



ELECTRONET
NETWORKING MEASUREMENT SOLUTIONS

SMART

ELPRT-100S PT

PRESSURE TRANSMITTER



FEATURES

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



Electronet series ELPRT-100S (GP & AP) can accurately measure the pressure of gases, vapors and liquids used in refineries, petrochemicals, oil & gas, power, chemical industries, food processing & pharmaceutical industries. Based on a mechanical and rugged silicon sensor & capacitive sensor, the ELPRT-100S (GP & AP) is suitable for Absolute & Gauge Pressure Measurements.

Technical Specifications

Output Signal

2-wire-system	4-20mA with super imposed signal for HART Protocol, Digital Communication
Supply Voltage	12.5 – 45 VDC
Signal Range	3.9mA – 20.8mA
Signal on Alarm	3.9mA / 20.8mA
Measuring Range	Refer Pressure Range Table

Electrical Protection

Insulation Resistance	>100 MΩ at 100VDC
Wiring Protection	Protect against Over Voltage & Short Circuit
Reverse Polarity Protection	Yes
Safe Operating Voltage	50VDC

Temperature Limits

Ambient	-40 to 85°C (without display), -20 to 70°C (with display)
Storage	-40 to 85°C
Ingress Protection	IP 67
Electromagnetic Compatibility (EMC)	Compliance with IEC 61000-4-3 and IEC 61000-4-6 Radiated and Conducted Susceptibility

Performance

Accuracy	+/-0.075% of URL	
Power Supply Effect	< ±0.005% of calibrated SPAN per volt	
Vibration Effect	± 0.2% of SPAN /g @200Hz	
Installation Position Effect	Zero shift which can be calibrated out, No SPAN Effect	
Thermal Effect	Range code 4 to 10	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	
Turndown Ratio	100:1	
Turn On Time	Less than 5 Sec.	
Response Time	200 ms (without considering electronic damping)	
Damping	0.1 to 30.0 Sec.	
Humidity	5-98% Relative Humidity	

Physical Specifications

Process Connection	¼" NPT (F), ½" NPT (F), ¼" BSP (F), ½" BSP (F), Others on request
Diaphragm	SS316 / SS316L, Others on request
Seals	Viton, Others on request
Wetted Parts	SS 316
Electronic Enclosure	Die-cast aluminum / SS 316
Sight Glass	Laminated Safety Glass
Filling Fluid	Silicon Oil / Others on request
Electrical Connection	M20 / ½" NPT / Other

Others

Display Type	Visible range: 32.5 x 22.5mm
Main Display	5-Digit
Digit Height	8 mm
Bar-graph	51 Segments
Weight	Standard model approx. 1.3 Kg

Measuring Range

Table A : Absolute Pressure Transmitter Ranges

Range Code	Lower Range Limit (LRL)	Upper Range Limit (URL)	Minimum SPAN
4	0	5.801psi (0.400 Bar)	0.0580 psi (0.0040 Bar)
5	0	29.007psi (2.0 Bar)	0.290 psi (0.0200 Bar)
6	0	100psi (6.895 Bar)	1 psi (0.0689 Bar)
7	0	300psi (20.684 Bar)	3 psi (0.2068 Bar)

Table B : Gauge Pressure Transmitter Ranges

Range Code	Lower Range Limit (LRL)	Upper Range Limit (URL)	Minimum SPAN
3	-1.160psi (-0.080 Bar)	1.160 psi (0.080 Bar)	0.0116 psi (0.0008 Bar)
4	-5.801psi (-0.400 Bar)	5.801 psi (0.400 Bar)	0.0580 psi (0.0040 Bar)
5	-14.7 psi (-1.013 Bar)	29.007 psi (2.0 Bar)	0.290 psi (0.0200 Bar)
6	-14.7 psi (-1.013 Bar)	100 psi (6.895 Bar)	1 psi (0.0689 Bar)
7	-14.7 psi (-1.013 Bar)	300 psi (20.684 Bar)	3 psi (0.2068 Bar)
8	-14.7 psi (-1.013 Bar)	1000 psi (68.948 Bar)	10 psi (0.6894 Bar)
9	-14.7 psi (-1.013 Bar)	3000 psi (206.843 Bar)	30 psi (2.0684 Bar)
10	-14.7 psi (-1.013 Bar)	6000 psi (413.685 Bar)	60 psi (4.1368 Bar)

