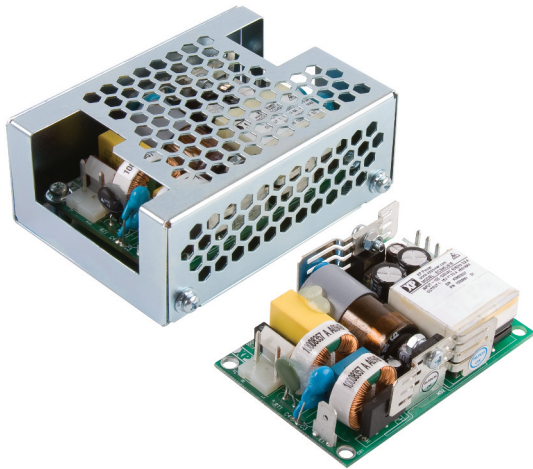


ECS25,45 & 60 Series



- IT & Medical Safety Approvals
- Very Small 2.0" x 3.0" Format
- Low Standby Power
- 25, 45 & 60 W – Convection Cooled Ratings
- High Convection Cooled Power Density up to 9.5 W/in³
- Class I & Class II Installations
- -20 °C to +70 °C Operation
- Low Earth Leakage Current
- 3 Year Warranty

The ECS25, 45 & 60 Series has been designed to minimise the no load power consumption and maximise efficiency in order to facilitate equipment design to the latest environmental legislation.

Approved for Class I and Class II applications, this range of single output AC-DC power supplies feature very high convection cooled power density in an industry leading 2" x 3" (51.0 mm x 76.2 mm) footprint. The very low profile, 1U compatible supplies meet EN55011/32 Level B conducted emissions with low earth leakage currents of 80 µA at 115 VAC or 160 µA at 230 VAC. Making these switchers ideal for industrial, IT and medical applications.

The series has single output versions from 5 V to 48 VDC, adjustable by ±10%. They are dual-fused for compliance with IEC60601-1 and efficiency up to 89%, so minimal excess heat is generated. They will deliver up to 60 W of power at +50 °C and up to +70 °C with derating.

Models and Ratings

Output Power - Convection Cooled	Output Voltage V1	Max Output Current	Model Number ¹⁾
25 W	12.0VDC	2.08 A	ECS25US12
25 W	15.0VDC	1.67 A	ECS25US15
25 W	24.0VDC	1.04 A	ECS25US24
25 W	48.0VDC	0.52 A	ECS25US48
30 W	5.0VDC	6.00 A	ECS45US05
45 W	12.0VDC	3.75 A	ECS45US12
45 W	15.0VDC	3.00 A	ECS45US15
45 W	24.0VDC	1.90 A	ECS45US24
45 W	48.0VDC	0.95 A	ECS45US48
40 W	5.0VDC	8.00 A	ECS60US05 ¹
60 W	12.0VDC	5.00 A	ECS60US12
60 W	15.0VDC	4.00 A	ECS60US15
60 W	24.0VDC	2.50 A	ECS60US24
60 W	48.0VDC	1.25 A	ECS60US48

Notes

1. For covered versions, add suffix '-C' to model number or order part number ECS25-60 COVER KIT for standalone cover. Not suitable for use in class II installations, derate output power by 20% with cover.

Input Characteristics

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Input Voltage - Operating	80	115/230	264	VAC	Derate output power < 90 VAC. See fig. 1
Input Frequency	47	50/60	400	Hz	Agency approval 47-63 Hz
Power Factor		>0.5			230 VAC, 100% load EN61000-3-2 class A compliant
Input Current - No Load		0.01/0.02		A	115/230 VAC
Input Current - Full Load		0.45/0.25 0.75/0.45 0.95/0.60		A	115/230 VAC - ECS25 115/230 VAC - ECS45 115/230 VAC - ECS60
Inrush Current			40	A	230 VAC cold start, 25 °C
No Load Input Power		0.3	0.5	W	115/230 VAC
Earth Leakage Current		80/160 0.6/1.2	260	µA mA	115/230 VAC/50 Hz (Typ.), 264 VAC/60 Hz (Max.) 115/230 VAC/400 Hz
Input Protection	T3.15A/250 V internal fuse in both line and neutral				

Output Characteristics

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Output Voltage - V1	5.0		48	VDC	See Models and Ratings table
Initial Set Accuracy			±1	%	50% load, 115/230 VAC
Output Voltage Adjustment	±10			%	Via potentiometer. See mech. details (page 9)
Minimum Load	0			A	
Start Up Delay		1		s	230 VAC full load (see fig.2)
Hold Up Time	16			ms	115 VAC full load (see fig.3)
Drift			±0.2	%	After 20 min warm up
Line Regulation			±0.5	%	90-264 VAC
Load Regulation			±1	%	0-100% load.
Transient Response - V1			4	%	Recovery within 1% in less than 500 µs for a 50-75% and 75-50% load step
Over/Undershoot - V1		3		%	See fig.4
Ripple & Noise			1	% pk-pk	20 MHz bandwidth (see fig.5 & 6)
Overvoltage Protection	115		140	%	Vnom DC.
Overload Protection	110		200	% I nom	Auto reset (see fig.7)
Short Circuit Protection					Continuous, trip & restart (hiccup mode)
Temperature Coefficient			0.05	%/°C	
Overtemperature Protection				°C	Not fitted