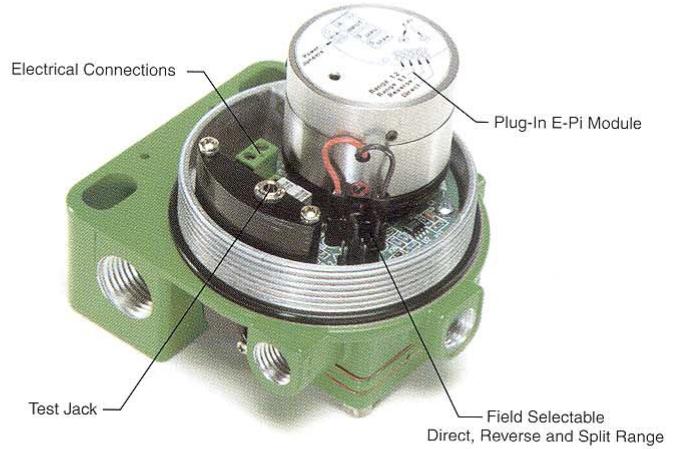




STD5000 and STD6000 Series Current To Pressure Transducers

STD 5000 & STD6000 Series I/P Transducers

Brandt Instrument's Plant Standard STD5000 and STD6000 Series of Current to Pressure (I/P) Transducers represent a new standard in I/P Technology. The rugged NEMA 4X housing, compact size and revolutionary "Plug-In E-Pi" Module coupled with Brandt's field proven technology and affordable price, make them the most accurate, reliable and simplest I/P's to install, operate and maintain in the industry.



STD6000 Explosion Proof I/P Transducer



- **Accuracies of $\pm 0.15\%$ to $\pm 0.25\%$ of Span.**
- **Field Proven "E-Pi" Technology is unaffected by Vibration, Shock or Mounting Position.**
- **Air consumption of 0.04 SCFM.**
- **Output capacity of 4.0 SCFM.**
- **Intrinsically Safe and Explosion Proof Approvals.**
- **Operating Temperature Range -40°F to 150°F .**
- **Rugged NEMA 4X & IP/65 Enclosure.**
- **Field selectable Direct, Reverse and Split Range.**

MODEL NUMBER

SERIES NUMBER	
STD5:	STD5000, NEMA 4X / IP65
STD6:	STD6000, Explosion Proof, NEMA 4X, IP65. FM, CSA approved. Sira tested to Standards BS EN50 014:1993 and BS EN 50 018:1995. See back cover for listing of Approvals. See Note 1 Below.
INPUT	
1:	4-20 mA Intrinsically Safe, FM, CSA & CENELEC Approved. See back cover for listing of Approvals. See Note 1 below.
2:	10-50 mA
3:	Special Input. Consult Factory for availability.
OUTPUT	
1:	6-30 PSIG. Split Range Not Available
2:	3-27 PSIG. Split Range Not Available
3:	3-15 PSIG
4:	1-17 PSIG
5:	Special Output. Consult factory for availability.
6:	0.2-1.0 Bar
CASE STYLE	
1:	Standard
OPTIONS	
-1:	Pipe Mount. Carbon Steel, Zinc Coated Hardware for mounting the STD5000 or STD6000 to a 2.5" Pipe.
-2:	Jack Plug (Standard on the STD6000 I/P). To calibrate, operate or monitor the STD5000 or STD6000.
-3:	Direct Only. Operational mode of Reverse has been enabled.
-4X:	Mounted Filter Regulator. X = Mounted (L)eft or (R)ight handed. FAS2022 Filter Regulator factory mounted to the STD5000 or STD6000. See FAS2022 Specification Sheet.
-5:	Valve Mount Kit. 304SS Hardware for mounting the STD5000 or 6000 to the yoke of a valve.
-6X:	Mounted Output Gauge. X = Mounted (L)eft or (R)ight handed. 0-30 or 0-60 PSIG standard (Dependent on Pneumatic Output Selected). Other scales possible. Consult factory for availability.

Note 1: FM Approved models are standard. If CSA or CENELEC Approved Models are desired please note this at the time of order.

