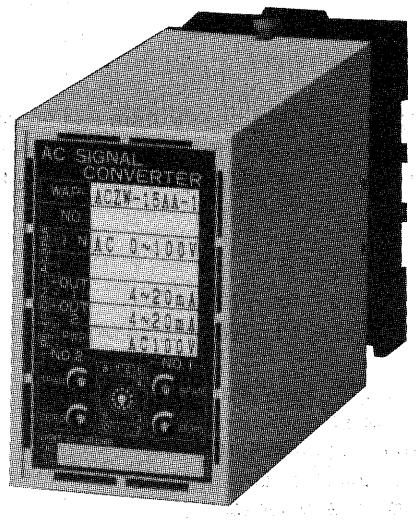
# RMS TO DC CONVERTER (WITH 2 ISOLATED OUTPUTS) WAP-EFZW




50 (W) x 84 (H) x 135.5 (D) mm Approx. 400 g

These units are plug-in type signal converters with 2 isolated outputs that convert AC voltage signals or current signals into DC signals that can be handled in a standardized manner in a system, and besides, that are fit to a long-distance transmission. Since Type EFZW adopts the true root-mean square operation system, it assures particularly high reliability against distorted waves.

## Features

- The four ports of input, 1st output, 2nd output, and power supply are isolated from one another with a dielectric strength of 2 kVAC.
- Constant-voltage output or constant-current output, without the need to specify a load resistant value.
- The high accuracy and low ripple of their output signals make them suitable for input into computers.
- Small-sized plug-in type, which is attached to or detached from DIN rails by a one-touch action.

## Model WAP-□□□□-□□□□-□

| | |
|---|---|
| EFZW | True r.m.s. value operation type |

| Power Supply | |
|---|---|
| 1 | AC 100 V ± 10%, 50/60 Hz |
| 2 | AC 200 V ± 10%, 50/60 Hz |
| 3 | DC 24 V ± 10% |
| 4 | AC 110 V ± 10%, 50/60 Hz |
| 5 | AC 220 V ± 10%, 50/60 Hz |

| Input Signal | | Input Resistance |
|---|---|---|
| 13 | AC 0–1 V | Approx. 1 MΩ |
| 14 | AC 0–10 V | Approx. 1 MΩ |
| 35 | AC 0–35 V | Approx. 1 MΩ |
| 15 | AC 0–100 V | Approx. 1 MΩ |
| 16 | AC 0–110 V | Approx. 1 MΩ |
| 17 | AC 0–150 V | Approx. 1 MΩ |
| 18 | AC 0–200 V | Approx. 1 MΩ |
| 19 | AC 0–250 V | Approx. 1 MΩ |
| 20 | AC 0–1 mA | 100 Ω |
| 21 | AC 0–10 mA | 50 Ω |
| 22 | AC 0–20 mA | 50 Ω |
| 23 | AC 0–100 mA | 10 Ω |
| 99 | Other than the above (Please consult with us.) | |

| 1st Output Signal | | Allowable Load Resistance |
|---|---|---|
| A | DC 4–20 mA | 750 Ω or less |
| B | DC 1–5 mA | 3 KΩ or less |
| C | DC 2–10 mA | 1.5 KΩ or less |
| D | DC 0–1 mA | 15 KΩ or less |
| E | DC 0–10 mA | 1.5 KΩ or less |
| F | DC 0–16 mA | 937 Ω or less |
| G | DC 0–20 mA | 750 Ω or less |
| H | DC 1–5 V | 2.5 KΩ or more |
| J | DC 0–10 mA | 10 KΩ or more |
| K | DC 0–100 mA | 100 KΩ or more |
| L | DC 0–1 V | 500 Ω or more |
| N | DC 0–5 V | 2.5 KΩ or more |
| P | DC 0–10 V | 5 KΩ or more |
| R | DC ± 10 V | 5 KΩ or more |
| S | Other than the above (Please consult with us.): Voltage output 10 V or less Current output 20 mA or less | |

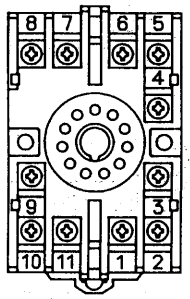
| 2nd Output Signal | | Allowable Load Resistance |
|---|---|---|
| A | DC 4–20 mA | 300 Ω or less |
| H | DC 1–5 V | 2.5 KΩ or more |
| N | DC 0–5 V | 2.5 KΩ or more |
| P | DC 0–10 V | 5 KΩ or more |
| S | Other than the above (Please consult with us.) | |

watanabe WATANABE ELECTRIC INDUSTRY Co., Ltd.
6-16-19 Jinguumae Shibuya-Ku, Tokyo, Japan 150-0001 Tel 03-3400-6141 Fax 03-3409-3156

## Specifications

| | |
|---|---|
| **Input signal:** | DC voltage, DC current |
| **Output signal:** | DC current or DC voltage, respectively, for the 1st and the 2nd output |
| **Allowable load resistance:** | Within the range specified in the part of Model, respectively, for the 1st and the 2nd output |
| **Accuracy:** | ±0.2%·fs (at 23℃) |
| **Response time:** | 500 msec (time to reach 90% of the final value) |
| **Rated frequency:** | 20 to 1,000 Hz |
| **Isolation:** | Among input, 1st output, 2nd output, and power supply, from one another |
| **Dielectric strength:** | 2,000 VAC for 1 minute among input, 1st output, 2nd output, and power supply |
| **Insulation resistance:** | 100 MΩ or more among input, 1st output, 2nd output, and power supply |
| **Zero & span adjustment:** | ±20%·fs each (multi-turn trimmer) |
| **Output limitation:** | Approx. 120%·fs (fixed) |
| **Influence of ambient temperature:** | Influence on accuracy: ±0.015 %·fs/℃ |
| **Influence of supply voltage:** | Influence on accuracy: ±0.1%·fs/rated voltage ±10% |
| **Power supply:** | 100 V, 110 V, 200 V, or 220 VAC ±10% each, 50/60 Hz, 24 VDC ±10% |
| **Power consumption:** | Approx. 5 VA (AC) |
| **Operating ambient temperature and humidity:** | -5 to +60℃, 90% RH or less (without condensation or icing) |
| **Material of case:** | ABS resin (outer covering), Noryl resin (base socket) |
| **Dimensions and weight:** | 50 wide x 84 high x 135.5 deep (mm), approx. 400 g |
| **Construction and mounting:** | Plug-in type. Directly installed or mounted on DIN rails |
| **Connection method:** | Coupled to M3.5 x 7 SEMS screws of base socket |

## Pin and Terminal Assignment




| No. | Symbol | | Description |
|---|---|---|---|
| 1 | OUT No. 1 | + | Output signal |
| 2 | | - | |
| 3 | | | N.C. |
| 4 | | | N.C. |
| 5 | IN | ~ | Input signal |
| 6 | | ~ | |
| 7 | POWER | U | Power supply |
| 8 | | V | |
| 9 | | | N.C. |
| 10 | OUT No. 2 | + | Output signal |
| 11 | | - | |



watanabe WATANABE ELECTRIC INDUSTRY Co., Ltd.
6-16-19 Jinguumae Shibuya-Ku, Tokyo, Japan 150-0001 Tel 03-3400-6141 Fax 03-3409-3156