

AC/DC power supplies

MAA Family MAA1500, 1500 W threephase



Basic specifications

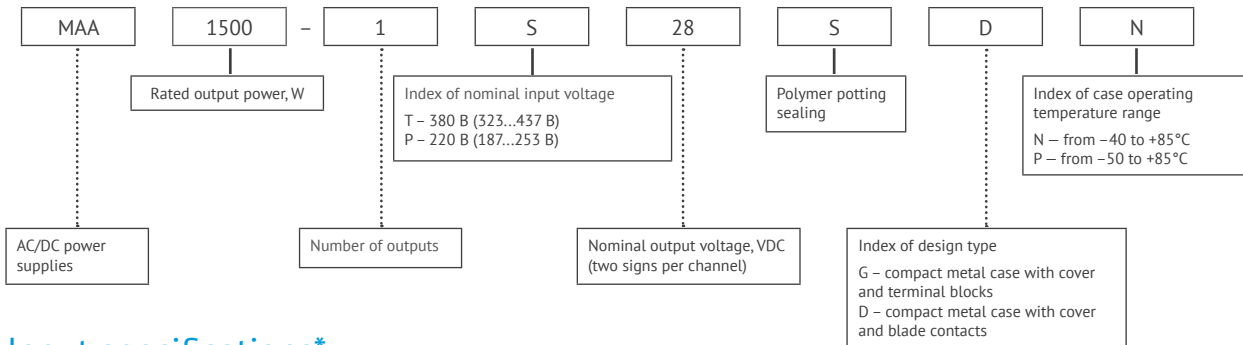
Power	1500 W
Input current	up to 80 A
Input voltage	~220 (187...264) VAC ~380 (323...437) VAC
Output voltage	=24 VDC, =28 VDC, =48 VDC
Efficiency.....	89-90%
Case operating temperature.....	-40...+85 °C; -50...+85 °C
Dimensions	250×140×41 mm
Warranty	2 years

Advantages

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



Ordering information



Input specifications*

Parameter	Value	
Input voltage range, VAC**	T (3ph. without neutral)	~323...437 (=455...616)
	P (3ph. without neutral)	~187...253 (=263...356)
Transient deviation range, VAC	T	~304...456
	P	~176...264
Transient time	T, P	1 s.
	T	47...53
Mains frequency range, Hz	P	360...440
	K	360...440

Output specifications*

Parameter	Value		
Nominal output voltage, VDC	24	28	48
Output voltage adjustment	10 %		
Efficiency, %	89	89	90
Rated output current, A	62.5	53.57	31.25
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...4.5 VDC (15...30 mA) output «REMOTE OFF»		
Maximum load capacity	33000 µF (Uout=15 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»	$-40...+85^{\circ}C$
	«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		$\geq 20 M\Omega min$
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		250×140×41
Weight, kg		< 2.4
Warranty		2 year

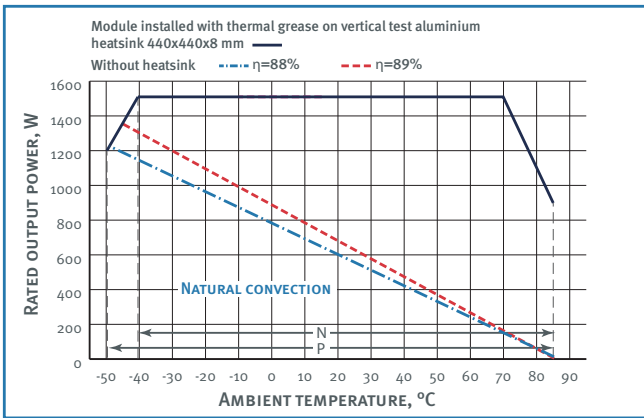
* Parameters are stated for the information purposes and could not be used at long term work, exceeding maximum output current, operating outside of a working temperatures range or when output voltage is over the range of adjustment.

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

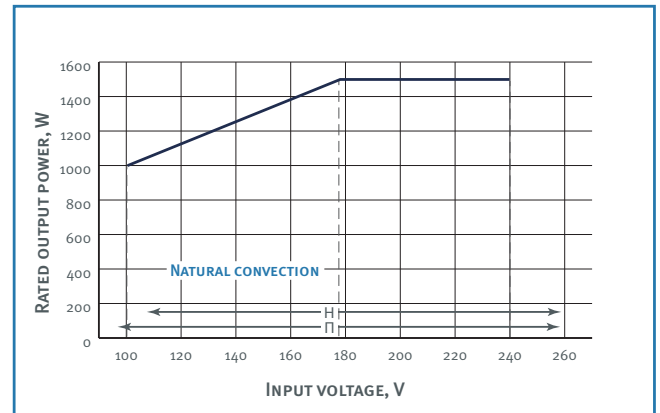
***Typical MTBF values for KWant and MAA series are determined by calculation method in accordance to MIL-HDBK-217, ($25^{\circ}C$).

