

Plug-in Signal Conditioners M-UNIT

S: 12 V DC
R: 24 V DC
V: 48 V DC

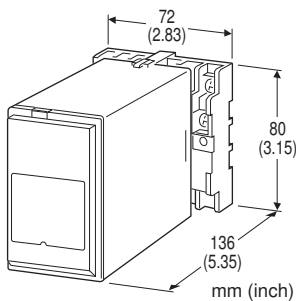
ANALOG SWITCHING MODULE

Functions & Features

- Selecting one signal as output from up to four analog input signals
- Distributing a single input signal to any or all of the up to four output channels
- High-density mounting

Typical Applications

- Switching 1 - 5 V DC signal: no contact failure that happens when using mechanical contacts for this purpose
- Switching low-speed pulse signals
- Switching alternating signals



[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)

Switching: Photo MOS relay

Isolation: Switching command relay to signal line to power

Monitor LED 1: Red light turns on with SW1 ON

Monitor LED 2: Red light turns on with SW2 ON

Monitor LED 3: Red light turns on with SW3 ON

Monitor LED 4: Red light turns on with SW4 ON

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

ORDERING INFORMATION

- Code number: MNV-[1]-[2][3]
Specify a code from below for each [1] through [3].
(e.g. MNV-1-B/Q)
- Specify the specification for option code /Q
(e.g. /C01/S01)

[1] SWITCHING CIRCUIT

- 1: Single circuit
2: Double circuit

[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

INPUT & OUTPUT

■ Signal Line

Operational voltage range: ± 50 V DC or less; minimum span 10 mV

Operational current range: 50 mA or less

ON resistance: Approx. 50 Ω per line

■ **Switching Command:** Relay contact or open collector

Sensing:

Approx. 20 V DC @ 7 mA with single circuit

Approx. 20 V DC @ 14 mA with double circuit

Detection levels

ON resistance: ≤ 1 K Ω , ≤ 5 V

OFF resistance: ≥ 100 k Ω , ≥ 18 V

Leakage current at OFF: 1 μ A (400 V AC between lines)

INSTALLATION

Power input

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

• **DC:** Operational voltage range: rating ± 10 %



(ripple 10 % p-p max.) approx. 1 W (30 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

Response time: Approx. 1 msec.

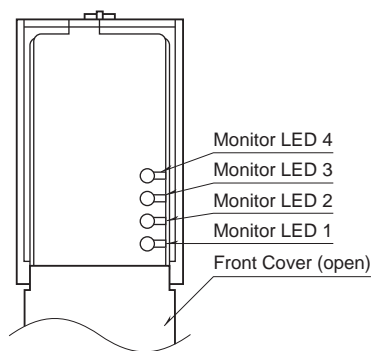
Leakage current at open circuit: $\leq 1 \mu\text{A}$

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

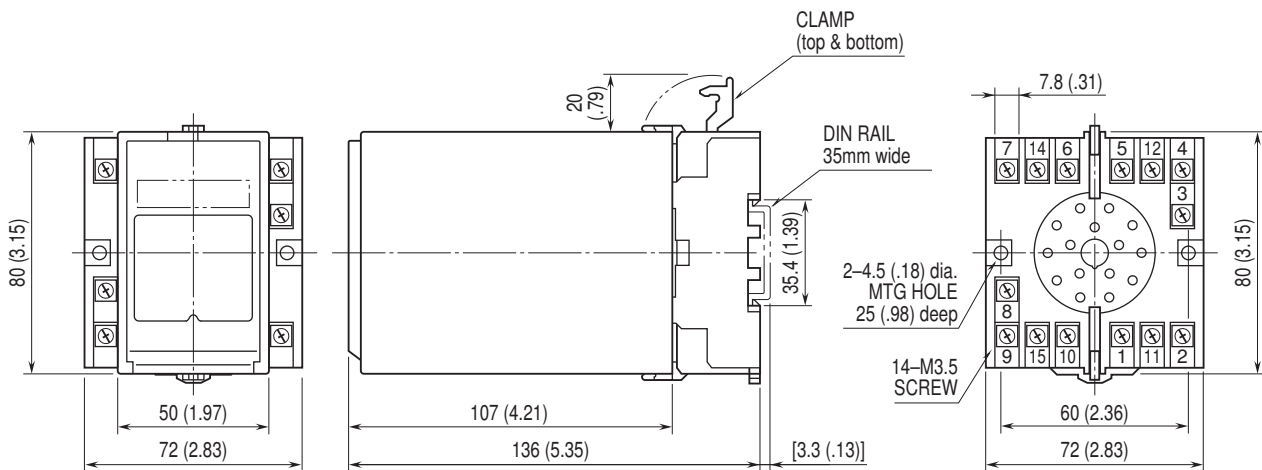
Dielectric strength: 1500 V AC @ 1 minute

