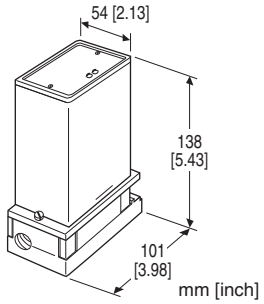
Plug-in Signal Conditioners M-UNIT

P/I TRANSDUCER

Functions & Features
• Converting a standard pneumatic signal into a proportional DC output
• High-density mounting

Typical Applications
• Converting a pneumatic system into a 4 – 20 mA for indicating and controlling in DCS system



MODEL: PV-[1]-[2][3]

ORDERING INFORMATION

• Code number: PV-[1]-[2][3]
Specify a code from below for each of [1] through [3].
(e.g. PV-A-B/A2S/P7)
• Special output range (For codes Z & 0)

[1] OUTPUT

Current
A: 4 – 20 mA DC (Load resistance 750 Ω max.)
B: 2 – 10 mA DC (Load resistance 1500 Ω max.)
C: 1 – 5 mA DC (Load resistance 3000 Ω max.)
D: 0 – 20 mA DC (Load resistance 750 Ω max.)
E: 0 – 16 mA DC (Load resistance 900 Ω max.)
F: 0 – 10 mA DC (Load resistance 1500 Ω max.)
G: 0 – 1 mA DC (Load resistance 15 kΩ max.)
Z: Specify current (See OUTPUT SPECIFICATIONS)
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.)
4W: -10 – +10 V DC (Load resistance 2000 Ω min.)
0: Specify voltage (See OUTPUT SPECIFICATIONS)

[2] POWER INPUT

AC Power
B: 100 V AC
C: 110 V AC
D: 115 V AC
F: 120 V AC
G: 200 V AC
H: 220 V AC
J: 240 V AC
DC Power
S: 12 V DC
R: 24 V DC
V: 48 V DC

[3] OPTIONS (multiple selections)

Input
blank: 0.2 – 1.0 kgf/cm^2
/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

GENERAL SPECIFICATIONS

Construction: Plug-in
Connection
Output & 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
Screw terminals: Nickel-plated steel
Isolation: Output to power
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/cm^2
20 – 100 kPa, 0.2 – 1.0 bar
20.7 – 103.4 kPa, 3 – 15 psig

OUTPUT SPECIFICATIONS

■ DC Current: 0 – 20 mA DC
Minimum span: 1 mA
Offset: Max. 1.5 times span

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Load resistance: Output drive 15 V max.
■ **DC Voltage**: -10 – +12 V DC
Minimum span: 5 mV
Offset: Max. 1.5 times span
Load resistance: Output drive 10 mA max.; 5 mA for negative voltage output; at ≥ 0.5 V

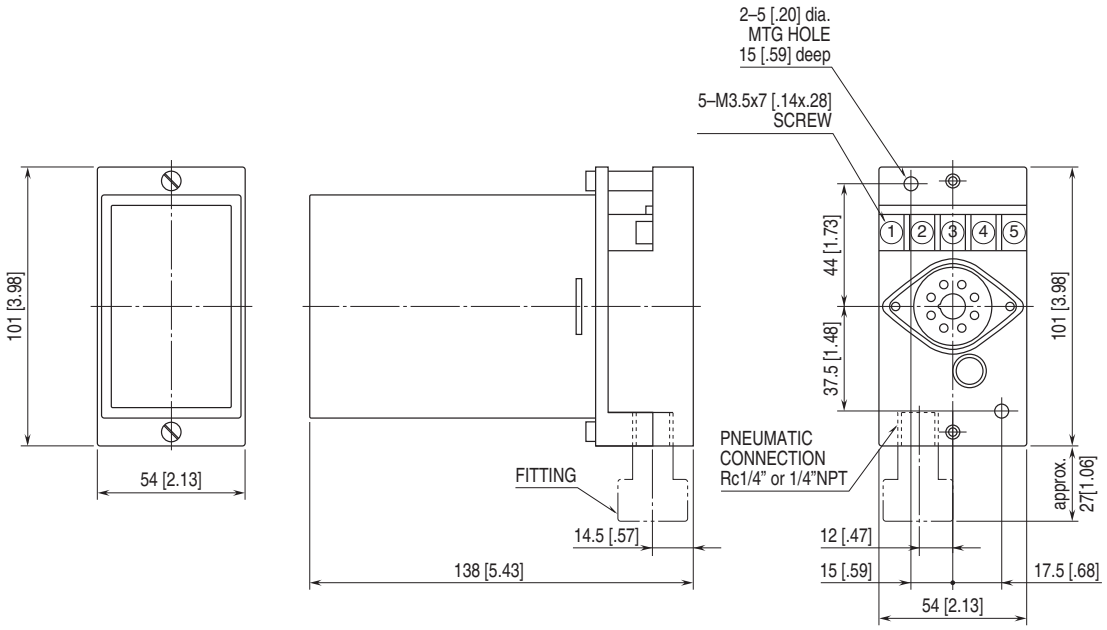
INSTALLATION

Power input
• **AC**: Operational voltage range: rating ±10 %, 50/60 ±2 Hz, approx. 2 VA
•**DC**: Operational voltage range: rating ±10 %, ripple 10 %p-p max., approx. 2 W (90 mA at 24 V)
Operating temperature: -5 to +60°C (23 to 140°F)
Operating humidity: 30 to 90 %RH (non-condensing)
Mounting: Surface
Weight: 550 g (1.21 lb)

PERFORMANCE in percentage of span

Accuracy: ±0.3 %
Temp. coefficient: ±0.03 %/°C (±0.02 %/°F)
Response time: 1.5 sec. (0 – 90 %)
Permissible overrange: 196 kPa (2.0 kgf/cm^2, 1.96 bar, 28 psig)
Line voltage effect: ±0.1 % over voltage range
Insulation resistance: ≥ 100 MΩ with 500 V DC
Dielectric strength: 2000 V AC @ 1 minute (output to power to housing)

EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]



• When mounting, no extra space is needed between units.
• Fitting is provided for 1/4"NPT connection.

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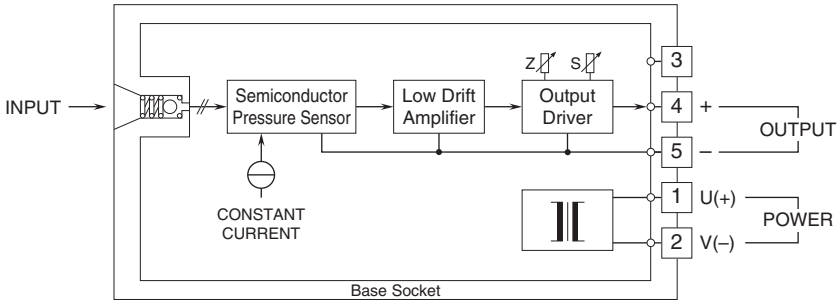
SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



⚠ Specifications are subject to change without notice.

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