

## Signal Conditioned Pressure Sensors

0 -1 psi to 0 - 150 psi

### ASCX Series

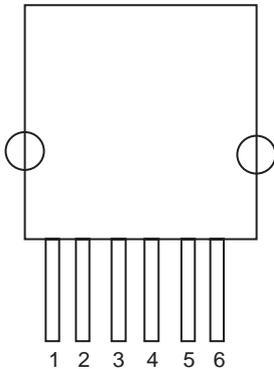
#### FEATURES

- Calibrated & Temperature Compensated
- 4.5 Volt Span
- 5 Volt Supply
- Small Size
- Absolute & Differential (Gauge) Pressures
- Reliable Semiconductor Technology

#### TYPICAL APPLICATIONS

- Industrial Controls
- Medical Equipment
- Pneumatic Controls

#### ELECTRICAL CONNECTION



- Pin 1: External Offset Adjust
- Pin 2: VS
- Pin 3: + Output
- Pin 4: Ground
- Pin 5: N/C
- Pin 6: N/C



This series is an amplified version of SenSym's proven performer and industry leading SCX series sensor. This amplified ASCX device is in a package with the same footprint as the SCX but it offers a high level (4.5 V span) output on a very cost effective basis. This family is fully calibrated and temperature compensated. These sensors are intended for use with non-corrosive, non-ionic working fluids; such as air and dry gases.

Devices are available to measure absolute differential and gauge pressures from 1 psi (ASCX01DN) through 150 psi (ASCX150DN). The absolute devices have an internal vacuum reference and an output voltage proportional to absolute pressure. Differential devices allow application of pressure to either side of the sensing diaphragm and can be used for gauge or differential measurements.

All ASCX devices are calibrated for span to within +/- 1%. The devices are characterized for operation from a single 5 volt supply although sensitivity is ratiometric to the supply voltage and any DC supply from 5 to 16 volts is acceptable.

Contact your local SenSym ICT representative, the factory, or go to Sensym ICT's Web site at [www.sensym-ict.com](http://www.sensym-ict.com) for additional details.

#### **⚠ WARNING**

##### **PERSONAL INJURY**

DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

**Failure to comply with these instructions could result in death or serious injury.**

#### **⚠ WARNING**

##### **MISUSE OF DOCUMENTATION**

- The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
- Complete installation, operation, and maintenance information is provided in the instructions supplied with each product.

**Failure to comply with these instructions could result in death or serious injury.**

# Signal Conditioned Pressure Sensors

0 -1 psi to 0 - 150 psi

ASCX Series

## PRESSURE SENSOR CHARACTERISTICS (all devices)

### Maximum Ratings

Supply Voltage $V_S = 4.5$ to 15 Vdc	Maximum Pressure On Any Port	150 psi
Output Current	Lead Temperature (2-4 Sec.)	250°C
Source	5 mA	
Sink	3 mA	
Quiescent Current	4 mA	

### Environmental Specifications

Temperature Range	Insulation Resistance (Min.)	100 MW at 50 Vdc
Compensated 0°C to 70°C	Vibration	10 G at 20-2000 Hz
Operating -25°C to 105°C	Shock	100 G for 11 msc
Storage -55°C to 125°C	Life	1 Million Cycles Minimum

## PRESSURE RANGE SPECIFICATIONS

Sensym Part No.	Pressure Range	Proof Pressure <sup>(6)</sup>	Sensitivity
ASCX01DN	0-1 psid	20 psig	4.5 V/psi
ASCX05DN	0-5 psid	20 psig	0.9 V/psi
ASCX15AN	0-15 psia	30 psig	0.3 V/psi
ASCX15DN	0-15 psid	30 psig	0.3 V/psi
ASCX30AN	0-30 psia	60 psia	0.15 V/psi
ASCX30DN	0-30 psid	60 psid	0.15 V/psi
ASCX100AN	0-100 psia	150 psia	0.045 V/psi
ASCX100DN	0-100 psid	150 psid	0.045 V/psi
ASCX150AN	0-150 psia	150 psia	0.030 V/psi
ASCX150DN	0-150 psid	150 psid	0.030 V/psi

## ASCX PERFORMANCE CHARACTERISTICS<sup>(1)</sup>

Characteristic	ASCX15/30/100/150			ASCX01/05			Units
	Min	Typ	Max	Min	Typ	Max	
Zero Pressure Offset	0.205	0.250	0.295	0.180	0.250	0.320	V
Full-Scale Span <sup>(2)</sup>	4.455	4.500	4.545	4.430	4.500	4.570	V
Output at FS Pressure	4.660	4.750	4.840	4.610	4.750	4.890	V
Combined Pressure Non-Linearity and Pressure Hysteresis <sup>(3)</sup>	–	±0.1	±0.5	–	±0.1	±0.5	%FSS
Temperature Effect on Span <sup>(4)</sup>	–	±0.2	±1.0	–	±0.2	±1.5	%FSS
Temperature Effect on Offset <sup>(4)</sup>	–	±0.2	±1.0	–	±0.2	±1.5	%FSS
Response Time (10% - 90%) <sup>(5)</sup>	–	0.1	–	–	0.1	–	mS
Repeatability	–	±0.05	–	–	±0.05	–	%FSS

## SPECIFICATION NOTES

Note 1: Reference Conditions (unless otherwise noted):  $T_A = 25^\circ\text{C}$ , Supply voltage  $V_S = 5$  Vdc.

