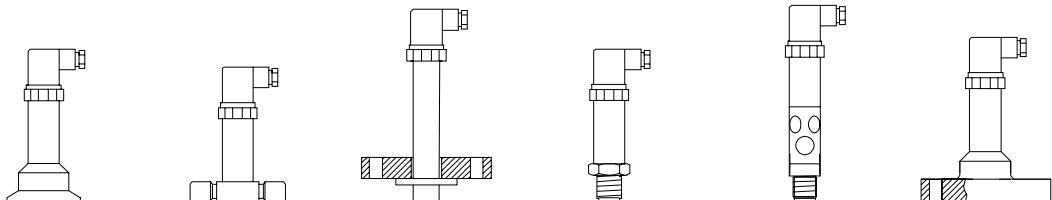




- HIGH TEMPERATURE / VIBRATION USE
- HYGIENIC MODELS FOR FOOD INDUSTRY
- REMOTE CAPILLARY SENSING MODELS
- SUPPLY VOLTAGE 13 - 36Vdc
- 4-20mA TWO-WIRE OUTPUT
- ZERO + SPAN ADJUSTMENT ON-SITE
- RANGES 0-250mbar to 0-1000bar

### DESCRIPTION

The PR3800 Series Pressure Transmitters offer a range of barrier seals for applications where the process media is unsuitable for direct contact with the transducer diaphragm. Seals are available in a variety of forms and materials for particular purposes. They may be directly attached to the process connection or remotely via a stainless steel capillary.



	Pipe Clamp	Hygienic	Homogeniser	Flush Diaphragm	High Temperature	Flange
Model No.	PR 3800	PR 3820	PR 3840	PR 3850	PR 3860	PR 3880
Process Connection	DN40, DN50	DIN-.to DIN 11851 IDF/ISS to BS4825 RJT to BS1864	Clamp Fixing	½" BSP Male to BS21	½" BSP Male to BS21	ASA 1" 150lb, ASA 2" 150lb, DIN DN25, 50
Pressure Ranges	0-250mbar to 0-400bar	0-250mbar to 0-400bar	0-60bar to 0-1000bar	0-6bar to 0-400bar	0-6bar to 0-400bar	0-250mbar to 0-400bar
Application	Chemical Industry, Aggressive, Highly Viscous Media, Paper + Pulp Industry	Food Processing, Hygienic for use with Milk, Beer or other biologically active media	Food Processing, Homogenisers	Food, Process and General Industrial use	High Temperature Applications, Media Temperatures to 300°C	Petro-Chemical, Pure Water, General Industrial use

### SPECIFICATION

#### PR3800, PR3820, PR3880

##### INPUT

Pressure ranges..... 0-250 mbar to 0-400 bar  
Pressure reference..... Gauge  
Over pressure..... 2 x Rated pressure

##### OUTPUT

Span..... 4-20 mA  
Type..... 2 wire

##### ACCURACY

Zero offset..... <±1% FSO  
Span tolerance..... <±1% FSO  
Combined non-linearity / hysteresis..... <±0.3% FSO  
Repeatability..... <±0.1% FSO  
Long term stability..... <±0.2% FSO / 6 months

##### ELECTRICAL

Supply voltage..... 13-36Vdc  
Supply voltage effects..... 3µA/V  
Reverse polarity..... Protected  
Load driving capability..... 1150Ω @ 36Vdc

Output short circuit (to ground) No damage  
Insulation resistance..... 100MΩ @ 100Vdc elec conn to case  
Adjustment..... ±10% FSO Zero and Span

##### ENVIRONMENTAL

Pressure media..... Media compatible with AISI 316  
Ceramic, Teflon, PVDF  
Operating temperature range..... -20 to +85°C  
Storage temperature range..... -40 to +90°C  
Thermal effect Zero..... <±0.03% FSO/°C  
Thermal sensitivity..... <±0.03% FSO/°C  
Vibration tolerance..... 10g's to 50Hz  
Mechanical shock tolerance..... 15g@s (11mS)  
Operating humidity..... 95% RH

##### PHYSICAL

Pressure connection..... Various  
Electrical connection..... DIN plug + socket to DIN43650  
Enclosure rating..... IP65

### SPECIFICATION

#### PR3840, PR3850

##### INPUT

Pressure ranges..... 0-6 bar to 0-1000 bar  
Pressure reference..... Gauge  
Over pressure..... 2 x Rated pressure

##### OUTPUT

Span..... 4-20 mA  
Type..... 2 wire

##### ACCURACY

Zero offset..... <±1% FSO  
Span tolerance..... <±1% FSO  
Combined non-linearity / hysteresis..... <±0.3% FSO  
Repeatability..... <±0.1% FSO  
Long term stability..... <±0.2% FSO / 6 months

##### ELECTRICAL

Supply voltage..... 13-36Vdc  
Supply voltage effects..... 3µA/V  
Reverse polarity..... Protected  
Load driving capability..... 1150Ω @ 36Vdc

Output short circuit (to ground) No damage  
Insulation resistance..... 100MΩ @ 100Vdc elec conn to case  
Adjustment..... ±10% FSO Zero and Span

