OMRON

Switch Mode Power Supply (15/25/35/50/75/100/150/200/350-W Models) S8FS-C

High Reliability at a Reasonable Cost. Reliable, Basic Power Supplies That Contribute to Stable Equipment Operation.

- High Reliability: Enhanced abnormal overvoltage resistance and lightning surge resistance for stable operation even with an unstable input voltage.
- Long Life: Japanese 105°C electrolytic capacitors are used to achieve stable quality and long life. A reliable 3-year warranty.*
- Wide Input Ranges: 100 to 120 VAC and 200 to 240 VAC
- Full Lineup: Models are available for the main output voltages and capacities used in FA applications.
- Global Standards: Conforms to CE (all models), Approved for UL (all models) and CCC (15 to 150-W models).
- Easy mounting to DIN Rails with Mounting Brackets. * Refer to *Period and Terms of Warranty* on page 40.

Refer to Safety Precautions for All Power Supplies and Safety Precautions on page 37.

Product Lineup

Output voltage	Power rating											
(VDC)	15 W	25 W	35 W	50 W	75 W	100 W	150 W	200 W	350 W			
5 V	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes			
12 V	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes			
15 V	Yes	Yes	Yes	Yes	Yes	Yes	Yes					
24 V	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes			
36 V						Yes	Yes	Yes	Yes			
48 V				Yes	Yes	Yes	Yes	Yes	Yes			

Model Number Structure

Model Number Legend

Note: Not all combinations are possible. Refer to List of Models in Ordering Information on page 2.

 $\underbrace{\mathsf{S8FS-C}}_{(1)} \underbrace{\square}_{(2)} \underbrace{\square}_{(3)}$

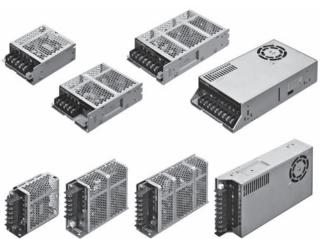
(1) Power Ra	ting
Code	Power rating
015	15 W
025	25 W
035	35 W
050	50 W
075	75 W
100	100 W
150	150 W
200	200 W
350	350 W

(2) Output Voltage

Code	Output voltage (VDC)
05	5 V
12	12 V
15	15 V
24	24 V
36	36 V
48	48 V

(3) Configuration

Code	Terminal Block Direction				
Blank	Models with terminal block facing upward				
J	Models with terminal block facing forward	, PP			
D	Models with DIN rail				



S8FS-C

Ordering Information

List of Models

Note: For details on normal stock models, contact your nearest OMRON representative.

ower rating	Input voltage	Output voltage (VDC)	Output current	Built-in fan	Model with terminal block facing upward	Model with terminal block facing forward	Model wtił DIN rail
		5 V	3 A			S8FS-C01505J	S8FS-C0150
45.144		12 V	1.3 A			S8FS-C01512J	S8FS-C0151
15 W		15 V	1 A			S8FS-C01515J	S8FS-C0151
		24 V	0.7 A			S8FS-C01524J	S8FS-C0152
		5 V	5 A		S8FS-C02505	S8FS-C02505J	S8FS-C0250
25 W		12 V	2.1 A		S8FS-C02512	S8FS-C02512J	S8FS-C0251
25 VV		15 V	1.7 A		S8FS-C02515	S8FS-C02515J	S8FS-C025
		24 V	1.1 A		S8FS-C02524	S8FS-C02524J	S8FS-C025
		5 V	7 A		S8FS-C03505	S8FS-C03505J	S8FS-C035
35 W	100 to 240 VAC	12 V	3 A		S8FS-C03512	S8FS-C03512J	S8FS-C035
55 W	(allowable range: 85 to 264 VAC or	15 V	2.4 A		S8FS-C03515	S8FS-C03515J	S8FS-C035
	120 to 370 VDC	24 V	1.5 A		S8FS-C03524	S8FS-C03524J	S8FS-C035
	*1)	5 V	10 A		S8FS-C05005	S8FS-C05005J	S8FS-C050
		12 V	4.2 A		S8FS-C05012	S8FS-C05012J	S8FS-C050
50 W		15 V	3.4 A		S8FS-C05015	S8FS-C05015J	S8FS-C050
		24 V	2.2 A		S8FS-C05024	S8FS-C05024J	S8FS-C050
		48 V	1.1 A		S8FS-C05048	S8FS-C05048J	S8FS-C050
	_	5 V	14 A		S8FS-C07505	S8FS-C07505J	S8FS-C075
		12 V	6.2 A		S8FS-C07512	S8FS-C07512J	S8FS-C075
75 W	-	15 V	5 A	None	S8FS-C07515	S8FS-C07515J	S8FS-C075
		24 V	3.2 A		S8FS-C07524	S8FS-C07524J	S8FS-C075
		48 V	1.6 A		S8FS-C07548	S8FS-C07548J	S8FS-C075
100 W	100 to 120 VAC,	5 V	20 A		S8FS-C10005	S8FS-C10005J	S8FS-C100
	200 to 240 VAC (allowable range:	12 V	8.5 A		S8FS-C10012	S8FS-C10012J	S8FS-C100
	85 to 132 VAC,	15 V	7 A		S8FS-C10015	S8FS-C10015J	S8FS-C100
	176 to 264 VAC, or 248 to 373 VDC	24 V	4.5 A		S8FS-C10024	S8FS-C10024J	S8FS-C1002
	(Select with the switch.)	36 V	2.8 A		S8FS-C10036	S8FS-C10036J	S8FS-C100
	*2)	48 V	2.3 A		S8FS-C10048	S8FS-C10048J	S8FS-C1004
		5 V	26 A		S8FS-C15005	S8FS-C15005J	S8FS-C150
		12 V	12.5 A		S8FS-C15012	S8FS-C15012J	S8FS-C150
150 W		15 V	10 A		S8FS-C15015	S8FS-C15015J	S8FS-C150
		24 V	6.5 A		S8FS-C15024	S8FS-C15024J	S8FS-C1502
		36 V	4.3 A		S8FS-C15036	S8FS-C15036J	S8FS-C150
	100 to 120 VAC, 200 to 240 VAC	48 V	3.3 A		S8FS-C15048	S8FS-C15048J	S8FS-C1504
	(allowable range:	5 V	40 A		S8FS-C20005	S8FS-C20005J	S8FS-C200
	90 to 132 VAC,	12 V	17 A		S8FS-C20012	S8FS-C20012J	S8FS-C200
200 W	180 to 264 VAC, or 254 to 373 VDC	24 V	8.8 A		S8FS-C20024	S8FS-C20024J	S8FS-C2002
	(Select with the switch.)	36 V	5.9 A		S8FS-C20036	S8FS-C20036J	S8FS-C200
	*2)	48 V	4.43 A		S8FS-C20048	S8FS-C20048J	S8FS-C2004
		5 V	60 A		S8FS-C35005	S8FS-C35005J	S8FS-C350
		12 V	29 A		S8FS-C35012	S8FS-C35012J	S8FS-C350
350 W		24 V	14.6 A	Yes	S8FS-C35024	S8FS-C35024J	S8FS-C3502
		36 V	9.7 A		S8FS-C35036	S8FS-C35036J	S8FS-C3503
		48 V	7.32 A		S8FS-C35048	S8FS-C35048J	S8FS-C3504

Note: You can use brackets that are sold separately to mount the Power Supplies to DIN Rail. Refer to Mounting Brackets (Order Separately) on page 30.

*1. The range for compliance with EC Directives and safety standards (UL, EN, etc.) is 100 to 240 VAC.
*2. The range for compliance with EC Directives and safety standards (UL, EN, etc.) is 100 to 120 VAC, 200 to 240 VAC.

Ratings, Characteristics, and Functions

		Power rating			15 W				
Item	Outpu	ut voltage (VDC)	5 V	12 V	15 V	24 V			
Efficienc	ar ala	115 VAC input	80% typ.	84% typ.	84% typ.	85% typ.			
Enicienc	y *	230 VAC input	82% typ.	85% typ.	86% typ.	87% typ.			
	Voltage range *				L terminal for the DC input is				
				Derating is required accord	ding to the input voltage. Refe	r to <i>Derating Curves</i> on page 19.)			
	Frequency *		50 /60 Hz (47 to 450 Hz) 0.3 A typ.						
	Current *	115 VAC input 230 VAC input	0.19 A typ.						
Input	Power factor	250 VAC Input							
	r ower factor	115 VAC input	0.05 mA	0.05 mA	0.05 mA	0.05 mA			
	Leakage current	230 VAC input	0.10 mA 0.10 mA 0.10 mA 0.10 mA						
	Inrush current *	115 VAC input	16 A typ.						
	(for a cold start at 25°)	230 VAC input	32 A typ.						
	Rated Output Curr		3 A	1.3 A	1 A	0.7 A			
	Voltage adjustmer		-10% to 10% (with V. AD	J)					
	Ripple & Noise	100 to 240							
	voltage *	VAC	30 mVp-p max.	30 mVp-p max.	40 mVp-p max.	30 mVp-p max.			
	Input variation infl	input	0.5% max.						
	Load variation infl		1.0% max.						
Output		100 to 240	1.070 max.						
	Temperature vari- ation influence	VAC input	0.03%/°C max.						
	Startup time *	115 VAC input	490 ms typ.	500 ms typ.	470 ms typ.	480 ms typ.			
	- tartap time 🕈	230 VAC input	470 ms typ.	480 ms typ.	450 ms typ.	460 ms typ.			
	Hold time *	115 VAC input	14 ms typ.	16 ms typ.	18 ms typ.	15 ms typ.			
		230 VAC input	83 ms typ.	87 ms typ.	92 ms typ.	79 ms typ.			
	Overload protection	on	Yes, automatic reset						
	Overvoltage prote		· •	ted output voltage, power	shut off (shut off the input vo	Itage and turn on the input again)			
Addi-	Overheat protection	on	No						
tional func-	Series operation		· ·	upplies, external diodes ar	. ,				
tions	Parallel operation			eration is possible, externa	al diodes are required.)				
	Remote sensing Remote control		No No						
	Output indicator		Yes (LED: Green)						
	output indicator		,	en all input terminals and c	output terminals) current cuto	ff 20 mA			
Insula-	Withstand voltage			•	PE terminals) current cutoff 2				
tion	j		1 kVAC for 1 min. (between all output terminals and PE terminals) current cutoff 20 mA						
	Insulation resistar	ice	100 M Ω min. (between all output terminals and all input terminals/PE terminals) at 500 VDC						
	Ambient operating	g temperature	-20 to 60°C (Derating is required according to the temperature. Refer to <i>Derating Curves</i> on page 18.) (with no condensation or icing)						
	Storage temperatu	ıre	-40 to 85°C (with no condensation or icing)						
Envi- ronment	Ambient operating	g humidity	20% to 90% (Storage humidity: 10% to 95%)						
	Vibration resistan	се		alf amplitude for 2 h each i alf amplitude for 1 h each i					
	Shock resistance		150 m/s ² , 3 times each in	$\pm X$, $\pm Y$, $\pm Z$ directions					
Reliabil-	MTBF		135,000 hrs min.						
ity	Life expectancy *		10 years min.						
Con-	Dimensions (W×H	XD)	Refer to <i>Dimensions</i> on page 24.						
struc-	Weight		150 g max.						
tion	Cooling fan		No						
	Degree of protecti Harmonic current								
	Harmonic current	Conducted	Conforms to EN 61000-3-2, GB17625.1 Conforms to EN 61204-3 Class B, EN 55011 Class B, GB9254						
	ЕМІ	Emissions Radiated		Class B, EN 55011 Class Class B, EN 55011 Class					
		Emissions			J, UD7204				
	EMS		Conforms to EN 61204-3	high severity levels					
Stan- dards	Safety Standards		Approved Standards UL : cURus UL 62368-1 (CSA: cURus C22.2 No62 CCC: GB4943 Conformed Standards EN: EN 62368-1 OVC II F RCM (EN61000-6-4) BIS: IS 13252 (Part1) (5 \	Pol2					
	Marine Standards		No	·, _ · · • • · · · , · ·					
	SEMI		No						

	•	Power rating	- 1/	40.14	25 W	45.14	0.11/		
tem	Outp	ut voltage (VDC)	5 V	12 V		15 V	24 V		
fficiency	y *	115 VAC input	80% typ.	84% typ.	85% typ.		86% typ.		
		230 VAC input	82% typ.	86% typ.	88% typ.		88% typ.		
	Voltage range *		Single phase 85 to 264 VAC, 120 to 370 VDC (The L terminal for the DC input is the positive side and safety standards do not apply.) (Derating is required according to the input voltage. Refer to <i>Derating Curves</i> on page 1						
	Frequency *		50 /60 Hz (47 to 450 Hz)						
	Trequency +	115 VAC input	0.49 A typ.						
	Current *	230 VAC input	0.3 A typ.						
nput	Power factor	200 VAO input							
		115 VAC input	0.10 mA	0.10 mA	0.10 mA		0.10 mA		
	Leakage current	230 VAC input	0.20 mA	0.20 mA	0.20 mA		0.20 mA		
	Inrush current *	115 VAC input	16 A typ.						
	(for a cold start at 25°)	230 VAC input	32 A typ.						
	Rated Output Curr		5 A	2.1 A	1.7 A		1.1 A		
	Voltage adjustmer		-10% to 10% (with V. Al		1.7 /		1.17		
	Ripple & Noise	100 to 240 VAC							
	voltage *	input	20 mVp-p max.	20 mVp-p max.	30 mVp-p n	nax.	40 mVp-p max.		
	Input variation inf	luence *	0.5% max.		J.				
	Load variation inf	luence *	1.0% max.						
Dutput	Temperature vari-	100 to 240 VAC	0.03%/°C max.						
	ation influence	input	0.05%/ C Max.						
	Startup time *	115 VAC input	390 ms typ.	340 ms typ.	400 ms typ.		360 ms typ.		
		230 VAC input	360 ms typ.	350 ms typ.	400 ms typ.		360 ms typ.		
	Hold time *	115 VAC input	17 ms typ.	22 ms typ.	23 ms typ.		21 ms typ.		
	noiu time 🕈	230 VAC input	103 ms typ.	113 ms typ.	117 ms typ.		112 ms typ.		
	Overload protection	on	Yes, automatic reset						
	Overvoltage prote	ction *	Yes, 115% or higher of r	ated output voltage, powe	r shut off (shut off t	ne input volta	age and turn on the input aga		
Addi-	Overheat protection	on	No						
ional S iunc- P	Series operation		Yes (For up to 2 Power	Supplies, external diodes	are required.)				
	Parallel operation		No (However, backup o	peration is possible, exter	nal diodes are requ	ired.)			
	Remote sensing		No						
	Remote control		No						
	Output indicator		Yes (LED: Green)						
			3 kVAC for 1 min. (between all input terminals and output terminals) current cutoff 20 mA						
nsula-	Withstand voltage			een all input terminals and	. ,				
tion	J		1 kVAC for 1 min. (between all output terminals and PE terminals) current cutoff 20 mA						
	Insulation resistar	Insulation resistance		100 M Ω min. (between all output terminals and all input terminals/PE terminals) at 500 VDC					
				•	•	,	Curves on page 18.) (with no		
	Ambient operating	g temperature	condensation or icing)	roquirou docoranig to the		to Doruting t			
	Storage temperatu	ıre	-40 to 85°C (with no cor	ndensation or icing)					
Envi- ronment	Ambient operating	g humidity	20% to 90% (Storage hu	umidity: 10% to 95%)					
onnent	Vibration resistan	69	10 to 55 Hz, 0.375-mm half amplitude for 2 h each in X, Y, and Z directions						
	VIDIATION TESISTAN	66	,	half amplitude for 1 h each	in X, Y, and Z direct	ctions			
	Shock resistance		,	150 m/s ² , 3 times each in $\pm X$, $\pm Y$, $\pm Z$ directions					
Reliabil-	MTBF		135,000 hrs min.						
ty	Life expectancy *	:	10 years min.						
	Dimensions (W×H	×D)	Refer to <i>Dimensions</i> on pages 21 and 24.						
Con- struc-	Weight		250 g max.						
tion	Cooling fan		No						
	Degree of protecti	on							
	Harmonic current	emissions	Conforms to EN 61000-3-2, GB17625.1						
		Conducted	Conforms to EN 61204-3	3 Class B, EN 55011 Clas	s B. GB9254				
	EMI	Emissions			-, -30201				
		Radiated	Conforms to EN 61204-3	3 Class B, EN 55011 Clas	s B, GB9254				
	EMS	Emissions	Conforms to EN 61204-3 high severity levels						
	LING			s myn seventy ievels					
Stan-				(Recognition) OVC II Pol2	2				
dards			CSA: cURus C22.2 No6						
	Safety Standards		CCC: GB4943 Conformed Standards						
			EN: EN 62368-1 OVC II	Pol2					
			RCM (EN61000-6-4)	1/ 24 1/ only) *					
	Marine Ota		BIS: IS 13252 (Part1) (5	v, ∠4 v oniy) *					
	Marine Standards		No						
	SEMI		No						

