

**ACCURACY**

0 to 20% of Range:  $\pm(0.04\%$  of Full Scale)  
 20% to 110% of Range:  $\pm(0.2\%$  of Reading)  
 Vacuum:  $\pm(0.25\%$  of Full Scale\*)  
 \* Full Scale = -14.5 psig

*Includes all effects of linearity, hysteresis, repeatability, temperature, and stability for two years.*

*All models indicate vacuum, but vacuum specification applies to 30 psi, 100 psi, and 300 psi models only.*

*Not recommended for continuous use below -14.5 psi. 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**

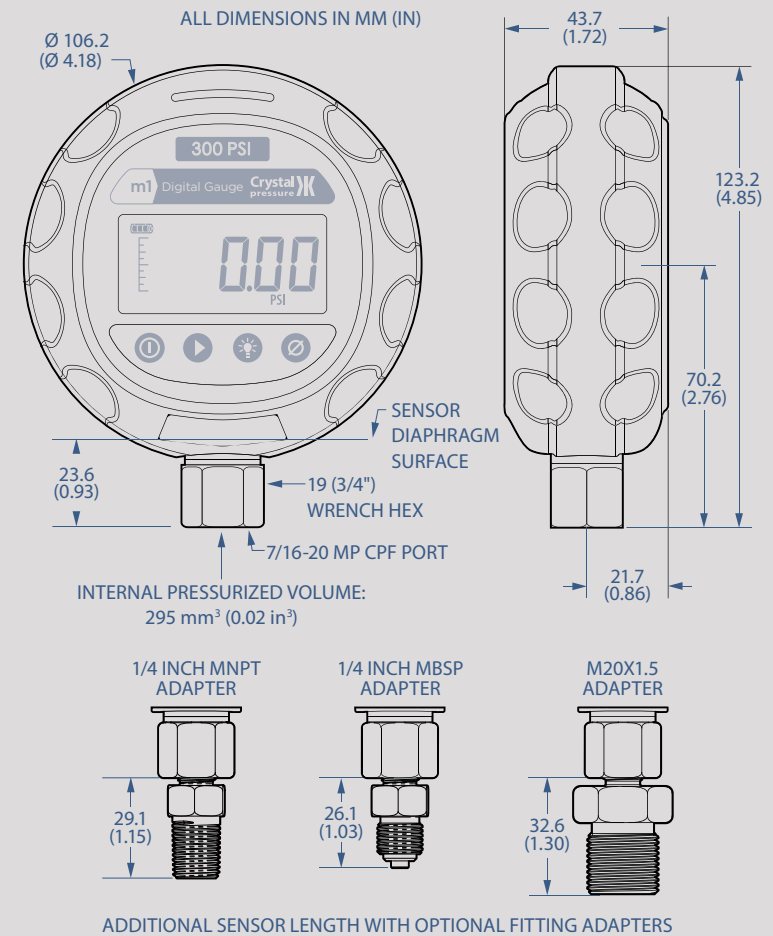
Screen: **5 digits, 16.8 mm (0.66") high**  
 Display Rate: **4 readings/second**

*LCD readable in sunlight with bright backlight.*

**POWER**

2 x AA: **900 hours, typical**  
 Extended Battery Life: **1 reading/15 seconds: 3,000 hours**  
**1 reading/30 seconds: 6,000 hours**  
**1 reading/60 seconds: 10,000 hours**  
**1 reading/5 minutes: 25,000 hours**  
**1 reading/10 minutes: 30,000 hours**

*Uses 2 alkaline AA (LR6) batteries. Use of backlight reduces operating time. Extended battery life is keypad selectable. Do not overtighten rear cover when replacing batteries.*



**ENCLOSURE**Weight: **331 g (11.7 oz)**Rating: **IP65**Housing: **Polyester/Polycarbonate Blend**Keypad and Labels: **UV Resistant Polyester***Weight includes batteries and protective boot.**Water resistant housing incorporating o-ring seals [IEC 60529].**LCD protected from impact damage by polycarbonate lens under polyester window.**Skydrol® compatible.***SENSOR**Wetted Materials: (WRENCH TIGHT) **316 stainless steel**(FINGER TIGHT) **316 stainless steel  
and Viton® (internal o-ring)**Diaphragm Seal Fluid: **Silicone Oil**Connection: **Crystal CPF Female***All welded, with a permanently filled diaphragm seal.**Metal to metal cone seal; O-ring can be removed if necessary.**1/4" medium pressure tube system compatible with HiP LM4 and LF4 Series, Autoclave Engr SF250CX Male and Female Series.**1/4" male NPT adapter included unless BSP or M20 is specified.***STORAGE TEMPERATURE**Temperature Range: **-40 to 75° C (-40 to 167° F)***Batteries should be removed if stored for more than one month.***SPECIAL FEATURES**Averaging: **Smooths unsteady readings (2 to 20 samples)**Vertical Bar Graph: **Percent pressure indication for quick reference**Capture: **Minimum (LO) and Maximum (HI)****CERTIFICATIONS**

m1 complies with the Electromagnetic Compatibility and Pressure Equipment Directives. Refer to the EC Declaration of Conformity for specific details.



m1 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 &amp; Light Craft, and Offshore Standards.

