

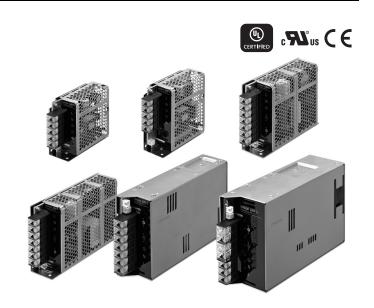
Switch Mode Power Supply S8FS-G (15/30/50/100/150/300/600-W Models)

Superior Basic Performance That **Ensures Reliability. Wide Range** of Standards Certification and Greater Usability.

- Superior basic performance that ensures reliability Ambient temperatures up to 70°C, greater resistance to rusting with aluminum/stainless steel case, and applications at altitudes up to 3,000 m.
- Certification for Global Standards North America: UL 508 (Listing)*, CSA C22.2 Europe: Overvoltage Category III (EN 50178) EMI: Class B (EN 61204-3)

No need for control circuit transformers for which the Machinery Directive is specified. (EN/IEC 61558-2-16) * Refer to pages 4 to 10 for certified models.

 Greater Usability The Terminal Block Cover prevents screws from dropping out and the Front Cover prevents ingress of foreign matter.



Refer to Safety Precautions for All Power Supplies and Safety Precautions on page 29.

Lineup

Output voltage (VDC)				Power rating			
Output voitage (VDC)	15 W	30 W	50 W	100 W	150 W	300 W	600 W
5 V	Yes	Yes	Yes	Yes	Yes		
12 V	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
48 V					Yes	Yes	Yes

Model Number Structure

Model Number Legend

Note: Not all combinations are possible. Refer to List of Models in Ordering Information, below.

S8FS-	G			<u></u>	<u>-</u>		
	1	2	3	4	5	6	7

1. Power Ratings	2. Output vo
015: 15 W	(VDC)
030: 30 W	05: 5 V
050: 50 W *1	12: 12 V
100: 100 W *2	15: 15 V
150: 150 W *3	24: 24 V
300: 300 W	48: 48 V

600: 600 W

oltage 3. Configuration

C: With cover/Direct mounting CD: With cover/DIN Rail mounting

4. Option (1)

None: Screw terminal block Connectors *4

5. Option (2) *5 None: None

7. Option (4) *7 None: None

Extended hold time

6. Option (3) *6 None: None Remote control

*1. The output electric power is 40 W for products with an output voltage of 5 V. *2. The output electric power is 80 W for products with an output voltage of 5 V.

***3.** The output electric power is 105 W for products with an output voltage of 5 V.

Parallel operation

^{*6.} Applicable only for 100 W or more and 24 V.

^{*4.} Applicable only for 150 W or less and 24 V.

^{*5.} Applicable only for 600 W and 24 V.

S8FS-G

Ordering Information

List of Models

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

With Cover/DIN Rail Mounting

ower ratings	Input voltage	Output voltage (VDC)	Output current	Built-in fan	Model
		5 V	3 A		S8FS-G01505CD
45 144		12 V	1.3 A		S8FS-G01512CD
15 W		15 V	1 A		S8FS-G01515CD
		24 V	0.65 A		S8FS-G01524CD
		5 V	6 A		S8FS-G03005CD
30 W		12 V	3 A		S8FS-G03012CE
30 W		15 V	2.4 A		S8FS-G03015CE
		24 V	1.5 A		S8FS-G03024CI
		5 V	8 A * 1		S8FS-G05005CE
50 W	100 to 240 VAC (Permissible range	12 V	4.3 A		S8FS-G05012CI
50 W	85 to 264 VAC,	15 V	3.5 A	None	S8FS-G05015CI
	80 to 370 VDC) *4	24 V	2.2 A		S8FS-G05024CI
	*4	5 V	16 A * 2		S8FS-G10005CI
100 W		12 V	8.5 A		S8FS-G10012CI
		15 V	7 A		S8FS-G10015CI
		24 V	4.5 A		S8FS-G10024CE
		5 V	21 A * 3		S8FS-G15005CI
		12 V	13 A		S8FS-G15012CI
150 W		15 V	10 A		S8FS-G15015CE
		24 V	6.5 A		S8FS-G15024CI
		48 V	3.3 A		S8FS-G15048CE
	100 to 240 VAC	12 V	25 A		S8FS-G30012CE
200 W	(Permissible range	15 V	20 A		S8FS-G30015CE
300 W	85 to 264 VAC,	24 V	14 A		S8FS-G30024CE
	120 to 370 VDC)	48 V	7 A	Yes	S8FS-G30048CE
	100 to 240 VAC	12 V	50 A	res	S8FS-G60012CE
000 144	(Permissible range	15 V	40 A		S8FS-G60015CE
600 W	85 to 264 VAC,	24 V	27 A		S8FS-G60024CE
	120 to 350 VDC)	48 V	13 A	7	S8FS-G60048CD

Note: Ask your OMRON representative for pricing information on optional models.

With Cover/DIN Rail Mounting (Extended hold time type)

Power ratings	Input voltage	Output voltage (VDC)	Output current	Built-in fan	Model
300 W	100 to 240 VAC (Permissible range 85 to 264 VAC, 120 to 370 VDC)	24 V	14 A	Yes	S8FS-G30024CD-H
600 W	100 to 240 VAC (Permissible range 85 to 264 VAC, 120 to 350 VDC)	24 V	27 A	res	S8FS-G60024CD-H

^{*1.} The output electric power is 40 W.

^{*2.} The output electric power is 80 W.

^{*3.} The output electric power is 105 W.

^{*4.} Applicable to products produced from May 2018.

With Cover/Direct Mounting

Power ratings	Input voltage	Output voltage (VDC)	Output current	Built-in fan	Model
		5 V	3 A		S8FS-G01505C
15 W		12 V	1.3 A		S8FS-G01512C
15 W		15 V	1 A		S8FS-G01515C
		24 V	0.65 A		S8FS-G01524C
		5 V	6 A		S8FS-G03005C
30 W		12 V	3 A		S8FS-G03012C
30 W		15 V	2.4 A		S8FS-G03015C
		24 V	1.5 A		S8FS-G03024C
	100 1- 040 1/40	5 V	8 A * 1		S8FS-G05005C
50 W	100 to 240 VAC (Permissible range	12 V	4.3 A		S8FS-G05012C
50 W	85 to 264 VAC,	15 V	3.5 A	None	S8FS-G05015C
	80 to 370 VDC)	24 V	2.2 A		S8FS-G05024C
	*4	5 V	16 A * 2		S8FS-G10005C
100 W		12 V	8.5 A		S8FS-G10012C
100 W		15 V	7 A		S8FS-G10015C
		24 V	4.5 A		S8FS-G10024C
		5 V	21 A * 3		S8FS-G15005C
		12 V	13 A		S8FS-G15012C
150 W		15 V	10 A		S8FS-G15015C
		24 V	6.5 A		S8FS-G15024C
		48 V	3.3 A		S8FS-G15048C
	100 to 240 VAC	12 V	25 A		S8FS-G30012C
000 144	(Permissible range	15 V	20 A		S8FS-G30015C
300 W	85 to 264 VAC,	24 V	14 A		S8FS-G30024C
	120 to 370 VDC)	48 V	7 A	†	S8FS-G30048C
	100 to 240 VAC	12 V	50 A	Yes	S8FS-G60012C
000 144	(Permissible range	15 V	40 A	7	S8FS-G60015C
600 W	85 to 264 VAC,	24 V	27 A		S8FS-G60024C
	120 to 350 VDC)	48 V	13 A		S8FS-G60048C

Note: 1. Ask your OMRON representative for pricing information on optional models.

To mount a Power Supply from the front, purchase a DIN Rail-mounting Power Supply and a Front-mounting Bracket (sold separately). Refer to page 27.

With Cover/Direct Mounting (Extended hold time type)

Power ratings	Input voltage	Output voltage (VDC)	Output current	Built-in fan	Model
300 W	100 to 240 VAC (Permissible range 85 to 264 VAC, 120 to 370 VDC)	- 24 V	14 A	Yes	S8FS-G30024C-H
600 W	100 to 240 VAC (Permissible range 85 to 264 VAC, 120 to 350 VDC)	Z4 V	27 A	res	S8FS-G60024C-H

With Cover/Direct Mounting (Connector type)

Power ratings	Input voltage	Output voltage (VDC)	Output current	Built-in fan	Model
15 W	100 to 240 VAC (Permissible range		0.65 A		S8FS-G01524CE
30 W			1.5 A		S8FS-G03024CE
50 W	85 to 264 VAC,	24 V	2.2 A	None	S8FS-G05024CE
100 W	80 to 370 VDC) *4		4.5 A		S8FS-G10024CE
150 W	~ 4		6.5 A		S8FS-G15024CE

^{*1.} The output electric power is 40 W.

^{2.} Front-mounting is not possible.

^{*2.} The output electric power is 80 W.

^{*3.} The output electric power is 105 W.

^{*4.} Applicable to products produced from May 2018.

S8FS-G

Specifications

		Power rating			15 W			
ltem	Ou	tput voltage (VDC)	5 V	12 V	15 V	24 V		
		100 VAC input	80% typ.	84% typ.	84% typ.	85% typ.		
Efficiency *		200 VAC input	80% typ.	84% typ.	84% typ.	86% typ.		
•		230 VAC input	80% typ.	84% typ.	84% typ.	86% typ.		
	Voltage range *		Single phase, 85 to 264					
	Frequency *		50/60 Hz (47 to 450 Hz					
	Troquency v	100 VAC input	0.32 A typ.	-1				
	Current *	200 VAC input	0.2 A typ.					
	Power factor	200 VAO IIIput						
Input	rower factor	100 VAC input	0.5 mA max.					
	Leakage current *	100 VAC input						
	1	200 VAC input	1 mA max.					
	Inrush current * (for a cold start at	100 VAC input	14 A typ.					
	25°C)	200 VAC input	28 A typ.					
	Rated Output Currer	nt	3 A	1.3 A	1 A	0.65 A		
	Voltage adjustment		-10% to 15% (with V.A	DJ)				
	Ripple & Noise		,	1	40. 17	00 11		
	voltage *	100 to 240 VAC input	40 mVp-p max.	40 mVp-p max.	40 mVp-p max.	60 mVp-p max.		
	Input variation influe	ence *	0.5% max.	<u>, </u>	1			
	Load variation influe		1.0% max.					
Output	Temperature variation influence	100 to 240 VAC input						
		100 VAC input	1,000 ms max.					
	Startup time *	200 VAC input	1,000 ms max.					
		100 VAC input	15 ms typ.	14 ms typ.	15 ms typ.	15 ms typ.		
	Hold time *	200 VAC input	75 ms typ.	70 ms typ.	75 ms typ.	70 ms typ.		
	Overload protection	200 VAC IIIput	Yes, automatic reset	το ma typ.	75 ms typ.	ro ilis typ.		
	Overload protection		· · · · · · · · · · · · · · · · · · ·	rated autout valtage in	awar abut off (abut off th	a innut valtage and turn		
	Overvoltage protecti	on *	the input again)	rated output voltage, p	ower shut on (shut on th	e input voltage and turn		
	Overheat protection		No					
Additional	Series operation		Yes (For up to two Pow	er Sunnline external d	iodes are required)			
functions	<u> </u>		` '		sternal diodes are require	ad \		
Parallel operation			No (Flowever, backup o	pperation is possible, ex	tterrial diodes are require	eu.)		
	Remote sensing							
	Remote control		No					
	Output indicator		Yes (LED: Green)					
			3 kVAC for 1 min. (between all input terminals and output terminals) current cutoff 20 mA					
Insulation	Withstand voltage		2 kVAC for 1 min. (between all input terminals and PE terminals) current cutoff 20 mA					
			1 kVAC for 1 min. (between all output terminals and PE terminals) current cutoff 20 mA					
	Insulation resistance	9	100 M Ω min. (between all output terminals and all input terminals/PE terminals) at 500 VDC					
	Ambient operating to	emperature	–20 to 70°C (Derating i	s required according to	the temperature.) (with	no condensation or icing)		
	Storage temperature	•	-25 to 75°C (with no co	ondensation or icing)				
Environment	Ambient operating h	umidity	90% max. (Storage hur	midity: 90% max.)				
	Vibration resistance		10 to 55 Hz, 4.5 G max	, 0.375-mm half amplit	ude for 2 h each in X, Y,	, and Z directions		
	Shock resistance		150 m/s², 3 times each in ±X, ±Y, ±Z directions					
	MTBF		135,000 hrs min.					
Reliability	Life expectancy *		10 years min.					
	Dimensions (W×H×D	0)	Refer to <i>Dimensions</i> on page 19.					
	Weight	•	250 g					
Construction	Cooling fan		No					
	Degree of protection		NO					
	Harmonic current en		Conforms to EN 61000	-3-2				
	namonic current en				Nace B			
	EMI *	Conducted Emissions	Conforms to EN 61204					
	EMO	Radiated Emissions	*					
	EMS		Conforms to EN 61204-3 high severity levels					
Standards	Safety Standards		UL 508 (Listing, exclud UL 62368-1 (Recognitic CSA C22.2 No.107.1 (€ CSA C22.2 No.62368-1 EN 50178 (OVCIII [≤ 2, EN/IEC 62368-1 (OVC Conforms to EN/IEC 6-1 Conforms to PELV (EN EAC (TR CU 004/2011 RCM (EN61000-6-4)	on, OVCII [\leq 3,000 m], excluding models with of (excluding models with 0000 m], OVCII [\geq 2,000 II [\leq 3,000 m], Pol2) (1558-2-16 I/IEC 60204-1)	Pol2) connector option))		
	Marine Standards		No					
			Conforms to F47-0706	(200 VAC input)				
Defeate Def	SEMI	and Functions on pa		(200 VAC IIIpul)				

