SP300 Series

Standard Pressure/Differential Pressure Transmitters

PARSEN Selection sample 2021.01

Overview

The SP 300 series standard pressure / differential pressure transmitter uses a high-precision pressure sensor assembly, through the built-in circuit converting the sensor voltage output into a standard current or voltage output signal. In order to ensure the stability, reliability and high performance of the product, the high quality sensor and transmitter special amplifier circuit are specially selected, and the whole stainless steel integrated welding process is adopted, so as to ensure that the product can work long-term and stable under harsh working conditions. The product has a variety of pressure and electrical connection options, suitable for a variety of testing equipment and control systems.

Applications

- Air pressure, hydraulic, pneumatic control system
- Level measurement and control system
- Power, environmental protection
- Petroleum, chemical industry
- Pipe network, storage tank control system
- Water supply
- Pure water cooling system
- Industrial process detection and control
- Laboratory pressure calibration, pressure test bench

SP300 Serie Pressure Transmitter

Features

- Adopt advanced technology
- High precision, good long-term stability, reliable and durable

- Using a micro amplifier circuit, can output a variety of current, voltage signals
- Adopt all-stainless steel integrated welding structure
- Thread, electrical interface diversification, convenient installation of various working conditions
- Multiple range and pressure type selection
- Anti-vibration, anti-shock, lightning protection, anti-radio frequency interference
- Optional small integrated LCD display and watch head with switching output
- Product parameters adopt laser marking technology to ensure the traceability of products
- Customizable

Specification

Measurement medium	Various liquids, gases or vapors compatible with 316 or 304 stainless steel
Pressure Range	Gauge pressure 0~0.01MPa to 0~250MPa, absolute pressure 0~0.1MPa to 0~250MPa, vacuum 0~-0.1MPa
Overload pressure	2 times full scale or 300MPa(take the smaller value)
Output Signal	4~20mADC(Two-wire system) 0~10VDC, 0~5VDC, 1~5VDC(three-wire system)
Power Supply	9~36VDC(two-wire system), 24±5VDC(three-wire system)
Medium temperature	-30~+85℃, -30~+150℃(plus loose tablets)
Operating temperature	-20~+85℃
Storage temperature	-40 ~ + 90℃
Relative humidity	≤95%(40℃)
Response time	≤5 ms ,up to 90% FS
Accuracy	0.5, 0.25 (combined error including nonlinearity, repeatability and hysteresis)
Temperature drift	≤± 0.05%FS / ℃(temperature range -20~85℃, including zero point and range temperature effects)
Temperature compensation	0~70℃
Long term stability	Typical: ± 0.1% FS/year, Max: ± 0.2% FS/year
Process Connection Material	304 or 316 stainless steel

Housing material	304 or 316 stainless steel, when selecting industrial type, the housing is painted with aluminum alloy
Installation	Threaded mounting (flange/chuck mounting)
Process Connection	M20×1.5, M12×1, G1/4, G1/2, flange, chuck(customer tailor)
Electrical connector	Four core shielded cable, aviation plug, Hersman connector, etc

Model number and naming

Product line

SP300 Series standard type pressure transmitter

Output Signal

CR	4~20mA Current output
VA	0~ 5V Voltage output
VB	0~10V Voltage output
VC	1~ 5V Voltage output

Product Type

BZ	Standard

Pressure Interface

A1	M20*1.5	B1	G1/2	C1	1/2"NPT	Y1	clamp φ50.5mm
A2	M16*1.5	B2	G1/4	C2	1/4"NPT	Y2	clamp φ64mm
A3	M14*1	B3	G1/8	C3	1/8"NPT	Y3	DN25 flange
A4	M12*1	B4	G3/8	C4	3/8"NPT	Y4	DN50 flange

D	Non-standard thread (flange or chuck)

Accuracy

A	0.5	B	0.2

Range

*(Digital) Product range * MPa

Electrical Interface

CD*	cable line * m	G	industrial type	D	Hensman joint
				H	aviation plug
				F	waterproof junction box

Display

S	LCD display	N	non-display

Other requirements

FZ	anti-vibration	FC	anti-impact	FG	anti-interference
GA	quadruple overvoltage protection	GK	waterproof, oil-proof protection	FL	lightning protection
GW	additional heat sink	QT	other requirements		

