

PRESSURE *is* Our BUSINESS



Introducing the next

**BIG THING**

Precision & Performance  
at an **affordable price!**



P R E S S U R E

Actual size!

**DO MORE** WITH LESS

**0.2% of reading accuracy!**

One M1 replaces several ordinary pressure gauges

**Fully compensated!**

No change in accuracy from -10°C (14°F) to 50°C (122°F)

**Easy to read 5 digit display!**

Large 17mm (0.66") numbers with a bright backlight

**Up to 30,000 hours of service!**

Runs on just two AA alkaline batteries

Housing and boot are compatible with many industrial fluids including Skydrol®



Crystal Engineering designed and manufactures the M1. Our gauges are tested and calibrated inside environmental test chambers using computer controlled pressure controllers. Every M1 comes with a certificate with calibration data at -10°C, 15°C, 25°C, 35°C and 50°C. We have devoted over 20 years to the engineering and manufacturing of pressure calibrators, pressure gauges and pressure measuring equipment for industries worldwide.

[www.crystalengineering.net](http://www.crystalengineering.net)

**CRYSTAL**  
engineering corporation



# SPECIFICATIONS

## ACCURACY

**20% to 100% of Full Scale:**  
±(0.2% of Reading).

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

**Vacuum, for 2MPa (300 PSI, 20 bar, 20kg/cm<sup>2</sup>) and lower pressure gauges:**

0 to -99.9 kPa (-14.5 PSIG):  
±(0.25% of Full Scale),  
where F.S.: -99.9 kPa (-14.5 PSIG).  
Not recommended for continuous use at high vacuum.

## TEMPERATURE

**Operating & Compensated:**  
-10°C to 50°C (14°F to 122°F).

No change in accuracy over operating temperature range.  
Gauge must be zeroed to achieve rated specification.

**Storage:** -40°C to 75°C (-40°F to 167°F).

## ENCLOSURE

**Description:** Water resistant housing incorporating o-ring seals. Polyester/ Polycarbonate blend compatible with common industrial fluids, including Skydrol.

**Weight:** 325g (11.5 oz).  
including batteries and protective boot.

## CONNECTIONS

**Pressure Connection:** 1/4" NPT or G 1/4 B (BSP parallel fitting).

## DISPLAY

**Numeral Height:** 16.8mm (0.66").

**Description:** 5 full digits.

**Display Rate:** 4 readings/second.

## SENSOR

Piezoresistive silicon sensor with permanent oil isolation system and integral filter.

316 stainless steel welded (not brazed) sensor. No o-rings, thread tape, epoxy or sealant on any part of sensor assembly.

## POWER

**Battery:** Two AA alkaline (LR6) batteries.

**Standard Battery Life:** 900 hours at 4 readings/second.

**Extended Battery Life:**

- 1 reading/15 seconds ... **3,000 hours**
- 1 reading/30 seconds ... **6,000 hours**
- 1 reading/1 minute ... **10,000 hours**
- 1 reading/5 minutes ... **25,000 hours**
- 1 reading/10 minutes ... **30,000 hours**

1/4" NPT

G 1/4 B

## MEDIA COMPATIBILITY

Liquids and gases compatible with 316 stainless steel.

Available cleaned for oxygen service.

## OVER SCALE LIMIT

Display will flash at 110% of Full Scale.


## ADDITIONAL FEATURES

**Vertical bar graph**

**Minimum (LO) & maximum (HI) capture**

**Averaging**

(2 to 20 samples).

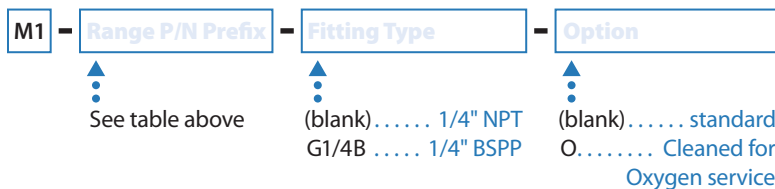
 Specifications include linearity, hysteresis, repeatability, temperature and stability for one year.

# ORDERING INFORMATION

Pressure Units and Resolution				Over-pressure	Pressure Units and Resolution										
PSI <sup>1</sup>	Pa <sup>2</sup>	bar <sup>1</sup>	kg/cm <sup>2</sup> <sup>1</sup>		PSI	kPa	MPa	bar	mbar	kg/cm <sup>2</sup>	inch H <sub>2</sub> O <sup>3</sup>	inch Hg	mm H <sub>2</sub> O	mm Hg	
30PSI	200KPA	2BAR	2KG	3.0 x	0.001	0.01		0.0001	0.1	0.0001	0.1	0.01	1	0.1	
100PSI	1MPA	10BAR	10KG	2.0 x	0.01	0.01	0.0001	0.001	1	0.001	0.1	0.01		1	
300PSI	2MPA	20BAR	20KG	2.0 x	0.01	0.1	0.0001	0.001	1	0.001		0.1		1	
1KPSI	10MPA	100BAR	100KG	2.0 x	0.1	1	0.001	0.01		0.01		0.1			
3KPSI	20MPA	200BAR	200KG	1.5 x	0.1	1	0.001	0.01		0.01		1			
10KPSI	70MPA	700BAR	700KG	1.5 x	1		0.01	0.1		0.1		1			

- 1 PSI, BAR and KG/CM2 versions can display all available pressure units. 2 KPA/MPA versions can display pressure in kPa, MPa, bar, and mbar only.
- 3 Density of water can be set to 4°C, 60°F or 20°C /68°F with the keypad. 4 Applies to 100PSI gauge. 1MPa, 10BAR and 10KG units will be 0.1 PSI.
- 5 Disabled for 1MPa, 10BAR and 10KG units.

## M1 PART NUMBERING SYSTEM



## SAMPLE PART NUMBERS

- M1-300PSI**  
A 300 PSI gauge with the 1/4" (male) NPT connection fitting
- M1-200KPA-G1/4B**  
A 200 kPa gauge with the G 1/4 B (BSPP) connection fitting
- M1-20BAR-G1/4B-O**  
A 20 bar gauge with the G 1/4 B (BSPP) connection fitting and cleaned for oxygen service



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