^{*} Refer to Ratings, Characteristics, and Functions on page 11.

		Power rating	30 W					
tem Output voltage (VDC)			5 V 12 V 15 V 24 V					
itoini		100 VAC input	81% typ.	84% typ.	86% typ.	86% typ.		
Efficiency *		200 VAC input	81% typ.	86% typ.	88% typ.	88% typ.		
Linciency 4		230 VAC input	81% typ.	86% typ.	88% typ.	89% typ.		
	Voltage range *	230 VAC IIIput	* '			09 % typ.		
			Single phase, 85 to 264 VAC, 80 to 370 VDC 50/60 Hz (47 to 450 Hz)					
	Frequency *	100 VAC input	0.72 A typ.)				
	Current *	100 VAC input	0.43 A typ.					
		200 VAC input	0.43 A typ.					
Input	Power factor							
	Leakage current *	100 VAC input	0.5 mA max.					
		200 VAC input	1 mA max.					
	Inrush current * (for a cold start at	100 VAC input	14 A typ.					
	25°C)	200 VAC input	28 A typ.					
	Rated Output Currer	nt	6 A 3 A 2.4 A 1.5 A					
	Voltage adjustment		-10% to 15% (with V.A	DJ)				
	Ripple & Noise		,	1				
	voltage *	100 to 240 VAC input	50 mVp-p max.	60 mVp-p max.	50 mVp-p max.	60 mVp-p max.		
	Input variation influe	ence *	0.5% max.		ı .	1		
O.,.t., 1	Load variation influe	ence *	1.0% max.					
Output	Temperature variation influence	100 to 240 VAC input	0.05%/°C max.					
		100 VAC input	1,000 ms max.					
	Startup time *	200 VAC input	1,000 ms max.					
		100 VAC input	11 ms typ.	10 ms typ.	11 ms typ.	10 ms typ.		
	Hold time *	200 VAC input	60 ms typ.	50 ms typ.	50 ms typ.	55 ms typ.		
	Overload protection	1	Yes, automatic reset					
			· · · · · · · · · · · · · · · · · · ·	rated output voltage	power shut off (shut off th	ne input voltage and turn		
	Overvoltage protect	ion *	the input again)	rated edipat restage,	porror orrac orr (orrac orr tr	io input rollago alla talli		
	Overheat protection	1	No					
Additional	Series operation		Yes (For up to two Pow	er Supplies, external	diodes are required.)			
functions	Parallel operation		No (However, backup o	pperation is possible.	external diodes are requir	red.)		
Remote sensing			No	, p		,		
	Remote control		No					
	Output indicator		Yes (LED: Green)					
	output maioator		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 output terminals) current cutoff 20 mA					
Insulation	- I I I I I I I I I I I I I I I I I I I		1 kVAC for 1 min. (between all output terminals and PE terminals) current cutoff 20 mA					
	Insulation resistance	Δ	100 MΩ min. (between all output terminals and all input terminals/PE terminals) at 500 VDC					
			, , , , , , , , , , , , , , , , , , , ,					
	Ambient operating t		-20 to 70°C (Derating is required according to the temperature.) (with no condensation or icing)					
Environment	Storage temperature		-25 to 75°C (with no condensation or icing) 90% max. (Storage humidity: 90% max.)					
Environment	Ambient operating h	<u> </u>	, ,		litude for 0 h 1 1 3/ 3/	and 7 dimenting		
	Vibration resistance		10 to 55 Hz, 4.5 G max., 0.375-mm half amplitude for 2 h each in X, Y, and Z directions					
	Shock resistance		150 m/s², 3 times each in ±X, ±Y, ±Z directions					
Reliability	MTBF		135,000 hrs min.					
,	Life expectancy *		10 years min.					
	Dimensions (W×H×I	0)	Refer to <i>Dimensions</i> on page 19.					
Construction	Weight		250 g					
	Cooling fan		No					
	Degree of protection							
	Harmonic current er	nissions	Conforms to EN 61000-	-3-2				
	EMI *	Conducted Emissions	Conforms to EN 61204	-3 Class B, EN 55011	Class B			
	L.VII 7	Radiated Emissions	Conforms to EN 61204	-3 Class B, EN 55011	Class B			
	EMS		Conforms to EN 61204-3 high severity levels					
Standards Safety Standards			UL 508 (Listing, excluding models with connector option) UL 62368-1 (Recognition, OVCII [\leq 3,000 m], Pol2) CSA C22.2 No.107.1 (excluding models with connector option) CSA C22.2 No.62368-1 (excluding models with connector option) EN 50178 (OVCIII [\leq 2,000 m], OVCII [$>$ 2,000 m and \leq 3,000 m], Pol2) EN/IEC 62368-1 (OVCII [\leq 3,000 m], Pol2) Conforms to EN/IEC 61558-2-16 Conforms to PELV (EN/IEC 60204-1) EAC (TR CU 004/2011, TR CU 020/2011)					
	Marine Standards		RCM (EN61000-6-4)					
	Marine Standards		No	(000) (4 0)				
	SEMI		Conforms to F47-0706	(200 VAC input)				
Reter to Rati	r to Ratings, Characteristics, and Functions on pa		nne 11					

^{*} Refer to Ratings, Characteristics, and Functions on page 11.

		Power rating	50 W						
Item	Oı	itput voltage (VDC)	5 V 12 V 15 V 24 V						
itein		100 VAC input	81% typ.	84% typ.	86% typ.	86% typ.			
Efficiency *		200 VAC input	82% typ.	86% typ.	88% typ.	89% typ.			
Lineichey 4		230 VAC input	82% typ.	86% typ.	88% typ.	89% typ.			
	Voltage range *	200 VAC IIIput	,,	264 VAC, 80 to 370 VDC		09 /6 typ.			
	Frequency *		50/60 Hz (47 to 450		<u>'</u>				
	r requeriey 4	100 VAC input	1.1 A typ.	12)					
	Current *	200 VAC input	0.62 A typ.						
	Power factor	200 VAC IIIput							
Input	rowel lactor	100 VAC input	0.5 mA max.						
	Leakage current *	200 VAC input	1 mA max.						
	Inrush current *	•							
	(for a cold start at	100 VAC input	14 A typ.						
	25°C)	200 VAC input	28 A typ.						
	Rated Output Currer	nt	8 A 4.3 A 3.5 A 2.2A						
	Voltage adjustment	range *	-10% to 15% (with V	.ADJ)	1	Ti-			
Ripple & Noise		100 to 240 VAC input	40 m\/n n mov	40 m\/n n may	40 m\/n n may	60 m\/n n mov			
	voltage *	100 to 240 VAC input	40 mVp-p max.	40 mVp-p max.	40 mVp-p max.	60 mVp-p max.			
	Input variation influe	ence *	0.5% max.						
Output	Load variation influe	ence *	1.0% max.						
Output	Temperature variation influence	100 to 240 VAC input	0.05%/°C max.						
	011	100 VAC input	1,000 ms max.						
	Startup time *	200 VAC input	1,000 ms max.						
		100 VAC input	14 ms typ.	11 ms typ.	10 ms typ.	10 ms typ.			
	Hold time *	200 VAC input	75 ms typ.	60 ms typ.	60 ms typ.	55 ms typ.			
	Overload protection		Yes, automatic reset	7.	71	71			
	Overvoltage protect			of rated output voltage,	power shut off (shut off th	e input voltage and turn o			
	0		the input again)						
Additional	Overheat protection		No	0 " 1 1	P 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
functions	Series operation		` '	ower Supplies, external	· · · · · · · · · · · · · · · · · · ·				
	Parallel operation		•	o operation is possible, e	external diodes are requir	ed.)			
	Remote sensing		No						
	Remote control		No						
	Output indicator		Yes (LED: Green)						
Insulation	Withstand voltage		3 kVAC for 1 min. (between all input terminals and output terminals) current cutoff 20 mA 2 kVAC for 1 min. (between all input terminals and PE terminals) current cutoff 20 mA 1 kVAC for 1 min. (between all output terminals and PE terminals) current cutoff 20 mA						
			500 VAC for 1 min. (between all output terminals and RC terminals) current cutoff 20 mA						
	Insulation resistance	e	100 M Ω min. (between all output terminals and all input terminals/PE terminals) at 500 VDC						
	Ambient operating to	emperature	-20 to 70°C (Derating is required according to the temperature.) (with no condensation or icing)						
	Storage temperature		−25 to 75°C (with no condensation or icing)						
Environment	Ambient operating h	<u> </u>	90% max. (Storage humidity: 90% max.)						
	Vibration resistance		-	10 to 55 Hz, 4.5 G max., 0.375-mm half amplitude for 2 h each in X, Y, and Z directions					
	Shock resistance		150 m/s², 3 times each in ±X, ±Y, ±Z directions						
Reliability	MTBF		135,000 hrs min.						
Tonability	Life expectancy *		10 years min.						
	Dimensions (W×H×E	0)	Refer to <i>Dimensions</i> on page 20.						
Construction	Weight		300 g						
oonsa uction	Cooling fan		No						
	Degree of protection	1							
	Harmonic current en	nissions	Conforms to EN 610	00-3-2					
	EMI &	Conducted Emissions	Conforms to EN 612	04-3 Class B, EN 55011	Class B				
	EMI *	Radiated Emissions	Conforms to EN 61204-3 Class B, EN 55011 Class B						
	EMS		Conforms to EN 612	04-3 high severity levels					
Standards	Safety Standards		UL 508 (Listing, excluding models with connector option) UL 62368-1 (Recognition, OVCII [≤ 3,000 m], Pol2) CSA C22.2 No.107.1 (excluding models with connector option) CSA C22.2 No.62368-1 (excluding models with connector option) EN 50178 (OVCIII [≤ 2,000 m], OVCII [> 2,000 m and ≤ 3,000 m], Pol2) EN/IEC 62368-1 (OVCII [≤ 3,000 m], Pol2) Conforms to EN/IEC 61558-2-16 Conforms to PELV (EN/IEC 60204-1) EAC (TR CU 004/2011, TR CU 020/2011)						
	Marine Standards		RCM (EN61000-6-4) No						
				06 (200 VAC input)					
	SEMI			Conforms to F47-0706 (200 VAC input)					

^{*} Refer to Ratings, Characteristics, and Functions on page 11.

