



## PROTRAN<sup>©</sup> PR3800

### Flush Diaphragm Pressure Transmitter

- Easy clean flush membrane to prevent clogging
- Thick film sensor technology for long service life
- Pressure ranges to 40 bar
- Range of sanitary grade pressure fittings
- ATEX/IECEx option available (includes M1 for mining applications)



## Specifications

The PR3800 series offer a range pressure transmitters with integrated or remote barrier seals for applications where direct media contact must be prevented. Robustly constructed from stainless steel, this range of pressure transmitters incorporates the latest strain gauge technology together with a custom IC amplifier offering excellent stability and accuracy over a long service life.

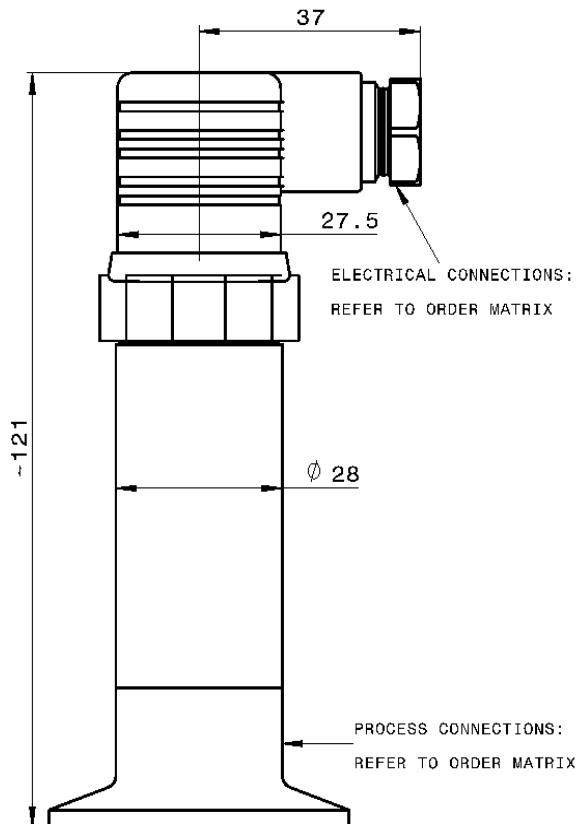
ATEX and IECEx approval and protection by intrinsic safety is optional and intended for installation and operation in zone 0, gas group IIC, temperature class T4 and zone 20 dust and M1 mining.

### Typical applications include:

- Food processin



## Dimensions (mm)



## Electrical Connection

Pin No.	(mA)	(Vdc)
	2 wire	4 wire
1	+supply	-supply
2	4-20mA signal	+supply
3	N/C	-output
—	to case	+output

