Sensor Co.,LTD

PRODUCT OVERVIEW

PRESSURE MEASUREMENT

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Micro Differential Pressure Transmitter P825

PROFILE

P825 is a micro-differential pressure transmitter that adopts silicon MEMS micro-pressure chip. It uses temperature compensation and digital calibration, which improves the temperature drift performance and product stability. With adopting temperature compensation, linear compensation, signal amplification, V/I conversion and other signal processing, this transmitter can output industrial standard signals, such as 4mA~20mA, RS485 and so on. Meanwhile it owns the functions of reverse polarity protection and anti-surge. Its product reliability is increased.

DP825 can measure the pressure or differential pressure of various dry and non-corrosive gases.

Features

☆ Accuracy: 0.5%F.S
☆ Advanced digital temperature compensation
☆ Strong RFI & EMI resistance
☆ Durable, >10 million load cycles
☆ Wide working temperature scope
☆ Wide measuring range
☆ Explosion-proof performance
☆ High stability, low drift
☆ Linear compensation supported
☆ Broad Compensated Temperature Range

APPLICATION

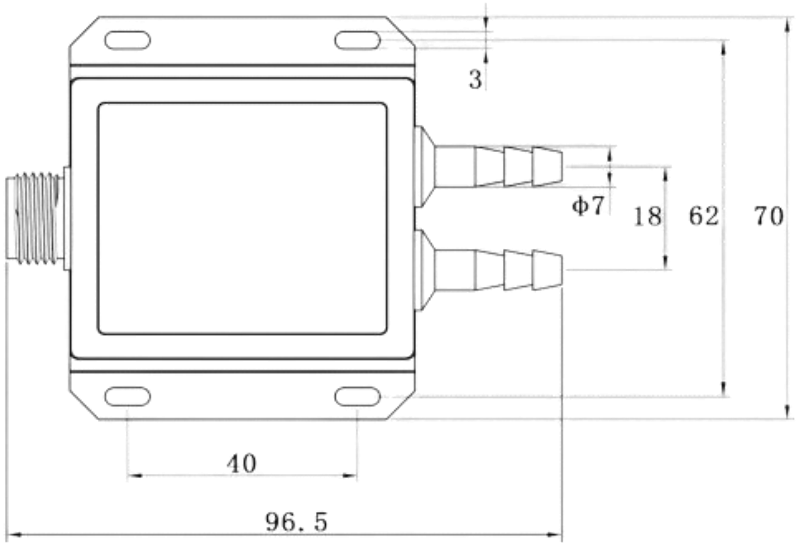
★ HVAC system
★Fan operation detection
★Medical
★Chemical industry
★Electricity
★Pure plant
★Building automation
★Wind pressure measurement
★Air purification equipment
★Pipeline velocity test

SPECIFICATIONS

Ambient Temperature: 25°C (unless specified)

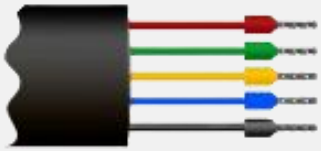
Parameter	P825			
Pressure type	Differential pressure, gauge pressure			
Measuring range	0Pa~±100Pa, 500Pa … 1000Pa; 0kPa~2kPa,10kPa … 100kPa			
Accuracy	±1.0%F.S; ±0.5%F.S			
Electrical wire	2 wire	3 wire	4 wire	4 wire
Signal output	4mA~20mA	0.5V~4.5Vdc	I^2C	RS485
Power supply	12V~30Vdc	5V~30Vdc	3.3V~5Vdc	5V~30Vdc
Total current consumption	23mA max	<5mA	<1.3mA	<5mA
Electrical connection	Direct cable outlet, IP66			
Medium Temp.	-40℃~85℃			
Ambient temp.	-40℃~85℃			
Storage Temp.	-40℃~85℃			
Temp. compensation	0℃~50℃			
Atmospheric pressure	86kPa~106kPa			
Insulate resistance	>100M Ω @100V			
Load resistance	R=(U-12)/0.02-RD , U means supply, RD means cable resistance.			
Medium compatible	Non-corrosive gases			
Load resistance (Ω)	Current (2-wire): R≤(U-10)/0.02-RD (U: supply voltage, RD: cable internal resistance)			
Overload	200% F.S			
Vibration environment	10g (@10Hz~2000Hz)			
Impact resistance	100g/11ms			
Max static pressure	≤200kPa (related to the actual range of the product)			
Nonlinear(%F.S)	≤0.4,≤0.8			
Hysteresis(%F.S)	≤0.1,≤0.2			
Repeatability(%F.S)	≤0.1,≤0.2			
Long-term stability(%F.S/year)	≤0.5,≤1.0			
Zero temperature drift (%F.S/℃)	≤0.05,≤0.08			
Sensitivity temp. drift(%F.S/℃)	≤0.05,≤0.08			
Static pressure effect(%F.S/100kPa)	≤0.05			

DIMENSION AND DRAWING



Unit: mm

Electrical Connections

Direct cable outlet					
Diagram	**Color**	**Current (2 wire)**	**Voltage (3 wire)**	**I²C (4 wire)**	**RS485 (4 wire)**
	**Red**	Vcc	Vcc	Vcc	Vcc
	Green	Iout	GND	GND	GND
	Yellow	/	Vout	SCL	RS485A
	Blue	/	/	SDA	RS485B
	Black	PE	PE	PE	PE

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