

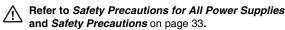
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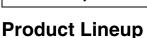
Switch Mode Power Supply (15/25/35/50/75/100/150/200/350-W Models) S8FS-C

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: High quality electrolytic capacitor with 4 times longer life compared to previous model ensure stable quality and long life.
- 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 (sold separately).





Output	Power rating											
voltage	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.

S8FS-C			
	(1)	(2)	(3)

(1) Power Rating

	_
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
05	5 V
12	12 V
15	15 V
24	24 V
36	36 V
48	48 V

(3) Terminal Block Direction

Code	Terminal Block	Direction
Blank	Models with terminal block facing upward	
J	Models with terminal block facing forward	





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 blo facing forwa
		5 V	3 A			S8FS-C0150
45.144		12 V	1.3 A			S8FS-C0151
15 W		15 V	1 A			S8FS-C0151
		24 V	0.7 A			S8FS-C0152
		5 V	5 A		S8FS-C02505	S8FS-C0250
OF W		12 V	2.1 A		S8FS-C02512	S8FS-C0251
25 W		15 V	1.7 A		S8FS-C02515	S8FS-C0251
		24 V	1.1 A		S8FS-C02524	S8FS-C0252
		5 V	7 A		S8FS-C03505	S8FS-C0350
35 W	100 to 240 VAC	12 V	3 A		S8FS-C03512	S8FS-C0351
35 VV	(allowable range: 85 to 264 VAC or	15 V	2.4 A		S8FS-C03515	S8FS-C0351
	120 to 370 VDC	24 V	1.5 A		S8FS-C03524	S8FS-C0352
	*1)	5 V	10 A		S8FS-C05005	S8FS-C0500
		12 V	4.2 A		S8FS-C05012	S8FS-C0501
50 W		15 V	3.4 A		S8FS-C05015	S8FS-C0501
		24 V	2.2 A		S8FS-C05024	S8FS-C0502
		48 V	1.1 A		S8FS-C05048	S8FS-C0504
		5 V	14 A		S8FS-C07505	S8FS-C0750
		12 V	6.2 A		S8FS-C07512	S8FS-C0751
75 W		15 V	5 A	None	S8FS-C07515	S8FS-C0751
		24 V	3.2 A		S8FS-C07524	S8FS-C0752
		48 V	1.6 A		S8FS-C07548	S8FS-C0754
	100 to 120 VAC,	5 V	20 A		S8FS-C10005	S8FS-C1000
	200 to 240 VAC (allowable range:	12 V	8.5 A		S8FS-C10012	S8FS-C1001
100 W	85 to 132 VAC,	15 V	7 A		S8FS-C10015	S8FS-C1001
100 VV	176 to 264 VAC, or	24 V	4.5 A		S8FS-C10024	S8FS-C1002
	248 to 373 VDC (Select with the switch.)	36 V	2.8 A		S8FS-C10036	S8FS-C1003
	*2)	48 V	2.3 A		S8FS-C10048	S8FS-C1004
		5 V	26 A		S8FS-C15005	S8FS-C1500
		12 V	12.5 A		S8FS-C15012	S8FS-C1501
150 W		15 V	10 A		S8FS-C15015	S8FS-C1501
100 11		24 V	6.5 A		S8FS-C15024	S8FS-C1502
		36 V	4.3 A		S8FS-C15036	S8FS-C1503
	100 to 120 VAC,	48 V	3.3 A		S8FS-C15048	S8FS-C1504
	200 to 240 VAC (allowable range:	5 V	40 A		S8FS-C20005	S8FS-C2000
	90 to 132 VAC,	12 V	17 A		S8FS-C20012	S8FS-C2001
200 W	180 to 264 VAC, or	24 V	8.8 A		S8FS-C20024	S8FS-C2002
	254 to 373 VDC (Select with the switch.)	36 V	5.9 A		S8FS-C20036	S8FS-C2003
	*2)	48 V	4.43 A		S8FS-C20048	S8FS-C2004
		5 V	60 A		S8FS-C35005	S8FS-C3500
		12 V	29 A		S8FS-C35012	S8FS-C3501
350 W		24 V	14.6 A	Yes	S8FS-C35024	S8FS-C3502
		36 V	9.7 A		S8FS-C35036	S8FS-C3503
		48 V	7.32 A		S8FS-C35048	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 26.