Item	Outo	Power rating ut voltage (VDC)	5 V	12 V	35 W 15 V	24 V		
	Outp	,		83% typ.	84% typ.	87% typ.		
Efficiency	/ *	115 VAC input	81% typ.	83% typ. 84% typ.				
		230 VAC input						
	Voltage range *		Single phase 85 to 264 VAC, 120 to 370 VDC (The L terminal for the DC input is the positive side and safety standards do not apply.) (Derating is required according to the input voltage. Refer to <i>Derating Curves</i> on page					
ł	Frequency *		50 /60 Hz (47 to 450 Hz)					
ł	Troquency +	115 VAC input	0.66 A typ.	-/				
	Current *	230 VAC input						
nput	Power factor	250 VAC Input	0.41 A typ.					
	Power lactor	11E VAC input	 0.15 mA	0.15 mA	0.15 mA	0.15 mA		
	Leakage current	115 VAC input	0.15 mA					
		230 VAC input	0.30 mA	0.25 mA	0.25 mA	0.25 mA		
	Inrush current *	115 VAC input	16 A typ.					
	(for a cold start at 25°)	230 VAC input	32 A typ.					
	Rated Output Curr	ent	7 A	3 A	2.4 A	1.5 A		
	Voltage adjustmen	it range *	-10% to 10% (with V. A	/DJ)		I		
	Ripple & Noise	100 to 240 VAC	80 mVp-p max.	90 mVp-p max.	90 mVp-p max.	80 mVp-p max.		
	voltage *	input						
	Input variation infl		0.5% max.					
Dutput	Load variation infl	uence *	1.0% max.					
a a p a c	Temperature vari-	100 to 240 VAC	0.03%/°C max.					
	ation influence	input	750 /	750 /	700	770		
	Startup time *	115 VAC input	750 ms typ.	750 ms typ.	760 ms typ.	770 ms typ.		
	•	230 VAC input	700 ms typ.	690 ms typ.	710 ms typ.	720 ms typ.		
	Hold time *	115 VAC input	13 ms typ.	14 ms typ.	14 ms typ.	15 ms typ.		
		230 VAC input	74 ms typ.	75 ms typ.	75 ms typ.	79 ms typ.		
	Overload protection	n	Yes, automatic reset					
	Overvoltage protect	ction *	Yes, 115% or higher of	rated output voltage, powe	r shut off (shut off the input v	oltage and turn on the input a		
Addi-	Overheat protection	n	No					
tional	Series operation		Yes (For up to 2 Power	Supplies, external diodes a	are required.)			
iunc- P ions R	Parallel operation		No (However, backup o	operation is possible, exteri	nal diodes are required.)			
	Remote sensing		No	· · ·				
	Remote control		No					
	Output indicator		Yes (LED: Green)					
			3 kVAC for 1 min. (between all input terminals and output terminals) current cutoff 20 mA					
	Withstand voltage							
Insula- tion	withstand voltage		2 kVAC for 1 min. (between all input terminals and PE terminals) current cutoff 20 mA					
			1 kVAC for 1 min. (between all output terminals and PE terminals) current cutoff 20 mA					
	Insulation resistan	ce	100 MΩ min. (between all output terminals and all input terminals/PE terminals) at 500 VDC -20 to 60° C (Derating is required according to the temperature. Refer to <i>Derating Curves</i> on page 18.) (with no					
	Ambient operating	temperature	-20 to 60°C (Derating is condensation or icing)	s required according to the	temperature. Refer to Derati	ng Curves on page 18.) (with		
	Storage temperatu	ro	-40 to 85°C (with no co	ndensation or icina)				
Envi-			l.	8,				
ronment	Ambient operating	numulty	20% to 90% (Storage h	• •	in V. V. and 7 direction-			
	Vibration resistance	ce		half amplitude for 2 h each half amplitude for 1 h each				
	Shock resistance		10 to 500 Hz, 0.26-mm half amplitude for 1 h each in X, Y, and Z directions 150 m/s ² , 3 times each in ±X, ±Y, ±Z directions					
Poliakil	MTBF		150 m/s ² , 3 times each in $\pm X$, $\pm Y$, $\pm Z$ directions 135,000 hrs min.					
Reliabil- ity	Life expectancy *		10 years min.					
,			Refer to <i>Dimensions</i> on	nades 21 and 24				
Con-	Dimensions (W×H>			1 payes 2 1 anu 24.				
struc-	Weight		250 g max.					
tion	Cooling fan		No					
	Degree of protection							
	Harmonic current	1	Conforms to EN 61000-3-2, GB17625.1					
	ЕМІ	Conducted Emissions	Conforms to EN 61204-	-3 Class B, EN 55011 Clas	s B, GB9254			
		Radiated Emissions	Conforms to EN 61204-	-3 Class B, EN 55011 Clas	s B, GB9254			
	EMS		Conforms to EN 61204-	-3 high severity levels				
Stan- dards	Safety Standards		CSA: cURus C22.2 Not CCC: GB4943 Conformed Standards	I (Recognition) OVC II Pol2 32368-1	2			
			EN: EN 62368-1 OVC II RCM (EN61000-6-4) BIS: IS 13252 (Part1) (2					
	Marine Standards		RCM (EN61000-6-4)					

 SEMI

 * Refer to Conditions on page 12.

ltem	•	Power rating	5 \/	40.14	50 W	0414	40.14			
	Outp	out voltage (VDC)	5 V	12 V	15 V	24 V	48 V			
Efficiency	y *	115 VAC input	79% typ.	83% typ.	84% typ.	86% typ.	87% typ.			
		230 VAC input	80% typ.	84% typ.	85% typ.	86% typ.	87% typ.			
	Voltage range *		Single phase 85 to 264 VAC, 120 to 370 VDC (The L terminal for the DC input is the positive side and safety standards do not apply.) (Derating is required according to the input voltage. Refer to <i>Derating Curves</i> on page 19							
-	Frequency *									
-	Frequency *		``	50 /60 Hz (47 to 450 Hz)						
	Current *	115 VAC input	0.97 A typ.							
nput	Davisa fa stan	230 VAC input	0.59 A typ.							
•	Power factor			0.05	0.05	0.05	0.05			
	Leakage current	115 VAC input	0.25 mA	0.25 mA	0.25 mA	0.25 mA	0.25 mA			
-		230 VAC input	0.60 mA	0.55 mA	0.55 mA	0.55 mA	0.55 mA			
	Inrush current *	115 VAC input	16 A typ.							
	(for a cold start at 25°)	230 VAC input	32 A typ.							
	Rated Output Curr	rent	10 A	4.2 A	3.4 A	2.2 A	1.1 A			
	Voltage adjustment range *		-10% to 10% (with V	/. ADJ)		T				
	Ripple & Noise	100 to 240 VAC	80 mVp-p max.	110 mVp-p max.	100 mVp-p max.	100 mVp-p max.	120 mVp-p max.			
-	voltage *	input								
	Input variation infl		0.5% max. 1.0% max.							
Dutput		bad variation influence *								
	Temperature vari-		0.03%/°C max.							
	ation influence	input		720	710	710	770			
	Startup time *	115 VAC input	730 ms typ.	730 ms typ.	710 ms typ.	710 ms typ.	770 ms typ.			
		230 VAC input	680 ms typ.	670 ms typ.	610 ms typ.	640 ms typ.	690 ms typ.			
	Hold time *	115 VAC input	12 ms typ.	14 ms typ.	14 ms typ.	14 ms typ.	14 ms typ.			
		230 VAC input	71 ms typ.	77 ms typ.	78 ms typ.	77 ms typ.	80 ms typ.			
	Overload protection	on	Yes, automatic reset							
	Overvoltage prote	ction *	Yes, 115% or higher of rated output voltage, power shut off (shut off the input voltage and turn on the input agai							
Addi-	Overheat protection	on	No							
ional	Series operation		Yes (For up to 2 Pov	ver Supplies, external	diodes are required.)					
tions —	Parallel operation		No (However, backu	up operation is possibl	e, external diodes are r	equired.)				
	Remote sensing		No							
	Remote control		No							
-	Output indicator		Yes (LED: Green)							
			3 kVAC for 1 min. (between all input terminals and output terminals) current cutoff 20 mA							
nsula-	Withstand voltage		2 kVAC for 1 min. (between all input terminals and PE terminals) current cutoff 20 mA							
tion	•			•	,					
			1 kVAC for 1 min. (b	elween all ouldul lenn	inals and PE terminals					
	Insulation resistan		1 kVAC for 1 min. (b 100 MΩ min. (betwe	•			DC			
	Insulation resistan	nce	100 M Ω min. (betwee	en all output terminals	and all input terminals	/PE terminals) at 500 V				
	Insulation resistan	nce	100 M Ω min. (betwee	en all output terminals		/PE terminals) at 500 V				
		nce g temperature	100 MΩ min. (betwe -20 to 60°C (Deratin condensation or icing	en all output terminals g is required accordin g)	and all input terminals, g to the temperature. R	/PE terminals) at 500 V				
Envi-	Ambient operating	nce g temperature gre	$100 \text{ M}\Omega \text{ min.}$ (betwe -20 to 60°C (Deratin condensation or icing -40 to 85°C (with no	en all output terminals	and all input terminals, g to the temperature. R	/PE terminals) at 500 V				
Envi-	Ambient operating Storage temperatu Ambient operating	nce 9 temperature 1re 9 humidity	100 MΩ min. (betwe -20 to 60°C (Deratin condensation or icing -40 to 85°C (with no 20% to 90% (Storage	en all output terminals g is required accordin g) condensation or icing e humidity: 10% to 95	and all input terminals, g to the temperature. R	PE terminals) at 500 V efer to <i>Derating Curve</i> s				
Envi-	Ambient operating Storage temperatu	nce 9 temperature 1re 9 humidity	100 MΩ min. (betwe -20 to 60°C (Deratin condensation or icing -40 to 85°C (with no 20% to 90% (Storag 10 to 55 Hz, 0.375-m	en all output terminals g is required accordin g) condensation or icing e humidity: 10% to 95 nm half amplitude for 2	and all input terminals, g to the temperature. R)) %)	PE terminals) at 500 V efer to <i>Derating Curves</i> directions				
Envi-	Ambient operating Storage temperatu Ambient operating	nce 9 temperature 1re 9 humidity	100 MΩ min. (betwe -20 to 60°C (Deratin condensation or icing -40 to 85°C (with no 20% to 90% (Storag 10 to 55 Hz, 0.375-m 10 to 500 Hz, 0.26-m	en all output terminals g is required accordin g) condensation or icing e humidity: 10% to 95 nm half amplitude for 2	and all input terminals, g to the temperature. R)) %) 2 h each in X, Y, and Z I h each in X, Y, and Z	PE terminals) at 500 V efer to <i>Derating Curves</i> directions				
Envi- onment	Ambient operating Storage temperatu Ambient operating Vibration resistant	nce 9 temperature 1re 9 humidity	100 MΩ min. (betwe -20 to 60°C (Deratin condensation or icing -40 to 85°C (with no 20% to 90% (Storag 10 to 55 Hz, 0.375-m 10 to 500 Hz, 0.26-m	en all output terminals g is required accordin g) condensation or icing e humidity: 10% to 95 nm half amplitude for 2 nm half amplitude for 2	and all input terminals, g to the temperature. R)) %) 2 h each in X, Y, and Z I h each in X, Y, and Z	PE terminals) at 500 V efer to <i>Derating Curves</i> directions				
Envi- onment	Ambient operating Storage temperatu Ambient operating Vibration resistance Shock resistance	nce 9 temperature 9 humidity ce	100 MΩ min. (betwe -20 to 60°C (Deratin condensation or icin -40 to 85°C (with no 20% to 90% (Storag 10 to 55 Hz, 0.375-n 10 to 500 Hz, 0.26-n 150 m/s ² , 3 times ea	en all output terminals g is required accordin g) condensation or icing e humidity: 10% to 95 nm half amplitude for 2 nm half amplitude for 2	and all input terminals, g to the temperature. R)) %) 2 h each in X, Y, and Z I h each in X, Y, and Z	PE terminals) at 500 V efer to <i>Derating Curves</i> directions				
Envi- onment	Ambient operating Storage temperatu Ambient operating Vibration resistance Shock resistance MTBF	nce 9 temperature 9 humidity ce	100 MΩ min. (betwe -20 to 60°C (Deratin condensation or icing -40 to 85°C (with no 20% to 90% (Storag 10 to 55 Hz, 0.375-m 10 to 500 Hz, 0.26-m 150 m/s ² , 3 times ea 135,000 hrs min. 10 years min.	en all output terminals g is required accordin g) condensation or icing e humidity: 10% to 95 nm half amplitude for 2 nm half amplitude for 2	and all input terminals, g to the temperature. R)) %) 2 h each in X, Y, and Z I h each in X, Y, and Z	PE terminals) at 500 V efer to <i>Derating Curves</i> directions				
Envi- ronment Reliabil- ty Con-	Ambient operating Storage temperatu Ambient operating Vibration resistance Shock resistance MTBF Life expectancy *	nce 9 temperature 9 humidity ce	100 MΩ min. (betwe -20 to 60°C (Deratin condensation or icing -40 to 85°C (with no 20% to 90% (Storag 10 to 55 Hz, 0.375-m 10 to 500 Hz, 0.26-m 150 m/s ² , 3 times ea 135,000 hrs min. 10 years min.	en all output terminals g is required accordin g) condensation or icing e humidity: 10% to 95 nm half amplitude for 2 ch in ±X, ±Y, ±Z direc	and all input terminals, g to the temperature. R)) %) 2 h each in X, Y, and Z I h each in X, Y, and Z	PE terminals) at 500 V efer to <i>Derating Curves</i> directions				
Envi- ronment Reliabil- ty Con- struc-	Ambient operating Storage temperatu Ambient operating Vibration resistance Shock resistance MTBF Life expectancy * Dimensions (W×H)	nce 9 temperature 9 humidity ce	100 MΩ min. (betwe -20 to 60°C (Deratin condensation or icing -40 to 85°C (with no 20% to 90% (Storagy 10 to 55 Hz, 0.375-m 10 to 500 Hz, 0.26-m 150 m/s ² , 3 times ea 135,000 hrs min. 10 years min. Refer to <i>Dimensions</i>	en all output terminals g is required accordin g) condensation or icing e humidity: 10% to 95 nm half amplitude for 2 ch in ±X, ±Y, ±Z direc	and all input terminals, g to the temperature. R)) %) 2 h each in X, Y, and Z I h each in X, Y, and Z	PE terminals) at 500 V efer to <i>Derating Curves</i> directions				
Envi- onment Reliabil- ty Con- struc-	Ambient operating Storage temperatu Ambient operating Vibration resistance Shock resistance MTBF Life expectancy # Dimensions (W×H) Weight Cooling fan	nce y temperature y humidity ce x ×D)	100 MΩ min. (betwe -20 to 60°C (Deratin condensation or icing -40 to 85°C (with no 20% to 90% (Storagy 10 to 55 Hz, 0.375-m 10 to 500 Hz, 0.26-m 150 m/s ² , 3 times ea 135,000 hrs min. 10 years min. Refer to <i>Dimensions</i> 300 g max.	en all output terminals g is required accordin g) condensation or icing e humidity: 10% to 95 nm half amplitude for 2 ch in ±X, ±Y, ±Z direc	and all input terminals, g to the temperature. R)) %) 2 h each in X, Y, and Z I h each in X, Y, and Z	PE terminals) at 500 V efer to <i>Derating Curves</i> directions				
Envi- onment Reliabil- ty Con- struc-	Ambient operating Storage temperatu Ambient operating Vibration resistance Shock resistance MTBF Life expectancy * Dimensions (W×H) Weight Cooling fan Degree of protection	nce y temperature y humidity ce : xD) on	100 MΩ min. (betwe -20 to 60°C (Deratin condensation or icing -40 to 85°C (with no 20% to 90% (Storag) 10 to 55 Hz, 0.375-n 10 to 500 Hz, 0.26-n 150 m/s ² , 3 times ea 135,000 hrs min. 10 years min. Refer to <i>Dimensions</i> 300 g max. No 	en all output terminals g is required accordin g) condensation or icing e humidity: 10% to 95 m half amplitude for 2 m half amplitude for 2 ch in ±X, ±Y, ±Z direc	and all input terminals, g to the temperature. R)) %) 2 h each in X, Y, and Z I h each in X, Y, and Z	PE terminals) at 500 V efer to <i>Derating Curves</i> directions				
Envi- ronment Reliabil- ty Con- struc-	Ambient operating Storage temperatu Ambient operating Vibration resistance Shock resistance MTBF Life expectancy # Dimensions (W×H) Weight Cooling fan	nce g temperature g humidity ce xD) on emissions	100 MΩ min. (betwe -20 to 60°C (Deratin condensation or icing -40 to 85°C (with no 20% to 90% (Storag 10 to 55 Hz, 0.375-m 10 to 500 Hz, 0.26-m 135,000 hrs min. 10 years min. Refer to <i>Dimensions</i> 300 g max. No Conforms to EN 610	en all output terminals g is required accordin g) condensation or icing e humidity: 10% to 95 nm half amplitude for 2 ch in ±X, ±Y, ±Z direc on pages 21 and 25.	and all input terminals, g to the temperature. R)) %) 2 h each in X, Y, and Z I h each in X, Y, and Z tions	PE terminals) at 500 V efer to <i>Derating Curves</i> directions				
Envi- onment Reliabil- ty Con- struc-	Ambient operating Storage temperatu Ambient operating Vibration resistance Shock resistance MTBF Life expectancy * Dimensions (W×H) Weight Cooling fan Degree of protection	nce y temperature y humidity ce : xD) on	100 MΩ min. (betwe -20 to 60°C (Deratin condensation or icing -40 to 85°C (with no 20% to 90% (Storag 10 to 55 Hz, 0.375-m 10 to 500 Hz, 0.26-m 135,000 hrs min. 10 years min. Refer to <i>Dimensions</i> 300 g max. No Conforms to EN 610	en all output terminals g is required accordin g) condensation or icing e humidity: 10% to 95 m half amplitude for 2 m half amplitude for 2 ch in ±X, ±Y, ±Z direc	and all input terminals, g to the temperature. R)) %) 2 h each in X, Y, and Z I h each in X, Y, and Z tions	PE terminals) at 500 V efer to <i>Derating Curves</i> directions				
Envi- onment Reliabil- ty Con- struc-	Ambient operating Storage temperatu Ambient operating Vibration resistance Shock resistance MTBF Life expectancy * Dimensions (W×H) Weight Cooling fan Degree of protection	nce g temperature g humidity ce ×D) on emissions Conducted	100 MΩ min. (betwe -20 to 60°C (Deratin condensation or icing -40 to 85°C (with no 20% to 90% (Storag 10 to 55 Hz, 0.375-m 10 to 500 Hz, 0.26-m 150 m/s ² , 3 times ea 135,000 hrs min. 10 years min. Refer to <i>Dimensions</i> 300 g max. No Conforms to EN 610 Conforms to EN 612	en all output terminals g is required accordin g) condensation or icing e humidity: 10% to 95 nm half amplitude for 2 nm half amplitude for 2 ch in ±X, ±Y, ±Z direc on pages 21 and 25.	and all input terminals, g to the temperature. R i) %) 2 h each in X, Y, and Z 1 h each in X, Y, and Z tions 11 Class B, GB9254	PE terminals) at 500 V efer to <i>Derating Curves</i> directions				
Envi- onment Reliabil- ty Con- truc-	Ambient operating Storage temperatu Ambient operating Vibration resistance Shock resistance MTBF Life expectancy * Dimensions (W×H) Weight Cooling fan Degree of protection	nce g temperature g humidity ce x xD) on emissions Conducted Emissions	100 MΩ min. (betwe -20 to 60°C (Deratin condensation or icing -40 to 85°C (with no 20% to 90% (Storag 10 to 55 Hz, 0.375-m 10 to 500 Hz, 0.26-m 150 m/s ² , 3 times ea 135,000 hrs min. 10 years min. Refer to <i>Dimensions</i> 300 g max. No Conforms to EN 610 Conforms to EN 612	en all output terminals g is required accordin g) condensation or icing e humidity: 10% to 95 nm half amplitude for 2 ch in ±X, ±Y, ±Z direc on pages 21 and 25.	and all input terminals, g to the temperature. R i) %) 2 h each in X, Y, and Z 1 h each in X, Y, and Z tions 11 Class B, GB9254	PE terminals) at 500 V efer to <i>Derating Curves</i> directions				
invi- onment Reliabil- Y Con- truc-	Ambient operating Storage temperatu Ambient operating Vibration resistance Shock resistance MTBF Life expectancy * Dimensions (W×H) Weight Cooling fan Degree of protection	arce g temperature g humidity ce ×D) on emissions Conducted Emissions Radiated	100 MΩ min. (betwe -20 to 60° C (Deratin condensation or icing -40 to 85° C (with no 20% to 90% (Storagy 10 to 55 Hz, 0.375-m 10 to 500 Hz, 0.26-m 150 m/s ² , 3 times ea 135,000 hrs min. 10 years min. Refer to <i>Dimensions</i> 300 g max. No Conforms to EN 612 Conforms to EN 612	en all output terminals g is required accordin g) condensation or icing e humidity: 10% to 95 nm half amplitude for 2 nm half amplitude for 2 ch in ±X, ±Y, ±Z direc on pages 21 and 25.	and all input terminals, g to the temperature. R () %) 2 h each in X, Y, and Z I h each in X, Y, and Z tions 11 Class B, GB9254 11 Class B, GB9254	PE terminals) at 500 V efer to <i>Derating Curves</i> directions				
Envi- ronment Reliabil- ty Con- struc- ion	Ambient operating Storage temperatu Ambient operating Vibration resistance MTBF Life expectancy * Dimensions (W×H) Weight Cooling fan Degree of protection Harmonic current of EMI	arce g temperature g humidity ce ×D) on emissions Conducted Emissions Radiated	100 MΩ min. (betwe -20 to 60° C (Deratin condensation or icing -40 to 85° C (with no 20% to 90% (Storagy 10 to 55 Hz, 0.375-m 10 to 500 Hz, 0.26-m 150 m/s ² , 3 times ea 135,000 hrs min. 10 years min. Refer to <i>Dimensions</i> 300 g max. No Conforms to EN 612 Conforms to EN 612	en all output terminals g is required accordin g) condensation or icing e humidity: 10% to 95 im half amplitude for ch in ±X, ±Y, ±Z direc con pages 21 and 25. 00-3-2, GB17625.1 04-3 Class B, EN 550 04-3 Class B, EN 550	and all input terminals, g to the temperature. R () %) 2 h each in X, Y, and Z I h each in X, Y, and Z tions 11 Class B, GB9254 11 Class B, GB9254	PE terminals) at 500 V efer to <i>Derating Curves</i> directions				
Envi- ronment ty Con- struc- tion	Ambient operating Storage temperatu Ambient operating Vibration resistance MTBF Life expectancy * Dimensions (W×H) Weight Cooling fan Degree of protection Harmonic current of EMI	arce g temperature g humidity ce ×D) on emissions Conducted Emissions Radiated	100 MΩ min. (betwe -20 to 60°C (Deratin condensation or icing -40 to 85°C (with no 20% to 90% (Storag 10 to 55 Hz, 0.375-n 10 to 500 Hz, 0.26-n 150 m/s ² , 3 times ea 135,000 hrs min. 10 years min. Refer to <i>Dimensions</i> 300 g max. No Conforms to EN 610 Conforms to EN 612 Conforms to	en all output terminals g is required accordin g) condensation or icing e humidity: 10% to 95 nm half amplitude for ch in ±X, ±Y, ±Z direc on pages 21 and 25. 00-3-2, GB17625.1 04-3 Class B, EN 550 04-3 Class B, EN 550 04-3 high severity leve i8-1 (Recognition) OV	and all input terminals, g to the temperature. R)) %) 2 h each in X, Y, and Z I h each in X, Y, and Z tions 11 Class B, GB9254 11 Class B, GB9254 els	PE terminals) at 500 V efer to <i>Derating Curves</i> directions				
Envi- ronment Reliabil- ity Con- struc- tion	Ambient operating Storage temperatu Ambient operating Vibration resistance MTBF Life expectancy * Dimensions (W×H) Weight Cooling fan Degree of protection Harmonic current of EMI EMS	arce g temperature g humidity ce ×D) on emissions Conducted Emissions Radiated	100 MΩ min. (betwe -20 to 60°C (Deratin condensation or icing -40 to 85°C (with no 20% to 90% (Storag) 10 to 55 Hz, 0.375-m 10 to 500 Hz, 0.26-m 150 m/s ² , 3 times ea 135,000 hrs min. 10 years min. Refer to <i>Dimensions</i> 300 g max. No Conforms to EN 610 Conforms to EN 612 Conforms to	en all output terminals g is required accordin g) condensation or icing e humidity: 10% to 95 nm half amplitude for ch in ±X, ±Y, ±Z direc on pages 21 and 25. 00-3-2, GB17625.1 04-3 Class B, EN 550 04-3 Class B, EN 550 04-3 high severity leve i8-1 (Recognition) OV	and all input terminals, g to the temperature. R)) %) 2 h each in X, Y, and Z I h each in X, Y, and Z tions 11 Class B, GB9254 11 Class B, GB9254 els	PE terminals) at 500 V efer to <i>Derating Curves</i> directions				
Envi- ronment ty Con- struc- tion	Ambient operating Storage temperatu Ambient operating Vibration resistance MTBF Life expectancy * Dimensions (W×H) Weight Cooling fan Degree of protection Harmonic current of EMI	arce g temperature g humidity ce ×D) on emissions Conducted Emissions Radiated	100 MΩ min. (betwe -20 to 60°C (Deratin condensation or icing -40 to 85°C (with no 20% to 90% (Storag 10 to 55 Hz, 0.375-n 10 to 500 Hz, 0.26-n 150 m/s ² , 3 times ea 135,000 hrs min. 10 years min. Refer to <i>Dimensions</i> 300 g max. No Conforms to EN 610 Conforms to EN 612 Conforms to	en all output terminals g is required accordin g) condensation or icing e humidity: 10% to 95 im half amplitude for ch in ±X, ±Y, ±Z direc con pages 21 and 25. 00-3-2, GB17625.1 04-3 Class B, EN 550 04-3 Class B, EN 550 04-3 high severity leve i8-1 (Recognition) OV No62368-1	and all input terminals, g to the temperature. R)) %) 2 h each in X, Y, and Z I h each in X, Y, and Z tions 11 Class B, GB9254 11 Class B, GB9254 els	PE terminals) at 500 V efer to <i>Derating Curves</i> directions				
Envi- ronment ty Con- struc- tion	Ambient operating Storage temperatu Ambient operating Vibration resistance MTBF Life expectancy * Dimensions (W×H) Weight Cooling fan Degree of protection Harmonic current of EMI EMS	arce g temperature g humidity ce ×D) on emissions Conducted Emissions Radiated	100 MΩ min. (betwe -20 to 60°C (Deratin condensation or icing -40 to 85°C (with no 20% to 90% (Storag 10 to 55 Hz, 0.375-n 10 to 500 Hz, 0.26-n 150 m/s ² , 3 times ea 135,000 hrs min. 10 years min. Refer to <i>Dimensions</i> 300 g max. No Conforms to EN 610 Conforms to EN 612 Conforms to E	en all output terminals g is required accordin g) condensation or icing e humidity: 10% to 95 im half amplitude for 2 im half amplitude for 2 ch in ±X, ±Y, ±Z direc con pages 21 and 25. 00-3-2, GB17625.1 04-3 Class B, EN 550 04-3 Class B, EN 550 04-3 high severity leve i8-1 (Recognition) OV No62368-1 ds C II Pol2	and all input terminals, g to the temperature. R)) %) 2 h each in X, Y, and Z I h each in X, Y, and Z tions 11 Class B, GB9254 11 Class B, GB9254 els	PE terminals) at 500 V efer to <i>Derating Curves</i> directions				
Envi- ronment Reliabil- ty Con- struc- ion	Ambient operating Storage temperatu Ambient operating Vibration resistance MTBF Life expectancy * Dimensions (W×H) Weight Cooling fan Degree of protection Harmonic current of EMI EMS	arce g temperature g humidity ce ×D) on emissions Conducted Emissions Radiated	100 MΩ min. (betwe -20 to 60°C (Deratin condensation or icing -40 to 85°C (with no 20% to 90% (Storag) 10 to 55 Hz, 0.375-n 10 to 500 Hz, 0.26-n 150 m/s ² , 3 times ea 135,000 hrs min. 10 years min. Refer to <i>Dimensions</i> 300 g max. No Conforms to EN 610 Conforms to EN 612 Conforms to EN 612 Conformed Standards Conformed Standards Confor	en all output terminals g is required accordin g) condensation or icing e humidity: 10% to 95 nm half amplitude for ch in ±X, ±Y, ±Z direc ch in ±X, ±Y, ±Z direc con pages 21 and 25. 00-3-2, GB17625.1 04-3 Class B, EN 550 04-3 Class B, EN 550 04-3 high severity leve a8-1 (Recognition) OV/ No62368-1 ds C II Pol2	and all input terminals, g to the temperature. R i) %) 2 h each in X, Y, and Z 1 h each in X, Y, and Z tions 11 Class B, GB9254 11 Class B, GB9254 els C II Pol2	PE terminals) at 500 V efer to <i>Derating Curves</i> directions				
Envi- onment Reliabil- ty Con- struc- ion	Ambient operating Storage temperatu Ambient operating Vibration resistance MTBF Life expectancy * Dimensions (W×H) Weight Cooling fan Degree of protection Harmonic current of EMI EMS	arce g temperature g humidity ce ×D) on emissions Conducted Emissions Radiated	100 MΩ min. (betwe -20 to 60°C (Deratin condensation or icing -40 to 85°C (with no 20% to 90% (Storag) 10 to 55 Hz, 0.375-n 10 to 500 Hz, 0.26-n 150 m/s ² , 3 times ea 135,000 hrs min. 10 years min. Refer to <i>Dimensions</i> 300 g max. No Conforms to EN 610 Conforms to EN 612 Conforms to EN 612 Conformed Standards Conformed Standards Confor	en all output terminals g is required accordin g) condensation or icing e humidity: 10% to 95 im half amplitude for 2 im half amplitude for 2 ch in ±X, ±Y, ±Z direc con pages 21 and 25. 00-3-2, GB17625.1 04-3 Class B, EN 550 04-3 Class B, EN 550 04-3 high severity leve i8-1 (Recognition) OV No62368-1 ds C II Pol2	and all input terminals, g to the temperature. R i) %) 2 h each in X, Y, and Z 1 h each in X, Y, and Z tions 11 Class B, GB9254 11 Class B, GB9254 els C II Pol2	PE terminals) at 500 V efer to <i>Derating Curves</i> directions				

