SPX510-D Double Flange Differential Pressure Densitometer

Product Overview

The double-flange differential pressure densitometer developed by our company adopts multi-parameter flat-flange sensors, which can be used for on-line detection density measurement of various liquids or liquid mixtures. It is widely used in the field of chemical industry, desulfurization and coal washing.

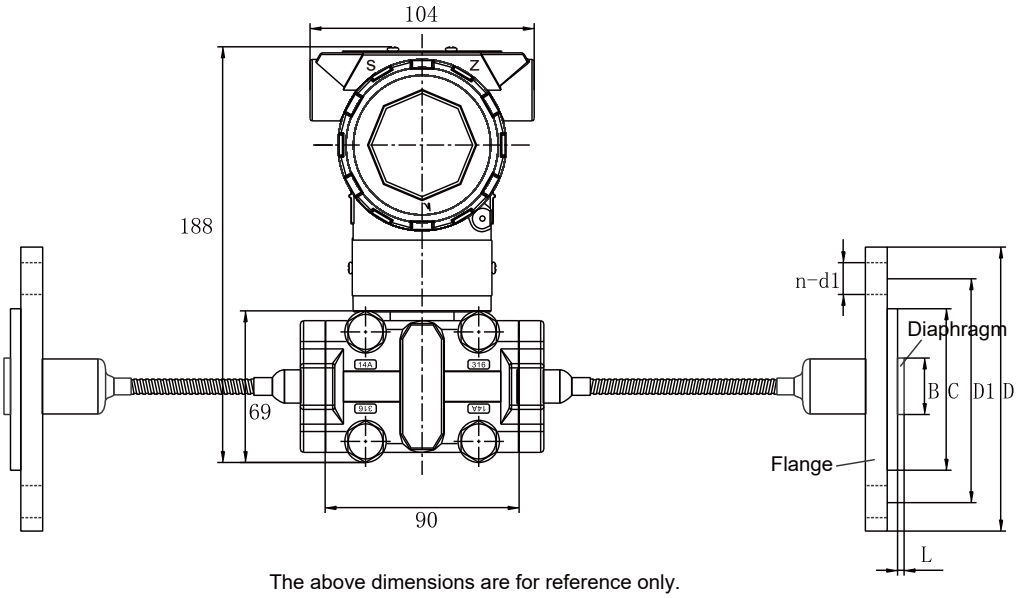
Application fields

1.Petroleum industry
2.Chemical industry
3.Food and beverage industry
4.Battery and electrolyte industry
5.Pharmaceutical industry
6.Coal washing industry

Technical indicators

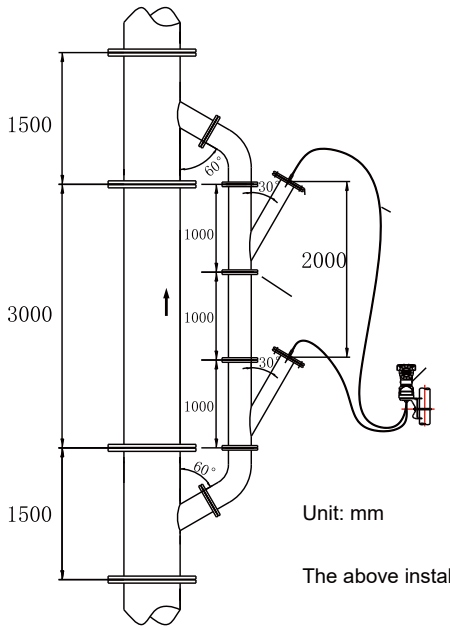
Measuring range: 0~3g/cm³
Allowable temperature: -10~300℃
Working voltage: 18~30VDC
Electrical interface: 1/2NPT or M20X1.5
Output: 4~20mA (2-wire), HART protocol
Programming interface: flange mounting
Protection level: IP65

Dimensional and installation drawings



The above dimensions are for reference only.
Actual dimensions are subject to production.

