone oil)	7		
II	Flange standard	ANSI flange		A	✔	✔
		JIS flange		J	✔	✔
		JPI flange		P	✔	✔
III	Flange type & rating	JIS 10K, ANSI/JPI 150 (RF) equivalent		A	✔	✔
		JIS 20K, ANSI/JPI 300 (RF) equivalent		B	✔	✔
		JIS 30K, ANSI/JPI 600 (RF) equivalent		C	✔	✔
IV	Flange material	SUS304		7	✔	✔
		SUS316		2	✔	✔
		SUS316L		8	✔	✔
V	Material of wetted parts	SUS316L (Diaphragm: SUS316L, others: SUS316L)		8	✔	✔
		Tantalum (Diaphragm: Tantalum, others: Tantalum) *17		4	✔	✔
		Hastelloy C (Diaphragm: Hastelloy C, others: Hastelloy C)		9	✔	✔
VI	Finish of gasket face	Standard (JIS Ra3.2 (12.5S))		J	✔	✔
VII	Length of extended parts	Flush diaphragm 3 inches (80 mm)		00	✔	✔
VIII	Length of capillary tube	2 m		2	✔	✔
		3 m		3	✔	✔
		4 m		4	✔	✔
		5 m		5	✔	✔
		6 m		6	✔	✔
		7 m		7	✔	✔
		8 m		8	✔	✔
		9 m		9	✔	✔
		10 m		A	✔	✔

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Model No.: STE9XX - I II III IV V VI VII VIII - **Option I** - **Option II**

			Fill fluid	
			4	7
Options I	No options	X	✔	✔
	Lightning arrester	L	✔	✔
	Built-in indicating smart meter (0 to 100% liner scales)	P	✔	✔
	Built-in indicating smart meter (engineering unit scales)	R	✔	✔
	SUS304 bolt and nuts material	W	✔	✔
	SUS630 bolt and nuts material	U	✔	✔
	Corrosion-resistant finish	A	✔	✔
	Corrosion-proof finish	B	✔	✔
	Corrosion-resistant finish, silver paint	D	✔	✔
	Oil free finish	K	✔	✔
	FM Explosionproof	3	✔	✔
	FM Intrinsically safe	4	✔	✔
	Combination of FM Explosionproof and Intrinsically safe	5	✔	✔
	ATEX Flameproof	6	✔	✔
	ATEX Intrinsic safety	7	✔	✔
	CSA Explosion-proof	8	✔	✔
		-		
Options II	No option	XX	✔	✔
	Burn-out feature (Lower limit of value at abnormal condition) *2	A4	✔	✔
	Burn-out feature (Upper limit of value at abnormal condition) *2	A5	✔	✔
	Water free finish (with oil free finish)	A7	✔	✔
	NEPSI Flameproof	C1	✔	✔
	NEPSI Intrinsically safe	C2	✔	✔
	Custom calibration	C7	✔	✔
	Digital output *38	D5	✔	✔
	HART communication *5 *38	D7	✔	✔
	One elbow	E1	✔	✔
	Two elbows	E2	✔	✔
	External zero/span adjustment	E5	✔	✔
	Mounting bracket	E9	✔	✔
	Material certificate	H2	✔	✔
	SI unit	U1	✔	✔

Note) **2 The output current value ranges from 3.0 to 3.8 mA for the lower limit and from 20.8 to 21.8 mA for the upper limit.*
**5 Intrinsically safe for NEPSI cannot be selected with -D7.*
**17 In case "tantalum" is used for diaphragm material, normal operating conditions of meter body (process fluid) temperature is -10 to +180°C*
**38 Either one of "digital output - code D5" or "HART communication - code D7" can be selected at a time.*

ST3000 series 900 electric difference pressure transmitter
Model STE929 / STE930 (Remote-sealed diaphragm type)
Extended diaphragm 4 inches (100 mm)
for high-temperature / vacuum, high-temperature / high-vacuum service

Model No.: STE9XX - **I II III IV V VI VII VIII** - Option I - Option II

Basic Model No.

