

## Model 420

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### DP Mid Range Two Wire Wet/Wet Differential Pressure Transducer



#### DESCRIPTION

The Model 420 DP two-wire mid range differential pressure transmitters utilize supply voltage of 9 Vdc to 32 Vdc to produce a two-wire 4 mA to 20mA process loop output for differential pressure ranges of 50 psid to 750 psid. A minimum full scale accuracy of 0.5% is achieved. Stainless steel construction ensures

durability under harsh, industrial conditions and includes zero and span adjustments. A variety of options are available with the Model 420 including choice of pressure adaptors and pressure ports.

#### FEATURES

- 0.5% accuracy
- 50 psid to 750 psid range
- Stainless steel
- Intrinsically safe available (2N option only)<sup>4</sup>
- CE approved<sup>5</sup>

# Model 420

## PERFORMANCE SPECIFICATIONS

Characteristic	Measure
Pressure ranges	50, 75, 100, 150, 200, 300, 500, 750 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)	4 mA to 20 mA
Line pressure	1500 psi
Resolution	Infinite

## ENVIRONMENTAL SPECIFICATIONS

Characteristic	Measure
Temperature, operating	18 °C to 82 °C [0 °F to 180 °F]
Temperature, compensated	16 °C to 71 °C [60 °F to 160 °F]
Temperature, effect, zero	±1.0 % full scale/ 38 °C [100 °F]
Temperature, effect, span	±1.0 % reading/ 38 °C [100 °F]

## ELECTRICAL SPECIFICATIONS

Characteristic	Measure
Strain gage type	Bonded foil
Excitation (calibration)	15 Vdc to 40 Vdc
Maximum load resistance	500 ohm
Shunt calibration data	Included
Elec. termination (std)	PTIH-10-6P or equiv. (Hermetic stainless)
Mating conn. (not incl)	PT06A-10-6S or equiv. (AA111)

## MECHANICAL SPECIFICATIONS

Characteristic	Measure
Media	Gas, liquid
Overload-safe	1500 psi either side
Pressure port	1/8-27 NPT female (2)
Wetted parts material	17-4 PH stainless steel
Case material	Stainless steel

## RANGE CODES

Range Code	RANGE	Range Code	RANGE
<b>BN</b>	50 psid	<b>CL</b>	200 psid
<b>BP</b>	75 psid	<b>CP</b>	300 psid
<b>BR</b>	100 psid	<b>CR</b>	500 psid
<b>CJ</b>	150 psid	<b>CT</b>	750 psid

## OPTION CODES

<b>Range Code</b>	Many range/option combinations are available in our quick-ship and fast-track manufacture programs. Please see <a href="http://sensing.honeywell.com/TMsensor-ship">http://sensing.honeywell.com/TMsensor-ship</a> for updated listings.
<b>Pressure ranges (psid)</b>	50, 75, 100, 150, 200, 300, 500, 750
<b>Temperature compensation</b>	1a. 60 °F to 160 °F      1c. 0 °F to 185 °F 1b. 30 °F to 130 °F
<b>Internal amplifiers</b>	2k. 4 mA to 20 mA (two wire)
<b>Internal amplifier enhancements</b>	3d. Remote buffered shunt calibration
<b>Pressure ports<sup>2</sup></b>	5h. 1/8-27 NPT female 5c. 7/16-20 UNF female
<b>Electrical termination</b>	6a. Bendix PTIH-10-6P (or equiv.) 6 pin (250 °F)      6h. Integral cable: Silicone (-54 °C to 150 °C) 6e. Integral cable: Teflon (-54 °C to 245 °C)      6i. Integral underwater cable (8 m [26 ft]) (max. 80 °C) <sup>1</sup> 6f. Integral cable: PVC (-30 °C to 70 °C)      6j. 1/2-14 conduit fitting with 1,5 m [5 ft] 4 conductor PVC cable 6g. Integral cable: Neoprene (-20 °C to 80 °C) <sup>1</sup>
<b>Special calibration</b>	9a. 10 point (5 up/5 down) 20% increments @ 20 °C [68 °F] 9b. 20 point (10 up/10 down) 20% increments @ 20 °C [68 °F]
<b>Wetted diaphragm</b>	17-4 stainless steel
<b>O-ring seals</b>	26a. Metal 26c. Teflon

