

Model HL-Z High Line Wet/ Wet Differential Pressure Transducer

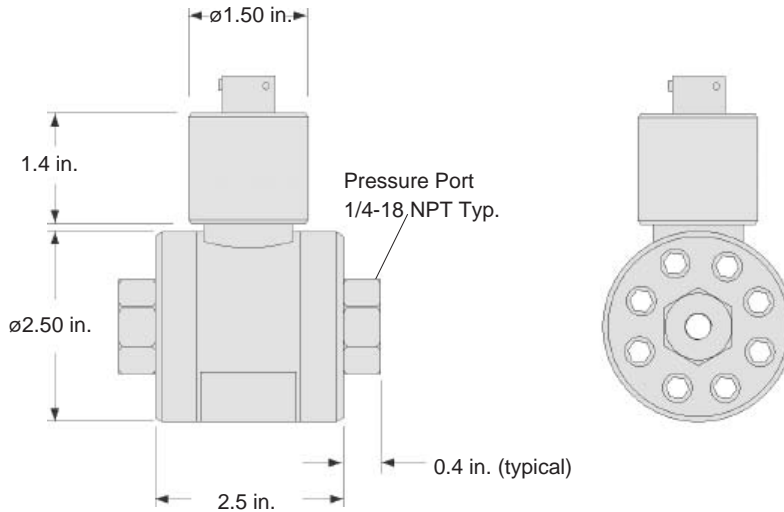


Order Code BD511

- Line Pressure to 5000 psi
- 0.25% Accuracy



Dimensions



Wiring Code

Connector/ Unamplified

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

Performance

- Pressure Ranges50; 75; 100; 150; 200; 300; 500; 750; 1000; 1500; 2000; 3000; 5000; 7500* 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)2 mV/V (nominal)
- Line Pressure2500 psi**
- ResolutionInfinite

Environmental

- Temperature, Operating-65° to 250°F
- Temperature, Compensated60° to 160°F
- Temperature, Effect
 - Zero+/- 0.5% Full scale/ 100 °F
 - Span+/- 0.5% Reading/ 100 °F

Electrical

- Strain Gage TypeBonded Foil
- Excitation (calibration)10 VDC
- Bridge Resistance350 Ohms
- Shunt Calibration DataIncluded
- Electrical Termination (std)PTIH-10-6P or equivalent (Hermetic stainless)
- Mating Connector (not incl.)PT06A-10-6S or equivalent

Mechanical

- MediaGas, Liquid
- Overload-Safe
 - 50 to 1500 psid2000 psi
 - 2000 to 7500 psidFull Scale capacity + 2000 psi
- Pressure Port1/4-18 NPT female (2)
- Wetted Parts Material17-4 PH Stainless Steel
- Case MaterialStainless 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.

* Not available with FM approval

** On units \geq 200 psid the sum of full scale pressure and line pressure must be \leq 9500 psi; on units $<$ 200 psid consult factory

