

NEW
LOW
PROFILE,
REDUNDANT
HOT-SWAP
POWER
SUPPLIES
FROM
KEPCO

The HSF-1U series will mount up to four 50 or 100 Watt modules in a 1.75" rack adapter, RA 19-1U. Single output modules from 5 Volts to 48 Volts are available.



Four HSF modules shown in RA 19-1U Housing



Rear View

HSF 1U MODEL TABLE

MODEL	OUTPUT VOLTS	ADJUSTMENT RANGE	OVP SETTING (VOLTS)	OUTPUT CURRENT AMPS 0-40°C	CURRENT ⁽¹⁾ LIMIT (AMPS)	SW RIPPLE mV		NOISE (spike) mV max
						typ	max	
50 WATT MODELS								
HSF 5-10-1U	5	4.5-5.5	6.5~7.5	0-10.0	10.5~12.0	30	60	<120
HSF 12-4.2-1U	12	11.4-12.6	13.7~15.7	0-4.2	4.4~5.1	35	70	<190
HSF 15-3.4-1U	15	13.5-16.5	17.0~19.0	0-3.4	3.6~4.1	45	90	<220
HSF 24-2.1-1U	24	22.5-25.5	27.0~30.5	0-2.1	2.2~2.6	50	100	<310
HSF 48-1-1U	48	45.0-51.0	53.5~60.0	0-1	1.1~1.3	60	150	<350
100 WATT MODELS								
HSF 5-20-1U	5	4.5-5.5	6.5~7.5	0-20	21.0~24.0	30	65	<120
HSF 12-8.3-1U	12	11.4-12.6	13.7~15.7	0-8.3	8.7~10.0	35	70	<190
HSF 15-6.6-1U	15	13.5-16.5	17.0~19.0	0-6.6	7.0~8.0	40	80	<220
HSF 24-4.2-1U	24	22.5-25.5	27.0~30.5	0-4.2	4.4~5.2	50	110	<310
HSF 28-3.5-1U	28	26.5-29.5	32.0~35.0	0-3.5	3.7~4.2	60	140	<330
HSF 48-2-1U	48	45.0-51.0	53.5~60.0	0-2	2.1~2.4	80	220	<530



HSF GENERAL SPECIFICATIONS

SPECIFICATION	RATING/DESCRIPTION		CONDITION
	50W	100W	
Temperature	0 to 71°C, See Figure 1		Operating
	-40°C to +85°C		Storage
Humidity	Up to 95% RH		Non-condensing Operating & storage
Shock	20g, 3 axes (11 msec ±5msec pulse duration)		Non-operating 3 shocks each axis
Vibration	6-10Hz: 10mm amplitude 3 axes		Non-operating 1 hour each axis
	10-55Hz: 2g, 3 axes		
Isolation Output-Case	500V d-c, 100M Ohm		25°C, 65% RH
Type of Construction	Plug-in		
Cooling	Convection		
Withstand Voltage 50W	Input-Output	3.75KV a-c for 1 minute	25°C, 65% RH Y caps removed
	Input-Case	3KV a-c for 1 minute	
Safety	2KV a-c for 1 minute		UL 1950, EN60950, CSA 222 No. 950-5
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Bellcore Requirements	NEBS GR-63-CORE		Designed to meet

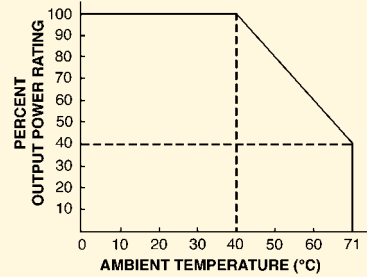
HSF INPUT CHARACTERISTICS

SPECIFICATION	RATING		CONDITION			
	50W, 100W	50W, 100W				
a-c Voltage	rated nominal	100/120/220/240V a-c	Single Phase			
	min-max range	95-264V a-c				
Power Factor	—		—			
d-c Voltage	min-max range	125-370V d-c ⁽¹⁾	Polarity insensitive			
Brown-out Voltage	min	85V a-c 110V d-c	Ripple, source & load effect increase			
Frequency	50-60Hz		Single Phase			
	47-440Hz ⁽²⁾					
EMI	FCC and VDE 0871		Conducted Class B			
Soft-start Circuit	Thermistor or thyristor limiter					
Leakage Current	max	0.5mA UL method	120V a-c 50-60Hz			
	max	07.5mA VDE method	240V a-c 50-60Hz			
Start-up Time	max	50W < 500ms 100W < 200ms	From turn-on until d-c output reaches nominal			
Holdup Time	typ	20msec	120V a-c			
	min	15msec	100V a-c			
INPUT CURRENT (Amperes)		50W	100W	120V a-c rms		
	a-c	typ	1.0		2.0	
	Current	max	1.2		2.4	
		typ	0.5		1.0	240V a-c rms
		max	0.7		1.6	
Fuse Value		3.0A	5.0A	250V type, 5x20mm		
Initial Turn-on Surge, First Half Cycle	45A		120V a-c rms			
	90A		240V a-c rms			
Efficiency	typ	76%	Max load, nominal output			
Switching Frequency	typ	120KHz	Main converter, forward			
		—	PFC converter			

Each HSF-1U plug-in power supply is equipped with a power on/off, indicator LEDs and voltage test points.

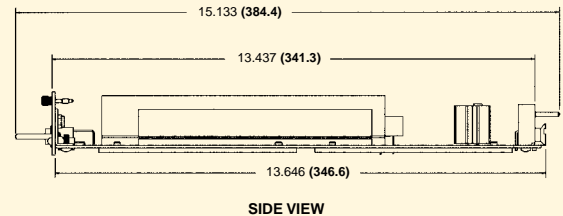
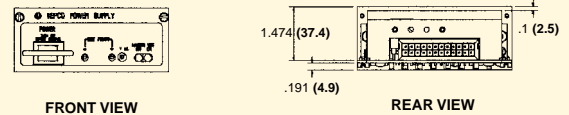
The RA 19-1U provides access to the DIP switches and rack keying without disassembling the rack. It also provides a redundant scheme with modules 1 and 3 being powered from one a-c input and modules 2 and 4 from a second a-c input. Module numbering is left to right facing the front panel.

FIGURE 1
Output Power Rating vs. Ambient Temperature



OUTLINE DIMENSIONAL DRAWINGS

Fractional dimensions in light face type are in inches,
dimensions in bold face type are in millimeters.
Tolerance: ± 1/64" (0.4) between mounting holes,
± 1/32" (0.8) other dimensions



MOUNTED IN 1U RACK HOUSING

For more information visit the Kepco Website:
www.kepcopower.com/hsf.htm



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(1) Note: Safety agency approvals are valid only for a-c input because of the fuse rating.
(2) At 440Hz the leakage current exceeds the UL safety specification.