

Space-saving Signal Conditioners *M3S-UNIT Series*

**SIGNAL TRANSMITTER**

MODEL **M3SVS**

**MODEL & SUFFIX CODE SELECTION**

MODEL \_\_\_\_\_  
 INPUT \_\_\_\_\_  
 M3SVS-□□-□□

**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**

**K3** : 100 – 120V AC  
**R** : 24V DC  
**KP** : 100 – 120V AC / 24 – 120V DC (universal)

**OPTIONS**

/K : Fast response

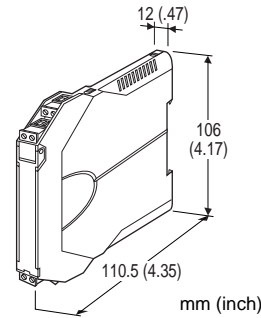
**ORDERING INFORMATION**

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 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 ( $\Omega$ 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 ( $\Omega$ 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 – 132V;  
47 – 66 Hz; approx. 2VA

**DC:** Operational voltage range for R: 24V DC  
 $\pm 10\%$ , KP: 22 – 132V 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:** W12×H106×D110.5 mm (0.47"×4.17"×4.35")

**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:**  $\leq 0.5$  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)

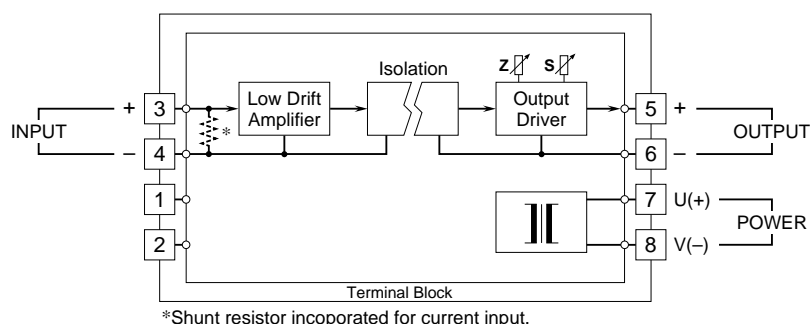
Installation category II

Pollution degree 2

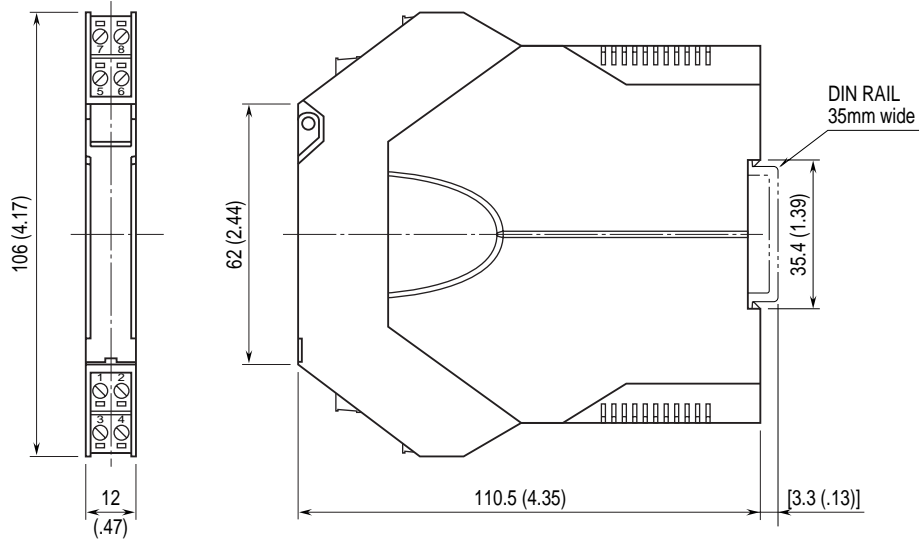
Max. operating voltage 300V

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.