



Electronic pressure sensor **PM1607**

URL: <https://www.sxplc.com/electronic-pressure-sensor-pm1607>

Product data sheet

Product characteristics			
Number of inputs and outputs	Number of digital outputs: 1, Number of analog outputs: 1		
Measuring range	-0.05...1 bar	-50...1000 mbar	-0.73...14.5 psi
Process connection	threaded connection G 1 external thread sealing cone		
Application			
System	gold plated contacts		
Measuring element	ceramic-capacitive pressure measuring cell		
Temperature monitoring	no		
Application	flush mountable for the food and beverage industry		
Media	viscous media and liquids with suspended particles, liquids and gases		
Medium temperature [°C]	-25...150		
Min. bursting pressure	20000 mbar	435 psi	2000 kPa
Pressure rating	10000 mbar	145 psi	1000 kPa
Vacuum resistance [mbar]	-1000		
Type of pressure	relative pressure		
No dead space	yes		
MAWP (for applications according to CRN) [bar]	10		
Electrical data			
Operating voltage [V]	18...30 DC		
Min. insulation resistance [MΩ]	100 (500 V DC)		
Protection class	III		
Reverse polarity protection	yes		
Measuring principle	hydrostatic		
Integrated watchdog	yes		
2-wire			
Current consumption [mA]	0.5...21.5		
Power-on delay time [s]	1		
3-wire			
Current consumption [mA]	< 45		
Power-on delay time [s]	0.5		
Inputs / outputs			
Number of inputs and outputs	Number of digital outputs: 1, Number of analog outputs: 1		
Outputs			
Total number of outputs	2		
Output signal	analog signal, IO-Link, (configurable)		
Number of digital outputs	1, (IO-Link)		
Number of analog outputs	1		
Analog current output [mA]	4...20 (scalable)		
Max. load [Ω]	700 (UB = 24 V, (UB - 9 V) / 21.5 mA)		
Short-circuit proof	yes		
Overload protection	yes		
Measuring/setting range			
Measuring range	-0.05...1 bar	-50...1000 mbar	-0.73...14.5 psi
Analog start point	-50...800 mbar	-0.73...11.6 psi	-5...80 kPa
Analog end point	150...1000 mbar	2.18...14.5 psi	15...100 kPa
In steps of	0.5 mbar	0.01 psi	0.05 kPa
Factory setting	ASP = 0.0 bar	AEP = 1000 mbar	
Accuracy / deviations			
Repeatability [% of the span]	< ± 0.1, (with temperature fluctuations < 10 K, Turn down 1:1)		
Characteristics deviation [% of the span]	< ± 0.2, (linearly incl. hysteresis and repeatability, limit value setting to DIN EN IEC 62828-1)		
Linearity deviation [% of the span]	< ± 0.15, (Turn down 1:1)		
Hysteresis deviation [% of the span]	< ± 0.15, (Turn down 1:1)		
Long-term stability [% of the span]	< ± 0.1, (Turn down 1:1; per year)		
Total deviation over temperature range	Temperature range	total deviation	
	25...15 °C	Characteristics deviation ± 0.05 % of the span / 10 K	
	15...80 °C	Characteristics deviation	
	80...150 °C	Characteristics deviation ± 0.1 % of the span / 10 K	
Notes on the accuracy / deviation	for further details see section Diagrams and graphs		
Reaction times			
Damping for the analog output dAA [s]	0...4		
2-wire			
Step response time analog output [ms]	30		
3-wire			
Step response time analog output [ms]	7		
Interfaces			
Communication interface	IO-Link		
Transmission type	COM2 (25.4 kbaud)		
IO-Link revision	1.1		
IO-Link standard	IEC 61131-9		
Profiles	Digital Measuring Sensor (DiM00A), Identification and Diagnosis (DiA000)		
SD mode	no		
Required master port class	A		
Process data analog	3		
Min. process cycle time [ms]	3.2		
IO-Link resolution pressure [mbar]	0.2		
IO-Link process data (cyclical)	Function	bit length	
	pressure	16	
	device status	4	
IO-Link functions (acyclical)	application specific tag, internal temperature		
Supported DeviceIDs	Type of operation	DeviceID	
	default	668	
Operating conditions			
Ambient temperature [°C]	-25...80		
Storage temperature [°C]	-40...100		
Protection	IP 67, IP 68, IP 69K		
Tests / approvals			
EMC	DIN EN 61000-4-2 DIN EN 61000-6-3		
Shock resistance	DIN EN 60068-2-27 50 g (11 ms)		
Vibration resistance	DIN EN 60068-2-6 20 g (10...2000 Hz)		
MTTF [years]	323		
Note on approval	Factory certificate available as download at www.factory-certificate.fm		
UL approval	UL approval number J022		
Mechanical data			
Weight [g]	338.45		
Material	stainless steel (1.4404 / 316L), PBT		
Materials (wetted parts)	ceramics (99.9 % Al ₂ O ₃); stainless steel (1.4435 / 316L), surface characteristics: Ra < 0.4 / Rz 4, PTFE		
Min. pressure cycles	100 million		
Tightening torque [Nm]	20		
Process connection	threaded connection G 1 external thread sealing cone		
Remarks			

