

Ultra-compact isolated DC/DC converters (modules) are specially designed for industrial applications and harsh environment operation. These compact units (59 x 23 x 10 mm) have output power up to 60 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 JETD50.



Features

- Class: Expert, power density up to **4550 W/dm³** (74 W/In³)
- **Budget version – for request !**
- High efficiency $\geq 92\%$
- Low profile 9.8 mm design
- Standard 1/8 brick size
- Case operating temperature range: -40°C...+110°C, for special request up to -60°C...+130°C
- Output current up to 12 A
- Output power up to 60 W
- Input voltage ranges: 10,5...36 VDC, 18...72 VDC
- Output voltage adjustment, remote on/off
- Max capacitance 13000 μ F (U_{out}=5 VDC)
- Metal case, with mounting holes

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

Ordering information

JETND 60 - 24W S 15 - C T
1 2 3 4 5 6 7 8

- 1 - «JETND» 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 |
|--------------------|---------------------|--------------|-----------------------------------------|
| JETND60-12WS3.3-XX | 10,5...36 VDC | 39.6 W | 3.3 VDC / 12 A |
| JETND60-12WS05-XX | | 50 W | 5 VDC / 10 A |
| JETND60-12WS12-XX | | 60 W | 12 VDC / 5 A |
| JETND60-12WS15-XX | | | 15 VDC / 4 A |
| JETND60-12WS24-XX | | | 24 VDC / 2.6 A |
| JETND60-24WS3.3-XX | 18...72 VDC | 39.6 W | 3.3 VDC / 12 A |
| JETND60-24WS05-XX | | 50 W | 5 VDC / 10 A |
| JETND60-24WS12-XX | | 60 W | 12 VDC / 5 A |
| JETND60-24WS15-XX | | | 15 VDC / 4 A |
| JETND60-24WS24-XX | | | 24 VDC / 2.6 A |

Comment: It's possible to produce non-standard output voltages from 3 to 60 V and maximal current 12 A.

| Module | Input voltage range | Output power | Output voltage / nominal output current |
|--------------------|---------------------|--------------|-----------------------------------------|
| JETBND50-24S3.3-XX | 18...36 VDC | 33 W | 3.3 VDC / 10 A |
| JETBND50-24S05-XX | | | 5 VDC / 10 A |
| JETBND50-24S12-XX | | 50 W | 12 VDC / 4.2 A |
| JETBND50-24S15-XX | | | 15 VDC / 3.3 A |
| JETBND50-24S24-XX | | | 24 VDC / 2.1 A |

Comment: It's possible to produce non-standard output voltages from 3 to 60 V and maximal current 10 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 |
| Oversvoltage 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, Uout=5VDC*** | 13000 µF, 10800 µF for JETBND50 |
| 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 | 11,3 °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) | 53 g |

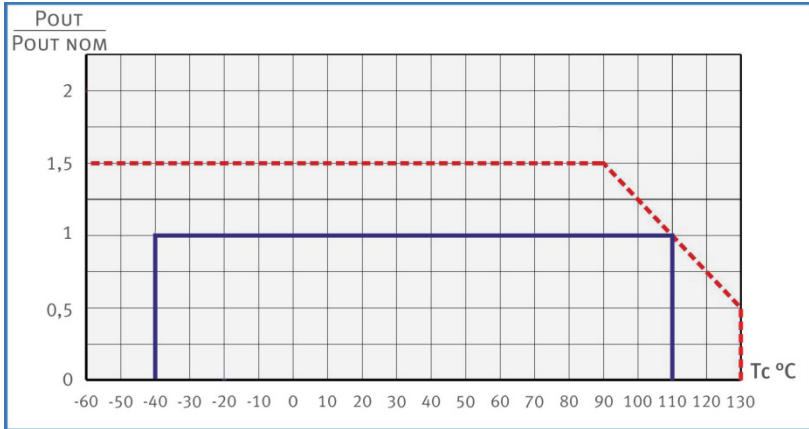
* All specifications are valid for normal climatic conditions, Uin. nom., Iout. nom., unless otherwise stated.

