Transducers
Model 773 I/P Transducer with Active Circuit

Introduction

Features & Benefits
- DIN rail and field mounting options offer easy, cost-effective installation
- Active circuit provides greater accuracy and low drift
- Direct or reverse action and split-ranging options provide application versatility
- Output trigger option ensures maximum sealing forces at the control valve
- Modular construction allows the transducer assembly to be changed without disturbing air lines, conduit, and mounting bolts

Description
The Model 773 Transducer with Active Circuit converts an electrical output to a proportional pneumatic output to drive a final control element. In addition, its active circuit constantly compares the pneumatic output to the input signal, ensuring high accuracy and low drift and providing stability during changes in supply pressure.

The Model 773 is typically used to operate a valve positioner or controller, and a built-in booster allows direct loading of some valve actuators.

Optional versions can be field-set for direct or reverse action and split-range applications. The Model 773 also offers a trigger option that provides a minimum of 2 psi of full air supply when the input signal is 0 or 100%, ensuring maximum seating forces at the control valve.

The Model 773D is ideal for high-density applications where the I/Ps are located in a control room or general purpose area. It has two sets of supply/output connections for easy installation. Moreover, its electrical input terminals, and zero and span adjustments, are conveniently located on the front of the unit.

The Model 773F is housed in an enclosure designed for a NEMA 4X (IP 65) environment that is intrinsically safe and explosion proof. It allows the electronic/pneumatic module within the enclosure to be removed via a single screw. As such, the conduit, air lines, and mounting bolts can remain intact during maintenance operations.

Specifications

Functional Specifications

Mounting
Model 773D: DIN Rail:
Top Hat 35 mm (EN50 022)
G-profile (EN50 035)
Pipe/wall mounting

Model 773F: Pipe/wall mounting
Valve yoke mounting bracket

Inputs
4-20 mA, 5.3 V drop max.

Outputs
3-15, 3-27, 6-30 psig
0.2-1.0 bar
0.2-1 kg/cm²
20-100 kPa

Input/Output Range
(Split-Ranging: Input in % for 0-100% Output)
0-25%, 25-50%, 50-75%, 75-100%
0-50%, 25-75%, 50-100%

Trigger Option
Drives output to minimum output of 2.0 psig or supply for 0-100% of range

Action
Selectable direct/reverse
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Technical data

Electrical Input Connection
- 773D: 3-position terminal block
- Wire Size: 14-22 AWG
- 773F: #6 screws with wire clamp
- Wire Size: 14-22 AWG
- Conduit: 1/2" NPT, 20 mm straight (optional)

Pneumatic Supply Connection
- 773D: Two 1/4" NPT
- 773F: One 1/4" NPT

Pneumatic Output Connection
- Two 1/4" NPT

Pneumatic Vent Connection
- 773F: One 1/2" NPT

Performance Specifications

Reference Accuracy
± 0.25% of span

Repeatability
0.05% of span

Ambient Temperature Effect
0.03% per °F (70 to 185°F)

Air Consumption
0.1 scfm (0.17 m³/h)

Supply Pressure Effect
None

Maximum Supply Pressure
45 psig (3.1 bar)

Supply Capacity
- 2.5 scfm max. (4.25 m³/h), 20 psig (1.38 bar) supply

Exhaust Capacity
- 2.5 scfm max. (4.25 m³/h)

Environmental Specifications

Ambient Temperature Range
-40 to 185°F (-40 to 85°C)

Humidity
0-100% relative humidity, non-condensing

Hazardous Area Classification
See Model Selection

- Model Number
  - I/P Transducer with Active Circuit
  - Model 773
  - DIN-Mount
  - Field-Mount
  - Input/Output Range
    - • 4-20 mAdc input; 3-15 psig output
    - • 4-20 mAdc input; 3-27 psig output
    - • 4-20 mAdc input; 6-30 psig output
    - • 4-20 mAdc input; 0.2-1.0 bar output
    - • 4-20 mAdc input; 0.2-1.0 kg/cm² output
    - • 4-20 mAdc input; 20-100 kPa output

- Conduit Connection
  - Not Applicable (773D only)
  - 1/2"-14 NPT (3, 7, or 8 Hazardous Area Classifications)
  - 20 mm Straight Thread (7 or 8 Hazardous Area Classifications)

- Order No.
  - 773-
  - D
  - F
  - 01
  - 02
  - 03
  - 04
  - 05
  - 06
  - 07
  - 08
  - 09
  - 1
  - 2

- Design Level
  - Current Design

- Hazardous Area Classification
  - Non-approved

1) Basic input/output feature is specified at the time of order as fixed (1: fixed range) or adjustable (2: trigger option and adjustable range). The Model 773Fxx1 can be calibrated only in its basic range, with some tolerance. The Model 773Fxx2 can be calibrated in its basic range (with some tolerance) or in a split-range. Direct/reverse action and output triggering (trigger option) are also furnished.
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Accessories
Model 773D:
- P/N 15972-33 - Pipe/wall mounting bracket kit
- P/N 15972-81 - 35 mm top hat DIN rail (2m)
Model 773F:
- P/N 15965-638 - Pipe/wall mounting bracket kit
- P/N 15972-91 - Valve yoke mounting bracket kit
- P/N 14870-21 - Customer tag (Max 4 lines of up to 20 characters each)

Mounting Dimensions