

Dual Output Plug-in Signal Conditioners W-UNIT

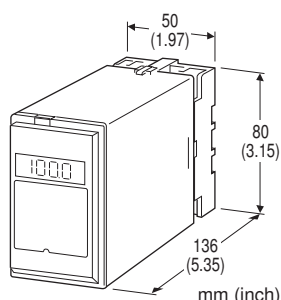
SIGNAL TRANSMITTER

Functions & Features

- Converting a DC input into two standard process signals
- Isolation up to 2000 V AC
- Fast response type available
- LCD meter
- High-density mounting

Typical Applications

- Isolation between control room and field instrumentation
- Power plant (2000 V AC isolation, 110 V DC power supply)



MODEL: WVS-[1][2][3]-[4][5]

ORDERING INFORMATION

- Code number: WVS-[1][2][3]-[4][5]

Specify a code from below for each of [1] through [5].

- (e.g. WVS-6AA-B/E/K/Q)
- Special input and output ranges (For codes Z & 0)
- Specify the specification for option code /Q (e.g. /C01/S01)

Note: When the user requires a current and a voltage output, specify the current to be the Output 1 which allows a greater load.

[1] INPUT

Current

- A: 4 – 20 mA DC (Input resistance 250 Ω)
- A1: 4 – 20 mA DC (Input resistance 50 Ω)
- B: 2 – 10 mA DC (Input resistance 500 Ω)
- C: 1 – 5 mA DC (Input resistance 1000 Ω)
- D: 0 – 20 mA DC (Input resistance 50 Ω)
- E: 0 – 16 mA DC (Input resistance 62.5 Ω)
- F: 0 – 10 mA DC (Input resistance 100 Ω)
- G: 0 – 1 mA DC (Input resistance 1000 Ω)
- H: 10 – 50 mA DC (Input resistance 100 Ω)
- J: 0 – 10 μ A DC (Input resistance 1000 Ω)
- K: 0 – 100 μ A DC (Input resistance 1000 Ω)

GW: -1 – +1 mA DC (Input resistance 1000 Ω)

FW: -10 – +10 mA DC (Input resistance 100 Ω)

Z: Specify current (See INPUT SPECIFICATIONS)
Voltage

1: 0 – 10 mV DC (Input resistance 10 k Ω min.)

15: 0 – 50 mV DC (Input resistance 10 k Ω min.)

16: 0 – 60 mV DC (Input resistance 10 k Ω min.)

2: 0 – 100 mV DC (Input resistance 100 k Ω min.)

3: 0 – 1 V DC (Input resistance 1 M Ω min.)

4: 0 – 10 V DC (Input resistance 1 M Ω min.)

5: 0 – 5 V DC (Input resistance 1 M Ω min.)

6: 1 – 5 V DC (Input resistance 1 M Ω min.)

4W: -10 – +10 V DC (Input resistance 1 M Ω min.)

5W: -5 – +5 V DC (Input resistance 1 M Ω min.)

0: Specify voltage (See INPUT SPECIFICATIONS)

[2] OUTPUT 1

Current

A: 4 – 20 mA DC (Load resistance 600 Ω max.)

B: 2 – 10 mA DC (Load resistance 1200 Ω max.)

C: 1 – 5 mA DC (Load resistance 2400 Ω max.)

D: 0 – 20 mA DC (Load resistance 600 Ω max.)

E: 0 – 16 mA DC (Load resistance 750 Ω max.)

F: 0 – 10 mA DC (Load resistance 1200 Ω max.)

G: 0 – 1 mA DC (Load resistance 12 k Ω max.)

Z: Specify current (See OUTPUT SPECIFICATIONS)

Voltage

1: 0 – 10 mV DC (Load resistance 10 k Ω min.)

2: 0 – 100 mV DC (Load resistance 100 k Ω min.)

3: 0 – 1 V DC (Load resistance 1000 Ω min.)

4: 0 – 10 V DC (Load resistance 10 k Ω min.)

5: 0 – 5 V DC (Load resistance 5000 Ω min.)

6: 1 – 5 V DC (Load resistance 5000 Ω min.)

