

Space-saving Dual Output Signal Conditioners *Mini-MW Series*

**SIGNAL TRANSMITTER**

MODEL **W2VS**

**MODEL & SUFFIX CODE SELECTION**

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 1** \_\_\_\_\_

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

**OUTPUT 2** \_\_\_\_\_

Same range availability as Output 1

**Y** : None

**POWER INPUT** \_\_\_\_\_

**AC Power**              **DC Power**

**M2** : 100 – 240V AC    **R** : 24V DC

**R2** : 11 – 27V DC \*2

**P** : 110V DC

\*2: Select 'N' for 'Standards & Approvals' code.

**OPTIONS** (none or multiple selections) \_\_\_\_\_

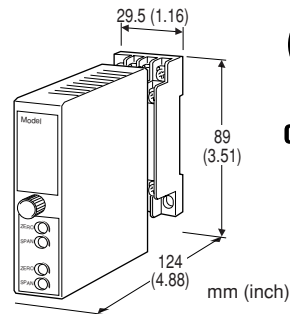
/K : Fast response

**STANDARDS & APPROVALS** (must be specified) \_\_\_\_\_

/N : Without CE or UL

/CE : CE marking

/UL : UL approval (CE marking)



**Functions & Features**

- Converting a DC input
- Two independent output ranges
- Universal power input
- Fast response type available
- High-density mounting
- CE marking
- UL approval

**Typical Applications**

- Isolation between control room and field instrumentation

**ORDERING INFORMATION**

Specify code number and variables. When the user requires a current and a voltage output, specify the current to be the Output 1 which allows a greater load.

- **Code number** (e.g. W2VS-6A6-M2/K/CE)
- **Special input and output ranges** (For codes Z & 0)

**GENERAL SPECIFICATIONS**

**Construction:** plug-in

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

**Housing material:** flame-resistant resin (black)

**Isolation:** input to output 1 to output 2 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 ( $\Omega$ minimum)
10 – 100mV	: 10k
0.1 – 1V	: 100k
$\geq 1V$	: 1M

## ■OUTPUTS (two)

•DC Current: 0 – 20mA DC

Minimum span: 1mA

Zero suppression/elevation: max. 1.5 times span

Load resistance: output drive 15V max. for Output 1;

7V max. for Output 2

Output	Ch.1 L.R.	Ch.2 L.R.
4 – 20mA	: 750	350 ( $\Omega$ max.)
2 – 10mA	: 1500	700
1 – 5mA	: 3000	1400
0 – 20mA	: 750	350
0 – 16mA	: 900	430
0 – 10mA	: 1500	700
0 – 1mA	: 15k	7000

•DC Voltage: -10 – +12V DC (up to +10V for Out. 2)

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 85 – 264V (90 – 264V for UL); 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 (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:** W29.5×H89×D124 mm (1.16"×3.51"×4.88")

See General Spec. Sheet Figure A-1.

**Weight:** 200 g (0.44 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:**  $\leq 0.5$  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 1 to output 2 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

Instal. category II; Pollution degree 2

Max. operating voltage 300V

Input or output 1 or output 2 to power – Reinforced insulation

Input to output 1 to output 2 – Basic insulation

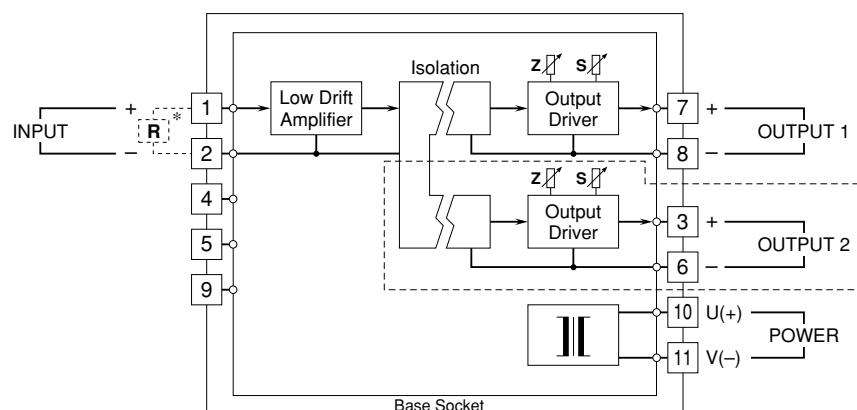
**Approval:** UL/C-UL nonincendive

Class I, Division 2, Groups A, B, C, and D (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



\*Input shunt resistor attached for current input.

Remark: The section enclosed by broken line is only with 2nd output option.

Specifications subject to change without notice.