

Solid State Pressure Sensor

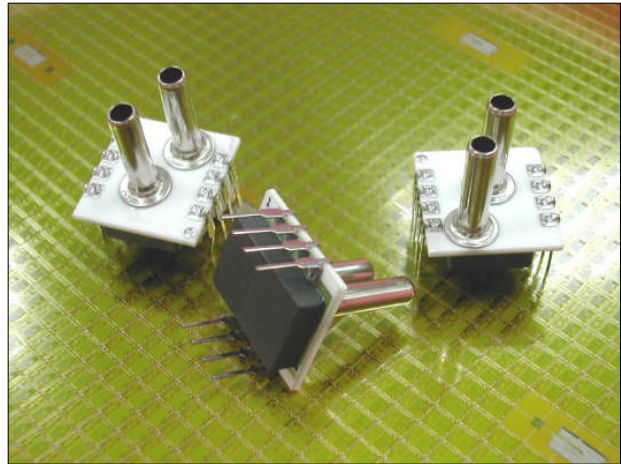
DIGITAL
OUTPUT



CCD Series – Model 53D Low Pressure

FEATURES

- Dual-in-line Package
- Calibrated Span and Offset
- Multi-order Temperature Compensation
- Rigid Ceramic Package
- 0.15 PSI to 3.0 PSI
- Custom Configuration Upon Request



DESCRIPTION

The CCD 53D Series is a smart pressure sensor with digital output via 1-wire serial Interface. Digital compensation of sensor offset, sensitivity, temperature drift and nonlinearity is accomplished in factory via the latest ASIC technology with calibration coefficients stored in on-chip EEPROM. The equivalent analog version is the Series 53A.

A variety of output configurations, including resolution, sampling rate, output interfaces 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 CCD Series is available for pressure ranges from 0.15 psi up to 150 psi. Custom ranges and calibrations are available. Please contact the factory for details.



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Characteristics

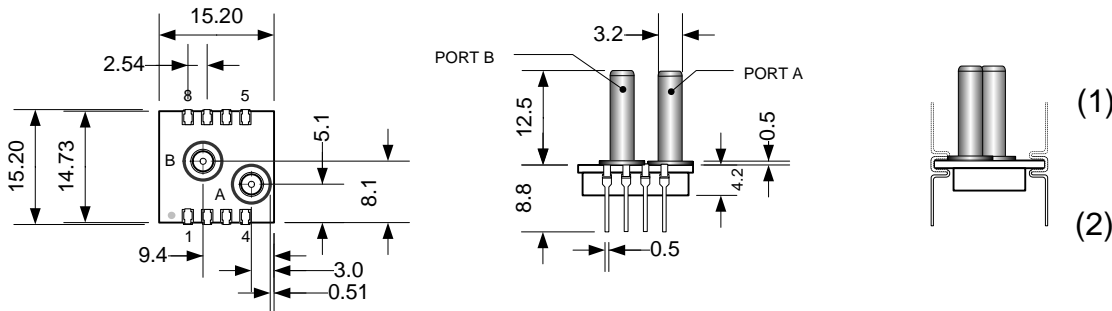
Unless otherwise specified, all parameters are measured at 5V excitation, 25 °C and 60% RH

Parameters	Min	Typ	Max	Unit
Supply Voltage ^{NOTE 1}	2.7 to 3.3		4.5 to 5.5	Vdc
Supply Current			2.5	mA
Pressure range ^{Note 5}	0.15		3.00	psi
Resolution		14		Bit
Accuracy ^{NOTE 3}		±2.2		%FS, +1 LSB
Zero Output		0666		Hex
Full Scale Output		3996		Hex
Warmup Time ^{NOTE 4}		1	2	sec
Start-Up Time			10	ms
Sampling Rate		1000		Hz
Temp - Compensated	0		50	°C
Temp - Operating	-20		+85	°C
Temp - Storage	-40		+125	°C
Over Pressure ^{Note 6}			3X or 2.5 psi	Rated FS

Notes:

- Specify desired operating voltage range when ordering. Output is ratiometric to supply voltage
- Wetted materials consist of Ni, RTV, glass, silicon and ceramic (Port A & B) and Au (Port A)
- Accuracy includes non-linearity, hysteresis, TCS and TCO inside the compensated temperature range, best fit straight line definition
- Zero fluctuation below 0.15% FS
- See ordering guide for list of available pressure ranges
- Whichever is greater

Dimensions:



Pin #	Description
1	N.C.
2	VSS
3	OUT
4	Vdd
5	N.C.
6	N.C.
7	N.C.
8	N.C.

