

Features

- ◆ Highest power density in 5.0'' × 3.0'' footprint
- ◆ Supplies 200W (convection cooling!)
- ◆ Highest efficiency up to 95%
- ◆ Operating temperature range -25°C to +70°C
- ◆ Universal input 85 – 264 VAC
- ◆ Compliance with EN 61000-3-2(PFC)
- ◆ Power Back immunity
- ◆ Low leakage current
- ◆ Protection class I and class II
- ◆ 3-year product warranty



UL File Number: E317501

The new KO-200 Series AC/DC Power Supplies feature the highest power rating in the industry standard 3.0'' × 5.0'' (76.2 × 127mm) footprint. They can supply up to 200W output power with convection cooling over an industrial operating temperature range of -25°C to +70°C. This performance could be realized by a state-of-the-art design providing an extremely high efficiency of >90% which eliminates the need for a dedicated power supply cooling fan.

Compliance with global safety and EMC standards quality these power supplies for worldwide markets. Approved for Class I and Class II applications. These switches are suitable for industrial and IT systems but also for consumer products. High reliability is provided by use of industrial quality grade components and an excellent thermal management. This product offers an interesting power supply solution for many space and cost critical applications in commercial and industrial electronic equipment.

Models			
Order Code	Output Power Max.	Output Voltage (fixed)	Output Current Max.
KO 200-112	192W	12VDC	16A
KO 200-115		15VDC	12.8A
KO 200-124		24VDC	8.0A
KO 200-148		48VDC	4.0A

Input Specifications

Input voltage	-nominal	120-240VAC(universal input)
	-AC input range	85-264 with derating at low input See power derating graph 1
Input frequency		47-63Hz
Harmonic limits		EN 61000-3-2, class A
Zero load power consumption		3.6W
Recommended circuit breaker		6A(characteristic C) or slow blow fuse. For protection class II use two fuses (line and neutral)

Output Specifications

Regulation	-Input and load variation	1.0%max.
Ripple and noise(20MHz Bandwidth)		<120mVp-p <150mVp-p for 48 VDC models
Overvoltage protection	12&15 VDC models:	>150% of Vout
	24&48 VDC models:	>125% of Vout
Power back immunity	12 VDC model:	16 V(18V for 1 sec)
	15VDC model:	20 V(23V for 1 sec)
	24 VDC model:	35V(40V for 1 sec)
	48 VDC model:	63 V(68V for 1 sec)
Overload protection by current limit		at 110-150% lout max.
Short circuit protection		foldback (automatic recovery)
Capacitive load		t.b.a. μ F max.

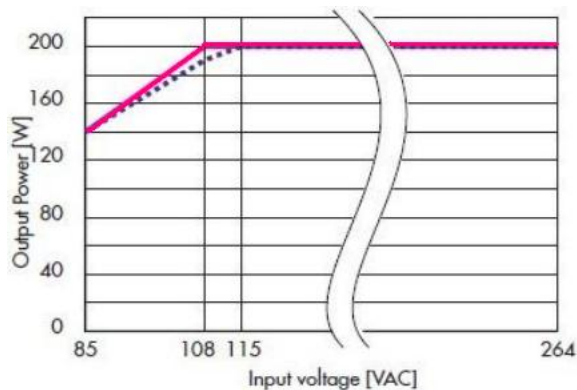
General Specifications

Operating temperature		-25°C to +70°C(convection cooling)
	-derating	see power derating graph 2

Power derating

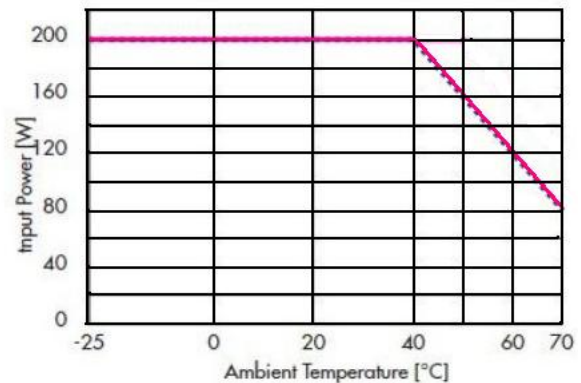
Graph1:

In respect to input voltage



Graph2:

in respect to ambient temperature



..... 12 & 15 VDC models ——— 24 & 48 VDC models

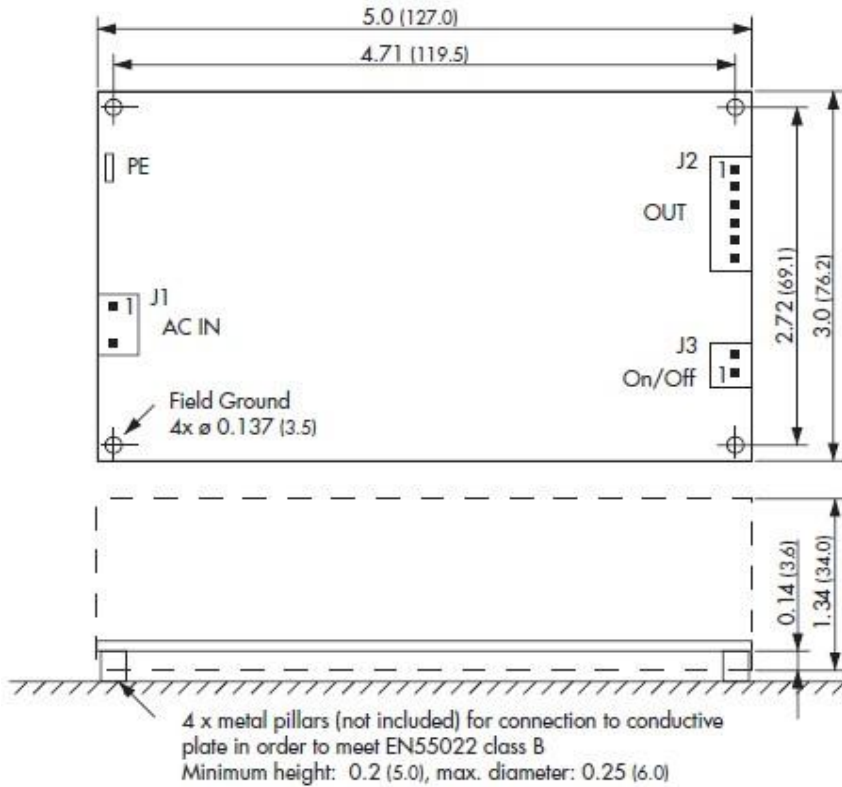
General Specifications

Efficiency	-Vin=115 VAC	12&15 VDC models: 88-91% 24&48 VDC models: 90-93%
	-Vin=230 VAC	12&15 VDC models: 90-93% 24&48 VDC models: 92-95%
Switching frequency		100kHz typ.(pulse width modulation)
Hold-up time		10 ms typ.
Start-up time	-Vin=115 VAC	<3.0s
	-Vin=230 VAC	<2.0s
Remote On/Off	-Off: connection to secondary ground	J3 pin 1 connected to secondary ground will Turn the unit off. Output voltage may pulse to 20% of nominal output voltage
	-Off: applying external current	J3 pin 2 connected to an external current Source of 10 mA will turn the unit off (no pulsing output)
	-On: open contacts	J3 pin 1&2 open.
Isolation voltage	-Input/Output	3000 VAC
	-Input/Field Ground	1500 VAC
	-Input//Field Ground	500 VAC
Isolation resistance(at 500 VDC)		100Mohm min.
Earth leakage current		500 μ A max
Safety class(for built in use only)		class I , class II prepared with second fuse
Electromagnets compatibility –Conducted input RI suppression (EMC),emissions (Note 1)		EN 55022,class B(conductive plane to be connected to field ground)
	-Harmonic current emissions	IEC/EN 61000-3-2, class A
Electromagnets compatibility-electrostatic discharge ESD (EMC),immunity		IEC/EN 61000-4-2
	-RF field immunity	IEC/EN 61000-4-3
	-Electrical fast transients/burst immunity	IEC/EN 61000-4-4
	-Surge	IEC/EN 61000-4-5
	-Conducted RF	IEC/EN 61000-4-6
	-Voltage dip	IEC/EN 61000-4-11
Safety approvals	-CB test certificate for IEC/EN 60950-1	
	-CSA certificate For UL/CUL 60950-1	
Environment	-Vibration acc. IEC 60068-2-6;	3 axis, sine sweep, 10-55Hz, 0.075mm
	-Shock acc. IEC 60068-2-27	3 axis, 15g half sine, 11ms
Connection		pin connector (JST VHR)
Weight		315 g (8.93 oz)

