

## Features

- 4000 W nominal output power at 85° C case temp.
- Robust copper case of 300x170x39 (mm)
- Baseplate mounting for conduction cooling
- Case operating temp. range up to -60° to +85° C
- Input voltage range 300-620 VDC
- Efficiency up to 94 %
- Adjustable output voltage
- Unlimited output capacity charging
- DC OK signal (OGOOD pins)
- Isolated aux. FAN outputs, remote On/Off



## Description

**JETDH4000-A7** are a series of isolated DC/DC units meant to work under both heavy electrical and harsh environmental conditions. **Up to 4000 Watts** of power packed in **300x170x39 (mm) copper case** offers you flexibility of wide input range with both extremely low and high case temperatures of **-50° to +85° C**. The units feature a system of over-current and short-circuit protection, over-voltage protection and thermal protection. Standard functions include remote on/off and output trimming. Its versatility allows you to implement the converter in a vast number of industrial applications, supplying capacitive, constant-power and impulse load.

## Models specification

4000 W					
Model	Input voltage range	Power (nominal)	Output voltage nom.	Output current nom.	Efficiency typ.
JETDH 4000 - 500W S144N - A7	300-620 VDC	4000 W	144 V	28 A	94 %

General specifications		
Temperature ranges	operating case temp.	-50° C to +85° C
	storage temp.	-60° C to 90° C
Over-temperature protection	case temp.	85° C typ. with auto-reset
Cooling method		conductive via baseplate/heatsink
Thermal resistance case-ambient	natural convection without heatsink	0,6 K/W
Humidity (non-condensing)		5-95 % rel. H
Insulation	input/case	1500 VAC
	input/output, input/REM	3000 VAC
	output/case, output/REM, REM/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)		4 kg

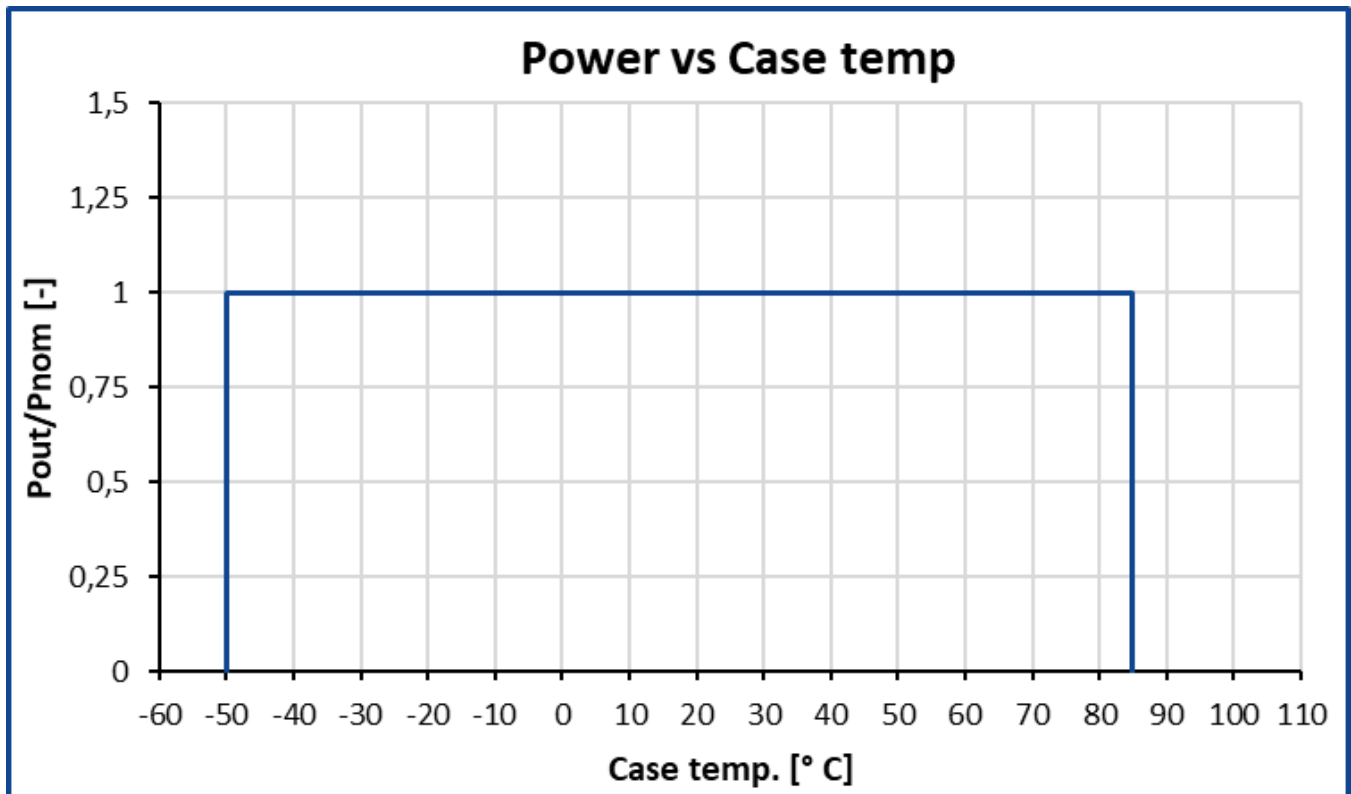
Input specifications		
Input voltage range		300-620 VDC

