

ACCURACY

0 to 20% of Range: \pm (0.02% of Full Scale)

20% to 110% of Range: \pm (0.1% of Reading)

Vacuum: \pm (0.25% of Full Scale*)

* Full Scale = -1.0 bar

Vacuum to Full Scale

-S2 Option: \pm (0.02% of Full Scale) 15 to 25° C
 \pm (0.05% of Full Scale) -10 to 15° C,
 25 to 50° C, typical

-S5 Option: \pm (0.05% of Full Scale) -10 to 50° C

Includes all effects of linearity, hysteresis, repeatability, temperature, and stability for one year.

All models indicate vacuum, but vacuum specification applies to 1 bar, 2 bar, 7 bar, and 20 bar models only.

Not recommended for continuous use below -1.0 bar. Refer to [XP2i-DP data sheet](#) for gauges that are intended for continuous high vacuum use.

OPERATING TEMPERATURE

Temperature Range: -10 to 50° C (14 to 122° F)

Non-condensing. No change in accuracy over operating temperature range. Gauge must be zeroed to achieve rated specification.

DISPLAY

Screen: **5.5 digits**

Single Line Display: **16.9 mm (0.67") high**

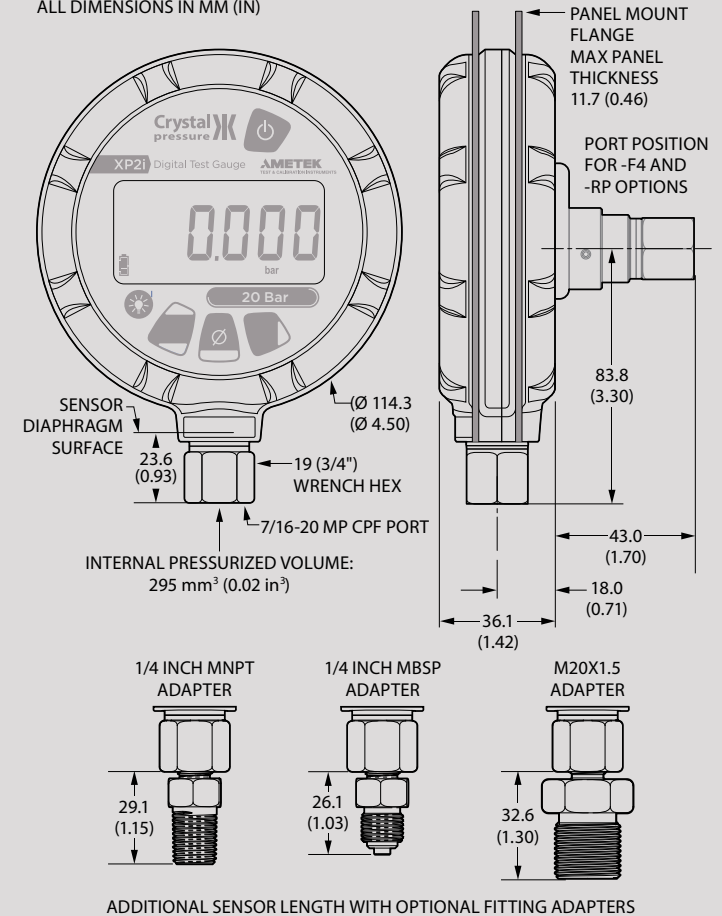
Dual Line Display: **Main Display: 13.9 mm (0.55")**
Secondary Display: 5.3 mm (0.21")

Display Rate: **4 readings/second (standard)**
8 readings/second (PSV mode)

LCD readable in sunlight with bright backlight.

PSV mode is intended for Pressure Safety Valve testing, and requires software to enable. (ConfigXP is a free download from ametekcalibration.com.)

U.S. PATENT D612277
 ALL DIMENSIONS IN MM (IN)



POWER

The XP2i is Intrinsically Safe only if powered by one of the following battery types.

ATEX/IECEX:	Approved Battery Type	Ta=	Marking
	Rayovac Max Plus 815	-20 to 50° C	Ex ia IIC T4 Ga
	Energizer E91		
	Energizer EN91	-20 to 50° C	Ex ia IIC T3 Ga
	Duracell MN1500		

CSA:	Approved Battery Type	Ta=	Marking
	Rayovac Max Plus 815	-20 to 45° C	Class I, Division 1, A, B, C, D T4
	Energizer E91	-20 to 50° C	Class I, Division 1, A, B, C, D T3C
	Energizer EN91		
	Rayovac Max Plus 815		

3 x AA: **1500 hours, typical**

Ultra Low Power: **> 1 year, typical****

Uses 3 alkaline AA (LR6) batteries. Use of backlight and/or RS232 reduces operating time.

Optional AC power supply available.

**20 minute recording interval or greater in LT5 mode.

For hazardous location product warnings, refer to the operation manual.

DATA/COMMUNICATION

Digital Interface: **RS232, DB-9F**

Free Labview® drivers and programming instructions are available for download from website.

