

# MB350 Silicon on Sapphire Pressure Transmitter

## Features

- High temperature & high pressure resistance,high precision;
- No isolation diaphragm and oil-filled;
- Anti-electromagnetic & RF interference.

## Application

- Engineering machinery,Car
- Oil and Chemical industry
- Automatic checkout system
- Shipping,Railway transportation
- Wind power generation
- Supply heating,Medicine
- Hydraulic pressure,Air compressor and Pump



## Introduction

MB350 Silicon on Sapphire Pressure Transmitter brings state-of-the-art Silicon-on-Sapphire (SOS) sensor technology to the industrial arena. SOS construction uses very stable solid state silicon strain gages on a Sapphire carrier which is glass bonded to a titanium diaphragm. This combination provides a very durable transducer which has excellent stability over a wide temperature range. Additionally, the all titanium wetted parts provide maximum corrosion resistance to harsh industrial chemicals. Specially suited for various wide temperature range,high pressure,anti-impact,pressure measurement application occasions.

## Specification

Pressure Type	Gauge pressure, Absolute pressure, Sealed gauge								
Measuring Medium	Liquid ,gas,vapor ,which are compatible with SUS304								
Pressure range(MPa)	-0.1	1	1.6	6	10	20	40	60	or customized
Pressure range (bar)	-1	10	16	60	100	200	400	600	or customized
Pressure range (psi)	-14.5	300	700	900	2k	4k	8k	or customized	
Overload range	200%FS								
Bursting pressure	300%FS								
Power Supply	(9~36) VDC,			(9~36) VDC,			(9~36) VDC		
Output signal	(0~5)V,			(1~5)V,			(4~20)mA		
Transmitting	2-wires,			3-wires,			3-wires,		
Load	$\leq(U-15)/0.02\Omega$ ,			> 100k,			> 100k		
Vibration	10~500Hz 25g								
Shock resistance	50g 11ms								
Accuracy	$\pm 0.5\%FS$ (typ.) @25°C								



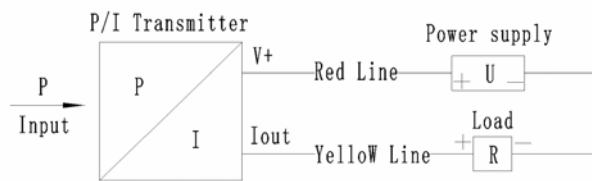
Zero temp.drift	$\pm 0.03\%FS/^\circ C$
FS temp.drift	$\pm 0.03\%FS/^\circ C$
Long-term stability	$\pm 0.2\%FS/Y$
Insulation resistance	250 M $\Omega$ /250V, 100M $\Omega$ /250V
Medium temp.	(-40~125) $^\circ C$
Ambient temp.	(-40~85) $^\circ C$
Storage temp.	(-40~125) $^\circ C$
Compensated temp.	(-10 ~ 80) $^\circ C$
Housing	SUS304
Diaphragm	SS316L
O-ring	Viton
Protection	IP67

### Electrical Connection

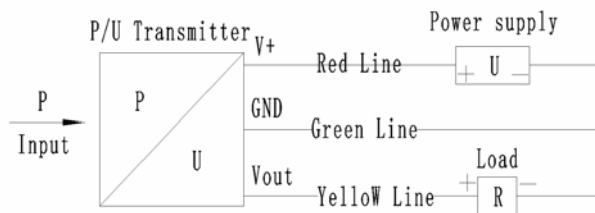
- Cable connection wiring

Color	2-wires	3-wires
Red	+V	+V
Yellow	0V/+OUT	GND
Green	Null	+OUT

- 2-wires, 4~20mA output

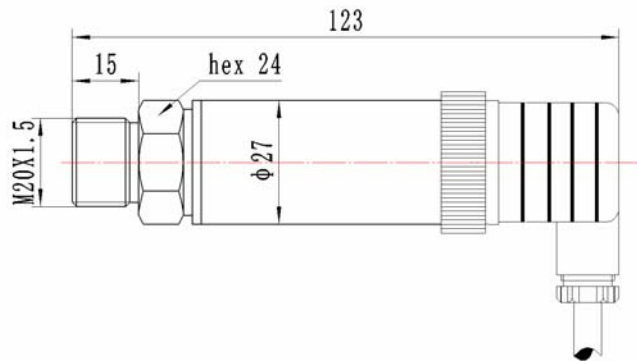


- 3-wires, 0~5V, 1~5V output



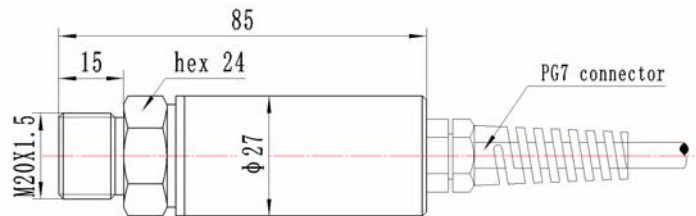
Outline Construction: (Unit :mm)