Output specifications		
Output voltage adjustment	via internal trimmer ADJ / pin TRIM	±5 % of Uout,nom
Output voltage regulation	input variance Uin,min to Uin,max	±0.5 %
	load variance 10 % to 100 %	±2 %
Output max. power	at 85° C case temperature	4000 W continuous
Ripple and noise (peak-to-peak)	20 MHz bandwidth	<2 %
Output protection	over-load, short-circuit	<130 % of Iout,nom
	over-voltage	<130 % Uout
Capacitive load (max)		unlimited
Output specifications (continued)		
Minimum load		Not required
Remote On/Off	method	Apply 3-5 VDC to REM pins (<5 mA) OR connect AUX to +REM
FAN outputs	isolated aux. voltage	13-9.5 VDC, Imax = 200 mA

Please contact the tech. team at [aeps@aeps-group.cz](mailto:aeps@aeps-group.cz) for more information.

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

## Power derating curves

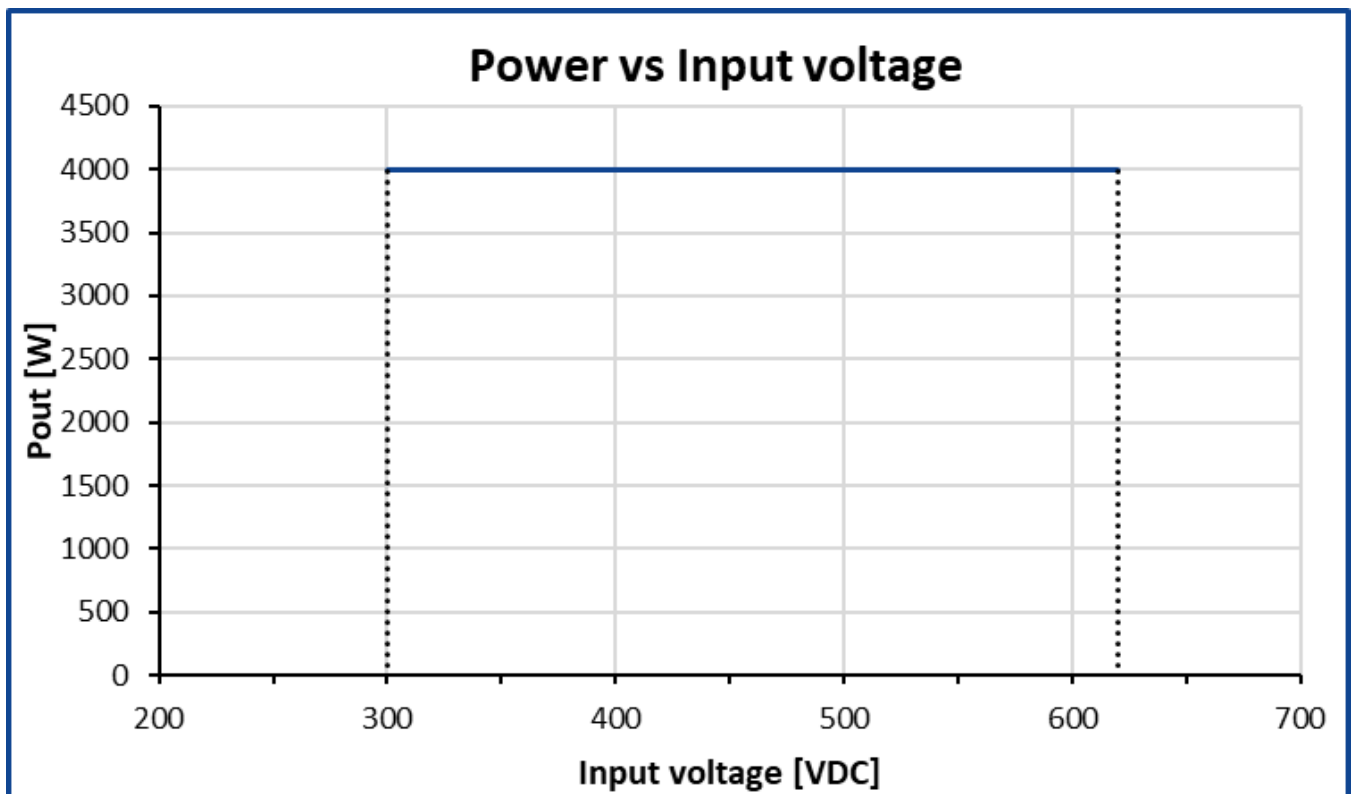


Standard maximum power output based on case temperature (long term work).

### Note:

Units must be used with a heatsink or coldplate. The length and width of the coldplate should not be less than those of the case, and its thickness must not be less than 6 mm.

Thermal paste must be applied between the unit surface and a heatsink for quality contact. Please contact us for choosing these components and their application. For modeling optimal heatsink and its delivery, with goal of providing allowed case temperatures, please contact us directly at [aeps@aeps-group.cz](mailto:aeps@aeps-group.cz). The converters may be supplied with heatsink already mounted.



— Maximum power output based on input voltage (long term work).

