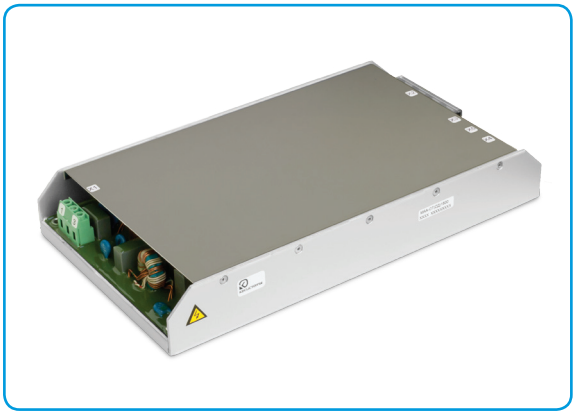
AC/DC POWER SUPPLIES MAA1200, MAA1500



- Power density max. 1084 W/dm^3 (17,8 W/in^3)
- 2 year warranty
- Output current max. 80 A, rated output power up to 1500 W
- Input voltage range 187...242 VAC
- Low-profile design (41 mm) with blade contacts or connector block
- Case operating temperature range −40...+85°C, −50...+85°C
- Power factor corrector
- Galvanic output isolation
- Fan power output (12 V; 0,2 A)
- Overvoltage, short-circuit and thermal protection
- Remote off/on
- Voltage output adjustment
- Parallel operation, external feedback
- Polymer potting sealing
- Recommended for application in a new designs

DESCRIPTION

Power supply modules of MAA1200 and MAA1500 series are designed for industrial and special-purpose equipment. With small dimensions (250×140×41 mm) the maximum output power of modules can reach up to 1500 W. These modules are able to operate in a wide range of case operating temperatures (−50...+85°C). They have remote off/on, full range protection (overload, short circuit, thermal). The modules of this series have a function of remote feedback for voltage drop compensation, which accurately maintains the specified voltage on a remote load. These converters have active adjustment of output current applied in case of parallel operation of several modules with common load. Polymer potting sealing ensures reliable environmental protection and excludes damage to the converter caused by vibration, dirt, moisture or salt fog.

Case of the modules has u-shaped aluminum base with a thin-walled steel cover.

COMPLIANCE

Designed to meet MIL-STD-810G

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

KWsystems

AC/DC POWER SUPPLIES MAA1200, MAA1500

ORDERING INFORMATION

MAA	1200	–	1	S	15	S	D	N
①	②		③	④	⑤	⑥	⑦	⑧

① – MAA series

② – Rated output power, W

③ – Single output model

④ – Index of nominal input voltage
S – 220 VAC (187...242 VAC)

⑤ – Nominal output voltage, VDC

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
MAA1200-1S24-SXX	187...242 VAC	1200 W	24 VDC / 50 A	89%
MAA1200-1S28-SXX	187...242 VAC	1200 W	28 VDC / 44,4 A	89%
MAA1200-1S48-SXX	187...242 VAC	1200 W	48 VDC / 25 A	90%
MAA1500-1S24-SXX	187...242 VAC	1500 W	24 VDC / 62,5 A	88%
MAA1500-1S28-SXX	187...242 VAC	1500 W	28 VDC / 55,5 A	88%
MAA1500-1S48-SXX	187...242 VAC	1500 W	48 VDC / 31,25 A	89%

AC/DC POWER SUPPLIES MAA1200, MAA1500

SPECIFICATIONS OF AC/DC POWER SUPPLIES MAA1200, MAA1500*

Input specifications	
Input voltage range*	
S	187...242 VAC (263...340 VDC) 176...264 VAC (248...372 VDC) up to 1 s
Input frequency	
S	47...53 Hz
Output specifications	
Output voltage adjustment	±10% (using on-board potentiometer R57)
Line and load regulation	max 2%
Ripple and noise (peak-to-peak)	<2% Uout. nom.
Short circuit protection**	automatic repair
Overcurrent protection	Pout...1,8 Pmax
Overload protection level**	<125% Uout. nom.
Remote on/off	Off at 3...5 VAC (5 mA) output «Contr»
General specifications	
Case temperature	
operating "N"	−40...+85°C
operating "P"	−50...+85°C
storage	−50...+85°C
power derating (free convection)	diagram (dashed, dash-dotted curve)
without power derating using heatsink	diagram (solid curve)
Humidity	93...95% / 25°C
Efficiency	88% Uout=24 VDC
Switching frequency, constant	100 kHz
Isolation voltage	
in./case	1500 VAC
in./out.	1500 VAC
out./case, out./out.	500 VAC
isolation resistance @ 500 VDC	20 Mohm min
EMC standards	IEC 60950, EN55022 (CISPR22), Class B
Thermal resistance case-ambient	0,8°C/W
Typical MTBF	2000 kHrs
Cooling	conductive (baseplate-cooled)
Weight	max 2000 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.
* All specifications are valid for normal climatic conditions, Uin. nom., Iout. nom., unless otherwise noted.
** 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.