4W: -10 – +10 V DC (Load resistance 10 k Ω min.)

5W: -5 – +5 V DC (Load resistance 5000 Ω min.)

0: Specify voltage (See OUTPUT SPECIFICATIONS)

[3] OUTPUT 2

Current

A: 4 – 20 mA DC (Load resistance 350 Ω max.)

B: 2 – 10 mA DC (Load resistance 700 Ω max.)

C: 1 – 5 mA DC (Load resistance 1400 Ω max.)

D: 0 – 20 mA DC (Load resistance 350 Ω max.)

E: 0 – 16 mA DC (Load resistance 430 Ω max.)

F: 0 – 10 mA DC (Load resistance 700 Ω max.)

G: 0 – 1 mA DC (Load resistance 7000 Ω max.)

Z: Specify current (See OUTPUT SPECIFICATIONS)

Voltage

Same range availability as Output 1

[4] POWER INPUT

AC Power

B: 100 V AC**C:** 110 V AC**D:** 115 V AC**F:** 120 V AC**G:** 200 V AC**H:** 220 V AC**J:** 240 V AC

DC Power

S: 12 V DC**R:** 24 V DC**V:** 48 V DC**P:** 110 V DC**[5] OPTIONS (multiple selections)**

Input Signal Indicator

blank: Without**/E:** With (0.0 - 100.0 % display)

Response Time (0 - 90 %)

blank: Standard (≤ 0.5 sec.)**/K:** Fast Response (Approx. 25 msec.)

Other Options

blank: none**/Q:** Option other than the above (specify the specification)**SPECIFICATIONS OF OPTION: Q (multiple selections)**

COATING (For the detail, refer to our web site.)

/C01: Silicone coating**/C02:** Polyurethane coating**/C03:** Rubber coating

TERMINAL SCREW MATERIAL

/S01: Stainless steel**GENERAL SPECIFICATIONS****Construction:** Plug-in**Connection:** M3.5 screw terminals**Screw terminal:** Chromated steel (standard) or stainless steel**Housing material:** Flame-resistant resin (black)**Isolation:** Input to output 1 to output 2 to power**Overrange output:** Approx. -10 to +120 % at 1 - 5 V**Zero adjustment:** -5 to +5 % (front)**Span adjustment:** 95 to 105 % (front)

Adjustable individually for each output 1 and output 2.

■ **DISPLAY (Input indicator)****LCD digital display:** 0.0 - 100.0 % (min. digit 0.1 %)

(No scaling)

INPUT SPECIFICATIONS■ **DC Current:**

Shunt resistor attached to the input terminals (0.5 W)

Specify input resistance value for code Z.

■ **DC Voltage:** -300 - +300 V DC**Minimum span:** 3 mV**Offset:** Max. 1.5 times span**Input resistance**Span 3 - 10 mV : ≥ 10 k Ω Span 10 - 100 mV : ≥ 10 k Ω Span 0.1 - 1 V : ≥ 100 k Ω Span ≥ 1 V : ≥ 1 M Ω **OUTPUT SPECIFICATIONS**■ **DC Current:** 0 - 20 mA DC**Minimum span:** 1 mA**Offset:** Max. 1.5 times span**Load resistance:** Output drive 12 V max. for Output 1;

