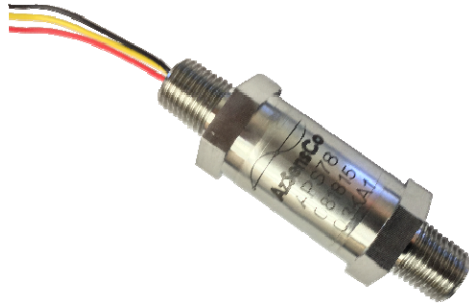


# High Pressure Sensor 0-5V Output

# APS78



- -25°C - 125°C Operating Temperature
- 0.875" Diameter Hex
- ±0.15% Linearity FS
- 0V – 5.0V
- 300 - 5,000 psi pressure ranges
- Absolute or Gage
- Media – Harsh Liquid, Air, & Gas
- Short Circuit Protection

## DESCRIPTION

The APS78 is designed as a Class 1, Division 1 explosion proof pressure transducer that is calibrated for 125°C operating temperatures and provides 0-5V output with ±0.25% error.

The stainless steel media isolated port design allows for pressure measurement of liquid or gas media. The top NPT port is designed to be connected to a conduit connection.

## APPLICATIONS

- Military/Aerospace
- Industrial Automation
- Wellhead Monitoring
- Chemical Refineries
- Natural Gas Compressors
- Pipeline Monitoring

## Maximum Environmental Ratings

Operating Temperature ..... -25°C to 125°C  
Storage Temperature Range ..... -55°C to 170°C

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

## APS78 Operational Characteristics

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

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS
Supply Voltage	$V_{DD}$	5.0	12	30	V
Output Voltage	$V_{OUT}$	0		5.0	V
Short Circuit Protection		Indefinite			
Hysteresis		-0.05		0.05	%FS
Linearity (Note 1)		-0.15		0.15	%FS
Repeatability		-0.05		0.05	%FS
Response Time	$t_R$		.25	1	ms
Total Error Band (Note 2)		-0.15		0.15	%FS
Compensated Temperature Range	C	-25		125	C
Operating Temperature Range	C	25		125	C

Notes:

- 1) Defined as best straight line 2) Measured from 0°C to 125°C

## Application Information

### Package

The body is made of 316L stainless steel that is hermetically welded together. The allows for easy manufacturability and long term stability. Automotive grade vibration proof design for engine mount. The standard output cable length is 1 foot. Other cable lengths available at request for OEM customers.

### Stability

The silicon MEMS pressure sensor has a Pyrex base and is mounted with RTV and is hermetically sealed in a oil filled element. The flexible die attach material reduces the mechanical stress which results in greater stability over time and temperature.

Additional stability is gained from factory burn-in of all sensors.

### Pressure port

The standard pressure port is 1/4-18 NPT, 1/8-27 NPT, 7/16-20 UNF.

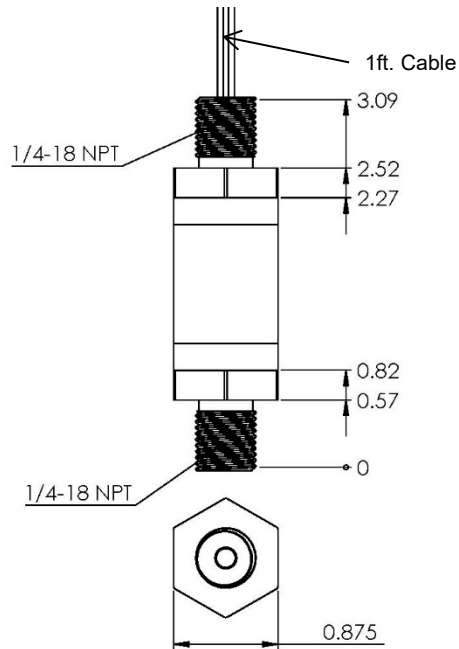
### Media

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

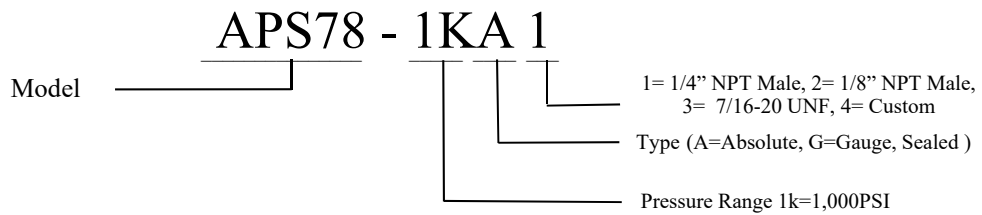
### Pressure ranges

Standard pressure ranges are 300, 500, 1,000, 3000 and 5,000 PSIA. Custom pressure ranges are available for OEM customers.

## Mechanical Dimensions (inches)



## Part Number Configuration



## Standard Part Numbers

Model	Pressure Range PSI	Type	Max Over Pressure
APS78-0.3KA1	300	Abs/Gage	900
APS78-0.5KA1	500	Abs/Gage	1500
APS78-1KA1	1000	Abs/Gage	3000
APS78-3KA1	3000	Abs/Gage	9000
APS78-5KA1	5000	Abs/Gage	10000

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