

Model T9000 Electro-Pneumatic Pressure Controller

T9000



T9020



T9040



Features

Common Features of the T9000 Products

- Fully functional keypad and display.
- Backlit Liquid Crystal display screen.
- Output pressure displays in psig, BAR, kPa, or user-defined pressure units.
- Independently adjustable PID tuning coefficients.
- Reverse acting capability for analog input and output signals.
- Select Current or Voltage mode for input signal or optional analog channels using the keypad.
- RFI/EMI protection eliminates electromagnetic and radio interference.

Operating Principles

The Model T9000 Series Pressure Controllers have a closed-loop, integrated, microprocessor control system that regulates outlet pressure. You can control the output from the Model T9000 products using the keypad or from an analog control signal. You can control the output from the Model T9000D using the keypad and through DeviceNet™ Communication network.

The Feed and Bleed Solenoid Valves control pressure in the Signal Chamber of the Booster Section. A pressure sensor measures the outlet pressure and provides a feedback signal to the Electronics Section. Any variation in pressure between the set-point and the outlet pressure activates the Feed and Bleed Solenoid Valves to correct the output pressure.



T9060



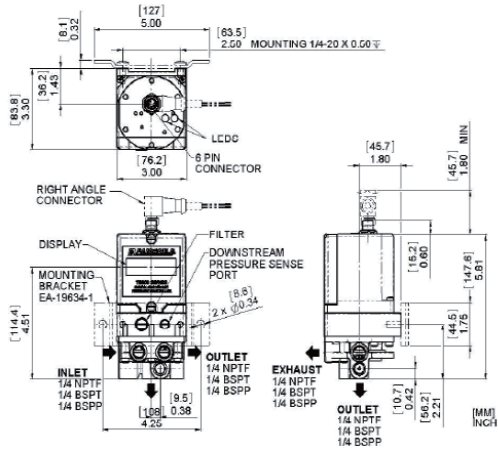
T9080



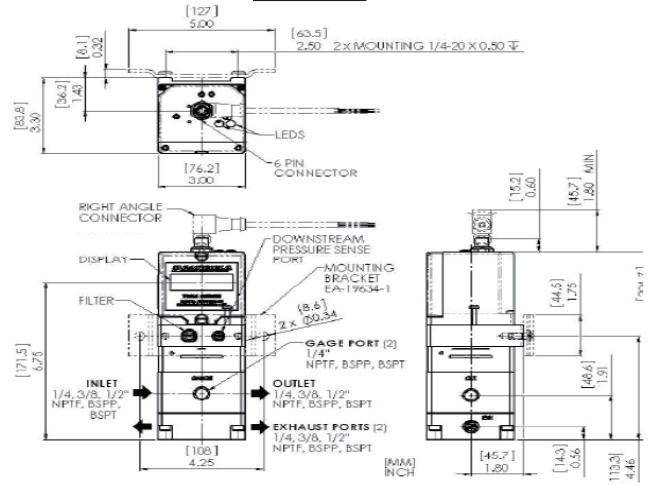
Model T9000 Electro-Pneumatic Transducer

