

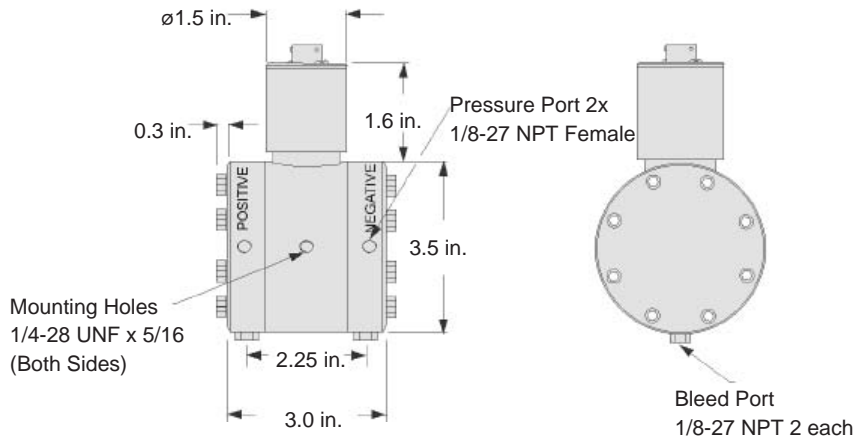
# Model Z Low Range Wet/ Wet Differential Pressure Transducer

Order Code AD111

- 0.5 to 30 psid
- All -Welded Design
- Amplified Output Available



## Dimensions



## Wiring Code

### Connector/ Unamplified

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

## Performance

Pressure Ranges .....0 +/- 0.5; 1; 2; 5; 10; 15; 25; 30 psid  
 Accuracy .....+/- 0.25% Full Scale  
 Linearity .....+/- 0.15% Full Scale (typical)  
 Hysteresis .....+/- 0.10% Full Scale (typical)  
 Non-Repeatability .....+/- 0.05% Full Scale (typical)  
 Output (standard)  
 0.5 psid .....1.0 mV/V nominal  
 1 to 4 psid .....1.5 mV/V nominal  
 5 to 30 psid .....2.0 mV/V nominal  
 Line Pressure .....1500 psi  
 Resolution .....Infinite

## Environmental

Temperature, Operating .....30° to 190°F  
 Temperature, Compensated .....30° to 130°F  
 Temperature, Effect  
 Zero .....+/- 0.5% Full scale/ 100 °F  
 Span .....+/- 0.5% Reading/ 100 °F

## Electrical

Strain Gage Type .....Bonded Foil  
 Excitation (calibration) .....10 VDC  
 Excitation (acceptable) .....Up to 10 VDC or AC  
 Insulation Resistance .....5000 Megohms @ 50 VDC max.  
 Bridge Resistance .....350 Ohms (nominal)  
 Shunt Calibration Data .....Included  
 Electrical Termination (std) .....Bendix PTIH-10-6P or equivalent  
 Mating Connector (not incl.) .....Bendix PT06A-10-6S or equivalent

## Mechanical

Media .....All fluid and gases compatible with 316 stainless steel  
 Overload-Safe .....1500 psi  
 Pressure Port .....1/8-27 NPT Female (2)  
 Dead Volume .....0.4 cu. in.  
 Wetted Parts Material .....316 Stainless Steel  
 Weight .....8 lb.  
 Case Material .....Stainless Steel

