

**70W** CONVECTION COOLED

AC-DC power supplies

Offering 70W with Energy Efficiency Level VI and CoC Tier 2 the AEJ70 desktop AC-DC power supplies are designed for ITE & industrial electronics applications.

The DC lead is fitted with a 5.5/2.5mm right angled barrel connector. With class B conducted & radiated emissions and class I construction they are fitted with an IEC320-C14 inlet and have a voltage input range of 90 to 264VAC.



## Features

- ▶ Single outputs from 12 to 48VDC
- ▶ Energy efficiency level VI
- ▶ European CoC tier 2
- ▶ Universal input
- ▶ <0.15W standby power
- ▶ -20°C to +65°C operation
- ▶ 3 year warranty

## Applications



Technology



Instrumentation

## Dimensions

120.0 x 53.5 x 31.0mm (4.72" x 2.09" x 1.24")

## Models & ratings

Model number	Output voltage	Output current	Total regulation	Efficiency <sup>(1)</sup>
AEJ70US12	12.0VDC	5.80A	±5%	89%
AEJ70US15	15.0VDC	4.65A	±4%	89%
AEJ70US19	19.0VDC	3.70A	±3%	89%
AEJ70US24	24.0VDC	3.00A	±3%	89%
AEJ70US28	28.0VDC	2.50A	±3%	89%
AEJ70US36	36.0VDC	2.00A	±3%	89%
AEJ70US48	48.0VDC	1.50A	±3%	89%

### Notes:

1. Typical average of efficiencies measured at 25%, 50%, 75% and 100% load and 230VAC input.

## Input

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Input voltage	90		264	VAC	
Input frequency	47		63	Hz	
Input current		1.5		A	Measured at 100VAC
Inrush current			70	A	230VAC cold start, +25°C
Earth leakage current			350	μA	264VAC, 60Hz
No load input power			0.15	W	
Input protection	T2.0A/250VAC internal fuse in line				

## Output

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Output voltage	12		48	VDC	See models and ratings table
Initial set accuracy			±2	%	At 60% load
Minimum load	No minimum load required				
Start up delay			3	s	
Start up rise time			20	ms	
Hold up time		8		ms	Full load and 115VAC
Line regulation			±1	%	
Total regulation	See models and ratings table				
Transient response			5	%	Maximum deviation, recovering to less than 1% within 500μs for 25% step load
Ripple and noise			1	% pk-pk	Measured with 20MHz bandwidth and 10μF electrolytic in parallel with 0.1μF ceramic capacitor.
Overshoot			10	%	At turn on / turn off
Overvoltage protection	112		140	%	Auto recovery
Overload protection	115		185	%	
Short circuit protection	Trip and restart (hiccup), auto resetting				
Temperature coefficient		0.04		%/°C	

## General

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Efficiency		89		%	See models and ratings table and curves.
Isolation	3000			VAC	
	1500			VAC	
					Negative output is connected to ground
Switching frequency		65		kHz	Variable
Power density			0.36 (5.9)	cm <sup>3</sup> (W/in) <sup>3</sup>	
Mean time between failure				khrs	MIL-HDBK-217F at 25°C GB for 24VDC version
Weight		300 (0.6)		g (lb)	

## Environmental

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Operating temperature	-20		+65	°C	Derate from 100% load at +40°C to 42% load at +65°C
Storage temperature	-40		+85	°C	
Operating humidity	5		90	%RH	Non-condensing
Operating altitude			5000	m	
Vibration	IEC68-2-6, 10-500 Hz, 2g 10mins/sweep, 60mins for each of 3 axes				
Cooling	Natural convection				
Shock	IEC68-2-27, 30g, 11ms half sine, 3 times in each of 6 axes				

## Emissions - EMC

Phenomenon	Standard	Test level	Notes & conditions
Emissions	EN55032	Level B	Conducted and radiated
Harmonic currents	EN61000-3-2	Class A	
Voltage flicker	EN61000-3-3		

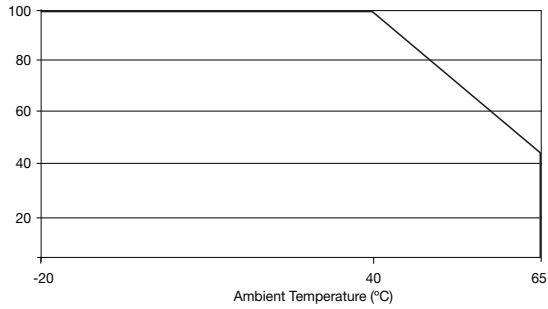
## Emissions - immunity

Phenomenon	Standard	Test level	Criteria	Notes & conditions
ESD immunity	EN61000-4-2	±8kV contact, ±15kV air	A	
Radiated immunity	EN61000-4-3	3V/m	A	
EFT/burst	EN61000-4-4	2	A	
Surge	EN61000-4-5	Installation class 3	A	
Conducted	EN61000-4-6	3V	A	
Magnetic fields	EN61000-4-8	3A/m	A	
Dips and interruptions	EN61000-4-11	Dip: 30% 500ms	A/B	High Line/low line
		Dip: 60% 100ms	A/B	High Line/low line
		Int: 100% 5000ms	B	
		Int: 100% 10ms	A	

