



# Protran PR3860

High Temperature  
Pressure Transmitter



- High operating temperatures of up to 250 °C
- Easy clean flush membrane to prevent clogging
- Thick film sensor technology for long service life
- Pressure ranges to 400 bar
- Good chemical compatibility for a range of applications
- Integral O-ring seal option to ensure flush pressure seal
- ATEX/IECEX option available (includes M1 for mining applications)



## Description

The PR3860 high temperature pressure transmitter has been designed to meet the requirements of the majority of industrial pressure measurement applications where a hygienic flush diaphragm connection is required.

Robustly constructed from stainless steel, the PR3860 pressure transmitter permits accurate pressure measurement at elevated temperatures. Output options include 0-5 Vdc, 0-10 Vdc and 4-20 mA. This transmitter is suitable for use at media temperature up to 250 °C. Typical applications include food processing, pharmaceutical and petrochemical. The flush membrane can be easily cleaned for long term reliability and outstanding performance. The PR3860 offers a stable and

accurate output signal of 4-20 mA with options for 0-5 Vdc, 0-10 Vdc and other output signals. Electrical connection is via a detachable DIN connector allowing easy access to zero and span adjustment. Pressure ranges available from 0-10 bar to 0-400 bar.

Optional weldable boss is available to ensure flush-face installation of transmitter to tanks and pipe-work.

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).

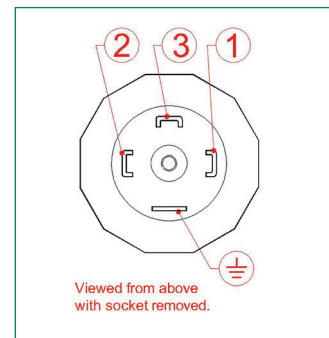
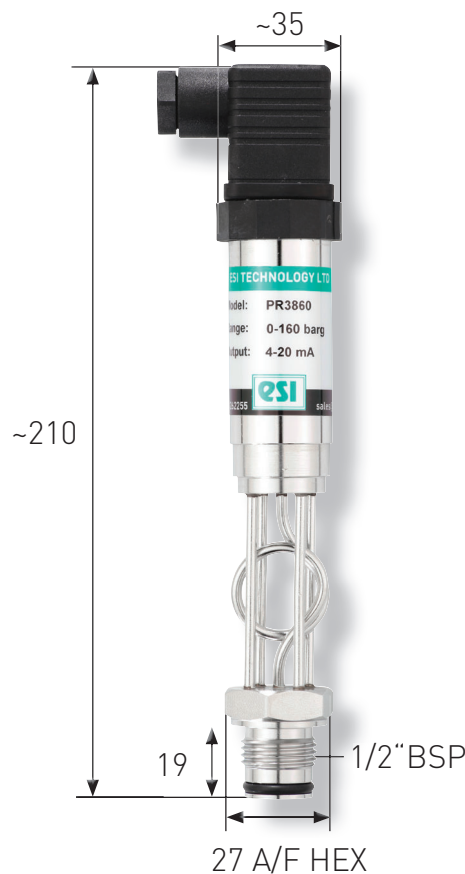
## Dimensions (in mm)

