

Model TJE Ultra Precision Wet/ Wet Differential Pressure Transducer

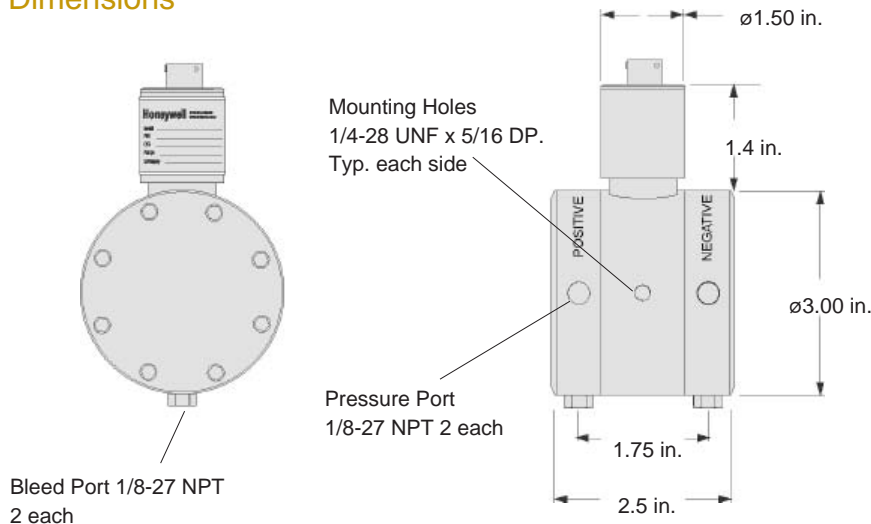


Order Code BD121

- 0.1% Accuracy
- Bi-Directional
- Amplified Output Available



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 psid
 Accuracy+/- 0.1% Full Scale
 Output (standard)2 mV/V (nominal)
 Line Pressure1500 psi
 ResolutionInfinite

Environmental

Temperature, Operating-65° to 250°F
 Temperature, Compensated60° to 160°F
 Temperature, Effect
 Zero+/- 0.25% Full scale/ 100 °F
 Span+/- 0.25% Reading/ 100 °F

Electrical

Strain Gage TypeBonded Foil
 Excitation (calibration)10 VDC
 Excitation (acceptable)UP to 10 VDC or AC
 Insulation Resistance10,000 Megohms @ 50 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-Safe1500 psi
 Pressure Port1/8-27 NPT Female (2)
 Dead Volume0.25 cu. in.
 Wetted Parts Material17-4 PH Stainless Steel
 Weight5.0 lb.
 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 housing.

