



- ▶ Power density up to 1714 W/dm<sup>3</sup> (28,1 W/in<sup>3</sup>)
- ▶ 2 year warranty
- ▶ Output current max 125 A, rated output power up to 3000 W
- ▶ Input Voltage range 187...242 VAC
- ▶ Low-profile design (50 mm) with blade contacts or connector block
- ▶ Case operating temperature range -40...+85°C, -50...+85°C
- ▶ Power factor corrector
- ▶ Overcurrent, overvoltage and thermal protection
- ▶ Typ. efficiency 92% (U<sub>out</sub>=48 V)
- ▶ Remote off/on
- ▶ Output voltage adjustment
- ▶ Parallel operation, remote feedback
- ▶ Polymer potting sealing
- ▶ Maximum load capacity 36500 μF (U<sub>out</sub>=27 V, P<sub>out</sub>=50%), 1800 μF (U<sub>out</sub>=5 V)
- ▶ Fan power output (12 V; 0,2 A)
- ▶ Designed to meet MIL-STD-810G
- ▶ Designed to meet MIL-STD-461E

## DESCRIPTION

MAA3000 Series is a family of encased power supplies designed for industrial and special applications. These compact units (250×140×50 mm) have an output power up to 3000 W and wide case operating temperature range up to -50...+85°C. The units are equipped with remote off/on mode, overcurrent, overvoltage and thermal protection, and can be operated in parallel or series mode.

Remote feedback and parallel operation with load sharing functions are available.

Power supplies have variable protections from different factors: vibration, dirt, moisture fog and salt fog. Module case is designed as a U-shaped aluminum base. The PCB is protected from mechanical and climatic influences by special steel cover.

## COMPLIANCE

Designed to meet MIL-STD-810G

Designed to meet MIL-STD-461E with additional circuit

## ORDERING INFORMATION

MAA 3000 - 1 S 27 S D N  
① ② ③ ④ ⑤ ⑥ ⑦ ⑧

- ① - MAA series
- ② - Rated output power, W  
(Maximum power for this standard size is indicated on the case and is stipulated at the time of order)
- ③ - Quantity of output channels (1)
- ④ - Index of nominal input voltage  
S — 220 VAC (187...242 VAC), 50 HZ
- ⑤ - Nominal output voltage, VDC (two signs per channel)
- ⑥ - Polymer potting sealing
- ⑦ - Index of design type  
G — compact metal case with cover and terminal blocks  
D — compact metal case with cover and blade contacts
- ⑧ - Index of case operating temperature range  
N — from -40 to +85°C  
P — from -50 to +85°C

## SINGLE OUTPUT MODELS

MODEL	INPUT VOLTAGE RANGE	OUTPUT POWER	OUTPUT VOLTAGE / RATED OUTPUT CURRENT	EFFICIENCY
MAA3000-1S24-Sxx	187...242 VAC	3000 W	24 VDC / 125 A	91%
MAA3000-1S28-Sxx	187...242 VAC	3000 W	28 VDC / 111 A	91%
MAA3000-1S48-Sxx	187...242 VAC	3000 W	48 VDC / 62,5 A	92%

Optionally custom design modules with output voltage from 5 to 68 VDC and maximum output current 125 A can be produced.

### SPECIFICATIONS OF AC/DC CONVERTERS MAA3000\*

#### Input specifications

Input voltage range**	S	187...242 VAC (263...340 VDC)
Input frequency		47...440 Hz

#### Output specifications

Output voltage adjustment		10%
Line and load regulation		max 2%
Ripple and noise (peak-to-peak)		<2% Uout. nom.
Short circuit protection***		automatic repair
Overload protection level***		<125% Uout. nom.
Remote on/off		Off.: 3.5 V (5 mA) On Pin "Contr"

#### General specifications

Environmental		Designed to meet MIL-STD-810G
Case temperature	operating "N" operating "P" storage	-40...+85°C -50...+85°C -50...+85°C
Humidity		93...95% / 25°C
Isolation voltage	in./case in./out. out./case, out./out. isolation resistance @ 500 VDC	1500 VAC 1500 VAC 500 VAC 20 Mohm min
EMC standards		Designed to meet MIL-STD-461E
Thermal resistance case-ambient		0,8°C/W
Typical MTBF		2000 kHrs
Cooling		conductive (baseplate-cooled)
Weight		max 2900 g

It is important to note that the information herein is not full.

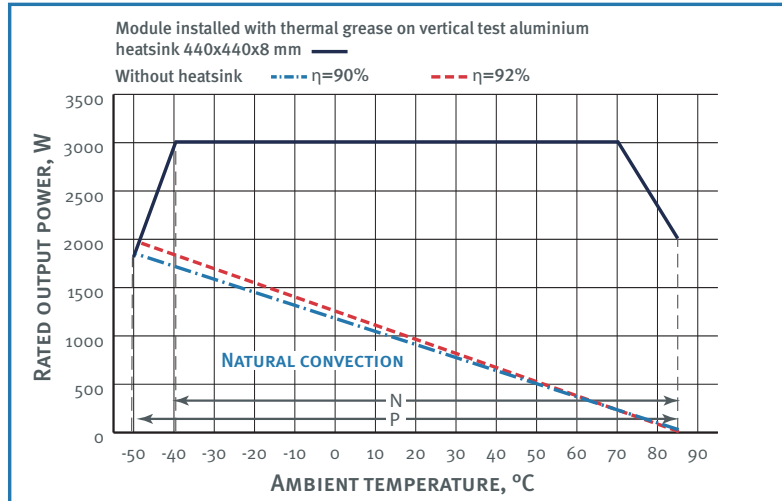
More detailed information (specific requirements, basic connection circuits, rules of operations etc.) can be found on our web-site: [www.kwsystems.ru](http://www.kwsystems.ru).

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

\*\* Maximum output power for input voltage C (wide circuit) at Uout 100...187 VDC is reducing according to Power reduction diagram of module according to input voltage.

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

## POWER DERATING VS AMBIENT TEMPERATURE DIAGRAM FOR INPUT VOLTAGE 187...242 VAC



Decreasing parts of the dashed and dash-dotted curves correspond to the maximum case temperature (+85°C for models with index "N" and "P"). Output power must not exceed the values limited by curve for a given ambient temperature.

Modules can be used without the heatsink only on condition of installation with thermal grease on heat-distribution baseplate with length and width not less than case's and with thickness not less than 8 mm.

### PIN OUT (WITH BLADE PINS)

PIN #	1	2	3	4	5	6	7
SINGLE CHANNEL	L	N	⊕	-TRIM	+TRIM	+RS	-RS

PIN #	8	9	10	11	12	13	14	15
SINGLE CHANNEL	PARAL	+U FAN	-U FAN	NOT USE	+USE1	+OUT1	-OUT1	-OUT1

### PIN OUT (WITH CONNECTOR BLOCKS)

PIN #	8	9	10	11	12	13	14	15
SINGLE CHANNEL	L	N	⊕	+OUT1	+OUT1	+U FAN	-U FAN	NOT USE

PIN #	X4.1	X4.2	X5.1	X5.2	X5.3	X5.4
SINGLE CHANNEL	-TRIM	+TRIM	+RS	-RS	PARAL	NOT USE

