FEATURES

- **1 to 100 psi absolute or gage**
- **Wide operating temperature range from -40 ... 85 °C**
- **Miniature SMT housings**
- **Low cost**
- **Quality Management System according to ISO 13485:2003 and ISO 9001:2008**

MEDIA COMPATIBILITY

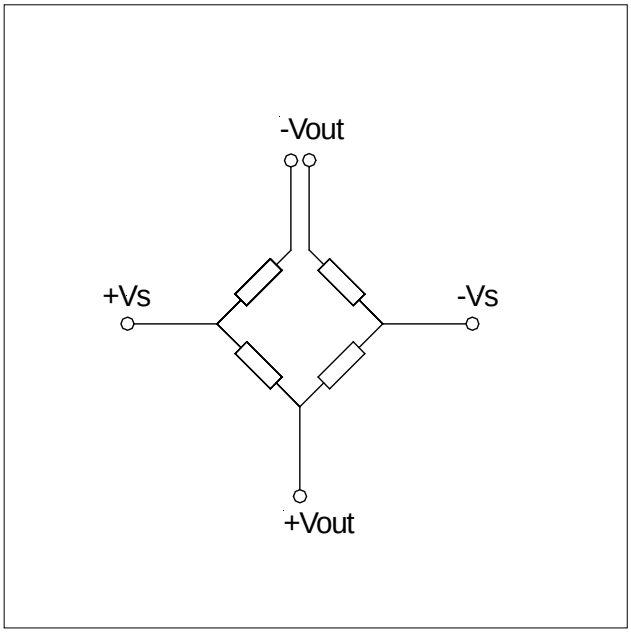
To be used with non-corrosive, non-ionic working fluids such as clean dry air, dry gases and the like.

SPECIFICATIONS

Maximum ratings

Supply voltage, V_S	15 V_{DC}
Supply current, I_S	3 mA
Temperature ranges	
Operating	-40 ... +85°C
Storage	-40 ... +125°C
Humidity limits (non-condensing)	15 ... 85 %RH
Overpressure[1]	2 x rated pressure

EQUIVALENT CIRCUIT



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PRESSURE SENSOR CHARACTERISTICS

(V_S = 5 V or I_S = 1 mA, T_A = 25 ±3 °C, pressure applied to high pressure port)

Part number	Operating pressure	Full-scale span[2]		
		Min.	Typ.	Max.
XSUP001...	0...1 psi	18 mV	30 mV	42 mV
XSUP006...	0...5.8 psi	45 mV	75 mV	105 mV
XSUP015...	0...15 psi	64 mV	100 mV	136 mV
XSUP030...	0...30 psi	74 mV	110 mV	146 mV
XSUP100...	0...100 psi	60 mV	120 mV	180 mV

PERFORMANCE CHARACTERISTICS[5]

(V_S = 5 V or I_S = 1 mA, T_A = 25 ±3 °C, pressure applied to high pressure port)

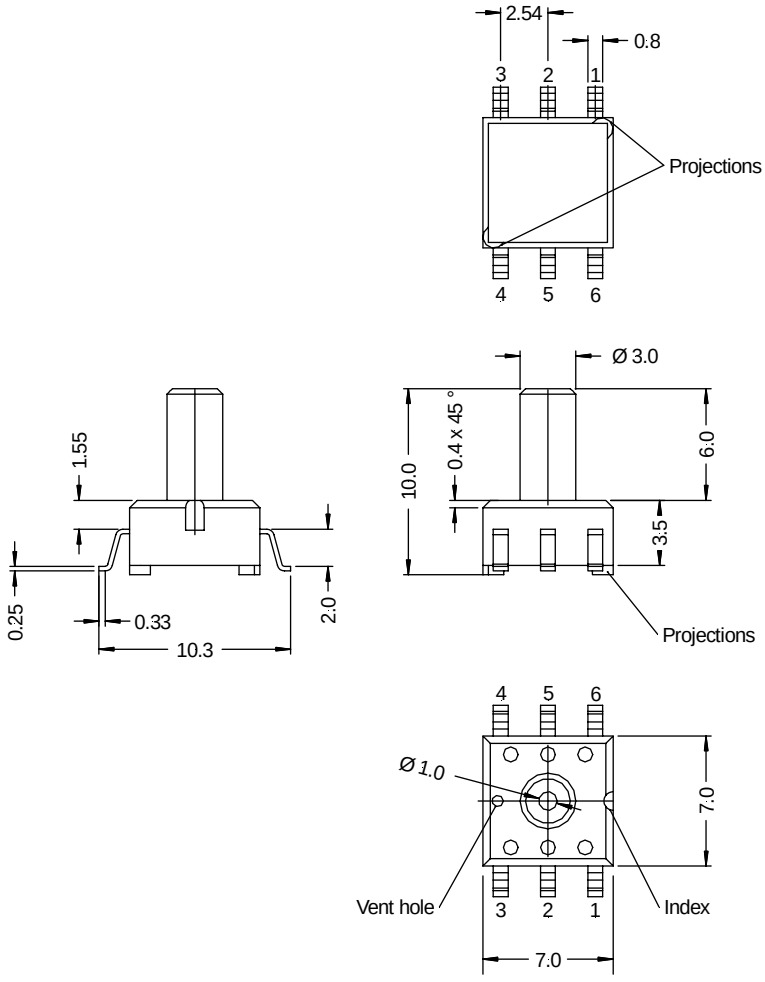
Characteristics			Min.	Typ.	Max.	Unit
Zero pressure offset			-30		+30	mV
Temperature effects (0...50 °C)	Offset	1 psi devices		±0.22		%FSS/ °C
		all others		±0.08		
	Span[3]	for V_S = 5 V		-0.16 ... -0.26		
		for I_S = 1 mA		±0.05		
	Bridge impedance			0.2		%/ °C
Non-linearity[4]		1 psi devices		±0.7		%FSS
		all others		±0.3		
Bridge resistance			3.8	5	6.2	kΩ

