



WITH EST4300 SMART
PRESSURE TRANSMITTER
YOU MAY BETTER
CONTROL YOUR PLANT



PRODUCTS BROCHURE 2019

EST4300 Smart Pressure Transmitter

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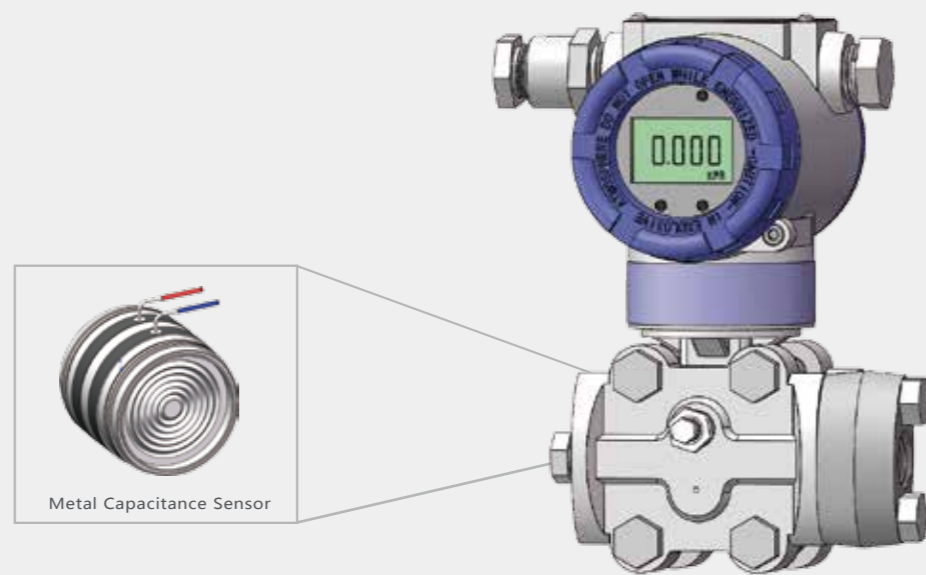
EST4300 Smart Pressure Transmitter GP/AP

Brief Introduction

EST4300 Smart Pressure Transmitter GP/AP is microprocessor-based measuring instrument. Connected with only one side process impulse line, EST4300 GP/AP type measures the pressure with reference to barometric pressure.

EST4300 GP/AP adopts the Metallic Capacitance Sensing Technology which is the new generation of Smart Capacitance GP/AP/DP/HP developed by Eastsensor, for which Eastsensor owns independent intellectual property rights.

With digital compensation technology compensating for temperature and static pressure, the Metallic Capacitance Sensors can remarkably improve the measurement accuracy and effectively reduce the temperature drift. In this regards, the Metallic Capacitance Sensors have been darling the Smart Pressure Transmitter market due to long-term stability, high reliability, self-diagnostic capability as well as excellence cost performance.



EST4300 Smart Pressure Transmitter - GP/AP

Technical Performance

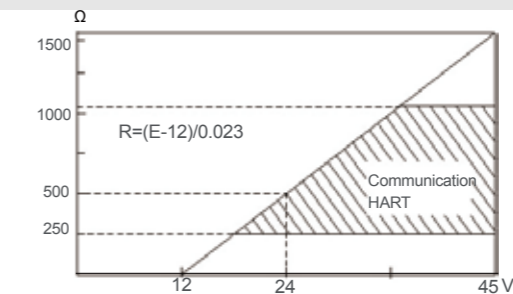
Service: Liquid, Gas, Vapor Applications

Range: Refer to below Order Procedure

Output Signal: 4~20mA (Two-wire), HART Protocols

Power Supply: External: 24V dc; Range: 12V~45V

Load:



Locations: ExdII BT5Gb for Explosion-Proof
Exiall CT4/T5/T6Ga for Intrinsic Safe

Zero shift: At minimum span, the maximum positive zero shift is 0.975 (39/40) of URL, the maximum negative zero shift could be the LRL. (After positive/negative shift, neither the URL nor the LRL may exceed the limits of the span no matter what the output is)

Temp. Limits: Electronics Temperature Operating Limits: -40~85 C Sensing Element Operating Limits: -40~10 C;
Memory Temperature: -40~85 C Digital Display: -20~75 C -40~85 C; Memory Temperature: -40~85 C Digital; Display: -20~75 C (normal operating); -40~85 C (Non Destructive)

Humidity: 0~95%

Overpressure: Range 3-8: 0 (Absolute pressure)~13.78 MPa
Rang 9: ≤31.29 MPa

Volumetric: ≤0.16 cm³

Damping: 0.2~32.0s

Technical Data

Accuracy : ±0.1%, ±0.075%

Stability: Maximum Span ±0.15%12months(exclude other ambient effects)

Temperature Effect: Zero Temperature Error per 55 C = ±0.25 of Maximum Span; Total Temperature Error per 55 C (Zero and Span)=±0.5% of URL; ±0.2% of URL@20 C

Power Supply Effect: ≤±0.005%/V

Vibration effect: For vibration of 200Hz in any axis, the error caused is ±0.05%/g of the maximum span

Load Effect: No load effects in the working area when voltage transferred to transmitter is higher than 12V

Mounting position Effect: Zero shifts up to 0.25kPa, which can be calibrated out. No span effect

Electromagnetic Radiation : Conform to IEC801 standards

Application & Order Procedure

EST4300 Smart Pressure Transmitter, which is compatible with HART 475 field communicator, is the one of the most popular industry process measuring instruments, and is used to measure the level, density, and pressure of liquid, gas, and steam, converts it to 4-20mA signal outputs.

Order Procedure

Model	Pressure Type																																
EST4300 GP EST4300 AP	Smart Pressure Transmitter Smart Absolute Pressure Transmitter																																
Code	Range																																
2	0-0.10 ~ 3.5kPa(0-10 ~ 350mmH2O)																																
3	0-0.8 ~ 8.0kPa(0-80 ~ 800mmH2O)																																
4	0-4.0 ~ 40kPa(0-400 ~ 4000mmH2O)																																
5	0-20 ~ 200kPa(0-2000 ~ 20000mmH2O)																																
6	0-70 ~ 700kPa(0-0.7 ~ 7kgf/cm2)																																
7	0-210 ~ 2100kPa(0-2.1 ~ 21kgf/cm2)																																
8	0-700 ~ 7000kPa(0-7.0 ~ 70kgf/cm2)																																
9	0-2.1 ~ 21MPa(0-21 ~ 210kgf/cm2)																																
0	0-4.1 ~ 41MPa(0-41 ~ 4100kgf/cm2)																																
Code	Output																																
E	4~20mA																																
SF	4~20mA+HART (Field Settable)																																
F	MODBUS-485																																
Code	MOC of Wetted Parts & Body																																
	<table border="1"> <thead> <tr> <th>Flange Adapter</th> <th>Drain/Vent Valves</th> <th>Diaphragm</th> <th>Fill Fluid</th> </tr> </thead> <tbody> <tr> <td>22</td> <td>SS316</td> <td>SS316</td> <td>Silicone Oil</td> </tr> <tr> <td>23</td> <td>SS316</td> <td>SS316</td> <td>Silicone Oil</td> </tr> <tr> <td>24</td> <td>SS316</td> <td>SS316</td> <td>Silicone Oil</td> </tr> <tr> <td>25</td> <td>SS316</td> <td>SS316</td> <td>Silicone Oil</td> </tr> <tr> <td>33</td> <td>Hastelloy Alloy C</td> <td>Hastelloy Alloy C</td> <td>Silicone Oil</td> </tr> <tr> <td>35</td> <td>Hastelloy Alloy C</td> <td>Hastelloy Alloy C</td> <td>Silicone Oil</td> </tr> <tr> <td>44</td> <td>Monel</td> <td>Monel</td> <td>Silicone Oil</td> </tr> </tbody> </table>	Flange Adapter	Drain/Vent Valves	Diaphragm	Fill Fluid	22	SS316	SS316	Silicone Oil	23	SS316	SS316	Silicone Oil	24	SS316	SS316	Silicone Oil	25	SS316	SS316	Silicone Oil	33	Hastelloy Alloy C	Hastelloy Alloy C	Silicone Oil	35	Hastelloy Alloy C	Hastelloy Alloy C	Silicone Oil	44	Monel	Monel	Silicone Oil
Flange Adapter	Drain/Vent Valves	Diaphragm	Fill Fluid																														
22	SS316	SS316	Silicone Oil																														
23	SS316	SS316	Silicone Oil																														
24	SS316	SS316	Silicone Oil																														
25	SS316	SS316	Silicone Oil																														
33	Hastelloy Alloy C	Hastelloy Alloy C	Silicone Oil																														
35	Hastelloy Alloy C	Hastelloy Alloy C	Silicone Oil																														
44	Monel	Monel	Silicone Oil																														

Code	MOC of Housing	Electronic Connection
A	Die cast Alu. Epoxy coating	M20×1.5
B	Die cast Alu. Epoxy coating	1/2NPT-14
C	SS304	M20×1.5
D	SS304	1/2NPT-14

Code	Process Connection
L1	1/4NPT-18 F
L2	1/2NPT-14 F
L3	M20 x 1.5 M

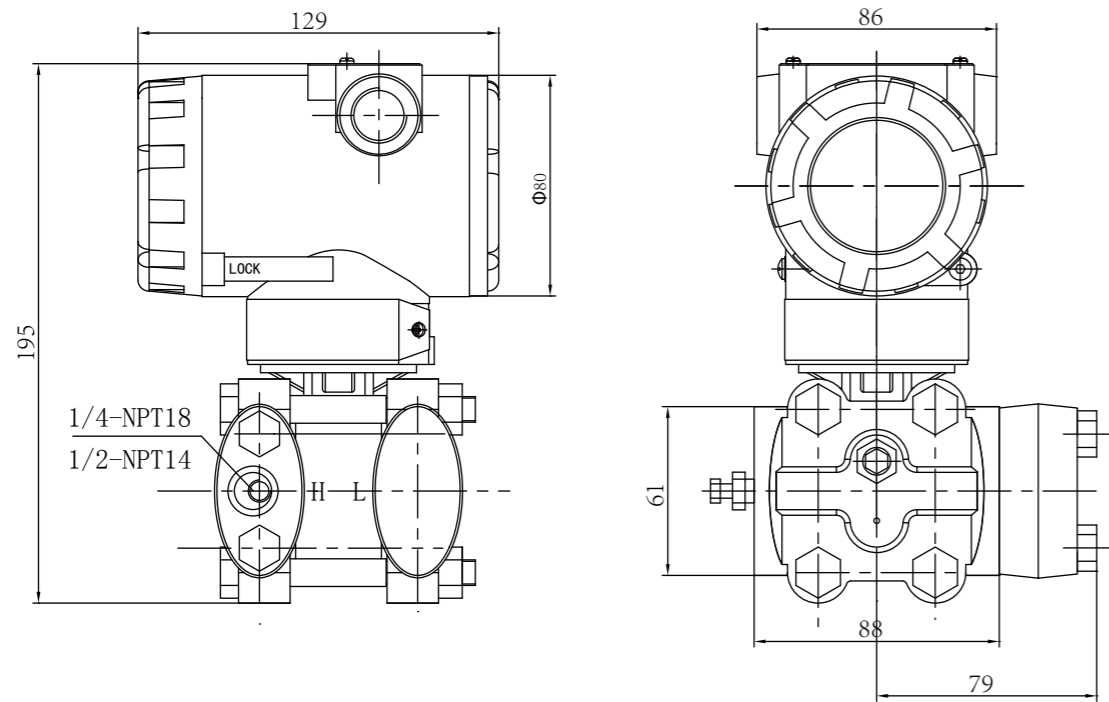
Code	Optional Accessory
M4	LCD Digital Display with Engineering Units
B1	Pipe Mounting (L type)
B2	Panel Mounting (L type)
B3	Pipe Mounting (Flat type)
D0	Drain/Vent Valve at Side
D1	Drain/Vent Valve at Top
D2	Drain/Vent Valve at Bottom
C02	M20 x 1.5 Nut with φ14 Impulsing Line
C12	1/2NPT-14 Thread M with φ14 Impulsing Line
C22	1/4NPT-18 Thread M with φ14 Impulsing Line
C32	1/4NPT-18 to M20 x 1.5 M
C42	1/2NPT-14 to M20 x 1.5 M
C43	1/2NPT-14 to 1/4NPT-18 F
C44	1/2NPT-14 to 1/2NPT-14 M
C45	1/2NPT-14 to G1/2 M
X1	Oil-Prohibited
GD	Gold-Plate for the Surface of Isolating Diaphragms
Da	Explosion-Proof ExdIIBT5Gb
Fa	Intrinsic Safe ExiaIICT4/T5/T6Ga

ie : EST4300GP4SF22AL1M4B3X1 0 ~ 20kPa

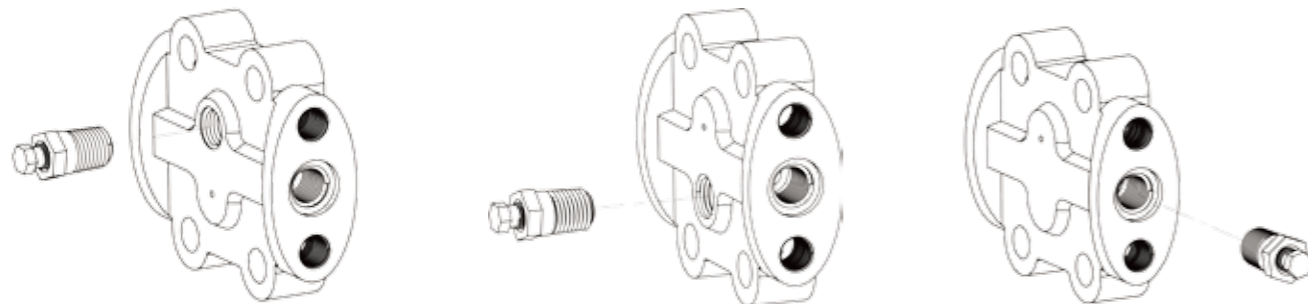
Note:

Before model select and order procedure, the measured Medium Temperature, Corrosivity, Pressure Range, Ex-Proof requirement, must clearly be aware of. The Flange mounting or Remote Diaphragm Seal is strongly recommended when the medium tend to be crystallized and viscous.

Drawing & Dimension



Drawing & Dimension

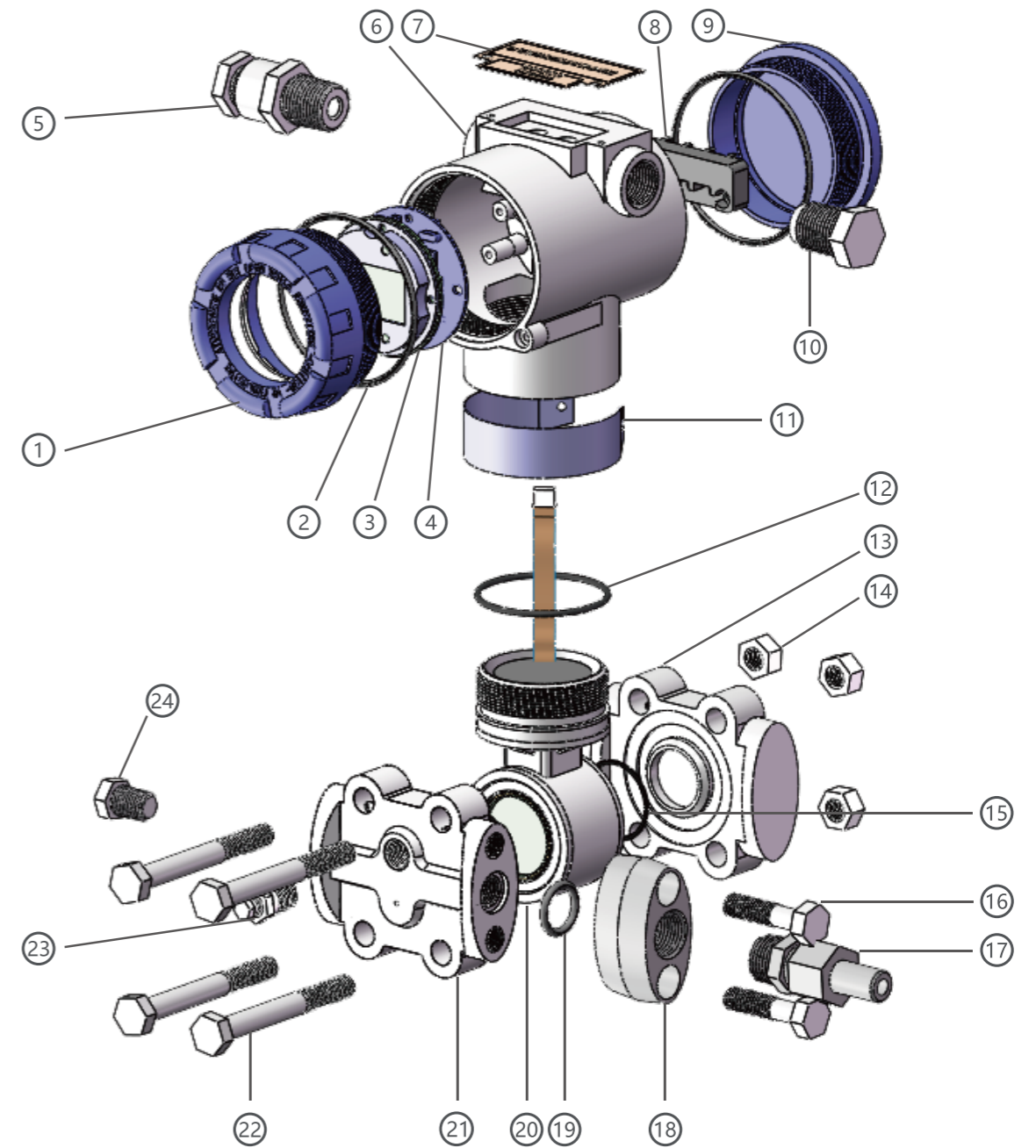


Drain/Vent Valve at Top (Code D1)

Drain/Vent Valve at Bottom (Code D2)

Drain/Vent Valve at Side (Code D0)

