

DC Electronic Circuit Protector (24 VDC 4 Outputs/8 Outputs Type) **S8V-CP**

Simplified safety design of DC circuits
Reliable DC circuit protection in the event of short circuits or overcurrent
Saves space even with multi-channels
Sequential start-up of outputs to avoid start-up trouble



NEW

- Push-in plus terminal block adopted
- Push button with indicator to help you understand each output status at a glance
- Switch lets you set the rated output current appropriately for each output depending on load
- Lineup of a UL Class 2 output-compatible model

For the most recent information on models that have been certified for safety standards, refer to your OMRON website.

Refer to *Safety Precautions* on page 10.

Model Number Structure

Model Number Legend Not all combinations are possible. Refer to List of Models in Ordering Information, below.

S8V-CP **24**
 Series name (1) (2) (3)

(1) Number of Outputs

Code	Number of Outputs
04	4 outputs
08	8 outputs

(2) Rated input voltage

Code	Rated input voltage
24	24 VDC

(3) UL Class 2 output

Code	UL Class 2 output certified
S	Yes
No	No

List of Models

Unit

Number of Outputs	UL Class 2 output	Model
4 outputs	No	S8V-CP0424
	Yes	S8V-CP0424S
8 outputs	No	S8V-CP0824

S8V-CP

Ratings, Characteristics, and Functions

Item	Model		S8V-CP0424	S8V-CP0424S	S8V-CP0824
	Number of Outputs		4	4	8
	UL Class 2 output		No	Yes	No
I/O characteristics	Rated input voltage (Input voltage allowable range)		24 VDC (20 to 30 VDC)	24 VDC (20 to 28.8 VDC)	24 VDC (20 to 30 VDC)
	Allowable input current *1		40 A	15.2 A	70 A
	Max. rated output current (per output)		10 A	3.8 A	10 A
	Internal voltage drop *2		180 mV typ.	180 mV typ.	200 mV typ.
	Output leakage current		10 mA max.		
	Power consumption (at input voltage 24 VDC) *3	When all outputs are connected	8 W typ. (at 10 A x 4 CH)	4 W typ. (at 3.8 A x 4 CH)	15 W typ. (at 10 A x 7 CH)
		When all outputs are tripped	0.7 W typ.	0.8 W typ.	1.1 W typ.
Start-up time *4	Initialization time	250 ms typ.			
	Start-up delay time	50 ms to 5 s			
Functions *5	Current tripping function *6	Rated output current	2 A, 3 A, 4 A, 6 A, 8 A, 10 A	3.8 A	2 A, 3 A, 4 A, 6 A, 8 A, 10 A
		Cutoff current	2.5 A, 3.5 A, 4.5 A, 6.5 A, 8.5 A, 10.5 A	3.8 A	2.5 A, 3.5 A, 4.5 A, 6.5 A, 8.5 A, 10.5 A
	Over voltage tripping function *6		No	Yes	No
	Push button (ON/OFF/RESET) with indicator		Yes (LED colors: Red/Green/Yellow)		
	Reset signal input (RST)		Yes (High level: 20 to 30 VDC, Low level: 0 to 5 VDC)		
Insulation	Alarm signal output (ALM1/ALM2)		Yes (MOS FET relay output 30 VDC max., 50 mA max.)		
	Dielectric strength		1.0 kVAC for 1 min (between all terminals and DIN rail mounting parts), current cutoff 20 mA		
Environment	Insulation resistance		100 MΩ min. (between all terminals and DIN rail mounting parts) at 500 VDC		
	Ambient operating temperature		-25 to 70°C (Derating is required according to the temperature.) (with no condensation or icing)		
	Storage temperature		-40 to 85°C (with no condensation or icing)		
	Ambient operating humidity		5% to 96% (storage humidity: 5% to 96%)		
	Vibration resistance		10 to 55 Hz, maximum 5 G, 0.42 mm half amplitude for 2 h each in X, Y, and Z directions		
Reliability	Shock resistance		294 m/s ² , 3 times each in ±X, ±Y, ±Z directions		
	MTBF *7	135,000 hrs typ.	60,000 hrs typ.	60,000 hrs typ.	
Construction	Life expectancy *8		10 years min.		
	Weight		160 g max.	170 g max.	420 g max.
	Cooling fan		No		
Standards	Degree of protection		IP20 by IEC60529		
	EMI		Conforms to EN 61000-6-3		
	EMS		Conforms to EN 61000-6-2		
	Safety standards		UL 508 (CSA22.2 No.14-10) Listing Pol2 UL 2367 Recognition (Max. 100W per output, per Class 2 limitations) Pol2 *9 CE (EN 61000-6-2, EN 61000-6-3)		

*1. For power input terminals, use 35 A max. per pole.

*2. A voltage drop will occur in the S8V-CP. Consider the voltage drop at the output.

*3. When selecting the power supply, be sure to include the power consumption of the S8V-CP and not just the power consumption of the load.

*4. Outputs start in order from +VO1 to +VO8. +VO1 starts after the initialization time. Start-up delay time of each output is automatically decided depending on the load. If the start-up delay time is over 5 s, the next output is forcibly started.

*5. Refer to *Tripping Functions* on page 3 for details.

*6. Refer to *Current Tripping Characteristics* and *Current and Voltage Tripping Characteristics* on page 7 for details.

*7. MTBF is calculated according to JEITA RCR-9102.

*8. Refer to *Recommended Replacement Periods* and *Periodic Replacement for Preventive Maintenance* on page 14 for details.

*9. UL Class 2 output applies for the S8V-CP0424S model only.