FILTER-RECTIFIER KAD500, 500 W

- AC input voltage
- Insertion loss up to 80 dB
- Pulse overvoltage protection
- Load of up to 500 W
- Output current up to 2,7 A
- Typ.Efficiency 98%
- Low-profile case with mounting flanges
- Heat conduction polymer sealing
- Operating case temperature -60...+125°C

DESCRIPTION

Compact filter-rectifier designed for rectifying single-phase AC voltage, as well as for protection of the connected load from input surge and for filtering conductive interference emitted by the load into the input network.

With compact dimensions (120,9×38×12,85) max power of the load connected to the filter-rectifier is 500 W. This unit can operate in a wide case operating temperature range (-60...+125°C). Polymer sealing potting ensures reliable protection from external impacts and eliminates damages caused by vibration, dirt, humidity or salt mist.

This product combined with isolated DC/DC converter and an electrolytic capacitor allows you to create a low-profile AC/DC power supply system operating in temperature range -60...+125°C.

If you connect power factor corrector to the filter-rectifier you will get stable high voltage of 300—400 V and will eliminate emission of harmonic components of the current into the input network.

ORDERING INFORMATION

KAD 500

① ②

① – Rectifier/filter

② – Rated power, W

Specifications can be changed without prior notification.
Actual information is available on our web-site: www.kwsystems.ru

