GP-2580 Digital Pressure Sensor

Features

- ✓ Ranges: -100kPa···0 ~ 20kPa···60MPa
- ✓ 24-bit High precision analog to digital conversion
- ✓ Real-time compensation
- ✓ Isolated structure for multiple media
- ✓ I^2C Bus protocol

Introduction

The GP2580 is an oil-filled MEMS pressure sensor featuring metal diaphragm isolation. Its integrated temperature sensor provides real-time compensation for temperature drift and sensitivity errors in the pressure signal. A digital ASIC calibrates linearity errors, outputting pressure and temperature data via the I²C interface protocol. This product features a compact design, straightforward installation, and accurate, reliable pressure measurement. Its digital communication capability facilitates the easy integration of various pressure measurement modules.

Parameters

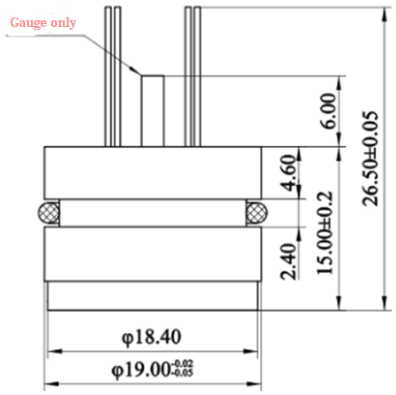
Items	Parameters
Range	-100kPa···0 ~ 20kPa···60MPa
Overload	x 1.5 FS
Accuracy	±0.1%FS BFSL @25℃
TEB	±1.0%FS （Includes calibration error and temperature drift effects）
Power Supply	1.8V ~ 3.6V DC
Output	15%~85%（I^2C Bus protocol）
Working Current	≤0.3mA， Standby current is about 0.1μA
Operation Temperature	-10℃ ~ 80℃
Storage Temperature	-40℃ ~ 125℃
Long-term stability	±0.2% FS/year

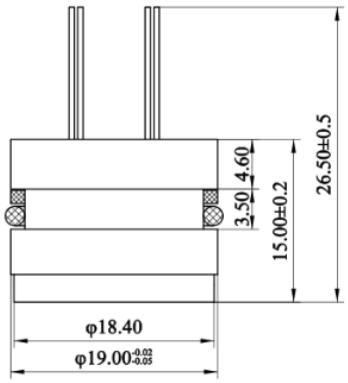
Output conversion

Percentage output （%）	Digital quantity (decimal)	Digital quantity (hexadecimal)
0	0	0x000000
10	1677722	0x19999A
15	2516582	0x266666
85	14260633	0xD99999
90	15099494	0xE66666
100	16777215	0xFFFFFF

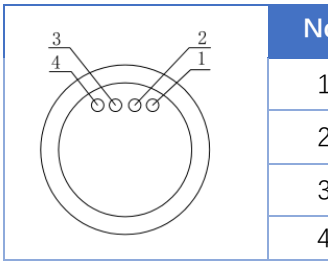
Dimensions (mm)

Range<20MPa	Range≥20MPa





Electrical connection



No.	Wire Color	Definition
1	Red	V+
2	Black	V-
3	Yellow	SDA
4	Blue	SCL

Order Guide

GP-2580	Digital Pressure Sensor					
	Code1	Pressure Range				
	0B	0~20kPa	G	12	0~2MPa	G/A
	0A	0~35kPa	G	13	0~3.5MPa	G/A
	02	0~70kPa	G	14	0~7MPa	A/S
	03	0~100kPa	G/A	15	0~10MPa	A/S
	07	0~200kPa	G/A	17	0~20MPa	A/S
	08	0~350kPa	G/A	18	0~35MPa	A/S
	09	0~700kPa	G/A	19	0~60MPa	A/S
	10	0~1MPa	G/A			
		Code2	Type			
		G	Gauge			
		A	Absolut e			
		S	Sealed Gauge			
			Code3	Electrical Connector		
			1	100mm Silicon rubber Wires with 4pin connector		
			2	others		
GP-2580	10	G	1			

Completed Sample: ***GP-2580-10-G-1***

Tips:

1: The sensor diaphragm is extremely fragile. Any direct contact with hard objects may cause diaphragm deformation and damage to the sensor.

2: When soldering on the gold-plated Kovar leads, please use a soldering iron of 25W or less, solder at low temperature, and complete the soldering within 3 seconds to avoid heat transfer to the sensor.