EST4300-GPC Smart Pressure Transmitter

Product Introduction

EST4300-GPC (Clamped Style) pressure transmitter is microprocessor-based measuring instrument, which is compatible with HART 475 field communicator, is used to measure the level, density, and pressure of liquid, gas, and steam, convert it to 4-20mAdc current signal outputs.

EST4300-GPC is also designed to be installed in a series of hazardous situation and is ideal for use in food, beverage sanitary, medical process and industrial applications where the media is either viscous, contains particulates or solids, which may probably cause the clog or foul.

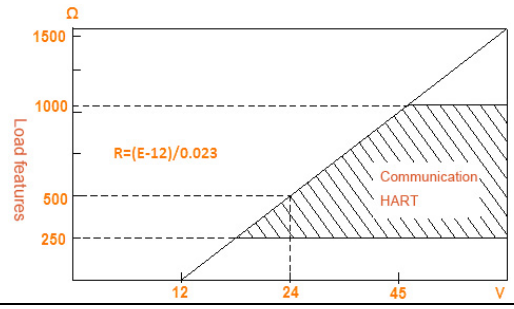
Applications

- Food
- Water Conservancy
- Beverage
- Environmental Protection
- Medical Process
- Pharmacy
- Health

Technologies

Service	Liquid, gas, and vapor applications	Range	
Output Signal	Two-wire 4～20mA dc output, superimposed on HART digital signal	2	0-0.10～1.5kPa(0-10～150mmH2O)
		3	0-0.7～7.0kPa(0-70～700mmH2O)
Power Supply	External Power Supply 24V dc; Power supply range 12V~45V	4	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) 0-2.1～21MPa(0-21～210kgf/cm2) 0-4.1～41MPa(0-41～4100kgf/cm2)
Installation Locations:	Explosion-Proof ExdIIBT5; Intrinsic Safe ExiaII CT5	5	
Zero shift	At minimum span, the maximum positive zero shift is 0.975 * URL, the maximum negative zero shift could be the LRL. (After positive/negative shift, neither the URL or the LRL may exceed the limits of the span no matter what the output is.)	6	
		7	
		8	
		9	
		0	
Temp. Limits	Electronics Temperature Operating Limits: -40～85℃ Sensing Element Operating Limits: -40～104℃; Memory Temperature: -40～85℃ Digital Display: -20～65℃ (normal operating); -40～85℃ (Non-Destructive)		

Overpressure Limits	Range 3-8: 13.78 MPa Rang 9: 31.29 MPa Rang 0: 51.4 MPa Operating Pressure range is between 3.43kPa (absolute pressure) and URL.

Load Limitations	Damping	Time constant: 0.2～32.0s
	Volumetric	Less than 0.16 cm3
	Relative Humidity	0～100%
	Booting Time	3s, No warm up

Performance

Under the condition of non-transference, 316 SST isolating diaphragm and others

Rangeability	40：1	
Accuracy	Span 3, 4, 5	Span 6, 7, 8, 9, 0
	For span between1:1 and 10:1, accuracy=± 0.1% of Calibrated Span; For span between10:1 and 40:1, accuracy=±0.05(1+0.1 URL/Span)% of Span	For span between1:1 and 10:1, accuracy=±0.15% of Calibrated Span; For span between10:1 and 40:1, accuracy=±0.075(1+0.1 URL/Span)% of Span
Stability	Maximum Span ±0.15%12months(exclude other ambient effects)	
Temperature Effect	Zero Temperature Error per 55℃ = ±0.25 of Maximum Span; Total Temperature Error per 55℃ (Zero and Span)= ±0.5 of URL. Note, for range 3, the temperature error is doubled.	
Overpressure Effect	Applying static pressure 140kgf / cm2, the error is systematic, which is ±0.25% of the maximum range and can be eliminated by zero trim based on actual static pressure.	
Power Supply	Less than ±0.005% of calibrated span per volt.	
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 effects	Zero shifts up to 0.25kPa, which can be calibrated out. No span effect.	
Electromagnetic Radiation	Conform to IEC801 standards	

Constructions

Wetted Part Materials	Isolating Diaphragm	316 SST, Alloy C, Monel and Tantalum
	Drain/Vent Valves	316 SST, Alloy C and Monel

	Flange and Connectors	316 SST, Alloy C and Monel
	O-rings:	Fluororubber, NBR
Non-Wetted Parts	Fill Fluid	Silicone
	Bolt	Zinc Plated CS
	Electrical housing	Low copper aluminum
	O-rings:	NBR
Impulse Piping Connections	Clamped Tube	1+1 / 2" or 2"
Electrical Connections	1 / 2—14NPT threaded end conduit	
Weight	4.8 kg (Options not included)	

Ordering Procedure

EST4300-GP	Smart Pressure Transmitter

Code	Rang
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 Type
E	Linear Output 4-20mAdc
S	Linear Output 4-20mAdc+HART signal
F	Fieldbus Signal

Code	Construction Materials			
	Flange Adapter	Drain/Vent Valves	Isolating Diaphragm	Fill Fluid
12	CS	CS	316 SST	Silicone
14	CS	CS	Monel	
22	316 SST	316 SST	316 SST	
23	316 SST	316 SST	Hastelloy Alloy C	
24	316 SST	316 SST	Monel	
25	316 SST	316 SST	Tantalum	
33	Hastelloy Alloy C	Hastelloy Alloy C	Hastelloy Alloy C	
35	Hastelloy Alloy C	Hastelloy Alloy C	Tantalum	
44	Monel	Monel	Monel	

Code	Impulse Piping Diameter
A1	1+1/2" O-Rings 44
A2	2" O-Rings 56

Code	Options
M1	0～100% Linear Meter
M4	LCD Digital Meter
B1	Pipe Mounting Bracket

						B2	Panel Mounting Bracket
						B3	Pipe Mounting Bracket
						D1	Side-mounted Drain/Vent Valve (TOP)
						D2	Side-mounted Drain/Vent Valve (TOP)
						X1	Oil Forbidden
						Da	Explosion-Proof ExdsIIBT5
						Fa	Intrinsically Safe ExiaIICT5
EST4300GPC	4	S	24	A1	M4B3X1	0～40kPa	