Installation Diagram



Unit: mm

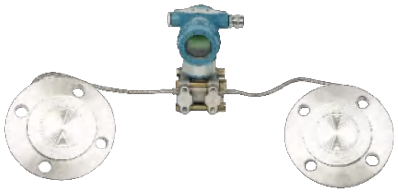
The above installation methods are for reference only.

Selection Chart

SPX510-D	□ □ □ □ □ □ □ □ □ □	Double Flange Differential Pressure Densitometer
Range	R1 R2 R3 RX	0～1.0g/cm³ 0～2.0g/cm³ 0～3.0g/cm³ others
Process Interface	A1 A2 X	DN50 DN80 others
Seal Surface Thickness	0 1 X	General 28mm others
Insertion Cylinder	0 1 X	None 100mm Others
Flange Center Distance	1 2 X	500mm 1000mm others
Positive End Hairline Tube Length	00 15 30 50 XX	None 1.5 m 3 m 5 m Other lengths
Negative End Hairline Tube Length	15 30 50 XX	1.5 m 3 m 5 m Other lengths
Filling Fluid	A X	DC200 Silicone Other
Diaphragm Material	J0 J1 J2 J3 JX	316L Titanium Hastelloy Tantalum Other
Accessories	F0 F1 F2 X	None Flat-welded paired flanges Paired flanges with concave surface Other

Applications in the coal washing industry

Online density meter for heavy media coal washing has radioactive isotope density meter, because of radioactive substances, the surrounding environment will cause radioactive pollution, radioactive radiation damage to personnel, the use and management is very inconvenient, the state control is very strict, the use and purchase have to go through a strict approval procedures, bad can not be used but also to spend money to send to the state to designate the unit and location of the storage, the loss of criminal responsibility. This instrument has a large time constant, the response is not sensitive, the measurement accuracy is not high: the use of calibration trouble, it is difficult to standardize, the installation location has strict requirements, the use of maintenance is very troublesome, at the same time, when the sampling tube wall scaling will also affect the measurement accuracy.

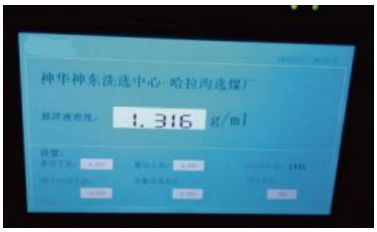


Differential Pressure Densitometer

In order to adapt to the market needs, to overcome the shortcomings and problems of the above instruments; production of double-flange density meter, differential pressure principle, the use of multi-parameter density sensors, automatic temperature compensation, easy to install, less maintenance.
Density meter for coal washing.
1. Adopting bypass installation method to reduce the flow rate and ensure the high precision of measurement.
2. Scientific and reasonable pipeline design can avoid the retention of medium or gas, and avoid the direct impact of fluid on the diaphragm, thus prolonging the service life of the sensor.
3. With temperature compensation function, the imported sensor further guarantees the accuracy of measurement. It can be used to measure the density and concentration of all fluids (including solutions and suspensions), with sensitive response and high measurement accuracy; factory calibrated, simple and convenient installation.

Gauge Box

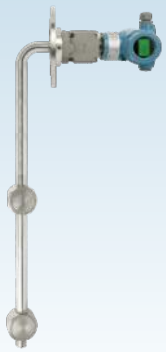
Advantages.
1. Two-wire transmitter with integrated structure, no moving parts and simple maintenance.
2. Four-digit liquid crystal display.
3. Easy to install and use, loaded into the liquid can display readings.
4. Used in fluid or static liquid, suitable for pipeline installation and tank installation.
5. Customized density unit, easy to carry out the industry standard density conversion.
6. Continuous online measurement of liquid density without process interruption, can be directly used for production process control.



SPX510-S side/top mounted differential pressure densitometer

Product Overview

SPX510-S Differential Pressure Density Gauge, adopting the original imported multi-parameter flat flange sensor, can be used for on-line density measurement of various liquids or liquid mixtures. It is widely used in chemical industry and desulfurization field.