### ELECTRICAL CONNECTION (mA)

Pin No.	2 wire
1	+supply
2	4-20mA signal
3	not fitted to case

### ELECTRICAL CONNECTION (Vdc)

Pin No.	4 wire	3 wire
1	-supply	common
2	+supply	+supply
3	+output	+output



## Technical Data

Type:	PR3860	PR3861	PR3862
Sensor Technology:	Ceramic Thick Film		
Output Signal:	4 – 20 mA (2 wire)	0 – 5 V (4 wire)	0 – 10 V (4 wire)
Supply Voltage:	13 – 36 VDC	13 – 30 VDC	13 – 30 VDC
Pressure Reference:	Gauge		
Protection of Supply Voltage:	Protected against supply voltage reversal up to 50 V		
Standard Pressure Ranges (bar):	0 – 10 bar; 0 – 25 bar; 0 – 60 bar; 0 – 100 bar; 0 – 250 bar; 0 – 400 bar (other options available)		
Standard Pressure Ranges (psi):	0-150 psi; 0-300 psi; 0-1,500 psi; 0-3,000 psi; 0-6,000 psi (other options available)		
Overpressure Safety:	1.5x all ranges		
Load Driving Capability:	4 – 20 mA: RL < [UB - 13 V] / 20 mA (e.g. with supply voltage (UB) of 36V, max. load (RL) is 1150 Ω); 0 – 5 V: max load RL > 5 KΩ; 0 – 10 V: max load RL > 10 KΩ		
Accuracy NLHR:	≤ ±0.3 % of span BFSL		
Zero Offset and Span Tolerance:	±1.0 %FS at room temperature; ±5 %FS (approx.) adjustment with easy access trimming potentiometers on amplified versions only		
Operating Ambient Temperature:	-20 °C to +85 °C (-4 °F to +185 °F)		
Operating Media Temperature:	0 °C to +205 °C (+32 °F to 185°F) with standard o-ring ; 0 °C to +250 °C (+32 °F to +482 °F) with optional o-ring (sensor and electronics thermally insulated from media temperature)		
Storage Temperature:	+5 °C to +40 °C (+41 °F to +104°F) Recommended Best Practice		
Temperature Effects:	±2.5% FS total error band for -20 °C to +70 °C. Typical thermal zero and span coefficients ±0.04 %FS/ °C		
ATEX/IECEX Approval Option (4-20mA version only):	Ex II 1 G Ex ia IIC T4 Ga (zone 0) Ex II 1 D Ex ia IIIC T135 °C Da (zone 20) Ex I M 1 Ex ia I Ma (group 1 M1)	n/a	n/a
ATEX/IECEX Safety Values:	Ui = 28 V Ii = 119 mA Pi = 0.65 W Li = 0.1 μH Ci = 62 nF Temperature Range = -20 °C to +70 °C Max. cable length = 105 m	n/a	n/a
Electromagnetic Compatibility:	Emissions: EN61000-6-4; Immunity: EN61000-6-2; Certification: CE Marked		
Insulation Resistance:	> 100 MΩ @ 50 VDC		
Wetted Parts:	SAE 316L stainless steel		
Pressure Media:	All fluids compatible with SAE 316L stainless steel		
Pressure Connection:	1/2" BSP male (G1/2) with standard integral viton (FKM) o-ring seal and flush SAE 316L stainless steel diaphragm. O-ring seal is for service temperature up to max. 205 °C. An alternative o-ring material can be provided for service up to 250 °C (charged accessory)		
Electrical Connection:	Mating socket EN175301-803 Form A (ex DIN43650) rated IP65 with PG9 cable entry (other options available)		
Net. Weight (Kg):	0.8 kg		

## Order Matrix

Output	Wires	Type	Electrical Connection/Options	Pressure Range	Process Connection	Options
4-20 mA	2	PR3860				
0-5 V	4	PR3861				
0-10 V	4	PR3862				
<b>Electrical Connection/Options</b>						
DIN EN175301 plug and socket			-			
Cable outlet 1m screened			A			
M12 connector			B			
Cable outlet 1m screened IP67 protection			C			
ATEX/ IECEx certified with DIN EN175301 plug and socket			EX			
<b>Pressure Range in bar</b>						
0-10 bar				0010		
0-25 bar				0025		
0-60 bar				0060		
0-100 bar				0100		
0-250 bar				0250		
0-400 bar				0400		
<b>Process Connection</b>						
1/2" BSP flush diaphragm male						BA
<b>Options</b>						
250°C rated o-ring, fitted						HT
<b>Order Number Example</b>			PR3860-0400BA			

For options not listed please contact the sales team



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