

Dual Output Plug-in Signal Conditioners W-UNIT

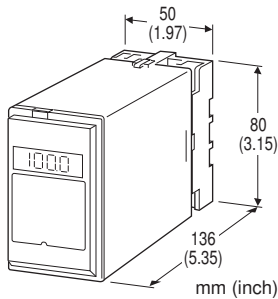
AC TRANSMITTER

Functions & Features

- Converting an alternating current/voltage into two standard process signals
- True RMS sensing
- Isolation up to 2000 V AC
- LCD meter
- High-density mounting

Typical Applications

- Converting a large AC current in combination with a shunt resistor, or a narrow span AC voltage



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

ORDERING INFORMATION

- Code number: WAC-[1][2][3]-[4][5]
- Specify a code from below for each [1] through [5].
(e.g. WAC-A1A6-B/E)

- Special input and output ranges
(For codes AZ, A8, Z & 0)

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

- AA: 0 - 10 mA AC (Input resistance 100 Ω)
- AB: 0 - 50 mA AC (Input resistance 20 Ω)
- AC: 0 - 100 mA AC (Input resistance 10 Ω)
- AD: 0 - 500 mA AC (Input resistance 1 Ω)
- AZ: Specify current (See INPUT SPECIFICATIONS)
(0 % input must be 0 mA.)

Voltage

- A1: 0 - 100 mV AC (Input resistance 100 kΩ min.)
- A2: 0 - 500 mV AC (Input resistance 100 kΩ min.)
- A3: 0 - 1 V AC (Input resistance 100 kΩ min.)
- A4: 0 - 5 V AC (Input resistance 100 kΩ min.)

- A5: 0 - 10 V AC (Input resistance 100 kΩ min.)
- A6: 0 - 120 V AC (Input resistance 100 kΩ min.)
- A7: 0 - 150 V AC (Input resistance 100 kΩ min.)
- A8: Specify voltage (See INPUT SPECIFICATIONS)
(0 % input must be 0 V.)

[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 kΩ max.)
- Z: Specify current (See OUTPUT SPECIFICATIONS)

Voltage

- 1: 0 - 10 mV DC (Load resistance 10 kΩ min.)
- 2: 0 - 100 mV DC (Load resistance 100 kΩ min.)
- 3: 0 - 1 V DC (Load resistance 1000 Ω min.)
- 4: 0 - 10 V DC (Load resistance 10 kΩ 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 kΩ 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

Input Signal Indicator

blank: Without

/E: With (0.0 - 100.0 % display)

GENERAL SPECIFICATIONS

Construction: Plug-in

Connection: M3.5 screw terminals

Housing material: Flame-resistant resin (black)

Isolation: Input to output 1 to output 2 to power

Input waveform

RMS sensing: Up to 15 % of 3rd harmonic content

Overrange output: 0 to 120 % at 1 - 5 V

Zero adjustment: -5 to +5 % (front)

Span adjustment: 95 to 105 % (front)

LCD meter: Indicating input; 0.1 % increments

INPUT SPECIFICATIONS

Frequency: 40 Hz min., 1 kHz max.

■ AC Current: 0 - 1 A AC; input resistor incorporated

Minimum span: 1 mA

Input resistance

Span 1 mA: 1 k Ω

Span \leq 2 mA: 500 Ω

Span \leq 5 mA: 200 Ω

Span \leq 10 mA: 100 Ω

Span \leq 20 mA: 50 Ω

Span \leq 50 mA: 20 Ω

Span \leq 100 mA: 10 Ω

Span \leq 500 mA: 1 Ω

Span \leq 1 A: 0.5 Ω

■ AC Voltage: 0 - 250 V AC

Minimum span: 50 mV

Input resistance: 100 k Ω min.

