

48 Watt

- IP22 Ingress Protection
- IEC/EN60601-1-11 for Home Healthcare Applications
- Energy Efficiency Level VI & EU2019/1782
- ITE & Medical (2 x MOPP) approvals
- 4th Edition Medical EMC
- Class I and Class II versions
- Input voltage range 80 to 264VAC
- Output voltages from 9 to 48VDC
- 0°C to +60°C operating temperature
- 3 Years Warranty



Dimensions:

AKM:

4.82 x 2.02 x 1.24" (122.4 x 51.4 x 31.5 mm)

The AKM45 series of desktop adaptors comply with medical, home-healthcare and IT approvals along 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
48 W	12.0 V	4.00 A	5%	90.5%	AKM45US12
	15.0 V	3.20 A	5%	90.5%	AKM45US15
	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.

3. For white case version add suffix '-W' e.g. AKM45US12-W. MOQ applies, contact sales for details.

4. Model number shown in the table is for Class I version. For Class II version add suffix C2, e.g. AKM45US24C2.

Input

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Input Voltage	80		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 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	

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 Efficiency					Level VI
Isolation	Input to Output	4000		VAC	Input to Output, 2 x MOPP
	Input to GND	1500			Class I Version Only
	Output to GND	1500			Class I Version Only
Leakage Current			100	µA	264 VAC, 60 Hz
Switching Frequency	24		70	kHz	Variable
Mean Time Between 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
Ingress Protection	IP22				

EMC: Emissions

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

EMC: Immunity

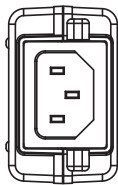
Phenomenon	Standard	Test Level	Criteria	Notes & Conditions
Medical Device EMC	IEC60601-1-2	Ed.4.0 : 2014	as below	
Low Voltage PSU EMC	EN61204-3	High severity level	as below	
ESD Immunity	EN61000-4-2	±8 kV contact, ±15 kV air	A	
Radiated Immunity	EN61000-4-3	10 V/m	A	
EFT/Burst	EN61000-4-4	Level 3	A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

Safety Approvals

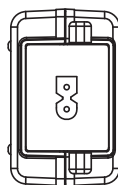
Certification	Safety Standard	Notes & Conditions
UL	UL 62368-1 & CAN/CSA C22.2 No. 62368-1-14	Information Technology
	ANSI/AAMI ES 60601-1	Medical, 2 x MOPP
EN	EN62368-1:2014/A11:2017	Information Technology
	EN60601-1 (Class I & II versions), EN60601-1-11 (Class II version)	Medical, 2 x MOPP
CB	IEC60950-1:2005 Ed 2 / IEC62368-1:2014	Information Technology
	IEC60601-1 (Class I & II versions), IEC60601-1-11 (Class II version)	Medical, 2 x MOPP
CSA	CSA C22.2 No. 60601	Medical, 2 x MOPP
CCC	GB17625.1, GB4943.1, GB/T9254	Information Technology
AU/NZ	AU/NZ 60950.1	Information Technology
CE	Meets all applicable directives	
UKCA	Meets all applicable legislation	

Mechanical Details

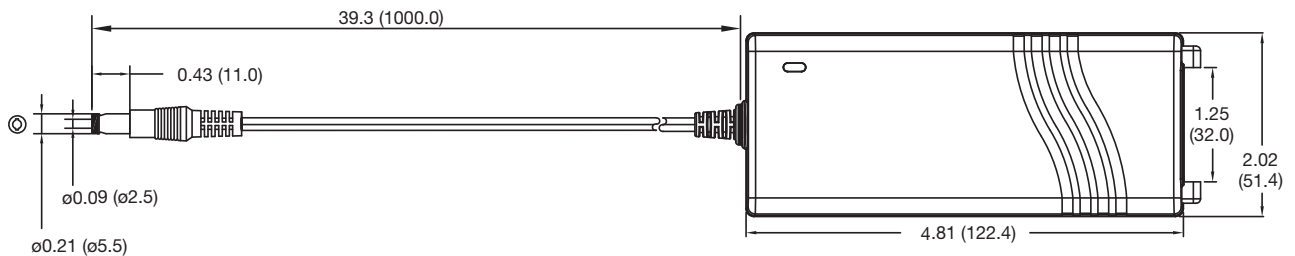
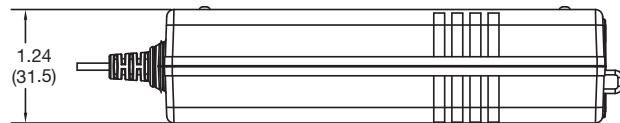
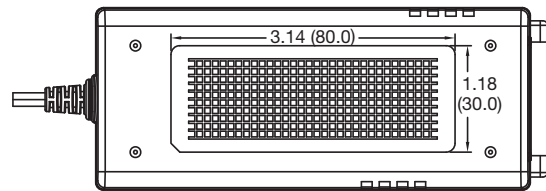
AKM45USXX



Standard Class I inlet IEC320-C14

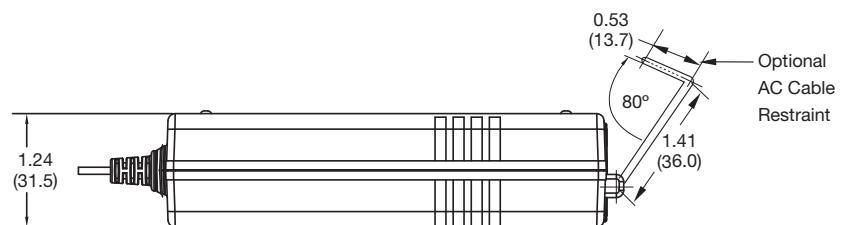
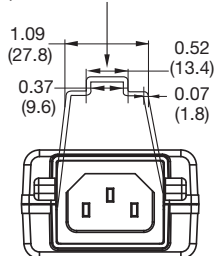


Standard Class II inlet polarised IEC320-C8



AKM45USXX with Optional AC Cable Restraint

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: $\phi 5.5 \times \phi 2.5 \times 11.0$ mm, centre positive