	Measuring span	2.5 to 100 kPa (250 to 10,160 mmH_2O)	STE929	Extended diaphragm flange type: 4 inches (100 mm)
		35 to 700 kPa (0.35 to 7 kgf/cm^2)	STE930	

Selection				Code	Fill fluid code	
I	Fill fluid	Flange type	Fill fluid		4	7
		STE929 Extended diaphragm 4 inches (100 mm)	For high-temperature / vacuum service (Silicone oil)	4		
			For high-temperature / high-vacuum service (Silicone oil)	7		
		STE930 Extended diaphragm 4 inches (100 mm)	For high-temperature / vacuum service (Silicone oil)	4		
			For high-temperature / high-vacuum service (Silicone oil)	7		
II	Flange standard	ANSI flange		A	✔	✔
		JIS flange		J	✔	✔
		JPI flange		P	✔	✔
III	Flange type & rating	JIS 10K, ANSI/JPI 150 (RF) equivalent		A	✔	✔
		JIS 20K, ANSI/JPI 300 (RF) equivalent *23		B	✔	✔
		JIS 30K, ANSI/JPI 600 (RF) equivalent *20 *24		C	✔	✔
IV	Flange material	SUS304		7	✔	✔
		SUS316		2	✔	✔
		SUS316L		8	✔	✔
V	Material of wetted parts	SUS316 (Diaphragm: SUS316L, others: SUS316)		2	✔	✔
		SUS316L (Diaphragm: SUS316L, others: SUS316L) *20 *23		8	✔	✔
VI	Finish of gasket face	Standard (JIS Ra3.2 (12.5S))		J	✔	✔
VII	Length of extended Parts	L = 50 mm (4 inches / 100 mm) *24		09	✔	✔
		L = 100 mm (4 inches / 100 mm) *24		14	✔	✔
		L = 150 mm (4 inches / 100 mm) *24		19	✔	✔
		L = 200 mm (4 inches / 100 mm) *23 *24		24	✔	✔
		L = 250 mm (4 inches / 100 mm) *23 *24		29	✔	✔
		L = 300 mm (4 inches / 100 mm) *23 *24		34	✔	✔
VIII	Length of capillary tube	2 m		2	✔	✔
		3 m		3	✔	✔
		4 m		4	✔	✔
		5 m		5	✔	✔
		6 m		6	✔	✔
		7 m		7	✔	✔
		8 m		8	✔	✔
		9 m		9	✔	✔
		10 m		A	✔	✔

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Model No.: STE9XX - I II III IV V VI VII VIII - **Option I** - **Option II**

			Fill fluid code	
			4	7
Options I	No options	X	✔	✔
	Lightning arrester	L	✔	✔
	Built-in indicating smart meter (0 to 100% liner scales)	P	✔	✔
	Built-in indicating smart meter (engineering unit scales)	R	✔	✔
	SUS304 bolt and nuts material	W	✔	✔
	SUS630 bolt and nuts material	U	✔	✔
	Corrosion-resistant finish	A	✔	✔
	Corrosion-proof finish	B	✔	✔
	Corrosion-resistant finish, silver paint	D	✔	✔
	Oil free finish	K	✔	✔
	FM Explosionproof	3	✔	✔
	FM Intrinsically safe	4	✔	✔
	Combination of FM Explosionproof and Intrinsically safe	5	✔	✔
	ATEX Flameproof	6	✔	✔
	ATEX Intrinsic safety	7	✔	✔
	CSA Explosion-proof	8	✔	✔
		-		
Options II	No option	XX	✔	✔
	Burn-out feature (Lower limit of value at abnormal condition) *2	A4	✔	✔
	Burn-out feature (Upper limit of value at abnormal condition) *2	A5	✔	✔
	Water free finish (with oil free finish)	A7	✔	✔
	NEPSI Flameproof	C1	✔	✔
	NEPSI Intrinsically safe	C2	✔	✔
	Custom calibration	C7	✔	✔
	Digital output *38	D5	✔	✔
	HART communication *5 *38	D7	✔	✔
	One elbow	E1	✔	✔
	Two elbows	E2	✔	✔
	External zero/span adjustment	E5	✔	✔
	Mounting bracket	E9	✔	✔
	Material certificate	H2	✔	✔
	SI unit	U1	✔	✔