For hazardous location product warnings, refer to the operation manual.

DATALOGGING

Capacity: **32 000 data points**

Storage Type: **Non-volatile flash memory**

Minimum Interval: **1 second**

Maximum Interval: **18 hours**

Min. Event Duration: **250 mS*****

DataLoggerXP Firmware Update may be purchased at time of order, or an Upgrade Package may be purchased afterward.

Software available for download from our website. Produces csv files, or uses Excel template files (samples included) to automatically format and graph data.

*** Logging Type - Average with Peaks.

CERTIFICATIONS



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



Ex ia IIC T4/T3 Ga
IECEX FTZU 12.0009X



Exia Intrinsically Safe and Non-incendive for Hazardous Locations: Class I, Division 1, Groups A, B, C and D, Temperature Code T4 or T3C. For hazardous location product warnings, refer to the operation manual.



XP2i complies with the Electromagnetic Compatibility and the Pressure Equipment Directives.



XP2i complies with the Australian Radiocommunications (Electromagnetic Compatibility) Standard 2008.



XP2i is approved for use as a portable test instrument for Marine use and complies with Det Norsjke Veritas' Rules for Classification of Ships, High Speed & Light Craft and Offshore Standards.

ENCLOSURE

Weight: 562 g (19.8 oz)	<i>Weight includes batteries.</i>
Rating: IP67	<i>Submersible to 1 m for 30 minutes [IEC 60529].</i>
Housing: Diecast aluminum	<i>Nickel plating over low copper, marine grade aluminum.</i>
Keypad and Labels: UV Resistant Polyester	<i>LCD protected from impact damage by 1.5 mm (0.06") thick polycarbonate lens under polyester window.</i>
	<i>Skydrol® compatible.</i>
	For hazardous location product warnings, refer to the operation manual.

SENSOR

Wetted Materials: (WRENCH TIGHT) 316 stainless steel	<i>All welded, with a permanently filled diaphragm seal.</i>
(FINGER TIGHT) 316 stainless steel and Viton® (internal o-ring)	<i>Metal to metal cone seal; O-ring can be removed if necessary.</i>
Diaphragm Seal Fluid: Silicone Oil	<i>Optional connection on back.</i>
Connection: Crystal CPF♦ Female	<i>1/4" male NPT adapter included unless BSP, M20, or 1KBAR is specified.</i>
	<i>1/4" medium pressure tube system compatible with HiP LM4 and LF4 Series, Autoclave Engr SF250CX Male and Female Series.</i>
	<i>♦U.S. Patent No. 8,794,677</i>

STORAGE TEMPERATURE

Temperature Range: -40 to 75° C (-40 to 167° F)	<i>Batteries should be removed if stored for more than one month.</i>
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SPECIAL FEATURES

The following requires the use of our free [ConfigXP](#) software

- User Defined Unit: **Allows the user to define and display any pressure units not included, or to use the gauge to display force, level, or other pressure related parameters. Reduce or increase displayed resolution.**
- PSV Mode: **Intended for pressure safety valve / burst disk testing. 8 readings per second. Captures point at which valve opens, as well as reseal pressure.**
- Averaging: **Smooths unsteady readings (1 to 10 samples).**
- Remove: **Unwanted pressure units from Units button.**
- Disable: **Peak pressure button.**
- Limit or Disable: **Zero button.**
- Password Protect: **Changes to configuration or calibration factor(s).**
 - Save: **Configuration to a file.**
 - Copy: **Configuration can be copied to other gauges.**

RANGE & RESOLUTION TABLE

P/N	Range (bar)	Over-pressure	Display Resolution									
			bar	mbar	kPa	MPa	psi	in H ₂ O	in Hg	mm Hg	mm H ₂ O	kg/cm ²
1BAR	1	6.5 x	0.0001	0.1	0.01	0.00001	0.001	0.01	0.001	0.01	1	0.0001
2BAR	2	3.0 x	0.0001	0.1	0.01	0.00001	0.001	0.01	0.001	0.1	1	0.0001
7BAR	7	2.0 x	0.0001	0.1	0.01	0.00001	0.01	0.1	0.01	0.1	1	0.0001
20BAR	20	2.0 x	0.001	1	0.1	0.0001	0.01	0.1	0.01	1		0.001
30BAR	30	2.0 x	0.001	1	0.1	0.0001	0.01	1	0.1	1		0.001
70BAR	70	2.0 x	0.001		0.1	0.0001	0.1		0.1			0.001
140BAR	140	2.0 x	0.01		1	0.001	0.1		0.1			0.01
200BAR	200	1.5 x	0.01		1	0.001	0.1		0.1			0.01
300BAR	300	1.5 x	0.01		1	0.001	0.1		1			0.01
700BAR	700	1.5 x	0.01		1	0.001	1					0.01
1KBAR	1000	1.3 x	0.01		1	0.001	1					0.01

CPF Adapter Fitting is not included.

