

High-density Signal Conditioners 10-RACK

(Operational voltage range 24 V \pm 10 %, ripple 10 %p-p max.)

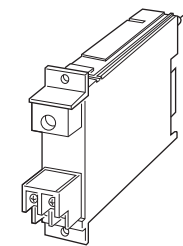
I/P TRANSDUCER

Functions & Features

- Converting a DC input into a proportional standard pneumatic signal
- Semiconductor pressure sensor in the feedback circuit
- High resolution
- No mounting position effect

Typical Applications

- Converting a 4 - 20 mA from a PID controller into a pneumatic signal



MODEL: 10VP-[1][2]0-R[3]

ORDERING INFORMATION

- Code number: 10VP-[1][2]0-R[3]
Specify a code from below for each [1] through [3].
(e.g. 10VP-260-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] INPUT

Current

A: 4 - 20 mA DC (Input resistance 250 Ω)

Voltage

6: 1 - 5 V DC (Input resistance 1 M Ω min.)

OUTPUT 2

0: None

POWER INPUT

DC Power

R: 24 V DC

[3] OPTIONS (multiple selections)

Output 1

blank: 0.2 - 1.0kgfcm²

/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

RELATED PRODUCTS

- Standard rack with air manifold

The 10VP must be installed in a 10-Rack series rack with air manifold (the model 10BXAN is not available).

GENERAL SPECIFICATIONS

Construction: Rack-mounted; terminal access via screw terminals at the front and via card-edge connector at the rear

Connection

Input: 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 \leq 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: Input to power

Zero adjustment: -5 to +5 % (front)

Span adjustment: 95 to 105 % (front)

INPUT SPECIFICATIONS

- DC Current: Input resistor incorporated

OUTPUT SPECIFICATIONS

- Output:

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

The output goes below 0 % if the input loop is open.

Maximum air delivery: 60 NI/minute (2.1 SCFM)

Maximum air exhaust: 60 NI/minute (2.1 SCFM)

INSTALLATION

Supply pressure: 140 kPa (1.4 kgf/cm², 1.4 bar, 20 psig)
 ±10 %. Use dry air containing no carbon black or other foreign particles. To ensure reliability use an air filter (0.01 microns).

Air consumption: 6 NI/minute (0.21 SCFM)

Current consumption: Approx. 30 mA

Operating temperature: -5 to +55°C (23 to 131°F)

Operating humidity: 30 to 90 %RH (non-condensing)

Mounting: Standard Rack 10BXx

Weight: 300 g (0.66 lb)

PERFORMANCE in percentage of span

Accuracy: ±0.3 % including linearity and repeatability

Linearity: ±0.2 %

Repeatability: 0.1 %

Temp. coefficient: ±0.05 %/°C (±0.03 %/°F)

Response time: ≤ 3 sec. (0 - 90 %)

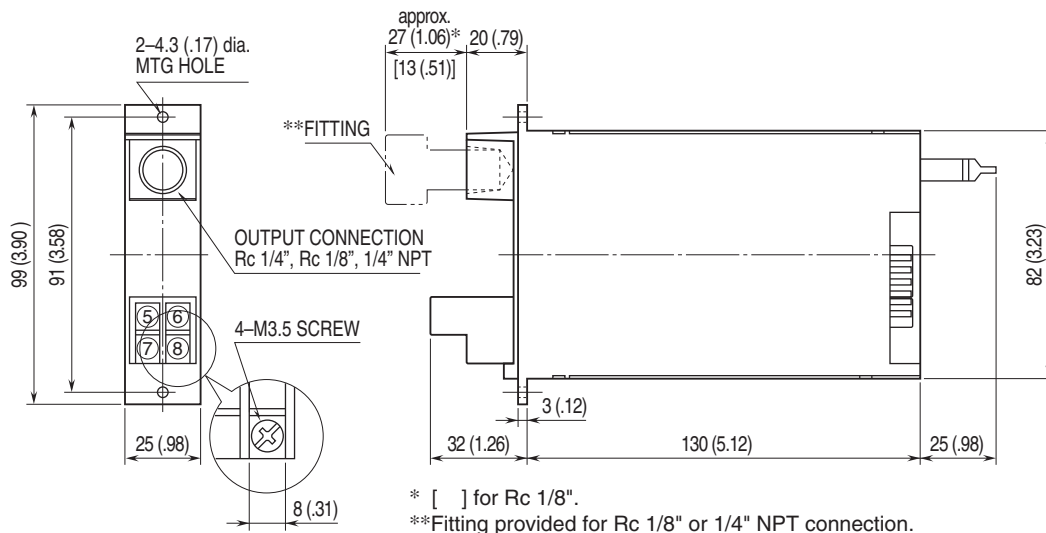
Mounting position effect: ±0.1 % (all dimensions)

Line voltage effect: ±0.1 % over voltage range

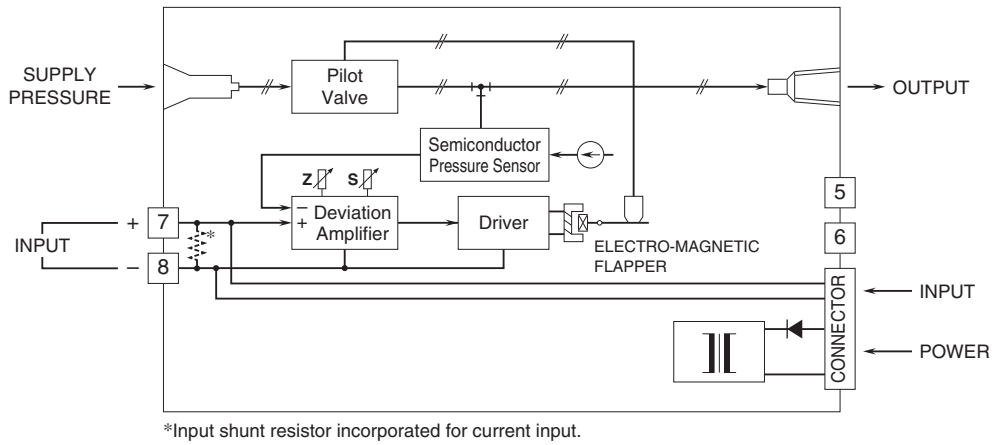
Insulation resistance: ≥ 100 MΩ with 500 V DC

Dielectric strength: 500 V AC @ 1 minute (input to power)

EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.