		Power rating	100 W						
Item Output voltage (VDC)			5 V 12 V 15 V 24 V						
item		100 VAC input	79% typ.	84% typ.	85% typ.	87% typ.			
Efficiency *		200 VAC input	81% typ.	86% typ.	87% typ.	89% typ.			
Linciency &		230 VAC input	81% typ.	86% typ.	87% typ.	89% typ.			
	V-14	230 VAC IIIput	7.			οθ% ιγμ.			
	Voltage range *		Single phase, 85 to 264 VAC, 80 to 370 VDC						
	Frequency *		50/60 Hz (47 to 450 Hz)						
	Current *	100 VAC input	2.1 A typ.						
		200 VAC input	1.2 A typ.						
Input	Power factor								
	Leakage current *	100 VAC input	0.5 mA max.						
	Lounage ourrent 4	200 VAC input	1 mA max.						
	Inrush current *	100 VAC input	14 A typ.						
	(for a cold start at 25°C)	200 VAC input	28 A typ.						
	Rated Output Curre	•	16 A	4.5 A					
	·		-	16 A 8.5 A 7 A 4.5 A -10% to 15% (with V.ADJ)					
	Voltage adjustment	range *	-10% to 15% (With V.A	D3)		<u> </u>			
	Ripple & Noise voltage *	100 to 240 VAC input	70 mVp-p max.	90 mVp-p max.	100 mVp-p max.	80 mVp-p max.			
		anaa *	0.5% max.						
	Input variation influe								
Output		SHUE T	1.0% max.						
	Temperature variation influence	100 to 240 VAC input	0.05%/°C max.						
variation influence		100 VAC input	1.000 ms max.						
Startup time *		200 VAC input	1,000 ms max.						
		100 VAC input	12 ms typ.	11 ms typ.	11 ms typ.	10 ms typ.			
	Hold time ★	•	70 ms typ.	55 ms typ.	* * * * * * * * * * * * * * * * * * * *	- ''			
	0	200 VAC input	,'	55 ms typ.	55 ms typ.	55 ms typ.			
	Overload protection		Yes, automatic reset						
	Overvoltage protection *		Yes, 120% or higher of rated output voltage, power shut off (shut off the input voltage and turn or the input again)						
	Overheat protection		No						
Additional	Series operation		Yes (For up to two Power Supplies, external diodes are required.)						
functions	<u> </u>		` '	• • • • • • • • • • • • • • • • • • • •		٨ /			
	Parallel operation			pperation is possible, e	external diodes are require	·u.)			
	Remote sensing		No		`				
	Remote control		Yes (Only for models with remote control option)						
	Output indicator		Yes (LED: Green)						
				3 kVAC for 1 min. (between all input terminals and output terminals) current cutoff 20 mA					
	Marin I I I I I I I I I I I I I I I I I I I			2 kVAC for 1 min. (between all input terminals and PE terminals) current cutoff 20 mA 1 kVAC for 1 min. (between all output terminals and PE terminals) current cutoff 20 mA					
Insulation	Withstand voltage		,	veen all output termina	als and PE terminals) curre	ent cutoff 20 mA			
			Only Remote control						
			500 VAC for 1 min. (between all output terminals and RC terminals) current cutoff 20 mA						
	Insulation resistance	e	100 M Ω min. (between all output terminals and all input terminals/PE terminals) at 500 VDC						
	Ambient operating t	emperature	-20 to 70°C (Derating is required according to the temperature. Refer to Engineering Data) (with						
	Storogo tomporature		condensation or icing)						
Environment	Storage temperature		-25 to 75°C (with no condensation or icing)						
	Ambient operating h		90% max. (Storage humidity: 90% max.)						
	Vibration resistance		10 to 55 Hz, 4.5 G max., 0.375-mm half amplitude for 2 h each in X, Y, and Z directions						
	Shock resistance		150 m/s², 3 times each in ±X, ±Y, ±Z directions						
Reliability	MTBF		135,000 hrs min.						
•	Life expectancy *		10 years min.						
	Dimensions (W×H×I	J)	Refer to Dimensions on page 21.						
Construction	Weight		400 g						
	Cooling fan		No						
	Degree of protection	1							
	Harmonic current er	missions	Conforms to EN 61000	-3-2					
	EMI &	Conducted Emissions	Conforms to EN 61204	-3 Class B, EN 55011	Class B				
	EMI *	Radiated Emissions	Conforms to EN 61204	-3 Class B, EN 55011	Class B				
	EMS		Conforms to EN 61204	-3 high severity levels					
Standards Safety Standards			UL 508 (Listing, excluding models with connector option or remote control option) UL 508 (Recognition, models with remote control option) UL 62368-1 (Recognition, OVCII [≤ 3,000 m], Pol2) CSA C22.2 No.107.1 (excluding models with connector option or remote control option) CSA C22.2 No.62368-1 (excluding models with connector option or remote control option) EN 50178 (OVCIII [≤ 2,000 m], OVCII [> 2,000 m and ≤ 3,000 m], Pol2) EN/IEC 62368-1 (OVCIII [≤ 3,000 m], Pol2) Conforms to EN/IEC 61558-2-16 Conforms to PELV (EN/IEC 60204-1) EAC (TR CU 004/2011, TR CU 020/2011)						
	Marine Standards		RCM (EN61000-6-4) No						
	Marine Standards								
	SEMI			(200 VAC input)					
Refer to Ratings Characteristics and Functions on na		aa 11							

^{*} Refer to Ratings, Characteristics, and Functions on page 11.

		Power rating			150 W			
Item Output voltage (VDC)		5 V 12 V 15 V 24 V 48 V						
itoiii		100 VAC input	78% typ.	84% typ.	85% typ.	87% typ.	85% typ.	
Efficiency *1		200 VAC input	81% typ.	87% typ.	88% typ.	89% typ.	88% typ.	
Elliciency & I		230 VAC input		87% typ.				
	V-14	230 VAC Input	81% typ.		88% typ.	90% typ.	88% typ.	
	Voltage range *		Single phase, 85 to 264 VAC, 80 to 370 VDC					
	Frequency *	400 1/40 1	50 /60 Hz (47 to	450 HZ)				
	Current *	100 VAC input	3 A typ.					
		200 VAC input	1.8 A typ.					
Input	Power factor	1						
	Leakage current *	100 VAC input	0.5 mA max.					
		200 VAC input	1 mA max.					
	Inrush current * (for a cold start at	100 VAC input	14 A typ.					
	25°C)	200 VAC input	28 A typ.					
	Rated Output Curre	nt	21 A	13 A	10 A	6.5 A	3.3 A	
	Voltage adjustment		-10% to 15% (w					
	Ripple & Noise	1	,					
	voltage *	100 to 240 VAC input	100 mVp-p max.	110 mVp-p max.	80 mVp-p max.	110 mVp-p max.	120 mVp-p max	
	Input variation influ	ence *	0.5% max.	I.				
	Load variation influ		1.0% max.					
Output	Temperature							
	variation influence	100 to 240 VAC input	0.05%/°C max.					
	Ctostus time st	100 VAC input	1,000 ms max.					
	Startup time *	200 VAC input	1,000 ms max.					
	11.11.11	100 VAC input	14 ms typ.	10 ms typ.	10 ms typ.	10 ms typ.	11 ms typ.	
	Hold time *	200 VAC input	80 ms typ.	55 ms typ.	55 ms typ.	55 ms typ.	55 ms typ.	
	Overload protection	 1	Yes, automatic r					
			Yes, 120% or higher of rated output voltage, power shut off (shut off the input voltage and turn on					
	Overvoltage protection *		the input again)					
	Overheat protection		No					
Additional	Series operation		Yes (For up to two Power Supplies, external diodes are required.)					
functions	Parallel operation		No (However, backup operation is possible, external diodes are required.)					
-	Remote sensing		No					
	Remote control		Yes (Only for models with remote control option)					
	Output indicator		Yes (LED: Green)					
			3 kVAC for 1 min.(between all input terminals and output terminals) current cutoff 20 mA					
			2 kVAC for 1 min.(between all input terminals and PE terminals) current cutoff 20 mA					
	Withstand voltage		1 kVAC for 1 min.(between all output terminals and PE terminals) current cutoff 20 mA					
Insulation			Only Remote control					
			500 VAC for 1 min.(between all output terminals and RC terminals) current cutoff 20 mA					
	Insulation resistance	e	100 MΩ min.(bet	tween all output termi	nals and all input te	rminals/PE terminals)	at 500 VDC	
	Ambient energting	la mana wali wa	-20 to 70°C (Derating is required according to the temperature. Refer to Engineering Data) (with no					
	Ambient operating	temperature	condensation or			· ·	, ,	
Emples	Storage temperatur	е	-25 to 75°C (with	n no condensation or	icing)			
Environment	Ambient operating	humidity	90% max. (Stora	ige humidity: 90% ma	x.)			
	Vibration resistance	9	10 to 55 Hz, 4.5	G max., 0.375-mm ha	alf amplitude for 2 h	each in X, Y, and Z of	directions	
	Shock resistance		150 m/s², 3 times each in ±X, ±Y, ±Z directions					
Deliability	MTBF		135,000 hrs min.					
Reliability	Life expectancy *		10 years min.					
	Dimensions (W×H×	D)	Refer to <i>Dimensions</i> on page 23.					
	Weight		500 g					
Construction	Cooling fan		No					
	Degree of protectio	n						
	Harmonic current e		Conforms to EN 61000-3-2 (Applicable at 80% or less of the rated load.)					
		Conducted Emissions	, , ,					
	EMI *	Radiated Emissions	· ·					
	EMS							
			Conforms to EN 61204-3 high severity levels UL 508 (Listing, excluding models with connector option or remote control option)					
Standards	Safety Standards		UL 62368-1 (Rec CSA C22.2 No.1 CSA C22.2 No.62 EN 50178 (OVC EN/IEC 62368-1 Conforms to EN/ Conforms to PEL EAC (TR CU 004	_V (EN/IEC 60204-1) 4/2011, TR CU 020/20	000 m], Pol2) els with connector o els with connector o [> 2,000 m and ≤ 3 Pol2)	otion or remote control		
	Maxima Otan I		RCM (EN61000-	0-4)				
	Marine Standards		No					
	SEMI	= .		'-0706 (200 VAC inpu	τ)			
Jote: Refer to	e: Refer to Ratings, Characteristics, and Functions of							

Note: Refer to Ratings, Characteristics, and Functions on page 11.

