

## Plug-in Signal Conditioners M-UNIT

H: 220 V AC

J: 240 V AC

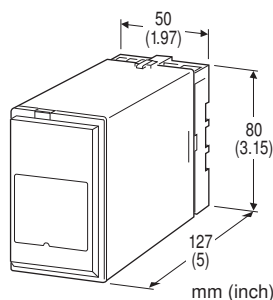
### EXCITATION SUPPLY

#### Functions & Features

- Highly regulated DC power supply
- Output voltage fully adjustable over its entire span
- MDC-3 features separate regulated and unregulated outputs
- Powering up to three standard 4 – 20 mA loops simultaneously
- Shortcircuit protection
- Highdensity mounting

#### Typical Applications

- Strain gauge bridge excitation
- Voltage reference and general-purpose power supply needs
- Various 2-wire transmitters



## MODEL: MDC-[1]-[2][3]

### ORDERING INFORMATION

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

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

- (e.g. MDC-1-B/Q)
- Specify the specification for option code /Q (e.g. /C01/S01/SET)

### [1] SUPPLY OUTPUT

- 1: 3 – 15 V DC adjustable
- 2: 5 – 30 V DC adjustable
- 3: 24 V DC regulated and 40 V DC unregulated

### [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

### [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

#### EX-FACTORY SETTING

/SET: Preset according to the Ordering Information Sheet (No. ESU-9222)

### 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: Output to power

### SUPPLY OUTPUT

- Output voltage:

MDC-1: 3 – 15 V DC (adjustable on front)

(If not specified the default value is used 12V DC)

MDC-2: 5 – 30 V DC (adjustable on front)

(If not specified the default value is used 24V DC)

MDC-3: 24 V DC regulated and 40 V DC unregulated

Load current:

MDC-1, -2: ≤ 50 mA

MDC-3: ≤ 65 mA (for the total of both outputs)

- Shortcircuit Protection

MDC-1, -2

Current limited: 65 mA max.

Protected time duration: No limit

MDC-3

Current limited: 85 mA max. at 24 V

Protected time duration: No limit

### INSTALLATION

Power input

- AC: Rating ±10 %, 50/60 ±2 Hz

Approx. 2 VA for MDC-1

Approx. 3.5 VA for MDC-2, -3

Operating temperature: -5 to +60°C (23 to 140°F)

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

**Mounting:** Surface or DIN rail

**Weight:** 290 g (0.64 lb)

## PERFORMANCE in percentage of span

**Temp. coefficient:**

**MDC-1, -2:**  $\pm 0.03 \text{ }^{\circ}\text{C}$  ( $\pm 0.02 \text{ }^{\circ}\text{F}$ )

**MDC-3:**  $\pm 0.03 \text{ }^{\circ}\text{C}$  ( $\pm 0.02 \text{ }^{\circ}\text{F}$ ) at 24 V

**Ripple:**

**MDC-1, -2:** 15 mVp-p max. at 50 mA output

**MDC-3:** 15 mVp-p max. at 24 V/65 mA output

**Load effect:**

**MDC-1, -2:** -0.1 % or -5 mV, whichever is greater as absolute value with 0 – 50 mA variation

**MDC-3:** -0.1 % max. with 0 – 65 mA variation at 24 V

**Line voltage effect:**

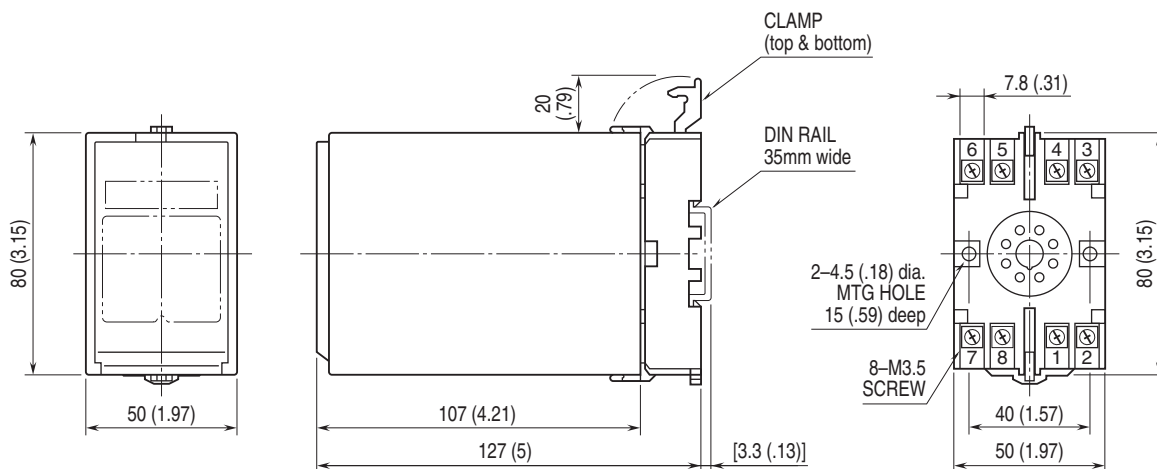
**MDC-1, -2:**  $\pm 0.5 \text{ } \%$  over voltage range

**MDC-3:**  $\pm 0.5 \text{ } \%$  over voltage range at 24 V

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

**Dielectric strength:** 2000 V AC @ 1 minute (output to power to ground)

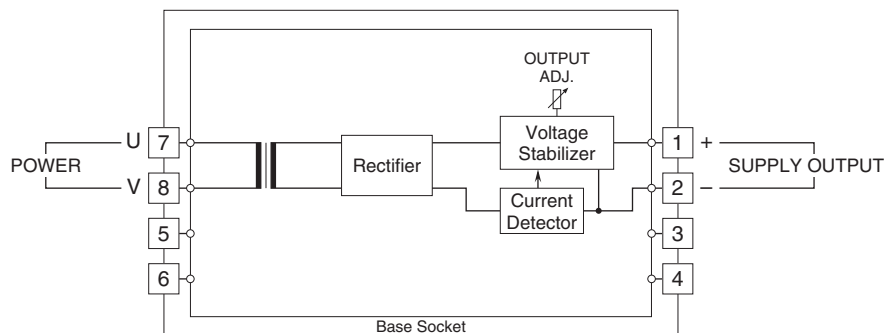
## EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



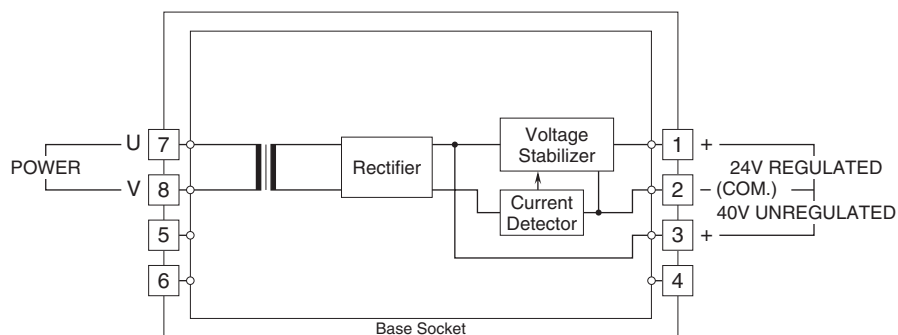
• When mounting, no extra space is needed between units.

## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

### ■ MDC-1 & -2



### ■ MDC-3



Specifications are subject to change without notice.