Itom	0	Power rating	5 V	12 V	75 W 15 V	24 V	48 V			
tem	Outp	ut voltage (VDC)	-							
Efficiency	/ *	115 VAC input	75% typ.	83% typ.	84% typ.	87% typ.	87% typ.			
		230 VAC input	77% typ.	83% typ.	84% typ.	87% typ.	87% typ.			
	Voltage range *		Single phase 85 to 264 VAC, 120 to 370 VDC (The L terminal for the DC input is the positive side and safety standards do not apply.) (Derating is required according to the input voltage. Refer to <i>Derating Curves</i> on page 19							
			50 /60 Hz (47 to 450 Hz)							
	Frequency *									
	Current *	115 VAC input	1.4 A typ.							
nput		230 VAC input	0.83 A typ.							
nput	Power factor									
	Leakage current	115 VAC input	0.25 mA	0.25 mA	0.25 mA	0.25 mA	0.25 mA			
		230 VAC input	0.60 mA	0.60 mA	0.60 mA	0.60 mA	0.60 mA			
	Inrush current *	115 VAC input	16 A typ.							
	(for a cold start at 25°)	230 VAC input	32 A typ.							
	Rated Output Curr	ent	14 A	6.2 A	5 A	3.2 A	1.6 A			
	Voltage adjustmen	nt range *	-10% to 10% (with \	/. ADJ)						
	Ripple & Noise	100 to 240 VAC	80 mVp-p max.	110 mVp-p max.	90 mVp-p max.	110 mVp-p max.	140 mVp-p max.			
	voltage *	input	oo mvp-p max.	no mvp-p max.	30 mvp-p max.	n to mvp-p max.	140 mvp-p max.			
	Input variation infl	uence *	0.5% max.							
Dutput	Load variation infl	uence *	1.0% max.							
aiput	Temperature vari-		0.03%/°C max.							
	ation influence	input								
	Startup time *	115 VAC input	750 ms typ.	720 ms typ.	730 ms typ.	750 ms typ.	700 ms typ.			
		230 VAC input	710 ms typ.	680 ms typ.	690 ms typ.	690 ms typ.	730 ms typ.			
	Hold time *	115 VAC input	12 ms typ.	13 ms typ.	13 ms typ.	14 ms typ.	15 ms typ.			
	noid time 🖡	230 VAC input	75 ms typ.	74 ms typ.	74 ms typ.	76 ms typ.	78 ms typ.			
	Overload protection	on	Yes, automatic reset	t						
	Overvoltage prote	ction *	Yes, 115% or higher of rated output voltage, power shut off (shut off the input voltage and turn on the input ag							
	Overheat protection	on	No							
Addi- ional	Series operation		Yes (For up to 2 Pov	wer Supplies, external	diodes are required.)					
func- P tions R	Parallel operation		No (However, back	up operation is possib	le, external diodes are	required.)				
	Remote sensing		No		,	, ,				
	Remote control		No							
	Output indicator		Yes (LED: Green)							
	output maleator		. ,	etween all input termi	als and output termin	als) current cutoff 20 m/	Δ			
	Withstand voltage		3 kVAC for 1 min. (between all input terminals and output terminals) current cutoff 20 mA 2 kVAC for 1 min. (between all input terminals and PE terminals) current cutoff 20 mA							
nsula- ion	withstand voltage		1 kVAC for 1 min. (between all output terminals and PE terminals) current cutoff 20 mA							
	1		1 kVAC for 1 min. (between all output terminals and PE terminals) current cutoff 20 mA 100 M Ω min. (between all output terminals and all input terminals/PE terminals) at 500 VDC							
	Insulation resistan	ICe	 -20 to 60°C (Derating is required according to the temperature. Refer to <i>Derating Curves</i> on page 18.) (with no 							
	Ambient operating	temperature	–20 to 60°C (Deratin condensation or icin		g to the temperature.	Refer to Derating Curves	s on page 18.) (with no			
	Storage temperatu	Iro		0)	1)					
Envi-	Ambient operating		-40 to 85°C (with no condensation or icing) 20% to 90% (Storage humidity: 10% to 95%)							
ronment	Ambient Operating	inumaty			,	directions				
	Vibration resistance	ce			2 h each in X, Y, and Z 1 h each in X, Y, and Z					
	Shock resistance									
Reliabil-	MTBF		150 m/s ² , 3 times each in ±X, ±Y, ±Z directions 135.000 hrs min.							
ty	Life expectancy *									
	Dimensions (W×H		10 years min. Refer to <i>Dimensions</i> on pages 22 and 25.							
Con-	•			on payes 22 and 23.						
struc-	Weight		350 g max.							
ion	Cooling fan		No							
	Degree of protection									
	Harmonic current	1	Conforms to EN 610	000-3-2, GB17625.1						
		Conducted Emissions	Conforms to EN 612	204-3 Class B, EN 550	11 Class B, GB9254					
	EMI									
		Radiated Emissions	Conforms to EN 612	204-3 Class B, EN 550	11 Class B, GB9254					
	EMS		Conforms to EN 612	04-3 high severity lev	els					
			Approved Standards	° ,						
Stan-			UL : cURus UL 6236	68-1 (Recognition) OV	C II Pol2					
dards			CSA: cURus C22.2							
	Safety Standards		CCC: GB4943 Conformed Standard	de						
			EN: EN 62368-1 OV							
			RCM (EN61000-6-4)						
			BIS: IS 13252 (Part1	í) (24 V, 48 V only) *						
	Marine Standards		No							

ltem		Output voltage (VDC)	5 V	12 V	15 V	24 V	36 V	48 V		
teni		,	-		-			-		
Efficiency	y *	115 VAC input	80% typ.	82% typ.	83% typ.	85% typ.	86% typ.	87% typ.		
	Voltage range *	230 VAC input	(The L terminal	for the DC input is	s the positive side a	and safety stand	87% typ. ect with the switch. ards do not apply.) <i>g Curves</i> on page 1	88% typ.		
	Frequency *		(Derating is required according to the input voltage. Refer to <i>Derating Curves</i> on page 19.) 50 /60 Hz (47 to 450 Hz)							
		115 VAC input	2 A typ.							
nnut	Current *	230 VAC input	1.1 A typ.							
nput	Power factor									
		115 VAC input	0.35 mA	0.35 mA	0.35 mA	0.35 mA	0.40 mA	0.40 mA		
	Leakage current	230 VAC input	0.60 mA	0.55 mA	0.60 mA	0.50 mA	0.60 mA	0.60 mA		
	Inrush current *	115 VAC input	32 A typ.	-1	-		I	1		
	(for a cold start at 25°)	230 VAC input	32 A typ.							
	Rated Output Curr	ent	20 A	8.5 A	7 A	4.5 A	2.8 A	2.3 A		
	Voltage adjustmen	it range *	-10% to 10% (w	vith V. ADJ)						
	Ripple & Noise voltage *	100 to 120 VAC/200 to 240 VAC input	70 mVp-p max.	100 mVp-p max.	70 mVp-p max.	120 mVp-p max.	90 mVp-p max.	120 mVp-p max.		
	Input variation infl	uence *	0.5% max.							
Output	Load variation infl	1	1.0% max.							
- acput	Temperature vari- ation influence	240 VAC input	0.03%/°C max.	1	1			1		
	Startup time *	115 VAC input	710 ms typ.	440 ms typ.	440 ms typ.	430 ms typ.	450 ms typ.	430 ms typ.		
	•	230 VAC input	720 ms typ.	700 ms typ.	720 ms typ.	660 ms typ.	690 ms typ.	660 ms typ.		
	Hold time *		23 ms typ.	37 ms typ.	36 ms typ.	34 ms typ.	36 ms typ.	34 ms typ.		
		230 VAC input	29 ms typ.	40 ms typ.	39 ms typ.	39 ms typ.	41 ms typ.	38 ms typ.		
	Overload protection		Yes, automatic							
	Overvoltage prote			ther of rated output	voltage, power shut	off (shut off the i	nput voltage and turn	on the input ag		
Addi-	Overheat protection	n	No		automal diadaa ar	a required)				
unc- P	Series operation		, ,		external diodes ar	. ,	using at X			
	Parallel operation			backup operation	s possible, externa	il diodes are req	uired.)			
	Remote sensing		No No							
	Remote control									
	Output indicator		Yes (LED: Green) 3 kVAC for 1 min. (between all input terminals and output terminals) current cutoff 20 mA							
Insula-	Withstand voltage		2 kVAC for 1 min. (between all input terminals and Output terminals) current cutoff 20 mA							
tion	Thirotana Voltago		1 kVAC for 1 min. (between all output terminals and PE terminals) current cutoff 20 mA							
	Insulation resistan	ce	$100 \text{ M}\Omega \text{ min}$. (between all output terminals and 12 terminals) current cutor 20 mR							
	Ambient operating		 -20 to 60°C (Derating is required according to the temperature. Refer to <i>Derating Curves</i> on page 18.) (with no condensation or icing) 							
	Storage temperatu	ire	-40 to 85°C (with no condensation or icing)							
Envi- ronment	Ambient operating	humidity	20% to 90% (Storage humidity: 10% to 95%)							
ronnent	Vibration resistant	ce	10 to 55 Hz, 0.3 10 to 500 Hz, 0.							
	Shock resistance		150 m/s ² , 3 time	es each in $\pm X$, $\pm Y$,	±Z directions					
Reliabil-	MTBF		135,000 hrs min	ı.						
ity	Life expectancy *		10 years min.							
C	Dimensions (W×H	<d)< td=""><td colspan="6">Refer to <i>Dimensions</i> on pages 22 and 25.</td></d)<>	Refer to <i>Dimensions</i> on pages 22 and 25.							
Con- struc-	Weight		400 g max.							
tion	Cooling fan		No							
	Degree of protection									
	Harmonic current			I 61000-3-2, GB1		D. 000000				
	EMI	Conducted Emissions			, EN 55011 Class	,				
	EMS	Radiated Emissions			, EN 55011 Class	D, OD9204				
Stan- dards	EMS Safety Standards		Approved Stand UL : cURus UL CSA: cURus C2 CCC: GB4943 Conformed Star EN: EN 62368-1 RCM (EN61000	62368-1 (Recogn 22.2 No62368-1 ndards 1 OVC II Pol2 0-6-4)	ition) OVC II Pol2					
-	Marine Standards		BIS: IS 13252 (Part1) (24 V, 48 V only) *							
	Marine Standards		No							

