

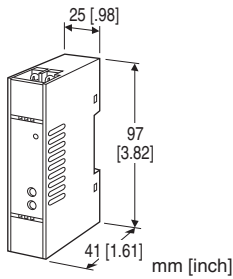
Super-mini Terminal Block Signal Conditioners M5-UNIT

(CE or UKCA not available)

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



MODEL: M5DY-[1]-[2][3]

ORDERING INFORMATION

- Code number: M5DY-[1]-[2][3]

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

- (e.g. M5DY-A-R/K/Q)
- Special output range (For codes Z, 0 & 01)
- Specify the specification for option code /Q (e.g. /C01/V01/S01)

INPUT

Current

4 – 20 mA DC (Input resistance approx. 250 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 kΩ min.)

(CE or UKCA not available)

2: 0 – 100 mV DC (Load resistance 100 kΩ min.)

(CE or UKCA 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)

[2] POWER INPUT

AC Power

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

(CE or UKCA not available)

DC Power

R: 24 V DC

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

[3] OPTIONS (multiple selections)

Response Time (0 – 90 %)

blank: Standard (≤ 0.5 sec.)

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

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 M-System's web site.)

/C01: Silicone coating

/C02: Polyurethane coating

/C03: Rubber coating

ADJUSTMENT

/V01: Multi-turn fine adjustment

TERMINAL SCREW MATERIAL

/S01: Stainless steel

GENERAL SPECIFICATIONS

Construction: Terminal block

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

Screw terminal: Nickel-plated steel (standard) or stainless steel

Housing material: Flame-resistant resin (black)

Isolation: Input to output to power

Overrange output: Approx. -10 to +110 % at 1 – 5 V

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

Span adjustment: 98 to 102 % (front)

Power indicator LED: Green LED 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

• **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:** Approx. 3 VA

- **DC:** 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**EU conformity:**

EMC Directive

EMI EN 61000-6-4

EMS EN 61000-6-2

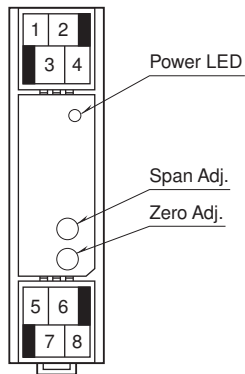
RoHS Directive

UK conformity (UKCA):

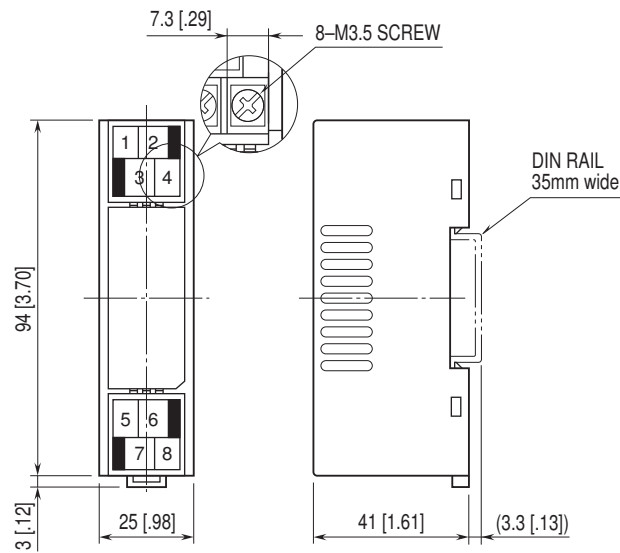
The UK legislations and designated standards are equivalent to the applicable EU directives.

(Refer to M-System's website for more information about the legislations and designated standards.)

FRONT VIEW

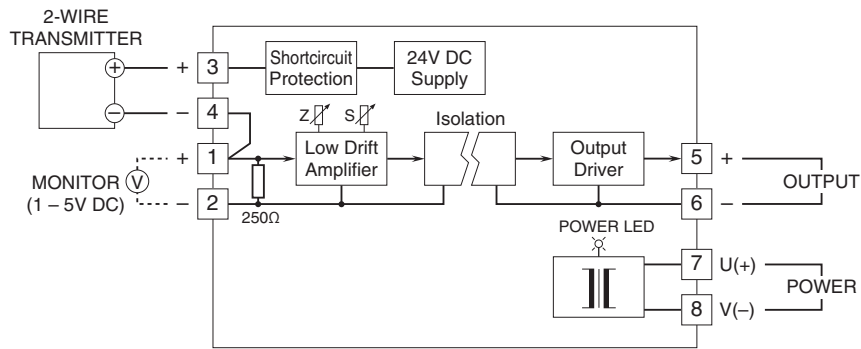


EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]

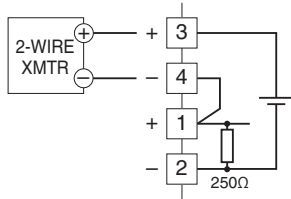


• When mounting, no extra space is needed between units.

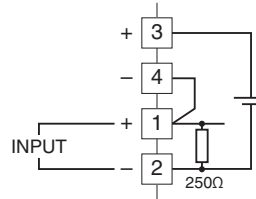
SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



■ When Used as DC Supply



■ When Used as Isolator



Specifications are subject to change without notice.