

AC/DC power supplies

MAA Family MAA60, 60 W



Basic specifications

Power	60 W
Input current	up to 12A
Input voltage	~220 (100...264) VAC
Output voltage	=5 VDC, =24 VDC, =27VDC
Efficiency.....	81-88%
Case operating temperature.....	-40...+85 °C; -50...+85 °C
Dimensions	61x111x24 mm
Warranty	2 years

Advantages

- ◀ Design to meet MIL-STD-810G and MIL-STD-461E
- ◀ Operation temperature from -50 °C or -40 °C (depending on version)
- ◀ Conductive cooling



Description of MAA60 on the manufacturer's website:
eng.kwsystems.ru/catalog/acdc/models/3

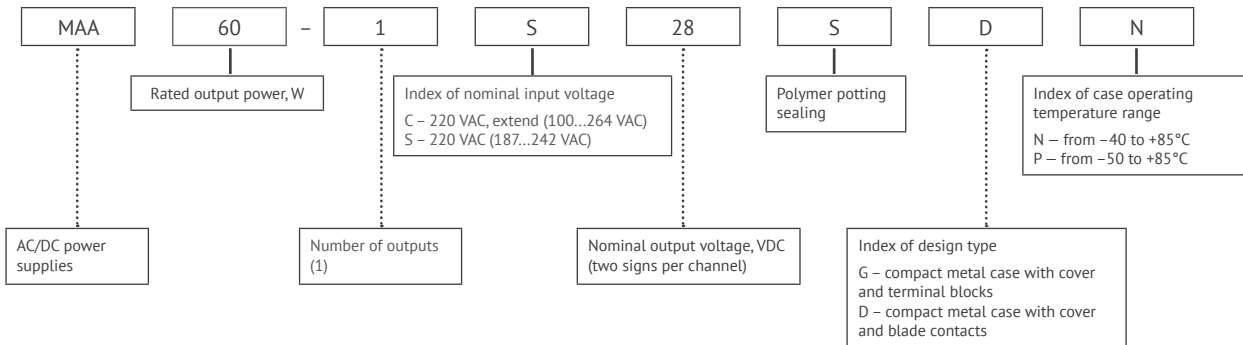
Order registration

+7 473 200 87 80, Global Operations Team

Technical support

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Ordering information



Input specifications*

Parameter	Value
Input voltage range, VAC**	C ~100...264 (=141...372)
	S ~187...242 (=263...340)
Transient deviation range, VAC	C ~100...264
	S ~176...264
Transient time	S 1 s.
	C -
Mains frequency range, Hz	C, S 47...440

Output specifications*

Parameter	Value
Nominal output voltage, VDC	5 9 12 15 24 28
Efficiency, %	81 83 84 85 87 88
Rated output current, A	12 6.67 5 4 2.5 2.14
Ripple and noise (peak-to-peak)	<2%
Line and load regulation	max 2%
Start-up time, ms	<500
Maximum load capacity	45500 µF (Uout=5 VDC)

* All specifications are valid for normal climatic conditions (ambient temp. +15...+35°C; relative humidity 45...80%; air pressure 8.6*10⁴...10.6*10⁴ Pa), U_{in}. nom., I_{out}. nom., unless otherwise noted.

** Maximum output power for input voltage range C (wide range) at U_{out} 100...187 VDC is reducing according to power derating VS input voltage diagram.

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**

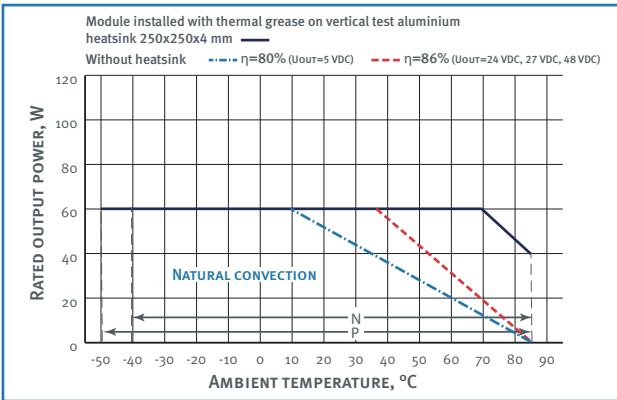
Parameter		Value
Type of connection		screw terminals and blade contacts
Protection level		IP20
Case temperature, operating	«N»	$-40 \dots +85^{\circ}C$
	«P»	$-50 \dots +85^{\circ}C$
Case temperature, storage		$-50 \dots +70^{\circ}C$
Humidity		98% / $35^{\circ}C$
Isolation voltage	in /case	~ 1500 VAC
	in /out	~ 1500 VAC
	out /case, out/out	~ 500 VAC
Isolation resistance @ 500 VDC		≥ 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
Thermal resistance case-ambient		$6.4^{\circ}C / W$
Typical MTBF		3 000 000Hrs
Case material		metal
Dimensions, mm		111×61×23.5
Weight, kg		< 0.27
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.