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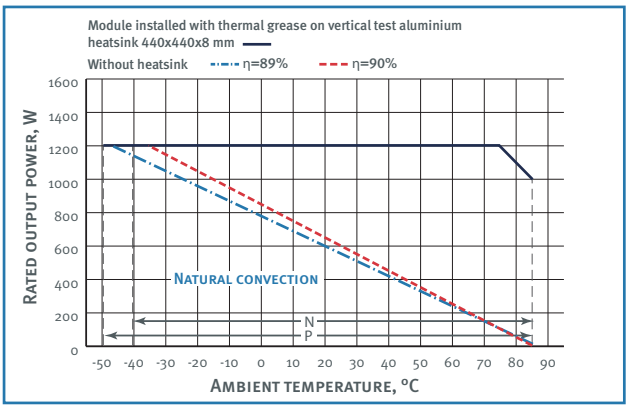
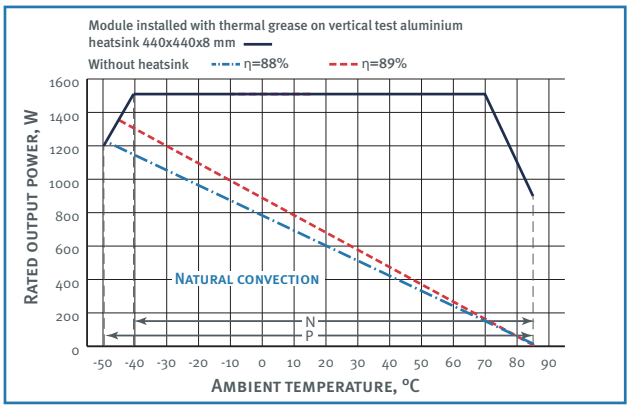
POWER DERATING VS AMBIENT TEMPERATURE DIAGRAM

MAA1200



MAA1500



Decreasing parts of the dashed and dash-dotted curves correspond to the maximum case temperature (+85ºC 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 lenght and width not less than case's and with thikness not less than 8 mm.

PIN OUT (DESIGN WITH BLADE CONTACTS) MAA1200, MAA1500

PIN #	1	2	3	4	5	6	7
FUNCTION	L	N	⏚	–REMOTE OFF	+REMOTE OFF	+RS	–RS

PIN #	8	9	10	11	12	13	14	15
FUNCTION	PARAL	+U FAN	–U FAN	NOT USE	+OUT1	+OUT1	–OUT1	–OUT1

PIN OUT (DESIGN WITH CONNECTOR BLOCKS) MAA1200, MAA1500

PIN #	X1.1	X1.2	X1.3	X2.1	X2.2	X3.1
FUNCTION	L	N	⏚	+OUT1	–OUT1	+U FAN

PIN #	X3.2	X3.3	X4.1	X4.2	X5.1	X5.2	X5.3	X5.4
FUNCTION	– U FAN	NOT USE	–REMOTE OFF	+REMOTE OFF	+RS	–RS	PARAL	NOT USE

Specifications can be changed without the prior notification. Up-to-date information can be found at kwsystems.ru

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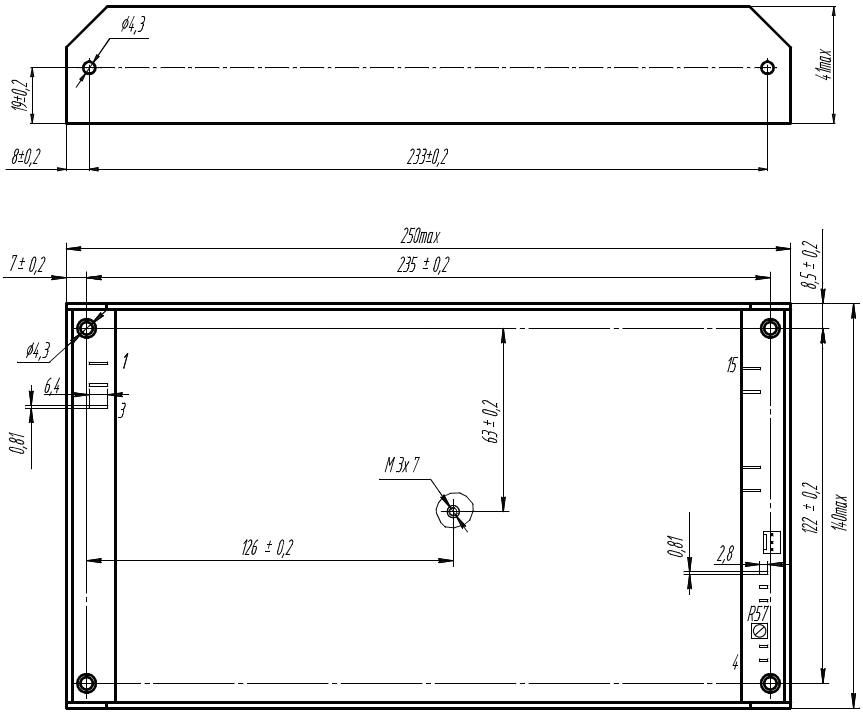
DESIGN WITH BLADE CONTACTS



DESIGN WITH CONNECTOR BLOCKS