Note : 1.The power supply is considered a component which will be installed into a final equipment. The final equipment must be Re-confirmed that is still meets EMC directives.

2.All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

Dimensions



J1: JST Series B3P-VH(LF)(SN)
 Mates with JST crimp terminal:SVH-21T-P1.1
 And terminal housing: VHR-3N

J2: JST Series B6P-VH(LF)(SN)
 Mates with JST crimp terminal: SVH-21T-P1.1
 And terminal housing: VHR-6N

J3: Leoco Series 2571P2V
 Mates with Leoco crimp terminal:2533TPB0000
 And terminal housing: 2530S20000

PE:Faston
 Mates with TAB-6.3(1/4 ")

Dimensions in inch, () =mm

J1	
Pin	
1	AC in L
2	AC in N

J2	
Pin	J2
1	+ Vout
2	+ Vout
3	+ Vout
4	- Vout
5	- Vout
6	- Vout

J3	
Pin	
1	contact
2	current

PE to connect to protective earth if used as safety class I unit
 J3 pin 1 connected to secondary ground will turn the unit off.
 Output voltage may pulse to 20% of nominal output voltage
 J3 pin 2 connected to an external current source of 10 mA
 Will turn the unit off (no pulsing output)
 J3 pin 1&2 open: Unit is on

Specifications can be changed any time without notice

KO*i*

L N	<input type="checkbox"/>	+12V
	<input type="checkbox"/>	+12V
	<input type="checkbox"/>	+12V
	<input type="checkbox"/>	GND
	<input type="checkbox"/>	GND
	<input type="checkbox"/>	GND

POWER
OUTPUT:
12VDC/16A

INPUT: 120-240VAC
2.0-1.0A 50/60Hz
Power Supply
Model:
KO 200-112

E317501

KO*i*

L N	<input type="checkbox"/>	+15V
	<input type="checkbox"/>	+15V
	<input type="checkbox"/>	+15V
	<input type="checkbox"/>	GND
	<input type="checkbox"/>	GND
	<input type="checkbox"/>	GND

POWER
OUTPUT:
15VDC/12.8A

INPUT: 120-240VAC
2.0-1.0A 50/60Hz
Power Supply
Model:
KO 200-115

E317501

KO*i*

L N	<input type="checkbox"/>	+24V
	<input type="checkbox"/>	+24V
	<input type="checkbox"/>	+24V
	<input type="checkbox"/>	GND
	<input type="checkbox"/>	GND
	<input type="checkbox"/>	GND

POWER
OUTPUT:
24VDC/8A

INPUT: 120-240VAC
2.0-1.0A 50/60Hz
Power Supply
Model:
KO 200-124

E317501

KO*i*

L N	<input type="checkbox"/>	+48V
	<input type="checkbox"/>	+48V
	<input type="checkbox"/>	+48V
	<input type="checkbox"/>	GND
	<input type="checkbox"/>	GND
	<input type="checkbox"/>	GND

POWER
OUTPUT:
48VDC/4A

INPUT: 120-240VAC
2.0-1.0A 50/60Hz
Power Supply
Model:
KO 200-148

E317501

Length X Width: 24.4mm X 24mm

Specifications can be changed any time without notice