SPX510-S Side Mount

SPX510-S Top Mount

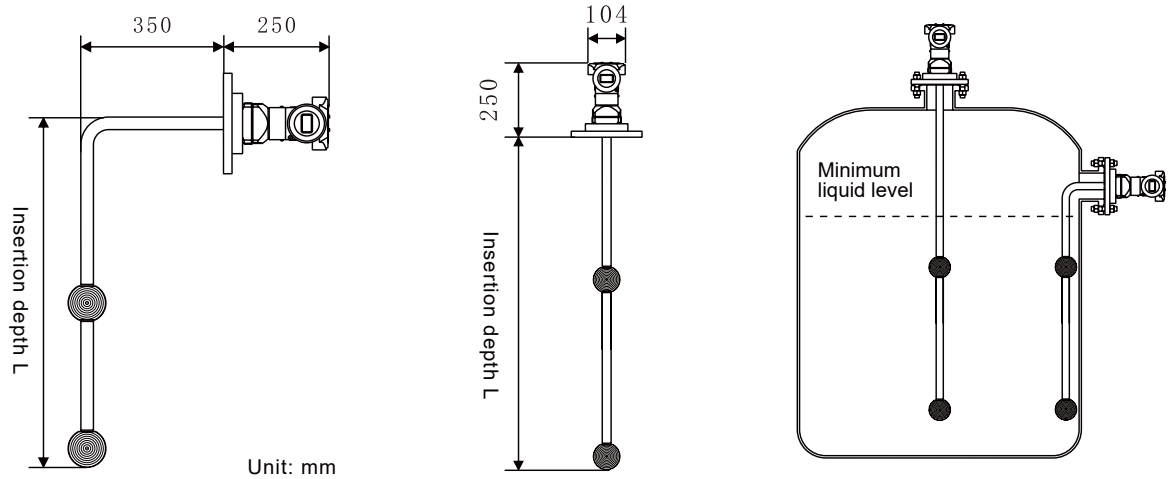
Areas of Application

1.Petroleum industry
2.Chemical industry
3.Food and beverage industry
4.Battery and electrolyte industry
5.Pharmaceutical industry

Technical Indicators

Measuring range: 0~3g/cm³
Allowable temperature: -20~100℃
Working voltage: 18~30VDC
Electrical interface: 1/2NPT or M20X1.5
Output: 4~20mA (2-wire), HART protocol
Process interface: DN80 flange tank mounting
Protection level: IP65

Dimensional and installation drawings



Unit: mm

The above dimensions are for reference only.
Actual dimensions are based on production.

Selection table

SPX510-S	□	□	□	□	□	□	□	Side/top mounted differential pressure densitometers
Range	R1							0～1.0g/cm^3
	R2							0～2.0g/cm^3
	R3							0～3.0g/cm^3
	RX							other
Process Interface		A1						DN80
		A2						DN100
		AX						other
Insertion Length			L1					500mm
			L2					800mm
			LX					other
Filling Fluid				A				Silicone oil
				B				Olive oil
				X				Other
Diaphragm Material					J1			316L
					J2			Hastelloy
					J3			Tantalum
					JX			Other
Flange Material						M0		SUS304
						M1		SUS316
Reception Material							1	304
							2	316L

SPX510-I Rod Type Side Mounted Differential Pressure Densitometer

Product Overview

Flange type side mounted differential pressure density meter, using multi-parameter flat flange sensor, can on-line detection of various liquids or liquid mixtures density measurement. It is widely used in chemical industry and desulfurization field.

