

Features

- Up to 1500 W nominal output power, 18 W/in³
- Extreme case operating temp. range for request up to -50°C...+85°C
- Efficiency up to 92 %
- 250x140x36 (mm) metal case
- Variants input:
230W - (100-242 VAC) - standard, other:
115, 230
- Power factor correction
- Output voltage adjustment
- Remote on/off
- External feedback
- Parallel operation
- Power good on request
- Max capacitance - not limited
- Additional output for fan



Description

JETA1500-LP are the series of isolated AC/DC power supplies meant to work under both heavy electrical and environmental conditions. Output power is **up to 1500 Watts**, power density is up to **18 W/in³**. The units offer you flexibility of wide input range with both extremely low and high case temperatures of **-40° to +85° C**. The units feature a system of over-current and short-circuit protection and over-voltage protection. Standard functions include remote on/off, energy-saving zero-load operation. The units maintain high efficiency across broad load range. Its versatility allows you to implement the converter in a vast number of industrial applications, supplying capacitive, constant-power and impulse load. Application fields: low altitude, land transport, supercomputers, equipment in high-temperature regions, digital signage equipment, APAR radars and others - where there are needed low-profile, small size and weight, high efficiency.

up to 1200 W units (optimized for output power 360-960 W)

Model*	Input voltage range**	Power max.	Output voltage nom.***	Output current max.	Efficiency typ.
JETA1200-230WS24-SCx-LP	100-242 VAC (264 VAC transient)	1200 W	24 V	50.00 A	89 %
JETA1200-230WS27-SCx-LP		1200 W	27 V	44.44 A	89 %
JETA1200-230WS48-SCx-LP		1200 W	48 V	25.67 A	89 %

JETA1500-LP

up to 1000 W units (optimized for output power 300-800 W)

Model*	Input voltage range**	Power max.	Output voltage nom.***	Output current max.	Efficiency typ.
JETA1500-230WS24-SCx-LP	100-242 VAC (264 VAC transient)	1440 W	24 V	60.00 A	92 %
JETA1500-230WS27-SCx-LP		1500 W	27 V	55.55 A	89 %
JETA1500-230WS48-SCx-LP		1500 W	48 V	31.25 A	89 %

* Index of temperature range (instead X): -40...+85° C (N), -50...+85° C (P);

** Units with different input voltage ranges, may be provided on request (please check the [selection guide](#)).

*** Models with custom output voltage may be provided on request.

General specifications		
Switching frequency		130 kHz typ. (PWM modulation)
Temperature ranges	operating case temp.	-40° C to +85° C
	storage temp.	-50° C to +85° C
Over-temperature protection		+95° C typ.
Cooling method		Natural convection or conductive
Thermal resistance	case - environment	0.8 K/W typ.
Humidity (non-condensing)		5-95 % rel. H
Insulation	input/case	1500 VAC
	input/output	3000 VAC
	output/case	500 VAC
Isolating resistance @ 500 VDC		>20 MOhm
Thermal shock, mechanical shock & vibration		MIL-STD-810F
Safety standards		IEC/EN 60950-1
Typical MTBF (Tcase = 50° C; Pout = 0.7·Pout,max)		30 000 hrs
Weight (max)		1900 g
Input specifications		
Input current (no load), typ.		10 mA
Input voltage range - standard*	230W	100-242 VAC (1s transient 264 VDC)
Start-up voltage for 27W input range		Start-up at <100 VAC
EMC standard compliance****		MIL-STD-461F, EN 55022 - class A (class B with JETA F20 filter)
Output specifications		
Output voltage adjustment	range	±5 %
Output voltage regulation	input variance Uin,min to Uin,max	±0.5 %
	load variance 10 % to 100 %	±2 %

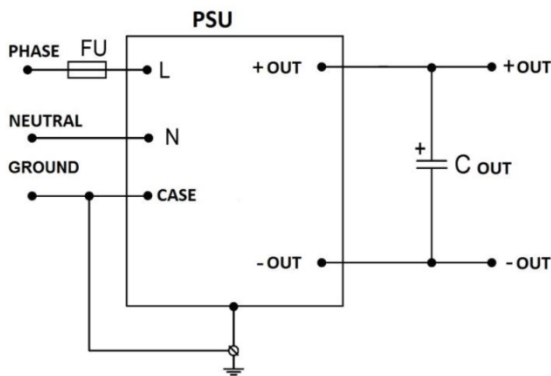
Ripple and noise (peak-to-peak)	20 MHz bandwidth	<2 %
Protection	over-load	<130 % of $P_{out,nom}$
	short-circuit	>150 % of $I_{out,nom}$ with automatic recovery
	over-voltage	<130 % U_{out}
Capacitive load (max)		not limited
Minimum load		not required
Remote On/Off	method	"opened-collector transistor": on if output voltage $U_{out} > 0,7 * U_{out,nom}$; off if output voltage $U_{out} < 0,7 * U_{out,nom}$ or module is turned off. $U_{max} = 20 \text{ V}$, $I_{max} = 15 \text{ mA}$

**** See product page for DC/DC filters at www.aeps-group.com.

Please contact the tech. team at aeps@aeps-group.cz for more information.

All specifications are valid for normal climatic conditions, nominal output voltage and current, unless otherwise stated.

