

Miniature

18mm MONOLITHIC CERAMIC PRESSURE CAPSULE

PTiM18 Series



- Pressure Ranges 0-2bar to 0-400bar
- Vented Gauge
- One-Piece Construction
- Low Cost
- Low Operating Current
- Excellent Price/Performance Ratio
- Designed for OEM applications
- 3 YEAR WARRANTY

Options Available

Alternative electrical connections

Specific packaging of the capsule undertaken on request

DESCRIPTION

The PTiM18 series of Monolithic Ceramic Pressure Capsules offers a high performance, low cost pressure sensing element available in standard pressure ranges from 0-2bar to 0-400bar.

Manufactured from high purity Al_2O_3 alumina ceramic, the diaphragm material possesses extraordinary chemical and abrasion resistance, making it unrivalled for use with virtually any pressure medium.

The sensor is manufacture from a single piece of alumina ceramic which minimises manufacturing costs and provides a very competitively priced OEM pressure sensing option.

The diaphragm of the sensing element has a balanced four-active-arm wheatstone bridge fused onto it's inner face. This direct fusion, with the absence of traditional bonding agents, ensures excellent long term stability and repeatability together with a high output and practically no thermal hysteresis.

Excellent linear thermal characteristics are provided by the high impedance bridge network which means that the sensor is especially suited for work in low current consumption applications, such as battery operation.

The PTiM18 series is available in vented gauge format only. We can offer guidance on selection and application if required.

Transducer Specialists...

APPLIED MEASUREMENTS LIMITED

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SPECIFICATION

CHARACTERISTICS	PTIM18	UNITS
Pressure Ranges:	0-2, 0-5, 0-10, 0-20, 0-50, 0-100, 0-200, 0-400	bar
Operational Mode:	Vented Gauge	
Sensitivity (Rated Output):	1.6 - 5.5 \pm 30% (dependent on capsule range)	mV/V
Zero Offset	\pm 0.2 typ.	mV/V
Excitation Voltage:	5 -30 (10 recommended)	Vdc
Combined Error:	$<$ \pm 0.75	% of Rated Output (BFSL)
Overpressure Capability:	150	% of Pressure Range
Burst Pressure:	200	% of Pressure Range
Temperature Range (Operating):	-40 to +135	$^{\circ}$ C
Temperature Effects On Output:	$<$ 0.01	\pm % of Rated Output/ $^{\circ}$ C
On Zero:	$<$ 0.04	\pm % of Rated Output/ $^{\circ}$ C
Bridge Impedance:	11K \pm 20%	ohms
Media Compatibility:	Any Gas or Fluid compatible with Alumina Ceramic (AL ₂ O ₃)	
Response Time:	$<$ 1.0	milliseconds
Stability:	0.2	%/Rated Output/Annum

All dimensions in mm

Outline Drawing