**RANGE & RESOLUTION TABLE**

P/N	Range (psi)	Over-pressure	Display Resolution									
			psi	in H <sub>2</sub> O	in Hg	mm Hg	mm H <sub>2</sub> O	kg/cm <sup>2</sup>	bar	mbar	kPa	MPa
30PSI	30	3.0 x	0.001	0.1	0.01	0.1	1	0.0001	0.0001	0.1	0.01	
100PSI	100	2.0 x	0.01	0.1	0.01	1		0.001	0.001	1	0.1	0.0001
300PSI	300	2.0 x	0.01		0.1	1		0.001	0.001	1	0.1	0.0001
1KPSI	1000	2.0 x	0.1		0.1			0.01	0.01		1	0.001
3KPSI	3000	1.5 x	0.1		1			0.01	0.01		1	0.001
10KPSI	10000	1.5 x	1		1			0.1	0.1			0.01

**ORDERING INFORMATION**

Model	P/N	Adapter Type	CPF* Fitting Kits	Pump System**	Liquid (Systems C-H)	Carrying Case~
M1	_____	_____	_____	_____	_____	_____
Standard:	NPT ..... (omit)	No ..... (omit)	No Pump.....(omit)			
Optional:	G 1/4 B ....-BSP	NPT Kit (4013) ...-N	System A (pneumatic) 0 to 30 psi .....-AXX	Full ..... (omit)	Aluminum ... (omit)	
	M20x1.5 ...-M20	BSP Kit (4015) ...-B	System A (pneumatic) 0 to 580 psi .....-AHX	Drained.....-E	Waterproof.....-W	
			System B (pneumatic) -25 inHg to 30 psi.....-BXX			
			System B (pneumatic) -25 inHg to 580 psi .....-BHX			
			System C (oil) 0 to 3000 psi .....-CXX			
			System C (oil) 0 to 5000 psi .....-CHX			
			System D (oil) 0 to 5000 psi .....-DOX			
			System D (water) 0 to 5000 psi .....-DWX			
			System E (oil) 0 to 10 000 psi.....-EOX			
			System F (oil) 0 to 15 000 psi.....-FOV			
			System F (water) 0 to 15 000 psi.....-FWV			
			System G (oil) 0 to 15 000 psi .....-GOX			
			System G (water) 0 to 15 000 psi .....-GWX			
			System H (oil/pneumatic) -25 inHg to 580 psi and 0 to 5000 psi ...-HOX			

\* All fittings are rated to 10 000 psi, with the exception of the MPF-1/2QTF rated to 5000 psi.  
 \*\* 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**

- M1-300PSI ..... 300 psi standard gauge, with a 1/4" NPT pressure fitting.
- M1-1KPSI-BSP ..... 1000 psi gauge, with a 1/4" BSP pressure fitting.
- M1-3KPSI-N-CXX-E-W ... 3000 psi standard gauge with an NPT CPF fitting kit; a System C pump system; no liquid; and a waterproof carrying case.

**Ordering a Pump System Only**

Any pump system, carrying case, and connection fittings for an m1 pressure gauge may be ordered separately from the gauge. Enter M1-NONE followed by the Pump System part number and the Carrying Case option code.

**SAMPLE PART NUMBER**

- M1-NONE-GOX-W ..... System G pump system with a waterproof carrying case.



900 Series

## PUMP SYSTEMS

All pump systems for the m1 include 1/4 NPT and BSP female fittings and a carrying case with custom insert. Additional fittings and accessories included with individual systems are listed below.

- ▶ **Systems A...** AXX (T-960), AHX (T-970)  
MPH-1 hose, bonded seals, o-ring kit, and teflon tape.



600 Series

- ▶ **Systems B...** BXX (T-965), BHX (T-975-CPF)  
MPH-1 hose, bonded seals, o-ring kit, and teflon tape.

- ▶ **Systems C...** CXX (T-620), CHX (T-620H-CPF)  
MPH-1 hose, MPF-CAP, MPM-PLUG, bonded seals, o-ring kit, and teflon tape.



P-018-CPF

- ▶ **Systems D...** DOX and DWX (P-018-CPF)  
Bonded seals, o-ring kit, and teflon tape.

- ▶ **System E...** EOX (P014)  
Bonded seals, o-ring kit, and teflon tape.



P014

- ▶ **Systems F...** FOV and FWV (T-1-CPF)  
Bonded seals, o-ring kit, and teflon tape.

- ▶ **Systems G ...** GOX and GWX (GaugeCalHP)  
Carrying case hold-down straps.

- ▶ **System H...** HOX (T-975-CPF and T-620H-CPF)  
MPF-CAP, MPM-PLUG, bonded seals, o-ring kit, and teflon tape.



T-1-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-1/8BSPF, MPF-1/4BSPF, MPF-3/8BSPF, and MPF-1/2BSPF.



GaugeCalHP

## ACCESSORIES



### Protective Boot P/N 3436 (included)

Protect your m1 from harsh environments with our form fitting chemical resistant thermoplastic boot (Skydrol fluid compatible).

## COMPLIMENTARY PRODUCTS

Crystal Engineering offers a wide range of products that work with the m1:

- [Fittings that connect without tools, safely and without leaks](#)
- [Lightweight, super flexible high pressure hoses](#)
- [Fitting kits and adapters](#)
- [Pneumatic hand pumps](#)
- [Hydraulic hand pumps](#)
- [Portable pressure comparators](#)

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