##### ENVIRONMENTAL

Pressure media..... Media compatible with AISI 316  
Stainless Steel  
Operating temperature range..... -20 to +85°C  
Storage temperature range..... -40 to +90°C  
Thermal effect Zero..... <±0.03% FSO/°C  
Thermal sensitivity..... <±0.03% FSO/°C  
Vibration tolerance..... 10g's to 50Hz  
Mechanical shock tolerance..... 15g@s (11mS)  
Operating humidity..... 95% RH

##### PHYSICAL

Pressure connection..... Various  
Electrical connection..... DIN plug + socket to DIN43650  
Enclosure rating..... IP65

### SPECIFICATION

#### PR3860 - HIGH TEMPERATURE

##### INPUT

Pressure ranges..... 0-6 bar to 0-400 bar  
Pressure reference..... Gauge  
Over pressure..... 2 x Rated pressure

##### OUTPUT

Span..... 4-20 mA  
Type..... 2 wire

##### ACCURACY

Zero offset..... <±1% FSO  
Span tolerance..... <±1% FSO  
Combined non-linearity / hysteresis..... <±0.3% FSO  
Repeatability..... <±0.1% FSO  
Long term stability..... <±0.2% FSO / 6 months

##### ELECTRICAL

Supply voltage..... 13-36Vdc  
Supply voltage effects..... 3µA/V  
Reverse polarity..... Protected  
Load driving capability..... 1150Ω @ 36Vdc

Output short circuit (to ground) No damage  
Insulation resistance..... 100MΩ @ 100Vdc elec conn to case  
Adjustment..... ±10% FSO Zero and Span

##### ENVIRONMENTAL

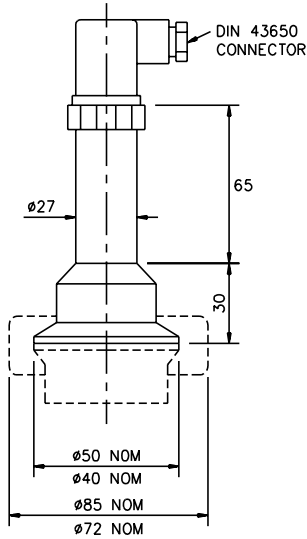
Pressure media..... Media compatible with AISI 316  
Stainless Steel  
Operating temperature range..... -10 to +300°C - Media  
-20 to +80°C - Ambient  
Storage temperature range..... -40 to +90°C  
Thermal effect Zero..... <±0.06% FSO/°C  
Thermal sensitivity..... <±0.06% FSO/°C  
Vibration tolerance..... 10g's to 50Hz  
Mechanical shock tolerance..... 15g@s (11mS)  
Operating humidity..... 95% RH

##### PHYSICAL

Pressure connection..... Various  
Electrical connection..... DIN plug + socket to DIN43650  
Enclosure rating..... IP65  
Weight..... 1500 grams

### DIMENSIONS

#### PR3800 - PIPE CLAMP FITTING



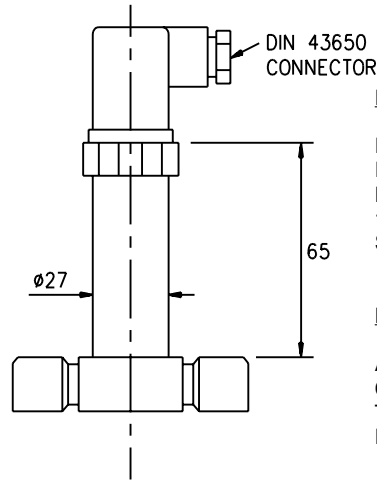
PROCESS CONNECTION

DN40, DN50 to ISO.2852

DIAPHRAGM MATERIAL

AISI 316  
CERAMIC  
TEFLON (Coated)  
PVDF

#### PR3820 - HYGIENIC FITTING



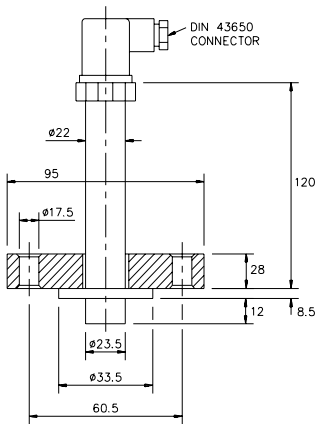
PROCESS CONNECTION

RJT 40,50ø to BS1864  
IDF 40,50ø to BS 4825  
DIN 40,50ø to DIN 11851  
SMS 40,50ø

