

# AC/DC power supplies

## MAA Family MAA3000, 3000 W threephase



### Basic specifications

Power .....	3000 W
Input current .....	up to 80 A
Input voltage .....	~380 (323...437) VAC
Output voltage .....	=24 VDC, =28VDC, =48VDC
Efficiency.....	91-92%
Case operating temperature.....	-40...+85 °C; -50...+85 °C
Dimensions .....	284x174x54 mm
Warranty .....	2 years

### Advantages

- ◀ Parallel and series operation
- ◀ Output voltage adjustment
- ◀ Conductive cooling
- ◀ DC OK
- ◀ Stand-by power supply
- ◀ Design to meet MIL-STD-810G and MIL-STD-461E



Description of MAA3000 on the manufacturer's website:  
[eng.kwsystems.ru/catalog/acdc/models/76](http://eng.kwsystems.ru/catalog/acdc/models/76)

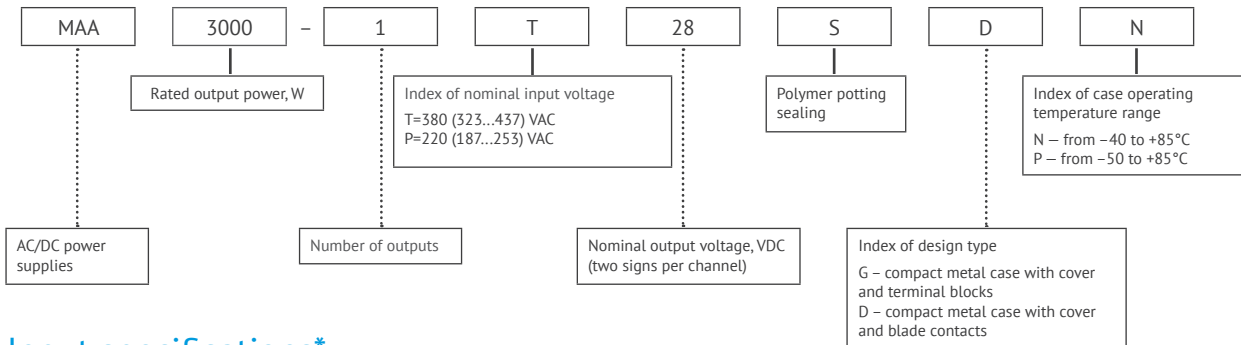
#### Order registration

+7 473 200 87 80, Global Operations Team

#### Technical support

Mikhail Timokhin, [mtimohin@kwsystems.ru](mailto:mtimohin@kwsystems.ru)

### Ordering information



### Input specifications\*

Parameter	Value	
Input voltage range, VAC	T (3ph without neutral)	323...437 (455...616 VDC)
	P (3ph without neutral)	187...253 (263...356 VDC)
Transient deviation range, VAC	T	-304...456
	P	-176...264
Transient time	T, P	1 s
Mains frequency range, Hz	T	47...53
	P	360...440
Consumed current, A	15	
Power factor	0.9	

### Output specifications\*

Parameter	Value		
Model	MAA3000-1T24-SXX	MAA3000-1T28-SXX	MAA3000-1T48-SXX
Nominal output voltage, VDC	24	28	48
Output voltage adjustment	10 %		
Rated output power, W	3000**		
Efficiency, %	91	91	92
Output voltage adjustment range, MCB	by built-in trim resistor	-10...+10 %	-10...+10 %
Rated output current, A	125	107.14	62.5
Ripple and noise (peak-to-peak)	<2%		
Line and load regulation	max 2%		
Start-up time, ms	<2000		
Parallel operation	redundancy, and boost of power		
Remote on/off	Off at 3.5...5.5 VDC (15...30 mA) output «REMOTE OFF»		
Maximum load capacity	36500 µF (Uout=28 VDC, Pout=50%)		

\* All specifications are valid for normal climatic conditions (ambient temp. +15...+35°C; relative humidity 45...80%; air pressure 8.6\*10<sup>4</sup>...10.6\*10<sup>4</sup> Pa), Uin. nom., Iout. nom., unless otherwise noted.

### Protections

Type of protection	
Short-circuit protection*	auto recovery
Overload protection	$P_{max} < 1.2 P_{nom}$
Overvoltage protection level*	$< 125\% U_{out, nom.}$
Overheat protection	triggers at case temperature $> 85^{\circ}C$