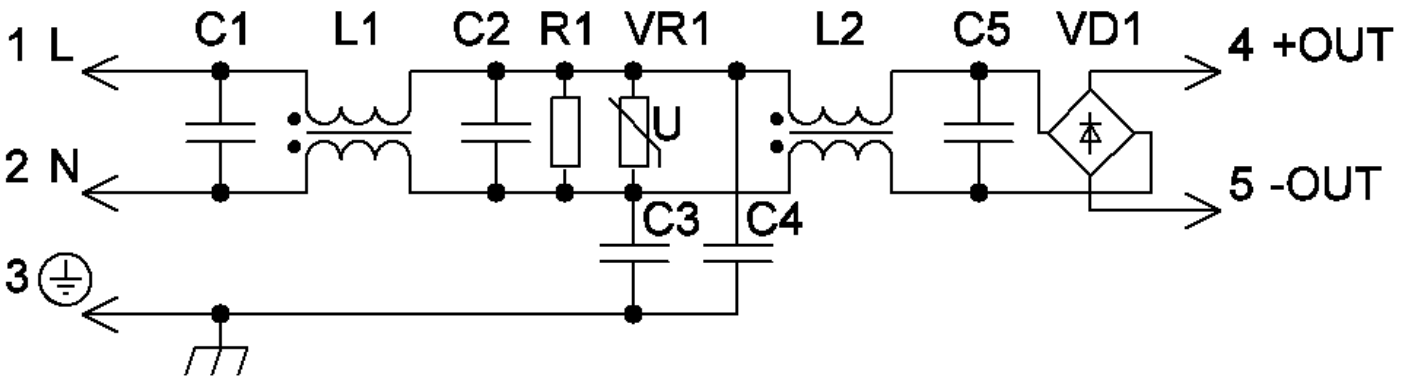
KWsystems

FILTER-RECTIFIER KAD500, 500 W

SPECIFICATIONS*

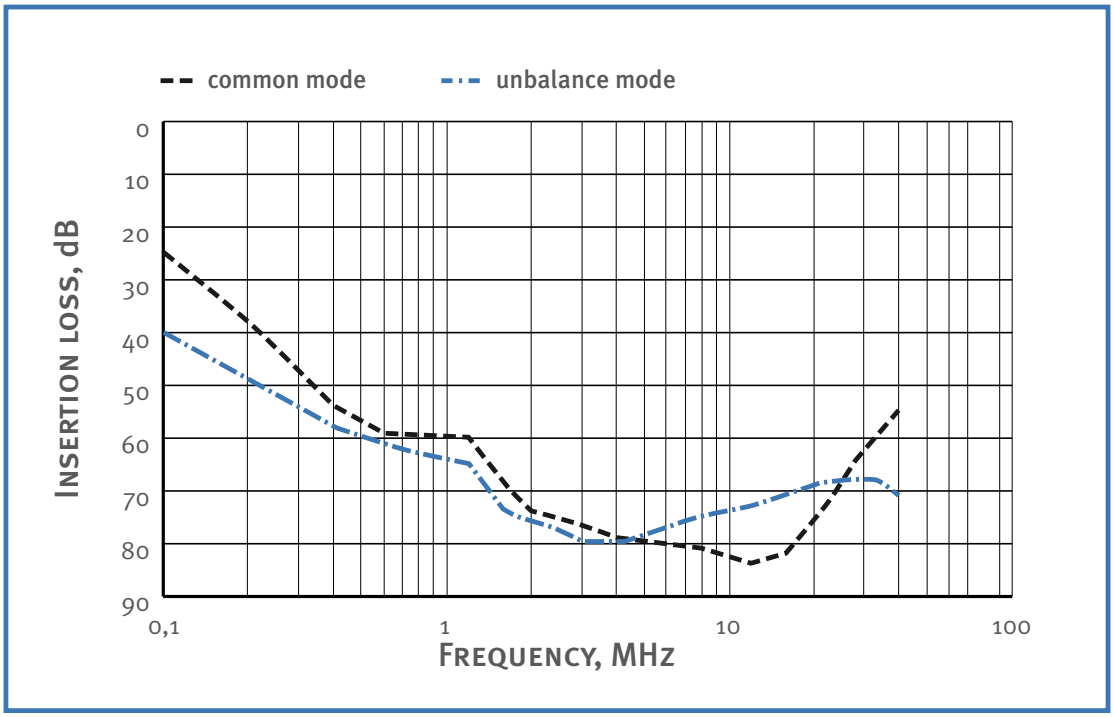
Input specifications	
Input voltage range / transient frequency deviation, 1 sec	187...242 VDC / 176...264 VDC
Power frequency	47...440 Hz
Limiting voltage (I=1 mA)	430 V
Maximum energy (10/1000 mks)	35 J
Maximum surge current for overvoltage (8/20 mks)	1,2 kA
Output specifications	
Throughput current**	up to 2,7 A
Power load**	up to 500 W
Voltage drop	max 2 %
Insertion loss in the frequency range 0,15...0,3 MHz 0,3... 1 MHz 1... 10 MHz 10...30 MHz	 ≥25 dB ≥40 dB ≥55 dB ≥50 dB
General specifications	
Efficiency	min 98%
Operating temperature of the heat sink**	−60°C...+125°C
Ambient temperature – output power derating (natural convection) – output power with heat sink – storage	 see diagram (dached, dash-dotted curve) see diagram (block curve) −60...+125°C
Isolation voltage output/case	1500 VAC
Humidity	98% / 25°C
Thermal resistance case-enviroment	6,4 °C/W
MTBF	2000 kHrs
Cooling	convectional radiator cooling or forced fan cooling
Weight	190 g

* All specifications are valid for normal climatic conditions, Uin.nom., Iout.nom., unless otherwise stated.
** Parameters are stated for the information only and are not valid for continuous operation exceeding maximum output current and operation temperature range.

