

NT™ Pressure Transducers for Hydrofluoric Acid and Vacuum Applications, Models 4150, 4250

Single-port and flow-through models

Entegris combines the latest electronic sensing technology and high-purity materials to create a pressure transducer for hydrofluoric acid and vacuum applications. Using an inert sapphire sensor, the NT™ Pressure Transducer measures vacuum and positive pressure conditions. Constructed without fill fluids or diaphragms, the transducer provides reliability in conditions where other nonmetallic sensors fail and offers accuracy to one percent ($\pm 1\%$) of span. Available in single-port or flow-through designs, the compact transducer easily integrates anywhere pressure measurement is needed.

- Inert sapphire pressure sensor for vacuum and positive pressure applications
- 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 ($\pm 1\%$) of span accuracy for critical measurements

Constructed for Compatibility

Packaged for harsh environments, NT Pressure Transducers contain no moving parts or fill fluids which could contaminate your process. The transducer's wetted parts are constructed with PTFE, sapphire and other fluoropolymers for corrosion resistance and high purity, while the encapsulated electronics provide protection against corrosive fumes and liquids.

Sensing Technology

For accurate and reliable pressure measurements, the pressure transducers use an inert sapphire sensor for vacuum and/or hydrofluoric acid applications. Each product is calibrated and 100 percent verified, so there is no need to slow down installation with unnecessary field calibration or adjustments.

APPLICATIONS

NT Pressure Transducers measure gas or liquid pressure, allowing you to monitor process conditions for increased safety and system performance.

- Measure dispense pressure for hydrofluoric acid
- Monitor purge cycles for aspirated liquid waste systems
- Verify hydrochloric acid gas pressure for furnaces
- Determine bulk delivery pressure for chemical dispense systems
- Monitor pressurized corrosive gas systems



NT Pressure Transducer, Single-port, Model 4150

SPECIFICATIONS

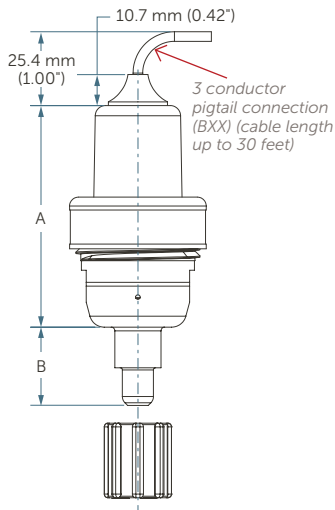
Materials	Wetted parts	Body	PTFE
		Sensor interface	Sapphire
		Primary seal	Perfrez®
	Nonwetted parts	Polypropylene, polyethylene, Viton®, PVDF (in addition to materials listed above)	
Pressure range	-83 to 207 kPa (-12 to 30 psig)	0 to 207 kPa (0 to 30 psig)	
	-83 to 414 kPa (-12 to 60 psig)	0 to 414 kPa (0 to 60 psig)	
	-83 to 690 kPa (-12 to 100 psig)	0 to 690 kPa (0 to 100 psig)	
Over-pressure limit	150% of full scale range or maximum pressure rating of fitting		
Process temperature	10° – 35°C (50° – 95°F)		
Process connection options	Flaretek® tube fitting	1/4", 3/8", 1/2"	
	PrimeLock® tube fitting	3/8", 1/2"	
	FNPT	1/4", 1/2"	
	MNPT	1/4"	
	Super 300 type Pillar® tube fitting	1/4", 1/2"	
Electrical input	24 VDC (12 – 30 VDC input voltage)		
Electrical output	4 – 20 mA		
Reference accuracy	±1% of span @ 23°C (73°F) (includes combined effects of linearity, hysteresis, and repeatability)		
Electrical enclosure	IP54		
Approvals			

