



Recorder



Flow



Pressure



Temp



Analyzer



Level

Datasheet

Pressure transmitter

SUP-P300

Supmea[®]

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Datasheet**Pressure transmitter
SUP-P300**

SUP-P300 Series pressure transmitter is kind of device based on pressure layer, which inside expert integrate circuit can transform sensor milli-volt signal to standard far distance transmission current signal, and it can be directly joined with computer joint clip, control instrument , aptitude instrument or PLC etc. conveniently. The series' product is applied extensively in the professions, such as the industry process control, petroleum, chemical engineering and metallurgy etc. Carry the distance delivers and can adopt electric current exportation method.

Applications

- Dyeing industry
- Air tightness test
- HVAC
- Water supply
- Agricultural irrigation
- Food industry
- Mud measurement
- Vacuum equipment
- Medical equipment

Features

- Compact structure and easy installation
- Advanced Diaphragm/Oil Filled Isolation Technology
- High stability, high reliability
- Anti-vibration, anti-radio frequency interference.
- 316L stainless steel isolation diaphragm structure.
- High precision, all stainless steel structure.
- Micro amplifier, voltage, current, RS485 signal output.
- Wide range with multiple pressure measurement
- Vibration and shock resistance.

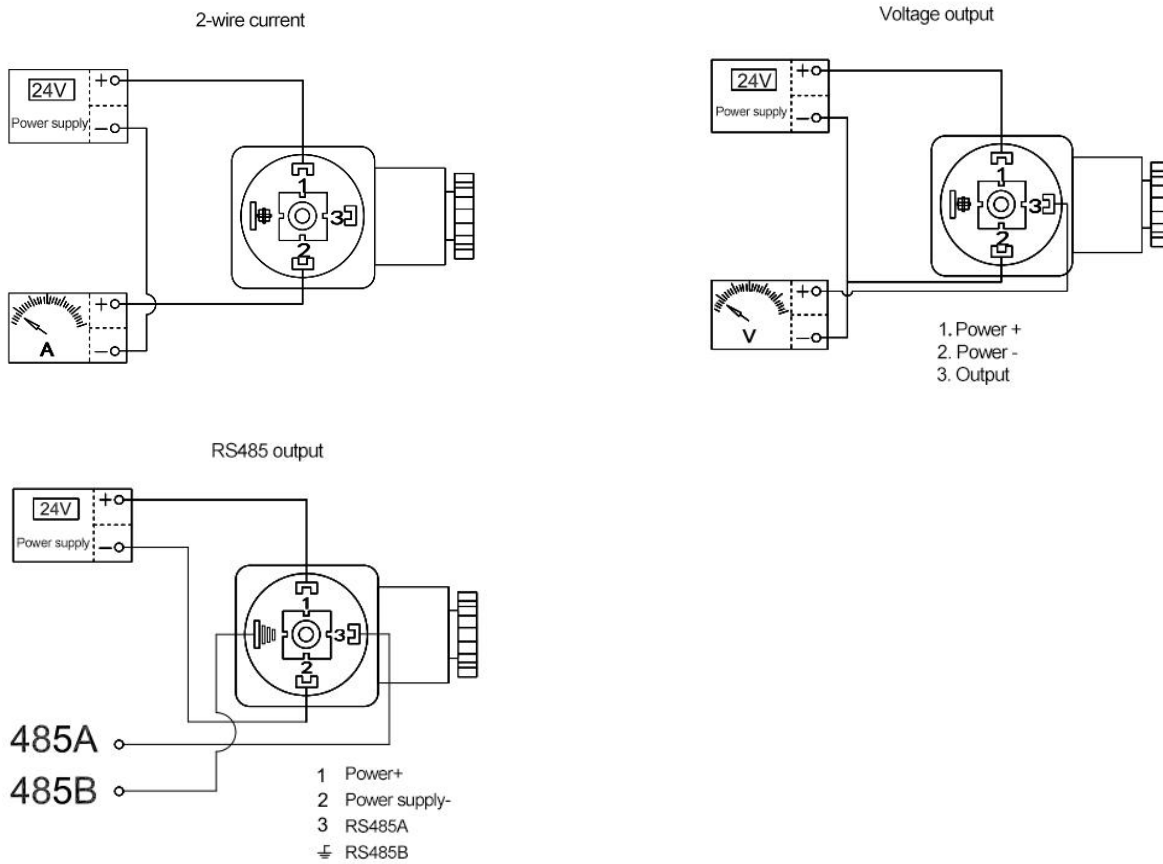
**SUP-P300****Principle**

Pressure Transmitter are devices that convert the mechanical force of applied pressure into electrical energy. This electrical energy becomes a signal output that is linear and proportional to the applied pressure. And a transmitter sends signals in milliamps (mA). At present, various types of pressure sensors, such as diffused silicon, capacitive, silicon sapphire, ceramic thick film, metal strain electric type are widely used in various industries. SUP-P300 is diffused silicon type pressure transmitter.

