

AC/DC power supplies

KAN-D Family KAN-D150, 150 W



Basic specifications

Output power.....	150 W
Output current.....	up to 12,5 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)..	-40...+70 °C; -50...+70 °C
Dry contact.....	relay, 5A
Dimensions.....	42x133x131 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-D150 on the manufacturer's website:
eng.kwsystems.ru/catalog/acdc/models/35

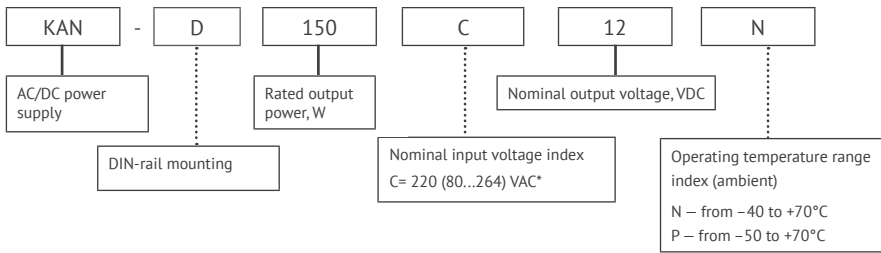
Order registration

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Technical support

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Ordering information



Output specifications*

Parameter	Value		
Model	KAN-D150C12X	KAN-D150C24X	KAN-D150C48X
Nominal output voltage, VDC	12	24	48
Output voltage adjustment range, V	with built-in potentiometer	-15...+20%	
	with Adj U	-5...+5%	
Efficiency, %	92	93	92
Output current max., A	12.5	6.25	3.13
Ripple-and-noise (peak-to-peak)	0.8% Uout nom	0.3% Uout nom	0.2% Uout nom
Line and load regulation	max 2%		
Start-up time	1 s (Uin=220 VAC)		
Output diagnostics signal	Dry contract 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 µF		

Input specifications*

Parameter	Value	
Input voltage range, VAC	80...264 VAC 112...372 VDC	
Mains frequency range, Hz	47-440 AC	
Current consumption, A	1.39 (~120 V) 0.76 (~220 V)	
Inrush current pulse	25 A	
Pre-fuse	5 A (internal)	
Power factor corrector	active	
Power factor	~115 V; Pmax	0,99
	~230 V; Pmax	0,95

* For KAN-D150CXXX

** 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**	$P_{max} = 1.35 P_{nom}$
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
Derating		$-2\% / ^{\circ}C$ over $+60^{\circ}C$
IP protection level		IP20
EMC/EMI standards		EN55022 (CISPR22), Class B
Operating temperature range (ambient)	N	$-40...+70^{\circ}C$
	P	$-50...+70^{\circ}C$
Storage temperature range		$-60...+70^{\circ}C$
Humidity		98% / $40^{\circ}C$
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		42×122×131 (without clamp feet)
Weight, kg		< 0.9
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