Type A

Type B

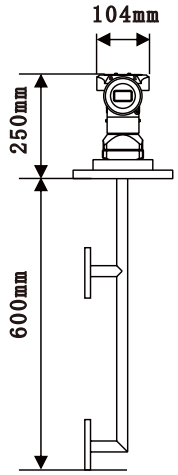
Areas of Application

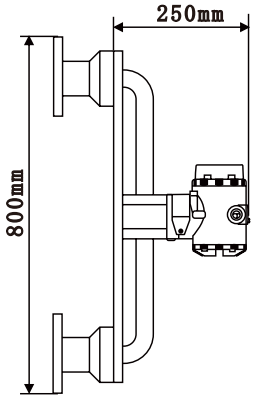
1. Petroleum industry
2. Chemical industry
3. Food and beverage industry
4. Battery and electrolyte industry
5. Pharmaceutical industry

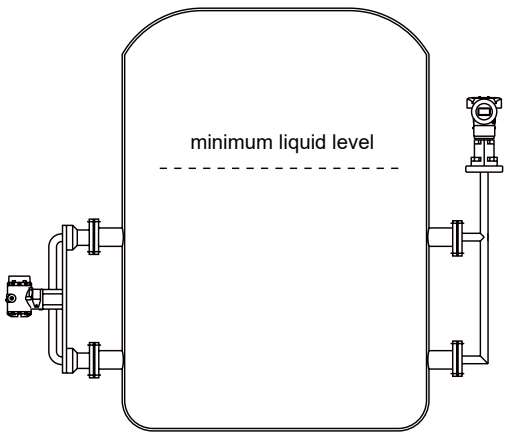
Technical Indicators

Measuring range: 0~3g/cm³
Allowable temperature: -20~100℃
Working voltage: 18~30VDC
Electrical interface: 1/2NPT or M20X1.5
Output signal: 4~20mA (2-wire), HART protocol
Programming interface: flange mounting
Protection level: IP65

Dimensional and installation drawings



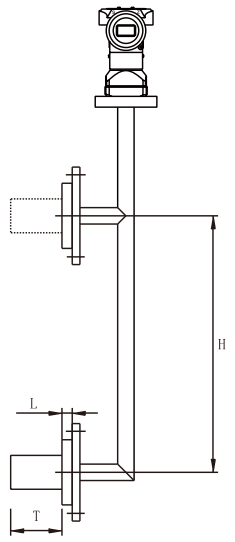




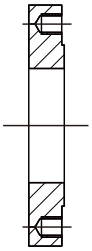
The above dimensions are for reference only.
Actual dimensions are based on production.

Selection table

SPX510-I	□	□	□	□	□	□	□	□	□	Rod-type side-mounted differential pressure densitometer
Range	R1 R2 R3 R4									0～1.0g/cm³ 0～2.0g/cm³ 0～3.0g/cm³ other
Process Interface		A1 A2 AX								DN50 DN80 other
Seal Surface Thickness			0 1 X							General 28mm Other
Insertion Cartridge				0 1 X						None 100mm Other
Flange Center Distance					1 2 X					500mm 1000mm other
Fill Fluid						A X				Dc200 Silicone Oil other
Diaphragm Material							J1 J2 J3 J4 JX			316L Titanium Hastelloy Tantalum Other
Meter Head Position								A B		Type A (head on top) Type B (head in center)
Accessories									F0 F1 F2 FX	None Flat Weld Pairing Flange Pairing Flange with Concave Other

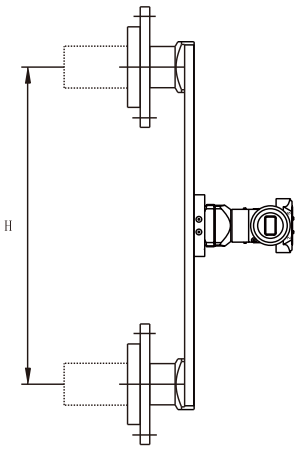


Type A (meter head on top)

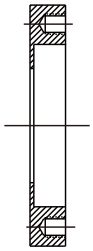


F1

Flat Weld Mating Flange



Type B (meter head in center)



F2

Mating Flange with Concave Surface

SPX510-P Pipeline Density Meter

Product Overview

SPX510 -P pipeline online density meter is a device for continuous online measurement of liquid density, using the principle of differential pressure densitometer, according to the medium in a certain vertical distance on the differential pressure value, directly read out the density value and the output of 4 ~ 20mA DC signal, with H ART communication protocol and automatic temperature compensation, installation and use of simple. Widely used in a variety of liquid density measurement, vertically installed in the pipeline flow path, easy to install, suitable for pipeline flange mounting, especially able to measure the density of viscosity media.

