



## Features

- Class: Expert, power density up to **2131** W/dm<sup>3</sup>
- **Budget version – for request !**
- Without Fan
- Low profile 38,1 mm design with terminal blocks
- Case operating temperature ranges: -40°C...+85°C, -50°C...+85°C, for request -60°C...+85°C
- Output current up to 100 A, output power up to 2000 W
- Three phase input voltage range 323...440 VAC
- Power Factor Correction (PFC)
- Additional output for fan
- Parallel operation
- Over current, short circuit, overvoltage and thermal protection, remote on/off by applying voltage or with breaker
- Output voltage adjustment
- Remote feedback
- Output diagnostics («Output good»)
- Max capacitance – not limited
- Metal case

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

## Description

**AC/DC power supplies (modules) JETNA2000-380** are specially designed for industrial applications and harsh environment operation. This compact unit (211 x 117 x 38,1 mm) proven maximum output power of up to 2000. The units can be switched on/off by a signal, have a full protection complex against over current, short circuit and overheating; they also can be connected in parallel or in series and provide compliance to EMC standard EN55022, class A (class B with filtration and protection module JETAF15).

Modules are made of customized element base. They are sealed with heat-conducting potting material and could have wide operating temperature range up to -60°C...+85°C, featuring a thermal protection chip. These power supplies undergo special temperature and burn-in tests with extreme on/off modes.

## Ordering information

**JETBNA 2000 - 380 S 15 - S C N**

**1 2 3 4 5 6 7 8 9**

- 1 - «JETA» Series
- 2 - For request is possible budget version **B**
- 3 - Max output power, W
- 4 - Input voltages  
**380** – 3 ph. 380 VAC (323...440 VAC)
- 5 - Index of output channels quantity  
**S** – one
- 6 - Nominal output voltage, VDC (two signs for a channel)
- 7 - Index of design option  
**S** - modification with polymer potting protection
- 8 - Index of outputs  
**C**- case with terminal blocks
- 9 - Index of operating temperature range of the case  
**N** -40°C...+85°C (basic version), for request -60°C...+85°C

## Technical information

### Standard models with one output

Module	Input voltage range	Output power	Output voltage / nominal output current	Typical efficiency
<b>JETNA2000-380S15-XXX</b>	323...440 VAC	<b>1500 W</b>	15 VDC / 100 A	93%
<b>JETNA2000-380S24-XXX</b>			24 VDC / 83,3 A	93%
<b>JETNA2000-380S27-XXX</b>		<b>2000 W</b>	27 VDC / 74 A	93%
<b>JETNA2000-380S48-XXX</b>			48 VDC / 41,6 A	93%

Modules with non-standard output voltage from 12 to 500 VDC with maximal output current up to 100 A, could be delivered on request.

Module	Input voltage range	Output power	Output voltage / nominal output current	Typical efficiency
<b>JETBNA1500-380S15-XXX</b>	323...440 VAC	<b>1200 W</b>	15 VDC / 80 A	93%
<b>JETBNA1500-380S24-XXX</b>			24 VDC / 62.5 A	93%
<b>JETBNA1500-380S27-XXX</b>		<b>1500 W</b>	27 VDC / 55.5 A	93%
<b>JETBNA1500-380S48-XXX</b>			48 VDC / 31.3 A	93%

Modules with non-standard output voltage from 12 to 500 VDC with maximal output current up to 80 A, could be delivered on request.

