JETAs800

Features

- **Up to 800 W nominal output power, 14 W/in^3**
- **Extreme case operating temp. range for request up to -50°C…+85°C**
- **Efficiency up to 90 %**
- **Simple frame**
- **211x117x36 mm case**
- **Variants input:**
  230 - (182-242 VAC) - standard, other:
  115
- **Output voltage adjustment**
- **Remote on/off**
- **External feedback**
- **Parallel operation**

Description

JETAs800 are the series of isolated AC/DC power supplies meant to work under both heavy electrical and environmental conditions. Output power is **up to 800 Watts,** power density is up to **14 W/in^3**. 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: supercomputers, equipment in high-temperature regions - where there are needed high efficiency and units without PFC.

up to 600 W units (optimized for output power 180-480 W)					
Model*	**Input voltage range****	**Power max.**	**Output voltage nom.*****	**Output current max.**	**Efficiency typ.**
JETAs600-230S12-SCx	**182-242 VAC** (264 VAC transient)	**600 W**	12 V	50.00 A	88 %
JETAs600-230S15-SCx		**600 W**	15 V	40.00 A	89 %
JETAs600-230S24-SCx		**600 W**	24 V	25.00 A	89 %
JETAs600-230S27-SCx		**600 W**	27 V	22.22 A	89 %
JETAs600-230S48-SCx		**600 W**	48 V	12.50 A	85 %

up to 800 W units (optimized for output power 240-640 W)					
Model*	**Input voltage range****	**Power max.**	**Output voltage nom.*****	**Output current max.**	**Efficiency typ.**
JETAs800-230S15-SCx	**182-242 VAC** (264 VAC transient)	**750 W**	15 V	50.00 A	89 %
JETAs800-230S24-SCx		**800 W**	24 V	33.33 A	89 %
JETAs800-230S27-SCx		**800 W**	27 V	29.63 A	90 %
JETAs800-230S48-SCx		**800 W**	48 V	16.67 A	88 %

*** 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		**150 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	**1.2 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)		**1500 g**
Input specifications		
Input current (no load), typ.		**10 mA**
Input voltage range - standard*	230	**182-242 VAC (1s transient 264 VDC)**
Start-up voltage for 27W input range		**Start-up at <176 VAC**
EMC standard compliance****		**MIL-STD-461F, EN 55022 - class A (class B with JETAF10 filter)**
Output specifications		
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 %**

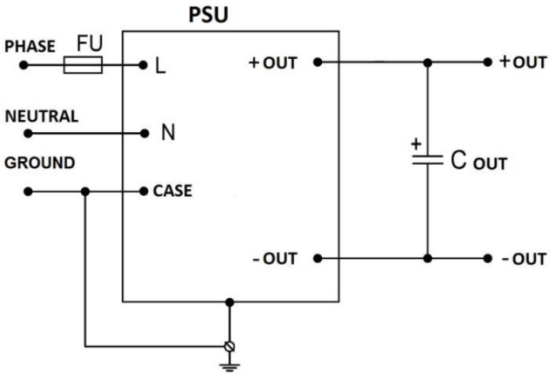
Protection	over-load	**<130 % of Pout,nom**
	short-circuit	**>150 % of Iout,nom with automatic recovery**
	over-voltage	**<130 % Uout**
Capacitive load (max)	5 VDC model (50% output power)	**typ. 20 000 uF**
Minimum load		**not required**
Remote On/Off	method	**Shuts down by applying 3…5VDC (≤5 mA) on "+REM", "-REM" pins**

****** 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)

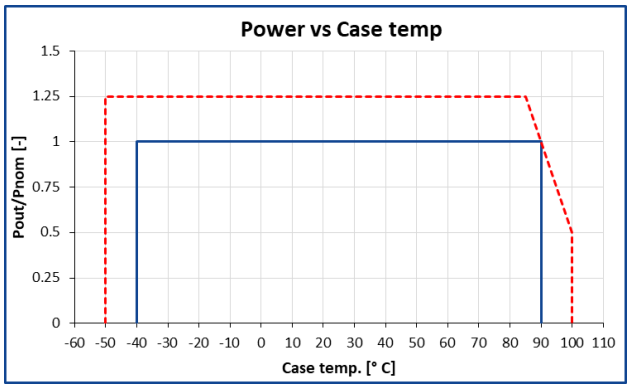


When using the units with typical connection scheme it's necessary to use certain type components.

