

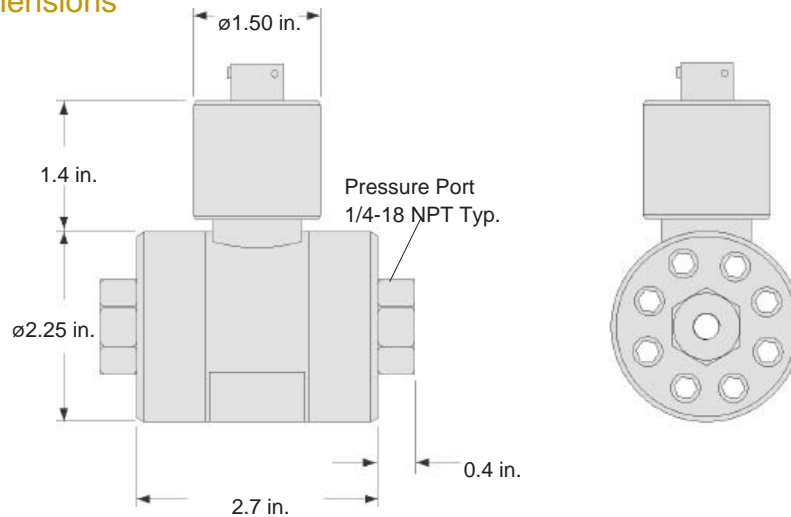
# Model A-5 High Range Wet/ Wet Differential Pressure Transducer

Order Code BD142



- 2000 to 10,000 psid
- 0.5% Accuracy
- Amplified Output Available

## Dimensions



## Wiring Code

### Connector/ Unamplified

- |       |                |
|-------|----------------|
| A & B | (+) Excitation |
| C & D | (-) Excitation |
| E     | (-) Output     |
| F     | (+) Output     |

## Performance

- Pressure Ranges .....2000; 3000; 5000; 7500; 10,000 psid
- Accuracy .....+/- 0.5% Full Scale
- Linearity .....+/- 0.25% Full Scale (typical)
- Hysteresis .....+/- 0.13% Full Scale (typical)
- Non-Repeatability .....+/- 0.07% Full Scale (typical)
- Output (standard) .....2 mV/V (nominal)
- Line Pressure .....2000 psi
- Resolution .....Infinite

## Environmental

- Temperature, Operating .....-65° to 250°F
- Temperature, Compensated .....60° to 160°F
- Temperature, Effect
  - Zero .....+/- 0.75% Full scale/ 100 °F
  - Span .....+/- 1.0% Reading/ 100 °F

## Electrical

- Strain Gage Type .....Bonded Foil
- Excitation (calibration) .....10 VDC
- Bridge Resistance .....350 Ohms (nominal)
- Shunt Calibration Data .....Included
- Electrical Termination (std) .....PTIH-10-6P or equivalent (Hermetic stainless)
- Mating Connector (not incl.) .....PT06A-10-6S or equivalent

## Mechanical

- Media .....Gas, Liquid
- Overload-Safe
  - 2000 to 3000 psid .....100% over capacity
  - 5000 to 10,000 psid .....50% over capacity
- Pressure Port .....1/4-18 NPT female (2)
- Wetted Parts Material .....17-4 PH Stainless Steel
- Case Material .....Stainless Steel

Note: Unless otherwise specified on order, amplified units with 4-20 mA output will provide 4 mA at 0 psid and 20 mA at positive full scale and the unit will not operate in the negative direction. An available alternative is to specify 4 mA at negative full scale and 20 mA at positive full scale. All amps add 2 in. to amplifier housing.

