



## NT® PRESSURE TRANSDUCERS

*Single-port and flow-through models*



# reliable pressure measurement

## Reliable Pressure Measurement

Whether it's automation, process control or safety concerns that require pressure measurement, the instrumentation must be clean, accurate and reliable. To meet the needs of the semiconductor industry, Entegris combines the latest electronic sensing technology and high purity materials to create leading-edge products that allow for greater control of process variables.

- No moving parts to generate particles
- Nonmetallic sensing technology for reliable measurement
- No fill fluids to contaminate your process
- Available with a flow-through design to minimize dead volume
- Compact design to minimize footprint
- One percent (1%) of full scale accuracy for critical measurements

## Constructed for Compatibility

NT® Pressure Transducers do not contain any moving parts or fill fluids that could potentially contaminate the process. The wetted parts of the nonmetallic transducer consist of PTFE and other high purity fluoropolymers. With the FEP-jacketed pigtail available as the standard electrical connection, the transducer is resistant to harsh chemical environments and external spraydowns.

## Sensing Technology

Using a nonmetallic pressure sensing technology, these transducers provide an accurate and reliable measurement. All products are factory calibrated and 100 percent verified, with no field calibration or adjustments necessary to slow down your installation. Standard electronic outputs enable easy integration with PLCs, control systems and electronic displays.

## Applications

Measuring line pressure allows the user to obtain valuable and critical diagnostic information, which is used for monitoring or controlling process conditions, such as:

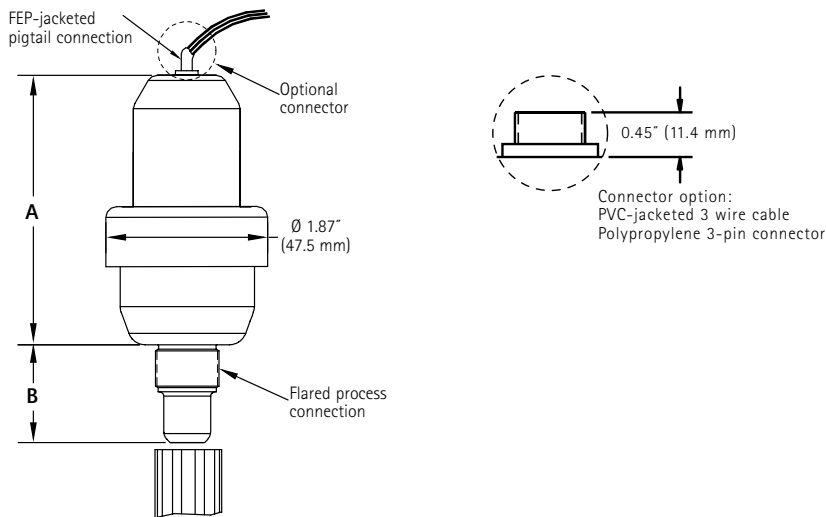
- Chemical and DI water dispense
- Filter life monitoring
- Back-pressure in recirculation loops
- Point-of-use dispense
- Tool prioritization

# NT<sup>®</sup> Pressure Transducer, Single-port

## Model 4100 Dimensional Information



Inlet/Outlet Port Connection	Dimensions		
	A		B
	Connector	Pigtail	
1/4" Flaretek <sup>®</sup>	2.90" (73.7 mm)	2.90" (73.7 mm)	0.99" (25.2 mm)
3/8" Flaretek <sup>®</sup>	2.90" (73.7 mm)	2.90" (73.7 mm)	1.06" (26.9 mm)
1/2" Flaretek <sup>®</sup>	2.90" (73.7 mm)	2.90" (73.7 mm)	1.14" (29.0 mm)
1/4" FNPT	3.07" (78.0 mm)	3.24" (82.3 mm)	–
1/2" FNPT	3.33" (84.6 mm)	3.50" (88.9 mm)	–
1/4" MNPT	2.90" (73.7 mm)	2.90" (73.7 mm)	0.59" (15.0 mm)

