

HFE2500 SERIES SPECIFICATIONS

			HFE2500-12	HFE2500-24	HFE2500-48	Rev
1	Rated output voltage	V	12	24	48	
2	Output voltage set point	V	12±1%	24±1%	48±1%	
3	Output voltage range	V	9.6~13.2	19.2~29.0	38.4~58	
4	Rated Output Current at 180 < Vin ≤ 265Vac	(*1) A	200	104	52	
5	Rated Output Current at 170 ≤ Vin ≤ 180Vac	(*1) A	200	100	50	
6	Rated Output Current at 100 ≤ Vin ≤ 132Vac	(*1) A	125	62.5	31.25	
7	Rated Output Current at 85V ≤ Vin < 100Vac	(*1) A	Linear derating 1.3% per 1VAC from output current at 100VAC:			
8	Rated output power 180 < Vin ≤ 265Vac	W	2400	2496	2496	
9	Rated output power 170 ≤ Vin ≤ 180Vac	W	2400			
10	Rated output power 100 ≤ Vin ≤ 132Vac	W	1500	1500	1500	
11	Rated output power 85Vac ≤ Vin < 100Vac	W	Linear derating 1.3% per V			
12	Input voltage / frequency range	(*2) ---	85~265Vac continuous, 47~63Hz, Single phase			
13	Maximum Input current	(*3) A	15/12A			
14	Power Factor (Typ)	(*3) ---	>0.99/0.98 @ 115/230V and maximum output power			
15	Efficiency at 75% rated load (Typ)	(*3) %	90/92%	90/92%	91/93%	
16	Efficiency at 100% rated load (Typ)	(*3) %	89/91%	89/91%	90/92%	
17	Inrush current	(*4) A	Less than 50A			
18	Hold-up time	(*13) mS	≥ 10mS typical at 115/230Vac input, rated output voltage and less than 80% of rated load.			
19	Maximum line regulation	(*5) %	0.25%			
20	Max load regulation	(*6) %	0.50%			
21	Output Ripple and noise P-P	(*7) mV	240	240	480	
		-10~0°C	360	360	780	
22	Temperature stability	%	0.05% of rated Vout for 8hrs after 30min warm-up. Constant line, load and temperature.			
23	Temperature coefficient	PPM/°C	±1-200			
24	Remote sensing	(*8) ---	Possible. Refer to instruction manual.			
25	Parallel operation	(*9) ---	Possible. Single wire current share, 5% accuracy of rated Iout, up to 8 units.			
26	Series operation	---	Possible (with external diodes), 2 units. Refer to instruction manual.			
27	Over current protection	%	105~115% of rated output current.			
28	Over voltage protection	(*10) V	Tracking OVP, range: 1.1xVout, accuracy: ±1-3%			
29	Over temperature protection	---	Inverter shut down method, automatic reset.			
30	Remote On/Off control	---	Two complementary inputs. By electrical signal or dry contact. Refer to instruction manual.			
31	"DC OK" signal	---	Tracking, On when Vout>90±5% of set output voltage. Open collector signal. Max.sink current: 10mA Refer to Instruction Manual.			
32	Over-Temperature warning	---	Refer to instruction manual. Open collector signal, Max. sink current: 10mA.			
33	"AC FAIL" signal	---	On when 270Vac>Vin>85Vac. Open collector signal, Max. sink current: 10mA.			
34	Auxiliary power supply output	(*3) (*11) ---	11.2~12.5V, 0.5A. 240mVp-p ripple and noise.			
35	Vout programming by external voltage	---	By 0~5V, equal to Vout min ~ Vout max. Refer to Instruction Manual.			
36	Vout programming by external resistor	---	By 1Kohm potentiometer. Refer to Instruction Manual.			
37	OCV programming by external voltage	---	By 0~5V. Refer to Instruction Manual.			
38	Front panel Indicators	---	AC OK, DC OK/FAIL. Refer to Instruction Manual.			
39	PC Interface	---	Optional, PMBus compatible. Refer to Instruction Manual.			
40	Operating temperature	---	-10~70°C.			
41	Storage temperature	---	-10~50°C: 100% load. Derate 2%/°C, 50°C to 60°C, Derate 2.5%/°C, 60°C to 70°C.			
42	Operating humidity	---	10~90% RH, no condensation.			
43	Storage humidity	---	10~95% RH, no condensation.			
44	Cooling	---	By Internal Fans. Variable speed control by ambient temperature and power level.			
45	Vibration	---	Built to meet IEC60068-2-64 (Basic Transportation)			
46	Shock	---	Built to meet IEC60068-2-27 (Basic Transportation)			
47	Conducted emission	---	Built to meet EN55022 Class B, FCC part 15 Class-B, VCCI Class-B			
48	Radiated emission	---	Built to meet EN55022 Class A, FCC part 15 Class-A, VCCI Class-A			
49	Immunity	---	Built to meet IEC61000-4-2 (Level 2,3), -3 (Level 2), +4 (Level 2), -5 (Level 3,4), -6 (Level 2), -8 (Level 4), -11			
50	Applicable safety standards	---	UL60950-1, EN60950-1			
51	Withstand voltage	---	Input-Output: 3000Vrms, 1min. Input-Ground: 2000Vrms, 1min. Output - Ground: 500VAC 1min. Output - Ground: 2250VDC 1min			
52	Insulation resistance	---	More than 100Mohm at 25°C and 70% RH. Output-Ground: 500Vdc			
53	Leakage current	(*12) mA	Less Than 0.75/1.5mA at 100/230Vac range			
54	Weight (Typ)	Kg	Max 2.1			
55	Size (W*H*D)	---	107x41x325mm Refer to Outline Drawing.			

