HP31X Series Ceramic Piezoresistive Sensor

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Overview

The HP31x series temperature compensation concave film ceramic piezoresistive pressure sensor is an ideal pressure sensor.It can be integrated directly with the control circuit of the device after packaging the shell.

Feature

·Available for mass production, high performance,low cost O.E.M. applications

·Complete internal protection against humidity and condensation effects

· Excellent corrosion resistance, can be in direct contact with corrosive gas and liquid

·Compact size, easy to package

Specifications

Model No. HP318 (φ18mm)	Pressure Range Bar	Burst Pressure Bar	Model No. HP314 (φ13.5mm)	Pressure Range Bar	Burst Pressure Bar
HP318-2	0...2	6	N/A		
HP318-5	0...5	15			
HP318- 10	0...10	30	HP314- 10	0...10	30
HP318-20	0...20	60	HP314-20	0...20	60
HP318-30	0...30	90	HP314-30	0...30	90
HP318-40	0...40	100	HP314-40	0...40	110
HP318-50	0...50	125	HP314-50	0...50	125
HP318- 100	0...100	250	HP314- 100	0...100	250
HP318-200	0...200	350	HP314-200	0...200	350
HP318-300	0...300	450	HP314-300	0...300	450
HP318-400	0...400	550	HP314-400	0...400	550
HP318-500	0...500	650	N/A		
HP318-600	0...600	750	N/A		

Technical Parameters

Electrical specification:

Max Excitation Voltage 30 Vdc

Input & Output Impedance 10KΩ±30%

Full scale output ≥ 2 mV/V

Zero point Long Term Drift 1 year @ 25°C< 0.2% FSO

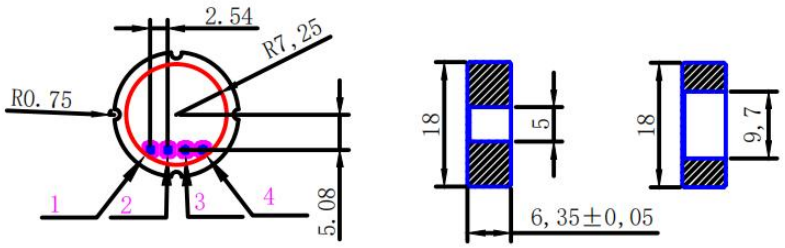
Zero point High Temp Drift 1000 hrs @ 150°C< 1% FSO

Material in contact with fluid Alumina Al2 O3 – 96%

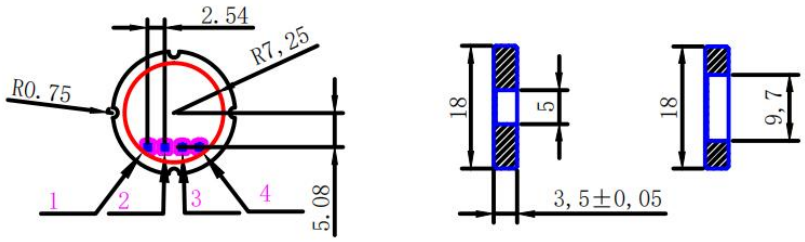
Measured range	2-600bar
Dimension(diameter x thickness)	φ18×3.5、φ18×6.35、φ13.5×3.5、φ13.5×6.35
Maximum excitation voltage	30 Vdc
Bridge resistance	10KΩ±30%
Zero offset	≤± 0.2mv /V
Insulation resistance	>2KV
Comprehensive accuracy (Linearity, hysteresis)	< 0.3% FS all range except 2bar < 0.5% FS 2bar
Repeatability	< 0.2% FS
Zero-point long-term stability	±0.25% FSO, typ. (no time accumulation) reference: 20ºC
Direct contact with liquid materials	96% aluminum oxide (AL3O2)
Operating temperature	-40 up to + 135ºC
Storage temperature	-50 up to + 150ºC
Temperature drift (zero & sensitivity)	Range 2bar ~ 50 bar:≤±0.03% FS/ºC (0ºC-85ºC) Range >50 bar:≤±0.04% FS/ºC (0ºC-85ºC)
Relative humidity	0- 99%
Sensor weight	< 7g

