

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

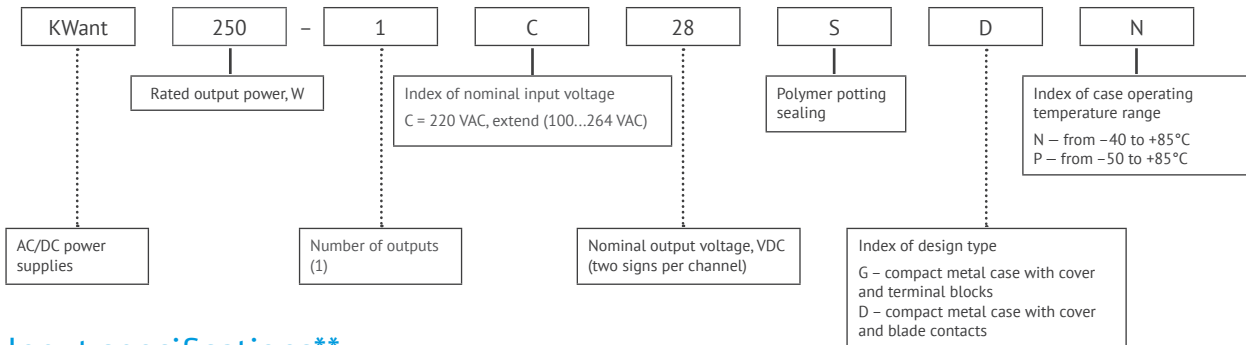
Order registration

+7 473 200 87 80, Global Operations Team

Technical support

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*10⁴...10.6*10⁴ Pa), U_{in}. nom., I_{out}. nom., unless otherwise noted.

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 $> 85^{\circ}\text{C}$

Basic specifications**

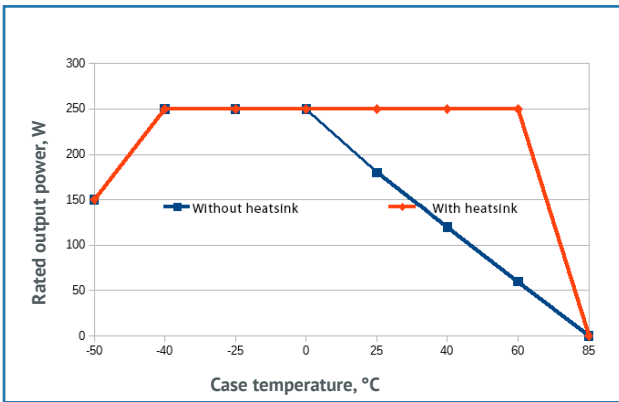
Parameter		Value
Type of connection		screw terminals and blade contacts
Protection level		IP20
Case temperature, operating	«N»	$-40...+85^{\circ}\text{C}$
	«P»	$-50...+85^{\circ}\text{C}$
Case temperature, storage		$-50...+70^{\circ}\text{C}$
Humidity		98% / 35°C
Isolation voltage	in /case	$\sim 1500\text{ VAC}$
	in /out	$\sim 1500\text{ VAC}$
	out /case, out/out	$\sim 500\text{ VAC}$
Isolation resistance @ 500 VDC		$\geq 20\text{ MOhm min}$
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		$2.7^{\circ}\text{C} / \text{W}$
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.

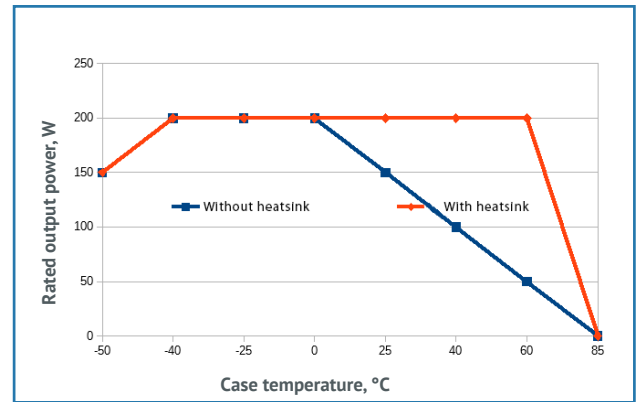
** All specifications are valid for normal climatic conditions, $U_{in\ nom.}$, $I_{out\ nom.}$, unless otherwise noted.

Derating

vs Temperature (input voltage 230 VAC)

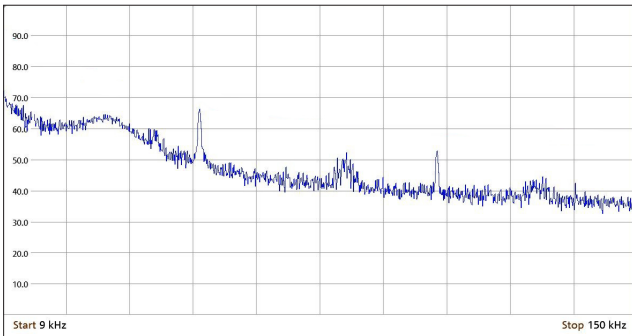


vs Temperature (input voltage 110 VAC)

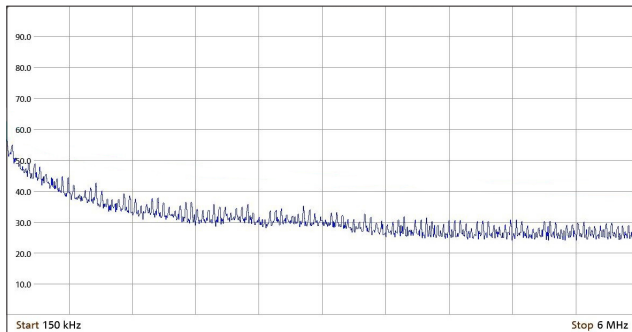


KWant250-1C28SXX EMC spectrograms

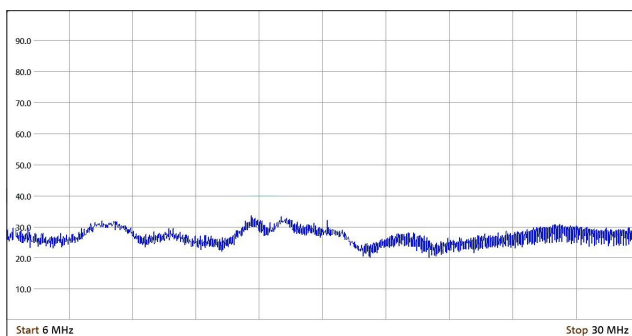
100 VAC input



EMI for MAA30-1C05SXX at 9 kHz-150 kHz within 300 Hz step at Max Peak mode.

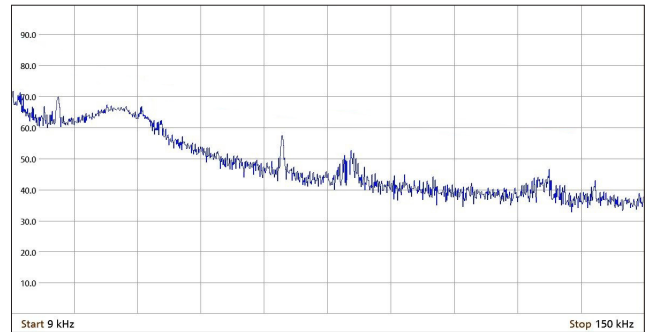


EMI for MAA30-1C05SXX at 150 kHz-6 MHz within 10 kHz step at Max Peak mode.

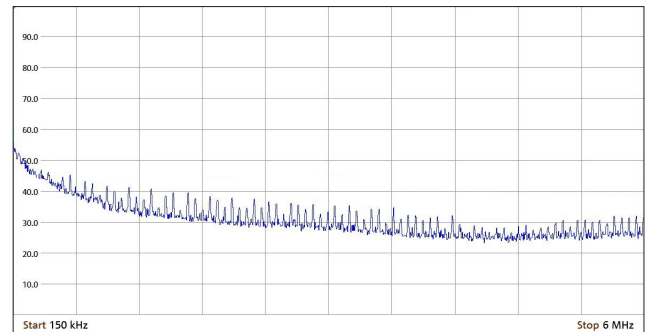


EMI for MAA30-1C05SXX at 6 MHz-30 MHz within 10 kHz step at Max Peak mode.

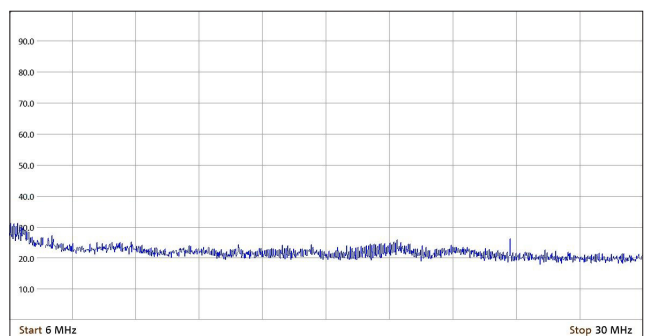
230 VAC input



EMI for MAA30-1C2427XX & MAA30-1C28SXX at 9 kHz-150 kHz within 300 Hz step at Max Peak mode.



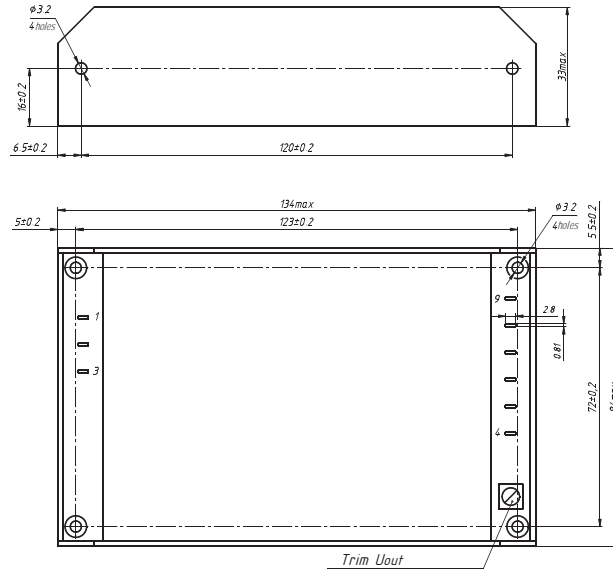
EMI for MAA30-1C24SXX & MAA30-1C28SXX at 150 kHz-6 MHz within 10 kHz step at Max Peak mode.



EMI for MAA30-1C24SXX & MAA30-1C28SXX at 6 MHz-30 MHz within 10 kHz step at Max Peak mode.

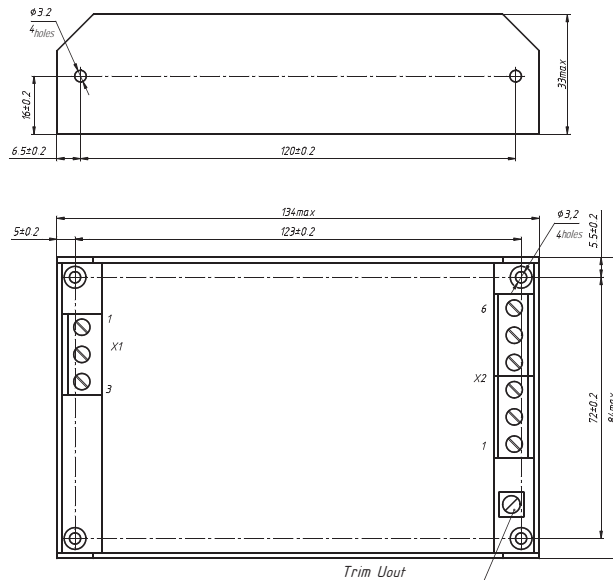
Dimensions

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	-	-	-	-



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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.