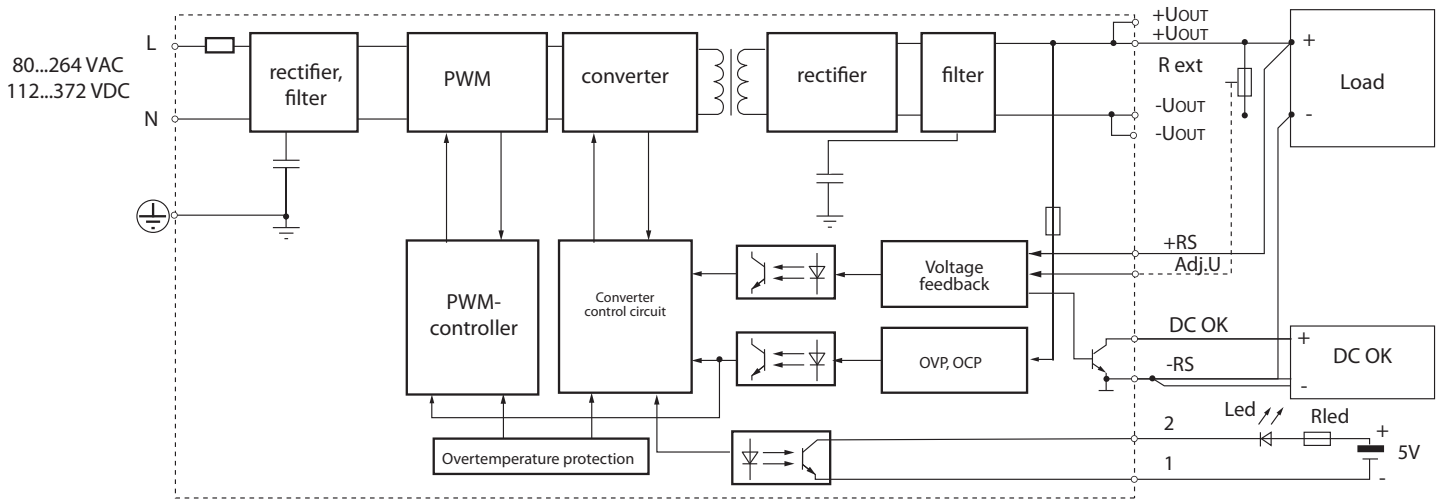
Terminal specification, input/output

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.

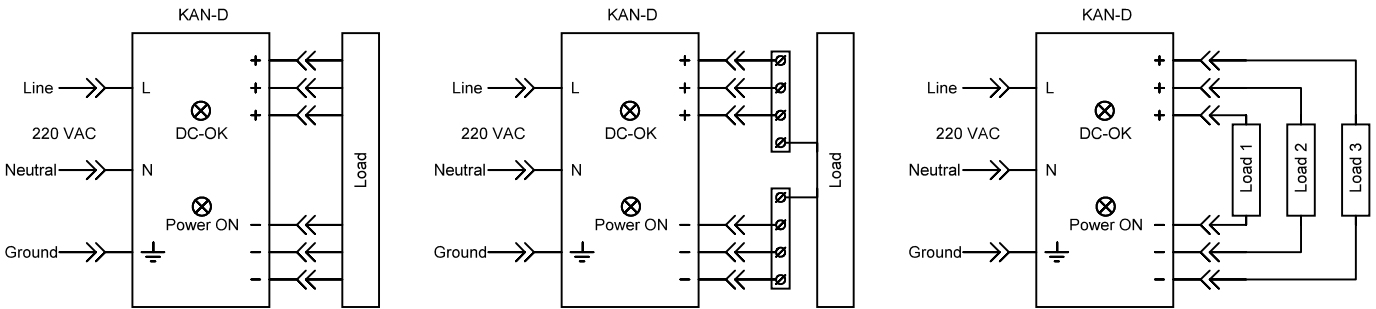
** All specifications are valid for normal climatic conditions, $U_{in nom.}$, $I_{out nom.}$, unless otherwise noted.

