

Super-space-saving Signal Conditioners *M3S-UNIT Series*

SIGNAL TRANSMITTER

MODEL **M3SVS**

MODEL & SUFFIX CODE SELECTION

M3SVS-□□□□

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

M2 : 100 – 240V AC

R : 24V DC

AD : 100 – 240V AC / 24 – 240V DC (universal)

OPTIONS

/K : Fast response

ORDERING INFORMATION

Specify code number and variables.

- **Code number** (e.g. M3SVS-6A-R/K)
- **Special input and output ranges** (For codes Z & 0)

GENERAL SPECIFICATIONS

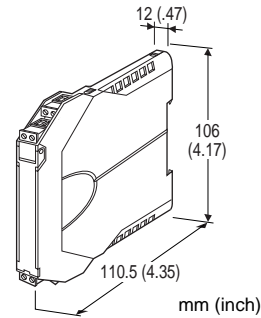
Connection: Removable terminal block

Housing material: Flame-resistant resin (grey)

Isolation: Input to output to power

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

Front adjustments: Zero and span; ±5%



Functions & Features

- Accepts a DC mV, V or mA input and provides an isolated DC signal
- Universal AC/DC power input
- High-density mounting
- CE marking

Typical Applications

- Signal conversion between control room and field instrumentation with isolation
- Ideal for use as a fast solution, multifunctional spare part

INPUT & OUTPUT

■ **INPUT**

- **DC Current:** Input resistor incorporated
- Input resistance:** For resistance values other than listed below, specify when ordering.

$$(R \leq 0.25W \div [F.S. Current]^2)$$

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
≥1V	: 1M

OUTPUT

•DC Current: 0 – 20mA DC

Minimum span: 1mA

Zero suppression/elevation: max. 1.5 times span

Load resistance: output drive 11V maximum

Output	Load Resistance
4 – 20mA	: 550 (Ω maximum)
2 – 10mA	: 1100
1 – 5mA	: 2200
0 – 20mA	: 550
0 – 16mA	: 680
0 – 10mA	: 1100
0 – 1mA	: 11k

•DC Voltage: -10 – +11V 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 90 – 264V;
47 – 66 Hz; approx. 2VA at 100V
approx. 3VA at 200V
approx. 4VA at 264V

DC: Operational voltage range for R: 24V DC
 $\pm 10\%$, AD: 21.6 – 264V DC
approx. 1W; ripple 10% p-p max.

Operating temperature: -10 to +55°C (14 to 131°F)**Operating humidity:** 30 to 90% RH (non-condensing)**Mounting:** DIN rail**Dimensions:** W12xH106xD110.5 mm (0.47"x4.17"x4.35")**Weight:** 100 g (0.22 lbs)**PERFORMANCE****Accuracy:** $\pm 0.1\%$ **Temp. coefficient:** $\pm 0.015\%/^{\circ}C$ ($\pm 0.008\%/^{\circ}F$)**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:** EMC Directive (89/336/EEC)

EMI EN61000-6-4

EMS EN61000-6-2

Low Voltage Directive (73/23/EEC)

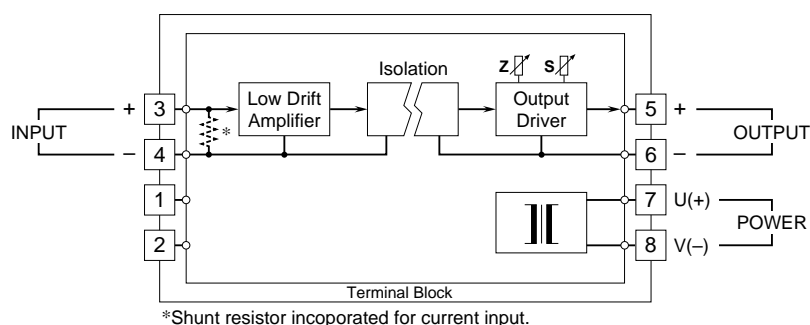
Installation category II

Pollution degree 2

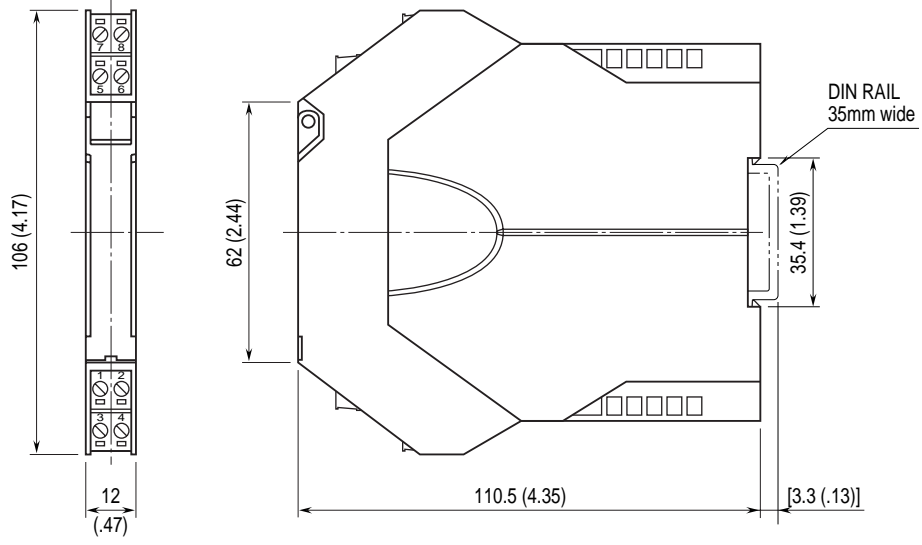
Max. operating voltage 300V

Input or output to power – Reinforced insulation

Input to output – Basic insulation

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS mm (inch)



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