Note) **2* *The output current value ranges from 3.0 to 3.8 mA for the lower limit and from 20.8 to 21.8 mA for the upper limit.*
**5* *Intrinsically safe for NEPSI cannot be selected with -D7*
**15* *Only available for Material of wetted parts: "SUS316" and "SUS316L"*
**20* *In case "JIS 30K" is used for flange type and rating and in case "SUS316L" is used for flange material, not available for the extended diaphragm type.*
**23* *In case "ANSI/JPI 300" is used for flange type and rating, not available for length of extended parts: 200/250/300mm.*
**24* *In case of "ANSI/JPI 600" is used for flange type and rating, not available for the extended diaphragm flange type.*
**38* *Either one of "digital output - code D5" or "HART communication - code D7" can be selected at a time.*

ST3000 series 900 electric difference pressure transmitter
Model STE929 / STE930 (Remote-sealed diaphragm type)
Flush diaphragm 2 inches (50 mm), 1.5 inch (40 mm)
for high-temperature / vacuum, high-temperature / high-vacuum service

Model No.: STE9XX - **I II III IV V VI VII VIII** - Option I - Option II

Basic Model No.

	Measuring span	2.5 to 100 kPa (250 to 10,160 mmH_2O)	STE929	Flush diaphragm type: 2 inches (50 mm), 1.5inch (40 mm)
		35 to 700 kPa (0.35 to 7 kgf/cm^2)	STE930	

Selection				Code	Fill fluid code	
I	Fill fluid	Flange type	Fill fluid		4	7
		STE929 Flush diaphragm 2 inches (5 0mm) 1.5 inch (40 mm)	For high-temperature / vacuum service (Silicone oil)	4		
			For high-temperature / high-vacuum service (Silicone oil)	7		
		STE930 Flush diaphragm 2 inches (50 mm) 1.5 inch (40 mm)	For high-temperature / vacuum service (Silicone oil)	4		
			For high-temperature / high-vacuum service (Silicone oil)	7		
II	Flange standard	ANSI flange		A	✔	✔
		JIS flange		J	✔	✔
		JPI flange		P	✔	✔
III	Flange type & rating	JIS 10K, ANSI/JPI 150 (RF) equivalent		A	✔	✔
		JIS 20K, ANSI/JPI 300 (RF) equivalent		B	✔	✔
		JIS 30K, ANSI/JPI 600 (RF) equivalent		C	✔	✔
IV	Flange material	SUS304		7	✔	✔
		SUS316		2	✔	✔
		SUS316L		8	✔	✔
V	Material of wetted parts	SUS316L (Diaphragm: SUS316L, others: SUS316L)		8	✔	✔
		Tantalum (Diaphragm: Tantalum, others: Tantalum) *17		4	✔	✔
		Hastelloy C (Diaphragm: Hastelloy C, others: Hastelloy C)		9	✔	✔
VI	Finish of gasket face	Standard (JIS Ra3.2 (12.5S))		J	✔	✔
VII	Length of extended parts	Flush diaphragm 2 inches (50 mm)		01	✔	✔
		Flush diaphragm 1.5 inch (40 mm)		02	✔	✔
VIII	Length of capillary tube	2 m		2	✔	✔
		3 m		3	✔	✔
		4 m		4	✔	✔
		5 m		5	✔	✔

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Model No.: STE9XX - I II III IV V VI VII VIII - **Option I** - **Option II**

