

Super-mini Signal Conditioners Mini-M Series

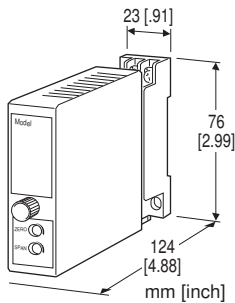
CURRENT LOOP SUPPLY

Functions & Features

- Powers a 4 – 20 mA DC current loop
- Shortcircuit protection
- Applicable to smart transmitters

Typical Applications

- Various 2-wire transmitters

**MODEL: M2DY-24[1]-[2][3]**

ORDERING INFORMATION

- Code number: M2DY-24[1]-[2][3]
Specify a code from below for each of [1] through [3].
(e.g. M2DY-24A-R/CE/Q)
- Specify the specification for option code /Q
(e.g. /C01/V01)

SUPPLY OUTPUT

24: 24 V DC

INPUT

Current

4 – 20 mA DC (Input resistance 300 Ω)

[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.)

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.)

[2] POWER INPUT

AC Power

M: 85 – 264 V AC (Operational voltage range 85 – 264 V, 47 – 66 Hz)

(Select '/N' for 'Standards & Approvals' code.)

DC Power

R: 24 V DC

(Operational voltage range 24 V $\pm 10\%$, ripple 10 %p-p max.)

R2: 11 – 27 V DC

(Operational voltage range 11 – 27 V, ripple 10 %p-p max.)

(Select '/N' for 'Standards & Approvals' code.)

P: 110 V DC

(Operational voltage range 85 – 150 V, ripple 10 %p-p max.)

(Select '/N' for 'Standards & Approvals' code.)

[3] OPTIONS (multiple selections)

Standards & Approvals (must be specified)

/N: Without CE or UL

/CE: CE marking

/UL: UL approval, CE marking

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 our web site.)

/C01: Silicone coating

/C02: Polyurethane coating

/C03: Rubber coating (UL not available)

/C04: Polyolefin coating (UL not available)

ADJUSTMENT

/V01: Multi-turn fine adjustment (UL not available)

TERMINAL SCREW MATERIAL

/S01: Stainless steel (UL not available)

GENERAL SPECIFICATIONS

Construction: Plug-in

Connection: M3 screw terminals (torque 0.8 N·m)

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 +120 % at 1 – 5 V

Zero adjustment: -5 to +5 % (front)

Span adjustment: 95 to 105 % (front)

SUPPLY OUTPUT

(across the terminals 1 - 4)

Output voltage: 24 - 28 V DC with no load

18 V DC min. at 20 mA

Current rating: ≤ 22 mA DC

• **Shortcircuit Protection**

Current limited: 30 mA max.

Protected time duration: No limit

INPUT SPECIFICATIONS

■ **DC Current:** Input resistor incorporated

INSTALLATION

Power Consumption

• **AC:**

Approx. 3 VA at 100 V

Approx. 4 VA at 200 V

Approx. 5 VA at 264 V

• **DC:** Approx. 3 W

Operating temperature: -5 to +55°C (23 to 131°F)

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

Mounting: Surface or DIN rail

Weight: 150 g (0.33 lb)

PERFORMANCE in percentage of span

Accuracy: ± 0.1 %

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

Response time: ≤ 0.5 sec. (0 - 90 %)

Line voltage effect

Supply output: ± 3 % over voltage range

Output signal: ± 0.1 % over voltage range

Insulation resistance: ≥ 100 M Ω with 500 V DC

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

STANDARDS & APPROVALS

EU conformity:

EMC Directive

EMI EN 61000-6-4

EMS EN 61000-6-2

RoHS Directive

Approval:

UL/C-UL nonincendive Class I, Division 2,

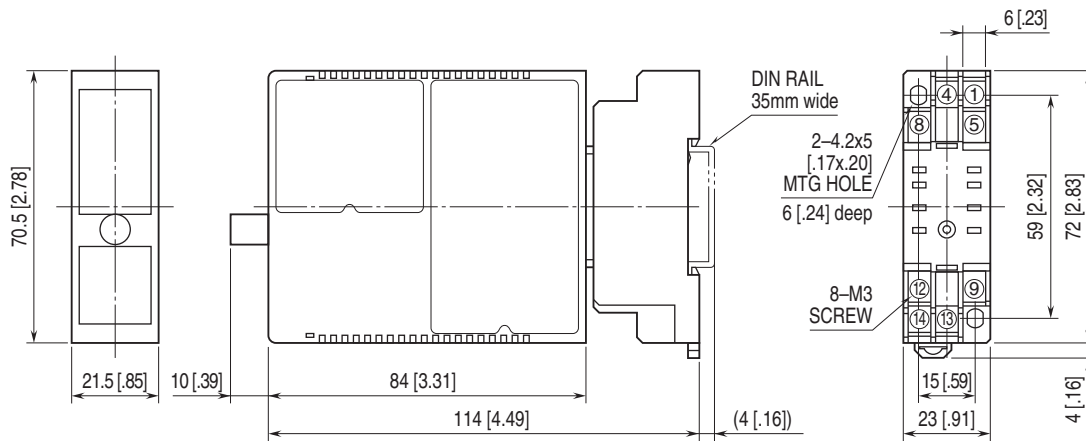
Groups A, B, C, and D

(UL 121201, CAN/CSA-C22.2 No.213-17)

UL/C-UL general safety requirements

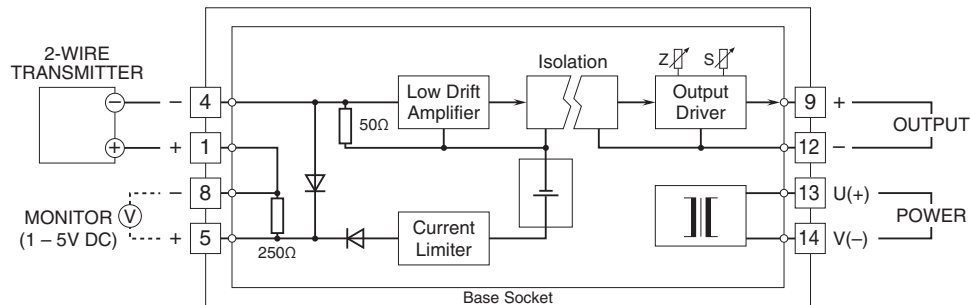
(UL 61010-1, CAN/CSA-C22.2 No.61010-1-12)

EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]



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

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.