Block diagram

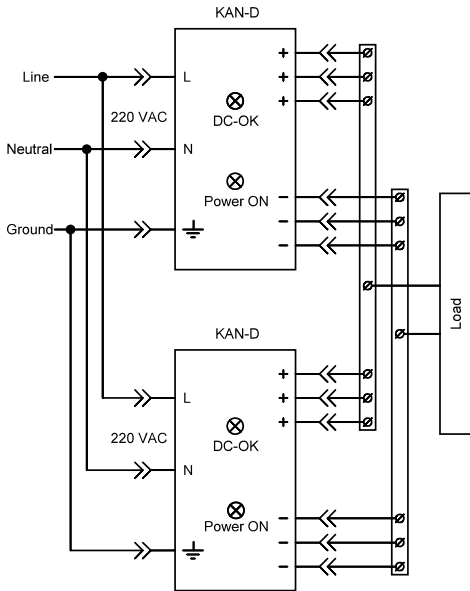


Connection diagram

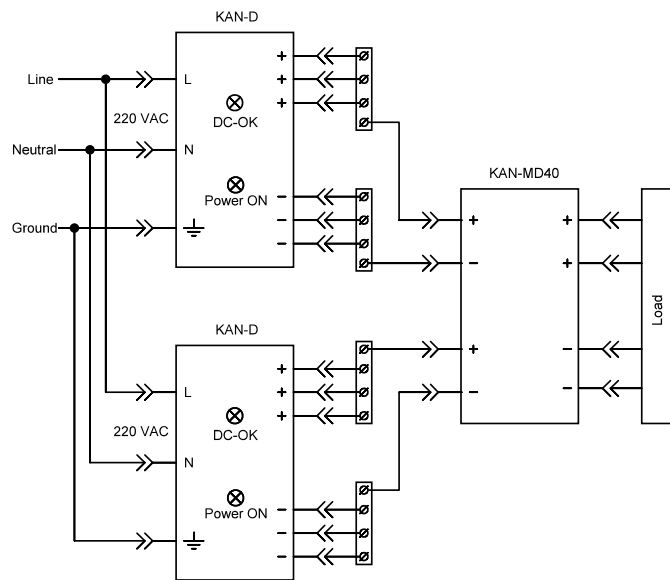
Typical connection



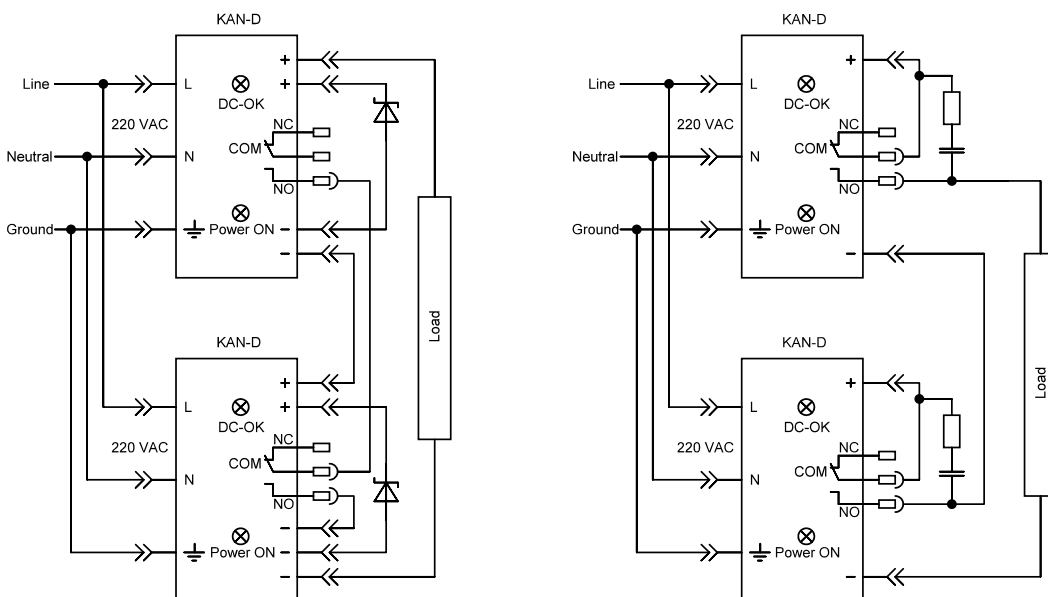
Parallel connection (power scaling)



Parallel connection (redundancy mode)

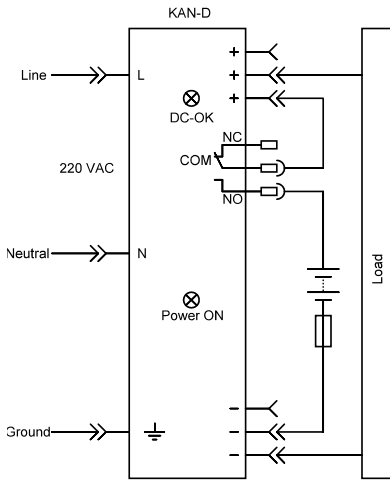


Series connection (up to two modules)