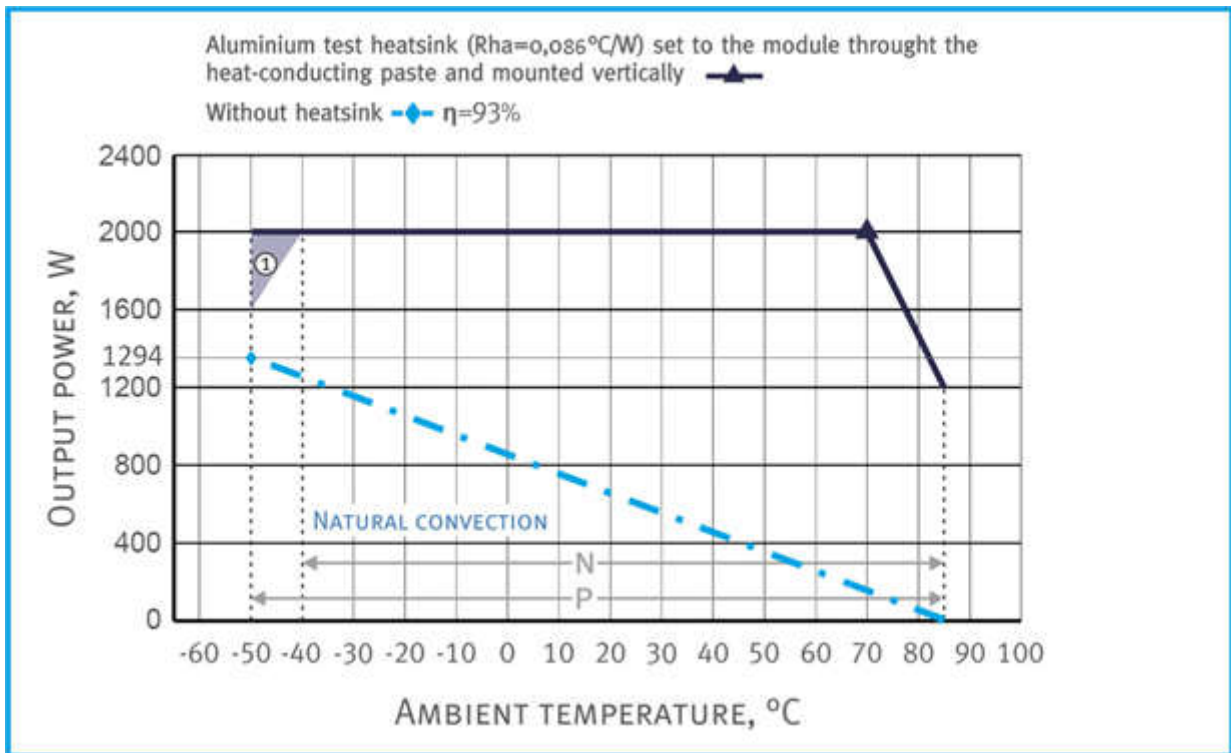
## Specifications \*

<b>Input specifications</b>	
Linear input voltage range, the connection to the "triangle"	323...440 VAC (accepted 390...620 VDC)
Input frequency	47...65 Hz
Power factor	>0,9
<b>Output specifications</b>	
Output voltage adjustment using trimmer resistor ADJ	±5%
Output voltage adjustment using pin ADJ	-30%...+10%
Instability of output voltage in accordance to changing of output current from 10 to 100%	±2%
Instability of output voltage in accordance to instability of input voltage	±0,5%
Ripple and noise (peak-to-peak) (20 MHz)	<2% Uout
Overvoltage protection**	>125% Uout
Over current protection level & short circuit protection**	Iout limiting at 110-120% of Iout nom
Protection against over-current for the dual-channel performance**	>125% Uout
Remote On/Off	Shuts down by applying 3...5VDC (≤5 mA) on REM outputs or connecting «ADJ» & «+REM»
Max capacitance	not limited
Output for fan	9.5...13 VDC, I <sub>max</sub> =200 mA
<b>General specifications</b>	
Case temperature (operating N)	-40°C ...+85°C, for request -60°C ...+85°C
Case temperature (operating P)	-60°C ...+85°C
Level of operation of thermal protection (temperature of case)	82°C ...+95°C, auto restore
Output power derating (natural convection)	See diagram (dashed, dash-dotted curves)
Output power with heatsink with thermal resistnace R <sub>ha</sub> =0,086°C/W, difference between ambient and module case temperature would be 15°C	See diagram (solid curve)
High humidity	95% @ 35 °C
Conversion frequency, fixed	125-150 kHz
Insulation voltage input/case	1500 VAC
Insulation voltage input/output; input/REM	3000 VAC
Insulation voltage input/case, output/REM, REM/case	500 VAC
Isolation resistance @ 500 VDC	20 MOhm
EMC standards	EN55022, class A (class B with filter)
Safety standard	IEC/EN60950
Thermal resistance case — environment without heat sink	1,2 °C/W
Typical MTBF (T <sub>case</sub> = 50°C; P <sub>out</sub> = 0,7 P <sub>out max</sub> )	30 000 hrs
Cooling method	Free air convection with heat sink or forced air cooling
Weight (max)	1500 g

\* All specifications are valid for normal climatic conditions, U<sub>in.nom.</sub>, I<sub>out.nom.</sub>, 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 working temperatures, at module's work with the output voltage over a range of adjustment.