# Model Z

## Internal Amplifiers

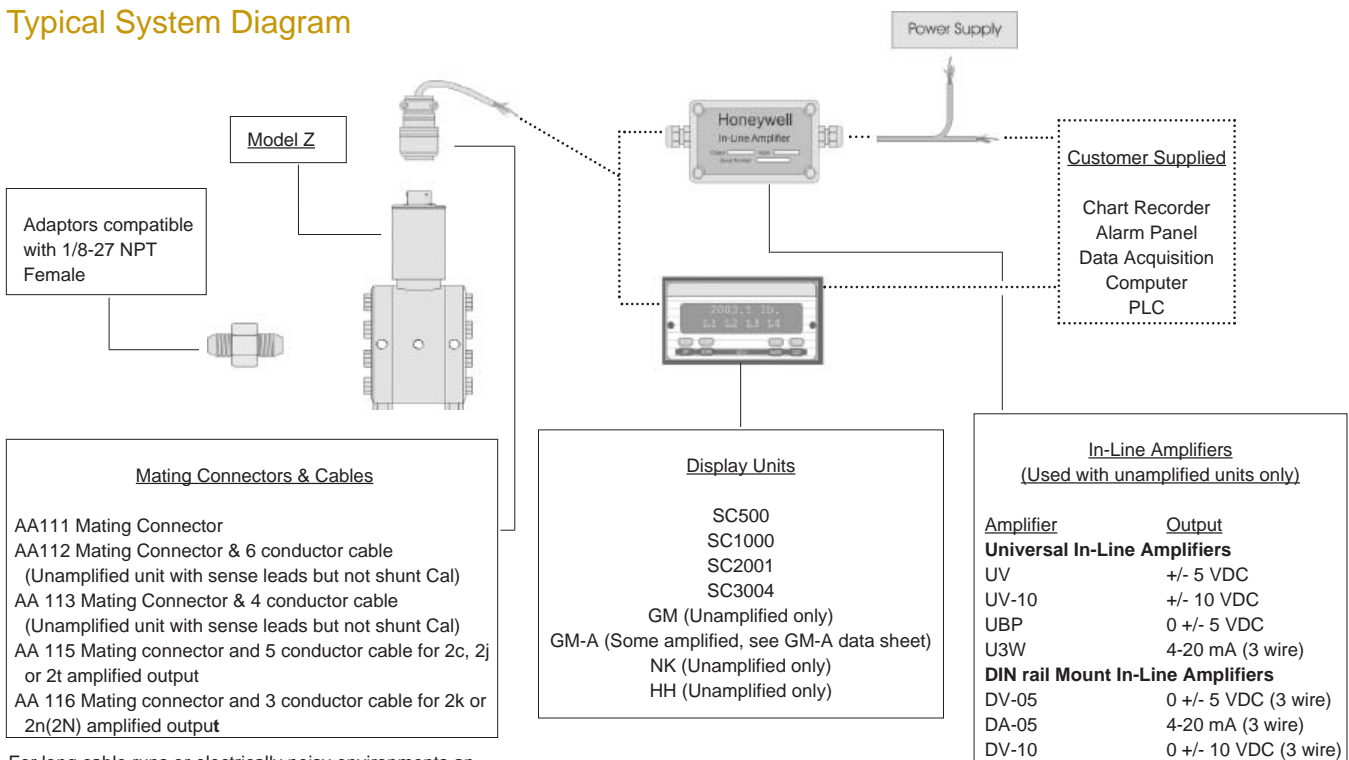
Amplifier Specifications	Voltage Output Option 2b	Voltage Output Option 2c	Voltage Output Option 2t	Current 3 Wire Option 2j	Current 2 Wire Option 2k	Intrinsically Safe Option 2n (2N)***
Output Signal	+/- 5V	0-5V or +/- 5V @ 5mA	0-10V or +/- 10V @ 5mA	4-20 mA	4-20 mA	4-20 mA
Input Power (Voltage)	+/-15V 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	Range Code
0.5 psid	AN
1 psid	AP
2 psid	AR
5 psid	AT
10 psid	AV
15 psid	BJ
25 psid	BL
30 psid	BM

# Model Z

## Options

	Build to Order	Build from Scratch
Pressure Ranges (psid)	0.5, 1, 2, 5, 10, 15, 25, 30	
Temperature Compensation	1b. 30° to 130° F 1a. 60° to 160° F 1d. -20° to 130° F 1c. 0° to 185° F 1j. 0° to 50° C	
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	3a. Input/ Output Isolation (note 8) 3d. Remote Buffered Shunt Calibration	
Pressure Ports (note 5)	5h. 1/8-27 NPT Female (2) 5a. 1/4" - 18 NPT Female 5c. 7/16" - 20 UNF Female (per MS33656E4)	
Electrical Termination	6a. Bendix PTIH-10-6P (or equiv.) 6 pin (max. 120°C) 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. of 4 conductor PVC cable	6g. Integral cable: Neoprene (-20 to 80° C) (note 1) 6h. Integral cable: Silicone (-54 to 150° C) 6m. DIN 43650 6q. Molded Integral Cable: Polyurethane (note 1) 6t. Integral Cable with Heyco Spring Strain relief (1.6m)
Shunt Calibration	8a. Precision Internal Resistor (note 6)	
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	10a. 316 Stainless Steel	
Bridge Type	11a. Square bridge 11b. Symmetrical bridge 11c. Square & symmetrical bridge	
Potentiometers	14b. Top access to pots (note 7) 14a. No access to pots	
Increased Line Pressure		25a. 2000 psi line pressure 25b. 3000 psi line pressure 25c. 5000 psi line pressure (note 1)
Interfaces	53e. Signature Calibration 53t. T.E.D.S. IEEE 1451.4 Module (note 9)	

Supplied as standard

## 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

## How to Order

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

Sample Code: **AD111** **AP** **6h**  
Order Code    Range Code    Options Code

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