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

DIMENSIONS

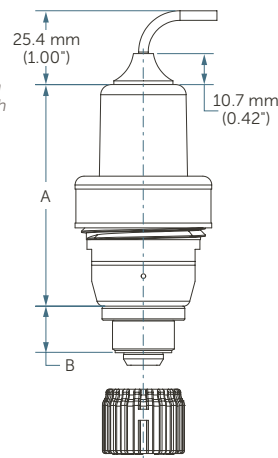
Flaretek Connection

Side View



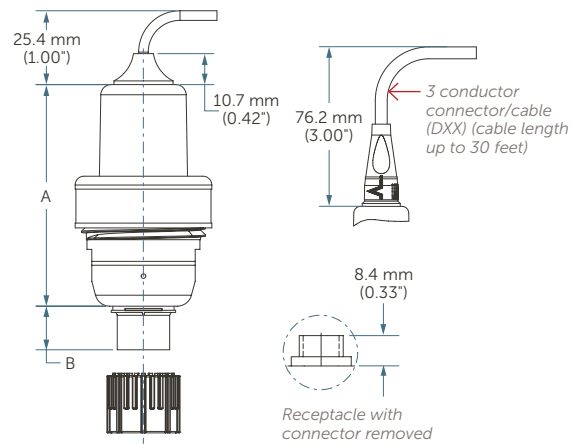
PrimeLock Connection

Side View

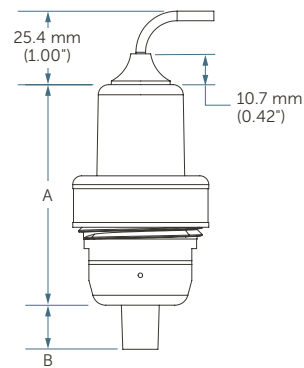


Super 300 Type Pillar Connection

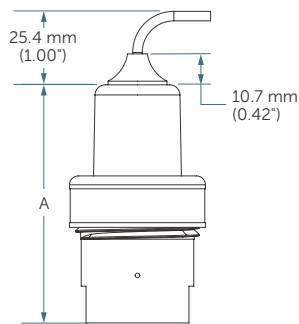
Side View



Male Pipe Thread Connection



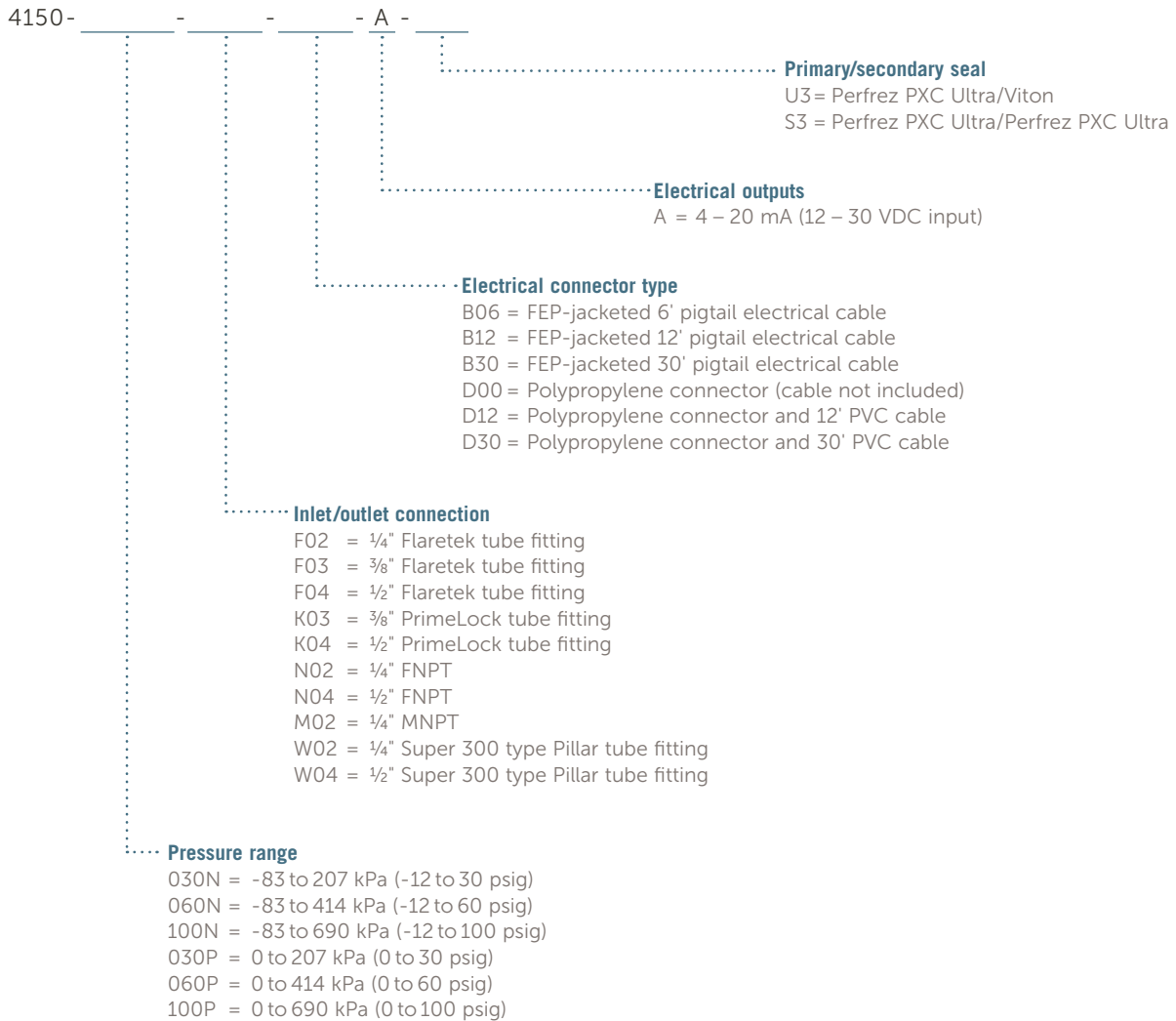
Female Pipe Thread Connection



DIMENSION		
Inlet/outlet port connections	A	B
1/4" Flaretek tube fitting	76.2 mm (3.00")	25.2 mm (0.99")
3/8" Flaretek tube fitting	76.2 mm (3.00")	26.9 mm (1.06")
1/2" Flaretek tube fitting	76.2 mm (3.00")	29.0 mm (1.14")
3/8" PrimeLock tube fitting	76.2 mm (3.00")	20.3 mm (0.80")
1/2" PrimeLock tube fitting	76.2 mm (3.00")	22.6 mm (0.89")
1/4" FNPT	82.3 mm (3.24")	—
1/2" FNPT	88.9 mm (3.50")	—
1/4" MNPT	76.2 mm (3.00")	15.0 mm (0.59")
1/4" Super 300 type Pillar tube fitting	76.2 mm (3.00")	11.0 mm (0.43")
1/2" Super 300 type Pillar tube fitting	76.2 mm (3.00")	17.5 mm (0.69")

ORDERING INFORMATION

NT Pressure Transducers, Model 4150: part number



Note: Product specified with a flared connection is packaged with one PVDF nut. For alternative nut material or custom configurations and specifications, please contact the factory.