Parameters	
Output and power supply	(4~20)mA output (10~32)V (0~10)V output (12~32)V (0~5)V,(1~5)V,RS485 output (8~32)V (4~20)mA output with LCD 4-digit display meter (17~32)V RS485 output with 8-segment digital tube 4-digit display meter (5~28)V
Accuracy	0.2%F.S, 0.25%F.S, 0.5%F.S(Optional)
Measuring Range	-0.1MPa...0~10kPa...60MPa
Pressure Type	Gauge pressure,Absolute pressure,Sealing pressure
Temperature compensation	-10~70℃
Operating temperature	-20~85℃
Medium temperature	-20~85℃
Storage temperature	-40~85℃
Ingress Protection	IP65
Overloading pressure	0.035~10MPa(150%FS),10~60MPa(125%FS)
Zero output temperature drift	±0.3%FS/10℃
Full-Scale output temperature drift	±0.3%FS/10℃
Long-term stability:	±0.2%FS/year
Response time	Current and voltage output type pressure≤10ms (up to 90%FS); RS485 output type pressure≤100ms (up to 90%FS)
Insulation resistance	20MΩ/250VDC
Dielectric strength	50Hz, 500VAC
Load Resistance	4~20mA output: $\leq (U-10V)/0.02A$, U is the power supply voltage 4~20mA output with display: $\leq (U-14V)/0.02A$, U is the power supply voltage V output: $\geq 5k\Omega$

Wiring

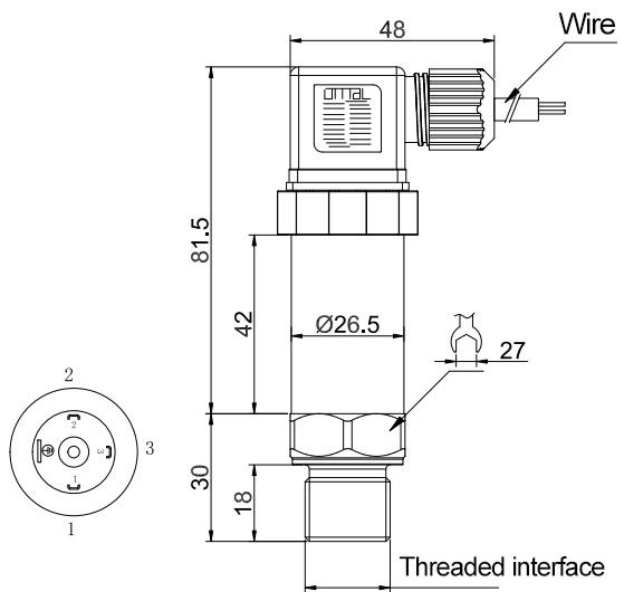
Electrical connection diagram of Herssman structure



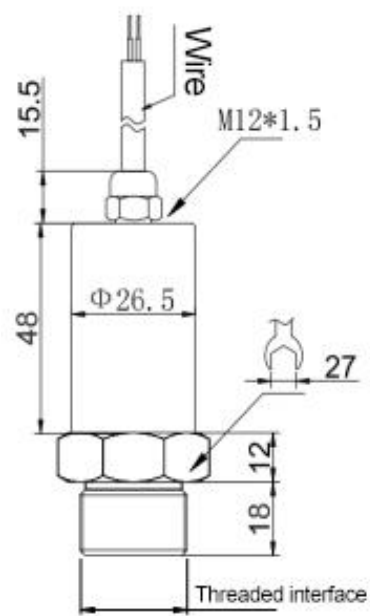
Direct lead structure electrical connection

Output	Color	Description
Current	Red	Power+
	Green	Current output
Voltage	Red	Power+
	Green	Power supply-
	Yellow	Voltage output
RS485	Red	Power+
	White	Power supply-
	Green	RS485+
	Yellow	RS485-