^{*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

Input I I I I I I I I I I I I I	Voltage range * Frequency * Current * Power factor Leakage current Inrush current * (for a cold start at 25°) Rated Output Curre Voltage adjustment Ripple & Noise voltage * Input variation influence Startup time * Hold time * Overload protection Overvoltage protect	range * 100 to 240 VAC input ence * ence * 100 to 240 VAC input 115 VAC input 230 VAC input 230 VAC input		0.05 mA 0.10 mA		24 V 85% typ. 87% typ. but is the positive side and sa Refer to Derating Curves of 0.05 mA 0.10 mA 0.7 A 30 mVp-p max.			
Efficiency Input I I I I I I I I I I I I I	Voltage range * Frequency * Current * Power factor Leakage current Inrush current * (for a cold start at 25°) Rated Output Curre Voltage adjustment Ripple & Noise voltage * Input variation influt Load variation influt Temperature variation influence Startup time * Hold time * Overload protection Overvoltage protection	115 VAC input 230 VAC input 115 VAC input 230 VAC input	82% typ. Single phase 85 to 264 V, standards do not apply.) (page 18.) 50 /60 Hz (47 to 450 Hz) 0.3 A typ. 0.19 A typ 0.05 mA 0.10 mA 16 A typ. 32 A typ. 3 A10% to 10% (with V. AD 30 mVp-p max. 0.5% max. 1.0% max. 490 ms typ. 470 ms typ. 14 ms typ.	84% typ. 85% typ. AC, 120 to 370 VDC (Tild Derating is required according is required according is not seen as a seen according to the seen according to t	84% typ. 86% typ. he L terminal for the DC inproording to the input voltage 0.05 mA 0.10 mA 1 A 40 mVp-p max.	87% typ. sut is the positive side and sa . Refer to <i>Derating Curves</i> of 0.05 mA 0.10 mA 0.7 A 30 mVp-p max.			
nput	Voltage range * Frequency * Current * Power factor Leakage current Inrush current * (for a cold start at 25°) Rated Output Curre Voltage adjustment Ripple & Noise voltage * Input variation influt Load variation influt Temperature variation influence Startup time * Hold time * Overload protection Overvoltage protection	230 VAC input 115 VAC input 230 VAC input 115 VAC input 230 VAC input 115 VAC input 230 VAC input 115 VAC input 1100 to 240 VAC input ence * ence * 100 to 240 VAC input 115 VAC input 230 VAC input 230 VAC input	82% typ. Single phase 85 to 264 V, standards do not apply.) (page 18.) 50 /60 Hz (47 to 450 Hz) 0.3 A typ. 0.19 A typ 0.05 mA 0.10 mA 16 A typ. 32 A typ. 3 A10% to 10% (with V. AD 30 mVp-p max. 0.5% max. 1.0% max. 490 ms typ. 470 ms typ. 14 ms typ.	85% typ. AC, 120 to 370 VDC (Ti Derating is required ac 0.05 mA 0.10 mA 1.3 A J) 30 mVp-p max.	86% typ. ne L terminal for the DC inp cording to the input voltage 0.05 mA 0.10 mA 1 A 40 mVp-p max.	87% typ. sut is the positive side and sa . Refer to <i>Derating Curves</i> of 0.05 mA 0.10 mA 0.7 A 30 mVp-p max.			
nput I I I I I I I I I I I I I	Frequency * Current * Power factor Leakage current Inrush current * (for a cold start at 25°) Rated Output Curre Voltage adjustment Ripple & Noise voltage * Input variation influt Load variation influt Temperature variation influence Startup time * Hold time * Overload protection Overvoltage protection	115 VAC input 230 VAC input 230 VAC input 230 VAC input 115 VAC input 230 VAC input 115 VAC input 1100 to 240 VAC input ence * ence * 100 to 240 VAC input 115 VAC input 230 VAC input 230 VAC input	Single phase 85 to 264 V, standards do not apply.) (page 18.) 50 /60 Hz (47 to 450 Hz) 0.3 A typ. 0.19 A typ 0.05 mA 0.10 mA 16 A typ. 32 A typ. 3 A10% to 10% (with V. AD 30 mVp-p max. 0.5% max. 1.0% max. 490 ms typ. 470 ms typ. 14 ms typ.	AC, 120 to 370 VDC (Ti Derating is required ac 0.05 mA 0.10 mA 1.3 A J) 30 mVp-p max.	ne L terminal for the DC inported in the Lemma of the Input voltage 0.05 mA 0.10 mA 1 A 40 mVp-p max.	out is the positive side and sa . Refer to <i>Derating Curves</i> of 0.05 mA 0.10 mA 0.7 A 30 mVp-p max.			
nput I I I I I I I I I I I I I	Voltage range * Frequency * Current * Diversification of the protection of the pr		0.3 A typ. 0.19 A typ 0.05 mA 0.10 mA 16 A typ. 32 A typ. 3 A10% to 10% (with V. AD. 30 mVp-p max. 0.5% max. 1.0% max. 0.03%/°C max. 490 ms typ. 470 ms typ. 14 ms typ.	0.10 mA 1.3 A J) 30 mVp-p max.	0.10 mA 1 A 40 mVp-p max.	0.10 mA 0.7 A 30 mVp-p max.			
nput I I I I I I I I I I I I I	Power factor Leakage current Inrush current * (for a cold start at 25°) Rated Output Curre Voltage adjustment Ripple & Noise voltage * Input variation influt Load variation influt Temperature variation influence Startup time * Hold time * Overload protection Overvoltage protection	230 VAC input 115 VAC input 230 VAC input 115 VAC input 230 VAC input 230 VAC input 100 to 240 VAC input ence * ence * 100 to 240 VAC input 115 VAC input 230 VAC input 230 VAC input 230 VAC input	0.19 A typ 0.05 mA 0.10 mA 16 A typ. 32 A typ. 3 A -10% to 10% (with V. AD 30 mVp-p max. 0.5% max. 1.0% max. 490 ms typ. 470 ms typ. 14 ms typ.	0.10 mA 1.3 A J) 30 mVp-p max.	0.10 mA 1 A 40 mVp-p max.	0.10 mA 0.7 A 30 mVp-p max.			
nput I I I I I I I I I I I I I	Power factor Leakage current Inrush current * (for a cold start at 25°) Rated Output Curre Voltage adjustment Ripple & Noise voltage * Input variation influt Load variation influt Temperature variation influence Startup time * Hold time * Overload protection Overvoltage protection	115 VAC input 230 VAC input 115 VAC input 230 VAC input 230 VAC input nt range * 100 to 240 VAC input ence * ence * 100 to 240 VAC input 115 VAC input 230 VAC input 230 VAC input	0.05 mA 0.10 mA 16 A typ. 32 A typ. 3 A -10% to 10% (with V. AD 30 mVp-p max. 0.5% max. 1.0% max. 490 ms typ. 470 ms typ. 14 ms typ.	0.10 mA 1.3 A J) 30 mVp-p max.	0.10 mA 1 A 40 mVp-p max.	0.10 mA 0.7 A 30 mVp-p max.			
Dutput Addi- ional unc- ions F	Leakage current Inrush current * (for a cold start at 25°) Rated Output Curre Voltage adjustment Ripple & Noise voltage * Input variation influ Load variation influ Temperature variation influence Startup time * Hold time * Overload protection Overvoltage protect	230 VAC input 115 VAC input 230 VAC input nt range * 100 to 240 VAC input ence * ence * 100 to 240 VAC input 115 VAC input 230 VAC input 230 VAC input 230 VAC input	0.05 mA 0.10 mA 16 A typ. 32 A typ. 3 A -10% to 10% (with V. AD 30 mVp-p max. 0.5% max. 1.0% max. 0.03%/°C max. 490 ms typ. 470 ms typ. 14 ms typ.	0.10 mA 1.3 A J) 30 mVp-p max.	0.10 mA 1 A 40 mVp-p max.	0.10 mA 0.7 A 30 mVp-p max.			
Dutput Addi- ional iunc- ions F I I I I I I I I I I I I	Inrush current * (for a cold start at 25°) Rated Output Curre Voltage adjustment Ripple & Noise voltage * Input variation influ- Load variation influ- Temperature variation influence Startup time * Hold time * Overload protection Overvoltage protect	230 VAC input 115 VAC input 230 VAC input nt range * 100 to 240 VAC input ence * ence * 100 to 240 VAC input 115 VAC input 230 VAC input 230 VAC input 230 VAC input	0.10 mA 16 A typ. 32 A typ. 3 A -10% to 10% (with V. AD 30 mVp-p max. 0.5% max. 1.0% max. 0.03%/°C max. 490 ms typ. 470 ms typ. 14 ms typ.	0.10 mA 1.3 A J) 30 mVp-p max.	0.10 mA 1 A 40 mVp-p max.	0.10 mA 0.7 A 30 mVp-p max.			
Dutput Addi- ional unc- ions F I I I I I I I I I I I I	Inrush current * (for a cold start at 25°) Rated Output Curre Voltage adjustment Ripple & Noise voltage * Input variation influ- Load variation influ- Temperature variation influence Startup time * Hold time * Overload protection Overvoltage protect	115 VAC input 230 VAC input nt range * 100 to 240 VAC input ence * ence * 100 to 240 VAC input 115 VAC input 230 VAC input 230 VAC input	16 A typ. 32 A typ. 3 A -10% to 10% (with V. AD 30 mVp-p max. 0.5% max. 1.0% max. 0.03%/°C max. 490 ms typ. 470 ms typ. 14 ms typ.	1.3 A J) 30 mVp-p max. 500 ms typ.	1 A 40 mVp-p max. 470 ms typ.	0.7 A 30 mVp-p max.			
Output I Output Addi- ional func- ions I I I I I I I I I I I I I I I I I I	(for a cold start at 25°) Rated Output Curre Voltage adjustment Ripple & Noise voltage * Input variation influt Load variation influt Temperature variation influence Startup time * Hold time * Overload protection Overvoltage protect	230 VAC input nt range * 100 to 240 VAC input ence * 100 to 240 VAC input 115 VAC input 230 VAC input 230 VAC input	32 A typ. 3 A -10% to 10% (with V. AD. 30 mVp-p max. 0.5% max. 1.0% max. 0.03%/°C max. 490 ms typ. 470 ms typ. 14 ms typ.	J) 30 mVp-p max. 500 ms typ.	40 mVp-p max. 470 ms typ.	30 mVp-p max.			
Output Addiional suncions F	Rated Output Curre Voltage adjustment Ripple & Noise voltage * Input variation influ Load variation influ Temperature variation influence Startup time * Hold time * Overload protection Overvoltage protect	range * 100 to 240 VAC input ence * 100 to 240 VAC input 115 VAC input 230 VAC input 230 VAC input	3 A -10% to 10% (with V. AD 30 mVp-p max. 0.5% max. 1.0% max. 0.03%/°C max. 490 ms typ. 470 ms typ. 14 ms typ.	J) 30 mVp-p max. 500 ms typ.	40 mVp-p max. 470 ms typ.	30 mVp-p max.			
Dutput I Addi- ional iunc- ions I I I I I I I I I I I I I	Voltage adjustment Ripple & Noise voltage * Input variation influ Load variation influ Temperature variation influence Startup time * Hold time * Overload protection Overvoltage protect	range * 100 to 240 VAC input ence * ence * 100 to 240 VAC input 115 VAC input 230 VAC input 230 VAC input	-10% to 10% (with V. AD 30 mVp-p max. 0.5% max. 1.0% max. 0.03%/°C max. 490 ms typ. 470 ms typ. 14 ms typ.	J) 30 mVp-p max. 500 ms typ.	40 mVp-p max. 470 ms typ.	30 mVp-p max.			
Addi- ional iunc- ions ion	Ripple & Noise voltage * Input variation influ Load variation influ Temperature variation influence Startup time * Hold time * Overload protection Overvoltage protect	100 to 240 VAC input ence * ence * 100 to 240 VAC input 115 VAC input 230 VAC input 230 VAC input 230 VAC input 15 VAC inp	30 mVp-p max. 0.5% max. 1.0% max. 0.03%/°C max. 490 ms typ. 470 ms typ. 14 ms typ.	30 mVp-p max.	470 ms typ.				
Dutput I Dutput I Addi- ional unc- ions I I I I I I I I I I I I I I I I I I	voltage * Input variation influ- Load variation influ- Temperature variation influence Startup time * Hold time * Overload protection Overvoltage protect	input ence * ence * 100 to 240 VAC input 115 VAC input 230 VAC input 115 VAC input 230 VAC input	0.5% max. 1.0% max. 0.03%/°C max. 490 ms typ. 470 ms typ. 14 ms typ.	500 ms typ.	470 ms typ.				
Dutput I Addi- ional unc- ions I I I I I I I I I I I I I	Load variation influ Temperature variation influence Startup time * Hold time * Overload protection Overvoltage protect Overheat protection	ence * 100 to 240 VAC input 115 VAC input 230 VAC input 115 VAC input 230 VAC input	1.0% max. 0.03%/°C max. 490 ms typ. 470 ms typ. 14 ms typ.			480 ms typ.			
Addi- ional gunc- ions F ions I ions	Temperature variation influence Startup time * Hold time * Overload protection Overvoltage protect Overheat protection	100 to 240 VAC input 115 VAC input 230 VAC input 115 VAC input 230 VAC input	0.03%/°C max. 490 ms typ. 470 ms typ. 14 ms typ.			480 ms typ.			
Addi- ional iunc- ions f	ation influence Startup time * Hold time * Overload protection Overvoltage protect Overheat protection	input 115 VAC input 230 VAC input 115 VAC input 230 VAC input	490 ms typ. 470 ms typ. 14 ms typ.			480 ms typ.			
Addi- tional func- tions f f f f f f f f f f f f f f f f f f f	Input variation influe Load variation influe Temperature variation influence Startup time * Hold time * Overload protection Overvoltage protection Overheat protection Series operation	230 VAC input 115 VAC input 230 VAC input	470 ms typ. 14 ms typ.			480 ms typ.			
Addi- ional iunc- ions i	Hold time * Overload protection Overvoltage protection Overheat protection	115 VAC input 230 VAC input	14 ms typ.	480 ms typ.	450 ms tvp.				
Addi- ional siunc- ions F	Overload protection Overvoltage protection Overheat protection	230 VAC input	71		21:	460 ms typ.			
Addi- ional iunc- ions i i i i i i i i i i i i i	Overload protection Overvoltage protection Overheat protection		83 ms typ.	16 ms typ.	18 ms typ.	15 ms typ.			
Addi- ional unc- ions i i i i i i i i i i i i i	Overvoltage protect			87 ms typ.	92 ms typ.	79 ms typ.			
Addi- ional sunc- ions F	Overheat protection	tion *	Yes, automatic reset						
ional gunc- ions F ions F ions F ions F	·		Yes, 115% or higher of ra again)						
unc- ions 	Series operation	1	No						
ions F F C Insula-	•		Yes (For up to 2 Power S	upplies, external diodes	s are required.)				
nsula- ion	Parallel operation		No (However, backup op	eration is possible, exte	ernal diodes are required.)				
nsula- ion			No						
nsula- ion	Remote control		No						
ion	Output indicator		Yes (LED: Green)						
ion			3 kVAC for 1 min. (between all input terminals and output terminals) current cutoff 20 mA						
-	Withstand voltage		2 kVAC for 1 min. (between all input terminals and PE terminals) current cutoff 20 mA						
I			1 kVAC for 1 min. (between all output terminals and PE terminals) current cutoff 20 mA						
	Insulation resistanc	e	100 M Ω min. (between all output terminals and all input terminals/PE terminals) at 500 VDC						
,	Ambient operating t	temperature	-20 to 60°C (Derating is r no condensation or icing)	equired according to th	e temperature. Refer to De	rating Curves on page 17.) (v			
	Storage temperature	e	-40 to 85°C (with no cond	densation or icing)					
Envi-	Ambient operating I	humidity	20% to 90% (Storage hun	nidity: 10% to 95%)					
Overvoltage protect Addi- ional unc- ions Remote sensing Remote control Output indicator Withstand voltage ion Insulation resistance Ambient operating to Storage temperature Ambient operating to Vibration resistance Shock resistance Reliabil- ty Dimensions (W×H×I Weight)			ch in X, Y, and Z directions ch in X, Y, and Z directions					
5	Shock resistance		10 to 500 Hz, 0.26-mm half amplitude for 1 h each in X, Y, and Z directions 150 m/s², 3 times each in ±X, ±Y, ±Z directions						
_			135,000 hrs min.	, , : ::::::					
·			10 years min.						
	• • •	0)	Refer to <i>Dimensions</i> on page 23.						
Con- \	•		150 g max.	<u> </u>					
struc- 🗕			No						
		n							
			Conforms to EN 61000-3-2, GB17625.1						
		Conducted Emis-	Conforms to EN 61204-3 Class B, EN 55011 Class B, GB9254						
E	ЕМІ		Conforms to EN 61204-3	<u> </u>	<u> </u>				
		sions	OSINOMIS to EN 01204-3	CIGOS D, LIN COULT OR	200 D, GD3204				
Stan- dards			Conforms to EN 61204-3 Approved Standards UL: cURus UL 60950-1 (CSA: cURus C22.2 No60 CCC: GB4943 Conformed Standards EN: EN 60950-1 OVC II F	Recognition) OVC II Po 950-1	012				
Г			No						
	Marine Standards								

^{*} Refer to *Conditions* on page 12.

