

DATA SHEET

INTERSONDE

PRESSURE TRANSDUCER

A range of transducers with internal thread and cone, designed for direct coupling to high pressure tubing via a gland nut and collar.

Weep holes are provided to facilitate pressure relief and venting.

The pressure sensing element is of one piece construction, machined from stainless steel bar, which has been heat treated to get high tensile properties which extend transducer life when used in cyclic, dynamic or static applications.



Type HP28

Key Features

- Direct coupling to 1/4" or 3/8" diameter high pressure tubing.
- High accuracy, better than 0.25%
- Robust Ni Cr bonded strain elements.
- Pressure range from 3000 to 7000 bar (43500 to 101500 psig)
- Choice of electrical termination.

Specification

Performance

Combined non-linearity and hysteresis	± 0.25% F.R.S
Full range sensitivity (FRS)	1.250 mV/Volt nominal
Residual unbalance	0.02 mV/Volt
Resolution	Infinite

Electrical

Excitation voltage	20 Volt dc or Volt ac rms maximum
Bridge output resistance	600 Ohms ± 5%
Insulation resistance	100 megohms minimum at 100 Volt d.c.
Electrical connection : Standard	6 pin bayonet lock connector (mates with MIL-C-26482 size10)
Option (a)	1 metre 6 core screened PTFE insulated flying lead
Option (b)	2 metre 6 core PVC moisture proof(Max operating temp 85°C)

Environmental and Physical

Operational temperature range	-25 °C to +100 °C
Thermal zero shift	± 0.02% F.R.S. / °C
Thermal sensitivity shift	± 0.02% F.R.S. / °C
Material in contact with pressure media	Stainless steel
Static volume	Less than 0.6ml
Volumetric change with pressure	Negligible
Pressure overload	10% above rated pressure
Weight	350 gram approx
Case material	Stainless steel

Dimensions

30 mm dia x 115 mm overall length

Ordering Information

Specify transducer type, pressure range, pressure port thread and options.

Data Sheet No
DSHP28-0305

Sheet 1 of 2

Design authority and manufacture by Barnbrook Systems Limited

Barnbrook Systems reserves the right to alter specifications and design without notice

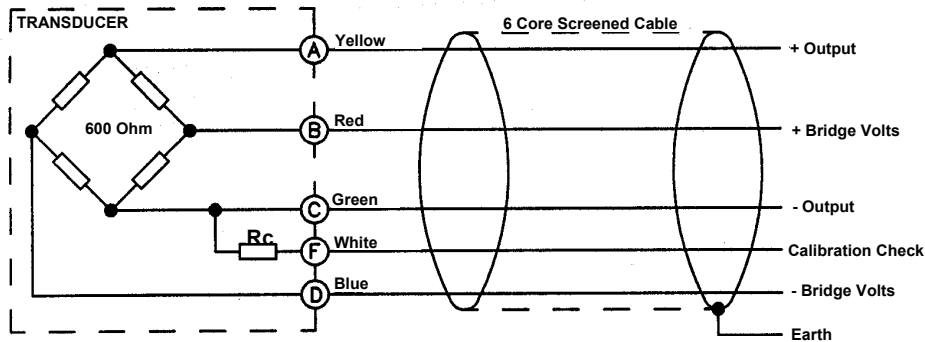
PRESSURE TRANSDUCER

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CALIBRATION CHECK

To use the calibration check facility, join pin D to pin F. This will unbalance the bridge and produce a change in output approximately equal to 90% of the full range sensitivity (F.R.S.) The exact figure is recorded on the Calibration Certificate.

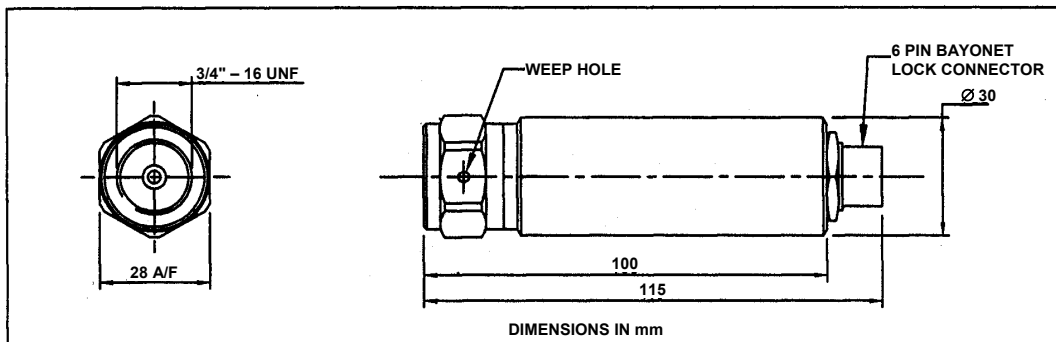
If the calibration check facility is not required then 4 core screened cable may be used in lieu of 6 core.



PRESSURE RANGES

Bar	3000	4000	5000	7000
Psig	43500	58000	72500	101500
Port	3/4" - 16 UNF Female			

DETAIL DIMENSIONS



INSTALLATION DETAILS

The design principle ensures a high sealing pressure over the metal to metal sealing area, with moderate gland torque requirements.

The external cone on the high pressure tubing mates with an internal cone in the transducer body which is machined to a slightly larger angle.

The cones are maintained in contact via a left hand threaded collar (1/4" o/diameter tubing and 3/8" - 24 UNF for 3/8" o/diameter tubing which is supported by a gland nut threaded into the pressure port. Gland nuts and collars to suit either tube size are available from Barnbrook Systems Limited. Adaptors and cone fittings can also be supplied to convert from 3/4" - 16 UNF to an external thread 3/8" BSP or M16 x 1.5

Data Sheet No
DSHP28-0305

Sheet 2 of 2

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