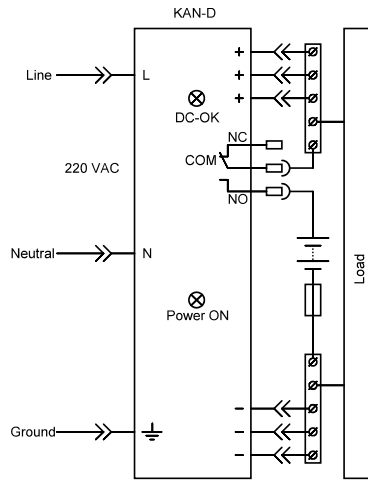


Connection diagram

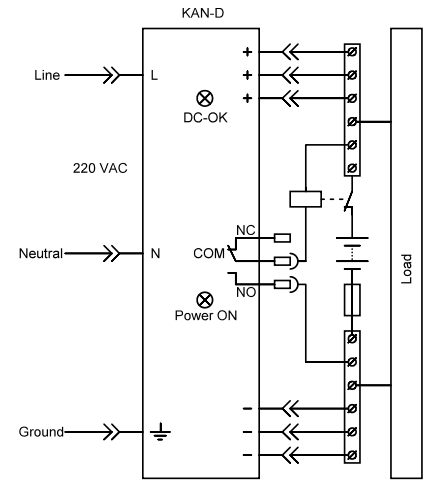
UPS-mode



For current up to 13 A

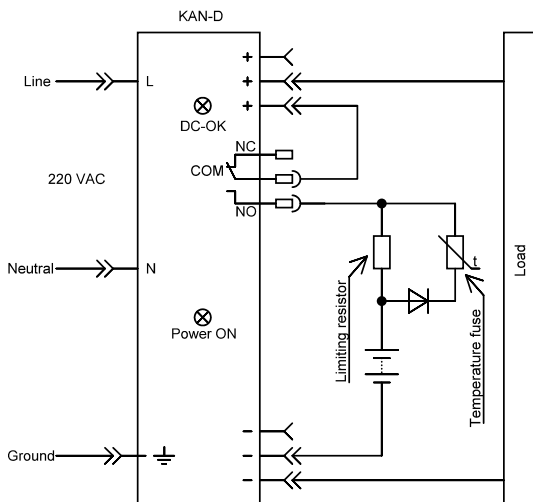


For current up to 30 A

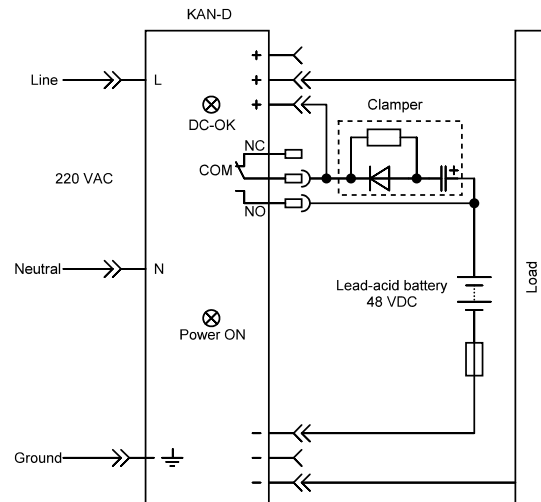


For current up to 30 A