		Power rating			25 W				
Item		Output volt-	5 V	12 V	15 V	24 V			
		_	000/ tun	0.40/ hum	050/ hm	000/ turn			
Efficiency *		•		84% typ. 86% typ.		**			
		230 VAC IIIput			**				
V	/oltage range *								
F	requency *		50 /60 Hz (47 to 450 Hz)						
		115 VAC input	0.49 A typ.						
Part Part	0.3 A typ.								
nput P	Power factor	II.							
		115 VAC input	0.10 mA	0.10 mA	0.10 mA	0.10 mA			
-		230 VAC input	0.20 mA	0.20 mA	0.20 mA	0.20 mA			
Ir		115 VAC input	16 A typ.	•		·			
(f	for a cold start at 25°)	230 VAC input	32 A typ.		85% typ. 86% typ. 88% typ. 88% typ. VDC (The L terminal for the DC input is the positive side and safet ired according to the input voltage. Refer to Derating Curves on paired according to the input voltage. Refer to Derating Curves on paired according to the input voltage. Refer to Derating Curves on paired according to the input voltage. Refer to Derating Curves on paired according to the input voltage. Refer to Derating Curves on paired according to the input voltage. 0.10 mA				
R	Rated Output Curr	ent	5 A	2.1 A	1.7 A	1.1 A			
٧	/oltage adjustmen	t range *	-10% to 10% (with V. AD	OJ)					
			20 mVp-p max.	20 mVn-n max	30 mVn-n max	40 mVn-n max			
		· ·	' '	Zo myp p max.	co myp p max.	10 mvp p max.			
	•		0.5% max.						
Output -	Voltage range * Frequency * Current * Power factor Leakage current * (for a cold start at 25°) Rated Output Current Voltage adjustment Ripple & Noise voltage * Input variation influe Load variation influence Startup time * Hold time * Overload protection Overvoltage protect Overheat protection Series operation Parallel operation Remote sensing Remote control Output indicator Withstand voltage Insulation resistance Withstand voltage Insulation resistance Shock resistance Shock resistance Shock resistance Withstand voltage Insulation resistance Shock resistance Shock resistance Hambient operating resistance Shock resistance Shock resistance Hambient operating resistance Shock resistance Shock resistance Shock resistance Shock resistance Insulation resistance Shock resistance		1.0% max.						
. Т			0.03%/°C max.						
a	ition illiuence	•	300 ms tvn	3/0 ms tvn	400 ms tvn	360 me typ			
S	Startup time *	•							
		•			**				
н	lold time *	•							
	Overload protection	•		110 ms typ.	117 ms typ.	112 ms typ.			
-	-								
				ated output voltage, power	shat on (shat on the input ve	ntage and turn on the input agai			
Addi-	•	•••		Supplies external diodes a	re required \				
,	•		` '	• • • • • • • • • • • • • • • • • • • •	. ,				
ions F	•			beration is possible, exten	iai diodes are required.)				
Remote sensing No Remote control No Output indicator Yes (LED: Green)									
			, ,	en all innut terminals and	output terminals) current cuto	off 20 mA			
V	Vithetand voltage		`	· · · · · · · · · · · · · · · · · · ·					
insula-	vitiistanu voitage								
l,	neulation resistan	CO.							
	iisulation resistan								
A	Ambient operating	temperature	condensation or icing)	required according to the	temperature. Herer to <i>Deratur</i>	g ourves on page 17.) (with no			
	Storage temperatu	re	-40 to 85°C (with no con	densation or icing)					
Overvoltady Overheat Overheat Overheat Series opening Parallel op Remote series Remote cor Output incorporation Insulation Ambient of Vibration in Shock res eliabil- y Dimension Weight	Ambient operating	humidity	20% to 90% (Storage hu	midity: 10% to 95%)					
	Current * Power factor Leakage current Inrush current * (for a cold start at 25°) Rated Output Cur Voltage adjustme Ripple & Noise voltage * Input variation inf Load variation influence Startup time * Hold time * Overload protecti Overvoltage protecti Series operation Parallel operation Remote sensing Remote control Output indicator Withstand voltage Insulation resistar Ambient operatin Vibration resistar Shock resistance eliabil- y On- truc- on Degree of protect Harmonic current EMI EMS	20	10 to 55 Hz, 0.375-mm half amplitude for 2 h each in X, Y, and Z directions						
_			,	•	in X, Y, and Z directions				
			150 m/s ² , 3 times each ir	n ±X, ±Y, ±Z directions		360 ms typ. 360 ms typ. 21 ms typ. 112 ms typ. voltage and turn on the input age stoff 20 mA f 20 mA s) at 500 VDC			
Tellabii-	/ITBF		135,000 hrs min.						
			10 years min.	mVp-p max. 20 mVp-p max. 30 mVp-p max. 40 mVp-p max. % max. % max. % max. % max. % max. % max. 1 ms typ. 340 ms typ. 400 ms typ. 360 ms typ. 1 ms typ. 350 ms typ. 400 ms typ. 360 ms typ. 1 ms typ. 22 ms typ. 23 ms typ. 21 ms typ. 1 ms typ. 113 ms typ. 117 ms typ. 112 ms typ. 1 ms typ. 113 ms typ. 117 ms typ. 112 ms typ. 6, automatic reset 5, 115% or higher of rated output voltage, power shut off (shut off the input voltage and turn on the input ag (However, backup operation is possible, external diodes are required.) (However, backup operation is possible, external diodes are required.) WAC for 1 min. (between all input terminals and output terminals) current cutoff 20 mA WAC for 1 min. (between all output terminals and PE terminals) current cutoff 20 mA MAC for 1 min. (between all output terminals and PE terminals) current cutoff 20 mA IMQ min. (between all output terminals and all linput terminals /PE terminals) at 500 VDC 10 60°C (Derating is required according to the temperature. Refer to Derating Curves on page 17.) (with no densation or icing) 1 to 85°C (with no condensation or icing) 1 to 90% (Storage humidity: 10% to 95%) 10 55 Hz, 0.375-mm half amplitude for 2 h each in X, Y, and Z directions 10 000 Hz, 0.26-mm half amplitude for 1 h each in X, Y, and Z directions 10 000 Hz, 0.26-mm half amplitude for 1 h each in X, Y, and Z directions 10 ms inc. 110 ms inc.					
	Dimensions (W×H>	(D)	Refer to Dimensions on p	pages 20 and 23.					
	Veight		250 g max.						
tion	Cooling fan		No No						
D	Degree of protection	on							
Н	larmonic current	emissions	Conforms to EN 61000-3-2, GB17625.1						
			Conforms to EN 61204-3 Class B. EN 55011 Class B. GB9254						
E	MI			· 					
			Conforms to EN 61204-3 Class B, EN 55011 Class B, GB9254						
F	EMS		Conforms to EN 61204-3	high severity levels					
Stan-	-		Approved Standards	g 11.0, 10.00					
dards			UL : cURus UL 60950-1						
S	Safety Standards		CSA: cURus C22.2 No60 CCC: GB4943)950-1					
			Conformed Standards						
			EN: EN 60950-1 OVC II	Pol2					
					·				
N	Marine Standards		No						

^{*} Refer to *Conditions* on page 12.

		Power rating	35 W						
Item		Output voltage	5 V	12 V	15 V	24 V			
		115 VAC input	81% typ.	83% typ.	84% typ.	87% typ.			
Efficiency	′ *	230 VAC input	81% typ.	84% typ.	84% typ.	87% typ.			
	Voltage range *		Single phase 85 to 264 V	AC, 120 to 370 VDC (The	L terminal for the DC input i	s the positive side and safety er to <i>Derating Curves</i> on page 1			
t	Frequency *		50 /60 Hz (47 to 450 Hz)	<u> </u>	0 1 0	<u> </u>			
t	,	115 VAC input	0.66 A typ.						
	Current *	230 VAC input	0.41 A typ.						
Input	Power factor	200 TAO IIIput							
t		115 VAC input	0.15 mA						
	Leakage current	230 VAC input	0.30 mA						
ł		115 VAC input	16 A typ.						
	· · · · · · · · · · · · · · · · · · ·	230 VAC input	32 A typ.	2.4	0.4.4	1 F A			
+	•		7 A	3 A	2.4 A	1.5 A			
-			-10% to 10% (with V. AD	J)					
+	voltage *	100 to 240 VAC input	80 mVp-p max.	90 mVp-p max.	90 mVp-p max.	80 mVp-p max.			
1	•		0.5% max.						
Output			1.0% max.						
	Temperature variation influence	100 to 240 VAC input	0.03%/°C max.						
	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.			
Efficiency * Volument Property Input Property Inition Property Anddistion Property Insulation Prop	Hold time *	115 VAC input	13 ms typ.	14 ms typ.	14 ms typ.	15 ms typ.			
Addi-ional Sunc-ions R	noid time	230 VAC input	74 ms typ.	75 ms typ.	75 ms typ.	79 ms typ.			
	Overload protection	n	Yes, automatic reset						
Ī	Overvoltage protect	tion *	Yes, 115% or higher of ra	ated output voltage, power	shut off (shut off the input ve	oltage and turn on the input aga			
A -1 -1:	Overheat protectio	n	No						
tional	Series operation		Yes (For up to 2 Power S	upplies, external diodes a	re required.)				
func-	Parallel operation		No (However, backup op	eration is possible, extern	nal diodes are required.)				
tions	Remote sensing		No						
ı	Remote control		No						
İ	Output indicator		Yes (LED: Green)						
	·		,	en all input terminals and	output terminals) current cut	off 20 mA			
lneula-	Withstand voltage		2 kVAC for 1 min. (between all input terminals and PE terminals) current cutoff 20 mA						
tion			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						
			-20 to 60°C (Derating is required according to the temperature. Refer to <i>Derating Curves</i> on page 17.) (with no						
t	Storage temperatu	re							
Envi-									
ronment	Input variation influt Load variation influt Temperature variation influence Startup time * Hold time * Overload protection Overvoltage protection Series operation Parallel operation Remote sensing Remote control Output indicator Withstand voltage innuition Insulation resistant Ambient operating Storage temperatu Ambient operating Vibration resistance Shock resistance Reliabil- Life expectancy * Dimensions (W×H× Weight Cooling fan Degree of protection Harmonic current et EMI EMS	•	10 to 55 Hz, 0.375-mm ha	alf amplitude for 2 h each					
Additional Far Rei Out Insulation	Shock resistance								
Doliabil		Injust 115 VAC input 750 ms typ. 750 ms typ. 750 ms typ. 770 ms typ. 720							
ity			,						
-		·D)	*	pages 20 and 23					
Con-	`	,		agos zo ana zo.					
struc-			•						
tion		n .							
	<u> </u>			0 CB17605 1					
	narmonic current 6		Contorms to EN 61000-3-2, GB17625.1						
	EMI	Emissions	Conforms to EN 61204-3	Class B, EN 55011 Class	s B, GB9254				
			Conforms to EN 61204-3 Class B, EN 55011 Class B, GB9254						
Stan	EMS			high severity levels					
dards	Safety Standards		UL: cURus UL 60950-1 (CSA: cURus C22.2 No60 CCC: GB4943 Conformed Standards	950-1					
			EN: EN 60950-1 OVC II Pol2						
	Marine Standards		No						

^{*} Refer to *Conditions* on page 12.

		Power rating			50 W					
tem		Output voltage	5 V	12 V	15 V	24 V	48 V			
fficiency	. *	115 VAC input	79% typ.	83% typ.	84% typ.	86% typ.	87% typ.			
		230 VAC input	• •		85% typ.	86% typ.	87% typ.			
	Frequency *		50 /60 Hz (47 to 4	150 Hz)						
	Current *	115 VAC input	0.97 A typ.							
	Current	230 VAC input	0.59 A typ.							
Input	Power factor									
	I	115 VAC input	0.25 mA	0.25 mA	0.25 mA	0.25 mA	0.25 mA			
	Leakage current	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.							
		230 VAC input	32 A typ.							
	Rated Output Curre	ent	10 A	4.2 A	3.4 A	2.2 A	1.1 A			
	•		-10% to 10% (wit	h V. ADJ)						
-	Ripple & Noise	100 to 240 VAC	,	110 mVp-p max.	100 mVp-p max.	100 mVp-p max.	120 mVp-p max			
		· .	0.5% max							
	•									
Output										
			0.03%/°C max.							
	0	115 VAC input	730 ms typ.	730 ms typ.	710 ms typ.	710 ms typ.	770 ms typ.			
	Startup time *	230 VAC input	680 ms typ.	670 ms typ.	610 ms typ.	640 ms typ.	690 ms typ.			
	11-1-1-1-1	115 VAC input	12 ms typ.	14 ms typ.	14 ms typ.	14 ms typ.	14 ms typ.			
	Hold time *	230 VAC input	71 ms typ.	77 ms typ.	78 ms typ.	77 ms typ.	80 ms typ.			
	Overload protectio	n	Yes, automatic res	set						
	Overvoltage protect	ge protection * Yes, 115% or higher of rated output voltage, power shut off (shut off the input voltage and turn on the input								
	Overheat protection	n	No							
Addi- tional			Yes (For up to 2 F	Power Supplies, external	I diodes are required.)					
func-	Parallel operation		No (However, ba	ckup operation is possib	ole, external diodes are	. ,				
tions	•		,		·					
	Series operation Parallel operation Remote sensing Remote control Output indicator Withstand voltage		No							
	Output indicator		Yes (LED: Green))						
	Remote control Output indicator		3 kVAC for 1 min.	(between all input termi	inals and output termina	uls) current cutoff 20 m/	Α			
Incula.	Withstand voltage		2 kVAC for 1 min. (between all input terminals and PE terminals) current cutoff 20 mA							
tion			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 17.) (with n							
	Ambient operating	temperature								
	Storage temperatu	re	-40 to 85°C (with no condensation or icing)							
	Ambient operating	humidity	20% to 90% (Stor	age humidity: 10% to 95	5%)					
	Vibration resistance	ce								
	Shock resistance		150 m/s ² , 3 times	each in ±X, ±Y, ±Z direct	ctions					
Reliabil-	MTBF		135,000 hrs min.							
ity	Life expectancy *		10 years min.							
	Dimensions (W×H×	<d)< td=""><td>Refer to Dimension</td><td>ons on pages 20 and 24.</td><td></td><td></td><td></td></d)<>	Refer to Dimension	ons on pages 20 and 24.						
Con-	Weight		300 g max.							
struc- tion	Cooling fan		No) current cutoff 20 mA /PE terminals) at 500 VDC lefer to <i>Derating Curves</i> on page 17.) (with				
	Degree of protection	on								
	Harmonic current	emissions	Conforms to EN 6	31000-3-2, GB17625.1						
		Conducted		·	011 Class P. CR0054					
	FMI	Emissions	Comornis to EN 6	11204-3 Glass B, EN 530	JTT Class B, GB9254					
			Conforms to EN 6	31204-3 Class B, EN 550	011 Class B, GB9254					
	EMC	Emissions		·						
Stan-	EIVIS				reis					
dards	Safety Standards		UL : cURus UL 60 CSA: cURus C22	0950-1 (Recognition) OV	/C II Pol2					
ion I I I I I I I I I I I I I										
	•		EN: EN 60950-1 (640 ms typ. 14 ms typ. 77 ms typ. off the input voltage and tu required.) als) current cutoff 20 mA current cutoff 20 mA s) current cutoff 20 mA s) current cutoff 20 mA corrent cutoff 20 mA corr				

^{*} Refer to *Conditions* on page 12.

		Power rating			75 W					
tem		Output voltage	5 V	12 V	15 V	24 V	48 V			
Efficient	. *	115 VAC input	75% typ.	83% typ.	84% typ.	87% typ.	87% typ.			
inclency		230 VAC input	77% typ.	83% typ.	84% typ.	87% typ.	87% typ.			
	Voltage range *									
	Frequency *		50 /60 Hz (47 to 450 Hz)							
	Current *	115 VAC input	1.4 A typ.							
	Current	230 VAC input	0.83 A typ.							
Input	Power factor									
	Leakage current	115 VAC input	0.25 mA	0.25 mA	0.25 mA	0.25 mA	0.25 mA			
	Leakage current	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.							
	115 VAC input 75% typ. 83% typ. 84% typ. 87%									
	Note	ent	14 A	6.2 A	5 A	3.2 A	1.6 A			
		t range *	-10% to 10% (with \	V. ADJ)						
			80 mVp-p max.	110 mVp-p max.	90 mVp-p max.	110 mVp-p max.	140 mVp-p max.			
	Input variation influ	uence *	0.5% max.							
Output	Load variation influ	uence *	1.0% max.							
Juiput			0.03%/°C max.							
	Startup time *	115 VAC input	750 ms typ.	720 ms typ.	730 ms typ.	750 ms typ.	700 ms typ.			
	Ciartap time	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 protectio	n	Yes, automatic rese	Yes, automatic reset						
	Overvoltage protect	tion *	Yes, 115% or higher	r of rated output voltaເ	ge, power shut off (shut	off the input voltage an	d turn on the input aç			
Addi-	Overheat protection	n	No							
tional	Overload protection Overvoltage protection display the protection of the protection		Yes (For up to 2 Pov	wer Supplies, externa	diodes are required.)					
func-	Parallel operation		No (However, back	up operation is possib	le, external diodes are	required.)				
LIUIIS	Remote sensing		No							
	Remote control		No							
	Output indicator		Yes (LED: Green)							
	Remote control Output indicator Mithstand voltag		3 kVAC for 1 min. (b	etween all input termi	nals and output termina	als) current cutoff 20 mA	4			
nsula- V	Withstand voltage		,							
tion			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 60°C (Derating is required according to the temperature. Refer to <i>Derating Curves</i> on page 17.) (with nondensation or icing)							
Envi-	Voltage range * Frequency * Current * Power factor Leakage current Inrush current * (for a cold start at 25°) Rated Output Curr Voltage adjustmer Ripple & Noise voltage * Input variation infl Load variation infl Temperature variation influence Startup time * Hold time * Overload protectic Overvoltage prote Overheat protectic Series operation Parallel operation Remote sensing Remote control Output indicator Withstand voltage Insulation resistant Ambient operating Storage temperatu Ambient operating Vibration resistant Shock resistance Iiabil- Life expectancy * Dimensions (W×H: Weight Cooling fan Degree of protectic Harmonic current EMI EMS Safety Standards	re	-40 to 85°C (with no	condensation or icing	g)					
	Ambient operating	humidity	, ,	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·					
	Vibration resistance	e								
	Shock resistance		150 m/s², 3 times ea	ach in $\pm X$, $\pm Y$, $\pm Z$ direction	etions					
	MTBF		135,000 hrs min.							
ity	Life expectancy *		10 years min.							
	Dimensions (W×H×	D)	Refer to Dimensions	on pages 21 and 24.						
	Weight		350 g max.							
	Cooling fan		No							
	Degree of protection	on								
	Harmonic current e	emissions	Conforms to EN 610	000-3-2, GB17625.1						
	ЕМІ		Conforms to EN 612	204-3 Class B, EN 550	011 Class B, GB9254					
Remote sensing No	204-3 Class B, EN 550	011 Class B, GB9254								
0.	EMS		Conforms to EN 612	204-3 high severity lev	rels					
Stan- dards	Safety Standards		UL: cURus UL 6095 CSA: cURus C22.2 CCC: GB4943 Conformed Standard	50-1 (Recognition) OV No60950-1 ds	C II Pol2					
	Marine Standards									
	3 G.aaa. aa		No							

^{*} Refer to Conditions on page 12.

		Power rating	100 W							
tem		Output voltage	5 V	12 V	15 V	24 V	36 V	48 V		
		115 VAC input	80% typ.	82% typ.	83% typ.	85% typ.	86% typ.	87% typ.		
tticiency	y *	230 VAC input	81% typ.	83% typ.	84% typ.	87% typ.	87% typ.	88% typ.		
	Voltage range *		(The L terminal	for the DC input	is the positive side a	and safety stand	lards do not apply.)	8.)		
	Frequency *		50 /60 Hz (47 to	450 Hz)						
	Voltage range * Frequency * Current * Power factor Leakage current * (for a cold start at 25°) Rated Output Current Voltage adjustment Ripple & Noise voltage * Input variation inflution influence Startup time * Hold time * Overload protection Overvoltage protection Series operation Parallel operation Remote sensing Remote control Output indicator Withstand voltage Insulation resistance Withstand voltage Insulation resistance Storage temperature Ambient operating Vibration resistance Shock resistance iabilities Ambient operation Parallel operation Color operation Colo	115 VAC input	2 A typ.							
nput		230 VAC input	1.1 A typ.							
•	Power factor									
	Laskana aumant	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.							
	Service Serv									
	Termperature variation influence * Temperature variation influence * Toverload protection Overload protection Power bearing memorature Startup time * Overload protection Remote sensing Remote control Output indicator Withstand voltage Insulation resistance Ambient operating temperature Storage temperature Ambient operating humidity Vibration resistance Insulation resistance MTBF Life expectancy * Dimensions (W×H×D) Weight Cooling fan Degree of protection Radiated Emissions EMS I15 VAC input 230 VAC input 240 VAC input 230 VAC input 240 VAC i		20 A	8.5 A	7 A	4.5 A	2.8 A	2.3 A		
	Voltage adjustmen	nt range *	-10% to 10% (v	vith V. ADJ)	-		<u> </u>			
	Ripple & Noise	100 to 120 VAC/200 to	70 m)/n n may	100 mVp-p	70 m)/n n may	120 mVp-p	00 ==\/= = ====	120 mVp-p		
	voltage *	240 VAC input	70 mvp-p max.	max.	70 mvp-p max.	max.	90 mvp-p max.	max.		
	Input variation infl	uence *	0.5% max.							
Output	Load variation infl	uence *	1.0% max.				typ. 86% typ. typ. 87% typ. VDC Select with the switch. fety standards do not apply.) for Derating Curves on page 18 mA 0.40 mA mA 0.60 mA 2.8 A mVp-p 90 mVp-p max. ms typ. 480 ms typ. ms typ. 36 ms typ. st typ. 36 ms typ. st typ. 41 ms typ. ut off the input voltage and turn fired.) se are required.) erminals) current cutoff 20 mA minals/PE terminals) at 500 V ture. Refer to Derating Curves and Z directions and Z directions and Z directions			
Jaipai			0.03%/°C max							
	ation influence			1010		1000		1.00		
	Startup time *	· ·	, ,	- ,.				380 ms typ.		
	115 VAC input 24 V 85 V 24 V 85 V 24 V 85 V 23 V AC input 24 V AC 248 to 373 VDC Select with the switch. The Literarian for the Did input is the postive side and safety standards of not apply. Period according to the input voltage. Refer to Denating Curves on page 230 VAC input 24 A Vp. 230 VAC input 24 A Vp. 230 VAC input 24 A Vp. 230 VAC input 23 230 VAC	580 ms typ								
Addi- tional func- tions	Hold time *	· ·	23 ms typ.	37 ms typ.	36 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	on	Yes, automatic	reset						
	Overvoltage protect	ction *	Yes, 115% or hig	her of rated outp	ıt voltage, power shu	t off (shut off the i	nput voltage and turn	on the input a		
∆ddi-	Overheat protection	on								
ional Se unc- ions	Series operation		Yes (For up to 2	2 Power Supplies	s, external diodes ar	e required.)				
	Parallel operation		No (However, b	oackup operatior	is possible, externa	al diodes are rec	juired.)			
tions	Remote sensing		No							
	Remote control		No							
	Output indicator		Yes (LED: Gree	en)						
			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 PE terminals) current cutoff 20 mA							
tion			1 kVAC for 1 min. (between all output terminals and PE terminals) current cutoff 20 mA							
	Insulation resistan	ice	100 MΩ min. (b	etween all outpu	t terminals and all in	put terminals/PI	E terminals) at 500 \	/DC		
	Ambient operating	j temperature			d according to the te	emperature. Ref	er to <i>Derating Curve</i>	s on page 17		
	Storage temperatu	ire	-40 to 85°C (with	th no condensati	on or icing)					
Envi- ronment	(for a cold start at 25°) Rated Output Curr Voltage adjustmer Ripple & Noise voltage * Input variation infl Load variation infl Temperature variation influence Startup time * Hold time * Overload protectic Overvoltage protection Series operation Parallel operation Remote sensing Remote control Output indicator Withstand voltage Insulation resistant Ambient operating Storage temperatur Ambient operating Vibration resistance MTBF Y Life expectancy * Weight Cooling fan Degree of protection Harmonic current EMI EMS	humidity	20% to 90% (St	orage humidity:	10% to 95%)					
	Vibration resistance	ce					86% typ. 87% typ. ect with the switch. ards do not apply.) g Curves on page 18 0.40 mA 0.60 mA 2.8 A 90 mVp-p max. 320 ms typ. 480 ms typ. 36 ms typ. 41 ms typ. uired.) current cutoff 20 mA arrent cutoff 20 mA arrent cutoff 20 mA et etrminals) at 500 V er to Derating Curves ections			
	Shock resistance		150 m/s ² , 3 time	es each in ±X, ±	', ±Z directions					
Reliabil-	MTBF		135,000 hrs mir	۱.						
ity	Life expectancy *		10 years min.							
	Dimensions (W×H	×D)	Refer to Dimens	sions on pages 2	1 and 24.					
Con-	Weight		400 g max.							
struc- tion	Cooling fan		No							
	Degree of protection	on								
	Harmonic current	emissions	Conforms to EN	l 61000-3-2, GB	17625.1					
	EMI	Conducted Emissions	Conforms to EN	l 61204-3 Class	B, EN 55011 Class	B, GB9254				
	⊏IVII	Radiated Emissions	Conforms to EN	l 61204-3 Class	B, EN 55011 Class	B, GB9254				
	EMS		Conforms to EN	l 61204-3 high s	everity levels					
Stan- dards	Safety Standards		UL: cURus UL CSA: cURus C2 CCC: GB4943 Conformed Star	60950-1 (Recog 22.2 No60950-1 ndards	nition) OVC II Pol2					
	Marine Standarde									

^{*} Refer to *Conditions* on page 12.

		Power rating			1	150 W				
tem		Output voltage	5 V	12 V	15 V	24 V	36 V	48 V		
		115 VAC input	81% typ.	84% typ.	85% typ.	86% typ.	86% typ.	87% typ.		
Efficiency * 230 VAC input		82% typ.	85% typ.	86% typ.	87% typ.	87% typ.	88% typ.			
			Single phase 90	to 132 VAC , Sin	gle phase 180 to	264 VAC , 254 t	o 373 VDC Selec	t with the switch		
	Voltage range *						dards do not apply			
	*		` .		the input voltage	e. Reier to <i>Deratil</i>	ng Curves on page	2 18.)		
	Frequency *	445.VAO immut	50 /60 Hz (47 to	450 HZ)						
	Current *	115 VAC input	2.8 A typ.							
nput	D	230 VAC input	1.6 A typ.							
	Power factor	445.VAO :	0.50 4	0.50 4	0.50 4	0.50 4	0.40 4	0.50 4		
	Leakage current	115 VAC input	0.50 mA	0.50 mA	0.50 mA	0.50 mA	0.40 mA	0.50 mA		
		230 VAC input	0.75 mA	0.75 mA	0.75 mA	0.70 mA	0.60 mA	0.70 mA		
	Inrush current * (for a cold start at 25°)	115 VAC input	32 A typ.							
	,	230 VAC input	32 A typ.	10.5.4	10.4	C.E.A	404	2.2.4		
	Rated Output Curre		26 A	12.5 A	10 A	6.5 A	4.3 A	3.3 A		
	Voltage adjustment	1	-10% to 10% (w	vitn V. ADJ)	110 m)/n n	100 m)/n n	000 m\/n n	100>/		
	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		0.5% max.	1	1					
	Load variation influ		1.0% max.							
Output	Temperature vari-	100 to 120 VAC/200 to								
	ation influence	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 time	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 i	reset						
	Overvoltage protect	tion *	Yes, 115% or higher of rated output voltage, power shut off (shut off the input voltage and turn on the input							
			again)							
tional func-	Overheat protection		No							
	Series operation		Yes (For up to 2 Power Supplies, external diodes are required.)							
tions	Parallel operation		No (However, backup operation is possible, external diodes are required.)							
	Remote sensing		No							
	Remote control		No							
	Output indicator		Yes (LED: Green)							
	Med at a transfer		3 kVAC for 1 min. (between all input terminals and output terminals) current cutoff 20 mA							
Insula- tion	Withstand voltage		2 kVAC for 1 min. (between all input terminals and PE terminals) current cutoff 20 mA							
11011			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							
	Ambient operating	temperature	-20 to 60°C (Derating is required according to the temperature. Refer to <i>Derating Curves</i> on page 17. (with no condensation or icing)							
	Storage temperatur	re	-40 to 85°C (with no condensation or icing)							
Envi-	Ambient operating		`	orage humidity: 10	σ,					
ronment		•	10 to 55 Hz, 0.375-mm half amplitude for 2 h each in X, Y, and Z directions							
	Vibration resistanc	е		26-mm half ampli						
	Shock resistance		150 m/s², 3 times each in ±X, ±Y, ±Z directions							
Reliabil-	MTBF		135,000 hrs min	1.						
ity	Life expectancy *		10 years min.							
	Dimensions (W×H×	D)	Refer to Dimens	sions on pages 21	and 24.					
Con- struc-	Weight		500 g max.							
tion	Cooling fan		No							
	Degree of protection	n								
	Harmonic current e	missions	Conforms to EN 61000-3-2, GB17625.1							
	ЕМІ	Conducted Emissions	Conforms to EN 61204-3 Class B, EN 55011 Class B, GB9254							
		Radiated Emissions	Conforms to EN 61204-3 Class B, EN 55011 Class B, GB9254							
		EMS		61204-3 high sev	verity levels					
	EMS		Conforms to EN 61204-3 high severity levels Approved Standards UL : cURus UL 60950-1 (Recognition) OVC II Pol2 CSA: cURus C22.2 No60950-1 CCC: GB4943 Conformed Standards							
Stan- dards	EMS Safety Standards		UL : cURus UL (CSA: cURus C2 CCC: GB4943 Conformed Star	60950-1 (Recogni 22.2 No60950-1 ndards	tion) OVC II Pol	2				
			UL : cURus UL (CSA: cURus C2 CCC: GB4943	60950-1 (Recogni 22.2 No60950-1 ndards	tion) OVC II Pol	2				

^{*} Refer to Conditions on page 12.

		Power rating			200 W				
tem		Output voltage	5 V	12 V	24 V	36 V	48 V		
Efficiency	<i>ı</i> *	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.		
	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.) (Derating is required according to the input voltage. Refer to <i>Derating Curves</i> on page 18.)						
	Frequency *		50 /60 Hz (47 to	450 Hz)					
		115 VAC input	4 A typ.						
nput	Current *	230 VAC input	2.3 A typ.						
iiput	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	0.80 mA		
	Inrush current *	115 VAC input	16 A typ.		•		•		
	(for a cold start at 25°)	230 VAC input	32 A typ.						
	Rated Output Curre	ent	40 A	17 A	8.8 A	5.9 A	4.43 A		
	Voltage adjustmen	t range *	-10% to 10% (wi	ith V. ADJ)	*		-		
	Ripple & Noise voltage *	100 to 120 VAC/200 to 240 VAC input	60 mVp-p max.	60 mVp-p max.	110 mVp-p max.	130 mVp-p max.	120 mVp-p max.		
	Input variation influ	uence *	0.5% max.						
Outout	Load variation influ	uence *	1.0% max.						
Output	Temperature variation influence	100 to 120 VAC/200 to 240 VAC input	0.03%/°C max.						
	Startup time *	115 VAC input	620 ms typ.	630 ms typ.	580 ms typ.	630 ms typ.	620 ms typ.		
	Startup time	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.		
	noid tillle	230 VAC input	37 ms typ.	35 ms typ.	45 ms typ.	37 ms typ.	37 ms typ.		
	Overload protectio	n	Yes, automatic re	eset					
	Overvoltage protect	ction *	Yes, 115% or higher of rated output voltage, power shut off (shut off the input voltage and turn on the input again						
Addi-	Overheat protection		No						
ional	Series operation		Yes (For up to 2 Power Supplies, external diodes are required.)						
func- tions	Parallel operation		No (However, backup operation is possible, external diodes are required.)						
lions	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						
Insula-	Withstand voltage		2 kVAC for 1 min. (between all input terminals and PE terminals) current cutoff 20 mA						
tion			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						
	Ambient operating	temperature	-20 to 50°C (Derating is required according to the temperature. Refer to <i>Derating Curves</i> on page 17.) (wit no condensation or icing)						
	Storage temperatu	re	-40 to 85°C (with no condensation or icing)						
Envi- ronment	Ambient operating	humidity	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						
			10 to 500 Hz, 0.26-mm half amplitude for 1 h each in X, Y, and Z directions						
	Shock resistance			es each in ±X, ±Y, ±Z directions					
Reliabil- ity	MTBF Life expectancy *		135,000 hrs min.						
,	Dimensions (W×H×	(D)	10 years min. Refer to <i>Dimensions</i> on pages 22 and 25.						
Con-	Weight	,		ons on payes 22 and 2					
struc-	Cooling fan		700 g max.						
tion	Degree of protection	n .							
	Harmonic current								
		Conducted Emis-							
	ЕМІ	sions Radiated Emis-	Conforms to EN						
		sions	Conforms to EN 61204-3 Class A, EN 55011 Class A						
Stan-	EMS		Conforms to EN	61204-3 high severity	evels				
dards	Safety Standards		CSA: cURus C22 Conformed Stand	:0950-1 (Recognition) (2.2 No60950-1 dards	DVC II Pol2				
	Maning Otto 1		EN: EN 60950-1	OVC II Pol2					
	Marine Standards		No						
	SEMI	ne 12.	No						

^{*} Refer to *Conditions* on page 12.

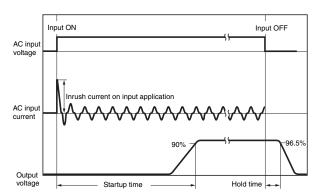
		Power rating			350 W				
Item		Output voltage	5 V	12 V	24 V	36 V	48 V		
		115 VAC input	77% typ.	83% typ.	86% typ.	87% typ.	87% typ.		
Efficiency * 230 VAC input		78% typ.	85% typ.	88% typ.	88% typ.	88% typ.			
		200 1710 1111	Single phase 90 to 132 VAC , Single phase 180 to 264 VAC , 254 to 373 VDC Select with the switch.						
	Voltage range *		(The L terminal fo	or the DC input is the	positive side and safe	ty standards do not ap	pply.)		
					input voltage. Refer to	Derating Curves on p	age 18.)		
	Frequency *		50 /60 Hz (47 to 4	450 Hz)					
	Current *	115 VAC input	6.4 A typ.						
nput		230 VAC input	3.5 A typ.						
	Power factor			1					
	Leakage current	115 VAC input	0.40 mA	0.40 mA	0.40 mA	0.40 mA	0.40 mA		
	.	230 VAC input	0.75 mA	0.80 mA	0.75 mA	0.80 mA	0.80 mA		
	Inrush current *	115 VAC input	16 A typ.						
	(for a cold start at 25°)	230 VAC input	32 A typ.						
	Rated Output Curre	ent	60 A	29 A	14.6 A	9.7 A	7.32 A		
	Voltage adjustmen		-10% to 10% (wi	th V. ADJ)					
	Ripple & Noise voltage *	100 to 120 VAC/200 to 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 infli	· · · · · · · · · · · · · · · · · · ·	0.5% max.						
	Load variation influ		2.0% max.	1.0% max.					
Output	Temperature vari-	100 to 120 VAC/200 to		1.0 /6 IIIax.					
	ation influence	240 VAC input	0.03%/°C max.						
		115 VAC input	610 ms typ.	620 ms typ.	580 ms typ.	610 ms typ.	610 ms typ.		
	Startup time *	230 VAC input	570 ms typ.	590 ms typ.	560 ms typ.	590 ms typ.	590 ms typ.		
•		115 VAC input	25 ms typ.	18 ms typ.	17 ms typ.	19 ms typ.	19 ms typ.		
	Hold time *	230 VAC input	31 ms typ.	25 ms typ.	23 ms typ.	25 ms typ.	24 ms typ.		
	Overload protectio	n	Yes, automatic re	eset		**			
•	Overveltene muster			Yes, 115% or higher of rated output voltage, power shut off (shut off the input voltage and turn on the input					
	Overvoltage protect	ction "	again)				·		
Addi-	Overheat protectio	n				e input again) (Overhe	at protection when the		
tional	•		cooling fan is in an abnormal condition)						
func- tions	Series operation		Yes (For up to 2 Power Supplies, external diodes are required.)						
LIUIIS	Parallel operation		No (However, backup operation is possible, external 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						
	Med at a large			•	•	•			
Insula- tion	Withstand voltage			•		nals) current cutoff 20			
			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 17.)						
	Ambient operating	temperature	(with no condens		ording to the temperati	ire. Refer to <i>Derating</i>	Curves on page 17.)		
	Storage temperatu	re	-40 to 85°C (with no condensation or icing)						
Envi-	Ambient operating		20% to 90% (Storage humidity: 10% to 95%)						
ronment		-	•	,	for 2 h each in X, Y, a	nd Z directions			
	Vibration resistance	ee .			for 1 h each in X, Y, a				
	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.						
_	Dimensions (W×H×	D)	Refer to Dimensi	<i>ons</i> on pages 22 and	25.				
Con- struc-	Weight		800 g max.						
tion	Cooling fan		Yes						
	Degree of protection	on							
	Harmonic current	emissions							
	EMI	Conducted Emissions	Conforms to EN	61204-3 Class A, EN	55011 Class A				
	Radiated Emissions		Conforms to EN	61204-3 Class A, EN	55011 Class A				
	EMS		Conforms to EN 6	61204-3 high severity	levels				
Stan-			Approved Standa						
dards	Safety Standards		UL: cURus UL 6 CSA: cURus C22	0950-1 (Recognition)	OVC II Pol2				
	Salety Standards		Conformed Stand						
			EN: EN 60950-1						
	Marine Standards		No						

^{*} Refer to Conditions on page 12.