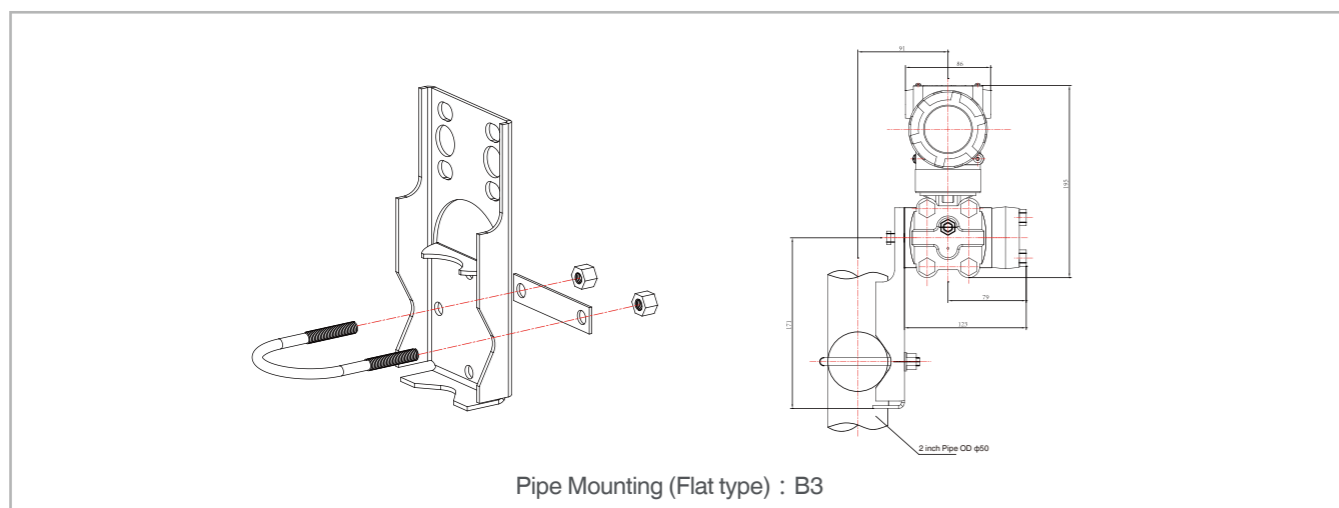
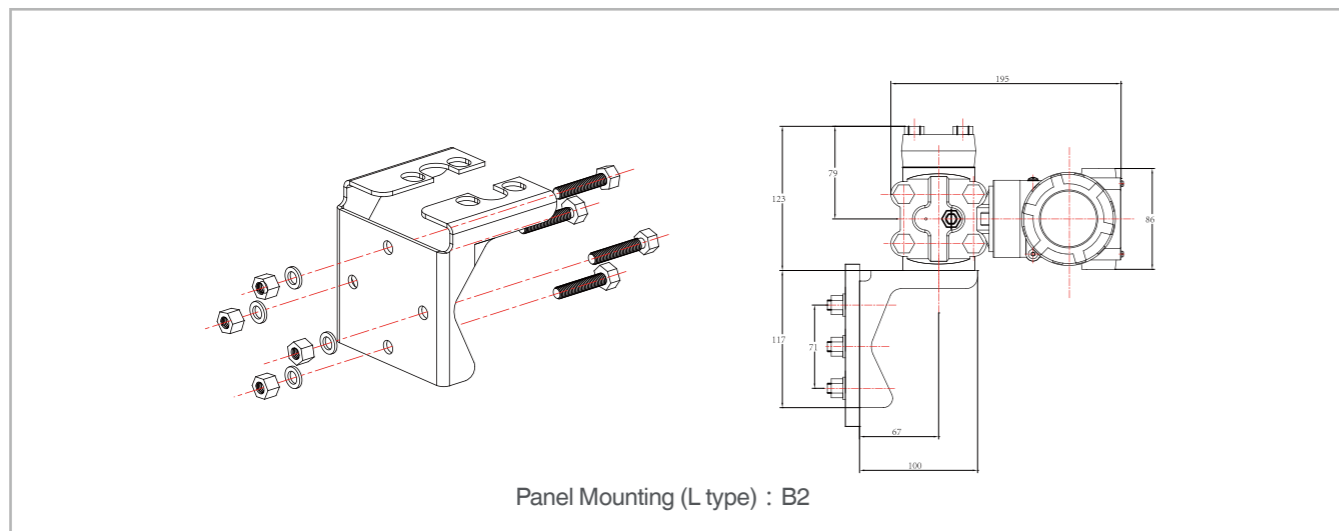
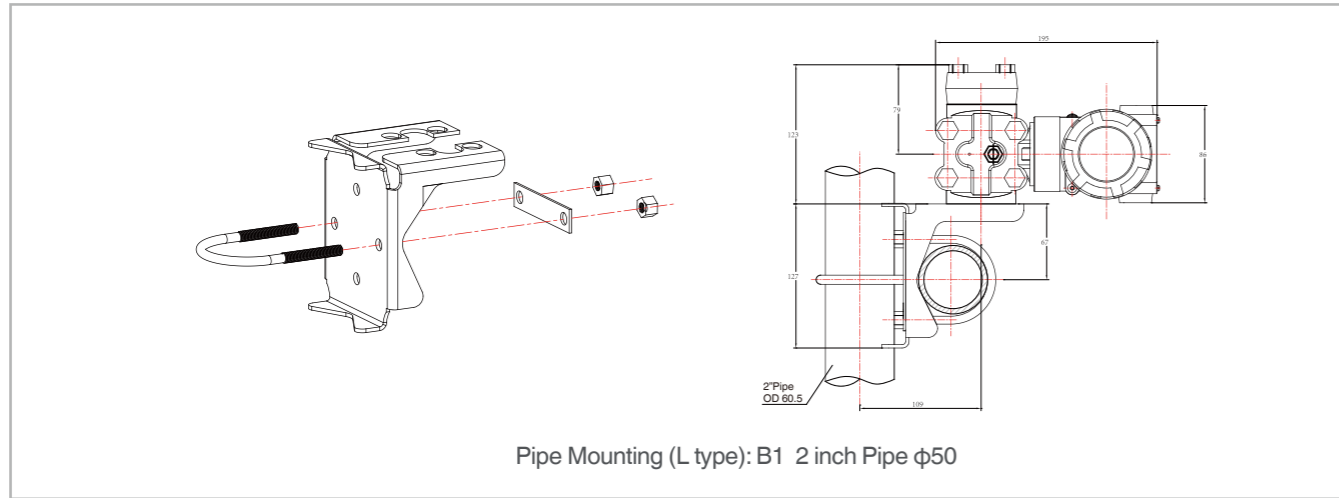
Exploded View



1 Front Cover	6 Electronics Housing	11 Nameplate-2	16 Bolt of Flange Adapter	21 Flange Pallets-2
2 O-Ring of Front Cover	7 Nameplate-1	12 O-Ring (upper) of Sensor Module	17 Impulse Piping Connector	22 Bolt of Flange Pallets
3 LCD Indicator	8 Terminal Block	13 Flange Pallets-1	18 Flange Adapter	23 Drain/Vent Valve
4 Electronics Board	9 Back Cover	14 Nut of Flange Pallets	19 O-Ring of Flange Adapter	24 Lock Nut
5 Electrical Connection	10 Ex-proof Seal	15 O-Ring (sides) of Sensor Module	20 Sensor Module	

Filed Mounting and Configuration

For GP , DP , HP , DR , AP :



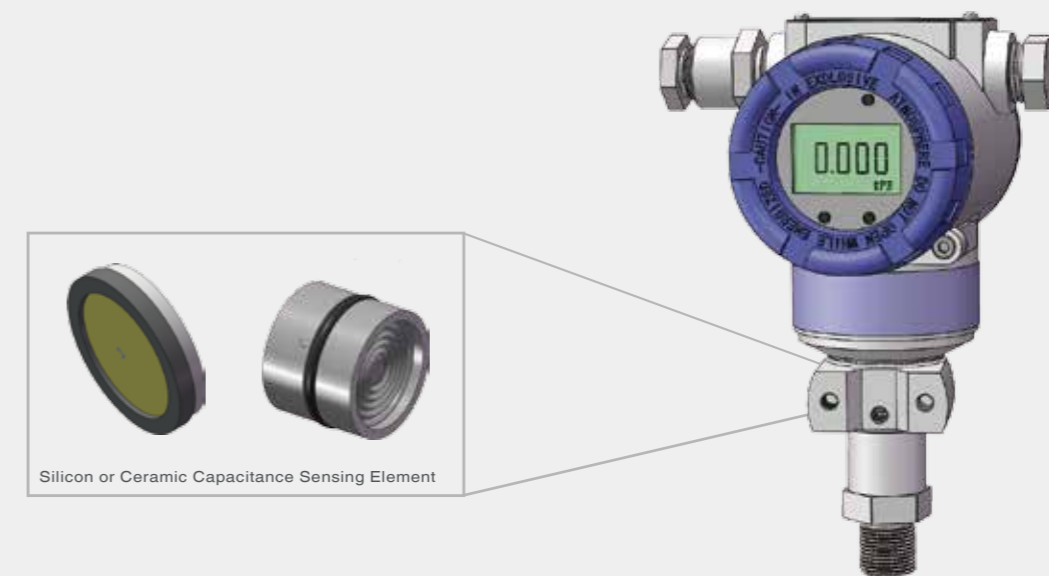
EST4300 SMART Pressure/absolute Pressure Transmitter

EST4300T (In-Line) Smart Pressure Transmitter GP/AP

Brief Introduction

EST4300T Smart Pressure Transmitter GP/AP type adopts the piezoresistive sensing method; the piezoresistive effect in silicon is due primarily to changes at the atomic level and is approximately two orders of magnitude larger than in metals¹. As stress is applied, the average effective mass of the carriers in the silicon either increases or decreases (depending on the direction of the stress, the crystallographic orientation, and the direction of current flow).

This change alters the silicon's carrier mobility and hence its resistivity. When piezoresistors are placed in a Wheatstone bridge configuration and attached to a pressure-sensitive diaphragm, a change in resistance is converted to a voltage/current output which is proportional to the applied pressure.



EST4300T (In-Line) Smart Pressure Transmitter GP/AP

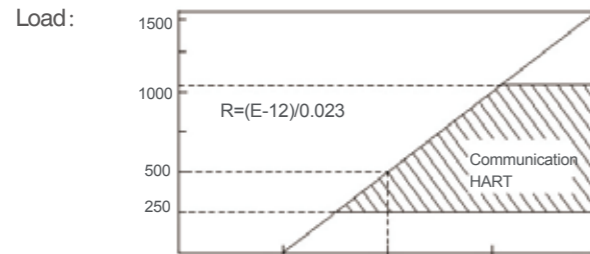
Technical Performance

Service: Liquid, Gas, Vapor Applications

Range: Refer to below Order Procedure

Output Signal: 4~20Ma (Two-wire), HART Protocols

Power Supply: External: 24V dc; Range: 12V~45V



Location: ExdIIBT5Gb for Explosion-Proof
ExialICT4/T5/T6Ga for Intrinsic Safe

Zero shift: At minimum span, the maximum positive zero shift is 0.975 (39/40) of URL, the maximum negative zero shift could be the LRL. (After positive/negative shift, neither the URL nor the LRL may exceed the limits of the span no matter what the output is)

Temp. Limits: Electronics Temperature Operating Limits: -40~85°C Sensing Element Operating Limits: -40~104°C ;
Memory Temperature: -40~85°C Digital Display: -20~75°C (normal operating); -40~85°C (Non Destructive)

Humidity: 0~95%

Overpressure (on Destructive): 2x~10x F.S

Volumetric: ≤0.16 cm³

Damping: 0.2~32.0s

Technical Data

Accuracy: ±0.1%, ±0.075%

Stability: Maximum Span ±0.15%12months(exclude other ambient effects)

Temperature Effect: Total Temperature (Zero and Span)=±0.2% of URL@20°C

Power Supply Effect: ≤±0.005%/V

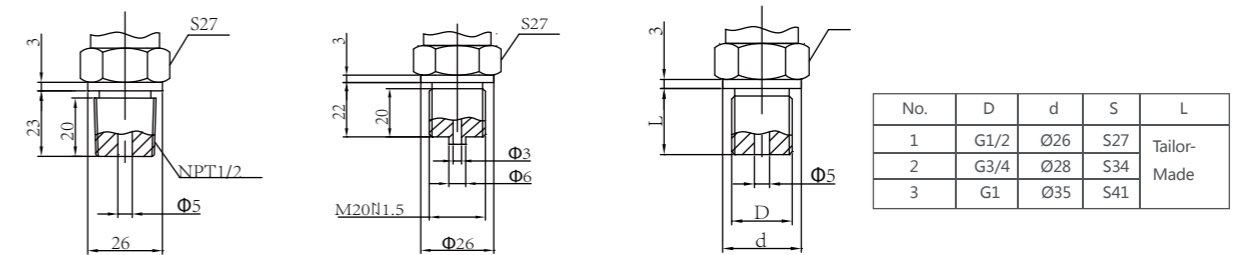
Vibration effect: For vibration of 200Hz in any axis, the error caused is ±0.05%/g of the maximum span

Load Effect: No load effects in the working area when the voltage transferred to transmitter is higher than 12V

Mounting position Effect: Zero shifts up to 0.10kPa, which can be calibrated out. No span effect.

Electromagnetic Radiation: Conform to IEC801 standards

Process Connection Thread Type



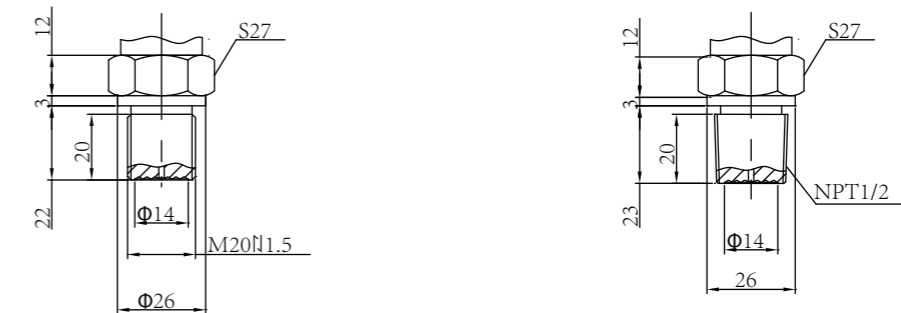
M20x1.5

Code P4

1/2NPT-14 Code P5

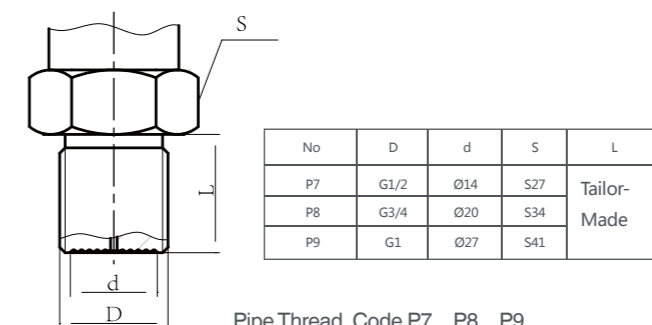
Pipe Thread Code P7, P8, P9

Regular Type of Process Connection



M20x1.5 Code P4

1/2NPT-14 Code P5



Pipe Thread Code P7, P8, P9

Flush type of process connection Code

Application & Order Procedure

EST4300T Smart Pressure Transmitter, which is compatible with HART 475 field communicator, is the one of the most popular industry process measuring instruments, and is used to measure the level, density, and pressure of liquid, gas, and steam, converts it to 4-20mA signal outputs.

Order Procedure

Model	Pressure Type																					
EST4300T GP EST4300T AP	Smart Pressure Transmitter Smart Absolute Pressure Transmitter																					
Code	Range																					
1 2 3 4 5 6 7 8 9	0-3.5 ~ 35kPa 0-10 ~ 100kPa 0-35 ~ 350kPa 0-0.1 ~ 1.0MPa 0-0.35 ~ 3.5MPa 0-1.0 ~ 10MPa 0-2.1 ~ 21MPa 0- 4.1 ~ 41Mpa 0- 6.0 ~ 60MPa																					
Code	Output																					
E SF F	4~20mA 4~20Ma+HART (Field Settable) Modbus-485																					
Code	MOC of Wetted Parts & Body																					
	<table border="1"> <thead> <tr> <th>Drain/Vent Valves</th> <th>Isolating Diaphragm</th> <th>Fill Fluid</th> </tr> </thead> <tbody> <tr> <td>22</td> <td>SS316</td> <td>Silicone Oil</td> </tr> <tr> <td>23</td> <td>SS316</td> <td>Silicone Oil</td> </tr> <tr> <td>24</td> <td>SS316</td> <td>Silicone Oil</td> </tr> <tr> <td>25</td> <td>SS316</td> <td>Silicone Oil</td> </tr> <tr> <td>26</td> <td>SS316</td> <td>Silicone Oil</td> </tr> <tr> <td>27</td> <td>SS316</td> <td>Dry-type</td> </tr> </tbody> </table>	Drain/Vent Valves	Isolating Diaphragm	Fill Fluid	22	SS316	Silicone Oil	23	SS316	Silicone Oil	24	SS316	Silicone Oil	25	SS316	Silicone Oil	26	SS316	Silicone Oil	27	SS316	Dry-type
Drain/Vent Valves	Isolating Diaphragm	Fill Fluid																				
22	SS316	Silicone Oil																				
23	SS316	Silicone Oil																				
24	SS316	Silicone Oil																				
25	SS316	Silicone Oil																				
26	SS316	Silicone Oil																				
27	SS316	Dry-type																				
Code	MOC of Housing	Electronic Connection																				
A B	Die cast Alu. Epoxy coating Die cast Alu. Epoxy coating	M20×1.5 1/2NPT-14																				

C D	SS304 SS304	M20×1.5 1/2NPT-14
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Code	Process Connection
L4 L5 L6 L7 L8 L9 LX P4 P5 P6 P7 P8 P9 PX	M20×1.5M 1/2NPT-14M 1/2NPT-14F G1/2M G3/4M G1M Others M20×1.5M Flush 1/2NPT-14M Flush 1/2NPT-14F Flush G1/2M Flush G3/4M Flush G1M Flush Others

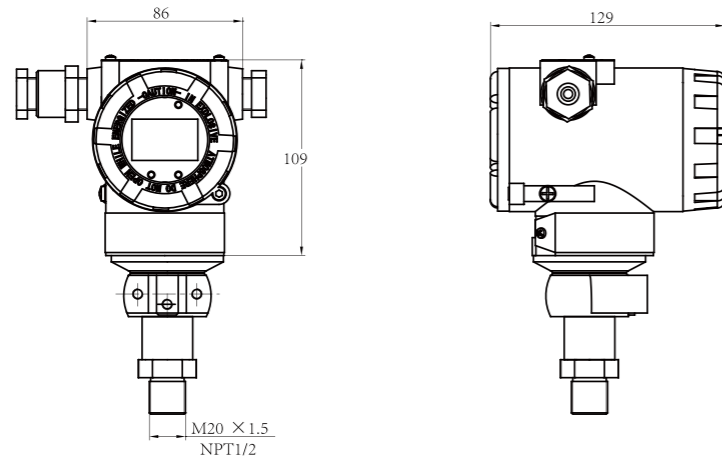
Code	Optional Accessory
M4 B4 B5 C02 C12 C22 C32 C42 C43 C44 C45 X1 Da Fa	LCD Digital Display with Engineering Units Pipe Mounting (L type) Panel Mounting (L type) M20 x 1.5 Nut with φ14 Impulsing Line 1/2NPT-14 Thread M with φ14 Impulsing Line 1/4NPT-18 Thread M with φ14 Impulsing Line 1/4NPT-18 to M20 x 1.5 M 1/2NPT-14 to M20 x 1.5 M 1/2NPT-14 to 1/4NPT-18 F 1/2NPT-14 to 1/2NPT-14 M 1/2NPT-14 to G1/2 M Oil-Prohibited Explosion-Proof ExdIIBT5Gb Intrinsic Safe ExiaIICT4/T5/T6Ga

i.e : EST4300TGP4SF22AL4M4X1 0 ~ 1000kPa

Note:

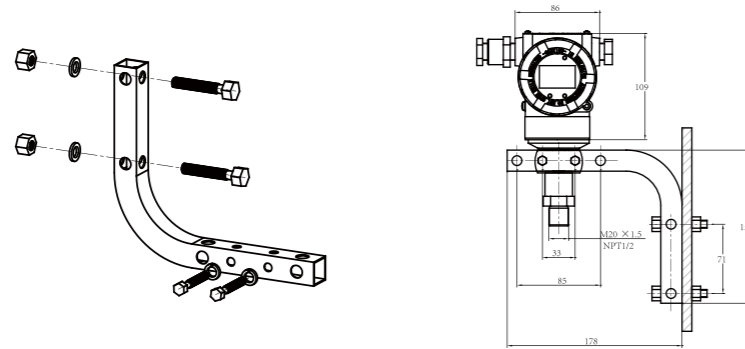
Before model select and order procedure, the measured Medium Temperature, Corrosivity, Pressure Range, Ex-Proof requirement, must clearly be aware of. The Flange mounting or Remote Diaphragm Seal is strongly recommended when the medium tend to be crystallized and viscous.