## Technical Data

Type	PR3800	PR3802	PR3820	PR3821	PR3822
<b>Sensor Technology:</b>	Ceramic Thick Film or Isolated Piezoresistive Silicon				
<b>Output Signal:</b>	4-20 mA (2 wire)	0-10 V (4 wire)	4-20 mA (2 wire)	0-5 V (4 wire)	0-10 V (4 wire)
<b>Supply Voltage:</b>	13-36 VDC	13-30 VDC	13-36 VDC	13-30 VDC	13-30 VDC
<b>Pressure Connection:</b>	Pipe clamp (Tri-clover) 1.5" 316L stainless steel (other options available)		DIN 11851 female 316L stainless steel (other option available)		
<b>Pressure Reference:</b>	Gauge				
<b>Protection of Supply Voltage:</b>	Protected against supply voltage reversal up to 50 V				
<b>Standard Pressure Ranges (bar):</b>	0-1 bar Vac; 0-200mbar, 0-1 bar; 0-2.5 bar; 0-6 bar; 0-10 bar; 0-16 bar; 0-25 bar; 0-40 bar (other options available)				
<b>Standard Pressure Ranges (psi):</b>	0-30 Hg; 0-1.5 psi; 0-15 psi; 0-30 psi; 0-100psi; 0-200 psi; 0-600 psi (other options available)				
<b>Overpressure Safety:</b>	1.5x for all ranges				
<b>Load driving Capability:</b>	4-20mA: $RL < [UB-13V] / 20$ mA (e.g. with supply voltage (UB of 36V, max load (RL) is $1150\Omega$ )				
<b>Accuracy NLHR:</b>	$\leq \pm 0.3\%$ of span BFS				
<b>Zero Offset &amp; Span Tolerance:</b>	+1.0 %FS at room temperature +5 %FS (approx.) adjustment with easy access trimming potentiometers on amplified versions only				
<b>Operating Ambient Temperature:</b>	-20°C to +85°C (-4°F + 185°F)				
<b>Operating Media Temperature:</b>	-20°C to +85°C (-4°F to 185°F)				
<b>Storage Temperature:</b>	+5°C to +40°C (+41°F to +104°F) Recommended Best Practice				
<b>Temperature Effects:</b>	$\pm 2.5\%$ FS total error band for -20°C to +70°C. Typical thermal zero and span coefficients +0.04 %FS/°C				
<b>ATEX/IECEx Approval (4-20 mA version only):</b>	EX II 1 G Ex ia IIC T4 GA (Zone 0) Ex II 1 D Ex ia IIC T135 C Da (Zone 20) Ex I M1 Ex ia Ma (group 1 M1)				
<b>ATEX/IECEx Safety Values (4-20 mA version only):</b>	Ui = 28 V / Li = 119mA / Pi = 0.65 W / Li = 0.1 μH / Ci = 62 nF. Temperature Range = -20°C to +70°C. Max. cable length = 105m				
<b>Electromagnetic Compatibility:</b>	Emissions: EN61000-6-3; Immunity: EN61000-6-2; Certification: CE/UKCA Marked				
<b>Insulation Resistance:</b>	> 100 MΩ @ 50 VDC				
<b>Response Time 10-90%:</b>	Ranges < 6 bar 1mS; Ranges ≥ 6 bar 10mS				
<b>Wetted Parts:</b>	Ranges < 6 bar: SAE 316 stainless steel and nitrile (NBR); Ranges ≥ 6 bar: SAE 316L stainless steel				
<b>Pressure Media:</b>	Ranges < 6 bar: all fluids compatible with SAE 316L stainless steel and nitrile (NBR); Ranges ≥ 6 bar: all fluids compatible with SAE 316L stainless steel				
<b>Electrical Connection:</b>	Mating socket EN175301-803 Form A (ex DIN43650) rated IP65 with PG9 cable entry (other options available)				
<b>Net. Weight:</b>	0.5 Kg				

## Order Matrix

Output	Wires	Type	Electrical Connection/ Options	Pressure Range	Process Connection	Other Options				
4-20 mA	2	PR3800								
	2	PR3820								
0-5 Vdc	4	PR3801								
	4	PR3821								
0-10 Vdc	4	PR3802								
	4	PR3822								
<b>Electrical Connections/Options</b>										
DIN EN175301 plug and socket (IP65)										
Cable outlet 1m screened (IP65)										
M12 connector (IP67 when mated with equivalent connector)										
Cable outlet 1m screened IP67										
ATEX/IECEx certified with DIN EN175301 plug and socket										
<b>Pressure Range in bar</b>										
0-1 bar vac										
0-200 mbar										
0-1 bar										
0-2.5 bar										
0-10 bar										
0-16 bar										
0-25 bar										
0-40 bar										
<b>Process Connection</b>										
Pipe clamp (Tri-clover) 1.5" 316L stainless steel (PR3800 only)										
Pipe clamp (Tri-clover) 2" 316L stainless steel (PR3800 only)										
RUT 38mm female 316L stainless steel (PR3820 only)										
DIN11851 female 32mm Stainless steel (PR3820 only)										
SMS 40mm female 316 stainless steel (PR3820 only)										
<b>Other Options</b>										
ATEX/IECEx certified with M12 connector										

Order Number Example

PR3800EX0040BG

For options not listed please contact the sales team

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