Conditions

Efficiency		The value is given for the rated output voltage and rated output current.			
	Voltage range	Although some inverters give 50/60 Hz as the output frequency, do not use an inverter output as the power			
Input	Frequency	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 wav output.			
	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 the 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 19 for information on resetting the input power.			
Reliability	Life expectancy	Refer to Recommended Replacement Periods and Periodic Replacement for Preventive Maintenance on page 36 for details.			

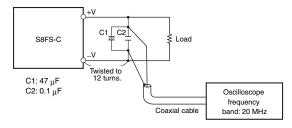
Inrush Current, Startup Time, and Output Hold Time



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

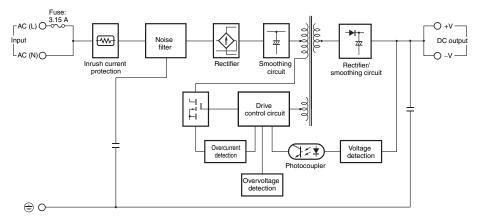
The specified standard for the ripple voltage noise was measured with the following measurement circuit.

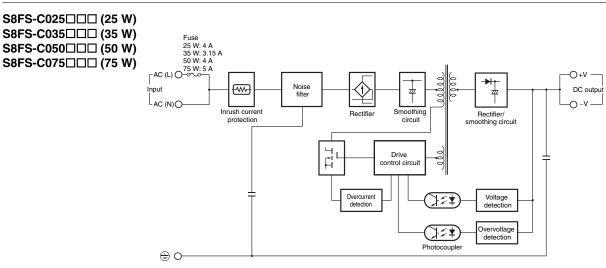


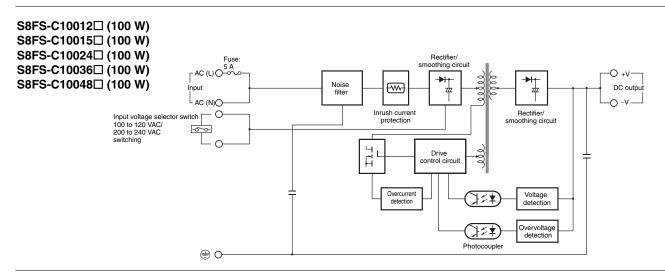
Connections

Block Diagrams

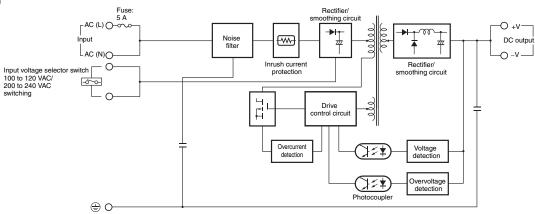
S8FS-C015□□J (15 W)



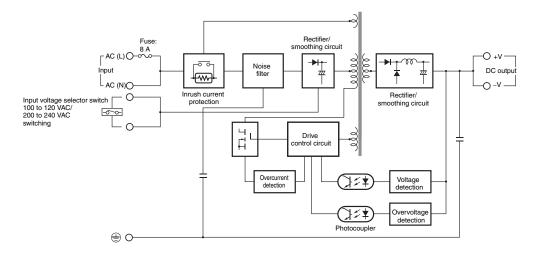




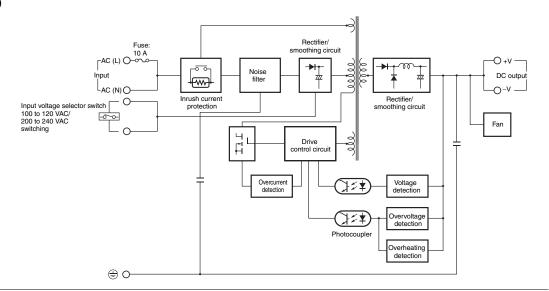
S8FS-C10005□ (100 W) S8FS-C150□□□ (150 W)



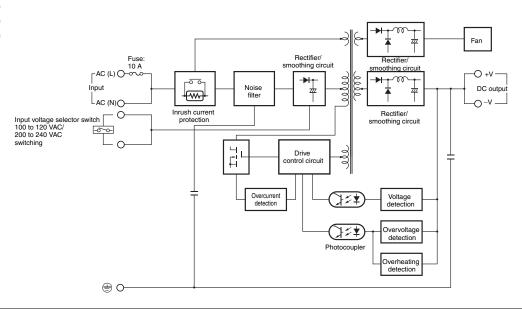
S8FS-C200□□□ (200 W)



S8FS-C35024□ (350 W)



S8FS-C35005□ (350 W) S8FS-C35012□ (350 W) S8FS-C35036□ (350 W) S8FS-C35048□ (350 W)



Construction and Nomenclature

Nomenclature

25-W, 35-W, 50-W, 15-W Models 100-W and 150-W Models 200-W and 350-W Models and 75-W Models anon SSFS rowersurrly ANDRON SSPS FONDS SUPPLY L N Q O + VALLED COMPANY VALLED COM 4 <u>(5)</u> (5) 3 S8FS-C025□□ S8FS-C100□□ S8FS-C200□□ S8FS-C050□□ S8FS-C035□□ S8FS-C075□□ S8FS-C150□□ S8FS-C350□□ L N & F (5) 3 -(1) 1 (2) 3 S8FS-C015□□J S8FS-C025□□J S8FS-C050□□J S8FS-C100□□J S8FS-C200□□J S8FS-C035□□J S8FS-C075□□J S8FS-C150□□J S8FS-C350□□J CHECK INPUT VOLTAGE SELECTOR SWITCH BEFORE POWER ON INPUT:100-120VAC 1输入) 200-240VAC 1 6

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.

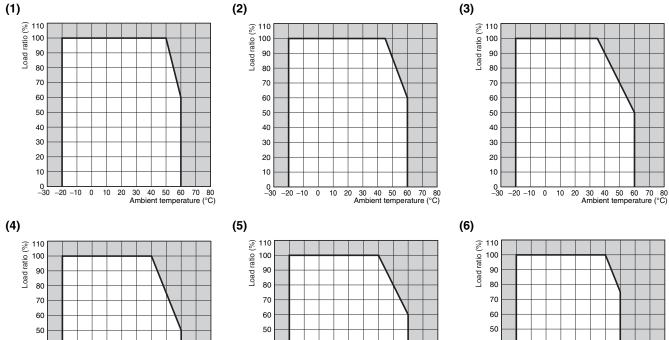
^{*4.} Refer to Input Voltage Selector Switch in Safety Precautions on page 33.

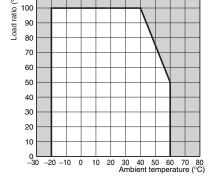
Engineering Data

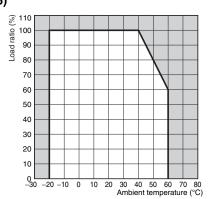
Derating Curves

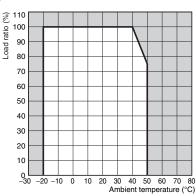
Derating for Ambient Temperatures

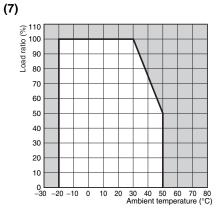
Power rating Output voltage	15 W	25 W	35 W	50 W	75 W	100 W	150 W	200 W	350 W
5 V	(1)	(2)			(3)	(4)	(5)	(7)	(1)
12 V			(1)	(1)	(1)			(6)	(1)
15 V		(1) (1)	(1)	(1)					
24 V					(2)	(1)	1)		
36 V								(6)	(1)
48 V				(1)	(1)				









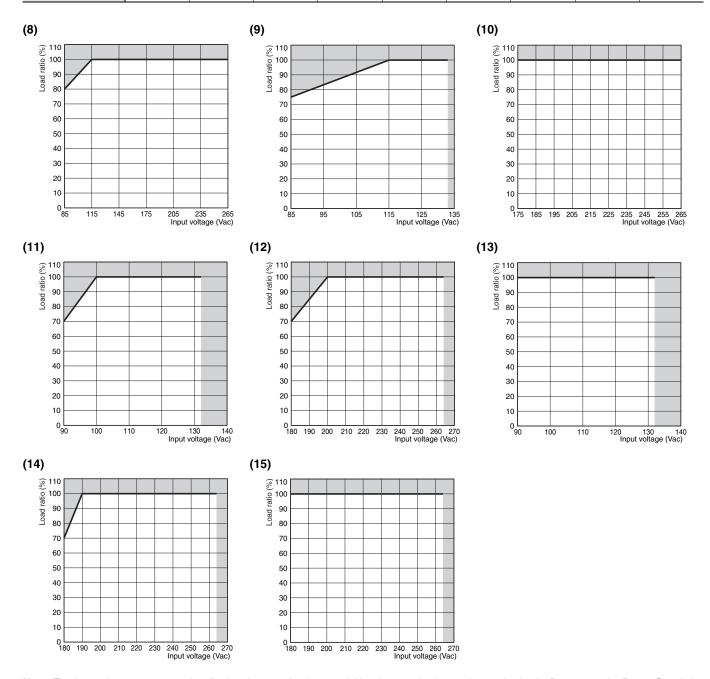


Note: The internal parts may occasionally deteriorate or be damaged. Use the standard mounting method only. Do not use the Power Supply in the area outside the derating curve.

S8FS-C

Derating for Input Voltages

Power rating Output voltage	15 W	25 W	35 W	50 W	75 W	100 W	150 W	200 W	350 W
5 V								(11) (14)	(11) (15)
12 V	(8)	(8)	(8)	(8)	(8)			(11) (11)	(11)(10)
15 V	(6)	(0)	(0)	(0)	(0)	(0) (10)	(11) (10)		
24 V						(9) (10)	(11) (12)		
36 V								(13) (15)	(11) (15)
48 V				(8)	(8)				

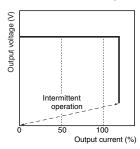


Note: The internal parts may occasionally deteriorate or be damaged. Use the standard mounting method only. Do not use the Power Supply in the area outside the derating curve.

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.

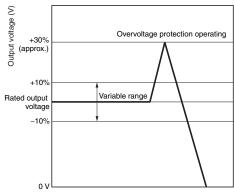


The values shown in the above diagrams are for reference only.

- 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.
 - 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 approximately 130% 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)

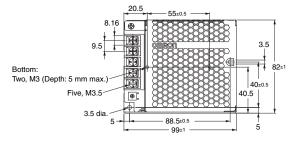
If the internal temperature rises excessively as a result of fan failure or any other reason, the overheat protection circuit will operate to protect internal elements. Reset the input power by turning it OFF for at least three minutes and then turning it back ON again.

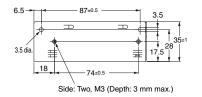
Dimensions (Unit: mm)

Power Supplies Models with Terminal Block Facing Upward

S8FS-C025□□ (25 W)





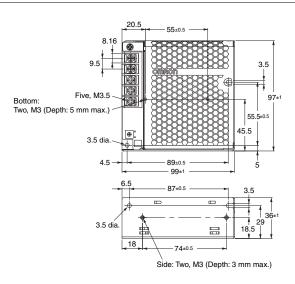


Panel mounting hole dimensions

	Using the mounting holes in the Power Supply	Using the screw holes in the Power Supply
Bottom mounting	Two, M3 40±0.5	Two, 3.5 dia.
Side mounting	Two, M3	Two, 3.5 dia.

