

Ultra-compact isolated DC/DC converters (modules) are specially designed for industrial applications and harsh environment operation. These compact units (59 x 37 x 12 mm) have output power up to 120 W and wide operating temperature range up to -60...+130°C.

Modules can be switched on and off by command, are provided with full complex of protections as following: output over-current, short-circuit, over-heat. Completely replace the previous generation modules JETD100.



## Features

- Class: Expert, power density up to **4 813 W/dm<sup>3</sup>** (79 W/ln<sup>3</sup>)
- **Budget version – for request !**
- High efficiency  $\geq 92\%$
- Low profile 11,55 mm
- Standard 1/4 brick size
- Case operating temperature range: -40°C...+110°C, for special request up to -60°C...+130°C
- Output current up to 20 A
- Output power 120 W
- Input voltage ranges: 10,5...36 VDC, 18...72 VDC
- Output voltage adjustment, remote on/off
- Max capacitance 21000  $\mu$ F (Uout=5 VDC)
- Metal case, with mounting holes

For all special requirements placed on the last page of datasheet [please click here.](#)

## Ordering information

**JETND 120 - 24W S 15 - C T**

**1 2 3 4 5 6 7 8**

- 1 - «JETD» Series
- 2 - For request is possible budget version **B**
- 3 - Max output power, W
- 4 - Input voltages  
**12W** - 12 VDC (10,5...36 VDC)  
**24W** - 24 VDC (18...72 VDC)
- 5 - Index of output channels quantity  
**S** - one
- 6 - Nominal output voltage, VDC (two signs for a channel)
- 7 - Index of case design  
**C** - Metal case with mounting holes
- 8 - Index of operating temperature range of the case  
**T** -40°C...+110°C (standard version), for request up to -60°C...+130°C

## Standard models with one output

Module	Input voltage range	Output power	Output voltage / nominal output current
JETND120-12WS3.3-XX	10,5...36 VDC	<b>66 W</b>	3.3 VDC / 20 A
JETND120-12WS05-XX		<b>100 W</b>	5 VDC / 20 A
JETND120-12WS12-XX		<b>120 W</b>	12 VDC / 10 A
JETND120-12WS15-XX			15 VDC / 8 A
JETND120-12WS24-XX			24 VDC / 5 A
JETND120-24WS3.3-XX	18...72 VDC	<b>66 W</b>	3.3 VDC / 20 A
JETND120-24WS05-XX		<b>100 W</b>	5 VDC / 20 A
JETND120-24WS12-XX		<b>120 W</b>	12 VDC / 10 A
JETND120-24WS15-XX			15 VDC / 8 A
JETND120-24WS24-XX			24 VDC / 5 A

Comment: It's possible to produce non-standard output voltages from 3 to 60 V and maximal current 20 A.

Module	Input voltage range	Output power	Output voltage / nominal output current
JETBND100-24S3.3-XX	18...36 VDC	66 W	3.3 VDC / 20 A
JETBND100-24S05-XX		100 W	5 VDC / 20 A
JETBND100-24S12-XX			12 VDC / 8.3 A
JETBND100-24S15-XX			15 VDC / 6.7 A
JETBND100-24S24-XX			24 VDC / 4.2 A

Comment: It's possible to produce non-standard output voltages from 3 to 60 V and maximal current 20 A.

## Specifications

Input specifications	
Input voltage range / transitional deviation, 1 sec 12W	=10,5...36 VDC / =9,5...40 VDC
Input voltage range / transitional deviation, 1 sec 24W	=18...72 VDC / =17...80 VDC
Input voltage range / transitional deviation, 1 sec 24	=18...36 VDC / =17...40 VDC
Input filter	P-type
Output specifications	
Output voltage adjustment (single-channel models only)	±5% Uout
Instability of output voltage in accordance to changing of output current from 10 to 100% for single output model	±2%
Instability of output voltage in accordance to changing of input voltage	±0,5%
Ripple and noise (peak-to-peak) (20 MHz)	<2% Uout
Short circuit protection**	>150% Iout nom, auto repair
Overvoltage protection**	<130 % Uout
Over current protection level**	Pout ... 1.3·Pout
Remote On/Off	Shuts down outputs by applying 0...1,1VDC or connection of output «ON» and «- IN», I≤5mA
Max capacitance for Pout=100 W, Uout=5VDC***	21000 µF, 17000 µF for JETBND100
General specifications	
Case temperature (operating) index T	up to -60°C ...+130°C
Case temperature (storage)	-60°C ...+130°C
Output power derating	See diagram
High humidity	100% @35 °C
Thermal resistance case — environment without heat sink	7,7 °C/W
Typical efficiency****	92%
Conversion frequency	300 kHz typ.
Insulation voltage input/output	=1500 VDC
Insulation voltage input/case	=1500 VDC
Insulation voltage output/case	=1000 VDC
Insulation voltage output/output	=500 VDC
Isolation resistance @ 500 VDC	>20 MOhm
EMC standards	EN 55022, class A; EN 55022, class B with additional filter
Safety standards	IEC/ EN 60950
Typical MTBF (Tcase = 50°C; Pout = 0,7 Pout max)	200 000 hrs
Cooling method	Free air convection or forced air cooling
Weight (max)	97 g

