

# DC Electronic Circuit Protector

S8V-CP



Adjustable rated output current  
per branch circuit,  
ranging from 2 to 10 A

Load branching and  
reliable protection with  
space-saving



# For building green control panels

Natural disasters caused by global warming and climate change are becoming a global social issue, that drives over 150 countries and regions worldwide to take action toward decarbonization. Our goal is to reduce greenhouse gas (GHG) emissions toward half by through new ways of building control panels, that key figure of the manufacturing site.



## Process

Realize greatly reduces design/ manufacturing work

Innovation for design, building Process

Further Evolution for Panels

## Panel

Realize compact & highly reliable control panels

Building sustainable control panels

Creating green control panels

Simple & Easy People

## Green

Reducing GHG emission of control panels to achieve carbon neutrality

## People

Provide reliable and comfortable manufacturing for all people who deal with control panels

## Integrating green perspectives into Value Design

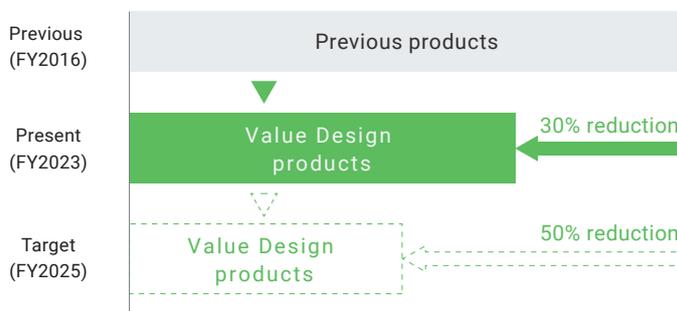
Value Design for Panel (Value Design) is the common concept shared across OMRON's in-panel product specifications to deliver new value to your control panels.

This Value Design also integrate environment consideration concept that enable earth and user-friendly control panel building.



- 1 ..... Unified height & slim size\*<sup>1</sup>
- 2 ..... Side-by-side mounting at (55°C) ambient temperature\*<sup>2</sup>
- 3 ..... Unique Push-In Plus technology\*<sup>1</sup>
- 4 ..... Front-in and front-release wiring
- 5 ..... eCAD library
- 6 ..... Certification for CE, UL, and CSA
- 7 ..... **Green features that save energy and resources**\*<sup>3</sup>

CFP of control panel (total GHG emissions)\*<sup>4</sup>



\*1. Expect for some products

\*2. Side-by-side mounting is possible in the same series

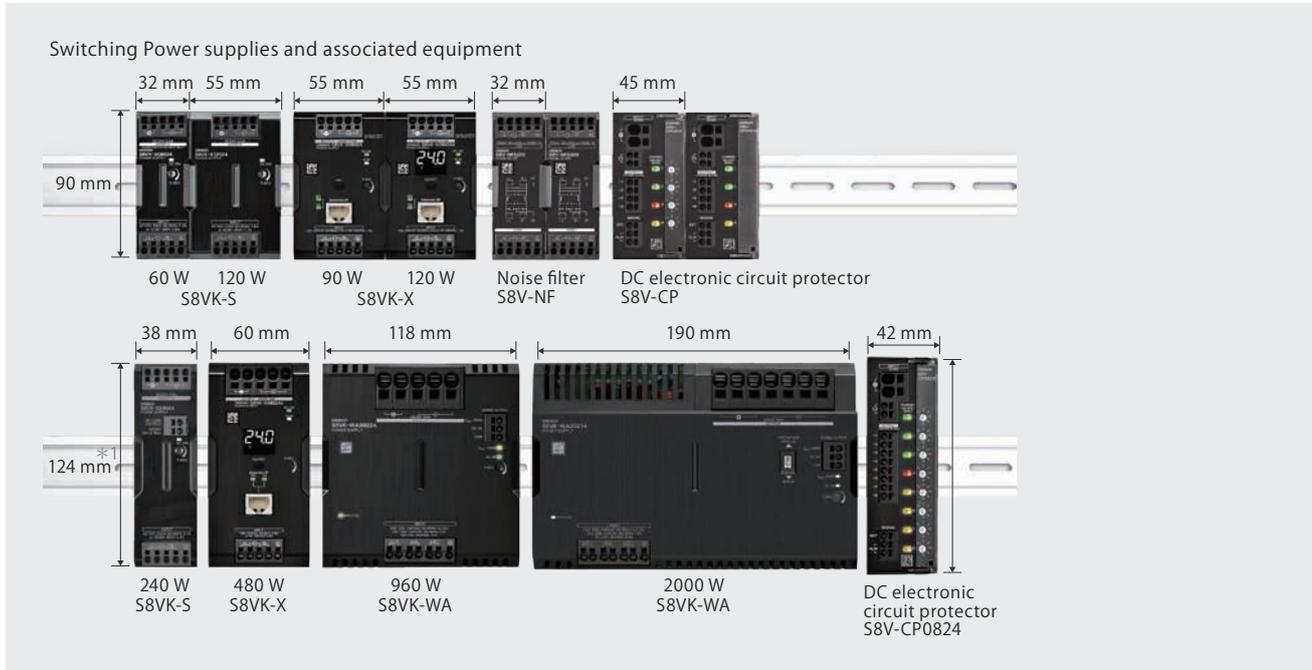
\*3. Greener design compared to previous (2016) products