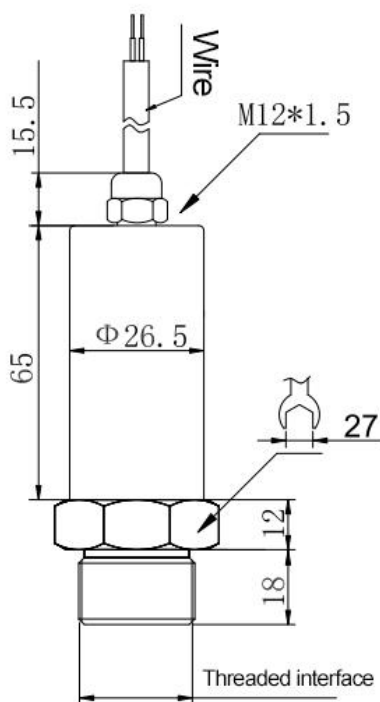
Dimensions



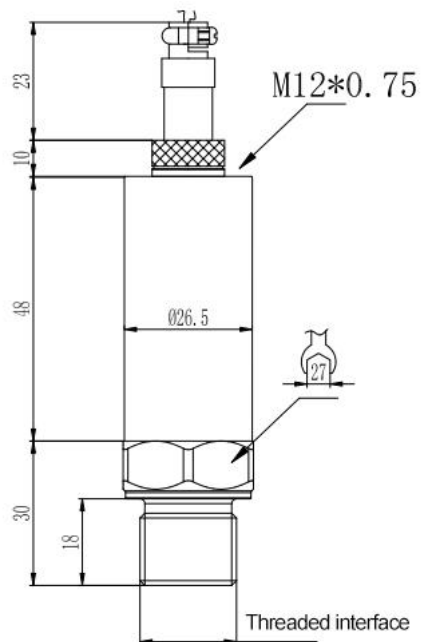
Hershman joint



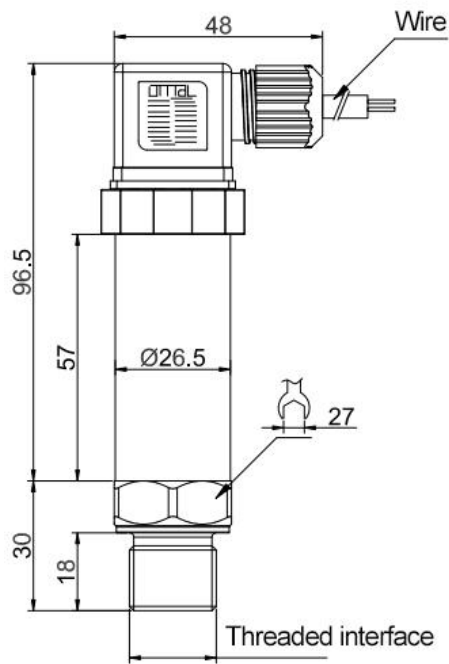
Direct lead



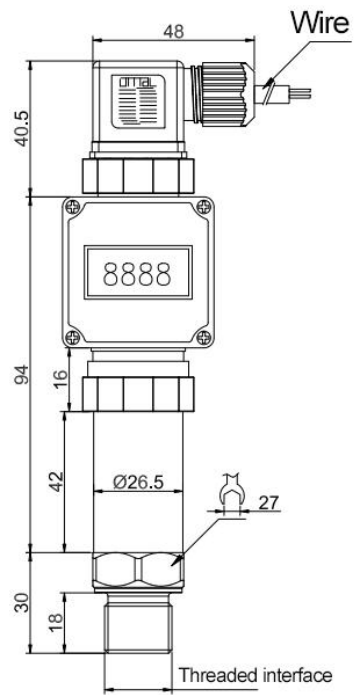
Direct lead with RS485 output



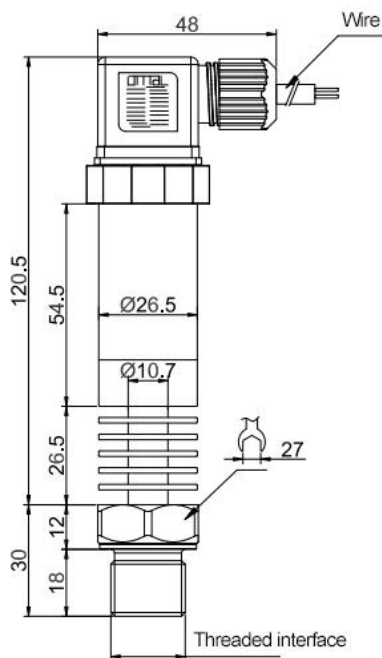
Aviation plug



Herssman joint with RS485 output



Herssman joint with display



Hessman high temperature type

Ordering code

SUP-P300-G-RT(0-1)-J3-O1-D2-I2-EI1-V1-DM1-E1-GQ1-IP1-HM1-TM1-CS2														Description		
SUP-P300	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Pressure Type	G															Gauge pressure
	A															Absolute pressure
	S															Sealed gauge pressure
Measuring range	RT(XX - XX)															-0.1MPa...0 - 10kPa...60MPa
Accuracy			J3													0.2%
			J4													0.25%
			J5													0.5%
Transmit output				O0												No
				O1												4~20mA output
				O2												1~5V output
				O3												0~10V output
				O4												0~5V output
				OZ1												20~4mA output
				OZ2												0.5~4.5V output
Communication				OZ3												0.5~2.5V output
				D0												No
Installation				D2												RS485
					I1											M20*1.5
					I2											G1/4
					I3											G1/2
					I4											M14*1.5
					I5											NPT1/4
					I6											NPT1/2
Electrical Interface				IZ												Others
					EI1											Herssman joint
					EI2											Herssman direct lead
					EI3											Direct lead
					EI4											Round seat aviation plug
Power supply					EI5											Square seat aviation plug
					V1											24VDC
Ingress Protection					V5											5VDC
																316L stainless steel diaphragm

Seal ring material	GQ1			Nitrile rubber seal (20°C ~ 100°C)
	GQ2			Fluorine rubber sealing ring (-20°C ~ 200°C)
Ingress Protection		IP1		IP65
Shell material		HM1		304(Standard)
		HM2		316L
Thread material			TM1	304(Standard)
			TM2	316L
Cable length			CS2	2m(Standard)
			CSXX	Xm

Note: Communication output and transmission output cannot be selected at the same time