Drawing & Dimension

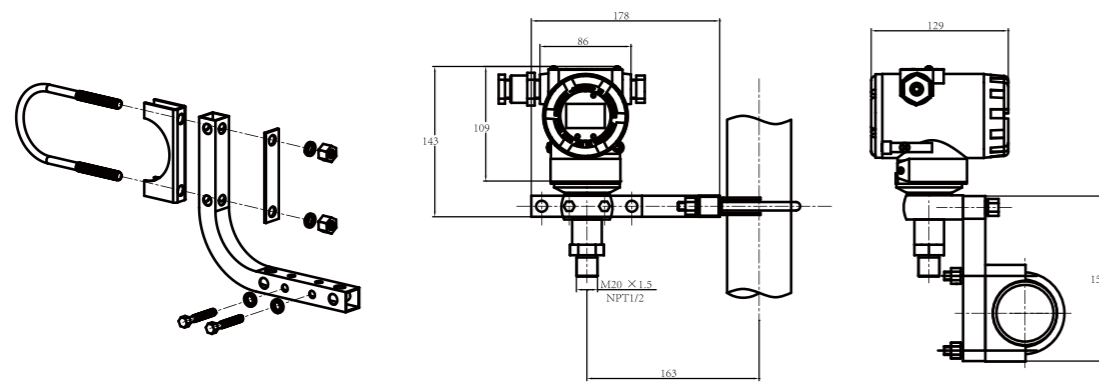


外形尺寸图

Filed Mounting and Configuration

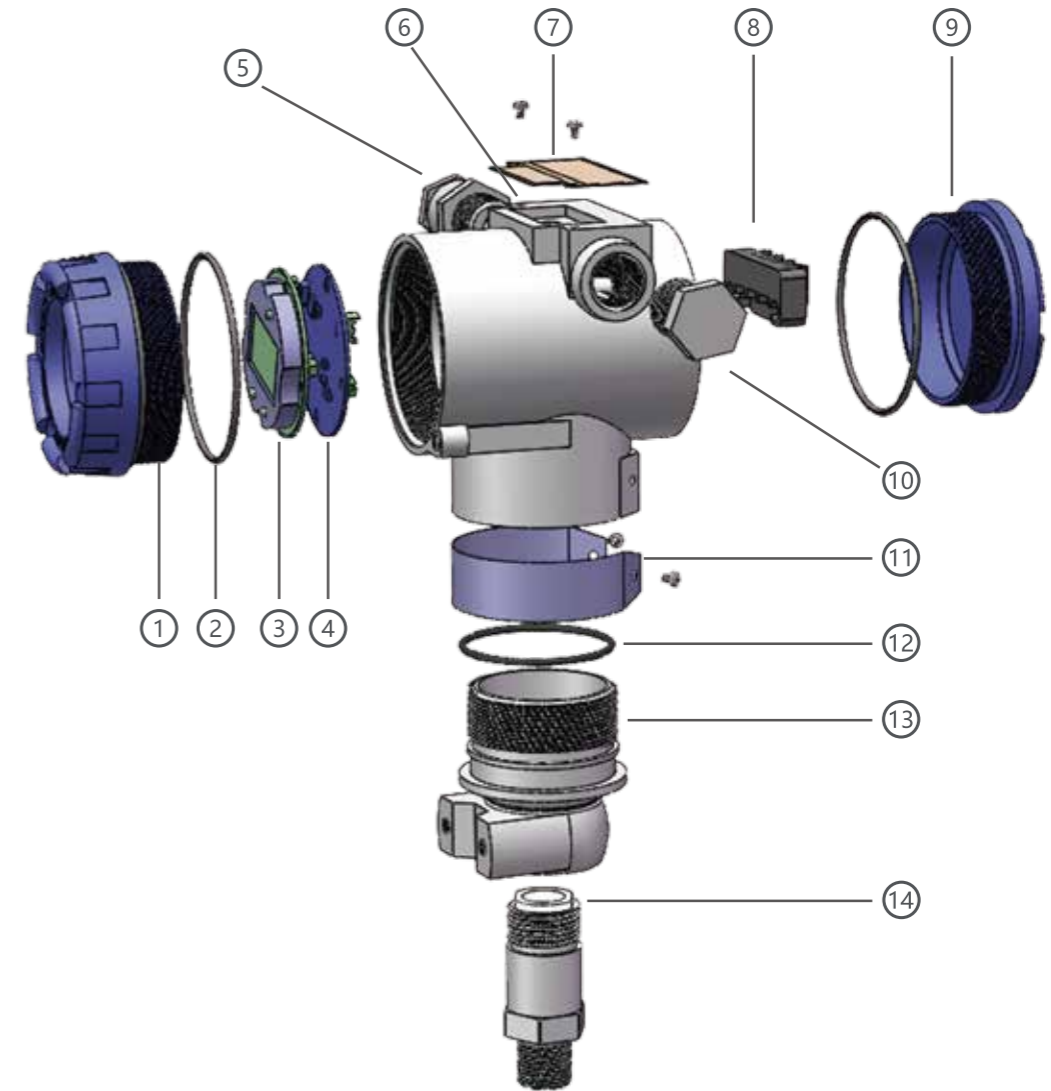


Panel Mounting (L type) : B5



Pipe Mounting (L type): B4

Exploded View



1 Front Cover	6 Electronics Housing	11 Nameplate-2
2 O-Ring of Front Cover	7 Nameplate-1	12 O-Ring (upper) of Sensor Module
3 LCD Indicator	8 Terminal Block	13 Connector
4 Electronics Board	9 Back Cover	14 Sensor
5 Electrical Connection	10 Ex-proof Seal	

**EST4300 SMART
Differential Pressure/High Static
Differential Pressure Transmitter**

EST4300 Smart Pressure Transmitter DP/HP

Brief Introduction

EST4300 Smart Pressure Transmitter DP/HP is microprocessor-based measuring instrument. Connected with two sides process impulse line, EST4300 DP/HP type measures the pressure with reference to barometric pressure.

EST4300 DP/HP adopts the Metallic Capacitance Sensing Technology which is the new generation of Smart Capacitance GP/AP/DP/HP developed by Eastsensor, for which Eastsensor owns independent intellectual property rights.

With digital compensation technology compensating for temperature and static pressure, the Metallic Capacitance Sensors can remarkably improve the measurement accuracy and effectively reduce the temperature drift. In this regards, the Metallic Capacitance Sensors have been darling the Smart Pressure Transmitter market due to long-term stability, high reliability, self-diagnostic capability as well as excellence cost performance.



Metal Capacitance Sensor



EST4300 Smart Pressure Transmitter - DP/HP

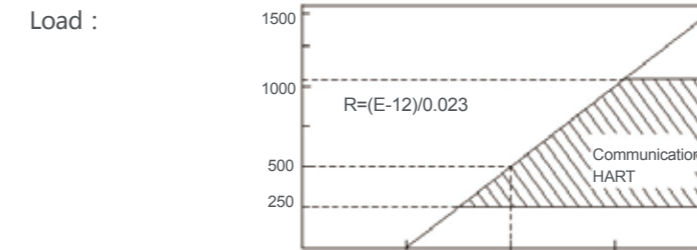
Technical Performance

Service: Liquid, Gas, Vapor Applications

Range: Refer to below Order Procedure

Output Signal: 4~20Ma (Two-wire), HART Protocols

Power Supply: External: 24V dc; Range: 12V~45V



Locations: ExdIIBT5Gb for Explosion-Proof
ExialICT4/T5/T6Ga for Intrinsic Safe

Zero Shift: At minimum span, the maximum positive zero shift is 0.975 (39/40) of URL, the maximum negative zero shift could be the LRL. (After positive/negative shift, neither the URL nor the LRL may exceed the limits of the span no matter what the output is)

Temp. Limits: Electronics Temperature Operating Limits: -40~85℃ Sensing Element Operating Limits: -40~10℃ ;
Memory Temperature: -40~85℃ Digital Display: -20~75℃ -40~85℃ ; Memory Temperature: -40~85℃ Digital; Display: -20~75℃ (normal operating); -40~85℃ (Non Destructive)

Humidity: 0~95%

Overpressure: Range 3-8: 0 (Absolute pressure)~13.78 MPa
Rang 9: ≤31.29 MPa

Volumetric: ≤0.16 cm³

Damping: 0.1~32.0s

Starting Time : 3s , no warm-up

Technical Data

Accuracy : ±0.1%, ±0.075%

Stability: Maximum Span ±0.15%12months(exclude other ambient effects)

Temperature Effect: Total Temperature Error per 55℃ (Zero and Span)= ±0.5% of URL; ±0.2% of URL@20℃

Static pressure Effect : Applying 14MPa for DP type (31.2Mpa for HP type) static pressure, the zero error is less than ±0.25% of the maximum span for DP type, and the span error is -1.0±2.5%/6.9MPa of the span. These are systematic errors which can be eliminated through calibration based on actual measurement before installation.

Power Supply Effect: ≤±0.005% /V

Vibration effect: For vibration of 200Hz in any axis, the error caused is ±0.05%/g of the maximum span

Load Effect : No load effects in the working area when voltage transferred to transmitter is higher than 12V

Mounting position Effect: Zero shifts up to 0.10kPa, which can be calibrated out. No span effect

Note: Above data has been tested under the condition of SS316 diaphragm

Application & Order Procedure

EST4300 Smart Pressure Transmitter DP/HP, which is compatible with HART 475 field communicator, is the one of the most popular industry process measuring instruments, and is used to measure the level, density, and pressure of liquid, gas, and steam, converts it to 4-20mA signal outputs.

Order Procedure

Code	Pressure Type
EST4300 DP EST4300 HP	Smart Differential Pressure Transmitter Smart High Static Differential Pressure Transmitter

Code	Range
2	0-0.10 ~ 3.5kPa(0-10 ~ 350mmH ₂ O)
3	0-0.8 ~ 8.0kPa(0-80 ~ 800mmH ₂ O)
4	0-4.0 ~ 40kPa(0-400 ~ 4000mmH ₂ O)
5	0-20 ~ 200kPa(0-2000 ~ 20000mmH ₂ O)
6	0-70 ~ 700kPa(0-0.7 ~ 7kgf/cm ²)
7	0-210 ~ 2100kPa(0-2.1 ~ 21kgf/cm ²)
8	0-700 ~ 7000kPa(0-7.0 ~ 70kgf/cm ²)
9	0-2.1 ~ 21MPa(0-21 ~ 210kgf/cm ²)
0	0-4.1 ~ 41MPa(0-41 ~ 4100kgf/cm ²)

Code	Output
E	4~20mA
SF	4~20Ma+HART (Field Settable)
F	MODBUS-485

Code	MOC of Wetted Parts & Body			
	Flange Adapter	Drain/Vent Valves	Diaphragm	Fill Fluid
22	SS316	SS316	SS316	Silicone Oil
23	SS316	SS316	Hastelloy Alloy C	Silicone Oil
24	SS316	SS316	Monel	Silicone Oil
25	SS316	SS316	Tantalum	Silicone Oil
33	Hastelloy Alloy C	Hastelloy Alloy C	Hastelloy Alloy C	Silicone Oil
35	Hastelloy Alloy C	Hastelloy Alloy C	Tantalum	Silicone Oil
44	Monel	Monel	Monel	Silicone Oil

Code	MOC of Housing	Process Connection
A	Die cast Alu. Epoxy coating	M20×1.5
B	Die cast Alu. Epoxy coating	1/2NPT-14
C	SS316	M20×1.5
D	SS316	1/2NPT-14

Code	Process Connection
L1	1/4NPT-18 F
L2	1/2NPT-14 F
L3	M20 x 1.5 M

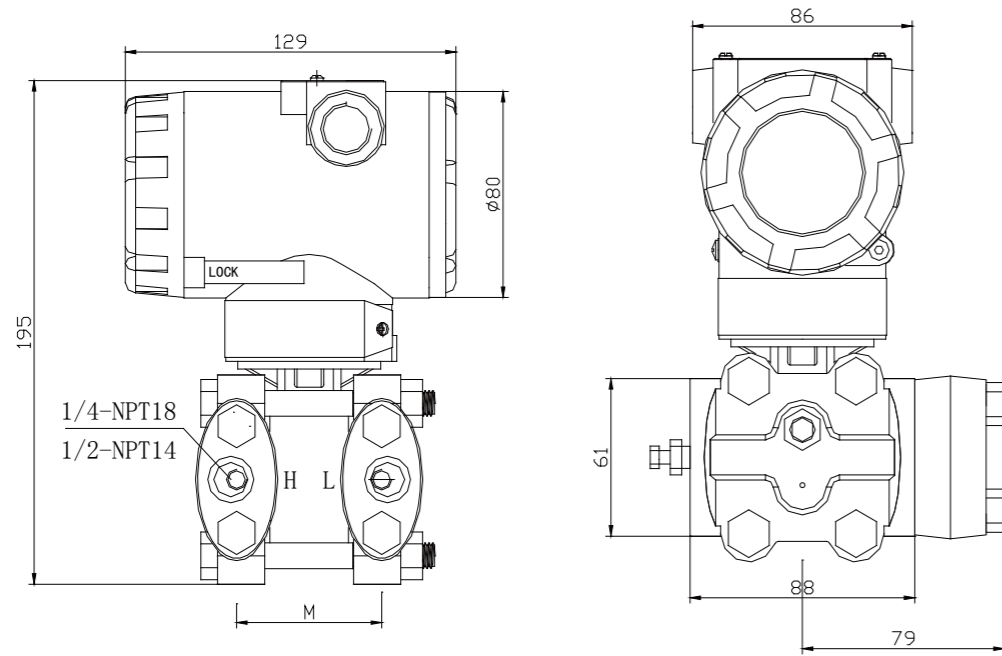
Code	Optional Accessory
M4	LCD Digital Display with Engineering Units
B1	Pipe Mounting (L type)
B2	Panel Mounting (L type)
B3	Pipe Mounting (Flat type)
D0	Drain/Vent Valve at Side
D1	Drain/Vent Valve at Top
D2	Drain/Vent Valve at Bottom
C02	M20 x 1.5 Nut with φ14 Impulsing Line
C12	1/2NPT-14 Thread M with φ14 Impulsing Line
C22	1/4NPT-18 Thread M with φ14 Impulsing Line
C32	1/4NPT-18 to M20 x 1.5 M
C42	1/2NPT-14 to M20 x 1.5 M
C43	1/2NPT-14 to 1/4NPT-18 F
C44	1/2NPT-14 to 1/2NPT-14 M
C45	1/2NPT-14 to G1/2 M
X1	Oil-Prohibited
Da	Explosion-Proof ExdIIBT5Gb
Fa	Intrinsic Safe ExiaIICT4/T5/T6Ga

i.e : EST4300 DP4SF22AL2M4B3X1 0~20kPa

Note:

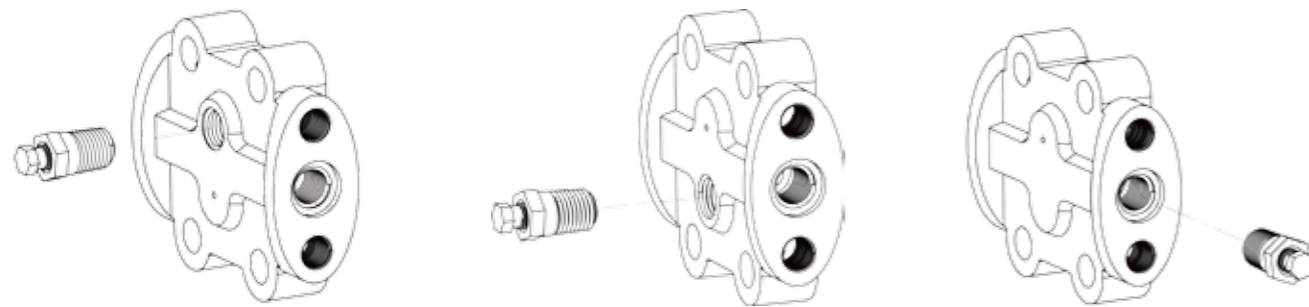
Before model select and order procedure, the measured Medium Temperature, Corrosivity, Pressure Range, Ex-Proof requirement, must clearly be aware of. The Flange mounting or Remote Diaphragm Seal is strongly recommended when the medium tend to be crystallized and viscous.

Drawing & Dimension



Range Code	2, 3, 4, 5	6	7	8	9
M (mm)	54	55.4	55.8	57.4	58.5

Drawing & Dimension



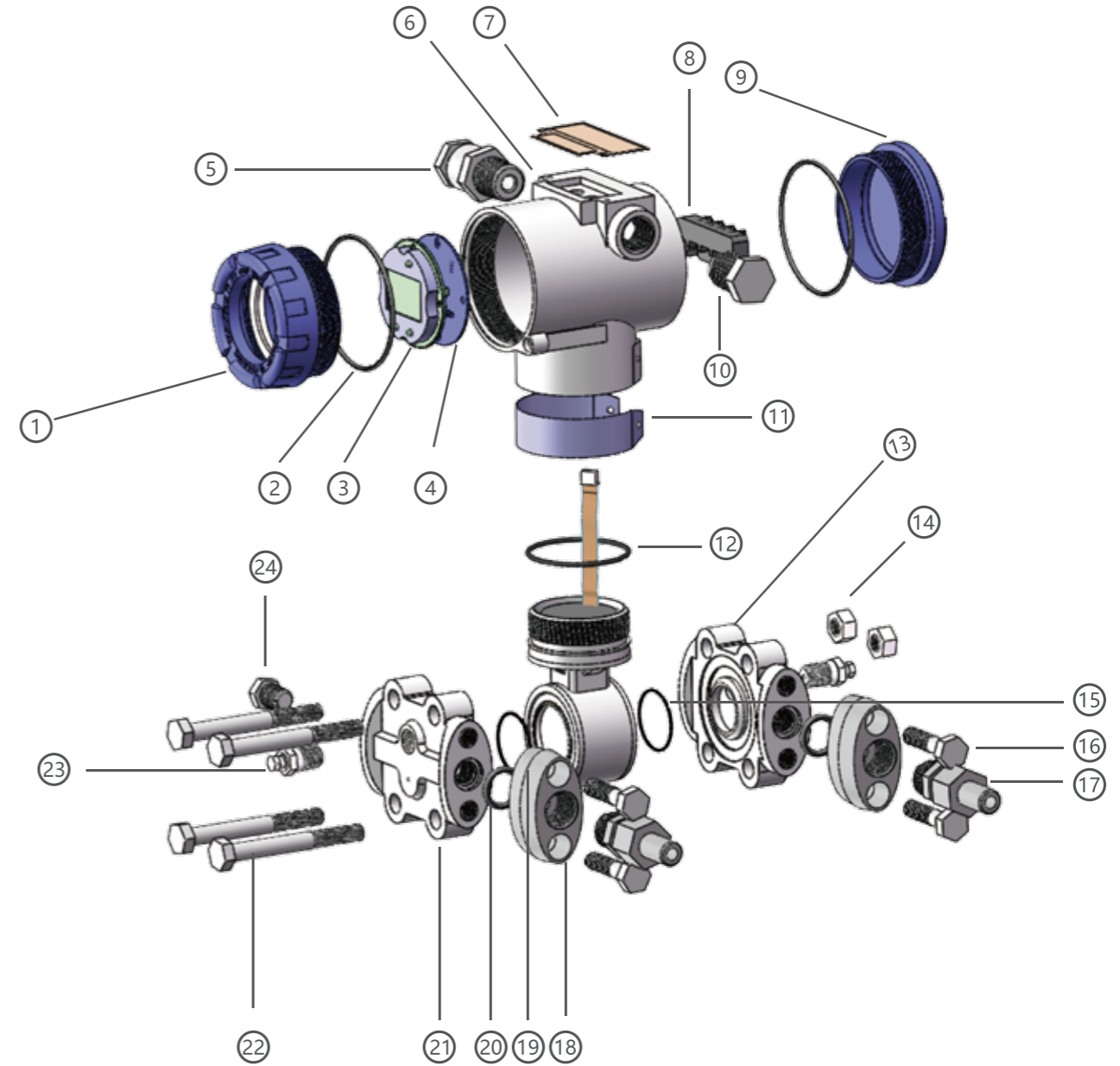
Drain/Vent Valve at Top (Code D1)

Drain/Vent Valve at Bottom (Code D2)

Drain/Vent Valve at Side (Code D0)

排放阀位置对应订货信息

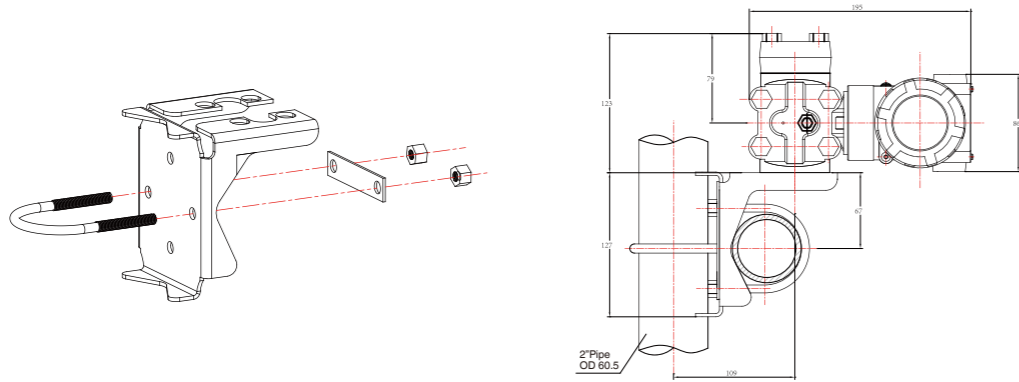
Exploded View



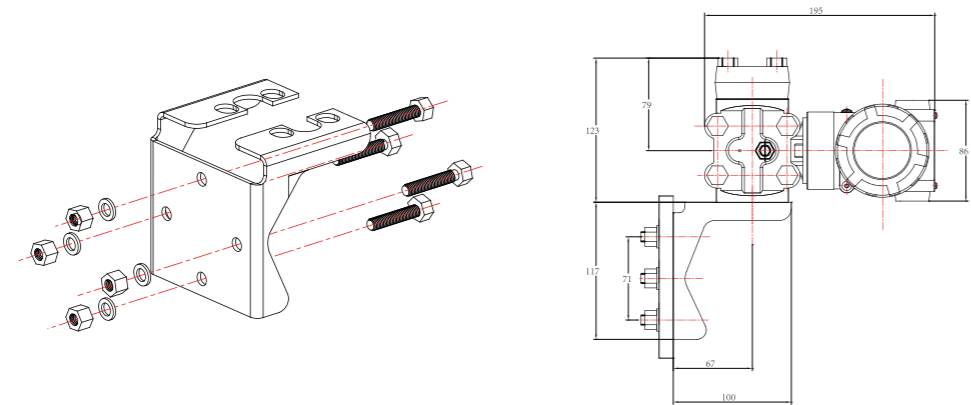
1 Front Cover	6 Electronics Housing	11 Nameplate-2	16 Bolt of Flange Adapter	21 Flange Pallets-2
2 O-Ring of Front Cover	7 Nameplate-1	12 O-Ring (upper) of Sensor Module	17 Impulse Piping Connector	22 Bolt of Flange Pallets
3 LCD Indicator	8 Terminal Block	13 Flange Pallets-1	18 Flange Adapter	23 Drain/Vent Valve
4 Electronics Board	9 Back Cover	14 Nut of Flange Pallets	19 O-Ring of Flange Adapter	24 Lock Nut
5 Electrical Connection	10 Ex-proof Seal	15 O-Ring (sides) of Sensor Module	20 Sensor Module	

Filed Mounting and Configuration

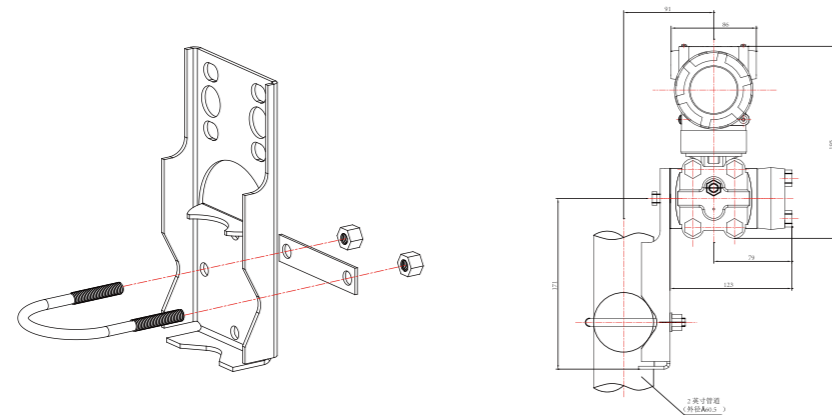
For GP , DP , HP , DR , AP :



Pipe Mounting (L type): B1 2 inch Pipe $\phi 50$



Panel Mounting (L type) : B2



Pipe Mounting (Flat type) : B3

EST4300 SMART Flange Mounted Liquid Level Transmitter

EST4300 Smart Flange Mounted Level Transmitter

Brief Introduction

EST4300 Smart Flange Mounted Pressure Transmitter - LT is microprocessor-based measuring instrument. Connected with one or two sides process impulse line, EST4300 Flange Mounted type measures the pressure with reference to barometric pressure.

