

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 = -0.1 MPa

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

All models indicate vacuum, but vacuum specification applies to 200 kPa, 1 MPa, and 2 MPa models only.

Not recommended for continuous use below -0.1 MPa. 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**

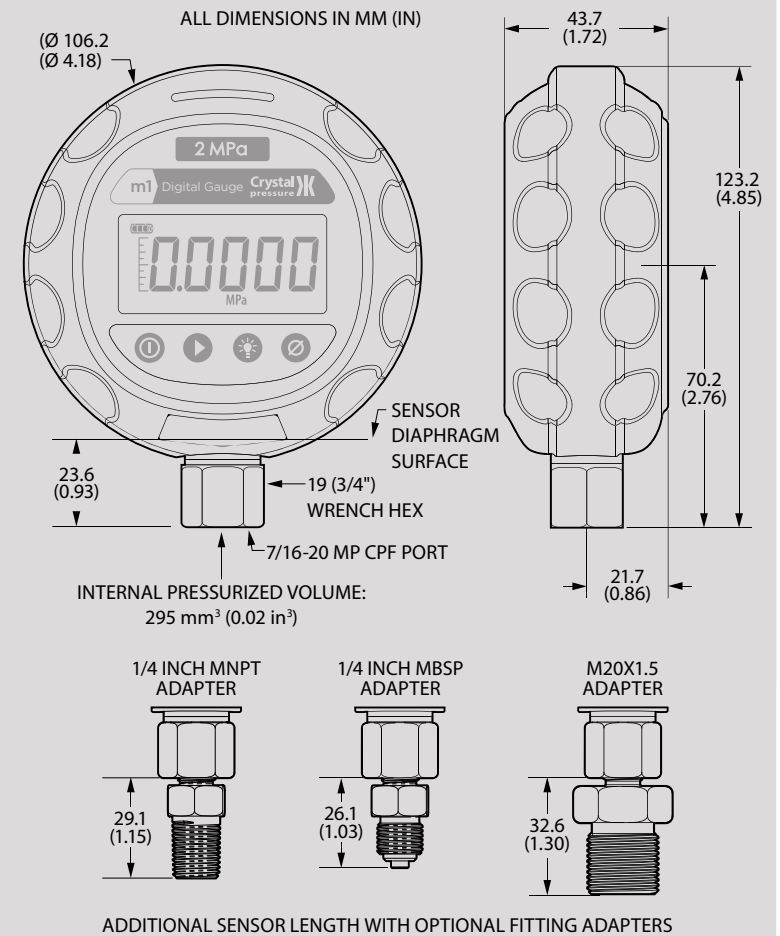
1 reading/30 seconds: 6,000 hours

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 & 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 (MPa)	Over-pressure	Display Resolution			
			MPa	kPa	bar	mbar
200KPA	200 (kPa)	3.0 x		0.01	0.0001	0.1
1MPA	1	2.0 x	0.0001	0.1	0.001	1
2MPA	2	2.0 x	0.0001	0.1	0.001	1
10MPA	10	2.0 x	0.001	1	0.01	
20MPA	20	1.5 x	0.001	1	0.01	
70MPA	70	1.5 x	0.01		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.

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.

SAMPLE PART NUMBERS









M1-2MPA 2 MPa standard gauge, with a 1/4" NPT pressure fitting.

M1-10MPA-BSP 10 MPa gauge, with a 1/4" BSP pressure fitting.

M1-20MPA-CHX-W 20 MPa standard gauge with a System C pump system and a waterproof carrying case.

* MPA 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)		■		P-018-CPF	■	
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)		■		T-1-CPF	■	
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		■