Notes:

- *1 Refer to Fig. 1
- *2 For cases where conformance to various safety standards (UL, EN etc.) is required, to be described as 100-240Vac (50/60Hz).
- *3 At 115/230Vac, 25°C ambient temperature.
- *4 Not applicable for the noise filter Inrush current less than 0.2mS.
- *5 From 85~132Vac or 170~265Vac, constant load.
- *6 From No-load to Rated load, constant Input voltage. Measured at the sensing point in Remote sense.
- *7 Measured with JEITA-RC9131A 1:1 probe with 4x270uF electrolytic capacitors and 1uF film capacitor on the output, 20MHz B.W. When Power Supplies are installed in HFE2500-S1U shelf, measured with 1uF film capacitor on the output terminals of the HFE2500-S1U.
- *8 Voltage drop on load wires: HFE2500-12: 0.25V/wire, HFE2500-24: 0.5V/wire, HFE2500-48: 1V/wire.
- *9 Accuracy applicable for load current > 50% of rated output current. Derate maximum output power by 5%.
- *10 Inverter shut down method. Reset by AC voltage recycle or by On/Off control.
- *11 Measured with JEITA-RC9131A 1:1 probe with 470uF electrolytic capacitor and 0.1uF film capacitor on the output, 20MHz B.W. Capacitors are not required when the Power Supply is installed in HFE2500-S1U shelf.
- *12 Measured according to UL, EN method at 60Hz Ta=25°C
- *13 Measured from Input-off until the output voltage drops under 5% from the nominal voltage.

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Vin(Ac)	Model	HFE2500		
		-12	-24	-48
85V	V1 (V)	12	24	48
	V2 (V)	13.2	29	58
100~132V	I1 (A)	90	42	21
	I2 (A)	100	50	25
170~180V	I1 (A)	114	52	26
	I2 (A)	125	62.5	31.25
180~265V	I1 (A)	181.8	82.5	41
	I2 (A)	200	100	50
180~265V	I1 (A)	181.8	86	43
	I2 (A)	200	104	52

DRAWING NO:	IA689-01-01
DRAW	<i>[Signature]</i> 20-JUN-11
ENGR	<i>[Signature]</i> 20-JUN-11
CHECK	<i>[Signature]</i> 20.7.11
APPR	<i>[Signature]</i> 20.7.11

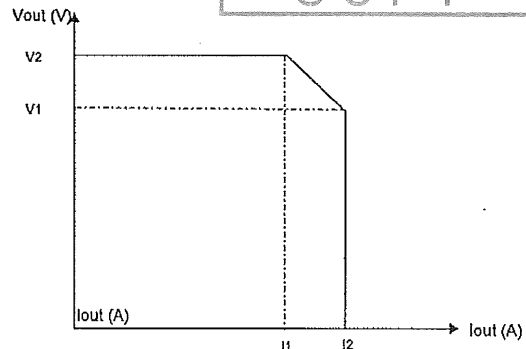


Fig. 1: Rated output current