

## AC/DC power supplies

### KWant Family

### KWant250 NEW, 250 W



#### Basic specifications

Power .....	250 W
Input current .....	up to 10.4 A
Input voltage .....	~220 (100...264) VAC
Output voltage .....	=24 VDC, =28 VDC
Efficiency.....	94 %
Case operating temperature.....	-40...+85 °C; -50...+85 °C
Dimensions .....	134x84x33 mm
Warranty .....	2 years

#### Advantages

- ◀ MIL-STD-461E (EN55022 class B) without external components
- ◀ MIL-STD-810G
- ◀ Series operation
- ◀ Conductive cooling
- ◀ Active PFC



Description of KWant250 on the manufacturer's website:  
[eng.kwsystems.ru/catalog/acdc/models/7](http://eng.kwsystems.ru/catalog/acdc/models/7)

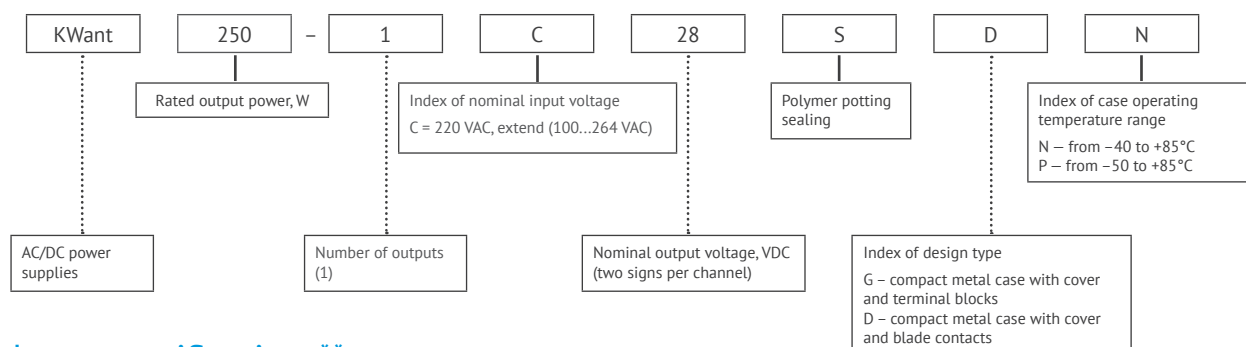
#### Order registration

+7 473 200 87 80, Global Operations Team

#### Technical support

[techsupport@kwsystems.ru](mailto:techsupport@kwsystems.ru)

### Ordering information



### Input specifications\*\*

Parameter		Value
Input voltage range, VAC	C	~100...264 (=141...372)
Transient deviation range, VAC	C	~100...264
Transient time	C	-
Mains frequency range, Hz	C	47...440

### Output specifications\*

Parameter		Value
Nominal output voltage, VDC		24      28
Efficiency, %		94      94
Rated output current, A		10.41      8.92
Ripple and noise (peak-to-peak)	ambient temperature +25 °C	<0.5%
	ambient temperature range -50...+70 °C	<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		10000 µF

\*All specifications are valid for normal climatic conditions (ambient temp. +15...+35 °C; relative humidity 45...80%; air pressure 8.6\*10<sup>4</sup>...10.6\*10<sup>4</sup> Pa), U<sub>in</sub>. nom., I<sub>out</sub>. nom., unless otherwise noted.

## Protections

Type of protection	
Short-circuit protection*	auto recovery
Overload protection	$P_{max} < 1.2 P_{nom}$ (auto recovery during 60 sec. after remove of overload)
Overvoltage protection level*	$< 125\% U_{out nom.}$
Overheat protection	triggers at case temperature $> 85^{\circ}C$

## Basic specifications\*\*

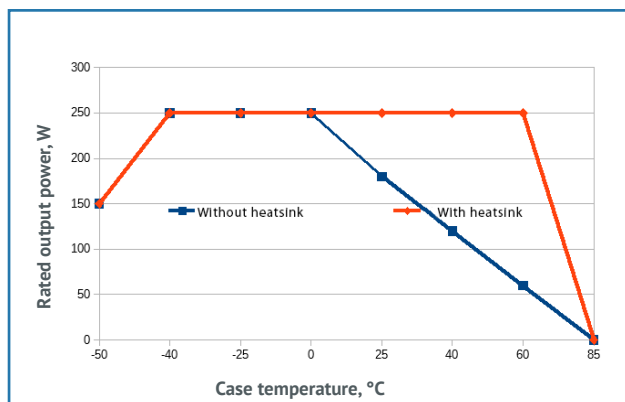
Parameter		Value
Type of connection		screw terminals and blade contacts
Protection level		IP20
Case temperature, operating	«N»	$-40...+85^{\circ}C$
	«P»	$-50...+85^{\circ}C$
Case temperature, storage		$-50...+70^{\circ}C$
Humidity		98% / $35^{\circ}C$
Isolation voltage	in /case	$\sim 1500 VAC$
	in /out	$\sim 1500 VAC$
	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		MIL-STD-461E (EN55022 class B) CE102
Thermal resistance case-ambient		$2.7^{\circ}C / W$
Typical MTBF		3 000 000 Hrs
Case material		metal
Dimensions, mm		134×84×33
Weight, kg		$< 0.6$
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.

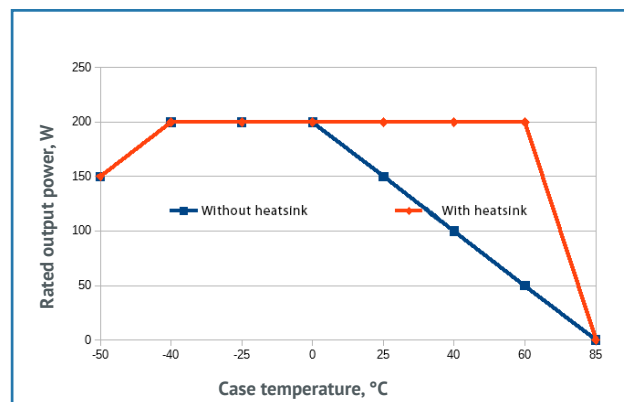
\*\* All specifications are valid for normal climatic conditions,  $U_{in nom.}$ ,  $I_{out nom.}$ , unless otherwise noted.

## Derating

vs Temperature (input voltage 230 VAC)

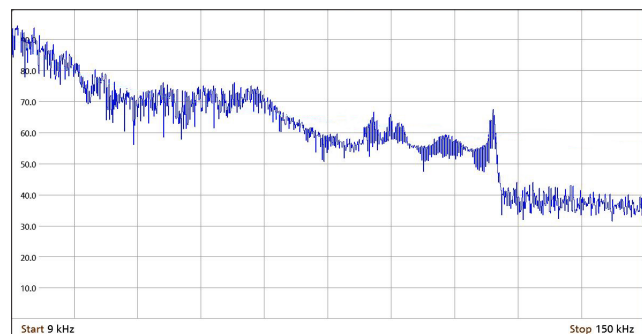


vs Temperature (input voltage 110 VAC)

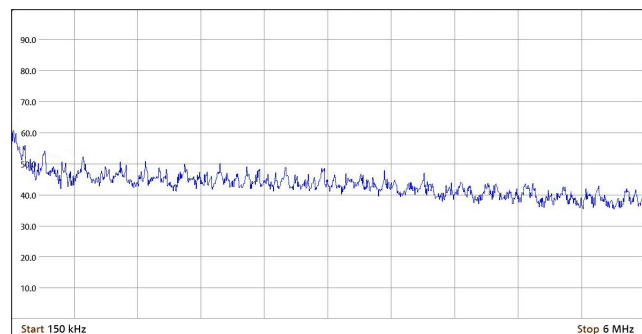


## KWant250-1C28SXX EMC spectrograms. 9,5 A

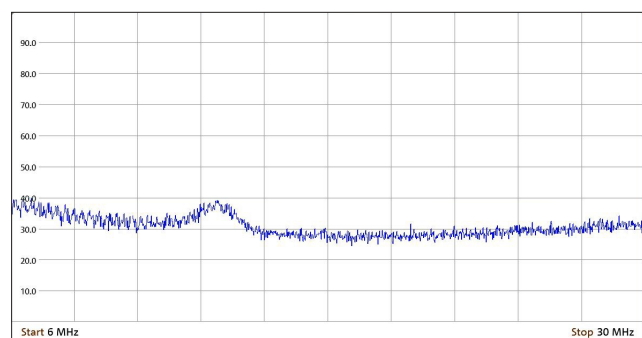
100 VAC input



EMI for KWant250-1C28SXX at 9 kHz-150 kHz within 300 Hz step at Max Peak mode.

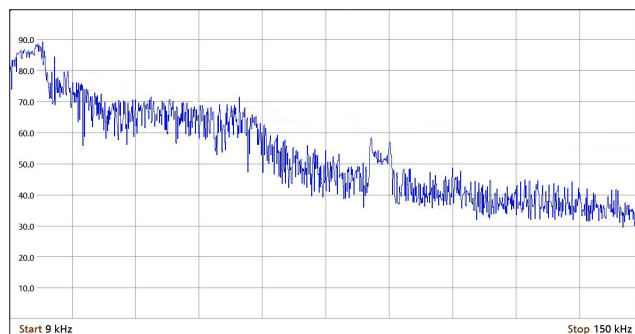


EMI for KWant250-1C28SXX at 150 kHz-6 MHz within 10 kHz step at Max Peak mode.

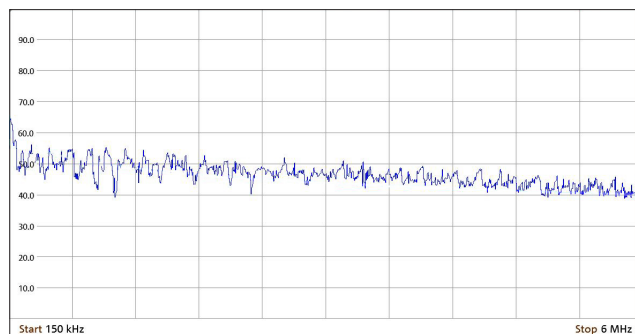


EMI for KWant250-1C28SXX at 6 MHz-30 MHz within 10 kHz step at Max Peak mode.

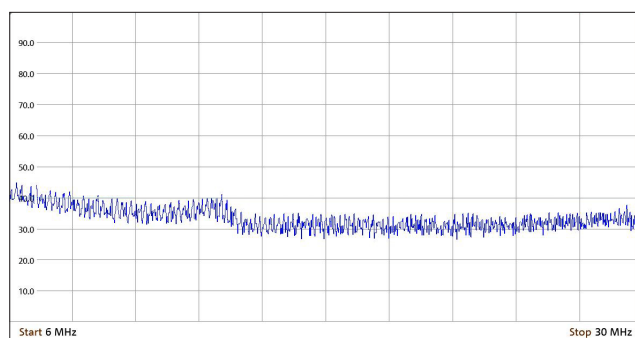
230 VAC input



EMI for KWant250-1C28SXX at 9 kHz-150 kHz within 300 Hz step at Max Peak mode.



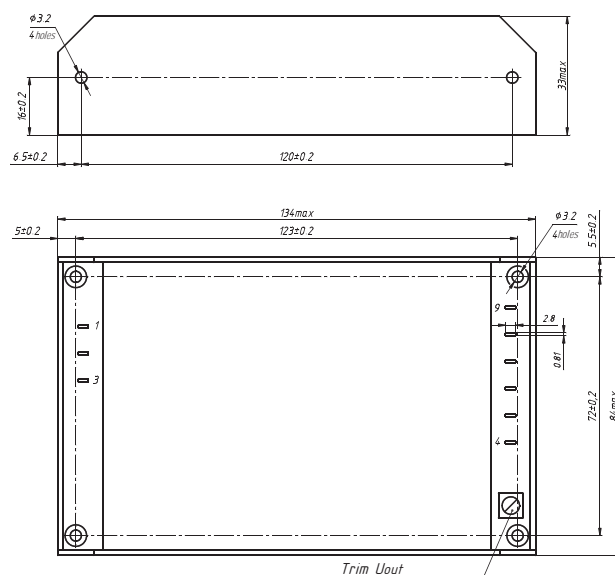
EMI for KWant250-1C28SXX at 150 kHz-6 MHz within 10 kHz step at Max Peak mode.




EMI for KWant250-1C28SXX at 6 MHz-30 MHz within 10 kHz step at Max Peak mode.

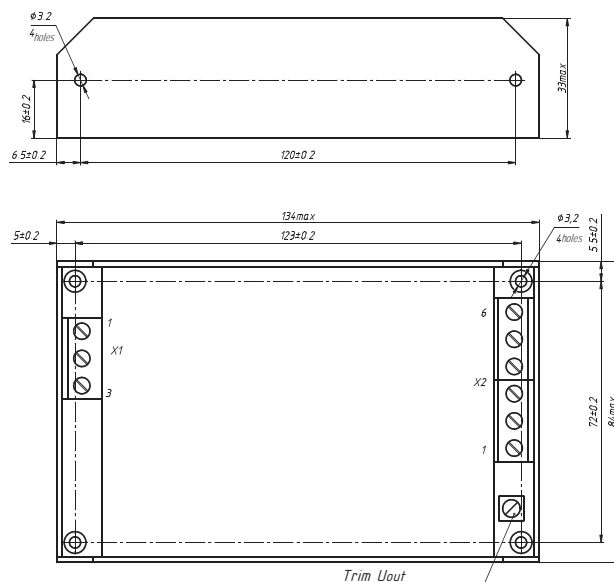
## Dimensions


### Single-channel design with blade contacts



PIN #	1	2	3	4	5	6	7	8	9	10	11	12	13
SINGLE-CHANNEL	L	N		-REMOTE OFF	+REMOTE OFF	+OUT1	+OUT1	-OUT1	-OUT1	—	—	—	—

### Single-channel design with terminal blocks



PIN #	X1.1	X1.2	X1.3	X2.1	X2.2	X2.3	X2.4	X2.5	X2.6	X2.7	X2.8	X2.9	X2.10
SINGLE-CHANNEL	L	N		-REMOTE OFF	+REMOTE OFF	+OUT1	+OUT1	-OUT1	-OUT1	—	—	—	—



[www.kwsystems.ru](http://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.

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This datasheet is valid for the following units: KWant250-1C24CXX, KWant250-1C28CXX.