MODEL STD 5131 and 5141
BRANDT I/P TRANSUDER

The Brandt Series STD 5000 is a current-to-
pneumatic (I/P) transducer for use in intrinsically safe
installations. Using a "Patented Solid State" design, the
STD 5000 converts an electronic signal into a proportional
pneumatic signal. With its internal feedback network, the
STD 5000 responds quickly to step input changes.

FEATURES
• Vibration resistant.
• Low air consumption.
• Mount in any position.
• Intrinsically safe capability.
• Balanced supply & exhaust dynamics.

SPECIFICATIONS

Input Signal: 4-20 mA.

Output Pressure: STD 5131- 3-15 psig (.21-1.03 barg).
STD 5141- 1-17 psig (.07-1.17 barg).

Accuracy: ± 0.15% of span.

Repeatability: ± 0.05% of span.

Deadband: ± 0.02% of span.

Vibration Effect: < 0.25% from 1-200 Hz/1g.

Loop Load: 3.8 Vdc +5 ohms (195 ohm load at
20 mA).

Supply Pressure: STD 5131; 20 psig (1.4 Barg).
STD 5141; 35 psig (2.4 Barg).

Electrical Classification: USA-Factory Mutual - FM

Output Capacity: 4.0 SCFM (7 SM^3/Hr supply and
exhaust characteristics are balanced
to within ± 10%).
Air Consumption: 0.04 SCFM (0.07 SM³/Hr) Steady State Average, 0.06 SCFM (0.10 SM³/Hr) Maximum.

Operating Temperature: -20°F to +150°F (-29°C to +66°C).

Temperature Effect: < 1% per 100°F (55°C) change.

Failure Mode: Transducer always fails to the direct mode, i.e. if input current drops below 3.7 mA dc, the output will drop to 1-2 psig (.07-.14 Barg) for 3-15 psig output, to 0.5-1 psig (.003-.07 Barg) for 1-17 psig output regardless of direct or reverse mode selection.


Materials: Enclosure cap and body-aluminum.

Painting: Chromate primer, powder coat epoxy final finish.

**TYPICAL PIPING SCHEMATICS FOR CONTROL VALVE WITH I/P TRANSUCER**

**I/P DIRECT TO VALVE POSITIONER**

**I/P DIRECT TO ACTUATOR**

**I/P DIRECT TO SOLENOID VALVE**

Rotary valve tight shutdown could be compromised with this arrangement. Because of pressure from the transducer, the control valve’s actuator pressure is not able to be fully unloaded. Consider using a valve positioner or a solenoid valve if tight shutdown is required.

Reference IPTDP-TB technical bulletin for maximum pressure drop capability of the control valve installed in conjunction with the I/P transducer.

A portion of the mA “SIG” will be lost as the control valve’s bench set range is overcome.

**NOTE:** Use “99” Product Coder to specify model and mounting.