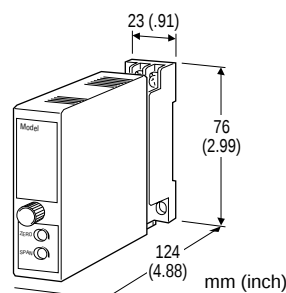


Super-mini Signal Conditioners *Mini-M Series*
SIGNAL TRANSMITTER
MODEL M2VS
MODEL & SUFFIX CODE SELECTION
M2VS-
MODEL
INPUT
Current
Voltage
A : 4 – 20mA DC
1 : 0 – 10mV DC
A1: 4 – 20mA DC *1
15: 0 – 50mV DC
B : 2 – 10mA DC
16: 0 – 60mV DC
C : 1 – 5mA DC
2 : 0 – 100mV DC
D : 0 – 20mA DC
3 : 0 – 1V DC
E : 0 – 16mA DC
4 : 0 – 10V DC
F : 0 – 10mA DC
5 : 0 – 5V DC
G : 0 – 1mA DC
6 : 1 – 5V DC
H : 10 – 50mA DC
4W : -10 – +10V DC
J : 0 – 10μA DC
5W : -5 – +5V DC
K : 0 – 100μA DC
0 : Specify voltage
GW: -1 – +1mA DC
FW: -10 – +10mA DC
Z : Specify current
***1 : 50Ω input resistance for Code A1**
OUTPUT
Current
Voltage
A : 4 – 20mA DC
1 : 0 – 10mV DC
B : 2 – 10mA DC
2 : 0 – 100mV DC
C : 1 – 5mA DC
3 : 0 – 1V DC
D : 0 – 20mA DC
4 : 0 – 10V DC
E : 0 – 16mA DC
5 : 0 – 5V DC
F : 0 – 10mA DC
6 : 1 – 5V DC
G : 0 – 1mA DC
4W : -10 – +10V DC
Z : Specify current
5W : -5 – +5V DC
0 : Specify voltage
POWER INPUT
AC Power
DC Power
M : 85 – 264V AC *2
R : 24V DC
M2: 100 – 240V AC
R2: 11 – 27V DC *2
P : 110V DC
***2 : CE or UL not available**
OPTIONS
/K : Fast response
/UL : UL approval
ORDERING INFORMATION

Specify code number and variables.

• **Code number** (e.g. M2VS-6A-M/K)

• **Special input and output ranges** (For codes Z & 0)

ISOLATION

CE
UL
Functions & Features

- Converting a DC input into a standard process signal
- Universal power input
- Fast response type available
- High-density mounting
- CE marking
- UL approval

Typical Applications

- Isolation between control room and field instrumentation

GENERAL SPECIFICATIONS
Construction: plug-in

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

Housing material: flame-resistant resin (black)

Power fuse: 0.25A incorporated

(0.5A for 24V or 11 – 27V DC power)

Isolation: input to output to power

Overrange output: approx. -10 – +120% at 1 – 5V

Front adjustments: zero and span; ±5%

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) (50Ω for Code A1)
2 – 10mA	: 500
1 – 5mA	: 1000
0 – 20mA	: 50
0 – 16mA	: 62.5
0 – 10mA	: 100
0 – 1mA	: 1000
10 – 50mA	: 100
0 – 10μA	: 1000
0 – 100μA	: 1000
-1 – +1mA	: 1000
-10 – +10mA	: 100

•DC Voltage: -300 – +300V DC

Minimum span: 3mV

Zero suppression/elevation: max. 1.5 times span

Input resistance

Input Span	Input Resistance
3 – 10mV	: 10k (Ω minimum)
10 – 100mV	: 10k
0.1 – 1V	: 100k
$\geq 1V$	: 1M

■OUTPUT

•DC Current: 0 – 20mA DC

Minimum span: 1mA

Zero suppression/elevation: max. 1.5 times span

Load resistance: output drive 15V maximum

Output	Load Resistance
4 – 20mA	: 750 (Ω maximum)
2 – 10mA	: 1500
1 – 5mA	: 3000
0 – 20mA	: 750
0 – 16mA	: 900
0 – 10mA	: 1500
0 – 1mA	: 15k

•DC Voltage: -10 – +12V DC

Minimum span: 5mV

Zero suppression/elevation: max. 1.5 times span

Load resistance: output drive 1mA maximum; at $\geq 0.5V$

Output	Load Resistance
0 – 10mV	: 10k (Ω minimum)
0 – 100mV	: 100k
0 – 1V	: 1000
0 – 10V	: 10k
0 – 5V	: 5000
1 – 5V	: 5000
-10 – +10V	: 10k
-5 – +5V	: 5000

INSTALLATION

Power input

AC: operational voltage range 85 – 264V
(90 – 264V for UL);
47 – 66 Hz; approx. 3VA at 100V
approx. 4VA at 200V
approx. 5VA at 264V

DC: operational voltage range for R: 24V
 $\pm 10\%$, R2: 11 – 27V, or P: 85 – 150V
(110V $\pm 10\%$ for UL);
ripple 10% p-p max.; approx. 3W

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: $\pm 0.015\%/^{\circ}\text{C}$ ($\pm 0.008\%/^{\circ}\text{F}$)

Response time: ≤ 0.5 seconds (0 – 90%)

approx. 25 milliseconds with option /K

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

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

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

STANDARDS & APPROVALS

CE conformity: Electromagnetic Compatibility
Directive (89/336/EEC)

EMI EN50081-2

EMS EN50082-2 (EN61000-6-2)

Low Voltage Directive (73/23/EEC)

Installation category II

Pollution degree 2

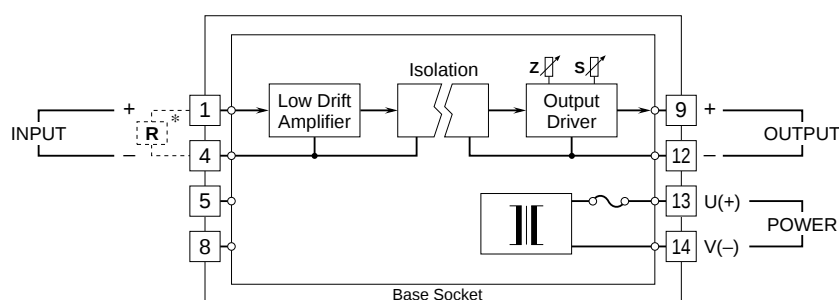
Max. operating voltage 300V

Input or output to power – Reinforced insulation

Input to output – Basic insulation

Approval: UL/C-UL nonincendive Class I, Division
2, Groups A, B, C, and D hazardous locations
(UL 1604, CAN/CSA-C22.2 No.213);
UL/C-UL general safety requirements
(UL 3111-1, CAN/CSA-C22.2 No.1010-1)

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications subject to change without notice.
*Input shunt resistor attached for current input.