\*4. CFP (carbon footprint) of control panel is a calculation result of referring the life cycle assessment method that based on international standards ISO14067 which define CO<sub>2</sub> quantitative conversion of the environmental burden at every stage, from manufacturing, transportation, use, and disposal of the control panel (product). According to OMRON investigation in May 2023.

## Unified height reduces dead-space and miniaturizes control panel



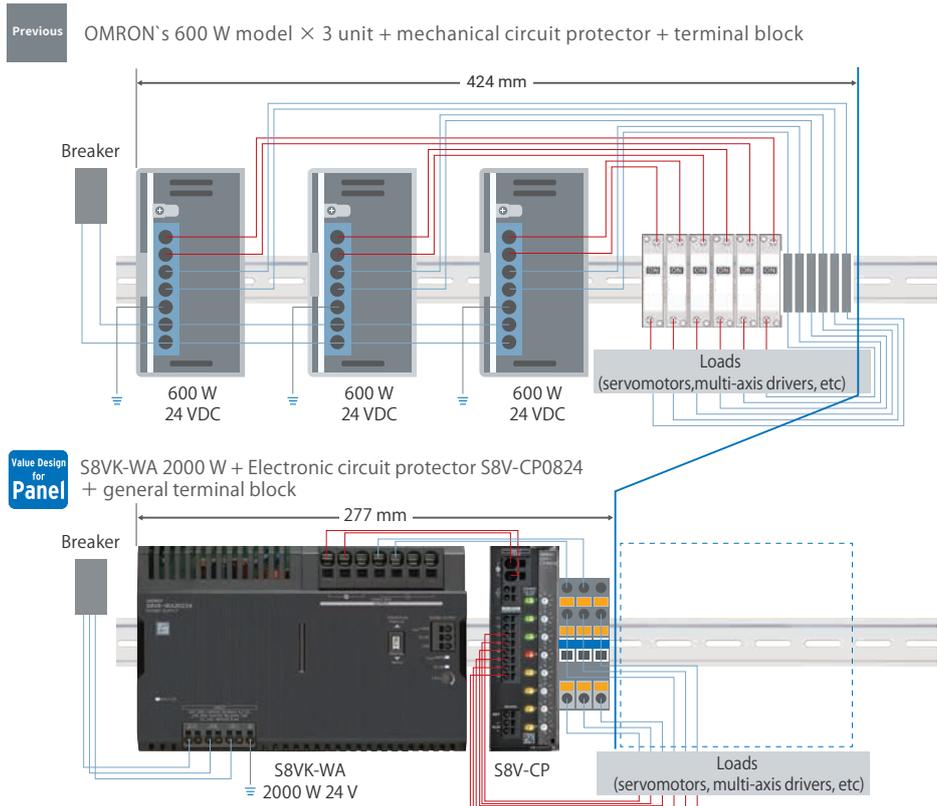
Value Design for Panel compliant switching power supplies, noise filters, and DC electronic circuit protectors are standardized in height. Reduces dead-space and reduces the size of control panel.