Note 2: Full-Scale Span is the algebraic difference between the output voltage at full-scale pressure and the output at zero pressure. Full-Scale Span is ratiometric to the supply voltage.

Note 3: Pressure Non-Linearity is based on best-fit straight line. Pressure Hysteresis is the maximum output difference at any point within the operating pressure range for increasing and decreasing pressure.

Note 4: Maximum error band of the offset voltage or span over the compensated temperature range, relative to the 25°C reading.

Note 5: Response time for 0 psi to full-scale pressure step change.

Note 6: If maximum pressure is exceeded, even momentarily, the package may leak or burst, or the pressure-sensing die may fracture.

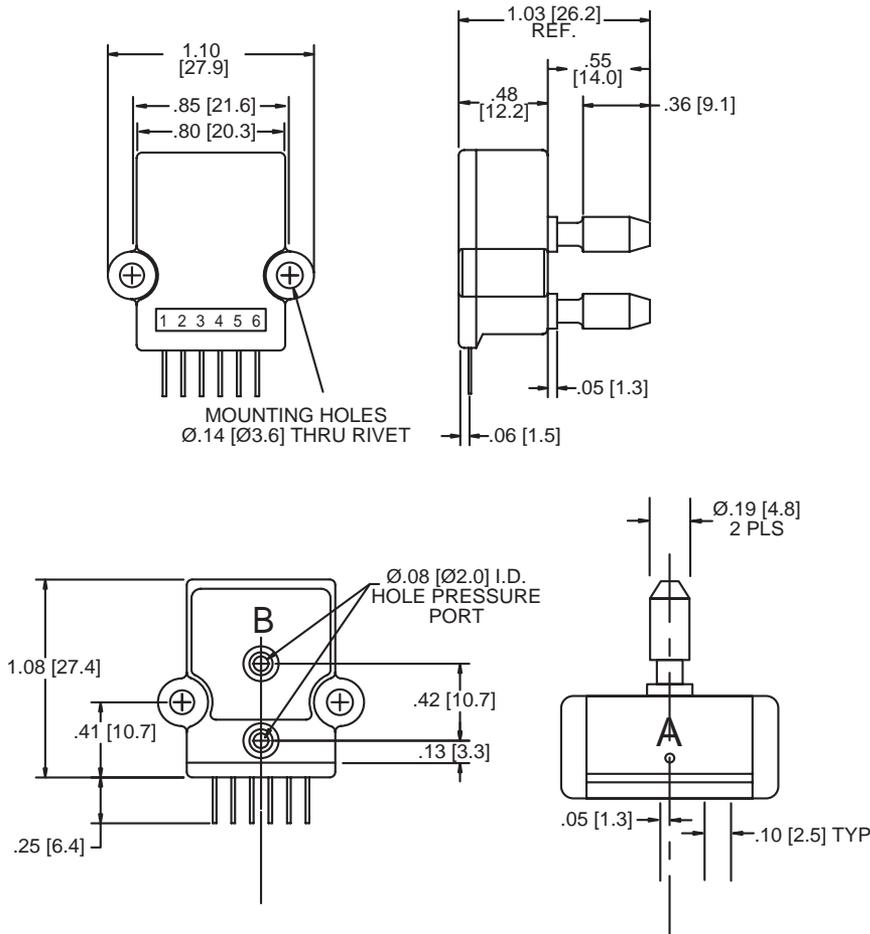
# Signal Conditioned Pressure Sensors

## 0 -1 psi to 0 - 150 psi

ASCX Series

### PHYSICAL DIMENSIONS

Dimensions in inches [mm]



### WARRANTY/REMEDY

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Contact your local sales office for warranty information. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace without charge those items it finds defective. **The foregoing is Buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose.**

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application. For application assistance, current specifications, or name of the nearest Authorized Distributor, contact a nearby sales office.

Or call:

1-800-537-6945 USA

1-800-737-3360 Canada

1-815-235-6847 International

**FAX**

1-815-235-6545 USA

**INTERNET**

[www.honeywell.com/sensing](http://www.honeywell.com/sensing)

[info.sc@honeywell.com](mailto:info.sc@honeywell.com)

**Honeywell**

### Sensing and Control

Honeywell

11 West Spring Street

Freeport, Illinois 61032

PK XXXXX-X-XX IL50 GLO MYR Printed in USA

[www.honeywell.com/sensing](http://www.honeywell.com/sensing)