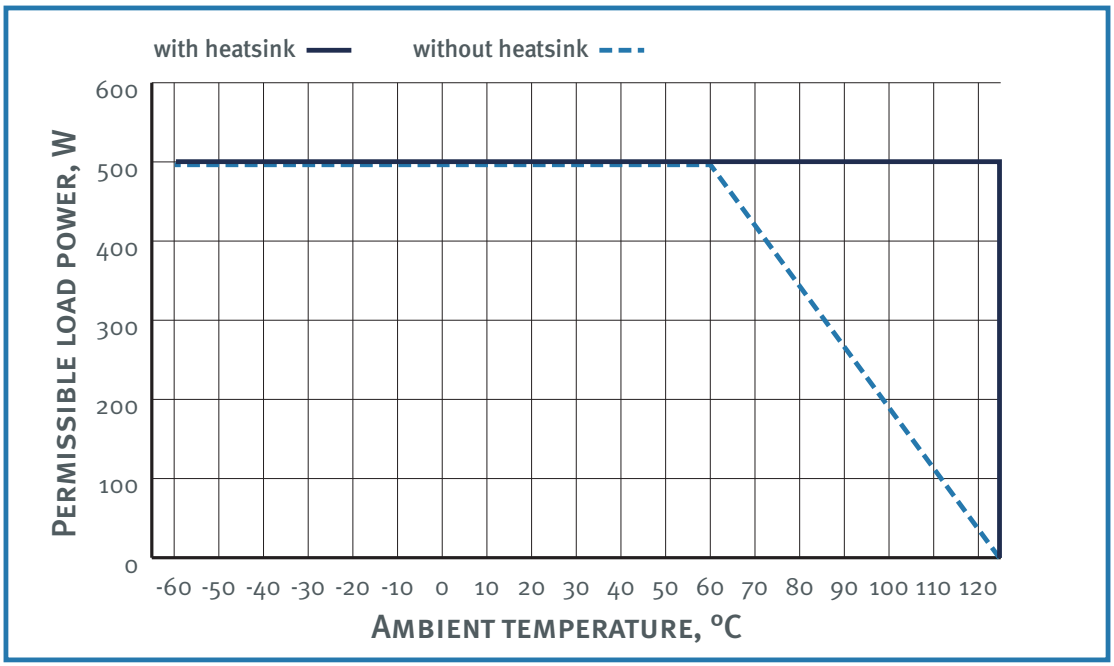


Specifications can be changed without prior notification.
Actual information is available on our web-site: www.kwsystems.ru

TYPICAL INSERTION LOSS VS FREQUENCY



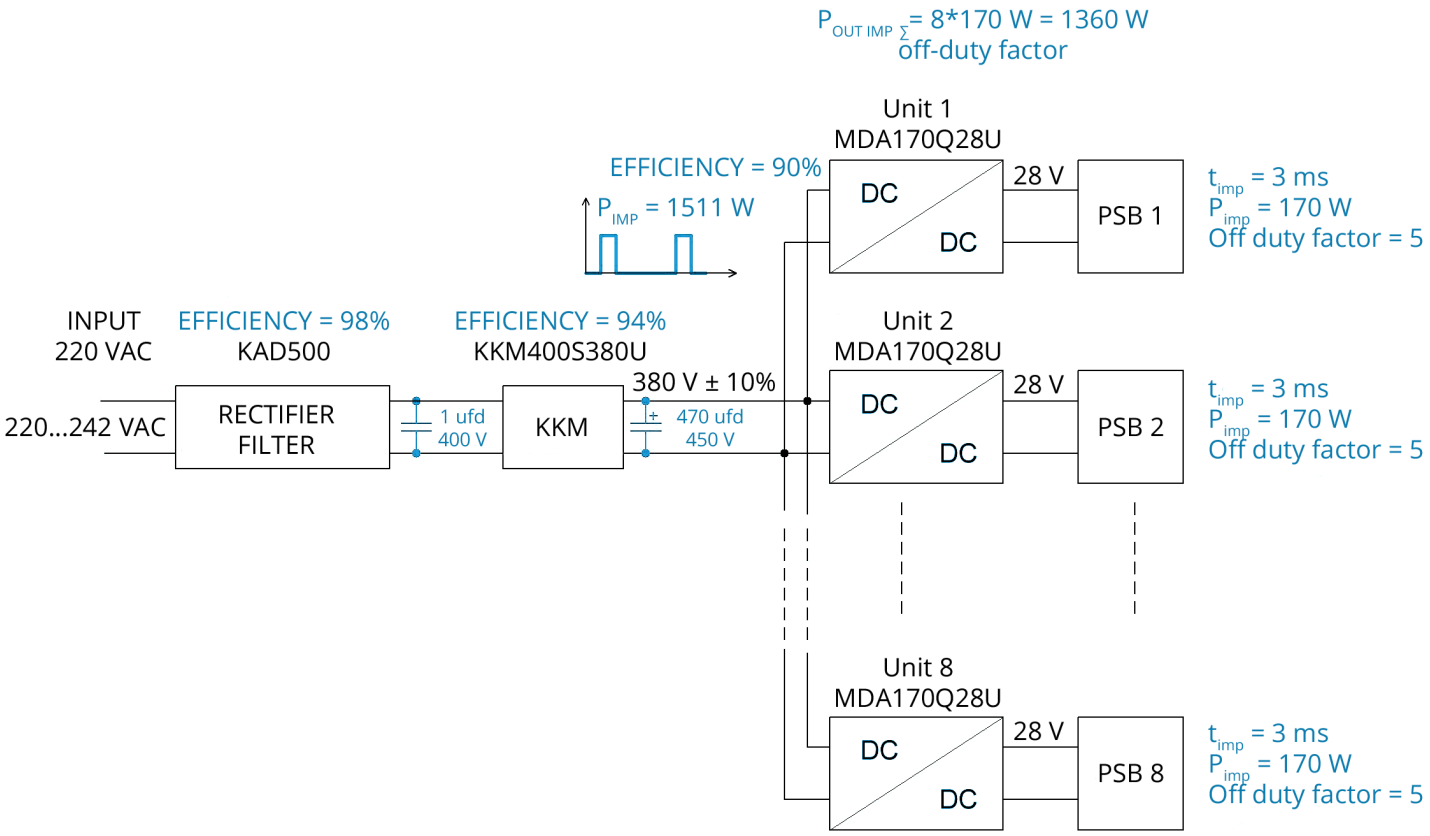
LOAD POWER DERATING VS AMBIENT TEMPERATURE



