

Installation Instructions for the ASDX DO Series Pressure Sensors

ISSUE 1
50005537

⚠ 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.

GENERAL INFORMATION

The ASDX DO series pressure sensors are fully calibrated and temperature compensated with on-board Application Specific Integrated Circuitry (ASIC). This ASDX DO device is in a standard DIP package and provides digital correction of sensor offset, sensitivity, temperature coefficients and non-linearity. The ASDX family uses I²C compatible protocol, which allows easy interfacing to most commonly used microcontrollers and microprocessors without additional components or electronic circuitry.

The 2-wire I²C interface has a Serial Clock Line (SCL) input and serial digital output data line. The output of the device is a corrected pressure value in hexadecimal format with 12-bit accuracy. Devices are available to measure absolute, differential, and gage pressures. The absolute devices have an internal vacuum reference and an output proportional to absolute pressure. Differential devices allow application of pressure to either side of the sensing diaphragm and can be used for gage or differential measurements.

All ASDX DO devices are accurate to within $\pm 2.0\%$ full scale. The devices are characterized for operation from a single 5 Vdc supply. The sensor is designed and manufactured according to standards laid down in ISO 9001. These devices are intended for use with non-corrosive, non-ionic working fluids such as air and dry gases.

SPECIFICATIONS

Supply Voltage (Vs)*	4.75 Vdc to 5.25 Vdc
Maximum Supply Voltage*	6.50 Vdc (max.)
Consumption Current	6 mA (typ)

*Note: The sensor is not reverse polarity protected. Incorrect application of excitation voltage or ground to the wrong pin can cause electrical failure. Application of supply voltage above the maximum can cause electrical failure.

ENVIRONMENTAL SPECIFICATIONS (all devices)

Temperature Ranges:

Compensated:	0 °C to 85 °C [32 °F to 185 °F]
Operating:	-20 °C to 105 °C [-4 °F to 221 °F]
Storage:	-40 °C to 125 °C [-40 °F to 257 °F]

Vibration: 10 g at 20 Hz to 2000 Hz

Shock: 50 g for 11 ms

Life: 1 million cycles minimum

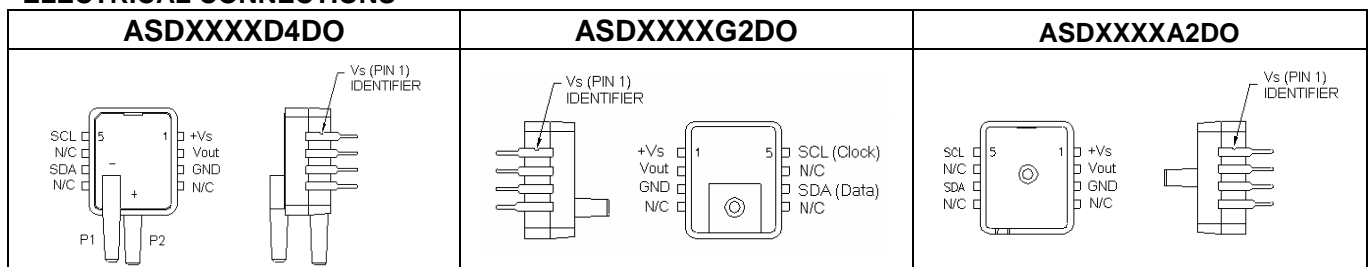
SOLDERING

Limit soldering to 250 °C [482 °F] maximum, with duration of 2 seconds to 4 seconds.

CLEANING

Proper cleaning fluids should be selected, based on the type of contaminants to be removed. Honeywell recommends alcohols or fluorinated solvents. Do not immerse the sensor.