		Code	Fill fluid code	
			4	7
Options I	No options	X	✔	✔
	Lightning arrester	L	✔	✔
	Built-in indicating smart meter (0 to 100% liner scales)	P	✔	✔
	Built-in indicating smart meter (engineering unit scales)	R	✔	✔
	SUS304 bolt and nuts material	W	✔	✔
	SUS630 bolt and nuts material	U	✔	✔
	Corrosion-resistant finish	A	✔	✔
	Corrosion-proof finish	B	✔	✔
	Corrosion-resistant finish, silver paint	D	✔	✔
	Oil free finish	K	✔	✔
	FM Explosionproof	3	✔	✔
	FM Intrinsically safe	4	✔	✔
	Combination of FM Explosionproof and Intrinsically safe	5	✔	✔
	ATEX Flameproof	6	✔	✔
	ATEX Intrinsic safety	7	✔	✔
	CSA Explosion-proof	8	✔	✔
		-		
Options II	No option	XX	✔	✔
	Burn-out feature (Lower limit of value at abnormal condition) *2	A4	✔	✔
	Burn-out feature (Upper limit of value at abnormal condition) *2	A5	✔	✔
	Water free finish (with oil free finish)	A7	✔	✔
	NEPSI Flameproof	C1	✔	✔
	NEPSI Intrinsically safe	C2	✔	✔
	Custom calibration	C7	✔	✔
	Digital output *38	D5	✔	✔
	HART communication *5 *38	D7	✔	✔
	One elbow	E1	✔	✔
	Two elbows	E2	✔	✔
	External zero/span adjustment	E5	✔	✔
	Mounting bracket	E9	✔	✔
	Material certificate	H2	✔	✔
	SI unit	U1	✔	✔

Note) **2 The output current value ranges from 3.0 to 3.8 mA for the lower limit and from 20.8 to 21.8 mA for the upper limit.*
**5 Intrinsically safe for NEPSI cannot be selected with -D7.*
**17 In case "Tantalum" is used for diaphragm material, and in case of "for high-temperature service", normal operating conditions of meter body (process fluid) temperature is -10 to +180°C.*
**38 Either on of "digital output - code D5" or "HART communication - code D7" can be selected at a time.*

ST3000 series 900 electric difference pressure transmitter
Model STE929 / STE930 (Remote-sealed diaphragm type)
Extended diaphragm 3 inches (80 mm), 2 inches (50 mm)
for high-temperature / vacuum, high-temperature / high-vacuum service

Model No.: STE9XX - **I II III IV V VI VII VIII** - Option I - Option II

Basic Model No.

	Measuring span	2.5 to 100 kPa (250 to 10,160 mmH_2O) 35 to 700 kPa (0.35 to 7 kgf/cm^2)	STE929 STE930	Extended diaphragm type: 3 inches (80 mm), 2 inches (50 mm)

Selection				Code	Fill fluid code	
I	Fill fluid	Flange type	Fill fluid		4	7
		STE929 Extended diaphragm 3 inches (80 mm) 2 inches (50 mm)	For high-temperature service (Silicone oil)	4		
			For high-temperature high-vacuum service (silicone oil)	7		
		STE930 Extended diaphragm 3 inches (80 mm) 2 inches (50 mm)	For high-temperature service (Silicone oil)	4		
			For high-temperature high-vacuum service (silicone oil)	7		
II	Flange standard	ANSI flange		A	✔	✔
		JIS flange		J	✔	✔
		JPI flange		P	✔	✔
III	Flange type & rating	JIS 10K, ANSI/JPI 150 (RF) equivalent		A	✔	✔
		JIS 20K, ANSI/JPI 300 (RF) equivalent		B	✔	✔
		JIS 30K, ANSI/JPI 600 (RF) equivalent *24		C	✔	✔
IV	Flange material	SUS304		7	✔	✔
		SUS316		2	✔	✔
		SUS316L		8	✔	✔
V	Material of wetted parts	SUS316 (Diaphragm: SUS316L, others: SUS316)		2	✔	✔
		SUS316L (Diaphragm: SUS316L, others: SUS316L)		8	✔	✔
VI	Finish of gasket face	Standard (JIS Ra3.2 (12.5S))		J	✔	✔
VII	Length of extended parts	L = 50 mm (3 inches / 80 mm) *24		05	✔	✔
		L = 100 mm (3 inches / 80 mm) *24		10	✔	✔
		L = 150 mm (3 inches / 80 mm) *24		15	✔	✔
		L = 50 mm (2 inches / 50 mm) *24		06	✔	✔
		L = 100 mm (2 inches / 50 mm) *24		11	✔	✔
		L = 150 mm (2 inches / 50 mm) *24		16	✔	✔
VIII	Length of capillary tube	2 m		2	✔	✔
		3 m		3	✔	✔
		4 m		4	✔	✔
		5 m		5	✔	✔