NT Pressure Transducer, Flow-through, Model 4250

SPECIFICATIONS

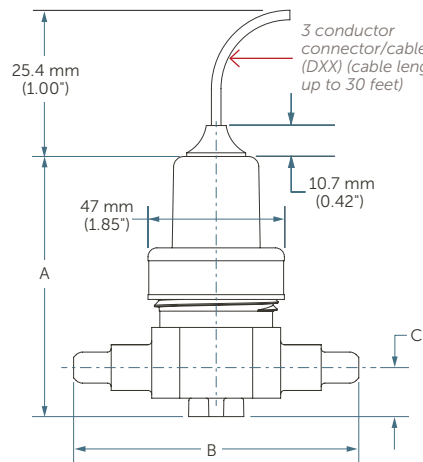
Materials	Wetted parts	Body	PTFE
		Sensor interface	Sapphire
		Primary seal	Perfrez
	Nonwetted parts	Polypropylene, polyethylene, Viton, PVDF (in addition to materials listed above)	
Pressure range	-83 to 207 kPa (-12 to 30 psig)	0 to 207 kPa (0 to 30 psig)	
	-83 to 414 kPa (-12 to 60 psig)	0 to 414 kPa (0 to 60 psig)	
	-83 to 690 kPa (-12 to 100 psig)	0 to 690 kPa (0 to 100 psig)	
Over-pressure limit	150% of full scale range or maximum pressure rating of fitting		
Process temperature	10° – 35°C (50° – 95°F)		
Process connection options	Flaretek tube fitting	1/4", 3/8", 1/2", 3/4", 1"	
	Super 300 type Pillar tube fitting	3/8", 1/2", 3/4", 1"	
Electrical input	24 VDC (12 – 30 VDC input voltage)		
Electrical output	4 – 20 mA		
Reference accuracy	±1% of span @ 23°C (73°F) (includes combined effects of linearity, hysteresis, and repeatability)		
Electrical enclosure	IP54		
Approvals			

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

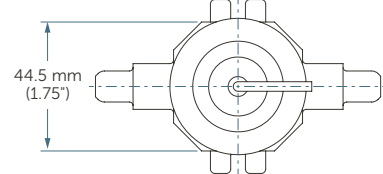
DIMENSIONS

Flaretek Connection

Side View

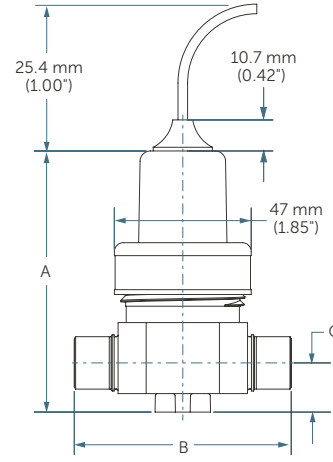


Top View

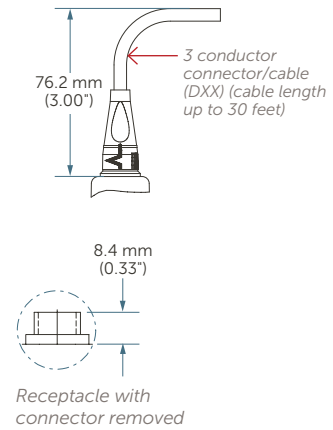
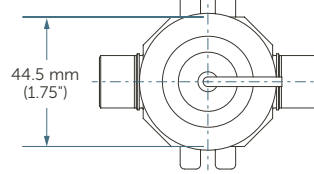


