



PRODUCT OVERVIEW

PRESSURE MEASUREMENT

MAC Sensor Co.,LTD.
Changsha City,Hunan,China
<http://www.macsensor.com>

TEL: +86-731-89975636 / 89975645

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
- ☆ High stability, low drift
- ☆ Linear compensation supported
- ☆ Broad Compensated Temperature Range

APPLICATIONS

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

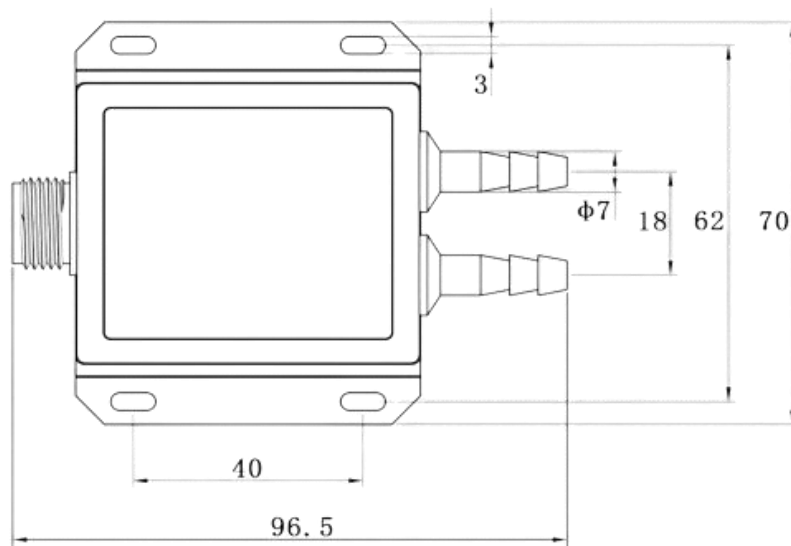
SPECIFICATIONS

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	4-20mA	0.5-4.5Vdc	I ² C	RS485
Power supply	12-30 V DC	5-30 V DC	3.3-5 V DC	5-30 V DC
Total current consumption	23mA max	<5mA	<1.3mA	<5mA
Electrical connection	Direct cable outlet, IP66			
Medium Temp.	-40°C to +85°C			
Ambient temp.	-40°C to +85°C			
Storage Temp.	-40°C to +85°C			
Temp. compensation	0°C to +50°C			
Atmospheric pressure	86kPa~106kPa			
Insulate resistance	>100M Ω @100V			
Load resistance	$R = (U - 12) / 0.02 - R_D$, U means supply, R_D means cable resistance.			
Medium compatible	Non-corrosive gases			
Load resistance (Ω)	Current (2-wire): $R \leq (U - 10) / 0.02 - R_D$ (U: supply voltage, R_D : 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/°C)	≤0.05, ≤0.08			
Sensitivity temp. drift(%F.S/°C)	≤0.05, ≤0.08			
Static pressure effect(%F.S/100kPa)	≤0.05			

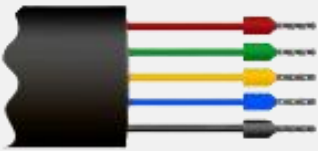
DIMENSION AND DRAWING

Unit: mm



ELECTRICAL CONNECTIONS

Direct cable outlet

Diagram	Color	Current (2 wire)	Voltage (3 wire)	I ² C (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

ORDER INFORMATION

P825	2	K	E5	S10	0	001
Pressure Range	2=2 ... 100=100					
Pressure Unit	B=bar	P=Psi	K=kPa	M=MPa		
Output	E5=4-20mA E11=RS485 MODBUS RTU	E8=0.5-4.5 V E13=I2C				
Power supply	S35=5-30V DC S46=3.3-5 V DC	S10=12-30 V DC X=By customized				
Accuracy	0=1%F.S (Typical)	1=0.5%F.S (Customized)				
Cable length	001=Cable 1m	... X=By customized				