

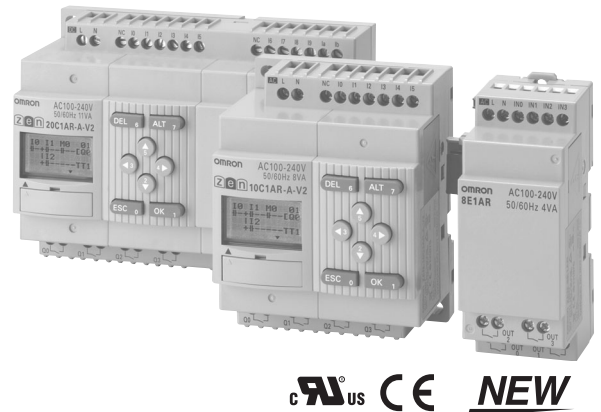
## Programmable Relay ZEN V2 Units

Please read and understand this catalog before purchasing the products. Please consult your OMRON representative if you have any questions or comments. Refer to “Warranty and Application Considerations” on page 36, and “Precautions for Safe Use” on page 34.

### Even Broader Applications with Increased Functionality and Higher Precision

- Increased functionality in a compact body (70 mm wide × 90 mm high).
- Easy programming is available using the LCD and operation buttons. (See note 1.)
- This single Unit easily provides relay, timer, counter, and time switch functions.
- Expansion is easy with Expansion I/O Units, allowing up to 44 I/O points. (See note 2.)
- Economy-type and Communications-type CPU Units have been added to series.
- Improved Weekly Timers (See note 1.)  
Increased timing accuracy with a monthly deviation of ±15 s max. Multiple-day operation and pulse output operation have been added.
- Select from two power supply options:  
100 to 240 VAC or 12 to 24 VDC.

**Note:** 1. Not supported for ZEN-□C2□□-□-V2 models.  
2. When using CPU Units with 20 I/O points.



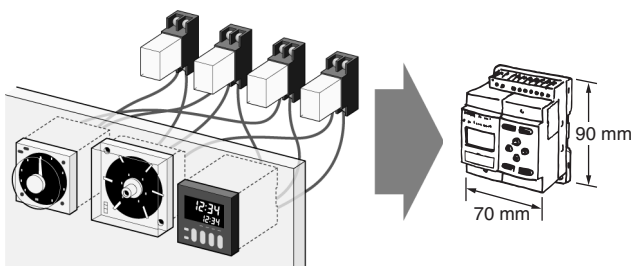
The information in this document applies to V2 Units. Refer to page 28 for details on differences with previous products.

## Features

### Easy and Simple Programming for Automatic Small-scale Control

#### Saves Space, Wiring, and Installation Steps

- Versatile functionality in a compact body (70 mm wide × 90 mm high).
- This single Unit easily provides relay, timer, counter, and time switch functions. Wiring work is greatly reduced because separate wiring is not required for devices such as timers and counters.



#### Easy Programming

The LCD screen comes with 8 operation buttons on the front panel to enable programming in ladder view format. The LCD screen also has a backlight, making it easier to see when the ZEN is used in dark locations.

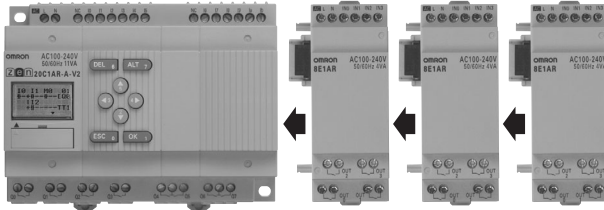
**Note:** Not supported for ZEN-□C2□□-□-V2 models.



## Flexible Expansion Enables Up to 44 I/O Points

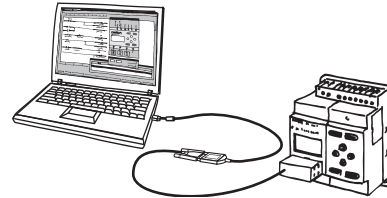
Up to three Expansion I/O Units can be connected if there are not enough I/O points. Expansion I/O Units are only 35 mm wide.

**Note:** CPU Units with 10 I/O points can be expanded to 34 I/O points. Expansion I/O Units cannot be connected to Economy-type CPU Units.



## Support Software with Simulation Function

- Programs can be easily written, saved, and monitored by personal computer.
- Programs can be simulated on the personal computer without connecting to the ZEN.



**Note:** For notebook computers that do not have an RS-232C serial port, connect the computer to the ZEN by connecting an OMRON CS1W-CIF31 USB-Serial Conversion Cable to the ZEN-CIF01 Connecting Cable.

## Other Versatile Functions

- Use of a Memory Cassette makes it easy to copy and save programs.
- Equipped with two analog input channels (CPU Units with DC power supply only).
- Password function ensures security. (See note.)
- Multi-language display in six languages (English, Japanese, German, French, Spanish, Italian). (See note.)
- Display user-set messages or analog-converted values. (See note.)

**Note:** Not supported for ZEN-C2□□-□-V2 models.

## Enhanced Features of V2 CPU Units

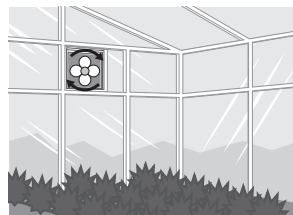
### Improved Weekly Timer and Calendar Timer Functions

**Note:** Not supported for ZEN-C2□□-□-V2 models.

- The time precision has been increased.  
Conventional model: 2-min difference/month  
↓  
-V2 models: ±15-s difference/month (at 25°C)
- Multiple-day operation and pulse-output operation are now possible.
- These improved functions are convenient for time-controlled applications such as lighting and air conditioning control.



Lighting control



Air conditioning control

### Economy-type Added to the Series

- Economy-type CPU Units with a more affordable price have been added to the series, although Expansion I/O Units cannot be added.

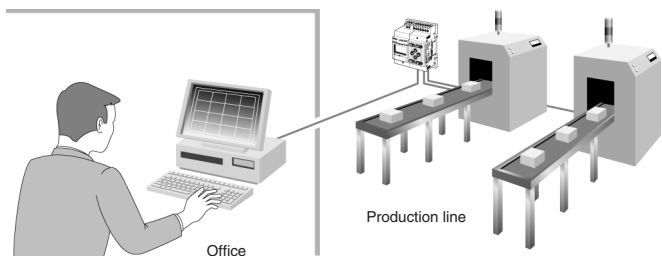
### 12 to 24 VDC Line Voltage Operation

Operation is now possible with 12 VDC.

Expansion I/O Units have been reduced to half-size (35 mm wide).

### RS-485 Communications Model Added to Series

Production line conditions can be remotely monitored by monitoring the ZEN control status.



### More Precise Analog Input

Conventional model: ± 10% FS → -V2 models: ± 1.5% FS  
DC power supply models are equipped with two analog inputs (0 to 10 V). There are four analog comparators. The increased precision makes it even easier to use the Unit in simple control applications with voltage, current, temperature, and other analog values.

### 8-digit Counter, 150-Hz Counter

- An 8-digit counter and 8-digit comparator have been added.
- The maximum count for DC power supply models is 150 Hz.

### Twin-timer Operation Added

Twin-timer operation allows you to set ON and OFF times separately, greatly simplifying intermittent operation.