Model HL-Z

Internal Amplifiers

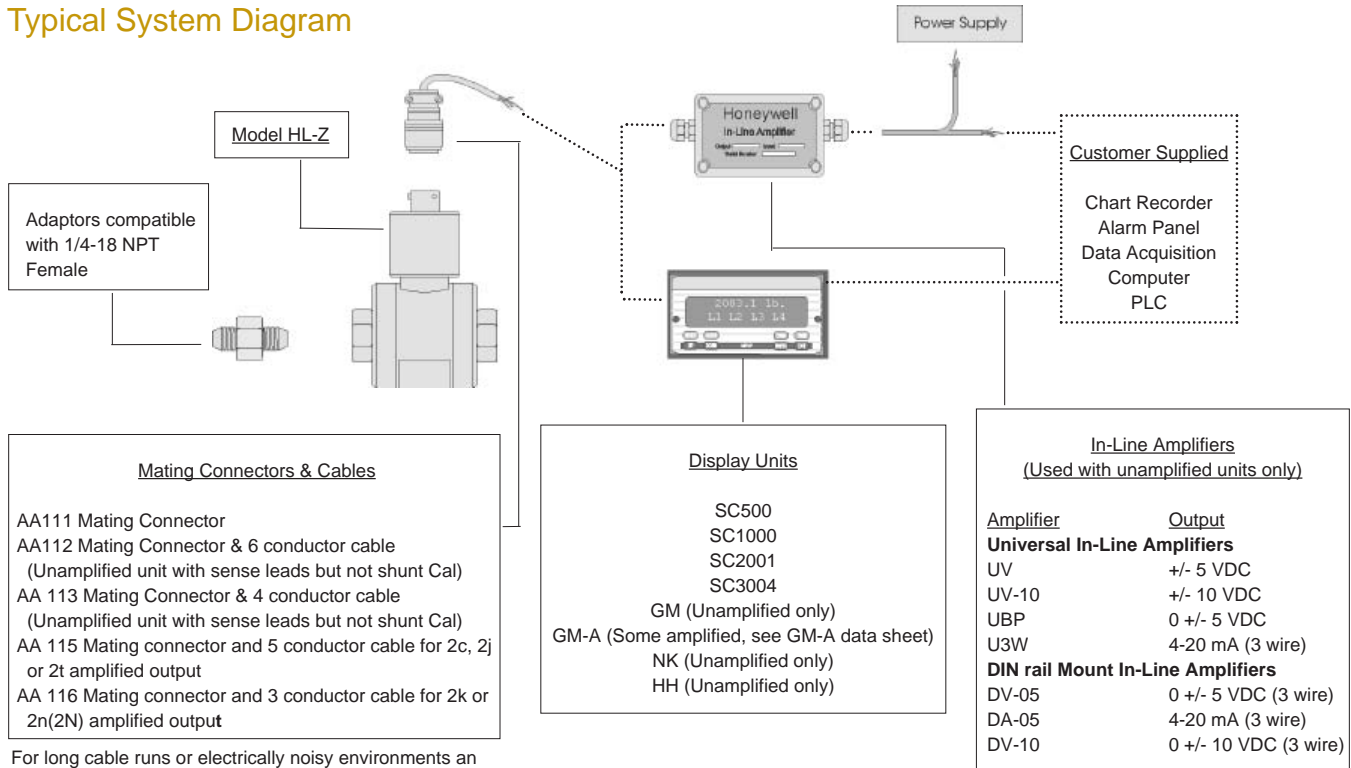
Amplifier Specifications	Voltage Output Option 2b	Voltage Output Option 2c	Voltage Output Option 2t	Current 3 Wire Option 2j	Current 2 Wire Option 2k	Intrinsically Safe Option 2n (2N)***
Output Signal	+/- 5V	0-5V or +/- 5V @ 5mA	0-10V or +/- 10V @ 5mA	4-20 mA	4-20 mA	4-20 mA
Input Power (Voltage)	+/-15V 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	Range	Range Code
50 psid	BN	750 psid	CT
75 psid	BP	1000 psid	CV
100 psid	BR	1500 psid	DJ
150 psid	CJ	2000 psid	DL
200 psid	CL	3000 psid	DN
300 psid	CP	5000 psid	DR
500 psid	CR	7500 psid	DT

Options

	Build from Scratch	
Pressure Ranges (psid)	50, 75, 100, 150, 200, 300, 500, 750, 1000, 1500, 3000, 5000, 7500	
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	
	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 7)	
	3d. Remote Buffered Shunt Calibration	
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)	
	6b. MS type connector (note 1)	
	6e. Integral cable: Teflon (-54° to 245° C)	
	6f. Integral cable: PVC (-30° to 70° C)	
	6g. Integral cable: Neoprene (-20 to 80° C) (note 1)	
	6h. Integral cable: Silicone (-54 to 150° C)	
	6i. Integral underwater cable(8m) (max 80° C) (note 1)	
6j. 1/2-14 conduit fitting with 5 ft. 4 conductor PVC cable		
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	17-4 PH Stainless Steel	
Bridge Type	11a. Square bridge	
	11b. Symmetrical bridge	
	11c. Square & symmetrical bridge	
Potentiometers	14b. Top access to pots (note 8)	
	14a. No access to pots	
Increased Line Pressure	25b. 3000 psi line pressure	
	25c. 5000 psi line pressure	
Interfaces	53e. Signature Calibration	
	53t. T.E.D.S. IEEE 1451.4 Module (note 9)	

Supplied as standard

Special Customer Requirements (Consult Factory)

Pressure Port adaptors
Mating connectors and cables
Wetted material

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 VDC output options 2b, 2c.
- Only available on amplified units.
- Consult factory for TEDS availability with amplified models.



How to Order

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

Sample Code: **BD511** **CV** **6h**
Order Code Range Code Options Code