Pressure type (product default)

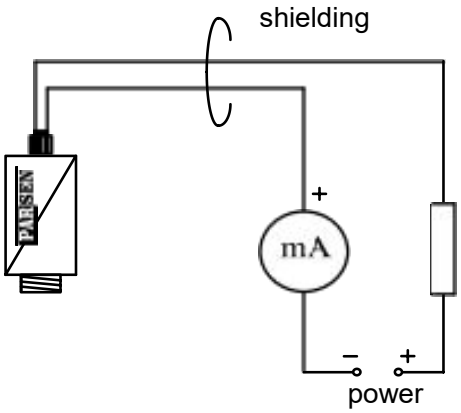
3	gauge pressure	4	absolute Pressure	5	sealed Pressure

Selection example

SP3000-CR-BZ-A1-A-G-S

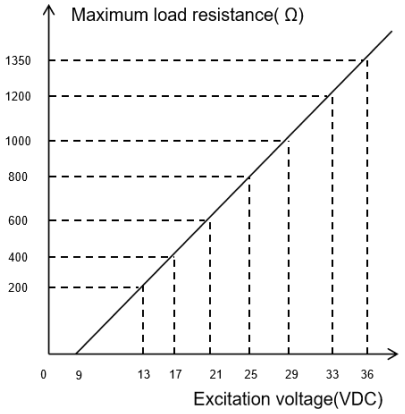
Product wiring

Current-type product wiring diagram



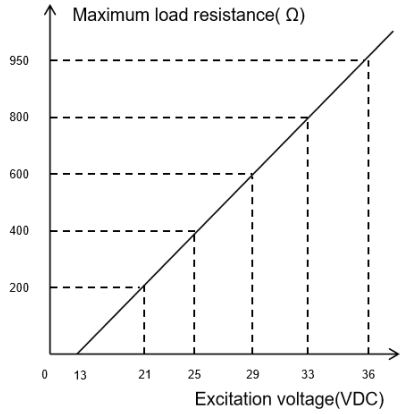
	Cable connection	Hersman joint connection	Aviation plug connection	Industrial-type
Power supply positive (V+)	red wire	first pin	first pin	OUT +
Signal output positive (OUT+)	black wire	second pin	second pin	OUT -
Ground connection (GND)	exposed line	ground pin	fourth pin	ground pin
Suspended	non	third pin	third pin	non
Test End (I +)	non	non	non	TEST +
Test End (I -)	non	non	non	OUT

Current output load characteristic diagram



Current Output Load Characteristics Diagram(0.5 ~ 250 MPa)

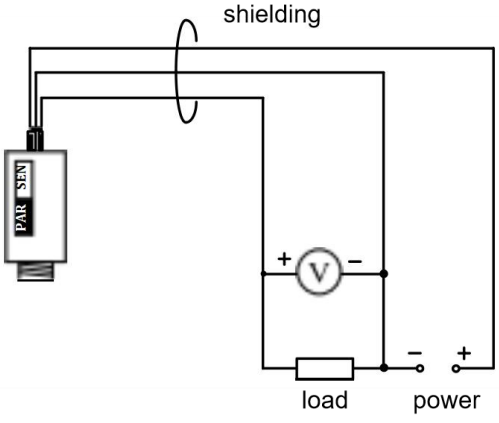
Maximum load resistance(k Ω)= Excitation voltage - 9V / 20mA



Current Output Load Characteristics Diagram(-0.1~0，0.1~0.5 MPa)

