

PTX20 SUBMERSIBLE PRESSURE TRANSMITTER

- MEASURING RANGE (0 to 1) mH₂O to (0 to 250) mH₂O
- HIGH TEMPERATURE STABILITY
- ATEX GAS & DUST APPROVED VERSIONS
- 2 WIRE (4 to 20) mA OUTPUT
- REVERSE POLARITY AND SHORT CIRCUIT PROTECTION

➤ INTRODUCTION

The PTX20 is a high-quality level 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. A titanium housing is available on request for more aggressive process media. 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 open and closed versions to choose from, and a ballast weight can be specified too. Measurement ranges of any value between 1 mH₂O to 250 mH₂O can be ordered, making the PTX20 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 PTX20), 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.

WEIGHTED OPTION

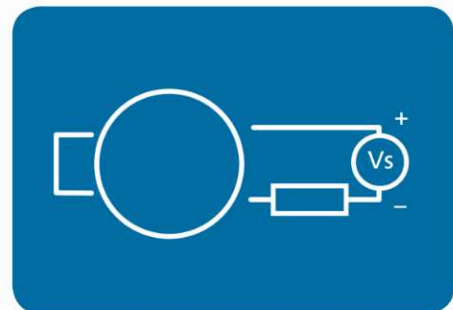
A weighted option is available for use in flowing or turbulent applications to help keep the PTX20 in place.

OPEN OR CLOSED END

For added protection for use in environments where debris or solids may be present, a closed-end version is available to protect the sensor diaphragm.

ALARM RELAYS (SEM1636)

When the PTX20 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.



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ELECTRICAL INPUT		SPECIFICATIONS @20°C
Type/Range	Notes	Error/stability
Within (0 to 1) to (0 to 5) mH2O	Over pressure	3 bar
Within (-5 to 50) °C	(Typical/Maximum)	$\leq \pm (1.0/1.5) \% FS^{*1}$
Within (50 to 80) °C	(Typical/Maximum)	$\leq \pm (2.0/2.5) \% FS^{*1}$
Long term stability	1 year (Typical/Maximum)	< 0.5% FS/<4 mbar
Within (0 to 5) to (0 to 20) mH2O	Over pressure	3 x FS (≥ 3 bar)
Within (-5 to 50) °C	(Typical/Maximum)	$\leq \pm (0.7/1.0) \% FS^{*1}$
Within (50 to 80) °C	(Typical/Maximum)	$\leq \pm (1.0/1.5) \% FS^{*1}$
Long term stability	1 year (Typical/Maximum)	< 0.2% FS/<4 mbar
Within (0 to 20) to (0 to 250) mH2O	Over pressure	3 x FS
Within (-5 to 50) °C	(Typical/Maximum)	$\leq \pm (0.7/1.0) \% FS^{*1}$
Within (50 to 80) °C	(Typical/Maximum)	$\leq \pm (1.0/1.5) \% FS^{*1}$
Long term stability	1 year (Typical/Maximum)	< 0.1% FS/<0.2% FS
Burst pressure		>200 bar
Response time	<1 ms	(10 to 90) % FS
FS = Full scale input range		
*1 Total error including accuracy and temperature influences at maximum signal span (16 mA / 10 V DC)		

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 = $\frac{V_{\text{supply}} - 9}{0.02 A}$
Load resistance influence		<0.05 % FS
Reverse polarity protection		Yes

AMBIENT	
Operating temperature	(-5 to 80) °C*1
Process temperature	(-5 to 80) °C*1
Storage temperature	(-40 to 80) °C*1
*1 For temperatures > 50 °C Teflon cable must be used	

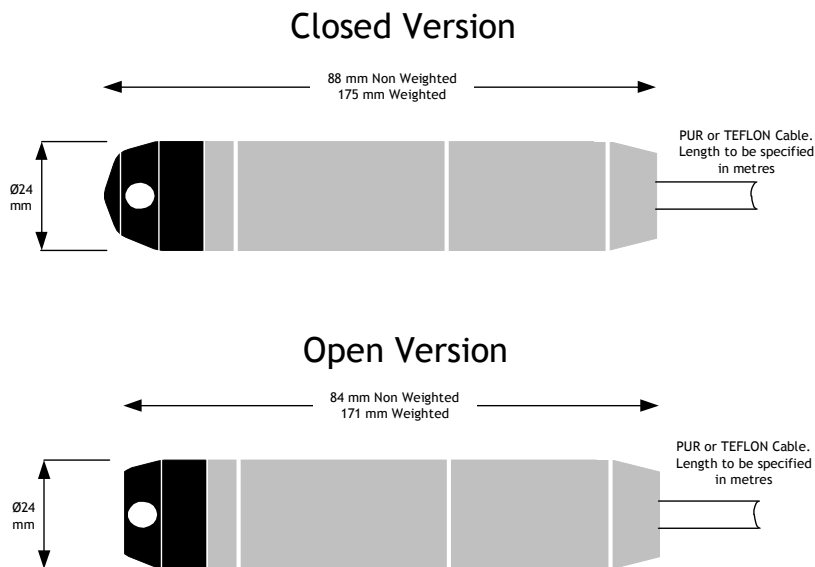
MECHANICAL	
Transducer and housing	Stainless Steel 316L/1.4435 and Stainless Steel 316L/1.4404
Seals	Viton
Weight and weighted option	210 g and 470 g
Cable	PUR, FEP (Teflon)

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

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ATEX VERSION			
Ex-Approval gas/dust			
II 1G Ex ia IIB / IIC T3...T6			
II 1D Ex iaD 20 IP6x T145...T70 °C			
Temperature class	T6	T4	T3
Ambient temperature Ta	(-5 to 50) °C	(-5 to 80) °C	(-5 to 80) °C
Process temperature	(-5 to 50) °C	(-5 to 80) °C	(-5 to 80) °C

Mechanical



ORDER CODE PTX20									
PTX20									
0 = non ATEX X = ATEX									
A = Absolute G = Gauge									
Open end = 0 Closed end = 3									
Pressure range (low to high) mH2O									
Standard temperature range (-5 to 50) °C = 0 Extended temperature range (-5 to 80) °C = 1c									
Cable PUR Cable PFE (Teflon)		= P (x length in m) = T (x length in m)		1 m supplied as standard					
Standard = 0 Weighted option = W									
Example: Non ATEX, gauge, open end, (0 to 5) mH2O, standard temperature range, 8 m PUR cable, weighted									
Note: Pressure ranges can be quoted in other units if preferred									
PTX20		0	G	0	(0 to 5) mH2O	0	P8	W	

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

Status Instruments Ltd
Status Business Park
Gannaway Lane, Tewkesbury
Gloucestershire, UK
GL20 8FD

Tel: +44 (0)1684 296818
Fax: +44 (0)1684 293746
Email: sales@status.co.uk
Website: www.status.co.uk

