

Super-mini Signal Conditioners Mini-M Series

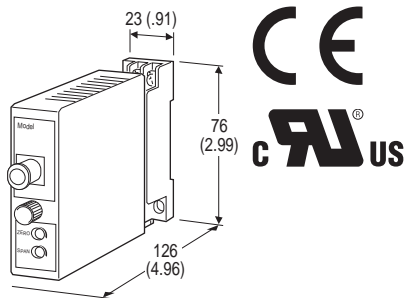
P/I TRANSDUCER

Functions & Features

- Converts a standard pneumatic signal into a proportional DC output
- CE marking
- UL approval

Typical Applications

- Converting a pneumatic system into a 4 – 20 mA for indicating and controlling in DCS system



MODEL: M2PV-C[1][2]-[3][4]

ORDERING INFORMATION

- Code number: M2PV-C[1][2]-[3][4]
- Specify a code from below for each [1] through [4]. (e.g. M2PV-C2SA-M2/CE/Q)
- Special output range (For codes Z & 0)
- Specify the specification for option code /Q (e.g. /C01/S01)

PNEUMATIC CONNECTION

C: 6 mm dia. (.24")

[1] INPUT

- 1S: 19.6 – 98.1 kPa
- 2S: 20 – 100 kPa
- 3S: 20.7 – 103.4 kPa
- 1: 0.2 – 1.0 kgf/cm²
- 2: 0.2 – 1.0 bar
- 3: 3 – 15 psig

[2] 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 1000 Ω min.)
- 4: 0 – 10 V DC (Load resistance 10 kΩ min.)
- 5: 0 – 5 V DC (Load resistance 5000 Ω min.)
- 6: 1 – 5 V DC (Load resistance 5000 Ω min.)
- 0: Specify voltage (See OUTPUT SPECIFICATIONS)

[3] POWER INPUT

AC Power

M: 85 – 264 V AC (Operational voltage range 85 – 264 V, 47 – 66 Hz)

(Select 'N' for 'Standards & Approvals' code.)

M2: 100 – 240 V AC (Operational voltage range 85 – 264 V, 47 – 66 Hz)

(90 – 264 V for UL)

DC Power

R: 24 V DC

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

R2: 11 – 27 V DC

(Operational voltage range 11 – 27 V, ripple 10 %p-p max.)

(Select 'N' for 'Standards & Approvals' code.)

P: 110 V DC

(Operational voltage range 85 – 150 V, ripple 10 %p-p max.)

(110 V ±10 % for UL)

[4] OPTIONS (multiple selections)

STANDARDS & APPROVALS (must be specified)

/N: Without CE or UL

/CE: CE marking

/UL: UL approval (CE marking)

OTHER OPTIONS

blank: none

/Q: Option other than the above (specify the specification)

(UL not available)

SPECIFICATIONS OF OPTION: Q (multiple selections)

COATING (For the detail, refer to M-System's web site.)

/C01: Silicone coating

/C02: Polyurethane coating

/C03: Rubber coating

TERMINAL SCREW MATERIAL

/S01: Stainless steel

GENERAL SPECIFICATIONS

Construction: Plug-in
Connection
Output & power input: M3 screw terminals (torque 0.8 N·m)
Pneumatic: 6 mm dia (.24") tube
Housing material: Flame-resistant resin (black)
Isolation: Output to power
Overrange output: Approx. -10 to +120 % at 1 - 5 V
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/cm²
 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
Load resistance: Output drive 15 V max.

- **DC Voltage:** 0 - 12 V DC

Minimum span: 5 mV
Offset: Max. 1.5 times span
Load resistance: Output drive 1 mA max.; at ≥ 1 V

INSTALLATION

Power Consumption

- **AC Power input:**
 Approx. 3 VA at 100 V
 Approx. 4 VA at 200 V
 Approx. 5 VA at 264 V
- **DC Power input:** Approx. 3 W

Operating temperature: -5 to +55°C (23 to 131°F)
Operating humidity: 30 to 90 %RH (non-condensing)
Mounting: Surface or DIN rail
Weight: 150 g (0.33 lbs)

PERFORMANCE in percentage of span

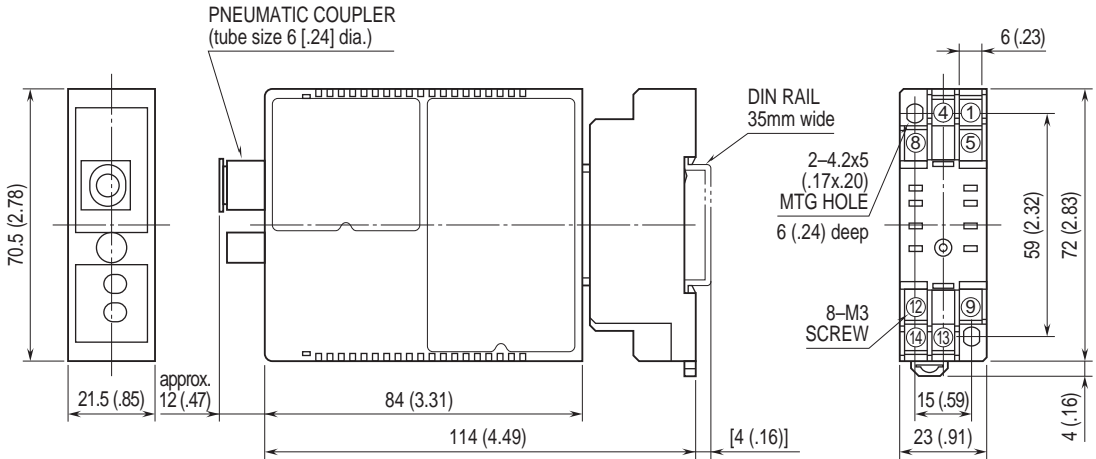
Accuracy: ± 0.3 %
Temp. coefficient: ± 0.03 %/°C (± 0.02 %/°F)
Response time: ≤ 0.5 sec. (0 - 90 %)
Permissible overrange: 196 kPa (2.0 kgf/cm², 1.96 bar, 28 psig)
Line voltage effect: ± 0.1 % over voltage range
Insulation resistance: ≥ 100 M Ω with 500 V DC
Dielectric strength: 2000 V AC @1 minute (output to power to ground)

STANDARDS & APPROVALS

CE conformity:
 EMC Directive (2004/108/EC)
 EN 61000-6-4 (EMI)
 EN 61000-6-2 (EMS)
 Low Voltage Directive (2006/95/EC)
 EN 61010-1
 Installation Category II
 Pollution Degree 2
 Max. operating voltage 300 V
 Output to power: Reinforced insulation

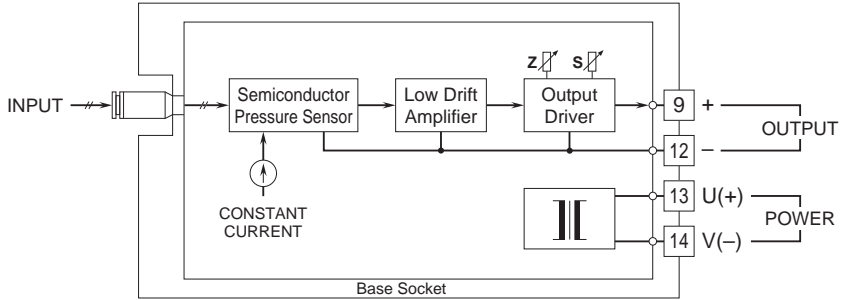
Approval:
 UL/C-UL nonincendive Class I, Division 2,
 Groups A, B, C, and D hazardous locations
 (UL 1604, CAN/CSA-C22.2 No.213)
 UL/C-UL general safety requirements
 (UL 61010B-1, CAN/CSA-C22.2 No.1010-1)

DIMENSIONS unit: mm (inch)



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

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.