

Model 415 Two Wire Gage/ Absolute Pressure Transmitters

Order Code AP411 (gage) AP412 (absolute)

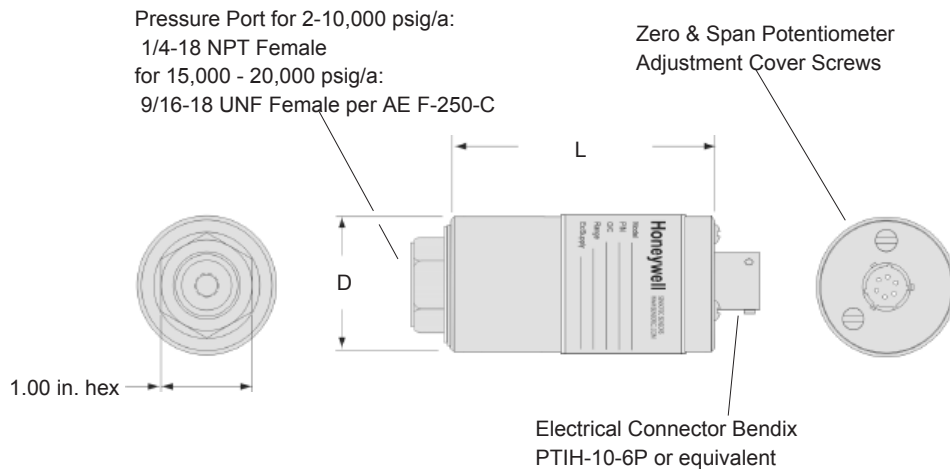
- 2 to 20,000 psi Range
- 4-20 mA Output
- 0.1% Accuracy



Wiring Code

Connector/ 2 Wire Current, 4-20 mA

- A (+) Supply
- B No Connection
- C No Connection
- D (+) Output 4-20 mA
- E Case Ground
- F No Connection



Dimensions

	2	5	10	15	25	50	75	100	150	200	300	500	750	1000	1500	2000	3000	5000	7500	10,000	15,000	20,000
Range Code	AR	AT	AV	BJ	BL	BN	BP	BR	CJ	CL	CP	CR	CT	CV	DJ	DL	DN	DR	DT	DV	EJ	EL
D (in./ mm)	2.25/ 57												1.50/ 38									
L (in./ mm) for psia	3.57/ 91				3.36/ 85				3.74/ 95				3.0/ 76				3.06/ 78					
L (in./ mm) for psig	3.10/ 79				3.36/ 85				3.74/ 95				3.0/ 76				3.06/ 78					
Over Pressure (test) (psi)	150% Full Scale																					
Over Pressure (burst) (psi)	50	100	200	400	800	2k	3k	3.5k	4k	8k	12k	20k	25k	25k	40k	45k						
Port Volume (in. ³ / cm ³)	0.32/ 5.2		0.25/ 4.1		0.17/ 2.8										0.12/ 3.1				0.06/ 1.5			
Natural Frequency (Hz)	550	1k	1.3k	2.1k	2.5k	2.9k	3.5k	4.6k	6k	7k	9k	9.5k	12k	17k	20k	35k	40k	54k	60k	80k	100k	>100k

Performance

Accuracy (note 4).....	+/-0.1% Full Scale
Non-Linearity and Hysteresis.....	+/-0.10% Best Fit Straight Line
Non-Repeatability.....	0.10% Best Fit Straight Line
Output.....	4-20 mA
Resolution.....	Infinite

Environmental

Temperature, Operating.....	-20° to 185°F
Temperature, Compensated.....	60° to 160°F
Temperature, Effect	
Zero.....	0.005% Full scale/ °F
Span.....	0.007% Reading/ °F

Electrical

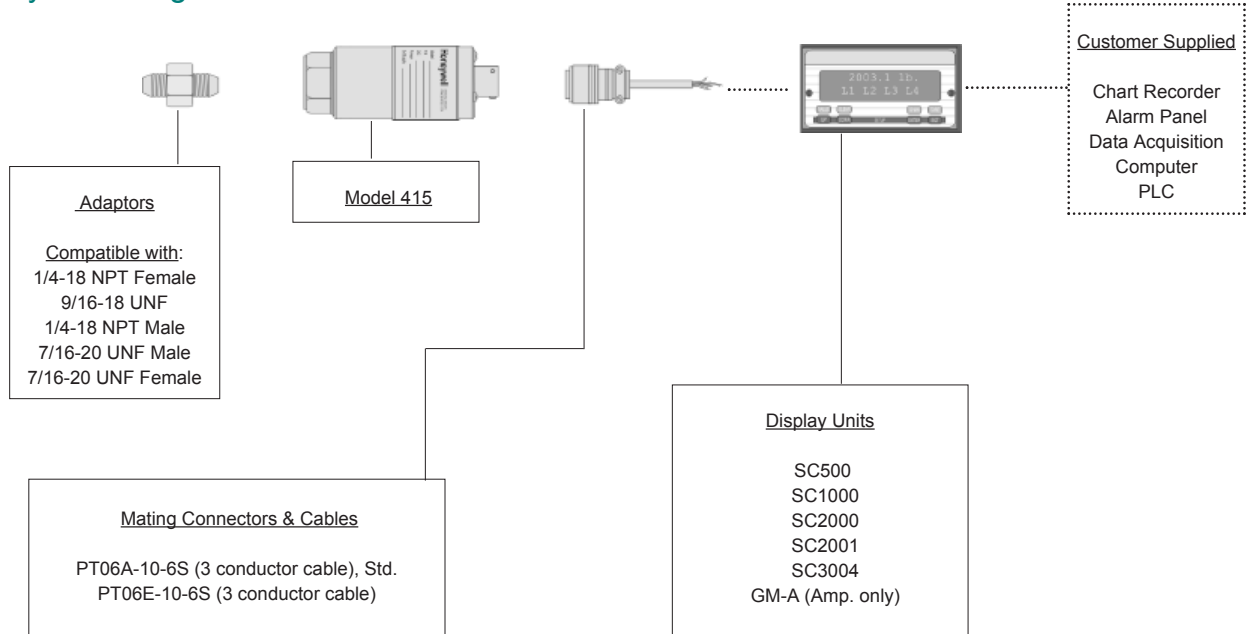
Excitation (acceptable).....	9 to 32 VDC
Insulation Resistance.....	5,000 Megohm @ 50 VDC
Electrical Termination (std).....	PTIH-10-6P or equiv. (Hermetic Stainless)
Mating Connector (not incl.).....	PT06A-10-6S or equiv.
Frequency Response.....	300 Hz

