Datasheet

Pressure transmitter

SUP-P300

Supmea®

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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 tightenss test
- HVAC
- Water supply
- Agricultural irrigation
- Food industry
- Mud measurement
- Vacuum equipment
- Medical equipment

SUP-P300

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.

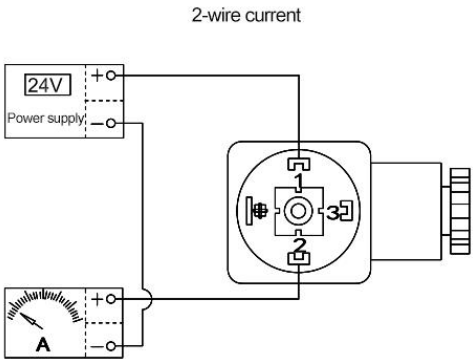
Principle

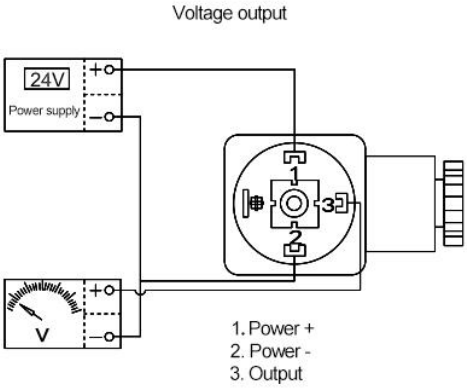
Pressure Transmitter are devices that convert the mechanical force of applied pressure into electrical energy. This electrical energy becomes a signal output that is linear and proportional to the applied pressure. And a transmitter sends signals in milliamps (mA). At present, various types of pressure 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.

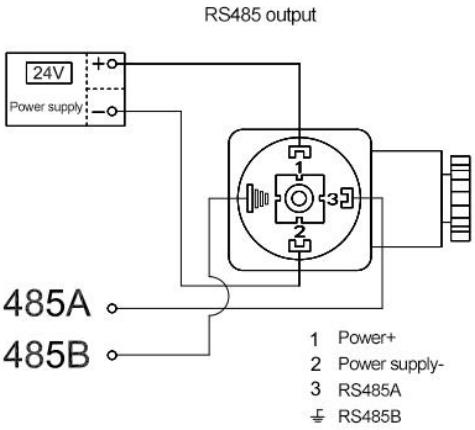
Parameters	
Output and power supply	(4~20)mA output (10~32)V (0~10)V output (12~32)V (0~5)V,(1~5)V,RS485 output (8~32)V (4~20)mA output with LCD 4-digit display meter (17~32)V RS485 output with 8-segment digital tube 4-digit display meter (5~28)V
Accuracy	0.2%F.S, 0.25%F.S, 0.5%F.S(Optional)
Measuring 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: ≤(U-10V)/0.02A, U is the power supply voltage 4~20mA output with display: ≤(U-14V)/0.02A, U is the power supply voltage V output: ≥5kΩ

Wiring

Electrical connection diagram of Herssman structure



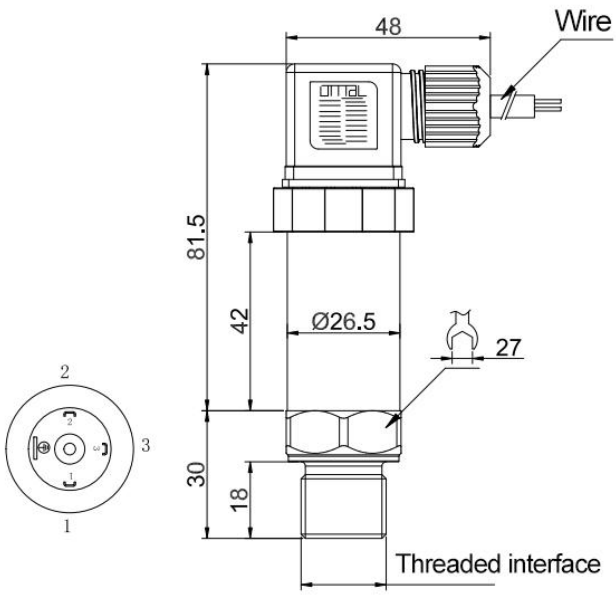




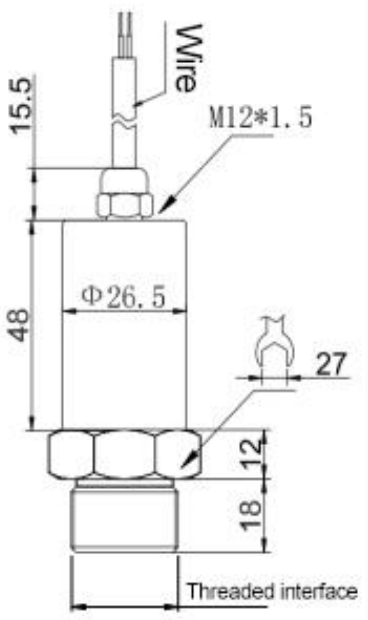
Direct lead structure electrical connection