	Power rating			300 W				
100 VAC input 55% typ. 61% typ. 62%	ltem	•						
200 VAC input 80% typ. 85% typ. 87%	iteiii	0.						
Voltage range * Solito S			•				**	
Voltage range * Single phase, 85 to 264 VAC, 120 to 370 VDC	Efficiency *							
Input		T	230 VAC input		**		87% typ.	
Input								
Input		· · · ·		50/60 Hz (47 to 63 Hz)				
Power factor		Current *	100 VAC input	4.2 A typ.				
Leakage current		Current w	200 VAC input	2.1 A typ.				
Leakage current 200 VAC input	Input	Power factor		0.9 min.				
Inrush current 100 VAC input 14 A Vp.	•		100 VAC input					
		Leakage current *	-					
Nor a cold start at 250 200 VAC input 28 A 1yp.		Invitab attract the	-	7.1				
Rated Output Current			•					
Votage adjustment range		,	200 1110 111941		00.4	11 1	7.4	
Rigole & Noise-vollage # 100 to 240 VAC input 150 mVp-p max. 150 mVp-p max. 330 m Vp-p max. 150 mVp-p max. 330 m Vp-p max. 150 mVp-p max. 330 m Vp-p max. 150 mVp-p max. 150 mVp-p max. 330 m Vp-p max. 150 mVp-p max. 150						14 A	7 A	
Input variation influence * 0.5% max.				,			1	
Load variation influence 1.0% max. 1			•		270 mVp-p max.	150 mVp-p max.	330 mVp-p max.	
Temperature variation influence 100 to 240 VAC input 1,000 ms max.		Input variation influ	ence *	0.5% max.				
Variation influence Startup time * 100 VAC input 1,000 ms max. 30 ms typ. 30 ms typ. 40 ms typ. (Extended 30 ms typ. 40 ms typ. (Extended 30 ms typ. 25 ms typ. 40 ms typ. (Extended 30 ms typ. 40 ms typ. (Extended 40 m		Load variation influe	ence *	1.0% max.				
Startup time * 100 VAC input 1,000 ms max. 200 VAC input 1,000 ms max. 30 ms typ. 40 ms typ. (Extended hold time type) 40 ms typ. (Extended hold time type) 30 ms typ. 40 ms typ. (Extended hold time type) 40 ms typ. (Extended tope type) 40 ms typ. (Extended hold time type)		Temperature	100 to 240 VAC immed	0.05%/%0				
Startup time 100 VAC input 1,000 ms max. 30 ms typ. 40 ms typ. (Extended hold time type) 200 VAC input 30 ms typ. 25 ms typ. 40 ms typ. (Extended hold time type) 40 ms typ. (Extended hold time	O4 :	variation influence	100 to 240 VAC input	0.05%/*C max.				
Note	Output	044	100 VAC input	1,000 ms max.				
Hold time ★ 100 VAC input 30 ms typ. 30 ms typ. 40 ms typ. 40 ms typ. 50 ms typ.		Startup time *	-	1,000 ms max.				
Hold time ★ Hold time ★				,		30 ms tvn		
Hold time # 200 VAC input 30 ms typ. 25 ms typ. 30 ms typ. 30 ms typ. 40 ms typ. (Extended hold time type) 30 ms typ. 40 ms typ. (Extended hold time type) 40 ms typ. (Extended hold time type)			100 VAC input	30 ms typ.	30 ms tvp.		30 ms typ.	
200 VAC input 30 ms typ. 25 ms typ. 40 ms typ. (Extended hold time type) 30 ms typ.		Uald tim - de			7 F-1			
200 VAC input 30 ms typ. 25 ms typ. 40 ms typ. (Extended 30 ms hold time type)		noia time *				30 ms typ.		
Additional functions Ves. automatic reset Ves. part protection Ves. power shut off (shut off the input voltage and turn on the input again)			200 VAC input	30 ms typ.	25 ms typ.	40 ms typ. (Extended	30 ms typ.	
Overvoltage protection * Yes, 120% or higher of rated output voltage, power shut off (shut off the input voltage and turn of the input voltage and turn on the input again) Parallel operation Yes, power shut off (shut off the input voltage and turn on the input again) Parallel operation Yes, power shut off (shut off the input voltage and turn on the input again) Parallel operation Yes (For up to two Power Supplies, external diodes are required.) Remote sensing No Remote control Yes (Uniform models with remote control option) Qutput indicator Yes (Diff for models with remote control option) Ves (LED: Green) Yes (LED: Green)						hold time type)		
Overheat protection Yes, power shut off (shut off the input voltage and turn on the input again)		Overload protection		Yes, automatic reset				
Series operation Yes (For up to two Power Supplies, external diodes are required.)		Overvoltage protection *		Yes, 120% or higher of rated output voltage, power shut off (shut off the input voltage and turn on the input ag				
Series operation Yes (For up to two Power Supplies, external diodes are required.)		Overheat protection		Yes, power shut off (shut off the input voltage and turn on the input again)				
Parallel operation No (However, backup operation is possible, external diodes are required.) Remote sensing No Yes (Conly for models with remote control option)	Additional	·		1 0 1				
Remote sensing No Yes (Conly for models with remote control option)	unctions			· · · · · · · · · · · · · · · · · · ·				
Remote control Yes (Conly for models with remote control option)		+			up operation is possible, ex	demai diodes are required.	<u> </u>	
Dutput indicator								
New Standards Withstand voltage 3 kVAC for 1 min. (between all input terminals and output terminals) current cutoff 2 kVAC for 1 min. (between all input terminals and PE terminals) current cutoff 20 1 kVAC for 1 min. (between all output terminals and PE terminals) current cutoff 20 1 kVAC for 1 min. (between all output terminals and PE terminals) current cutoff 20 0 mg members are provided by the provid		Remote control		· · ·				
Withstand voltage 2 kVAC for 1 min. (between all input terminals and PE terminals) current cutoff 20 1 kVAC for 1 min. (between all output terminals and PE terminals) current cutoff 20 1 kVAC for 1 min. (between all output terminals and PE terminals) current cutoff 20 1 kVAC for 1 min. (between all output terminals and RC terminals) current cutoff 20 1 kVAC for 1 min. (between all output terminals and RC terminals) current cutoff 20 1 kVAC for 1 min. (between all output terminals and RC terminals) at 20 kVAC for 1 min. (between all output terminals and RC terminals) at 30 kVAC for 1 min. (between all output terminals and RC terminals) at 30 kVAC for 1 min. (between all output terminals and RC terminals) at 30 kVAC for 1 min. (between all output terminals and RC terminals) current cutoff 20 2 kVAC for 1 min. (between all output terminals and RC terminals) current cutoff 20 2 kVAC for 1 min. (between all output terminals and RC terminals) current cutoff 20 2 kVAC for 1 min. (between all output terminals and RC terminals) current cutoff 20 2 kVAC for 1 min. (between all output terminals and RC terminals) current cutoff 20 2 kVAC for 1 min. (between all output terminals and RC terminals) current cutoff 20 2 kVAC for 1 min. (between all output terminals and RC terminals) current cutoff 20 2 kVAC for 1 min. (between all output terminals and RC terminals) current cutoff 20 2 kV Everminals and RC terminals) current cutoff 20 2 kV Everminals and RC terminals) current cutoff 20 2 kV Everminals and RC terminals and RC te		Output indicator						
Name				3 kVAC for 1 min. (between all input terminals and output terminals) current cutoff 20 mA				
Conly Remote control				2 kVAC for 1 min. (between all input terminals and PE terminals) current cutoff 20 mA				
Conly Remote control 500 VAC for 1 min. (between all output terminals and RC terminals) current cutoff 100 MΩ min. (between all output terminals and all input terminals) at 100 MΩ min. (between all output terminals and all input terminals) at 100 MΩ min. (between all output terminals and all input terminals) at 100 MΩ min. (between all output terminals and all input terminals) at 100 MΩ min. (between all output terminals and all input terminals) at 100 MΩ min. (between all output terminals and all input terminals) at 100 MΩ min. (between all output terminals and all input terminals) at 100 MΩ min. (between all output terminals and all input terminals) at 100 MΩ min. (between all output terminals and all input terminals) at 100 MΩ min. (between all output terminals and all input terminals) at 100 MΩ min. (between all output terminals and all input terminals) at 100 MΩ min. (between all output terminals and all input terminals) at 100 MΩ min. (between all output terminals and all input terminals) at 100 MΩ min. (between all output terminals and all input terminals) at 100 MΩ min. (between all output terminals and all input terminals) at 100 min. (between all output terminals and all input terminals) at all input terminals) at 20 decording the set in 100 MΩ. (in the input terminals) at 20 the terminals) at 20 the terminals) at 20 the terminals) at 20 the seminal put terminals and all input terminals and all at 20 the min and all and the terminals and all input terminals and all input terminals and all input terminals and all input and all input and all input and and all input and and all input and all input and and all input and and and and and and and and	Inculation	Withstand voltage		1 kVAC for 1 min. (between all output terminals and PE terminals) current cutoff 20 mA				
Insulation resistance	modiation							
Ambient operating temperature				500 VAC for 1 min. (between all output terminals and RC terminals) current cutoff 20 mA				
Storage temperature		Insulation resistance	е	100 M Ω min. (between all output terminals and all input terminals/PE terminals) at 500 VDC				
Ambient operating humidity 90% max. (Storage humidity: 90% max.)		Ambient operating t	emperature	-20 to 70°C (Derati	ng is required according to	the temperature.) (with no	condensation or icin	
Ambient operating humidity 90% max. (Storage humidity: 90% max.)			•	`	<u> </u>	. /\		
Vibration resistance 10 to 55 Hz, 4.5 G max., 0.375-mm half amplitude for 2 h each in X, Y, and Z direct Shock resistance 150 m/s², 3 times each in ±X, ±Y, ±Z directions	Environment			,				
Shock resistance				10 to 55 Hz, 4.5 G max., 0.375-mm half amplitude for 2 h each in X, Y, and Z directions				
MTBF				·				
Life expectancy ★ 10 years min. Dimensions (W×H×D)								
Dimensions (WxHxD) Refer to Dimensions on page 25	Reliability	+						
Weight		· · · · · ·		10 years min.				
Conling fan Yes Degree of protection Harmonic current emissions Conforms to EN 61000-3-2 EMI ★ Conducted Emissions Conforms to EN 61204-3 Class B, EN 55011 Class B Radiated Emissions Conforms to EN 61204-3 Class B, EN 55011 Class B EMS Conforms to EN 61204-3 high severity levels UL 508 (Listing, excluding models with remote control option) UL 508 (Recognition, models with remote control option) UL 508 (Recognition, OVCII [≤ 3,000 m], Pol2) CSA C22.2 No.107.1 (excluding models with remote control option) CSA C22.2 No.62368-1 (excluding models with remote control option) EN 50178 (OVCIII [≤ 2,000 m], OVCII [> 2,000 m and ≤ 3,000 m], Pol2) EN/IEC 62368-1 (OVCIII [≤ 3,000 m], Pol2) Conforms to EN/IEC 61558-2-16 Conforms to EN/IEC 61558-2-16 Conforms to PELV (EN/IEC 60204-1) EAC (TR CU 004/2011, TR CU 020/2011) RCM (EN61000-6-4)		Dimensions (W×H×I	0)	Refer to Dimensions on page 25				
Cooling fan	Construction	Weight		700 g				
Degree of protection	Construction	Cooling fan		-				
Harmonic current emissions		+	1					
EMI								
Radiated Emissions		- Carront of	1					
$ \textbf{EMS} \qquad \qquad \textbf{Conforms to EN 61204-3 high severity levels} \\ \textbf{UL 508 (Listing, excluding models with remote control option)} \\ \textbf{UL 508 (Recognition, models with remote control option)} \\ \textbf{UL 508 (Recognition, models with remote control option)} \\ \textbf{UL 62368-1 (Recognition, OVCII [\leq 3,000 \text{ m}], Pol2)} \\ \textbf{CSA C22.2 No.107.1 (excluding models with remote control option)} \\ \textbf{CSA C22.2 No.62368-1 (excluding models with remote control option)} \\ \textbf{EN 50178 (OVCII [} \leq 2,000 \text{ m}], OVCII [} > 2,000 \text{ m} \text{ and } \leq 3,000 \text{ m}], Pol2)} \\ \textbf{EN/IEC 62368-1 (OVCII [} \leq 3,000 \text{ m}], Pol2)} \\ \textbf{Conforms to EN/IEC 61558-2-16} \\ \textbf{Conforms to PELV (EN/IEC 60204-1)} \\ \textbf{EAC (TR CU 004/2011, TR CU 020/2011)} \\ \textbf{RCM (EN61000-6-4)} \\ \end{cases} $		EMI *						
$ \begin{tabular}{lllllllllllllllllllllllllllllllllll$		FMO	naulateu EIIIISSIONS		<u> </u>	OI033 D		
UL 508 (Recognition, models with remote control option) UL 62368-1 (Recognition, OVCII [≤ 3,000 m], Pol2) CSA C22.2 No.107.1 (excluding models with remote control option) CSA C22.2 No.62368-1 (excluding models with remote control option) EN 50178 (OVCIII [≤ 2,000 m], OVCII [> 2,000 m and ≤ 3,000 m], Pol2) EN/IEC 62368-1 (OVCII [≤ 3,000 m], Pol2) Conforms to EN/IEC 61558-2-16 Conforms to PELV (EN/IEC 60204-1) EAC (TR CU 004/2011, TR CU 020/2011) RCM (EN61000-6-4)		EMS						
UL 62368-1 (Recognition, OVCII [≤ 3,000 m], Pol2) CSA C22.2 No.107.1 (excluding models with remote control option) CSA C22.2 No.62368-1 (excluding models with remote control option) EN 50178 (OVCII [≤ 2,000 m], OVCII [> 2,000 m and ≤ 3,000 m], Pol2) EN/IEC 62368-1 (OVCII [≤ 3,000 m], Pol2) Conforms to EN/IEC 61558-2-16 Conforms to PELV (EN/IEC 60204-1) EAC (TR CU 004/2011, TR CU 020/2011) RCM (EN61000-6-4)								
Standards CSA C22.2 No.107.1 (excluding models with remote control option) CSA C22.2 No.62368-1 (excluding models with remote control option) EN 50178 (OVCIII [≤ 2,000 m], OVCII [> 2,000 m and ≤ 3,000 m], Pol2) EN/IEC 62368-1 (OVCII [≤ 3,000 m], Pol2) Conforms to EN/IEC 61558-2-16 Conforms to PELV (EN/IEC 60204-1) EAC (TR CU 004/2011, TR CU 020/2011) RCM (EN61000-6-4)				UL 508 (Recognition, models with remote control option)				
Safety Standards CSA C22.2 No.62368-1 (excluding models with remote control option) EN 50178 (OVCIII [≤ 2,000 m], OVCII [> 2,000 m and ≤ 3,000 m], Pol2) EN/IEC 62368-1 (OVCIII [≤ 3,000 m], Pol2) Conforms to EN/IEC 61558-2-16 Conforms to PELV (EN/IEC 60204-1) EAC (TR CU 004/2011, TR CU 020/2011) RCM (EN61000-6-4)								
Safety Standards EN 50178 (OVCIII [≤ 2,000 m], OVCII [> 2,000 m and ≤ 3,000 m], Pol2) EN/IEC 62368-1 (OVCII [≤ 3,000 m], Pol2) Conforms to EN/IEC 61558-2-16 Conforms to PELV (EN/IEC 60204-1) EAC (TR CU 004/2011, TR CU 020/2011) RCM (EN61000-6-4)	Standards							
Conforms to EN/IEC 61558-2-16 Conforms to PELV (EN/IEC 60204-1) EAC (TR CU 004/2011, TR CU 020/2011) RCM (EN61000-6-4)		Safety Standards		EN 50178 (OVCIII [≤ 2,000 m], OVCII [> 2,000			
Conforms to PELV (EN/IEC 60204-1) EAC (TR CU 004/2011, TR CU 020/2011) RCM (EN61000-6-4)								
EAC (TR CU 004/2011, TR CU 020/2011) RCM (EN61000-6-4)								
RCM (EN61000-6-4)								
		Marine Standards		, , ,				
					706 (200 VAC input)			
Pofer to Patings Characteristics, and Functions on page 11	h Defente D	SEMI			Conforms to F47-0706 (200 VAC input)			

^{*} Refer to Ratings, Characteristics, and Functions on page 11.

		Power rating		60	00 W		
Item	Oı	utput voltage (VDC)					
iteiii		,			=	_	
		100 VAC input	84% typ.	84% typ.	85% typ.	88% typ.	
Efficiency *		200 VAC input	88% typ.	88% typ.	89% typ.	92% typ.	
		230 VAC input	88% typ. 90% typ. 92% typ.				
	Voltage range *		Single phase, 85 to 264 VAC, 120 to 350 VDC				
	Frequency *		50 /60 Hz(47 to 63 Hz)				
		100 VAC input	7.7 A typ.				
	Current *	200 VAC input	7.7 A typ. 3.8 A typ.				
Innut	Power factor	200 VAO IIIput	0.9 min.				
Input	Power factor						
	Leakage current *	100 VAC input	0.5 mA max.				
		200 VAC input	1 mA max.				
	Inrush current *	100 VAC input	14 A typ.				
	(for a cold start at 25°C)	200 VAC input	28 A typ.				
	Rated Output Current		50 A	40 A	27 A	13 A	
	Voltage adjustment		-10% to 15% (with V.A	(DJ)			
		100 to 240 VAC input	170 mVp-p max.	170 mVp-p max.	280 mVp-p max.	340 mVp-p max.	
		•		170 IIIVp-p IIIax.	200 mvp-p max.	340 HVp-p Hax.	
	Input variation influ		0.5% max.				
	Load variation influe	ence *	1.0% max.				
	Temperature variation influence	100 to 240 VAC input	0.05%/°C max.				
Output	variation influence	•					
	Startup time *	100 VAC input	1,000 ms max.				
		200 VAC input	1,000 ms max.				
		100 VAC input	30 ms typ.	25 ms typ.	30 ms typ. 40 ms typ. (Extended hold time type)	30 ms typ.	
	Hold time *	200 VAC input	30 ms typ.	25 ms typ.	30 ms typ. 40 ms typ. (Extended	30 ms typ.	
					hold time type)		
	Overload protection		Yes, automatic reset				
	Overvoltage protect	ion *	Yes, 120% or higher of rated output voltage, power shut off (shut off the input voltage and turn on the input again				
	Overheat protection		Yes, power shut off (shut off the input voltage and turn on the input again)				
Additional	Series operation		Yes (For up to two Power Supplies, external diodes are required.)				
functions	Parallel operation		Yes (up to five Power Supplies, S8FS-G60024 (models with parallel operation option) only).				
F	·		No				
	Remote sensing						
	Remote control		Yes (Only Remote con	trol)			
	Output indicator		Yes (LED: Green)				
			3 kVAC for 1 min. (between all input terminals and output terminals) current cutoff 20 mA				
			2 kVAC for 1 min. (between all input terminals and PE terminals) current cutoff 20 mA				
Insulation	Withstand voltage		1 kVAC for 1 min. (between all output terminals and PE terminals) current cutoff 20 mA Only Remote control 500 VAC for 1 min. (between all output terminals and RC terminals) current cutoff 20 mA				
	Inquistion as siste		100 MΩ min. (between all output terminals and all input terminals) current cuton 20 mA				
	Insulation resistanc		`	<u>'</u>	<u>'</u>		
	Ambient operating t	•	` `	is required according to the	e temperature.) (with no	condensation or icing	
	Storage temperature	•	-25 to 75°C (with no co	ondensation or icing)			
Environment	Ambient operating h	numidity	90% max. (Storage hu	midity: 90% max.)			
	Vibration resistance		10 to 55 Hz, 4.5 G max	c., 0.375-mm half amplitud	de for 2 h each in X, Y, an	d Z directions	
	Shock resistance		150 m/s², 3 times each in ±X, ±Y, ±Z directions				
	MTBF		135,000 hrs min.				
Reliability			<u>'</u>				
	Life expectancy *		10 years min.				
	Dimensions (W×H×I	J)	Refer to Dimensions or	n page 26.			
Construction	Weight		1,050 g				
	Cooling fan		Yes				
	Degree of protection	1					
	Harmonic current er		Conforms to EN 61000-3-2				
		Conducted Emissions		I-3 Class B, EN 55011 Cla	ass B		
	EMI *	Radiated Emissions		I-3 Class B, EN 55011 Cla			
	EMS		Conforms to EN 61204	· · · · · · · · · · · · · · · · · · ·			
Standards	Safety Standards		UL 508 (Listing, excluding models with remote control option) UL 508 (Recognition, models with remote control option) UL 508 (Recognition, OVCII [≤ 3,000 m], Pol2) CSA C22.2 No.107.1 (excluding models with remote control option) CSA C22.2 No.62368-1 (excluding models with remote control option) EN 50178 (OVCIII [≤ 2,000 m], OVCII [> 2,000 m and ≤ 3,000 m], Pol2) EN/IEC 62368-1 (OVCII [≤ 3,000 m], Pol2) Conforms to EN/IEC 61558-2-16 Conforms to PELV (EN/IEC 60204-1) EAC (TR CU 004/2011, TR CU 020/2011) RCM (EN61000-6-4)				
	Marine Standards SEMI		No				
	JEIVII		Conforms to F47-0706 (200 VAC input)				

^{*} Refer to Ratings, Characteristics, and Functions on page 11.

Ratings, Characteristics, and Functions

Efficiency			The value is when both rated output voltage and rated output current are satisfied.		
	Voltag	e range ency	Do not use an inverter output for the Power Supply. Inverters with an output frequency of 50/60 Hz are available, but the rise in the internal temperature of the Power Supply may result in ignition or burning.		
la acut	Currer	nt	The value is when both rated output voltage and rated output current are satisfied.		
Input	Leaka	ge current	The values are determined according to the Act on Power Supply Safety of Electrical Appliances and Materials.		
	1111111111	current	For a cold start at 25°C. Refer to the following figure.		
	Voltage adjustment range		If the output voltage adjuster (V. ADJ) is turned, the voltage will increase by more than +15 of the voltage adjustment range. When adjusting the output voltage, confirm the actual output voltage from the Power Supply and be sure that the load is not damaged.		
	Ripple	& Noise voltage	The value is when both rated output voltage and rated output current are satisfied. A characteristic when the ambient operating temperature is 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 v	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.		
	Startu	p time	The value is when both rated output voltage and rated output current are satisfied. For a cold start at 25°C. Refer to the following figure.		
	Hold t	ime	The value is when both rated output voltage and rated output current are satisfied. At 25°C. Refer to the following figure.		
Additional functions	Overvoltage protection		Refer to Overvoltage Protection on page 18 for the time when input voltage shuts off and input turns on again.		
Reliability	Life expectancy		Refer to Recommended Replacement Periods and Periodic Replacement for Preventive Maintenance on page 33 for details.		
Standards	ЕМІ	Conducted Emissions	The 150-W and higher models conform to Class B when an aluminum plate is set under the		
Stanuards	EIVII	Radiated Emissions	Power Supply.		

Standard Compliance

- The input voltage range for compliance with EC Directives and other safety standards (UL, EN, etc.) is 90 to 264 VAC.
- EN/IEC 61558-2-16

To comply with EN/IEC 60204-1 (Machine Safety), a transformer is required in the control circuit. If, however, a Power Supply that has a built-in transformer that complies with EN/IEC 6155-8-2-16 is used, an external transformer is not required.

• Safety standard targets during a DC input *

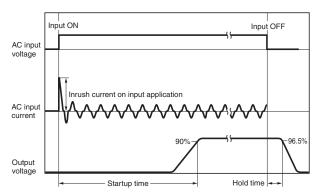
During a DC input, UL 62368-1, cUR (CSA C22.2 No. 62368-1), EN/IEC 62368-1, EN 50178, EN/IEC 61558-2-16, and EN/IEC 60204-1 are safety standard targets. (However, the input voltage range is 120 to 320 VDC. The safety standards during DC input are not acquired for the S8FS-G60048□.)

