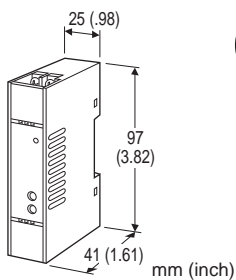


Super-mini Terminal Block Signal Conditioners M5-UNIT

CURRENT LOOP SUPPLY

Functions & Features

- Powering a 4 – 20 mA DC current loop
- Applicable to smart transmitters
- Isolation between the input and output
- Fast response type available
- High-density mounting
- Power LED
- CE marking for 24 V power



M5DY-□-□□

ORDERING INFORMATION

Specify a code from below for each [1] through [3].

- Code number: M5DY-[1]-[2][3]
(e.g. M5DY-A-R/K/Q)

Specify variables.

- Special output range (For codes Z & 0)
- Specify the specification for option code /Q
(e.g. /C01 /V01)

INPUT

Current

4 – 20 mA DC (Input resistance 249.5 Ω)

[1] OUTPUT

Current

A: 4 – 20 mA DC (Load resistance 550 Ω max.)

D: 0 – 20 mA DC (Load resistance 550 Ω max.)

Z: Specify current (See OUTPUT SPECIFICATIONS)

Voltage

1: 0 – 10 mV DC (Load resistance 100 k Ω min.)
(CE not available)

2: 0 – 100 mV DC (Load resistance 100 k Ω min.)
(CE not available)

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.)

0: Specify voltage (See OUTPUT SPECIFICATIONS)

01: Specify voltage (See OUTPUT SPECIFICATIONS)
(CE not available)

[2] POWER INPUT

AC Power

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

(CE not available)

DC Power

R: 24 V DC

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

[3] OPTIONS

RESPONSE TIME (0 – 90 %)

blank: Standard (\leq 0.5 sec.)

/K: Fast Response (Approx. 25 msec.)

OTHER OPTIONS

blank: none

/Q: Option other than the above (specify the specification)

OPTION SPECIFICATIONS OF /Q (multiple selections)

COATING (For the detail, refer to M-system's web site.)

/C01: Silicone coating

/C02: Polyurethane coating

/C03: Rubber coating

ADJUSTMENT

/V01: Multi-turn fine adjuster

GENERAL SPECIFICATIONS

Construction: Terminal block

Connection: M3.5 screw terminals (torque 0.8 N·m)

Screw terminal: Nickel-plated steel

Housing material: Flame-resistant resin (black)

Isolation: Input to output to power

Zero adjustment: -2 to +2 % (front)

Span adjustment: 98 to 102 % (front)

Power LED: Green light turns on when the power is supplied.

SUPPLY OUTPUT

(across the terminals 3 – 4)

Output voltage: 24 – 28 V DC with no load

18 V DC min. at 20 mA

Current rating: 22 mA DC max.

• Shortcircuit Protection

Current limited: 30 mA max.

Protected time duration: No limit

INPUT SPECIFICATIONS

- DC Current: Input resistor incorporated

OUTPUT SPECIFICATIONS

- DC Current: 0 – 20 mA DC
 - Minimum span: 1 mA
 - Offset: Max. 1.5 times span
 - Load resistance: Output drive 11 V max.
- DC Voltage
 - Output code 0 (CE)
 - Voltage range: 0 – 10 V DC
 - Minimum span: 1 V
 - Offset: Max. 1.5 times span
 - Load resistance: Output drive 10 mA max.; at ≥ 1 V
 - Output code 01 (Not CE)
 - Voltage range: 0 – 1 V DC
 - Minimum span: 10 mV
 - Offset: Max. 1.5 times span
 - Load resistance: Min. 100 k Ω

INSTALLATION

Power Consumption

- AC Power input: Approx. 3 VA
- DC Power input: Approx. 2 W
- Operating temperature: -5 to +55°C (23 to 131°F)
- Operating humidity: 0 to 90 %RH (non-condensing)
- Mounting: DIN rail
- Weight: 80 g (2.8 oz)

PERFORMANCE in percentage of span

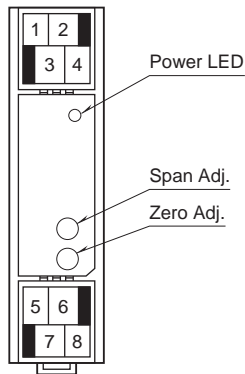
- Accuracy: ± 0.1 %
- Temp. coefficient: ± 0.015 %/°C (± 0.008 %/°F)
- Line voltage effect: ± 0.1 % over voltage range
- Insulation resistance: ≥ 100 M Ω with 500 V DC
- Dielectric strength (input to output to power to ground)
 - DC powered: 2000 V AC @1 minute
 - AC powered: 1500 V AC @1 minute

STANDARDS & APPROVALS

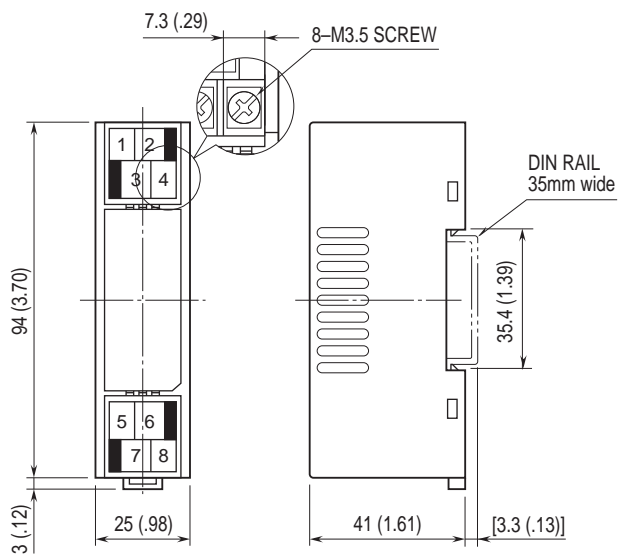
CE conformity:

- EMC Directive (2004/108/EC)
- EN 61000-6-4 (EMI)
- EN 61000-6-2 (EMS)

FRONT VIEW

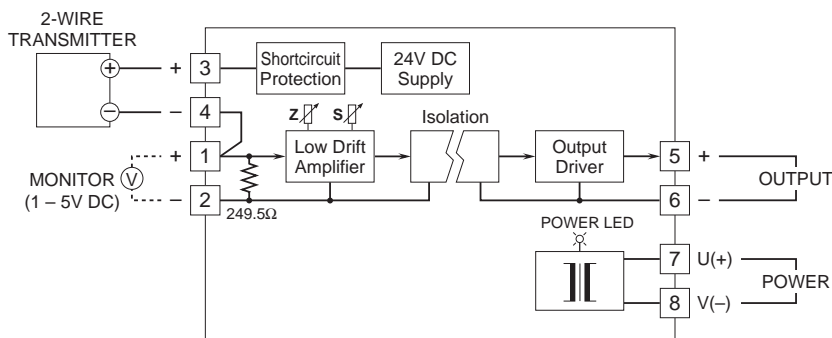


DIMENSIONS unit: mm (inch)

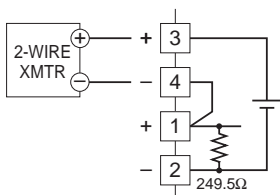


• When mounting, no extra space is needed between units.

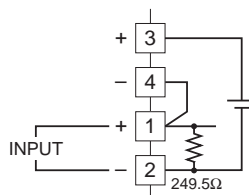
SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



■ When Used as DC Supply



■ When Used as Isolator





Specifications are subject to change without notice.