STD6 1 3 1 -1-4R

Typical Model Number

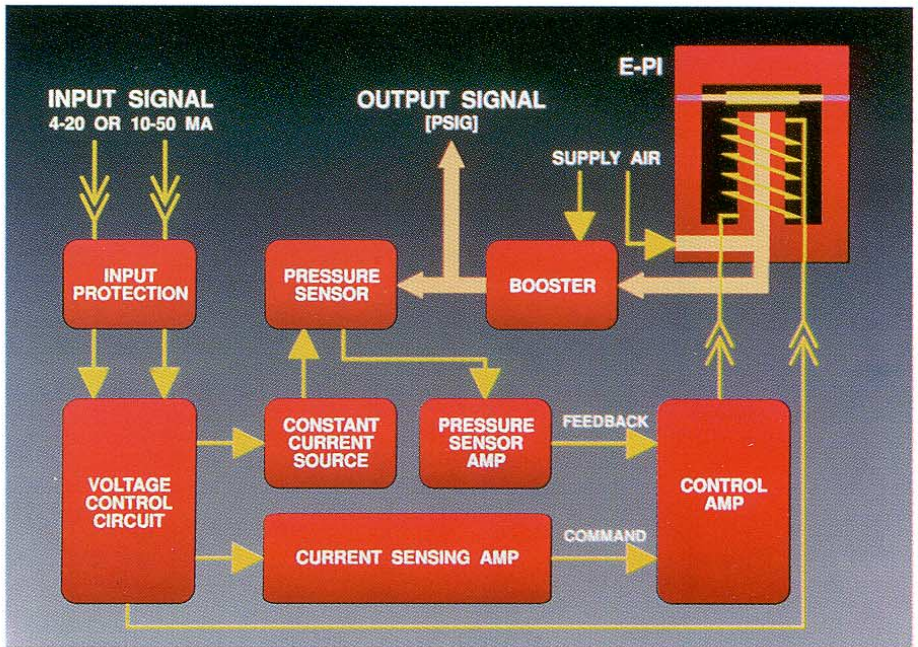
Brandt's "E-Pi" Transducer Technology

The STD5000 and STD6000 Series of I/P's utilize Brandt's patented, field proven, "E-Pi" transducer technology. This revolutionary breakthrough provided the industry with its first "Solid State" I/P Transducer.