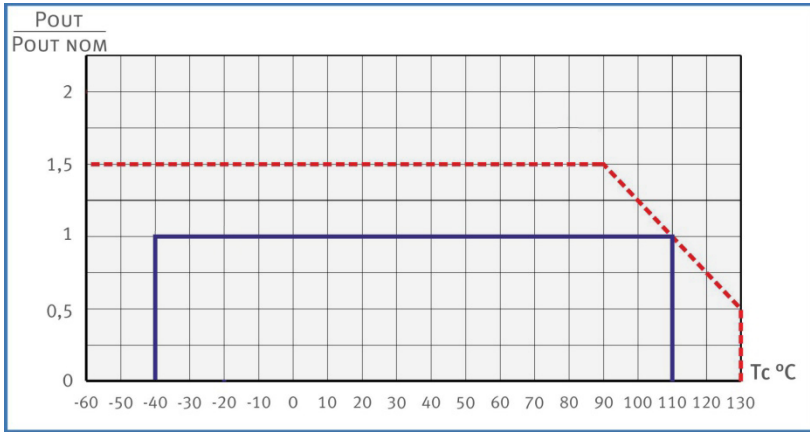
\* All specifications are valid for normal climatic conditions, Uin. nom., Iout. nom., unless otherwise stated.

\*\* Parameters are stated for the information purposes and could not be used at long term work, exceeding maximum output current, at work outside of a range of operating temperatures.

\*\*\* For other output voltages the maximum output capacity is calculated from the fact that  $C_{max} \cdot U_{out}^2$  is a constant.

\*\*\*\* Typical efficiency - for input 12 VDC (input range 12 W), 24 VDC (input range 24 W) and output 5 VDC, output power is 0.7·Pmax, Tcase +60°C.

## Maximum power output as a function of case temperature



Allowed power output and case temperature range for standard version of unit.

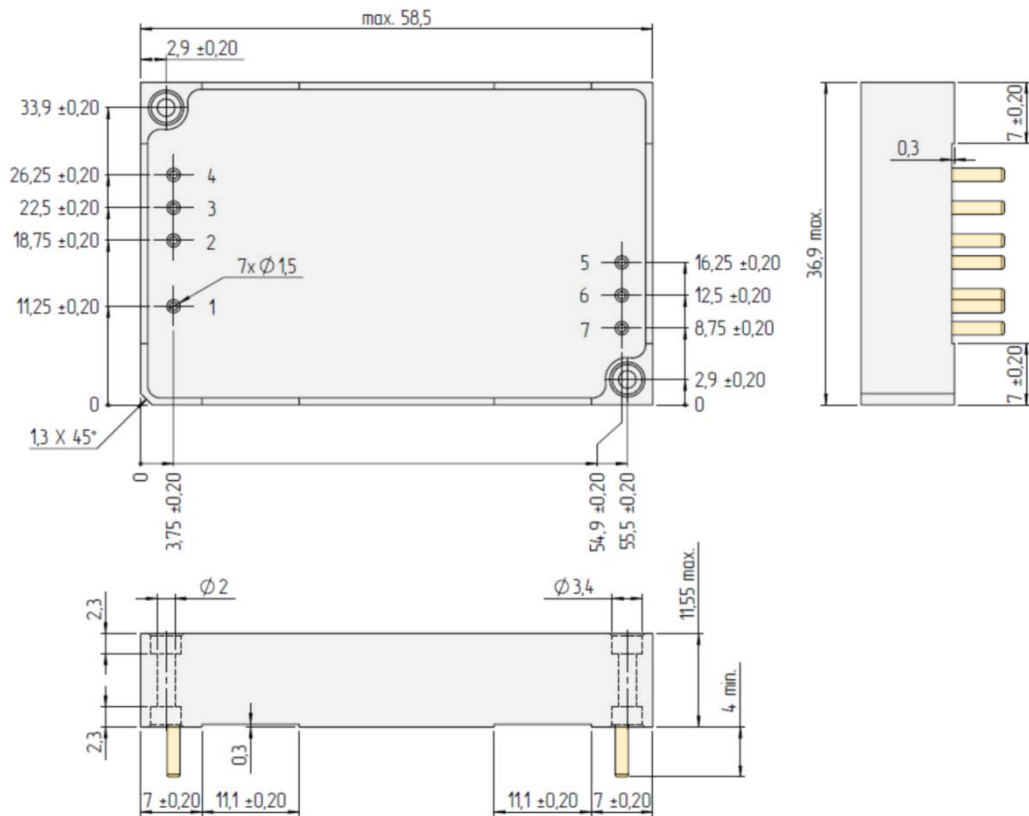
Possible range of output power for special order.

For modeling optimal heatsink and its delivery, with goal of providing allowed case temperatures, please contact us directly [aeps@aeps-group.cz](mailto:aeps@aeps-group.cz).

## Pin out

Nº Pin	1	2	3	4	5	6	7
Single output	Vin+	Vin-	On/Off	Case	Vout+	Trim	Vout-

## Single output model with mounting holes (1/4 brick size)



Certificate ISO 9001\*  
CE conformity declaration

\* Management system and R&D of Alexander Electric is ISO certified

## Note

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

Please, note that all information in this material is for reference only. Further detailed information (including: additional requirements, manuals and circuit schemes) is found on our website <http://www.goncharov-jet.com>

## Contact information

<http://www.goncharov-jet.com> e-mail: [aeps@aeps-group.cz](mailto:aeps@aeps-group.cz) phone/fax: +420 281 001 341

According to company's policy in view of constant improvements of the production design the manufacturer reserves the right to change the contents of promotional materials without prior notification.

## Special requirements

