

Plug-in Signal Conditioners M-UNIT

50 mA OUTPUT TRANSMITTER

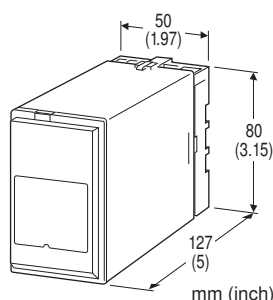
(non-isolated)

Functions & Features

- Converting a DC input into a 10 – 50 mA DC signal
- High-density mounting

Typical Applications

- Interfacing between 10 – 50 mA and 4 – 20 mA systems



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

ORDERING INFORMATION

- Code number: VA-[1]-[2][3]

Specify a code from below for each of [1] through [3].

- (e.g. VA-6-B/Q)
- Special input range (For codes Z & 0)
- Specify the specification for option code /Q (e.g. /C01/S01)

[1] INPUT

Current

- A: 4 – 20 mA DC (Input resistance 250 Ω)
- A1: 4 – 20 mA DC (Input resistance 50 Ω)
- B: 2 – 10 mA DC (Input resistance 500 Ω)
- C: 1 – 5 mA DC (Input resistance 1000 Ω)
- D: 0 – 20 mA DC (Input resistance 50 Ω)
- E: 0 – 16 mA DC (Input resistance 62.5 Ω)
- F: 0 – 10 mA DC (Input resistance 100 Ω)
- G: 0 – 1 mA DC (Input resistance 1000 Ω)
- H: 10 – 50 mA DC (Input resistance 100 Ω)
- Z: Specify current (See INPUT SPECIFICATIONS)

Voltage

- 1: 0 – 10 mV DC (Input resistance 10 k Ω min.)
- 2: 0 – 100 mV DC (Input resistance 100 k Ω min.)
- 3: 0 – 1 V DC (Input resistance 1 M Ω min.)
- 4: 0 – 10 V DC (Input resistance 1 M Ω min.)
- 5: 0 – 5 V DC (Input resistance 1 M Ω min.)
- 6: 1 – 5 V DC (Input resistance 1 M Ω min.)

4W: -10 – +10 V DC (Input resistance 1 M Ω min.)

0: Specify voltage (See INPUT SPECIFICATIONS)

OUTPUT

Current

10 – 50 mA DC (Load resistance 300 Ω max.)

[2] POWER INPUT

AC Power

B: 100 V AC

C: 110 V AC

F: 120 V AC

G: 200 V AC

H: 220 V AC

J: 240 V AC

[3] OPTIONS

blank: none

/Q: With options (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

TERMINAL SCREW MATERIAL

/S01: Stainless steel

GENERAL SPECIFICATIONS

Construction: Plug-in

Connection: M3.5 screw terminals

Screw terminal: Chromated steel (standard) or stainless steel

Housing material: Flame-resistant resin (black)

Isolation: Input or output to power

Overrange output: Approx. -10 to +120 % at 100 Ω load

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)

Specify input resistance value for code Z.

■ DC Voltage: -300 – +300 V DC

Minimum span: 10 mV

Offset: Max. 1.5 times span

Input resistance

Span 10 – 100 mV : ≥ 10 k Ω

Span 0.1 – 1 V : ≥ 100 k Ω

Span ≥ 1 V : ≥ 1 M Ω

INSTALLATION

Power input

- **AC:** Operational voltage range: rating $\pm 10\%$,

50/60 ± 2 Hz, approx. 3 VA

Operating temperature: -5 to +55°C (23 to 131°F)

Operating humidity: 30 to 90 %RH (non-condensing)

Mounting: Surface or DIN rail

Weight: 400 g (0.88 lb)

PERFORMANCE in percentage of span

Accuracy: $\pm 0.1\%$

Temp. coefficient: $\pm 0.015\text{ \%/}^{\circ}\text{C}$ ($\pm 0.008\text{ \%/}^{\circ}\text{F}$)

Response time: ≤ 0.5 sec. (0 – 90 %)

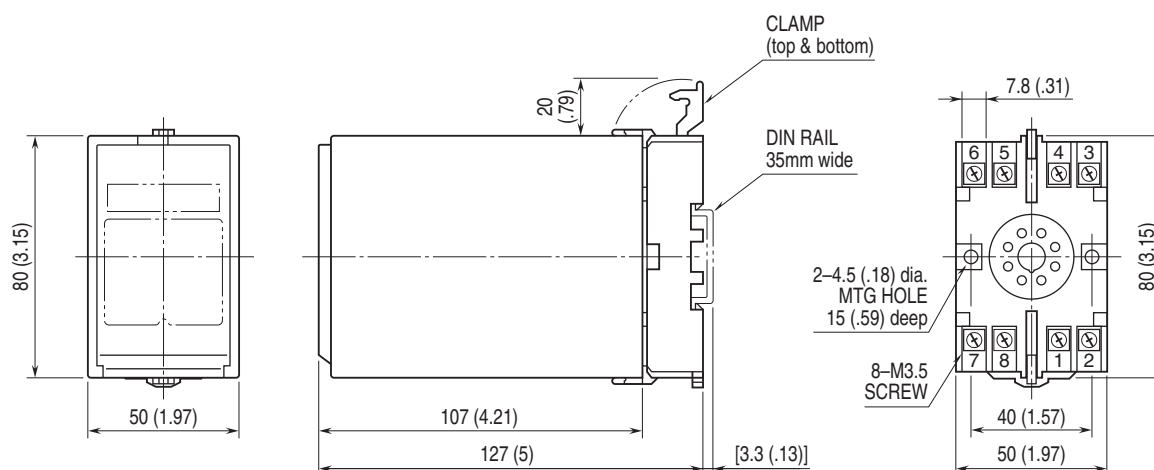
Line voltage effect: $\pm 0.1\%$ over voltage range

Insulation resistance: $\geq 100 \text{ M}\Omega$ with 500 V DC

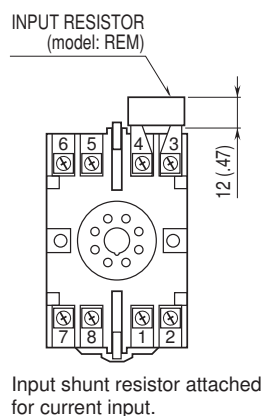
Dielectric strength: 1000 V AC @ 1 minute

(input or output to power)

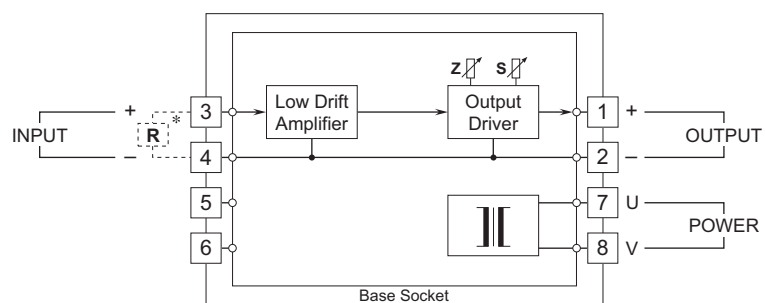
2000 V AC @ 1 minute (input or output or power to ground)

EXTERNAL DIMENSIONS unit: mm (inch)

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

TERMINAL ASSIGNMENTS unit: mm (inch)

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



* Input shunt resistor attached for current input.



Specifications are subject to change without notice.