ORDERING INFORMATION*

P/N	Model	Dual Display	Accuracy	Adapter Type	Connection Location	Data-logging	CPF* Fitting Kits	Pump System**	Liquid (Systems C-H)	Carrying Case~
	XP2I									
	Standard:	No ..(omit)	0.1% of reading..(omit)	NPT(omit)	Bottom(omit)	No ..(omit)	No	No Pump....(omit)		
	Optional:	Yes....-DD	0.02% of FS-S2	G 1/4 B-BSP	Back-RP	Yes....-DL	NPT Kit (4013) ..-N	System A (pneumatic) 0 to 2 bar.....-AXX	Full	Aluminum ... (omit)
			0.05% of FS-S5	M20x1.5 ..-M20	Panel Mount ..-F4		BSP Kit (4015) ..-B	System A (pneumatic) 0 to 40 bar.....-AHX	Drained.....-E	Waterproof.....-W
								System B (pneumatic) -0.91 to 2 bar-BXX		
								System B (pneumatic) -0.91 to 40 bar-BHX		
								System C (oil) 0 to 200 bar-CXX		
								System C (oil) 0 to 350 bar-CHX		
								System D (oil) 0 to 350 bar.....-DOX		
								System D (water) 0 to 350 bar.....-DWX		
								System E (oil) 0 to 700 bar.....-EOX		
								System F (oil) 0 to 1000 bar.....-FOV		
								System F (water) 0 to 1000 bar.....-FWV		
								System G (oil) 0 to 1000 bar.....-GOX		
								System G (water) 0 to 1000 bar.....-GWX		
								System H (oil/pneumatic) -0.91 to 40 bar and 0 to 350 bar-HOX		

* CPF Fitting Kits can **only** be ordered as part of a Pump System. All fittings are rated to 700 bar, with the exception of the MPF-1/2QTF rated to 350 bar.

** Refer to the following page for a more detailed description of each Pump System.

~ The Waterproof Case is an **option** for Systems A, B, and C only. The Waterproof Case is **the only option** for Systems G and H.

SAMPLE PART NUMBERS

20BARXP2I 20 bar standard gauge, with a 1/4" NPT pressure fitting.

300BARXP2I-S2-BSP-DL 300 bar gauge with 0.02% of FS accuracy, a 1/4" BSP pressure fitting, and Data logging.

700BARXP2I-DD-N-GWX-E-W 700 bar Dual Display gauge with an NPT CPF fitting kit; a System G pump system; no liquid; and a waterproof carrying case.

Ordering a Pump System Only

Any pump system, carrying case, and connection fittings for an XP2i pressure gauge may be ordered separately from the gauge. Enter XP2I-NONE followed by the Pump System part number and the Carrying Case option code.

SAMPLE PART NUMBER

XP2I-NONE-BHX-W System B pump system with a waterproof carrying case.

* BAR versions available in USA direct from factory only.

PUMP SYSTEMS

All pump systems for the XP2i include 1/4 NPT and BSP female fittings for the device under test, plus a carrying case with custom insert. For complete details, click on the systems below.

► [Systems A... AXX \(T-960\), AHX \(T-970\)](#)

[Systems B... BXX \(T-965\), BHX \(T-975-CPF\)](#)



► [Systems C... CXX \(T-620\), CHX \(T-620H-CPF\)](#)



► [Systems D... DOX and DWX \(P-018-CPF\)](#)



► [System E... EOX \(P014\)](#)



► [Systems F... FOV and FWV \(T-1-CPF\)](#)



► [Systems G... GOX and GWX \(GaugeCalHP\)](#)



► [System H... HOX \(T-975-CPF and T-620H-CPF\)](#)



CPF FITTING KITS

- [NPT Kit... -N \(4013\)](#)
Includes MPF-1/8QTF, MPF-1/4QTF, and MPF-1/2QTF.
- [BSP Kit... -B \(4015\)](#)
Includes MPF-1/8QTFB, MPF-1/4QTFB, MPF-3/8QTFB, MPF-1/2QTFB.

STANDARD DELIVERY

- XP2i Gauge
- CD Manual
- ISO 17025 Accredited Calibration Certificate, NIST Traceable
- CPF Connection Fitting (ranges 10 000 psi and lower)

ACCESSORIES

Protective Boot [P/N 3696](#)

Magnetic Hanging Strap [P/N 5203](#)

AC Adapter Kit [P/N 2984](#)

USB B to RS232 DB9M Cable [P/N 3313](#)

Waterproof Carrying Case [P/N 2888](#)

COMPLEMENTARY PRODUCTS

Crystal Engineering offers a wide range of products that work with the XP2i:

- [Discounted three year calibration program](#)
- [Fittings that connect without tools, safely and without leaks](#)
- [Lightweight, super flexible high pressure hoses](#)
- [Pneumatic hand pumps](#)
- [Hydraulic hand pumps](#)
- [Portable pressure comparators](#)
- [Software, for the quickest way to calibrate pressure transmitters and gauges](#)

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