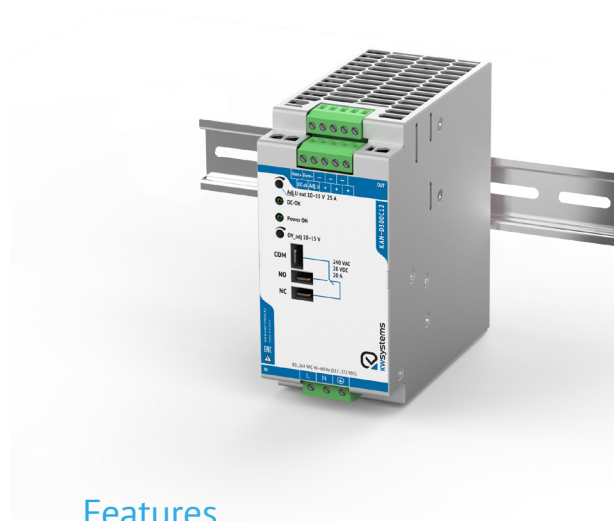


AC/DC power supplies

KAN-D Family

KAN-D300, 300 W



Basic specifications

Output power.....	300 W
Output current.....	up to 15 A
Input voltage.....	220(80...264) VAC; 310 (112...372) VDC
Output voltage.....	12 VDC; 24 VDC; 48 VDC
Efficiency.....	up to 93%
EMC/EMI level.....	EN55022 (CISPR22), Class B
Operating temperature (ambient)	-25...+70 °C; -50...+70 °C
Dry contact.....	relay, 5A
Dimensions.....	62x133x131 mm
Warranty.....	2 years

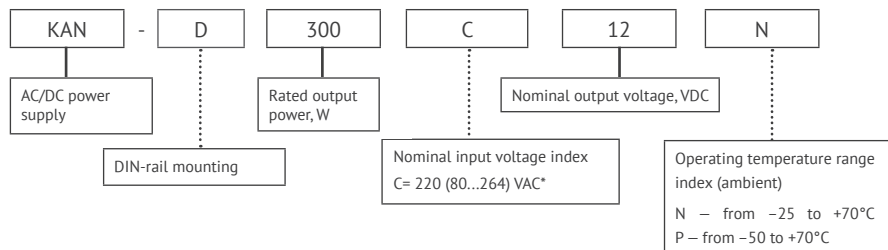
Features

- ◀ Wide operating temperature range -50...+70°C
- ◀ DIN-rail mounting (toolless assembly)
- ◀ Convective cooling
- ◀ Output voltage adg. range -15...+20%
- ◀ Parallel and series operation
- ◀ Built-in UPS mode



Description of KAN-D300 on the manufacturer's website:
eng.kwsystems.ru/catalog/acdc/models/36

Ordering information



Output specifications*

Parameter		Value		
Model		KAN-D300C12X	KAN-D300C24X	KAN-D300C48X
Nominal output voltage, VDC		12	24	48
Output voltage adjustment range, MBCB	with built-in potentiometer	-15...+20%		
	with Adj U	±4%		
Efficiency, %		89	92	93
Output current max., A		15	12,5	6,25
Ripple-and-noise (peak-to-peak)		0,8%	0,3%	0,2%
Line and load regulation		max 2%		
Start-up time		1 s (Uin=220 VAC)		
Output diagnostics signal		Dry contact optocoupler pins (open condition - voltage within nominal range)		
		DC OK pin (open collector) 100mA 45V max		
Parallel operation		with external Oring diode		
Maximum load capacity		6000 mF (Uin = 220 VAC)		

Input specifications*

Parameter		Value
Input voltage range, VAC		80...264 VAC 112...372 VDC
Mains frequency range, Hz		47-440 AC
		0 DC
Current consumption, A		2.75 (~120 V) 1.5 (~220 V)
Inrush current pulse		30 A
Pre-fuse		5 A (internal)
PFC		active
Power factor	~115 V; Pmax	0,99
	~230 V; Pmax	0,95