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# Model A-5

## Internal Amplifiers

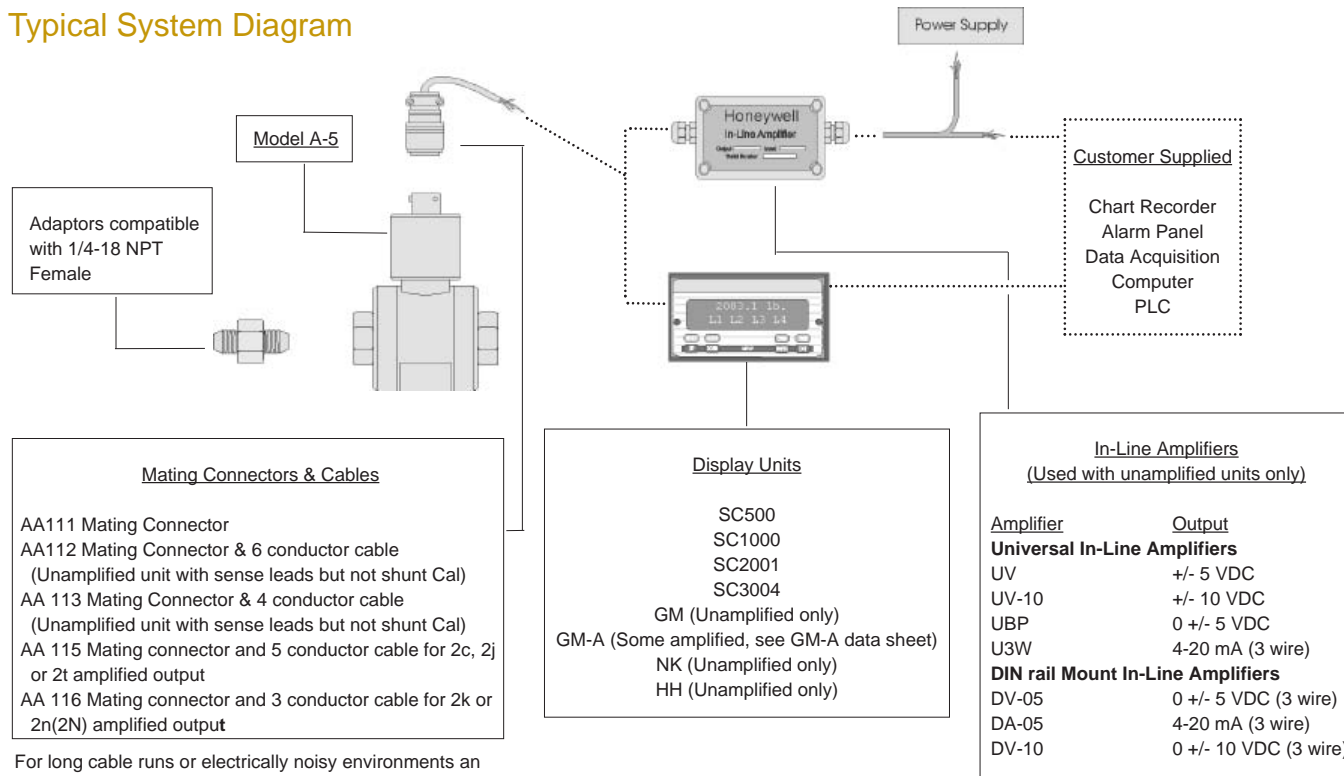
Amplifier Specifications	Voltage Output Option 2b	Voltage Output Option 2c	Voltage Output Option 2t	Current 3 Wire Option 2j	Current 2 Wire Option 2k	Intrinsically Safe Option 2n (2N)***
Output Signal	+/- 5V	0-5V or +/- 5V @ 5mA	0-10V or +/- 10V @ 5mA	4-20 mA	4-20 mA	4-20 mA
Input Power (Voltage)	+/-15V or 26-32 VDC	11-28 VDC	15-28 VDC	22-32 VDC	9-32 VDC	9-28 VDC
Input Power (Current)	45 mA	40 mA	40 mA	65 mA	4-28 mA	4-24 mA
Frequency Response (amp)	3000 Hz	3000 Hz	3000 Hz	2500 Hz	300 Hz	2000 Hz
Power Supply Rejection	60 db	60 db	60 db	60 db	60 db	60 db
Operating Temperature	-20° to 185° F	-20° to 185° F	-20° to 185° F	0° to 185° F	0° to 185° F	-20° to 185° F
Reverse Voltage Protection	Yes	Yes	Yes	Yes	Yes	Yes
Short Circuit Protection	Momentary	Momentary	Momentary	Yes	Yes	Yes
Wiring Code: Connector (Std.) (note 2)	A (+) Supply B Output Common/ C Supply Return D (+) Output E Shunt Cal 1 F Shunt Cal 2	A (+) Supply B** Output Common/ C** Supply Return D (+) Output E Shunt Cal 1 F Shunt Cal 2	A (+) Supply B** Output Common/ C** Supply Return D (+) Output E Shunt Cal 1 F Shunt Cal 2	A (+) Supply B** Output Common/ C** Supply Return D (+) Output E Shunt Cal 1 F Shunt Cal 2	A (+) Supply B No connection C No connection D (+) Output E Case Ground F No connection	A (+) Supply B No connection C No connection D (+) Output E Case Ground F No connection
Wiring Code: Cable (note 2) (note 3) (note 4)	R (+) Supply Bl Output Common/ G Supply Return W (+) Output B Shunt Cal 1 Br Shunt Cal 2	R (+) Supply Bl*Output Common/ G*Supply Return W (+) Output B Shunt Cal 1 Br Shunt Cal 2	R (+) Supply Bl*Output Common/ G*Supply Return W (+) Output B Shunt Cal 1 Br Shunt Cal 2	R (+) Supply Bl*Output Common/ G*Supply Return W (+) Output B Shunt Cal 1 Br Shunt Cal 2	R (+) Supply Bl (+) Output W Case Ground	R (+) Supply Bl (+) Output W Case Ground

