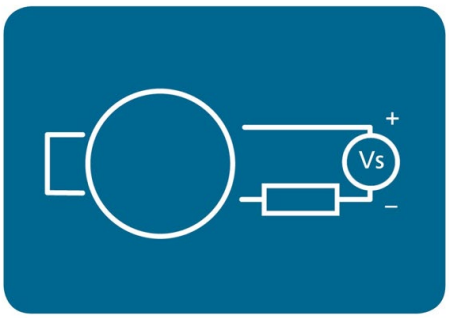
PTX19 MKII PRESSURE TRANSMITTER

- MEASURING RANGE (0 .05 to 1000) bar
- HIGH TEMPERATURE STABILITY
- ATEX GAS & DUST APPROVED VERSION
- 2 WIRE (4 to 20) mA OUTPUT
- COMPACT AND ROBUST



INTRODUCTION

The PTX19 is a high quality 2 wire pressure transmitter providing a 2 wire (4 to 20) mA output over a wide pressure range. The piezoresistive element provides excellent accuracy and stability in an all-welded stainless-steel housing. The body of the product is oil-filled and coupled with high accuracy electronics. This enables the product to maintain a very high level of accuracy and temperature stability when used with high temperature processes. There are several process connections to choose from, and measurement ranges of any value between 50 mbar to 1000 bar can be ordered, making the PTX19 a very versatile product, suitable for many applications.

FEATURE HIGHLIGHTS

TANK LINEARISATION (SEM1600VI)
When used with products like the Status Instruments SEM1600VI conditioning block (the SEM1600VI can also provide power for the PTX19), a user non-linear curve can be applied to the (4 to 20) mA signal to allow for volume measurement in non-linear shaped tanks.

FLEXIBLE
Any range between (0 to 0.05) bar and (0 to 1000) bar can be selected with 100 mbar the smallest span available. Absolute and gauge options are both available.

WIDE TEMPERATURE RANGE
Options for use with high temperature mediums up to 150 °C are possible. The lowest temperature medium can be as low as -40 °C.

ALARM RELAYS (SEM1636)
When the PTX19 is used with products like the Status Instruments SEM1636 (4 to 20) mA loop powered alarm, two independent alarm trips can be used. The SEM1636 can also be linearised for non-standard tanks.

MEASURING RANGE (BAR)			**SPECIFICATIONS @20°C**
Options	**(0 to 0.05) to (0 to <0.1)**	**(0 to 0.1) to (0 to <1)**	**(0 to 1) to (0 to <100)**
Overpressure (Proof)	3 bar	3 bar	3 x FS
Burst pressure	>200 bar	>200 bar	>200 bar
Accuracy*[3] (± %FS)	≤ 0.25	≤ 0.25 / ≤ 0.1	≤ 0.2 / ≤ 0.1 / ≤ 0.05
Total Error*[4,5] (± %FS; typ. / max.)			
(0 to 70) °C compensated Allowed process (-40 to125)°C	≤ 0.4 / 0.6	≤ 0.2 / 0.4	≤ 0.15 / 0.3
(-25 to 100) °C compensated Allowed process (-40 to125)°C	≤ 0.5 / 0.7	≤ 0.3 / 0.5	≤ 0.2 / 0.4
(-40 to 100) °C compensated Allowed process (-40 to150)°C*[2]	≤ 0.7 / 1.0	≤ 0.4 / 0.7	≤ 0.3 / 0.6
Response time, (typ.)	< 1ms / 10 to 90 % FS	< 1ms / 10 to 90 % FS	< 1ms / 10 to 90 % FS
Long term stability, (typ./max. per year)	< 1 mbar / < 2 mbar	< 1 mbar / < 2 mbar	< 0.1% FS / < 0.2% FS

MEASURING RANGE (BAR)			**SPECIFICATIONS @20°C**
Options	**(0 to 100) to (0 to <600)**	**(0 to 600) to (0 to <1000)**	**(0.8 to 1.2*[1])**
Overpressure (Proof)	3 x FS (≤ 850 / ≤ 1500 bar)	≤ 850 / ≤ 1500 bar	3 x FS
Burst pressure	> 850 / > 1500 bar	> 850 / > 1500 bar	>200 bar
Accuracy*[3] (± %FS)	≤ 0.2 / ≤ 0.1	≤ 0.2	≤ 0.2 / ≤ 0.1
Total Error*[4,5] (± %FS; typ. / max.)			
(0 to 70) °C compensated Allowed process (-40 to125)°C	≤ 0.3 / 0.5	≤ 0.4 / 0.6	≤ 0.2 / 0.4
(-25 to 100) °C compensated Allowed process (-40 to125)°C	≤ 0.5 / 0.7	≤ 0.7 / 1.0	≤ 0.3 / 0.5
(-40 to 100) °C compensated Allowed process (-40 to150)°C*	≤ 0.7 / 0.9	≤ 1.0 / 1.2	≤ 0.4 / 0.7
Response time, (typ.)	< 1ms / 10 to 90 % FS	< 1ms / 10 to 90 % FS	< 1ms / 10 to 90 % FS
Long term stability, (typ./max. per year)	< 0.1% FS / < 0.2% FS	< 0.1% FS / < 0.2% FS	< 1 mbar / < 2 mbar

