

Transducers

Model 772R Current-to-Pneumatic Transducing System

Introduction

Features & Benefits

- ▶ Modular, plug-in design simplifies installation
- ▶ On-line calibration and testing minimizes maintenance
- ▶ RFI protection accommodates installation in harsh industrial environments
- ▶ Rack or wall mount installation options, direct or reverse action and optional split range provide application versatility
- ▶ Trigger option provides full actuation force on the valve actuator

Description

The Model 772R, plug-in modules provide the transducing and signal condition components for one loop. Zero and span adjustments and an output test port are easily accessible from the front of each module. An optional module has switches on the side for direct/reverse action, split range applications, and trigger option. With the module set for direct action, the trigger drive will drive the output towards 0 psi or supply for inputs of 0 or 100% of calibrated range. With the module set for reverse action, the trigger option will drive the output towards supply or 0 psi for inputs of 0 or 100% of calibrated range.

The module enclosure is suitable for surface or 19" relay rack mounting, and holds up to 20 transducer modules.

Specifications

Mounting

Wall or 19" rack

Required Connections

Electrical Input: #6 screws with pressure plates
Pneumatic Supply: 1/2" NPT
Pneumatic Output: 1/8" NPT

Transducer Module

Inputs:

Standard: 4-20 mA_{dc}, 5.3V max. drop (isolated to 150 Vac)

Optional: 10-50 mA_{dc}, 6.3V max. drop (isolated to 150 Vac)

Outputs:

Standard: 3-15 psig

Optional: 3-27 psig, 6-30 psig (0.2-1.0 kg/cm², 20-100 kPa)

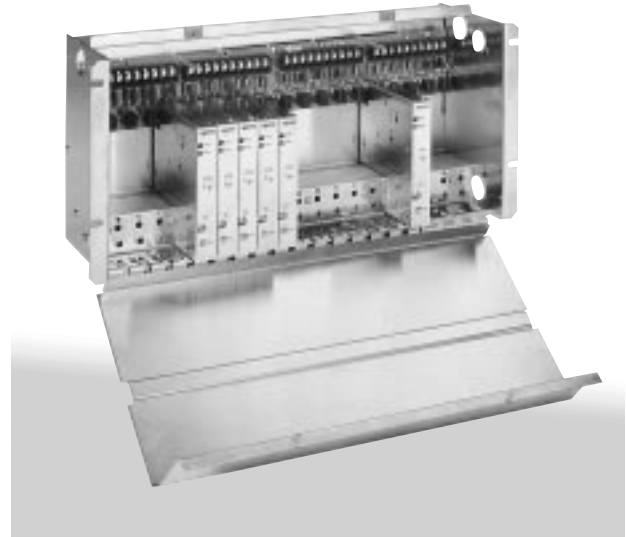
Supply:

20 psig for 3-15 psig units (17 psig min.; 40 psig max.)

35 psig for 6-30 psig units (33 psig min.; 40 psig max.)

Reference Accuracy

±0.25% of span



Repeatability

0.05% of span

Ambient Temperature Effect

0.03%/°F (75 to 125°F)

Air Consumption

0.1 scfm/module

Supply Capacity

2.5 scfm maximum¹

Exhaust Capacity

2.5 scfm maximum

Options for Split Range Applications

Field Adjustable: 0-25%, 25-50%, 50-75%, 75-100%

Input Signal in % for 0-100%

Output: 0-50%, 25-75%, 50-100%

Trigger Option

Drives output toward 0 psi or 20 psi when input is 4 mA or 20 mA to insure full seating force on valves. (To be used on direct acting units only.)

RFI Protection

Less than 1% of span output shift with 10 V/M field strength. Class 2; a, b, c; 1.0% per SAMA PMC 33.1- 1978.

Environmental

IEC classification BX (-40 to 85°C, 5-100% relative humidity, moisture content 0.05 Kg/Kg dry air)

Transducers

Model 772R Current-to-Pneumatic Transducing System

Technical data

Electrical Classification

FM/CSA

Intrinsically Safe Class I, Div. 1, Groups C, D (Entity) when installed per Siemens drawing 15032-7721 and barrier manufacturer's instructions.

Entity parameters:

$V_{max} = 42V$ $I_{max} = 110\text{ mA}$
 $C_i = 0$ $L_i = 0$

CSA

Non-Incendive Class I, Div. 2, Groups A, B, C, D
Intrinsically Safe Class I, Div. 1, Groups A, B, C, D. Must be installed per Siemens drawing 15032-7720 and barrier manufacturer's instructions. Suitable for Class I, Div. 2 Groups A, B, C, D hazardous locations.

Module Enclosure

20 Position FM Approved (P/N 15937-58)

Class I, Div. 1, Groups C, D

Class I, Div. 2, Groups A, B, C, D

5 Position FM Approved (P/N 15937-59)

Class I, Div. 1, Groups C, D

Class I, Div. 2, Groups A, B, C, D

20 Position CSA Approved (P/N 15937-56)

Class I, Div. 1, Groups A, B, C, D

Class I, Div. 2, Groups A, B, C, D

5 Position CSA Approved (P/N 15937-57)

Class I, Div. 1, Groups A, B, C, D

Class I, Div. 2, Groups A, B, C, D

Hazardous Area Classification Approvals

FM/CSA - Intrinsically Safe Class I, Div. 1, Groups C, D (Entity) when installed per Siemens drawing 15032-7721 and barrier manufacturer's instructions.

Entity parameters:

$V_{max} = 42V$ $I_{max} = 110\text{ mA}$
 $C_i = 0$ $L_i = 0$

CSA - Non-Incendive Class I, Div. 2, Groups A, B, C, D.
Intrinsically Safe Class I, Div. 1, Groups A, B, C & D. Must be installed per Siemens drawing 15032-7720 and barrier manufacturer's instructions. Suitable for Class I, Div. 2 Groups A, B, C, D hazardous locations.

Model Number

Current-to-Pneumatic
Transducing System

Input/Output Range

- 4-20 mA_{dc} input, 3-15 psig out
- 4-20 mA_{dc} input, 3-27 psig out
- 10-50 mA_{dc} input, 3-15 psig out
- 10-50 mA_{dc} input, 3-27 psig out

Input/Output Features

- Standard
- Optional - Includes:
 - Direct/Reverse Acting
 - Split Ranging (See Specifications)
 - Output Trigger (Direct Acting Only)

Electrical Certification

- FM/CSA - Intrinsically Safe
- CSA - Non-Incendive
- Reserved for use by manufacturer

Order No.

772R-

01

02

03

04

1

2

A

B

C

F

C

N

Accessories

- ▶ P/N 15937-60 - Test Enclosure

Transducers

Model 772R Current-to-Pneumatic Transducing System

Dimensional drawings

Mounting Dimensions

