

High-density Signal Conditioners 10-RACK

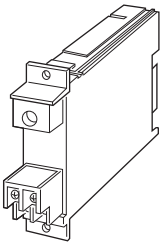
P/I TRANSDUCER

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 [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 – 1.0kgf/cm²

/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 M-System's 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/cm²
 20 - 100 kPa, 0.2 - 1.0 bar
 20.7 - 103.4 kPa, 3 - 15 psig

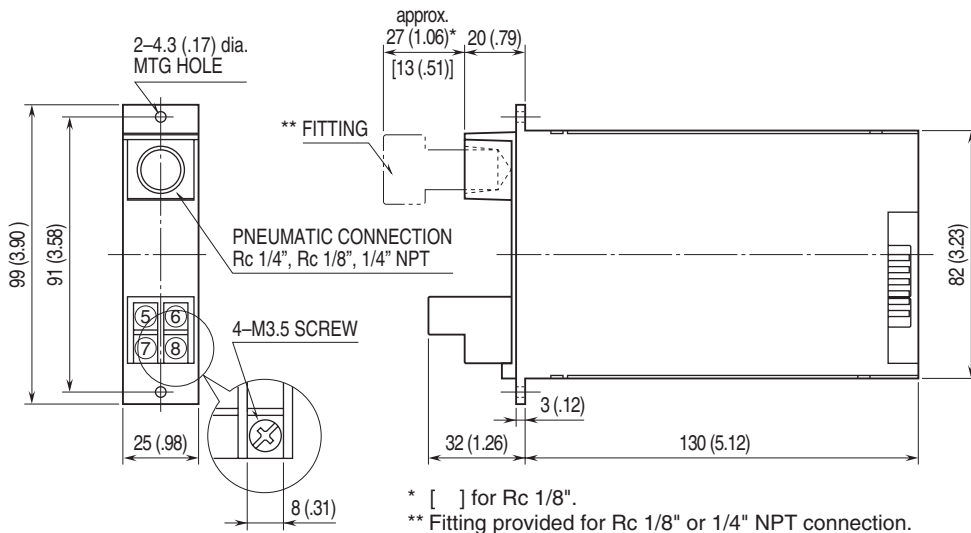
INSTALLATION

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)

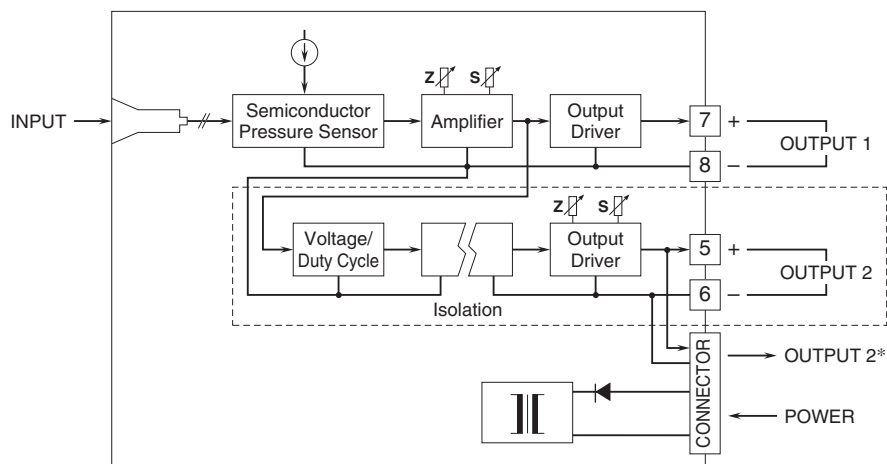
PERFORMANCE in percentage of span

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/cm², 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)



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.