High-density Signal Conditioners 10-RACK
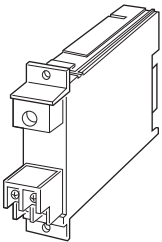
P/I TRANSDUCER

> ### Functions & Features
> • Converting a standard pneumatic signal into a proportional DC output
> • Optional second channel output available at the front terminals and at the Standard Rack connector
>
> ### Typical Applications
> • Converting a pneumatic system into a 4 – 20 mA for indicating and controlling in DCS system
>
>

MODEL: 10PV-[1][2][3]-R[4]

ORDERING INFORMATION

• Code number: 10PV-[1][2][3]-R[4]
Specify a code from below for each of [1] through [4].
  (e.g. 10PV-2A6-R/A2S/Q)
• Specify the specification for option code /Q
  (e.g. /C01)

[1] PNEUMATIC CONNECTION
2: Rc 1/4"
5: Rc 1/8" fitting
7: 1/4" NPT fitting

[2] OUTPUT 1
Current
A: 4 – 20 mA DC (Load resistance 600 Ω max.)
B: 2 – 10 mA DC (Load resistance 1200 Ω max.)
C: 1 – 5 mA DC (Load resistance 2400 Ω max.)
D: 0 – 20 mA DC (Load resistance 600 Ω max.)
E: 0 – 16 mA DC (Load resistance 750 Ω max.)
F: 0 – 10 mA DC (Load resistance 1200 Ω max.)
G: 0 – 1 mA DC (Load resistance 12 kΩ max.)
Voltage
1: 0 – 10 mV DC (Load resistance 10 kΩ min.)
2: 0 – 100 mV DC (Load resistance 100 kΩ min.)
3: 0 – 1 V DC (Load resistance 100 Ω min.)
4: 0 – 10 V DC (Load resistance 1000 Ω min.)
5: 0 – 5 V DC (Load resistance 500 Ω min.)
6: 1 – 5 V DC (Load resistance 500 Ω min.)

[3] OUTPUT 2
0: None
Voltage
6: 1 – 5 V DC (Load resistance 5000 Ω min.)

POWER INPUT
DC Power
R: 24 V DC
(Operational voltage range 24 V ±10 %, ripple 10 %p-p max.)

[4] OPTIONS (multiple selections)
Pressure Range
blank: 0.2 - 1.0 kgf/cm^2
/A1S: 19.6 – 98.1 kPa
/A2S: 20 – 100 kPa
/A3S: 20.7 – 103.4 kPa
/A2: 0.2 – 1.0 bar
/A3: 3 – 15 psig
Other Options
blank: none
/Q: Option other than the above (specify the specification)

SPECIFICATIONS OF OPTION: Q
COATING (For the detail, refer to our web site.)
/C01: Silicone coating
/C02: Polyurethane coating
/C03: Rubber coating

GENERAL SPECIFICATIONS
Construction: Rack-mounted; terminal access via screw terminals at the front and via card-edge connector at the rear
Connection
  Output: M3.5 screw terminals (torque 0.8 N·m) and card-edge connector
  Pneumatic: Rc 1/4", Rc 1/8" or 1/4" NPT female (torque ≤12 N·m)
  Power input: Supplied from card-edge connector
Material
  Housing: Flame-resistant resin (black)
  Base: Die cast aluminium
  Screw terminals: Nickel-plated steel
Isolation: Output 1 to output 2 to power
Overrange output: Approx. -10 to +120 % at 1 – 5 V
Zero adjustment: -5 to +5 % (front)
Span adjustment: 95 to 105 % (front)

INPUT SPECIFICATIONS

■ Input
19.6 – 98.1 kPa, 0.2 – 1.0 kgf/cm^2
20 – 100 kPa, 0.2 – 1.0 bar
20.7 – 103.4 kPa, 3 – 15 psig

INSTALLATION

Current consumption: Approx. 35 mA with voltage output 1
Approx. 55 mA with current output 1
Operating temperature: -5 to +55°C (23 to 131°F)
Operating humidity: 30 to 90 %RH (non-condensing)
Mounting: Standard Rack 10BXx
**Weight**: 200 g (0.44 lb)

