GP-1100 Atmosphere Pressure Sensor

Features

- ✓ MEMS silicon resonant sensor
- ✓ Comprehensive accuracy up to ±0.01% F.S.
- ✓ Frequency signal output
- ✓ Widest temperature range: -40°C to 80°C
- ✓ Flexible electrical and pressure interface configurations

Introduction

GP-1100 Meteorological Pressure Sensor, specifically designed for atmospheric data measurement in meteorology, features a proprietary silicon resonant pressure core at its heart. It offers high precision, excellent stability, and quasi-digital output. The sensor's pressure chip employs a tuning fork beam design for its resonant structure, operating via in-plane vibration. Resonant frequency is captured through electrostatic excitation and capacitance detection, then converted into a frequency signal output via a closed-loop control circuit.

Specification

Items	Parameters
Pressure Range	40kPa ~ 140kPa
Max Over Pressure	1.5×FS
Max Burst Pressure	2×FS
Temperature Compensation	-40°C ~ 80°C
Accuracy*	±0.01%FS
Resolution	0.1Hz
Long Term Stability	±0.01%FS/year
Acceleration Impact	＜5Pa/g
Response Time	＜25ms, From 10% to 90%FS
Initial Time	250ms reach accuracy
Measure Medium	Dry air no corrosivity
Pressure Port	Φ2mm×7mm
Size	45mm×28mm×16mm
Weight	14g
* Including Nl, Rp, Hy and Temperature	

Power & Output

Current	Output	Frequency Range	Waveform
15 ~ 35mA	Pressure Frequency	30kHz ~ 50kHz	Square wave, 5V TTL
	Temperature Frequency	2kHz ~ 16kHz	

Connection

Items	Definition
+15 (V)	+15V Power Supple
GND	GND
TEMP (TF)	Temperature frequency
FREQUENCY (F)	Pressure frequency
SCL	Contral wire
SDA	Data wire

Dimensions (mm)
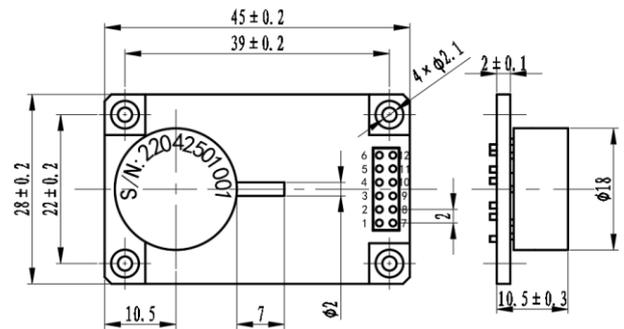
Order Guide

GP-1100	Atmosphere Pressure Sensor			
	Code1	Pressure Range		
	RA1	0~140kPa		
	RA2	0~280kPa		
	RA3	0~350kPa		
	RA4	40~140kPa		
		Code2	Pressure Type	
		A	Absolute	
		D	Differential	
			Code3	Compensation Temperature
			T1	-10℃ ~ 50℃
			T2	-20℃ ~ 70℃
			T3	-40℃ ~ 80℃
			T4	-40℃ ~ 125℃
GP-1100	RA4	A	T3	

Completed Sample: **GP-1100-RA4-A-T3**