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Model No.: STE9XX - I II III IV V VI VII VIII - **Option I** - **Option II**

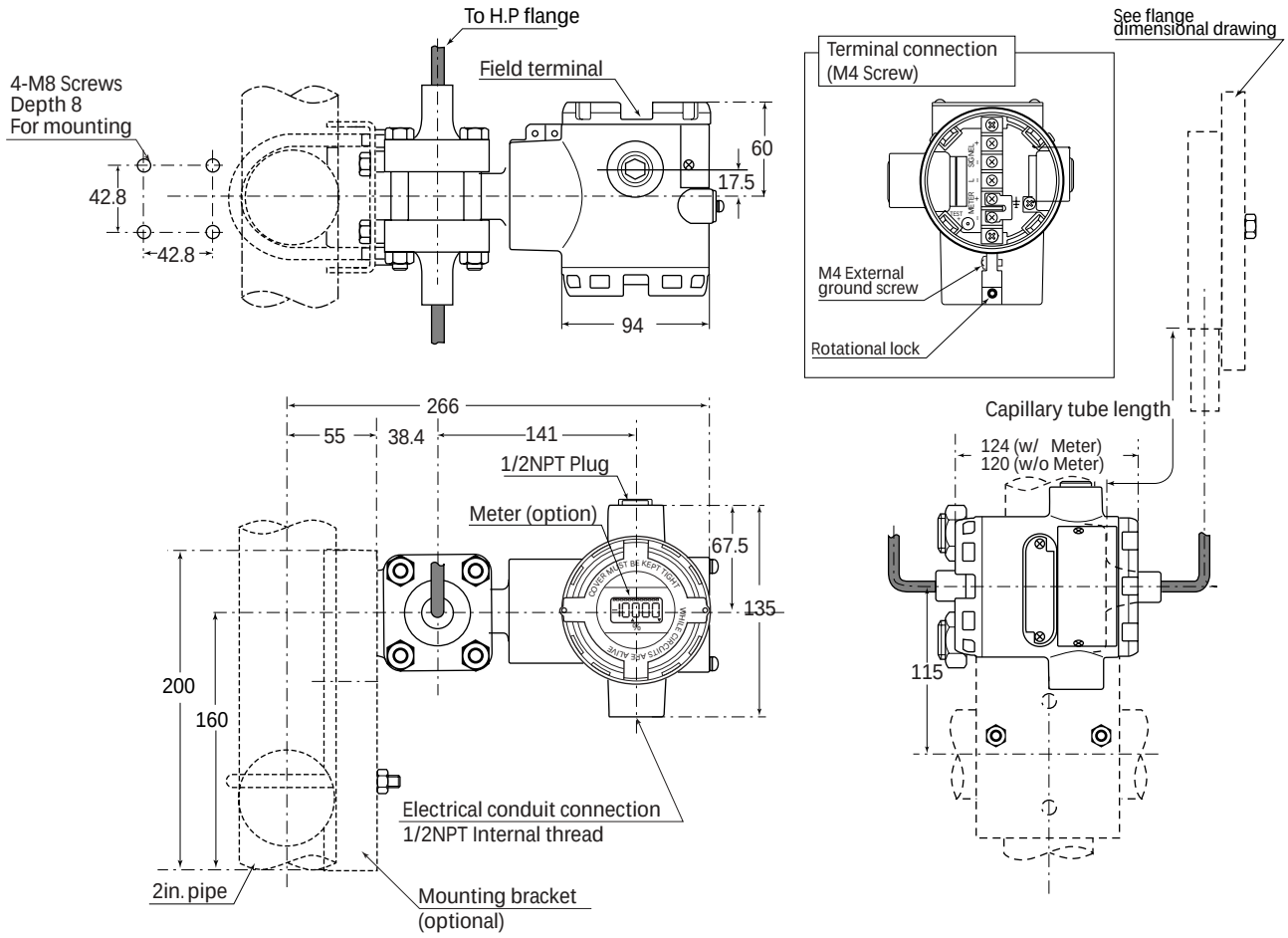
		Code	Fill fluid code	
			4	7
Options I	No options	X	✔	✔
	Lightning arrester	L	✔	✔
	Built-in indicating smart meter (0 to 100% liner scales)	P	✔	✔
	Built-in indicating smart meter (engineering unit scales)	R	✔	✔
	SUS304 bolt and nuts material	W	✔	✔
	SUS630 bolt and nuts material	U	✔	✔
	Corrosion-resistant finish	A	✔	✔
	Corrosion-proof finish	B	✔	✔
	Corrosion-resistant finish, silver paint	D	✔	✔
	Oil free finish	K	✔	✔
	FM Explosionproof	3	✔	✔
	FM Intrinsically safe	4	✔	✔
	Combination of FM Explosionproof and Intrinsically safe	5	✔	✔
	ATEX Flameproof	6	✔	✔
	ATEX Intrinsic safety	7	✔	✔
	CSA Explosion-proof	8	✔	✔
		-		
Options II	No option	XX	✔	✔
	Burn-out feature (Lower limit of value at abnormal condition) *2	A4	✔	✔
	Burn-out feature (Upper limit of value at abnormal condition) *2	A5	✔	✔
	Water free finish (with oil free finish)	A7	✔	✔
	NEPSI Flameproof	C1	✔	✔
	NEPSI Intrinsically safe	C2	✔	✔
	Custom calibration	C7	✔	✔
	Digital output *38	D5	✔	✔
	HART communication *5 *38	D7	✔	✔
	One elbow	E1	✔	✔
	Two elbows	E2	✔	✔
	External zero/span adjustment	E5	✔	✔
	Mounting bracket	E9	✔	✔
	Material certificate	H2	✔	✔
	SI unit	U1	✔	✔