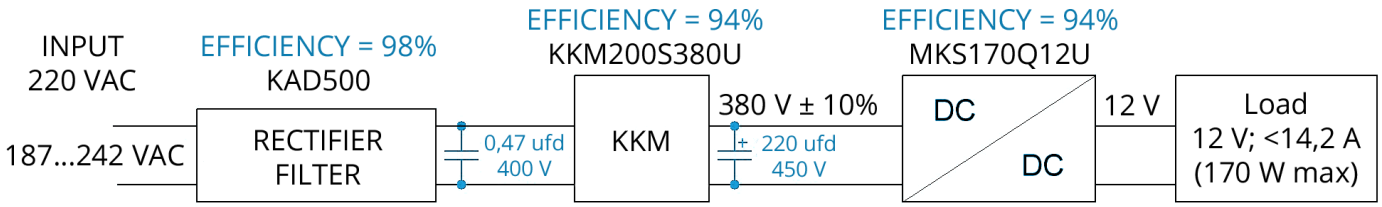
The decreasing dotted curve corresponds to the maximum case temperature. Load power of rectifier filter must not exceed the values which are limited by corresponding curve for a given ambient temperature.

FILTER-RECTIFIER KAD500, 500 W

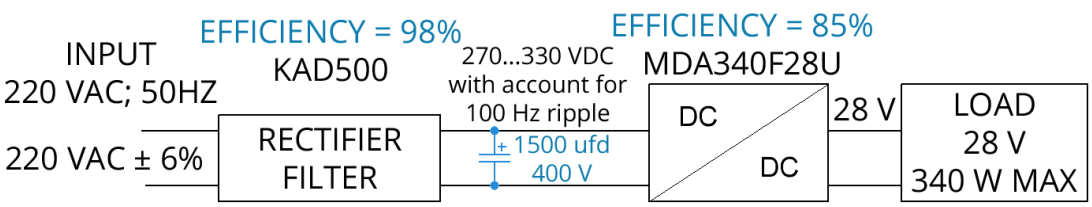
KAD500 APPLICATION



Example 1. Power supply system of AESA PCB from AC network without pulse load for the input network.



Example 2. Power supply of a 12-volt consumer from AC 220V input line with power factor correction.