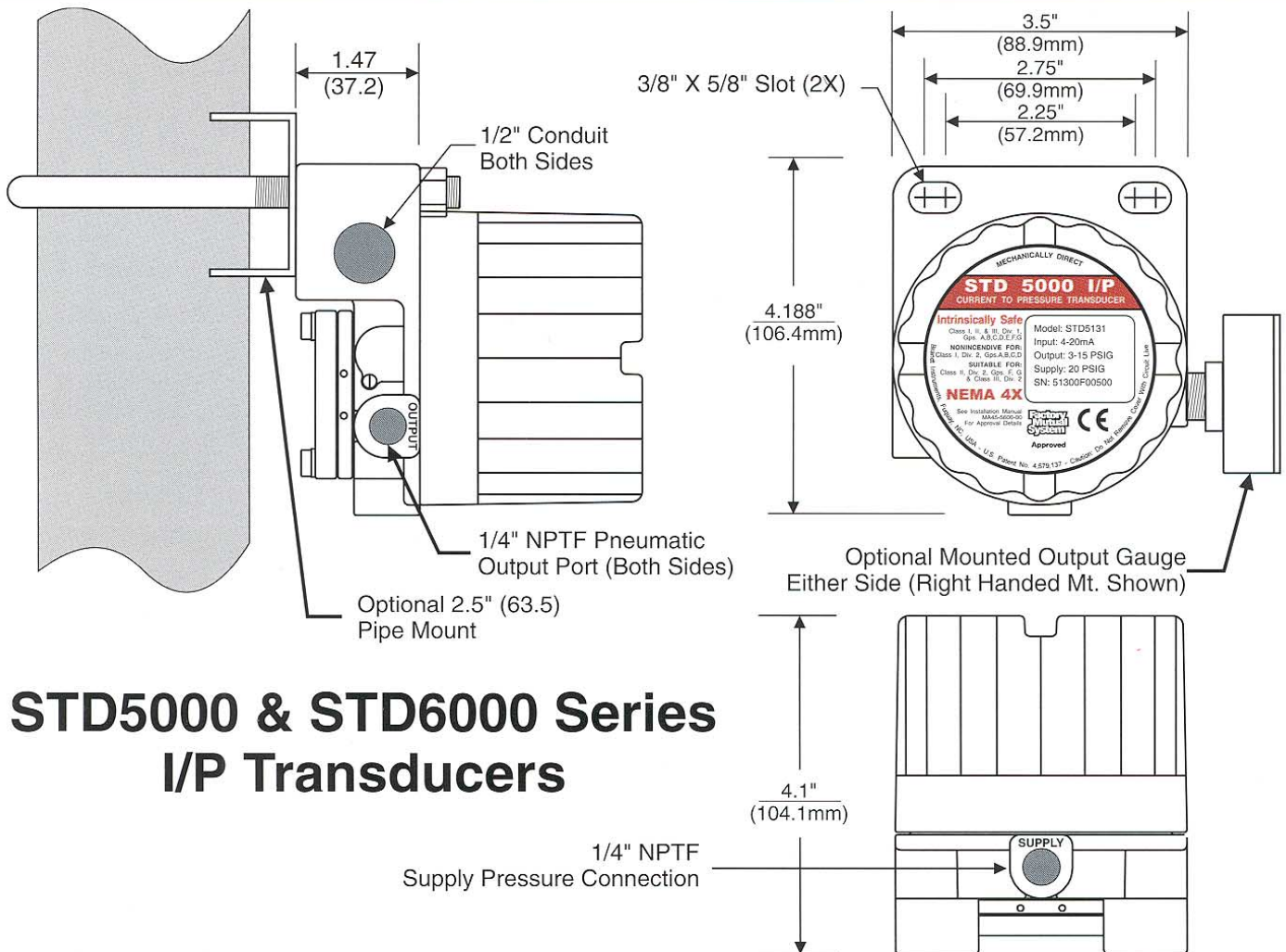
Brandt's "State of the Art" E-Pi Technology uses minimal electrical energy and air consumption to convert an electronic input signal (4-20mA or 10-50mA) to a proportional pneumatic output signal (3-15, 3-27, 6-30 and 1-17 psig).

The E-Pi Transducer utilizes "a virtually weightless membrane" that is electromagnetically positioned over a nozzle to precisely modulate the pneumatic (backpressure) output. The low mass membrane is held in a continuously balanced position, providing an output that is unaffected by shock, vibration, or mounting position. The output of the E-Pi is then fed into an integral volume booster to deliver a pneumatic output signal with an output capacity of 4.0 SCFM.

The overall performance, accuracy and repeatability are further enhanced by employing an internal feedback network whose speed and resolution allow the I/P to quickly respond to input changes. The balanced supply and exhaust dynamics enhance control stability, while delivering accuracies of $\pm 0.15\%$ to $\pm 0.25\%$ of Span.



Dimensions



STD5000 & STD6000 Series I/P Transducers

STD 5000 & STD6000 Series I/P Transducers

PERFORMANCE SPECIFICATIONS

Accuracy:	±0.15% of Span (3-15 & 1-17 PSI Output). ±0.25% of Span (3-27 & 6-30 PSI Output).
Repeatability:	0.05% of Span.
Deadband:	0.02% of Span.
Stability / Reproducibility:	0.5% of Span / 6 Months.
Output Capacity:	4.0 SCFM (Supply and Exhaust characteristics are balanced to within +/-10%).
Air Consumption:	0.04 SCFM Steady State Average.

