

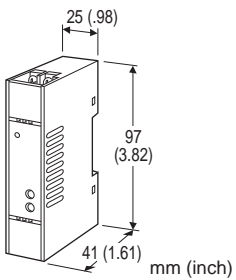
## Super-mini Terminal Block Signal Conditioners M5-UNIT

### SIGNAL TRANSMITTER

(narrow span input)

#### Functions & Features

- Converts a narrow span ( $\leq 100$  mV DC) input into an isolated DC signal
- High-density mounting
- Power LED
- CE marking for 24 V DC power



### MODEL: M5MV-[1][2]-[3][4]

#### ORDERING INFORMATION

Specify a code from below for each [1] through [4].

- Code number: M5MV-[1][2]-[3][4]  
(e.g. M5MV-14W-R/K/Q)

Specify variables.

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

#### [1] INPUT

##### Current

- K: 0 - 100  $\mu$ A DC (Input resistance 1000  $\Omega$ )
- Z: Specify current (See INPUT SPECIFICATIONS)

##### Voltage

- 1: 0 - 10 mV DC (Input resistance 10 k $\Omega$  min.)
- 15: 0 - 50 mV DC (Input resistance 10 k $\Omega$  min.)
- 0: Specify voltage (See INPUT SPECIFICATIONS)

#### [2] OUTPUT

##### Current

- A: 4 - 20 mA DC (Load resistance 550  $\Omega$  max.)
- Z: Specify current (See OUTPUT SPECIFICATIONS)

##### Voltage

- 18: 0 - 80 mV DC (Load resistance 100 k $\Omega$  min.)  
(CE not available)
- 4: 0 - 10 V DC (Load resistance 1000  $\Omega$  min.)
- 5: 0 - 5 V DC (Load resistance 500  $\Omega$  min.)

- 6: 1 - 5 V DC (Load resistance 500  $\Omega$  min.)
- 4W: -10 - +10 V DC (Load resistance 8000  $\Omega$  min.)
- 5W: -5 - +5 V DC (Load resistance 4000  $\Omega$  min.)
- 0: Specify voltage (See OUTPUT SPECIFICATIONS)

#### [3] 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.)

#### [4] OPTIONS (multiple selections)

##### 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)

#### SPECIFICATIONS OF OPTION: Q

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

- /C01: Silicone coating
- /C02: Polyurethane coating
- /C03: Rubber coating

#### 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.

#### INPUT SPECIFICATIONS

- DC Current: Input resistor incorporated  
Specify input resistance value for code Z.  
( $R \leq 0.125 \text{ W} \div [\text{F.S. Current}]^2$ )
- DC Voltage: -100 - +100 mV DC
- Minimum span: 5 mV
- Offset: Max. 1.5 times span
- Input resistance:  $\geq 10$  k $\Omega$

#### 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:** 0 - 10 V DC

**Minimum span:** 1 V

**Offset:** Max. 1.5 times span

**Load resistance:** Output drive 10 mA max.; at  $\geq 1$  V

## 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:**  $\pm 0.1$  %

**Temp. coefficient:**  $\pm 0.015$  %/°C ( $\pm 0.008$  %/°F)

**Line voltage effect:**  $\pm 0.1$  % over voltage range

**Insulation resistance:**  $\geq 100$  M $\Omega$  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

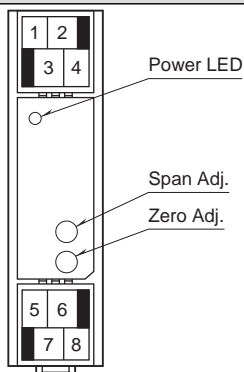
**CE conformity:**

EMC Directive (2004/108/EC)

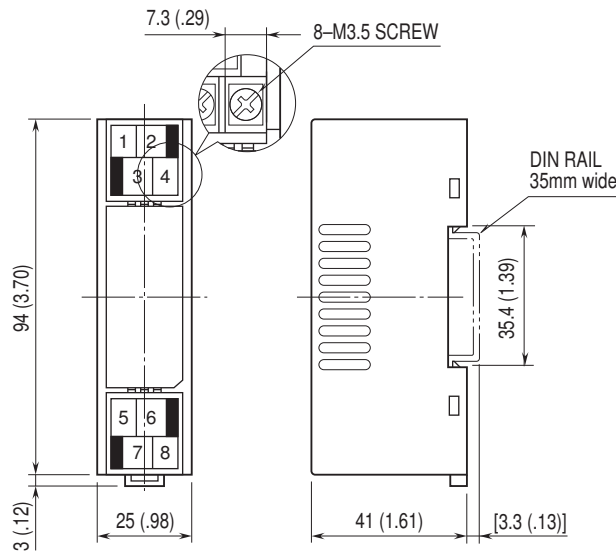
EMI EN 61000-6-4: 2007

EMS EN 61000-6-2: 2005

## FRONT VIEW

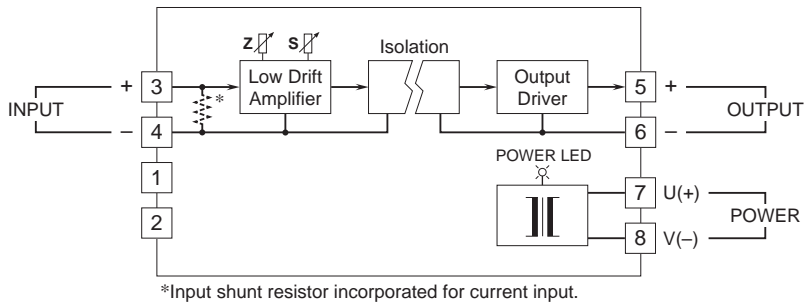


**DIMENSIONS unit: mm (inch)**



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

**SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM**



Specifications are subject to change without notice.