Based on the regular model of EST4300 GP/AP/DP, the LT type is designed, with one or two diaphragm seal as wetted parts, to measure the pressure in some special cases such as high temperature, medium easy to solidify and tend to be crystallized and viscous or the medium has chemical corrosivity and other circumstance that strict sanitation terms are requested.

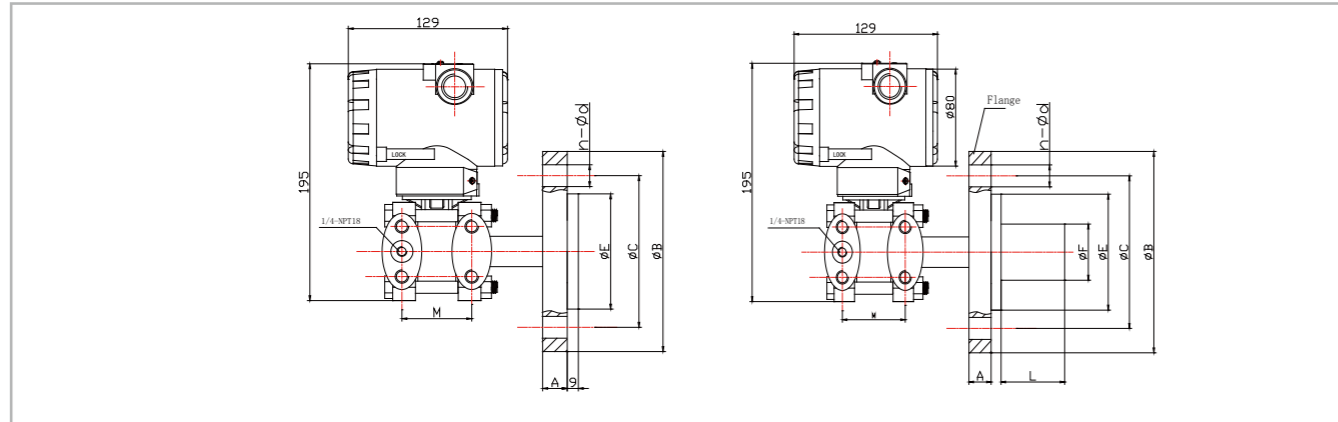
The basic sensing element of EST4300 LT type is the same as EST4300 GP/AP/DP, however the response time will be a little bit longer when the Capillary is more than 3 meter long.



EST4300LT Liquid
Differential Pressure Transmitter



EST4300LT Liquid
Pressure/Differential Pressure Transmitter



DN25 1" The O-Ring (optional) can effectively prevent diaphragm deformation which extruded by flange

1199 Diaphragm Seal - FFW Flat Remote Seal

DN50(2 inch)						
Class/Table	B	C	E	A	Bolts	Hole size
150LB	150	120	95	19	4	18
300LB	165	127	95	20	8	18
600LB	165	127	95	32	8	18
900LB	215	165	95	45	8	26
PN1.6/1.0	165	125	95	18	4	18
PN2.5/4.0	165	125	95	20	4	18
PN6.4	180	135	95	26	4	22

DN80(3 inch)						
Class/Table	B	C	E	A	Bolts	Hole size
150LB	190	152	124	20	4	18
300LB	210	168	124	25	8	22
600LB	210	168	124	38	8	22
900LB	240	191	124	54	8	26
PN1.6/1.0	200	160	124	20	8	18
PN2.5/4.0	200	160	124	24	8	18
PN6.4	215	170	124	28	8	22

DN80(3 inch)						
Code/Table	B	C	E	A	Bolts	Hole size
150LB	190	152	124	20	4	18
300LB	210	168	124	25	8	22
600LB	210	168	124	38	8	22
900LB	240	191	124	54	8	26
PN1.6/1.0	200	160	124	20	8	18
PN2.5/4.0	200	160	124	24	8	18
PN6.4	215	170	124	28	8	22

DN100(4 inch)						
Class/Table	B	C	E	A	Bolts	Hole size
150LB	230	190	155	24	4	18
300LB	255	200	155	32	8	22
600LB	275	215	155	45	8	26
900LB	290	235	155	50	8	33
PN1.6/1.0	200	180	155	20	8	18
PN2.5/4.0	200	190	155	24	8	22
PN6.4	215	200	155	28	8	26

DN40(1+1/2 inch)						
Code/Table	B	C	E	A	Bolts	Hole size
PN1.6/2.5	150	110	84	18	4	18
PN2.5/4.0	150	110	84	18	4	18
PN6.4	170	125	89	26	4	22

1199 Diaphragm Seal - EFW Plug-in Remote Seal

DN50(2 inch)							
Code/Table	B	C	E	F	A	Bolts	Hole size
150LB	150	120	95	48	19	4	18
300LB	165	127	95	48	20	8	18
600LB	165	127	95	48	32	8	18
900LB	215	165	95	48	45	8	26
PN1.6/1.0	165	125	95	48	18	4	18
PN2.5/4.0	165	125	95	48	20	4	18
PN6.4	180	135	95	48	26	4	22

DN80(3-in)							
Code/Table	B	C	E	E	A	Bolts	Hole size
150LB	190	152	124	74	20	4	18
300LB	210	168	124	74	25	8	22
600LB	210	168	124	74	38	8	22
900LB	240	191	124	74	54	8	26
PN1.6/1.0	200	160	124	74	20	8	18
PN2.5/4.0	200	160	124	74	24	8	18
PN6.4	215	170	124	74	28	8	22

DN100(4-in)							
Code/Table	B	C	E	E	A	Bolts	Hole size
150LB	230	190	155	89	24	4	18
300LB	255	200	155	89	32	8	22
600LB	275	215	155	89	45	8	26
900LB	290	235	155	89	50	8	33
PN1.6/1.0	200	180	155	89	20	8	18
PN2.5/4.0	200	190	155	89	24	8	22
PN6.4	215	200	155	89	28	8	26

Order Procedure

Model	Pressure Type
EST4300LT	Flange Mounted Level Transmitter
Code	Range
4 5 6 7	0-4.0 ~ 40kPa(0-400 ~ 4000mmH2O) 0-20 ~ 200kPa(0-2 ~ 20mH2O) 0-70 ~ 700kPa(0-7 ~ 70mH2O) 0-210 ~ 2100kPa(0-21 ~ mH2O)
Code	Output
E SF F	4~20mA 4~20Ma+HART (Field Settable) MODBUS-485

Code	Flange Standard (High Side)
A D	ANSI (HG20615) DIN (HG20592)

Code	Process Connection Size	
25 40 50 80 00	ANSI (HG20615)	DIN (HG20592)
	1-in	DN25
	1.5-in	DN40
	2-in	DN50
	3-in	DN80
	4-in	DN100

Code	Flange/Pressure Rating	
A B C D	ANSI (HG20615)	DIN (HG20592)
	150LB	PN16/25
	300LB	PN40
	600LB	PN64
	900LB	PN100

Code	Seal Diaphragm (High Side)
A B C D E F	SS316 Hastelloy Alloy C Monel Tantalum Titanium Others

Code	Seal Extension Length (High Side)	Seal Extension Material (High Side)
A B C D	0 mm 50 mm 150 mm 200 mm	--- SS316 SS316 SS316

Code	Seal Fill Fluid (High Side)
D	Silicone Oil (-40~104°C)
F	High Temp. Silicone Oil (-40~304°C)
S	Inert (Halocarbon) (-40~204°C)

Code	MOC of Low Pressure Side			
	Flange Adapter	Drain/Vent Valves	Diaphragm	Fill Fluid
22	SS316	SS316	SS316	Silicone Oil
23	SS316	SS316	Hastelloy Alloy C	Silicone Oil
24	SS316	SS316	Monel	Silicone Oil
25	SS316	SS316	Tantalum	Silicone Oil
33	Hastelloy Alloy C	Hastelloy Alloy C	Hastelloy Alloy C	Silicone Oil
35	Hastelloy Alloy C	Hastelloy Alloy C	Tantalum	Silicone Oil
44	Monel	Monel	Monel	Silicone Oil
S2	One Remote Diaphragm Seal for Low Pressure Side			

Code	MOC of Housing	Electronic Connection
A	Die cast Alu. Epoxy coating	M20×1.5
B	Die cast Alu. Epoxy coating	1/2NPT-14
C	SS304/316	M20×1.5
D	SS304/316	1/2NPT-14

Code	Optional Accessory
M1	0 ~ 100% Linear Indicator
M4	LCD Digital Display with Engineering Units
D0	Drain/Vent Valve at Side (For Lower Side None Diaphragm Seal)
D1	Drain/Vent Valve at Top (For Lower Side None Diaphragm Seal)
D2	Drain/Vent Valve at Bottom (For Lower Side None Diaphragm Seal)
Da	Explosion-Proof ExdIIBT5Gb
Fa	Intrinsic Safe ExiaIICT4/T5/T6Ga
CX	SS316 Flushing Ring

ie : EST4300LT4SFA50AAAD22AM4Da 0 ~ 20kPa

SMART In-Line Type Pressure/Level Transmitter

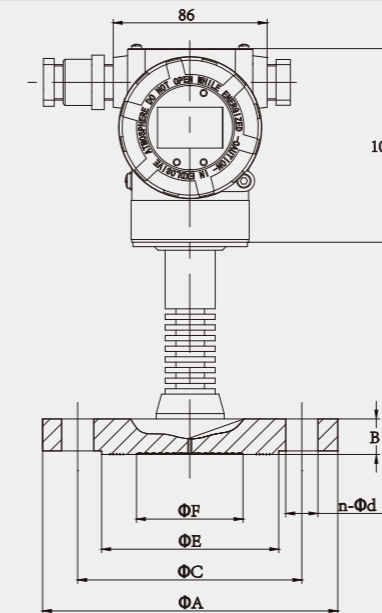
EST4300T Smart Level Transmitter

Brief Introduction

As the economic and affordable version of EST4300 LT, EST4300T LT, the in-line type Smart Pressure Transmitter is suitable for measuring the process when the Gage and Absolute pressure range is wide. With only one process side connected by Flange, the in-line type with compact design allows the transmitter to be connected directly to a process for quick, easy and cost effective installation.

EST4300T LT is designed, with one diaphragm seal as wetted parts, to measure the pressure in some special cases such as high temperature, medium easy to solidify and tend to be crystallized and viscous or the medium has chemical corrosivity and other circumstance that strict sanitation terms are requested.

The basic sensing element of EST4300T LT is the same as EST4300T GP/AP, however the response time will be a little bit longer when the Capillary is more than 3 meter long. (EST4300 LT type is strongly recommended when the measuring pressure less than 4KPa)



EST4300T Smart Level Transmitter

1199 Diaphragm Seal - FFW Flat Remote Seal

DN50(2-in)						
Class/Table	B	C	E	A	Bolts	Hole size
150LB	150	120	95	19	4	18
300LB	165	127	95	20	8	18
600LB	165	127	95	32	8	18
900LB	215	165	95	45	8	26
PN1.6/1.0	165	125	95	18	4	18
PN2.5/4.0	165	125	95	20	4	18
PN6.4	180	135	95	26	4	22

DN80(3-in)						
Class/Table	B	C	E	A	Bolts	Hole size
150LB	190	152	124	20	4	18
300LB	210	168	124	25	8	22
600LB	210	168	124	38	8	22
900LB	240	191	124	54	8	26
PN1.6/1.0	200	160	124	20	8	18
PN2.5/4.0	200	160	124	24	8	18
PN6.4	215	170	124	28	8	22

DN100(4-in)						
Class/Table	B	C	E	A	Bolts	Hole size
150LB	230	190	155	24	4	18
300LB	255	200	155	32	8	22
600LB	275	215	155	45	8	26
900LB	290	235	155	50	8	33
PN1.6/1.0	200	180	155	20	8	18
PN2.5/4.0	200	190	155	24	8	22
PN6.4	215	200	155	28	8	26

DN40(1.5-in)						
Class/Table	B	C	E	A	Bolts	Hole size
PN1.6/2.5	150	110	84	18	4	18
PN2.5/4.0	150	110	84	18	4	18
PN6.4	170	125	89	26	4	22

1199 Diaphragm Seal - EFW Plug-in Remote Seal

DN50(2-in)							
Class/Table	B	C	E	F	A	Bolts	Hole size
150LB	150	120	95	48	19	4	18
300LB	165	127	95	48	20	8	18
600LB	165	127	95	48	32	8	18
900LB	215	165	95	48	45	8	26
PN1.6/1.0	165	125	95	48	18	4	18
PN2.5/4.0	165	125	95	48	20	4	18
PN6.4	180	135	95	48	26	4	22

DN80(3-in)							
Class/Table	B	C	E	F	A	Bolts	Hole size
150LB	190	152	124	74	20	4	18
300LB	210	168	124	74	25	8	22
600LB	210	168	124	74	38	8	22
900LB	240	191	124	74	54	8	26
PN1.6/1.0	200	160	124	74	20	8	18
PN2.5/4.0	200	160	124	74	24	8	18
PN6.4	215	170	124	74	28	8	22

DN100(4-in)							
Class/Table	B	C	E	F	A	Bolts	Hole size
150LB	230	190	155	89	24	4	18
300LB	255	200	155	89	32	8	22
600LB	275	215	155	89	45	8	26
900LB	290	235	155	89	50	8	33
PN1.6/1.0	200	180	155	89	20	8	18
PN2.5/4.0	200	190	155	89	24	8	22
PN6.4	215	200	155	89	28	8	26

Order Procedure

Model		Pressure Type	
EST4300T		In-Line Type Level Transmitter	
Code		Range	
2		0-20 ~ 100kPa(0-2000 ~ 10000mmH2O)	
3		0-70 ~ 350kPa(0-7 ~ 35mH2O)	
4		0-200 ~ 1000kPa(0-20 ~ 100mH2O)	
5		0-700 ~ 3500kPa(0-70 ~ 350mH2O)	
Code		Output	
E		4~20mA	
SF		4~20Ma+HART (Field Settable)	
F		MODBUS-485	
Code		Flange Standard (High Side)	
A		ANSI (HG20615)	
D		DIN (HG20592)	
Code		Process Connection Size	
		ANSI (HG20615)	DIN (HG20592)
25		1-in	DN25
40		1.5-in	DN40
50		2-in	DN50
80		3-in	DN80
00		4-in	DN100
Code		Flange/Pressure Rating	
		ANSI (HG20615)	DIN (HG20592)
A		150LB	PN16/25
B		300LB	PN40
C		600LB	PN64
D		900LB	PN100

Code		Seal Diaphragm	
A		SS316	
B		Hastelloy Alloy C	
C		Monel	
D		Tantalum	
E		Titanium	
F		Others	
Code		Seal Extension Length (High Side)	Seal Extension Material (High Side)
A		0 mm	---
B		50 mm	SS316
C		150 mm	SS316
D		200 mm	SS316
Code		Seal Fill Fluid (High Side)	
D		Silicone Oil (-40~104°C)	
F		High Temp. Silicone Oil (-40~304°C)	
S		Inert (Halocarbon) (-40~204°C)	
Code		MOC of Housing	Electronic Connection
A		Die cast Alu. Epoxy coating	M20×1.5
B		Die cast Alu. Epoxy coating	1/2-14 NPT
C		SS304/316	M20×1.5
D		SS304/316	1/2-14 NPT
Code		Optional Accessory	
M1		0 ~ 100% Linear Indicator	
M4		LCD Digital Display with Engineering Units	
Da		Explosion-Proof ExdIIBT5Gb	
Fa		Intrinsic Safe ExiaIICT4/T5/T6Ga	
CX		SS316 Flushing Ring	

ie : EST4300TLT4SFA50AAADAM4Da 0 ~ 1000kPa

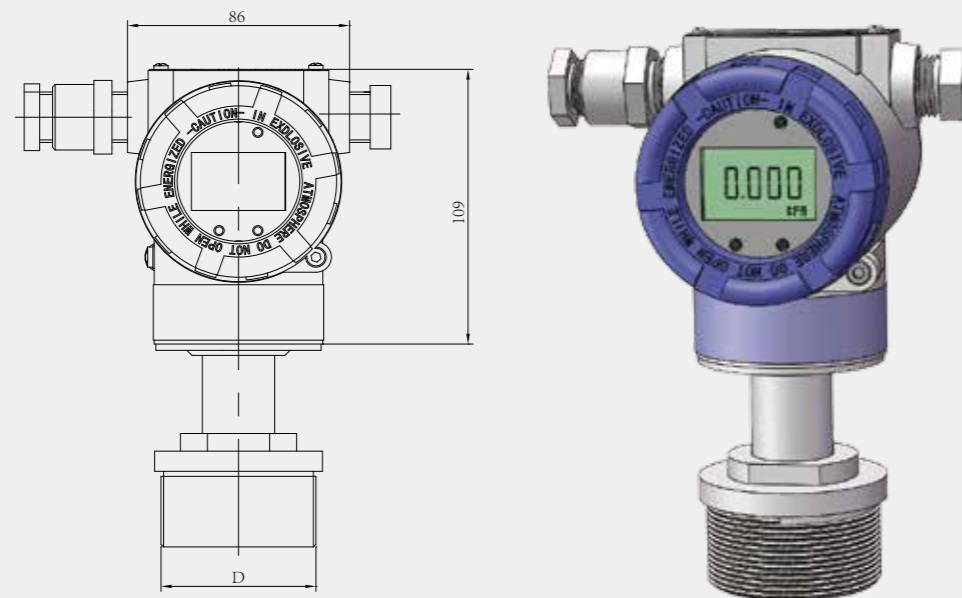
EST4300T Smart Screw Mounted Level Transmitter

Brief Introduction

EST4300T WLT, the in-line type Smart Pressure Transmitter is suitable for measuring the process when the Gage and Absolute pressure range is wide, and the pressure rating is high. With only one process side connected by Thread, the in-line type with compact design allows the transmitter to be connected directly to a process for quick, easy and cost effective installation.

EST4300T WLT is designed, with one diaphragm seal as wetted parts, to measure the pressure in some special cases such as high temperature, medium easy to solidify and tend to be crystallized and viscous or the medium has chemical corrosivity and other circumstance that strict sanitation terms are requested.

The basic sensing element of EST4300T WLT is the same as EST4300T GP/AP, however the response time will be a little bit longer when the Capillary is more than 3 meter long. (EST4300 LT type is strongly recommended when the measuring pressure less than 4KPa)



EST4300T Smart Screw Mounted Level Transmitter

Order Procedure

Model	Pressure Type	
EST4300T	Smart Screw Mounted Level (Pressure) Transmitter	
Code	Range	
2	0-20 ~ 100kPa(0-2000 ~ 10000mmH2O)	
3	0-70 ~ 350kPa(0-7 ~ 35mH2O)	
4	0-200 ~ 1000kPa(0-20 ~ 100mH2O)	
5	0-700 ~ 3500kPa(0-70 ~ 350mH2O)	
Code	Output	
E	4~20mA	
SF	4~20Ma+HART (Field Settable)	
F	MODBUS-485	
Code	Screw Type (High Side)	MOC (High Side)
G1	Screw 1-in	SS316/304
G2	Screw 1.5-in	SS316/304
G3	Screw 2-in	SS316/304
Code	Seal Diaphragm	
A	SS316	
B	Hastelloy Alloy C	
Code	Seal Fill Fluid	
D	Silicone Oil (-40~104°C)	
F	High Temp. Silicone Oil (-40~304°C)	
S	Inert (Halocarbon) (-40~204°C)	

Code	MOC of Housing	Electronic Connection
A	Die cast Alu. Epoxy coating	M20×1.5
B	Die cast Alu. Epoxy coating	1/2NPT-14
C	SS304/316	M20×1.5
D	SS304/316	1/2NPT-14

Code	Optional Accessory
M1	0~100% Linear Indicator
M4	LCD Digital Display with Engineering Units
Da	Explosion-Proof ExdIIBT5Gb
Fa	Intrinsic Safe ExiaIICT4/T5/T6Ga

ie : EST4300TWLT2SFG2ADAM4 0~50kPa

SMART Flange Screw Mounted Liquid Level/Pressure Transmitter

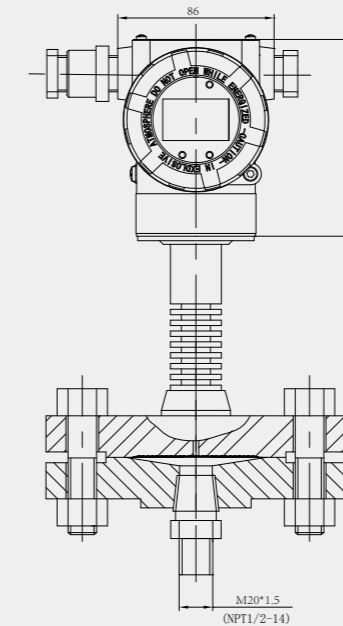
EST4300T Smart Flange Screw Level Transmitter

Brief Introduction

EST4300T FLT, the in-line type Smart Level /Pressure Transmitter is suitable for measuring the process when the Gage and Absolute pressure range is wide, and the pressure rating is high. With only one process side connected by Flange Screw, the in-line type with compact design allows the transmitter to be connected directly to a process for quick, easy and cost effective installation.