PERFORMANCE in percentage of span

Accuracy: ±0.2 %
Temp. coefficient: ±0.03 %/°C (±0.02 %/°F)
Response time: ≤ 0.5 sec. (0 – 90 %)
Permissible overrange: 196 kPa (2.0 kgf/cm^2, 1.96 bar, 28 psig)
Line voltage effect: ±0.1 % over voltage range
Insulation resistance: ≥ 100 MΩ with 500 V DC
Dielectric strength: 500 V AC @ 1 minute
(output 1 to output 2 to power)
1500 V AC @ 1 minute (output or power to ground)

EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS   unit: mm [inch]

* [   ] for Rc 1/8".
**Fitting provided for Rc 1/8" or 1/4" NPT connection.
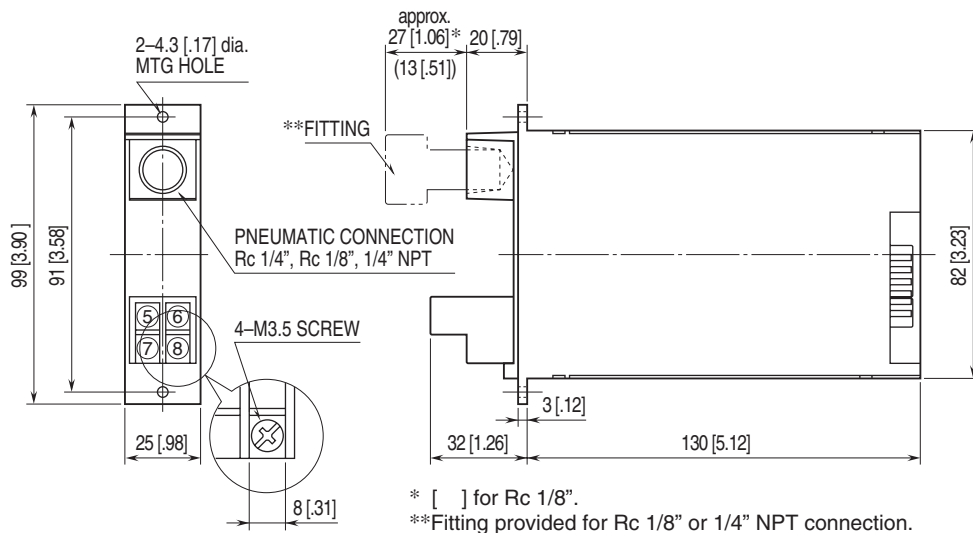
SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM
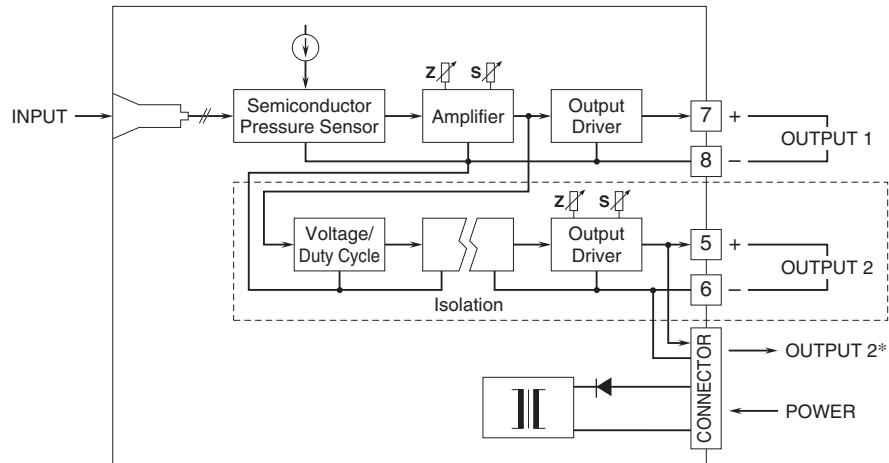
*1 output type has the output 1 connected to the card-edge connector in parallel.
Remark 1) The section enclosed by broken line is only for 2nd output channel.

⚠ Specifications are subject to change without notice.

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