DATASHEET

Differential Pressure

Differential Pressure Transmitter For Air/Liquid in Standard Industry

Model PWP301

Applications

- HAVC systems
- Wind pipe pressure measurement
- Dust removal equipment
- Purification plant
- Leak detection device
- Wind machine
- Blow down expander

Differential Pressure Transmitter PWP301

Features

- MEMS micro-pressure sensor chip
- Advanced circuit linearity
- Digital temperature compensation
- Compact and easy to install
- Protection class IP66
- Anti-surge, reverse polarity protection

Description

PWP301 differential pressure transmitter is designed for monitoring differential pressure in industrial field like electrical power, dust removal, leakage detection, textile and environmental protection, etc.

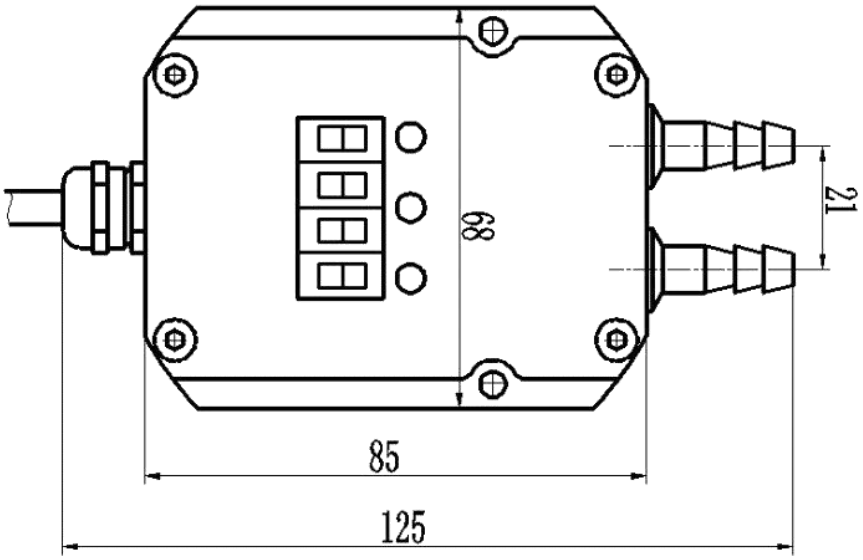
The micro-differential pressure transmitter uses silicon MEMS micro-pressure chip. After temperature compensation, linear compensation, signal amplification, V/I conversion, anti-surge, reverse polarity protection and other transmission circuit signal processing, it outputs industry standard signal for example 4-20mA. It features full digital calibration, no moving potentiometer, improved temperature drift performance and stability. This series of product chips adopts two isolation protection methods.

Transmitters with a range <5kPa are mainly used for differential pressure measurement of non-corrosive airs; Transmitters with a range ≥ 5kPa are suitable for measuring non-corrosive medias compatible with stainless steel and sealing ring materials.

Specifications

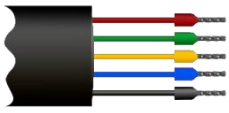
Model	PWP301		
Pressure Type	Differential pressure		
Pressure Range	0Pa~±100Pa …100kPa		
Safe Overload	≤200%FS		
Electrical Connection	Directly outlet cable		
IP Rating	IP66		
Indicator	4-bits LCD display		
Accuracy	±1.0%FS		
Signal Output & Power Supply	4-20mA(2 wires) 12-30VDC --- I²C 3.3 or 5VDC	0-5V(3 wires) 8-24VDC --- RS485 Modbus 5-30VDC	0-10V(3 wires) 12-30VDC
Response Time	≤3ms (10%~90%)		
Medium Compatible	<5kPa, non-corrosive airs ≥5kPa, liquids compatible with SS316L and silicone		
Load Resistance(2 wires)	R≤(U-10)/0.02-RD (U: Power supply, RD: Internal resistance in the cable)		
Total current consumption	Current signal(2wires): Max about 23mA Voltage signal(3wires): <5mA I²C(4wires): <1.3mA (Available to customize low consumption <5 μA) RS485(4wires): <5mA (Available to customize low consumption <1.1mA)		
Accuracy&Performance	0.25% Accuracy Class	0.5% Accuracy Class	1.0% Accuracy Class
Non-linear (%FS)	≤0.2	≤0.4	≤0.8
Hysteresis (%FS)	≤0.05	≤0.1	≤0.2
Repeatability (%FS)	≤0.05	≤0.1	≤0.2
Long-term Stability (%FS/year)	≤0.2	≤0.5	≤1.0
Zero Temp Drift (%FS/℃)	≤0.03	≤0.05	≤0.08
Effect of Static Pressure	≤0.05 (%FS/100kPa)		
Compensation Temp.	0℃~+50℃		
Working Temp.	-40℃~+85℃		
Storage Temp.	-40℃~+85℃		
Vibration Environment	10g (@10Hz~2000Hz)		
Impact Resistance	100g/11ms		
Service Life	>10 million load cycles (within measurement range)		
Max Static Pressure	≤100kPa		
EMC Standard	EN IEC 61326-1:2021; EN IEC 61326-2:2021		

Dimensions and Drawings



*Unit is mm. This is typical structure, customization of other structures is available.

Electrical Connection

Directly outlet cable					
	Wire Color	Current(2wires)	Voltage(3wires)	IIC(4wires)	RS485(4wires)
	Red	Vcc	Vcc	Vcc	Vcc
	Green	Iout	GND	GND	GND
	Yellow	/	Vout	SCL	RS485A
	Blue	/	/	SDA	RS485B
	Black	PE	PE	PE	PE

How to Order

Example Part Number: 301C[10]KDT1S1C22A1000

Model No.	PWP301	301
Electronic Connection	C=Direct outlet cable	C
Pressure Range	0Pa~±100Pa …100kPa Directly write in []	[10]
Pressure Units	A=Pa K=kPa B=bar	K
Pressure Type	D=Differential	D
Signal Output	T1=4-20mA(2wires) T2=0-5V(3wires) T3=0-10V(3wires) T4=I^2C(4wires) T5=RS485(4 wires) T0=Customized	T1
Power Supply	S1=12~30VDC S2=3.3VDC S3=5V~30VDC S4=8V~24VDC S5=5VDC S0=Customized	S1
Pressure Connection	C22=Φ6 gas mouth C33=Φ8 gas mouth C0=Customized	C22
Accuracy	A1=1.0%F.S. A2=0.5%F.S. .	A1
Cable Length	000=Non-cable 001= 1m cable 002= 2m cable ...	000

*Means to order: Differential pressure transmitter PWP301, directly cable outlet, 0~10kPa, 4-20mA, 12-30VDC, Φ6 gas mouth, 1.0%FS accuracy, cable length is 0.

You may also Need

Reference Picture	Description	Product
	To connect with pressure transmitter and to have a site indicator of the measured value, have high&low value alarms, record and control.	Display/indicator/controller
	Cast aluminum material with IP67 protection level for submersible pressure transmitter. Moisture-proof sealing design, insulation protection against electric shock. To be placed in dry environment or in a cabinet.	Terminal box 0010

***Tell us medium / which application / measuring range / working temperature / signal output / what you wanna to realize, our sales engineer will recommend suitable model for you.*