PROTRAN© PR3100

Standard Industrial Pressure Transmitter

- Pressure ranges available from 0-2.5 bar to 0-1000 bar
- Reliable pressure management
- Long service life
- Robust designs
- ATEX/IECEx option available, including M1 for mining

RoHS 2011/65/EU

Suco GROUP

CE UK CA

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Specifications

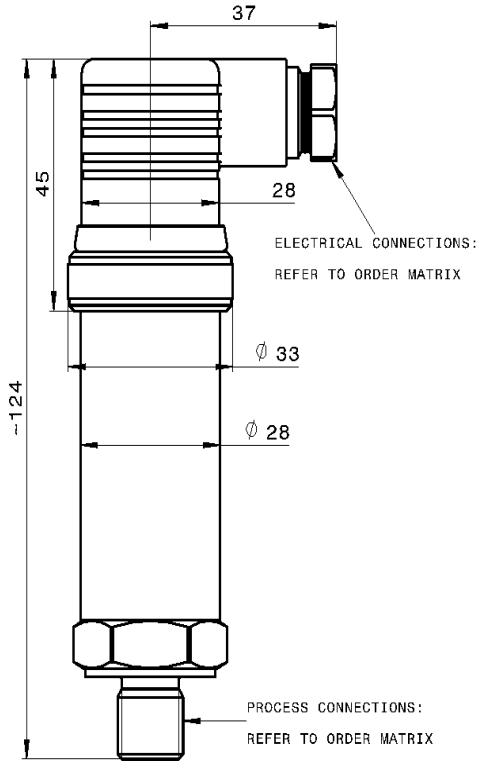
The PROTRAN PR3100 series pressure transmitters have been designed to meet the requirements of the majority of industrial applications of pressure measurement requiring an output of 4-20 mA. Robustly constructed from stainless steel this range of pressure transmitters incorporates the latest strain gauge technology together with a custom IC amplifier, offering excellent stability and accuracy over a long service life.

An optional ATEX and IECEx approved version of this product is available for explosion protection for flammable gases (zone 0), dusts (zone 20) and mining areas (group I M1).

Typical applications include:

- Mechanical and civil engineering installations
- Process plant
- Production test facilities
- Water resources
- Power generation
- Any application on fluid or gas requiring a stable repeatable and accurate output signal of 4-20 mA.

Dimensions (in mm)



Electrical Connections

	DIN Connection	
	mA	Vdc
Pin No.	2 wire	4 wire
1	+supply	-supply
2	4-20mA signal	+supply
3	N/C	+output
⏚	to case	-output

	M12 Connection	
	mA	Vdc
Pin No.	2 wire	4 wire
1	+supply	-supply
2	N/C	+supply
3	4-20mA	+output
4	N/C	-output

