

## Super-mini Signal Conditioners Mini-M Series

### SIGNAL TRANSMITTER

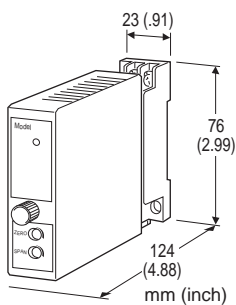
(high-accuracy, ultra-high speed response 30  $\mu$ sec.)

#### Functions & Features

- Converts DC input from a sensor into a standard process signal
- Frequency characteristics 12 kHz (-3 dB)
- 30-microsecond response
- CE marking

#### Typical Applications

- Isolation for a vibration analyzing system
- Isolation for Discharge/Charge tester



### MODEL: M2VF3-[1]4W-R[2]

#### ORDERING INFORMATION

- Code number: M2VF3-[1]4W-R[2]
- Specify a code from below for [1] and [2].  
(e.g. M2VF3-04W-R/CE/Q)
- Special input range (For code 0: e.g. -164 - +164 mV DC)
- Specify the specification for option code /Q  
(e.g. /C01/S01)

#### [1] INPUT

##### Voltage

- 2W:** -100 - +100 mV DC (Input resistance 1 M $\Omega$  min.)
- 4W:** -10 - +10 V DC (Input resistance 1 M $\Omega$  min.)
- 5W:** -5 - +5 V DC (Input resistance 1 M $\Omega$  min.)
- 8W:** -20 - +20 V DC (Input resistance 1 M $\Omega$  min.)
- 0:** Specify voltage (Select input range as indicated below)
- 20 - +20 mV DC
- 24 - +24 mV DC
- 40 - +40 mV DC
- 85 - +85 mV DC
- 164 - +164 mV DC
- 200 - +200 mV DC
- 15 - +15 V DC
- 25 - +25 V DC

- 55 - +55 V DC
- 60 - +60 V DC
- 300 - +300 V DC \*
- 350 - +350 V DC \*
- 400 - +400 V DC \*
- 600 - +600 V DC \*
- 800 - +800 V DC \*

\* Select '/N' for 'Standards & Approvals' code.  
Multiple installation bases are unable.

#### OUTPUT

##### Voltage

**4W:** -10 - +10 V DC (Load resistance 2000  $\Omega$  min.)

#### POWER INPUT

##### DC Power

**R:** 24 V DC

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

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

##### STANDARDS & APPROVALS (must be specified)

/N: Without CE

/CE: 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 M-System's web site.)

/C01: Silicone coating

/C02: Polyurethane coating

/C03: Rubber coating

##### TERMINAL SCREW MATERIAL

/S01: Stainless steel

#### GENERAL SPECIFICATIONS

**Construction:** Plug-in

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

**Housing material:** Flame-resistant resin (black)

**Isolation:** Input to output to power

**Overrange input:** -5 to +105%

**Zero adjustment:** -1 to +1 %; multi-turn screwdriver adjustments (front)

**Span adjustment:** 99 to 101 %; multi-turn screwdriver adjustments (front)

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

#### INPUT SPECIFICATIONS

**Input resistance:**  $\geq$  1 M $\Omega$  (3 k $\Omega$  min. in power failure)



## OUTPUT SPECIFICATIONS

Parallel load capacitance:  $\leq 2000 \text{ pF}$

## INSTALLATION

### Power Consumption

• DC Power input: max.0.6W

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 lbs)

## PERFORMANCE in percentage of span

Accuracy:  $\pm 0.01 \%$

Temp. coefficient:  $\pm 0.005 \%/^{\circ}\text{C}$  ( $\pm 0.003 \%/^{\circ}\text{F}$ )

Frequency characteristics: 12 kHz, -3 dB

Response time:  $\leq 30 \text{ }\mu\text{sec.}$  (0 - 90 %)