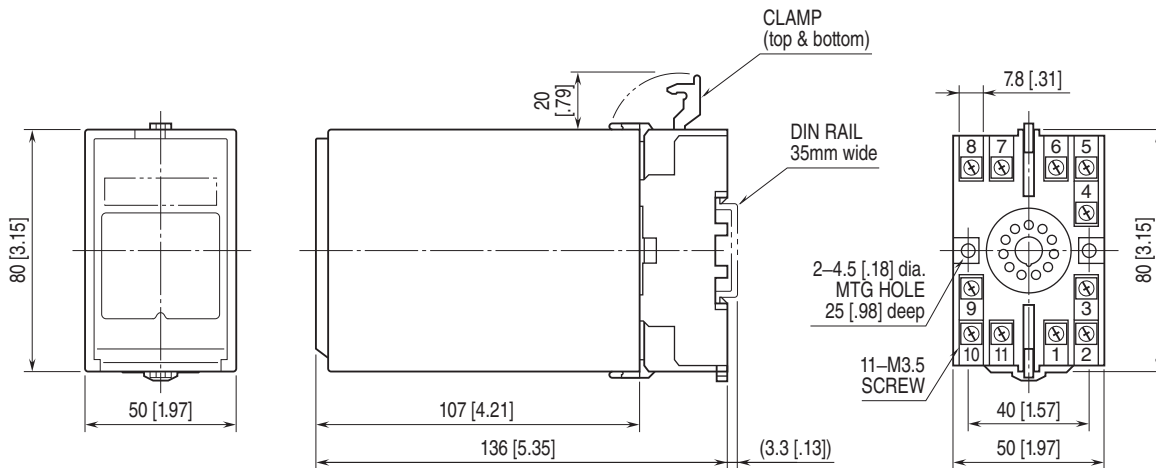
7 V max. for Output 2

■ **DC Voltage:** -10 - +12 V DC**Minimum span:** 5 mV**Offset:** Max. 1.5 times span**Load resistance:** Output drive 1 mA max. at ≥ 0.5 V**INSTALLATION****Power input**• **AC:** Operational voltage range: rating ± 10 %, 50/60 ± 2 Hz, approx. 3 VA• **DC:** Operational voltage range: rating ± 10 %, or 85 - 150 V for 110 V rating, ripple 10 %p-p max., approx. 3 W (125 mA at 24 V)**Operating temperature:** -5 to +55°C (23 to 131°F)**Operating humidity:** 30 to 90 %RH (non-condensing)**Mounting:** Surface or DIN rail**Weight:** 400 g (0.88 lb)**PERFORMANCE in percentage of span****Accuracy:** ± 0.1 %**Display accuracy:** $\pm (0.1$ % of FS + 1 digit)**Temp. coefficient:** ± 0.015 %/°C (± 0.008 %/°F)**Line voltage effect:** ± 0.1 % over voltage range**Insulation resistance:** ≥ 100 M Ω with 500 V DC**Dielectric strength:** 2000 V AC @1 minute

(input to output to power to ground)

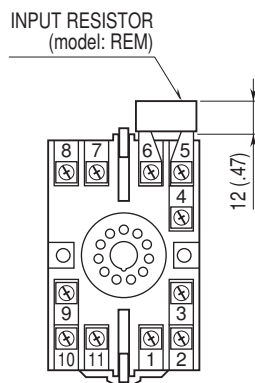
1000 V AC @ 1 minute (output 1 to output 2)

EXTERNAL DIMENSIONS unit: mm [inch]



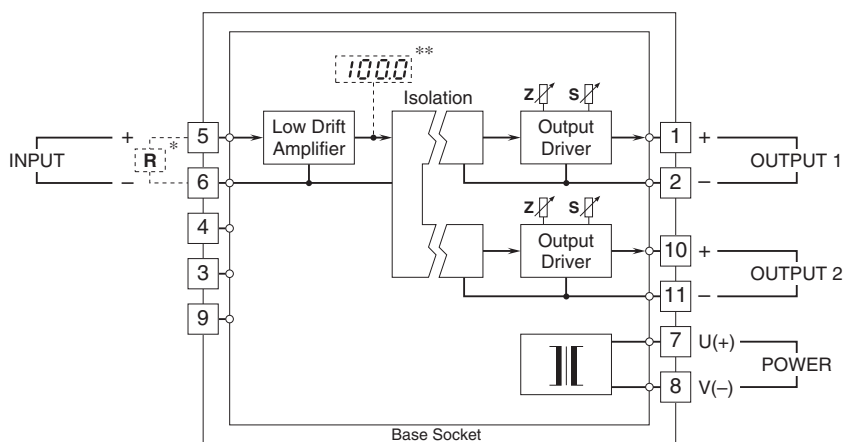
• When mounting, no extra space is needed between units.

TERMINAL ASSIGNMENTS unit: mm [inch]



Input shunt resistor attached for current input.

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



* Input shunt resistor attached for current input.

** Option /E



Specifications are subject to change without notice.