

# ICS-NH

INDUSTRIAL CONSULTING & SALES

## DPHP 100 Series

Preliminary Data sheet

### SOI based wide temperature differential pressure sensor system

#### Features:

- Pressure range 0~4bar differential
- Fully passive compensated
- 100mV FS output @ 10V Supply
- **Operating temperature range -65 ... +170°C**
- Constant voltage power supply
- 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 DPHP100 series SOI differential pressure sensor system is designed for an extreme wide operating temperature range including a full passive compensation of all TC errors. The System includes the standard DPH100 DP sensor and a specific passive compensation circuit directly attached to the housing for excellent thermal contact. The mechanical construction is made in 316L material for use in most media. The standard O-Ring seal material is FVMQ.

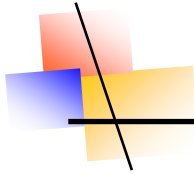
#### Electric Performance:

Power supply:	10 VDC regulated
Electric connection:	50 mm flexible wires (silicone, PTFE, ...)
Common mode voltage input:	(3,5 ±1) VDC
Input impedance:	(1,5 ±0.5) KΩ
Output impedance:	(8~11) KΩ
Response (10%~90%):	<1ms
Insulation resistance:	tbd
Max. static pressure:	300 bar (4350psi)
Zero drift/static pressure:	≤0.03mV/bar

#### 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: 10VDCV

### Specifications:

Specification*	Min.	Typ.	Max.	Units
Nonlinearity		±0.1	±0.35	% FS,BFSL
Repeatability		±0.025		%FS
Hysteresis		±0.05		%FS
Zero output			±1	mVDC
FS output		100		mVDC
Thermal error TC zero and TC span		±0.5	±1	%FS, 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:

