

AC/DC power supplies

MAA Family MAA500 threephase, 500 W



Basic specifications

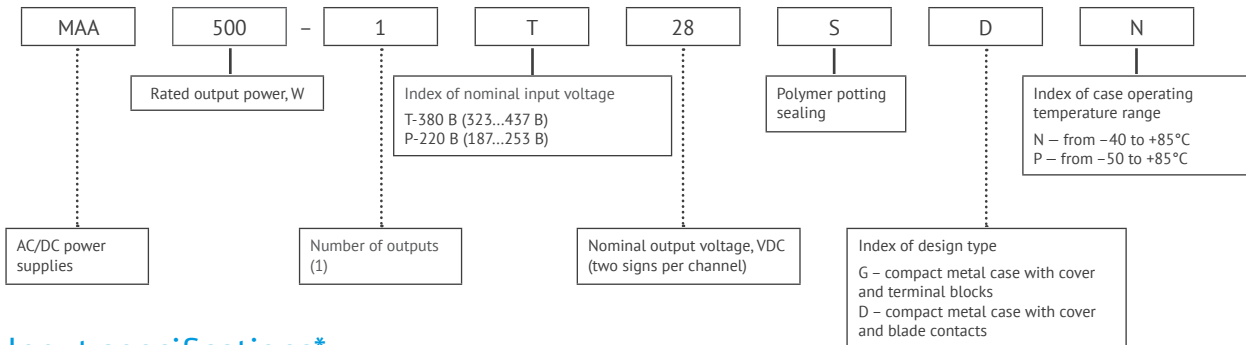
Power	500 W
Output current	up to 60 A
Input voltage	~380 (323...437) VAC
Output voltage	=28 VDC
Efficiency.....	87 %
Case operating temperature.....	-40...+85 °C; -50...+85 °C
Dimensions	175×93×35 mm
Warranty	years

Advantages

- ◀ Design to meet MIL-STD-810G and MIL-STD-461E
- ◀ Parallel and series operation
- ◀ Output voltage adjustment
- ◀ Conductive cooling



Ordering information



Input specifications*

Parameter	Value	
Input voltage range, VAC**	T (3ph without neutral)	~323...437 (=455...616)
	P T (3ph without neutral)	~187...253 (=263...356)
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

Output specifications*

Parameter	Value
Nominal output voltage, VDC	28
Output voltage adjustment	10 %
Efficiency, %	87
Rated output current, A	17.86
Ripple and noise (peak-to-peak)	<2%
Line and load regulation	max 2%
Start-up time, ms	<500
Remote on/off	Off at 3,5...4,5 VDC (15...30 mA) output «REMOTE OFF»
Maximum load capacity	60000 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**

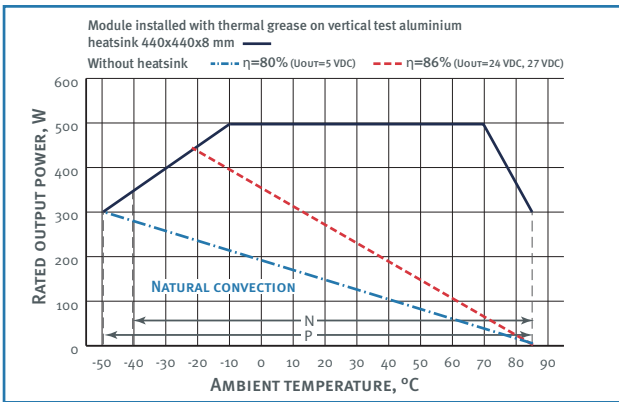
Parameter		Value
Type of connection		screw terminals and blade contacts
Protection level		IP20
Case temperature, operating	«N»	$-40...+85^{\circ}C$
	«P»	$-50...+85^{\circ}C$
Case temperature, storage		$-50...+70^{\circ}C$
Humidity		98% / $35^{\circ}C$
Isolation voltage	in /case	~ 1500 VAC
	in /out	~ 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		$1.8^{\circ}C / W$
Typical MTBF		3 000 000 Hrs
Case material		metal
Dimensions, mm		175×93×35
Weight, kg		< 1.1
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.

