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Z
Mid Range Wet/Wet Differential Pressure Transducer

Model Z mid-range Wet/Wet Differential is a bonded foil strain gage transducers designed to accept fluid in both ports and measure differential pressure ranges from 50 psid to 750 psid. Standard features such as overload stops and stainless steel construction provide unit durability in rugged industrial environments. Each is bi-directional and achieves accuracies of 0.25 % full scale.
A variety of standard options are available with the Model Z including the traditional removable pressure adaptors for cleaning purposes, extended temperature ranges, alternative pressure ports, internal amplifiers options, and electrical terminations.

FEATURES

- 0.25% accuracy
- 50 psid to 750 psid
- mV/V (standard), 4 mA to 20 mA, 0 Vdc to 5 Vdc, or 0 Vdc to 10 Vdc output
- Intrinsically safe available (2N option only)10
- CE approved11

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SPECIFICATIONS

PERFORMANCE SPECIFICATIONS

Characteristic	Measure
Pressure ranges	50, 75, 100, 150, 200, 300, 500, 750 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 pressure	1500 psi
Resolution	Infinite

ENVIRONMENTAL SPECIFICATIONS

Characteristic	Measure
Temperature, operating	-54 °C to 121 °C [-65 °F to 250 °F]
Temperature, compensated	15 °C to 71 °C [60 °F to 160 °F]
Temperature, effect, zero	±0.5 % full scale/100 °F
Temperature, effect, span	±0.5 % reading/100 °F

ELECTRICAL SPECIFICATIONS

Characteristic	Measure
Strain gage type	Bonded foil
Excitation (calibration)	10 Vdc
Excitation (acceptable)	Up to 10 Vdc or ac
Insulation resistance	5000 mOhm @ 50 Vdc
Bridge resistance	350 ohm
Shunt calibration data	Included
Elec. termination (std)	PTIH-10-6P or equivalent (hermetic stainless)
Mating connector (not incl.)	PT06A-10-6S or equiv. (AA111)

MECHANICAL SPECIFICATIONS

Characteristic	Measure
Media	Gas, liquid
Overload-safe	1500 psi
Pressure port	1/8-27 NPT female (2)
Dead volume	0.25 cu. in
Wetted parts material	17-4 PH stainless steel
Weight	2,3 kg [5 lb]
Case material	Stainless steel

RANGE CODES

Range Code	Available ranges	Range Code	Available ranges
BN	±50 psid	CL	±200 psid
BP	±75 psid	CP	±300 psid
BR	±100 psid	CR	±500 psid
CJ	±150 psid	CT	±750 psid

OPTION CODES

Range Code	**Many range/option combinations are available in our quick-ship and fast-track manufacture programs. Please see http://sensing.honeywell.com/TMsensor-ship for updated listings.**	
Pressure ranges (psid)	50, 75, 100, 150, 200, 300, 500, 750	
Temperature compensation	1a. 60 °F to 160 °F 1b. 30 °F to 130 °F 1c. 0 °F to 185 °F 1d. -20 °F to 130 °F 1e. -20 °F to 200 °F 1f. 70 °F to 250 °F	1g. 70 °F to 325 °F 1h. 70 °F to 400 °F 1i. -65 °F to 250 °F 1j. 0 °C to 50 °C 1m. -25 °C to 110 °C
Internal amplifiers	2b. 4 wire ±5 Vdc 2c. 0 Vdc to 5 Vdc 2j. 4 mA to 20 mA (3-wire) output 2k. 4 mA to 20 mA (two-wire) output	2n. (2N) 4 mA to 20 mA (two-wire) intrinsically safe 2t. 0 Vdc to 10 Vdc 2u. Unamplified, mV/V output
Internal amp enhancements	3a. Input/output isolation [8] 3d. Remote buffered shunt calibration	
Pressure ports [5]	5h. 1/8-27 NPT female (2) 5c. 7/16-20 UNF female	
Electrical termination	6a. Bendix PTIH-10-6P (or equiv.) 6 pin (max. 250 °F) 6b. MS type connector [1] 6e. Integral cable: Teflon (-54 °C to 245 °C) 6f. Integral cable: PVC (-30 °C to 70 °C) 6g. Integral cable: Neoprene (-20 °C to 80 °C) [1]	6h. Integral cable: Silicone (-54 °C to 150 °C) 6i. Integral underwater cable (8m [26 ft]) (max. 80 °C) [1] 6j. 1/2-14 conduit fitting with 1,5 m [5 ft] of 4 conductor PVC cable
Shunt calibration	8a. Precision internal resistor [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 [6] 11b. Symmetrical bridge [6] 11c. Square & symmetrical bridge [6]	
Zero & span adjustment	14a. No access to pots 14b. Top access to pots [6]	
Interfaces	53e. Signature calibration [6] 53t. TEDS IEEE 1451.4 module [9]	