B
Model T9000

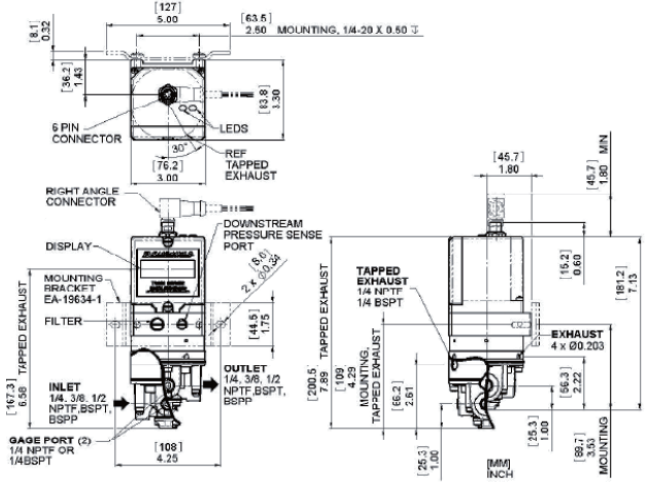
T9000



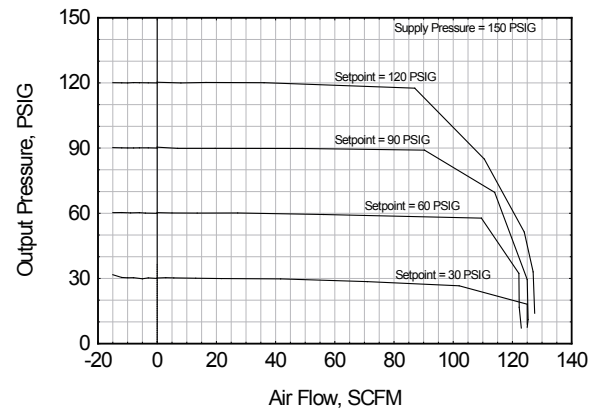
T9040



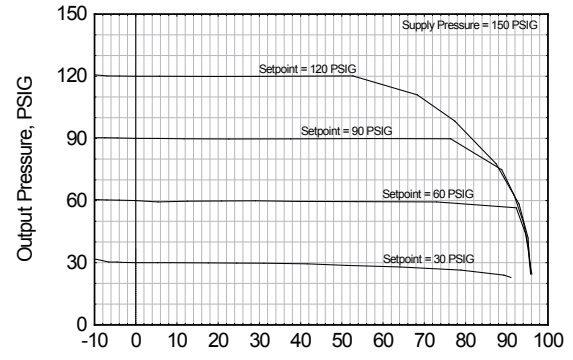
T9020



Flow Characteristics
T9040-4074N4FJT Pressure Controller



Flow Characteristics
T9020-4072N4NFS Pressure Controller



T9000
Flow Rate (SCFM)
1 (1.7 m³/HR) @ 150 psig, [10 BAR], (1000 kPa) supply

T9020
Flow Rate (SCFM)
90 (153 m³/HR) @ 150 psig, [10 BAR] (1000 kPa) supply

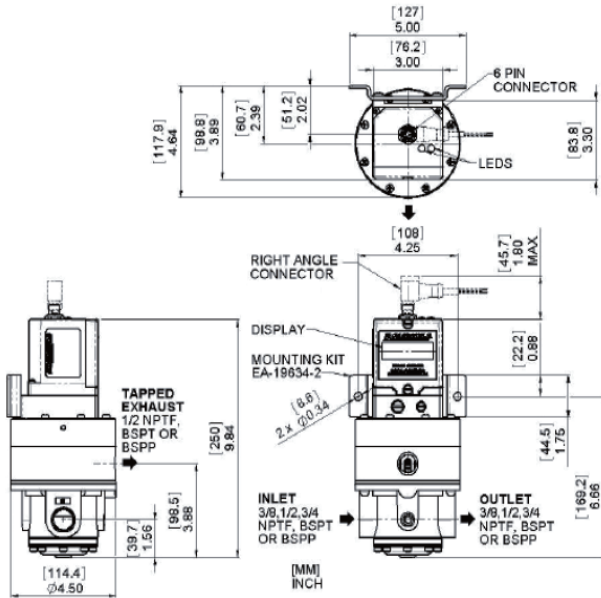
Exhaust Flow (SCFM)
45 (77 m³/HR) @ 60 psig [4 BAR], (400 kPa) downstream pressure

T9040
Flow Rate (SCFM)
110 (187 m³/HR) @ 150 psig, [10 BAR], (1000 kPa) supply

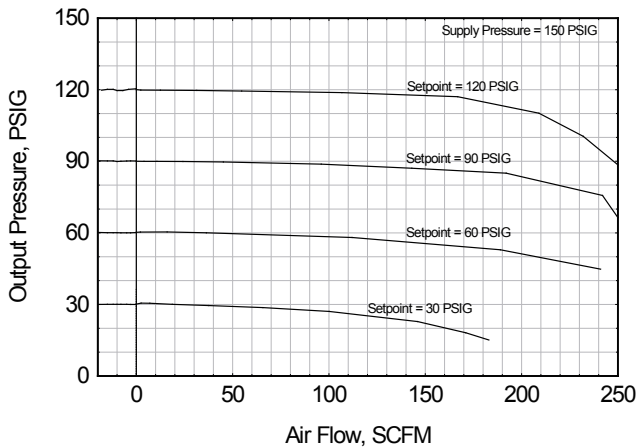
Exhaust Flow (SCFM)
55 (94 m³/HR) @ 60 psig, [4 BAR], (400 kPa) downstream pressure

Model T9000 Electro-Pneumatic Transducer

T9060



Flow Characteristics
T9060-4074N4FNT Pressure Controller



Flow Rate (SCFM)