EST4300T FLT is designed, with one diaphragm seal as wetted parts, to measure the pressure in some special cases such as high temperature, medium easy to solidify and tend to be crystallized and viscous or the medium has chemical corrosivity and other circumstance that strict sanitation terms are requested.

The basic sensing element of EST4300T FLT is the same as EST4300T GP/AP, however the response time will be a little bit longer when the Capillary is more than 3 meter long. (EST4300 LT type is strongly recommended when the measuring pressure less than 4KPa)



EST4300T Smart Flange Screw Level Transmitter

Order Procedure

Model	Pressure Type	
EST4300T	Flange Screw Level Transmitter	
Code	Range	
2 3 4 5	0-20 ~ 100kPa(0-2000 ~ 10000mmH2O) 0-70 ~ 350kPa(0-7 ~ 35mH2O) 0-200 ~ 1000kPa(0-20 ~ 100mH2O) 0-700 ~ 3500kPa(0-70 ~ 350mH2O)	
Code	Output	
E SF F	4~20mA 4~20Ma+HART (Field Settable) MODBUS-485	
Code	Process Connection Size	
A1 A2 A3	1/2NPT-14 (F) M20×1.5 (M) Customize	
Code	Seal Diaphragm	MOC of Flange & Wetted Parts
A B C D	SS316 Hastelloy Alloy C Monel Tantalum	316L 316L 316L 316L
Code	Seal Fill Fluid	
D F S	Silicone Oil (-40~104°C) High Temp. Silicone Oil (-40~304°C) Inert (Halocarbon) (-40~204°C)	

Code	MOC of Housing	Electronic Connection
A B C D	Die cast Alu. Epoxy coating Die cast Alu. Epoxy coating SS304/316 SS304/316	M20×1.5 1/2NPT-14 M20×1.5 1/2NPT-14

Code	Optional Accessory
M1 M4 Da Fa Gd T F4	0 ~ 100% Linear Indicator LCD Digital Display with Engineering Units Explosion-Proof ExdII BT5Gb Intrinsic Safe ExiaII CT4/T5/T6Ga Gold Plated Diaphragm Intensification Diaphragm PTFE Coated Diaphragm for nonstick purposes only

ie : EST4300T FLT3SFA1ADAM4 0~100kPa

EST4300(T) Smart Remote Diaphragm Seal Pressure/Level Transmitter

Brief Introduction

EST4300 Remote Diaphragm Seal RG (Remote Gauge) and RD (Remote Differential) is used where to keep the isolating diaphragm out of direct contact with the process liquid and to prevent the process from the sensor module; for EST4300T, it only has RG (Remote Gauge) type.

With the same technology and specifications EST4300 GP/DP, EST4300 RG/RD Smart Pressure Transmitter is a little bit weakened in measurement accuracy and response time.

Besides, as the capillary length is over 10m, special attention must be paid to the installation position to ensure the pressure tested is within the measuring scope of the basic sensing element;

Due to the nature of hydrostatic level monitoring, medium density should be known for an accurate level measurement. For most cases, the measurement process can performed with EST4300 GP/DP types; however, for any of the following situations, EST4300 RG/RD or EST4300T RG shall be considered to use.

- Where the process medium are prone to solidifying or crystallizing
- Where the process medium are too thick or contains suspended solid and can easily block the impulse piping
- Where the process medium s are hot or corrosive, and cannot be measured directly
- Where the process medium are food or other materials that cannot be contaminated
- Where the process medium

Before model select and order procedure, the measured Medium Temperature, Corrosivity, Pressure Range, Ex-Proof requirement, must clearly be aware of. The Flange mounting or Remote Diaphragm Seal is strongly recommended when the medium tend to be crystallized and viscous.

EST4300(T) Remote Diaphragm Seal PT/LT-Single Seal



Transmitter: EST4300TGP2SF00S1M4B4

Seal: 1199FFW A50AADL03H00

EST4300T In-Line type Smart Pressure Transmitter + 0-20~100KPa + 4-20mA+HART + LCD Display + Single Remote Diaphragm Seal + Pipe Mounting + Curve Bracket + Flange Mounting System + ANSI 2 inch 150LB + SS316 + Regular Silicone Oil + 3m Capillary + High Pressure Side + No Gasket + No Accessory



Transmitter: EST4300TGP2SF00S1M4B4

Seal: 1199PFW A50AADL03H00

EST4300T In-Line type Smart Pressure Transmitter + 0-20~100KPa + 4-20mA+HART + LCD Display + Single Remote Diaphragm Seal + Pipe Mounting + Curve Bracket + Flat Mounting System + ANSI 2 inch 150LB + SS316 + Regular Silicone Oil + 3m Capillary + High Pressure Side + No Gasket + No Accessory



Transmitter: EST4300TGP2SF00S1M4B4

Seal: 1199EFW A50AABDL03H00

EST4300T In-Line type Smart Pressure Transmitter + 0-20~100KPa + 4-20mA+HART + LCD Display + Single Remote Diaphragm Seal + Pipe Mounting + Curve Bracket + Plug-in Remote Seal System + ANSI 2 inch 150LB + SS316 + 100mm Extension + Regular Silicone Oil + 3m Capillary + High Pressure Side + No Gasket + No Accessory



Transmitter: EST4300TGP4SF00S1M4B4

Seal: 1199RTW A1AADL03H00

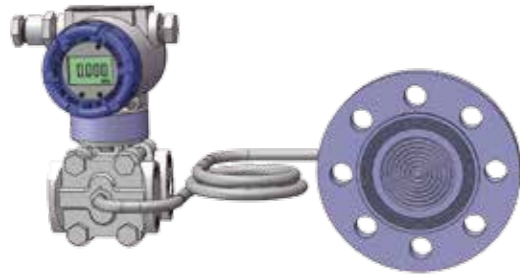
EST4300T In-Line type Smart Pressure Transmitter + 0-200~1000KPa + 4-20mA+HART + LCD Display + Single Remote Diaphragm Seal + Pipe Mounting + Curve Bracket + Thread Mounting Remote Seal System + 1/2NPT-14F + SS316 + Regular Silicone Oil + 3m Capillary + High Pressure Side + No Gasket + No Accessory



Transmitter: EST4300TGP2SF00S1M4B4

Seal: 1199SCW A1ADL03H0

EST4300T In-Line type Smart Pressure Transmitter + 0-20~100KPa + 4-20mA+HART + LCD Display + Single Remote Diaphragm Seal + Pipe Mounting + Curve Bracket + Hygienic Tri Clamp Remote Seal System + 1.5 inch Outer Diameter + SS316 + Regular Silicone Oil + 3m Capillary + High Pressure Side + No Accessory



Transmitter: EST4300GP4SF22S1M4B3

Seal: 1199FFW A50AADL03H00

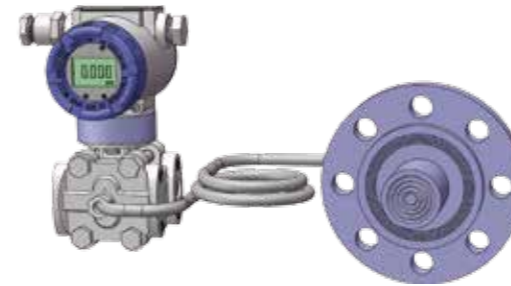
EST4300 Smart Pressure Transmitter + 0-4.0~40KPa + 4-20mA+HART + SS316 Wetted Parts + SS316 Diaphragm + Single Remote Diaphragm Seal + LCD Display + Pipe Mounting + Bracket + Flange Mounting System + ANSI 2 inch 150LB + SS316 + Regular Silicone Oil + 3m Capillary + High Pressure Side + No Gasket + No Accessory



Transmitter: EST4300GP4SF22S1M4B3

Seal: 1199PFW A50AADL03H00

EST4300 Smart Pressure Transmitter + 0-4.0~40KPa + 4-20mA+HART + SS316 Wetted Parts + SS316 Diaphragm + Single Remote Diaphragm Seal + LCD Display + Pipe Mounting + Bracket + Flat Mounting System + ANSI 2 inch 150LB + SS316 + Regular Silicone Oil + 3m Capillary + High Pressure Side + No Gasket + No Accessory



Transmitter: EST4300GP4SF22S1M4B3

Seal: 1199EFW A50AABDL03H00

EST4300 Smart Pressure Transmitter + 0-4.0~40KPa + 4-20mA+HART + SS316 Wetted Parts + SS316 Diaphragm + Single Remote Diaphragm Seal + LCD Display + Pipe Mounting + Bracket + Plug-in Remote Seal System + ANSI 2 inch 150LB + SS316 + 100mm Extension + Regular Silicone Oil + 3m Capillary + High Pressure Side + No Gasket + No



Transmitter: EST4300GP7SF22S1M4B4

Seal: 1199RTW A1AADL03H00

EST4300 Smart Pressure Transmitter + 0-210~2100KPa + 4-20mA+HART + SS316 Wetted Parts + SS316 Diaphragm + Single Remote Diaphragm Seal + LCD Display + Pipe Mounting + Curve Bracket + Thread Mounting Remote Seal System + 1/2NPT-14F + SS316 + Regular Silicone Oil + 3m Capillary + High Pressure Side + No Gasket + No Accessory



Transmitter: EST4300GP5SF22S1M4B3

Seal: 1199SCW A1ADL03H0

EST4300 Smart Pressure Transmitter + 0-20~200KPa + 4-20mA+HART + SS316 Wetted Parts + SS316 Diaphragm + Single Remote Diaphragm Seal + LCD Display + Pipe Mounting + Bracket + Hygienic Tri Clamp Remote Seal System + 1.5 inch Outer Diameter + SS316 + Regular Silicone Oil + 3m Capillary + High Pressure Side + No Accessory

Order Procedure

Model	Pressure Type
EST4300TGP	Remote Diaphragm Seal Pressure Transmitter
EST4300GP	Remote Diaphragm Seal Pressure Transmitter
EST4300DP	Remote Diaphragm Seal Differential Pressure Transmitter

Code	Range (GP/DP)	Code	Range (TGP)
4	0-4.0 ~ 40kPa(0-400 ~ 4000mmH2O)	2	0-20 ~ 100kPa(0-2000 ~ 10000mmH2O)
5	0-20 ~ 200kPa(0-2000 ~ 20000mmH2O)	3	0-70 ~ 350kPa(0-7 ~ 35mH2O)
6	0-70 ~ 700kPa(0-0.7 ~ 7kgf/cm2)	4	0-200 ~ 1000kPa(0-20 ~ 100mH2O)
7	0-210 ~ 2100kPa(0-2.1 ~ 21kgf/cm2)	5	0-700 ~ 3500kPa(0-70 ~ 350mH2O)
8	0-700 ~ 7000kPa(0-7.0 ~ 70kgf/cm2)	6	0-2 ~ 10MPa

Code	Output
SF	4~20mA+HART (Field Settable)
F	MODBUS-485

Code	MOC (Only for EST4300GP, Code of 00 can be used in case of EST4300TGP)		
	Flange Adapter	Drain/Vent Valves	Diaphragm
22	SS316	SS316	SS316
23	SS316	SS316	Hastelloy Alloy C
24	SS316	SS316	Monel
25	SS316	SS316	Tantalum
33	Hastelloy Alloy C	Hastelloy Alloy C	Hastelloy Alloy C
35	Hastelloy Alloy C	Hastelloy Alloy C	Tantalum

Code	Remote Diaphragm Seal
S1	Single 1199 Seal

Code	Optional Accessory
M1	0 ~ 100% Linear Indicator
M4	LCD Digital Display with Engineering Units
B1	Pipe Mounting (L type)
B2	Panel Mounting (L type)
B3	Pipe Mounting (Flat type)
B4	Panel Mounting (Flat type)
Da	Explosion-Proof ExdIIBT5Gb
Fa	Intrinsic Safe ExiaIIBT4/T5/T6Ga

ie : EST4300GP4SF22S1M4B3 0~40kPa

EST4300 SMART Diaphragm seal system Pressure /Differential Pressure Transmitter

EST4300 Remote Diaphragm Seal PT/LT-Dual Seal



Transmitter: EST4300DP4SF22S2M4B3

Seal-R: 1199FFW A50AADL03H00

Seal-L: 1199FFW A50AADL03H00

EST4300 Smart Pressure Transmitter + 0-4.0~40KPa + 4-20mA+HART + SS316 Wetted Parts + SS316 Diaphragm + Dual Remote Diaphragm Seal + LCD Display + Pipe Mounting + Bracket + Flange Mounting System + ANSI 2 inch 150LB + SS316 + Regular Silicone Oil + 3m Capillary + High Pressure Side + No Gasket + No Accessory



Transmitter: EST4300DP4SF22S2M4B3

Seal-R: 1199PFW A50AADL03H00

Seal-L: 1199PFW A50AADL03H00

EST4300 Smart Pressure Transmitter + 0-4.0~40KPa + 4-20mA+HART + SS316 Wetted Parts + SS316 Diaphragm + Dual Remote Diaphragm Seal + LCD Display + Pipe Mounting + Bracket + Flat Mounting System + ANSI 2 inch 150LB + SS316 + Regular Silicone Oil + 3m Capillary + High Pressure Side + No Gasket + No Accessory



Transmitter: EST4300DP4SF22S2M4B3

Seal-R: 1199EFW A50AABDL03H00

Seal-L: 1199EFW A50AABDL03H00

EST4300 Smart Pressure Transmitter + 0-4.0~40KPa + 4-20mA+HART + SS316 Wetted Parts + SS316 Diaphragm + Dual Remote Diaphragm Seal + LCD Display + Pipe Mounting + Bracket + Plug-in Remote Seal System + ANSI 2 inch 150LB + SS316 + 100mm Extension + Regular Silicone Oil + 3m Capillary + High Pressure Side + No Gasket + No Accessory



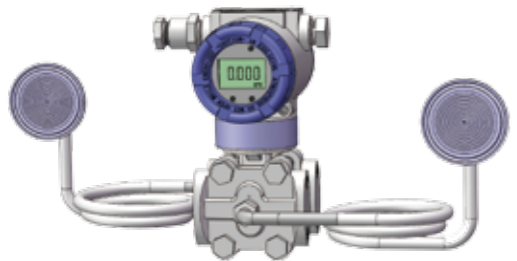
Transmitter: EST4300DP4SF22S2M4B3
Seal-R: 1199EFW A50AABDL03H00
Seal-L: 1199FFW A50AABDL03L00

EST4300 Smart Pressure Transmitter + 0-4.0~40KPa + 4-20mA+HART + SS316 Wetted Parts + SS316 Diaphragm + Dual Remote Diaphragm Seal + LCD Display + Pipe Mounting + Bracket + Plug-in Remote Seal System (Seal R) + Flange Mounting System (Seal L)



Transmitter: EST4300DP4SF22S2M4B3
Seal-R: 1199EFW A50AABDL03H00
Seal-L: 1199PFW A50AADL03L00

EST4300 Smart Pressure Transmitter + 0-4.0~40KPa + 4-20mA+HART + SS316 Wetted Parts + SS316 Diaphragm + Dual Remote Diaphragm Seal + LCD Display + Pipe Mounting + Bracket + Plug-in Remote Seal System (Seal R) + Flat Mounting System (Seal L)



Transmitter: EST4300DP4SF22S2M4B3
Seal-R: 1199SCW A1A0DL03H0
Seal-L: 1199SCW A1A0DL03H0

EST4300 Smart Pressure Transmitter + 0-4.0~40KPa + 4-20mA+HART + SS316 Wetted Parts + SS316 Diaphragm + Dual Remote Diaphragm Seal + LCD Display + Pipe Mounting + Bracket + Hygienic Tri Clamp Remote Seal System (Seal R) + Hygienic Tri Clamp Remote Seal System (Seal L)

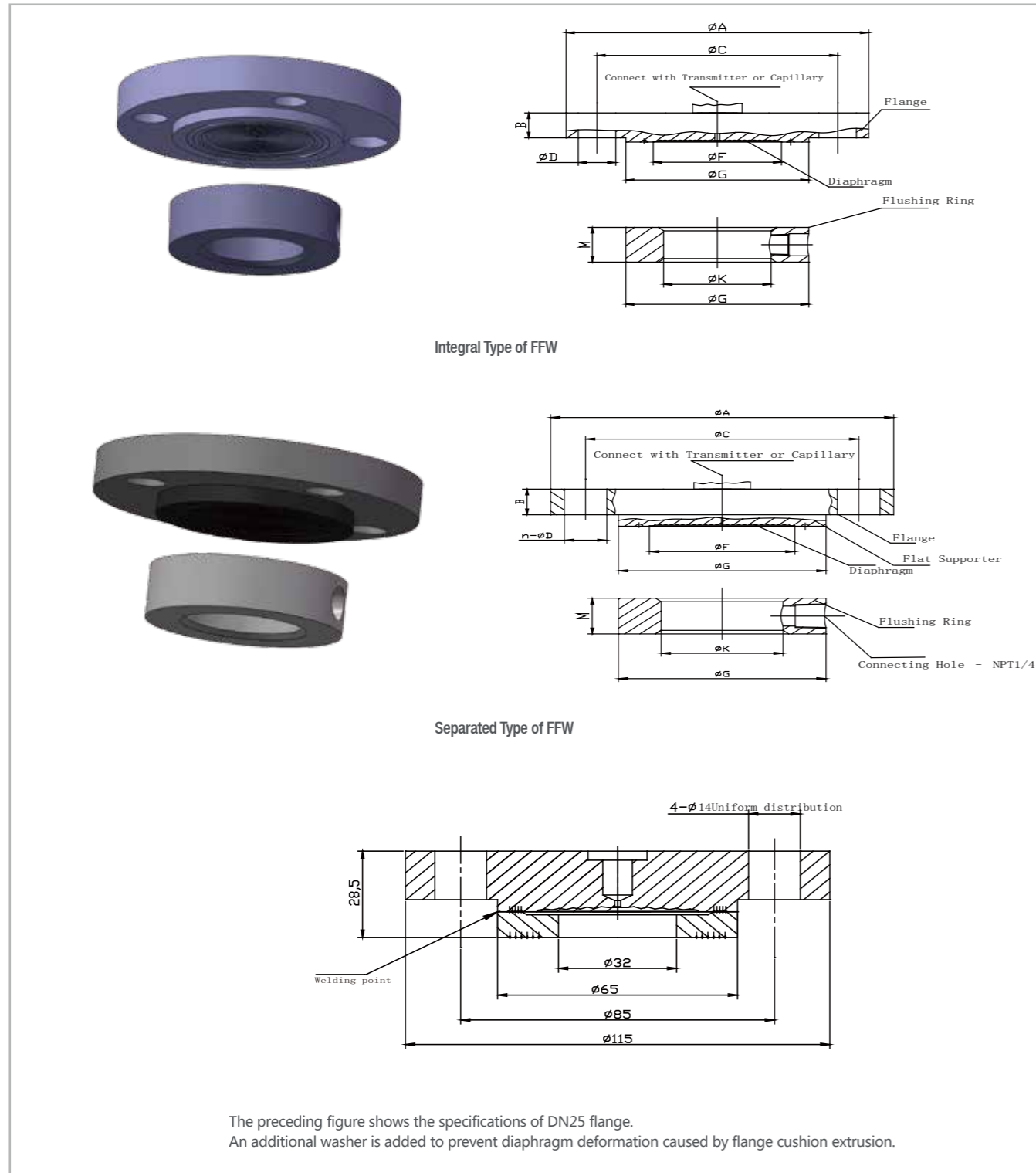
Order Procedure

Model		Pressure Type
EST4300DP		Remote Diaphragm Seal Differential Pressure Transmitter
Code		Range
4		0-4.0 ~ 40kPa(0-400 ~ 4000mmH2O)
5		0-20 ~ 200kPa(0-2000 ~ 20000mmH2O)
6		0-70 ~ 700kPa(0-0.7 ~ 7kgf/cm2)
7		0-210 ~ 2100kPa(0-2.1 ~ 21kgf/cm2)
8		0-700 ~ 7000kPa(0-7.0 ~ 70kgf/cm2)
Code		Output
SF		4~20mA+HART (Field Settable)
F		MODBUS-485
Code	MOC of Flange	
22	SS316	
Code		Remote Diaphragm Seal
S2		Dual 1199 Seals
Code		Optional Accessory
M1		0 ~ 100% Linear Indicator
M4		LCD Digital Display with Engineering Units
B1		Pipe Mounting (L type)
B2		Panel Mounting (L type)
B3		Pipe Mounting (Flat type)
Da		Explosion-Proof ExdIIBT5Gb
Fa		Intrinsic Safe ExiaIIBT4/T5/T6Ga

ie : EST4300DP4SF22S2M4B3

Diaphragm Seals for EST4300

Flush Flanged Seal-FFW



Specification of FFW

Specification of Flush Flanged Seal

DN50(2-in)						
Class/Table	A	C	G	B	Bolts	Hole size
150LB	150	120	95	19	4	18
300LB	165	127	95	20	8	18
600LB	165	127	95	32	8	18
900LB	215	165	95	45	8	26
PN1.6/1.0	165	125	95	18	4	18
PN2.5/4.0	165	125	95	20	4	18
PN6.4	180	135	95	26	4	22