*Note) *2 The output current value ranges from 3.0 to 3.8 mA for the lower limit and from 20.8 to 21.8 mA for the upper limit.*
**5 Intrinsically safe for NEPSI cannot be selected with -D7.*
**24 In case of "ANSI/JPI 600" is used for flange type and rating, not available for the extended diaphragm flange type.*
**38 Either on of "digital output - code D5" or "HART communication - code D7" can be selected at a time.*

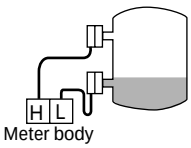
DIMENSIONS

Model STE929 / STE930 (for regular type and high-temperature service)

Flush diaphragm flange / Extended diaphragm flange

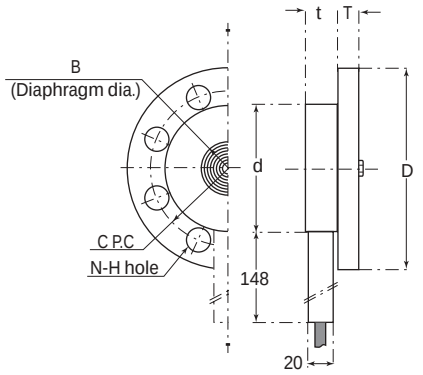


Note) *1. To prevent vibration, you are recommended to fasten the capillary tube mid-length.*
2. Select a gasket that will not contact the diaphragm after it is tightened.
3. When the suppression in larger than one half of the measuring span, the higher pressure side and the lower pressure side of the process connection end flange are opposite to those shown in the figure above. When using the transmitter to measure liquid levels, connect at H and L marks on the meter body as shown in the right figure.



Model STE929 / STE930 Table of flush diaphragm flange dimensions

[Unit: mm]