\* 1. Height: 124 mm, but S8V-CP0824 excluded

## Reduced mounting space by using new DC distribution methods

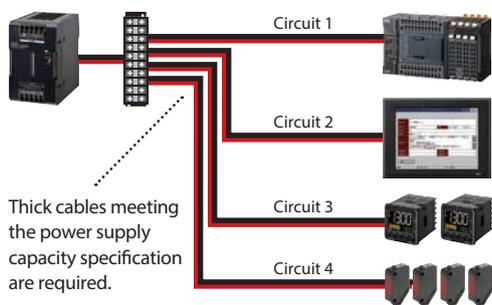
Examples of S8VK-WA 2000 W Types: Space-saving implementation and less wiring connections by providing branch methods and protective devices



Mounting width approx. **34%** Reduction

## Shortening Lead Time for Control Panel Building

**Previous** Branch design and the design for securing the safety are complicated. Small diameter cables are preferable for easy wiring.



**Value Design for Panel** Branching, selectable rated current settings and protection functionality achieve the standardization of panel design.

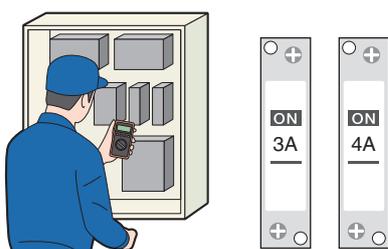
S8V-CP allows you to :

### Design easily

Simplify design of branches and safety securing with the one unit.



**Previous** The selection is difficult as the tripping characteristics of thermomagnetic circuit protectors may widely vary by the temperature and unit variations.

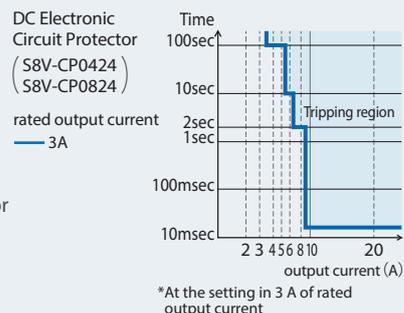


**Value Design for Panel** Accurate current protection reduces the time for the evaluation and the verification of design.

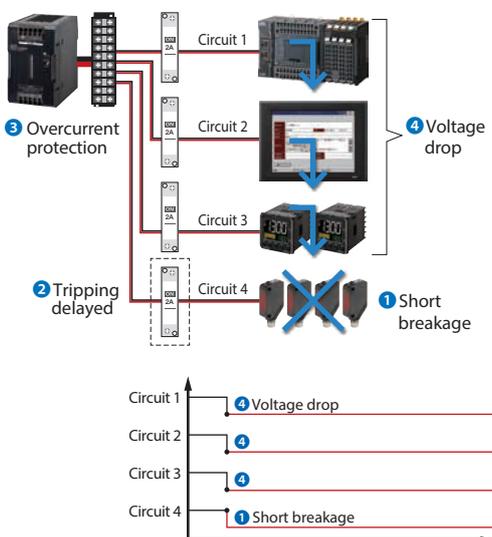
S8V-CP allows you to :

### Reliably protection

The tripping characteristic of DC electronic circuit protector securely helps the defective circuit to cut off with less variation errors as designed.



**Previous** If an abnormality occurred, the power supply activates its protection function to stop the all circuits prior to the tripping function activation of the thermomagnetic circuit protectors.

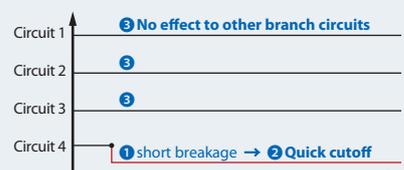
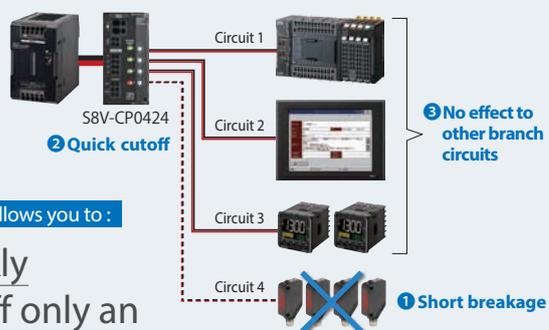