DN80(3-in)						
Class/Table	A	C	G	B	Bolts	Hole size
150LB	190	152	124	20	4	18
300LB	210	168	124	25	8	22
600LB	210	168	124	38	8	22
900LB	240	191	124	54	8	26
PN1.6/1.0	200	160	124	20	8	18
PN2.5/4.0	200	160	124	24	8	18
PN6.4	215	170	124	28	8	22

DN100(4-in)						
Class/Table	A	C	G	B	Bolts	Hole size
150LB	230	190	155	24	4	18
300LB	255	200	155	32	8	22
600LB	275	215	155	45	8	26
900LB	290	235	155	50	8	33
PN1.6/1.0	200	180	155	20	8	18
PN2.5/4.0	200	190	155	24	8	22
PN6.4	215	200	155	28	8	26

DN40(1.5-in)						
Class/Table	B	C	E	A	Bolts	Hole size
PN1.6/2.5	150	110	84	18	4	18
PN2.5/4.0	150	110	84	18	4	18
PN6.4	170	125	89	26	4	22

Order Procedure of FFW

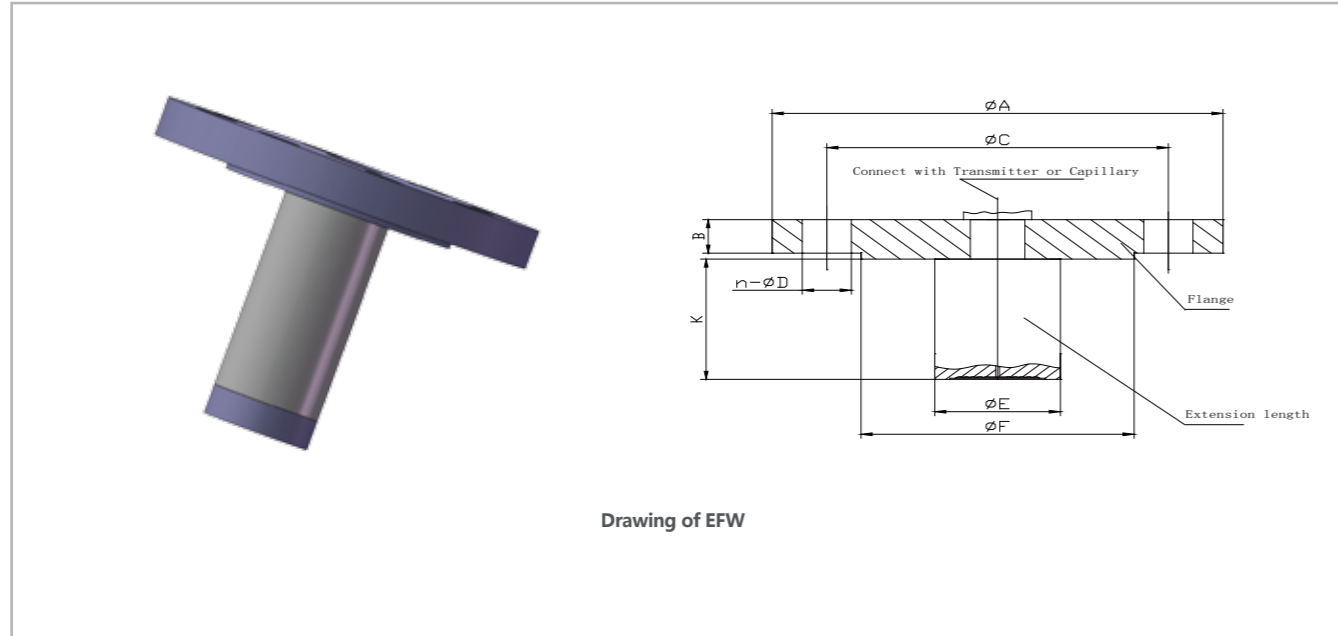
Model		Seal Type	
1199FFW		Flush Flanged Seal	
Code		Output	
A D		ANSI (HG20615) DIN (HG20592)	
Code		Seal Size of Process Connection	
		ANSI (HG20615)	DIN (HG20592)
25		1-in	DN25
40		1.5-in	DN40
50		2-in	DN50
80		3-in	DN80
00		4-in	DN100
Code		Flange/Pressure Rating	
		ANSI (HG20615)	DIN (HG20592)
A		150LB	PN16/25
B		300LB	PN40
C		600LB	PN64
D		900LB	PN100
Code		MOC of Diaphragm & Wetted Parts	
A B C D E F		SS316 Hastelloy Alloy C Monel Tantalum Titanium Others	
Code		Seal Fill Fluid (High Side)	
D F S		Silicone Oil (-40~104°C) High Temp. Silicone Oil (-40~304°C) Inert (Halocarbon) (-40~204°C)	

Code		Length of Capillary	
L00 LXX		No Capillary XX (m)	
Code		Position	
H L		High Pressure Side Low Pressure Side	
Code		Flushing Ring Connection	
0 1		No Flushing Ring Flushing Ring (SS316)	
Code		Optional Accessory	
0 F J G T F4		--- Teflon O-ring Metal Winding O-ring Gold Plated Diaphragm Intensification Diaphragm PTFE Coated Diaphragm for nonstick purposes only	

ie : EST4300 1199FFWA50AADL03H00

Diaphragm Seals for EST4300

Extended Flanged Seal-EFW



Specification of EFW

DN50(2-in)							
Class/Table	A	C	F	E	B	Bolts	Hole size
150LB	150	120	95	48	19	4	18
300LB	165	127	95	48	20	8	18
600LB	165	127	95	48	32	8	18
900LB	215	165	95	48	45	8	26
PN1.6/1.0	165	125	95	48	18	4	18
PN2.5/4.0	165	125	95	48	20	4	18
PN6.4	180	135	95	48	26	4	22

DN80(3-in)							
Class/Table	B	C	E	F	A	Bolts	Hole size
150LB	190	152	124	74	20	4	18
300LB	210	168	124	74	25	8	22
600LB	210	168	124	74	38	8	22
900LB	240	191	124	74	54	8	26
PN1.6/1.0	200	160	124	74	20	8	18
PN2.5/4.0	200	160	124	74	24	8	18
PN6.4	215	170	124	74	28	8	22

DN100(4-in)							
Class/Table	A	C	F	E	B	Bolts	Hole size
150LB	230	190	155	89	24	4	18
300LB	255	200	155	89	32	8	22
600LB	275	215	155	89	45	8	26
900LB	290	235	155	89	50	8	33
PN1.6/1.0	200	180	155	89	20	8	18
PN2.5/4.0	200	190	155	89	24	8	22
PN6.4	215	200	155	89	28	8	26

Order Procedure of EFW

Code	Seal Type
SMT1199EFW	Extended Flanged Seal
Code	Output
A D	ANSI (HG20615) DIN (HG20592)
Code	Seal Size of Process Connection
50 80 00	ANSI (HG20615)
	DIN (HG20592)
	2吋
	3吋
4吋	DN50 DN80 DN100
Code	Flange/Pressure Rating
A B C D	ANSI (HG20615)
	DIN (HG20592)
	150LB
	300LB
	600LB
900LB	PN16/25 PN40 PN64 PN100
Code	MOC of Diaphragm & Wetted Parts
A B C	SS316 Hastelloy Alloy C Monel

D	Tantalum
E	Titanium
F	Others

Code	Extension Length	Extension Material
A	50 mm	SS316
B	100 mm	SS316
C	150 mm	SS316
D	200 mm	SS316

Code	Seal Fill Fluid (High Side)
D	Silicone Oil (-40~104°C)
F	High Temp. Silicone Oil (-40~304°C)
S	Inert (Halocarbon) (-40~204°C)

Code	Length of Capillary
L00	No Capillary
LXX	XX (m)

Code	Position
H	High Pressure Side
L	Low Pressure Side

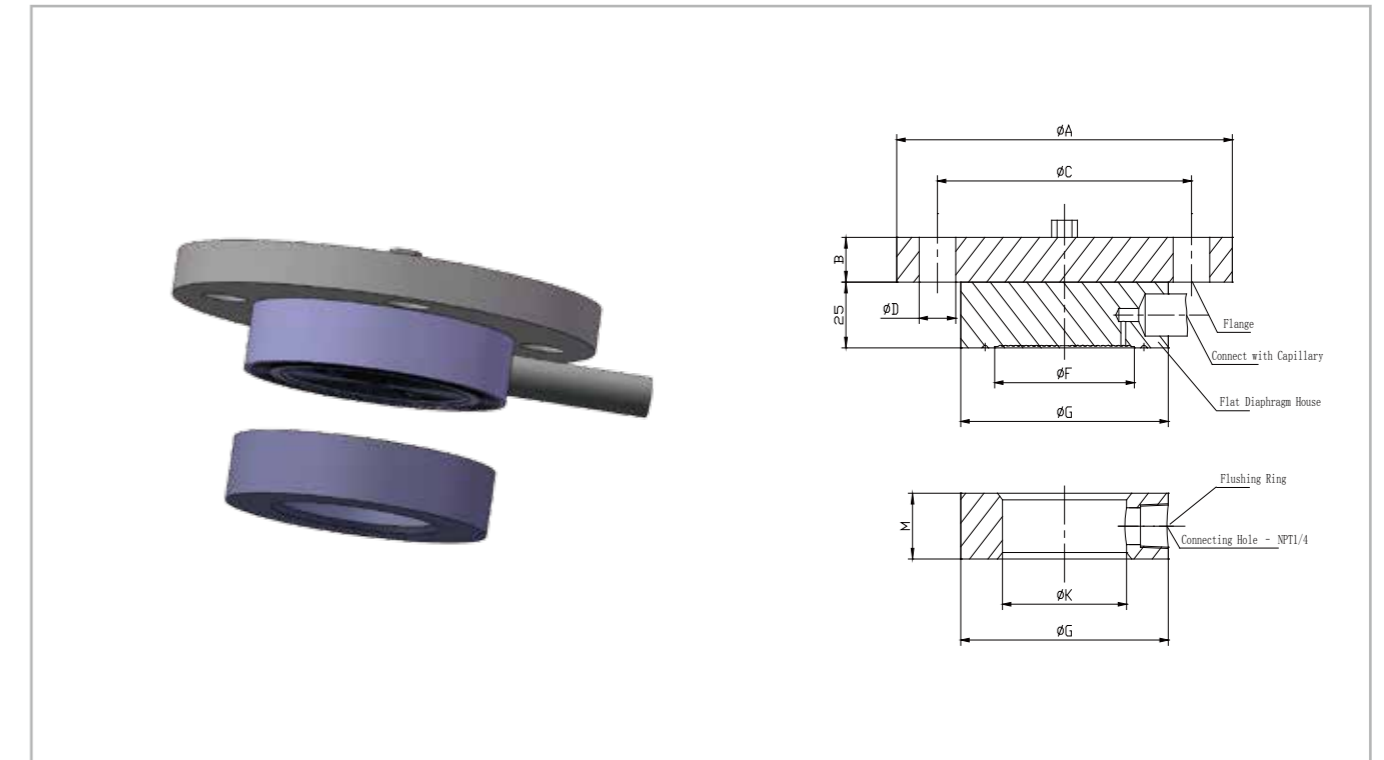
Code	Flushing Ring Connection
0	No Flushing Ring
1	Flushing Ring (SS316)

Code	Optional Accessory
0	---
F	Teflon O-ring
J	Metal Winding O-ring
G	Gold Plated Diaphragm
T	Intensification Diaphragm
F4	PTFE Coated Diaphragm for nonstick purposes only

ie : SEST4300 1199EFWA50AABDL03H00

Diaphragm Seals for EST4300

Pancake Seal-PFW



Specification of PFW

DN50(2-in)						
Class/Table	A	C	G	B	Bolts	Hole size
150LB	150	120	95	19	4	18
300LB	165	127	95	20	8	18
600LB	165	127	95	32	8	18
900LB	215	165	95	45	8	26
PN1.6/1.0	165	125	95	18	4	18
PN2.5/4.0	165	125	95	20	4	18
PN6.4	180	135	95	26	4	22

DN50(2-in)						
Class/Table	A	C	G	B	Bolts	Hole size
150LB	190	152	124	20	4	18
300LB	210	168	124	25	8	22
600LB	210	168	124	38	8	22
900LB	240	191	124	54	8	26
PN1.6/1.0	200	160	124	20	8	18
PN2.5/4.0	200	160	124	24	8	18
PN6.4	215	170	124	28	8	22

DN100(4-in)						
Class/Table	A	C	G	B	Bolts	Hole size
150LB	230	190	155	24	4	18
300LB	255	200	155	32	8	22
600LB	275	215	155	45	8	26
900LB	290	235	155	50	8	33
PN1.6/1.0	200	180	155	20	8	18
PN2.5/4.0	200	190	155	24	8	22
PN6.4	215	200	155	28	8	26

DN40(1.5-in)						
Class/Table	A	C	G	B	Bolts	Hole size
PN1.6/2.5	200	180	155	20	8	18
PN2.5/4.0	200	190	155	24	8	22
PN6.4	215	200	155	28	8	26

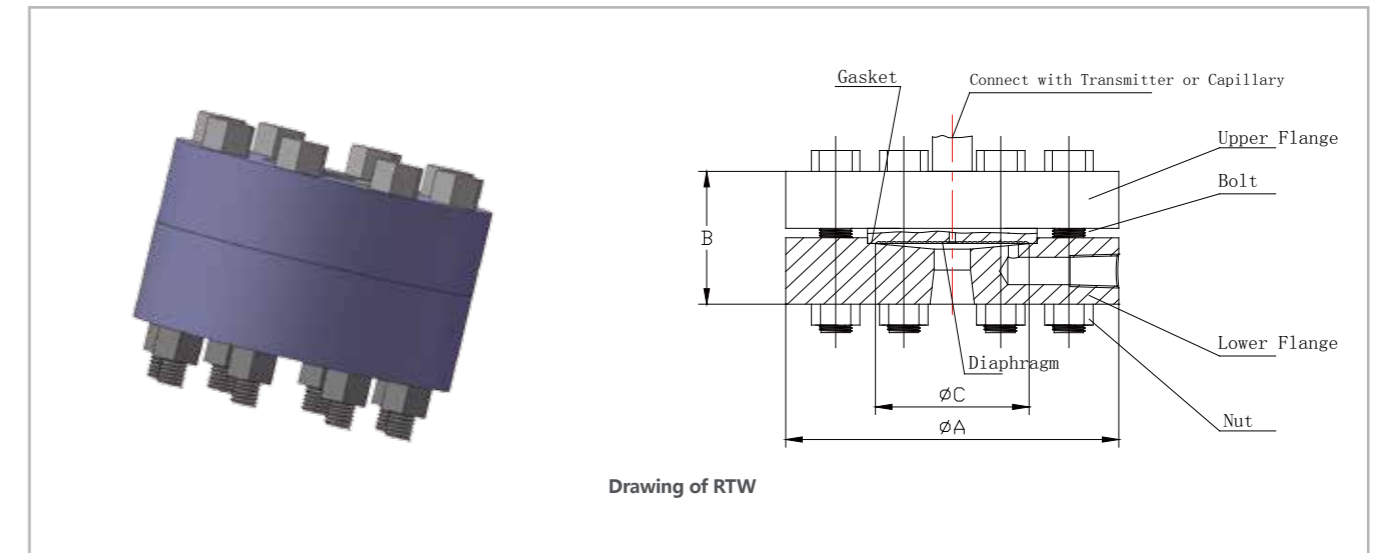
Order Procedure of PFW

Model	Seal Type	
1199PFW	Pancake Seal	
Code	Output	
A D	ANSI (HG20615) DIN (HG20592)	
Code	Seal Size of Process Connection	
50 80 00	ANSI (HG20615)	DIN (HG20592)
	2-in	DN50
	3-in	DN80
	4-in	DN100
Code	Flange/Pressure Rating	
A B C D	ANSI (HG20615)	DIN (HG20592)
	150LB	PN16/25
	300LB	PN40
	600LB	PN64
	900LB	PN100
Code	MOC of Diaphragm & Wetted Parts	
A B C D E F	SS316 Hastelloy Alloy C Monel Tantalum Titanium Others	
Code	Seal Fill Fluid (High Side)	
D F S	Silicone Oil (-40~104°C) High Temp. Silicone Oil (-40~304°C) Inert (Halocarbon) (-40~204°C)	

Code	Length of Capillary
L00 LXX	No Capillary XX (m)
Code	Position
H L	High Pressure Side Low Pressure Side
Code	Flushing Ring Connection
0 1	No Flushing Ring Flushing Ring (SS316)
Code	Optional Accessory
0 F J G V F4	--- Teflon O-ring Metal Winding O-ring Gold Plated Diaphragm Intensification Diaphragm PTFE Coated Diaphragm for nonstick purposes only

ie : EST4300 1199PFWA50AADL03H00

Diaphragm Seals for EST4300 Remote Threaded Seal-RTW



Order Procedure of RTW

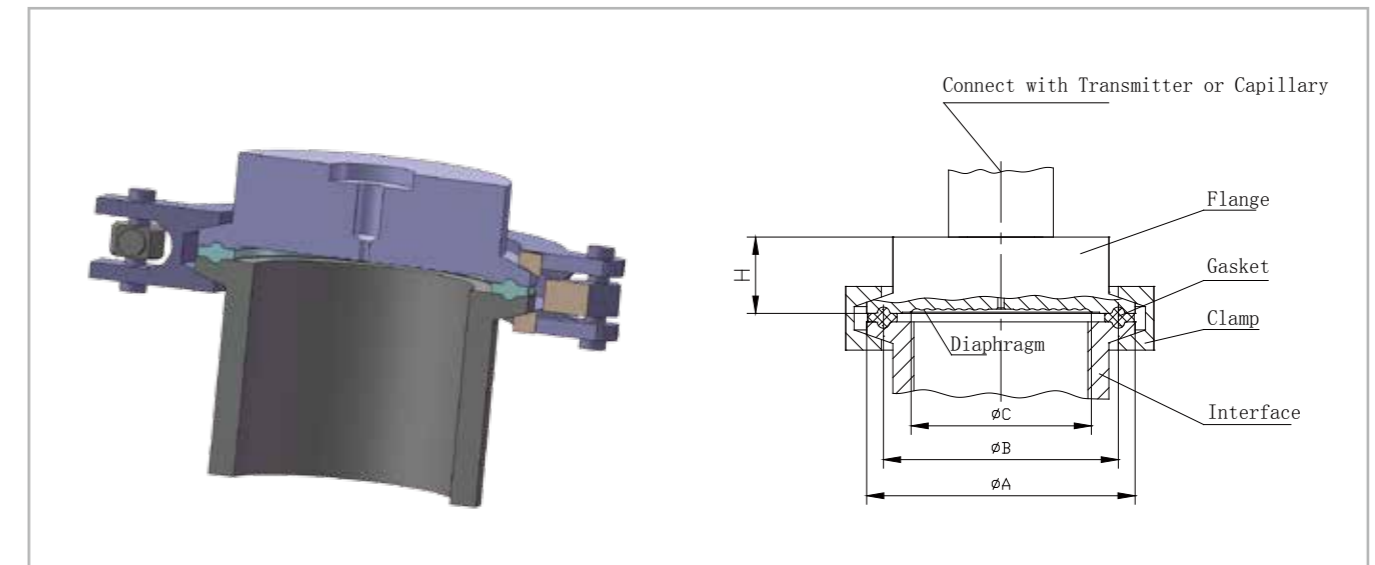
Model	Seal Type
1199RTW	Remote Threaded Seal
Code	Seal Size of Process Connection
A1 A2 A3	1/2NPT-14 (F) M20×1.5 (M) Customized
Code	MOC of Diaphragm & Wetted Parts
A B C D E F	SS316 Hastelloy Alloy C Monel Tantalum Titanium Others
Code	Material of Lower Flange
A	SS316L