It is possible to comply with the safety standards by connecting a UL-authenticated fuse. Select a UL-authenticated fuse that satisfies the following conditions:

S8FS-G015 (320 VDC or above, 3 A) S8FS-G050 (320 VDC or above, 4 A) S8FS-G100 (320 VDC or above, 8 A) S8FS-G150 (320 VDC or above, 10 A) S8FS-G300 (320 VDC or above, 12 A) S8FS-G600 (320 VDC or above, 20 A)

- To comply with the PELV output of the EN/IEC 60204-1, ground the output negative side (-V) to PE. *
- * Applicable to products produced from May 2018

Inrush Current, Startup Time, Output Hold Time

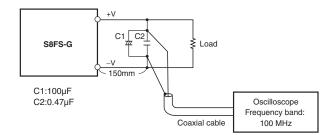


Note: The total inrush current of all of the Power Supplies will flow for parallel operation or backup operation.

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

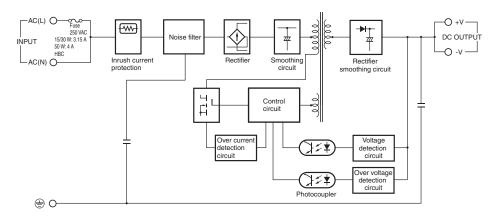
The specified standard for the ripple voltage noise was measured with a measurement circuit that is based on JEITA standard RC-9131A.



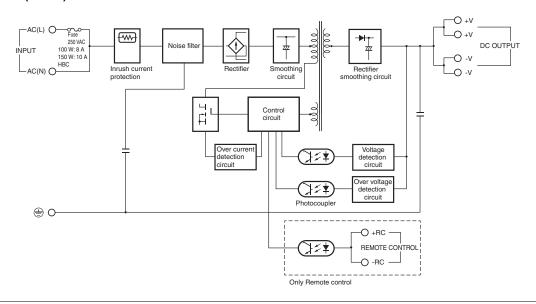
Connections

Block Diagrams

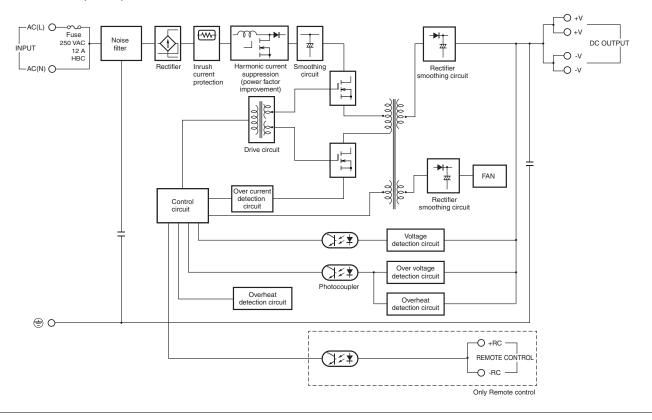
S8FS-G015□□□ (15 W) S8FS-G030□□□ (30 W) S8FS-G050□□□ (50 W)



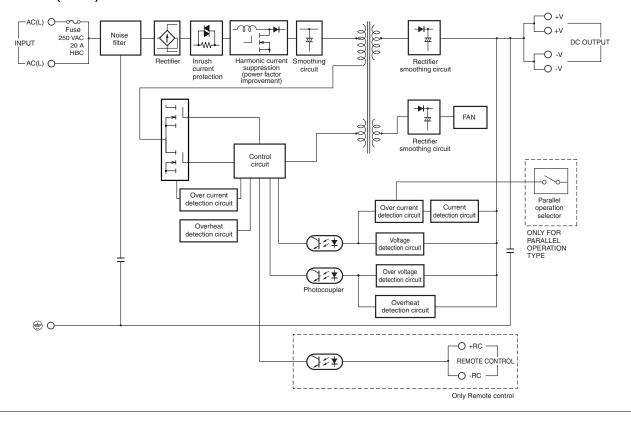
S8FS-G100□□□ (100 W) S8FS-G150□□□ (150 W)



S8FS-G300□□□ (300 W)



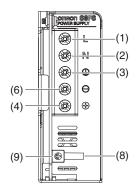
S8FS-G600□□□ (600 W)



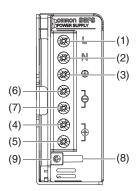
Construction and Nomenclature

Nomenclature

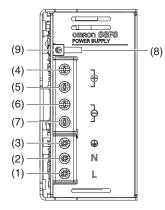




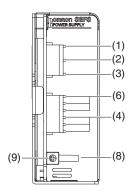
\$8FS-G100□□□ \$8FS-G150□□□



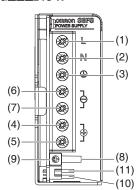
S8FS-G300□□□ S8FS-G600□□□



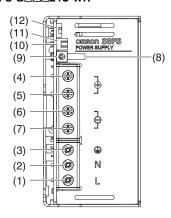
S8FS-G□□□24CE



S8FS-G□□□24C-R



S8FS-G□□□24C-WR



No.	Terminal name	Name	Function		
(1)	L	Input terminals	Connect the input lines to these terminals. *1		
(2)	N	Input terminals	Connect the input lines to these terminals. *1		
(3)	PE	Protective Earth terminal ()	Connect the ground line to this terminal. *2		
(4)	+V1				
(5)	+V2	DC output terminals	Connect the load lines to these terminals.		
(6)	-V1	DC output terminals	Connect the load lines to these terminals.		
(7)	-V2				
(8)		Output indicator (DC ON: green)	Lights while a direct current (DC) output is ON.		
(9)		Output voltage adjuster (V.ADJ)	Use to adjust the voltage.		
(10)	+RC	Remote control terminals	Wire for remote control.		
(11)	-RC	nemote control terminals	wife for remote control.		
(12)		Parallel operation switch	To operate in parallel, set the switch to the "PARALLEL" side.		

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

Input and Output Connectors (Connector type)

-	•	•				
			Applicable connector	Housing	Terminals	Applicable crimp tool
Input side	All models	CN110	B3P5-VH (LF) (SN)	VHR-5N		
Output side	S8FS-G01524□E S8FS-G03024□E S8FS-G05024□E	CN510	B4P-VH (LF) (SN)	VHR-4N	Reel: SVH-21T-P1.1 Bulk: BVH-21T-P1.1	YC-160R
	S8FS-G10024□E S8FS-G15024□E		B6P-VH (LF) (SN)	VHR-6N		
Manufacturer			J.S.T. Mfg. Co., Ltd.			

Note: The female connectors that are required for wiring are not provided with the Power Supply.

^{*2.} This is the protective earth terminal specified in the safety standards. Always ground this terminal.

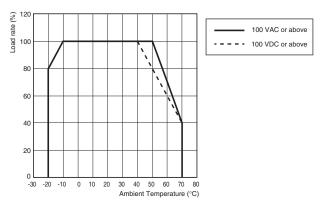
S8FS-G

Engineering Data

Derating Curves

Output Derating

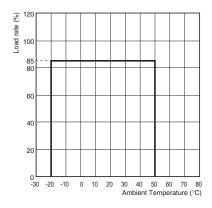
15 W, 30 W, 50 W, 100 W, and 150 W



- Note: 1. (For customers using the unit with an AC input)
 At a voltage below 100 VAC, reduce the load below the range of the derating curve shown above by the solid line, at the rate of 1.3%/V.s (40°C < Ambient temperature ≤ 70°C)
 - 2. (For customers using the unit with a DC input)
 At a voltage below 100 VDC, reduce the load below the range of the derating curve shown above by the dashed line, by multiplying with the coefficient 0.9.

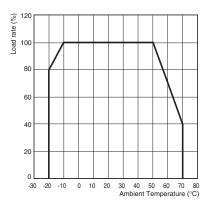
Parallel Operation

For Models with Parallel Operation Option



Note: At a voltage below 100 VAC, reduce the load at the rate of 1.3%/V.

300 W and 600 W

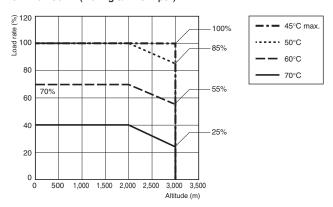


Note: At a voltage below 100 VAC, reduce the load at the rate of

This Power Supply can be used at an altitude of 3,000 m.

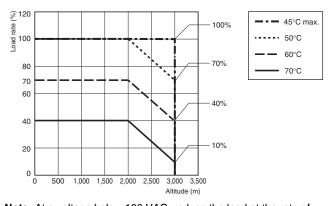
Between 2,000 and 3,000 m, derate the load according to the following derating curve.

15 W to 150 W (During an AC input)



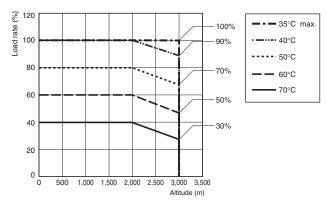
Note: At a voltage below 100 VAC, reduce the load at the rate of 1.3%/V. ($40^{\circ}C < Ambient temperature \le 70^{\circ}C$)

300 W and 600 W



Note: At a voltage below 100 VAC, reduce the load at the rate of 1.3%/V.

15 W to 150 W (During a DC input)

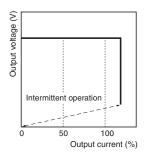


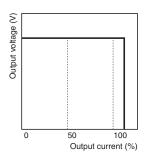
Note: At a voltage below 100 VDC, reduce the load by multiplying with the coefficient 0.9.

Engineering Data

Overload Protection

The load and the Power Supply are automatically protected from overcurrent damage by this function. Overload protection is activated if the output current rises above 105 to 160% of the rated current. When the output current returns within the rated range overload protection is automatically cleared.





Note: 1. Internal parts may occasionally deteriorate or be damaged if a short-circuited or overcurrent state continues during operation

 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.

If an excessive voltage that is 120% of the rated voltage or more is output, the output voltage is shut OFF.

Reset the input power by turning it OFF for at least three minutes and then turning it back ON again.

Overheating Protection (300 W and 600 W)

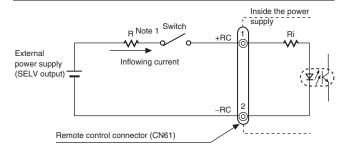
If the internal temperature of the Power Supply rises excessively as a result of fan failure or any other reason, the overheat protection circuit will be triggered to shut OFF the output voltage.

To restore operation, turn OFF the input power supply long enough for the Power Supply to cool sufficiently and then turn it ON again.

Remote Control Function (Only Remote control)

This function is to turn ON/OFF the output by applying a voltage to the remote control connector from a DC power Supply (external power supply) other than this Power Supply.

Built-in	Voltage between	Inrush current	
resistance Ri (Ω)	Output ON	Output OFF	(mA)
780	4.5 to 12.5	0 to 0.5	20 max.



Usage example of the remote control

Connectors used:

	CN61	Applicable connector	Applicable contact
Model	B2B-XH-AM	XHP-2	SXH-001T-P0.6 or SXH-002T-P0.6
Manufacturer		J.S.T. Mfg. Co., Ltd.	

Applicable crimp tool: YC-110R (J.S.T. Mfg. Co., Ltd.) or YRS-110 (J.S.T. Mfg. Co., Ltd.)

- Note: 1. When the external power supply is 4.5 to 12.5 V, the current limiting resistor R is not required. When it is 12.5 to 24.5 V, insert 1.5 k Ω as the current limiting resistor R.
 - 2. Reverse connection of the connector may cause damage on the internal parts.
 - The +RC and -RC terminals are the secondary circuit of the Power Supply. Use an SELV output power supply for an external power supply. The remote control circuit is insulated from the secondary output of the Power Supply (functional insulation).

Reference Value

	Value			
Reliability (MTBF)	Single phase model 15W: 970,000 30W: 970,000 50W: 880,000 100W: 730,000 150W: 620,000 300W: 200,000 600W: 190,000			
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.			