Circuit to prevent extreme currents charge and discharge the battery

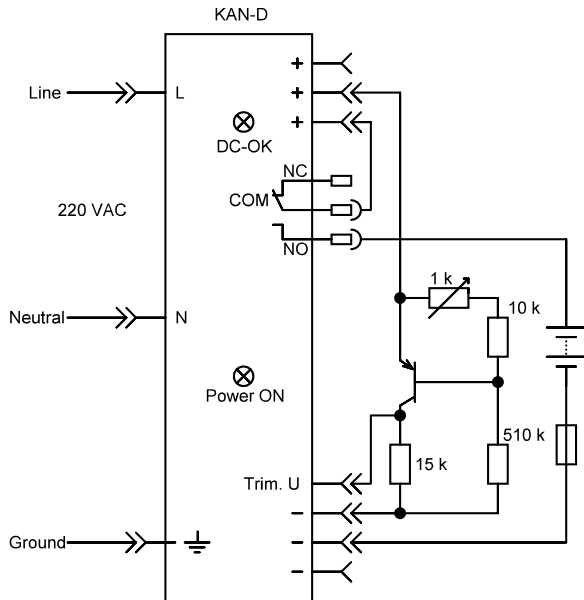


Using the spark extinguishing clumper to work with the battery 48 V

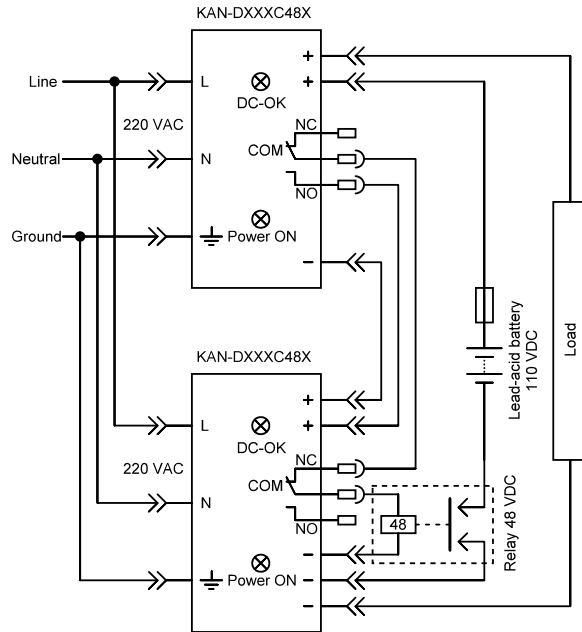


Connection diagram

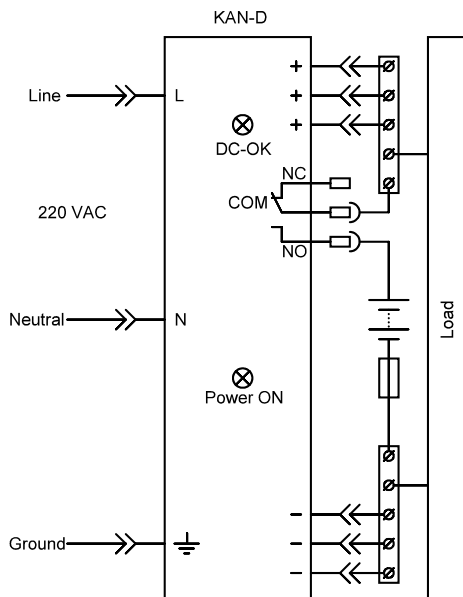
UPS mode with temperature compensation function



