

Super-mini Signal Conditioners *Mini-M Series*

SIGNAL TRANSMITTER
(ultra-high speed response 30 μsec.; isolated)

MODEL **M2VF2**

MODEL & SUFFIX CODE SELECTION

M2VF2-□□-□□

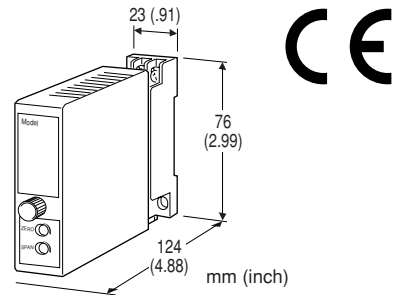
MODEL _____
 INPUT _____
Current **Voltage**
A : 4 – 20mA DC **3** : 0 – 1V DC
B : 2 – 10mA DC **4** : 0 – 10V DC
C : 1 – 5mA DC **5** : 0 – 5V DC
D : 0 – 20mA DC **6** : 1 – 5V DC
E : 0 – 16mA DC **4W** : -10 – +10V DC
F : 0 – 10mA DC **5W** : -5 – +5V DC
G : 0 – 1mA DC **0** : Specify voltage *1
H : 10 – 50mA DC **01** : Specify voltage *2
GW : -1 – +1mA DC
FW : -10 – +10mA DC
Z : Specify current
 *1 : Select 'N' for 'Standards & Approvals' code.
 *2 : Select 'CE' for 'Standards & Approvals' code.

OUTPUT _____
Current **Voltage**
A : 4 – 20mA DC **1** : 0 – 10mV DC
D : 0 – 20mA DC **2** : 0 – 100mV DC
E : 0 – 16mA DC **3** : 0 – 1V DC
 4 : 0 – 10V DC
 5 : 0 – 5V DC
 6 : 1 – 5V DC
 4W : -10 – +10V DC
 5W : -5 – +5V DC
POWER INPUT _____
AC Power **DC Power**
M : 85 – 264V AC *3 **R** : 24V DC
M2 : 100 – 240V AC **R2** : 11 – 27V DC *3
 P : 110V DC *3
 *3 : Select 'N' for 'Standards & Approvals' code.

STANDARDS & APPROVALS _____
 /N : Without CE
 /CE: CE marking

ORDERING INFORMATION

Specify code number and variables.
 • **Code number** (e.g. M2VF2-4W4W-R/CE)
 • **Special input range** (For codes Z & 0)



Functions & Features

- Converts a DC input into a standard process signal
- 30-microsecond response
- Universal power input
- High-density mounting
- CE marking

Typical Applications

- Isolation for a vibration analyzing system

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 output: Approx. -10 – +120% at 1 – 5V
Front adjustments: Zero and span; ±5%*
 *±2% for the output codes 4W and 5W

INPUT & OUTPUT

■ **INPUT**

• **DC Current:** Shunt resistor attached to input terminals (0.5W)
Input resistance: For resistance values other than listed below, specify when ordering.

Input	Input Resistance
4 – 20mA	: 250 (Ω)
2 – 10mA	: 500
1 – 5mA	: 1000
0 – 20mA	: 50
0 – 16mA	: 62.5
0 – 10mA	: 100
0 – 1mA	: 1000
10 – 50mA	: 100
-1 – +1mA	: 1000
-10 – +10mA	: 100

• **DC Voltage:** -300 – +300V DC**
 **-30 – +30V for code 01. Span 30V max.

Minimum span: 1V

Zero suppression/elevation: Max. 1.5 times span

Input resistance: 1MΩ minimum

OUTPUT**•DC Current**

Parallel load capacitance: Max. 2000 pF

Load resistance

Output	Load Resistance
4 – 20mA	: 600 (Ω maximum)
0 – 20mA	: 600
0 – 16mA	: 750

•DC Voltage**Load resistance**

Output	Load Resistance
0 – 10mV	: 10k (Ω minimum)
0 – 100mV	: 100k
0 – 1V	: 200
0 – 10V	: 2000
0 – 5V	: 1000
1 – 5V	: 1000
-10 – +10V	: 2000
-5 – +5V	: 1000

INSTALLATION**Power input**

AC: Operational voltage range 85 – 264V;
47 – 66 Hz; approx. 4VA at 100V
approx. 5VA at 200V
approx. 6VA at 264V

DC: Operational voltage range for R: 24V
 $\pm 10\%$, R2: 11 – 27V, or P: 85 – 150V
ripple 10% p-p max.; approx. 4W

Operating temperature: -5 to +55°C (23 to 131°F)

Operating humidity: 30 to 90% RH (non-condensing)

Mounting: Surface or DIN rail

Dimensions: W23×H76×D124 mm (0.91"×2.99"×4.88")
See General Spec. Sheet Figure A-1.

Weight: 150 g (0.33 lbs)

Terminal assignment: See General Spec. Sheet Figure B-2.

PERFORMANCE in percentage of span

Accuracy: $\pm 0.1\%$

Temp. coefficient: $\pm 0.02\%/^{\circ}\text{C}$ ($\pm 0.01\%/^{\circ}\text{F}$)

Response time: ≤ 30 microseconds (0 – 90%)
(except the user specified ranges)

Frequency characteristics: 15 kHz, -3 dB

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

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

Dielectric strength: 2000V AC @1 minute

(input to output to power to ground)

STANDARDS & APPROVALS

CE conformity: EMC Directive (89/336/EEC)

EMI EN61000-6-4

EMS EN61000-6-2

Low Voltage Directive (73/23/EEC)

EN61010-1

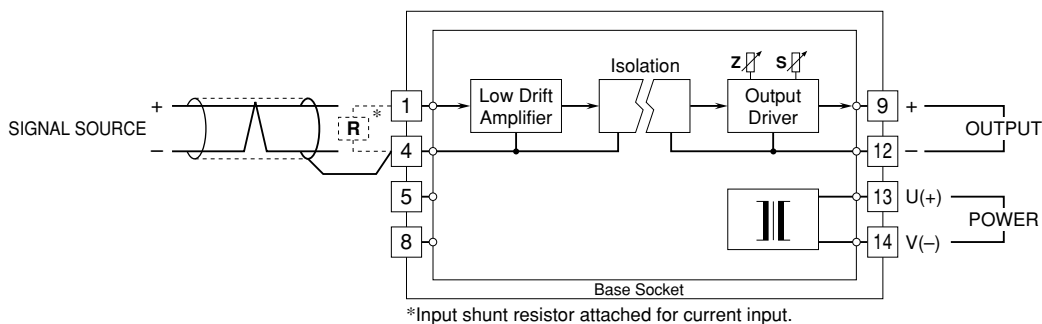
Installation category II

Pollution degree 2

Max. operating voltage 300V

Input or output to power – Reinforced insulation

Input to output – Basic insulation

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

Remark: The M2VF2, due to its fast-response design, does not eliminate noise included in the input signal. Use shielded twisted-pair cable for preventing them. The described response time may not be assured with a current output when the cable's line capacitance is greater than 2000 pF.