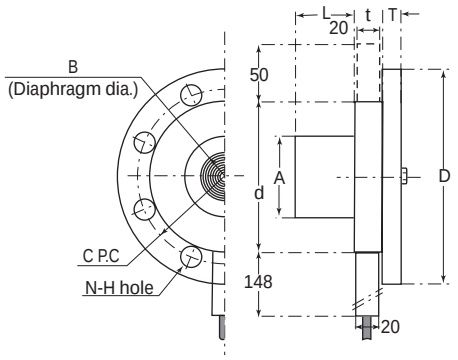


Rating	Flange rating	D	T	C	N	H	d	B	t
1.5 inch/ 40mm	JIS 10K-40 mm	140	16	105	4	19	81	43	25 (note2)
	JIS 20K-40 mm	140	18	105	4	19			
	JIS 30K-40 mm	160	22	120	4	23			
	ANSI 150-1.5 inch	127	18	98.6	4	16			
	ANSI 300-1.5 inch	155	21	114.3	4	22			
	ANSI 600-1.5 inch	155	22.5	114.3	4	22			
	JPI 150-1.5 inch	127	18	98.6	4	16			
	JPI 300-1.5 inch	155	21	114.3	4	22			
	JPI 600-1.5 inch	155	22.5	114.3	4	22			
2 inches (50 mm)	JIS 10K-50 mm	155	16	120	4	19	99	62 (note1)	
	JIS 20K-50 mm	155	18	120	8	19			
	JIS 30K-50 mm	165	22	130	8	19			
	ANSI 150-2 inches	152	19.5	120.6	4	19			
	ANSI 300-2 inches	165	22.5	127	8	19			
	ANSI 600-2 inches	165	25.5	127	8	19			
	JPI 150-2 inches	152	19.5	120.6	4	19			
	JPI 300-2 inches	165	22.5	127	8	19			
	JPI 600-2 inches	165	25.5	127	8	19			
3 inches (80 mm)	JIS 10K-80 mm	185	18	150	8	19	129.5	95	25
	JIS 20K-80 mm	200	22	160	8	23			
	JIS 30K-80 mm	210	28	170	8	23			
	ANSI 150-3 inches	190	24	152.4	4	19			
	ANSI 300-3 inches	210	28.5	168.1	8	22			
	ANSI 600-3 inches	210	32	168.1	8	22			
	JPI 150-3 inches	190	24	152.4	4	19			
	JPI 300-3 inches	210	28.5	168.1	8	22			
	JPI 600-3 inches	210	32	168.1	8	22			

Note) 1) Wetted parts material is Hastelloy C and Fill fluid is for reglon, high-temperature, oxygen, or chlorine service: B=43
2) Wetted parts material is Hastelloy C and Fill fluid is for reglon, high-temperature, oxygen, or chlorine service: t=26.7

Model STE929 / STE930 Table of extended diaphragm flange dimensions

[Unit: mm]



Rating	Flange rating	D	T	C	N	H	d	A	t	B
2 inches (50 mm)	JIS 10K - 50 mm	155	16	120	4	19	99	47±1	25	43
	JIS 20K - 50 mm	155	18	120	8	19				
	JIS 30K - 50 mm	165	22	130	8	19				
	ANSI 150 - 2 inches	152	19.5	120.6	4	19				
	ANSI 300 -2 inches	165	22.5	127	8	19				
	ANSI 600 - 2 inches	165	25.5	127	8	19				
	JPI 150 - 2 inches	152	19.5	120.6	4	19				
	JPI 300 - 2 inches	165	22.5	127	8	19				
	JPI 600 - 2 inches	165	25.5	127	8	19				
3 inches (80 mm)	JIS 10K - 80 mm	185	18	150	8	19	129.5	69±1	25	62
	JIS 20K - 80 mm	200	22	160	8	23				
	JIS 30K - 80 mm	210	28	170	8	23				
	ANSI 150 - 3 inches	190	24	152.4	4	19				
	ANSI 300 - 3 inches	210	28.5	168.1	8	22				
	ANSI 600 - 3 inches	210	32	168.1	8	22				
	JPI 150 - 3 inches	190	24	152.4	4	19				
	JPI 300 - 3 inches	210	28.5	168.1	8	22				
	JPI 600 - 3 inches	210	32	168.1	8	22				
4 inches (100 mm)	JIS 10K - 100 mm	210	18	175	8	19	157	95±1	23	90.4
	JIS 20K - 100 mm	225	24	185	8	23				
	JIS 30K - 100 mm	240	32	195	8	25				
	ANSI 150 - 4 inches	229	24	190.5	8	19				
	ANSI 300 - 4 inches	254	32	200.2	8	22				
	JPI 150 - 4 inches	229	24	190.5	8	19				
	JPI 300 - 4 inches	254	32	200.2	8	22				

L
50
100
150
200
250
300

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