ICS-NH

INDUSTRIAL CONSULTING & SALES

DPH 100 Series

SOI based wide temperature differential pressure sensor

Features:

- Pressure range 0∼400kPa differential
- Operating temperature range -65 … +170°C
- Constant voltage power supply
- Isolated construction
- 316L stainless steel in media contact
- High static pressure 300bar (4350psi)
- Vibration tested according DO160 cat. H and R

Typical Applications:

·Wet wet differential pressure measurement for gas, liquid, fuel, oil, …
·Filter monitoring, volume measurement, flow measurement

Introduction:

The DPH100 series SOI differential pressure sensor is designed for an extreme wide operating temperature range. Due to the implementation of our SPS Series SOI MEMS the sensor has excellent technical data in a standard housing. The mechanical construction is made in 316L material for use in most media. The standard O-Ring seal can be replaced to required materials.

Electric Performance:

Power supply:	3 … 20 VDC
Electric connection:	50 mm flexible wires (silicone, PTFE, …)
Common mode voltage input:	50% of input (typ.)
Input impedance:	8kΩ∼11kΩ
Output impedance:	8kΩ∼11kΩ
Response (10%∼90%):	<1ms
Insulation resistance:	tbd
Max. static pressure:	30MPa
Zero drift/static pressure:	≤0.5mV/MPa

Mechanical Specification:

Diaphragm material:	stainless steel 316L
Housing:	stainless steel 316L
Wiring out:	PTFE or silicon rubber flexible wire
O-ring:	FVMQ
Net weight:	~36g

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Environment Data:

Position effect:	deviate 90° from any orientation, zero change ≤0.2%FS
Vibration:	no change, test method DO160 cat. H and cat. R
Impact:	100g, 11ms
Media compatibility:	gas or liquid which is compatible with stainless steel and FVMQ

Basic Conditions:

Media temperature:	(25±1) °C
Environment temperature:	(25±1) °C
Shock:	0.1g (1m/s/s) Max.
Humidity:	(50%±10%) RH
Local air pressure:	(86～106) kPa
Power supply:	5VDCV

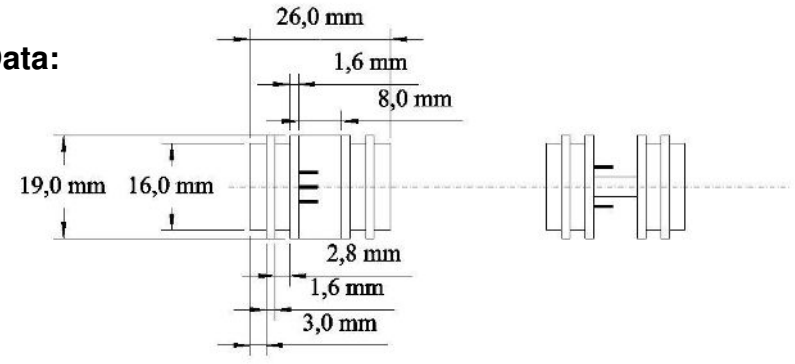
Specifications:

Specification*	Min.	Typ.	Max.	Units
Linearity		±0.1	±0.35	% FS,BFSL
Repeatability		±0.025		%FS
Hysteresis		±0.05		%FS
Zero output			±3	mVDC
FS output		75		mVDC
Zero thermal error		±0.15	±0.25	%FS, reference 25°C
Span thermal error		±0.085		%FS/K, reference 25°C
Operating temp. range		-65…170 (-85 … 338)		°C (°F)
Storage temp. range		-68…180 (-90 … 356)		°C (°F)
Long-term stability		±0.3	±0.5	%FS/year
Over pressure High over Low			10*FS	
*Over Pressure Low over High			5*FS	
*tested at basic conditions				

Other data on request

*: Over pressure low over high is a non-conformal operating condition. Continuous operation in that direction can cause damages

Mechanical Data:



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