### Side View



## Specifications

### Description Model 4100

Materials of construction:	Wetted parts	Body: PTFE Sensor interface: PFA or CTFE Primary seal: Kalrez <sup>®</sup>
	Nonwetted parts	Polypropylene, polyethylene, PVDF and PVC or FEP-jacketed cable (in addition to materials listed above)
Pressure range:	0 to 30 PSIG (0 to 207 kPa); 0 to 60 PSIG (0 to 414 kPa); 0 to 100 PSIG (0 to 690 kPa); 0 to 150 PSIG (0 to 1034 kPa)	
Over-pressure limit:	150% of full scale range	
Process temperature:	50° to 149°F (10° to 65°C); 149° to 203°F (65° to 95°C) at 75 PSIG (517 kPa) maximum	
Process connection options:	Flaretek <sup>®</sup> flared tube: 1/4", 3/8", 1/2" FNPT: 1/4", 1/2" MNPT: 1/4"	
Electrical input:	24 VDC (12-28 VDC input voltage)	
Electrical output:	4-20 mA*, 0-5 VDC, 0-10 VDC	
Reference accuracy:	±1% of full scale (includes combined effects of linearity, hysteresis and repeatability)	
Enclosure:	NEMA 5/IP54	
Approvals:	  Conforms to the UL Standard 1604 Class I, Div. II Group A, B, C, D T6.	

Note: Specifications are subject to change without notice. Please consult the factory for the most current information.

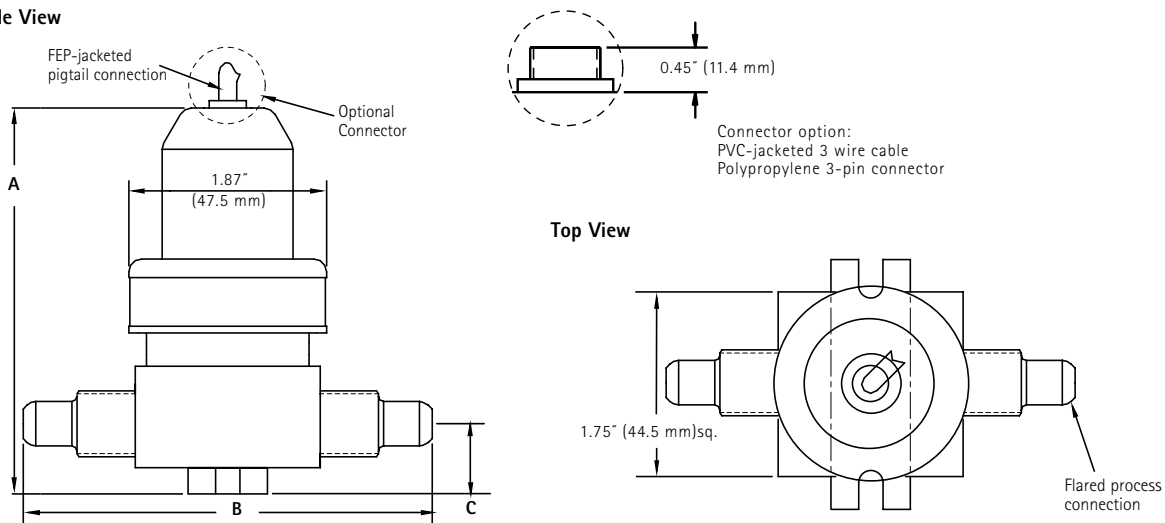
\*The 4-20 mA electrical output, rated 12-28 VDC, is also ETL listed for conformance to UL standard 2279, Class 1, Zone 0, 1 and 2, Ex ia IIA T6