## Output power vs ambient temperature

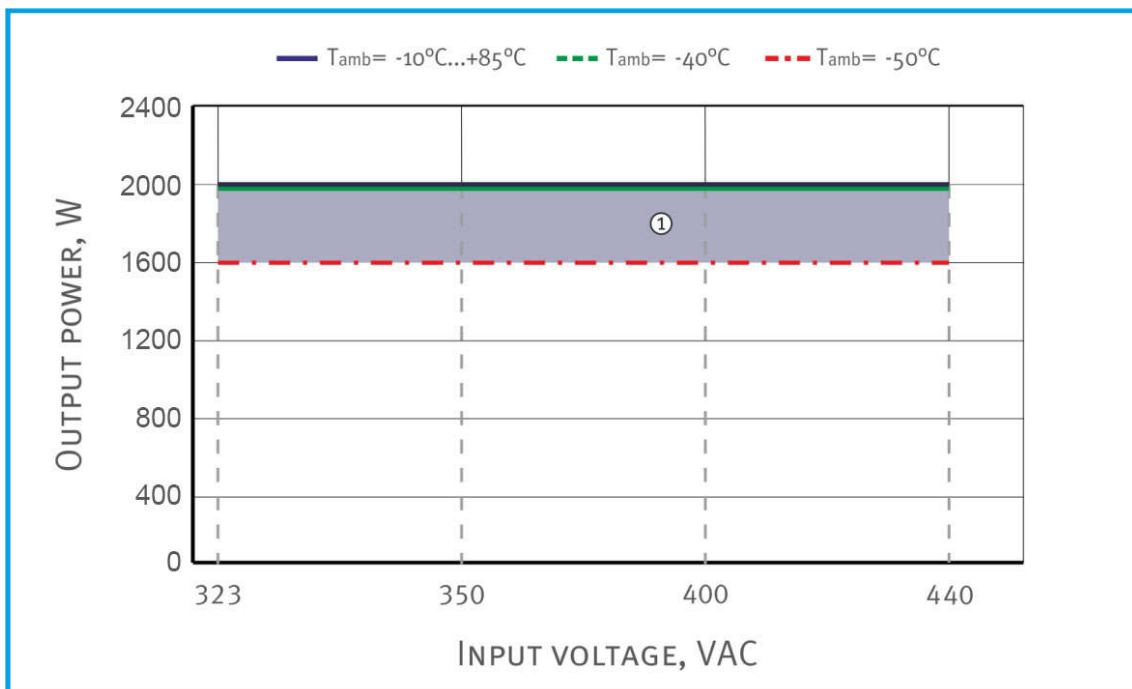


Dropping parts of the dashed and dash-dotted curves are in accordance with the **maximum temperature of the case** (for modules with index «N», «P» equal to  $+85^{\circ}\text{C}$ ). Output power must not exceed the values which are limited by corresponding curve for a given ambient temperature.

Modules can be used without a heat sink only when attached to a heat conductive plate with thermal paste. The length and width of the plate should not be less than those of the case, and its thickness must not be less than 3,5 mm.

Points  $\blacktriangle$  represent simultaneously several extreme worst-case conditions, such as the combination of maximum case temperature and maximum output power. Continuous module operation at these points should be avoided.

