Huntkey
Power Your Dream

Server Power

HK460A-C2

460 Watts 12 V

Distributed Power System

Distributed Power Bulk Front-End
Total Output Power: 460 Watts
+12 Vdc main Output
+12 Vdc Stand-by Output
Wide Range Input voltage: 90 - 264 Vac

RoHS
2002/95/EC

Special Features

- Active power factor correction
- EN61000-3-2 harmonic compliance
- Active AC inrush control
- 1U X 3U form factor

- +12 Vdc output
- 12 Vdc Stand-By
  (5 V standby - consult factory)
- No minimum load required
- Hot plug operation
- N + 1 redundant
- Internal OR'ing fets
- Active current sharing
  (10 - 100% load)
- Built-in cooling fans
  (40 mm x 28 mm)

- PM Bus compliant
- EERPOM for FRU data
- Green color LED indicator
- Internal fan speed control
- INTEL, SSI Std. logic timing
- INTEL, SSI Std. FRU data format
- Three years warranty

Safety

UL/cUL 60950 (UL Recognized)
GS Geprufte Sicherheit
EN60950
CE Mark
China CCC
CB Certificate & Report, IEC60950
IEC60950-1 (International)

Electrical Specifications

Input	
Input range	90-264 Vac (wide range)
Frequency	47-63 Hz, single phase AC
Inrush current	30A maximum inrush current
Efficiency	90%,94%,91% (20%;50%;100% load) 230Vac
Conducted EMI	FCC Subpart J EN55022 Class B
Radiated EMI	FCC Subpart J EN55022 Class B
Power factor	0.99 typical
Leakage current	<1mA at 240V RMS, and <0.5mA at 120VRMS
Hold up time	12 ms minimum
Output	
Main DC voltage	+12 V @ 38.3A 90 - 264 Vac
Stand-By	+12 Vsb @ 2.5 A (5 V @ 5 A TBA)
Adjustment range	Factory Set, no pot adjustments
Regulation	+12 Vdc; 11.85-12.45Vdc +12 Vsb; 11.40-12.60Vdc
Over current	+12 Vdc;49.8A max, 200mS latch off +12 Vsb, 5A max
Over voltage	+12 Vdc; 13.6 - 15 Vdc +12 Vsb; 13.6 - 15 Vdc
Under voltage	+12 Vdc; 10.5 - 11 V (latch off)
Turn-on delay	1.5 Second max,
+12 V Output Rise Time	10 - 30 ms, Monotonic Rise

Ordering Information

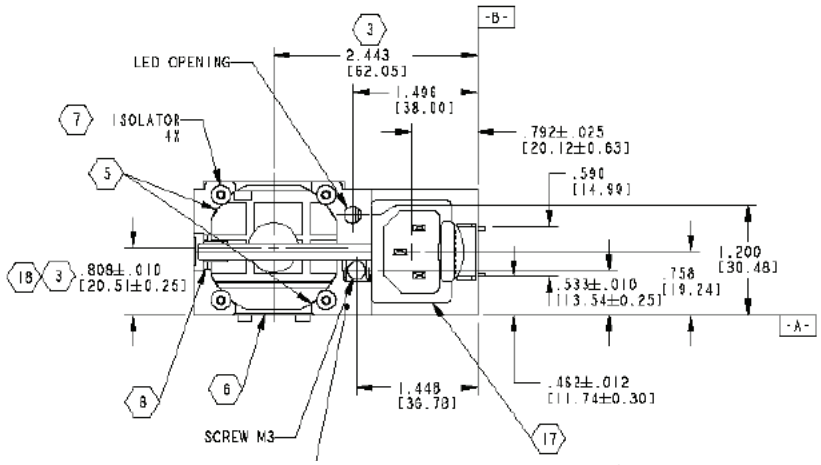
Output	Nominal Output Voltage Set Point	Set Point Tolerance	Total Regulation	Minimum Current	Maximum Current	Output Ripple P/P	Over Current
HK460A-C2	12.3 Vdc 12 Vsb	±0.25% ±0.5%	±4% ±5%	0A 0A	38.3A 2.5A	120 mV 120 mV	120%-130% of Io 3.5-5A

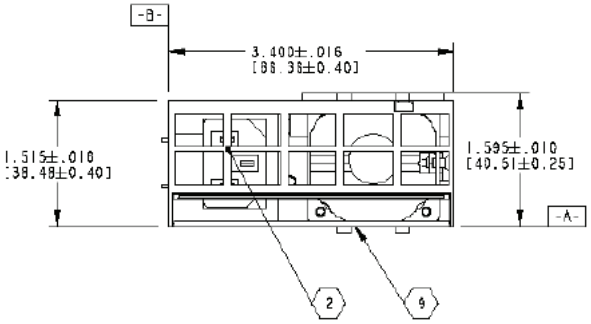
*Over current latches off if overcurrent lasts over 0.2 second, otherwise it is auto recovery.

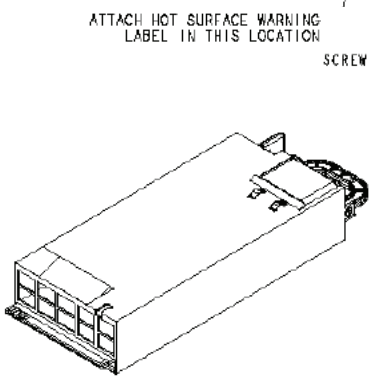
Mechanical Drawing

NOTES.

1. NO COMPONENTS ON PCA WITHIN SLOT AREA .150" DEEP.
2. MAXIMIZE AIRFLOW OPENING.
3. FAN CENTER POSITION.
4. LATCH 450338-001.
5. OPENING CUTOUT TO BE EQUAL OR GREATER THAN THE FAN OPENING.
6. AIRGAP AROUND FAN TO BE TIGHTLY SEALED WITH INSULATOR. INSULATOR TO BE FLUSH OR RECESSED BY .010" TO CHASSIS BOTTOM AFTER FAN INSTALLATION.
7. FAN TO BE COMPLETELY ISOLATED FROM CHASSIS WITH ISOLATORS AT FAN MOUNTING HOLES.
8. AIR GAP ON FAN SIDES TO BE TIGHTLY FILLED WITH COMPRESSED FOAM.
9. EDGE TO BE HEMMED OR COINED TO .010"X45°
10. BUTTON: 450339-001 (PORT).
11. EDGE TO BE COINED TO .016" X 45°
12. HANDLE 444789-001.
13. EMI CLIP 186897-002.
14. TOLERANCES OF ALL DIMENSIONS ARE ±.020" [0.5MM] UNLESS OTHERWISE SPECIFIED.
15. NO RECESS OR EMBOSS TO BE WITHIN THE INDICATED AREA.
16. RECESS AREA FOR LABELS TO BE ON THE SIDE OF THE CHASSIS AS INDICATED. SIZE AND LOCATION IS VENDOR OPTION.
17. IEC INLET CONNECTOR, 516705-501, ONLY APPLIES TO RS232 CIRCUIT IMPLEMENTATION.
18. QUALITY CONTROL DIMENSION.



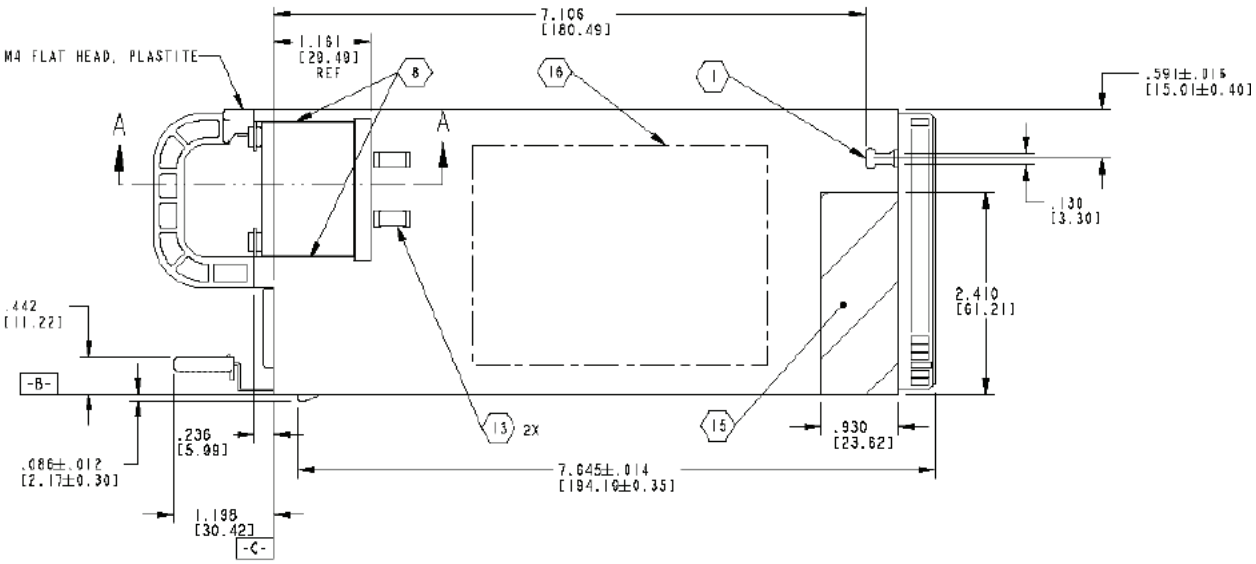




SCALE 1/2

ATTACH HOT SURFACE WARNING LABEL IN THIS LOCATION

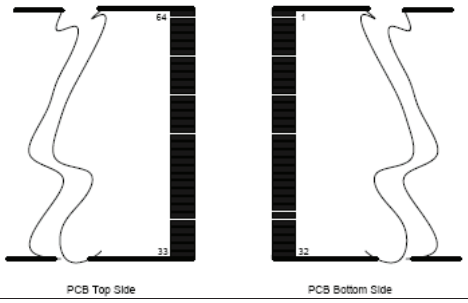
SCREW M4 FLAT HEAD, PLASTITE

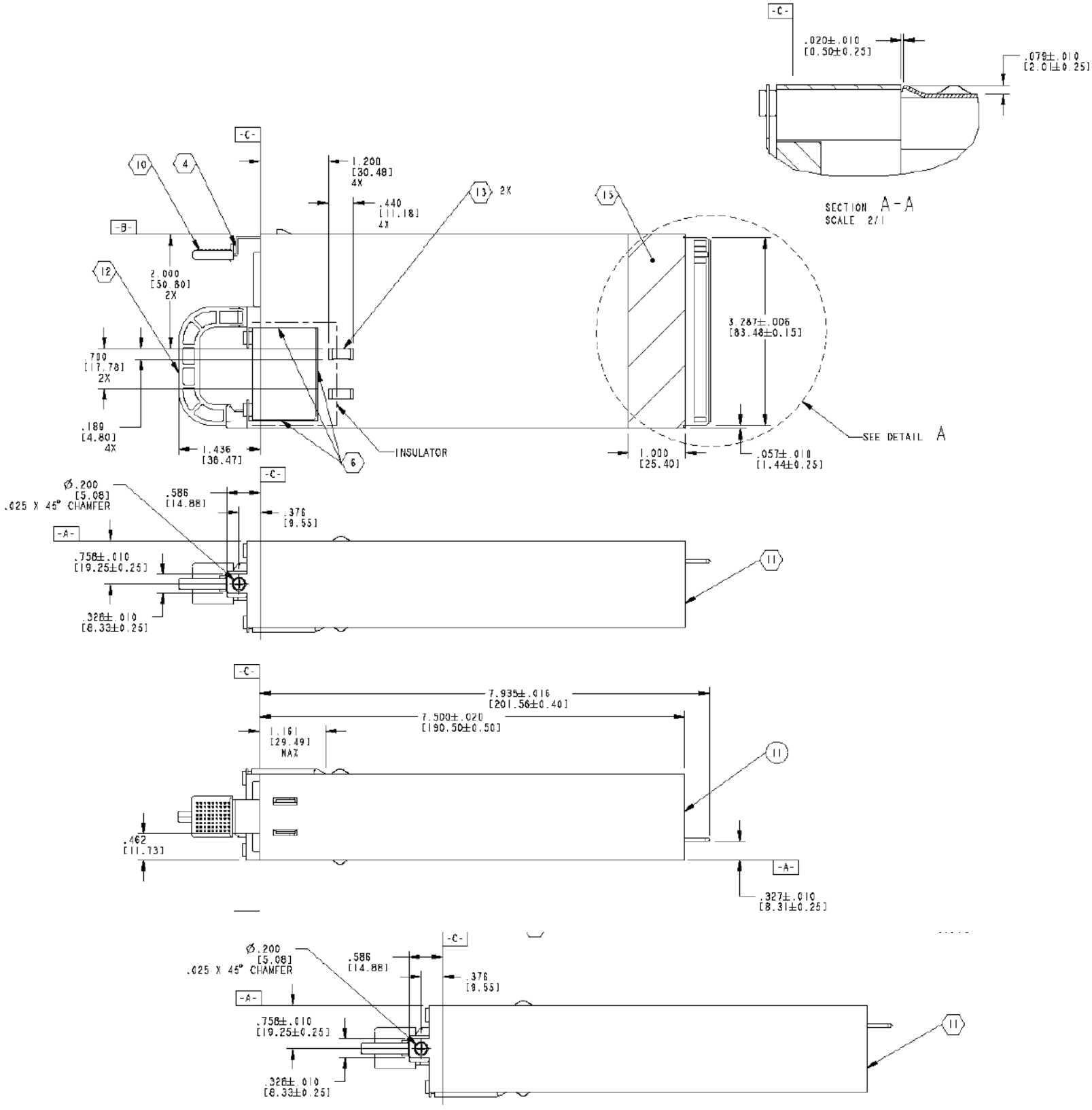


PIN NUMBER, FUNCTION, AND DESCRIPTIONS

Pin #	Function	Description
14-26, 39-51	RTN	Power and Standby Return
1-13, 52-64	12V	12V Output
37	12VSB	12V Standby Output
38	PS_INTERRUPT	Power Supply Interrupt signal
36	PRESENT#	Power Supply Present Signal (shortest pin).
35	PSOK	Combination of AC input OK and 12V Output OK.
34	I-MON	12V load current monitor
33	PSON#	Power Supply on/off control signal
32	SCL	Clock
31	SDA	Data
30	GND	I2C Signal Ground
29	ADD0	Address 0
28	ADD1	Address 1
27	ADD2	Address 2

FIGURE 1 - OUTPUT CONNECTOR




-C-
.020±.010
[0.50±0.25]
.078±.010
[2.0±0.25]
SECTION A-A
SCALE 2/1
-B-
1.200
[30.48]
4X
.440
[11.18]
4X
2X
2.000
[50.80]
2X
.700
[17.78]
2X
.189
[4.80]
4X
1.436
[36.47]
INSULATOR
3.287±.006
[83.48±0.15]
SEE DETAIL A
1.000
[25.40]
.057±.010
[1.44±0.25]
Ø.200
[5.08]
.025 X 45° CHAMFER
.586
[14.88]
.376
[9.55]
-A-
.758±.010
[19.25±0.25]
.328±.010
[8.33±0.25]
7.935±.016
[201.56±0.40]
7.500±.020
[190.50±0.50]
1.16
[29.49]
MAX
.462
[11.73]
.327±.010
[8.31±0.25]

