AC/DC power supplies

KWant Family
KWant30 NEW, 30 W

Basic specifications

Power ..... 30 W

Output current ..... up to 6 A

Input voltage ..... 220 (100...264) VAC

Output voltage ..... 5 VDC, 12VDC, 15VDC, 24 VDC, 28 VDC

Efficiency..... ≥75%

Case operating temperature..... –40...+85 °C; –50...+85 °C

Dimensions ..... 101×51×20 mm

Warranty ..... 2 years

Advantages

- MIL-STD-461E without external components
- MIL-STD-810G
- Extra low ripple-and-noise level of 40 mV (at Uout=28 VDC) without external components
- Convection cooling (without heatsink up to +40 °C ambient)

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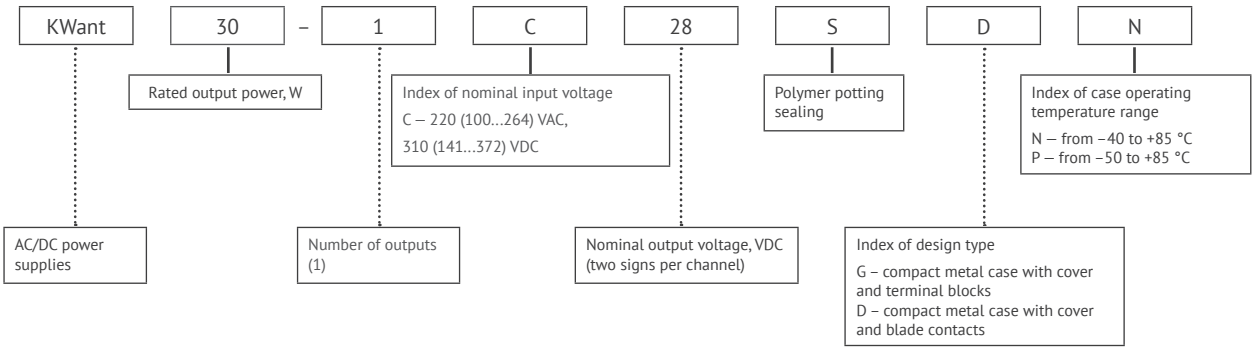
Ordering information



Output specifications*

Parameter	Value				
Nominal output voltage, VDC	5	12	15	24	28
Efficiency, %	72%	⩾75%			
Rated output current, A	6	2.5	2	1.25	1.1
Ripple and noise (peak-to-peak), %	⩽2				
Line and load regulation	±2% for the first channel ±10% for second channel				
Start-up time, s	<0,5				
Maximum load capacity	22500 uF	7500 uF		2500 uF	

Input specifications*

Parameter	Value
Input voltage range, VAC**	100...264 (141...372 VDC)
Transient deviation range, VAC	100...264
Transient time	1 s.
Mains frequency range, Hz	47...53
I^2t (Joule integral) for pulse-type current	25
Pre-fuse	Slow blow 1.25 A

* 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), Uin. nom., Iout. nom., unless otherwise noted.

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Protections

Type of protection	
Short-circuit protection	auto recovery
Overload protection	Pmax<1.8 Pnom
Overvoltage protection level	<125 % Uout nom.
Overheat protection	triggers at case temperature > 100 °C ± 3 °C

Basic specifications

Parameter		Value
Type of connection		screw terminals and blade contacts
Protection level		IP20
Case temperature, operating	«N»	–40...+85 °C
	«P»	–50...+85 °C
Ambient temperature, storage		–60...+70 °C
Humidity		95 % / +25 °C
Isolation voltage	in /case	1500 VAC
	in /out	1500 VAC
	out /case	500 VAC
Isolation resistance @ 500 VDC		⩾ 20 MOhm min
Cooling		conductive
Environmental influence standards		design to meet MIL-STD-810G
Operational altitude		up to 35 000 m / 115 000 ft
EMC standards		MIL-STD-461E
Typical MTBF		up to 75 000 hrs
Case material		metal
Dimensions, mm (W×D×H)		101×51×20
Weight, kg		0.15
Warranty		2 years

Terminal specification, input/output	
Cross section of the flexible conductor, mm² (max)	0.5...1.5
Cross section of AWG conductor, min	28
Cross section of AWG conductor, max	12
Strip length, mm	6

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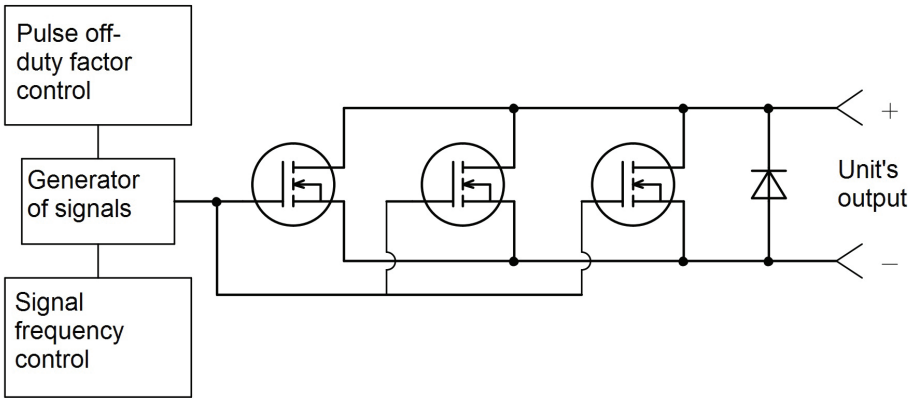
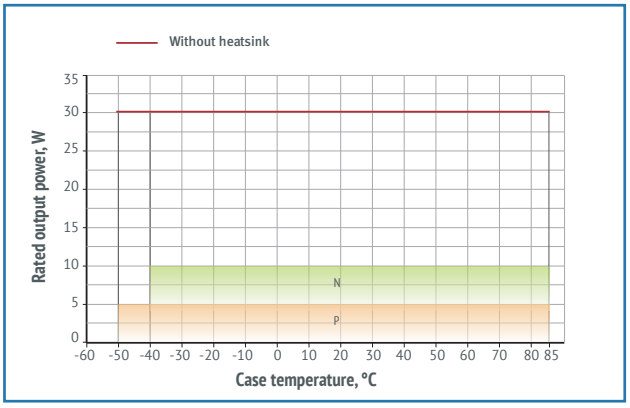
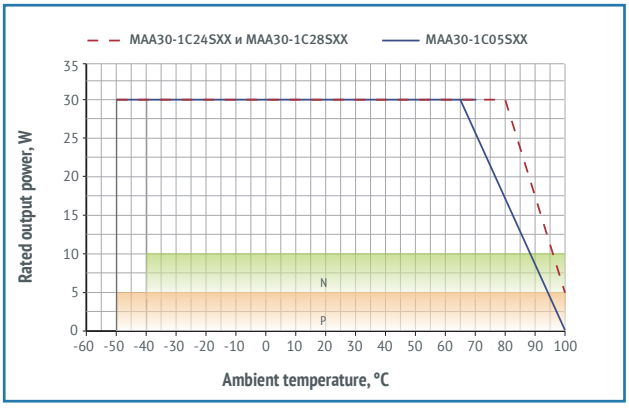
Block diagram for short-circuit debugging



Derating

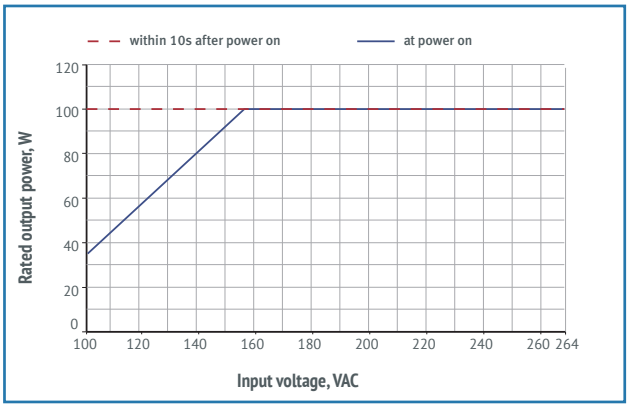
vs Temperature



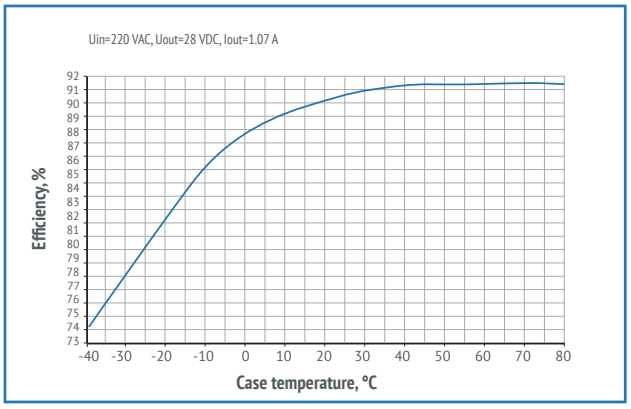


Decreasing parts of the dashed and dash-dotted curves correspond to the maximum case temperature (+85 °C for models with index «N» and «P»). Output power must not exceed the values limited by curve for a given ambient temperature.

vs Input Voltage



Efficiency



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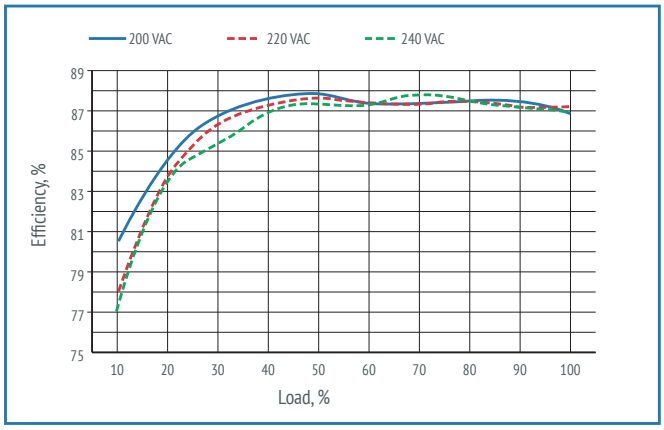
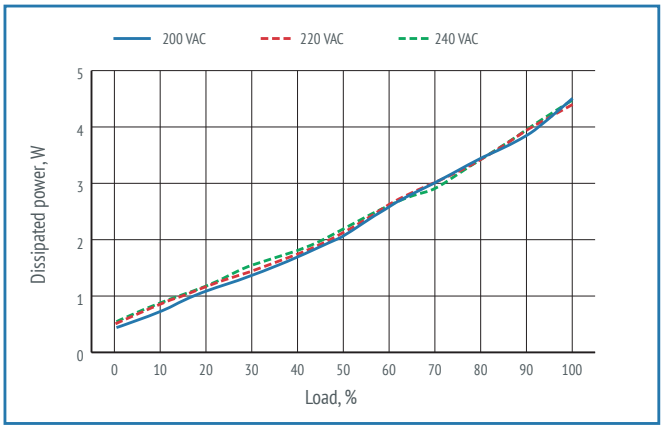
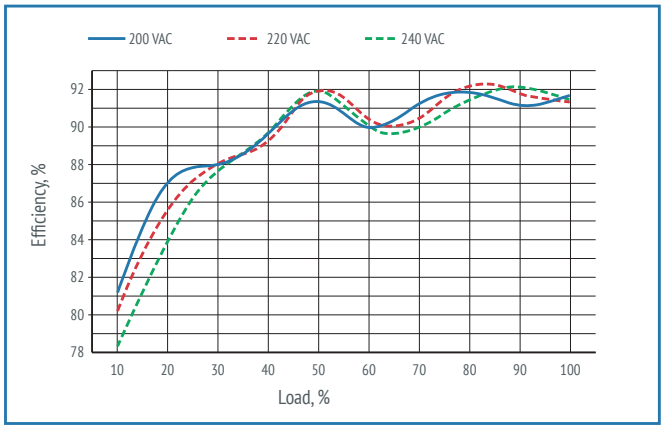
Efficiency



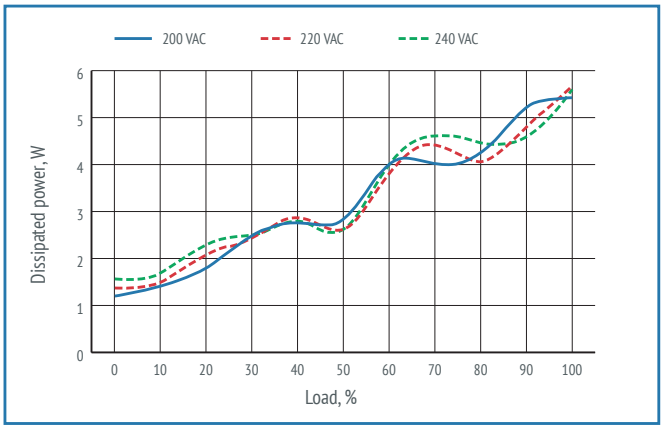
Efficiency vs load for KWant30-1C05SXX



Dissipated power vs load for KWant30-1C05SXX



Efficiency vs load for KWant30-1C24SXX and KWant30-1C28SXX.



Dissipated power vs load for KWant30-1C24SXX and KWant30-1C28SXX

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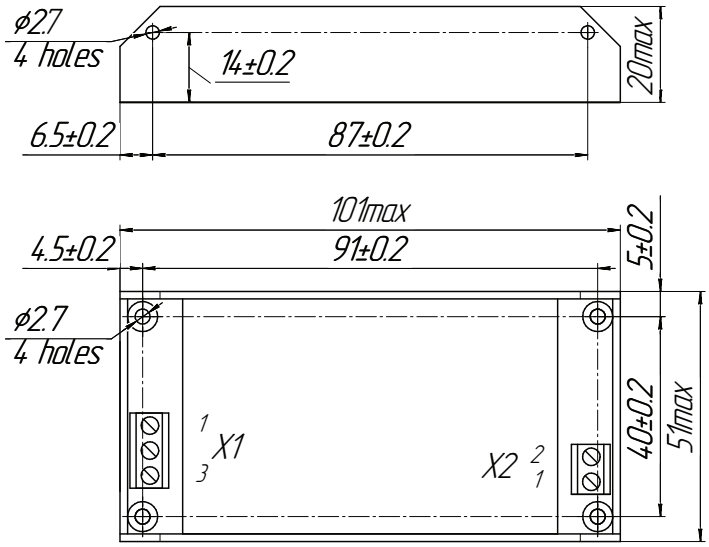
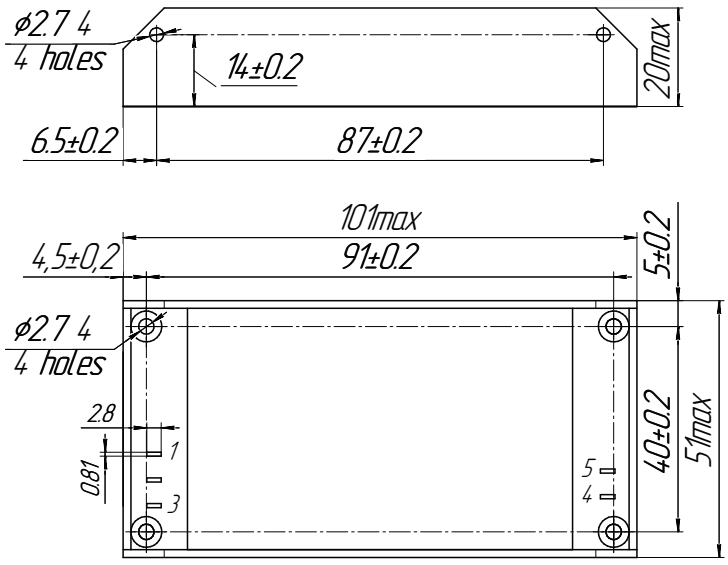
Dimensions

Single-channel design with terminal blocks



PIN #	X1.1	X1.2	X1.3	X2.1	X2.2
SINGLE-CHANNEL	L	N	⏚	+OUT 1	–OUT 1

Single-channel design with blade contacts



PIN #	1	2	3	4	5
SINGLE-CHANNEL	L	N	⏚	+OUT 1	–OUT 1

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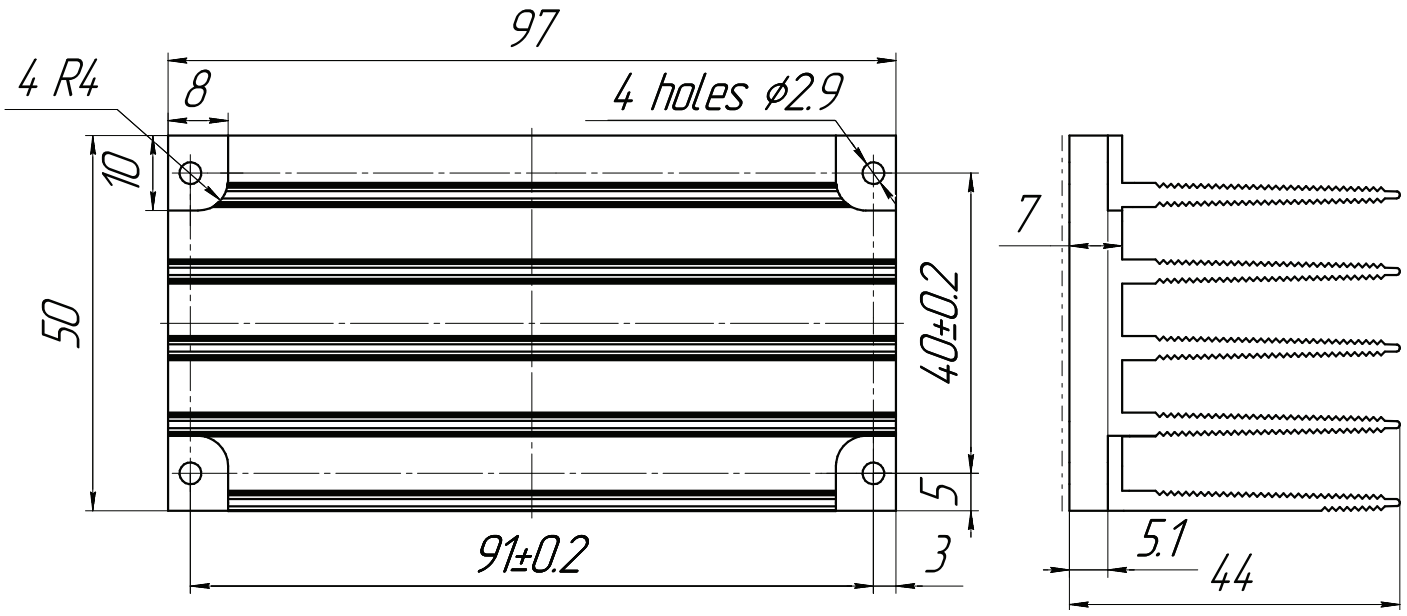
Heatsink drawing

Lengthwise ribbed heatsink



This datasheet is valid for the following units: KWant30-1C05SXX, KWant30-1C12SXX, KWant30-1C24SXX, KWant30-1C28SXX.

* Must be ordered separately if required

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