### Basic specifications\*\*

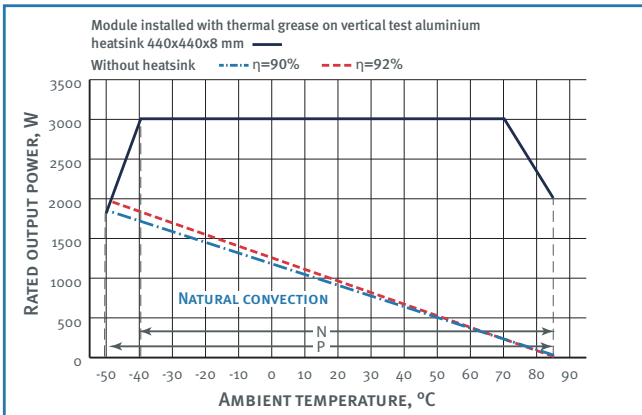
Parameter	Value	
Type of connection	screw terminals and blade contacts	
Derating	$-3.3\% / ^{\circ}C$ ( $t^{\circ} < 40^{\circ}C$ and $> 70^{\circ}C$ )	
Protection level	IP20	
Case temperature, operating	«N»	$-40...+85^{\circ}C$
	«P»	$-50...+85^{\circ}C$
Case temperature, storage	$-50...+70^{\circ}C$	
Humidity	98% / $35^{\circ}C$	
Isolation voltage	in /case	$\sim 1500$ VAC
	in /out	$\sim 1500$ VAC
	out /case, out/out	$\sim 500$ VAC
Isolation resistance @ 500 VDC	$\geq 20$ MOhm min	
Cooling	conductive, forced air	
Environmental influence standards	design to meet MIL-STD-810G	
EMC standards	EN55022 (CISPR22); design to meet MIL-STD-461E	
Typical MTBF	3 000 000 Hrs	
Case material	metal	
Dimensions, mm	284x174x54	
Weight, kg	$< 3.4$	
Warranty	2 year	

\* 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.

\*\* All specifications are valid for normal climatic conditions,  $U_{in, nom.}$ ,  $I_{out, nom.}$ , unless otherwise noted.

## Derating

vs Temperature

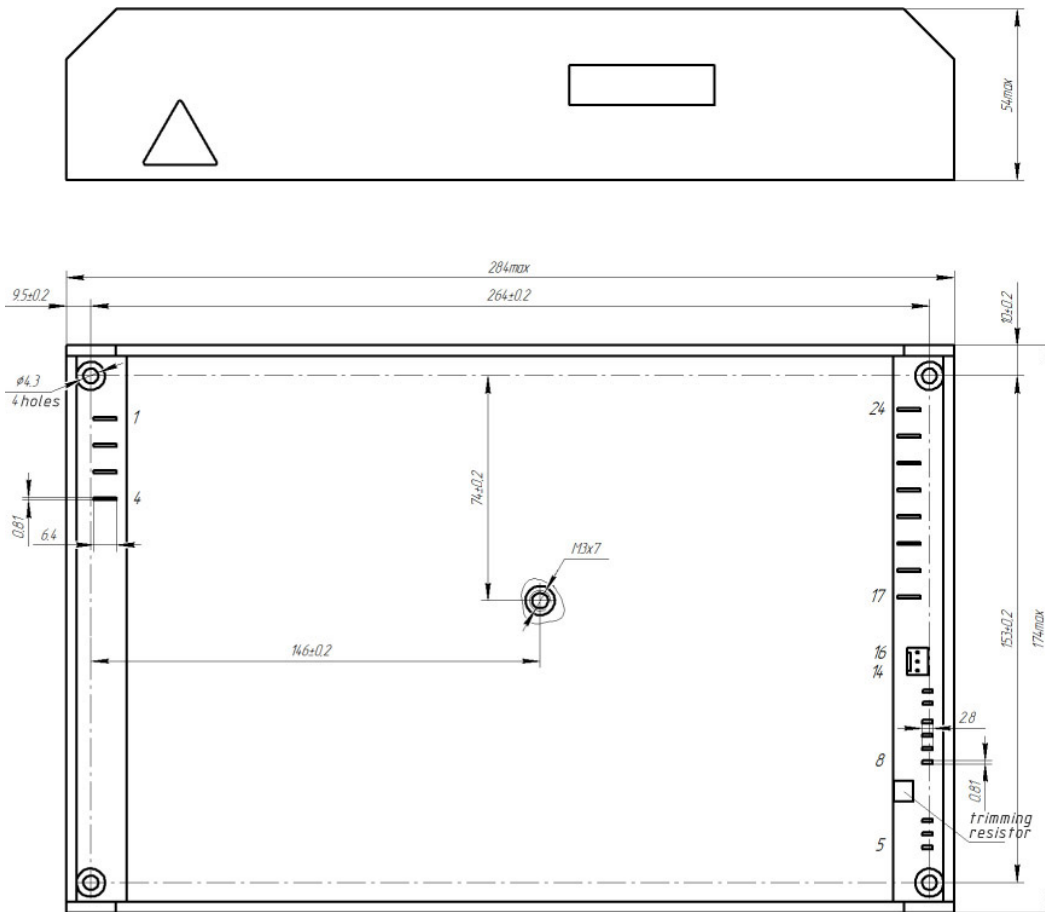


Decreasing parts of the dashed and dash-dotted curves correspond to the maximum case temperature ( +85°C for models with index "N" and "P"). Output power must not exceed the values limited by curve for a given ambient temperature.

