

## Space-saving Plug-in Signal Conditioners H-UNIT

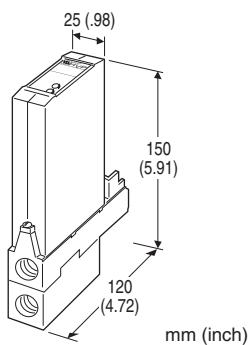
### I/P TRANSDUCER

#### 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 [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 MΩ min.)

### POWER INPUT

#### DC Power

R: 24 V DC

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

### [2] OPTIONS (multiple selections)

#### Output

blank: 0.2 - 1.0 kgf/cm<sup>2</sup>

/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 ≤ 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/cm<sup>2</sup>

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/cm<sup>2</sup>, 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)

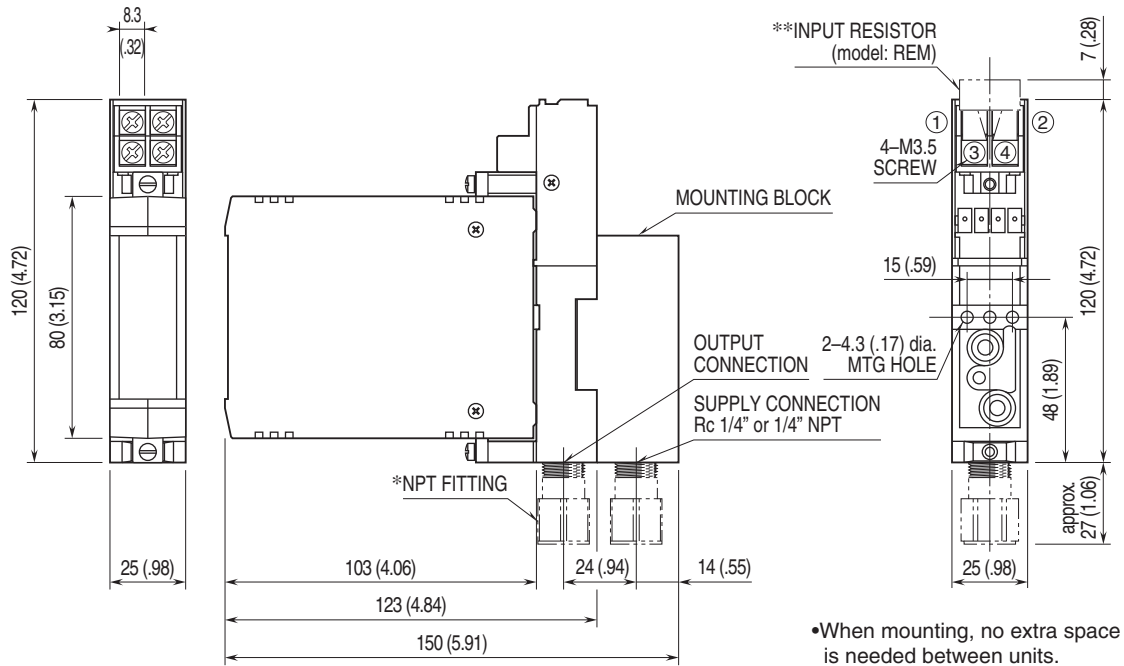


**Mounting:** Surface; Standard Rack Mounting Frame (BX-16H) available  
**Weight:** 400 g (0.88 lbs)

## PERFORMANCE in percentage of span

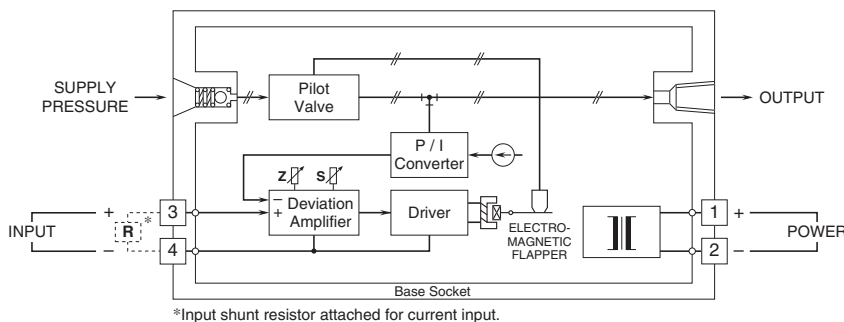
**Accuracy:**  $\pm 0.3\%$  including linearity and repeatability  
**Linearity:**  $\pm 0.2\%$   
**Repeatability:**  $0.1\%$   
**Temp. coefficient:**  $\pm 0.05\%/^{\circ}\text{C}$  ( $\pm 0.03\%/^{\circ}\text{F}$ )  
**Response time:**  $\leq 3$  sec. (0 - 90 %)  
**Mounting position effect:**  $\pm 0.1\%$  (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 & TERMINAL ASSIGNMENTS unit: mm (inch)



\* Fitting provided for 1/4" NPT connection.  
 \*\*Input resistor provided for current input.

## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



**幸託有限公司**  
 XIN TOP CORPORATION

TEL : (02)2598-1199  
 FAX : (02)2596-2331

E-mail : info@xintop.com  
 Website : www.xintop.com



Specifications are subject to change without notice.



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E-mail : [info@xintop.com](mailto:info@xintop.com)  
Website : [www.xintop.com](http://www.xintop.com)