

# esi

## PROTRAN® PR3860

### High Temperature Flush Diaphragm 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)



## Specifications

The **PROTRAN© 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. The flush membrane can be easily cleaned for long term reliability and outstanding performance. An optional weldable boss is available to ensure flush-face installation of transmitter to tanks and pipe-work.

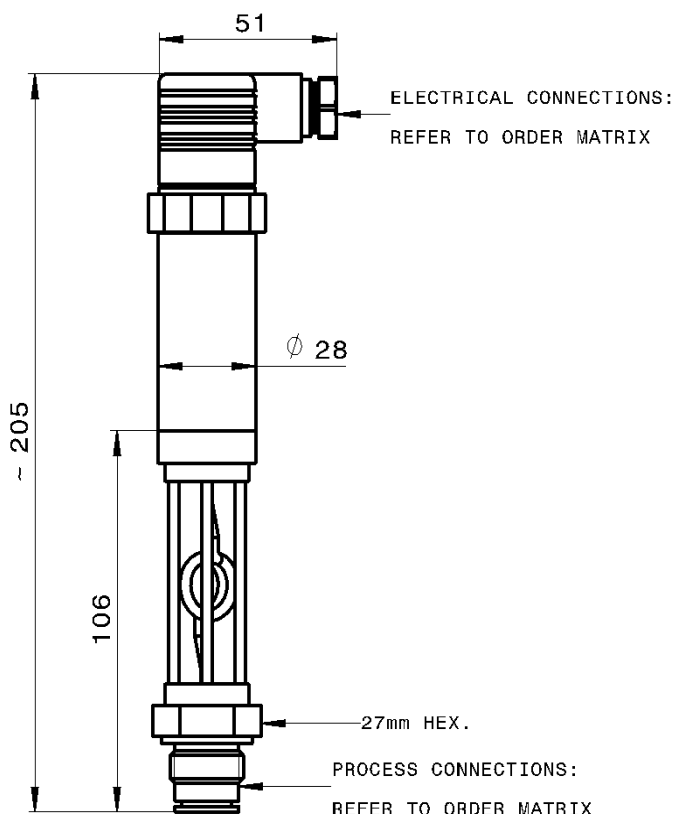
An optional ATEX and IECEx approved version of this product is available for explosion protection for flammable gases (zone0), dusts (zone 20) and mining areas (group I M1).

### Typical applications include:

- Food processing
- Pharmaceutical
- Petrochemical



## Dimensions (in mm)



## Electrical Connection

Pin No.	Ma	VDC	
	2 wire	4 wire	3 wire
1	+supply	-supply	common
2	4-20mA signal	+supply	+supply
3	N/C	+output	+output
⏏	to case	ioutput	to case

## 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 (3 wire available on request)
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):	0-20 psi; 0-60 psi; 0-150 psi; 0-350 psi; 0-1500 psi; 0-3600 psi; 0-5800 psi (other options available)		
Overpressure Safety:	1.5x all ranges		
Load driving Capability:	<b>4-20 mA:</b> RL < [UB-13V] / 20mA (e.g. with supply voltage (UB) of 36V max. load (RL) is 1150Ω); <b>2mV/V:</b> n/a; <b>0-5V:</b> max load RL > 5 KΩ; <b>0-10V:</b> max load RL > 10KΩ		
Accuracy NLHR:	≤ ±0.3 % of span BFSL		
Zero Offset & Span Tolerance:	±1.0 %FS at room temperature; ±5 %FS (approx.) adjustment with easy access trimming potententionmeters on amplified versions only		
Operating Ambient Temperature:	-20°C to +85°C (-4°F + 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 (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 Saftey Values:	Ui = 28 V / Li = 119mA / Pi = 0.65 W / Li = 0.1 pH / Ci = 62 nF. Temperature Range = '-20C to '+70C. Max. cable length = 105m		n/a
Electromagnetic Campatibility:	Emissions: BS EN61000-6-3; Immunity: BS EN61000-6-2; Certification: CE/UKCA 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 temperaature up to max. 205C. An alternative o-ring material can be provided for service up to 250°C (changed 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	Other Options
4-20 mA	2	PR3860				
0-5 Vdc	4	PR3861				
0-10 Vdc	4	PR3862				
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 socket			EX			
Pressure Range in bar						
0-10 bar				0010		
0-25 bar				0025		
0-60 bar				0060		
0-100 bar				0100		
0-250 bar				0250		
0-400 bar				0400		
Process Connection						
1/2" BSP flush diaphragm male					BA	
Options						
250C rated o-ring, fitted						HT
ATEX/IECEx certified with M12 Connector						-M12

Number Example	PR3860-0400BA-HT
----------------	------------------

For options not listed please contact the sales team

**DISCLAIMER:** ESI Technology Ltd operates a policy of continuous product development. We reserve the right to change specification without prior notice. All products manufactured by ESI Technology Ltd are calibrated using precision calibration equipment, traceable to national measurement standards.