Space-saving Plug-in Signal Conditioners H-UNIT

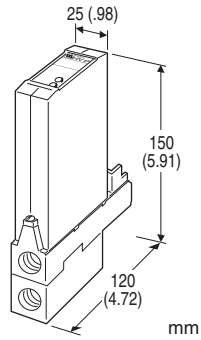
LOOP POWERED I/P TRANSDUCER

Functions & Features

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

Typical Applications

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



MODEL: HVPN-[1]A[2]

ORDERING INFORMATION

- Code number: HVPN-[1]A[2]

Specify a code from below for each of [1] and [2].
(e.g. HVPN-2A2S)

[1] PNEUMATIC CONNECTION

2: Rc 1/4"
7: 1/4" NPT fitting

INPUT

Current

A: 4 – 20 mA DC

[2] OUTPUT

1S: 19.6 – 98.1 kPa
2S: 20 – 100 kPa
3S: 20.7 – 103.4 kPa
1: 0.2 – 1.0 kgf/cm^2
2: 0.2 – 1.0 bar
3: 3 – 15 psig

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: M3.5 screw terminals (torque 0.8 N·m)
Pneumatic: Rc 1/4" or 1/4" NPT female;
(torque ≤ 12 N·m)

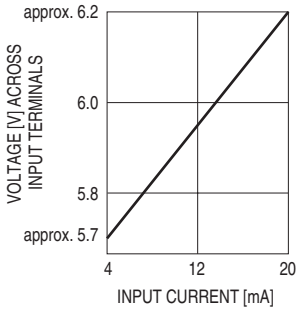
Material

- **Housing**: Flame-resistant resin (black)
- **Base socket**: Die cast aluminium
- **Valve section**: Die cast aluminium
- **Screw terminals**: Nickel-plated steel;

Zero adjustment: -5 to +5 % (front)
Span adjustment: 95 to 105 % (front)

INPUT SPECIFICATIONS

Equivalent input impedance: Approx. 310 Ω at 20 mA
The voltage measure at the input terminals changes corresponding to the input signal as in the diagram below. Be sure that the device at the input side allows the load increase.



OUTPUT SPECIFICATIONS

■ **Output**:
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
The output goes below 0 % if the input loop is open.
Maximum air delivery: 60 Nl/minute (2.1 SCFM)
Maximum air exhaust: 60 Nl/minute (2.1 SCFM)

INSTALLATION

Supply pressure: 140 kPa (1.4 kgf/cm^2, 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 Nl/minute (0.21 SCFM)

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)

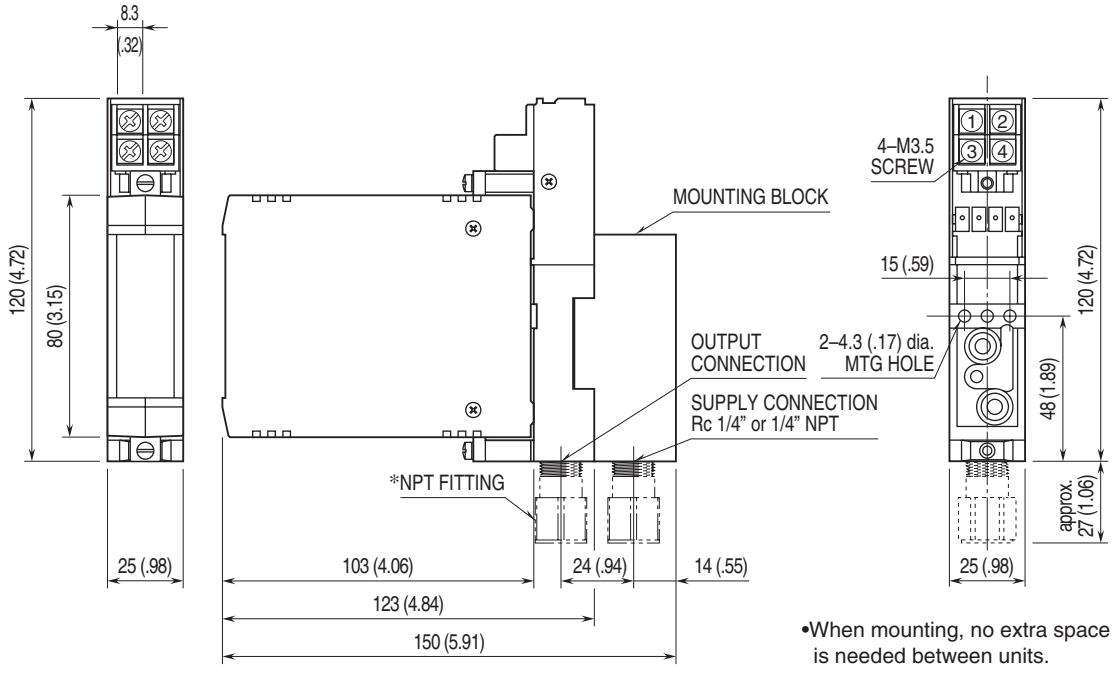
PERFORMANCE in percentage of span

Accuracy: ±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)
Dielectric strength: 1500 V AC @ 1 minute (input to housing)

STANDARDS & APPROVALS

EU conformity:
EMC Directive
EMI EN 61000-6-4
EMS EN 61000-6-2
RoHS Directive

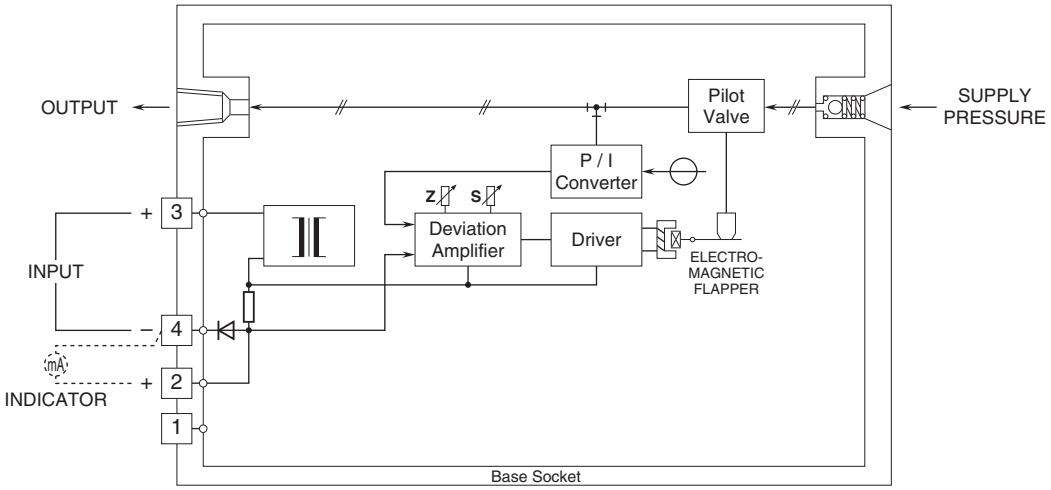
EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]



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

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

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



⚠ Specifications are subject to change without notice.