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:

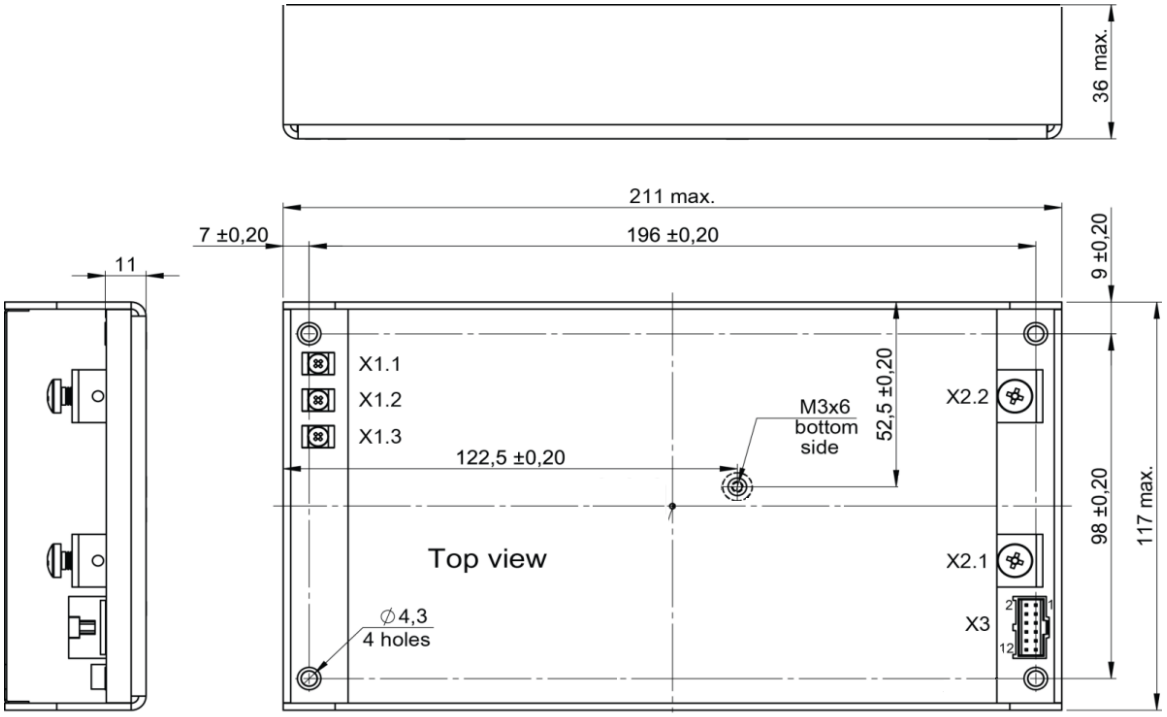
The units have a short-circuit output protection, which is for emergency only, not for long-term operation. It's prohibited to use the units with reversed input voltage polarity or turn on the units with short-circuited outputs (the units have the special detectors inside).

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	X3.11	X3.12
GND	N	L	+OUT	-OUT	ADJ	PARAL	-	-	-RS	-OUT	+RS	+OUT	not use	not use	-REM	+REM

X1.1, X1.2, X1.3	Screw size: **6-32x1/4 L** Recommended Torque: **0,5 Nm** Recommended: Use ring terminal, for example MOLEX 19323-0007. MOLEX 19324-0007.
X2.1, X2.2	Screw size: **M5** Recommended torque: **2Nm** Recommended: Use ring terminal, for example Wurth Electronics Inc. 5580510 or 5580516.
X3	MOLEX, C-GRID III MALE – SDA-90130-1112. FEMALE – SD-90142-0012 (12 pin) USE WITH "GRIMP TERMINAL" SD – 90119-0109 or other. USE "HAND CRIMP TOOL" for C-GRID III female Crimp Terminals for example 63825-8100 or other depending on the CRIMP TERMINALS.



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.
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