

Ultra-compact isolated DC/DC converters (modules) are specially designed for industrial applications and harsh environment operation. These compact units (61 x 59 x 12 mm) have output power up to 250 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.



Features

- Class: Expert, power density up to **6 030 W/dm³** (98 W/In³)
- High efficiency $\geq 92\%$
- Low profile 11,6 mm design
- Standard 1/2 brick size
- Case operating temperature range: -40°C...+110°C, for special request up to -60°C...+130°C
- Output current up to 40 A
- Output power 250 W
- Input voltage ranges: 10,5...36 VDC, 18...72 VDC
- Parallel operation
- Feedback from load
- Output voltage adjustment, remote on/off
- Max capacitance 40000 μ F (U_{out}=5 VDC)
- Metal case, with mounting holes
- Feedback without optocouplers

Ordering information

JETND 250 - 24W S 15 - C T

1 2 3 4 5 6 7

- 1 - «JETND» Series
- 2 - Max output power, W
- 3 - Input voltages
 - 12W** - 12 VDC (10,5...36 VDC)
 - 24W** - 24 VDC (18...72 VDC)
- 4 - Index of output channels quantity
 - S** - one
- 5 - Nominal output voltage, VDC (two signs for a channel)
- 6 - Index of case design
 - C** - Metal case with mounting holes
- 7 - 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

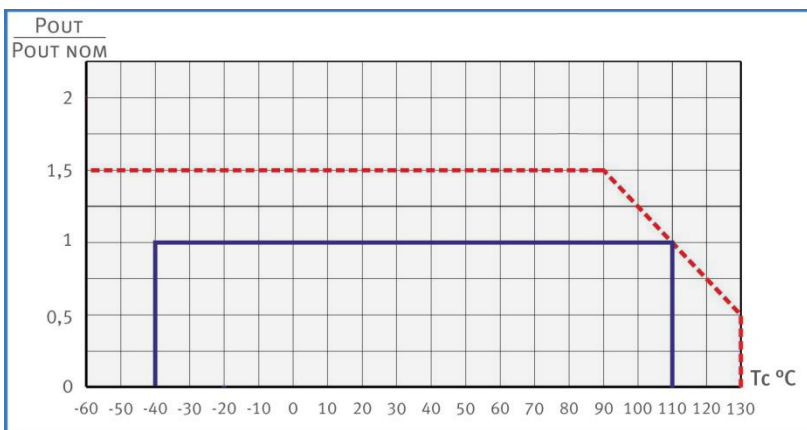
Module	Input voltage range	Output power	Output voltage / nominal output current
JETND250-12WS3.3-XX	10,5...36 VDC	132 W	3.3 VDC / 40 A
JETND250-12WS05-XX		200 W	5 VDC / 40 A
JETND250-12WS12-XX		250 W	12 VDC / 21 A
JETND250-12WS15-XX			15 VDC / 17 A
JETND250-12WS24-XX			24 VDC / 11 A
JETND250-24WS3.3-XX	18...36 VDC	132 W	3.3 VDC / 40 A
JETND250-24WS05-XX		200 W	5 VDC / 40 A
JETND250-24WS12-XX		250 W	12 VDC / 21 A
JETND250-24WS15-XX			15 VDC / 17 A
JETND260-24WS24-XX			24 VDC / 11 A

Comment: It's possible to produce non-standard output voltages from 3 to 60 V and maximal current 40 A.

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 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=200 W, Uout=5VDC***	40000 µF
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	5,4 °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)	150 000 hrs
Cooling method	Free air convection or forced air cooling
Weight (max)	187 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 for long-term operation, exceeding maximum output current, for operation out of a range of operating temperatures.
- *** For other output voltages the maximum output capacity is calculated basing upon the fact that $C_{max} \times U_{out}^2$ 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 ambient temperature



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

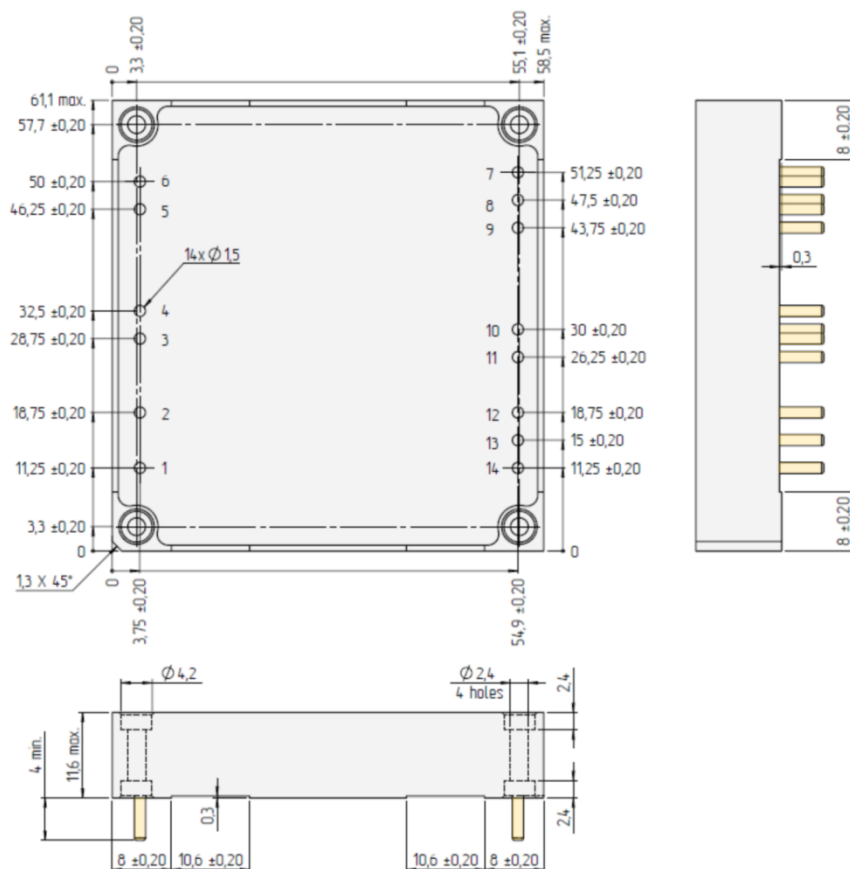
Possible range of output power for special order.

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	9	10	11	12	13	14
Single output	Case	On/Off	Vin-	Vin-	Vin+	Vin+	+RS out	Vout+	V out+	Vout-	Vout-	-RS out	Paral	Trim

Single output model with mounting holes (1/2 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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