EMI/EMC Tests

No.	Tests	Basic Standards	Test Conditions	Performance Level
1	Conducted Emission (Mains)	CISPR11	150KHz-30MHz	A
2	Radiated Emission (in GTEM)	IEC61000-4-20	30MHz-1000MHz	A
3	Conducted Radio Frequency Immunity (Mains)	IEC61000-4-6	150KHz-80MHz	A
4	Electrical Fast Transient / Burst (EFT/B) Immunity (on Mains)	IEC61000-4-4	1KV(5/50nSec,5KHz)	A
5	Combination Wave Surge Immunity (On Mains)	IEC61000-4-5	1KV(Line to Line) (1.2/50us)	B
6	Immunity to Radiated Electromagnetic Field (Amplitude Modulated)	IEC61000-4-3	80MHz - 1000MHz (10V/M)	A
7	Damped Oscillatory Surge Immunity (On Mains)	IEC61000-4-18	1KV(Line to Ground) 0.5KV(Line to Line)	B
8	Electrostatic Discharge (ESD) Immunity	IEC61000-4-2	6KV(Contact) 8KV(Air)	A

Product Drawing & Dimensions

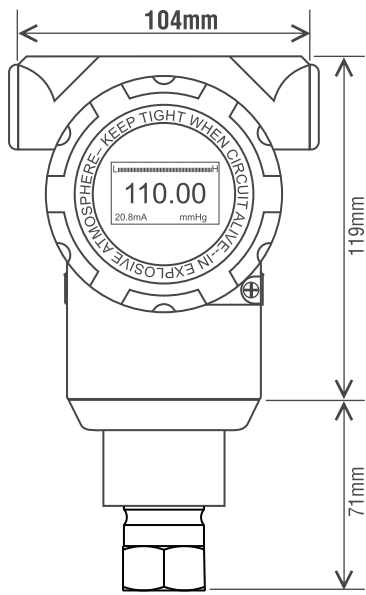


Fig 1 Front View

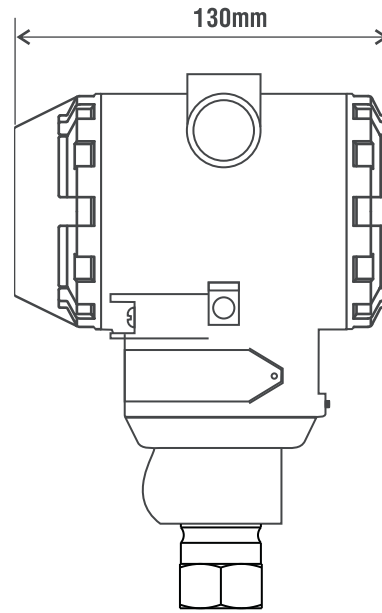
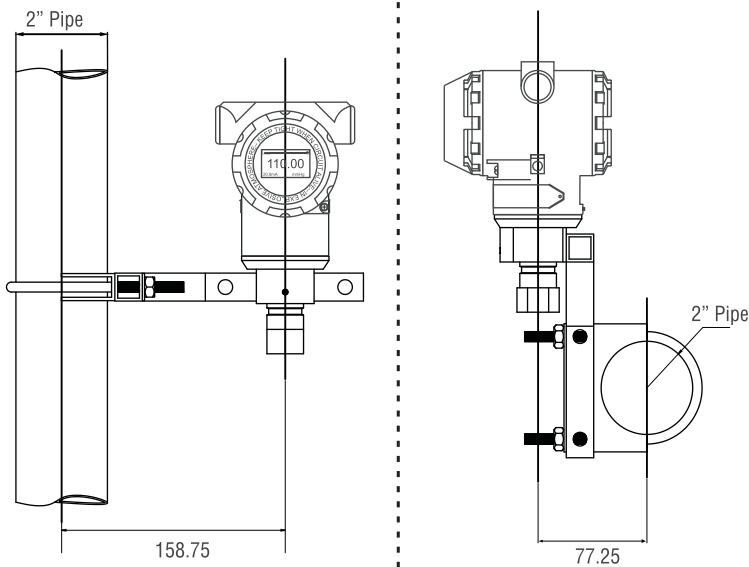