MEASURING RANGE (BAR)			**SPECIFICATIONS @20°C**
Options	**(-0.025 to 0.025) to (-0.1 to <0.1)**	**(>-0.1to >0.1) to (-0.5 to 0.5)**	**(>-0.5 to 0.5) to (-1 to 100)**
Overpressure (Proof)	3 bar	3 bar	3 bar / 3 x FS
Burst pressure	>200 bar	>200 bar	>200 bar
Accuracy*[3] (± %FS)	≤ 0.25	≤ 0.2 / ≤ 0.1	≤ 0.2 / ≤ 0.1
Total Error*[4,5] (± %FS; typ. / max.)			
(0 to 70) °C compensated Allowed process (-40 to125)°C	≤ 0.4 / 0.6	≤ 0.2 / 0.4	≤ 0.15 / 0.3
(-25 to 100) °C compensated Allowed process (-40 to125)°C	≤ 0.5 / 0.7	≤ 0.3 / 0.5	≤ 0.2 / 0.4
(-40 to 100) °C compensated Allowed process (-40 to150)°C*	≤ 0.7 / 1.0	≤ 0.4 / 0.7	≤ 0.3 / 0.6
Response time, (typ.)	< 1ms / 10 to 90 % FS	< 1ms / 10 to 90 % FS	< 1ms / 10 to 90 % FS
Long term stability, (typ./max. per year)	< 1 mbar / < 2 mbar	< 1 mbar / < 2 mbar	< 0.1% FS / < 0.2% FS

*[1]Typical barometric pressure range, max. offset: 900 mbar, min. span: 400 mbar
*[2] With cooling fins

*[3]Zero based accuracy according to EN-61298, incl. hysteresis and repeatability at ambient temperature
*[4]Total error including accuracy and temperature influences at maximum signal span (16 mA)
For compensated temperature ranges refer to tables above, for ATEX ranges see ATEX table below
Pressure type; Gauge (≤25 bar), Absolute, Sealed gauge (>10 bar)

OUTPUT		**SPECIFICATIONS @20°C**
Type/options	**Range**	**Accuracy/stability/notes**
(4 to 20) mA two wire		Accuracy included in input values
Supply voltage, normal	(9 to 33) Vdc	SELV
Supply voltage, ATEX	(9 to 28) Vdc	
Supply influence		<0.05 % FS
Load resistance		Load = $\frac{(V\ supply - 9)}{0.02\ A}$
Load resistance influence		<0.05 % FS
Reverse polarity protection		Yes

