

## Dual Output Plug-in Signal Conditioners W-UNIT

### SIGNAL TRANSMITTER

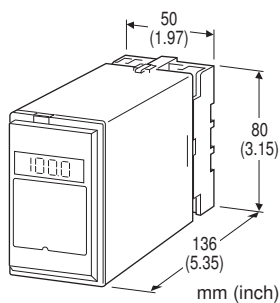
(high speed response; isolated)

#### Functions & Features

- Converting a DC input
- Two independent output ranges
- 180-microsecond response
- Universal power input
- LCD meter

#### Typical Applications

- Isolation for a vibration analyzing system



### MODEL: WVF-[1][2][3]-[4][5]

#### ORDERING INFORMATION

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

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

- (e.g. WVF-6A6-M2/E/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  $\Omega$ )
- B: 2 - 10 mA DC (Input resistance 500  $\Omega$ )
- C: 1 - 5 mA DC (Input resistance 1000  $\Omega$ )
- D: 0 - 20 mA DC (Input resistance 50  $\Omega$ )
- E: 0 - 16 mA DC (Input resistance 62.5  $\Omega$ )
- F: 0 - 10 mA DC (Input resistance 100  $\Omega$ )
- G: 0 - 1 mA DC (Input resistance 1000  $\Omega$ )
- H: 10 - 50 mA DC (Input resistance 100  $\Omega$ )
- GW: -1 - +1 mA DC (Input resistance 1000  $\Omega$ )
- FW: -10 - +10 mA DC (Input resistance 100  $\Omega$ )
- Z: Specify current (See INPUT SPECIFICATIONS)

Voltage

- 3: 0 - 1 V DC (Input resistance 1 M $\Omega$  min.)
- 4: 0 - 10 V DC (Input resistance 1 M $\Omega$  min.)
- 5: 0 - 5 V DC (Input resistance 1 M $\Omega$  min.)
- 6: 1 - 5 V DC (Input resistance 1 M $\Omega$  min.)
- 4W: -10 - +10 V DC (Input resistance 1 M $\Omega$  min.)
- 5W: -5 - +5 V DC (Input resistance 1 M $\Omega$  min.)
- 0: Specify voltage (See INPUT SPECIFICATIONS)

#### [2] OUTPUT 1

Current

- A: 4 - 20 mA DC (Load resistance 600  $\Omega$  max.)
- B: 2 - 10 mA DC (Load resistance 1200  $\Omega$  max.)
- C: 1 - 5 mA DC (Load resistance 2400  $\Omega$  max.)
- D: 0 - 20 mA DC (Load resistance 600  $\Omega$  max.)
- E: 0 - 16 mA DC (Load resistance 750  $\Omega$  max.)
- F: 0 - 10 mA DC (Load resistance 1200  $\Omega$  max.)
- G: 0 - 1 mA DC (Load resistance 12 k $\Omega$  max.)
- FW: -10 - +10 mA DC (Load resistance 700  $\Omega$  max.)
- GW: -1 - +1 mA DC (Load resistance 7000  $\Omega$  max.)
- Z: Specify current (See OUTPUT SPECIFICATIONS)

Voltage

- 1: 0 - 10 mV DC (Load resistance 10 k $\Omega$  min.)
- 2: 0 - 100 mV DC (Load resistance 100 k $\Omega$  min.)
- 3: 0 - 1 V DC (Load resistance 1000  $\Omega$  min.)
- 4: 0 - 10 V DC (Load resistance 10 k $\Omega$  min.)
- 5: 0 - 5 V DC (Load resistance 5000  $\Omega$  min.)
- 6: 1 - 5 V DC (Load resistance 5000  $\Omega$  min.)
- 4W: -10 - +10 V DC (Load resistance 10 k $\Omega$  min.)
- 5W: -5 - +5 V DC (Load resistance 5000  $\Omega$  min.)
- 0: Specify voltage (See OUTPUT SPECIFICATIONS)

#### [3] OUTPUT 2

Current

- A: 4 - 20 mA DC (Load resistance 350  $\Omega$  max.)
- B: 2 - 10 mA DC (Load resistance 700  $\Omega$  max.)
- C: 1 - 5 mA DC (Load resistance 1400  $\Omega$  max.)
- D: 0 - 20 mA DC (Load resistance 350  $\Omega$  max.)
- E: 0 - 16 mA DC (Load resistance 430  $\Omega$  max.)
- F: 0 - 10 mA DC (Load resistance 700  $\Omega$  max.)
- G: 0 - 1 mA DC (Load resistance 7000  $\Omega$  max.)
- FW: -10 - +10 mA DC (Load resistance 700  $\Omega$  max.)
- GW: -1 - +1 mA DC (Load resistance 7000  $\Omega$  max.)
- Z: Specify current (See OUTPUT SPECIFICATIONS)

Voltage

Same range availability as Output 1

**[4] POWER INPUT**

AC Power

**M2:** 100 – 240 V AC (Operational voltage range 85 – 264 V, 47 – 66 Hz)

DC Power

**R2:** 11 – 27 V DC

(Operational voltage range 11 – 27 V, ripple 10 %p-p max.)

**P:** 110 V DC

(Operational voltage range 85 – 150 V, ripple 10 %p-p max.)