## WIRING CODES

Connector/ two-wire current/ 4 mA to 20 mA	
<b>A</b>	(+) supply
<b>B</b>	No connection
<b>C</b>	No connection
<b>D</b>	(+) output (4 mA to 20 mA)
<b>E</b>	Case ground
<b>F</b>	No connection

# Model 420

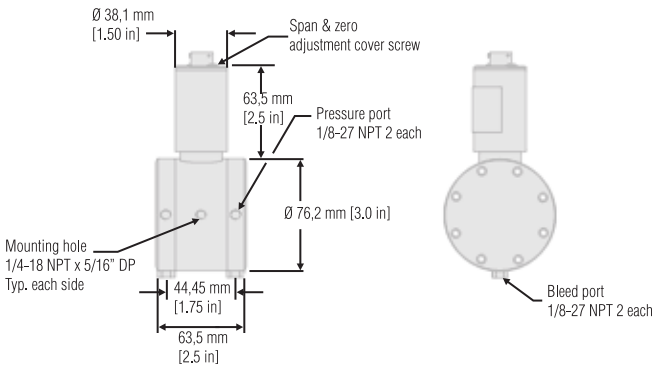
# DP Mid Range Two Wire Wet/Wet Differential Pressure Transducer

## NOTES

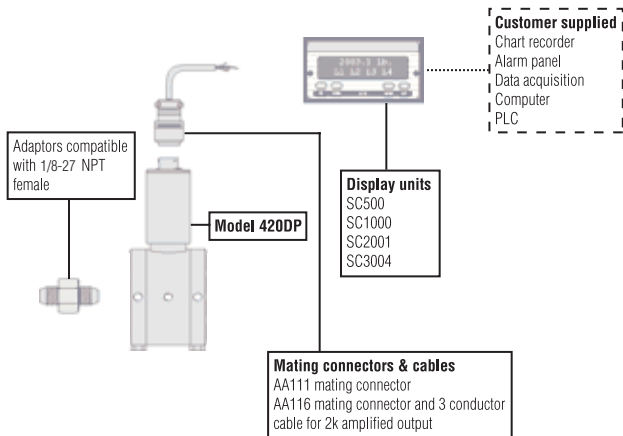
1. Availability varies according to range.
2. Some pressure port options may require axial orientation.
3. Range dependent; consult factory. Termination dependent; consult factory.
4. Internal amp and termination dependent; consult factory.

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 alternative is to specify 4 mA at negative full scale and 20 mA at positive full scale.

## MOUNTING DIMENSIONS AND CHARACTERISTICS



## TYPICAL SYSTEM DIAGRAM



**Warranty.** Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items it finds defective. **The foregoing is buyer's sole remedy and is in lieu of all warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

For more information about Sensing and Control products, visit [www.honeywell.com/sensing](http://www.honeywell.com/sensing) or call +1-815-235-6847

Email inquiries to [info.sc@honeywell.com](mailto:info.sc@honeywell.com)

### **WARNING** **PERSONAL INJURY**

- DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

**Failure to comply with these instructions could result in death or serious injury.**

### **WARNING** **MISUSE OF DOCUMENTATION**

- The information presented in this catalogue is for reference only. DO NOT USE this document as product installation information.
- Complete installation, operation and maintenance information is provided in the instructions supplied with each product.

**Failure to comply with these instructions could result in death or serious injury.**

Sensing and Control  
Automation and Control Solutions  
Honeywell  
1985 Douglas Drive North  
Golden Valley, MN 55422 USA  
+1-815-235-6847  
[www.honeywell.com/sensing](http://www.honeywell.com/sensing)

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