

# MSP1030A Piezoresistive Pressure Transducer

## Characteristics

- 100, 350KPa Ranges
- Leadless Package
- Self-contained Hybrid Temperature Compensation
- 500mV Full Scale
- Absolute Reference
- High Frequency Response



Parameter	Unit	MSP1030A-100	MSP1030A-350
Range	KPa	0 ~ 100	0 ~ 350
Sensitivity	mV/KPa(Typ)	5	1.43
Combined non-linearity, non repeatability, pressure hysteresis	%FSO RSS max	0.4	0.4
Non-linearity	%FSO typ	0.15	0.1
Pressure hysteresis	%FSO typ	0.1	0.1
Non-repeatability	%FSO typ	0.1	0.1
Zero measurand output	mV	±20	±20
Zero shift after 3X range	±% 3XFSO max	0.2	0.2
Thermal zero shift (-20°C ~ 85°C )	%FSO max	±2	±2
Thermal sensitivity shift (-20°C ~ 85°C )	%FSO max	±2	±2
Resonance frequency	KHz	180	320
Non-linearity at 3X range	%3XFSO	1.0	1.0
Warm-up time	ms	1	1
Acceleration sensitivity	KPa/g	0.001	0.001
Burst pressure (diaphragm)	KPa min	500	1750
Bridge Resistance	Ω	2500±200	2500±200
Supply voltage	Vdc	10/5	10/5
Temperature	°C	-55 ~ +120	-55 ~ +120

## Typical Applications

- Wind tunnel tests
- High-speed railways

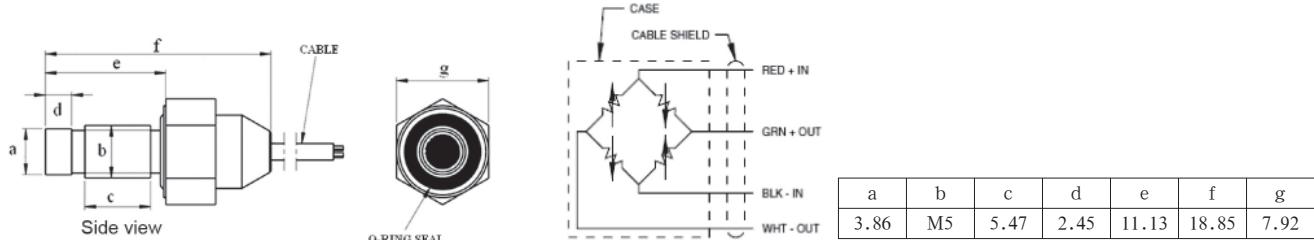
Aerodynamic pressure measurements during flight tests  
 Aerospace, automotive, marine and industrial process

Engine control systems

## Remark

1. All values are typical at +25°C, 100Hz and +10Vdc excitation unless otherwise statement.
2. FSO(Full Scale Output) is defined as transducer output change from 0 kPa to +full scale pressure.
3. Warm-up time is defined as elapsed time from excitation voltage "turn on" until the transducer output is within  $1 \pm \%$  of reading accuracy.

## Structure (unit: mm)



# MSP1030B Piezoresistive Pressure Transducer

## Characteristics

- 100, 700, 1000KPa Ranges
- Leadless Package
- Self-contained Hybrid Temperature Compensation
- 200mV Full Scale
- Absolute Reference
- High Frequency Response



Parameter	Unit	MSP1030B-100	MSP1030B-700	MSP1030B-1000
Range	KPa	0 ~ 100	0 ~ 700	0 ~ 1000
Sensitivity	mV/KPa(Typ)	2	0.28	0.2
Combined: non-linearity, non repeatability, pressure hysteresis	%FSO RSS max	0.4	0.4	0.4
Non-linearity	%FSO typ	0.15	0.1	0.1
Pressure hysteresis	%FSO typ	0.1	0.1	0.1
Non-repeatability	%FSO typ	0.1	0.1	0.1
Zero measurand output	mV	±20	±20	±20
Zero shift after 3X range	±% 3XFSO max	0.2	0.2	0.2
Thermal zero shift (-20°C ~ 85°C )	%FSO max	±2	±2	±2
Thermal sensitivity shift (-20°C ~ 85°C )	%FSO max	±2	±2	±2
Resonance frequency	KHz	180	500	750
Non-linearity at 3X range	%3XFSO	1.0	1.0	1.0
Warm-up time	ms	1	1	1
Acceleration sensitivity	KPa/g	0.001	0.001	0.001
Burst pressure (diaphragm)	KPa min	500	3500	5000
Bridge Resistance	Ω	5000±500	5000±500	5000±500
Supply voltage	Vdc	10	10	10
Temperature	°C	-55 ~ +120	-55 ~ +120	-55 ~ +120

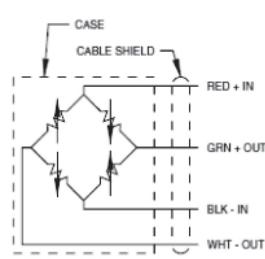
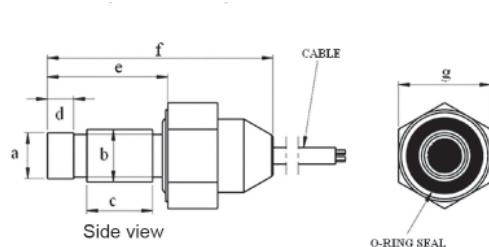
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- Wind tunnel tests
- Aerodynamic pressure measurements during flight tests
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## Structure (unit: mm)



a	b	c	d	e	f	g
3.86	M5	5.47	2.45	11.13	18.85	7.92