

# Solid State Pressure Sensor

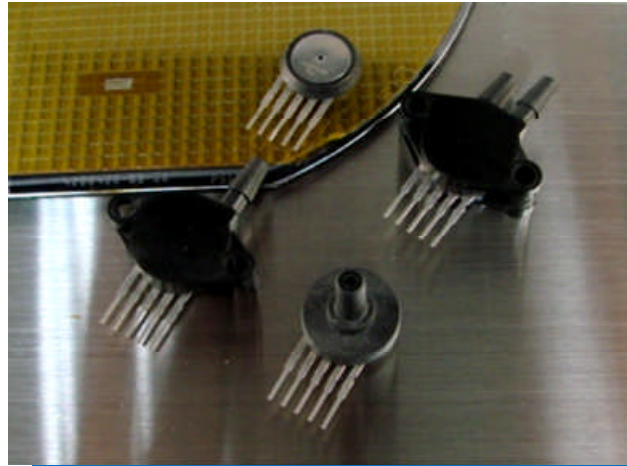
ANALOG  
OUTPUT



## MAP Series – Model 36A Low Pressure

### FEATURES

- Low Cost Sensor Element
- Calibrated Span and Offset
- Multi-order Temperature Compensation
- 0.3 PSI to 3.0 PSI
- Differential Pressure



### DESCRIPTION

The MAP Series is a smart pressure sensor with amplified analog output. Compensation of sensor offset, sensitivity, temperature drift and nonlinearity is accomplished in the factory via the latest ASIC technology with calibration coefficients stored in an on-chip EEPROM.

A variety of output configurations, including resolution, sampling rate and voltage levels are available to provide a simple and ready-to-use solution for a wide range of applications. The low voltage version operates from 2.7 to 3.3V while the regular version operates from 4.5 to 5.5V.

The MAP Series including Models 36A, are available for pressure ranges from 0.3 to 100 psi. Higher pressure ranges (>5psi) are catered for by the MAP 36A STD and CCD series. Custom ranges and calibrations are available. Please contact the factory for details.



# Characteristics

Unless otherwise specified, all parameters are measured at 60% RH, 25 °C and 5 Vdc excitation

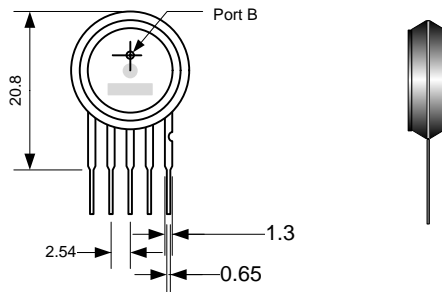
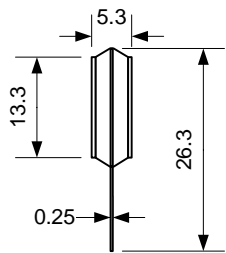
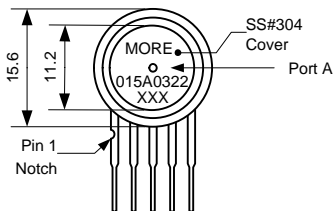
Parameters	Min	Typ	Max	Unit
Supply Voltage <sup>NOTE 1</sup>	2.7 to 3.3		4.5 to 5.5	V
Supply Current			2.5	mA
Pressure Range <sup>NOTE 3</sup>	0.3		3.0	psi
Zero Output (Offset)	0.320	0.500	0.680	V
Full Scale Output	4.320	4.500	4.680	V
Accuracy <sup>NOTE 2</sup>			4.5	%FS
Response Time		1	2	ms
Linearity	-0.5		+0.5	%FS
Thermal Hysteresis	-0.30		+0.30	%FS
Over Pressure <sup>Note 5</sup>			3X or 2.5 psi	Rated Pressure
Temp - Compensated	0		+50	°C
Temp - Operating	-20		+85	°C
Temp - Storage	-40		+125	°C

## NOTES:

1. Specify desired operating voltage range when ordering. Output is ratiometric to supply voltage
2. Accuracy includes non-linearity, hysteresis, TCS and TCO inside the compensated temperature range, best fit straight line definition
3. Wetted materials contain PPA, Silicone gel (Port A) and PPA, RTV, glass and silicon (Port B)
4. See ordering guide for list of available pressure ranges
5. Whichever is greater

## Dimensions

### Button (No Port)



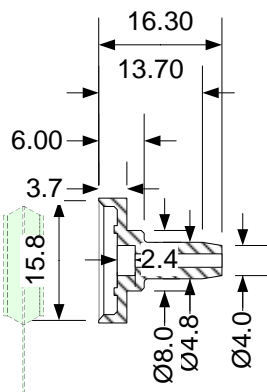
Delivery : 15 pcs per tray

All dimensions are in mm

#### Notes:

1. Port B is used for positive differential
2. Port A is used for absolute
3. Port B is used for gage
4. All dimension are in mm
5. Soldering leads max. 250 °C 5s