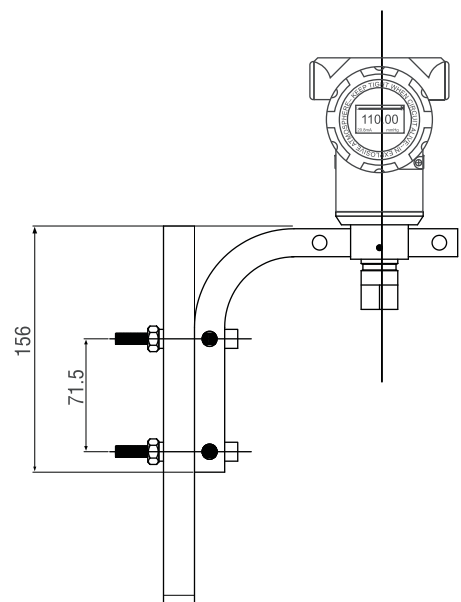
Fig 2 Side View

Installation Drawing & Dimensions

Pipe Mounting



Panel Mounting



Measuring Medium

Liquid, Gas or Steam

Field of Application

Pressure & Level

Approvals



Ordering Information

03	07	13	14	21	22	49	65	66	67	77	78	91
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Parameter	Code	Value	Parameter	Code	Value		
03	Measurement Type	03A	Absolute Pressure	65	Wetted Parts Material	65A	SS316
		03B	Gauge Pressure			65X	Other
07	Area Classification	07A	Weather Proof	66	Process Connection	66G	1/4" NPT (M)
		07B	Flame Proof			66H	1/2" NPT (M)
13	Pressure Range FOR AP	13B	5.801 psi			66I	1/4" BSP (M)
		13C	29.007 psi			66J	1/2" BSP (M)
		13D	100 psi			66K	Flush Diaphragm
		13E	300 psi			66L	2 Meters Capillary
14	Pressure Range FOR GP	14A	1.16 psi			66R	1/4" NPT (F)
		14B	5.801 psi			66S	1/2" NPT (F)
		14C	29.007 psi			66T	1/4" BSP (F)
		14D	100 psi			66U	1/2" BSP (F)
		14E	300 psi	66X	Other		
		14H	1000 psi	67	MOC Flange	67C	SS316
		14I	3000 psi			67D	SS304
14J	6000 psi		67X	Other			
21	Electrical Connection	21A	M20 X 1.5	77	Sensor Type	77A	Piezo Resistive
		21B	1/2" NPT (F)			77B	Capacitive
		21X	Other	78	Fill Fluid	78A	Silicon Oil
22	MOC Electronics Enclosure	22A	Die Cast Aluminium			78X	Other
		22B	SS316	91	Mounting Bracket	91A	CS
49	Output	49A	4 to 20mA			91B	SS
		49B	4 to 20mA with HART				

Note : • Due to our continuous product revisions, design specification and model numbers are subject to change without notice.
 • Accuracy defined at Lab Conditions.
 • For other requirement please consult factory.

Applications

Food Industry	Chemical Industry	Atomic Energy	Manufacturing Industry
Automation Industry	Thermal Power Energy	Process Industry	Water Treatment Industry

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