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Technical Data

Type	PR3100	PR3101	PR3102	PR3103	PR3103
Sensor Technology:	Ceramic Thick Film or Bonded Foil Strain Gauge				
Output Signal:	4-20 Ma (2 wire)	2 mV/V typical (4 wire)	0-5 V (4 wire)	0-10 V (4 wire)	0-10 V (4 wire)
Supply Voltage:	13-36 VDC	10 VDC (5-15)	13-30 VDC	13-30 VDC	13-30 VDC
Pressure Reference:	Gauge or Absolute				
Protection of Supply Voltage:	Protected against supply voltage reversal up to 50 V (amplified versions)				
Standard Pressure Ranges (bar):	0 – 1 bar Vac; 0 – 2.5 bar; 0 – 10 bar; 0 – 100 bar; 0 – 250 bar; 0 – 600 bar; 0 – 1000 bar (other ranges available; absolute to 0 – 400 bar)				
Standard Pressure Ranges (psi):	0-30 in Hg; 0-30 psi; 0-150 psi; 0-1500 psi; 0-3000 psi; 0-10000 psi; 0-15000 psi (other ranges available; absolute to 0-5800 psi)				
Overpressure Safety:	2x for ranges 1 bar to 400 bar; 1.5x for 600 bar range; 1.2x 1000 bar range				
Load driving Capability:	**4-20 mA:** RL < [UB-13V] / 20mA (e.g. with supply voltage (UB) of 36V max. load (RL) is 1150Ω); **2 mV/V:** n/a; **0-5 V:** max load RL > 5 KΩ: **0-10 V:** max load RL > 10KΩ				
Accuracy NLHR:	≤ ±0.3 % of span BFSL				
Zero Offset & Span Tolerance:	±0.5 %FS at room temperature (PR3101: ±0.2 mV); ±5 %FS (approx.) adjustment with easy access trimming potentionmeters on amplified versions only				
Operating Ambient Temperature:	-20°C to +85°C (-4°F to 185°F)				
Operating Media Temperature:	-20°C to +85°C (-4°F to 185°F)				
Storage Temperature:	+5°C to +40°C (+41°F to +104°F) Recommended Best Practice				
Temperature Effects:	±1.5 %FS total error band for -20°C to +70°C. Typical thermal zero and span coefficients ±0.015 %FS/°C				
ATEX/IECEx Approval (4-20 mA version only):	EX II 1 G Ex ia IICT4 GA (Zone 0) Ex II 1 D Ex ia IIIC T135 C Da (Zone 20) Ex I M1 Ex ia Ma (group 1 M1)	n/a			
ATEX/IECEx Safety Values:	Ui = 28 V / Ii = 119mA / Pi = 0.65 W / Li = 0.1 pH / Ci = 74 nF. Temperature Range = -20C to +70C. Max. cable length = 45m	n/a			
Electromagnetic Campatibility:	Emissions: BS EN61000-6-3; Immunity: BS EN6100-6-2; Certification: CE/UKCA Marked				
Insulation Resistance:	> 100 MΩ @ 50 VDC				
Response Time 10-90%:	1 mS				
Wetted Parts:	SAE 316 Stainless Steel and Nitrile NBR O-Ring for ranges up to 20 bar, and SAE 316 stainles steel, aluminia and nitrile (NBR) seal for ranges over 20 bar				
Pressure Media:	All fluids compatinble with SAE 316 Stainless Steel and Nitrile NBR O-Ring for ranges up to 20 bar, and SAE 316 stainles steel, aluminia and nitrile (NBR) seal for ranges over 20 bar				
Pressure Connection:	1/4" BSP male (G1/4): 1/4" NPT male; 1/2" BSP male (G1/2); 1/2" NPT male (other options available				
Electrical Connection:	Mating socket EN175301-803 Form A (ex DIN43650) rated IP65 with PG9 cable entry (other options available)				
Net Weight:	0.3 Kg				

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Order Matrix

Output	Wires	Type	Electrical Connection/ Options	Pressure Range	Process Connection	Other Options
4-20 mA	2	PR3100				
2 mV/V	4	PR3101				
0-5 Vdc	4	PR3102				
0-10 Vdc	4	PR3103				

Electrical Connections/Options	
Din plug and socket (IP65)	-
Cable outlet 1m screened (IP65)	A
M12 connector (IP67 when mated with equivalent connector)	B
Cable outlet 1m screened IP67 protection	C
ATEX/IECEx certified with DIN EN175301 plug	EX

Pressure Range in bar	
0-1 bar Vac	V001
0-2.5 bar	02.5
0-10 bar	0010
0-100 bar	0100
0-250 bar	0250
0-600 bar	0500
0-1,000 bar	1000

Process Connection	
1/4" BSP male (G1/4)	AB
1/4" NPT Male	AM
1/2" BSP male (G1/2)	AC
1/2" NPT male	AN

Other Options	
ATEX/IECEx certified with M12 connector	-M12

Order Number Example	PR3100-0100AC

For options not listed please contact the sales team

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