

ACCURACY

0 to 20% of Range: **±(0.04% of Full Scale)**

20% to 110% of Range: **±(0.2% of Reading)**

Vacuum: **±(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**

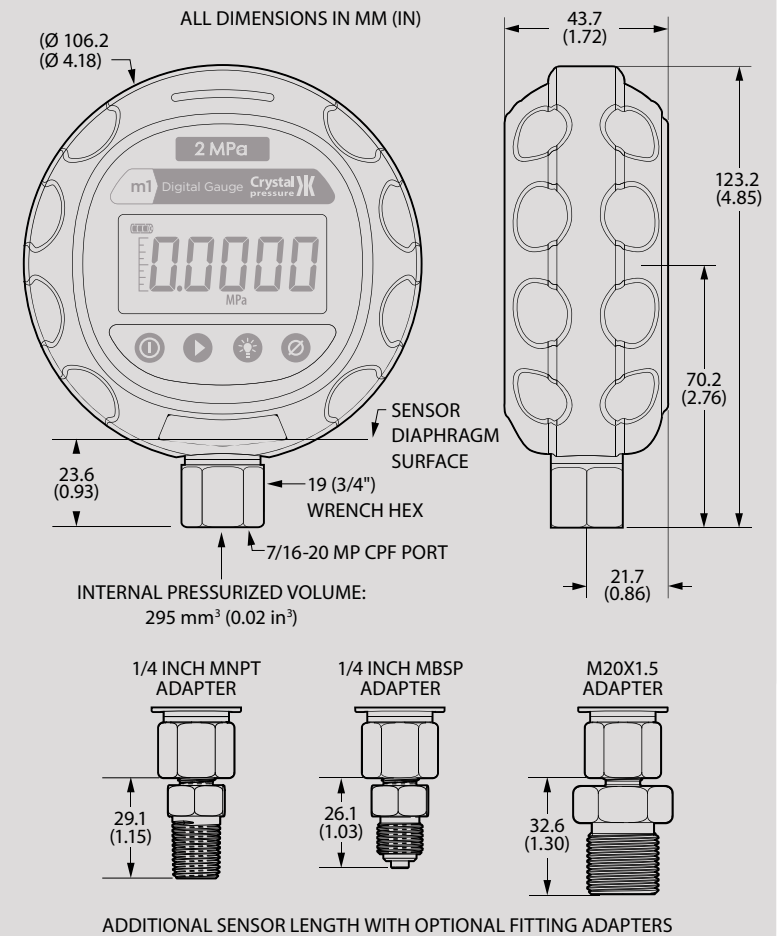
1 reading/30 seconds: 6,000 hours

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.



ENCLOSUREWeight: **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.

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	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 200 kPa-AXX	Full (omit)	Aluminum ... (omit)
		M20x1.5 ...-M20	BSP Kit (4015) ...-B	System A (pneumatic) 0 to 4 MPa-AHX	Drained..... -E	Waterproof..... -W
				System B (pneumatic) -91 to 200 kPa-BXX		
				System B (pneumatic) -91kPa to 4 MPa-BHx		
				System C (oil) 0 to 20 MPa-CXX		
				System C (oil) 0 to 35 MPa-CHX		
				System D (oil) 0 to 35 MPa-DOX		
				System D (water) 0 to 35 MPa-DWX		
				System E (oil) 0 to 70 MPa-EOX		
				System F (oil) 0 to 100 MPa-FOV		
				System F (water) 0 to 100 MPa-FWV		
				System G (oil) 0 to 100 MPa-GOX		
				System G (water) 0 to 100 MPa-GWX		
				System H (oil/pneumatic) -91 kPa to 4 MPa and 0 to 35 MPa-HOX		

* CPF Fitting Kits can **only** be ordered as part of a Pump System. All fittings are rated to 70 MPa, with the exception of the MPF-1/2QTF rated to 35 MPa.

** 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

- M1-2MPa 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-N-CHX-E-W 20 MPa 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.

* MPA versions available in USA direct from factory only.



900 Series



600 Series



P-018-CPF



P014



T-1-CPF



GaugeCalHP

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.
- ▶ **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.
- ▶ **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.
- ▶ **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.

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.

m1 Pressure Gauge MPa

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](#)