FUNCTIONAL SPECIFICATIONS

Position Effect:	Not Measurable
Vibration Effect:	< 0.25% from 1-200 Hz/1g
Frequency Response:	-3db at 5 Hz (per ISA-S26.4.3.1 Configuration A)
Loop Load:	3.8Vdc + 5 ohm (195 ohm load at 20mA)
Operating Current:	3.7mA min., 200mA max. continuous at 120°F half cycle 70 amp 1/120 second at 68°F
Supply Pressure:	Minimum of 3 psig and maximum of 10 psig above the maximum calibrated output.
Operating Temperature:	-40° to 150°F (-40° to 66°C)
Temperature Effect:	Range 0° to 150°F: ±0.02% / °F of Span. Range -40° to 150°F: ±0.04% / °F of Span
EMI / RFI:	Less than ±1% effect on Zero / Span (26-1000 mHz @ 30V/m) when installed per Installation guidelines. Refer to CE Conformity (this page) for Test Standards.
Operational Modes:	Field Selectable Direct, Reverse and/or Split Range. See notes in Model Number Description.
Failure Mode:	Mechanically Direct. i.e. if input current drops below 3.7mA dc the output will drop to 1 to 2 psig regardless of direct or reverse mode selection.

PHYSICAL SPECIFICATIONS

Enclosure:	Internally purged NEMA 4X / IP65. Cast/Machined Aluminum with powder coat epoxy.
Connections:	Supply Port: 1/4" NPTF (1X) Pneumatic Output Port: 1/4" NPTF (2X) Electrical: 1/2" NPTF conduit (2X)
Weight:	2.5 pounds

APPROVALS

Factory Mutual Research Corporation

Intrinsically Safe: STD5000 & 6000 I/P, 4-20mA Units Only

- Intrinsically safe operation for Class I, II, and III, Div. 1, applicable Groups A, B, C, D, E, F, G.
- Nonincendive for Class I, Division 2, Groups A, B, C, D. Suitable for Class II, Div. 2 Groups F, G.
- Suitable for Class III, Division 2. Hazardous Locations Outdoors, NEMA 4X when installed per Brandt I.S. Installation Drawing.



Explosion Proof: STD6000 I/P, All Units

- Explosion Proof for Class I, Div. 1 & 2, Applicable Groups B, C, D Hazardous Locations Outdoors, NEMA 4X.
- Dust Ignitionproof for Class II, Div. 1 & 2, Applicable Groups E, F, G Hazardous Locations Outdoors, NEMA 4X.

Canadian Standard Association

Intrinsically Safe: STD5000 & 6000 I/P, 4-20mA Units Only

- Intrinsically Safe / Securite Intrinseque: Class I, Groups A, B and Class II, Groups E, F, G and Class III. Temp Code T3C, Intrinsically Safe when connected to CSA certified safety barriers rated 31.5 V max., 463 ohms min. CSA.ENC.4 outdoors
- Intrinsically Safe / Securite Intrinseque: Class I, Groups C, D and Class II, Groups E, F, G, and Class III. Temp Code T3C, Intrinsically Safe when connected to CSA certified safety barriers rated 28V max., 120 ohms min. CSA.ENC.4 outdoors
- Class I, Division 2, Groups A, B, C, D. without safety barriers CSA.ENC.4 Outdoors



Explosion Proof: STD6000 I/P, All Units

- Explosion Proof for Class I, Groups B, C, D and Class II, Groups E, F, G and Class I, Div. 2, Groups A, B, C, D Hazardous locations Outdoors, CSA.ENC.4

CENELEC & Sira

Intrinsically Safe: STD5000 & 6000 I/P, 4-20mA Units Only

- Sira/CENELEC Approved for Intrinsically Safe Operation
- Category: EEx ia IIC T4 Tamb = 60°C
- Certificate No: Ex 93C2032X
- Complies with the harmonized European Standards EN50 014 (1977) & EN50 020 (1977)
- Umax = 30Vdc, Imax = 100mA, Ceq = 0.94nF, Leq = 7.0 uH, Pmax = 0.75W



Explosion Proof: STD6000 I/P, All Units

- Sira tested and found to comply with Explosion Proof Standards BS EN50 014: 1993, Including Amendment 1 and BS EN 50 018: 1995.
- Category: EEx d IIC T6
- Certificate No. Ex 95Y1117X
- Pi 0.75W



European Community "CE" Conformity

- The STD5000 and STD6000 Series I/P's have been tested and found to comply with BS EN50081-2: 1993 Generic Emissions, Residential, Commercial and Light Industrial and BS EN50082-2: 1995 Generic Immunity, Residential, Commercial and Light Industrial.



A Peek company.

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Represented By: