

Space-saving Dual Output Signal Conditioners Mini-MW Series

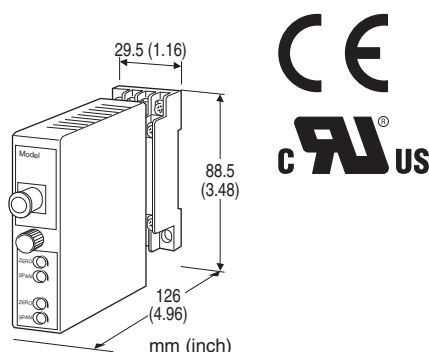
P/I TRANSDUCER

Functions & Features

- Converts a standard pneumatic signal into a proportional DC output

Typical Applications

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



MODEL: W2PV-C[1][2][3]-[4][5]

ORDERING INFORMATION

- Code number: W2PV-C[1][2][3]-[4][5]

Specify a code from below for each [1] through [5].
(e.g. W2PV-C2SAA-M2/CE/Q)

- Special output range (For codes Z & 0)
- Specify the specification for option code /Q
(e.g. /C01/S01)

Note: If one of the outputs should be a current range, specify it for the Output 1 to allow a greater load.

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 1

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 k Ω max.)
Z: Specify current (See OUTPUT SPECIFICATIONS)

Voltage

- 1: 0 – 10 mV DC (Load resistance 10 k Ω min.)
2: 0 – 100 mV DC (Load resistance 100 k Ω min.)
3: 0 – 1 V DC (Load resistance 1000 Ω min.)
4: 0 – 10 V DC (Load resistance 10 k Ω 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] OUTPUT 2

Y: None

Current

- A: 4 – 20 mA DC (Load resistance 350 Ω max.)
B: 2 – 10 mA DC (Load resistance 700 Ω max.)
C: 1 – 5 mA DC (Load resistance 1400 Ω max.)
D: 0 – 20 mA DC (Load resistance 350 Ω max.)
E: 0 – 16 mA DC (Load resistance 430 Ω max.)
F: 0 – 10 mA DC (Load resistance 700 Ω max.)
G: 0 – 1 mA DC (Load resistance 7000 Ω max.)
Z: Specify current (See OUTPUT SPECIFICATIONS)

Voltage

Same range availability as Output 1

[4] POWER INPUT

AC Power

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 $\pm$ 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 $\pm$ 10 % for UL)

[5] 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)

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 (UL not available)

TERMINAL SCREW MATERIAL

/S01: Stainless steel (UL not available)

GENERAL SPECIFICATIONS

Construction: Plug-in

Connection

Output & power input: M3 screw terminals (torque 0.8 N·m)

Pneumatic: 6 mm dia (.24") tube

Screw terminal: Chromated steel (standard) or stainless steel

Housing material: Flame-resistant resin (black)

Isolation: Output 1 to output 2 to power

Overrange output: Approx. -10 to +120 % at 1 - 5 V

Zero adjustment: -5 to +5 % (front)

Span adjustment: 95 to 105 % (front)

Adjustable individually for each output 1 and output 2.

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. for Output 1;
7 V max. for Output 2**■ DC Voltage:** 0 - 12 V DC (up to 10 V for Output 2)

Minimum span: 5 mV

Offset: ≤ 1.5 times span

Load resistance: Output drive 1 mA max.; at ≥0.5 V

INSTALLATION**Power Consumption****•AC:**

Approx. 4 VA at 100 V

Approx. 5 VA at 200 V

Approx. 6 VA at 240 V

•DC: 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:** 200 g (0.44 lb)**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 MΩ with 500 V DC**Dielectric strength:** 2000 V AC @1 minute (output 1 to output 2 to power to ground)**STANDARDS & APPROVALS****EU conformity:**

EMC Directive

EMI EN 61000-6-4

EMS EN 61000-6-2

Low Voltage Directive

EN 61010-1

Installation Category II

Pollution Degree 2

output 1 or output 2 to power input:

Reinforced insulation (300 V)

output 1 to output 2: Basic insulation (300 V)

RoHS Directive

EN 50581

Approval:

UL/C-UL nonincendive Class I, Division 2,

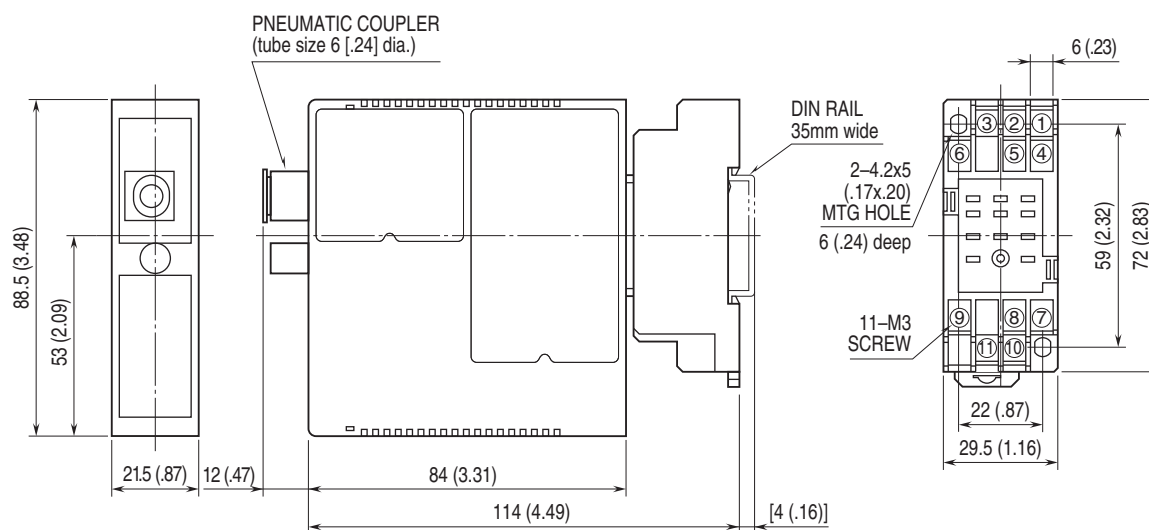
Groups A, B, C, and D

(ANSI/ISA-12.12.01, CAN/CSA-C22.2 No.213)

UL/C-UL general safety requirements

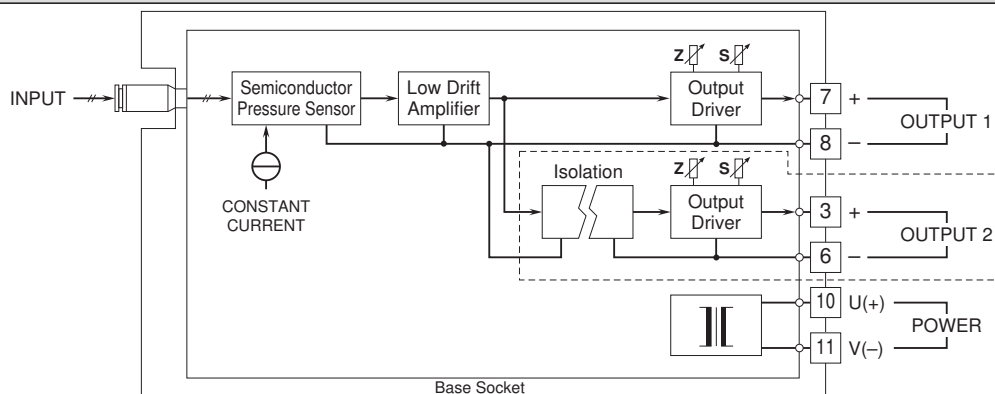
(UL 61010-1, CAN/CSA-C22.2 No.61010-1)

EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



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

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Note: The section enclosed by broken line is only with 2nd output option.



Specifications are subject to change without notice.