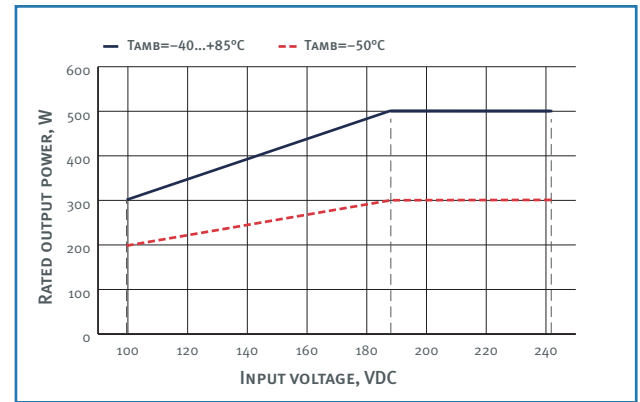
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Derating

vs Temperature. MAA500

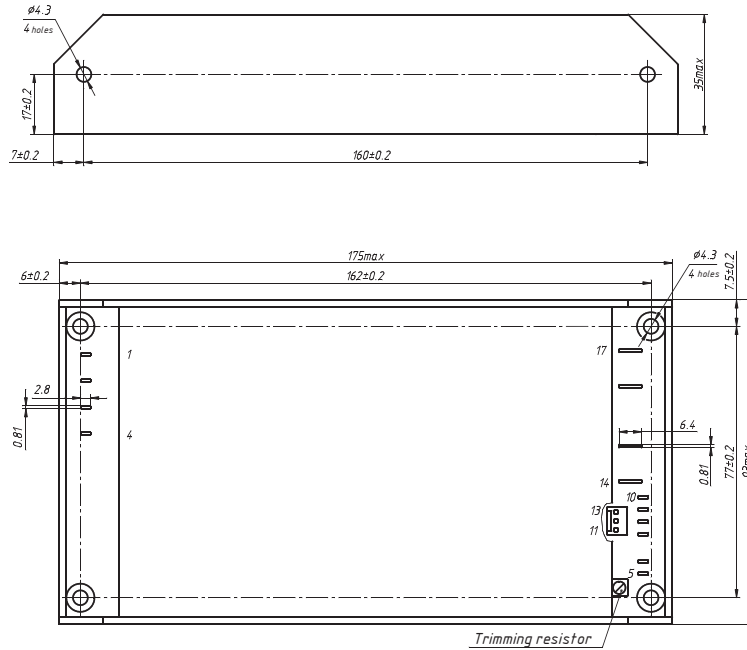


vs Input Voltage. MAA500



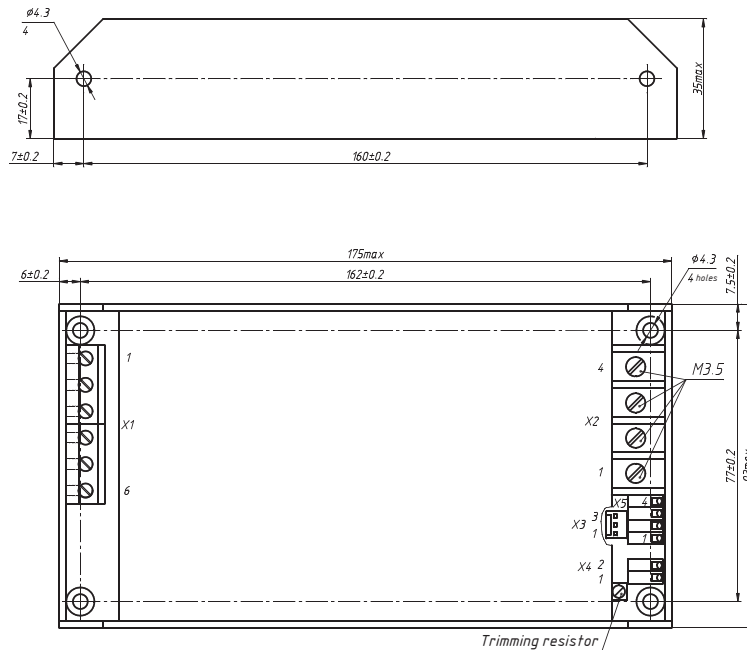
Dimensions

Single-channel design with blade contacts



PIN #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
SINGLE-CHANNEL	C	B	A	⊕	-REMOTE OFF	+REMOTE OFF	+RS	-RS	PARAL	TRIM	NOT USE	-U FAN	+U FAN	+OUT	+OUT	-OUT	-OUT

Single-channel design with terminal blocks



PIN #	X1.1	X1.2	X1.3	X1.4	X1.5	X1.6	X2.1	X2.2	X2.3	X2.4	X3.1	X3.2	X3.3	X4.1	X4.2	X5.1	X5.2	X5.3	X5.4
SINGLE-CHANNEL	C	B	A	⊕	NOT USE	NOT USE	+OUT	+OUT	-OUT	-OUT	NOT USE	-U FAN	+U FAN	-REMOTE OFF	+REMOTE OFF	+RS	-RS	PARAL	TRIM



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