AKM45 Series

AC-DC Power Supplies



48 Watt

- Energy Efficiency Level VI
- European CoC Tier 2
- ITE & Medical (2 x MOPP) approvals
- 4th Edition Medical EMC
- Class I as standard, Class II optional
 Class B conducted & radiated emissions
- Input voltage range 90 to 264VAC
- Output voltages from 9 to 48VDC
- 0°C to +60°C operating temperature
- 3 Years Warranty

GREEN COPOWER

Dimensions:

AKM: 4.82 × 2.02 × 1.24" (122.4 × 51.4 × 31.5 mm)

The AKM45 series of desktop adaptors comply with the latest energy efficiency level VI standards with high active mode efficiency and extremely low no load power consumption. Available with a standard jack plug connector these adaptors suit a wide variety of cost sensitive industrial and medical applications while maintaining industry leading performance.

Models & Ratings

Output Power	Output Voltage	Output Current	Total Regulation ⁽¹⁾	Efficiency ⁽²⁾	Model Number ^(3,4)
40.5 W	9.0 V	4.50 A	5%	89.8%	AKM45US09
	12.0 V	4.00 A	5%	90.5%	AKM45US12
	15.0 V	3.20 A	5%	90.5%	AKM45US15
48 W	18.0 V	2.66 A	5%	90.6%	AKM45US18
	24.0 V	2.00 A	5%	90.2%	AKM45US24
	48.0 V	1.00 A	5%	91.2%	AKM45US48

Notes

- 1. Total regulation includes initial set accuracy, line and load regulation.
- 2. Typical average value measured at 25%, 50%, 75% and 100% at 230 VAC.
- For white case version add suffix '-W' e.g. AKM45US12-W. MOQ applies, contact sales for details.

4. For optional Class II version add suffix C2, e.g. AKM45US24C2.

Input							
Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions		
Input Voltage	90		264	VAC			
Input Frequency	47		63	Hz			
Input Current			1.3	A	90 VAC		
Inrush Current			100	A	230 VAC, cold start at 25 °C		
No Load Input Power			75	mW			
Input Protection	Internal fuse in	Internal fuse in both line and neutral					

Output					
Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Output Voltage	9		48	V	See Models and Ratings table
Minimum Load	0			A	No minimum load required
Start Up Delay			4	S	
Start Up Rise Time		30	55	ms	
Hold Up Time	10			ms	Full load and 100 VAC
Total Regulation			5	%	See Models and Ratings table
Transient Response			4	% deviation	Recovery within <1% within 500 μs for a 60% step load change at 0.15 A/ μs
Ripple & Noise			200	mV pk-pk	Measured with 20 MHz bandwidth and 10 μF electrolytic in parallel with 0.1 μF ceramic capacitor
Overload Protection	130		160	%	
Short Circuit Protection					Continuous, trip and restart (hiccup mode) with auto recovery
Temperature Coefficient			0.05	%/°C	

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General

Characteristic	;	Minimum	Typical	Maximum	Units	Notes & Conditions
Efficiency			89		%	Typical average of efficiencies measured at 25%, 50%, 75% and 100% load and 115 VAC input
Energy Efficie	ncy					Level VI
	Input to Output	4000				Input to Output, 2 x MOPP
Isolation	Input to GND	1500			VAC	Class I Version Only
	Output to GND	1500				Class I Version Only
Leakage Curre	ent			100	μA	264 VAC, 60 Hz
Switching Free	quency	24		70	kHz	Variable
Mean Time Be	tween Failure	250			kHrs	MIL-HDBK-217F at 25 °C GB
Weight			0.75 (340)		lb (g)	

Environmental

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Operating Temperature	0		+60	°C	Derate from 100% load at 40 °C to 50% load at 60 °C. Agency approval to 40 °C max.
Storage Temperature	-25		+70	°C	
Operating Humidity	5		90	%	RH, non-condensing
Operating Altitude			5000	m	
Cooling					Natural convection
Shock					1 m drop onto concrete on each of 6 axes, non operating
Vibration	10		300	Hz	2 g, 0.3 decades/min, 15 mins for each of 3 axes

EMC: Emissions

Phenomenon	Standard	Test Level	Notes & Conditions
Conducted	EN55032	Level B	
Radiated	EN55032	Level B	
Voltage Flicker	EN61000-3-3		

EMC: Immunity

Phenomenon	Standard	Test Level	Criteria	Notes & Conditions
Medical Device EMC	IEC60601-1-2	Ed.4.0 : 2014	as below	
Low Voltage PSU EMC	EN61204-3	High severity level	as below	
ESD Immunity	EN61000-4-2	±8 kV contact, ±15 kV air	A	
Radiated Immunity	EN61000-4-3	10 V/m	A	
EFT/Burst	EN61000-4-4	Level 3	A	
Surge	EN61000-4-5	Installation Class 3	A	
Conducted Immunity	EN61000-4-6	6 V	A	
Magnetic Fields	EN61000-4-8	30 A/m	A	
	EN61000-4-11 EN60601-1-2	Int: 100% 10 ms	A	
		Dip: 30% 500 ms	A	
		Int: 100% 5000 ms	В	
Dips and Interruptions		Dip: 30% 25 AC Cycles	A	
		Int: 100% 0.5 AC Cycle	A	At 8 angles
		Int: 100% 1 AC Cycle	В	
		Int.: >95% 5000 ms	В	

Safety Approvals

Safety Agency	Safety Standard	Notes & Conditions
UL	UL 62368-1 & CAN/CSA C22.2 No. 62368-1-14	
TUV	EN62368-1:2014/A11:2017	
СВ	IEC60950-1:2005 Ed 2 / IEC62368-1:2014	Information Technology
CE	LVD	Information rechnology
AU/NZ	AU/NZ 60950.1	
CCC	GB17625.1, GB4943.1, GB/T9254	
UL	ANSI/AAMI ES 60601-1	
CSA	CSA C22.2 No. 60601	Medical, 2 x MOPP
TUV	EN60601-1	
СВ	IEC60601-1	

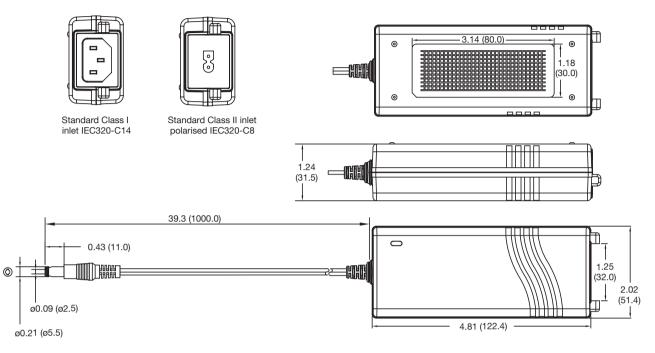
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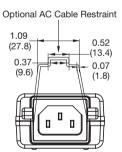


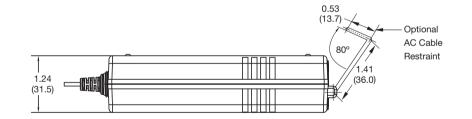
Mechanical Details

AKM45USXX



AKM45USXX with Optional AC Cable Restraint





Notes

For optional AC cable restraint, order additional part AFM45-65 AC Clip. For correct restraint, AC mains lead must be Interpower Corporation, part number 70006020300. AC cable restraint is not suitable for use on Class II version.

Output plug: ø5.5 x ø2.5 x 11.0mm, centre positive