

Plug-in Signal Conditioners M-UNIT

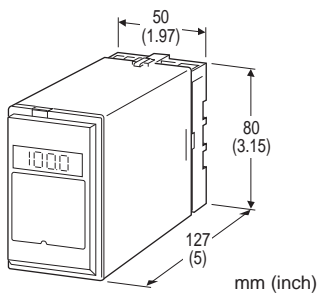
PARAMETER GENERATOR

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 [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 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 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)

Signal Indicator

- blank: Without
- /E: With front-mounted LCD meter

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")
- LCD meter:** 0.1 % increments



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

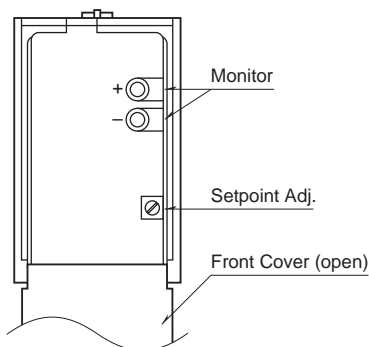
- **AC:** Operational voltage range: rating ± 10 %, 50/60 ± 2 Hz, approx. 2 VA
- **DC:** Operational voltage range: rating ± 10 %, or 85 - 150 V for 110 V rating (ripple 10 % p-p max.) approx. 2.5 W (100 mA at 24 V)
- Operating temperature:** -5 to +60°C (23 to 140°F)
- Operating humidity:** 30 to 90 %RH (non-condensing)
- Mounting:** Surface or DIN rail
- Weight:** 350 g (0.77 lb)

PERFORMANCE in percentage of span

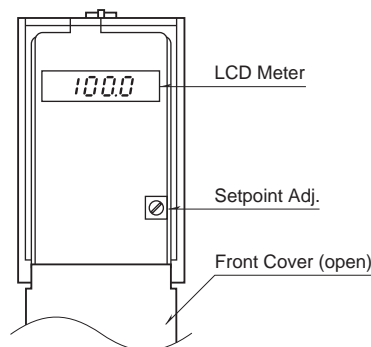
- Setting accuracy (monitor jacks):** ± 0.1 %
- Setting accuracy (digital display):** ± 0.1 % ± 1 digit
- Temp. coefficient:** ± 0.015 %/°C (± 0.008 %/°F)
- Line voltage effect:** ± 0.1 % over voltage range
- Insulation resistance:** ≥ 100 M Ω with 500 V DC
- Dielectric strength:** 2000 V AC @ 1 minute (output to power to ground)

EXTERNAL VIEW

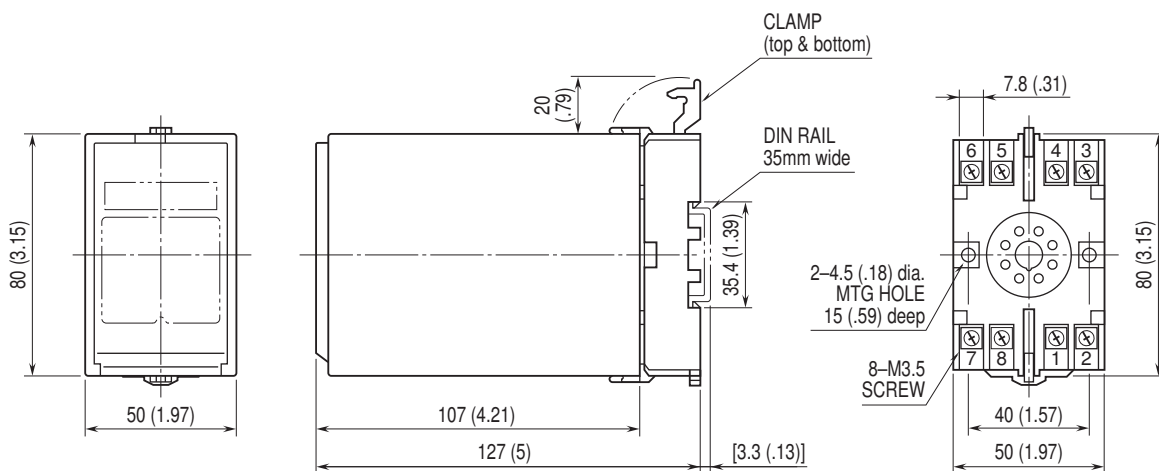
■ STANDARD TYPE: MONITOR JACKS



■ OPTION/E: LCD METER

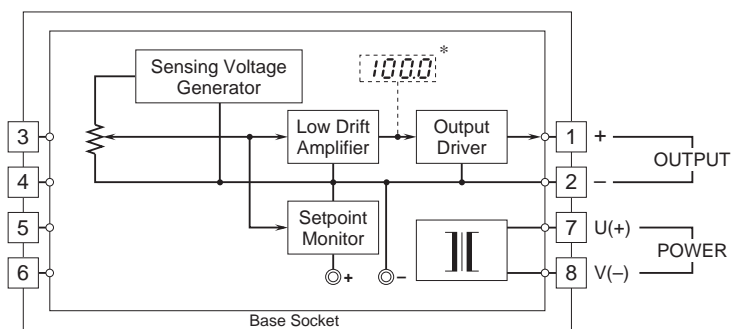


EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



• 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.