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-

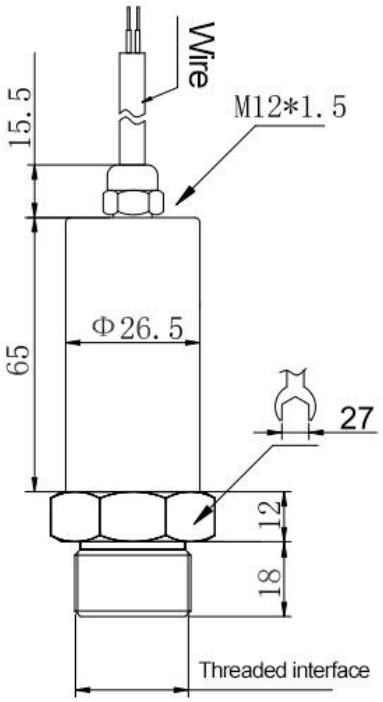
Dimensions



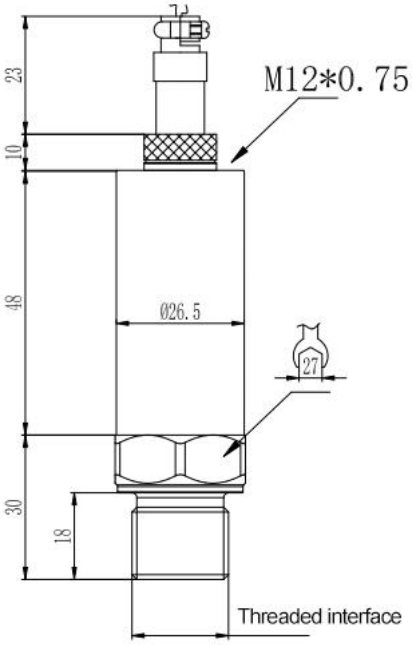
Herssman joint



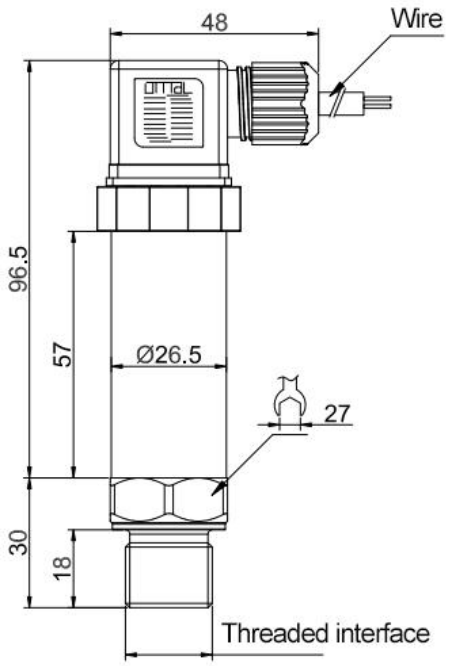
Direct lead



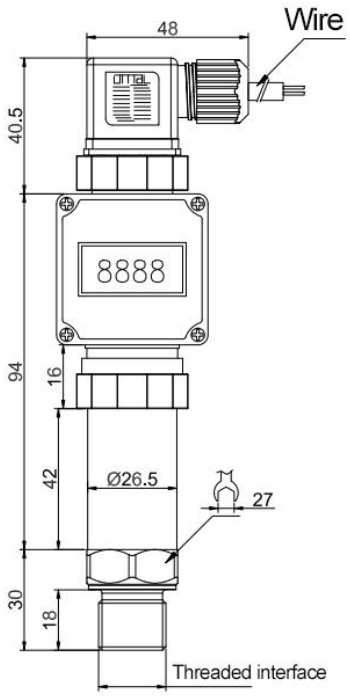
Direct lead with RS485 output



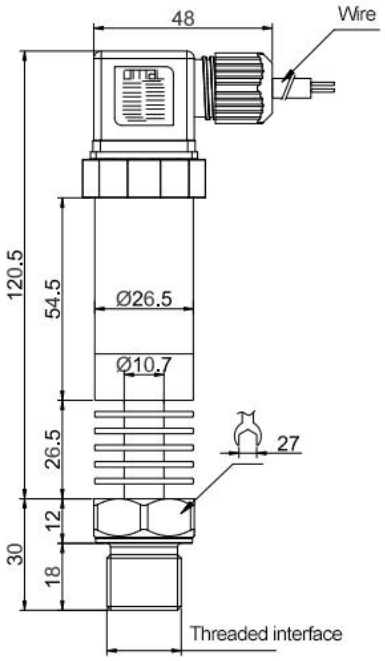
Aviation plug



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
				OZ3											0.5~2.5V output
Communication					D0										No
					D2										RS485
Installation						I1									M20*1.5
						I2									G1/4
						I3									G1/2
						I4									M14*1.5
						I5									NPT1/4
						I6									NPT1/2
						IZ									Others
Electrical Interface							EI1								Herssman joint
							EI2								Herssman direct lead
							EI3								Direct lead
							EI4								Round seat aviation plug
							EI5								Square seat aviation plug
Power supply								V1							24VDC
								V5							5VDC
Ingress Protection									DM1						316L stainless steel diaphragm

Seal ring material	GQ1				Nitrile rubber seal (20℃～100℃)
	GQ2				Fluorine rubber sealing ring (-20℃～200℃)
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