AKM65 Series

AC-DC Power Supplies

HELIOS POWER SOLUTIONS

65 Watt

- Energy Efficiency Level VI
- European CoC Tier 2
- Medical and ITE Approvals
- Optional Class II Versions
- Optional White Versions
- Output Voltages from 12 V to 48 V
- Optional AC Cable Restraint
- 3 Years Warranty
- AS/NZ 60950.1 Approval

GREEN XP POWER

The AKM65 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.

Dimensions:

AKM:
4.92 x 2.45 x 1.34" (125.0 x 62.3 x 34.0 mm)

Models & Ratings

Output Power	Output Voltage	Output Current	Total Regulation[1]	Efficiency[2]	Model Number[3,4]
65 W	12.0 V	5.42 A	5%	90.1%	AKM65US12
	15.0 V	4.30 A	5%	90.9%	AKM65US15
	18.0 V	3.60 A	5%	90.7%	AKM65US18
	24.0 V	2.70 A	5%	90.5%	AKM65US24
	48.0 V	1.35 A	5%	89.6%	AKM65US48

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. AKM65US12-W. MOQ applies, contact sales for details.
4. For optional Class II version add suffix C2, e.g. AKM65US24C2.

Input

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Input Voltage	90		264	VAC	
Input Frequency	47		63	Hz	
Input Current			2.0	A	90 VAC
Inrush Current			100	A	230 VAC, cold start at 25 °C
No Load Input Power			150	mW	
Input Protection	Internal fuse in both line and neutral				

Output

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Output Voltage	12		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 Ground	1500				Class I version only
Output to Ground					Negative output is connected to ground at class I version.
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
Storage Temperature	-20		+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

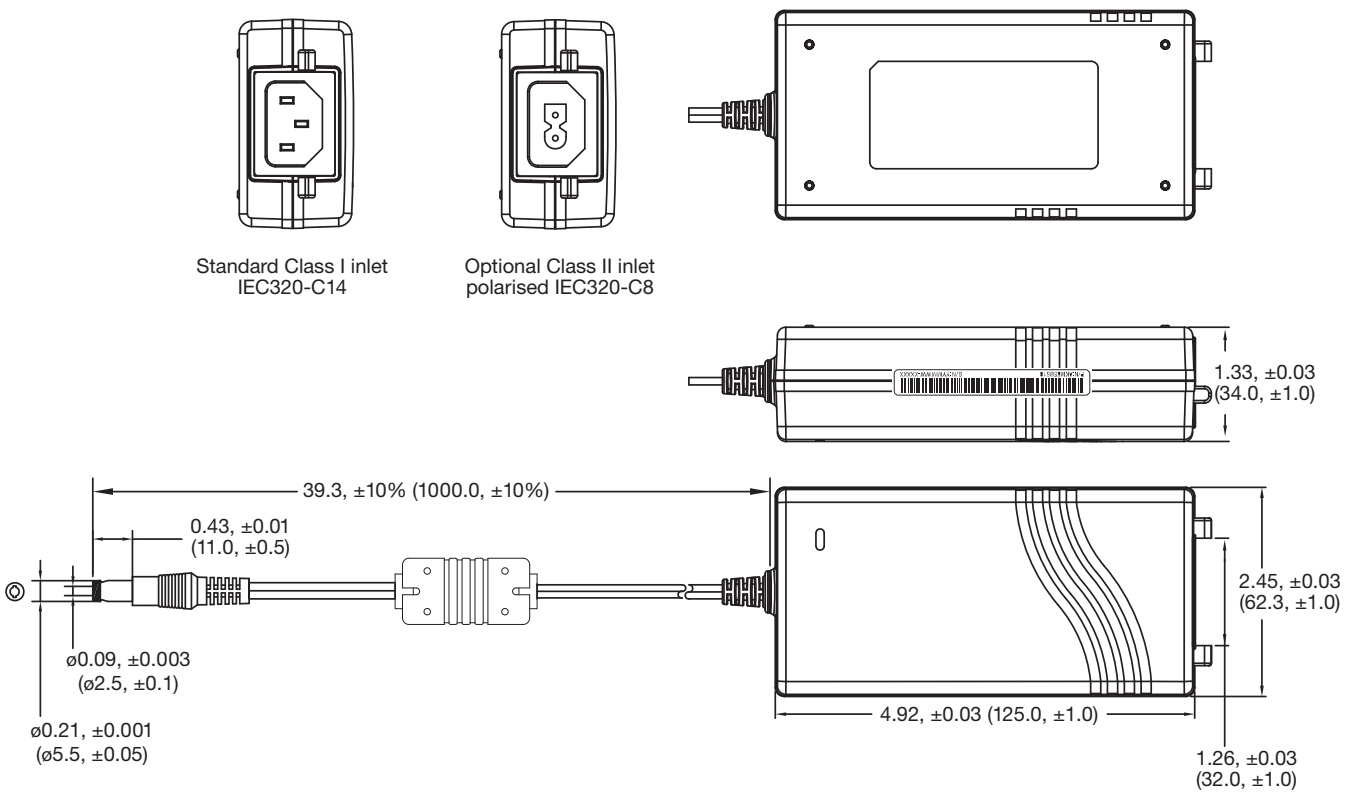
Phenomenon	Standard	Test Level	Criteria	Notes & Conditions
Medical Device EMC	IEC60601-1-2	Ed.4.0 : 2014	as below	
Low Voltage PSU EMC	EN61204-3	High severity level	as below	
ESD Immunity	EN61000-4-2	±8 kV contact, ±15 kV air	A	
Radiated Immunity	EN61000-4-3	10 V/m	A	
EFT/Burst	EN61000-4-4	Level 3	A	
Surge	EN61000-4-5	Level 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	Dip: 100% 10 ms	A	
		Dip: 70% 500 ms	B	
		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

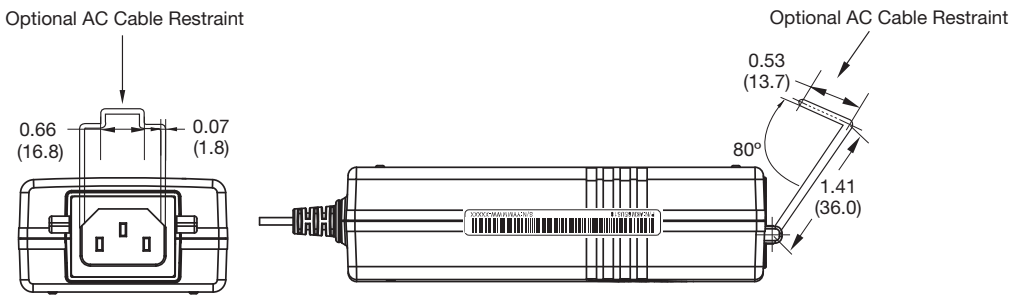
Safety Agency	Safety Standard	Notes & Conditions
UL	UL 62368-1 & CAN/CSA C22.2 No. 62368-1-14	Information Technology
TUV	EN62368-1:2014/A11:2017	
CB	IEC60950-1:2005 Ed 2 / IEC62368-1:2014	
CE	LVD	
CCC	China Compulsory Certification, GB4943	
AU/NZ	AU/NZ 60950.1	
UL	ANSI/AAMI ES 60601-1	Medical, 2 x MOPP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

Mechanical Details

AKM65USXX



AKM65USxx with Optional AC Cable Restraint



Notes

For optional AC cable restraint, order additional part AFM45-60 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.