ELECTRICAL CONNECTIONS (1)(2)(3)(4)



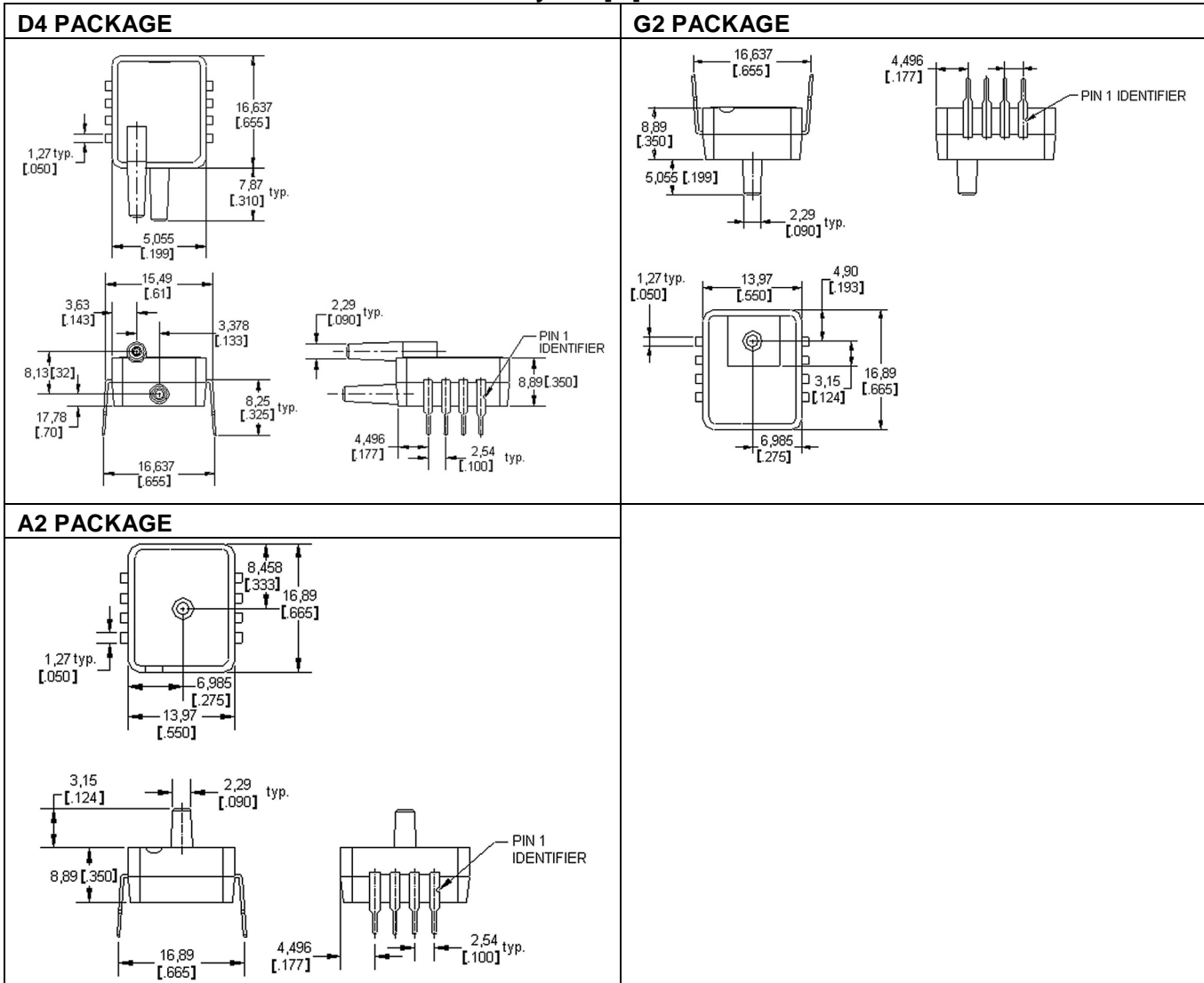
Note 1: Pin 6 must be left open

Note 2: Capacitor 220 nF required between +Vs and GND, and 15 nF between Vout and GND.

Note 3: The sensor is not reverse polarity protected. Incorrect application of excitation voltage or ground to the wrong pin can cause electrical failure. Application of supply voltage above the maximum can cause electrical failure.

Note 4: N/C means no connection, connecting to ground or other potential may damage sensor.

DIMENSIONAL DRAWINGS – for reference only mm [in]



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/Canada

1-815-235-6847 International

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