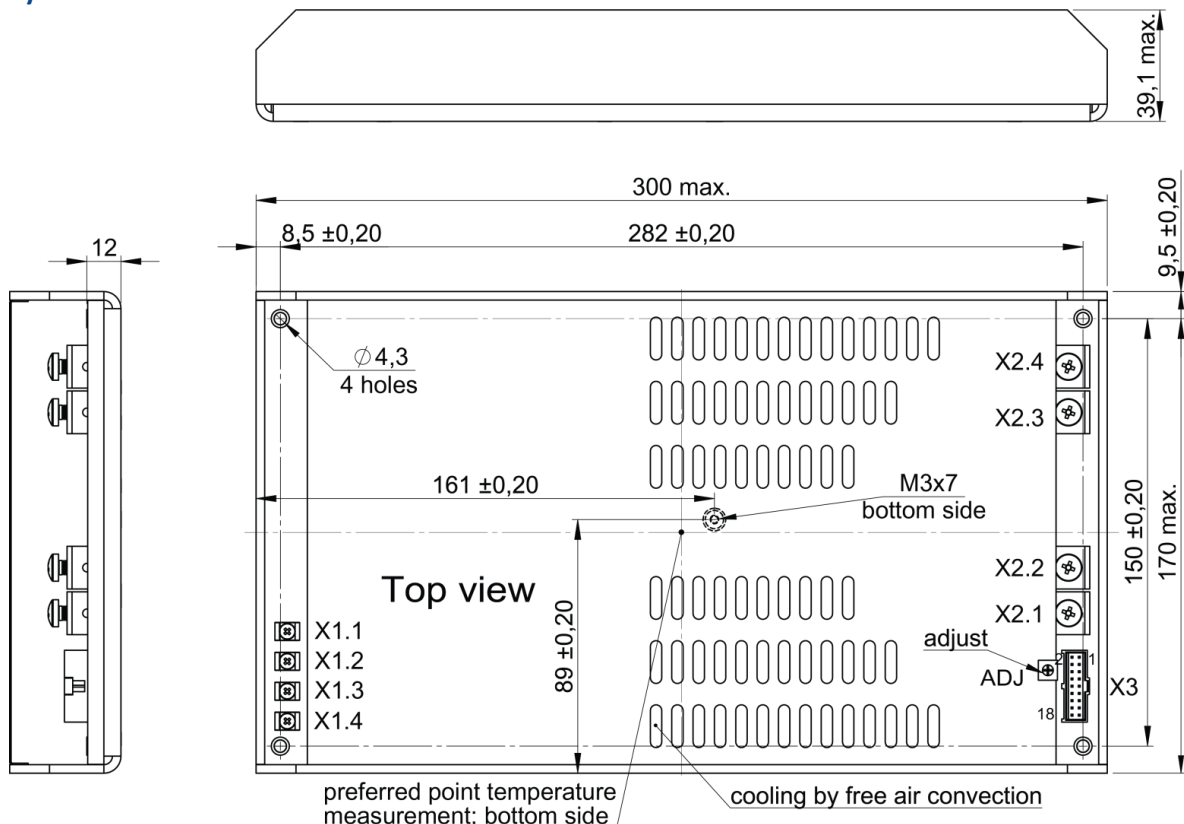
## Dimensions

Single Output Pin-out									
X1.1	X1.2	X1.3	X1.4	X2.1, X2.2	X2.3, X2.4	X3.1	X3.2	X3.5	X3.7
+Vin	+Vin	-Vin	GND	-Vout	+Vout	+OGOOD	-OGOOD	TRIM	+FAN
X3.8	X3.10	X3.12	X3.16	X3.17	X3.18				
-FAN	-Vout	+Vout	AUX	-REM	+REM				

X1	Screw size: <b>6-32x1/4 L</b>
	Recommended Torque: <b>0,5 Nm</b>
	Recommended: Use ring terminal, for example MOLEX 19323-0007.
	MOLEX 19324-0007.
X2	Screw size: <b>M5</b>
	Recommended torque: <b>2 Nm</b>
	Recommended: Use ring terminal, for example Würth Electronics Inc. 5580510 or 5580516.
X3	MOLEX, C-GRID III
	MALE – SDA-90130-1118.
	FEMALE – SD-90142-0018 (18 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.

The use of a central socket for attaching the unit to the heatsink is required, whereas the fastening screw must enter the unit body to a depth of no more than 7 mm. Evenly spread thermal paste or other thermal compound of conductance higher than 3.5 W/m.K must be used between unit's case and attached cold-plate/heatsink surface with after-installation thickness of 50-70 µm.

Violation of these requirements may result in heat damage to the unit, its failure and wavering of the warranty.



Note: all dimensions are in mm

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## Additional information

The label with sign “remove before use” can be placed on the top surface of the unit and must be removed before installation.

Please, note that all information in this material is for reference only. Product appearance may vary. Further detailed information (including: additional requirements, manuals and circuit schemes) is found at <http://www.aeps-group.com> or provided via an email request at [aeps@aeps-group.cz](mailto: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 <http://www.aeps-group.com>.

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