Maximum load resistance(k Ω)= Excitation voltage - 13V / 20mA

Voltage type product wiring diagram

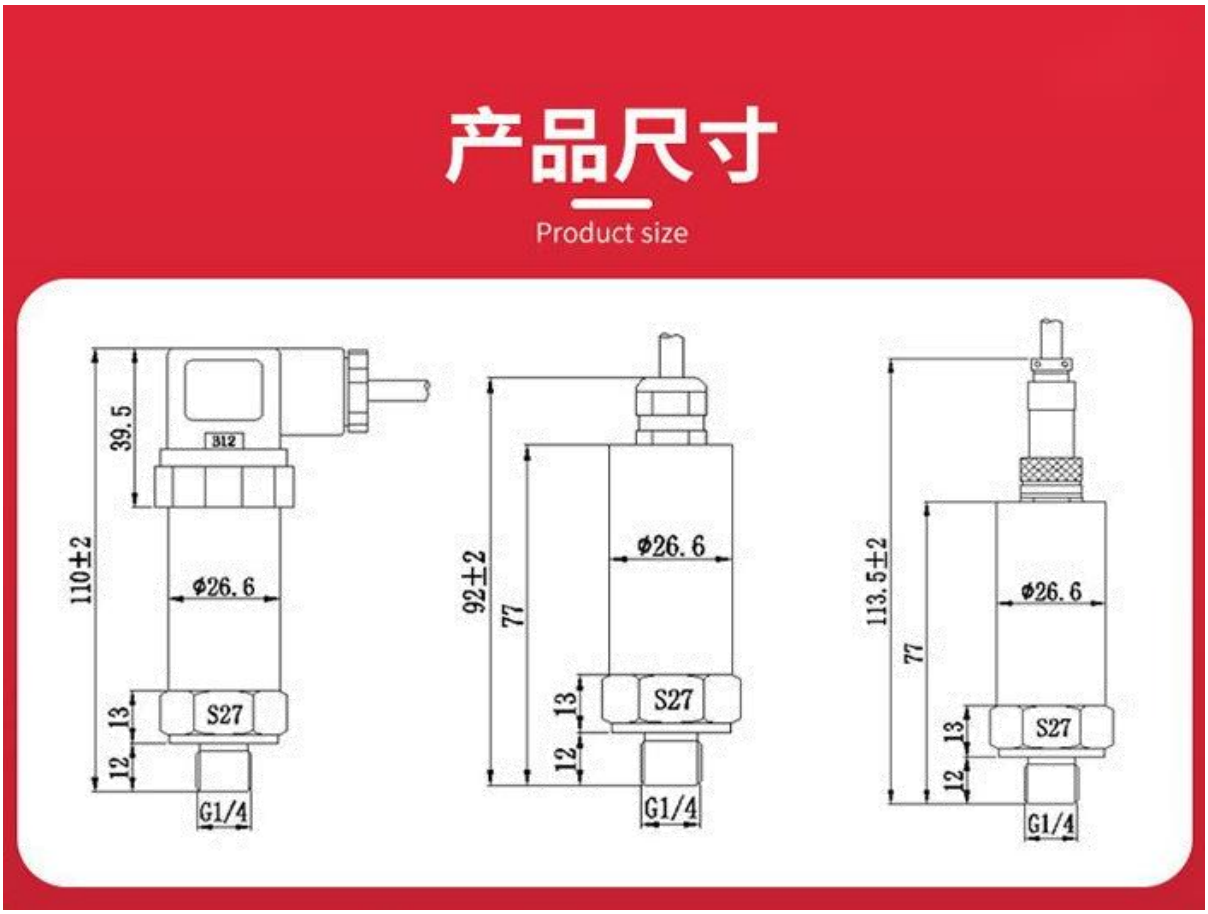


	Cable connection	Hersman joint connection	Aviation plug connection
Power supply positive (V+)	red wire	first pin	first pin
Power negative/signal negative (V-/OUT-)	black wire	second pin	second pin
Signal output	green wire	third pin	third pin
Ground (GND)	exposed line	ground pin	fourth pin

The supply voltage of the voltage type product is 24±5VDC, and the load resistance should be greater than 2000 Ω.