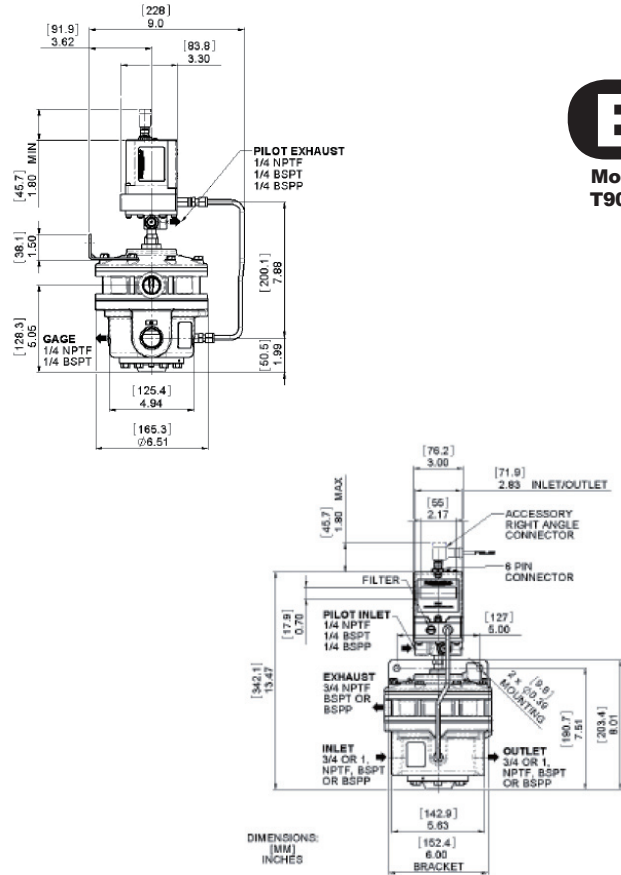
220 (375 m³/HR) @ 150 psig, [10 BAR], (1000 kPa) supply

Exhaust Flow (SCFM)

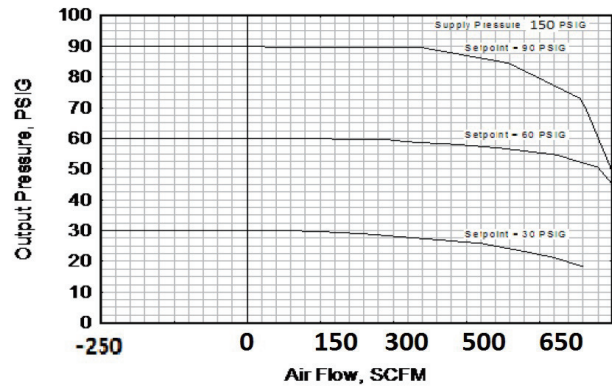
110 (187m³/HR) @ 60 psig [4 BAR], (400 kPa) downstream pressure



T9080



Flow Characteristics
T9080-4078N4FNT Pressure Controller



Flow Rate (SCFM)

700 (1190 m³/HR) @ 150 psig, [10 BAR], (1000 kPa) supply

Exhaust Flow (SCFM)

350 (600 m³/HR) @ 60 psig [4 BAR], (400 kPa) downstream pressure



Model T9000 Electro-Pneumatic Transducer

Specifications

Supply Pressure¹
200 psig, [14 BAR], (1400 kPa) Maximum

Pneumatic Outputs **psig:** 0-30 0-75 0-150
 [BAR]: [0-2] [0-5] [0-10]
 (kPa): (0-200) (0-500) (0-1000)

Minimum Span **psig:** 12 30 60
 [BAR]: [0.8] [2.0] [4.0]
 (kPa): (80) (200) (400)

Input Signal
4-20 mA, 0-10 VDC

Flow Rate 1-700 SCFM (Select desired configuration)

Exhaust Flow 1-350 SCFM (Select desired configuration)



Model T9000

Air Consumption
0 @ steady state output with Deadband @ 1 % of Full Scale

Supply Pressure Effect
No Measurable Effect

Electrical Supply
24 VDC ± 10 %

Power Consumption
Less than 5 watts

Analog Output Signal / Impedance
4-20 mA/500 ohms Maximum, 0-10 VDC/400 ohms Minimum

Deadband (ISA S51.1)
Adjustable from 0 to 10 % of Full Scale

Unit Accuracy (ISA S51.1)
Less than 0.50% Output Span

Frequency Response
-3 db @ 1 HZ per ISA S26.4.3.1 load Configuration A (typical but depends on specific T9000 product configuration)

Vibration Effect
Less than 1 % of Span under the following conditions: 5 - 15 Hz @ 0.8 inches constant displacement 15-500 Hz @ 10 g's

RFI/EMI Effect
Less than 0.5%. EMC Directive 89/336/EEC European Norms EN 50081-2 & EN 50082-2.