ltem		Output voltage (VDC)	5 V	12 V	15 V	24 V	36 V	48 V					
Efficienc		115 VAC input	81% typ.	84% typ.	85% typ.	86% typ.	86% typ.	87% typ.					
melenc	·y ••	230 VAC input	82% typ.	85% typ.	86% typ.	87% typ.	87% typ.	88% typ.					
	Voltage range *		(The L terminal f	or the DC input is	the positive side	e and safety stand	o 373 VDC Select dards do not apply ng Curves on page	.)					
	Frequency *		(Derating is required according to the input voltage. Refer to <i>Derating Curves</i> on page 19.) 50 /60 Hz (47 to 450 Hz)										
		115 VAC input	2.8 A typ.										
	Current *	230 VAC input	1.6 A typ.										
nput	Power factor												
		115 VAC input	0.50 mA	0.50 mA	0.50 mA	0.50 mA	0.40 mA	0.50 mA					
	Leakage current	230 VAC input	0.75 mA	0.75 mA	0.75 mA	0.70 mA	0.60 mA	0.70 mA					
	Inrush current *	115 VAC input	32 A typ.										
	(for a cold start at 25°)	230 VAC input	32 A typ.										
	Rated Output Curre	ent	26 A	12.5 A	10 A	6.5 A	4.3 A	3.3 A					
	Voltage adjustment	t range *	-10% to 10% (w	ith V. ADJ)	•								
	Ripple & Noise voltage *	100 to 120 VAC/200 to 240 VAC input	50 mVp-p max.	90 mVp-p max.	110 mVp-p max.	100 mVp-p max.	200 mVp-p max.	120 mVp-p max.					
	Input variation influ	ience *	0.5% max.										
Jutnut	Load variation influ	ience *	1.0% max.										
Output	Temperature vari- ation influence	100 to 120 VAC/200 to 240 VAC input	0.03%/°C max.			_							
	Startup time #	115 VAC input	770 ms typ.	730 ms typ.	740 ms typ.	770 ms typ.	730 ms typ.	760 ms typ.					
	Startup time *	230 VAC input	750 ms typ.	720 ms typ.	730 ms typ.	760 ms typ.	720 ms typ.	750 ms typ.					
	Hold time *	115 VAC input	29 ms typ.	24 ms typ.	27 ms typ.	23 ms typ.	23 ms typ.	21 ms typ.					
	Hold tille 🕈	230 VAC input	35 ms typ.	30 ms typ.	31 ms typ.	28 ms typ.	29 ms typ.	27 ms typ.					
	Overload protection	n	Yes, automatic reset Yes, 115% or higher of rated output voltage, power shut off (shut off the input voltage and turn on the inpu										
	Overvoltage protect	tion *	Yes, 115% or hig again)	her of rated output	voltage, power s	hut off (shut off the	e input voltage and	turn on the inpu					
ional S unc-	Overheat protectio	n	No										
	Series operation	•		Power Supplies,	external diodes	are required.)							
tions	Parallel operation		No (However, b	ackup operation is	s possible, exter	nal diodes are rec	quired.)						
	Remote sensing		No										
	Remote control		No										
	Output indicator		Yes (LED: Greer	,									
			3 kVAC for 1 min. (between all input terminals and output terminals) current cutoff 20 mA 2 kVAC for 1 min. (between all input terminals and PE terminals) current cutoff 20 mA										
Insula- tion	Withstand voltage												
	1		1 kVAC for 1 min. (between all output terminals and PE terminals) current cutoff 20 mA										
	Insulation resistant	ce	 100 MΩ min. (between all output terminals and all input terminals/PE terminals) at 500 VDC -20 to 60°C (Derating is required according to the temperature. Refer to <i>Derating Curves</i> on page 18 										
	Ambient operating	temperature	(with no condensation or icing)										
	Storage temperatur	re	-40 to 85°C (with no condensation or icing)										
Envi- ronment	Ambient operating	humidity	20% to 90% (Storage humidity: 10% to 95%)										
onnent	Vibration resistanc	e	10 to 55 Hz, 0.375-mm half amplitude for 2 h each in X, Y, and Z directions 10 to 500 Hz, 0.26-mm half amplitude for 1 h each in X, Y, and Z directions										
	Shock resistance		150 m/s², 3 times each in ±X, ±Y, ±Z directions										
Reliabil-	MTBF		135,000 hrs min										
ity	Life expectancy *		10 years min.										
	Dimensions (W×H×	D)	Refer to <i>Dimensions</i> on pages 22 and 25.										
Con-	Weight		500 g max.										
	Cooling fan		No										
	Degree of protection												
		on		Conforms to EN 61000-3-2, GB17625.1									
struc- tion				61000-3-2, GB17	625.1			Conforms to EN 61204-3 Class B, EN 55011 Class B, GB9254					
	Degree of protection	missions Conducted Emissions	Conforms to EN Conforms to EN	61204-3 Class B,	EN 55011 Clas								
	Degree of protection Harmonic current e	emissions	Conforms to EN Conforms to EN Conforms to EN	61204-3 Class B, 61204-3 Class B,	EN 55011 Clas EN 55011 Clas								
tion Stan-	Degree of protection Harmonic current e	missions Conducted Emissions	Conforms to EN Conforms to EN Conforms to EN Conforms to EN Approved Stand UL : cURus UL 6 CSA: cURus C2 CCC: GB4943 Conformed Stan EN: EN 62368-1 RCM (EN61000-	61204-3 Class B, 61204-3 Class B, 61204-3 high sev ards 22368-1 (Recognit 2.2 No62368-1 dards OVC II Pol2 6-4)	EN 55011 Clas EN 55011 Clas erity levels	s B, GB9254							
	Degree of protection Harmonic current e EMI EMS	missions Conducted Emissions	Conforms to EN Conforms to EN Conforms to EN Conforms to EN Approved Stand UL : cURus UL 6 CSA: cURus C2 CCC: GB4943 Conformed Stan EN: EN 62368-1 RCM (EN61000-	61204-3 Class B, 61204-3 Class B, 61204-3 high sev ards 62368-1 (Recognit 2.2 No62368-1 dards OVC II Pol2	EN 55011 Clas EN 55011 Clas erity levels	s B, GB9254							

ltom		Power rating	EV	40.1/	200 W	26.1/	49.1/			
tem		Output voltage (VDC)	5 V	12 V	24 V	36 V	48 V			
fficiency	/ *	115 VAC input	81% typ.	85% typ.	88% typ.	89% typ.	88% typ.			
		230 VAC input	81% typ. 87% typ. 88% typ. 90% typ. 90% typ. Sinch a base 00 to 100 VAO Sinch a base 00 to 100 VAO Sinch a base 00 to 100 VAO Sinch a base							
	Voltage range *		Single phase 90 to 132 VAC , Single phase 180 to 264 VAC , 254 to 373 VDC Select with the switch. (The L terminal for the DC input is the positive side and safety standards do not apply.)							
	vonago rango a				out voltage. Refer to De					
	Frequency *		50 /60 Hz (47 to 4	50 Hz)						
		115 VAC input	4 A typ.	· ·						
	Current *	230 VAC input	2.3 A typ.							
input	Power factor									
		115 VAC input	0.35 mA 0.25 mA		0.40 mA	0.20 mA	0.40 mA			
	Leakage current	230 VAC input	0.60 mA	0.50 mA	0.75 mA	0.45 mA	0.40 mA			
		115 VAC input	16 A typ.		0.75 11A	0.40 IIIA	0.00 IIIA			
	Inrush current * (for a cold start at 25°)									
		230 VAC input	32 A typ.	47.0	0.0.4	504	4.40.4			
-	Rated Output Curr		40 A	17 A	8.8 A	5.9 A	4.43 A			
	Voltage adjustmen		-10% to 10% (with	h V. ADJ)						
	Ripple & Noise	100 to 120 VAC/200	60 mVp-p max.	60 mVp-p max.	110 mVp-p max.	130 mVp-p max.	120 mVp-p max.			
	voltage *	to 240 VAC input								
	Input variation infl		0.5% max.							
output	Load variation infl	1	1.0% max.							
	Temperature vari- ation influence	100 to 120 VAC/200	0.03%/°C max.							
	auon innuence	to 240 VAC input	600 m - t	620 +	500 m t	620	620 +			
-	Startup time *	115 VAC input	620 ms typ.	630 ms typ.	580 ms typ.	630 ms typ.	620 ms typ.			
		230 VAC input	600 ms typ.	610 ms typ.	550 ms typ.	600 ms typ.	600 ms typ.			
	Hold time *	115 VAC input	32 ms typ.	30 ms typ.	38 ms typ.	30 ms typ.	31 ms typ.			
		230 VAC input	37 ms typ.	35 ms typ.	45 ms typ.	37 ms typ.	37 ms typ.			
	Overload protectio	n	Yes, automatic res	set						
	Overvoltage protect	ction *	Yes, 115% or high	er of rated output voltag	e, power shut off (shut o	off the input voltage and	l turn on the input aga			
ddi-	Overheat protectio	n	No							
tional func- tions	Series operation		Yes (For up to 2 Power Supplies, external diodes are required.)							
	Parallel operation		No (However, backup operation is possible, external diodes are required.)							
	Remote sensing		No							
	Remote control		No							
	Output indicator									
	Output indicator		Yes (LED: Green)							
	Withstand values		3 kVAC for 1 min. (between all input terminals and output terminals) current cutoff 20 mA							
nsula-	Withstand voltage		2 kVAC for 1 min. (between all input terminals and PE terminals) current cutoff 20 mA							
ion			1 kVAC for 1 min. (between all output terminals and PE terminals) current cutoff 20 mA							
	Insulation resistan	ce	100 M Ω min. (between all output terminals and all input terminals/PE terminals) at 500 VDC							
	Ambient operating	temperature	-20 to 50°C (Derating is required according to the temperature. Refer to <i>Derating Curves</i> on page 18.) (wi							
		•	no condensation or icing)							
nvi-	Storage temperatu		-40 to 85°C (with no condensation or icing)							
onment	Ambient operating	numidity	20% to 90% (Storage humidity: 10% to 95%)							
	Vibration resistance	e	10 to 55 Hz, 0.375-mm half amplitude for 2 h each in X, Y, and Z directions							
	Check resister		10 to 500 Hz, 0.26-mm half amplitude for 1 h each in X, Y, and Z directions							
	Shock resistance		150 m/s ² , 3 times each in ±X, ±Y, ±Z directions							
eliabil-	MTBF		135,000 hrs min.							
У	Life expectancy *		10 years min.							
	Dimensions (W×H>	<d)< td=""><td colspan="6">Refer to <i>Dimensions</i> on pages 23 and 26.</td></d)<>	Refer to <i>Dimensions</i> on pages 23 and 26.							
on- truc-	Weight		700 g max.							
on	Cooling fan		No							
	Degree of protection	on								
	Harmonic current	emissions								
		Conducted Emis-	Conformed ENC							
	EMI	sions	Conforms to EN 6	1204-3 Class A, EN 55	DUTT CLASS A					
	EMI	Radiated Emis-	Conforms to EN 61204-3 Class A, EN 55011 Class A							
		sions	CONICITIIS LO EIN O							
	EMS		Conforms to EN 61204-3 high severity levels							
tan- ards	Safety Standards		Approved Standar UL : cURus UL 62 CSA: cURus C22. Conformed Stand EN: EN 62368-1 C RCM (EN61000-6 BIS: IS 13252 (Pa	2368-1 (Recognition) O 2 No62368-1 ards DVC II Pol2 -4)	IVC II Pol2					
	Marine Standarda									
-	Marine Standards		No							
	SEMI		No							