* For KAN-D300CXXX

** 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.

Protections

Type of protection	
Short-circuit protection*	auto recovery
Overcurrent protection**	$P_{max} = 1.2 P_{nom}$
Overload protection level**, V	$< 125\% U_{out nom}$
Over temperature protection	$T_{ambient} > 70^{\circ}C$

Basic specifications

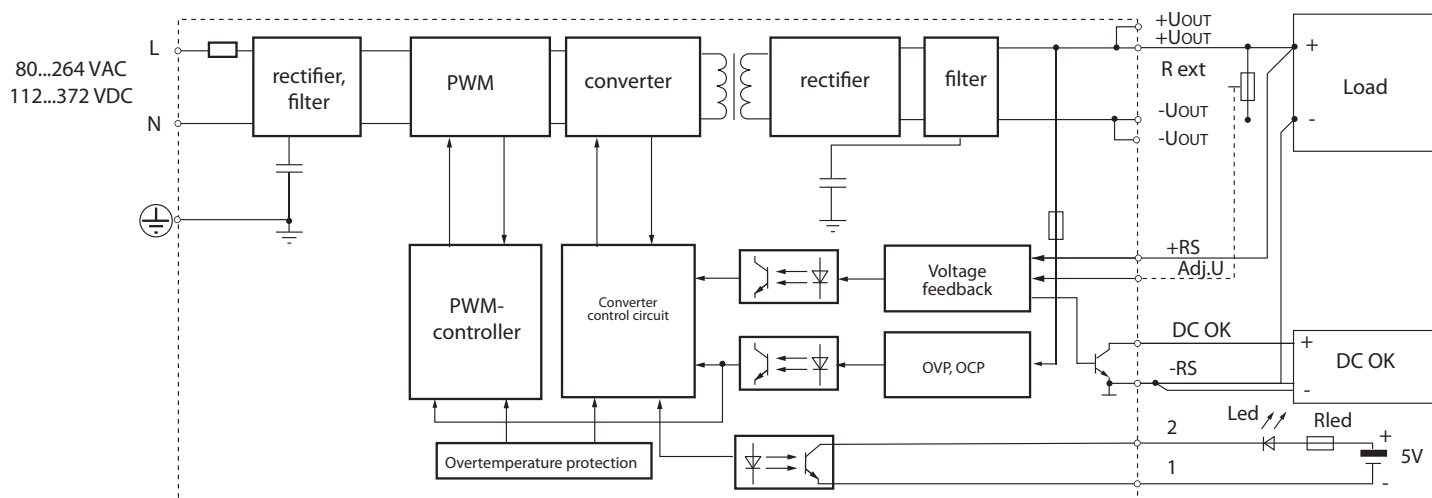
Parameter		Value
Type of connection		screw terminals and blade contacts
Derating		$-3,5\% / ^{\circ}C$ over $+50^{\circ}C$
IP protection level		IP20
EMC/EMI standards		EN55022 (CISPR22), Class B
Operating temperature range (ambient)	N	$-25...+70^{\circ}C$
	P	$-50...+70^{\circ}C$
Storage temperature range		$-60...+70^{\circ}C$
Humidity		85% / $T_{amb.}+40^{\circ}C$ (95% / $T_{amb.}+25^{\circ}C$)
Isolation voltage	input/case	~ 3000 VAC
	input/output	~ 3000 VAC
	output/case	~ 3000 VAC
Isolation resistance @ 500 VDC		≥ 20 MOhm min
Cooling		convective
Typical MTBF		3 600 000 Hrs
Case material		metal
Dimensions (W×D×H), mm		62x122x131 (without clamp feet)
Weight, kg		< 1.1
Mounting position		Vertical, for horizontal DIN-rail TH35-7.5
Mounting instructions		Min gap between units: horizontal 5 mm, between active 15 mm; vertical 50 mm
Warranty		2 years

Terminal specification, input/output	
Cross section of the flexible conductor, mm ² (max)	2.5
Cross section of AWG conductor, min	28
Cross section of AWG conductor, max	12
Strip length, mm	7

* 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.

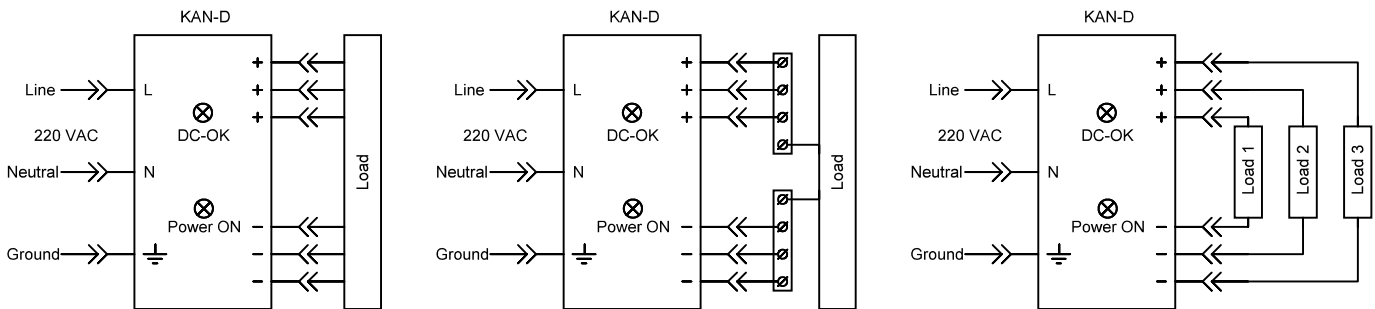
** All specifications are valid for normal climatic conditions, $U_{in nom.}$, $I_{out nom.}$, unless otherwise noted.