**Value Design for Panel** Restoration time is shortened by identifying the circuit of malfunction.

S8V-CP allows you to :

### Quickly cut off only an abnormal circuit

Easy to identify the troubled parts

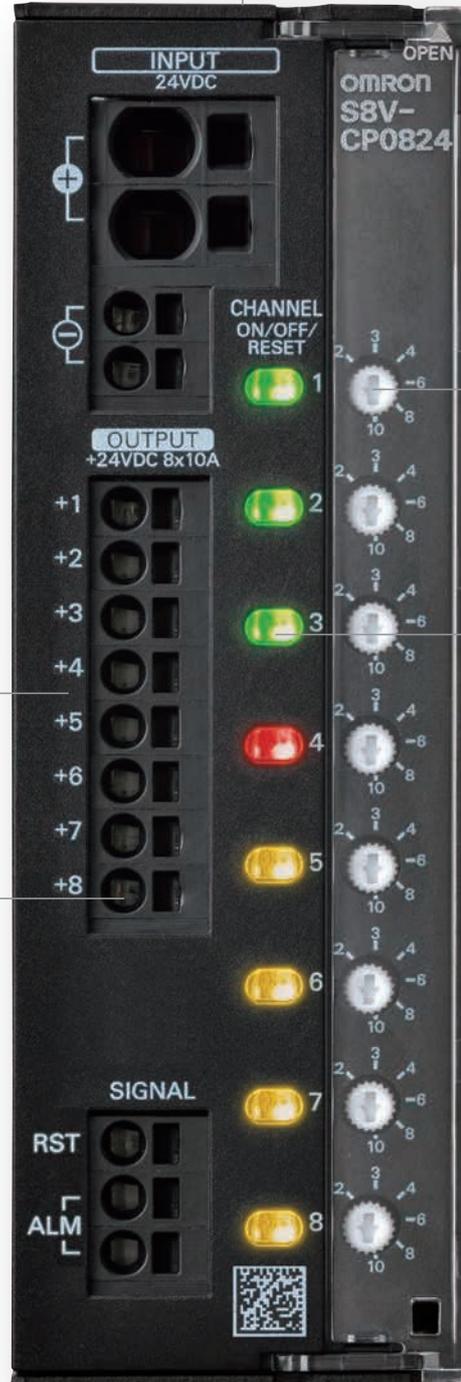


## Easier setting and wiring reduce the work load of operators

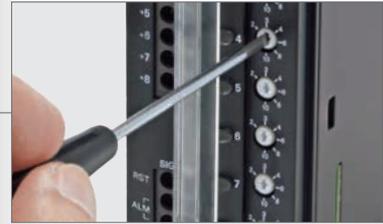
Protecting up to eight branch circuits in the 42-mm low profile design

Constant monitoring of the current realizes tripping characteristic with less variations and errors.

Easy wiring with the Push-In Plus Terminal Blocks



Free from new parts arrangements or conversions for sudden design change of devices. One fits various current range



Setting the rated output current available for 2 A, 3 A, 4 A, 6 A, 8 A, and 10 A.

\* Also available is UL Class 2 compatible type with the fixed 3.8 A.

### Push button with indicator

Just press the button to toggle ON/OFF for each branch circuit



3-step LED indication for easy indication of the status of each branch circuit

-  Green lit : Output ON
-  Yellow lit : Over current
-  Yellow blinking or red blinking : output tripping / alarm output

## DC Electronic Circuit Protector S8V-CP

4ch S8V-CP0424

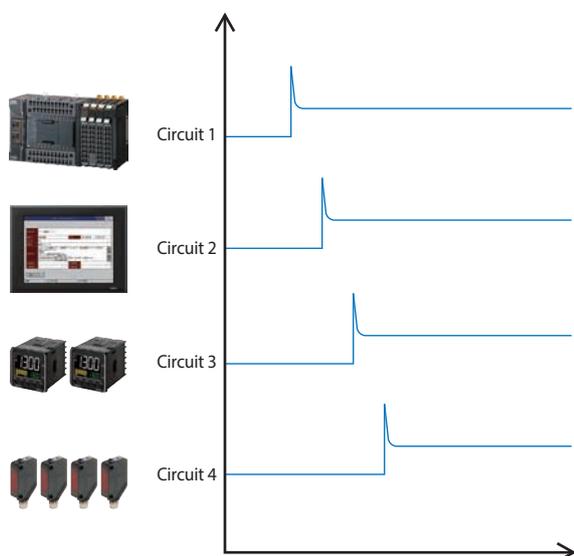
4ch S8V-CP0424S ( UL Class 2 with a fixed rated output current 3.8 A)

