

AC/DC power supplies

KWant Family KWant500, 500 W



Basic specifications

Power	500 W
Output current	up to 60 A
Input voltage	220 (100...264) VAC
Output voltage	12, 15, 24, 28 VDC
Efficiency.....	95 %
Case operating temperature.....	-40...+85 °C; -50...+85 °C
Dimensions	175×93×35 mm
Warranty	2 years

Advantages

- ◀ MIL-STD-461E without external components
- ◀ MIL-STD-810G
- ◀ Parallel and series operation
- ◀ Output voltage adjustment
- ◀ Conductive cooling
- ◀ Active PFC



Description of KWant500 on the manufacturer's website:
eng.kwsystems.ru/catalog/acdc/models/9

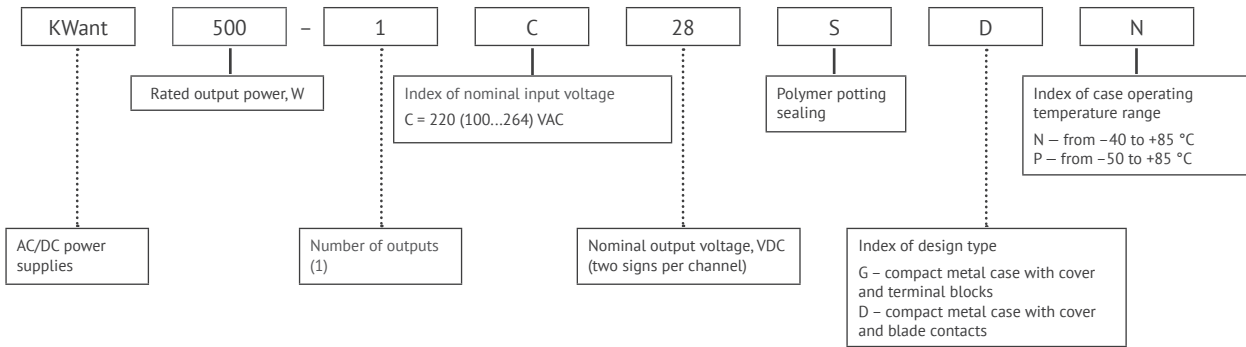
Order registration

+7 473 200 87 80, Global Operations Team

Technical support

Mikhail Timokhin, mtimohin@kwsystems.ru

Ordering information



Input specifications*

Parameter	Value
Input voltage range, VAC**	C 220 (100...264)
Transient deviation range, VAC	C 100...264
Transient time	-
Mains frequency range, Hz	47...440

Output specifications*

Parameter	Value
Nominal output voltage, VDC	12 15 24 28
Output voltage adjustment	10 %
Efficiency, %	95
Rated output current, A	41.66 33.33 20.83 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	20000 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	$P_{max} < 1.8 P_{nom}$
Overvoltage protection level*	$< 125 \% U_{out\ nom.}$
Overheat protection	triggers at case temperature $> 85\ ^\circ\text{C}$

Basic specifications**

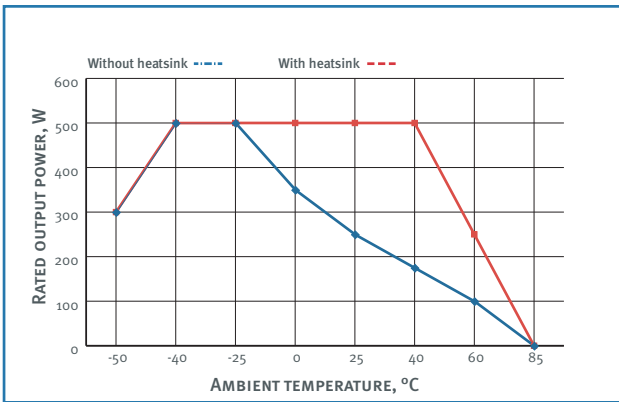
Parameter		Value
Type of connection		screw terminals and blade contacts
Protection level		IP20
Case temperature, operating	«N»	$-40\dots+85\ ^\circ\text{C}$
	«P»	$-50\dots+85\ ^\circ\text{C}$
Case temperature, storage		$-50\dots+70\ ^\circ\text{C}$
Humidity		98 % / 35 °C
Isolation voltage	in /case	$\sim 1500\ \text{VAC}$
	in /out	$\sim 1500\ \text{VAC}$
	out /case, out/out	$\sim 500\ \text{VAC}$
Isolation resistance @ 500 VDC		$\geq 20\ \text{M}\Omega\ \text{min}$
Cooling		conductive, forced air
Environmental influence standards		design to meet MIL-STD-810G
EMC standards		MIL-STD-461E
Thermal resistance case-ambient		$1.8\ ^\circ\text{C} / \text{W}$
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.

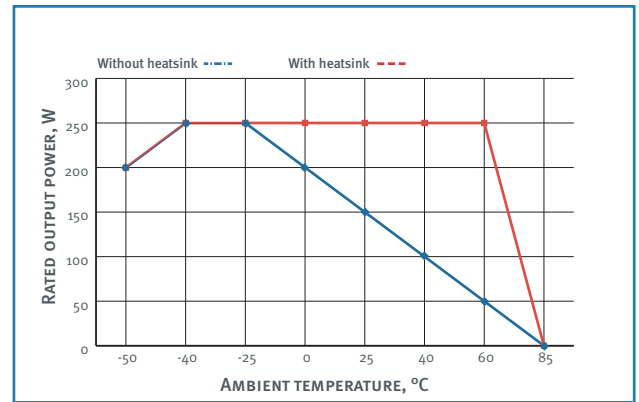
** All specifications are valid for normal climatic conditions, $U_{in\ nom.}$, $I_{out\ nom.}$, unless otherwise noted.

Derating

vs Temperature. KWant500 (at input voltage 230 VAC)

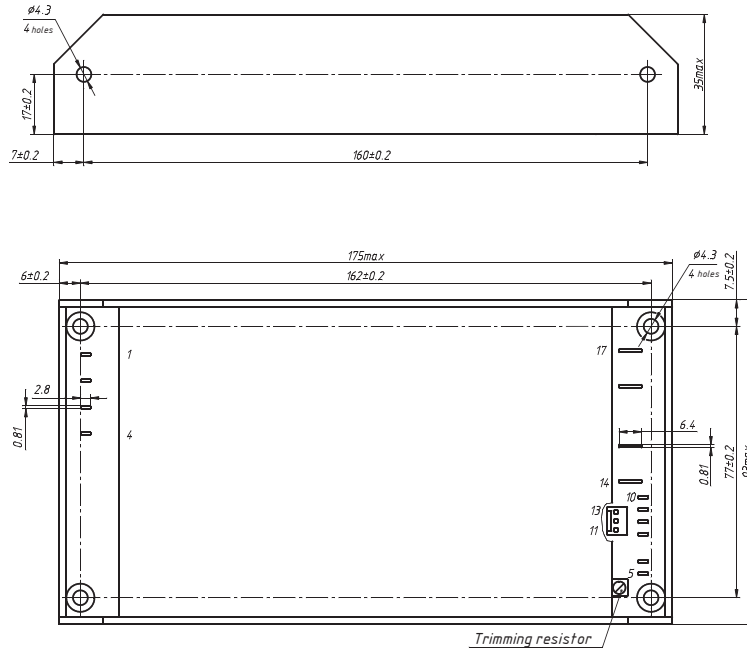


vs Input Voltage. KWant500 (at input voltage 100 VAC)



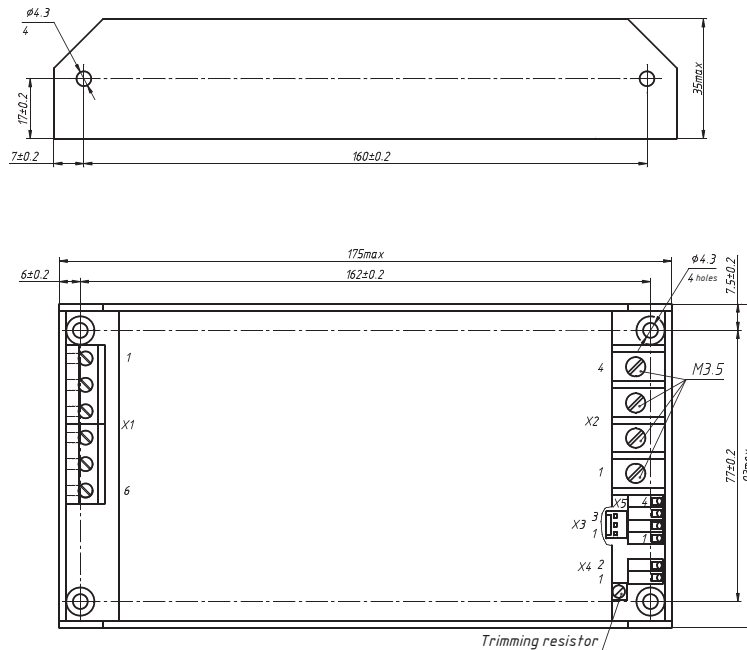
Dimensions

Single-channel design with blade contacts



PIN #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
SINGLE-CHANNEL	L	N	⊕	-REMOTE OFF	+REMOTE OFF	+RS	-RS	PARAL	NOT USE	-U FAN	+U FAN	+OUT	+OUT	-OUT	-OUT

Single-channel design with terminal blocks



PIN #	X1.1	X1.2	X1.3	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	L	N	⊕	+OUT1	+OUT1	-OUT1	-OUT1	NOT USE	-U FAN	+U FAN	-REMOTE OFF	+REMOTE OFF	+RS	-RS	PARAL	NOT USE



www.kwsystems.ru 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: KWant500-1C12CXX, KWant500-1C15CXX, KWant500-1C24CXX, KWant500-1C28CXX.