Derating

vs Temperature

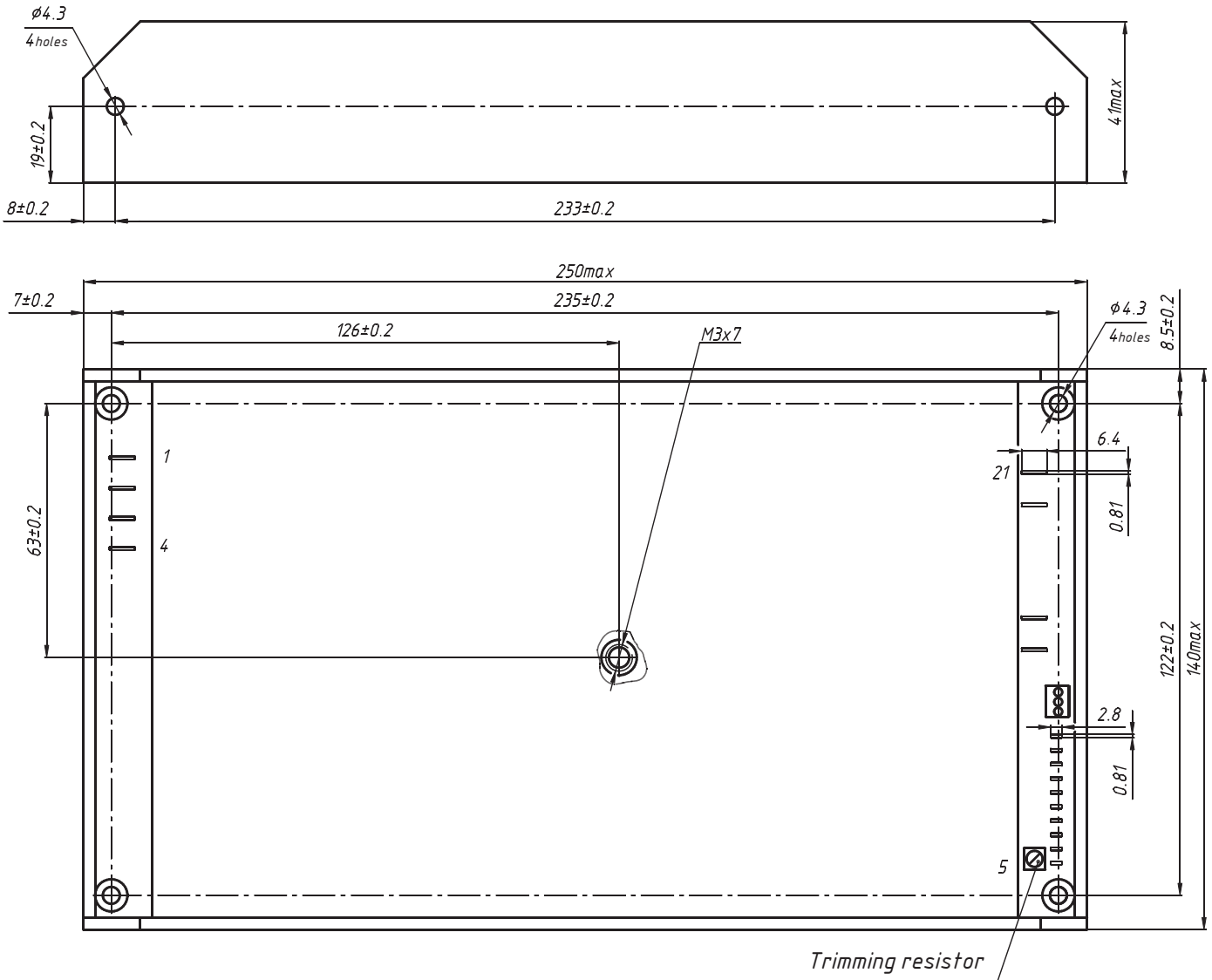



vs Input Voltage



Dimensions

Single-channel design with blade contacts

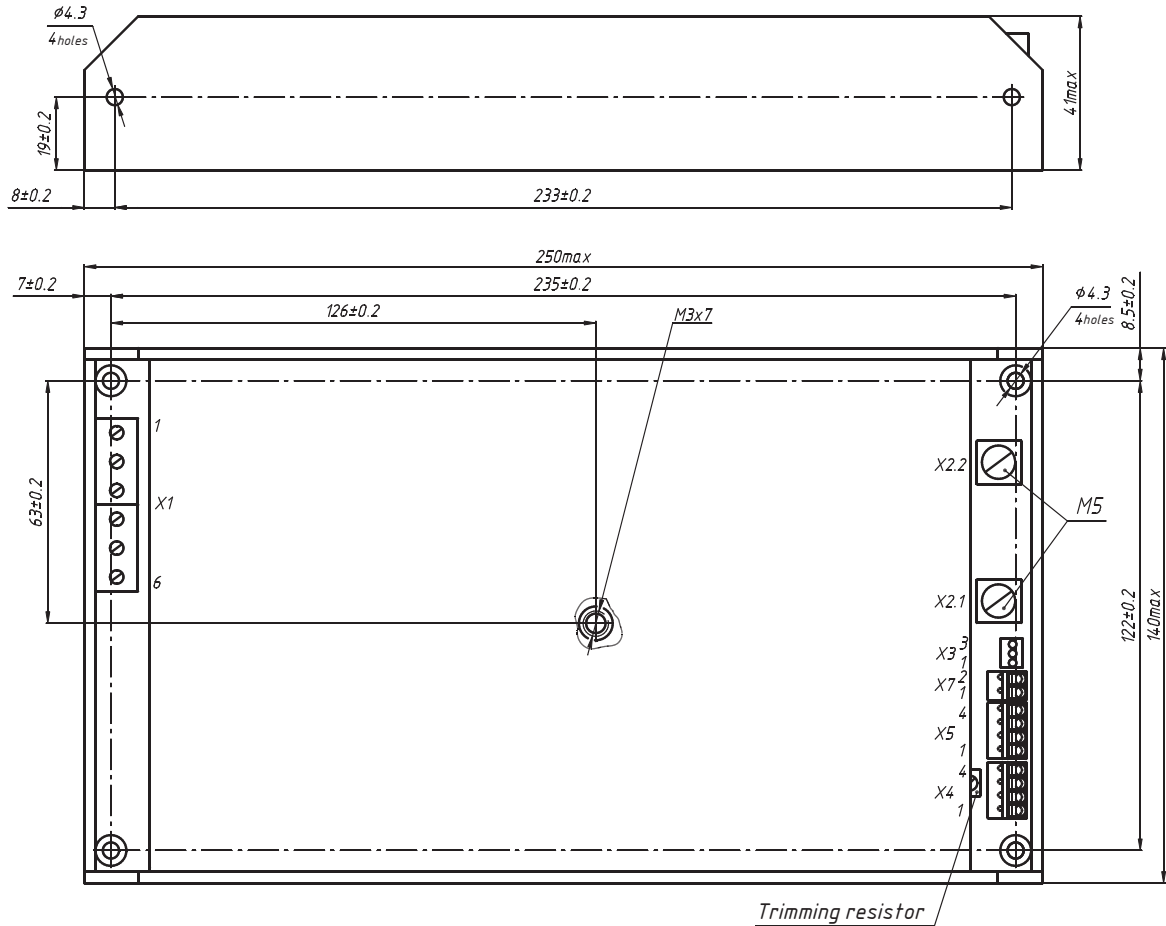


PIN #	1	2	3	4	5	6	7	8	9	10	11
SINGLE-CHANNEL	C	B	A		-REMOTE OFF	+REMOTE OFF	DIAG IN 2	DIAG IN 1	+RS	-RS	PARAL

PIN #	12	13	14	15	16	17	18	19	20	21
SINGLE-CHANNEL	TRIM	DIAG OUT 1	DIAG OUT 2	+FAN	-FAN	NOT USE	+OUT	+OUT	-OUT	-OUT

Dimensions

Single-channel design with terminal blocks



PIN #	X1.1	X1.2	X1.3	X1.4	X1.5	X1.6	X2.1	X2.2	X3.1	X3.2	X3.3
SINGLE-CHANNEL	C	B	A	⊥	NOT USE	NOT USE	+OUT	-OUT	+FAN	-FAN	NOT USE

PIN #	X4.1	X4.2	X4.3	X4.4	X5.1	X5.2	X5.3	X5.4	X7.1	X7.2
SINGLE-CHANNEL	-REMOTE OFF	+REMOTE OFF	DIAG IN 1	DIAG IN 2	+RS	-RS	PARAL	TRIM	DIAG OUT 1	DIAG OUT 2



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

This datasheet is valid for the following units:
MAA1500-1T24CXX, MAA1500-1T28CXX, MAA1500-1T48CXX, MAA1500-1P24CXX, MAA1500-1P28CXX, MAA1500-1P48CXX.