

HFE1600 SERIES

AC / DC Single Output: 1600 ~ 7600 Watts



Specifications

Input Voltage	85 ~ 265VAC
Input Frequency	47 ~ 63Hz
Input Current	14.2A / 8.1A (110 / 230VAC)
Leakage Current	0.75mA / 1.5mA (110 / 230VAC)
Inrush Current	35A maximum
Power Factor	Typically 0.98 at full load
Harmonics	EN61000-3-2
Output Voltage	12V, 24V & 48V nominal
Output Power	1600 ~ 8000 watts per rack at 230VAC
Efficiency	Typically 90% (Model dependent)
Hold up time	>10ms at nominal input 110 / 230VAC
Line Regulation	± 0.25%
Load Regulation	± 0.50%
Output Ripple & Noise	240mV for 12/24V outputs 480mV for 48V output
Temperature Coefficient	< 0.02% per °C
Remote Sensing	Yes (refer to manual for complete details)
Parallel Operation	Yes. Single wire current share, 10% accuracy of rated output, up to 10 units max, refer to manual
Series Operation	Yes, refer to manual
Over current Protection	105 ~ 120% of rated output
Over voltage Protection	Yes. Inverter shut down method. Reset by recycle AC voltage, or by On/Off control.
Over temp. Protection	Inverter shut down, automatic restart.
Remote ON/OFF	Two complementary inputs. By electrical signal or dry contact. Refer to instruction manual.
DC OK Signal	Tracking, On when $V_{out} > 90 \pm 5\%$ of set output voltage.
Over Temp Signal	Open collector signal. Maximum sink current: 10mA, maximum voltage 15V.
AC Fail Signal	On when $85V_{ac} < V_{in} < 270V_{ac}$.
Auxiliary output	12V, 0.5A. 240mVp-p ripple and noise
Vout Programming	By external 0~5V, & 1Kohm Resistor, refer to manual for details.

Features

- Universal input 85 - 265VAC
 - 1600W 1U Hot Swap Rectifier Modules
 - Up to 7600W power in 1U x 19in Rack
 - Isolation diodes for **N+1 Redundancy**
 - Current share between modules
 - Status monitoring signals
 - Harmonic correction EN61000-3-2 ,Power Factor 0.95
 - EMC EN55022-B, Immunity to EN61000-4
 - International safety approvals EN60950, UL60950
 - Suitable for use in Battery Charging applications
 - PMBus option
- **Instruction manual and further details available from our website.**

Description

The **HFE1600 series** power supply is a new generation “High Power Density” design, aimed at key projects, where performance and reliability is paramount.

One 19in x 1U rack, can hold up to five 1600W rectifier modules, with up to ten modules in parallel to provide 14.5kw of power with N+1 Redundancy.

There are a number of programming and status signals, allowing end users to configure a system that suits their application.

Specifications Cont.

Front Panel LED	AC OK and DC OK / FAIL
I²c Interface	Optional, PMBus compatible. Refer to Instruction Manual.
Operating Temp.	-10°C to +70°C. Refer to manual for derating
Operating Humidity	10~90% RH, no condensation.
Cooling	By internal Fans. Variable speed control based on ambient temperature and power level.
Shock & Vibration	Built to meet IEC60068-2-64 (Basic Transportation)
Conducted Emission	Built to meet EN55022 Class B, FCC part 15 Class-B, VCCI Class-B
Radiated Emission	Built to meet EN55022 Class A, FCC part 15 Class-A, VCCI Class-A
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
Safety	UL60950-1 Second Edition, EN60950-1 Second Edition
Isolation	Input – Output: 3000VAC,
Dimensions (Modules)	85 x 41 x 300mm Refer to outline drawing. (1.6Kg)
Rack	1U x 19in , refer to outline drawing