ltem		Power rating Output voltage (VDC)	5 V	12 V	350 W 24 V	36 V	48 V			
		115 VAC input	77% typ.	83% typ.	86% typ.	87% typ.	87% typ.			
Efficiency	у ж	230 VAC input	78% typ.	85% typ.	88% typ.	88% typ.	88% typ.			
	Voltage range *	I	Single phase 90 to 132 VAC, Single phase 180 to 264 VAC, 254 to 373 VDC Select with the switch. (The L terminal for the DC input is the positive side and safety standards do not apply.) (Derating is required according to the input voltage. Refer to <i>Derating Curves</i> on page 19.)							
	Eroquonov #		50 /60 Hz (47 to 450	0 1	out voltage. Relef to I	Deraung Curves on pa	age 19.)			
	Frequency *	115 VAC input		J H2)						
	Current *	230 VAC input	6.4 A typ.							
nput	Power factor	250 VAC Input	3.5 A typ.							
	Fower lactor	115 VAC input	 0.40 mA	0.40 mA	0.40 mA	0.40 mA	0.40 mA			
	Leakage current	230 VAC input	0.75 mA 0.80 mA 0.75 m			0.40 mA	0.40 mA			
	1	115 VAC input	16 A typ.		0.75 IIA	0.00 IIIA	0.00 IIIA			
	Inrush current * (for a cold start at 25°)	230 VAC input	32 A typ.							
	Rated Output Curre		60 A	29 A	14.6 A	9.7 A	7.32 A			
	Voltage adjustment		-10% to 10% (with)	-	14.0 A	3.1 A	1.52 A			
	Ripple & Noise	100 to 120 VAC/200 to	-107010-1070 (With	V. AD3)						
	voltage *	240 VAC input	110 mVp-p max.	130 mVp-p max.	120 mVp-p max.	180 mVp-p max.	180 mVp-p max.			
	Input variation influ	ience *	0.5% max.							
	Load variation influ		2.0% max.	1.0% max.						
Dutput	Temperature vari-	100 to 120 VAC/200 to	0.03%/°C max.							
	ation influence	240 VAC input	0.03%/°C max.							
	Startup time *	115 VAC input	610 ms typ.	620 ms typ.	580 ms typ.	610 ms typ.	610 ms typ.			
		230 VAC input	570 ms typ.	590 ms typ.	560 ms typ.	590 ms typ.	590 ms typ.			
	Hold time *	115 VAC input	25 ms typ.	18 ms typ.	17 ms typ.	19 ms typ.	19 ms typ.			
		230 VAC input	31 ms typ.	25 ms typ.	23 ms typ.	25 ms typ.	24 ms typ.			
	Overload protection	1	Yes, automatic rese	et						
	Overvoltage protec	tion *	Yes, 115% or higher of rated output voltage, power shut off (shut off the input voltage and turn on the inpu again)							
tional	Overheat protection	ı	Yes, power shut off (shut off the input voltage and turn on the input again) (Overheat protection when the cooling fan is in an abnormal condition)							
	Series operation		Yes (For up to 2 Power Supplies, external diodes are required.)							
ions	Parallel operation		No (However, back	up operation is possi	ble, external diodes a	are required.)				
	Remote sensing		No							
	Remote control		No							
	Output indicator		Yes (LED: Green)							
	•		3 kVAC for 1 min. (between all input terminals and output terminals) current cutoff 20 mA							
			3 kVAC for 1 min. (b	petween all input tern	ninals and output terr	ninals) current cutoff	20 mA			
	Withstand voltage				•	ninals) current cutoff als) current cutoff 20				
			2 kVAC for 1 min. (k	between all input tern	ninals and PE termina	· ·	mA			
		Se	2 kVAC for 1 min. (k 1 kVAC for 1 min. (k	between all input tern between all output ter	ninals and PE termina rminals and PE termin	als) current cutoff 20	mA) mA			
	Withstand voltage		2 kVAC for 1 min. (k 1 kVAC for 1 min. (k 100 MΩ min. (betwe	between all input tern between all output ter een all output termina ng is required accord	ninals and PE termina rminals and PE termina als and all input termina	als) current cutoff 20 nals) current cutoff 20	mA) mA 500 VDC			
ion	Withstand voltage	temperature	2 kVAC for 1 min. (k 1 kVAC for 1 min. (k 100 M Ω min. (betwe -20 to 60°C (Deratin (with no condensation	between all input tern between all output ter een all output termina ng is required accord	ninals and PE termina minals and PE terminals and all input termin ing to the temperatur	als) current cutoff 20 nals) current cutoff 20 nals/PE terminals) at	mA) mA 500 VDC			
ion Envi-	Withstand voltage Insulation resistance Ambient operating	temperature e	2 kVAC for 1 min. (t 1 kVAC for 1 min. (t 100 M Ω min. (betwee -20 to 60°C (Deratii (with no condensatio -40 to 85°C (with no 20% to 90% (Storage	between all input term between all output ter een all output termina ng is required accord on or icing) o condensation or icin ge humidity: 10% to 9	ninals and PE termina minals and PE terminals and all input termining to the temperatur ng) 15%)	als) current cutoff 20 hals) current cutoff 20 hals/PE terminals) at e. Refer to <i>Derating</i> (mA) mA 500 VDC			
ion Envi-	Withstand voltage Insulation resistance Ambient operating Storage temperatur Ambient operating Vibration resistance	temperature e humidity	2 kVAC for 1 min. (t 1 kVAC for 1 min. (t 100 MΩ min. (betwe -20 to 60° C (Deratii (with no condensativ -40 to 85° C (with no 20% to 90% (Storage 10 to 55 Hz, 0.375-1 10 to 500 Hz, 0.26-1	between all input term between all output ter een all output termina ng is required accord on or icing) b condensation or icir ge humidity: 10% to 9 mm half amplitude for mm half amplitude for	ninals and PE termina minals and PE terminals and all input termining to the temperatur ng) 15%) r 2 h each in X, Y, an r 1 h each in X, Y, an	als) current cutoff 20 mals) current cutoff 20 mals/PE terminals) at e. Refer to <i>Derating</i> (d Z directions	mA) mA 500 VDC			
ion :nvi-	Withstand voltage Insulation resistance Ambient operating Storage temperatur Ambient operating Vibration resistance	temperature e humidity	2 kVAC for 1 min. (t 1 kVAC for 1 min. (t 100 MΩ min. (betwe -20 to 60° C (Deratii (with no condensativ -40 to 85° C (with no 20% to 90% (Storage 10 to 55 Hz, 0.375-1 10 to 500 Hz, 0.26-1	between all input term between all output ter een all output termina ng is required accord on or icing) b condensation or icir ge humidity: 10% to 9 mm half amplitude for	ninals and PE termina minals and PE terminals and all input termining to the temperatur ng) 15%) r 2 h each in X, Y, an r 1 h each in X, Y, an	als) current cutoff 20 mals) current cutoff 20 mals/PE terminals) at e. Refer to <i>Derating</i> (d Z directions	mA) mA 500 VDC			
ion Envi- onment Reliabil-	Withstand voltage Insulation resistance Ambient operating Storage temperatur Ambient operating Vibration resistance	temperature e humidity	2 kVAC for 1 min. (t 1 kVAC for 1 min. (t 100 MΩ min. (betwe -20 to 60° C (Deratii (with no condensativ -40 to 85° C (with no 20% to 90% (Storage 10 to 55 Hz, 0.375-1 10 to 500 Hz, 0.26-1	between all input term between all output ter een all output termina ng is required accord on or icing) b condensation or icir ge humidity: 10% to 9 mm half amplitude for mm half amplitude for	ninals and PE termina minals and PE terminals and all input termining to the temperatur ng) 15%) r 2 h each in X, Y, an r 1 h each in X, Y, an	als) current cutoff 20 mals) current cutoff 20 mals/PE terminals) at e. Refer to <i>Derating</i> (d Z directions	mA) mA 500 VDC			
ion Envi- onment Reliabil-	Withstand voltage Insulation resistance Ambient operating Storage temperatur Ambient operating Vibration resistance Shock resistance MTBF Life expectancy *	temperature e humidity e	2 kVAC for 1 min. (k 1 kVAC for 1 min. (k 100 $M\Omega$ min. (betwe -20 to 60°C (Deratii (with no condensation -40 to 85°C (with no 20% to 90% (Storage 10 to 55 Hz, 0.375-1 10 to 500 Hz, 0.26-1 150 m/s ² , 3 times ea 135,000 hrs min. 10 years min.	between all input term between all output term een all output termina ing is required accord on or icing) to condensation or icin ge humidity: 10% to 9 mm half amplitude for mm half amplitude for ach in $\pm X, \pm Y, \pm Z$ dire	ninals and PE termina minals and PE terminals and all input terminals and all input terminals ing to the temperature ng) (5%) r 2 h each in X, Y, and r 1 h each in X, Y, and ections	als) current cutoff 20 mals) current cutoff 20 mals/PE terminals) at e. Refer to <i>Derating</i> (d Z directions	mA) mA 500 VDC			
ion Invi- onment Reliabil- Ly	Withstand voltage Insulation resistance Ambient operating Storage temperatur Ambient operating Vibration resistance Shock resistance MTBF Life expectancy * Dimensions (W×H×	temperature e humidity e	2 kVAC for 1 min. (k 1 kVAC for 1 min. (k 100 $M\Omega$ min. (betwe -20 to 60°C (Deratii (with no condensation -40 to 85°C (with no 20% to 90% (Storage 10 to 55 Hz, 0.375-1 10 to 500 Hz, 0.26-1 150 m/s ² , 3 times ea 135,000 hrs min. 10 years min.	between all input term between all output ter een all output termina ng is required accord on or icing) b condensation or icir ge humidity: 10% to 9 mm half amplitude for mm half amplitude for	ninals and PE termina minals and PE terminals and all input terminals and all input terminals ing to the temperature ng) (5%) r 2 h each in X, Y, and r 1 h each in X, Y, and ections	als) current cutoff 20 mals) current cutoff 20 mals/PE terminals) at e. Refer to <i>Derating</i> (d Z directions	mA) mA 500 VDC			
ion Envi- onment Reliabil- ty Con-	Withstand voltage Insulation resistance Ambient operating Storage temperatur Ambient operating Vibration resistance MTBF Life expectancy * Dimensions (W×H× Weight	temperature e humidity e	2 kVAC for 1 min. (t 1 kVAC for 1 min. (t 100 MΩ min. (betwe -20 to 60° C (Deratii (with no condensation -40 to 85° C (with no 20% to 90% (Storage 10 to 55 Hz, 0.375-1 10 to 550 Hz, 0.375-1 150 m/s ² , 3 times ea 135,000 hrs min. 10 years min. Refer to <i>Dimensions</i> 800 g max.	between all input term between all output term between all output termina ing is required accord on or icing) b condensation or icin ge humidity: 10% to 9 mm half amplitude for mm half amplitude for ach in $\pm X$, $\pm Y$, $\pm Z$ direct s on pages 23 and 26	ninals and PE terminals minals and PE terminals and all input termin ing to the temperatur ng) (5%) r 2 h each in X, Y, an r 1 h each in X, Y, an ections	als) current cutoff 20 mals) current cutoff 20 mals/PE terminals) at e. Refer to <i>Derating</i> (d Z directions	mA) mA 500 VDC			
ion Envi- onment Reliabil- ty Con- struc-	Withstand voltage Insulation resistance Ambient operating Storage temperatur Ambient operating Vibration resistance MTBF Life expectancy * Dimensions (W×H× Weight Cooling fan	temperature e humidity e D)	2 kVAC for 1 min. (t 1 kVAC for 1 min. (t 100 MΩ min. (betwe -20 to 60° C (Deratii (with no condensation -40 to 85° C (with no 20% to 90% (Storage 10 to 55 Hz, 0.375-1 10 to 550 Hz, 0.375-1 150 m/s ² , 3 times ea 135,000 hrs min. 10 years min. Refer to <i>Dimensions</i> 800 g max.	between all input term between all output term een all output termina ing is required accord on or icing) to condensation or icin ge humidity: 10% to 9 mm half amplitude for mm half amplitude for ach in $\pm X, \pm Y, \pm Z$ dire	ninals and PE terminals minals and PE terminals and all input termin ing to the temperatur ng) (5%) r 2 h each in X, Y, an r 1 h each in X, Y, an ections	als) current cutoff 20 mals) current cutoff 20 mals/PE terminals) at e. Refer to <i>Derating</i> (d Z directions	mA) mA 500 VDC			
ion Envi- onment Reliabil- ty Con- struc-	Withstand voltage Insulation resistance Ambient operating Storage temperatur Ambient operating Vibration resistance MTBF Life expectancy * Dimensions (W×H× Weight	temperature e humidity e D)	2 kVAC for 1 min. (t 1 kVAC for 1 min. (t 100 MΩ min. (betwe -20 to 60° C (Deratii (with no condensation -40 to 85° C (with no 20% to 90% (Storage 10 to 55 Hz, 0.375-1 10 to 550 Hz, 0.375-1 150 m/s ² , 3 times ea 135,000 hrs min. 10 years min. Refer to <i>Dimensions</i> 800 g max.	between all input term between all output term between all output termina ing is required accord on or icing) b condensation or icin ge humidity: 10% to 9 mm half amplitude for mm half amplitude for ach in $\pm X$, $\pm Y$, $\pm Z$ direct s on pages 23 and 26	ninals and PE terminals minals and PE terminals and all input termin ing to the temperatur ng) (5%) r 2 h each in X, Y, an r 1 h each in X, Y, an ections	als) current cutoff 20 mals) current cutoff 20 mals/PE terminals) at e. Refer to <i>Derating</i> (d Z directions	mA) mA 500 VDC			
ion Envi- onment Reliabil- ty Con- struc-	Withstand voltage Insulation resistance Ambient operating Storage temperatur Ambient operating Vibration resistance MTBF Life expectancy * Dimensions (W×H× Weight Cooling fan	temperature e humidity e D)	2 kVAC for 1 min. (t 1 kVAC for 1 min. (t 100 M Ω min. (betwee -20 to 60°C (Deratii (with no condensatii -40 to 85°C (with no 20% to 90% (Storage 10 to 55 Hz, 0.375-1 10 to 500 Hz, 0.375-1 10 to 500 Hz, 0.26-1 150 m/s ² , 3 times ea 135,000 hrs min. 10 years min. Refer to <i>Dimensions</i> 800 g max. Yes (ON/OFF control	between all input term between all output term between all output termina ing is required accord on or icing) b condensation or icin ge humidity: 10% to 9 mm half amplitude for mm half amplitude for ach in $\pm X$, $\pm Y$, $\pm Z$ direct s on pages 23 and 26	ninals and PE terminals minals and PE terminals and all input termin ing to the temperatur ng) (5%) r 2 h each in X, Y, an r 1 h each in X, Y, an ections	als) current cutoff 20 mals) current cutoff 20 mals/PE terminals) at e. Refer to <i>Derating</i> (d Z directions	mA) mA 500 VDC			
ion invi- onment Reliabil- y Con- truc-	Withstand voltage Insulation resistant Ambient operating Storage temperatur Ambient operating Vibration resistance Shock resistance MTBF Life expectancy * Dimensions (W×H× Weight Cooling fan Degree of protectio Harmonic current e	temperature e humidity e D) n missions Conducted Emissions	2 kVAC for 1 min. (t 1 kVAC for 1 min. (t 100 MΩ min. (betwee -20 to 60° C (Deratii (with no condensativ -40 to 85° C (with no 20% to 90% (Storag 10 to 55 Hz, 0.375-r 10 to 500 Hz, 0.26-r 150 m/s ² , 3 times ea 135,000 hrs min. 10 years min. Refer to <i>Dimensions</i> 800 g max. Yes (ON/OFF contro- Conforms to EN 612	between all input term between all output term een all output termina ng is required accord on or ricing) to condensation or icin ge humidity: 10% to 9 mm half amplitude for mm half amplitude for ach in $\pm X$, $\pm Y$, $\pm Z$ direct s on pages 23 and 26 ol according to interm	ninals and PE termina minals and PE terminals and all input terminals and all input terminals ing to the temperature ng) 15%) r 2 h each in X, Y, an r 1 h each in X, Y, an ections 3. al temperature) 5011 Class A	als) current cutoff 20 mals) current cutoff 20 mals/PE terminals) at e. Refer to <i>Derating</i> (d Z directions	mA) mA 500 VDC			
ion Invi- onment Reliabil- ty Con- truc-	Withstand voltage Insulation resistance Ambient operating Storage temperatur Ambient operating Vibration resistance Shock resistance MTBF Life expectancy * Dimensions (W×H× Weight Cooling fan Degree of protectio Harmonic current e EMI	temperature e humidity e D) n missions	2 kVAC for 1 min. (t 1 kVAC for 1 min. (t 1 kVAC for 1 min. (t 100 M Ω min. (betwee -20 to 60°C (Deratii (with no condensativ -40 to 85°C (with no 20% to 90% (Storage 10 to 55 Hz, 0.375-1 0 to 500 Hz, 0.375-1 10 to 500 Hz, 0.375-1 150 m/s ² , 3 times ex 135,000 hrs min. 10 years min. Refer to <i>Dimensions</i> 800 g max. Yes (ON/OFF contre- Conforms to EN 612 Conforms to EN 612	between all input term between all output term een all output termina ng is required accord on or ricing) to condensation or icin ge humidity: 10% to 9 mm half amplitude for mm half amplitude for ach in $\pm X$, $\pm Y$, $\pm Z$ direct s on pages 23 and 26 ol according to interm	ninals and PE termina minals and PE termina and all input terminals and all input terminals ing to the temperature ng) 15%) r 2 h each in X, Y, an r 1 h each in X, Y, an ections 6. al temperature) 5011 Class A 5011 Class A	als) current cutoff 20 mals) current cutoff 20 mals/PE terminals) at e. Refer to <i>Derating</i> (d Z directions	mA) mA 500 VDC			
ion Invi- onment Reliabil- ty Con- truc-	Withstand voltage Insulation resistant Ambient operating Storage temperatur Ambient operating Vibration resistance Shock resistance MTBF Life expectancy * Dimensions (W×H× Weight Cooling fan Degree of protectio Harmonic current e	temperature e humidity e D) n missions Conducted Emissions	2 kVAC for 1 min. (t 1 kVAC for 1 min. (t 100 $M\Omega$ min. (betwee -20 to 60°C (Deratii (with no condensativ -40 to 85°C (with no 20% to 90% (Storage 10 to 55 Hz, 0.375-1 0 to 500 Hz, 0.375-1 10 to 500 Hz, 0.26-1 150 m/s ² , 3 times ex 135,000 hrs min. 10 years min. Refer to <i>Dimensions</i> 800 g max. Yes (ON/OFF contre- Conforms to EN 612 Conforms to EN 612	between all input term between all output term een all output termina ng is required accord on or ricing) to condensation or icin ge humidity: 10% to 9 mm half amplitude for mm half amplitude for ach in $\pm X$, $\pm Y$, $\pm Z$ direct s on pages 23 and 26 ol according to interm	ninals and PE termina minals and PE termina and all input terminals and all input terminals ing to the temperature ng) 15%) r 2 h each in X, Y, an r 1 h each in X, Y, an ections 6. al temperature) 5011 Class A 5011 Class A	als) current cutoff 20 mals) current cutoff 20 mals/PE terminals) at e. Refer to <i>Derating</i> (d Z directions	mA) mA 500 VDC			
nsula- ion Envi- ronment ty Con- struc- ion Stan- dards	Withstand voltage Insulation resistance Ambient operating Storage temperatur Ambient operating Vibration resistance Shock resistance MTBF Life expectancy * Dimensions (W×H× Weight Cooling fan Degree of protectio Harmonic current e EMI	temperature e humidity e D) n missions Conducted Emissions	2 kVAC for 1 min. (t 1 kVAC for 1 min. (t 100 MΩ min. (betwa -20 to 60°C (Deratii (with no condensatii -40 to 85°C (with no 20% to 90% (Storag 10 to 55 Hz, 0.375-1 10 to 500 Hz, 0.375-1 10 to 500 Hz, 0.375-1 10 to 500 Hz, 0.375-1 10 years min. 10 years min. Refer to <i>Dimensions</i> 800 g max. Yes (ON/OFF contre- Conforms to EN 612 Conforms to EN 612 Conformed Standard UL : cURus UL 6236 CA: cURus C22.2 Conformed Standard EN: EN 62368-1 OV RCM (EN61000-6-4	between all input term between all output term between all output termina ing is required accord on or icing) b condensation or icin ge humidity: 10% to 9 mm half amplitude for mm half amplitude for ach in $\pm X$, $\pm Y$, $\pm Z$ direct s on pages 23 and 26 ol according to interm 204-3 Class A, EN 55 204-3 Class A, EN 55 204-	ninals and PE terminals minals and PE terminals and all input termin ing to the temperatur ng) 15%) r 2 h each in X, Y, an ections 3. al temperature) 5011 Class A 5011 Class A evels	als) current cutoff 20 mals) current cutoff 20 mals/PE terminals) at e. Refer to <i>Derating</i> (d Z directions	mA) mA 500 VDC			
ion Envi- onment Reliabil- ty Con- struc- ion	Withstand voltage Insulation resistant Ambient operating Storage temperatur Ambient operating Vibration resistance MTBF Life expectancy * Dimensions (W×H× Weight Cooling fan Degree of protectio Harmonic current e EMI EMS	temperature e humidity e D) n missions Conducted Emissions	2 kVAC for 1 min. (t 1 kVAC for 1 min. (t 100 MΩ min. (betwa -20 to 60°C (Deratii (with no condensatii -40 to 85°C (with no 20% to 90% (Storag 10 to 55 Hz, 0.375-1 10 to 500 Hz, 0.375-1 10 to 500 Hz, 0.375-1 10 to 500 Hz, 0.375-1 10 years min. 10 years min. Refer to <i>Dimensions</i> 800 g max. Yes (ON/OFF contre- Conforms to EN 612 Conforms to EN 612 Conformed Standard UL : cURus UL 6236 CA: cURus C22.2 Conformed Standard EN: EN 62368-1 OV RCM (EN61000-6-4	between all input term between all output term and is required accord on or icing) be condensation or icin ge humidity: 10% to 9 mm half amplitude for mm half amplitude for mm half amplitude for ach in ±X, ±Y, ±Z direct s on pages 23 and 26 ol according to interm 204-3 Class A, EN 55 204-3 Class A, EN 55 204-3 Class A, EN 55 204-3 high severity les s 68-1 (Recognition) O No62368-1 ds /C II Pol2	ninals and PE terminals minals and PE terminals and all input termin ing to the temperatur ng) 15%) r 2 h each in X, Y, an ections 3. al temperature) 5011 Class A 5011 Class A evels	als) current cutoff 20 mals) current cutoff 20 mals/PE terminals) at e. Refer to <i>Derating</i> (d Z directions	mA) mA 500 VDC			

Conditions

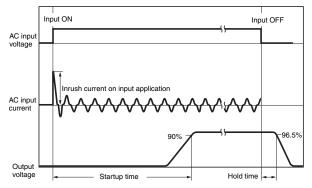
Efficiency		The value is given for the rated output voltage and rated output current.			
Input	Voltage range Frequency	Although some inverters give 50/60 Hz as the output frequency, do not use an inverter output as the power source for the Power Supply. Doing so may result in smoking or burning due to internal temperature increases in the Power Supply. If you connect a UPS to the input, do not connect one with a square way output.			
mpar	Current	The value is given for the rated output voltage and rated output current.			
	Inrush current (for a cold start at 25°C)	The value is given for a cold start at 25°C. Refer to following for details.			
	Voltage adjustment range	If the output voltage adjuster (V. ADJ) is turned, the voltage will increase by 10% or more over the voltage adjustment range. When adjusting the output voltage, confirm the actual output voltage from the Power Supply and be sure that load is not damaged.			
	Ripple & Noise voltage	The value is given for the rated output voltage and rated output current. The value is for an ambient operating temperature of 25°C.			
Output	Input variation influence	This is the maximum variation in the output voltage when the input voltage is gradually changed within allowable input voltage range at the rated output voltage and rated output current.			
	Load variation influence	This is the value when the output current is changed from 0 A to the rated output current while the input voltage is within the allowable input voltage.			
	Startup time	The value is given for the rated output voltage and rated output current. The value is given for a cold start at 25°C. Refer to following for details.			
	Hold time	The value is given for the rated output voltage and rated output current. Refer to following for details.			
Additional functions	Overvoltage protection	Refer to Overvoltage Protection on page 20 for information on resetting the input power.			
Reliability	Life expectancy	Refer to Recommended Replacement Periods and Periodic Replacement for Preventive Maintenance on page 40 for details.			

List of Models with Bureau of Indian Standards (BIS) Certification

This BIS Standard is an Indian standard that has been in effect for this product since April 2021, and certification has been acquired for belowmentioned models to enable individual product export to India.

Model with terminal block facing upward	Model with terminal block facing forward	Model with DIN rail
	S8FS-C01505J	S8FS-C01505D
	S8FS-C01524J	S8FS-C01524D
S8FS-C02505	S8FS-C02505J	S8FS-C02505D
S8FS-C02524	S8FS-C02524J	S8FS-C02524D
S8FS-C03524	S8FS-C03524J	S8FS-C03524D
S8FS-C05005	S8FS-C05005J	S8FS-C05005D
S8FS-C05012	S8FS-C05012J	S8FS-C05012D
S8FS-C05024	S8FS-C05024J	S8FS-C05024D
S8FS-C07524	S8FS-C07524J	S8FS-C07524D
S8FS-C07548	S8FS-C07548J	S8FS-C07548D
S8FS-C10024	S8FS-C10024J	S8FS-C10024D
S8FS-C10048	S8FS-C10048J	S8FS-C10048D
S8FS-C15012	S8FS-C15012J	S8FS-C15012D
S8FS-C15024	S8FS-C15024J	S8FS-C15024D
S8FS-C20024	S8FS-C20024J	S8FS-C20024D
S8FS-C35005	S8FS-C35005J	S8FS-C35005D
S8FS-C35024	S8FS-C35024J	S8FS-C35024D

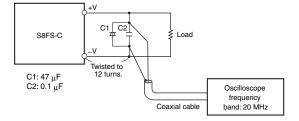
Inrush Current, Startup Time, and Output Hold Time



Note: Twice the normal input current will flow for a redundant system. Sufficiently check the fusing characteristics of fuses and the operating characteristics of breakers and select fuses and breakers so that external fuses will not burn out or breakers will not operate due to inrush current.

