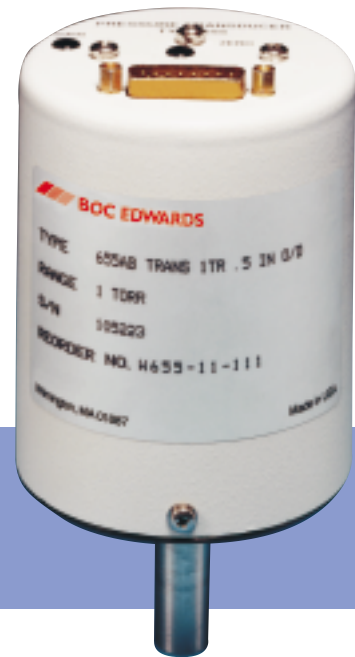




PRODUCT DATA

Model 655/658/659 Barocel[®] Vacuum Pressure Transducers



The 655 Series of Barocel transducers employ a number of proprietary design features to enhance reliability and performance. The sensing cell utilises a unique diaphragm design, stitch welding process, and a new sensing cavity geometry which provides enhanced resistance to particulate contamination. Performance is further improved by isolating the sensor in a patented, temperature controlled, hermetically sealed enclosure which neutralises the effect of barometric pressure, humidity and ambient temperature changes. The result is a transducer offering long term stability.

Features & Benefits

- Wide Measuring Range
 - Full four decade measurement
- High Accuracy
 - 0.15% of reading
- High Resolution
 - Better than 0.005% of FS
- Temperature Controlled
 - Internal temperature maintained at 45, 100, or 123°C depending on the model selected
 - Improved zero stability:
Better than 0.002% FS / °C
- True Total Pressure
 - Calibration and measurement independent of gas composition
- High Level dc Output
 - 0 to 10 volts dc full scale, linear with pressure

Applications

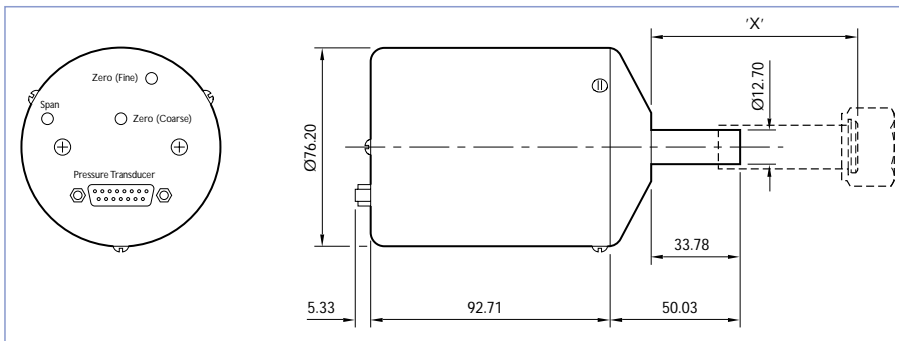
- Plasma Deposition / Etch
- Sputtering / PVD / RTP
- Industrial CVD / Ion Implantation
- LPCVD
- Crystal Growing / Freeze Dryers

TECHNICAL DATA

SPECIFICATIONS

- Standard Ranges: 0-50, 0-100 mtorr
0-1, 0-2, 0-5, 0-10, 0-100 torr & mbar
0-1000 torr
other ranges also available
- Accuracy: 0.15% of reading + 0.005% of FS
- Repeatability: ±0.01% of FS
- Resolution: 0.005% of FS
- Warm up Time: 2 hours
- Heater Temperature: 655 45°C
658 100°C
659 123°C
- Ambient Operating Temperature: 655 15 - 40°C
658 15 - 70°C
659 15 - 70°C
- Storage Temperature: -45 to + 80°C
- Temperature Effect on Zero: > 1 torr = <0.002% of FS / °C
≤ 1 torr = <0.005% of FS / °C
- Temperature Effect on Sensitivity: <0.02% of reading / °C
- Barometric Pressure Effects: <0.005% of FS / 760 torr
- Ambient Relative Humidity Effects: < 0.005% of FS in range 0-95% RH
- Overpressure Limit: 3.1 bar abs (45 PSIA)
- Leak Rate to Ambient: < 1 x 10⁻¹⁰ std cc / sec at 760 torr applied pressure
- Internal Volume: 8.33 cc including 1/2" OD tube
- Materials Exposed to Pressure Media: Inconel, Monel ,
316 SS (for vac fittings)
- Power required: ±15 VDS ±5% regulated to 1%
655 250mA maximum
658 500mA maximum
659 700mA maximum
- Output Signal: 0 - 10Vdc linear with pressure
- Output Impedance: < 0.1Ω
- Output Noise: < 0.002% of FS rms
(0-2 KHz)
- Weight: 0.55 Kg (1.2lb)

DIMENSIONS (mm)



FITTING	DIM "X"
MINI CONFLAT	35.05
CAJON 8VCR	62.23
CAJON 8VCO	44.70
NW16	36.32
TRI-CLOVER	34.80

ORDERING INFORMATION

BAROCEL TYPE:

655 5
658 8
659 9

PRESSURE RANGE:

50 mtorr (655 only) 05
100 mtorr (655 & 658 only) 16
1 torr 11
2 torr 14
10 torr 21
100 torr 31
1000 torr 41
1 mbar 12
10 mbar 22
100 mbar 32
1000 mbar 42

W65 11

VACUUM FITTING:

1 1/2" OD Tube
3 1.33" Mini ConFlat*
6 8VCR
7 8VCO
8 NW16
H Tri-Clover

* ConFlat® is a trade mark of Varian

PRODUCT DESCRIPTION

Adaptor cable Barocel 655 to AGC
(Female FCC68) 0.5m

ORDERING INFORMATION

D400-03-050