\* Black and Green wires are internally connected.

\*\* Pins B and C are internally connected.

\*\*\* See Sensotec website for most up-to-date information regarding Intrinsically Safe approvals ref. #008-0547-00.

## Typical System Diagram



For long cable runs or electrically noisy environments an amplified sensor or locally mounted amplifier is often preferred.

## Range Codes

Range Code	Range Code
2000 psid	DL
3000 psid	DN
5000 psid	DR
7500 psid	DT
10,000 psid	DV

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Options

	Build to Order	Build from scratch
Pressure Ranges (psid)	2000, 3000, 5000, 7500, 10000	
Temperature Compensation	1a. 60° to 160° F 1b. 30° to 130° F 1c. 0° to 185° F 1d. -20° to 130° F 1e. -20° to 200° F 1f. 70° to 250° F 1i. -65° to 250° F 1j. 0° to 50° C 1m. -25° to 110° C	1g. 70° to 325° F 1h. 70° to 400° F
Internal Amplifiers	2u. Unamplified, mV/V output 2b. 4 wire +/-5VDC 2c. 0-5VDC 2t. 0-10VDC 2j. 4-20mA (3 wire) output	2k. 4-20mA(2-wire) output 2n(2N). 4-20mA (2-wire) intrinsically safe
Internal Amp Enhancements	3d. Remote Buffered Shunt Calibration	3a. Input/ Output Isolation (note 6)
Pressure Ports (note 5)	5a. 1/4-18 NPT Female	5c. 7/16" - 20 UNF Female (per MS33656E4)
Electrical Termination	6a. Bendix PTIH-10-6P (or equivalent) 6 pin (max. 250°F) 6e. Integral cable: Teflon (-54° to 245° C) 6f. Integral cable: PVC (-30° to 70° C) 6i. Integral underwater cable(8m) (max 80° C) (note 1) 6j. 1/2-14 conduit fitting with 5 ft. 4 conductor PVC cable	6b. MS type connector (note 1) 6g. Integral cable: Neoprene (-20 to 80° C) (note 1) 6h. Integral cable: Silicone (-54 to 150° C)
Shunt Calibration	8a. Precision Internal Resistor (note 7)	
Special Calibration		9a. 10 point (5 up/5 down) 20% increments @ 20° C 9b. 20 point (10 up/10 down) 10% increments @ 20° C
Wetted Diaphragm	17-4 PH Stainless Steel	
Bridge Type	11a. Square bridge	11c. Square & symmetrical bridge 11b. Symmetrical bridge
Potentiometers	14b. Top access to pots (note 8) 14a. No access to pots	
O Ring Seals	26a. Metal	
Interfaces	53e. Signature Calibration 53t. T.E.D.S. IEEE 1451.4 Module (note 9)	

Notes

- Availability varies according to range.
- Interconnecting shunt cal. 1 terminal with shunt cal. 2 terminal provides 50% (unamplified units), 75% (4-20mA 3-wire units) or 80% (voltage amplified units) of full scale output for quick calibration. Shunt Calibration comes standard with internal amplifier options 2b, 2c, 2t and 2j.
- O=Orange; Y=Yellow; B=Blue; Bl=Black; R=Red; Br=Brown; W=White; G=Green. Color specifying cable and number or letter specifying connector.
- No mating connector necessary for cable option.
- Some pressure port options may require axial orientation.
- Only available with unamplified option 2u.
- Only available with amplified options.
- Only available with VDC output options 2b, 2c.
- Consult factory for TEDS availability with amplified models.

Special Customer Requirements (Consult Factory)

- Pressure Port adaptors
- Mating connectors and cables
- Enhanced Line Pressure



How to Order

Combine the order code, the range code and the options code.

Sample Code: **BD142** **DV** **6h**  
 Order Code    Range Code    Options Code