(switching command relay to signal line to power to ground)

EXTERNAL VIEW



EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)

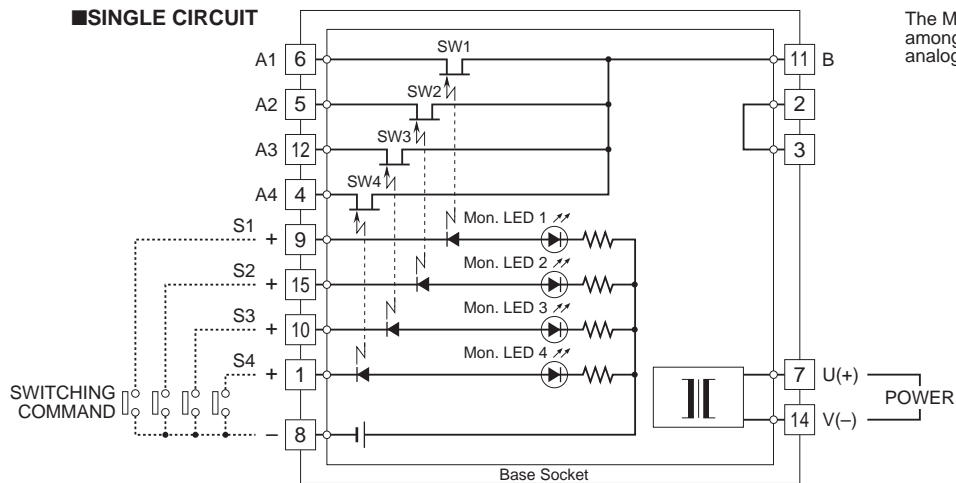


• When mounting, no extra space is needed between units.

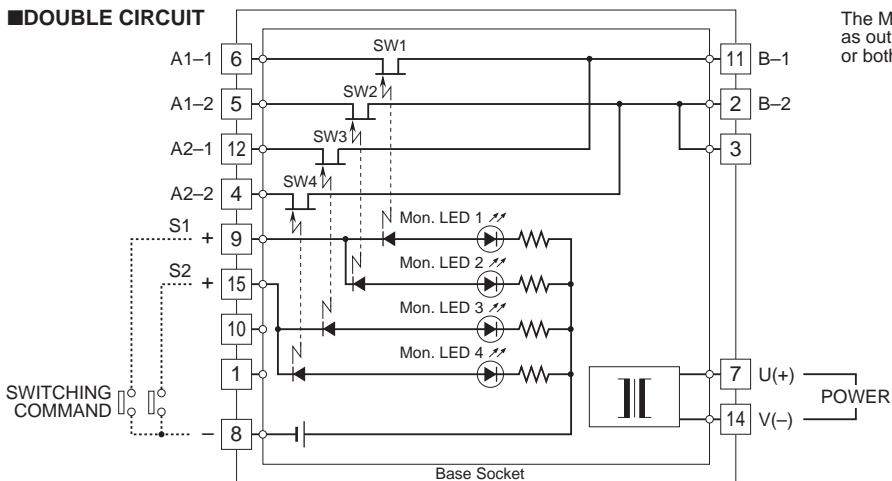


SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

■ SINGLE CIRCUIT



■ DOUBLE CIRCUIT



Specifications are subject to change without notice.