Line voltage effect:  $\pm 0.01 \%$  over voltage range

Insulation resistance:  $\geq 100 \text{ M}\Omega$  with 500 V DC

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

## STANDARDS & APPROVALS

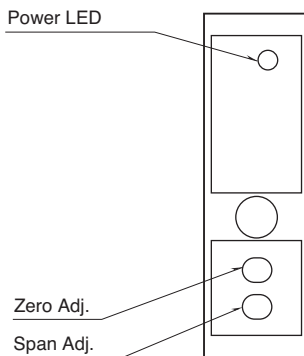
### CE conformity:

EMC Directive (2004/108/EC)

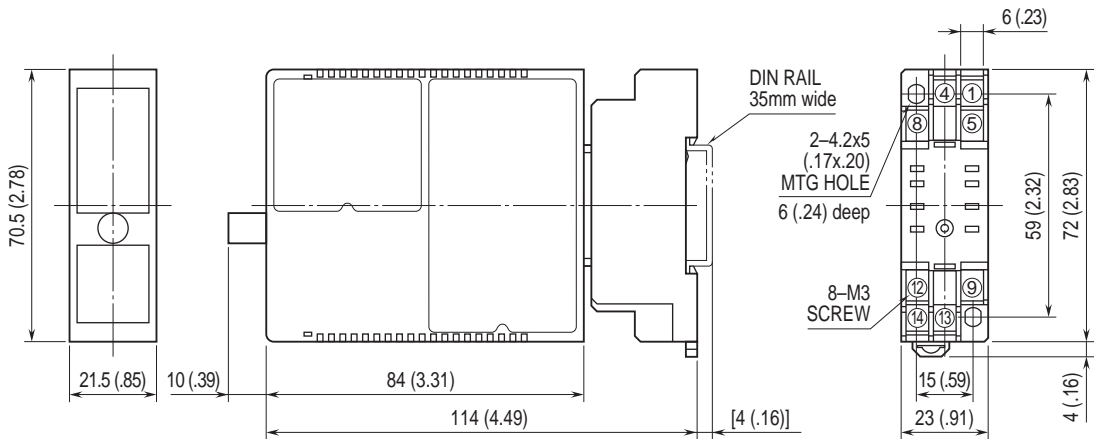
EN 61000-6-4 (EMI)

EN 61000-6-2 (EMS)

## EXTERNAL VIEW

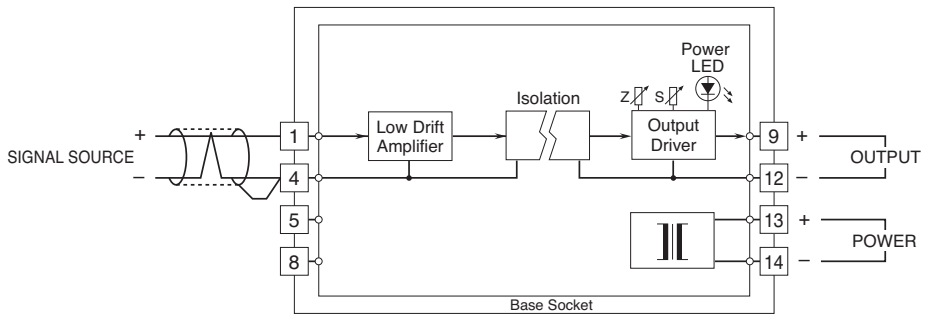


## DIMENSIONS unit: mm (inch)



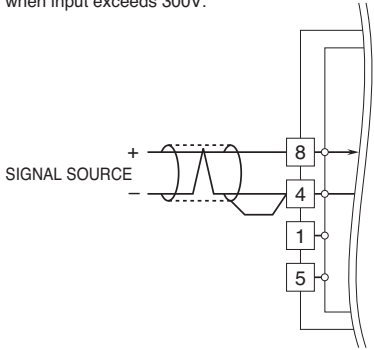
• When mounting, no extra space is needed between units.


## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



The M2VF3, by its fast-response feature, is not designed to eliminate noise present in the input signal. Use a shielded twisted-pair cable to prevent noise from entering through the input wiring.

• At input signal code "0", signal source is allocated between terminals 8 and 4 when input exceeds 300V.



 Specifications are subject to change without notice.

