



## m1M Pressure Gauge

### ACCURACY – 3 YEAR RECOMMENDED CALIBRATION INTERVAL

0 to 20% of Range:  $\pm(0.05\%$  of Full Scale)

20% to 110% of Range:  $\pm(0.25\%$  of Reading)

Vacuum:  $\pm(0.5\%$  of Full Scale\*)

\* Full Scale = -14.5 psig / -1 bar / -0.1 MPa

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

*All models indicate vacuum, but vacuum specification applies to 300 psi / 20 bar / 2 MPa 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.*



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#### ENCLOSURE

Weight: **331 g (11.7 oz)**  
Rating: **IP65**  
Housing: **Polyester/Polycarbonate Blend**  
Keypad and Labels: **UV Resistant Polyester**

#### 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**

*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.*

*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)**

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#### m1M Pressure Gauge

#### CERTIFICATIONS



m1M complies with the Electromagnetic Compatibility and Pressure Equipment Directives. Refer to the EC Declaration of Conformity for specific details.



m1M is approved for use as a portable test instrument for Marine use and complies with Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft, and Offshore Standards.

**Notes:** The m1M is specified to support a 3 year recommended calibration interval.

Every m1M comes with an ISO 17025 calibration report-NIST-traceable, A2LA accredited (certificate # 2601.01), internationally recognized by ILAC - with test data at 5 temperatures, proving our gauges meet specifications throughout their full temperature range.

Crystal products include a factory calibration report that proves it meets its specifications over the operating temperature range. The products described herein, are calibrated in Crystal's accredited Calibration Lab (A2LA, Certificate #2601.01 ISO/IEC 17025) in an environmental chamber using fully automated equipment. Inclusion of the ILAC-MRA symbol does not imply certification or approval of the product itself, but rather refers to Crystal's accreditation as a calibration facility.



## RANGE & RESOLUTION TABLE

P/N	Range	Overpressure	Display Resolution							
			psi	in Hg	mm Hg	kg/cm <sup>2</sup>	bar	mbar	kPa	MPa
300PSI	300 psi	2.0 x	0.01	0.1	1	0.001	0.001	1	0.1	0.0001
200BAR	20 bar	2.0 x	0.01	0.1	1	0.001	0.001	1	0.1	0.0001
2MPa	2 MPa	2.0 x					0.001	1	0.1	0.0001
3KPSI	3000 psi	1.5 x	0.1	1		0.01	0.01		1	0.001
200BAR	200 bar	1.5 x	0.1	1		0.01	0.01		1	0.001
20MPa	20 MPa	1.5 x					0.01		1	0.001

Refer to the complementary products section on page 4, for additional ranges and accuracies.

## ORDERING INFORMATION

Model	P/N	Adapter Type	Pump System*
M1M			
	Standard:	NPT..... (omit)	No Pump..... (omit)
	Optional:	G 1/4 B ....-BSP	System B (pneumatic) Maritime Kit — 25 inHg to 580 psi ....-BHM
		M20x1.5 ....-M20	System B (pneumatic) -25 inHg to 580 psi .....-BHX
			System C (oil) Maritime Kit — 0 to 3000 psi .....-CXM
			System C (oil) 0 to 3000 psi .....-CXX

\* Refer to the following page for a more detailed description of each Pump System.  
Systems C are delivered without fluid.

### SAMPLE PART NUMBERS

M1M-300PSI ..... 300 psi gauge, with a 1/4" NPT pressure fitting.  
M1M-200BAR-BSP ..... 200 bar gauge, with a 1/4" BSP pressure fitting.  
M1M-3KPSI-CXM ..... 3000 psi gauge with a 1/4" NPT fitting; a System C maritime pump system; and carrying case.

### ► Ordering a Pump System Only

Any pump system, including the carrying case and connection fittings, may be ordered separately from the gauge. Enter M1M-NONE followed by the Pump System part number.

### SAMPLE PART NUMBER

M1M-NONE-BHM ..... System B maritime pump system with a rugged carrying case.

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### PUMP SYSTEMS

► **Systems B...** T-975 Pump (-0.91 to 40 bar/-27 in Hg to 580 psi)

**BHM Maritime System:** Coiled Hose with 1/4" NPT F connection, adapter to 1/4" BSP F, M1M connection fitting, bonded seals, o-ring kit, and rugged carrying case.

**BHX Quick Test CPF System:** CPF hose with 1/4" NPT F and 1/4" BSP F adapters, M1M connection fitting, bonded seals, o-ring kit, and a rugged carrying case.

► **Systems C...** T-620 Pump (200 bar/3000 psi)

**CXM Maritime System:** Standard hose with 1/4" NPT F connection, adapter to 1/4" BSP F, M1M connection fitting, bonded seals, o-ring kit, and rugged carrying case.

**CXX Quick Test CPF System:** CPF hose with 1/4" NPT F and 1/4" BSP F adapters, M1M connection fitting, bonded seals, o-ring kit, and a rugged carrying case.



### ACCESSORIES

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

Protect your m1M from harsh environments with our form fitting chemical resistant thermoplastic boot (Skydrol fluid compatible).

**NPT Hose and Fitting Kit P/N 4016**

Includes: 1/8 NPT [Male (2), Male 90°, Male Quick Test, and Female Quick Test], 1/4 NPT [Male (2), Female, Male Quick Test, and Female Quick Test], 1/2 NPT [Female Quick Test], Tube [1/4 Male, 3/8 Male, and 1/2 Male], AN4 Male, Transmitter [1/4 Male and 5/16 Male], CPF Connectors [Male-Male, T-Union, Plug, and Cap (2)], Hose [1 meter], and Custom Carrying Case.

**BSP Hose and Fitting Kit P/N 4017**

Includes: BSP Female [1/8, 1/4 (2), 3/8, and 1/2], NPT [1/4 Quick Test Female and 1/8 Male (2)], Transmitter [1/4 Male and 5/16 Male], CPF Connectors [Male-Male, T-Union, Plug, and Cap (2)], Hose [1 meter], and Custom Carrying Case.

### COMPLEMENTARY PRODUCTS

AMETEK offers a wide range of DNV certified products for the maritime industry:

- [Fittings that connect without tools, safely and without leaks](#)
- [Lightweight, super flexible high pressure hoses](#)
- [Portable temperature calibrators](#)
- [Intrinsically Safe Digital Test Gauges](#)
- [Intrinsically Safe Reference Recorders](#)
- [Multi-Function Calibrators](#)