CRYSTAL
engineering corporation

XP2i-DP
A rugged Wet/Wet Differential!






Features

High accuracy, long term vacuum measurement

Wet/wet differential transducer

Customizable for panel mounting or portable configurations

Programmable for custom engineering units

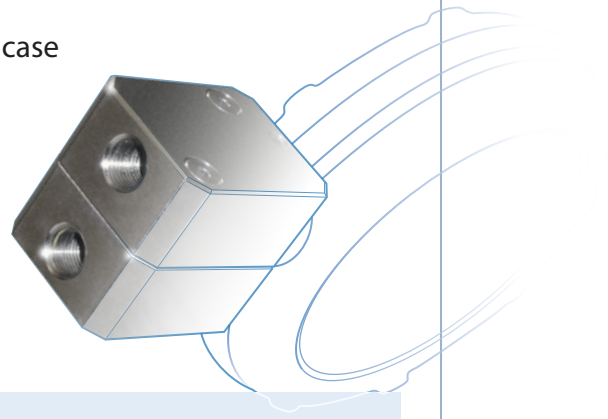
Optional pressure datalogging capability

Hardshell carrying case

Easy to use buttons

Backlit (LCD) display

ATEX IECEx



High accuracy, long term vacuum measurement

The XP2i-DP is a combination of leading edge technology, double-sided isolated differential pressure sensing and rugged industrial design.

The unique design of the differential pressure sensor integrated into the XP2i-DP allows for long term vacuum use without fear of permanent damage to the sensing chip or sensing package.

Wet/wet differential transducer

Both sides of the sensor can withstand fluids. The differential pressure sensor is a double-sided, media compatible, piezoresistive silicon pressure sensor packaged in a stainless steel housing. The sensing package utilizes oil to transfer pressure from the two stainless steel diaphragms to the sensing element. It is designed for high performance, low pressure applications where differential pressure measurement is required. The stainless steel package makes it suitable for use with liquids and corrosive gases.

www.crystalengineering.net

Crystal Engineering Corporation 708 Fiero Lane, Suite 9, San Luis Obispo, California 93401-8701, USA
805-595-5477 or 800-444-1850

CRYSTAL engineering corporation

Specifications, Options, Software & Accessories

Differential Pressure Accuracy

20% to 100% of Full Scale: ±(0.1% of Reading)

0 to 20% of Full Scale: ±(0.02% of Full Scale)

Static line pressure effect is 0.0003 PSI per lowest applied test pressure. Continuous use at high vacuum permissible.

Pressure Ranges

See Ordering Information below.
Note: Density of water conversion can be selected via the keypad: 4°C, 60°F or 20°C /68°F.

Temperature

Operating & Compensated: -10°C to 50°C (14°F to 122°F)

Storage: -40°C to 75°C (-40°F to 167°F)

Backlit Display

Description: 5 Full (seven segment) digits

Display Rate: 4 readings per second

Numerical Display Height: 16.5mm (0.67") single line display

Connections

Pressure Connections: 1/8" Female NPT

Electrical Connection: DB9, RS-232 (environmentally sealed)

Do not use the RS-232 connector in a hazardous area.

Media Compatibility

Liquids and gases compatible with 300 Series stainless steel and buna-n (o-ring).

Power

Battery: Three size AA (LR6) batteries

Battery Life: 1500 hours typical (alkaline battery)

The unit is intrinsically safe only if powered by Rayovac Maximum Plus, Energizer E91, Energizer EN91, or Duracell MN 1500 batteries. Replace batteries only in non-hazardous locations.

Enclosure (U.S. Patent D612277)

Description: Aluminum alloy

Dimensions: 165.1 mm (6.5") H x 112 mm (4.4") W x 33 mm (1.3") D

Weight: 915g (2.0 lbs), including batteries

Sensor

Permanent fill dual diaphragm seal (filled with Dow Corning 200).

Max Static Line Pressure: 100 PSI

WARNING: Pressure applied to the + sensor port must be greater than or equal to the pressure applied to the – sensor port.

Intrinsic Safety

ATEX
II 1G Ex ia IIC T4/T3 Ga
FTZU 12 ATEX 0048X

IECEx
Ex ia IIC T4/T3 Ga
IECEx FTZU 12.0009X

Options

Panel Mounting (option F4): A panel mount flange allows an XP2i-DP to fit in a 4½" gauge cutout • An XP2i-DP with the F4 option can also be adapted to 6 or 8½" gauge cutouts.

Rear Port Fitting (option RP): The rear port fitting may be ordered separately, but is included automatically with the panel mount flange option (F4).

Software

ConfigXP: Free gauge calibration software available as a download from our website at www.xp2i.com.

DataLoggerXP: A firmware upgrade to transform an intrinsically safe XP2i-DP into a pressure datalogging device.

Accessories

RS232 Cable: 6' (2m) P/N 2400

USB to RS232 Adapter P/N 3313

Flange Adapter Kit: 6" (152mm) P/N 2955

Flange Adapter Kit: 8½" (216mm) P/N 2956

AC Adapter Kit P/N 2984

Protective Boot P/N 3696

WARNING: RS232 Cable and USB to RS232 Adapter are not assessed for use in a hazardous atmosphere.

CE Specifications include all effects of linearity, hysteresis, repeatability, temperature, and stability for one year.

Ordering Information

PSI	bar	kPa	Over-pressure (+/- ports)	Pressure Units and Resolution								
P/N Prefix	P/N Prefix	P/N Prefix		PSI	kg/cm²	inch Hg	inch H_2O	mm Hg	mm H_2O	kPa	bar	mbar
15PSI	1BAR	100KPA	6.5x / 3.0x	0.001	0.0001	0.001	0.01	0.01	1	0.01	0.0001	0.1
100PSI	7BAR	700KPA	2.0x / 2.0x	0.01	0.0001	0.01	0.1	0.1	1	0.01	0.0001	0.1

Sample Part Number

1BARXP2I-DP-RP . . . . . ATEX/IECEx intrinsically safe 1 bar gauge with differential pressure sensor and rear port option.

Visit us on the web at **www.crystalengineering.net**