

# ***PRESSURE TRANSMITTER***

***Flow SPT Series***



CE



## Summary :

Flowtech Smart Pressure Transmitters of Flow-SPT Series can accurately measure the pressure of all types of gases, vapours and liquids used in refineries, petrochemicals, oil & gas, power, chemical industries, food processing, pharmaceutical industries and Water Industry. Based on a mechanical and rugged silicon sensor & capacitive sensor, the Flow-SPT Model is suitable for Absolute & Gauge Pressure Measurements.

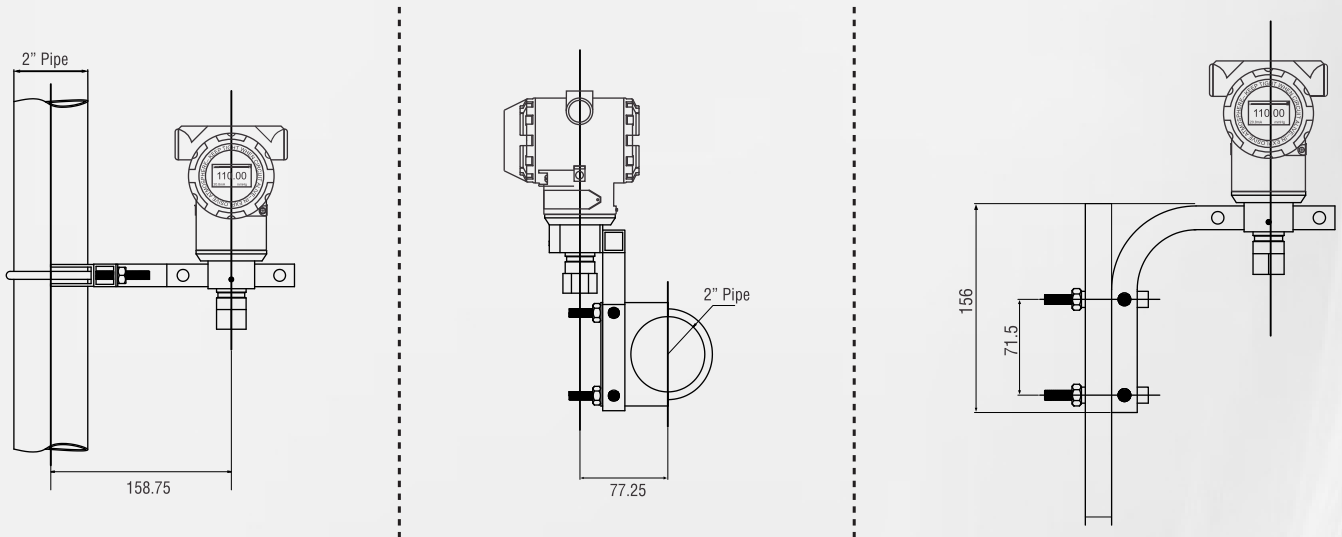
## Features:

- Piezo Resistive & Capacitive Sensor
- ATEX Certified
- Long Operation Life
- Excellent Long Term Stability
- Two Wire System
- Range-ability 100:1
- LCD Display with Backlight
- Faster Response Time
- Application flexible with HART Communication



**Pressure Transmitter**

## 1. Panel Mounting



### Note :

- Please follow the wiring method correct wiring as diagrams. If reverse, because the transmitter used protection measures, will be no signal output. The transmitter power can work, after 30 minutes preheating, output signal will be more stable and reliable.
- Transmitter for use in non-corrosion harm of medium on stainless steel (except special anticorrosion type).
- The maximum temperature should not exceed the rated overload. The transmitter pressure end cannot be directly connected electrically conductive, corrosive liquid or gas.
- Precision measuring instruments, it is prohibited to beat, strong clamping, removing.
- If possible, the instrument should be installed in the ventilation, drying, no corrosion, shade place. As the harsh environment, proper measures shall be taken to protect the instrument.
- If quality problem of product, with the guarantee card and instructions return the factory repair and replacement.
- Non-professional personnel do not disassemble the instrument circuit board or change configuration

## Technical Specifications

### OUTPUT SIGNAL

<b>Output</b>	4-20mA / 4-20mA + HART
<b>Supply Voltage</b>	12.5 - 45 VDC
<b>Signal Range</b>	3.9mA - 20.8mA
<b>Measuring Range</b>	Refer Pressure Range Table (in Model De-codefication)

### ELECTRICAL PROTECTION

<b>Insulation Resistance</b>	>100 MΩ at 100 VDC
<b>Wiring Protection</b>	Protection against over voltage & Short Circuit
<b>Reverse Polarity Protection</b>	Available

### TEMPERATURE LIMITS

<b>Ambient Conditions</b>	-20 to 70°C
<b>Storage</b>	-40 to 85°C
<b>Ingress Protection</b>	IP 67
<b>Electromagnetic Compatibility (EMC)</b>	Compliant with IEC 61000-4-3 & IEC 61000-4-6 Radiated & conducted Susceptibility