Typical connection scheme (minimum required)



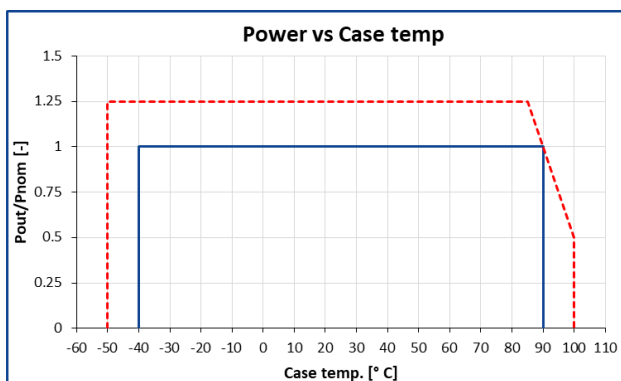
When using the units with typical connection scheme it's necessary to use certain type components.

In the figure:

C out – please see capture 5.6 in [Reference Technical Material](#).

Exact information can be found [Technical Materials](#) on our website www.aeps-group.com

Output power based on case temperature



—— Standard maximum power output based on case temperature.

- - - Possible extreme range of output power for customized product.

When using the unit with heatsink thermal/conductive paste must be placed between the unit surface and a heatsink for quality contact (with thickness less than 100 μm , of minimal thermal resistance 2 W/K.m). Mesh stencil should be used to apply paste in a pattern of 2x2

mm to 4x4 mm squares mm with 0.5-1 mm spacing between the squares. This allows paste to be evenly spread in a thin layer and excess air to escape when tightening screws during unit mounting.

If it's necessary to shortly turn on the unit (for example for input-control testing), it must be attached to a metal coldplate. Its width and length must be not less than of the unit itself, with thickness at least 5 mm.

It's prohibited to use the units without the specified coldplate.

Note:

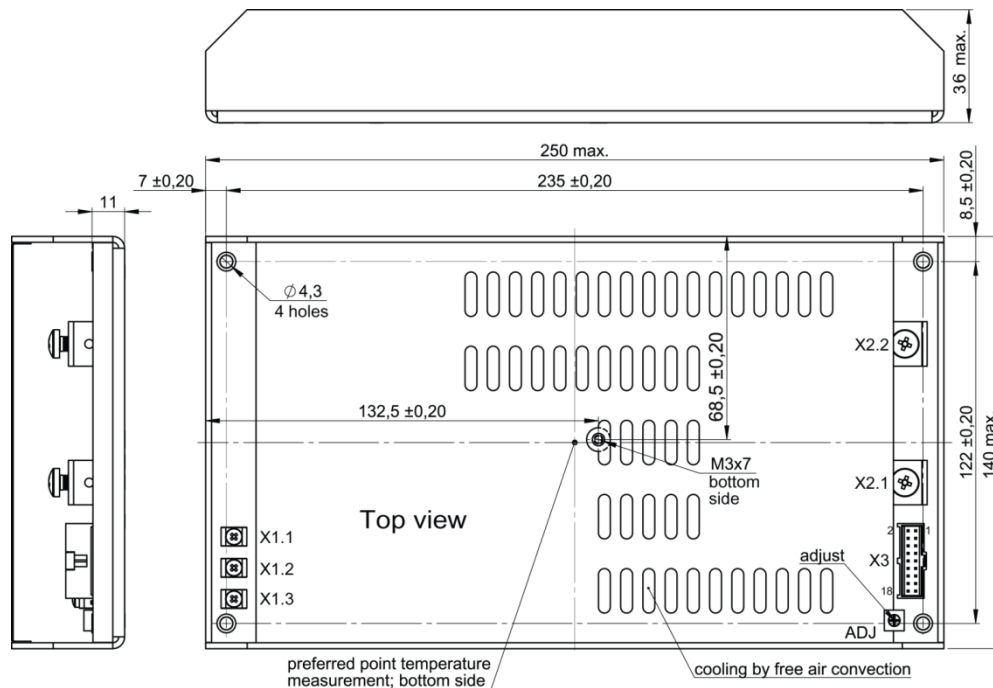
The units have a short-circuit output protection, which is for emergency only, not for long-term operation. It's prohibited to use the units with reversed input voltage polarity or turn on the units with short-circuited outputs (the units have the special detectors inside).

If you have any questions please contact us directly at aeps@aeps-group.cz.

Dimensions

X1.1	X1.2	X1.3	X2.1	X2.2	X3.1	X3.2	X3.3	X3.4	X3.5	X3.6	X3.7	X3.8	X3.9	X3.10
L	N	GND	+OUT	-OUT	+OGOOD	-OGOOD	not use	not use	ADJ	PARAL	+FAN	-FAN	-RS	-OUT

X3.11	X3.12	X3.13	X3.14	X3.15	X3.16	X3.17	X3.18
+RS	+OUT	not use	not use	not use	AUX	-REM	+REM



Additional information

Please, note that all information in this material is for reference only. Further detailed information (including: additional requirements, manuals and circuit schemes) is found at www.aeps-group.com or provided via an email request at aeps@aeps-group.cz.

According to company's policy in view of constant improvements of the production design the manufacturer reserves the right to change the contents of specifications and promotional materials without prior notice! Make sure you are using the latest documentation downloadable at www.aeps-group.com.

Management system and R&D of Alexander Electric s.r.o. are ISO 9001 certified.

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