



DXD Series Digital Pressure Transducer

- Accuracy⁽¹⁾ $\pm 0.02\%$ F.S. total error band. Includes the effects of non-linearity, hysteresis, non-repeatability and temperature
- Update Rate: 15mS
- Port speeds up to 57.6K bps
- Multi-drop digital communication via four-wire RS232 or six-wire RS485
- Easy connection to RS232 port on any standard PC compatible computer with available port adapter
- Up to 99 transducers on a single RS232 line
- Simple ASCII command structure
- Gauge, absolute, vacuum and compound pressure types
- 300 series stainless steel wetted materials and housing
- Rugged, shock resistant design

(1) See Product Specifications page 2.



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BULLETIN HTR-4

A Halliburton Company



The DXD Series digital pressure transducer sets a new standard for price and performance. It provides all of the advantages of an extremely precise digital output, simple interface and support software at a very affordable price.

The DXD Series features accuracy of $\pm 0.02\%$ of full scale including the effects of temperature, which is achieved by using an innovative modeling technique. The design emphasizes speed and is capable of yielding an update rate of 15mS. Connection with a host computer is simple and versatile via full-duplex four-wire RS232 or six-wire RS485 electrical standards.

Support software provides access to all of DXD's built-in features utilizing a simple ASCII protocol. Built-in firm-ware provides the user with zero and span adjustment, user label, tare, device address, serial number, pressure type and full scale range.

Up to 99 DXD transducers can share the same RS232 line. The RS232 version includes a simple port adapter that plugs directly into any standard PC's RS232 port. Transducers are connected utilizing simple telephone type (RJ11) connectors. An entire system can be in-

stalled in just a few minutes enabling the user to communicate with up to 99 DXDs at up to 57.6K bps.

Up to 32 DXD transducers can share the same RS485 line. The RS485 version requires a user-supplied RS485 card or port adapter and transducer wiring.

Power is supplied by a 12 Vdc, 500mA ac to dc converter. Each unit requires approximately 15mA maximum. The standard electrical connector is an 8 pin Switchcraft EN3 connector.

The DXD Series innovative design includes direct access to the micro-processor, power and communication busses. This design feature will allow for future expansion of the product's capabilities to include other communication protocols, analog output, datalogging, etc.

Available pressure types include gauge, absolute, vacuum and compound. The standard pressure inlet connector is a 1/4 male NPT type.

The DXD Series is available in a variety of pressure ranges.

The wetted materials and rugged enclosure are made of 300 series stainless steel providing compatibility with a broad variety of process media and environments.

Performance Specifications

Accuracy: $\pm 0.02\%$ F.S. total error band from $\pm 0.02\%$ F.S. 10-30°C (50-86°F)
 $\pm 0.04\%$ F.S. 0-50°C (32-122°F)
 $\pm 0.05\%$ F.S. -10-70°C (14-158°F)

Temperature Effects:

Corrected: -10 to 70°C (14 to 158°F)
 Operating: -10 to 70°C (14 to 158°F)
 Storage: -40 to 80°C (-40 to 176°F)

Update Rate: From 15mS to 50mS
 update time for fully corrected pressure information

Resolution: 1 part in 50,000 max. at 30mS update, 1 part in 20,000 max. at 15mS update

Functional Characteristics

Sensor Type: Piezo resistive strain gauge

Pressure Ranges:

0/5	0/150
0/10	0/200
0/15	0/250
0/30	0/300
0/50	0/500
0/60	0/1000
0/100	

Pressure Types: Gauge, absolute, vacuum and compound.

Pressure Inlet Type:

Standard - 1/4 NPTM 0/5 to 0/1000 psi
 Optional - VCR, MS-33656-4

Housing Dimensions: 1.5" x 5.78"
 cylindrical

Housing Materials: 304 stainless steel

Wetted Materials: 316 stainless steel

Electrical Connector:

Standard - Switchcraft EN3 8 pin weather-tight connector. Optional - ITT Cannon kPT07 (Bendix PT07 compatible).

Power Requirement: 12 to 24 Vdc
 15mA maximum

A/D Resolution: 23 bit plus sign
 Sigma/Delta internally reduced to 50,000

Output Signal: ASCII digital

Output Electrical: RS485 full duplex - asynchronous serial interface up to 32 units or RS232 full duplex - asynchronous serial interface up to 99 units. 9 pin "D" type Com port adapter included.

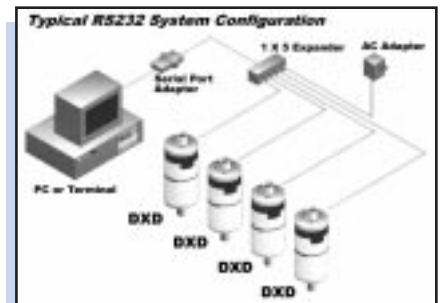
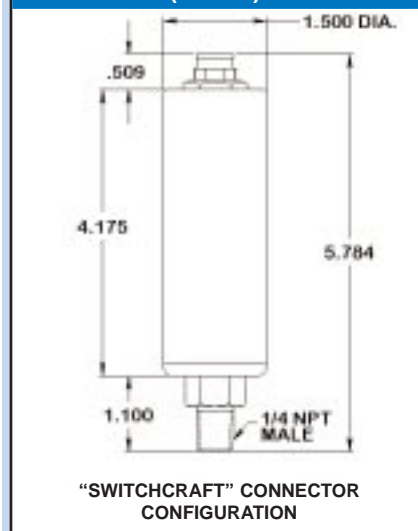
ASCII Data Format: 7 data bits, 1 stop bit, even parity

BPS: 1200, 2400, 4800, 9600, 19.2k, 38.4k, 57.6k

Firmware Features

Address
 BPS Select
 User Zero
 User Span
 Tare
 Pressure Type (G, A, V, C)
 User Label
 Error Flag
 Wild Card Address
 PSI Reading
 Serial Number
 Filter
 Full Scale Value
 Firmware Revision I.D.

Dimensions (inches)



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