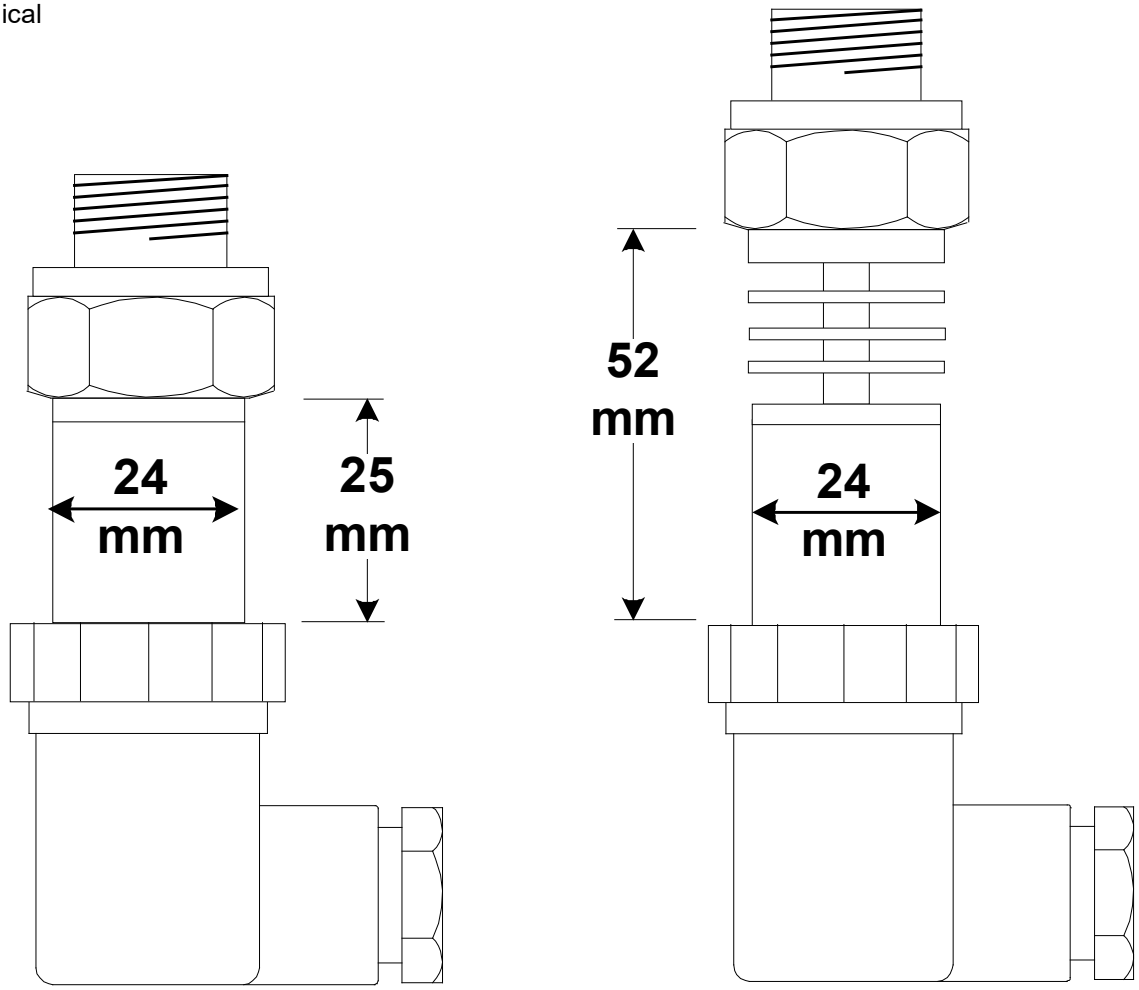
AMBIENT	
Operating temperature	(-40 to 125) °C
Process temperature	(-40 to 150) °C
Storage temperature	(-40 to 125) °C

MECHANICAL	
Diaphragm, process connection and housing	Stainless Steel 316L
Connector	DIN 43650 IP65
Seals	Viton
Weight and weighted option	210 g and 470 g
Cable	PUR, FEP (Teflon)

APPROVALS	
Vibration	EN 60068-2-6
Shock	EN 60068-2-27
Emission, Class B	EN55022
Generic immunity	EN 61000-4-2
Electrostatic discharge	EN 61000-4-3
Fast transients (burst)	EN 61000-4-4
Surge	EN 61000-4-5
Conducted radio-frequency	EN 61000-4-6

ATEX VERSION Ex-Approval gas/dust			
II 2 G Ex ia IIB T6…T3 Gb II 1 D Ex ia IIIC T_{200} 160 °C Da I M2 Ex ia I Mb			
Temperature class	T6	T4	T3
Ambient temperature Ta	(-40 to 50) °C	(-40 to 85) °C	(-40 to 125) °C
Process temperature	(-40 to 50) °C	(-40 to 110) °C	(-40 to 150) °C With cooling fins

Mechanical



ORDER CODE PTX19 MKII

	PTX19 MKII						
0 = non ATEX X = ATEX							
A = Absolute G = Gauge							
Pressure Connection: 1/4" BSP Female pressure fitting 1/2" BSP Male flush diaphragm 1/4" BSP Male pressure fitting 1/2" BSP Male pressure fitting 1/2" NPT Male pressure fitting 1/4" NPT Male pressure fitting		1 2 5 7 8 9					
Pressure range (low to high) bar			(xx to xx) bar				
OPTIONS Temperature range (0 to 70) °C compensated (allowed medium temperature (-40 to 125) °C Seals FKM Extended temperature range (-25 to100) °C compensated. Allowed medium temperature (-40 to 125) Extended temperature range (-25 to100) °C compensated. Allowed medium temperature (-40 to 150) °C With cooling fins Ranges over 600 Bar Negative Ranges Range 50 mbar to <100 mbar Special oil filling (Food drinking water applications) Special oil filling (PAO4 Silicon Free) Seals NBR (Food drinking water applications) Seals Kalrez (must have FEP cable) Seals EDPM Titanium body Other Options FEP cable, Diaphragm seals Hygienic, Tri-clamp etc.						Standard Standard /1 /1b /1c /1d /1e /1f /1g /1h /1i /1j /1k	Refer to sales
Example: Non ATEX, Gauge, 1/2" BSP Male flush diaphragm, Extended temperature range, NBR Seals, Note: Pressure ranges can be quoted in other units than bar if preferred							
	PTX19 MKII	**0**	**G**	**2**	**(0 to 5) bar**	**/1a /1h**	

To maintain full accuracy annual calibration is required: Contact sales@status.co.uk for details
The data in this document is subject to change. Status Instruments assumes no responsibility for errors

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