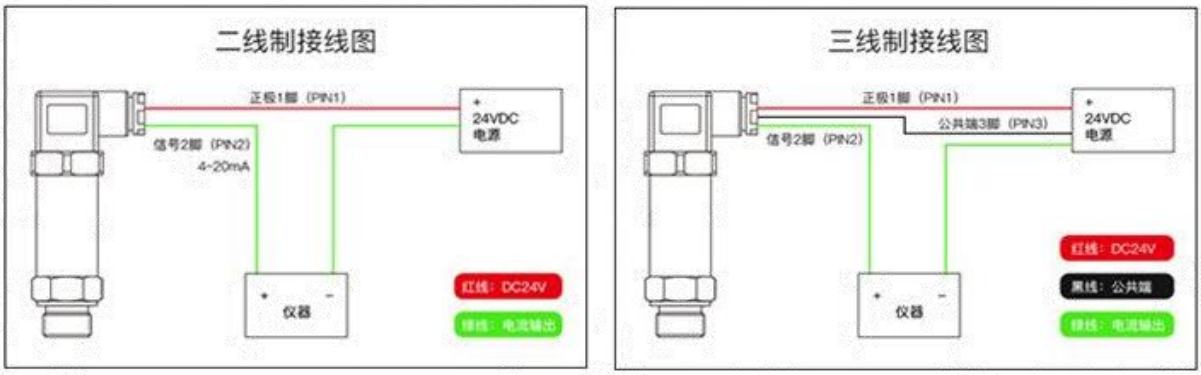
Exterior drawing and mounting square type

Pressure transmitter



接线指导

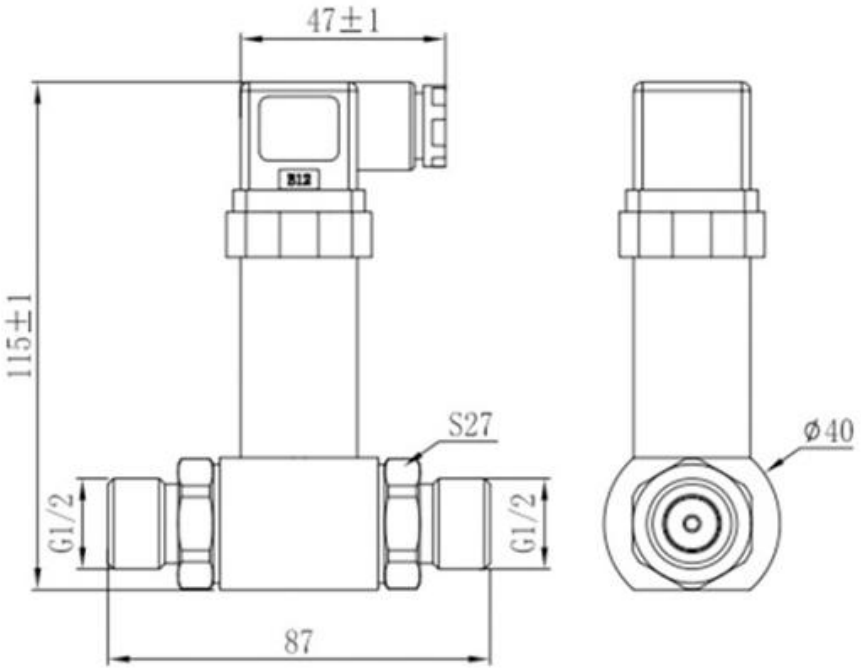
Wiring guidance



Differential pressure transmitter

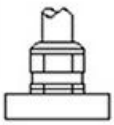
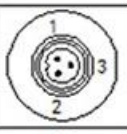
规格尺寸

Specification size



接线指导

Wiring Guidance

输出类型	外形图	脚位	电流二线制		电压三线制		RS485	
			功能	颜色	功能	颜色	功能	颜色
DIN43650A（大赫斯曼）		1	电源+	红色	电源+	红色	电源+	红色
		2	信号+	黑色	信号+	绿色	A	绿色
		3			电源-/信号-	黑色	B	白色	
		⏚					电源-/信号-	黑色
M12×1.5 防水接头			电源+	红色	电源+	红色	电源+	红色
			信号+	黑色	电源-/信号-	黑色	A	绿色
					信号+	绿色	B	白色
							电源-/信号-	黑色
M12×0.75 四芯航插		1	电源+	红色	电源+	红色	电源+	红色
		2	信号+	黑色	电源-/信号-	黑色	A	绿色
		3			信号+	绿色	B	白色
		4					电源-/信号-	黑色
M12×0.75 三芯航插		1	电源+	红色	电源+	红色		
		2	信号+	黑色	电源-/信号-	黑色		
		3			信号+	绿色		