Ripple Noise Voltage

The specified standard for the ripple voltage noise was measured with the following measurement circuit.

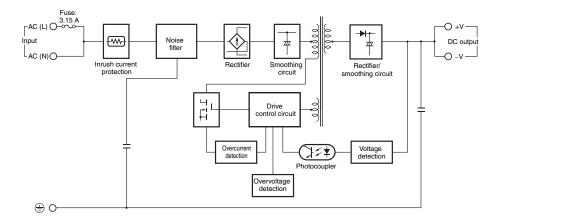


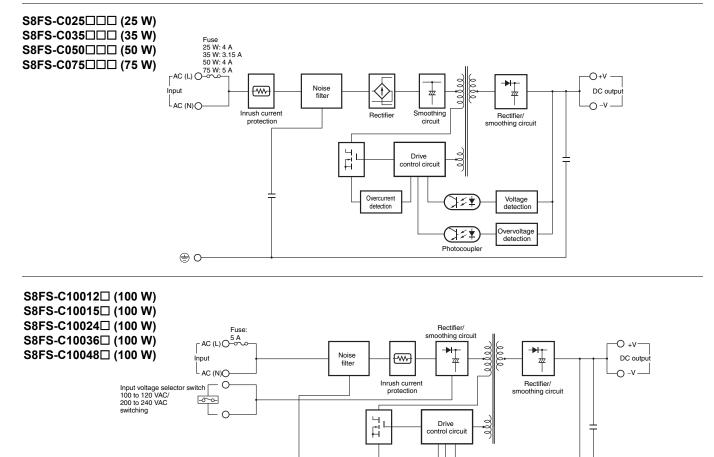
S8FS-C

Connections

Block Diagrams

S8FS-C01500 (15 W)





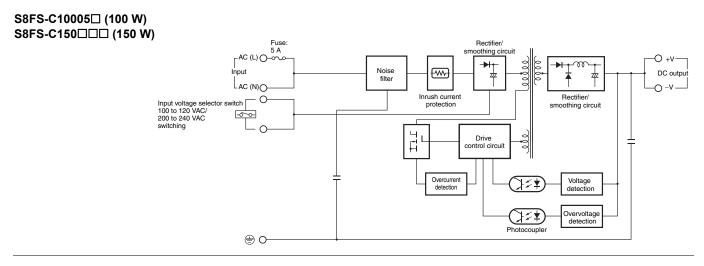
Overcurrent detection

Voltage detection

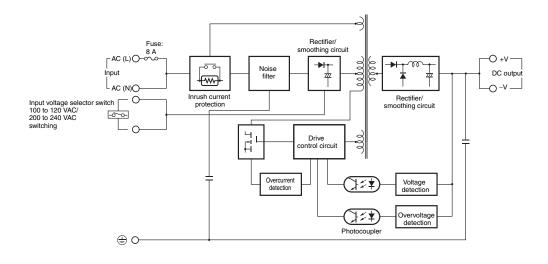
Overvoltage detection

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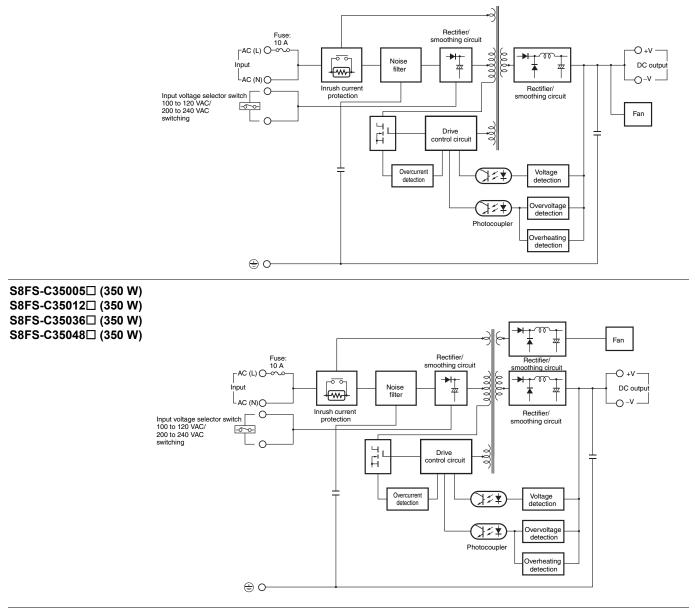
÷ 0-



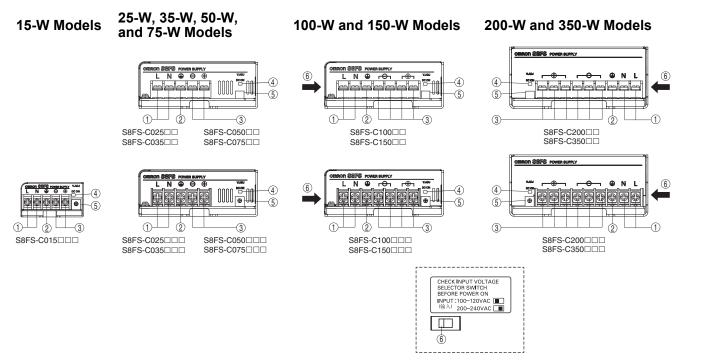
S8FS-C200 (200 W)



S8FS-C35024 (350 W)



Nomenclature



No.	No. Name Function				
1	Input terminals (L), (N)	Connect the input lines to these terminals. *1			
2	Protective Earth Terminal (PE)	Connect the ground line to this terminal. *2			
3	DC output terminals (-V), (+V)	Connect the load lines to these terminals.			
4	Output indicator (DC ON: Green)	Lit while the DC output is ON.			
5	Output voltage adjuster (V. ADJ)	Use to adjust the output voltage.			
6	Input voltage selector switch	Used to switch the input voltage. *3 , *4			

*1. The fuse is located on the (L) side. It is not user replaceable. For a DC power input, connect the positive voltage to the L terminal.

*2. This is the protective earth terminal specified in the safety standards. Always ground this terminal.
*3. The 100-W, 150-W, 200-W, and 350-W models only.

*4. Refer to Input Voltage Selector Switch in Safety Precautions on page 37.

S8FS-C

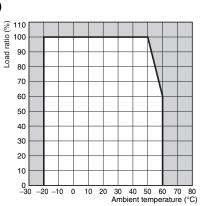
Engineering Data

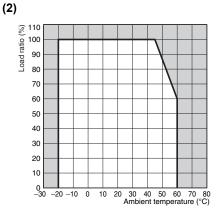
Derating Curves

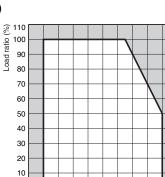


Power rating	15 W	25 W	35 W	50 W	75 W	100 W	150 W	200 W	350 W
Output voltage	15 W	25 VV	35 VV	50 W	75 VV	100 W	150 W	200 W	350 W
5 V		(2)			(3)	(4)	(5)	(7)	(1)
12 V	(4)		(1)	(1)				(6)	(1)
15 V	(1)	(1)	(1)	(1)	(1)				
24 V						(2)	(1)		
36 V								(6)	(1)
48 V				(1)	(1)				







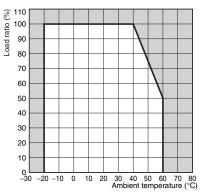


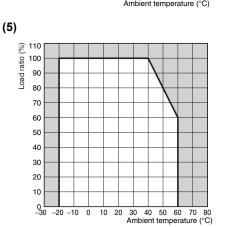
(3)

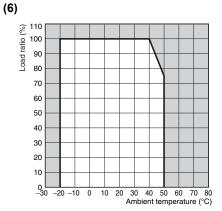
0 L _30

-20 -10 0



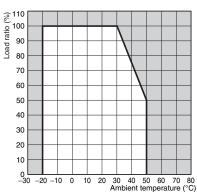




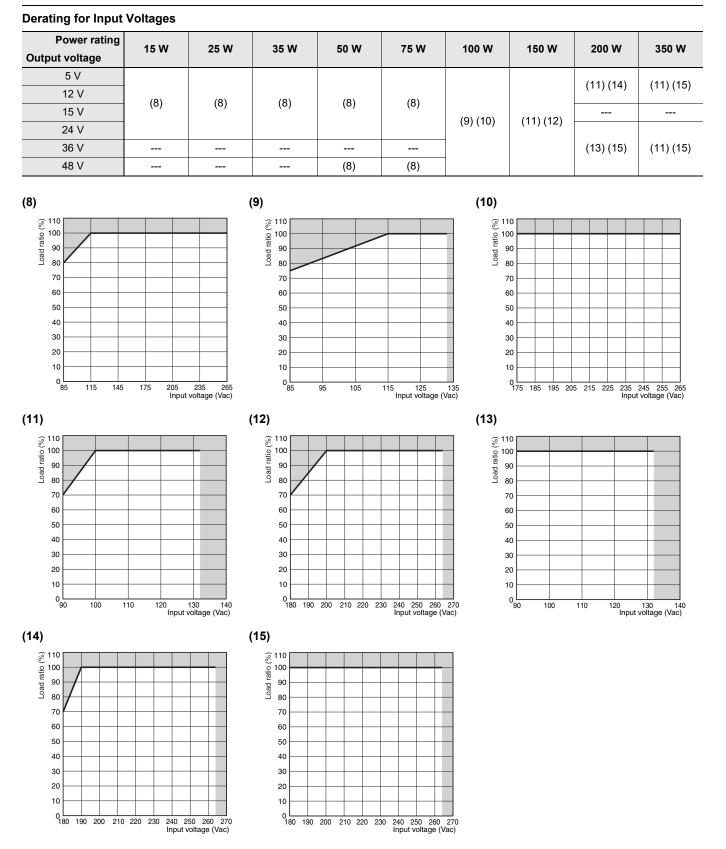


10 20 30 40 50 60 70 80 Ambient temperature (°C)





Note: The internal parts may occasionally deteriorate or be damaged. Use the standard mounting method only. Do not use the Power Supply in the area outside the derating curve.

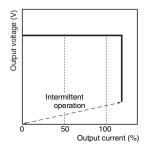


Note: The internal parts may occasionally deteriorate or be damaged. Use the standard mounting method only. Do not use the Power Supply in the area outside the derating curve.

Overload Protection

The load and the Power Supply are automatically protected from short-circuit currents and overcurrent damage by this function. Overload protection is activated if the output current rises above 105% of the rated current.

When the output current returns within the rated range, the overload protection is automatically cleared.

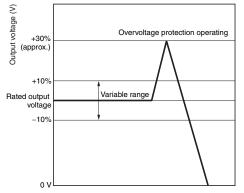


The values shown in the above diagrams are for reference only.

- **Note: 1.** If the Power Supply has been short-circuited or supplied with an overcurrent longer than 10 seconds, the internal parts of the Power Supply may occasionally deteriorate or be damaged.
 - 2. Internal parts may possibly deteriorate or be damaged if the Power Supply is used for applications with frequent inrush current or overloading at the load end. Do not use the Power Supply for such applications.

Overvoltage Protection

Consider the possibility of an overvoltage and design the system so that the load will not be subjected to an excessive voltage even if the feedback circuit in the Power Supply fails. When an excessive voltage that is 115% of the rated voltage or more is output, the output voltage is shut OFF, preventing damage to the load due to overvoltage. Reset the input power by turning it OFF for at least three minutes and then turning it back ON again.



The values shown in the above diagrams are for reference only. **Note:** Do not turn ON the power again until the cause of the overvoltage has been removed.

Overheat Protection (S8FS-C350 Only)

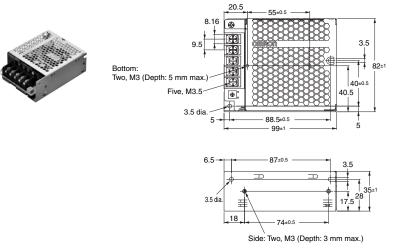
If the internal temperature rises excessively as a result of fan failure or any other reason, the overheat protection circuit will operate to protect internal elements. Reset the input power by turning it OFF for at least three minutes and then turning it back ON again.

(Unit: mm)

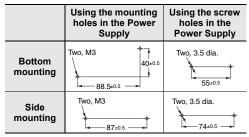
Dimensions

Power Supplies Models with Terminal Block Facing Upward

S8FS-C025□□ (25 W)

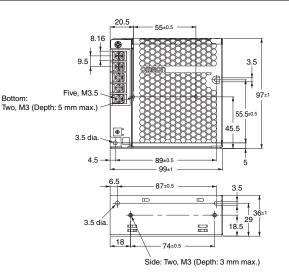


Panel mounting hole dimensions



S8FS-C03500 (35 W)



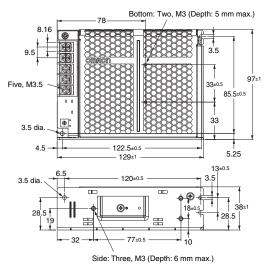


Panel mounting hole dimensions

	Using the mounting holes in the Power Supply	Using the screw holes in the Power Supply
Bottom mounting	Two, M3 55.5±0.5 89±0.5	Two, 3.5 dia.
Side mounting	Two, M3	Two, 3.5 dia.

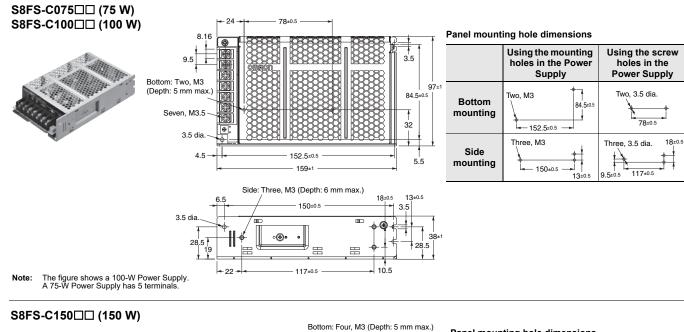
S8FS-C050 (50 W)

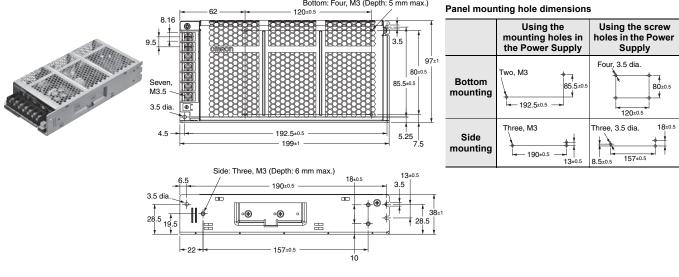


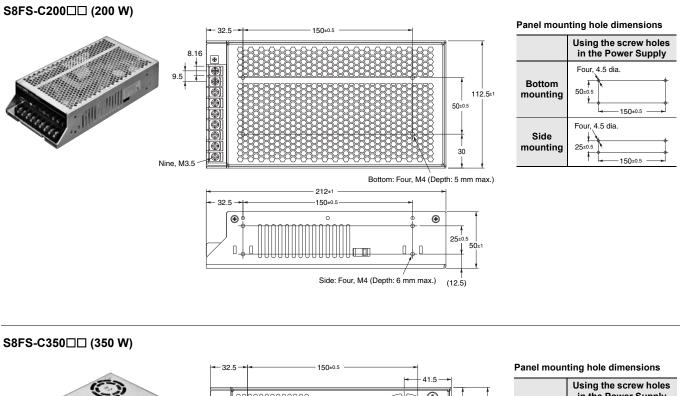


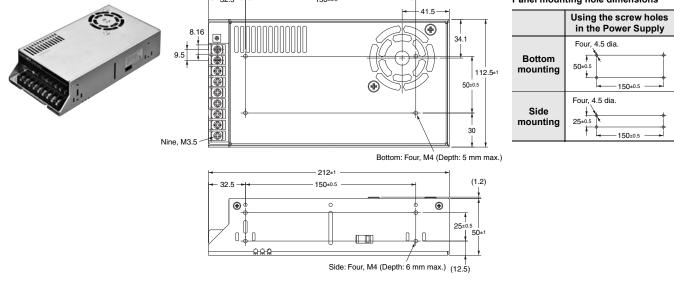
Panel mounting hole dimensions

	Using the mounting holes in the Power Supply	Using the screw holes in the Power Supply
Bottom mounting	Two, M3	Two, 3.5 dia.
Side mounting	Three, M3	Three, 3.5 dia. 18±0.5 9±0.5 77±0.5





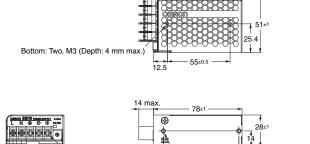




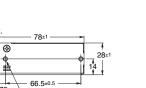
Models with Terminal Block Facing Forward

S8FS-C015□□J (15 W)

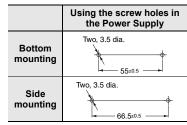




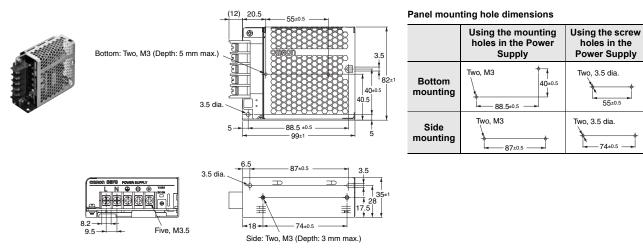
Five, M3 6. 7.62 →



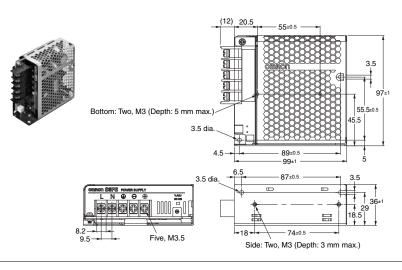
8.75 Side Two, M3 (Depth: 3 mm max.) Panel mounting hole dimensions



S8FS-C025□□J (25 W)



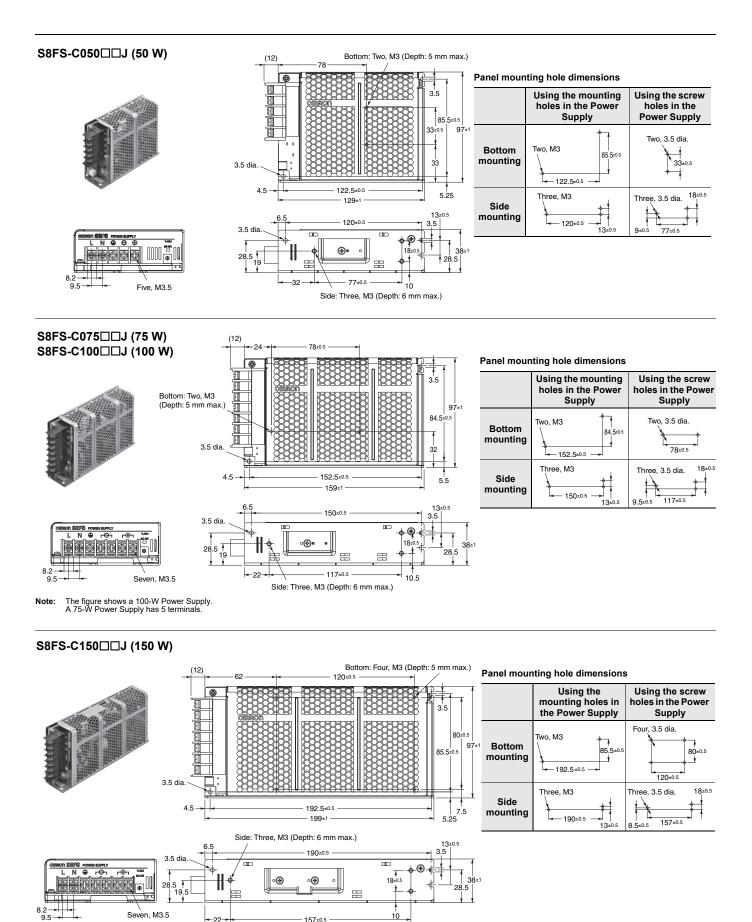
S8FS-C035□□J (35 W)



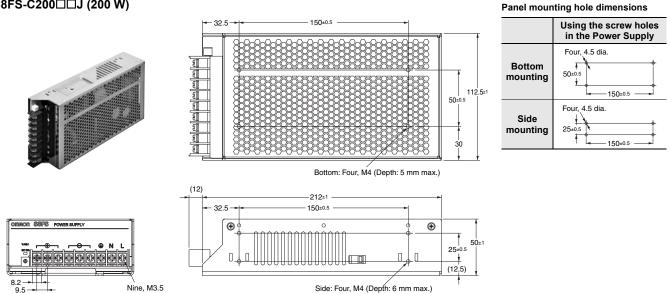
Panel mounting hole dimensions

	Using the mounting holes in the Power Supply	Using the screw holes in the Power Supply
Bottom mounting	Two, M3 55,5±0.5 89±0.5	Two, 3.5 dia.
Side mounting	Two, M3	Two, 3.5 dia.