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.

### Dimensions

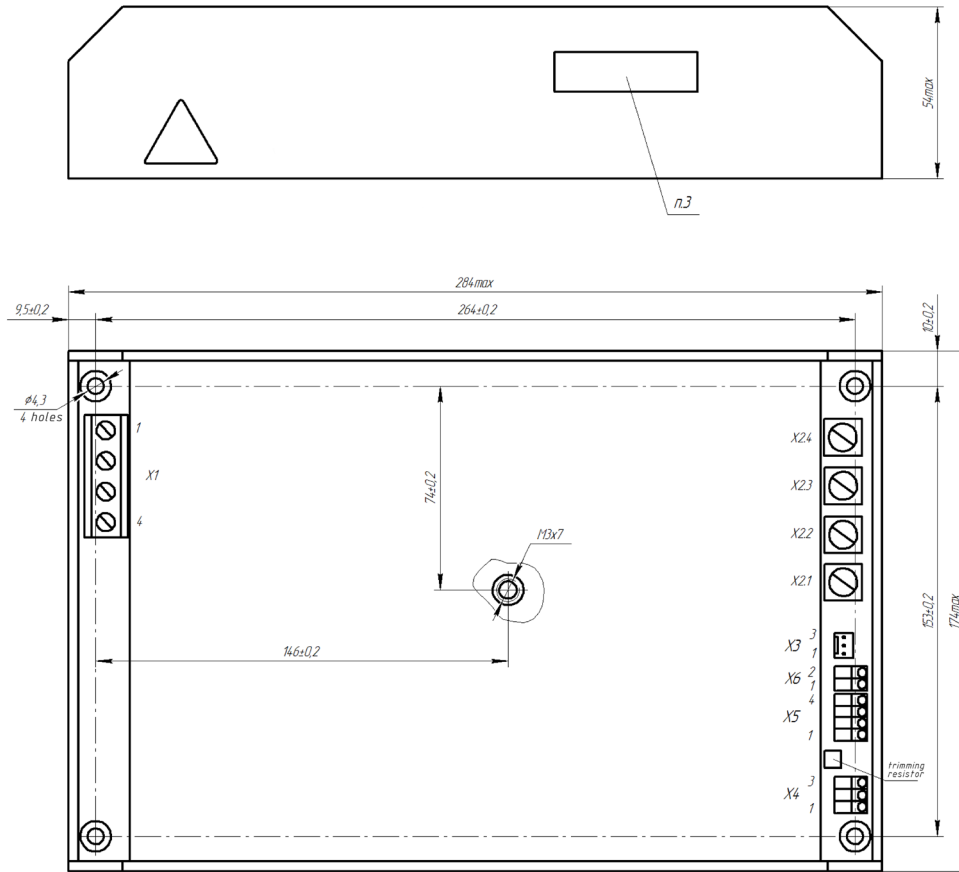
Single-channel design with blade contacts



PIN #	1	2	3	4	5	6	7	8	9
SINGLE-CHANNEL	A	B	C	⊕	-REMOTE OFF	+REMOTE OFF	AUX	+RS	-RS
PIN #	10	11	12	13	14	15	16	17	18
SINGLE-CHANNEL	PARAL	TRIM	+DIAG OUT	-DIAG OUT	+FAN	-FAN	NOT USE	+Uout1	+Uout1
PIN #	19	20	21	22	23	24			
SINGLE-CHANNEL	+Uout1	+Uout1	-Uout1	-Uout1	-Uout1	-Uout1			

## Dimensions

Single-channel design with terminal blocks



PIN #	X1.1	X1.2	X1.3	X1.4	X2.1	X2.2	X2.3	X2.4	X3.1
SINGLE-CHANNEL	A	B	C	⊕	+Uout1	+Uout1	-Uout1	-Uout1	+FAN

PIN #	X3.2	X3.3	X4.1	X4.2	X4.3	X5.1	X5.2	X5.3	X5.4	X6.1	X6.2
SINGLE-CHANNEL	-FAN	NOT USE	-REMOTE OFF	+REMOTE OFF	AUX	+RS	-RS	PARAL	TRIM	+DIAG OUT	-DIAG OUT



[www.kwsystems.ru](http://www.kwsystems.ru) [info@kwsystems.ru](mailto:info@kwsystems.ru)

KW Systems, LLC is the leading Russian developer and manufacturer of AC/DC converters and power supply systems for mission critical applications.

Druzinnikov str. 5B, Voronezh, 394026, Russia. +7 473 200-87-80

**This datasheet is valid for the following units:**

MAA3000-1P24SXX, MAA3000-1P28SXX, MAA3000-1P48SXX, MAA3000-1T24SXX, MAA3000-1T28SXX, MAA3000-1T48SXX.