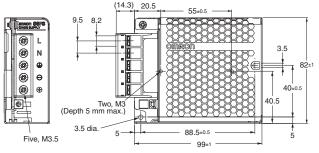
Dimensions (Unit: mm)

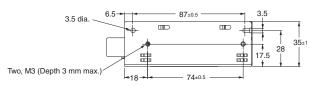
Power Supplies

15 W and 30 W

S8FS-G015□□C S8FS-G030□□C





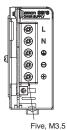


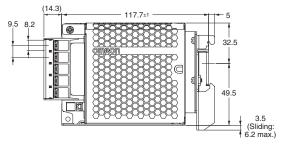
Panel mounting holes dimensions

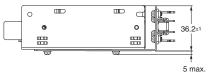
	Using the mounting holes in the Power Supply	Using the screw holes in the Power Supply
Side Mounting	Two, M3 40±0.5	Two, 3.5 dia. 55±0.5 →
Bottom Mounting	Two, M3	Two, 3.5 dia.

S8FS-G015□□CD S8FS-G030□□CD



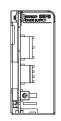


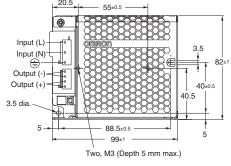


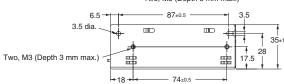


\$8FS-G015□□E \$8FS-G030□□E









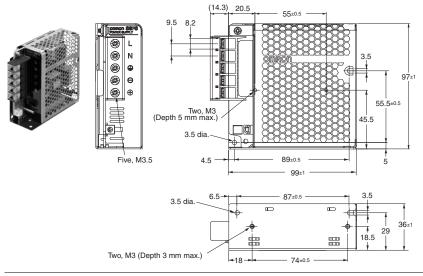
Panel mounting holes dimensions

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

S8FS-G

50W

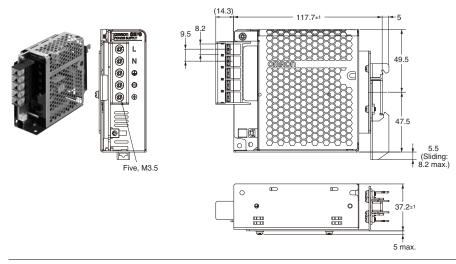
S8FS-G050□□C



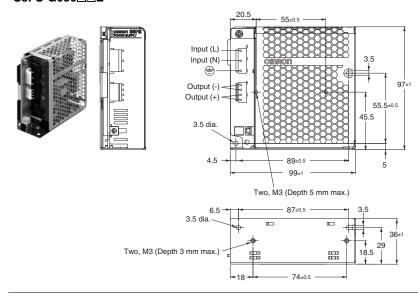
Panel mounting holes dimensions

	=	
	Using the mounting holes in the Power Supply	Using the screw holes in the Power Supply
Side Mounting	55.5±0.5 Two, M3	Two, 3.5 dia. - 55±0.5 →
Bottom Mounting	Two, M3	Two, 3.5 dia.

S8FS-G050□□CD



S8FS-G050□□E



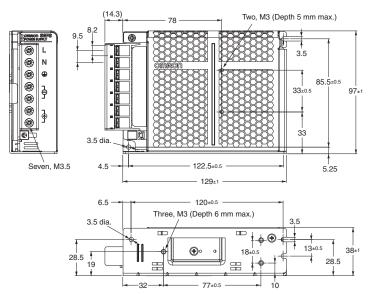
Panel mounting holes dimensions

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

100W

S8FS-G100□□C

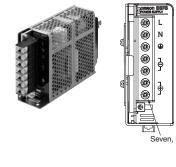


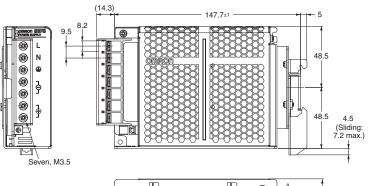


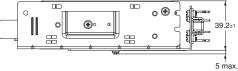
Panel mounting holes dimensions

	Using the mounting holes in the Power Supply	Using the screw holes in the Power Supply
Side Mounting	Two, M3	Two, 3.5 dia.
Bottom Mounting	13±0.5 Three, M3	Three, 3.5 dia.

S8FS-G100□□CD



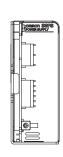


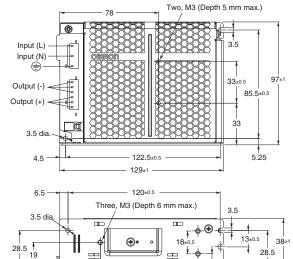


S8FS-G

S8FS-G100□□E







77±0.5

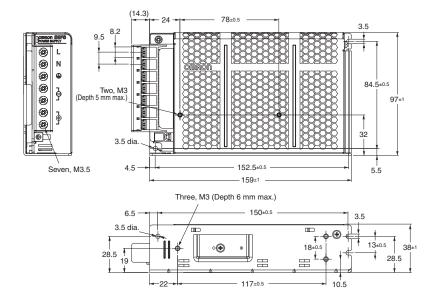
Panel mounting holes dimensions

	Using the mounting holes in the Power Supply	Using the screw holes in the Power Supply
Side Mounting	Two, M3	Two, 3.5 dia. 33±0.5
Bottom Mounting	Three, M3 13±0.5	Three, 3.5 dia.

150W

S8FS-G150□□C



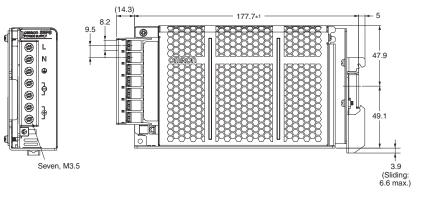


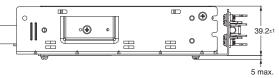
Panel mounting holes dimensions

	Using the mounting holes in the Power Supply	Using the screw holes in the Power Supply
Side Mounting	Two, M3	Two, 3.5 dia.
Bottom Mounting	Three, M3 13±0.5	Three, 3.5 dia.

S8FS-G150□□CD

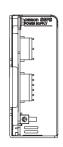


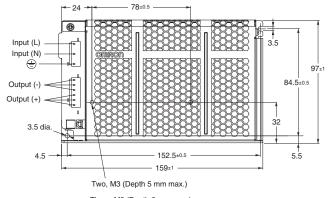


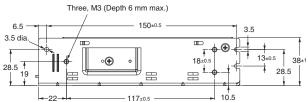


S8FS-G150□□E









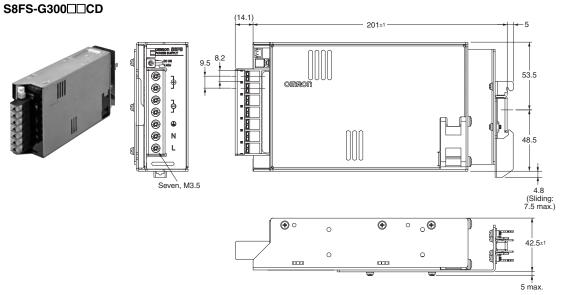
Panel mounting holes dimensions

	Using the mounting holes in the Power Supply	Using the screw holes in the Power Supply
Side Mounting	Two, M3	Two, 3.5 dia.
Bottom Mounting	Three, M3 13±0.5	Three, 3.5 dia. 117±0.5 18±0.5

300W

S8FS-G300□□C Two, M4 (Depth 5 mm max.) Panel mounting holes dimensions Using the screw holes in the Power Supply **⊗** Two, 4.5 dia. 102±1 Side Mounting 64±0.5 Four, 4.5 dia. 50.5 **Bottom** Mounting 74±0.5 Seven, M3.5 (3.5)170±1 60 74±0.5 • • **(** • 20±0.5 12

Four, M4 (Depth 5 mm max.)



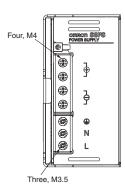
Note: Use a Front-mounting Bracket (S82Y-FSG-30F) when the DIN Rail is not strong enough for your usage environment.

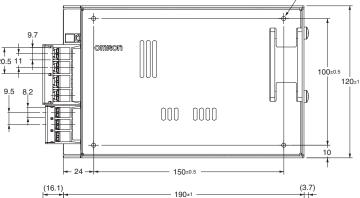
S8FS-G

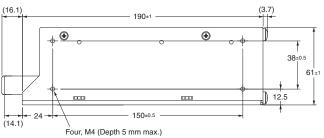
600W

S8FS-G600□□C

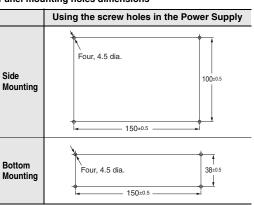








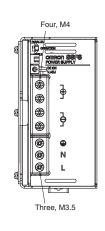
Panel mounting holes dimensions

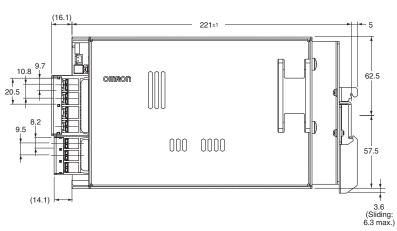


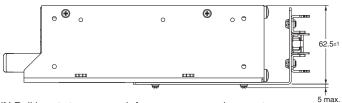
Four, M4 (Depth 5 mm max.)

S8FS-G600□□CD









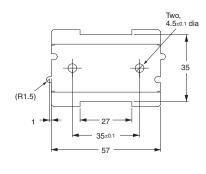
Note: Use a Front-mounting Bracket (S82Y-FSG-60F) when the DIN Rail is not strong enough for your usage environment.

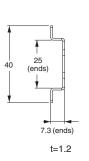
Mounting Brackets (Order Separately)

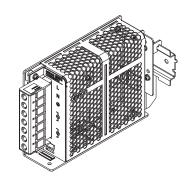
Use the Front-mounting Brackets together with DIN Rail-mounting Power Supplies (S8FS-G CD).

Power rating	Mounting direction	Model
15 W, 30 W, 50 W 100 W, 150 W and 300 W	Front-mounting	S82Y-FSG-30F
600 W	Front-mounting	S82Y-FSG-60F

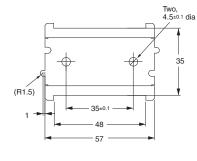
S82Y-FSG-30F

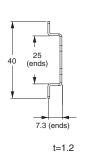


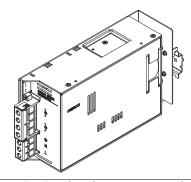




S82Y-FSG-60F







Note: Replacement brackets from the S8JX-N, S8JX-P, and S8VM series are available. Use these brackets for a front mounting configuration using direct mounting models.

Refer to the data sheet (Cat. No.: T216-E1, T217-E1, and T218-E1) for more information.

Terminal cover (Order Separately)

Power rating	Applicable models	Terminal Cover model number
15 W	S8FS-G015□□□	
30 W	S8FS-G030□□□	S82Y-FSG-C5P
50 W	S8FS-G050□□□	
100 W	S8FS-G100□□□	
150 W	S8FS-G150□□□	S82Y-FSG-C7P
300 W	S8FS-G300□□□	
600 W	S8FS-G600□□□	S82Y-FSG-C7P-L (Input Output)

Note: A Terminal Block Cover is provided with the Power Supply as a standard accessory. You can purchase another one if your Cover is damaged or lost.

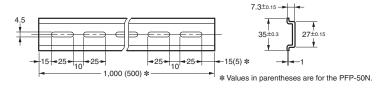
DIN Rail (Order Separately)

(Unit: mm)

Mounting Rail (Material: Aluminum)

PFP-100N PFP-50N

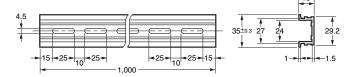




Mounting Rail (Material: Aluminum)

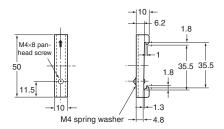
PFP-100N2





End Plate PFP-M

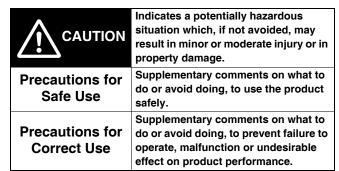




Note: If there is a possibility that the Unit will be subject to vibration or shock, use a steel DIN Rail. Otherwise, metallic filings may result from aluminum abrasion.