Code	Seal Fill Fluid (High Side)
D	Silicone Oil (-40~104°C)
F	High Temp. Silicone Oil (-40~304°C)
S	Inert (Halocarbon) (-40~204°C)
Code	Length of Capillary
L00	No Capillary
LXX	XX (m)
Code	Position
H	High Pressure Side
L	Low Pressure Side
Code	Flushing Ring Connection
0	No Flushing Ring
1	Flushing Ring (SS316)
Code	Optional Accessory
0	---
G	Gold Plated Diaphragm
T	Intensification Diaphragm
F4	PTFE Coated Diaphragm for nonstick purposes only

ie : EST4300 1199RTWA1AADL03H00

Diaphragm Seals for EST4300

Hygienic Tri Clamp Seal-SCW



Specification of SCW

Pipe Size	OD	O-Ring	Diaphragm Diameter	Code
1.5-in	50.4	44	31	A1
2-in	64	56	43	A2

Order Procedure of SCW

Model	Seal Type	
1199SCW	Hygienic Tri Clamp Seal	
Code	Pipe Size	Material of Seal
A1	OD 50.4 (1.5-in)	SS316/304
A2	OD 64 (2.0-in)	SS316/304
Ax	Customized	
Code	Material of Diaphragm	
A	SS316	
B	Hastelloy Alloy C	

Code	Seal Fill Fluid (High Side)
D	Silicone Oil (-40~104°C)
F	High Temp. Silicone Oil (-40~304°C)
S	Inert (Halocarbon) (-40~204°C)
Code	Length of Capillary
L00	No Capillary
LXX	XX (m)
Code	Position
H	High Pressure Side
L	Low Pressure Side
Code	Optional Accessory
0	---
1	Gasket+Clamp
T	Intensification Diaphragm
F4	PTFE Coated Diaphragm for nonstick purposes only

ie : EST4300 1199SCWA1ADL03H0

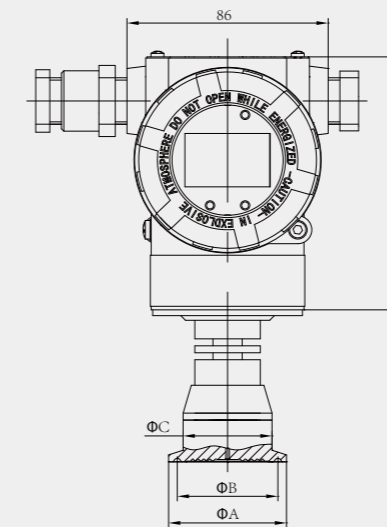
EST4300 SMART Hygienic Tri Clamp Pressure Transmitter

EST4300T Smart Hygienic Tri-Clamp Seal (SCW) PT/LT

Brief Introduction

EST4300T SCW type is suitable for Hygienic industry where the high standard of health and hygiene is requested, With reference to barometric pressure or the tank pressure, EST4300T SCW is designed to measure the process pressure of Tank or Pipe line via Hygienic Tri-Clover Style Tri Clamp Seal. The height of the liquid can be measured precisely by the variation of output signal.

The basic sensing element of EST4300T SCW is the same as EST4300T GP/AP.



Pipe size	OD	O-Ring	Diaphragm Diameter	Code
1.5-in	50.4	44	31	A1
2-in	64	56	43	A2

EST4300T Smart Hygienic Tri-Clamp Seal (SCW) PT/LT

Order Procedure of SCW

Model		Seal Type	
SMT3151CTLT		Hygienic Tri-Clamp Seal	
Code		Range	
2 3 4 5		0-20 ~ 100kPa(0-2000 ~ 10000mmH2O) 0-70 ~ 350kPa(0-7 ~ 35mH2O) 0-200 ~ 1000kPa(0-20 ~ 100mH2O) 0-700 ~ 3500kPa(0-70 ~ 350mH2O)	
Code		Output	
E SF F		4~20mA 4~20mA+HART (Field Settable) MODBUS-485	
Code	Size	Material	
A1 A2	OD50.4 (1.5-in) OD64 (2.0-in)	SS316/304 SS316/304	
Code		Material of Diaphragm	
A B		SS316 Hastelloy Alloy C	
Code		Seal Fill Fluid (High Side)	
D F S		Silicone Oil (-40~104°C) High Temp. Silicone Oil (-40~304°C) Inert (Halocarbon) (-40~204°C)	
Code	MOC of Housing	Electronic Connection	
A B C D	Die cast Alu. Epoxy coating Die cast Alu. Epoxy coating SS304/316 SS304/316	M20×1.5 1/2NPT-14 M20×1.5 1/2NPT-14	

Code	Optional Accessory
M1 M4 Da Fa	0 ~ 100% Linear Indicator LCD Digital Display with Engineering Units Explosion-Proof ExdII BT5Gb Intrinsic Safe ExiaII CT4/T5/T6Ga

ie : EST4300SCW2SFA1ADAM4 0~100kPa

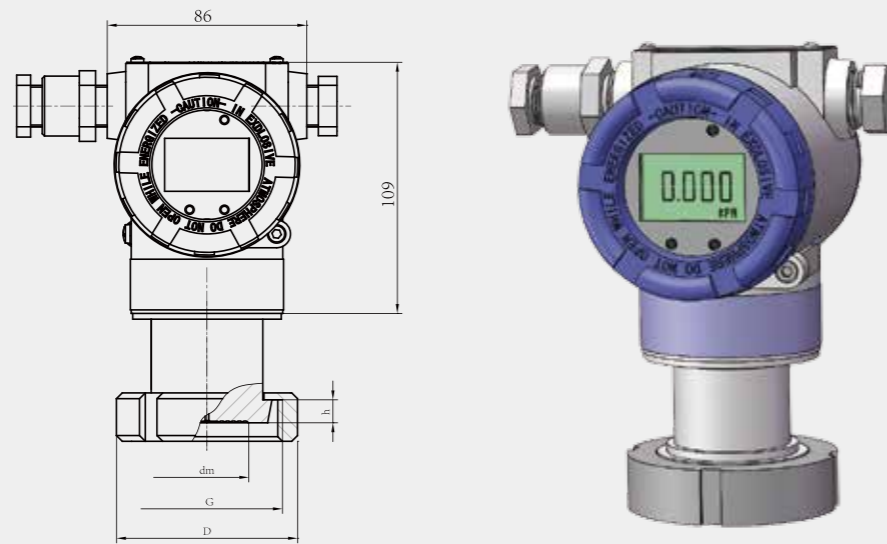
**EST4300T SMART
SLS Dairy Process Connection -Female Thread
Pressure Transmitter**

EST4300T Smart Dairy Process- Female Thread Seal (SLS) PT/LT

Brief Introduction

EST4300T SLS is suitable for Dairy Process where the high standard of health and hygiene is requested, With reference to barometric pressure or the tank pressure, EST4300T SLS is designed to measure the process pressure of Tank or Pipe line via Female Thread Seal. The height of the liquid can be measured precisely by the variation of output signal.

The basic sensing element of EST4300T SLS is the same as EST4300T GP/AP.



尺寸	DN25	DN40	DN50	DN80	DN100
D	Ø63	Ø78	Ø92	Ø127	Ø148
G	RD52×1/6	RD65×1/6	RD78×1/6	RD110×1/4	RD130×1/4
dm	21	28	38	50	62
h	10	10	11	12	15

EST4300T Smart Dairy Process-Female Thread Seal (SLS) PT/LT

Order Procedure of SLS

Model	Seal Type	
EST4300T	Female Thread Seal	
Code	Range	
2	0-20 ~ 100kPa(0-2000 ~ 10000mmH2O)	
3	0-70 ~ 350kPa(0-7 ~ 35mH2O)	
4	0-200 ~ 1000kPa(0-20 ~ 100mH2O)	
5	0-700 ~ 3500kPa(0-70 ~ 350mH2O)	
Code	Output	
E	4~20mA	
SF	4~20mA+HART (Field Settable)	
F	MODBUS-485	
Code	Thread Standard	Diaphragm & Wetted Material
D	DIN Standard	SS316/304
S	SMS Standard	SS316/304
I	ISO Standard	SS316/304
Code	Material of Diaphragm	
A	SS316	
B	Hastelloy Alloy C	
Code	Seal Fill Fluid (High Side)	
D	Silicone Oil (-40~104°C)	
F	High Temp. Silicone Oil (-40~304°C)	
S	Inert (Halocarbon) (-40~204°C)	
Code	MOC of Housing	Electronic Connection
A	Die cast Alu. Epoxy coating	M20×1.5
B	Die cast Alu. Epoxy coating	1/2-14 NPT
C	SS304/316	M20×1.5
D	SS304/316	1/2-14 NPT
Code	Optional Accessory	
M1	0 ~ 100% Linear Indicator	
M4	LCD Digital Display with Engineering Units	
Da	Explosion-Proof ExdIIBT5Gb	
Fa	Intrinsic Safe ExiaIICT4/T5/T6Ga	

ie : EST4300SLS4SFDADAM4 0~1000kPa

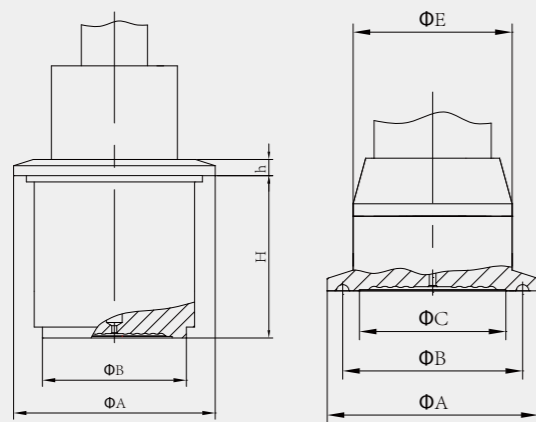
**EST4300 SMART
Hygienic Tank Spud Seal
Pressure Transmitter**

EST4300 Smart Hygienic Tank Spud Seal (SSW) PT/LT

Brief Introduction

EST4300 SSW is suitable for Hygienic industry where the high standard of health and hygiene is requested, With reference to barometric pressure or the tank pressure, EST4300 SSW is designed to measure the process pressure of Tank or Pipe line via Hygienic Spud Seal. The height of the liquid can be measured precisely by the variation of output signal.

The basic sensing element of EST4300 SSW is the same as EST4300 GP/AP.



EST4300 Smart Hygienic Tank Spud Seal (SSW) PT/LT

Specification of SSW

Pipe Size	OD	O-Ring	Diaphragm Diameter	Code
1.5-in	50.4	44	31	A1
2-in	64	56	43	A2
2-in (Plug-in)	64	56	43	A3

Order Procedure of SSW

Model	Seal Type
EST4300	Hygienic Tank Spud Seal

Code	Range
4	0-4.0 ~ 40kPa(0-400 ~ 4000mmH2O)
5	0-20 ~ 200kPa(0-2000 ~ 20000mmH2O)
6	0-70 ~ 700kPa(0-0.7 ~ 7kgf/cm2)
7	0-210 ~ 2100kPa(0-2.1 ~ 21kgf/cm2)
8	0-700 ~ 7000kPa(0-7.0 ~ 70kgf/cm2)

Code	Output
E	4~20mA
SF	4~20mA+HART (Field Settable)
F	MODBUS-485

Code	Process connection size	Diaphragm & Wetted & Extension Material	Extension Length
A1	OD50.4 (1.5-in)	SS316/304	0
A2	OD64 (2.0-in)	SS316/304	0
A3	OD64 (2.0-in)	SS316/304	52

Code	Material of Diaphragm
A	SS316
B	Hastelloy Alloy C

Code	Seal Fill Fluid (High Side)
D	Silicone Oil (-40~104°C)
F	High Temp. Silicone Oil (-40~304°C)
S	Inert (Halocarbon) (-40~204°C)

Code	MOC of Housing	Electronic Connection
A	Die cast Alu. Epoxy coating	M20×1.5
B	Die cast Alu. Epoxy coating	1/2NPT-14
C	SS304/316	M20×1.5
D	SS304/316	1/2NPT-14

Code	Optional Accessory
M1	0 ~ 100% Linear Indicator
M4	LCD Digital Display with Engineering Units
Da	Explosion-Proof ExdII BT5Gb
Fa	Intrinsic Safe Exia IIC T4/T5/T6Ga

ie : EST4300SSW4SFA1ADAM4

EST4300 SMART High Temperature Pressure Transmitter

EST4300 Smart High Temperature Pressure Transmitter

Brief Introduction

Eastsensor has been always dedicating to develop the new methods to handle the process measuring when medium temperature is remarkably high. The regular ways of temperature cooling, for example, are increasing the length of capillary, adopting heat radiator or spacer fluid, using high temperature silicone oil or sensor like sapphire, all such behaviors can effective work well in case of temperature below 300 °C .

How can do when the temperature more than 300 °C or even 400 °C ? EST4300 HT type can provide with the best solutio



EST4300 Smart High Temperature Pressure Transmitter

Order Procedure

Model	Pressure Type																					
EST4300HTGP EST4300HTDP	High Temperature Differential Pressure Transmitter High Temperature Remote Diaphragm Seal Pressure Transmitter																					
Code	Range																					
4 5 6 7 8	0-4.0 ~ 40kPa(0-400 ~ 4000mmH2O) 0-20 ~ 200kPa(0-2000 ~ 20000mmH2O) 0-70 ~ 700kPa(0-0.7 ~ 7kgf/cm2) 0-210 ~ 2100kPa(0-2.1 ~ 21kgf/cm2) 0-700 ~ 7000kPa(0-7.0 ~ 70kgf/cm2)																					
Code	Output																					
SF F	4~20mA+HART (Field Settable) MODBUS-485																					
Code	MOC of Wetted Parts & Body																					
	<table border="1"> <thead> <tr> <th>Flange Adapter</th> <th>Drain/Vent Valves</th> <th>Diaphragm</th> </tr> </thead> <tbody> <tr> <td>22</td> <td>SS316</td> <td>SS316</td> </tr> <tr> <td>23</td> <td>SS316</td> <td>Hastelloy Alloy C</td> </tr> <tr> <td>24</td> <td>SS316</td> <td>Monel</td> </tr> <tr> <td>25</td> <td>SS316</td> <td>Tantalum</td> </tr> <tr> <td>33</td> <td>Hastelloy Alloy C</td> <td>Hastelloy Alloy C</td> </tr> <tr> <td>35</td> <td>Hastelloy Alloy C</td> <td>Tantalum</td> </tr> </tbody> </table>	Flange Adapter	Drain/Vent Valves	Diaphragm	22	SS316	SS316	23	SS316	Hastelloy Alloy C	24	SS316	Monel	25	SS316	Tantalum	33	Hastelloy Alloy C	Hastelloy Alloy C	35	Hastelloy Alloy C	Tantalum
Flange Adapter	Drain/Vent Valves	Diaphragm																				
22	SS316	SS316																				
23	SS316	Hastelloy Alloy C																				
24	SS316	Monel																				
25	SS316	Tantalum																				
33	Hastelloy Alloy C	Hastelloy Alloy C																				
35	Hastelloy Alloy C	Tantalum																				
Code	Remote Diaphragm Seal																					
H1 H2	Single Seal (High Temperature) Dual Seals (High Temperature)																					
Code	Optional Accessory																					
M1 M4 B1 B2 B3 Da	0 ~ 100% Linear Indicator LCD Digital Display with Engineering Units Pipe Mounting (L type) Panel Mounting (L type) Pipe Mounting (Flat type) Explosion-Proof ExdII BT5Gb																					

Fa

Intrinsic Safe ExiaIICT4/T5/T6Ga

ie : EST4300HTDP4S22H2M4B3 0~20KPa
1199EFA50AABDL03H00
1199EFA50AABDL03L00

EST4300T Smart Battery Power Supply (BPS) PT

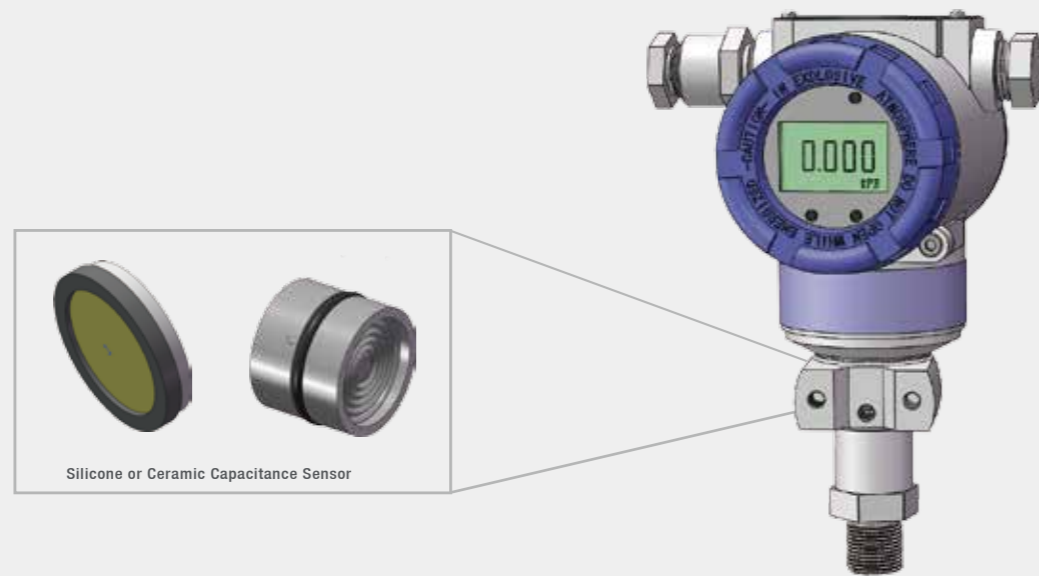
Brief Introduction

As an upgraded version of EST4300T series, the BPS model can work ceaselessly in case of 24Vdc power off, BPS model only have Gauge and Absolute Pressure type.

The unique trait of BPS model is it can not only monitor the pressure change but also the voltage of power supply, it can switch to battery supply if any abnormal of direct current power has been detected. When the BPS model activated, the current output has been suspended automatically, the transmitter only show current status of pressure.

The BSP model can serve well especially under the condition of remote outskirts areas where stable DC power supply are not available, it can also switch to DC power supply automatically when 24Vdc become stable and workable, in case of that, the battery power supply will be suspended accordingly and the battery turn to recharge itself from DC power to keep it alive always.

The diaphragm adopts the integrated circuit which the linear and temperature compensation have been included, so the excellent accuracy and stability can be expected even under the situation of harsh industry environment.



EST4300T Smart Battery Power Supply (BPS) Pressure Transmitter

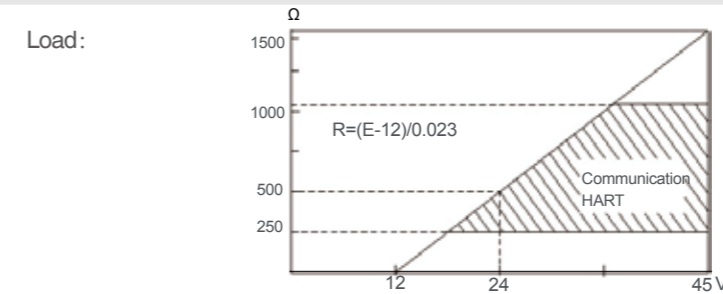
Technical Performance

Service: Liquid, Gas, Vapor Applications

Range: Refer to below Order Procedure

Output Signal: 4~20Ma (Two-wire), HART Protocols

Power Supply: External: 24V dc Or 3.6V Lithium Battery/ Ni-Mh Battery Pack, power range 3.6V~36V



Locations: ExdII BT5Gb for Explosion-Proof
Exiall CT4/T5/T6Ga for Intrinsic Safe

Zero Shift: At minimum span, the maximum positive zero shift is 0.975 (39/40) of URL, the maximum negative zero shift could be the LRL. (After positive/negative shift, neither the URL nor the LRL may exceed the limits of the span no matter what the output is)

Temp.Limits: Electronics Temperature Operating Limits: -40~85 C Sensing Element Operating Limits: -40~104 C;
Memory Temperature: -40~85 C Digital Display: -20~75 C (normal operating); -40~85 C (Non Destructive)

Humidity: 0~95%

Overpressure: 2X~5X

Volumetric: ≤0.16 cm³

Damping: 0.2~32.0s

Booting Time : 3s , no warming up

Technical Data

Accuracy : ±0.1%, ±0.2%

Stability: Maximum Span ±0.25%/6months

Temperature Effect: Max ±0.2%/20°C

Power Supply Effect: ≤±0.005%/V

Vibration effect: For vibration of 200Hz in any axis, the error caused is ±0.05%/g of the maximum span

Load Effect : No load effects in the working area when voltage transferred to transmitter is higher than 12V

Mounting position Effect: Zero shifts up to 0.25kPa, which can be calibrated out. No span effect

Electromagnetic Radiation : Conform to IEC801 standards

Application & Order Procedure

EST4300T Smart Pressure Transmitter, which is compatible with HART 475 field communicator, is the one of the most popular industry process measuring instruments, and is used to measure the level, density, and pressure of liquid, gas, and steam, converts it to 4-20mA signal outputs.