OMRON



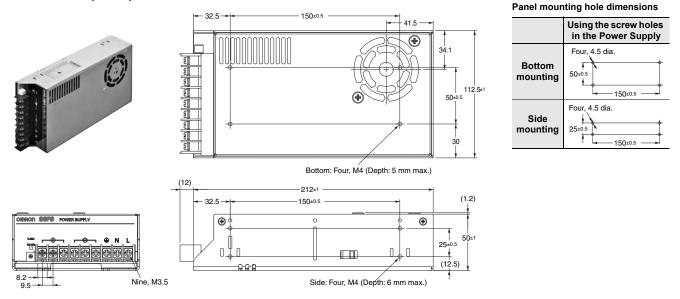
S8FS-C200 U (200 W)



Side: Four, M4 (Depth: 6 mm max.)

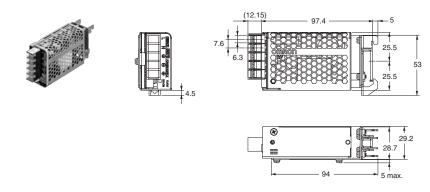
S8FS-C350 U (350 W)

Nine, M3.5



Models with DIN rail

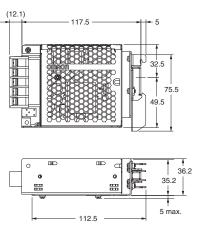
S8FS-C015□□D (15 W)



S8FS-C025□□D (25 W)

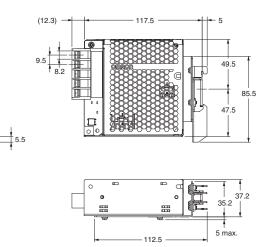




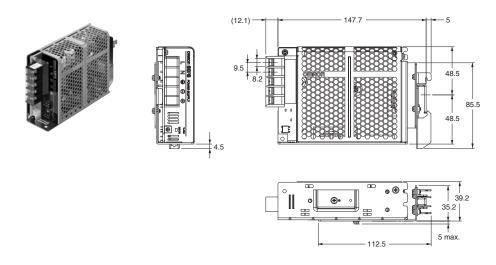


S8FS-C035□□D (35 W)

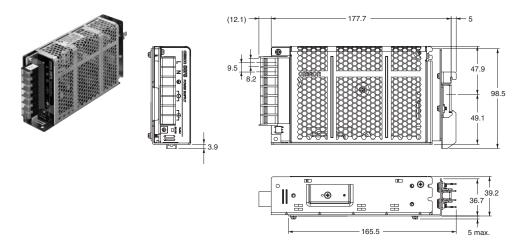




S8FS-C050 D (50 W)

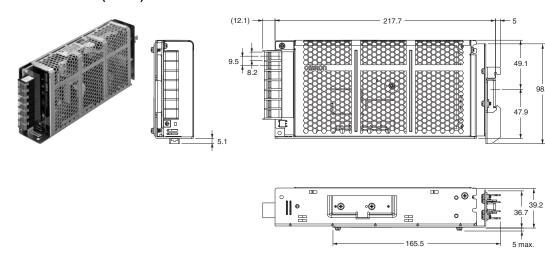


S8FS-C075□□D (75 W) S8FS-C100 D (100 W)



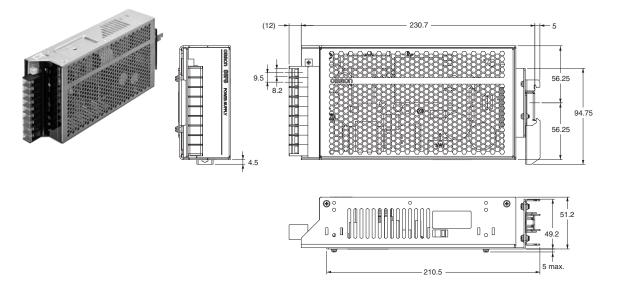
The figure shows a 100-W Power Supply. A 75-W Power Supply has 5 terminals. Note:

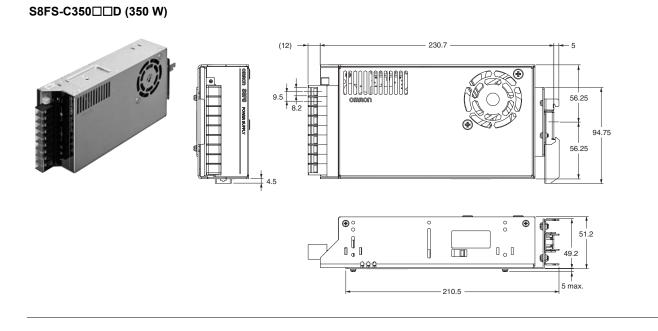
S8FS-C150 D (150 W)



98.5

S8FS-C200 D (200 W)



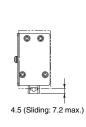


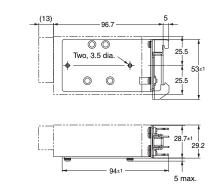
Mounting Brackets (Order Separately)

Power rating	Mounting direction	Model	
15 W		S82Y-FSC015DIN	
25 W		S82Y-FSC025DIN	
35 W		S82Y-FSC050DIN	
50 W		3821-FSC050DIN	
75 W	DIN Rail		
100 W		S82Y-FSC150DIN	
150 W			
200 W		S82Y-FSC350DIN	
350 W		3021-F3C330DIN	
15 W		S82Y-FSC015DIN-S	
25 W		S82Y-FSC025DIN-S	
35 W		S82Y-FSC035DIN-S	
50 W	Bottom-mounting to DIN Rail	S82Y-FSC050DIN-S	
75 W		S82Y-FSC100DIN-S	
100 W		302 T-1-3C 100DIN-3	
150 W		S82Y-FSC150DIN-S	
200 W	Bottom-mounting with L-brackets	S82Y-FSC350B (4 brackets	
350 W	Bottom-mounting with L-blackets	SOZI-FSC350B (4 Drackets	

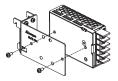
S82Y-FSC015DIN





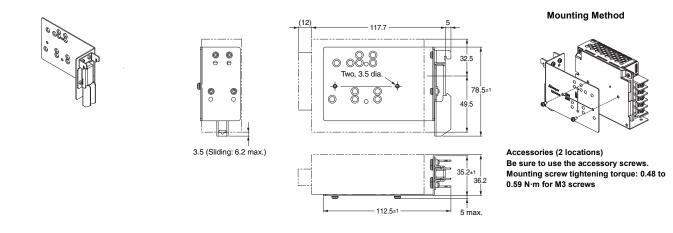






Accessories (2 locations) Be sure to use the accessory screws. Mounting screw tightening torque: 0.48 to 0.59 N·m for M3 screws

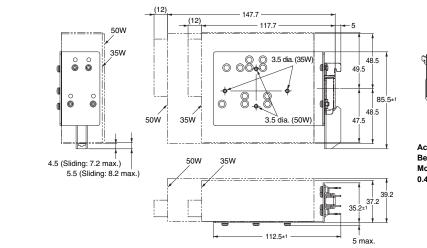
S82Y-FSC025DIN



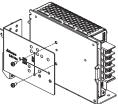
S82Y-FSC050DIN

° 8°8

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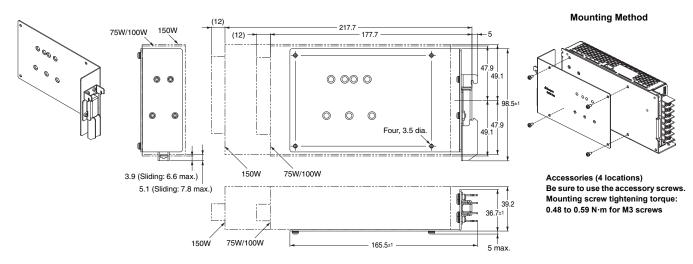


Mounting Method

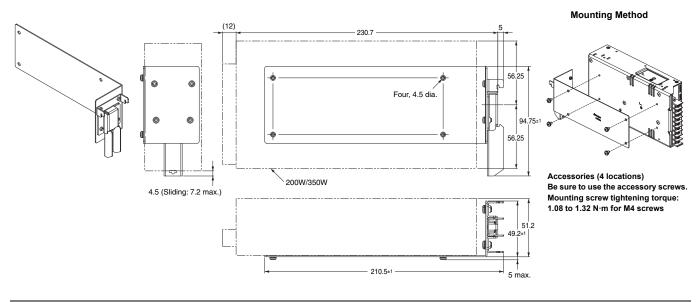


Accessories (2 locations) Be sure to use the accessory screws. Mounting screw tightening torque: 0.48 to 0.59 N·m for M3 screws

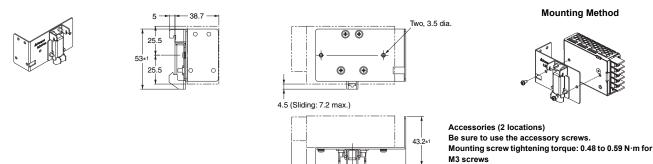
S82Y-FSC150DIN



S82Y-FSC350DIN



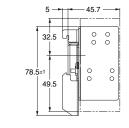
S82Y-FSC015DIN-S

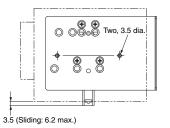


(13)

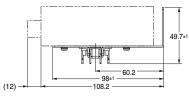
S82Y-FSC025DIN-S



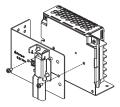




47.2 - 79.5±1 - 87.2 ----

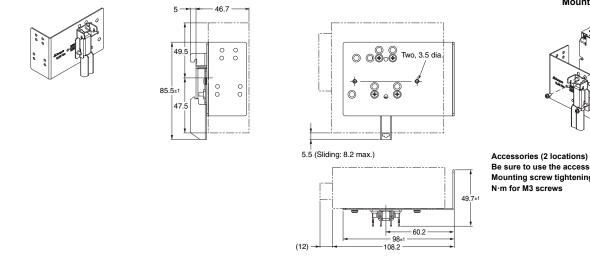


Mounting Method

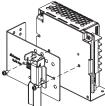


Accessories (2 locations) Be sure to use the accessory screws. Mounting screw tightening torque: 0.48 to 0.59 N·m for M3 screws

S82Y-FSC035DIN-S



Mounting Method

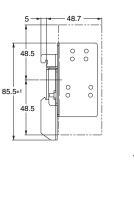


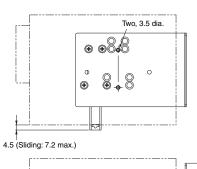
Be sure to use the accessory screws. Mounting screw tightening torque: 0.48 to 0.59

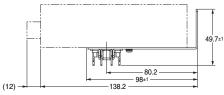
S8FS-C

S82Y-FSC050DIN-S

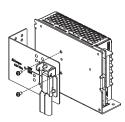






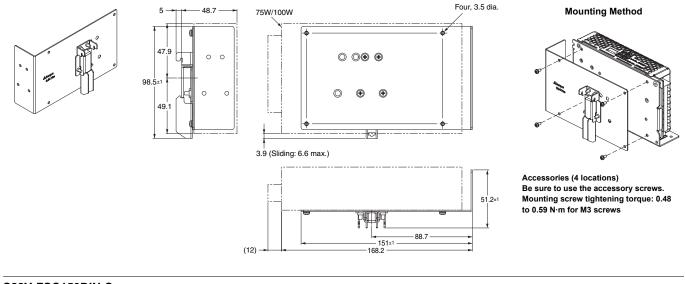


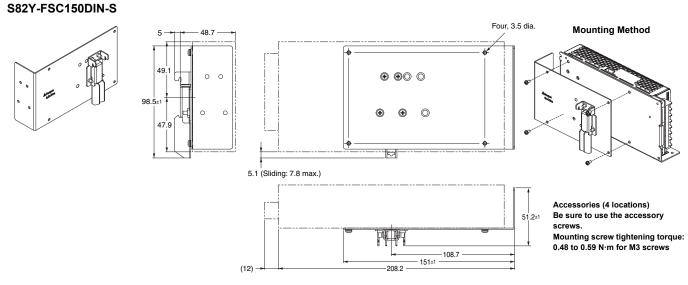
Mounting Method



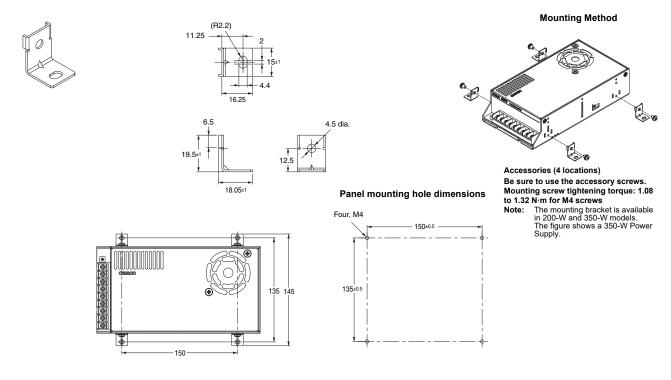
Accessories (2 locations) Be sure to use the accessory screws. Mounting screw tightening torque: 0.48 to 0.59 N⋅m for M3 screws







S82Y-FSC350B (Four Brackets)



For Users of S8JC DIN Rail-mounting Power Supplies

If you are using a DIN Rail-mounting S8JC-series Power Supply, you can use a DIN Rail-mounting S8FS-C-series Power Supply or replace it with an S8FS-C-series Power Supply with a Forward-facing Terminal Block and a DIN Rail Mounting Bracket.

Table of Corresponding S8JC Power Supplies and S8FS-C J Power Supplies with DIN Rail Mounting Brackets

Power rating	S8JC-Z *2	S8JC-ZS		S8FS-C Power Supply		DIN Rail-mounting Bracket *1
	S8JC-Z01505CD	S8JC-ZS01505CD-AC2	\Rightarrow	S8FS-C01505J		
15 W	S8JC-Z01512CD	S8JC-ZS01512CD-AC2	\Rightarrow	S8FS-C01512J	+	S82Y-FSC015DIN
	S8JC-Z01524CD	S8JC-ZS01524CD-AC2	\Rightarrow	S8FS-C01524J		
	S8JC-Z03505CD	S8JC-ZS03505CD-AC2	\Rightarrow	S8FS-C03505J		
35 W	S8JC-Z03512CD	S8JC-ZS03512CD-AC2	\Rightarrow	S8FS-C03512J	+	S82Y-FSC050DIN
	S8JC-Z03524CD	S8JC-ZS03524CD-AC2	\Rightarrow	S8FS-C03524J		
	S8JC-Z05005CD	S8JC-ZS05005CD-AC2	\Rightarrow	S8FS-C05005J		
50 W	S8JC-Z05012CD	S8JC-ZS05012CD-AC2	\Rightarrow	S8FS-C05012J	1	S82Y-FSC050DIN
50 00	S8JC-Z05024CD	S8JC-ZS05024CD-AC2	\Rightarrow	S8FS-C05024J	Ť	3021-F3C030DIN
	S8JC-Z05048CD		\Rightarrow	S8FS-C05048J		
	S8JC-Z10005CD	S8JC-ZS10005CD-AC2	\Rightarrow	S8FS-C10005J		
100 W	S8JC-Z10012CD	S8JC-ZS10012CD-AC2	\Rightarrow	S8FS-C10012J	+	S82Y-FSC150DIN
100 W	S8JC-Z10024CD	S8JC-ZS10024CD-AC2	\Rightarrow	S8FS-C10024J	-	3021-F3C130DIN
	S8JC-Z10048CD		\Rightarrow	S8FS-C10048J		
	S8JC-Z15005CD	S8JC-ZS15005CD-AC2	\Rightarrow	S8FS-C15005J		
150 W	S8JC-Z15012CD	S8JC-ZS15012CD-AC2	\Rightarrow	S8FS-C15012J		S82Y-FSC150DIN
150 W	S8JC-Z15024CD	S8JC-ZS15024CD-AC2	\Rightarrow	S8FS-C15024J	+	5821-FSC150DIN
	S8JC-Z15048CD		\Rightarrow	S8FS-C15048J		
	S8JC-Z35005CD	S8JC-ZS35005CD-AC2	\Rightarrow	S8FS-C35005J		
350 W	S8JC-Z35012CD	S8JC-ZS35012CD-AC2	\Rightarrow	S8FS-C35012J	+	S82Y-FSC350DIN
	S8JC-Z35024CD	S8JC-ZS35024CD-AC2	\Rightarrow	S8FS-C35024J		

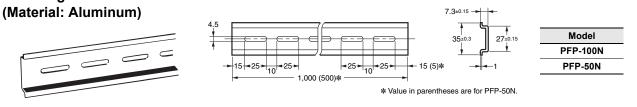
*1. To mount an S8FS-series Power Supply that is not a DIN Rail-mounting model to a DIN Rail, purchase a DIN Rail-mounting Bracket separately from the Power Supply.