# NT<sup>®</sup> Pressure Transducer, Flow-through

## Model 4210 Dimensional Information



Inlet/Outlet Port Connection	A		B	C
	Connector	Pigtail		
1/4" Flaretek <sup>®</sup>	3.53" (89.7 mm)	3.53" (89.7 mm)	3.72" (94.5 mm)	0.67" (18.5 mm)
3/8" Flaretek <sup>®</sup>	3.53" (89.7 mm)	3.53" (89.7 mm)	3.87" (98.3 mm)	0.73" (17.0 mm)
1/2" Flaretek <sup>®</sup>	3.78" (96.0 mm)	3.78" (96.0 mm)	4.03" (102.4 mm)	0.85" (21.6 mm)
3/4" Flaretek <sup>®</sup>	4.11" (104.4 mm)	4.11" (104.4 mm)	4.27" (108.5 mm)	1.00" (25.4 mm)
1" Flaretek <sup>®</sup>	4.43" (112.5 mm)	4.43" (112.5 mm)	4.75" (120.7 mm)	1.20" (30.5 mm)

### Side View



## Specifications

### Description Model 4210

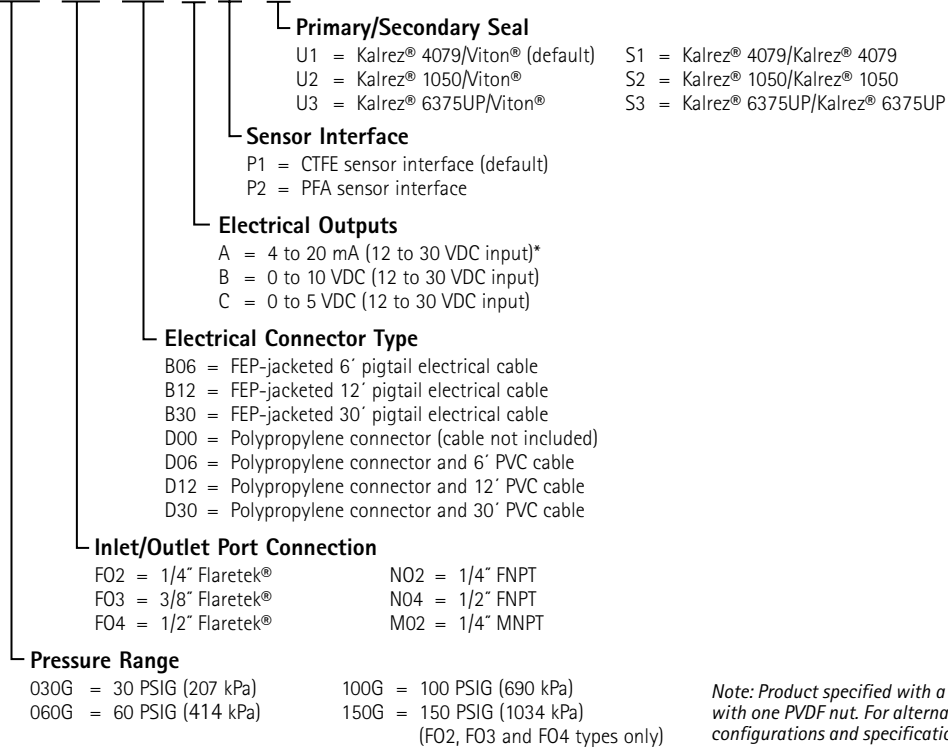
Materials of construction:	Wetted parts	Body: PTFE Sensor interface: PFA or CTFE Primary seal: Kalrez <sup>®</sup>
	Nonwetted parts	Polypropylene, polyethylene, PVDF and PVC or FEP-jacketed cable (In addition to materials listed above)
Pressure range:	0 to 30 PSIG (0 to 207 kPa); 0 to 60 PSIG (0 to 414 kPa); 0 to 100 PSIG (0 to 690 kPa)	
Over-pressure limit:	150% of full scale range	
Process temperature:	50° to 149°F (10° to 65°C); 149° to 203°F (65° to 95°C)	
Process connection options:	Flaretek <sup>®</sup> flared tube: 1/4", 3/8", 1/2", 3/4", 1" (NPT versions also available)	
Electrical input:	24 VDC (12-28 VDC input voltage)	
Electrical output:	4-20 mA*, 0-5 VDCm 0-10 VDC	
Reference accuracy:	±1% of full scale (includes combined effects of linearity, hysteresis and repeatability)	
Enclosure:	NEMA 5/IP54	
Approvals:	  Conforms to the UL Standard 1604 Class I, Div. II Group A, B, C, D T6.	