Block diagram

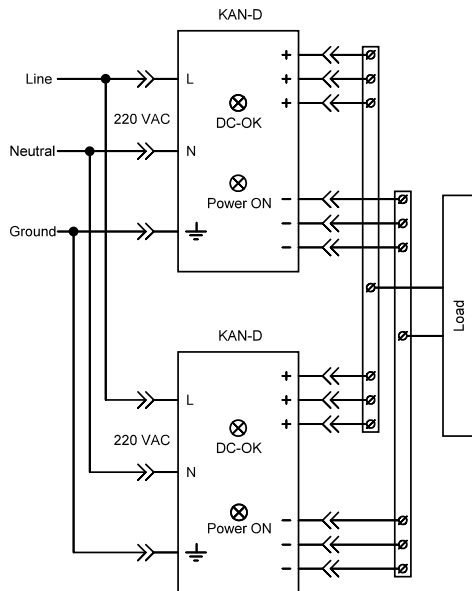


Connection diagram

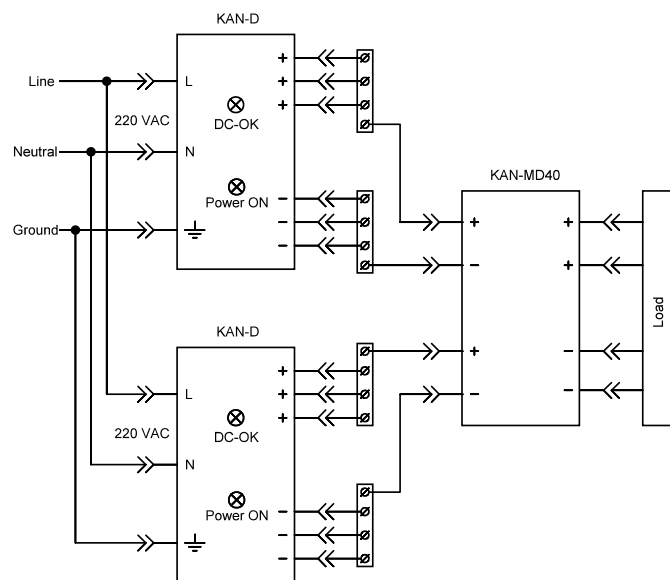
Typical connection



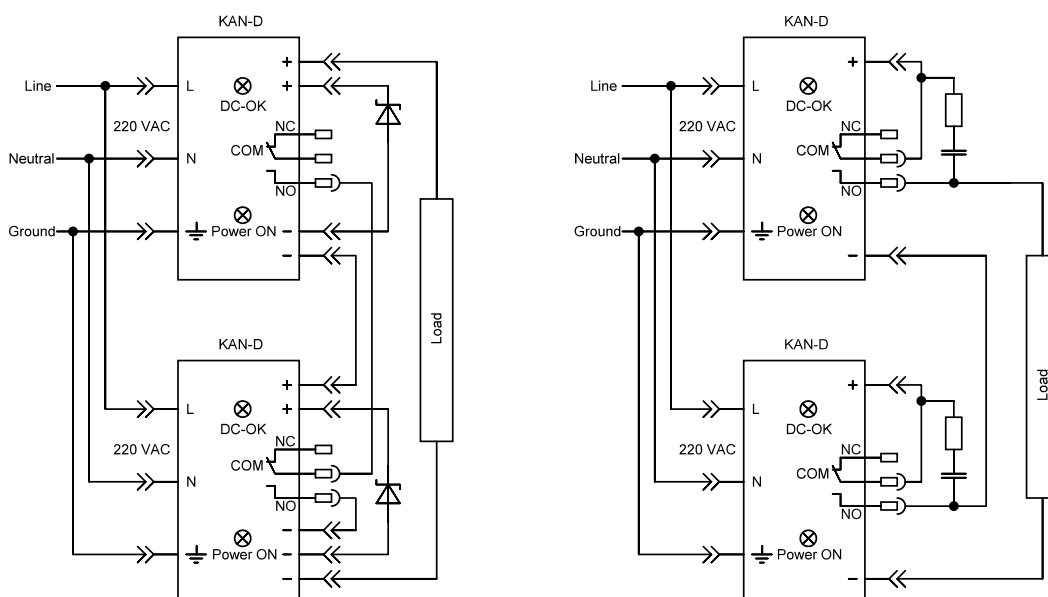
Parallel connection (power scaling)



Parallel connection (redundancy mode)

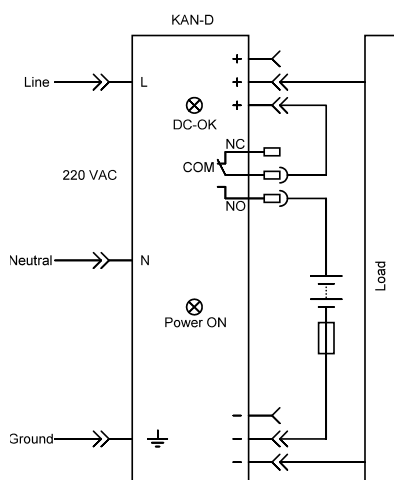


Series connection (up to two modules)

