

Plug-in Signal Conditioners M-UNIT

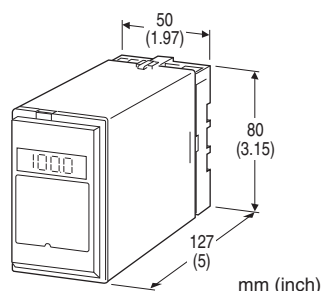
PARAMETER GENERATOR

Functions & Features

- Providing a constant DC signal
- Setpoint monitoring with LCD meter
- Isolation up to 2000 V AC
- High-density mounting

Typical Applications

- Various parameter settings for computers and DCS's



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

ORDERING INFORMATION

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

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

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

[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 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 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.)

5W: -5 – +5 V DC (Load resistance 1000 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
- P: 110 V DC

[3] OPTIONS (multiple selections)

LCD Meter

blank: None

/E: with LCD meter (0.0 - 100.0 % display)

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

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: Output to power

Output adjustment: Multi-turn screwdriver (front)

Monitor jacks: Output 0 – 10 V for 0 – 100 % setpoint (deleted with option /E)

Monitor jack diameter: 2 mm (.08")

■ DISPLAY (LCD meter)

LCD digital display: 0.0 - 100.0 % (min. digit 0.1 %) (No scaling)

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:** -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 %, or 85 – 150 V

for 110 V rating (ripple 10 % p-p max.)

Approx. 2.5 W (100 mA at 24 V)

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

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

Mounting: Surface or DIN rail

Weight: 350 g (0.77 lb)

PERFORMANCE in percentage of span

Setting accuracy (monitor jacks): ± 0.1 %

Setting accuracy (digital display): ± 0.1 % ± 1 digit

Temp. coefficient: ± 0.015 %/°C (± 0.008 %/°F)

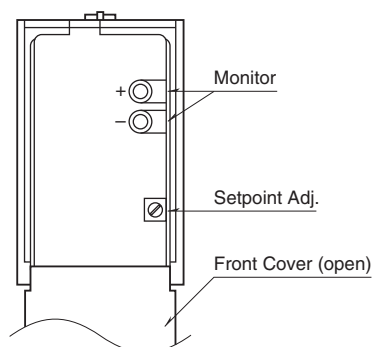
Line voltage effect: ± 0.1 % over voltage range

Insulation resistance: ≥ 100 M Ω with 500 V DC

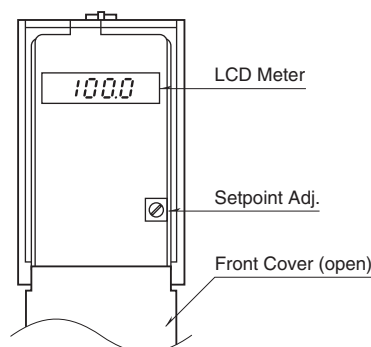
Dielectric strength: 2000 V AC @ 1 minute (output to power to ground)

EXTERNAL VIEW

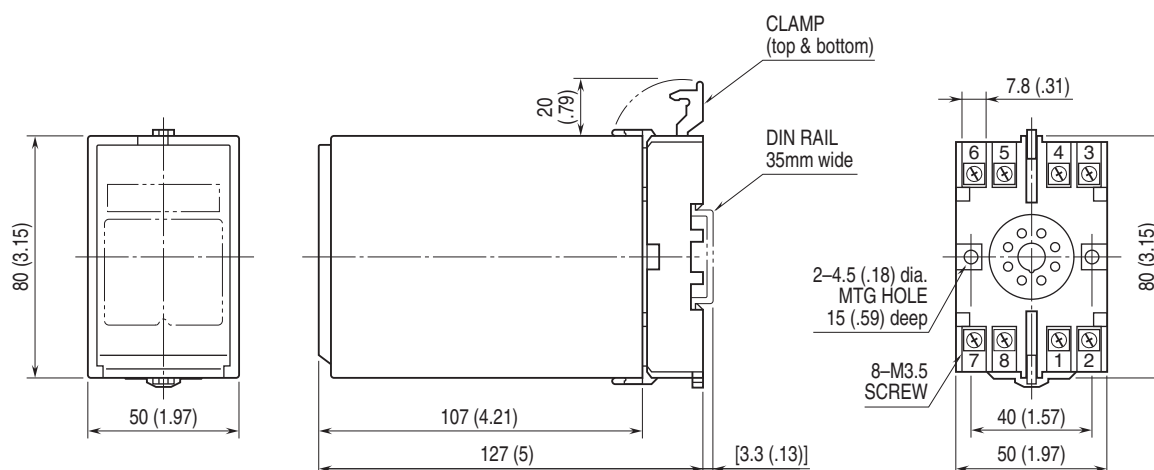
■ STANDARD TYPE: MONITOR JACKS



■ OPTION /E: LCD METER

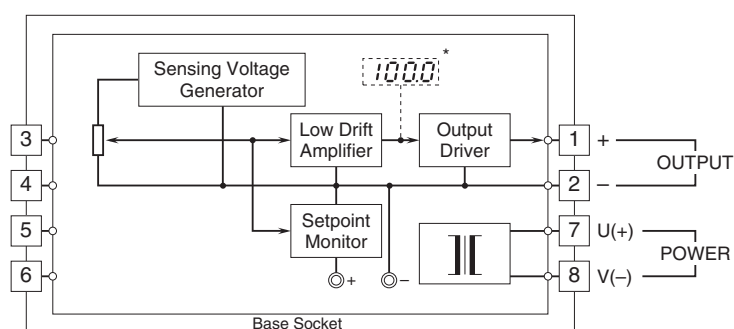


EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



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

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



*Option/E.

Setpoint monitor circuit and monitor jacks are deleted when Option/E is selected.



Specifications are subject to change without notice.