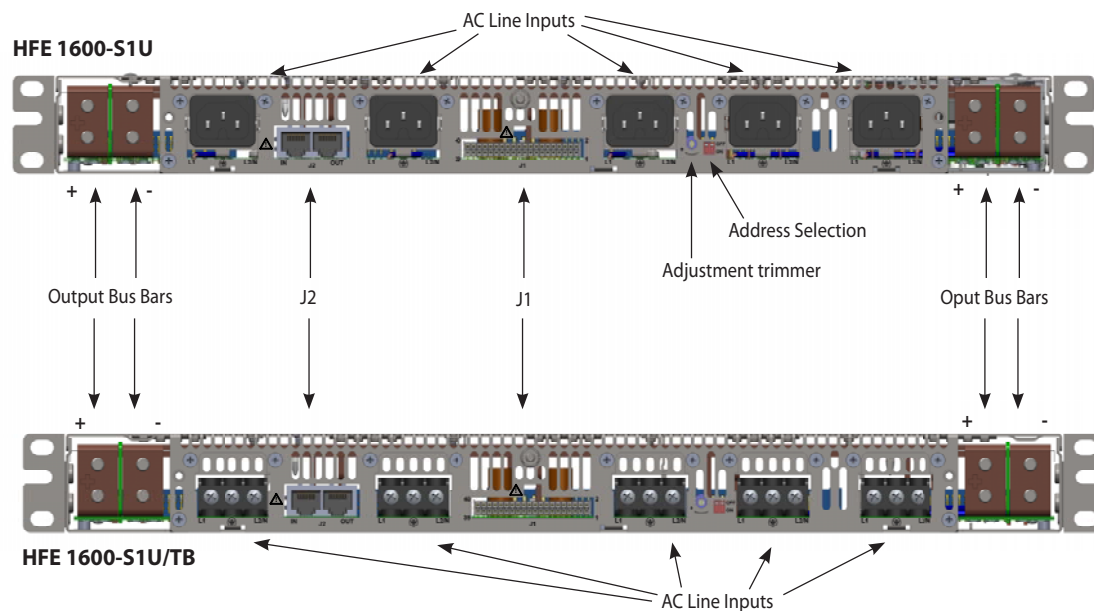
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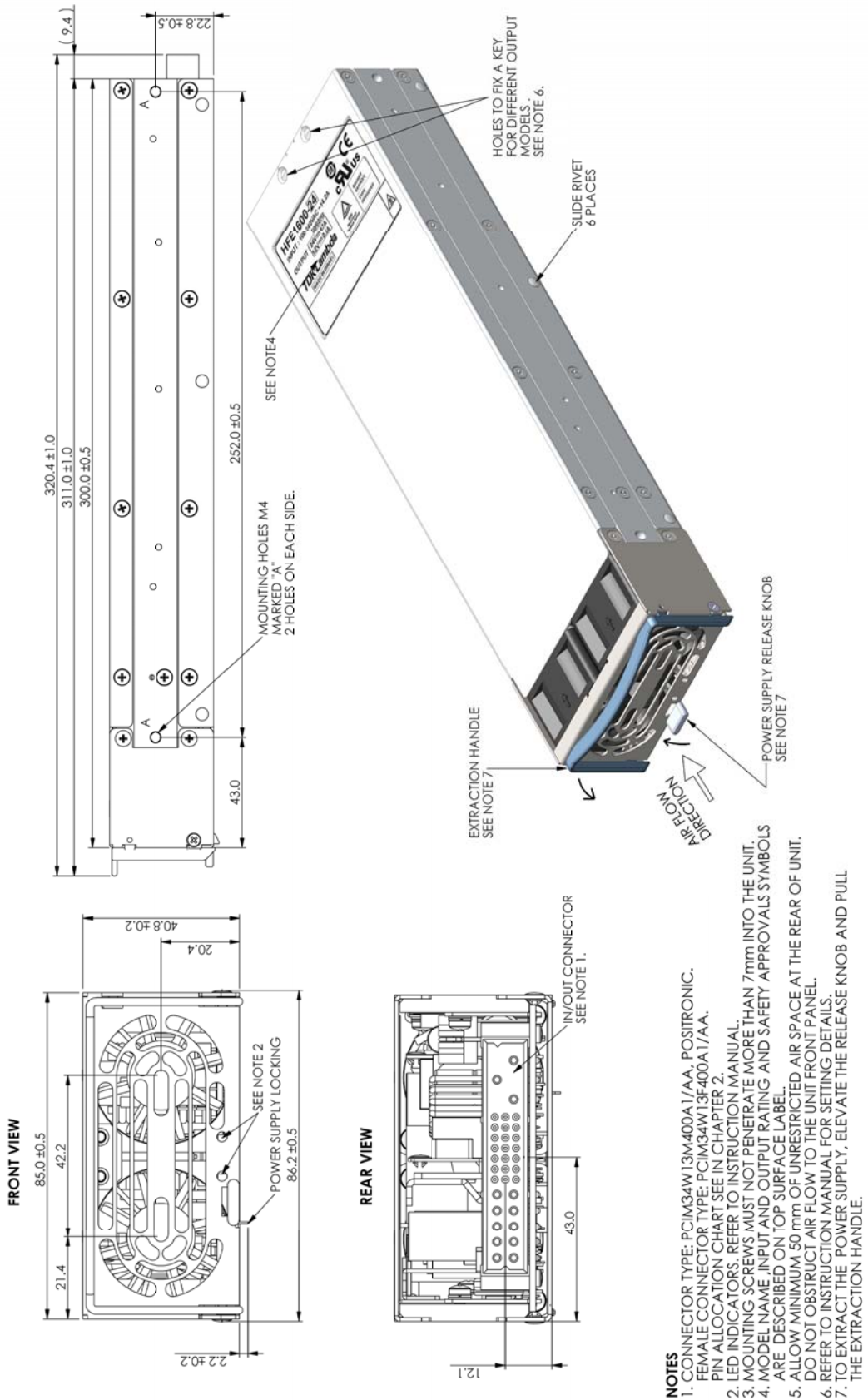
Model Power Supply	Output		V Range	Power	
	V	A		<170VAC	>170VAC
HFE1600-12	12V	133A	9.6~13.2V	1200W	1596W
HFE1600-24	24V	67A	19.2~29V	1200W	1608W
HFE1600-48	48V	33A	38.4~58V	1200W	1584W
Rack Selector			Max Rack Current		
HFE1600-S1U	Five slot 19in Rack, IEC320 input five connectors			200A each side 400A total	
HFE1600-S1U-TB	Five slot 19in Rack Terminal Block Input five connectors			200A each side 400A total	
HFE1600/BP	One spare slot blanking panel. Three provided with each rack				

- For option I²C interface, add /S to modules: HFE1600-24/S
- Maximum output power of 7600 watts per rack >170VAC input

Fig 1: Rear view of HFE1600-S1U Rack.



HFE 1600 Module Outline Drawing



HFE1600-S1U Rack Outline Drawing