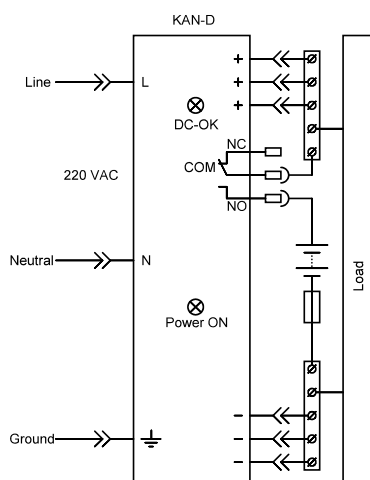


Connection diagram

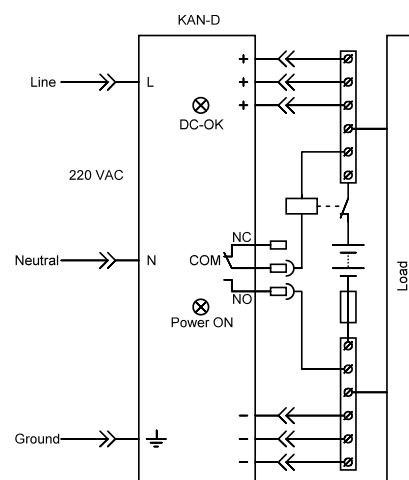
UPS-mode



For current up to 13 A

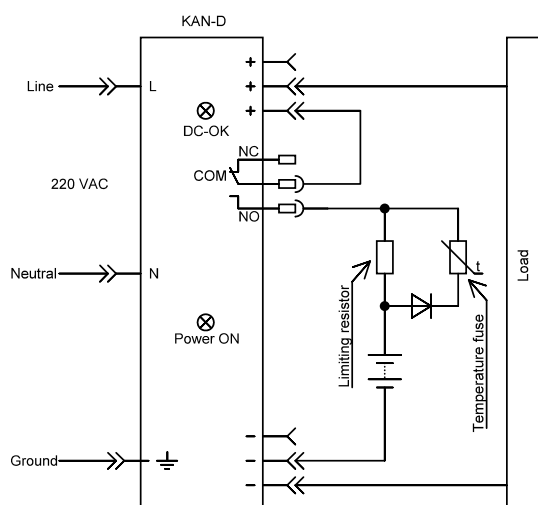


For current up to 30 A

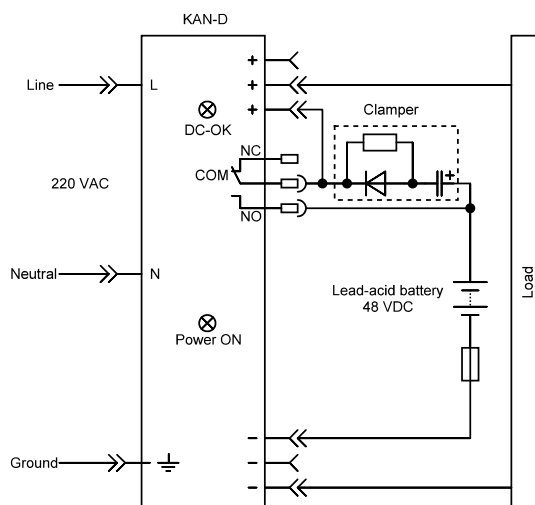


For current up to 30 A

Circuit to prevent extreme currents charge and discharge the battery

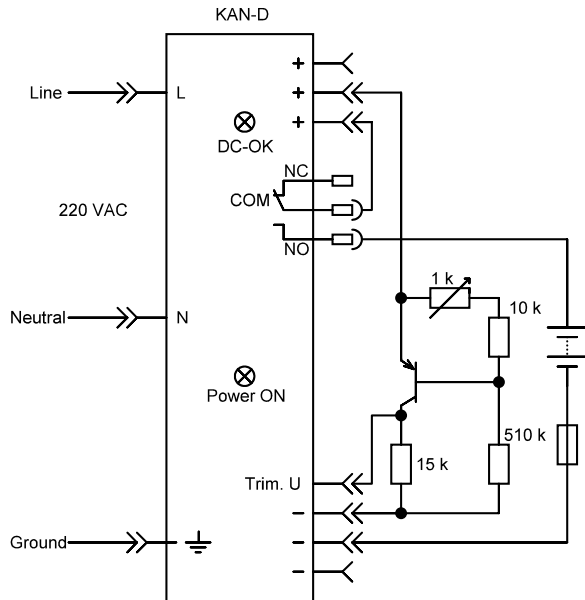


Using the spark extinguishing clumper to work with the battery 48 V

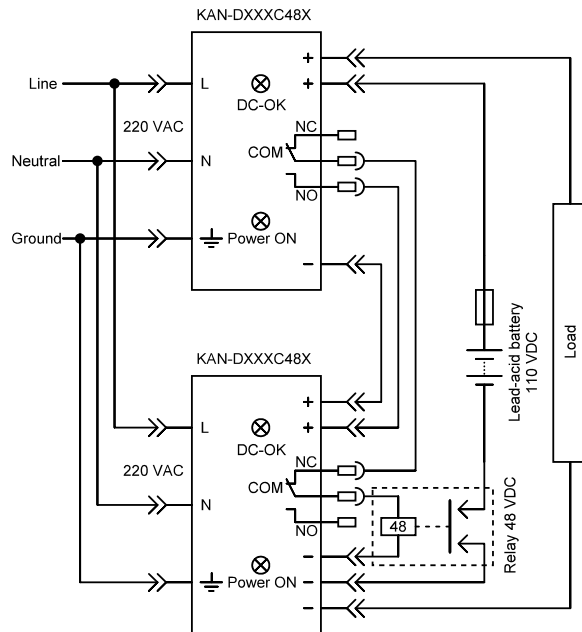


Connection diagram

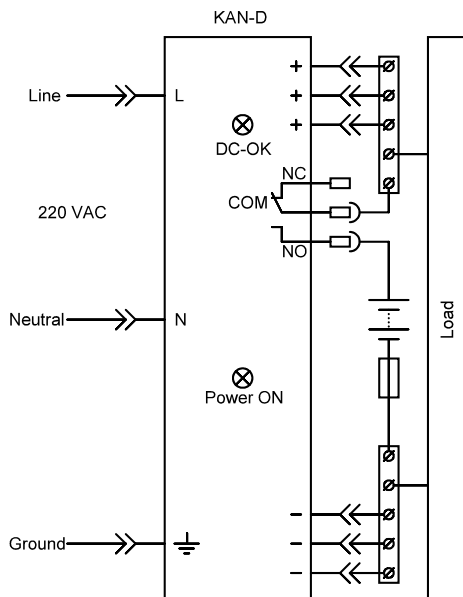
UPS mode with temperature compensation function



