

**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 = -1.0 bar

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

*All models indicate vacuum, but vacuum specification applies to 2 bar, 10 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 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**

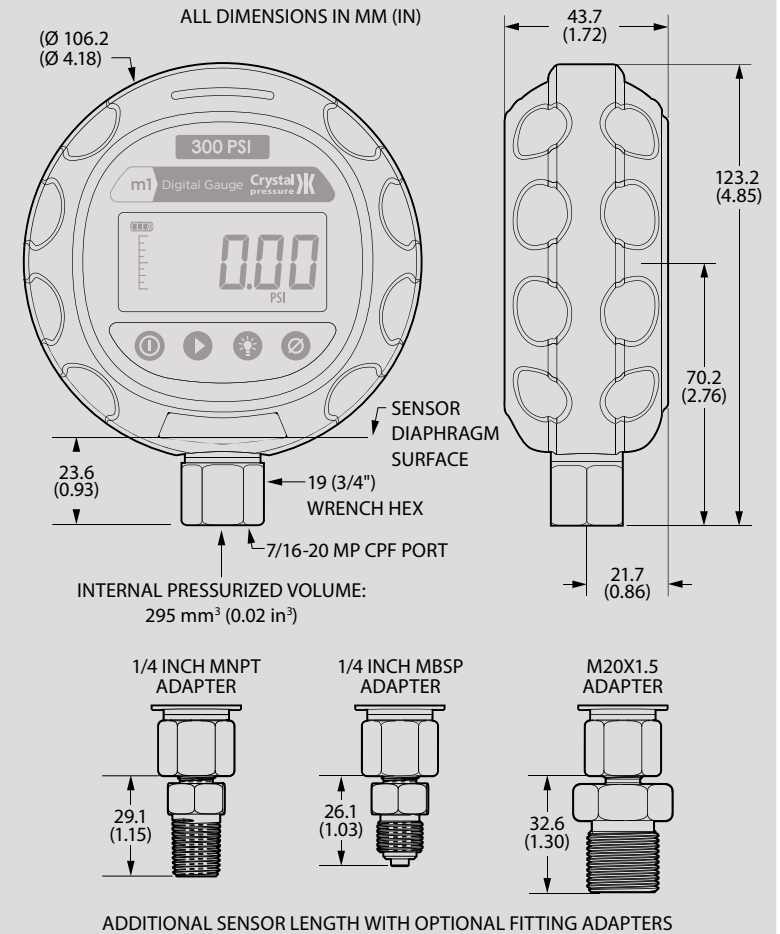
**1 reading/30 seconds: 6,000 hours**

**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.**♦U.S. Patent No. 8,794,677***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.

**ACCESSORIES****Protective Boot P/N 3436 (included)**

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

**COMPLEMENTARY 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](#)

**RANGE & RESOLUTION TABLE**

P/N	Range (bar)	Over-Pressure	Display Resolution									
			bar	mbar	kPa	MPa	psi	in H <sub>2</sub> O	in Hg	mm Hg	mm H <sub>2</sub> O	kg/cm <sup>2</sup>
2BAR	2	3.0 x	0.0001	0.1	0.01		0.001	0.1	0.01	0.1	1	0.0001
10BAR	10	2.0 x	0.001	1	0.1	0.0001	0.01	0.1	0.01	1		0.001
20BAR	20	2.0 x	0.001	1	0.1	0.0001	0.01		0.1	1		0.001
100BAR	100	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		1			0.01
700BAR	700	1.5 x	0.1			0.01	1		1			0.1

**ORDERING INFORMATION\***

Model	P/N	Adapter Type	Pump System*	Carrying Case~
M1	—	—	—	—
	Standard:	NPT . . . . . (omit)	No Pump. . . . (omit)	
	Optional:	G 1/4 B . . . . -BSP	System A. . . . -AXX	Aluminum . . . (omit)
		M20x1.5 . . . -M20	System A. . . . -AHX	Waterproof. . . . -W
			System B. . . . -BXX	
			System B. . . . -BHX	
			System C. . . . -CXX	
			System C. . . . -CHX	
			System D. . . . -DOX	
			System D. . . . -DWX	
			System E. . . . -EOX	
			System F. . . . -FOV	
			System F. . . . -FWV	
			System G. . . . -GOX	
			System G. . . . -GWX	
			System H . . . -HOX	

AMETEK offers a variety of solutions for pressure generation and measurement. Our line of products for pressure generation includes everything from small pneumatic hand pumps to a precision, hydraulic pressure comparator capable of generating up to 15 000 psi / 1000 bar / 100 MPa.

All of our pumps may be ordered as part of a Pump System, complete with an m1 and delivered in a sturdy carrying case with custom insert.

\* 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**

- M1-20BAR . . . . . 20 bar standard gauge, with a 1/4" NPT pressure fitting.
- M1-100BAR-BSP . . . . . 100 bar gauge, with a 1/4" BSP pressure fitting.
- M1-200BAR-CXX-W . . . . . 200 bar standard gauge with a System C pump system 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.

\* BAR versions available in USA direct from factory only.

**PUMP SYSTEMS OVERVIEW**

Pump System	Part Number	Pressure Range	Pneumatic	Hydraulic	Hand Pump	Bench Top	Included Pump	Case Options		
								Aluminum	Waterproof (Pelican Case)	
System A	AXX	0 to 30psi /2 bar	■		■			■	(or)	■
	AHX	0 to 580 psi /40 bar	■		■			T-970-CPF		■
System B	BXX	-25 inHg to 30 psi /-0.85 to 2 bar	■		■			■	(or)	■
	BHX	-27 inHg to 580 psi /-0.91 to 40 bar	■		■			T-975-CPF		■
System C	CXX	0 to 3000 psi /200 bar		■ (Oil)	■			■	(or)	■
	CHX	0 to 5000 psi /350 bar		■ (Oil)	■			T-620H-CPF		■
System D	DOX	0 to 5000 psi /350 bar		■ (Oil)		■		■		
	DWX	0 to 5000 psi /350 bar		■ (Water)		■			■	
System E	EOX	0 to 10 000 psi /700 bar		■ (Oil)		■		■		
System F	FOV	0 to 15 000 psi /1000 bar		■ (Oil)		■		■		
	FWV	0 to 15 000 psi /1000 bar		■ (Water)		■			■	
System G	GOX	0 to 15 000 psi /1000 bar		■ (Oil)		■				■
	GWX	0 to 15 000 psi /1000 bar		■ (Water)		■		GaugeCalHP		
System H	HOX	-27 inHg to 580 psi /-0.91 to 40 bar	■		■			T-975-CPF (and)		■
		0 to 5000 psi /350 bar		■ (Oil)	■			T-620H-CPF		■