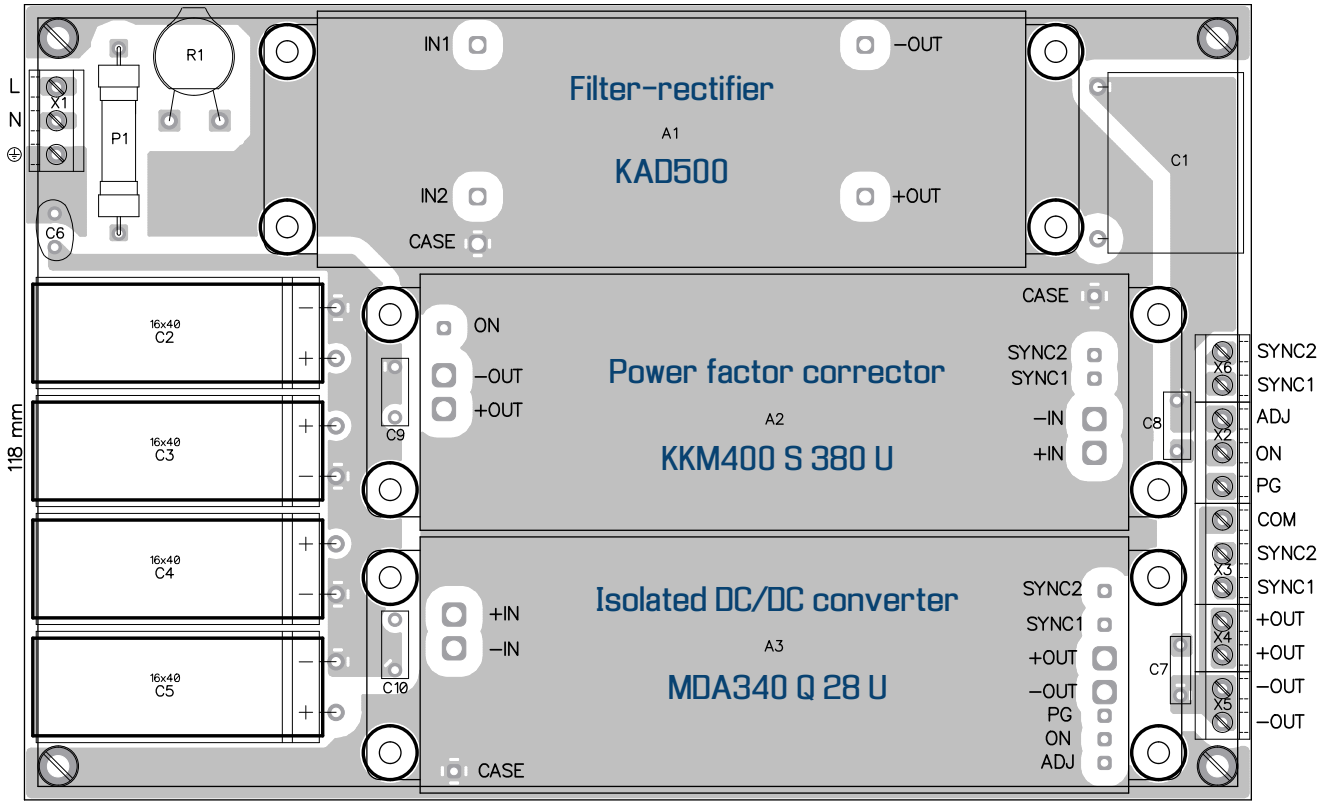
Example 3. AC/DC converter without power factor correction at stable AC network.

Specifications can be changed without prior notification.
Actual information is available on our web-site: www.kwsystems.ru