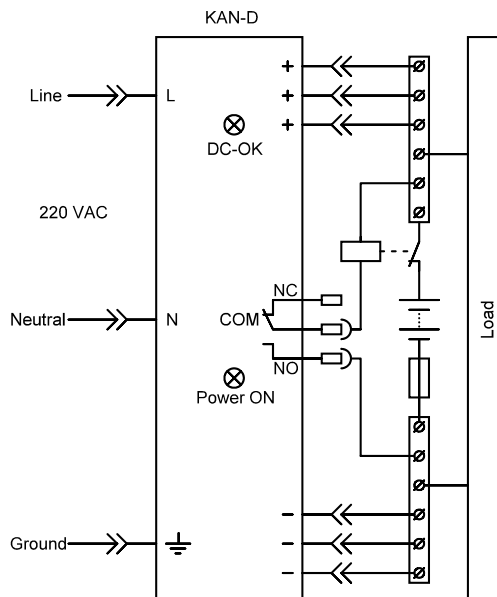
UPS mode with battery 110 V



Buffer mode



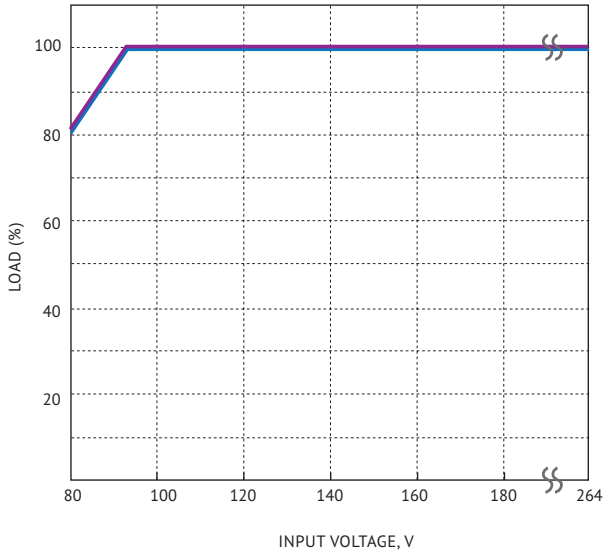
For current up to 30 A



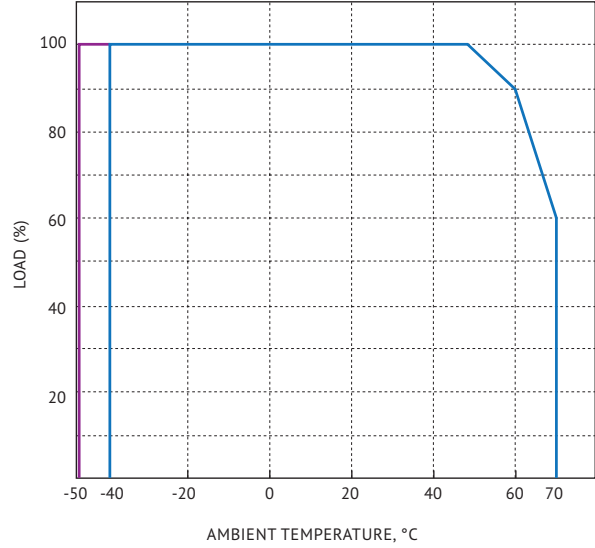
For current up to 30 A

Derating

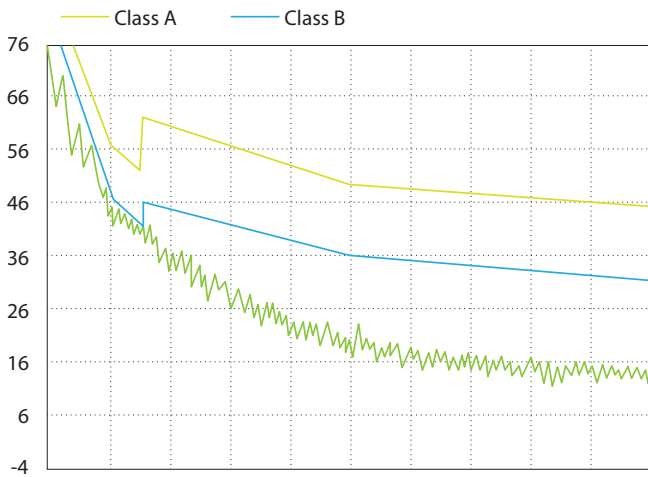
vs Input Voltage



vs Temperature



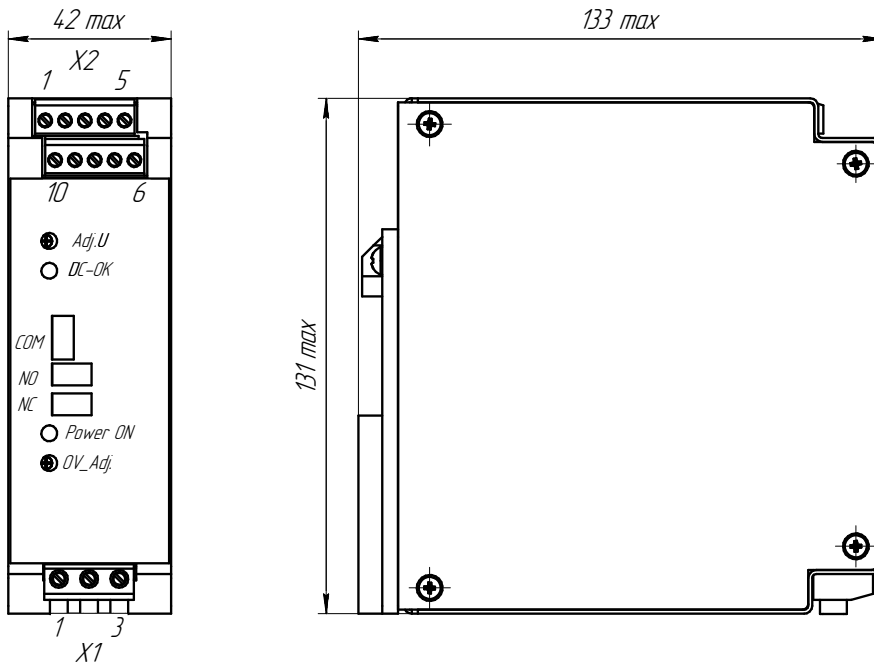
EMC spectrograms of KAN-D150C24P



EMC spectrogram has been measured for KAN-D150C12N, the results are shown in the diagrams above - vertical axis means Lead (%)

EMC spectrogram has been measured in compliance with EN55022

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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