



- -40°C - 125°C Operating Temperature
- Compact Size- .354 Hex (9 MM)
- ±0.15% Linearity FS
- 100mV Output
- 10 - 100 psi pressure ranges
- Absolute or Gage
- Ratio metric Output
- Media – Liquid, Air, & Gas

DESCRIPTION

The APS70 is the smallest transducer in the market with a high temperature range for the most challenging of applications. AZSensCo's unique temperature compensation enables superior performance at wide operating temperatures. This silicon pressure transducer was designed for demanding industrial and commercial applications. The 316L SS port design allows for pressure measurement of liquid or gas media.

The APS70 series utilizes piezo-resistive pressure sensor pressurized packaged in a stainless steel housing which has superior long term stability and accuracy (.15% Linearity).

The design proves value for OEM customers. Please contact us for Custom design availability.

APPLICATIONS

- Mil/Aero
- Industrial Automation
- HVAC
- Automotive Engine
- Compressor
- Pneumatic

Maximum Environmental Ratings

Operating Temperature -40°C to 125°C
Storage Temperature Range -55°C to 150°C

Proof pressure 3x full scale pressure
Burst pressure 5x full scale pressure

APS70 Operational Characteristics

$V_+ = 5V$, $V_- = 0V$, Temperature = 25°C

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS
Excitation Voltage	V_{EX}	1	5	18	V
Excitation Current	I_{EX}		1.5	2	mA
Span (FS Range) (Note 1)	V_{OUT}		100		mV
Offset (Note 2)	V_{OS}	-2	0	2	mV
Linearity (Note 3)		-0.2	±0.15	0.2	%FS
Temperature Error (Null and Span) (Note 4)		-2		+2	%FS
Bridge Impedance		4.0	4.5	5.0	kΩ
Response Time	t_R		.5	1	ms

Notes:

1) Output is ratio metric to the supply voltage 2) Measured at zero pressure. 3) Defined as best straight line 4) Measured from 0°C to 85°C

Application Information

Package

The one piece body design is made of stainless steel (SS316L), which allows for easy manufacturability and long term stability. The SS is highly impervious to corrosion and rust.

Stability

The silicon MEMS pressure sensor has a Pyrex base and is mounted to a ceramic substrate and sealed into the SS housing. Flexible die attach materials help reduce the mechanical stress which results in greater stability over time and temperature.

Additional stability is gained from factory stabilization of all sensors.

Pressure port

10-32 UNF-2A is the standard port located at the base of the sensor. Other port fittings are available for OEM customers.

Media

The pressure port is tolerant to most media including but not limited to oil, air, gas, some corrosive media, and salt water.

Wetted parts

The wetted surfaces are composed of stainless steel, RTV, and silicon.

Pressure ranges

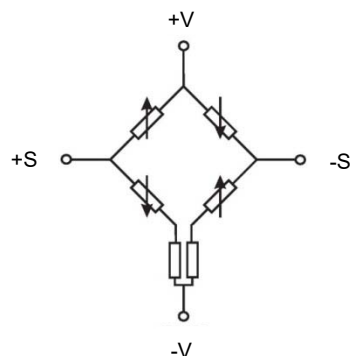
Standard pressure ranges are 10, 30, 50, 100 PSI. Custom pressure ranges are available for OEM customers.

Wiring

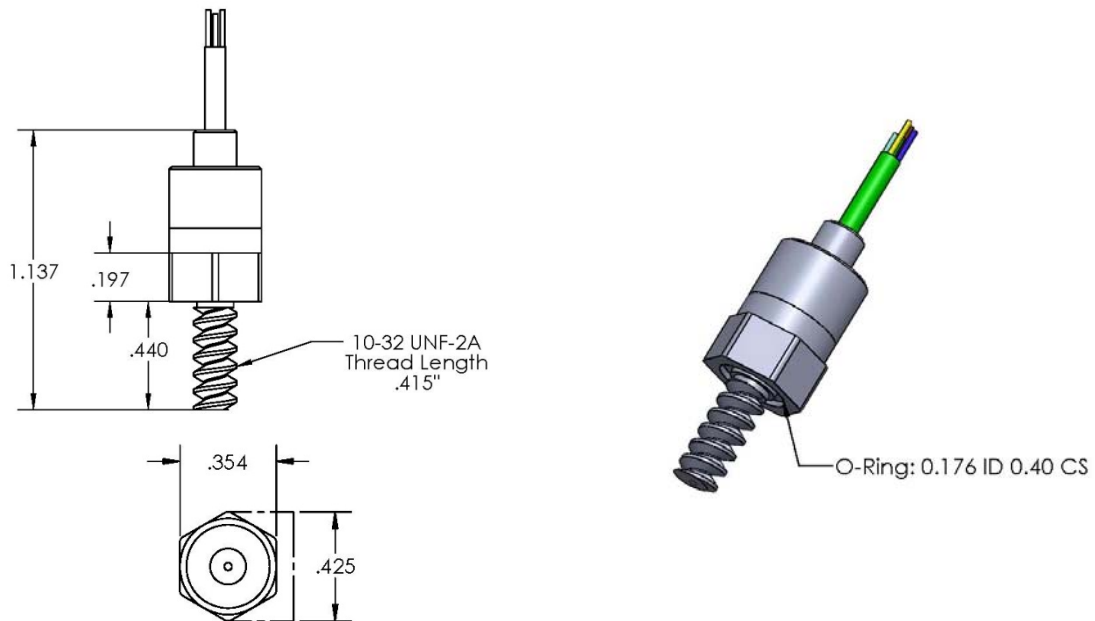
Red: +V, Black -V, White +S, Green -S

30 gauge wire

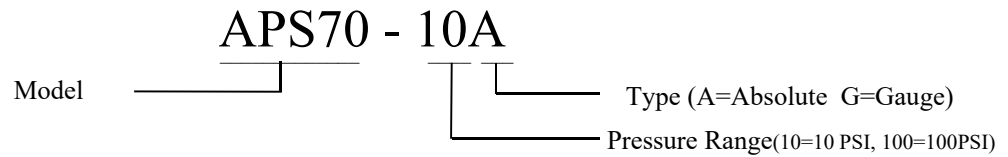
Schematic



Mechanical Dimensions (inches)



Part Number Configuration



Standard Part Numbers

Model	Pressure Range PSI	Type	Max Over Pressure
APS70-10A	10	Abs/Gage	30
APS70-30A	30	Abs/Gage	90
APS70-50A	50	Abs/Gage	100
APS70-100A	100	Abs/Gage	150

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