

# MSP 5100

## Heavy Duty Pressure Sensor

(CE Logo) <NEW>

The **M5100 series** from Measurement Specialties Inc., sets the price / performance standard for transducers used in demanding environments.

The M5100 meets the latest Heavy Industrial CE requirements, including surge protection and is over voltage protected to 16V DC in both positive and reverse polarity.

The pressure port is machined from a solid piece of 17-4PH stainless steel (316L optional), there are no O-rings, organics or welds exposed to the pressure media. This allows for a leak proof, all-metal sealed pressure system which withstands more than 10 million pressure cycles without failure.



### Features

- Heavy Industrial CE Approval
- 100 V/m
- Reverse Polarity Protection
- Extended temperature range
- 1.5% Total Error Band
- Compact Outline

### CE Compliant per the following specifications

EN55022 Emissions Class A & B  
 IEC61000-4-2 Electrostatic Discharge Immunity (6kv contact/8kv air)  
 IEC61000-4-3 EM Field Immunity (30V/m)  
 IEC61000-4-4 Electrical Fast Transient Immunity (1kv)  
 IEC61000-4-5 (1kv) Surge  
 IEC61000-4-6 Conducted Immunity (10V)  
 IEC61000-4-9 Pulsed Magnetic Field Immunity (100A/m)  
 Automotive EM field immunity 100V/m 80 MHz to 1 GHz

### Applications

- Advanced HVAC Controllers
- Refrigeration Systems
- Automotive
- Gas compressors
- Industrial process control

### Environmental Performance

Operating Temp Range	-40 to 125 °C - 40 to +85 °C (4-20 mA)
Compensated Temp Range	-20 to 85 °C
Total Error Band	+/- 1% FS over compensated range (+/- 1.5% typical over extended range)
Vibration	20G at 20 to 200 Hz
Shock	200 G / 11ms

**PRELIMINARY**

## Output Options

Code	Output	Supply
3	0.5 to 4.5 V ratiometric	4.75 to 5.25 V
4	1 to 5 V	10 – 30 V
5	4 – 20 mA	10 – 30 V

## Ordering Information

Model	Output	Connection	Options	Pressure Port	Pressure Range/Units	Pressure Reference
M51	3= 0.5 to 4.5 V	1 = 2 ft cable	- 00000	2= 1/4 BSP	100P= 100 psi	007B= 7 Bar
	4= 1 to 5 V	4= Packard		4= 7/16-20 UNF	200P= 200 psi	010B= 10 Bar
	5= 4 to 20 mA	5= Metripak 150		Male, O-ring	300P= 300 psi	020B= 20 Bar
		6= Bendix	5= 1/4-18 NPT	500P= 500 psi	035B= 35 Bar	
		5= Min-Hirschman	P= 7/16-20 female		01KP= 1000 psi	070B= 70 Bar
		6= DIN 43650			03KP= 3000 psi	200B= 200 Bar
					05KP= 5000 psi	350B= 350 Bar
			Fill options alphabetically from left	W= 316L wetted material		
	X= Special Output	X= Special connection	1nnnn = custom drawing number	X= Special Port		

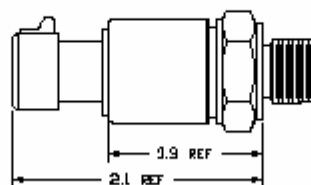
Consult Factory for special options or non-standard part numbers

## static performance specifications

Pressure range	See ordering information table. For custom ranges consult factory.
Accuracy	+/- 0.25% FS BFSL
Zero setting	+/- 0.5 % FS
Span setting	+/- 0.5 % FS
Media compatibility	Fluids compatible with 17-4 PH stainless steel (316L optional)
Pressure cycles	> 10 million
Pressure overload	2 times rated pressure without calibration shift
Burst pressure	5 times rated pressure
Long Term Stability	+/- 0.25% FS typical (12 months)

## mechanical dimensions

Pin A: +Excitation  
Pin B: Return  
Pin C: +Output



PRELIMINARY