## Output power vs input voltages



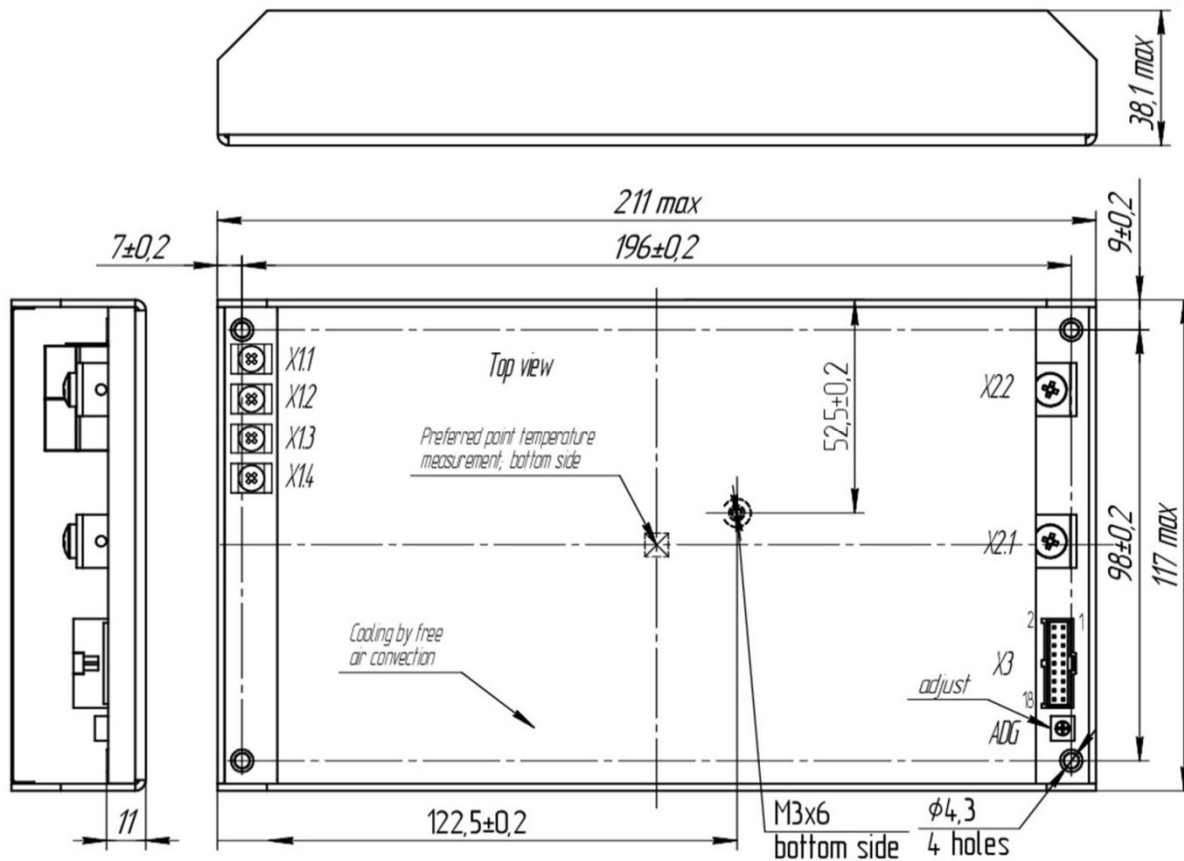
① - For ambient temperature  $-60^{\circ}\text{C}\dots-10^{\circ}\text{C}$  in gray areas of diagrams some specification parameters may not be met.

## Pin out (models with the terminal blocks)

X1.1	X1.2	X1.3	X1.3	X2.1	X2.2												
GND	A	B	C	-OUT	+OUT												
X3.1	X3.2	X3.3	X3.4	X3.5	X3.6	X3.7	X3.8	X3.9	X3.10	X3.11	X3.12	X3.13	X3.14	X3.15	X3.16	X3.17	X3.18
+OG00D	-OG00D	Not use	Not use	ADJ	PARAL	+ FAN	- FAN	-RS	-OUT	+RS	+OUT	Not use	Not use	Not use	AUX	-REM	+REM

X1.1...X1.4	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.
X2.1, X2.2	Screw size: <b>M5</b> Recommended torque: <b>2Nm</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 "CRIMP 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.

## Single output model with terminal blocks (IV A case size)



## Certificates

Certificate ISO 9001\*  
CE conformity declaration

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

## Note

Please note that information given in this document is not complete. More detailed information (additional requirements, typical connection schemes, operation manuals, etc.) may be provided to you upon request.

## 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 itself change the contents of promotional materials without prior notification.

## Special requirements