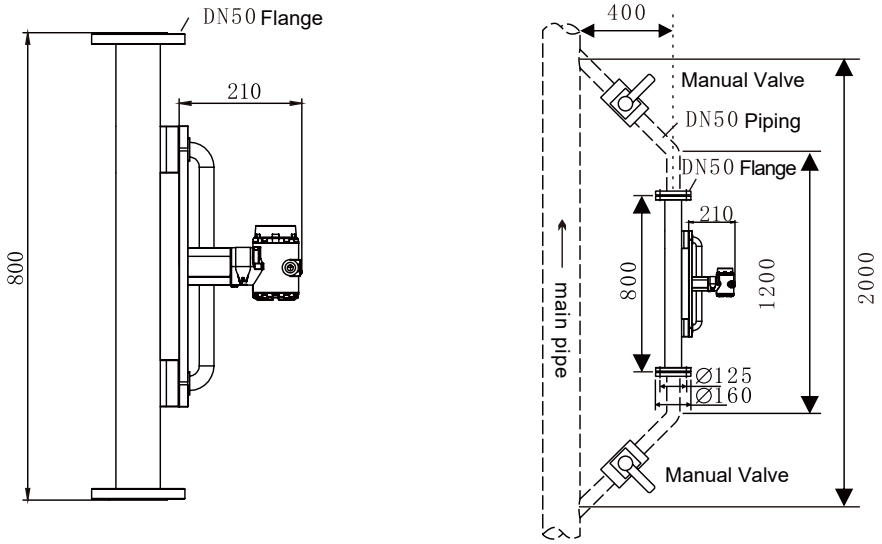
Areas of Application

1.Petroleum industry
2.Chemical industry
3.Food and beverage industry
4.Battery and electrolyte industry
5.Pharmaceutical industry

Technical Indicators

Measuring range: 0~3g/cm³
Allowable temperature: -20~90℃
Working voltage: 18~30VDC
Electrical interface: 1/2NPT or M20X1.5
Output signal: 4~20mA (2-wire), HART protocol
Process interface: flange pipeline mounting
Protection grade: IP65

Dimensional and installation drawings



The above dimensions are for reference only.
Actual dimensions are based on production.

Selection table

SPX510-P	□	□	□	□	□	Pipeline Densitometer
Range	R1					0～1.0g/cm³
	R2					0～2.0g/cm³
	R3					0～3.0g/cm³
	RX					Other
Process Interface		A1				DN50
		A1				DN80
		A3				DN100
		X				Other
Filling Fluid			A			Silicone oil
			B			Olive oil
			X			Other
Diaphragm Material				J1		316L
				J2		Hastelloy
				J3		Tantalum
				JX		Other
Flange Material					M1	304
					M2	316L
Reception Material						2 316L
						3 polytetrafluoroethylene

Applications in the chemical / desulfurization / mineral processing industries

Domestic chemical, mining, fertilizer and other industries, need to measure the density of the working conditions are often corrosive, many particles, unstable flow rate and other characteristics. The use of conventional on-line density meter, the liquid material is not corrosion-resistant and wear-resistant, the use of short life. Resulting in high maintenance costs and unstable measurement, unable to meet customer requirements. Secondly, because of the problem of flow rate, the measurement has deviation, can not truly reflect the density value of the medium.

SPX510-P Pipeline Density Meter is suitable for vertical pipeline installation. The original anti-corrosion structure, wear-resistant parts, throttling design, high temperature data processing, can be used in more particles or suspended solids, corrosive, high temperature, high flow rate or unstable flow rate and other harsh conditions. For example, heavy media coal washing, sulfuric acid, nitric acid, ammonium sulfate, lime slurry, monoammonium phosphate and so on.