NOTE:
N.C. pins should be left floating
A 0.1 uF capacitor must be connected between Vss and Vdd

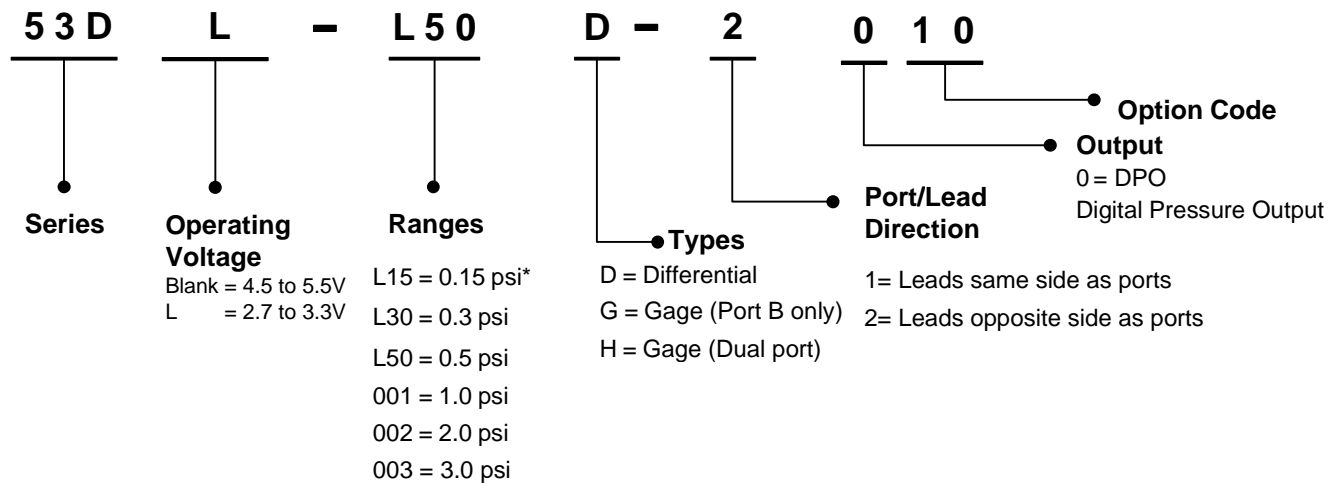
- Port B is used for positive differential
- Port A is used for absolute
- Port B is used for gage
- All dimensions are in mm
- Solder reflow max. 250 °C 5s

Delivery : 17 pcs per tube



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Ordering Information



Note:

- 1) To specify differential single ended pressure (one side is always more +ve than the other or 0 to xx psi) specify gage pressure with Dual port configuration. The device can be used for differential pressure by simply connecting the reference port (Port A) to the reference pressure instead of atmosphere.
- 2) Specifying Differential pressure means a +/- pressure range (-xx to + xx psi)
- 3) Custom outputs and pressure ranges available. Please contact us with your request

* For pressure range L15 (0.15 psi) accuracy is 2.7% FS

Disclaimer/Warranty/Notice

Senphire Ltd products are not authorized for use in applications where failure could result in loss of life or injury. While Senphire provides application assistance personally, through our literature and website, it is the responsibility of the customer to determine the suitability of the product for the intended application.

All information provided is believed to be accurate at the time of publishing however Senphire Ltd reserves the right to make changes without prior notice.

Senphire Ltd warrants its products to be free of manufacturing defects for a period of 12 months from the date of purchase. The maximum liability, expressed or implied shall be limited to a direct replacement of those products Senphire finds defective. The foregoing is the Buyers Sole remedy in lieu of all other warranties, expressed or implied including those of merchantability and fitness for a particular purpose.



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Ver 1.6 7-Apr-14