DIAPHRAGM MATERIAL

AISI 316  
CERAMIC  
TEFLON (Coated)  
PVDF

#### PR3840 - HOMOGENISER



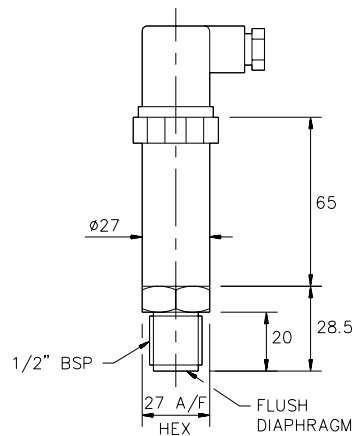
PROCESS CONNECTION

CLAMP FIXING

DIAPHRAGM MATERIAL

AISI 316

#### PR3850 - FLUSH DIAPHRAGM



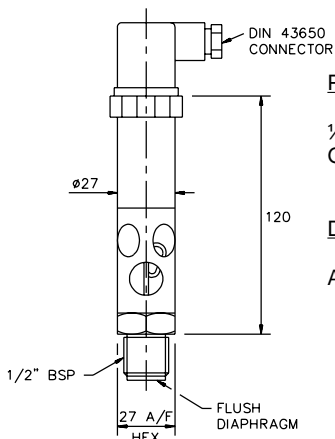
PROCESS CONNECTION

1/2" MALE to BS21.  
G 1/2

DIAPHRAGM MATERIAL

AISI 316

#### PR3860 - HIGH TEMPERATURE



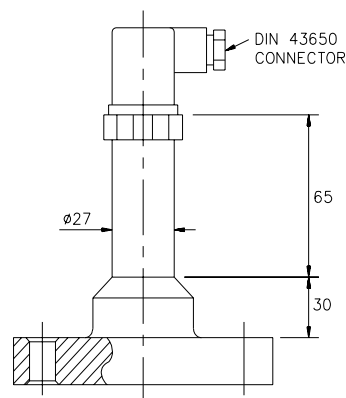
PROCESS CONNECTION

1/2" MALE to BS21.  
G 1/2

DIAPHRAGM MATERIAL

AISI 316

#### PR3880 - FLANGE



PROCESS CONNECTION

ASA 1" 150lb  
ASA 2" 150lb  
DIN DN25 to DIN 2501  
DIN DN50 to DIN 2501

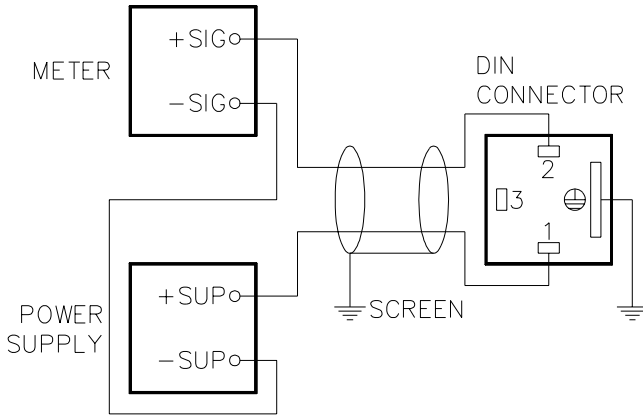
DIAPHRAGM MATERIAL

AISI 316  
CERAMIC  
TEFLON (Coated)  
PVDF

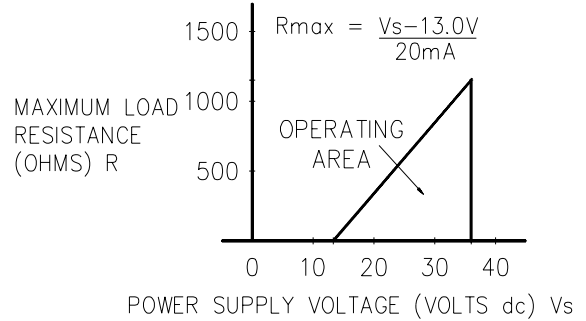
NOTE:- IN ALL ABOVE REMOVE ELECTRICAL CONNECTOR AND CAP TO ADJUST ZERO AND SPAN.

### WIRING DETAILS

**TRANSMITTER WIRING DIAGRAM**



**LOAD DRIVING CHART**



### ORDERING INFORMATION

STATE MODEL NUMBER, PRESSURE RANGE AND PROCESS CONNECTION REQUIRED:-  
 ie: PR3800 / 0-10bar / 50 IDF / TEFLON

MODEL NO.	DESCRIPTION
PR 3800	Pipe Clamp. 0-250mbar to 0-400bar
PR 3820	Hygienic. 0-250mbar to 0-400bar
PR 3840	Homogeniser. 0-60 to 0-1000bar
PR 3850	Flush Diaphragm. 0-6 to 0-400bar
PR 3860	High Temperature. 0-6 to 0-400bar
PR 3880	Flange. 0-250mbar to 0-400bar

**PRESSURE RANGES**

-1 - 0 bar Vac	0 - 25 bar
0 - 250 mbar	0 - 40 bar
0 - 500 mbar	0 - 60 bar
0 - 1 bar	0 - 100 bar
0 - 1.6 bar	0 - 160 bar
0 - 2.5 bar	0 - 250 bar
0 - 4 bar	0 - 400 bar
0 - 6 bar	0 - 600 bar
0 - 10 bar	0 - 1000 bar
0 - 16 bar	

**Tel: 01978 262255**



**Fax: 01978 262233**

**ellison sensors international**

Sensor House, Wrexham Technology Park, Wrexham, LL13 7YP, Wales, U.K.