**[5] OPTIONS (multiple selections)**

Input Signal Indicator

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

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:** 1 V**Offset:** Max. 1.5 times span**Input resistance:**  $\geq 1 \text{ M}\Omega$ **OUTPUT SPECIFICATIONS****■ DC Current:** -10 – +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 (7 V for both outputs for bidirectional outputs)**■ DC Voltage:** -10 – +12 V DC (up to 10 V for Output 2)**Minimum span:** 5 mV**Offset:** Max. 1.5 times span**Load resistance:** Output drive 1 mA max.; at  $\geq 0.5 \text{ V}$ **INSTALLATION****Power Consumption****•AC:**

Approx. 4 VA at 100 V

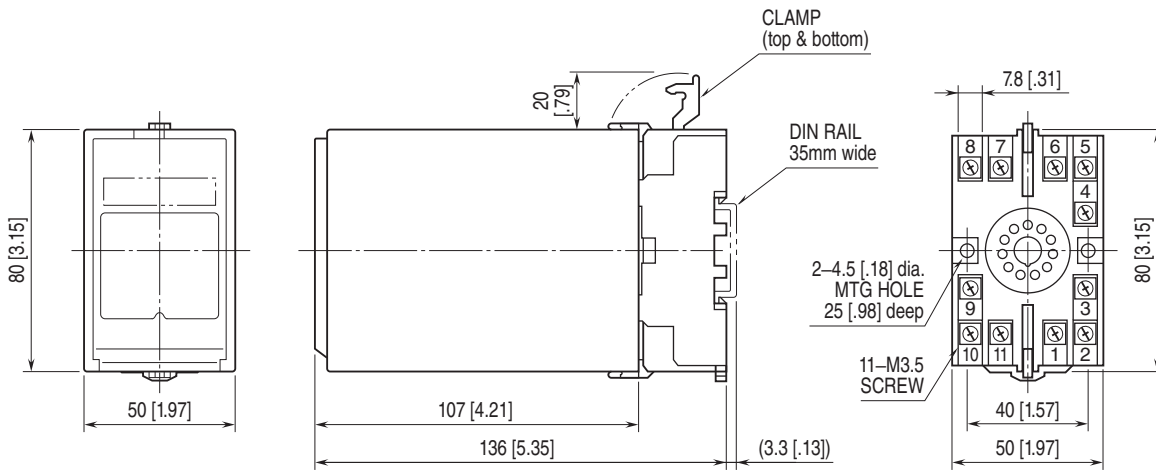
Approx. 5 VA at 200 V

Approx. 6 VA at 240 V

**•DC:** Approx. 3 W**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:**  $\pm 0.1 \%$ **Display accuracy:**  $\pm(0.1 \%$  of FS + 1 digit)**Temp. coefficient:**  $\pm 0.015 \%$ /°C ( $\pm 0.008 \%$ /°F)**Response time:**  $\leq 180 \mu\text{sec.}$  (0 – 90 %)**Line voltage effect:**  $\pm 0.1 \%$  over voltage range**Insulation resistance:**  $\geq 100 \text{ M}\Omega$  with 500 V DC**Dielectric strength:** 2000 V AC @1 minute (input or output1 or output 2 to power to ground)

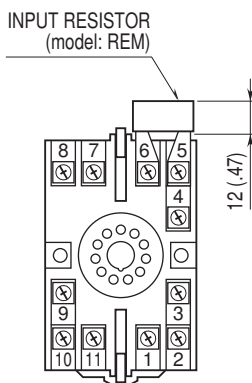
1000 V AC @1 minute (input to output 1 to output 2)

## EXTERNAL DIMENSIONS unit: mm [inch]



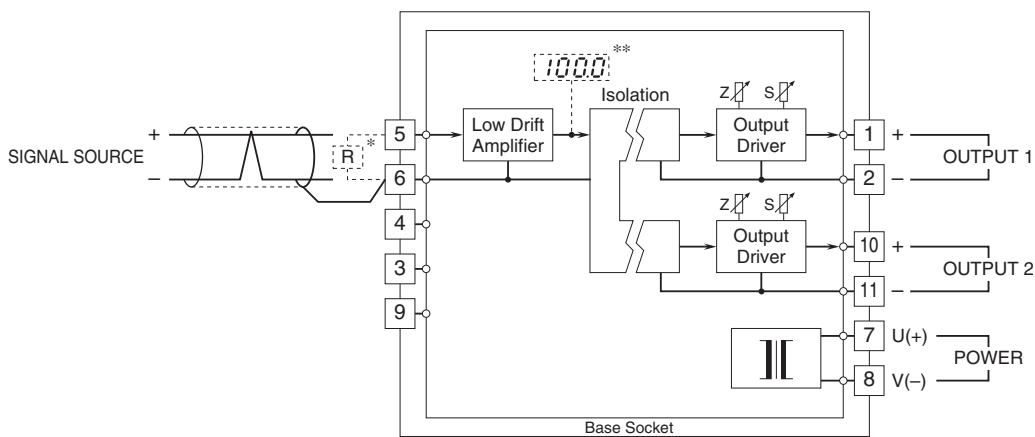
• When mounting, no extra space is needed between units.

## 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

Note: The WVF, due to its fast-response design, does not eliminate noises included in the input signal. Use shielded twisted-pair cable for preventing them.



Specifications are subject to change without notice.