

# Universal AC Input Switchers

**AEC** SERIES

**25 Watts External**



*CE Marked - LVD & EMC*

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*35 Watts Peak Power*

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*90-264 V AC Universal Input*

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*Short Circuit Protected*

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*LED Indication*

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*EN55022 Level B EMC*

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*Single & Multi Outputs*

## **Specification**

Input Voltage	• 90-264 V AC (120-370 V DC)
Input Frequency	• 47-63 Hz
Inrush Current	• Cold start 18 A max 132 V AC, 36 A max 264 V AC
Hold Up Time	• 10 ms at 110 V AC, 60 ms typical at 230 V AC
Earth Leakage Current	• 0.4 mA @ 230 V AC
Output Voltage	• See Table (not adjustable)
Output Power	• 25 W at +40 °C ambient (35 W peak for 60 secs - 5% duty cycle)
Line Regulation	• See Table
Load Regulation	• See Table
Ripple & Noise	• See Table
Short Circuit and Overload Protection	• Primary power limited 80 W P in max, 40 W P out max
Overvoltage Protection	• +5 V O/P, 6.25 V $\pm$ 0.65 V & standard on all 24 & 48 V models
Temperature Coefficient	• 0.02%/°C
Efficiency	• 70% typical (63% min for AEC25US05)
Operating Temperature	• 0 °C to +40 °C at full load
Storage Temperature	• -40 °C to +85 °C
Relative Humidity	• 5% to 95% non-condensing
EMC	• FCC, VDE 0871 level B, EN 55022 level B radiated & Conducted noise EN61000-4-2,-4 & -5 level 3 IEC801-2 level 3 & IEC 801-3 level 2
Weight	• 450g
Case Material	• General electric lexan, black, UL94V0 flammability rated
Safety Approvals	• UL1950, CSA 22.2 234/950 certified, EN60950/IEC950 registered, VDE0805, BABT
MTBF	• 150,000 hrs MIL-HDBK-217 F @ 25 °C and full load

**Output Voltage & Current Ratings**

Max. Power	Output Voltage	Output Currents			Ripple Pk-Pk <sup>(7)</sup>	Total Regulation <sup>(8)</sup>	Model Number
		Minimum <sup>(4)</sup>	Maximum <sup>(5)</sup>	Peak <sup>(6)</sup>			
25 W	+5 V (A)	0 A	2.00 A	4.0 A	50 mV	+6%, -4%	AEC25UT08
	+12 V (B)	0 A	1.00 A	2.0 A	120 mV	+7%, -5%	
	-12 V (C)	0 A	0.20 A	1.0 A	120 mV	±5%	
25 W	+5 V (A)	0 A	2.00 A	4.0 A	50 mV	+6%, -4%	AEC25UT10
	+15 V (B)	0 A	0.75 A	1.5 A	150 mV	+9%, -3%	
	-15 V (C)	0 A	0.20 A	1.0 A	150 mV	±5%	
25 W	+5 V (A)	0 A	2.50 A	4.0 A	50 mV	+6%, -4%	AEC25UD18
	+12 V (B)	0 A	1.00 A	2.0 A	120 mV	+7%, -5%	
25 W	+5 V	0 A	4.00 A	5.0 A	50 mV	+6%, -4%	AEC25US05
25 W	+9.5 V	0 A	2.50 A	3.2 A	95 mV	±4%	AEC25US14 <sup>(1)</sup>
25 W	+12 V	0 A	2.00 A	2.5 A	120 mV	±4%	AEC25US12 <sup>(1)</sup>
25 W	+14 V	0 A	1.70 A	2.2 A	140 mV	±4%	AEC25US21 <sup>(1)</sup>
25 W	+16 V	0 A	1.50 A	2.0 A	160 mV	±4%	AEC25US16 <sup>(1)</sup>
25 W	+24 V	0 A	1.00 A	1.3 A	240 mV	±4%	AEC25US24 <sup>(1)</sup>
25 W	+48 V	0 A	0.50 A	0.7 A	240 mV	±4%	AEC25US48 <sup>(1)</sup>

**Notes:**

- (1) An alternative 48 inch cable assembly with 2.5 mm jack plug is available on single output models (except 5 V models). This option can be ordered by adding Suffix H1 at the end of the model number.
- (2) The green LED is ON to indicate the presence of output (A) & single output. The LED turns off during output short circuit condition.
- (3) To maintain user-system safety approvals, the input power cable must be appropriately rated and approved by UL, CSA and VDE.
- (4) Although the AEC25 models will operate with no load on the outputs, some components temperatures increase under this condition. A minimum total load of 4 W is recommended.
- (5) Natural convection cooling, 25 W maximum.
- (6) Peak output current lasting less than 60 seconds with duty cycle less than 5%. During peak loading, output voltage may exceed total regulation limits.

(7) 50 MHz bandwidth, peak to peak, measured differentially.

(8) Total regulation is defined as the static output regulation at 25 °C, including initial tolerance, line voltage within stated limits, load currents within stated limits, and output voltages adjusted to their factory settings

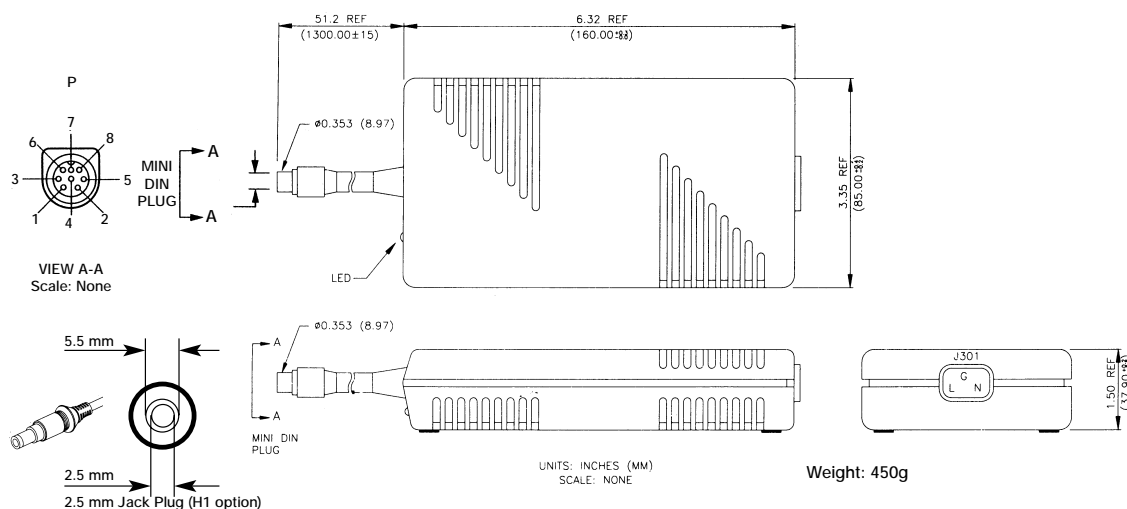
For multi output models to maintain stated regulation:

$$0.25 \leq \frac{I(A)}{I(B)} \leq 5, \text{ for } I(B) > 0.3 \text{ A}$$

$$0.5 \leq \frac{I(A)}{I(B)} \leq 5, \text{ for } I(B) < 0.3 \text{ A}$$

To obtain full load from output (C), I(A) must be ≥ 0.5 A &amp; I(B) must be greater than I(A) taken from output (C).

Output (B) must be loaded to achieve regulation on output A (multi - output units).

**Mechanical Details****PIN CONNECTIONS MINI DIN PLUG**

Pin No.	Single Output	Dual Output	Triple Output	Mating Connector
1	VA	VA	VA	AMP shielded Miniature circular DIN Plug 8 Pin P/N 749179-1 or equivalent
2	VA	VA	VA	
3	VA	VA	VA	
4	VA	VB	VB	
5	Return	Return	VC	
6	Return	Return	Return	
7	Return	Return	Return	
8	Return	Return	Return	
PIN CONNECTIONS 2.5 mm JACK PLUG Single O/P				
Inner	VA			Switchcraft Power Jack, P/N 712A or equivalent.
Outer	Return			

**MATING CONNECTOR - AEC25 CON**

Chassis mount mating connector with 90 mm flying leads available, order part no. AEC25 CON. Contact office for data sheet.

Right angle pcb mount connectors are also available.

**AC INPUT LEADS**

Description	Model Number
2 M black UK plug fitted with 5 A fuse, terminated with IEC connection.	UK-MAINS-IEC
2 M black Euro plug fitted with 5 A fuse, terminated with IEC connection.	EU-MAINS-IEC