Safety Precautions

Refer to Safety Precautions for All Power Supplies. Warning Indications



Meaning of Product Safety Symbols



Used to warn of the risk of electric shock under specific conditions.



Used to warn of the risk of minor injury caused by high temperatures.



Use to indicate prohibition when there is a risk of minor injury from electrical shock or other source if the product is disassembled.



Used for general mandatory action precautions for which there is no specified symbol.

/!\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.

M3.5: 0.74 to 1.13N·m M4: 1.08 to 1.32N·m



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



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



Precautions for Safe Use

Ambient Operating and Storage Environments

- Store the Power Supply at a temperature of –25 to 75°C and a humidity of 90% max.
- The internal parts may occasionally deteriorate or be damaged.
 Use the Power Supply within the derating curve.
- Use the Power Supply at a humidity of 90% max.
- Do not use 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. In particular, install the Power Supply as far away as possible from contractors or other devices that are a vibration source.
- Install the Power Supply well away from any sources of strong, high-frequency noise and surge.

Mounting

 Take adequate measures to ensure proper heat dissipation to increase the long-term reliability of the Power Supply.
 Be sure to allow convection in the atmosphere around devices when mounting.

Do not use in locations where the ambient temperature exceeds the range of the derating curve.

The S8FS-G015 o to S8FS-G150 or are cooled by natural convection. Mount them so that air convection will occur around them.

The S8FS-G300 and S8FS-G600 are cooled by forced airflow. Do not allow the ventilation holes to be blocked. The effectiveness of cooling would be reduced.

- 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 and be broken due to adverse heat radiation. Do not loosen the screws on the Power Supply.
- If you mount the Power Supply with the holes provided on the chassis, do not exceed the depth given in the dimensional diagrams.

Use the following tightening torques.

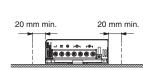
M3 screws: 0.48 to 0.59 N·m M4 screws: 1.08 to 1.32 N·m

Mounting

<Standard mounting> S8FS-G015□□□ to 150□□□ Bottom mounting

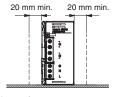
20 mm min. 20 mm min.

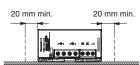
Side (horizontal orientation) mounting

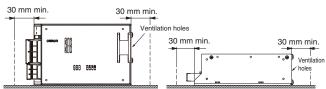


S8FS-G300□□□ and S8FS-G600□□□

Bottom mounting Side (horizontal orientation) mounting

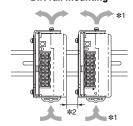






Note: Use a metal plate as the mounting surface.

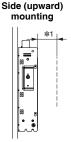
DIN rail mounting

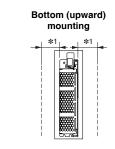


- *1. Convection of air.
- ***2.** 20 mm min.

<Other mounting types> *2 S8FS-G015 \square to 150 \square



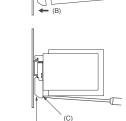




- ***1.** 20 mm min.
- *2. Applicable to products produced from May 2018

<DIN Rail Mounting>

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.



Rail stopper

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

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 150-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-G to prevent smoking or ignition caused by abnormal loads.

Terminals and Wiring (Screw terminal block type)

Terminals	Model	Recommendes Wire Gauges	
	S8FS-G015□□□	AWG12-22	
Input	S8FS-G030□□□ to 100□□□	AWG12-20	
	S8FS-G150□□□ to 600□□□	AWG12-16	
	S8FS-G01512□ to 01524□	AWG12-22	
	S8FS-G03024□	AVVG12-22	
	S8FS-G01505□		
	S8FS-G03012□, 03015□	AWG12-20	
	S8FS-G05015□, 05024□	AVVG12-20	
	S8FS-G15048□		
	S8FS-G05012□	AWG12-18	
	S8FS-G10024□	AWG12-18	
	S8FS-G03005□		
Output	S8FS-G10015□	AWG12-16	
Output	S8FS-G15024□		
	S8FS-G30048□		
	S8FS-G05005□		
	S8FS-G10012□	AWG12-14	
	S8FS-G15015□		
	S8FS-G10005□		
	S8FS-G15005□, 15012□	AWG12	
	S8FS-G30012□ to 30024□		
	S8FS-G60015□ to 60048□	AWG10-12	
	S8FS-G60012□	AWG10	
Protective earth terminal	S8FS-G015□□□ to 600□□□	AWG12-14	

Note: The current capacity per output terminal is given in the following table.

S8FS-G015 to S8FS-G300 : 20 A

S8FS-G600□□□: 30 A

Use two terminals together if the current flow is higher than the rated terminal current.

Terminals and Wiring (Connector type)

Terminals	Model	Recommendes Wire Gauges
Input	S8FS-G01524□E to 15024□E	AWG18
Output	S8FS-G01524□E to 15024□E	AWG18

- Note: 1. The current capacity per output terminal is 5 A.

 Use two or more terminals together if the current flow is higher than the rated terminal current.
 - Do not insert and remove any connector more than 20 times.
 - 3. Refer to Input and Output Connectors on page 15 for the model numbers of the input and output connectors.

Overcurrent Protection

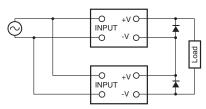
- Internal parts may possibly deteriorate or be damaged if a shortcircuited, overload, or boost load state continues during operation.
- Internal parts may possibly deteriorate or be damaged if the Power Supply is used for applications with frequent inrush current or overloading at the load end. Do not 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 operation.



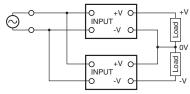
Note: 1. The diode is connected as shown in the figure. If the load is short-circuited, a reverse voltage will be generated inside the Power Supply. If this occurs the Power Supply may possibly deteriorate or be damaged. Always connect a diode as shown in the figure. Select a diode having the following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

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

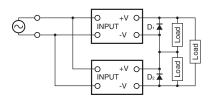
Although Power Supply having different specifications can be connected in series, the current flowing through connected in series, the current flowing through the load must not exceed the smaller rated output current.

<Making Positive/Negative Outputs>

• The outputs are floating outputs (i.e., the primary circuits and secondary circuits are separated). You can therefore make positive/negative outputs by using two Power Supplies. You can make positive/negative outputs with any of the models. If you use positive/negative outputs, connect two Power Supplies of the same model as shown below. You can combine models with different output capacities and output voltages. However, use the lower of the two rated 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 may operate in series.
 Therefore, connect bypass diodes (D1, D2) as shown in the following figure. If the list of models that support series connection of outputs says that an external diode is not required, an external diode is also not required for positive/negative outputs.

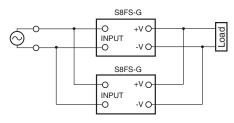


 Use the following information as a guide to the diode type, dialectic strength, and current.

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

Parallel Operation

Parallel operation is used when the output current from one Power Supply is insufficient for the load. Power Supplies are connected in parallel to increase the output current.



Power Supplies without the Parallel Operation Option

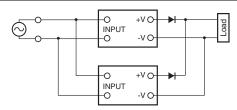
Parallel operation is not possible.

S8FS-G60024□-W□ (Models with the Parallel Operation Option)

Up to five Power Supplies can be connected in parallel operation. You must meet the following conditions to use parallel operation.

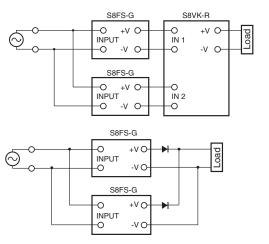
- The internal parts may occasionally deteriorate or be damaged. To operate in parallel, set the switch to the "PARALLEL" side.
- For parallel operation, always use Power Supplies with the same model number.
- Use the output voltage adjusters (V. ADJ) to adjust the difference in the output voltages to 50 mV or less between Power Supplies that are used in parallel operation.
- The length and thickness of each wire connected to the load must be the same so that there is no difference in the voltage drop value between the load and the output terminals of each Power Supply.
- Drastic fluctuations in the load (including fluctuations that occur
 when starting and starting the load) may reduce the output voltage.
 If fluctuations in the output voltage that result from drastic
 fluctuations in the load would be a problem, connect external
 diodes as shown in the following diagram.
- Use the following information as a guide to the diode type, dialectic strength, and current.

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



Backup Operation

Backup operation is possible if you use two Power Supplies of the same model. Even if one Power Supplies fails, operation can be continued with the other Power Supply. Make sure that the maximum load does not exceed the capacity of one Power Supply. Connect the S8VK-R or external diodes as shown in the following figure for backup operation. Refer to the S8VK-R datasheet (Cat. No.: T059) for information on using the S8VK-R.



Use the following information as a guide to the diode type, dialectic strength, and current.

Туре	Schottky Barrier diode
Dielectric strength (V _{RRM})	Twice the output voltage or above
Forward current (I _F)	Twice the rated output current or above

In Case There Is No Output Voltage

There is a possibility that overload protection, overvoltage protection, or overheating protection are functioning. The internal protection may operate if a large amount of surge voltage, such as a lightning inrush, is applied to the input. In addition, other possible causes for some models include stoppage of the built-in fan and the remote control function (OFF). Check the following five points. If there is still no output voltage, contact your OMRON representative.

- Checking Overload Protection: Remove the load wires and check whether the load is in an overload state or is short-circuited.
- Checking Overvoltage or Internal Protection:
 Turn the power supply OFF, leave it OFF for at least three minutes, and then turn it ON again to see if this clears the condition.
- Checking Overheating Protection (300 W/600 W): Turn OFF the input power supply long enough for the Power Supply to cool sufficiently and then turn it ON again.
- Checking for Built-in Fan Stoppage (300 W/600 W): Check whether or not the built-in fan has stopped.
- Confirming Remote Control Operation (Power Supplies with Remote Control):

Check whether or not the +RC and -RC terminals are open. Connect the terminals as specified.

Charging a Battery

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

Built-in Fan Replacement

<Only S8FS-G300□□/600□□>
The built-in fan cannot be replaced.

Audible Noise at Power ON

A harmonic current suppression circuit is built into the Power Supply. This circuit can create noise when the input is turned ON, but it will last only until the internal circuits stabilize and does not indicate any problem in the Power Supply.

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. (See note.)
- 2. Average load rate of 80% max. (See note.)
- 3. Mounting method: Standard mounting
- 4. Rated input voltage

Note: 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 Power Supply 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 or accidents that can be caused by using a Power Supply beyond its service live, 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, the Power Supply failures or accidents may occur.

We therefore recommend that you replace the Power Supply periodically to minimize product failures or 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.

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

_	МЕМО

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.

OMRON Corporation Industrial Automation Company

Kyoto, JAPAN

Contact: www.ia.omron.com

Regional Headquarters
OMRON EUROPE B.V.

Wegalaan 67-69, 2132 JD Hoofddorp Tel: (31)2356-81-300/Fax: (31)2356-81-388

OMRON ASIA PACIFIC PTE. LTD.
No. 438A Alexandra Road # 05-05/08 (Lobby 2),
Alexandra Technopark,
Singapore 119967
Tel: (65) 6835-3011/Fax: (65) 6835-2711

OMRON ELECTRONICS LLC

2895 Greenspoint Parkway, Suite 200 Hoffman Estates, IL 60169 U.S.A. Tel: (1) 847-843-7900/Fax: (1) 847-843-7787

OMRON (CHINA) CO., LTD.
Room 2211, Bank of China Tower,
200 Yin Cheng Zhong Road,
PuDong New Area, Shanghai, 200120, China
Tel: (86) 21-5037-2222/Fax: (86) 21-5037-2200

Authorized Distributor:

© OMRON Corporation 2016-2020 All Rights Reserved. In the interest of product improvement, specifications are subject to change without notice.

CSM_3_1

Cat. No. T207-E1-06 1120(1016)

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Omron:

S8FSG01515CD