Note: Specifications are subject to change without notice. Please consult the factory for the most current information.  
\*The 4-20 mA electrical output, rated 12-28 VDC, is also ETL listed for conformance to UL standard 2279, Class 1, Zone 0, 1 and 2, Ex ia IIA T6

# Ordering Information

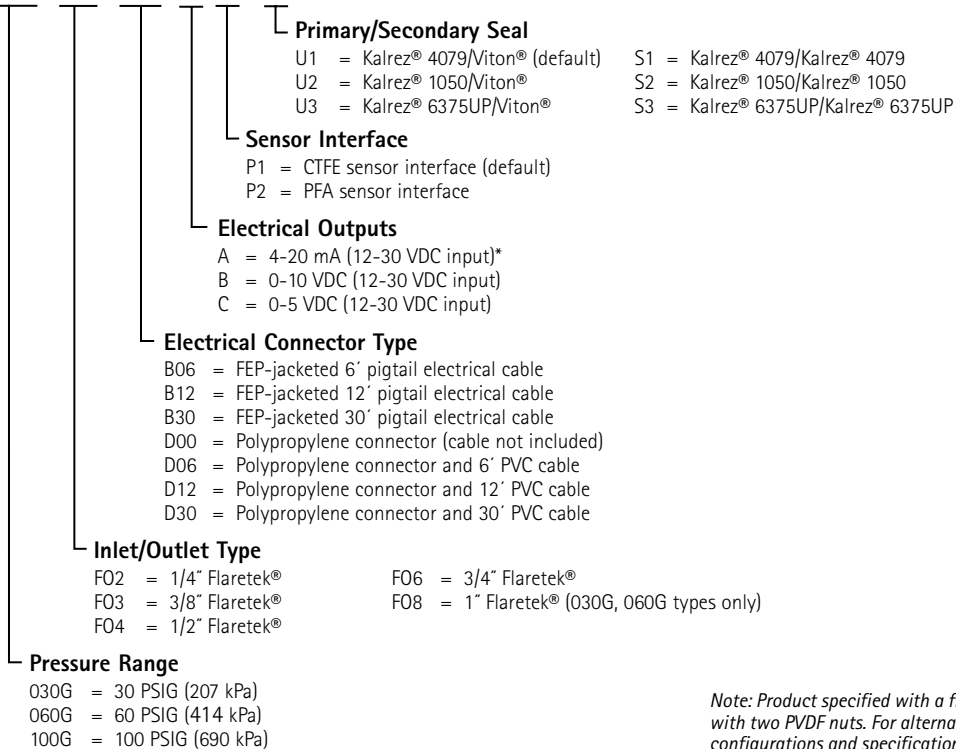
## Part Number

4100-100G-F02-D06-A-P1-U1



## Part Number

4210-100G-F02-D06-A-P1-U1



\*The 4-20 mA electrical output, rated 12-28 VDC, is also ETL listed for conformance to UL standard 2279, Class 1, Zone 0, 1 and 2, Ex ia IIA T6



## Wet Chemical Process Control

Entegris' patented products measure and control the pressure, flow and level of high purity corrosive acids, bases and solvents used in semiconductor processing. The proven reliability, performance and ease of integration provided by Entegris' products offer you new levels of wet chemical process control.

## Terms and Conditions of Sale

All purchases are subject to Entegris' "Terms and Conditions of Sale."

## For Additional Information

For more information on NT<sup>®</sup> Pressure Transducers or our complete line of fluoropolymer fluid handling solutions, contact your local Entegris distributor or Entegris, Inc.

To review our complete line of sensing and control product solutions visit Entegris' Web site at [www.entegrisfluidhandling.com](http://www.entegrisfluidhandling.com) or contact Entegris Customer Service.

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Kalrez<sup>®</sup> and Viton<sup>®</sup> are registered trademarks of DuPont Dow Elastomers.

U.S. Patent 5,869,766, 5,693,887 5,852,244, other patents pending.

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