S8FS-C035□□ (35 W)



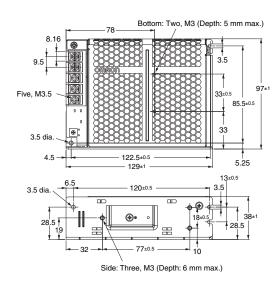


Panel mounting hole dimensions

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

S8FS-C050□□ (50 W)

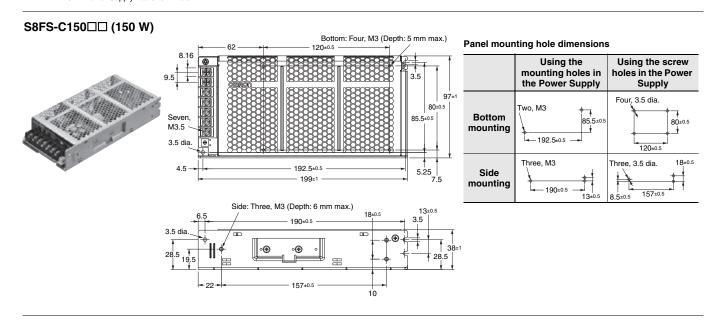




Panel mounting hole dimensions

· · · · · y · · · · · · · ·					
	Using the mounting holes in the Power Supply	Using the screw holes in the Power Supply			
Bottom mounting	Two, M3 85,5:0.5	Two, 3.5 dia.			
Side mounting	Three, M3	Three, 3.5 dia. 18±0.5 9±0.5 77±0.5			

S8FS-C075□□ (75 W) S8FS-C100□□ (100 W) Panel mounting hole dimensions 8.16 Using the mounting holes in the Power Using the screw holes in the Power Supply 3.5 Supply Bottom: Two. M3 97±1 Two, 3.5 dia. **Bottom** 84,5±0.5 Seven, M3.5 mounting 78±0.5 152.5±0.5 3.5 dia 18±0.5 Three, M3 Three, 3.5 dia. Side 4.5 5.5 mounting - 159±1 - 150±0.5 117±0.5 Side: Three, M3 (Depth: 6 mm max.) 13±0.5 150±0.5 3.5 3.5 dia 28.5 10.5 The figure shows a 100-W Power Supply. A 75-W Power Supply has 5 terminals.

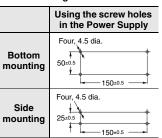


S8FS-C200□□ (200 W) 8.16 9.5 Nine, M3.5 Bottom: Four, M4 (Depth: 5 mm max.)

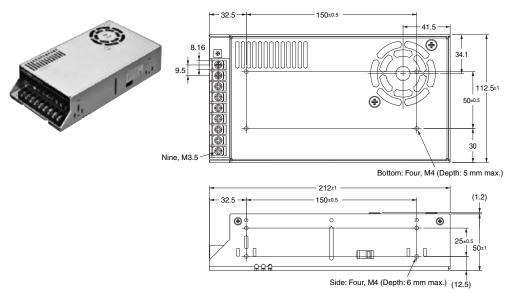
Side: Four, M4 (Depth: 6 mm max.)

(12.5)

Panel mounting hole dimensions



S8FS-C350□□ (350 W)

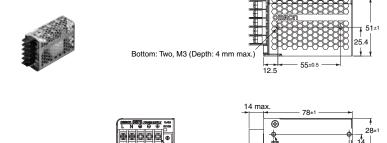


Panel mounting hole dimensions

	Using the screw holes in the Power Supply					
Bottom mounting	Four, 4.5 dia.					
Side mounting	Four, 4.5 dia.					

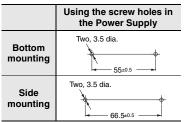
Models with Terminal Block Facing Forward

S8FS-C015□□J (15 W)

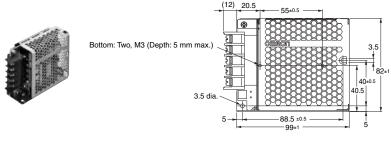


Five, M3

Panel mounting hole dimensions

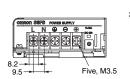


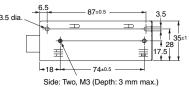
S8FS-C025□□J (25 W)



Panel mounting hole dimensions

	Using the mounting holes in the Power Supply	Using the screw holes in the Power Supply
Bottom mounting	Two, M3 40±0.5	Two, 3.5 dia.
Side mounting	Two, M3	Two, 3.5 dia.



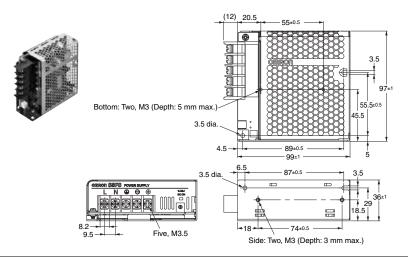


66.5±0.5

Side: Two, M3 (Depth: 3 mm max.)

8.75

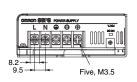
S8FS-C035□□J (35 W)

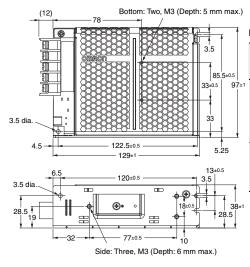


Panel mounting hole dimensions

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

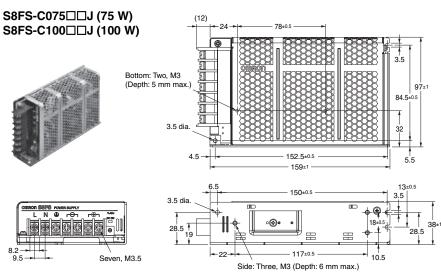
S8FS-C050□□J (50 W)





Panel mounting hole dimensions

	Using the mounting holes in the Power Supply	Using the screw holes in the Power Supply	
Bottom mounting	Two, M3 85.5±0.5	Two, 3.5 dia.	
Side mounting	Three, M3	Three, 3.5 dia. 18±0.5	



Panel mounting hole dimensions

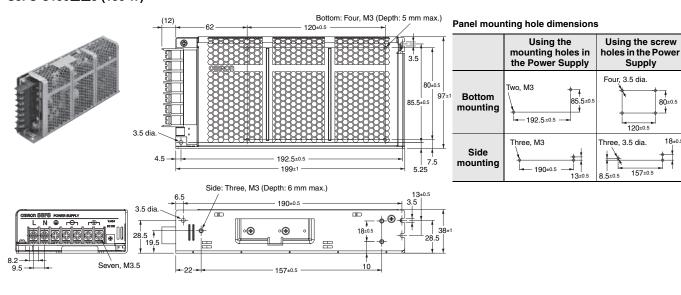
	Using the mounting holes in the Power Supply	Using the screw holes in the Powe Supply	
Bottom mounting	Two, M3 84,5±0.5	Two, 3.5 dia.	
Side mounting	Three, M3	Three, 3.5 dia. 18±0.5 9.5±0.5 117±0.5	

80±0.5

18±0.5

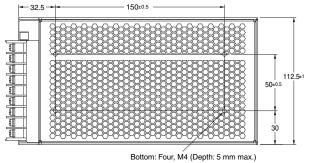
The figure shows a 100-W Power Supply. A 75-W Power Supply has 5 terminals.

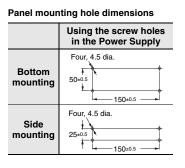
S8FS-C150□□J (150 W)

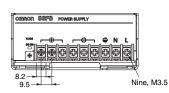


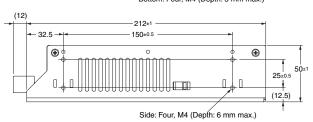
S8FS-C200□□J (200 W)







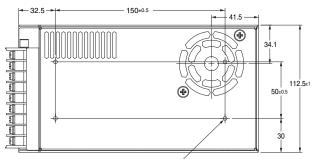


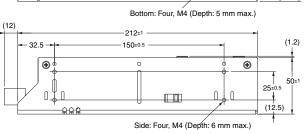


S8FS-C350□□J (350 W)



Nine, M3.5





Panel mounting hole dimensions

	Using the screw holes in the Power Supply
Bottom mounting	Four, 4.5 dia.
Side mounting	Four, 4.5 dia. 25±0.5

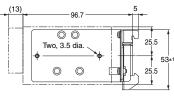
Mounting Brackets (Order Separately)

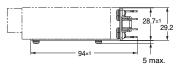
Power rating	Mounting direction	Model	
15 W		S82Y-FSC015DIN	
25 W		S82Y-FSC025DIN	
35 W		S82Y-FSC050DIN	
50 W		3021-F3C030DIN	
75 W	DIN Rail		
100 W		S82Y-FSC150DIN	
150 W			
200 W		S82Y-FSC350DIN	
350 W		582 Y-F5C330DIN	
15 W		S82Y-FSC015DIN-S	
25 W		S82Y-FSC025DIN-S	
35 W		S82Y-FSC035DIN-S	
50 W	Bottom-mounting to DIN Rail	S82Y-FSC050DIN-S	
75 W	2 In than	S82Y-FSC100DIN-S	
100 W		3021-F3C100DIN-S	
150 W		S82Y-FSC150DIN-S	
200 W	Pottom mounting with L brockets	COOV ESCOPOR (4 brooksts)	
350 W	Bottom-mounting with L-brackets	S82Y-FSC350B (4 brackets)	

S82Y-FSC015DIN

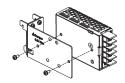








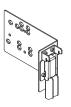
Mounting Method

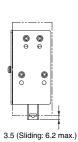


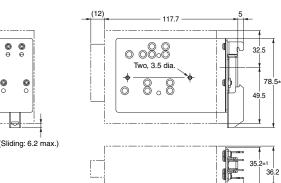
Accessories (2 locations) Be sure to use the accessory screws.

Mounting screw tightening torque: 0.48 to 0.59 N·m for M3 screws

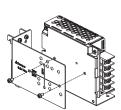
S82Y-FSC025DIN





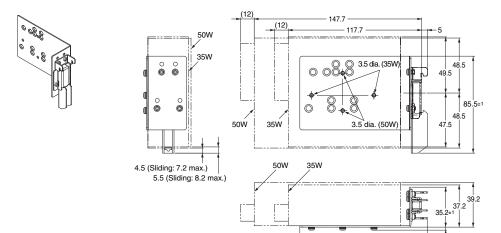


Mounting Method

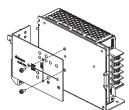


Accessories (2 locations)
Be sure to use the accessory screws. Mounting screw tightening torque: 0.48 to 0.59 N·m for M3 screws

S82Y-FSC050DIN

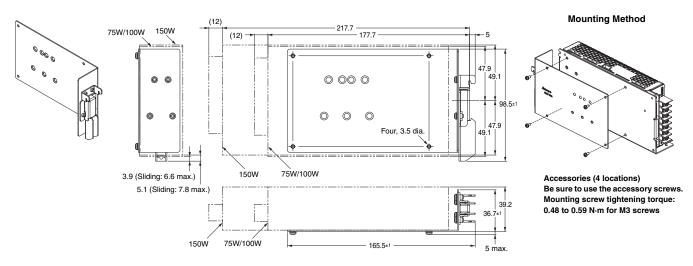


Mounting Method



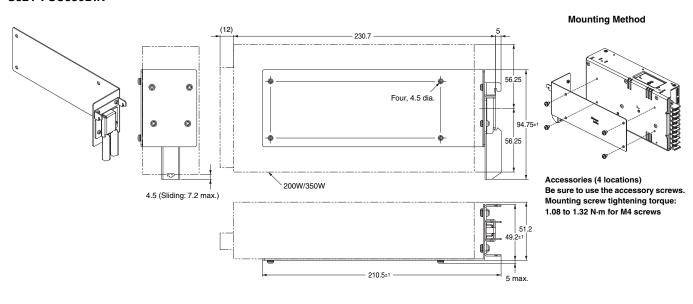
Accessories (2 locations)
Be sure to use the accessory screws.
Mounting screw tightening torque:
0.48 to 0.59 N·m for M3 screws

