HEISE®

DXD Series
Precision Pressure Transducer
Digital Output

- ***Accuracy(1) ±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 115.2K 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***
- ***Available snap-together wiring components for quick electrical connection***
- ***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

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.

PERFORMANCE SPECIFICATIONS

Accuracy: ±0.02% F.S. total error band from ±0.02% F.S. 10-30°C (50-86°F)
±0.04% F.S. 0-50°C (32-122°F)
±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 12.6mS or 27.7mS processing time for fully corrected pressure information

Resolution: 1 part in 50,000 max. (range dependent)

Signal Stability: ±1 count in 50,000 counts @ 27.7mS update rate, ±3 counts in 50,000 counts @ 12.6mS update rate

Turnaround Time: 15mS or 30mS @ 115.2k baud

FUNCTIONAL CHARACTERISTICS

Sensor Type: Piezo resistive strain gauge

Pressure Ranges: Gauge or Absolute (psi)

0/5*	0/50	0/300	0/2500
0/10	0/60	0/500	0/3000
0/15	0/100	0/600	0/5000
0/20	0/150	0/1000	0/6000
0/25	0/200	0/1500	0/7500
0/30	0/250	0/2000	

*0/5 not available in absolute

Vacuum (psi)		Compound (psi)	
0/10	0/15	–10/10	–15/30
		–15/15	–15/60

Overpressure Capability:

0/5-0/250	4X range
0/500-0/4000	3X range
0/5000	2X range
0/7500	1.33X range

Shock & Vibration:
Shock –
100g per 11 milliseconds
Vibration –
10g RMS within 20 to 2000 Hz

Pressure Inlet Type:
Standard –
Ranges up to and including 5000 psi: ¼ NPT male
Ranges over 5000 psi: 9/16-18 UNF-2B female port for ¼˝ O.D. high pressure tubing

Optional –
MS33656-4; 7/16-20 male w/37° flare for 1/4˝ tubing (for all ranges)
VCR w/standard, 10-20 or 3-5 RA gland finishes (for ranges up to and including 5000 psi only)

Housing Dimensions: 1.5˝ x 5.78˝ cylindrical

Housing Materials: 304 stainless steel

Wetted Materials: 316 stainless steel

ELECTRICAL SPECIFICATIONS

Electrical Connection:
Standard – Switchcraft EN3, 8 pin weather-tight receptacle and mating connector
Optional – ITT Cannon kPT07 receptacle with kPT06 mating connector (Bendix PT07/PT06 compatible)

Power Requirement: 12 to 40 Vdc, 15mA maximum

Power Consumption:
Watts = supply voltage x 15mA (with optional 12 Vdc power supply accessory, power consumption = 0.18 watts per DXD)

Optional Power Supply Accessory:
Input: Specify 110 Vac/60Hz or 220 Vac/50Hz
Output: 12 Vdc

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, 115.2k

FIRMWARE FEATURES

Address , BPS Select, User Zero
User Span, Pressure Type (G, A, V, C)
User Label, Error Flag, Wild Card Address, PSI Reading
Serial Number, A/D Filter
Full Scale Value, Firmwave Revision I.D.
10 additional engineering units (including bar, mbar, hPa, kPa, mPa, in.Hg, in.H_2O, ftH_2O, cmH_2O)

Every DXD is supplied with:
- Certification of NIST traceability
- (for RS-232 versions): 25 ft. cable w/mating connector and RJ11 plug
- (for RS-485 versions): mating connector only

To electrically connect the DXD, RS232 configurations require:
- (1) Serial Port Converter (supports up to 99 DXDs (RS-232) on one serial port)
- ac Adapter (powers up to 32 DXDs)
- 5 Port Expander Module; to connect up to 4 DXD (RS-232) cables and 1 ac adapter to serial port converter. (Multiple 5 port expander modules can be interconnected for systems requiring 5 DXDs or more).
- Setup/Utility Software (to allow DXD to communicate with PC)
- Mating Connector & Cable (one provided with each DXD)

Complete kit includes all required accessories identified above to operate up to 4 DXD transducers

RS485 configurations require:
- Mating connector/adapter assembly terminating in dual RJ45 (modular "Y") jacks
- 25 ft. cable assembly with RJ45 plug ends
- ac adapter with RJ45 plug (powers up to 32 DXD units maximum)
- Adapter; RJ45 jack to DB9 female "D"connector
- Setup/utility software (to allow DXD to communicate with PC)
- Customer supplied RS-485 interface card or adapter installed on PC

Complete kit includes all required accessories above to operate 1 DXD (RS-485) transducer. For systems with multiple DXDs (RS-485), add one additional mating connector/adapter assembly and one 25 ft. cable assembly per DXD.

or,

for systems with customer provided power, wiring and PC interface card or adapter:
- Mating connector only (provided with each DXD (RS-485) transducer)
- Setup/utility software (to allow DXD to communicate with PC)I