

Model NPS13

Piezoresistive OEM pressure sensor
Small size

VOLLTEL
Sensing and Internet of Things

Features

- ❑ Piezoresistive pressure chip encapsulated in an oil-filled metal housing
- ❑ Measuring ranges from 2bar to 1000bar
- ❑ Gauge pressure, absolute pressure
- ❑ Accuracy: $\pm 0.25\% \text{FSO(Typ.)}$
- ❑ $\varnothing 12.6\text{mm} \times 10.5\text{mm}$

Application

- ❑ Hydraulic and pneumatic
- ❑ OEM
- ❑ Water treatment
- ❑ IoT pressure measurement



Technical data

Performance		
Accuracy*	$\pm 0.25\% \text{FS(typ.)}$, $\pm 0.5\% \text{FS(max.)}$	*Linearity (best straight line) + Hysteresis + Repeatability
Linearity	$\pm 0.2\% \text{FS(typ.)}$, $\pm 0.3\% \text{FS(max.)}$	
Hysteresis	$\pm 0.05\% \text{FS(typ.)}$, $\pm 0.075\% \text{FS(max.)}$	
Repeatability	$\pm 0.05\% \text{FS(typ.)}$, $\pm 0.075\% \text{FS(max.)}$	
Operating temperature	-40 to 120 °C	
Compensated temperature range	-10 to 70 °C	
Temperature coefficient zero	$\pm 0.75\% \text{FS(typ.)}$, $\pm 1.5\% \text{FS(max.)}$	
Temperature coefficient sensitivity	$\pm 0.75\% \text{FS(typ.)}$, $\pm 1.5\% \text{FS(max.)}$	
Vibration	10 g RMS(20 to 2000Hz)	
Shock	100 g(10ms)	
Cycles	10×10^6	
Overpressure	150 %FS or 1100bar (min. value is valid)	
Long term stability	$\pm 0.2\% \text{FS(typ.)}$	

Electrical @25°C	
Zero output	$\pm 2 \text{ mV} / V_s = 1.5 \text{ mA}$
Full scale output	$80 \text{ mV(typ.)} / V_s = 1.5 \text{ mA}$
Excitation	1 mA~2 mA
Bridge resistance	2~8 k Ω
Insulation resistance	100 M Ω @100VDC

Physical Specifications	
Housing	316L stainless steel
Diaphragm	316L stainless steel
Oil Filling	Silicone oil
Weight	~13g

The listed specifications and dimensions are subject to change without prior notice

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Standard pressure range

Code	Nominal pressure [bar]	Gauge	Sealed gauge	Absolute
01	0...2	✓		✓
02	0...3.5	✓		✓
03	0...7	✓		✓
04	0...10	✓		✓
05	0...20	✓		✓
06	0...35	✓	✓	✓
07	0...70		✓	✓
08	0...100		✓	✓
09	0...200		✓	✓
10	0...350		✓	✓
11	0...700		✓	✓
12	0...1000		✓	✓

Dimensions (All dimensions in mm)

NPS13-H	NPS13-L

Ordering code

Model	Range	Type	Output / Excitation	Electrical Connection	Compensation
NPS13-H	code	G gauge	A mV / 1.5 mA	F silicon rubber wires(L=100mm)	T with temperature compensated
NPS13-L		S sealed gauge		P pins	NA without temperature compensated
		A absolute			