S82Y-FSC150DIN



112.5±1

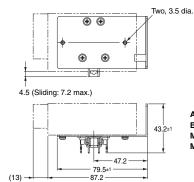
S82Y-FSC350DIN



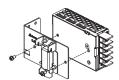
S82Y-FSC015DIN-S







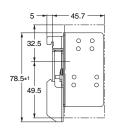
Mounting Method

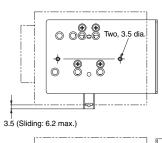


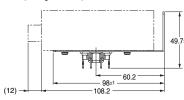
Accessories (2 locations)
Be sure to use the accessory screws.
Mounting screw tightening torque: 0.48 to 0.59 N-m for M3 screws

S82Y-FSC025DIN-S

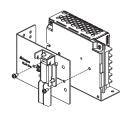








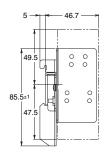
Mounting Method

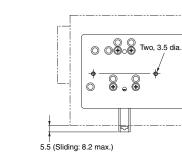


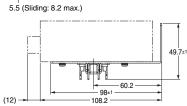
Accessories (2 locations)
Be sure to use the accessory screws.
Mounting screw tightening torque: 0.48 to
0.59 N·m for M3 screws

S82Y-FSC035DIN-S

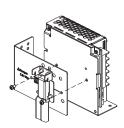








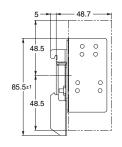
Mounting Method

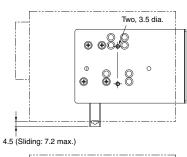


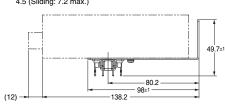
Accessories (2 locations)
Be sure to use the accessory screws.
Mounting screw tightening torque: 0.48 to 0.59
N-m for M3 screws

S82Y-FSC050DIN-S

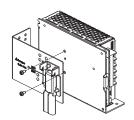






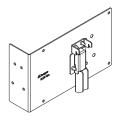


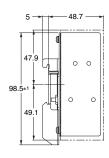
Mounting Method

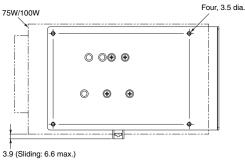


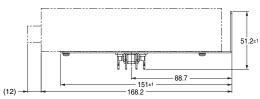
Accessories (2 locations)
Be sure to use the accessory screws.
Mounting screw tightening torque:
0.48 to 0.59 N·m for M3 screws

S82Y-FSC100DIN-S

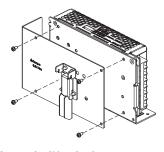






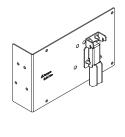


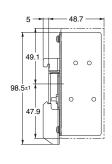
Mounting Method

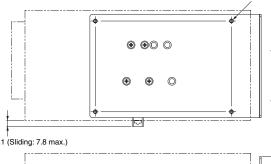


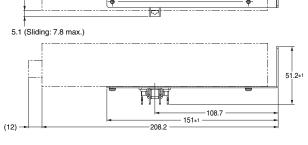
Accessories (4 locations)
Be sure to use the accessory screws.
Mounting screw tightening torque: 0.48
to 0.59 N·m for M3 screws

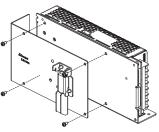
S82Y-FSC150DIN-S









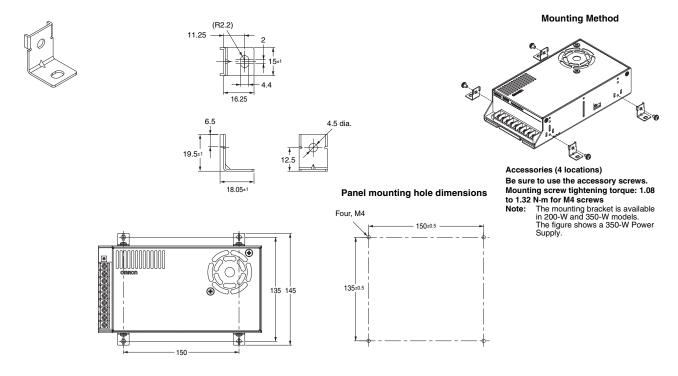


Mounting Method

Four, 3.5 dia.

Accessories (4 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 replace it with an S8FS-C-series Power Supply with 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	+	S82Y-FSC050DIN
50 W	S8JC-Z05024CD	S8JC-ZS05024CD-AC2	\Rightarrow	S8FS-C05024J	+	3621-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 VV	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	+	3621-F3C130DIN
	S8JC-Z15048CD		\Rightarrow	S8FS-C15048J	1	
	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		

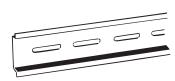
^{*1.} To mount an S8FS-series Power Supply to a DIN Rail, purchase a DIN Rail-mounting Bracket separately from the Power Supply.
*2. Consult with your OMRON representative if you use a 15-W or 35-W S8JC-Z Power Supply with a 48-V output voltage.

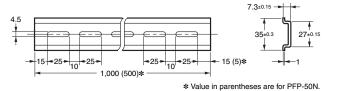
DIN Rail (Order Separately)

Note: All units are in millimeters unless otherwise indicated.

Mounting Rail

(Material: Aluminum)



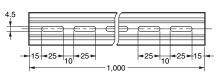


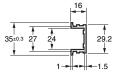


Mounting Rail

(Material: Aluminum)



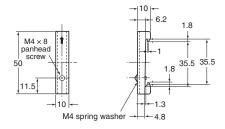






End Plate







- 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□□	3021-130-03	
Models with terminal block	75-W	S8FS-C075□□		
facing upward	100-W	S8FS-C100□□	S82Y-FSC-C7	
	150-W	S8FS-C150□□	3021-F30-07	
	200-W	S8FS-C200□□	S82Y-FSC-C9	
	350-W	S8FS-C350□□	3021-F30-09	
	15-W	S8FS-C015□□J	S82Y-FSC-C5MF	
	25-W	S8FS-C025□□J		
	35-W	S8FS-C035□□J	S82Y-FSC-C5F	
	50-W	S8FS-C050□□J	3021-F30-05F	
Models with terminal block facing forward	75-W	S8FS-C075□□J		
laoning forward	100-W	S8FS-C100□□J	S82Y-FSC-C7F	
	150-W	S8FS-C150□□J	3021-F30-0/F	
	200-W	S8FS-C200□□J	S82Y-FSC-C9F	
	350-W	S8FS-C350□□J	3021-F30-09F	

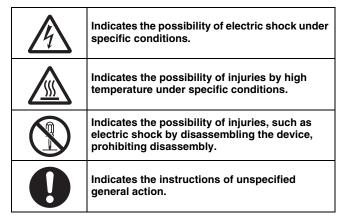
Safety Precautions

Refer to Safety Precautions for All Power Supplies.

Warning Indications

CAUTION	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



⚠ CAUTION

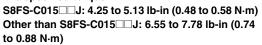
Minor electric shock, fire, or Product failure may occasionally occur. Do not disassemble, modify, or repair the Product or touch the interior of the Product.



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.





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 Supplies.

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 240 VAC setting.

 Minor electric shock may occasionally occur. Do not operate the input voltage selector switch while power is being supplied.

Mounting

- 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.
- For the S8FS-C350 —: Forced air cooling with a fan is used. Do not allow the ventilation holes to be blocked. The effectiveness of cooling would be reduced.
- 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.

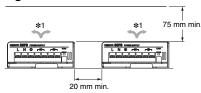
0.48 to 0.59 N·m for M3 screws

- 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

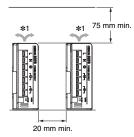
The standard mounting pattern is shown below.

Mounting Pattern A



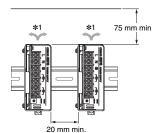
The above figure shows a model with the terminal block facing upward.

Mounting Pattern B



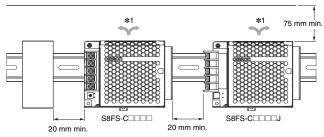
The above figure shows a model with the terminal block facing upward.

Mounting Pattern C *2



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

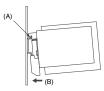
Mounting Pattern D *2

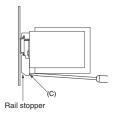


To mount the Power Supply to a DIN Rail, hook portion (A) of the Power Supply onto the DIN Rail and press the Power Supply in direction (B) until you hear it lock into place. Make sure that the catch on the Mounting Bracket is engaged with the DIN Rail.

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 26 for the separately sold Mounting Brackets.





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
	S8FS-C015□□J	AWG14 to 22
Input	S8FS-C025□□□ to S8FS-C100□□□	AWG12 to 20
IIIput	S8FS-C150□□□ or S8FS-C200□□□	AWG12 to 16
	S8FS-C350□□□	AWG12
	S8FS-C015□□J	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□	
	S8FS-C05012 to S8FS-C05015□	1
	S8FS-C07515 to S8FS-C07548□	AWG12 to 16
Output	S8FS-C10024 to S8FS-C10048□	
	S8FS-C15036 to S8FS-C15048□	
	S8FS-C03505 or S8FS-C05005□	
	S8FS-C07505 to S8FS-C07512□	AWG12
	S8FS-C10005 to S8FS-C10015□	
	S8FS-C15005 to S8FS-C15024□	7111-011-
	S8FS-C200□□□ or S8FS-C350□□□	
Protective	S8FS-C015□□J	AWG14
earth terminal	S8FS-C025□□□ to S8FS-C350□□□	AWG12 to 14

Note: The current capacity for the output terminals on the S8FS-C025□□□ to S8FS-C350□□□ is 25 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

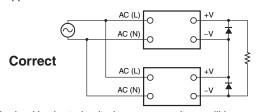
- If the Power Supply has been short-circuited or supplied with an overcurrent longer than 10 seconds, the internal parts of the Power Supply may occasionally deteriorate or be damaged.
- Internal parts may possibly deteriorate or be damaged if the Power Supply is used for applications with frequent 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.



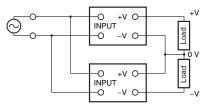
Note: 1. If the load is short-circuited, a reverse voltage will be generated inside the Power Supply. If this occurs the Power Supply may possibly deteriorate or be damaged. Always connect a diode as shown in the figure. Select a diode having the following ratings.

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

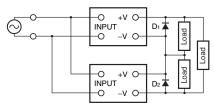
Although Power Supplies having different specifications can be connected in series, the current flowing through the load must not exceed the smaller rated output current.

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.

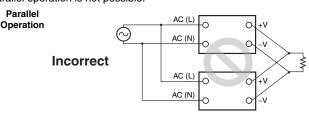


· Select a diode having the following ratings.

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

Parallel Operation

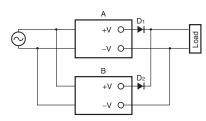
Parallel operation is not possible.



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 _F)	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 (V_F) 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.

Reference Value

	-
	Value
Reliability (MTBF)	Single phase model 15 W: 1,080,000 hrs 25 W: 890,000 hrs 35 W: 670,000 hrs 50 W: 560,000 hrs 75 W: 580,000 hrs 100 W: 540,000 hrs 150 W: 530,000 hrs 200 W: 450,000 hrs 350 W: 190,000 hrs
Definition	MTBF stands for Mean Time Between Failures, which is calculated according to the probability of accidental device failures, and indicates reliability of devices. Therefore, it does not necessarily represent a life of the product.
Life expectancy	10 yrs. Min.
Definition	The life expectancy indicates average operating hours under the ambient temperature of 40°C and a load rate of 50%. Normally this is determined by the life expectancy of the built-in aluminum electrolytic capacitor.

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.

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