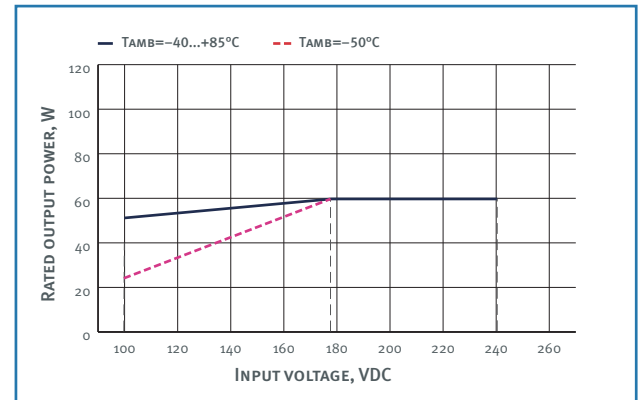
Derating

vs Temperature



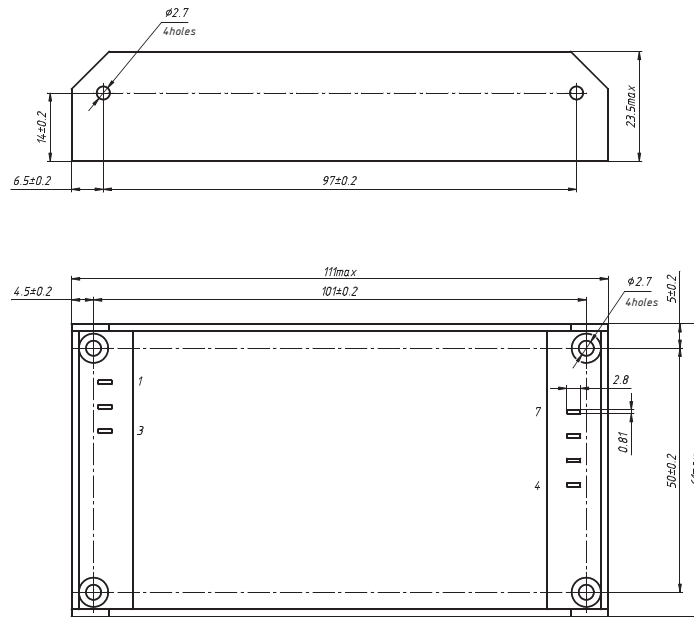
Decreasing parts of the dashed and dash-dotted curves correspond to the maximum case temperature (+85°C for models with index «N» and «P»). Output power must not exceed the values limited by curve for a given ambient temperature.

vs Input Voltage



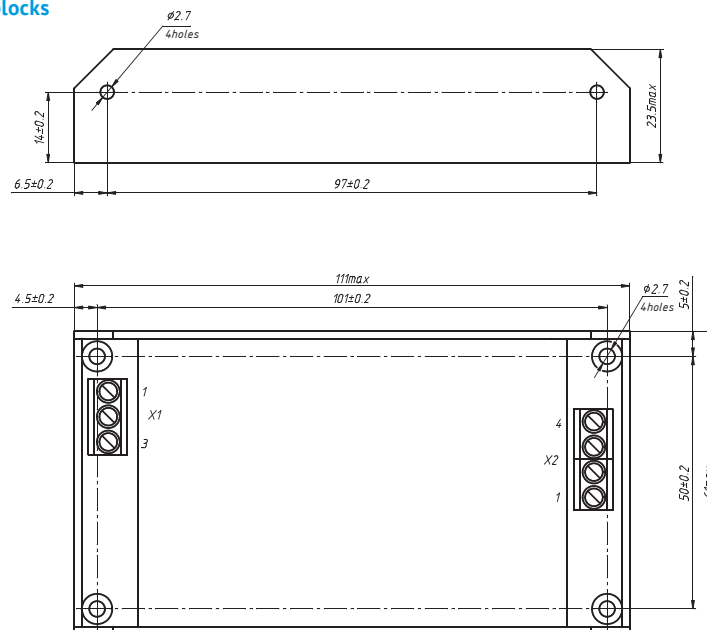
Dimensions


Single-channel design with blade contacts



PIN #	1	2	3	4	5	6	7
SINGLE-CHANNEL		L	N	+OUT 1	+OUT 1	-OUT 1	-OUT 1

Single-channel design with terminal blocks



PIN #	X1.1	X1.2	X1.3	X2.1	X2.2	X2.3	X2.4
SINGLE-CHANNEL		L	N	+OUT 1	+OUT 1	-OUT 1	-OUT 1



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

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This datasheet is valid for the following units: MAA60-1C05CXX, MAA60-1C09CXX, MAA60-1C12CXX, MAA60-1C15CXX, MAA60-1C24CXX, MAA60-1C28CXX, MAA60-1S05CXX, MAA60-1S09CXX, MAA60-1S12CXX, MAA60-1S15CXX, MAA60-1S24CXX, MAA60-1S28CXX.