*2. Consult with your OMRON representative if you use a 15-W or 35-W S8JC-Z Power Supply with a 48-V output voltage.

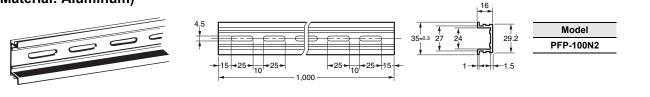
DIN Rail (Order Separately)

Note: All units are in millimeters unless otherwise indicated.

Mounting Rail

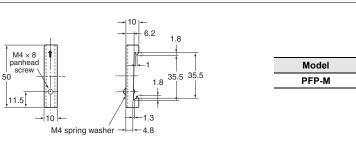


Mounting Rail (Material: Aluminum)



End Plate





Note: 1. If there is a possibility that the Power Supply will be subject to vibration or shock, use a steel DIN Rail. Otherwise, metallic filings may result from aluminum abrasion.

2. If there is a possibility of the Power Supply sliding sideways, place an End Plate (PFP-M) on each end of the Power Supply.

Terminal Cover (Order Separately)

Terminal block direction	Power rating	Applicable models	Terminal Cover model number	
	25-W	S8FS-C025		
	35-W	S8FS-C035	S82Y-FSC-C5	
	50-W	S8FS-C050	3021-1 30-03	
Models with terminal block	75-W	S8FS-C075		
facing upward	100-W	S8FS-C100	S82Y-FSC-C7	
	150-W	S8FS-C150	3021-130-07	
	200-W	S8FS-C200		
	350-W	S8FS-C350	3021-F30-09	
	15-W	S8FS-C015	S82Y-FSC-C5MF	
	25-W	S8FS-C025		
	35-W	S8FS-C035	S82Y-FSC-C5F	
	50-W	S8FS-C050	3021-F3C-C5F	
Models with terminal block facing forward	75-W	S8FS-C075	-	
	100-W	S8FS-C100 J/D	S82Y-FSC-C7F	
	150-W	S8FS-C150 J/D	3021-F3C-C/F	
	200-W	S8FS-C200 J/D	S82Y-FSC-C9F	
	350-W	S8FS-C350 J/D	3021-F30-69F	

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Safety Precautions

Refer to Safety Precautions for All Power Supplies.

Warning Indications

	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury or in property damage.
Precautions for Safe Use	Supplementary comments on what to do or avoid doing, to use the product safely.
Precautions for Correct Use	Supplementary comments on what to do or avoid doing, to prevent failure to operate, malfunction or undesirable effect on product performance.

Meaning of Product Safety Symbols

	Indicates the possibility of electric shock under specific conditions.
	Indicates the possibility of injuries by high temperature under specific conditions.
	Indicates the possibility of injuries, such as electric shock by disassembling the device, prohibiting disassembly.
0	Indicates the instructions of unspecified general action.

Minor electric shock, fire, or Product failure may occasionally occur. Do not disassemble, modify, or repair the Product or touch the interior of the Product.



Minor burns may occasionally occur. Do not touch the Product while power is being supplied or immediately after power is turned OFF.



Fire may occasionally occur. Tighten terminal screws to the specified torque. S8FS-C015□□J: 4.25 to 5.13 lb-in (0.48 to 0.58 N·m)

S8FS-C015□□J: 4.25 to 5.13 lb-in (0.48 to 0.58 N·m) Other than S8FS-C015□□J: 6.55 to 7.78 lb-in (0.74 to 0.88 N·m)

Minor injury due to electric shock may occasionally occur. Do not touch the terminals while power is being supplied.



Minor electric shock, fire, or Product failure may occasionally occur. Do not allow any pieces of metal or conductors or any clippings or cuttings resulting from installation work to enter the Product.



Precautions for Safe Use

Ambient Operating and Storage Environments

- Store the Power Supply at a temperature of -40 to 85°C and a humidity of 10% to 95%.
- The internal parts may occasionally deteriorate or be damaged. Use the standard mounting method only. Do not use the Power Supply outside the derating range.
- Use the Power Supply at a humidity of 20% to 90%.
- Do not use the Power Supply in locations subject to direct sunlight.
 Do not use the Power Supply in locations where liquids, foreign matter, or corrosive gases may enter the interior of the Power

Installation Environment

- Do not use the Power Supply in locations subject to shocks or vibrations. Install the Power Supply away from contactors and other parts and devices that are sources of vibration.
- Install the Power Supply well away from any sources of strong, high-frequency noise and surge.

Input Voltage Selector Switch

- For 100-W or higher models, the input voltage is factory-set to 200 to 240 V.
 To use an input voltage of 100 to 120 VAC, change the input voltage selector switch to the 100 to 120 VAC setting.
 To use a DC input set the input voltage selector switch to the 200
- To use a DC input, set the input voltage selector switch to the 200 to 240 VAC setting.
- Minor electric shock may occasionally occur. Do not operate the input voltage selector switch while power is being supplied.

Mounting

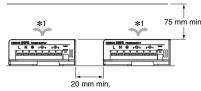
Supplies.

- Take adequate measures to ensure proper heat dissipation to increase the long-term reliability of the Power Supply.
- For models other than the S8FS-C350 , be sure to allow convection in the atmosphere around devices when mounting. Do not use the Power Supply in locations where the ambient temperature exceeds the range of the derating curve.
- The internal parts may occasionally deteriorate or be damaged. Use the standard mounting method only. Do not use the Power Supply outside the derating range.
- If you mount the Power Supply by using the screw holes provided on the chassis, the screws should preferably not penetrate beyond the exterior by more than 3 mm inside the Power Supply. If you use screws that are longer than this, make sure that they do not penetrate beyond the depth given in the dimensional diagram. Use the following tightening torque.
 - 0.48 to 0.59 N⋅m for M3 screws
 - 1.08 to 1.32 N⋅m for M4 screws
- When cutting out holes for mounting, make sure that cuttings do not enter the interior of the Power Supplies.
- The internal parts may occasionally deteriorate or be damaged due to adverse heat radiation. Do not loosen the screws on the Power Supplies.

Mounting

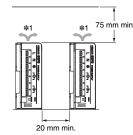
The standard mounting pattern is shown below.

Mounting Pattern A



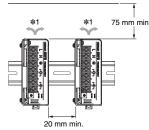
The above figure shows a model with the terminal block facing upward.

Mounting Pattern B



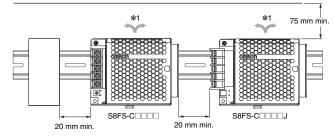
The above figure shows a model with the terminal block facing upward.

Mounting Pattern C *2



The above figure shows a model with the terminal block facing forward.

Mounting Pattern D *2



To mount the Power Supply to a DIN Rail, hook portion (A) of the Power Supply onto the DIN Rail and press the Power Supply in direction (B) until you hear it lock into place. Make sure that the catch on the Mounting Bracket is engaged with the DIN Rail.

(B)

To dismount the Power Supply, pull down portion (C) with a flat-blade screwdriver and pull out the Power Supply.

- *1. Air flow
- *2. For mounting patterns C and D, a separately sold Mounting Bracket is used to mount the Power Supplies to DIN Rail. Refer to Mounting Brackets (Order Separately) on page 30 for the separately sold Mounting Brackets.



Rail stopper

Wiring

- · Connect the ground completely.
- A protective earthing terminal stipulated in safety standards is used. Electric shock or malfunction may occur if the ground is not connected completely.
- Minor fire may possibly occur. Ensure that input and output terminals are wired correctly
- Do not apply more than 75 N force to the terminal block when tightening it.
- Be sure to remove the sheet covering the Power Supply for machining before power-ON so that it does not interfere with heat dissipation.
- Use the following material for the wires to be connected to the S8FS-C to prevent smoking or ignition caused by abnormal loads.

Recommended Wire Gauges

Terminals	Model	Recommended Wire Gauges	
Input	S8FS-C015	AWG14 to 22	
	S8FS-C025□□□ to S8FS-C100□□□	AWG12 to 20	
	S8FS-C150□□□ or S8FS-C200□□□	AWG12 to 16	
	S8FS-C350□□□	AWG12	
Output	S8FS-C015□□	AWG14 to 18	
	S8FS-C02512 to S8FS-C02524		
	S8FS-C03515 to S8FS-C03524	AWG12 to 20	
	S8FS-C05024 to S8FS-C05048		
	S8FS-C02505 or S8FS-C03512	AWG12 to 16	
	S8FS-C05012 to S8FS-C05015		
	S8FS-C07515 to S8FS-C07548		
	S8FS-C10024 to S8FS-C10048		
	S8FS-C15036 to S8FS-C15048□	1	
	S8FS-C03505 or S8FS-C05005□		
	S8FS-C07505 to S8FS-C07512		
	S8FS-C10005 to S8FS-C10015	AWG12	
	S8FS-C15005 to S8FS-C15024	- AWG12	
	S8FS-C200□□□ or S8FS-C350□□□		
Protective	S8FS-C015□□	AWG14	
earth terminal	S8FS-C025□□□ to S8FS-C350□□□	AWG12 to 14	

Note: The current capacity for the output terminals on the S8FS-C025 C025 to S8FS-C350 C025 A for each terminal. Make sure to use multiple terminals together if the current flow is higher than the current capacity for each terminal.

Overload Protection

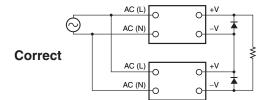
- If the Power Supply has been short-circuited or supplied with an overcurrent longer than 10 seconds, the internal parts of the Power Supply may occasionally deteriorate or be damaged.
- Internal parts may possibly deteriorate or be damaged if the Power Supply is used for applications with frequent inrush current or overloading at the load end. Do not use the Power Supply for such applications.

Output Voltage Adjuster (V. ADJ)

- The output voltage adjuster (V. ADJ) may possibly be damaged if it is turned with unnecessary force. Do not turn the adjuster with excessive force.
- After completing output voltage adjustment, be sure that the output capacity or output current does not exceed the rated output capacity or rated output current.

Series Operation

Two Power Supplies can be connected in series.



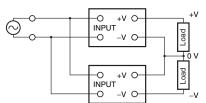
Note: 1. If the load is short-circuited, a reverse voltage will be generated inside the Power Supply. If this occurs the Power Supply may possibly deteriorate or be damaged. Always connect a diode as shown in the figure. Select a diode having the following ratings.

Туре	Schottky Barrier diode
Dielectric strength (VRRM)	Twice the rated output voltage or above
Forward current (I _F)	Twice the rated output current or above

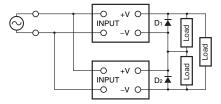
 Although Power Supplies having different specifications can be connected in series, the current flowing through the load must not exceed the smaller rated output current.

Making Positive/Negative Outputs

 The outputs are floating outputs (i.e., the primary circuits and secondary circuits are separated). You can therefore make positive and negative outputs by using two Power Supplies. You can make positive and negative outputs with any of the models. If positive and negative outputs are used, connect Power Supplies of the same model as shown in the following figure. (Combinations with different output capacities or output voltages can be made. However, use the lower of the two maximum rated output currents as the current to the loads.)



• Depending on the model, internal circuits may be damaged due to startup failure when the power is turned ON if loads such as a servomotor or operational amplifier operate in series. Therefore, connect bypass diodes (D₁, D₂) as shown in the following figure.

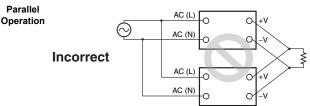


• Select a diode having the following ratings.

Туре	Schottky Barrier diode
Dielectric strength (VRRM)	Twice the rated output voltage or above
Forward current (IF)	Twice the rated output current or above

Parallel Operation

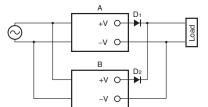
Parallel operation is not possible.



Backup Operation

Backup operation is possible if you use two Power Supplies of the same model.

Connect diodes as shown in the following figure for backup operation.



Select a diode having the following ratings.

Туре	Schottky Barrier diode
Dielectric strength (VRRM)	Twice the rated output voltage or above
Forward current (I⊧)	Twice the rated output current or above

- The output voltages of Power Supplies A and B output must be set higher only by a value equivalent to the drop in forward voltages (VF) of diodes D1 and D2.
- Power loss occurs equivalent to the Power Supply output current (lout) times the diode forward voltage (VF), and heat is generated. The diode must be cooled to ensure that its temperature is kept at or below the value indicated in the diode catalog.
- There will be a power loss caused by load power and diodes. Be sure that this total power loss does not exceed the rated output power (rated output voltage times rated output current) of each Power Supply.

In Case There Is No Output Voltage

There is a possibility that functions such as overcurrent protection, over-voltage protection or overheating protection are functioning. The internal protection circuit may operate if a large amount of surge voltage such as a lightening surge occurs while turning ON the Power Supply.

In case there is no output voltage, please check the following points before contacting us:

- Checking overload protection status:
- Check whether the load is in overload status or is short-circuited. Remove wires to load when checking.
- Checking overvoltage or internal protection:
- Turn the power supply OFF once, and leave it OFF for at least 3 minutes. Then turn it ON again to see if this clears the condition.
 Check overheating protection (350-W model):
- Switch off the input power supply and switch back on after allowing sufficient time for cooling.

Charging Batteries

If you connect a battery at the load, install overcurrent control and overvoltage protection circuits.

Period and Terms of Warranty

Warranty Period

The Power Supply warranty is valid for a period of three years from the date of shipment from the factory.

Terms of Warranty

The warranty is valid only for the following operating conditions.

1. Average ambient operating temperature of the Power Supply: 40°C max.

- 2. Average load rate: 80% max.
- 3. Mounting method: Standard mounting
- * The maximum ratings must be within the derating curve.

If the Power Supply fails for reasons attributable to OMRON within the above warranty period, OMRON will repair or replace the faulty part of the Power Supply at the place of purchase or the place where the Power Supply delivered without charge. This warranty does not cover the following types of failures.

- (1) Failures that result from handling or operation of the Power Supply under conditions or in environments that are not given in this document and not given in any other specifications exchanged between OMRON and the customer
- (2) Failures that originate in causes other than the delivered product itself
- (3) Failures caused by disassembly, modification, or repair of the Power Supply by anyone other than OMRON
- (4) Failures caused by applications or uses for which the Power Supply was not originally intended
- (5) Failures caused by factors that could not be anticipated with the scientific or technical knowledge available when the Power Supply was shipped
- (6) Failures caused by other causes for which OMRON is not responsible, such as natural disasters and other acts of God This warranty is limited to the individual product that was delivered and does not cover any secondary, subsequent, or related damages.

Recommended Replacement Periods and Periodic Replacement for Preventive Maintenance

The recommended replacement period for preventive maintenance is greatly influenced by the application environment of the Power Supply. As a guideline, the recommended replacement period is 7 to 10 years.* To prevent failures and accidents that can be caused by using a Power Supply beyond its service life, we recommend that you replace the Power Supply as early as possible within the recommended replacement period. However, bear in mind that the recommended replacement period is for reference only and does not guarantee the life of the Power Supply.

Many electronic components are used in the Power Supply and the Power Supply depends on the correct operation of these components to achieve the original Power Supply functions and performance. However, the influence of the ambient temperature on aluminum electrolytic capacitors is large, and the service life is reduced by half for each 10°C rise in temperature (Arrhenius law). When the capacity reduction life of the electrolytic capacitor is reached, Power Supply failures or accidents may occur. We therefore recommend that you replace the Power Supply periodically to minimize Power Supply failures and accidents in advance.

* The recommended replacement period applies under the following conditions: rated input voltage, load rate of 50% max., ambient temperature of 40°C max., and the standard mounting method. (The fan is excluded for models with fans.)

This product model is designed with a service life of 10 years minimum under the above conditions.

Terms and Conditions Agreement

Read and understand this catalog.

Please read and understand this catalog before purchasing the products. Please consult your OMRON representative if you have any questions or comments.

Warranties.

- (a) Exclusive Warranty. Omron's exclusive warranty is that the Products will be free from defects in materials and workmanship for a period of twelve months from the date of sale by Omron (or such other period expressed in writing by Omron). Omron disclaims all other warranties, express or implied.
- (b) Limitations. OMRON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCTS. BUYER ACKNOWLEDGES THAT IT ALONE HAS DETERMINED THAT THE PRODUCTS WILL SUITABLY MEET THE REQUIREMENTS OF THEIR INTENDED USE.

Omron further disclaims all warranties and responsibility of any type for claims or expenses based on infringement by the Products or otherwise of any intellectual property right. (c) Buyer Remedy. Omron's sole obligation hereunder shall be, at Omron's election, to (i) replace (in the form originally shipped with Buyer responsible for labor charges for removal or replacement thereof) the non-complying Product, (ii) repair the non-complying Product, or (iii) repay or credit Buyer an amount equal to the purchase price of the non-complying Product; provided that in no event shall Omron be responsible for warranty, repair, indemnity or any other claims or expenses regarding the Products unless Omron's analysis confirms that the Products were properly handled, stored, installed and maintained and not subject to contamination, abuse, misuse or inappropriate modification. Return of any Products by Buyer must be approved in writing by Omron before shipment. Omron Companies shall not be liable for the suitability or unsuitability or the results from the use of Products in combination with any electrical or electronic components, circuits, system assemblies or any other materials or substances or environments. Any advice, recommendations or information given orally or in writing, are not to be construed as an amendment or addition to the above warranty.

See http://www.omron.com/global/ or contact your Omron representative for published information.

Limitation on Liability; Etc.

OMRON COMPANIES SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCTS, WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, NEGLIGENCE OR STRICT LIABILITY.

Further, in no event shall liability of Omron Companies exceed the individual price of the Product on which liability is asserted.

Suitability of Use.

Omron Companies shall not be responsible for conformity with any standards, codes or regulations which apply to the combination of the Product in the Buyer's application or use of the Product. At Buyer's request, Omron will provide applicable third party certification documents identifying ratings and limitations of use which apply to the Product. This information by itself is not sufficient for a complete determination of the suitability of the Product in combination with the end product, machine, system, or other application or use. Buyer shall be solely responsible for determining appropriateness of the particular Product with respect to Buyer's application, product or system. Buyer shall take application responsibility in all cases.

NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY OR IN LARGE QUANTITIES WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCT(S) IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

Programmable Products.

Omron Companies shall not be responsible for the user's programming of a programmable Product, or any consequence thereof.

Performance Data.

Data presented in Omron Company websites, catalogs and other materials is provided as a guide for the user in determining suitability and does not constitute a warranty. It may represent the result of Omron's test conditions, and the user must correlate it to actual application requirements. Actual performance is subject to the Omron's Warranty and Limitations of Liability.

Change in Specifications.

Product specifications and accessories may be changed at any time based on improvements and other reasons. It is our practice to change part numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the Product may be changed without any notice. When in doubt, special part numbers may be assigned to fix or establish key specifications for your application. Please consult with your Omron's representative at any time to confirm actual specifications of purchased Product.

Errors and Omissions.

Information presented by Omron Companies has been checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical or proofreading errors or omissions.

Note: Do not use this document to operate the Unit.

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