Super 300 Type Pillar Connection

Side View



Top View

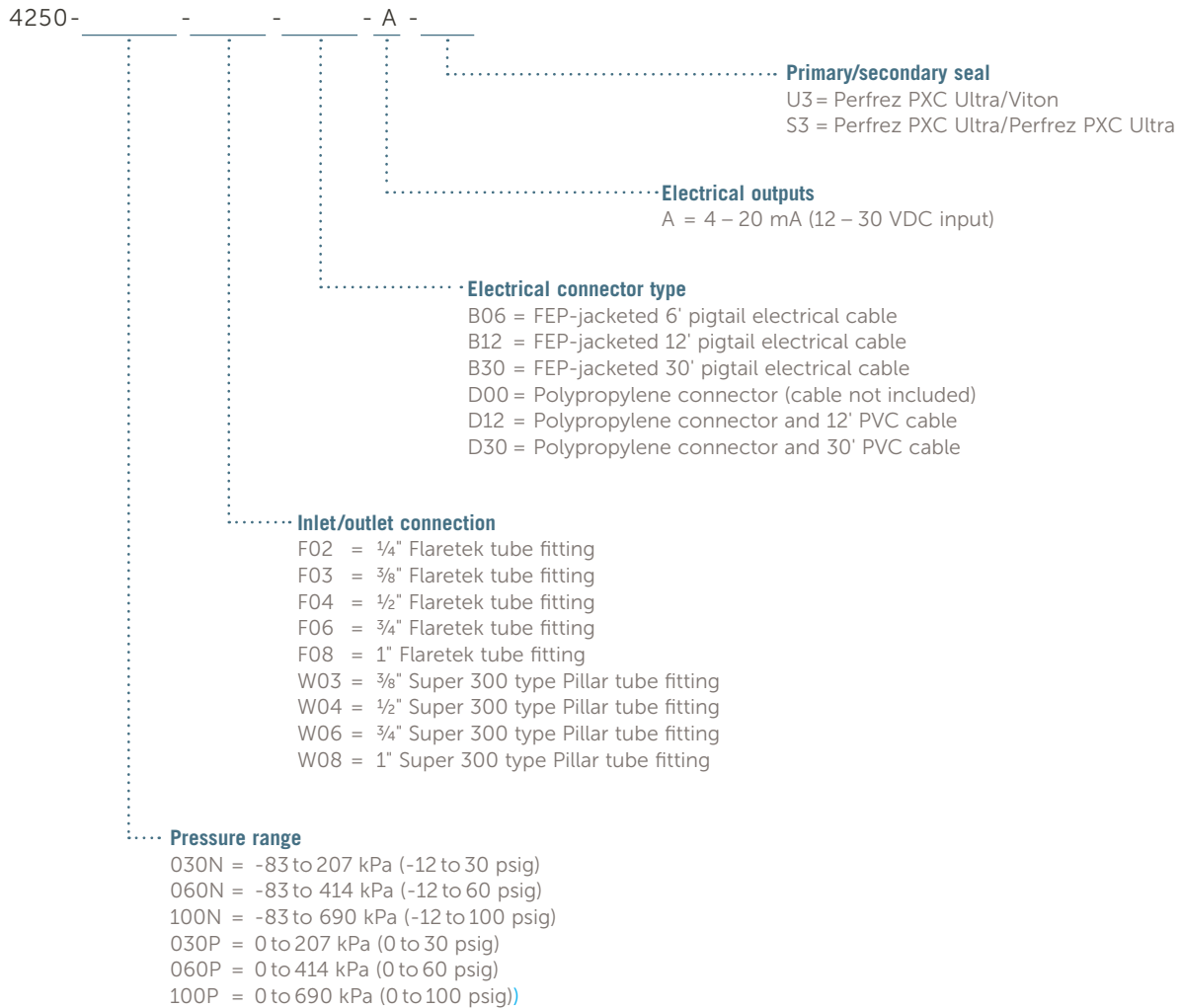


DIMENSION

Inlet/outlet port connections	A	B	C
1/4" Flaretek tube fitting	89.7 mm (3.53")	94.7 mm (3.73")	18.5 mm (0.73")
3/8" Flaretek tube fitting	89.7 mm (3.53")	98.3 mm (3.87")	17.0 mm (0.67")
1/2" Flaretek tube fitting	96.0 mm (3.78")	102.4 mm (4.03")	21.6 mm (0.85")
3/4" Flaretek tube fitting	104.4 mm (4.11")	108.5 mm (4.27")	25.4 mm (1.00")
1" Flaretek tube fitting	112.5 mm (4.43")	120.7 mm (4.75")	30.5 mm (1.20")
3/8" Super 300 type Pillar tube fitting	89.7 mm (3.53")	74.4 mm (2.93")	17.0 mm (0.67")
1/2" Super 300 type Pillar tube fitting	93.2 mm (3.67")	79.5 mm (3.13")	18.3 mm (0.72")
3/4" Super 300 type Pillar tube fitting	104.4 mm (4.11")	88.4 mm (3.48")	25.4 mm (1.00")
1" Super 300 type Pillar tube fitting	111.8 mm (4.40")	98.6 mm (3.88")	29.7 mm (1.17")

ORDERING INFORMATION

NT Pressure Transducers, Model 4250: part number



Note: Product specified with a flared connection is packaged with two PVDF nuts. For alternative nut material or custom configurations and specifications, please contact the factory.

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.



FOR MORE INFORMATION

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

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