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Mechanical

Media.....	Gases, Liquids compatible with wetted material
Overload-Safe.....	50% over capacity
Pressure Port	
2 to 10,000 psig/a.....	1/4-18 NPT female
15,000 to 20,000 psig/a.....	9/16-18 UNF per Autoclave AE F250-C
Proof Pressure.....	400%
Dead Volume.....	See Table
Wetted Parts Material	
2 to 1500 psig/a.....	17-4 PH Stainless Steel
>1500 psig/a.....	15-5 PH Stainless Steel
Weight.....	13 oz.
Case Material.....	Stainless Steel

Typical System Diagram



Internal Amplifiers

Amplifier Specifications	Current 2-wire Option 2k	Intrinsically Safe Amp Option 2N (2n)*
Output Signal	4-20 mA	4-20 mA
Input Power (Voltage)	9-32 VDC	9-28 VDC
Input Power (Current)	4-24 mA	4-24 mA
Frequency Response	300 Hz	2000 Hz
Power Supply Rejection	60 db	60 db
Operating Temperature	-20° to 185° F	-20° to 185° F
Reverse Voltage Protection	Yes	Yes
Short Circuit Protection	Yes	Yes
Wiring Code: Connector (Std.)	A (+) Supply	A (+) Supply
	B No Connection	B No Connection
	C No Connection	C No Connection
	D (+) Output	D (+) Output
	E Case Ground	E Case Ground
	F No Connection	F No Connection
Wiring Code: Cable (note 2)	R (+) Supply	R (+) Supply
	BI (+) Output	BI (+) Output
	W Case Ground	W Case Ground

* See Sensotec website for most up-to-date information regarding Intrinsically safe approvals reference #008-0547-00.

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Options

	Fast Track Manufacture	Built to Order	Built from Scratch
Pressure Ranges	15; 25; 50; 75; 100; 200; 300; 500; 750; 1000; 1500; 2000; 3000; 5000; 7500; 10,000 psig/a		2; 5; 10; 15,000; 20,000 psig/a
Temperature Compensation	1a. 60° to 160° F 1b. 30° to 130°F 1c. 0° to 185°F 1d. -20° to 130°F		
Internal Amplifiers	2k. 4-20mA (2-wire) output 2n (2N). Intrinsically safe amp		
Pressure Ports (note 3)	5a. 1/4-18 NPT Female (2 - 10,000 psi) 5s. 9/16-18 UNF per AE F-250-C (15,000 - 20,000 psi) 5b. 1/4-18 NPT Male 5d. 7/16-20 UNF Male	5c. 7/16-20 UNF Female	
Electrical Termination (note 2)	6a. Bendix PTIH-10-6P-(or equiv.) 6 pin (max. 400°F) 6e. Integral cable: Teflon (-65° to 475°F) 6f. Integral cable: PVC (-20° to 160°F) 6g. Integral cable: Neoprene (0° to 180°F) (note 1) 6h. Integral cable: Silicone (-65° to 300°F)	6i. Integral underwater cable (max. 180°F) 6j. 1/2-14 conduit fitting with 5' of 4 conductor PVC cable (may be used with 6e-i)	
Shunt Calibration		3d. Remote Buffered Shunt Cal	
Special Calibration (note 3)	9a. 10 point (5 up/ 5 down) 20% increments @ 70°F		
Wetted Diaphragm (note 3)			10a. 316 Stainless Steel 10b. Crucible A-286 10c. Hastelloy C
Potentiometers	14a. No Access to Pots 14b. Top Access to Pots		
Shock & Vibration		44a. Shock/ Vibration Resistance	

■ Supplied as standard

Range Codes

Range	Range Code	Range	Range Code
2 psig/a	AR	500 psig/a	CR
5 psig/a	AT	750 psig/a	CT
10 psig/a	AV	1,000 psig/a	CV
15 psig/a	BJ	1,500 psig/a	DJ
25 psig/a	BL	2,000 psig/a	DL
50 psig/a	BN	3,000 psig/a	DN
75 psig/a	BP	5,000 psig/a	DR
100 psig/a	BR	7,500 psig/a	DT
200 psig/a	CL	10,000 psig/a	DV
300 psig/a	CP	20,000 psig/a	EL

Notes

- Specify cable diameter: can handle dia. of 4.5mm to 14 mm or 1/2" NPT conduit fitting
- G=Green; B=Blue; W=White; Bl=Black; Br=Brown; Y=Yellow; R=Red; O=Orange; Color specifying cable and number or letter specifying connector.
- Availability varies with range.
- Accuracies stated are expected for Best Fit Straight Line for all errors including linearity, hysteresis & non-repeatability thru zero.

Special Customer Requirements (Consult Factory)

Special wetted material
Special ports
Special wiring codes

How to Order

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

Sample Code: **AP411** **AT** **5a**
Order Code Range Code Options Code