



- HIGH STABILITY AND REPEATABILITY
- SUPPLY VOLTAGE 13-36Vdc
- ALL STAINLESS STEEL HOUSING
- 4-20mA TWO-WIRE OUTPUT
- ZERO and SPAN ADJUSTMENT ON-SITE
- RANGES 1bar TO 1000bar
- CE MARKED
- COMPATIBLE INDICATORS AND ALARMS
- INTRINSICALLY SAFE OPTION

The PR3100 series pressure transmitters have been designed to meet the requirements of the majority of industrial applications of pressure measurement requiring an output of 4-20mA.

Robustly constructed from stainless steel this range of pressure transmitters incorporates the latest strain gauge technology together with a custom IC amplifier offering excellent stability and accuracy over a long service life. Output options include 0-20mA, 0-5vdc and 0-10Vdc. Electrical connection is via a detachable DIN connector allowing easy access to zero and span adjustment. Standard pressure connection is 1/2" BSP. Optional 1/4" BSP, 1/4" BSPT, 1/2" BSPT, 1/4" NPT, 1/2" NPT are also available on request. In addition PR3100 is available in corrosion resistant materials e.g. Hastalloy C, Inconel etc. Pressure ranges available from 0-1bar to 0-1000bar.

Typical applications for this series of standard transmitters includes, mechanical and civil engineering installations, process plant, production test facilities, water resources, power generation and any application on fluid or gas requiring a stable repeatable and accurate output signal of 4-20mA.

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, Ii=93mA, Pi=0.65W, Li=0, Ci=62nF.

Tel: +44 (0) 1978 262255



Fax: +44 (0) 1978 262233

ellison sensors international

Sensor House, Wrexham Technology Park, Wrexham, LL13 7YP, Wales, UK
sales@esi-tec.com www.esi-tec.com

SPECIFICATION

PRESSURE RANGES:

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

OVERPRESSURE:

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

2x for ranges 1bar to 400bar

1.5x for 600bar

OUTPUT SIGNAL:

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

Optional outputs available are

0-5Vdc (4 wire),

0-10Vdc (4 wire),

ZERO OFFSET AND SPAN SETTING:

± 0.08 mA

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

SUPPLY VOLTAGE:

Measured across supply terminals on connector plug

13-36Vdc for 4-20mA versions

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

REVERSAL OF SUPPLY VOLTAGE:

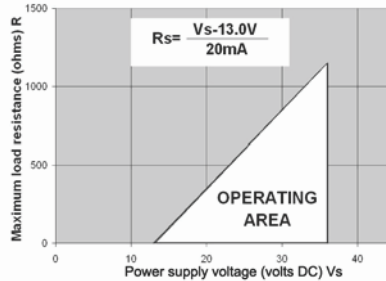
Protected against supply voltage reversal up to 50Vdc

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 three consecutive pressure cycles.

LONG TERM STABILITY:

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

PRESSURE MEDIA:

All fluids compatible with 17/4PH and 303 stainless steel for ranges over 20bar, or alumina and 303 stainless steel for ranges 20bar and below.

OPERATING TEMPERATURE RANGE:

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

Storage: 5°C to 40°C

TEMPERATURE EFFECTS:

$\pm 2\%$ FS total error band for -20° to 70°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:

1/2" BSP Male (others on request)

ELECTRICAL CONNECTION:

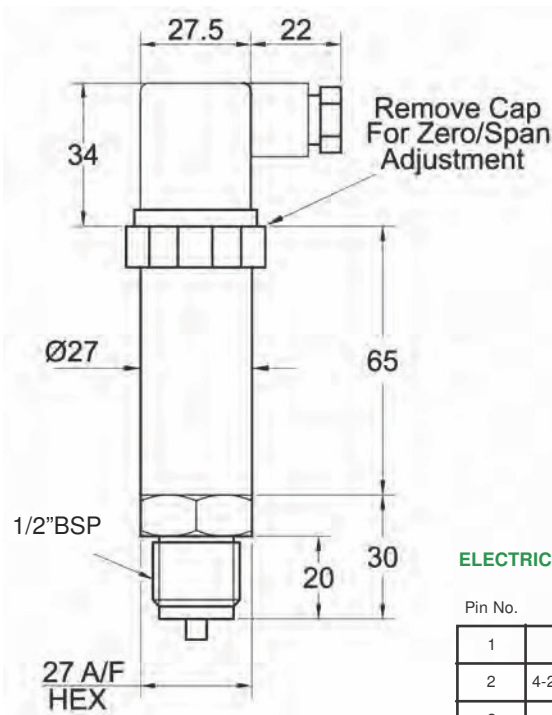
Mating socket with screw terminal connections to DIN 43650, rated IP65.

Option: flying lead with optional cable length

WEIGHT:

195 grams for standard unit with DIN43650 socket fitted.

DIMENSIONS (in mm)



ELECTRICAL CONNECTION

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

ORDER DETAILS

State model number and pressure range required:-
e.g. PR3100 0-6barg

Model No.	OUTPUT
PR3100	4-20mA
PR3101	0-20mVdc
PR3102	0-5Vdc
PR3103	0-10Vdc

PRESSURE RANGES

-1-0bar Vac	0-40bar
0-1bar	0-60bar
0-1.6bar	0-100bar
0-2.5bar	0-160bar
0-4bar	0-250bar
0-6bar	0-400bar
0-10bar	0-600bar
0-16bar	0-1000bar
0-25bar	Absolute ranges available to 400bar

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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