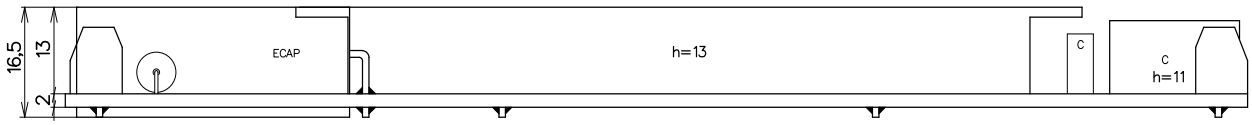
KWsystems

FILTER-RECTIFIER KAD500, 500 W

PCB LAYOUT



SIDE VIEW



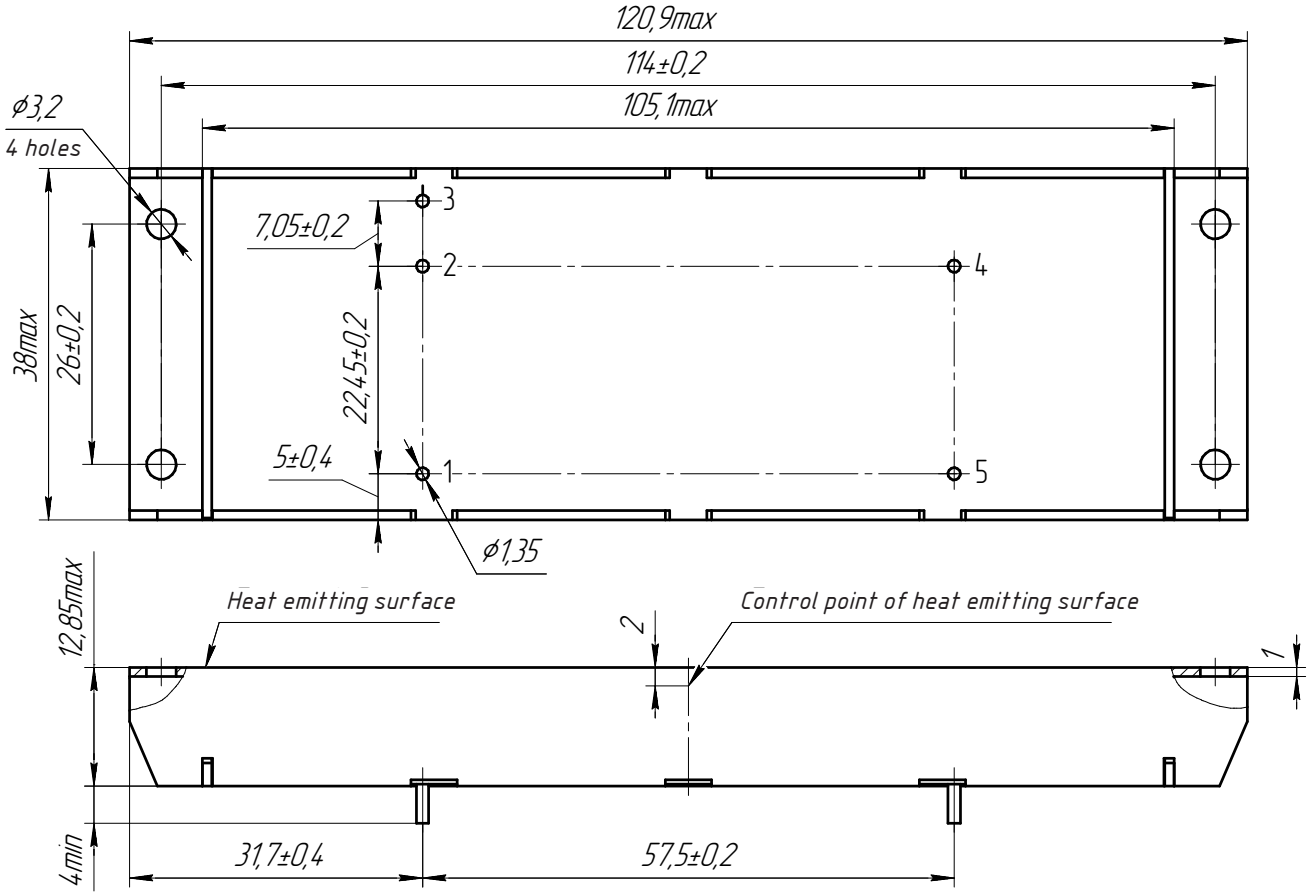
Example 4. Low-profile (H=16,5 mm) AC/DC 340 W power supply system from unified units made by KW Systems LLC.

FILTER-RECTIFIER KAD500, 500 W

PIN OUT KAD500

# PIN	1	2	3	4	5
ASSIGNMENT	IN1	IN2	CASE	+OUT	-OUT

ENCAPSULATED VERSION WITH FLANGES



Specifications can be changed without prior notification.
Actual information is available on our web-site: www.kwsystems.ru