

Space-saving Plug-in Signal Conditioners H-UNIT

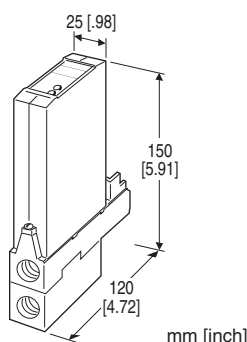
I/P TRANSDUCER

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
- High-density mounting

Typical Applications

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



MODEL: HVP-[1]-R[2]

ORDERING INFORMATION

- Code number: HVP-[1]-R[2]

Specify a code from below for each of [1] and [2].

(e.g. HVP-6-R/A2S/P7)

[1] INPUT

Current

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

Voltage

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

POWER INPUT

DC Power

R: 24 V DC

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

[2] OPTIONS (multiple selections)

Output

blank: 0.2 – 1.0 kgf/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

Pneumatic Connection

blank: Rc 1/4"

/P7: 1/4" NPT fitting

RELATED PRODUCTS

Mounting Block is required. See the data sheet for model MB.

- Code number of the Mounting Block (e.g. MB-08)

GENERAL SPECIFICATIONS

Construction: Plug-in

Connection

Input & power input: M3.5 screw terminals (torque 0.8 N·m)

Pneumatic: Rc 1/4" or 1/4" NPT female; (torque \leq 12 N·m)

Material

- **Housing:** Flame-resistant resin (black)
- **Base socket:** Die cast aluminium
- **Valve section:** 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:

Shunt resistor attached to the input terminals (0.5 W)

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)

\pm 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: Surface; Standard Rack Mounting Frame (BX-

16H) available

Weight: 400 g (0.88 lb)

PERFORMANCE in percentage of span

Accuracy: $\pm 0.3\%$ including linearity and repeatability

Linearity: $\pm 0.2\%$

Repeatability: 0.1%

Temp. coefficient: $\pm 0.05\% / ^\circ\text{C}$ ($\pm 0.03\% / ^\circ\text{F}$)

Response time: ≤ 3 sec. (0 - 90 %)

Mounting position effect: $\pm 0.1\%$ (all dimensions)

Line voltage effect: $\pm 0.1\%$ over voltage range

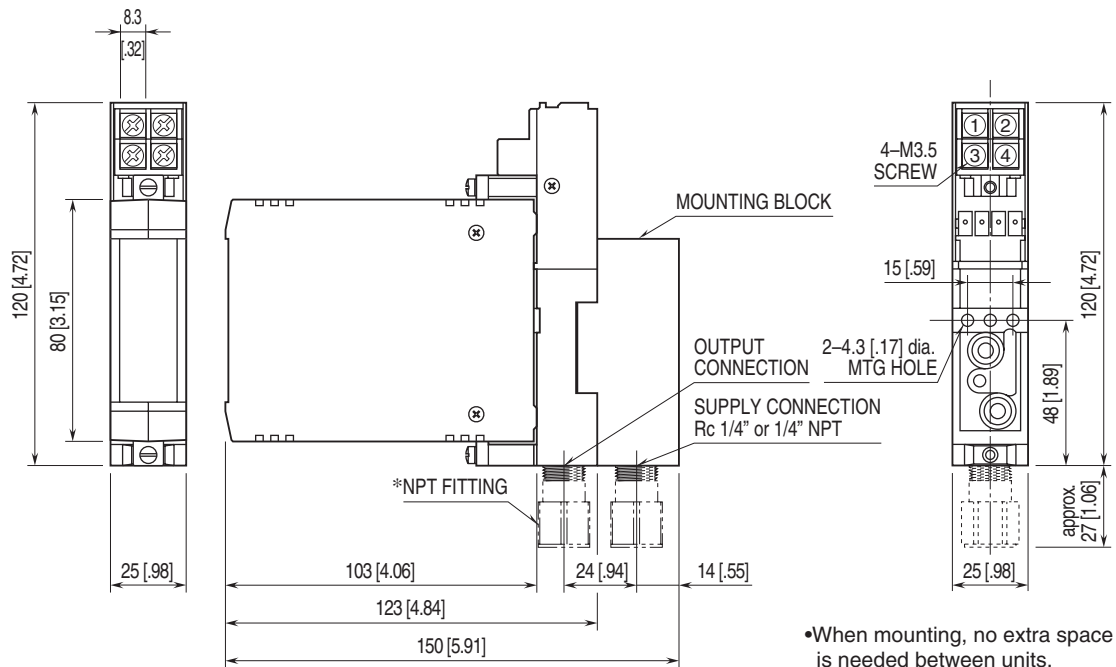
Insulation resistance: $\geq 100\text{ M}\Omega$ with 500 V DC

Dielectric strength: 500 V AC @ 1 minute

(input to power)

1500 V AC @ 1 minute (input or power to housing)

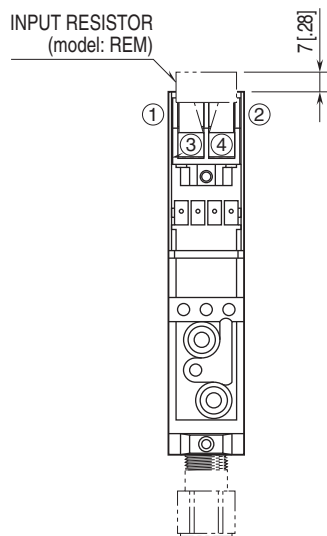
EXTERNAL DIMENSIONS unit: mm [inch]



*Fitting is provided for 1/4" NPT connection.

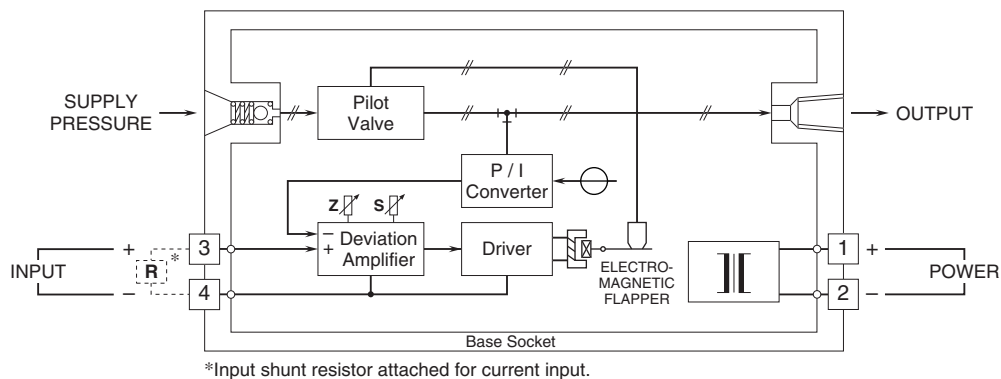
•When mounting, no extra space is needed between units.

TERMINAL ASSIGNMENTS unit: mm [inch]



Input shunt resistor attached for current input.

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.