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 \geq 0.5 V

INSTALLATION

Power input

•AC: Operational voltage range: rating \pm 10 %, 50/60 \pm 2 Hz, approx. 3 VA

•DC: Operational voltage range: rating \pm 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: \pm 0.4 %

Display accuracy: \pm (0.4 % of FS + 1 digit)

Temp. coefficient: \pm 0.05 %/°C (\pm 0.03 %/°F)

Response time: \leq 0.7 sec. (0 - 90 %)

Ripple: 0.5 %p-p max.

Line voltage effect: \pm 0.1 % over voltage range

Insulation resistance: \geq 100 M Ω with 500 V DC

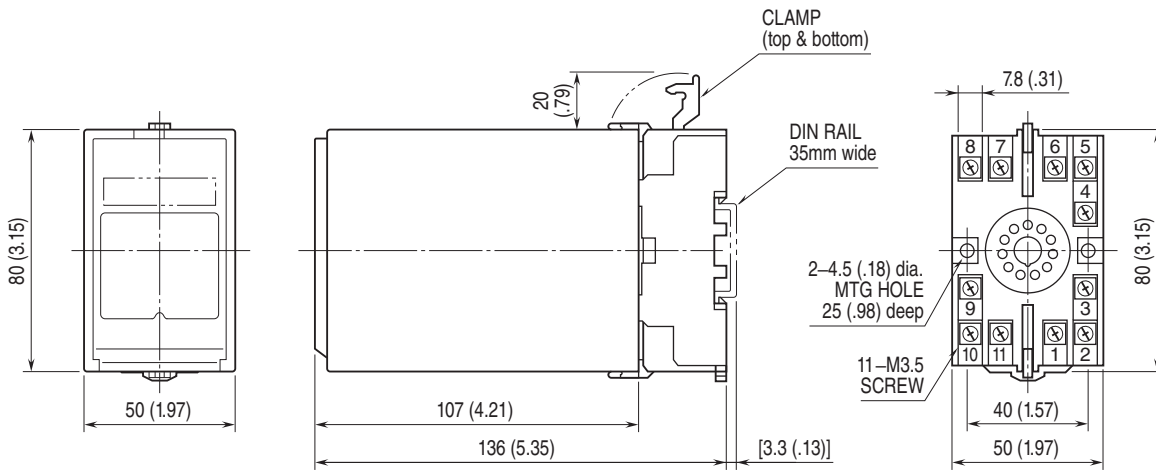
Dielectric strength: 2000 V AC @1 minute

(input to output to power to ground)

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

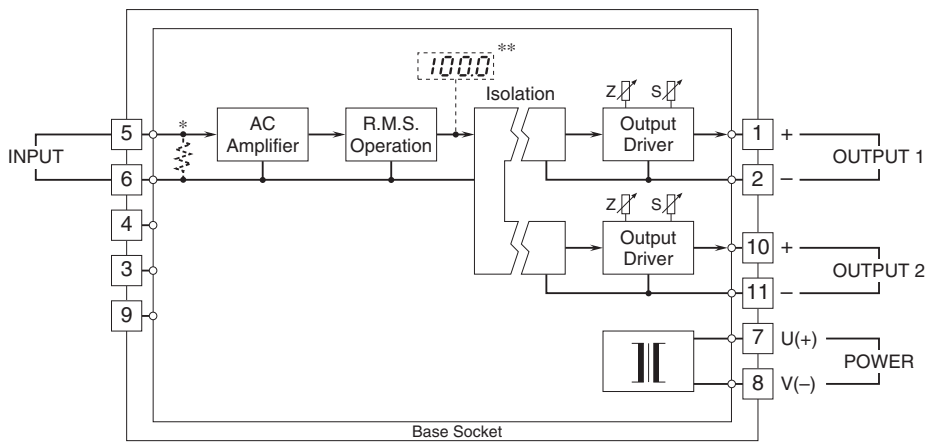


EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



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

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



* Input shunt resistor incorporated for current input
 **Option /E



Specifications are subject to change without notice.