## Safety approvals

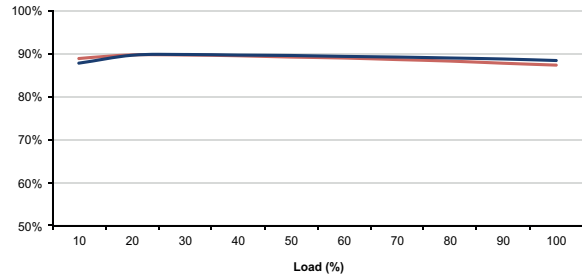
Safety agency	Standard	Notes & conditions
UL	UL62368-1	
EN	EN62368-1	
CB	IEC62368-1	
AU/NZ	AU/NZ 60950.1	
CE	Meets all applicable legislation	
UKCA	Meets all applicable legislation	

## Derating curve

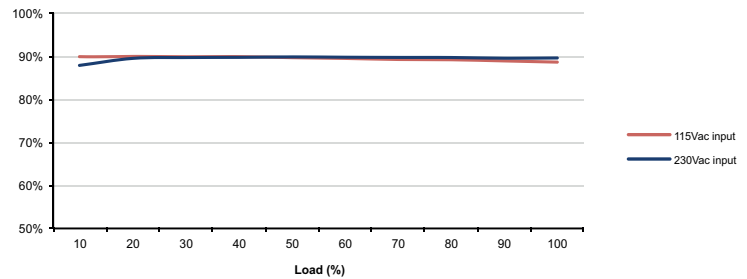


## Efficiency curve

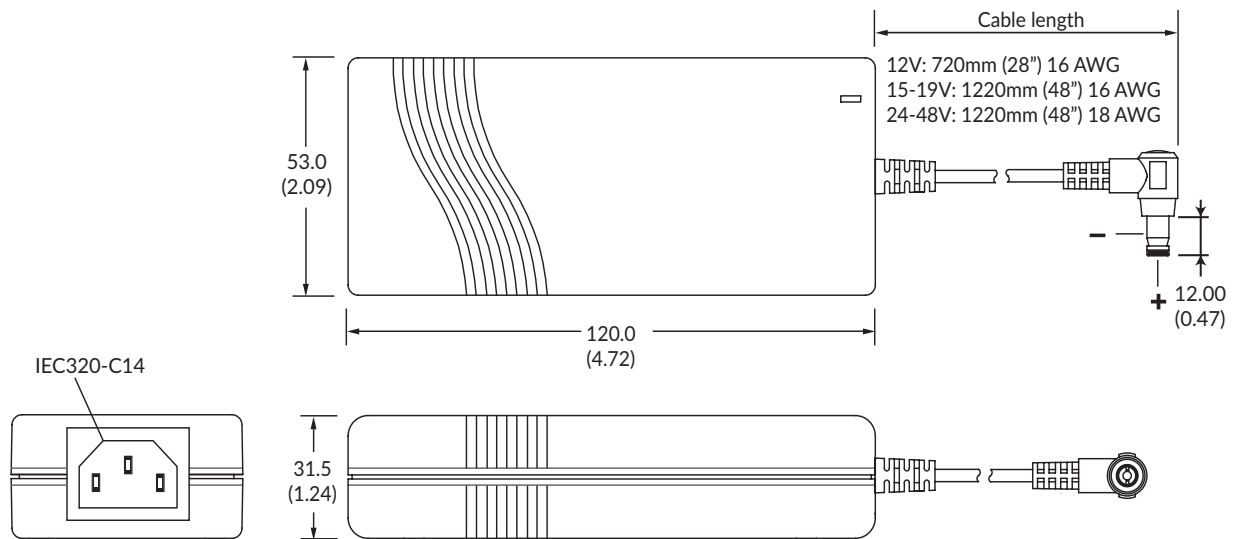
AEJ70US12



AEJ70US24



## Mechanical details



### Notes:

1. All dimensions shown in mm (inches).
2. Weight: 300g (0.6lbs) approx.

3. Tolerance is  $\pm 0.5$  ( $\pm 0.02$ ) maximum, except output cable length which is  $\pm 50$ mm ( $\pm 2$ "
4. Output connector is 5.5mm dia. outer barrel, inner dia. is 2.5mm with a center + and outer shell - polarity.

Specifications subject to change without notice.