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Internal Amplifiers

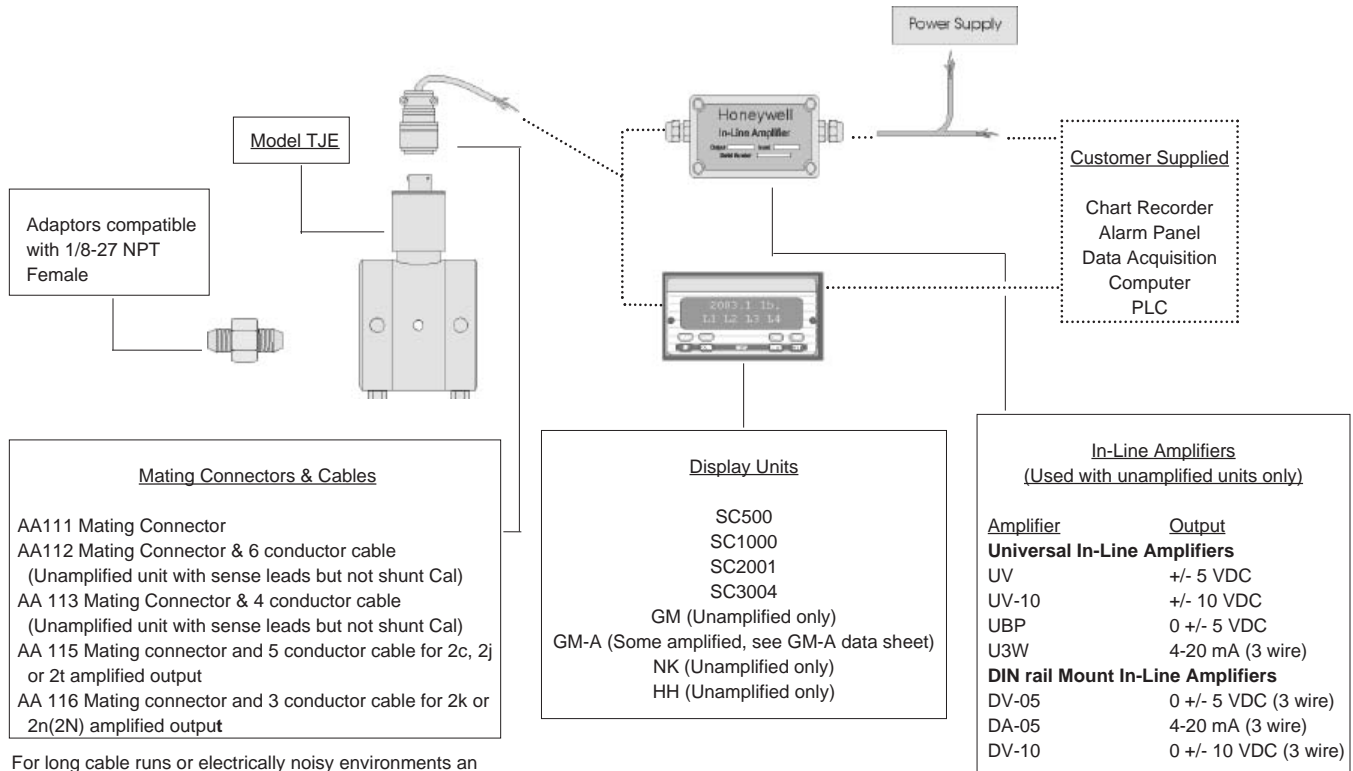
Amplifier Specifications	Voltage Output Option 2b	Voltage Output Option 2c	Voltage Output Option 2t	Current 3 Wire Option 2j	Current 2 Wire Option 2k	Intrinsically Safe Option 2n (2N)***
Output Signal	+/- 5V	0-5V or +/- 5V @ 5mA	0-10V or +/- 10V @ 5mA	4-20 mA	4-20 mA	4-20 mA
Input Power (Voltage)	+/-15V 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 BI Output Common/ G Supply Return W (+) Output B Shunt Cal 1 Br Shunt Cal 2	R (+) Supply BI*Output Common/ G*Supply Return W (+) Output B Shunt Cal 1 Br Shunt Cal 2	R (+) Supply BI*Output Common/ G*Supply Return W (+) Output B Shunt Cal 1 Br Shunt Cal 2	R (+) Supply BI*Output Common/ G*Supply Return W (+) Output B Shunt Cal 1 Br Shunt Cal 2	R (+) Supply BI (+) Output W Case Ground	R (+) Supply BI (+) 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
50 psid	BN
75 psid	BP
100 psid	BR
150 psid	CJ
200 psid	CL
300 psid	CP
500 psid	CR
750 psid	CT

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Model TJE

Options

	Same Day Ship	Fast track manufacture	Build to Order	Build from scratch
Pressure Ranges (psid)	50, 100, 200, 500			75, 150, 300, 750
Temperature Compensation	1a. 60° to 160° F	1b. 30° to 130° F 1c. 0° to 185° F 1f. 70° to 250° F 1j. 0° to 50° C	1d. -20° to 130° F 1e. -20° to 200° F 1i. -65° to 250° F 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 8)	
Pressure Ports (note 5)	5h. 1/8-27 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		10a. 316 Stainless Steel	
Bridge Type		11a. Square bridge 11b. Symmetrical bridge 11c. Square & symmetrical bridge		
Potentiometers		14a. No access to pots 14b. Top access to pots (note 6)		
O Ring Seals				26a. Metal 26b. Vi-Ton 26c. Teflon
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: **BD121** **CR** **6h**
Order Code Range Code Options Code

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