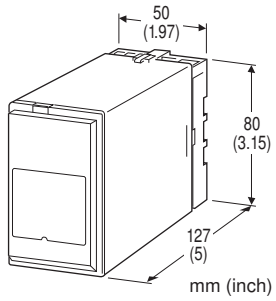
Plug-in Signal Conditioners M-UNIT

LOGARITHM FUNCTION MODULE

Functions & Features

• Providing logarithm function output for a wide range of input signal
• Isolation up to 2000 V AC
• High-density mounting



MODEL: MLG-[1][2]-[3][4]

ORDERING INFORMATION

• Code number: MLG-[1][2]-[3][4]
Specify a code from below for each of [1] through [4].
(e.g. MLG-1A-B/Q)
• Special output range (For codes Z & 0)
• Specify the specification for option code /Q
(e.g. /C01/S01)

[1] INPUT

Voltage

1: 100 mV – 10 V DC (Input resistance 100 kΩ min.)
2: 10 mV – 1 V DC (Input resistance 100 kΩ min.)

[2] 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 1000 Ω min.)
4: 0 – 10 V DC (Load resistance 10 kΩ min.)
5: 0 – 5 V DC (Load resistance 5000 Ω min.)
6: 1 – 5 V DC (Load resistance 5000 Ω min.)
4W: -10 – +10 V DC (Load resistance 10 kΩ min.)
5W: -5 – +5 V DC (Load resistance 5000 Ω min.)
0: Specify voltage (See OUTPUT SPECIFICATIONS)

[3] 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

[4] 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

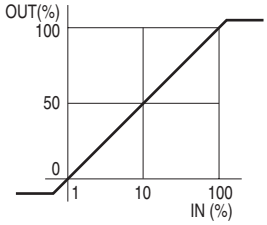
Construction: Plug-in
Connection: M3.5 screw terminals
Screw terminal: Chromated steel (standard) or stainless steel
Housing material: Flame-resistant resin (black)
Isolation: Input to output to power
Overrange output: Approx. -10 to +104 % at 1 – 5 V
Zero adjustment: -5 to +5 % (front)
Span adjustment: 95 to 105 % (front)

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 – +20 V DC
Span: Min. 5 mV, max. 20 V
Offset: Max. 1.5 times span

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

■ **OPERATION DIAGRAM**



INSTALLATION

Power input

•**AC**: Operational voltage range: rating ±10 %, 50/60 ±2 Hz, approx. 3 VA

•**DC**: Operational voltage range: rating ±10 %, ripple 10 %p-p max., approx. 2 W (90 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

Accuracy: ±1.0 %

Temp. coefficient: ±0.1 %/°C (±0.06 %/°F)

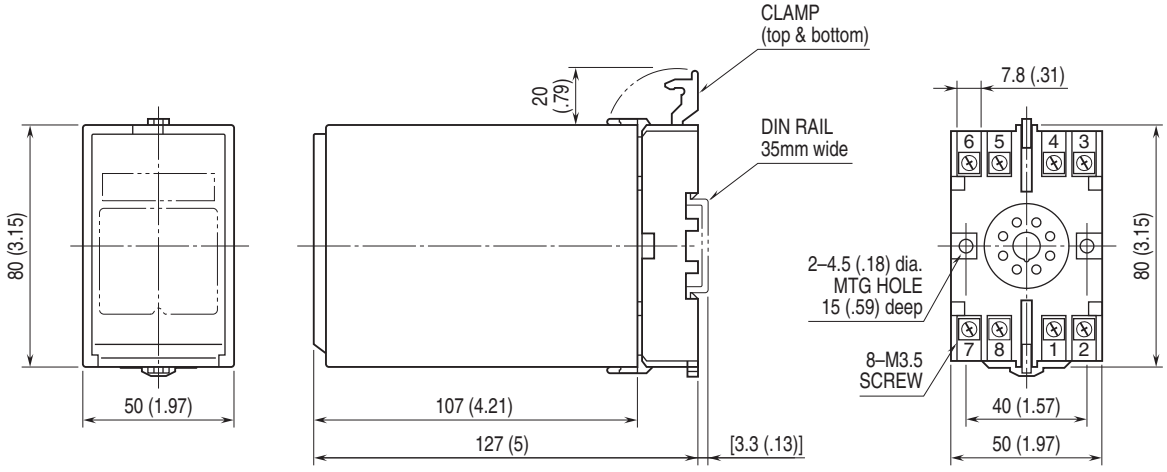
Response time: ≤ 0.5 sec. (0 – 90 %)

Line voltage effect: ±0.1 % over voltage range

Insulation resistance: ≥ 100 MΩ with 500 V DC

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

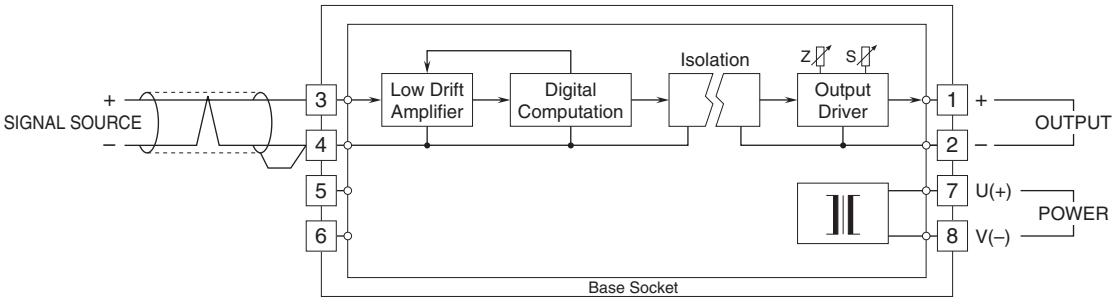
EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



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

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

This unit is designed to amplify very low level signals by high gain. In order to prevent the output becomes unstable due to input noises, use shielded twisted-pair cables or take other precautions for input wiring.



⚠ Specifications are subject to change without notice.