



Protran® PR3400

SUBMERSIBLE DEPTH PRESSURE TRANSMITTER



- CERAMIC THICK FILM SENSOR TECHNOLOGY
- PRESSURE RANGES 0-5mWG TO 0-500mWG
- 4-20mA TWO WIRE OUTPUT AS STANDARD (0-5Vdc, 0-10Vdc OPTIONAL)
- OPTIONAL ATEX APPROVED VERSION
- ALL STAINLESS STEEL HOUSING
- NYLON OVER TUBE FOR TROUBLE FREE VENTING

DESCRIPTION

The PR3400 submersible depth and level transmitter has been designed for the accurate measurement of the depth and level of fluids. Standard version has output signal of 4-20mA, two wire. Options include; outputs of 0-5Vdc and 0-10Vdc, remote amplifier for surface adjustment of zero and span.

For submersion in aggressive or corrosive liquids the PR3400 is available in specialist materials such as Inconel 625, Hastalloy C, titanium and plastic. The standard depth transmitter is fitted with a Delrin® nose cone to reduce sludge build-up. The nose cone connection may be replaced by a variety of threaded process connections common in sub-sea requirements. ESI has many options available for high pressure and hydraulic sub-sea applications. Standard applications include reservoir and borehole level monitoring, water mains pressure metering, power level and outlet pressure on submersible pumps. Electrical connection is via a screened cable protected by a tough nylon pressure tight sheath, which allows excellent trouble-free venting to the surface.

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).



PRESSURE RANGES

0 to 5mWG through to 0 to 500mWG, see table below for list of all standard pressure ranges.

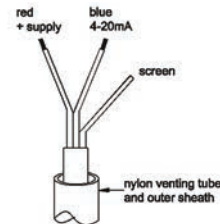
Range (mWG)	Order Code	Range (mWG)	Order Code
0-5	0005	0-80	0080
0-10	0010	0-100	0100
0-20	0020	0-150	0150
0-30	0030	0-200	0200
0-50	0050	0-500	0500

DIMENSIONS (in mm)



ELECTRICAL CONNECTION

Red + supply
Blue 4-20mA signal
Screen to case



cable termination

ORDERING INFORMATION

Model	Electrical Connector	Pressure Range - mWG	Process Connection	Cable Length
PR3400	-	xxxx	xx	-xxx

ELECTRICAL CONNECTION/OPTION

Nylon sheathed vented cable, 4-20mA 2 wire
Nylon sheathed vented cable, 0-5Vdc 4 wire
Nylon sheathed vented cable, 0-10Vdc 4 wire
Nylon sheathed vented cable, 4-20mA 2 wire ATEX

Order Code

-
A
B
EX

PROCESS CONNECTION

Protective nose cone

Order Code

AX

EXAMPLE

Base Model
Nylon sheathed vented cable, 4-20mA 2 wire
Pressure range 0-10mWG
Protective nose cone
Cable length 10 metres

Order Code

PR3400
-
0010
AX
010

Correct Part Number

For options not listed contact sales team

Order Code

PR3400-0010AX-010

SPECIFICATION

PRESSURE REFERENCE

Vented gauge

OVERPRESSURE

Pressure can be exceeded by up to 1.6x full scale range with no damage or change in calibration greater than $\pm 0.5\%$ FS.

OUTPUT SIGNAL

4-20mA (2 wire configuration).

ZERO OFFSET AND SPAN TOLERANCE

± 0.16 mA

SUPPLY VOLTAGE

13-36Vdc

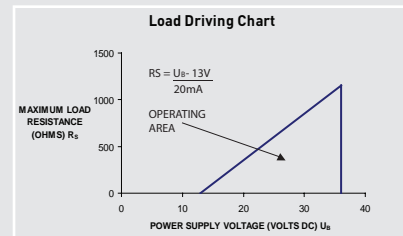
Minimum supply to transmitter circuit is 13Vdc. Voltage drop in connecting lead due to cable resistance must be considered. See load driving capability chart below.

PROTECTION OF SUPPLY VOLTAGE

Protected against supply voltage reversal up to 50Vdc

LOAD DRIVING CAPABILITY

For power supply voltages 13-36Vdc



ACCURACY (NON LINEARITY, HYSTERESIS & REPEATABILITY)

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

PRESSURE MEDIA

All fluids compatible with 303 or 316L stainless steel housing, alumina diaphragm, nylon over tube and Nitrile o-ring seal.

OPERATING TEMPERATURE RANGE

Operating: -20°C to $+60^{\circ}\text{C}$
Media must not freeze around sensor
Storage: $+5^{\circ}\text{C}$ to $+40^{\circ}\text{C}$

TEMPERATURE EFFECTS

$\pm 2.0\%$ FS total error band for -20°C to $+60^{\circ}\text{C}$
Typical thermal zero and span coefficients $\pm 0.03\%$ FS/ $^{\circ}\text{C}$

ATEX APPROVAL

Ex II 1 G Ex ia IIC T4 Ga (zone 0)
Ex II 1 D Ex ia IIC T135 $^{\circ}\text{C}$ 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°C to $+70^{\circ}\text{C}$
Max. cable length = 105m

PRESSURE CONNECTION

Delrin[®] nose cone with radial pressure inlets.

ELECTRICAL CONNECTION

Screened cable in pressure tight, flexible nylon sheath. Cable conductor size 7/0.20mm²(24awg), resistance 8.9ohms/100metre (x2).

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.

