



SMI PRESSURE SENSORS FOR LOW PRESSURE SENSING

There's an increasing demand for lower pressure sensing capabilities in industrial and medical markets. From HVAC and gas flow, to continuous positive airway pressure (CPAP), ventilation, and patient monitoring applications, the ability to detect small pressure changes is critical. This demand requires pressure sensors to be highly accurate and provide long-term stability in robust, compact packages.

SMI pressure sensors from TE Connectivity (TE) offer some of the lowest pressure sensing ranges available. These sensors enable ultra-low and low pressure sensing using piezoresistive technology with signal processing to provide a compensated output. Optimized for miniature devices, SMI pressure sensors are packaged in a compact, robust housing. The lightweight design of these sensors enables medical devices to become more compact and portable, and large industrial equipment to be made smaller and smarter.

- MEDICAL
- INDUSTRIAL

DESIGN-IN QUESTIONS

- What value pull-up resistor is needed for I²C digital output?
- Can you use 3.3V option with a 5V power supply?
- What is the wash protocol?
- What is the solder temperature and protocol?

LEARN MORE



SMI PRESSURE SENSORS

SMI LOW PRESSURE SENSORS

Series	Max Pressure Range	Pressure Type	Output	Accuracy	Supply Voltage	Compensated Temperature Range*	Package & Porting Options
Ultra-Low Pressure SM9000	125 to 600 Pa	Differential or Gage	16-bit I ² C	±1.0% FS (after Autozero)	3.3 or 5 V	-20 to +85°C	JEDEC SOIC-16 Dual Vertical or Horizontal
Low Pressure SM7000 SM6000 SM5000	0.07 to 0.29 PSI		16-bit I ² C and / or Amplified Analog	±1.0% FS (Digital)			JEDEC SOIC-16 Single or Dual Vertical or Horizontal
	0.3 to 0.79 PSI						
	0.8 to 2.49 PSI						
Medium Pressure SM4000 SM1000	2.5 to 14.9 PSI		±1.5% FS (Analog)	JEDEC SOIC-16 Single or Dual Vertical or Horizontal OR JEDEC SOIC-10 Single Vertical			
	15 to 30 PSI						

*Standard configuration, further ranges available

ULTRA-LOW PRESSURE CAPABILITIES

- Highly sensitive sensing elements detect minimal changes in pressure down to 125 Pa (0.5 inH₂O)

PRECISE MEASUREMENTS WITH ADAPTABLE OUTPUT SIGNAL

- Dual output signal (digital and analog)
- Up to 1% FS total error band
- Long-term stability confirms accurate measurements over time

MINIMAL FOOTPRINT

- Small, lightweight unibody package design
- Vertical or horizontal porting options ease system integration

Package Configurations



SOIC-16 Dual Vertical



SOIC-16 Dual Horizontal



SOIC-16 Single Horizontal



SOIC-16 Single Vertical



SOIC-10 Single Vertical