1.Hirschman



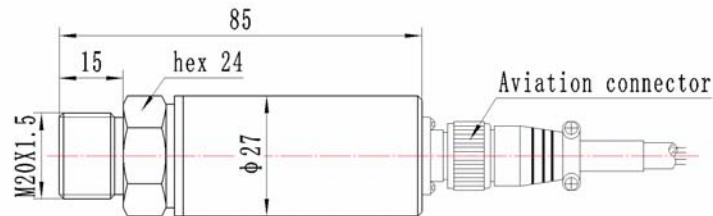
Widely used in air compressor ,Pump,medic etc.

2.PG7



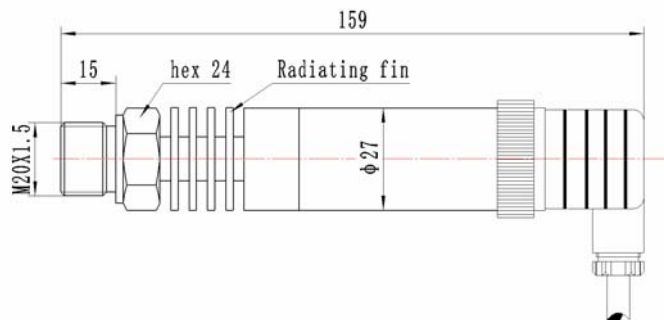
Waterproof ,IP65.Widely used in hydraulic, presswind ,power etc.

3. Aviation connector



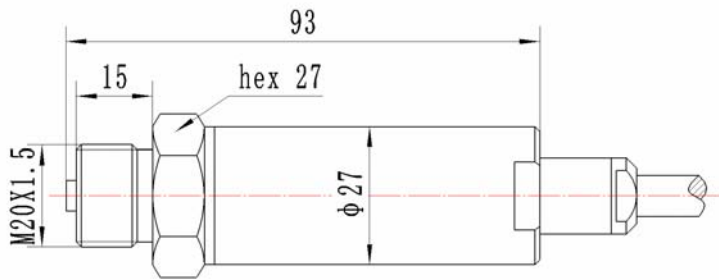
Widely used in aeronautical equipment,etc.

4.Cooling plate & Hirschman



Waterproof,IP68.Widely used in Shipping, Oil and Chemical industry.

## 5.Cable directly



## Order Guide

MB350	MB350 Silicon on Sapphire Pressure Transmitter				
	0~30MPa	Pressure range,Please write the range directly(Unit:Mpa,kpa,psi,bar etc.)			
		Code	Pressure reference		
		A	Absolute pressure		
		G	Gauge pressure		
		S	Sealed gauge pressure		
		Code	Excitation		
		V1	24V		
		V2	12V		
		V3	others (please specify)		
		Code	Output signal		
		S1	4~20mA		
		S2	1~5V		
		S3	others (please specify)		
		Code	Pressure connection		
		C1	M20×1.5 or G1/2		
		C2	G1/2		
		C3	others (please specify)		
		Code	Accuracy		
		A1	0.1%FS		
		A2	0.25%FS		
		A3	0.5%FS(typ.)		
		Code	Electrical connection		
		E1	Hirschman connection		
		E2	Cable directly		
		E3	Air plug connection others (please specify)		
		Code	Specific need		
		E	Intrinsically safe Exia II CT6		
		V	Anti-vibration		
		I	Anti-impact		



								C	Cable length
								O	Other requirements
MB350	0~30MPa	G	V1	S1	C1	A3	E1	E	

**Order Note**

1. The material of measuring medium should be compatible with the stainless steel.If it is corrosive,pls specify its material in detail.
2. Please note in the order if you need zero pressure as negative pressure.
3. Please note it in detail if your application environment is critical or the elements which may influence the pressure transmitter normal operation existed.
4. The structure and demension of the pressure transmitter can be used for most of the application occasions,if your application space is too small or having other requirements to the transmitters,please specify it in detail.
5. All specifications are subject to change.Contact Gaohua for specifications and engineering drawings that are critical to your application.Drawings contained in this document are for reference only.