

## Super-mini Signal Conditioners Mini-M Series

### SIGNAL TRANSMITTER

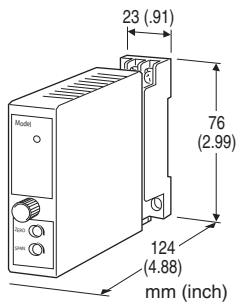
(high-accuracy, ultra-high speed response 30 μsec.)

#### Functions & Features

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

#### 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 each of [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 MΩ min.)

**4W:** -10 - +10 V DC (Input resistance 1 MΩ min.)

**5W:** -5 - +5 V DC (Input resistance 1 MΩ min.)

**8W:** -20 - +20 V DC (Input resistance 1 MΩ 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 Ω min.)

#### POWER INPUT

DC Power

**R:** 24 V DC

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

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

Standards & Approvals (must be specified)

**/N:** Without CE or UKCA

**/CE:** CE marking

**/UK:** CE, UKCA 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 our web site.)

**/C01:** Silicone coating

**/C02:** Polyurethane coating

**/C03:** Rubber coating

**/C04:** Polyolefin coating

**TERMINAL SCREW MATERIAL**

**/S01:** Stainless steel

#### GENERAL SPECIFICATIONS

**Construction:** Plug-in

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

**Screw terminal:** Chromated steel (standard) or stainless steel

**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 indicator LED:** Green LED turns on when the power is

supplied.

## INPUT SPECIFICATIONS

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

## OUTPUT SPECIFICATIONS

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

## INSTALLATION

Power consumption

•DC:  $\leq 0.6 \text{ W}$

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 lb)

## 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:  $\leq 30 \mu\text{sec}$ . (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

EU conformity:

EMC Directive

EMI EN 61000-6-4

EMS EN 61000-6-2

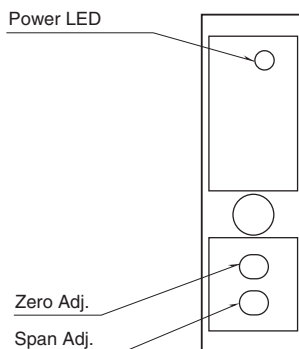
RoHS Directive

UK conformity (UKCA):

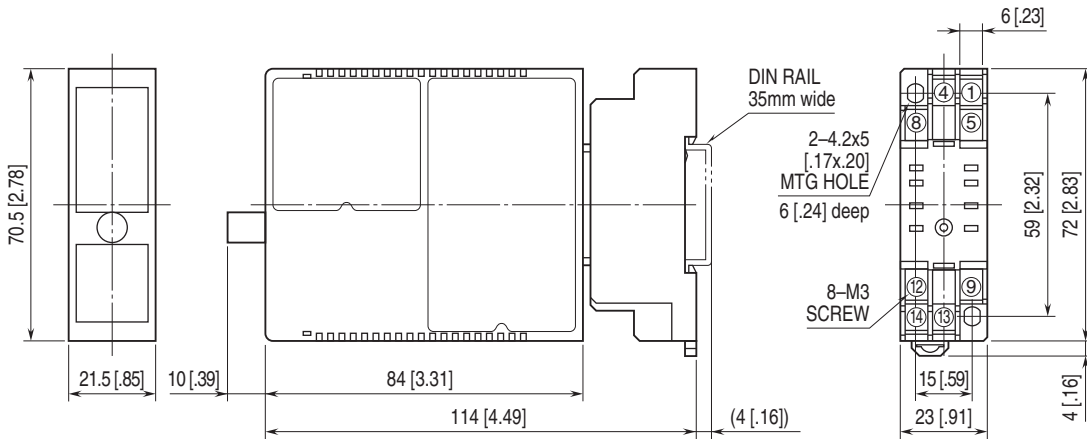
The UK legislations and designated standards are equivalent to the applicable EU directives.

(Refer to our website for more information about the legislations and designated standards.)

## EXTERNAL VIEW

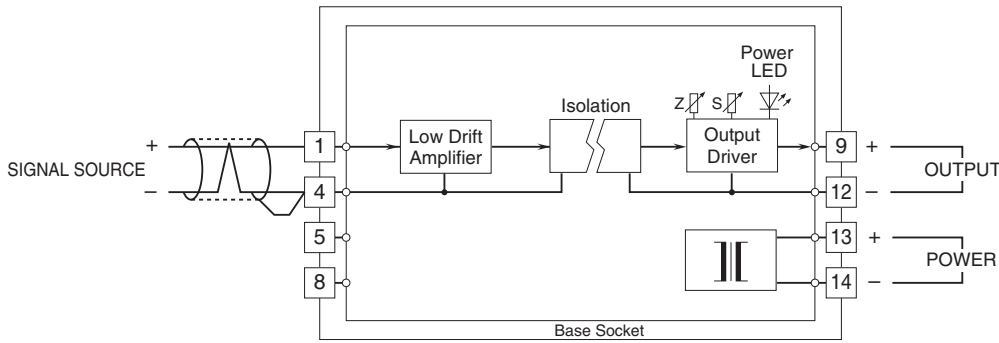


**EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS** unit: mm [inch]



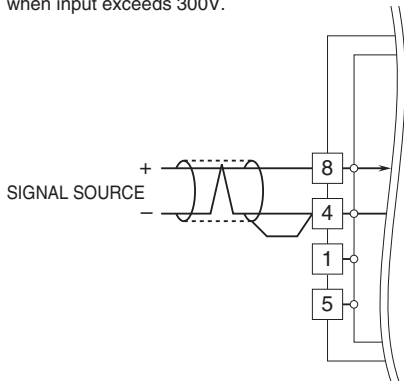
• When mounting, no extra space is needed between units.

**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.