Dimension

Model: HP318



Model: HP318X

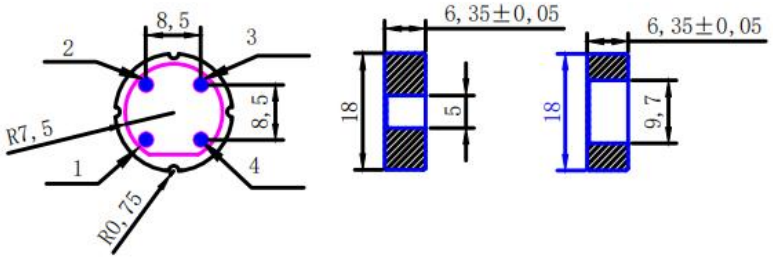


1: Excitation Voltage - 2 : Output +

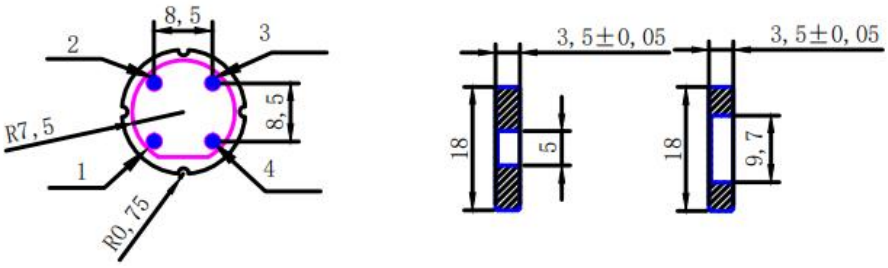
3: Excitation Voltage + 4 : Output-

Dimension (mm) : Height = 6.35±0.05/ 3.5±0.05

Model: HP318-A



Model: HP318X-A

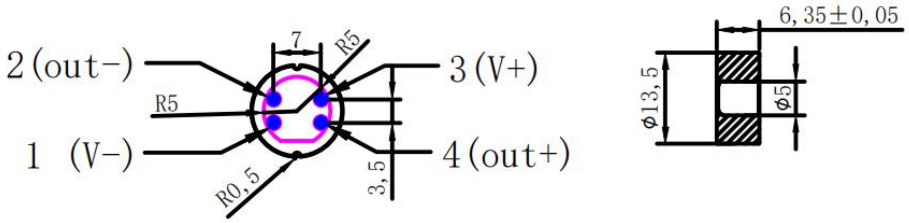


1: Excitation Voltage - 2 : Output -

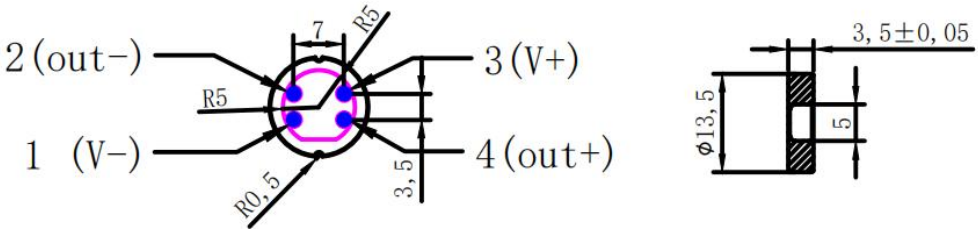
3: Excitation Voltage + 4 : Output+

Dimension (mm) : Height = 6.35±0.05/ 3.5±0.05

Model: HP314



Model: HP314X



1: Excitation Voltage - 2 : Output -

3: Excitation Voltage + 4 : Output+

Dimension (mm) : Height = 6.35±0.05/ 3.5±0.05

Ordering Guide:

Item NO.	Type					
HP31X	Ceramic Piezo Sensor					
	Code	Diameter				
	X=8	18mm				
	X=4	13.5mm				
		Code	Thickness	Thickness 6.35mm 3.5mm		
		N/A	6.35mm			
		X	3.5mm			
			Code	Pad place		
			N/A	In line pad		
			A	Four corner pad		
				Pressure Range	Measuring Range	
				X bar	Fill out X directly	
					Code	Additional Functions
					N/A	Default
					1	contact pin
					2	Wires outlet
					Other requirement	
HP31	8			2	N/A	