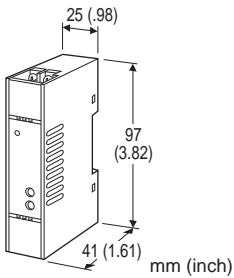


Super-mini Terminal Block Signal Conditioners M5-UNIT

POTENTIOMETER TRANSMITTER

Functions & Features

- Provides a standard DC output proportional to a potentiometer or slidewire position input
- Constant voltage excitation
- Fast response type available
- High-density mounting
- Power LED



MODEL: M5MS-[1]-[2][3]

ORDERING INFORMATION

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

- Code number: M5MS-[1]-[2][3]
(e.g. M5MS-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

Total resistance 100 Ω - 10 k 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.)
- 1W: -10 - +10 mV DC (Load resistance 100 k Ω min.)

(CE not available)

2W: -100 - +100 mV DC (Load resistance 100 k Ω min.)

(CE not available)

3W: -1 - +1 V DC (Load resistance 800 Ω min.)

4W: -10 - +10 V DC (Load resistance 8000 Ω min.)

5W: -5 - +5 V DC (Load resistance 4000 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 (multiple selections)

Response Time (0 - 90 %)

blank: Standard (\leq 0.5 sec.)

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

Input Minimum Span

blank: \leq 70 % of total resistance

/A1: \leq 50 % of total resistance (CE not available)

(Selectable only current output A, D)

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

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: 0 - 30 % of total resistance (front)

Span adjustment: 70 - 100 % of total resistance (front)

(For '/A1', 50 - 100 % of total resistance (front))

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



INPUT SPECIFICATIONS

Minimum span: 70% of total resistance
(For '/A1', 50% of total resistance)
Excitation: 0.5 V DC

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: -10 - +10 V DC
Minimum span: 1 V
Offset: Max. 1.5 times span
Load resistance: Output drive 10 mA max.; at ≥ 1 V
Max. 1.25 mA output drive for negative voltage

Output code 01 (Not CE)
Voltage range: -1 - +1 V DC
Minimum span: 10 mV
Offset: Max. 1.5 times span
Load resistance: Min. 100 k Ω
Min. 1 M Ω for negative voltage

INSTALLATION

Power Consumption

•AC:

Approx. 2 VA at 100 V
Approx. 3 VA at 200 V
Approx. 3 VA at 264 V

•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

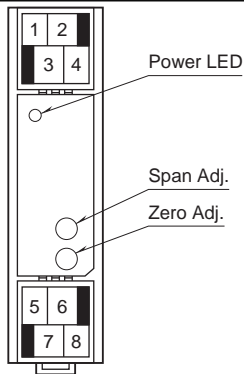
Accuracy: ± 0.1 % (For '/A1' ± 0.2 %)
Temp. coefficient: ± 0.015 %/°C (± 0.008 %/°F) (For '/A1'
 ± 0.04 %/°C (± 0.02 %/°F))
Line voltage effect: ± 0.1 % over voltage range
Insulation resistance: ≥ 100 M Ω with 500 V DC
Dielectric strength (input to output to power to ground)
DC powered: 2000 V AC @1 minute
AC powered: 1500 V AC @1 minute

STANDARDS & APPROVALS

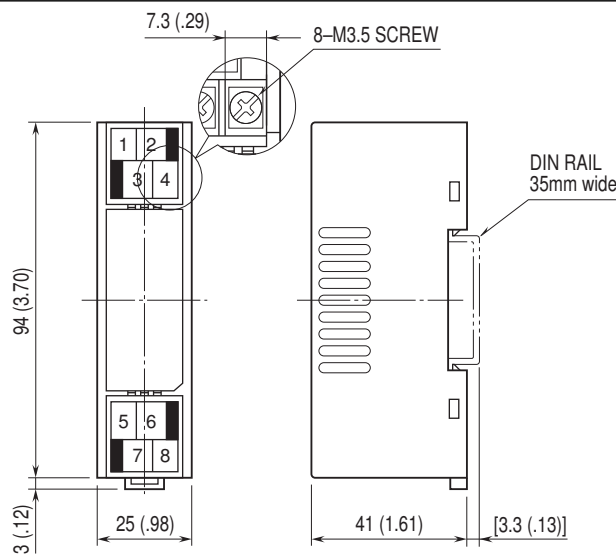
CE conformity:
EMC Directive (2004/108/EC)
EMI EN 61000-6-4: 2007



FRONT VIEW

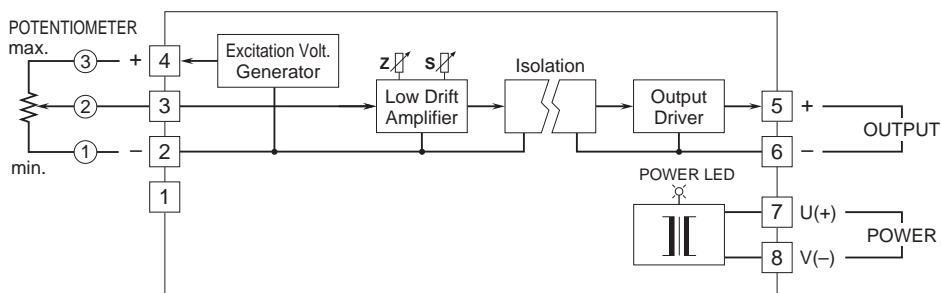


DIMENSIONS unit: mm (inch)



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

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.