### PERFORMANCE

<b>Accuracy</b>	1.) 0.25% M.V.   2.) 0.075% FSD * In case of remote seal process connection the accuracy will be less than +/-1% of URL	
<b>Power Supply Effect</b>	<± 0.005% of calibrated SPAN per volt.	
<b>Ingress Protection</b>	< 0.2% of SPAN/g @ 200Hz	
<b>Installation Position Effect</b>	Zero shift up to ≤ +/- 0.15% of URL, which can be calibrated out. No SPAN Effect	
<b>Thermal Effect</b>	Range code 4 to 8	Zero error = +/-0.3% URL per 28°C
		Total error = +/-0.3% URL + 0.25% of Calibrated Span per 28°C
	Double the effect for Range Code 3,2	
<b>Turndown Ratio</b>	100:1	
<b>Turn On Time</b>	Less than 5 Sec.	

## Technical Specifications

### PERFORMANCE

<b>Response Time</b>	200 ms (without considering electronic damping)
<b>Damping</b>	0.1 to 30.0 Sec.
<b>Humidity</b>	5-98% Relative Humidity
<b>Stability</b>	Less Than +/-0.2% of URL per year
<b>Over Pressure</b>	2 Times max. Pressure Range
<b>Burst Pressure</b>	3 Times max. Pressure Range

## Physical Specifications

<b>Process Connection</b>	¼ NPT (M/F), ½ NPT (M/F), ¼ BSP (M/F), ½ BSP (M/F)
<b>Diaphragm</b>	Ss316/ SS316L/ Hastelloy C / with Remote Seal
<b>Seals</b>	Viton / Neoprene / Red Silica / EPDM
<b>Wetted Parts</b>	Ss304 / SS316 / SS316L / Hastelloy C
<b>MOC Electronic Enclosure</b>	Die Cast Aluminum PU Painted
<b>Sight Glass</b>	Laminated Safety Glass
<b>Filling Fluid</b>	Silicon Oil / Inert (for Capacitive Sensor)
<b>Electrical Connection</b>	M20*1.5 / ½" NPT (F)

### Others

<b>Display Type</b>	LCD Display
<b>Display Visible Range</b>	32.5 x 22.5 mm
<b>Main Display</b>	5 - Digit
<b>Digit Height</b>	8 mm
<b>Bar-graph</b>	51 Segments
<b>Weight</b>	Standard Model approx 1.3 Kg
<b>Certification</b>	CE
	Ⓔ ATEX Certification





## Product Ordering Information

### Order Code for Pressure Transmitter Decodification

Measuring Type	Description	Code
	Absolute Pressure	AP
	Gauge Pressure	GP

Enclosure Type	Description	Code
	AL. Die Cast Weatherproof	E1
	AL. Die Cast Ex Proof	E2
Flameproof IIA, IIB & IIC	E3	

Pressure Range Type	Description	Code
	-1 to 0 Bar	PR 1
	-0.35 to 0 Bar	PR 1
	-0.2 to 0 Bar	PR 1
	0 to 0.1 Bar	PR 1
	0 to 0.35 Bar	PR 1
	0 to 0.7 Bar	PR 1
	0 to 1 Bar	PR 1
	0 to 1.6 Bar	PR 1
	0 to 2.5 Bar	PR 1
	0 to 4 Bar	PR 1
	0 to 4 Bar	PR 1
	0 to 6 Bar	PR 1
	0 to 10 Bar	PR 1
	0 to 16 Bar	PR 1
	0 to 20 Bar	PR 1
	0 to 25 Bar	PR 1
	0 to 60 Bar	PR 1
	0 to 100 Bar	PR 1
	0 to 250 Bar	PR 1
	0 to 400 Bar	PR 1
0 to 1000 Bar	PR 1	
Customized Range	OTH (Mention Range)	

\*Absolute Pressure  
Min. : 0.35 Bar ; Max. : 30 Bar  
Gauge Pressure  
Min. : 0.1 Bar ; Max. : 1000 Bar

Output	Description	Code
	4-20mA	01
	RS 485	02
	4-20mA + HART	03

Communication Output	Description	Code
	1/4 " NPT M	P1
	1/2 " NPT M	P2
	1/4 " BSP M	P3
	1/2 " BSP M	P4
	1/4 " NPT F	P5
	1/2 " NPT F	P6
	1/4 " BSP F	P7
	1/2 " BSP F	P8
	M20*1.5	P9
	Flush Diaphragm (Triclover)	P10
	Flush Diaphragm ( Srewed Connection )	P11
	Diaphragm (Seal)	P12
5 Mtr Capillary	P13	
Others	OTH	

Diaphragm MOC	Description	Code
	SS316L	D1
	Hastalloy-C	D2
Others	OT	

MOC of Sensor, Flange,Adapter	Description	Code
	SS304	N1
	SS316	N2
Others	OT	

Mounting Bracket	Description	Code
	MS	MB 1
	SS304	MB 2
	SS316	MB 3
	Others	NA

Power Supply Type	Description	Code
	24 VDC	PS 1
	230 VAC	PS 2
	12 VDC	PS 3
	110 VAC	PS 4

**FLOWTECH**

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