

AC/DC power supplies

KWant Family KWant30 NEW, 30 W



Under development

Basic specifications

Power	30 W
Output current	up to 6 A
Input voltage	220 (100...264) VAC
Output voltage	5 VDC, 24 VDC, 28 VDC
Efficiency.....	78 – 85%
Case operating temperature.....	-40...+100 °C; -50...+100 °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 20 mV (at Uout=28 VDC) without external components
- ◀ Convection cooling (without heatsink up to +40°C ambient)



Description of KWant30 on the manufacturer's website:
eng.kwsystems.ru/catalog/acdc/models/1

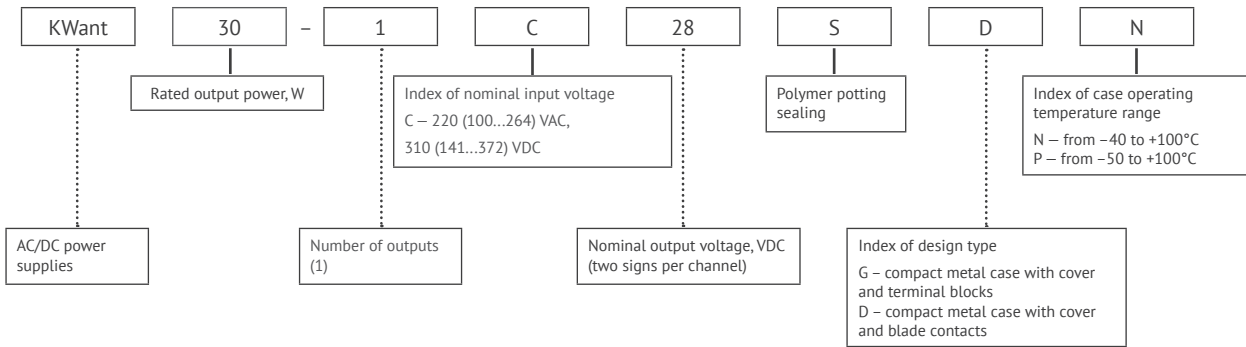
Order registration

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Technical support

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Ordering information



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...440

Output specifications*

Parameter	Value		
Nominal output voltage, VDC	5	24	28
Efficiency, %	78	84	85
Rated output current, A	6	1.25	1.07
Ripple and noise (peak-to-peak)	<2%		
Line and load regulation	max 2%		
Start-up time, ms	<500		
Maximum load capacity	22500 µF (Uout=5 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 $> 100^{\circ}C$

Basic specifications**

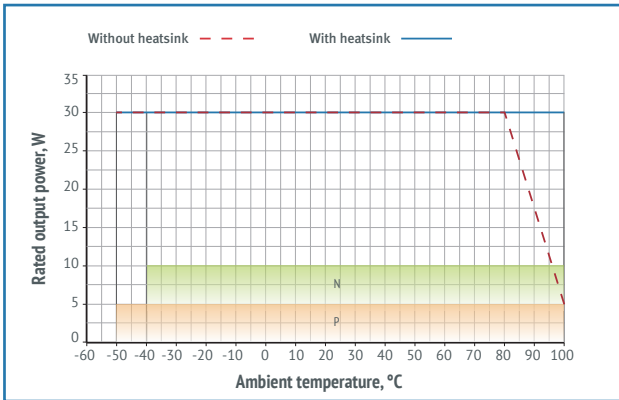
Parameter		Value
Type of connection		screw terminals and blade contacts
Protection level		IP20
Case temperature, operating	«N»	$-40...+100^{\circ}C$
	«P»	$-50...+100^{\circ}C$
Ambient temperature, storage		$-55...+100^{\circ}C$
Humidity		98% / $35^{\circ}C$
Isolation voltage	in /case	1500 VAC
	in /out	1500 VAC
	out /case, out/out	500 VAC
Isolation resistance @ 500 VDC		$\geq 20 M\Omega$ min
Cooling		convective, conductive, forced air
Environmental influence standards		design to meet MIL-STD-810G
EMC standards		MIL-STD-461E
Thermal resistance case-ambient		$6.4^{\circ}C / W$
Typical MTBF		3 000 000 Hrs
Case material		metal
Dimensions, mm		101×51×20
Weight, kg		0.1
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.

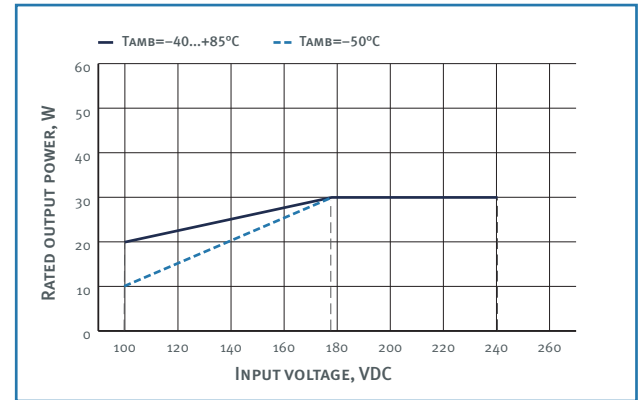
Derating

vs Temperature

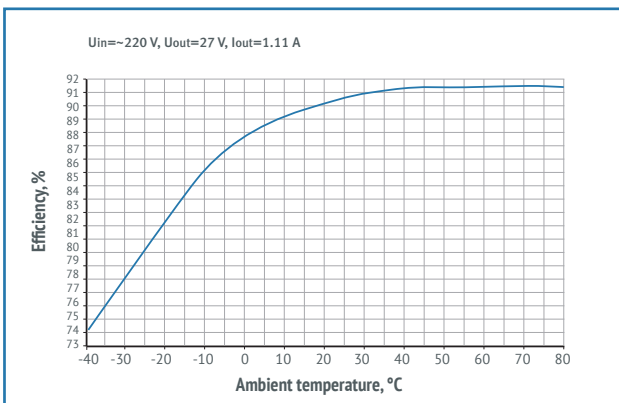


Decreasing parts of the dashed and dash-dotted curves correspond to the maximum case temperature (+85°C for models with index «N» and «P»). Output power must not exceed the values limited by curve for a given ambient temperature.

vs Input Voltage

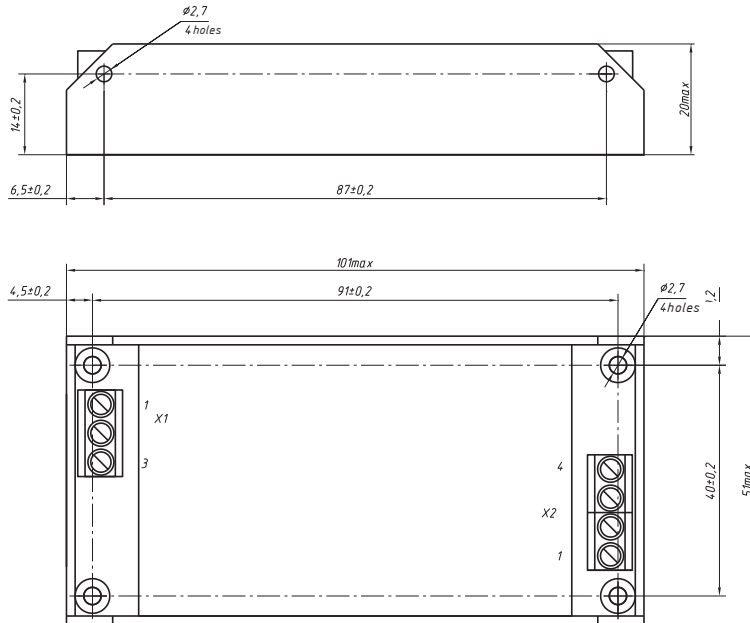


Efficiency



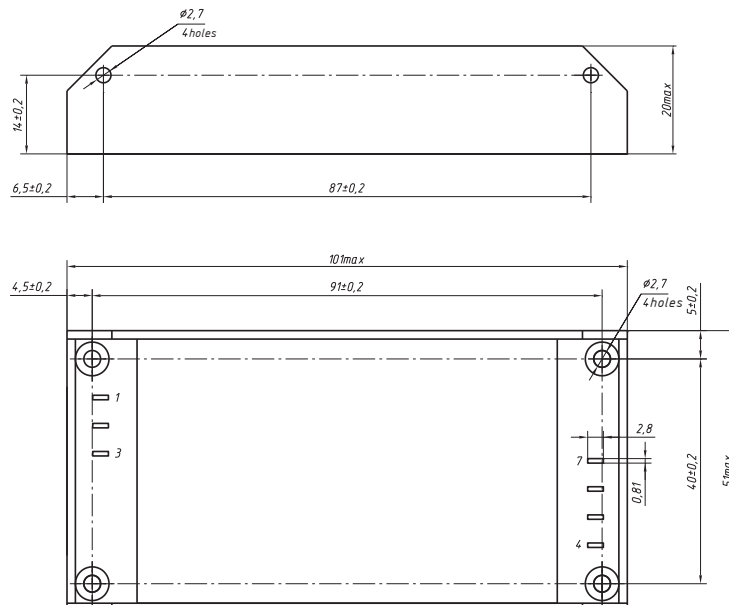
Dimensions


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
SINGLE-CHANNEL		L	N	+OUT 1	+OUT 1	-OUT 1	-OUT 1	-	-

Single-channel design with blade contacts



PIN #	1	2	3	4	5	6	7	8	9
SINGLE-CHANNEL		L	N	+OUT 1	+OUT 1	-OUT 1	-OUT 1	-	-



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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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