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SPECIFICATIONS

INTERNAL AMPLIFIERS

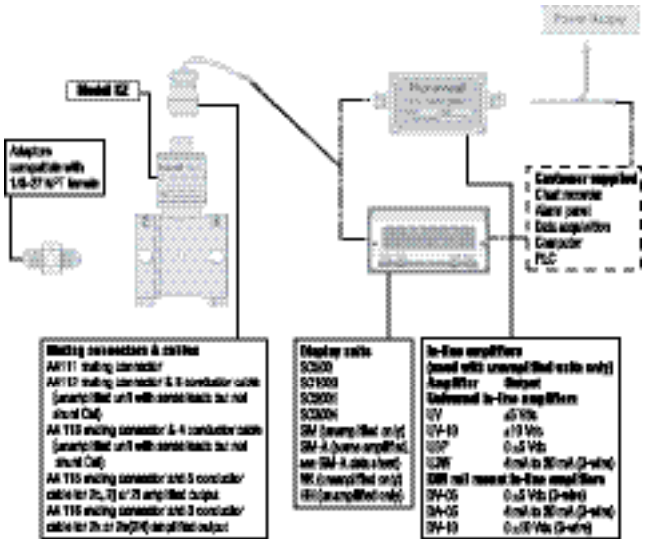
Amplifier specifications	Voltage output: Option 2b	Voltage output: Option 2c	Voltage output: Option 2t	Current three-wire: Option 2j	Current two-wire: Option 2k	Intrinsically safe amp: Option 2n (2N)***
Output signal	±5 V	0 V to 5 V or ±5 V @ 5 mA	0 V to 10 V or ±10 V @ 5 mA	4 mA to 20 mA	4 mA to 20 mA	4 mA to 20 mA
Input power (voltage)	±15 V or 26 Vdc to 32 Vdc	11 Vdc to 28 Vdc	15 Vdc to 28 Vdc	22 Vdc to 32 Vdc	9 Vdc to 32 Vdc	9 Vdc to 28 Vdc
Input power (current)	45 mA	40 mA	40 mA	65 mA	4 mA to 28 mA	4 mA to 24 mA
Freq. resp (amp)	3000 Hz	3000 Hz	3000 Hz	2500 Hz	300 Hz	2000 Hz
Power supply rej.	60 db	60 db	60 db	60 db	60 db	60 db
Operating temp.	-20 °F to 185 °F	-20 °F to 185 °F	-20 °F to 185 °F	0 °F to 185 °F	0 °F to 185 °F	-20 °F to 185 °F
Reverse voltage protection	Yes	Yes	Yes	Yes	Yes	Yes
Short cir. protection	Momentary	Momentary	Momentary	Yes	Yes	Yes
Wiring code: connector (std) [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 [2,3,4]	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 Honeywell's Web site for the most up-to-date information regarding Intrinsically safe approvals, ref #008-0547-00.

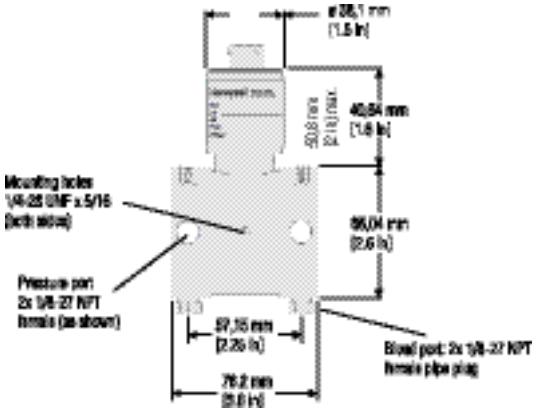
WIRING CODES

Connector	Unamplified
A, B	(+) excitation
C, D	(-) excitation
E	(-) output
F	(+) output

TYPICAL SYSTEM DIAGRAM



MOUNTING DIMENSIONS AND CHARACTERISTICS



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NOTES

1. Availability varies according to range.
2. Interconnecting shunt cal. 1 terminal with shunt cal. 2 terminal provides 50% (unamplified units), 75% (4 mA to 20 mA 3-wire units) or 80% (voltage amplified units of full scale output for quick calibration. Shunt calibration comes standard with inter - nal amplifier options 2b, 2c, 2t and 2j.)
3. 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.
4. No mating connector necessary for cable option.
5. Some pressure port options may require axial orientation.
6. Only available with unamplified option 2u.
7. Only available with amplified options.
8. Only available with Vdc output options 2b, 2c.
9. Consult factory for TEDS availability with amplified models.
10. Range dependent; consult factory. Termination dependent; consult factory.
11. Internal amp and termination dependent; consult factory.

12 5000 ohm bridge required.

Note: Unless otherwise specified on order, amplified units with 4 mA to 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 is to specify 4 mA at negative full scale and 20 mA at positive alternative/full scale. All amps add 2 in to housing.

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