### Opposing Ports



Port Options 1,3,5: Either one or both Vertical Port add-ons

Delivery : 15 pcs per tray

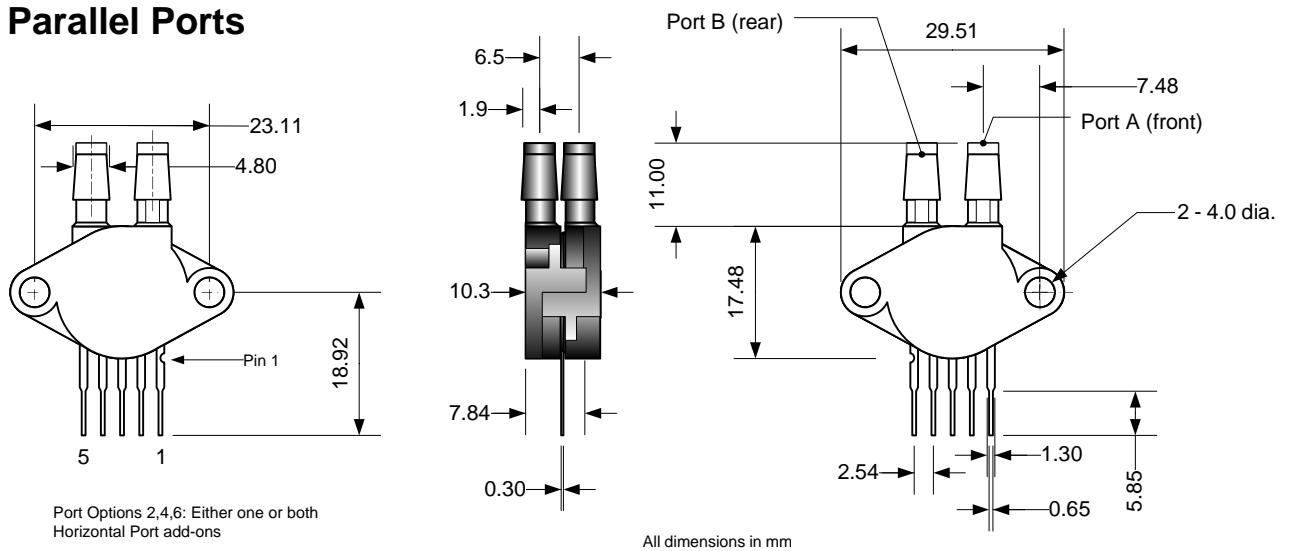
Pin #	Description
1	N.C.
2	Vdd.
3	Output
4	Vss
5	N.C.

#### NOTE:

N.C. pins must be left floating  
A 0.1uF capacitor must be connected between VDD and VSS



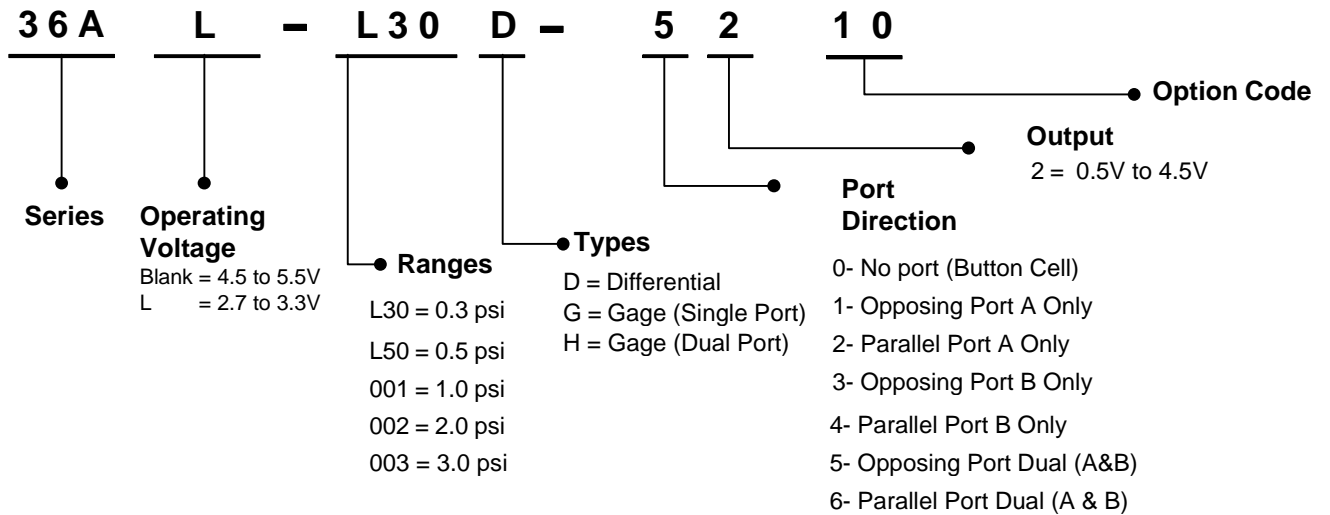
# Parallel Ports



Port Options 2,4,6: Either one or both Horizontal Port add-ons

Delivery : 10 pcs per tray

## Ordering Information



**Note:**

- 1) To specify single ended pressure (one side is always more +ve than the other) specify gage pressure with Dual port configuration (pressure type H). The device can be used for differential pressure by simply connecting the reference port (Port B) to the reference pressure instead of atmosphere.
- 2) Specifying Differential pressure means a +/- pressure range.

**Example:**

Part number 36A L30 D 52 20 corresponds to an output of 2.5V (@ 0 psi) +/- 2V (@ +/- 0.3 psi)  
 Part number 36A L30 G 52 20 corresponds to an output of 0.5V (@ 0 psi) to 4.5V (@ 0.3 psi)



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