

Plug-in Signal Conditioners M-UNIT

CURRENT LOOP SUPPLY

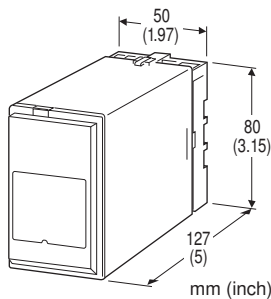
(non-isolated)

Functions & Features

- Powering a 4 – 20 mA DC current loop
- Output voltage 24 V or 42 V
- Electrically isolating output signal from power input
- Shortcircuit protection
- Applicable to smart transmitters
- High-density mounting

Typical Applications

- Various 2-wire transmitters
- 42 V output provides increased loop drive



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

ORDERING INFORMATION

- Code number: DS-[1]-[2][3]
- Specify a code from below for each [1] through [3].
(e.g. DS-24-B/Q)
- Specify the specification for option code /Q
(e.g. /C01/S01)

[1] SUPPLY OUTPUT

24: 24 V DC

42: 42 V DC

INPUT

Current

4 – 20 mA DC

OUTPUT

Current

4 – 20 mA DC

[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

[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

RELATED PRODUCTS

- Resistor module (model: REM-250)

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 or output to power

SUPPLY OUTPUT

Output voltage (with no load):

24 V use: 24 – 28 V DC

42 V use: 39 – 43 V DC

Current rating: ≤ 22 mA DC

- Shortcircuit Protection

Current limited: 40 mA max.

Protected time duration: No limit

INSTALLATION

Power input

Operational voltage range: Rating ±10 %

50/60 ±2 Hz

Approx. 2 VA (DS-24)

Approx. 3.2 VA (DS-42)

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



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

Mounting: Surface or DIN rail

Weight: 300 g (0.66 lb)

PERFORMANCE in percentage of span

Line voltage effect

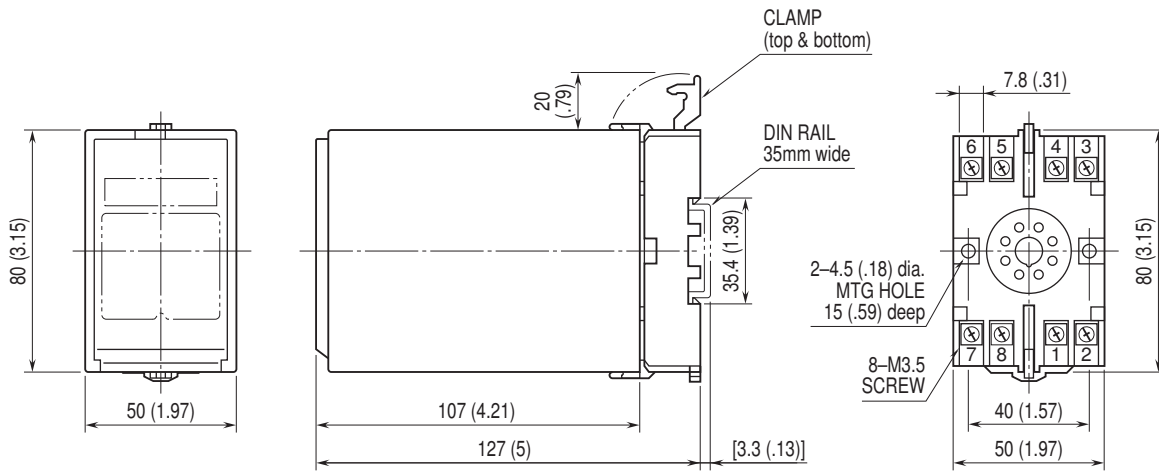
DS-24: $\pm 0.5\%$ over voltage range

DS-42: $\pm 1\%$ over voltage range

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

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

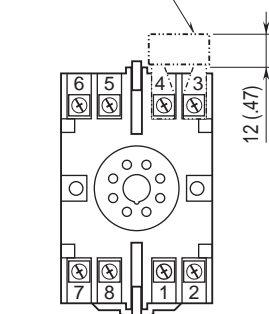
DIMENSIONS unit: mm (inch)



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

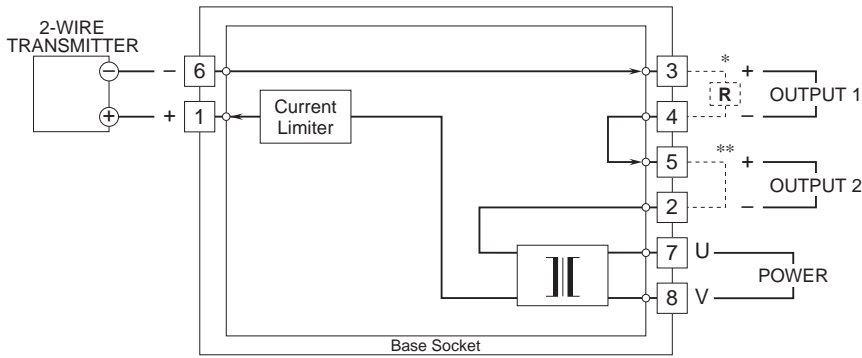
TERMINAL ASSIGNMENTS unit: mm (inch)

OUTPUT RESISTOR
(model: REM)



Use output shunt resistor for voltage output.

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



* Use output shunt resistor for voltage output.
 **Short across these terminals when not using output 2.
 Remark: Use 250Ω load resistance when combined with a smart transmitter.



Specifications are subject to change without notice.