Order Procedure

Model	Pressure Type		
EST4300TBSPGP EST4300TBSPAP	Pressure Transmitter Absolute Pressure Transmitter		
Code	Range		
1	0-3.5 ~ 35kPa		
2	0-10 ~ 100kPa		
3	0-35 ~ 350kPa		
4	0-0.1 ~ 1.0MPa		
5	0-0.35 ~ 3.5MPa		
6	0-1.0 ~ 10MPa		
7	0-2.1 ~ 21MPa		
8	0- 4.1 ~ 41Mpa		
9	0- 6.0 ~ 60MPa		
Code	Output		
SF	4~20mA+HART (Field Settable)		
Code	MOC		
	Process Connection	Diaphragm	Fill Fluid
22	SS316	SS316	Silicone Oil
23	SS316	Hastelloy Alloy C	Silicone Oil

Code	MOC of Housing	Electronic Connection
A	Die cast Alu. Epoxy coating	M20×1.5
B	Die cast Alu. Epoxy coating	1/2NPT-14
C	SS304	M20×1.5
D	SS304	1/2NPT-14

Code	Process Connection Thread Type
A	M20×1.5 (M)
B	1/2NPT-14 (M)
C	G1/2 (M)
D	1/2NPT-14 (F)
X	Others

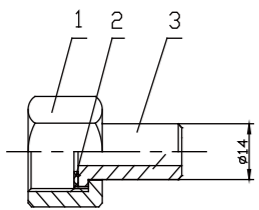
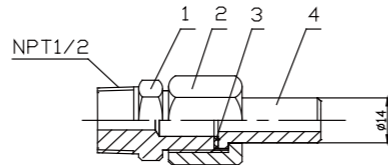
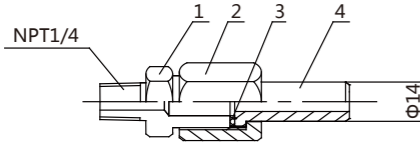
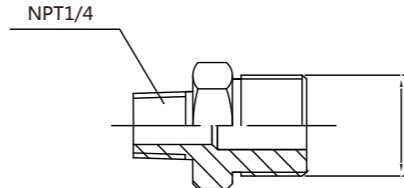
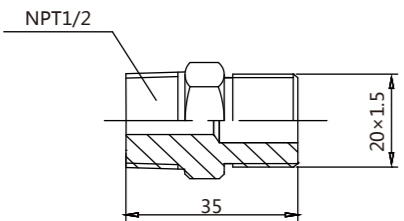
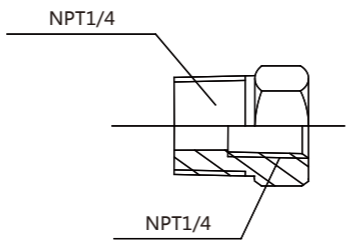
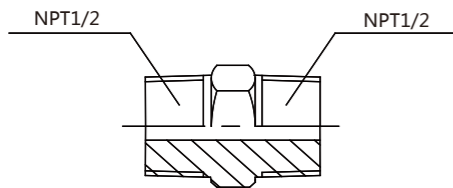
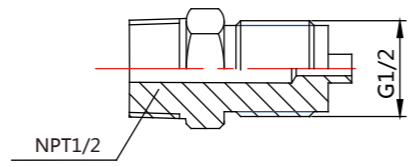
Code	Optional Accessory
DL	Lithium Battery (1 year in use after DC power off)
DN	Ni-Mh Battery Pack (Recycling use)
M4	LCD Digital Display with Engineering Units
B4	Pipe Mounting (L type)
B5	Panel Mounting (L type)
C02	M20×1.5 nut & Φ14 pipe
C12	1/2NPT-14 Male & Φ14pipe
C22	1/4NPT-18 Male & Φ14pipe
C32	1/4NPT-18 adopt to M20×1.5 Male
C42	1/2NPT-14 adopt to M20×1.5 Male
C43	1/2NPT-14 adopt to 1/4NPT-18 Female
C44	1/2NPT-14 adopt to 1/2NPT-14 Male
C45	1/2NPT-14 adopt to G1/2 Male
Da	Explosion-Proof ExdIIBT5Gb
Fa	Intrinsic Safe ExiaIICT4/T5/T6Ga

ie : EST4300TBSPGP4SF22AADL 0~1.0MPa

Note:

Before model select and order procedure, the measured Medium Temperature, Corrosivity, Pressure Range, Ex-Proof requirement, must clearly be aware of. The Flange mounting or Remote Diaphragm Seal is strongly recommended when the medium tend to be crystallized and viscous.

Appendix 1 Process Connection / Impulse Piping Connection

Code : C02 M20 x 1.5 Nut + Φ 14 Impulse Piping 	Code : C12 1/2NPT-14 Thread M + Φ 14 Impulse Piping 
Code : C22 1/4NPT-18 Thread M + Φ 14 Impulse Piping 	Code : C32 1/4NPT-18 Thread + M20 x 1.5 M 
Code : C42 1/2NPT-14 Thread + M20 x 1.5 M 	Code : C43 1/2NPT-18 Thread + 1/4NPT-18 Thread F 
Code : C44 1/2NPT-14 Thread + 1/2NPT-14 Thread M 	Code : C45 1/2NPT-14 Thread + 1/2G Thread M 

Appendix 2 Corrosion-resistance Reference Sheet of Diaphragms

A-Excellent B-Good C-Not Good X-No

Process Media	Concentration / %	Temperature / C	Carbon Steel	316/316L	Hastelloy C	Monel	Tantalum	Nickel	Titanium
Sulfuric acid	5	25	x	A	A	A	A	C	C
		100	x	C	B	B	A	C	C
	10	25	x	C	A	A	A	C	C
		100	x	C	C	B	A	C	C
	20	25	C	B	A	C	A	x	C
		100	x	C	C	x	A	x	C
	60	25	C	C	A	C	A	C	C
		100	x	x	C	x	A	C	C
	80	25	B	A	A	C	A	C	C
		100	C	C	C	x	B	C	C
	98	25	B	B	A	C	A	x	C
		100	x	x	A	x	A	x	C
	Fuming	25	C	C	B	C	C	x	C
		100	x	C	B	C	C	x	C
Mineral acid	10	25	C	A	B	C	A	C	A
		100	x	A	B	C	A	C	A
	30	25	C	A	B	C	A	C	A
		100	x	B	C	C	A	C	C
	68	25	C	A	A	x	A	C	A
		100	x	x	x	x	A	C	A
Fuming	25	x	x	x	x	A	C	C	
Hydrochloric	5	25	x	C	B	C	A	B	B
		100	x	C	C	C	A	C	C
	10	25	x	C	B	C	A	B	B
		100	x	C	C	C	A	C	C
	20	25	x	C	B	C	A	C	B
		100	x	C	C	C	A	C	C
35	25	x	C	B	C	A	C	C	
	100	x	C	C	C	A	C	C	
Phosphoric	20	25	C	A	A	C	A	C	B
		100	x	A	A	C	A	C	C
	30	25	C	A	A	C	A	C	B
		100	C	B	A	C	A	C	x
	50	25	C	A	A	C	A	C	x
		100	C	B	A	C	A	C	x
	70	25	C	A	A	C	A	C	x
		100	C	C	B	C	A	C	x
	85	25	C	A	A	C	A	C	x
		100	C	C	C	C	A	C	x
90	25	C	C	B	C	A	x	x	

	Process Media	Concentration / %	Temperature / °C	Carbon Steel	316/316L	Hastelloy C	Monel	Tantalum	Nickel	Titanium
Mineral acid	hypochlorous	5	25	C	C	A	C	A	x	A
			100	x	C	x	C	A	x	x
	sulfuric acid	0~100	25	C	A	A	B	A	x	A
			100	C	A	A	B	A	x	A
	chlorosulfonic acid	10	25	C	C	B	C	A	x	x
			100	C	C	x	C	A	x	x
		100	25	B	B	A	C	A	x	x
			100	x	B	A	C	A	x	x
	Chromium water	20	25	x	x	A	x	A	C	x
			100	x	x	x	x	B	C	x
	chloroazotic acid		25	C	C	C	C	A	x	x
			100	C	C	C	C	A	x	x
organic acid	methanoic acid	10	25	C	x	A	x	C	x	x
			100	x	x	A	C	C	x	x
		100	25	x	x	A	C	A	x	x
			100	x	x	A	C	A	x	x
	acetic acid	<100	25	C	A	A	C	A	x	A
			100	x	A	A	C	A	x	A
		100	25		B	A	B	A	x	A
			100		B	A	B	A	x	A
	propionic acid	60~90	25	C	B	A	B	A		C
			100		B	A	B	A		C
	butyric acid		25	C	A	A	B	A		A
			100		A	A	B	A		A
	butenoic acid		25	C	B	B	B	A		x
			100		B	B	B	A		x
	Stearic acid		25		A	A	B	A		A
			100	C	A	A	x	A		A
	aliphatic acid		25	x	A	A	B	A		A
			100	x	A	A	B	A		A
	glycollic acid		25	x	B	B	B	A		A
			100	x	B	B	B	A		A
	pyroligneous acid	10	25	C	A	B	B	A		x
			100	x	A	x	B	A		x
		100	25	A	B	A	B	A		x
			100	x	x	x	B	A		x
monochloroacetic acid	<70	25	C	C	B	B	A		x	
		100	x	C	B	B	A		A	
	100	25	B	B	A	B	A		A	
		100	x	x	A	B	A		A	

	Process Media	Concentration / %	Temperature / °C	Carbon Steel	316/316L	Hastelloy C	Monel	Tantalum	Nickel	Titanium	
Mineral acid	hydrofluoric acid	5	25	C	C	C	A	C	x	x	
			100	C	C	C	B	C	x	x	
		40	25	C	C	A	A	x	x	x	
			100	x	C	C	A	x	x	x	
		90	25	B	C	B	x	x	x	x	
			100	C	C	x	x	x	x	x	
	hydrobromic acid	<60	25	C	C	x	C	A	C	A	
			100	A	C	x	C	A	C	A	
	hydrocyanic acid		25	B	B	B	B	A	B	A	
			100	A	B	B	C	A	B	A	
	sulphurous acid		25	C	B	B	C	A	B	A	
			100	x	B	B	C	A	B	A	
	carbonic acid	10	25	B	B	A	A	A	B	A	
			100	x	C	x	A	A	B	A	
		100	25	B	A	A	B	A	B	A	
			100	x	A	x	A	A	B	A	
	chromic acid	<50	25	C	C	B	C	A	B	A	
			100	x	C	B	C	A	B	A	
		>50	25	A	C	B	C	A	B	A	
			100	x	C	x	C	A	B	A	
	chloric acid	10	25	C	C	B	C	A	x	x	
			100	x	C	x	C	A	x	x	
	alkali & hydroxide	Sodium hydroxide	10	25	A	A	A	A	C		A
				100	B	A	A	A	C		A
20			25	A	A	B	A	A	A	A	
			100	B	A	B	B	B	A	x	
40			25	A	A	B	A	C	A	x	
			100	B	A	B	B	C	A	x	
70		25	B	A	A	A	C	B	x		
		100	C	B	A	A	C	B	x		
potassium hydroxide		<60	25	B	A	B	A	C	A	A	
			100	B	A	B	A	C	A	A	
100		25	B	A	B	A	C	B	B		
		100	x	A	x	A	C	C	C		
ammonium hydroxide	0~100	25	A	A	A	A	x		A		
		100	B	B	A	A	x		A		
Calcium hydroxide	<50	25	B	A	A	B	A		A		
		100	B	A	A	B	A		A		
magnesium hydroxid	100	25	B	A	A	A	A		A		
		100	B	A	A	A	A		A		

	Process Media	Concentration / %	Temperature / °C	Carbon Steel	316/316L	Hastelloy C	Monel	Tantalum	Nickel	Titanium
organic acid	lactic acid	<20	25	C	A	B	C	A		A
			100	×	B	B	C	A		A
		>70	25	×	A	B	B	A		A
			100	×	B	B	B	A		A
	oxalic acid	10	25	×	B	B	B	A	B	B
			100	×	C	B	B	A	B	C
	succinic acid	<50	25	B	B	B	B	A		A
			100	B	B	B	B	A		A
		100	25	B	B	B	B	A		A
			100	B	B	A	B	A		A
	benzoic acid	<70	25	C	B	A	B	A		A
			100	×	B	A	B	A		A
	citric acid	0~100	25	C	A	A	B	A	B	A
			100	×	A	A	B	A	×	×
	Salicylic acid		25	C	B	B	B	A	×	×
			100	C	B	×	B	A	×	×
	aminobenzoic acid		25	B	B	B	B	A		A
			100	B	B	B	B	A		A
	benzenesulfonic acid	0~100	25	C	B	B	B	A		A
			100	C	×	B	B	A		A
naphthalene acid	100	25	C	B	A	B	C	×	×	
		100	×	×	A	B	C	×	×	
potassium chloride	<30	25	B	A	B	B	A		A	
		100	×	A	B	B	A		A	
potassium bromide	<30	25	×	B	B	B	A		A	
		100	×	B	B	B	A		A	
potassium chromate	<30	25	B	B	A	B	A		A	
		100	B	B	A	B	A		A	
potassium permanganate	10	25	B	B	B	B	×		A	
		100	B	B	B	B	×		×	
aluminum sulfate	<50	25	C	A	A	B	A		A	
		100	×	A	A	C	A		A	
aluminium chloride	0~100	25	C	B	A	A	A		B	
		100	×	×	A	C	A		C	
magnesium sulfate	<50	25	A	A	A	A	A		A	
		100	A	A	A	A	A		A	
magnesium nitrate		25	B	B	B	B	A		B	
		100	B	B	B	B	A		B	
magnesium chloride	40	25	×	B	A	B	A	×	A	
		100	×	B	A	B	A	×	A	

	Process Media	Concentration / %	Temperature / °C	Carbon Steel	316/316L	Hastelloy C	Monel	Tantalum	Nickel	Titanium
	lithium hydrate	10	25	B	B	B	B	×		×
			100	B	B	B	B	×		×
	aluminium hydroxide	10	25	B	A	B	B	A		A
			100	B	A	B	B	A		A
salt	ammonium sulfate	<40	25	×	B	B	B	A	B	A
			100	×	B	B	B	A	C	C
	ammonium nitrate	10	25	A	A	B	C	A	×	×
			100	A	A	B	C	A	×	×
	ammonium carbonate	100	25	B	B	B	B	A		A
			100	×	B	B	B	A		A
	ammonium chloride	<40	25	C	A	A	B	A	A	A
			100	C	A	A	B	A	B	A
		100	25	B	×	B	B	A	×	×
			100	×	×	B	B	A	×	×
	ammonium acetate	0~100	25	A	A	A	A	×		×
			100	×	A	A	A	×		×
	ammonium sulfite	<30	25	C	B	B	C	A		×
			100	×	B	B	C	A		×
	sodium sulfate	<40	25	B	×	×	A	A	×	×
			100	B	×	B	B	A	×	×
	sodium carbonate	10	25	A	A	A	A	A		A
			100	A	A	A	A	A		A
		100	25	A	B	B	B	A		×
			100	A	B	B	B	A		C
sodium hypochlorite	<20	25	B	C	B	C	A		A	
		100	×	C	B	C	A		A	
sodium chloride	<30	25	C	B	B	×	A	A	A	
		100	C	C	B	×	A	A	A	
sodium bicarbonate	<30	25	C	A	B	B	A		A	
		100	C	C	B	B	A		A	
sodium nitrite		25	A	A	A	B	A		A	
		100	C	A	A	B	A		A	
natrium aceticum	<60	25	A	A	B	A	A		A	
		100	A	A	B	A	A		A	
sodium benzoate	<60	25	B	B	B	B	B		B	
		100	B	B	B	B	B		B	
potassium sulphate	<20	25	B	A	A	A	A		A	
		100	C	A	A	A	A		A	
nitrate of potash	<100	25	B	B	B	B	A	×	×	
		100	×	×	×	B	A	×	×	

	Process Media	Concentration / %	Temperature / °C	Carbon Steel	316/316L	Hastelloy C	Monel	Tantalum	Nickel	Titanium	
salt	calcium sulfate	10	25	B	A	B	B	A		A	
			100	B	A	B	B	A		A	
		100	25	B	B	B	B	A		A	
			100	C	B	B	B	A		A	
	calcium carbonate	100	25	B	B	B	B	A		A	
			100	B	×	B	B	A		A	
	calcium phosphate	10	25	B	B	B	B	A		A	
			100	B	B	B	B	A		A	
	calcium chloride	<80	25	A	B	A	A	A	A	A	
			100	A	B	A	A	A	×	A	
	ferric chloride	30	25	C	C	B	C	A	C	A	
			100	×	C	C	C	A	×	A	
	gas & inorganic compound	chlorine	dry	25	B	B	A	B	A	A	C
				100	B	B	B	B	A	A	C
moisture			25	C	C	B	C	A	×	A	
			100	C	C	C	C	A	×	A	
chlorine water		saturation	RT	×	C	B	B	A	×	×	
bromine		dry	25	C	C	A	A	A		C	
			100	C	C	B	A	A		C	
		moisture	25	C	×	A	C	A		C	
			100	C	×	A	C	A		C	
phosphorus			25	B	A	A	C	×		×	
			100		A	×	C	×		×	
sodium			370	A	A	A	A	A		A	
hydrogen chloride		100	25	A	A	A	A	A		B	
			100	A	A	A	A	A		B	
sulfur dioxide	10	25	C	A	A	C	×		A		
		100	C	A	A	C	×		A		
	90~100	25	A	B	B	C	×		A		
phosphorus trichloride	dry	25	A	A	A	A	A		A		
		100	A		A	A	A		A		
arsenic trichloride	10	25	C	C	B	C	×		×		
		100	C	C	B	C	×		×		
sodium peroxide	10	25	B	A	B	B	×		C		
		100	B	A	B	B	×		C		
two chlorate sulfur	moisture		×	A	×	×	A	B	×		
sulfuretted hydrogen	moisture	25	×	A	×	×	A	C	A		
methyl alcohol		25	B	A	A	A	A		A		
		100	A	A	A	A	A		A		

	Process Media	Concentration / %	Temperature / °C	Carbon Steel	316/316L	Hastelloy C	Monel	Tantalum	Nickel	Titanium
salt	potassium carbonate	<50	25	×	B	B	B	×		A
			100	×	B	B	B	C		A
	potassium perchlorate	10	25	C	B	B	B	×		A
			100	B	B	B	B	×		A
Alcohol aldehyde ether ketone fat	acetaldehyde		25	A	A	A	A	A		A
			100	A	A	×	B	A		A
	methyl ether		25	B	B	B	B	A		A
			100	B	B	B	B	A		A
	ether		25	A	A	B	A	A		A
			100	B	A	B	A	A		A
	acetone		25	B	A	A	A	A		A
			100	B	A	A	A	A		A
	butanone	<100	25	B	B	B	B	A		A
			100	B	B	B	B	A		A
	methyl formate	<30	25	B	B	B	B	B		A
			100	B	B	B	B	B		A
	acetic ether		25	A	A	B	A	A		A
			100	B	B	B	A	A		A
Hydrocarbon petroleum products	methane		25	A	A	A	A	A		A
			100	A	A	A	A	A		A
	benzene		25	B	B	B	A	A		A
			100	B	B	B	A	A		A
	methylbenzene		25	A	A	A	A	A		A
			100	A	A	A	A	A		A
	phenol	90	25	A	B	A	B	A		A
			100	×	B	A	B	A		A

	Process Media	Concentration / %	Temperature / °C	Carbon Steel	316/316L	Hastelloy C	Monel	Tantalum	Nickel	Titanium
Alcohol aldehyde ether ketone fat	ethyl alcohol		25	A	A	A	A	A		A
			100	A	A	A	A	A		A
	formaldehyde	< 70	25	C	A	B	A	A		A
			100	C	A	B	A	A		A
Hydrocarbon and petroleum product	acrylonitrile		25	A	A	A	A	A		A
			100	A	A	A	A	A		A
	urea	< 50	25	B	B	B	B	A		A
			100	C	B	B	B	A		A
	nitroglycerin		25	A	A	A	A	A		A
			100	x	A	x	x	A		x
nitrotoluene		25	A	A	B	B	A		B	
		100	A	A	B	B	A		B	
others	seawater		25	C	A	A	A	A	C	A
			80	C	A	A	x	A	x	x
	saline		25	B	B	A	A	A	B	A
			80	x	B	A	x	A	x	x
mixture	35%HCL +65%HNO3		25	x	x	x	x	A	x	x
	90%H2SO4 +10%HNO3		25	x	x	x	x	A	x	x
	70%H2SO4 +30%HNO3		RT	x	x	x	x	A	x	x
	50%H2SO4 +50%HNO3		RT	x	x	x	x	A	x	x