** Parameters are stated for the information purposes and could not be used at long term work, exciding 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.

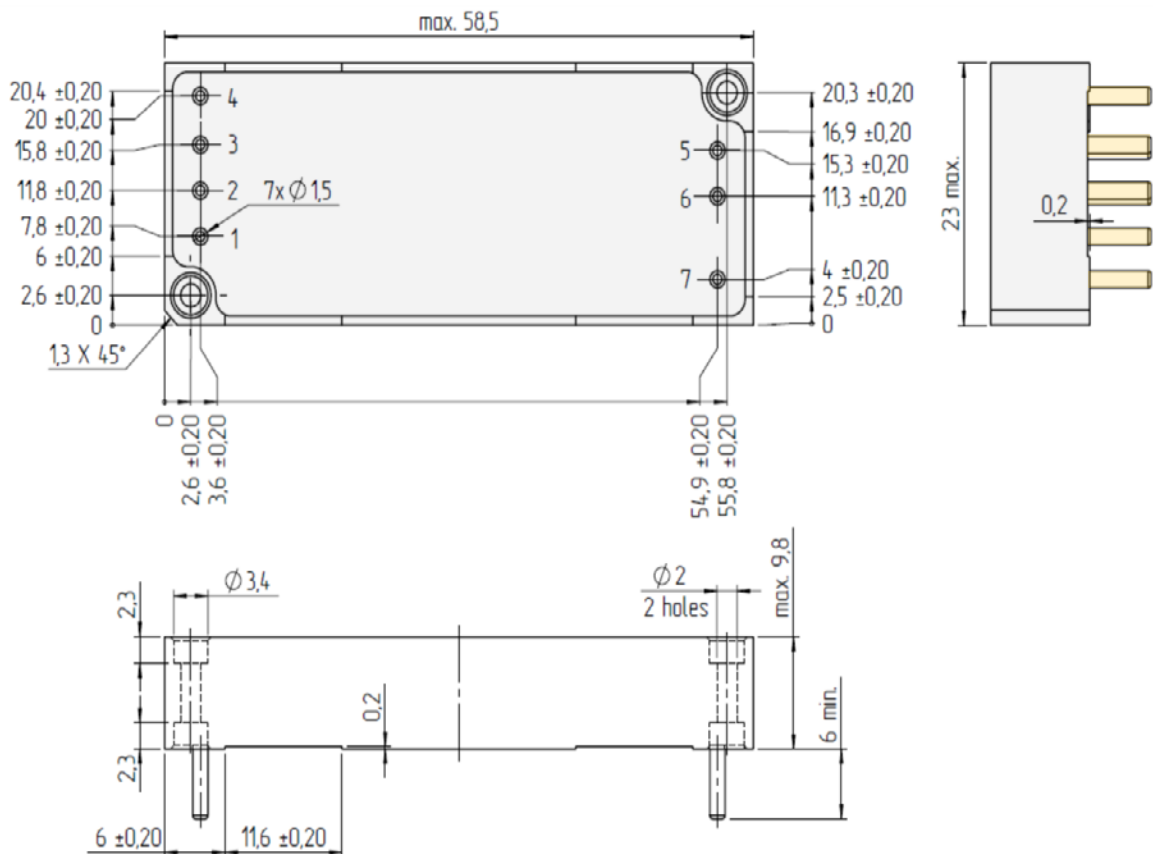
Possible range of output power for special order.

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

Pin out

| Nº Pin | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---------------|------|------|--------|------|------|-------|-------|---|
| Single output | Vin+ | Vin- | On/Off | Case | Trim | Vout- | Vout+ | - |

Single output model with mounting holes (1/8 brick size)



Certificates

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

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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

