



# Protran® PR3800

SERIES PRESSURE TRANSMITTER  
WITH BARRIER SEAL



## DESCRIPTION

The PR3800 series offer a range pressure transmitters with integrated or remote barrier seals for applications where direct media contact must be prevented.

In these installations the process media may corrode the sensing diaphragm or clog the narrow pressure inlet on a standard transmitter. For hygienic application the seal provides a sanitary grade pressure fitting. Seals are available in a variety of forms and materials for a wide range of applications and can be directly attached to the proposed connection or remotely via stainless steel capillary. Please contact our sales department for information on our full range of process connections.

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

- THICK FILM SENSOR TECHNOLOGY
- PRESSURE RANGES  
0-200mbar TO 0-1000bar
- 4-20mA TWO WIRE OUTPUT
- ACCURACY 0.30% NLHR
- OPTIONAL ATEX APPROVED  
VERSION (4-20mA ONLY)
- REMOTE CAPILLARY SENSING  
MODELS
- LARGE FLUSH FACE  
STAINLESS STEEL MEDIA  
DIAPHRAGM
- HYGIENIC MODELS FOR FOOD  
INDUSTRY



## PRESSURE RANGES

0 - 1bar vac through to 0 - 1000bar , see table below for list of all standard pressure ranges.

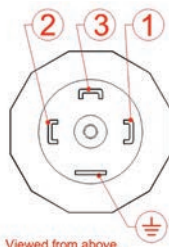
Range (bar)	Order Code	Range (bar)	Order Code
0-1 Vac	V001	0-25	0025
0-0.2	00.2	0-40	0040
0-0.5	00.5	0-60	0060
0-1	0001	0-100	0100
0-2.5	02.5	0-160	0160
0-4	0004	0-250	0250
0-6	0006	0-400	0400
0-10	0010	0-600	0600
0-16	0016	0-1000	1000

## DIMENSIONS (in mm)



### ELECTRICAL CONNECTION

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

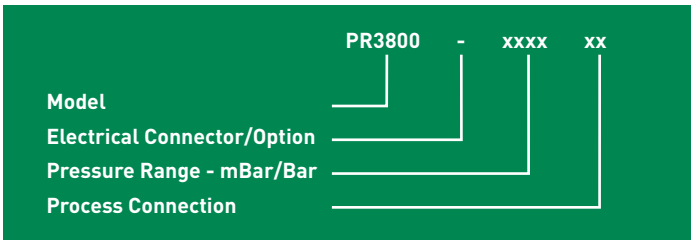


Viewed from above with socket removed.

### ELECTRICAL CONNECTION

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

## ORDERING INFORMATION



### ELECTRICAL CONNECTION/OPTION

DIN 43650 plug and socket

ATEX certified with DIN43650 plug and socket

### Order Code

-

EX

### PROCESS CONNECTION

Pipe Clamp (Tri-clover) 1.5" 316L S/Steel PR3800

Pipe Clamp (Tri-clover) 2" 316L S/Steel PR3800

RJT 38mm female 316L S/St PR3820

DIN11851 female 32mm 316L S/St PR3820

SMS 40mm female 316L S/St PR3820

Homogeniser High Pressure 316L S/St PR3840

### Order Code

BG

BH

BJ

BR

BV

BZ

### EXAMPLE

Output signal 4-20mA

DIN 43650 plug and socket

Pressure range 0-10barg

Pressure connection 1.5" Pipe Clamp flush diaphragm

### Order Code

PR3800

-

0010

BG

Correct Part Number

PR3800-0010BG

For options not listed contact sales team

## SPECIFICATION

### PRESSURE REFERENCE

Gauge

### OVERPRESSURE

Pressure can exceed the rated pressure range by the multiple below with no damage or change in calibration greater than  $\pm 0.5\%$ FS.

1.5x ranges 0-200mbar to 400bar

1.2x ranges 0-600bar to 1000bar

### OUTPUT SIGNAL

4-20 mA (2 wire configuration) as standard. Optional outputs available are:

0-5 Vdc (4 wire),

0-10 Vdc (4 wire)

### ZERO OFFSET AND SPAN TOLERANCE

$\pm 0.16$ mA

$\pm 5\%$ FS zero adjustment with easy access trimming potentiometers.

### SUPPLY VOLTAGE

Measured across supply terminals on connector plug 13-36Vdc for 4-20mA versions

13-30Vdc for 0-5Vdc and 0-10Vdc versions

### PROTECTION OF SUPPLY VOLTAGE

Protected against supply voltage reversal up to 50Vdc

### ACCURACY (NON LINEARITY, HYSTERESIS & REPEATABILITY)

$\pm 0.30\%$  FS. Typical max. Best fit straight line.

### PRESSURE MEDIA

All fluids compatible with 316L stainless steel.

### OPERATING TEMPERATURE RANGE

Ambient/Media:  $-20^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$

Storage:  $+5^{\circ}\text{C}$  to  $+40^{\circ}\text{C}$

### TEMPERATURE EFFECTS

$\pm 2.5\%$ FS total error band for  $-20^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$

Typical thermal zero and span coefficients  $\pm 0.04\%$ FS/ $^{\circ}\text{C}$

### ATEX APPROVAL (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 I M1)

### ATEX SAFETY VALUES

$U_i = 28\text{V}$

$I_i = 119\text{mA}$

$P_i = 0.65\text{W}$

$L_i = 0.1$

$C_i = 62\text{nF}$

Temperature range =  $-20^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$

Max. cable length = 105m

### ELECTROMAGNETIC COMPATIBILITY

Emissions: EN61000-6-4

Immunity: EN61000-6-2

### PRESSURE CONNECTION

Please contact our sales department for information on our full range of process connections.

### ELECTRICAL CONNECTION

Mating socket with screw terminal connections to DIN 43650, rated IP65.

Option: flying lead with optional cable length

**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 with traceability to international standards.