Specification notes:

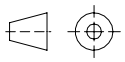
1. If the overpressure is exceeded, even momentarily, the package may leak or burst, or the pressure sensing die may fracture.
2. Span is the algebraic difference between the output voltage at full-scale pressure and the output at zero pressure.
3. For constant current excitation at 1 mA the temperature coefficient of span is typ. ±0.05 %FSS/°C
4. Non-linearity is the maximum deviation of measure output at constant temperature (25°C) from "Best Straight Line" determined by three points, offset, full scale pressure and half full scale pressure.
5. These values are only tested on a sample basis, therefore only typ. values can be given by First Sensor.

PHYSICAL DIMENSIONS AND ELECTRICAL CONNECTIONS

XSU...GY



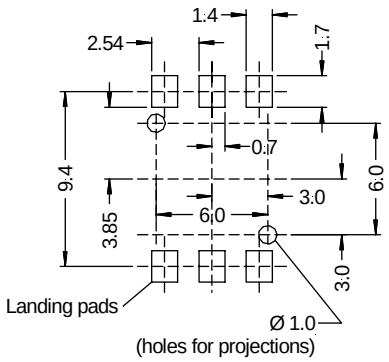
Pin	Connection
1	-Vout
2	+Vs
3	+Vout
4	N/C
5	-Vs
6	-Vout



first angle projection

dimensions in mm

Pad layout



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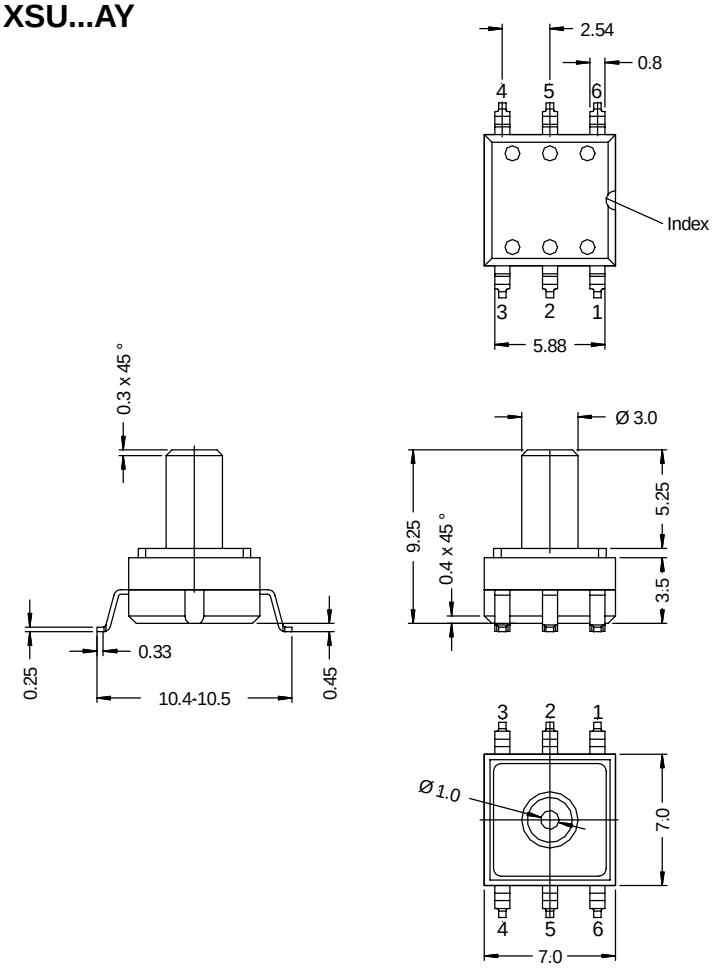
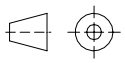
PHYSICAL DIMENSIONS AND ELECTRICAL CONNECTIONS (cont.)

XSU...AY



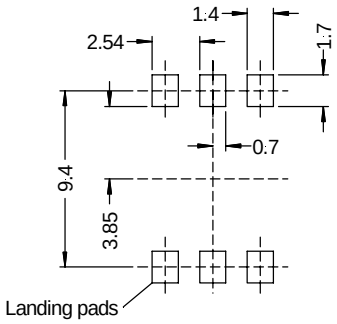
Pin	Connection
1	-Vout
2	-Vs
3	+Vout
4	N/C
5	+Vs
6	-Vout



first angle projection

dimensions in mm

Pad layout



ORDERING INFORMATION

Pressure range	Absolute	Gage
0...1 psi	-	XSUP001GY
0...5.8 psi	-	XSUP006GY
0...15 psi	XSUP015AY	XSUP015GY
0...30 psi	XSUP030AY	XSUP030GY
0...100 psi	XSUP100AY	XSUP100GY

Note: Other options are available on request. Please contact First Sensor.

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LGA InterCert
Certified Quality System
EN ISO 13485:2003+AC:2009
DIN EN ISO 9001:2008