8ch S8V-CP0824

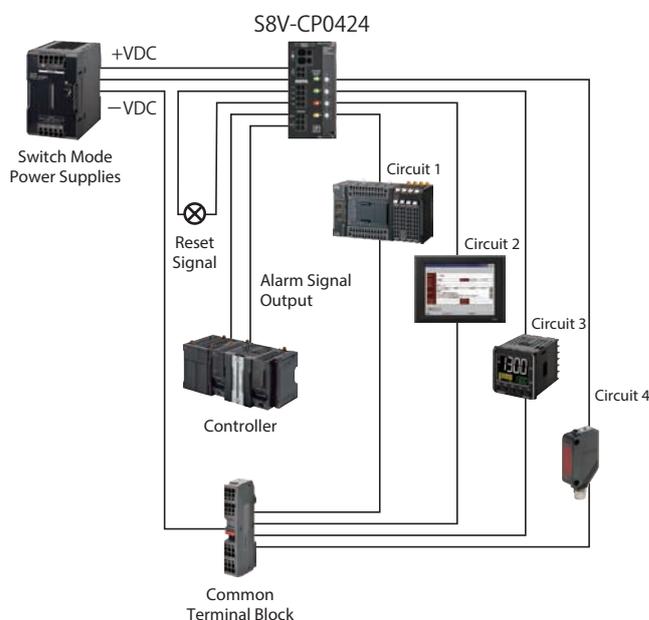
Photo : S8V-CP0824

## Sequential start-up of branch circuits can avoid the trouble of operation start and awareness to the malfunction is possible

Sequential start-up of branch circuits minimizes start-up troubles by the inrush current.



An alarm signal output enables to output an abnormal occurrence to an upstream controller.



The processes and costs for the UL certificate can be reduced.

## UL Class2 [ S8V-CP0424S ]

### What is the UL Class 2 output?

It is the classification that indicates “power supplies and the related products with safety outputs of which voltage, current, and power are limited to a certain level, so that not to cause an electric shock or fire,” and is evaluated by UL1310.

For the UL Class 2 output, the voltage, current, and power are provided as follows:

- DC30 V or lower of output voltage
- 8 A or lower of output current
- 100 VA or lower of output power

Any loads and parts to be connected to this UL Class 2 output can be used without UL certificate.

### What is S8V-CP0424S (UL Class 2 output type)?

To meet the conditions of this UL Class 2 output, the rated output current is fixed at 3.8 A.

- 24 V of output voltage  
→ meets DC30 V or lower
- 3.8 A of output current  
→ meets 8 A or lower
- 24 V \* 3.8 A of output power = 91.2 VA  
→ meets 100 VA or lower

### The processes and costs for applying to a safety standard for the devices can be reduced.

As S8V-CP0424S has already certified the UL Class 2 output, the UL evaluation of the circuit to be connected to this output may not be needed, which can help reduce processes and costs for the UL certificate. Any loads and parts to be connected to this UL Class 2 output can be used without UL certificate. Furthermore, that also helps for cost down and easy selection of the parts, because any wiring materials without UL certificate are usable in the control panel.



S8V-CP0424



S8V-CP0424S  
( UL Class 2 with a fixed rated output current 3.8 A )



S8V-CP0824

Model	Number of Outputs	Rated Input Voltage	Rated Output Current
S8V-CP0424	4ch	24V	2A、3 A、4A、6A、8A、10A
S8V-CP0424S	4ch (ULClass2)		3.8A
S8V-CP0824	8ch		2A、3 A、4A、6A、8A、10A



## Creating green control panels

Cat. No. Y235-E1

Natural disasters caused by global warming and climate change are a global social issue, driving over 150 countries and regions worldwide to take action toward decarbonization. Our goal is to cut greenhouse gas (GHG) emissions by half through new ways of building control panels, which constitute the core of the manufacturing site.

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