Temperature Range
0° F to + 160° F, (-18° C to + 71° C)

Materials of Construction
Body Housing Polymer, Chromate Treated Aluminum
Trim Zinc Plated Steel
Elastomers..... Nitrile, Fluorocarbon
Finish..... Epoxy

¹ Supply Pressure must be no less than 5 psig, [0.35 BAR], (35 kPa) above maximum output.

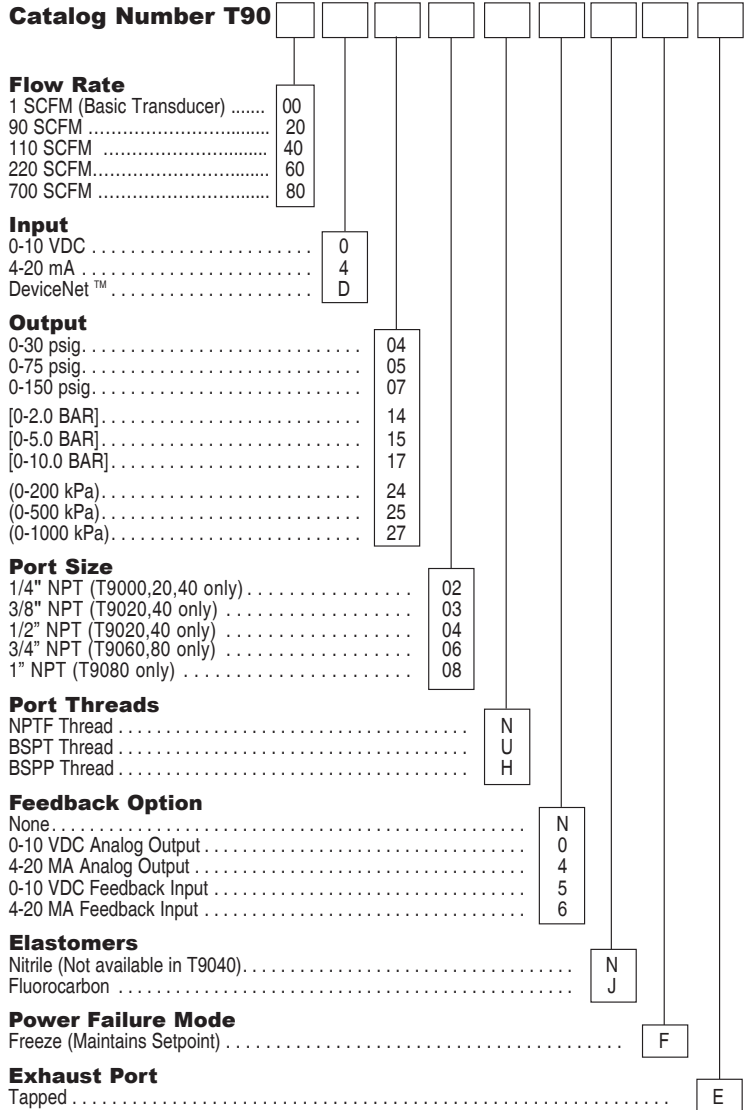
Unique Feature of the T9000D

- DeviceNet™ Communications connect the Model T9000D to a digital network to increase functional flexibility, installation speed, and reduce system wiring cost.

Available Options for the T9000 Series Transducer

- Optional analog output channel configured as an output pressure monitor or as a user-defined output.
- External Pneumatic Feedback port to sense down stream pressure. (See Cables and Accessories table)
- Optional Feedback Input Channel configurable to control setpoint, external process variable, or accept a user defined input. (Consult factory for availability.)

Catalog Information



Remote Pressure Sensing Capability (see table below)

T9000 Cables and Accessories (sold separately)

Part Number	Description
032-IPI-018-2	Straight, Shielded 6 pin Female
032-IPI-019-2	Right angle, Shielded 6 pin Female
21655-1N	1/8-27 NPTF Remote Pressure Sensor fitting
21655-1U	1/8-28 BSPT Remote Pressure Sensor fitting

Installation

For operating instructions, refer to the corresponding Fairchild *Operation and Maintenance Instructions*, OM-500T90F1, OM-500T90AB, OM-500T90AO, OM-500T90DB, OM-500T90DI, OM-500T90DO.

For installation instructions, refer to II-500T9000.