Huntkey
Power Your Dream

Server Power

Logic Control	
PS_ON	When this signal is not pulled low by the system, or left open, all the outputs (except for 12Vsb) shall be turned off
PSOK	PSOK=High : PS Good; PSOK=Low : PS Not Good; PSOK=Mid : AC Bad,DC Good
PS_Interrupt	Signal behavior in response to certain operating condition changes in the power supply meet firmware requirements as defined in the firmware section
Present#	Present#=Low : Present; Present#=High : Not Present

Environmental Specifications

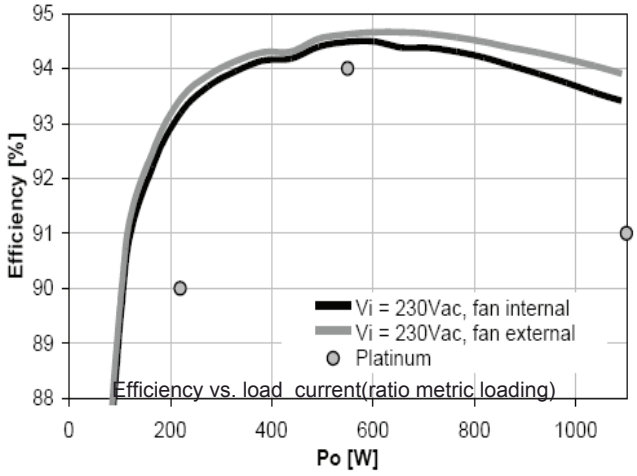
Operating temperature	0 °C to 55 °C
Storage temperature	-40 °C to +85 °C Altitude, operating 50,000 ft
Electromagnetic susceptibility / Input transients	-EN61000-3-2, -3-3 -EN61000-4-2, 4.3, 4-4, -4-5, 4-11 Level -EN55024:1998
RoHS & lead-free compliant (no tantalum caps).	RoHS6
Humidity	5 to 95% RH, non-condensing
Shock and vibration	Operating :Half-sine 5 G;None operating: Half-sine 140 G
MTBF (Demonstrated)	500 K Hrs at full load, 50 °C

LED Status
The PWR LED behaves per firewave definition to indicate that AC is applied to the PS,12Vsb is within regulation limits OR valid AC is applied, 12VSB and 12V outputs are within regulation limits.

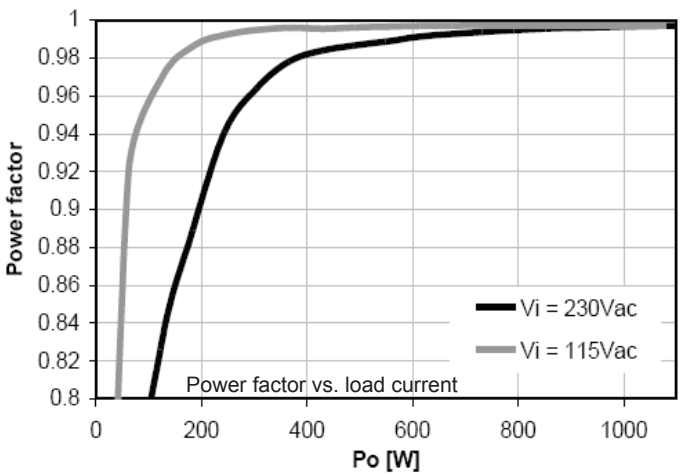
Huntkey HongKong Development Co., Ltd
ADD: Huntkey Industrial Park, Banxue Road,
BanTian, ShenZhen, 518129, China
Tel: +86-755-8960 6658
Fax: +86-755-8960 6699
www.huntkey.com
www.huntkeydiy.com
E-mail: webmarks@huntkey.com

Huntkey FPT Power.
The global leader in enabling business-critical continuity.

- PC Case
- Power Supply
- Power Bank
- **Server Power**
- USB Charger
- Car Charger
- Power Strip
- LED Lighting
- Home Appliance
- Notebook Adapter



Efficiency vs. load current(ratio metric loading)



Power factor vs. load current