

Super-mini Terminal Block Signal Conditioners *M5-UNIT*
SIGNAL TRANSMITTER
MODEL M5VS
MODEL & SUFFIX CODE SELECTION
M5VS-□□-□□
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

Z : Specify current

*1: CE not available.

*2: Choose 01 for CE. Power suffix code R only.

OUTPUT
Current
Voltage
A : 4 – 20mA DC

4 : 0 – 10V DC

Z : Specify current

5 : 0 – 5V DC

6 : 1 – 5V DC

4W : -10 – +10V DC *2

5W : -5 – +5V DC *2

0 : Specify voltage

*2: For the input suffix codes 4W and 5W only.

POWER INPUT
M : 85 – 264V AC *3

R : 24V DC

*3: CE not available.

OPTIONS

: Response time ≤0.5 sec. (blank code)

/**K** : Response time approx. 25 msec.

/**F** : Response time ≤1 msec.

ORDERING INFORMATION

Specify code number and variables.

• **Code number** (e.g. M5VS-4W4W-R/K)

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

GENERAL SPECIFICATIONS
Construction: Terminal block

Connection: M3.5 screw terminals

(nickel-plated steel; torque 0.8 N·m)

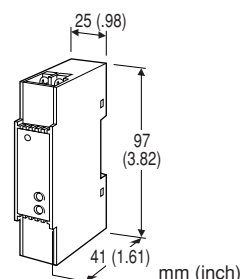
Housing material: Flame-resistant resin (black)

Isolation: Input to output to power

Front adjustments: ±2% for zero and span;

±1% with the input suffix codes 4W and 5W selected.

Power LED: Green light turns on when the power is supplied.

ISOLATION

CE
Functions & Features

- Converting a DC input into an isolated DC signal
- High-density mounting
- Power LED
- CE marking for 24V power

INPUT & OUTPUT
INPUT

• **DC Current:** Input resistor incorporated (0.125W)

Input resistance: For resistance values other than listed below, specify when ordering.

Input Span	Input Resistance
4 – 20mA	: 249 (Ω)
2 – 10mA	: 499
1 – 5mA	: 1000
0 – 20mA	: 49.9
0 – 16mA	: 61.9
0 – 10mA	: 100
0 – 1mA	: 1000
10 – 50mA	: 20

• **DC Voltage**
Input resistance: 1MΩ minimum

(10kΩ minimum at power loss)

Input code 0 (Not CE)
Voltage range: -300 – +300V DC

Spans: Min. 100mV, max. 300V

Zero suppression/elevation: Max. 1.5 times span

Input code 01 (CE)
Voltage range: -70 – +70V DC

Spans: Min. 100mV, max. 70V

Zero suppression/elevation: Max. 1.5 times span

■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)

•DC Voltage: 0 – 10V DC

Minimum span: 1V

Zero suppression/elevation: Max. 1.5 times span

Load resistance: Output drive 10mA maximum; at $\geq 1V$

Output	Load Resistance
0 – 10V	: 1000 (Ω minimum)
0 – 5V	: 500
1 – 5V	: 500
-10 – +10V	: 8000
-5 – +5V	: 4000

INSTALLATION**Power input**

AC: Operational voltage range 85 – 264V;
47 – 66 Hz; approx. 2VA at 100V
approx. 3VA at 200V
approx. 3VA at 264V

DC: Operational voltage range 24V $\pm 10\%$;
ripple 10% p-p max.; approx. 2W

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

Operating humidity: 0 to 90% RH (non-condensing)

Mounting: DIN rail

Dimensions: W25×H97×D41 mm (0.98"×3.82"×1.61")

See General Spec. Sheet Figure C-1.

Weight: 80 g (2.8 oz.)

Terminal assignment: See General Spec. Sheet Figure D-1.

PERFORMANCE in percentage of span

Accuracy: $\pm 0.1\%$

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

$\pm 0.02\%/^{\circ}\text{C}$ ($\pm 0.01\%/^{\circ}\text{F}$) at input <1V and
output <5mA

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

approx. 25 milliseconds with option /K

≤ 1 milliseconds with option /F

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

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

Dielectric strength

DC powered: 2000V AC @1 minute

(input to output to power to ground)

AC powered: 1500V AC @1 minute

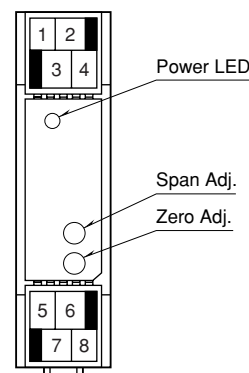
(input to output to power to ground)

STANDARDS & APPROVALS

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

EMI EN61000-6-4

EMS EN61000-6-2

FRONT PANEL CONFIGURATION**SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM**