

AC/DC power supplies

KWant Family KWant-L150, 150 W



Basic specifications

Power	150 W
Output current	up to 20 A
Input voltage	~220 (85...264) VAC
Output voltage	5; 12; 15; 24; 28 VDC
Efficiency.....	up to 94 %
Case operating temperature.....	- 50...+85 °C
Dimensions	134×84×33 mm
Warranty	2 years

Advantages

- ◀ Design to meet MIL-STD-810G and MIL-STD-461E
- ◀ Remote OFF/ON
- ◀ Conductive cooling

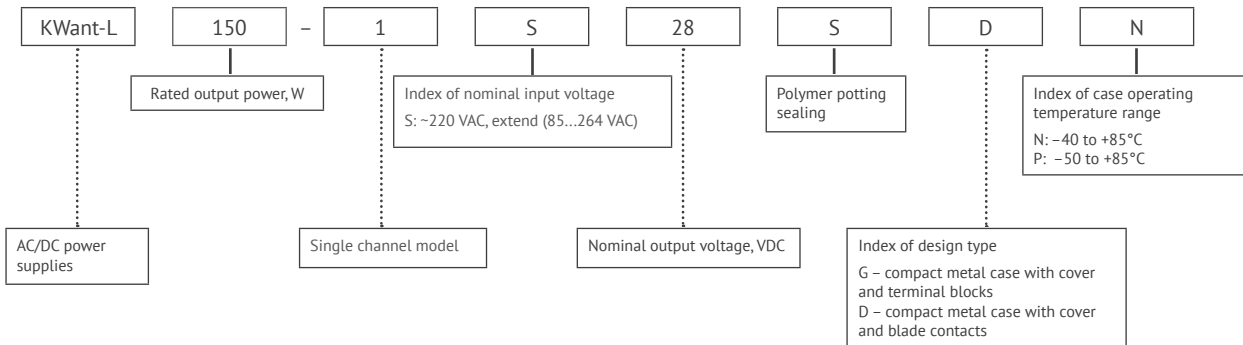
Order registration

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Technical support

Yuri Kazaryan, techsupport@kwsystems.ru

Ordering information



Input specifications*

Parameter	Value
Input voltage range, VAC	S 85...264 (=120...372) with derating
Mains frequency range, Hz	S 47...440 Hz

Output specifications*

Parameter	Value				
Nominal output voltage, VDC	5	12	15	24	28
Efficiency, %	87.5	92	92.5	93.5	94
Rated output current, A	20	12.5	10	6.25	5.36
Ripple and noise (peak-to-peak), mV**	65	60	70	80	80
Line and load regulation	< 0.5 %	< 0.25 %			
Start-up time, ms (input 115-230VAC case 10...50°C)	< 1000	< 500		< 500	
Remote on/off	Off at 3...5 VDC (≤5 mA) output «REMOTE OFF»				
Maximum load capacity	35 000 uF	26 000 uF		4 200 uF	
Hold-up time (input 115/220VAC case 10...50°C)	18/60ms				

Protections

Type of protection	
Short-circuit protection*	auto recovery
Overload protection	Pmax<1.5 Pnom
Overvoltage protection level*	<125% Uout nom.
Overheat protection	case > 85°C

* 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.

** Efficiency is measured within 230VAC input, 100% load, 50°C ambient and after thermal balance of power supply

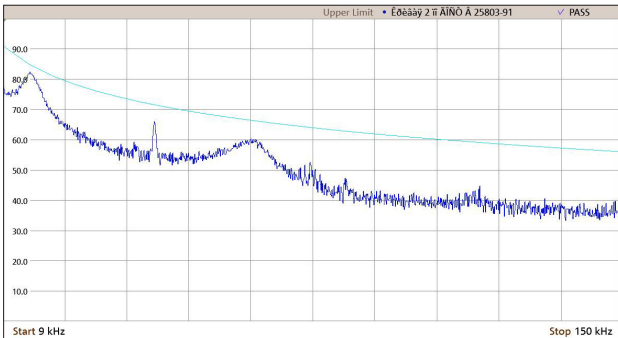
Basic specifications*

Parameter	Value	
Type of connection	screw terminals and blade contacts	
Protection level	IP20	
Case temperature, operating	«N»	-40...+85 °C
	«P»	-50...+85 °C
Case temperature, storage	-50...+70 °C	
Humidity	98 % / 35°C	
Isolation voltage	in /case	~1500 VAC
	in /out	~1500 VAC
	out /case	~500 VAC
Isolation resistance @ 500 VDC	≥ 20 MOhm min	
Cooling	conductive, forced air	
Environmental influence standard	design to meet MIL-STD-810G	
EMC standard	EN55022 class B (CISPR22); MIL-STD-461E	
Typical MTTF	3 000 000 Hrs	
Case material	metal	
Dimensions, mm	134×84×33	
Weight, kg	< 0.6	
Warranty	2 years	

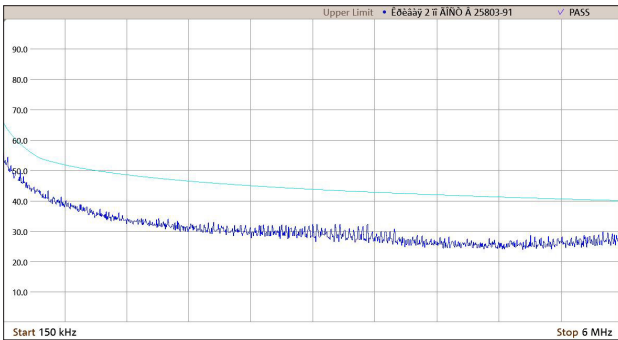
* All specifications are valid for normal climatic conditions, Uin. nom., Iout. nom., unless otherwise noted.

EMC spectrograms

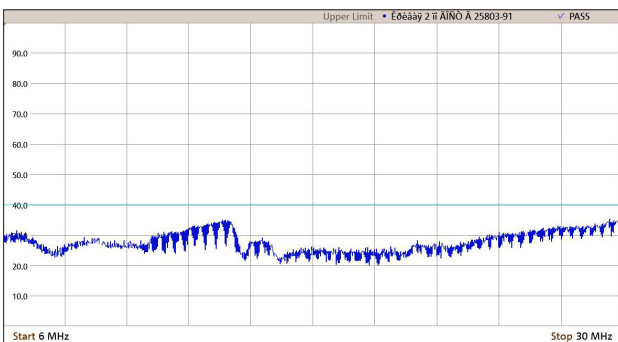
KWant-L-1C05SXX



EMI for KWant-L150-1C05SXX at 9kHz-150kHz within 300Hz step at Max Peak mode

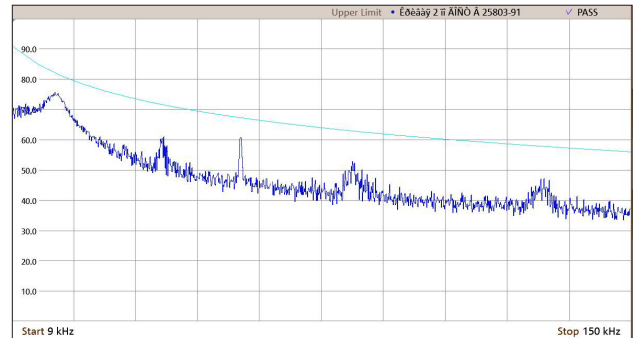


EMI for KWant-L150-1C05SXX at 150 kHz-6 MHz within 10kHz step at Max Peak mode

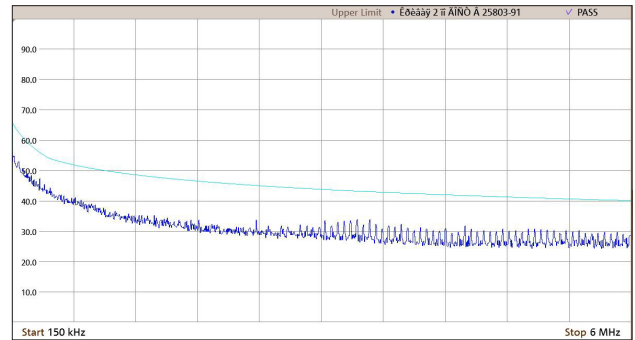


EMI for KWant-L150-1C05SXX at 6 MHz-30 MHz within 10kHz step at Max Peak mode.

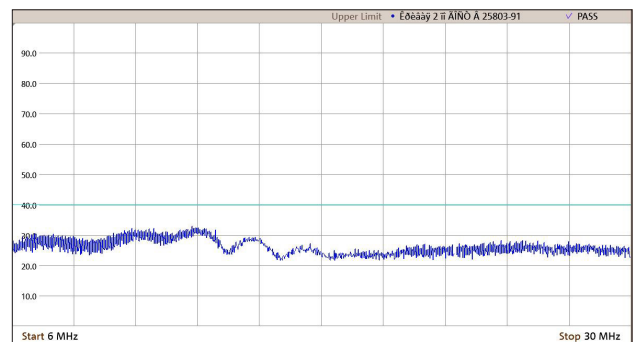
KWant-L150-1C12/15SXX



EMI for KWant-L150-1C12/15SXX at 9kHz-150kHz within 300Hz step at Max Peak mode



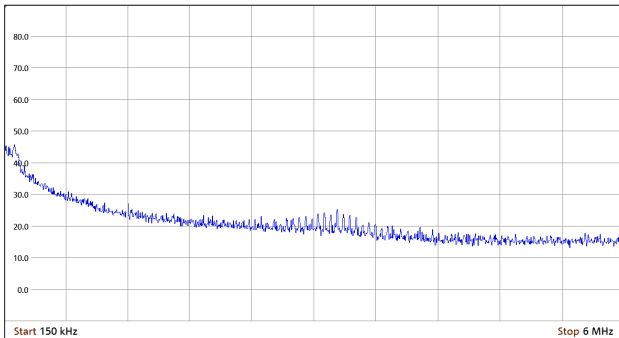
EMI for KWant-L150-1C12/15SXX at 150 kHz-6 MHz within 10kHz step at Max Peak mode



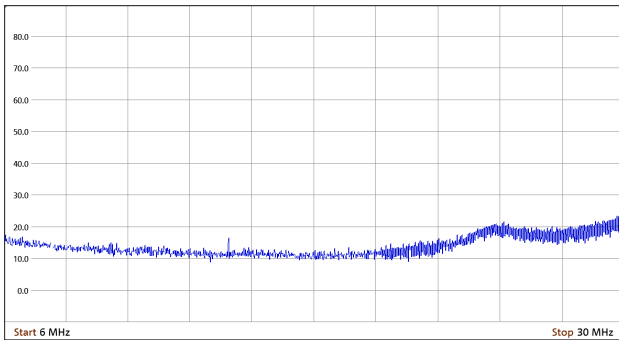
EMI for KWant-L150-1C12/15SXX at 6 MHz-30 MHz within 10kHz step at Max Peak mode.

EMC spectrograms

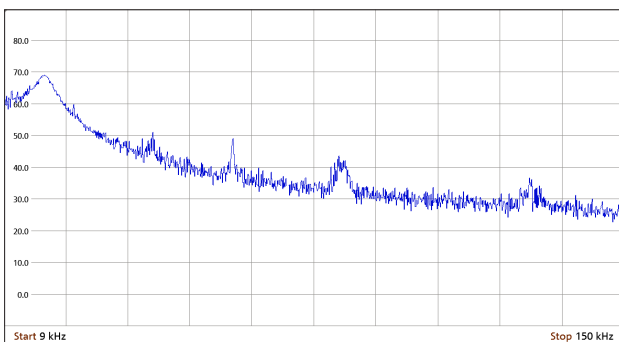
KWant-L150-1C24/28SXX



EMI for KWant-L150-1C24/28SXX at 9kHz-150kHz within 300Hz step at Max Peak mode.



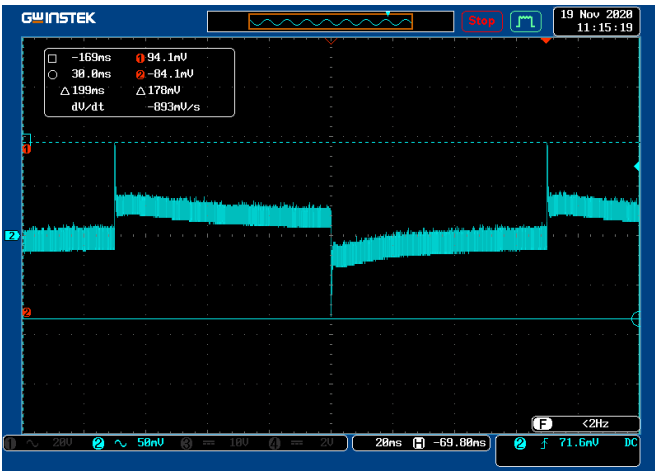
EMI for KWant-L150-1C24/28SXX at 150 kHz-6 MHz within 10kHz step at Max Peak mode.



EMI for KWant-L150-1C24/28SXX at 6 MHz-30 MHz within 10kHz step at Max Peak mode.

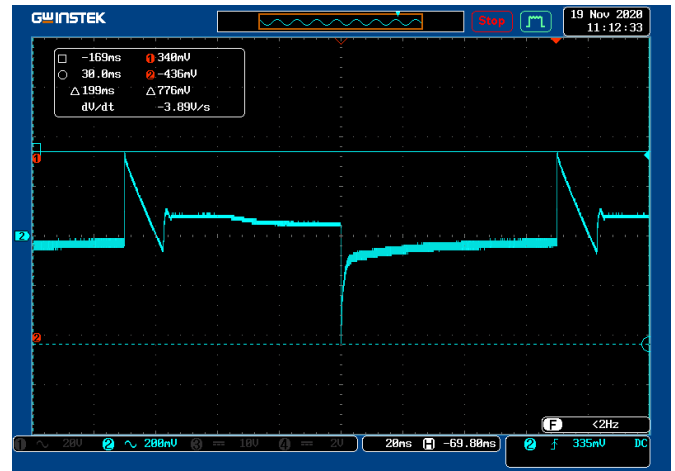
Oscillograph charts

KWant-L150-1C05SXX



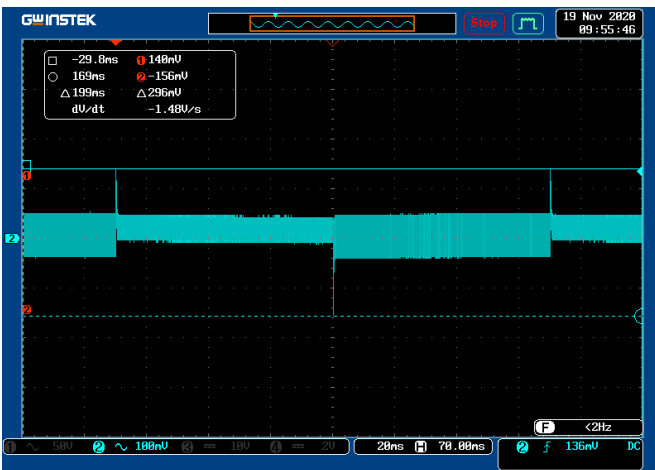
Wavechart of transient deviations of output voltage for KWant-L150-1C05SXX at dropping and surge of load 50-75-50%.

KWant-L150-1C05SXX



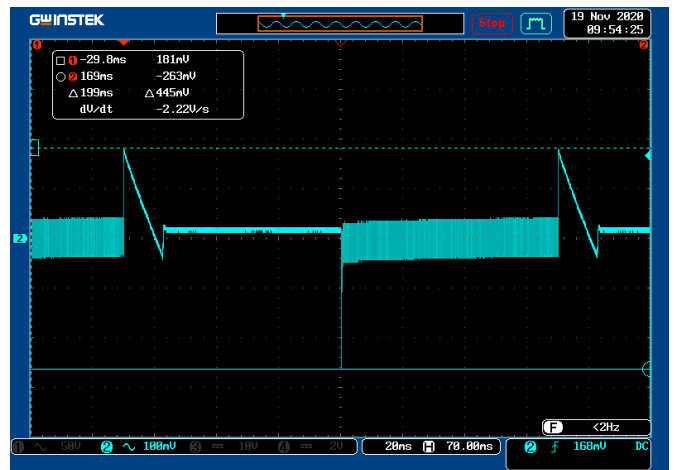
Wavechart of transient deviations of output voltage for KWant-L150-1C05SXX at dropping and surge of load 0-100-0%.

KWant-L150-1C12/15SXX



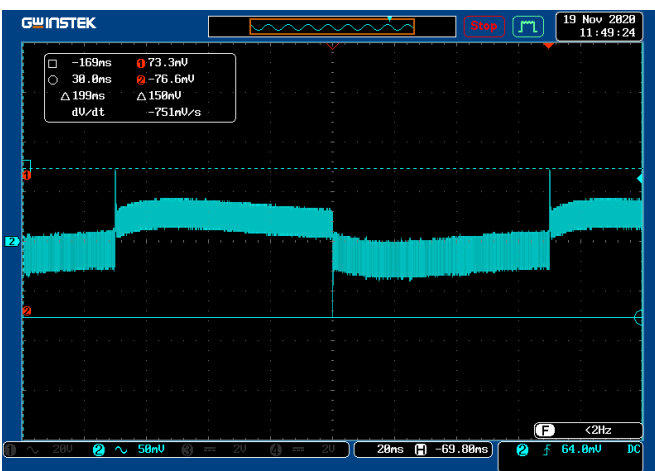
Wavechart of transient deviations of output voltage for KWant-L150-1C12/15SXX at dropping and surge of load 50-75-50%.

KWant-L150-1C12/15SXX



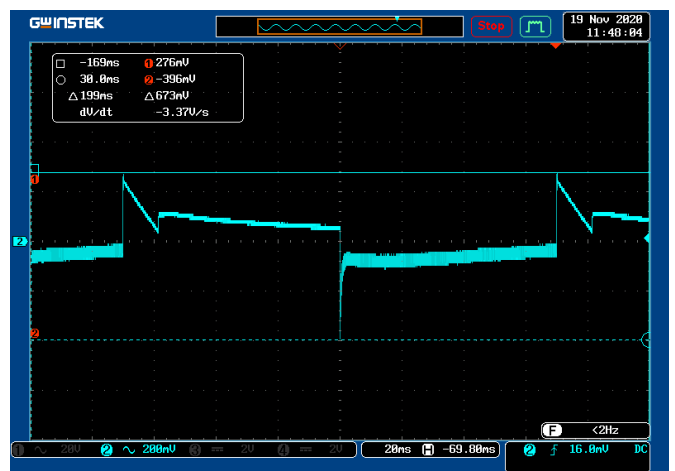
Wavechart of transient deviations of output voltage for KWant-L150-1C12/15SXX at dropping and surge of load 0-100-0%.

KWant-L150-1C24/28SXX



Wavechart of transient deviations of output voltage for KWant-L150-1C24/28SXX at dropping and surge of load 50-75-50%.

KWant-L150-1C24/28SXX

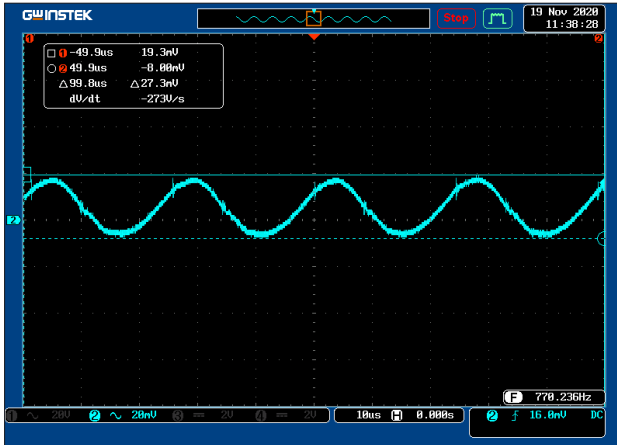


Wavechart of transient deviations of output voltage for KWant-L150-1C24/28SXX at dropping and surge of load 0-100-0%.

EMC spectrograms

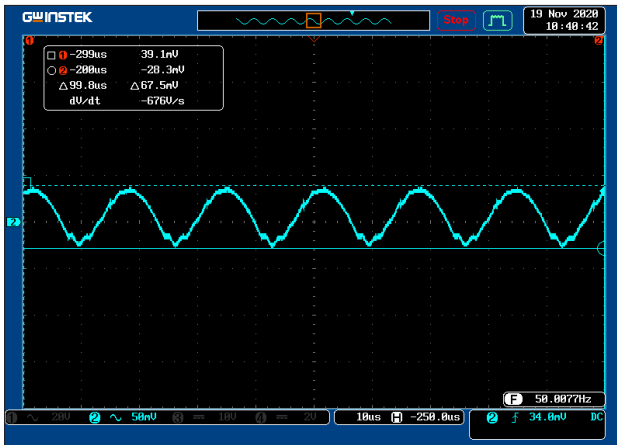
115 VAC

KWant-L150-1C05SXX

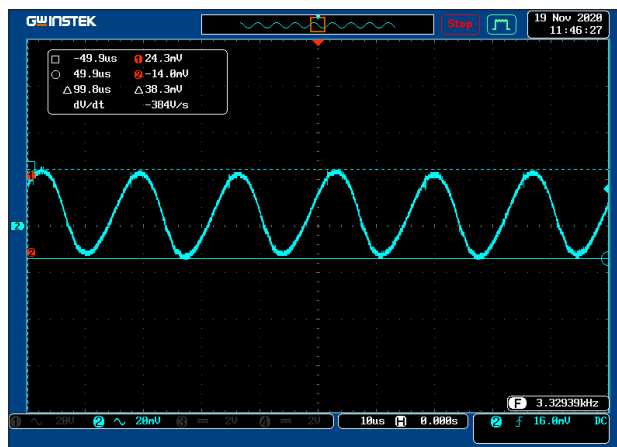


Wavechart of output voltage ripple for KWant-L150-1C05SXX at bandwidth 20 MHz and 100 % load 115 VAC input 86 W. 1uf 50V X7R cap parallel to probe-spring.

KWant-L150-1C12/15SXX



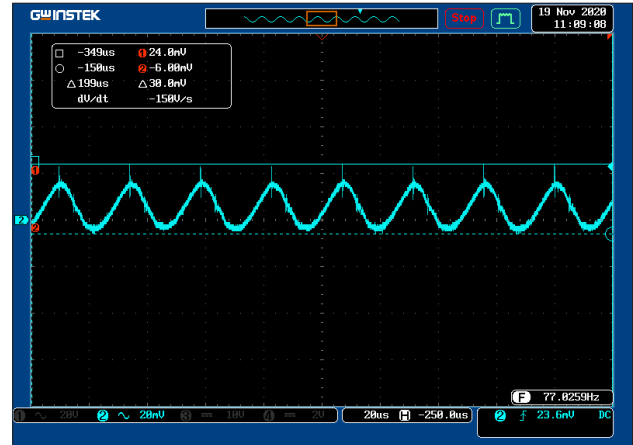
Wavechart of output voltage ripple for KWant-L150-1C12/15SXX at bandwidth 20 MHz and 100 % load 115 VAC input 115 W. 1uf 50V X7R cap parallel to probe-spring.



Wavechart of output voltage ripple for KWant-L150-1C24/28SXX at bandwidth 20 MHz and 100 % load 115 VAC input 115 W. 1uf 50V X7R cap parallel to probe-spring

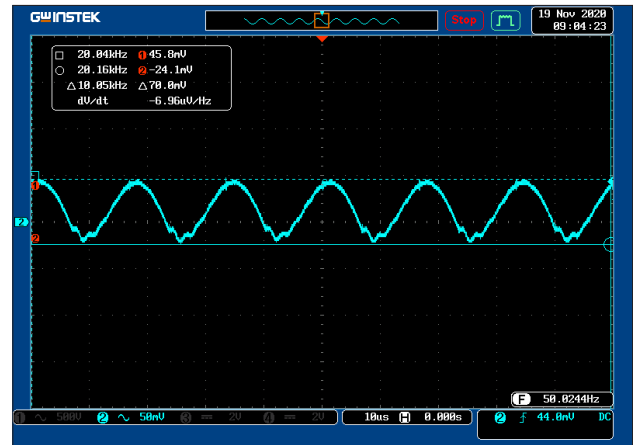
230 VAC

KWant-L150-1C05SXX

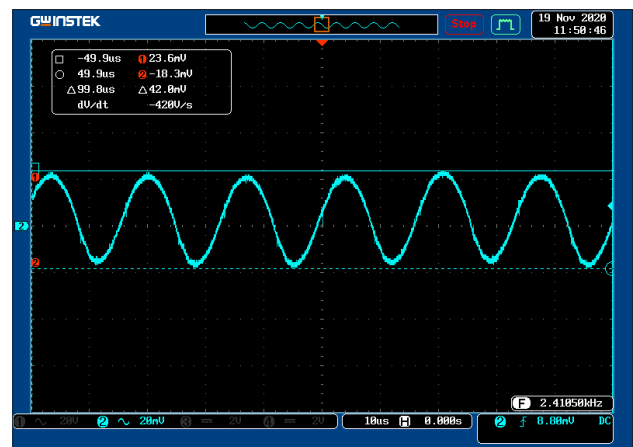


Wavechart of output voltage ripple for KWant-L150-1C05SXX at bandwidth 20 MHz and 100 % load 220 VAC input 100 W. 1uf 50V X7R cap parallel to probe-spring.

KWant-L150-1C12/15SXX



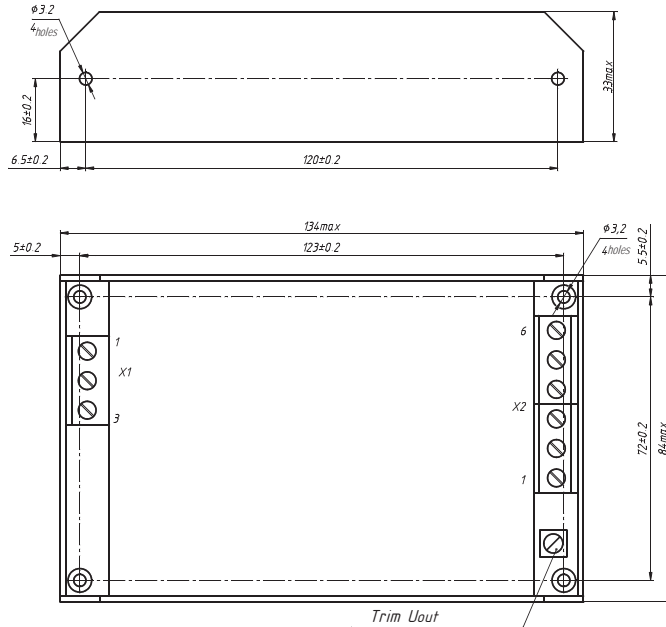
Wavechart of output voltage ripple for KWant-L150-1C12/15SXX at bandwidth 20 MHz and 100 % load 220 VAC input 150 W. 1uf 50V X7R cap parallel to probe-spring.




Wavechart of output voltage ripple for KWant-L150-1C24/28SXX at bandwidth 20 MHz and 100 % load 220 VAC input 150 W. 1uf 50V X7R cap parallel to probe-spring.

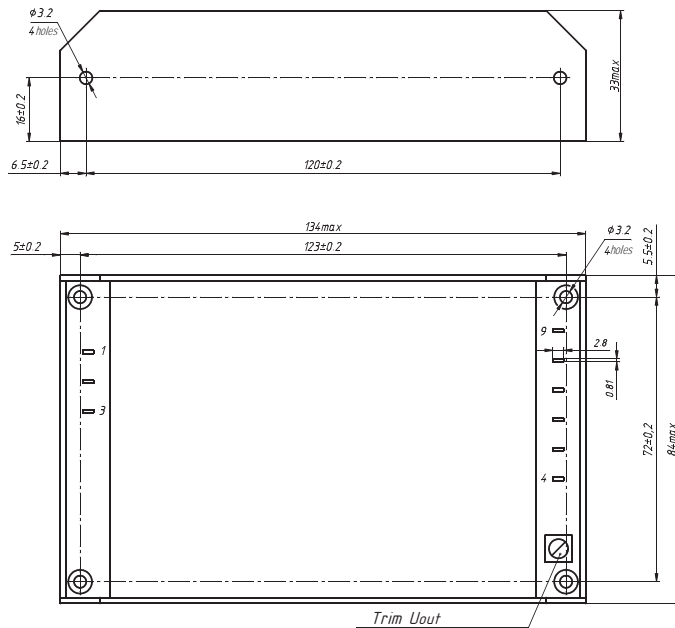
Dimensions


Single-channel design with screw contacts



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

Single-channel design with blade contacts



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