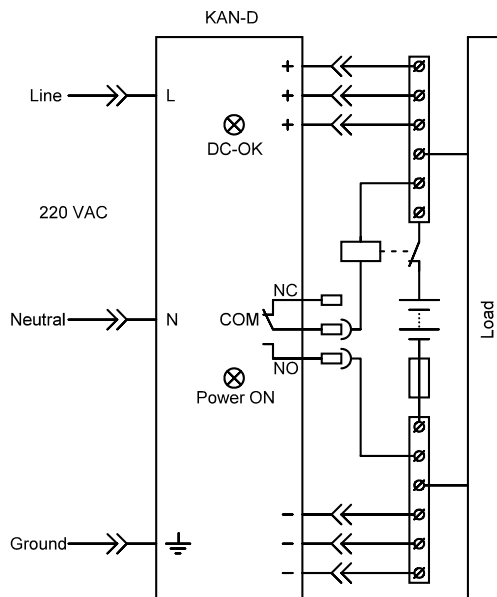
UPS mode with battery 110 V



Buffer mode



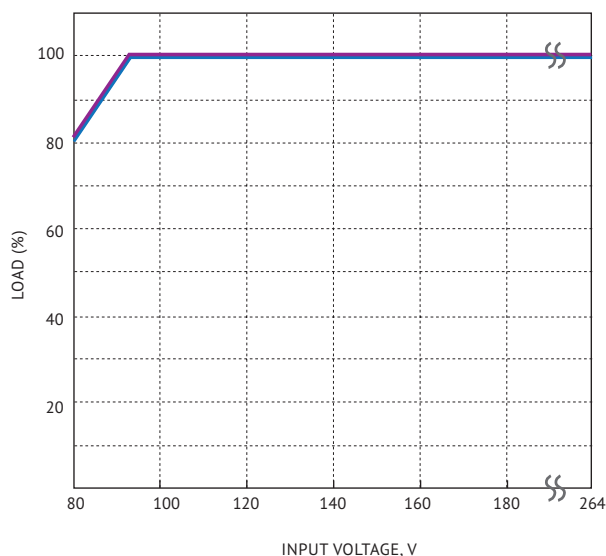
For current up to 30 A



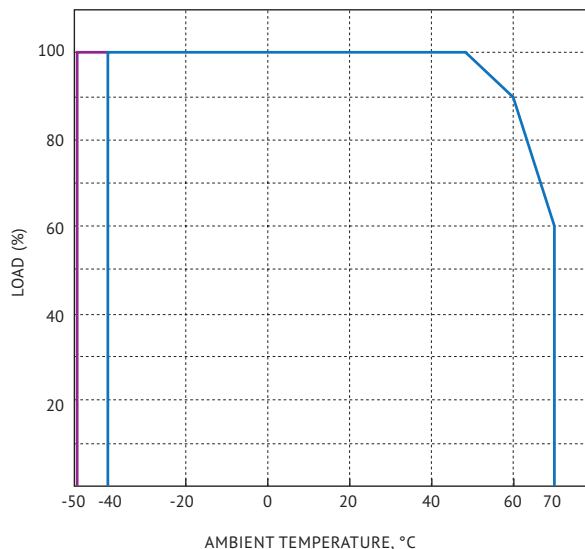
For current up to 30 A

Derating

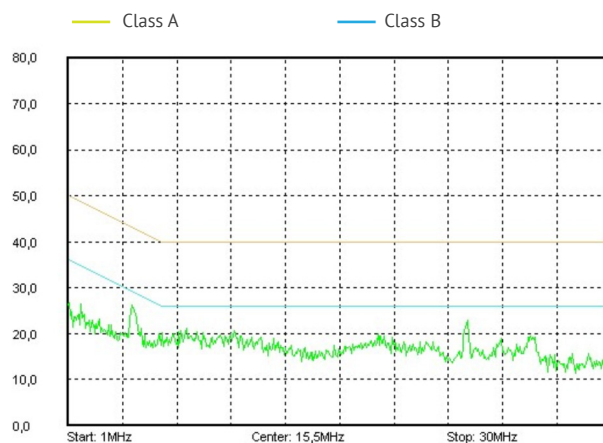
vs Input Voltage



vs Temperature



EMC spectrograms of KAN-D300C24P

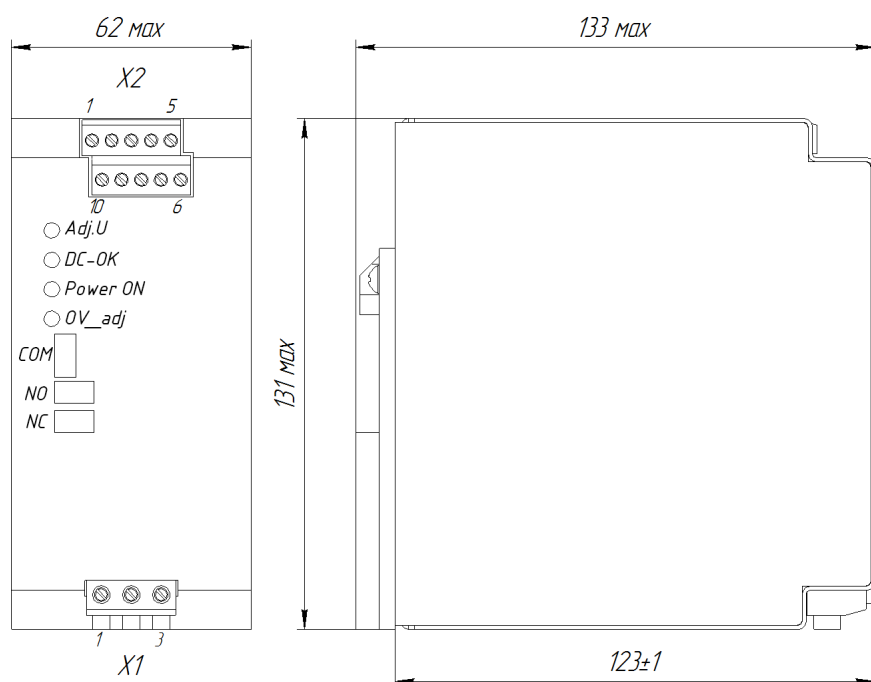


Spectrogram KAN-D300C24P in the frequency range from 1 kHz to 1 MHz

Spectrogram KAN-D300C24P in the frequency range from 1 MHz to 30 MHz

EMC spectrogram has been measured for KAN-D300C24N, the results are shown in the diagrams above - vertical axis means Lead (%)

Dimensions



X1.1	X1.2	X1.3
L	N	

X2.1	X2.2	X2.3	X2.4	X2.5
+RS	-RS	-OUT	-OUT	-OUT

X2.10	X2.9	X2.8	X2.7	X2.6
DC ok	ADJ.U	+OUT	+OUT	+OUT



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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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