



- ACCURATE AT VERY WIDE DP RANGE
- HIGH STABILITY AND REPEATABILITY
- WET / WET OPERATION
- 4-20mA TWO-WIRE OUTPUT
- ZERO and SPAN ADJUSTMENT ON-SITE
- RANGES 250mbarDP TO 200barDP
- UNI + BI-DIRECTIONAL OPERATION
- CE MARKED
- INTRINSICALLY SAFE OPTION

The PR3200 Differential Pressure Transmitter uses two ceramic pressure diaphragms, offering high stability and performance with true wet/wet operation, suitable for use with all liquids and gases compatible with stainless steel and alumina. Flush diaphragm models are available with integral or remote pressure diaphragms for hygienic applications.

Applications include flow measurement with pivot tubes, orifice plates and mass flow meters, plus static differential pressure measurement and control in combustion chambers and clean rooms, also condition monitoring and filter monitoring in high pressure hydraulic systems or any application on liquid or gas requiring reliable differential pressure measurement. Electrical connector is DIN plug and socket. Access to zero and span adjustment is by removing top plate for easy on-site adjustment. Pressure connection as standard is via two 1/4" BSP female connections. Mounting plate is available for standpipe or bulkhead mounting. Ranges available from 0-250mbarDP to 0-200barDP

An optional ATEX certified version of this product is available approved to II 1 GD EEx ia IIC T4 (zone 0) and Ex iaD 20 T200°C (zone 20) TA = -20 to +70°C. This option has the following safety values; Ui=28V, li=93mA, Pi=0.65W, Li=0, Ci=62nF.

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### SPECIFICATION

#### PRESSURE RANGES:

0-250mbarDP through to 200barDP, see table under Order Details for list of all standard pressure ranges

#### PRESSURE REFERENCE:

Differential Pressure (DP) only

#### COMMON MODE (STATIC LINE) PRESSURE:

Dependant on the DP pressure range, see table.

| DP Pressure Range | Maximum Static Line Pressure |
|-------------------|------------------------------|
| 0 - 250 mbar      | 1 bar                        |
| 0 - 500 mbar      | 1.6 bar                      |
| 0 - 1 bar         | 2.5 bar                      |
| 0 - 2 bar         | 6 bar                        |
| 0 - 4 bar         | 10 bar                       |
| 0 - 10 bar        | 25 bar                       |
| 0 - 20 bar        | 60 bar                       |
| 0 - 40 bar        | 100 bar                      |
| 0 - 100 bar       | 250 bar                      |
| 0 - 200 bar       | 400 bar                      |

#### OVERPRESSURE:

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

1.5x Maximum Static pressure for all ranges.

#### OUTPUT SIGNAL:

4-20 mA (2 wire configuration) as standard.

#### ZERO OFFSET AND SPAN SETTING:

$\pm 0.08$ 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

#### REVERSAL OF SUPPLY VOLTAGE:

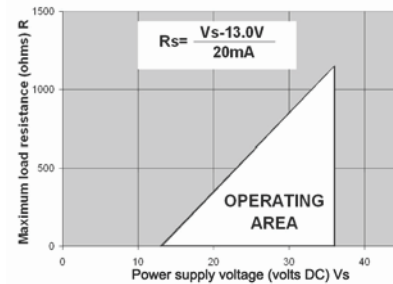
Protected against supply voltage reversal up to 50Vdc

#### LOAD DRIVING CAPABILITY

(4-20mA version only):

Calculate maximum load see chart below.

E.g. with supply voltage load of 36vdc, maximum load is 1150ohms.



#### COMBINED NON-LINEARITY AND

#### HYSTERESIS:

$\pm 0.30\%$  FS best fit straight line definition.

#### REPEATABILITY:

$\pm 0.1\%$  FS defined as maximum error between 3 consecutive pressure cycles.

#### LONG TERM STABILITY:

$\pm 0.2\%$  FS/year non-cumulative

#### PRESSURE MEDIA:

All fluids compatible with 303 stainless steel alumina and nitrile.

#### OPERATING TEMPERATURE RANGE:

Operating:  $-20^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$

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

#### TEMPERATURE EFFECTS:

$\pm 2\%$ FS total error band for  $-20^{\circ}\text{C}$  to  $70^{\circ}\text{C}$

Typical thermal zero and span coefficients

$\pm 0.03\%$ FS/ $^{\circ}\text{C}$

#### ELECTROMAGNETIC-COMPATIBILITY:

Emissions EN61000-6-4

Immunity EN61000-6-2

Certification CE marked

#### PRESSURE CONNECTION:

1/4" BSP Female (others on request)

#### ELECTRICAL CONNECTION:

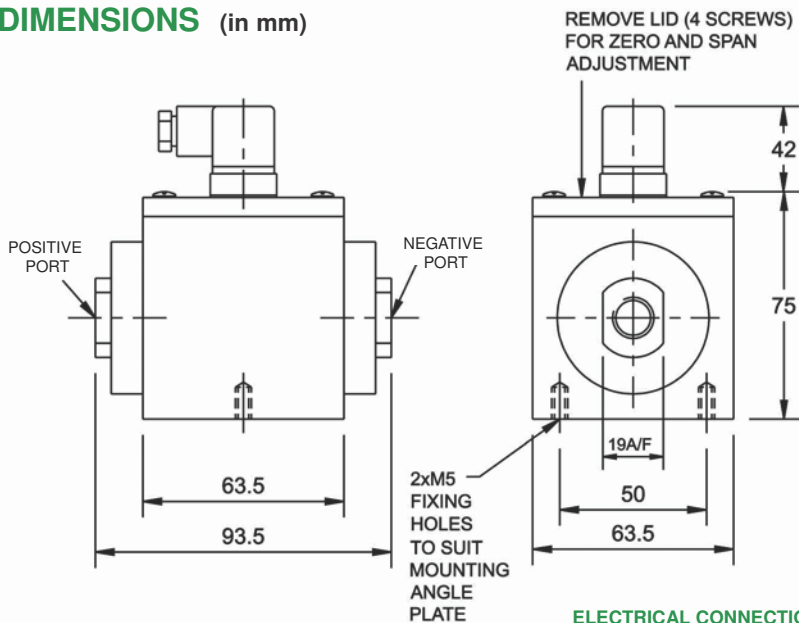
Mating socket with screw terminal connections to DIN 43650, rated IP65.

Option: flying lead with optional cable length

#### WEIGHT:

835grams for standard unit with DIN43650 socket fitted.

### DIMENSIONS (in mm)



#### ELECTRICAL CONNECTION

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

#### ORDER DETAILS

State model number and pressure range required:-  
e.g. PR3200 0-10barDP

| Model No. | DESCRIPTION                             |
|-----------|---|
| PR3200    | DP Transmitter<br>0-250mbar to 0-200bar |
| PR3200MP  | Mounting Angle Plate                    |

#### DP PRESSURE RANGES

|           |          |
|-----------|----------|
| 0-250mbar | 0-10bar  |
| 0-500mbar | 0-20bar  |
| 0-1bar    | 0-40bar  |
| 0-2bar    | 0-100bar |
| 0-4bar    | 0-200bar |

#### CALIBRATION

All products manufactured by Ellison Sensors are calibrated using precision calibration equipment with traceability to international standards.

Ellison Sensors operates a policy of continuous product development. We reserve the right to change specification without prior notice.

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