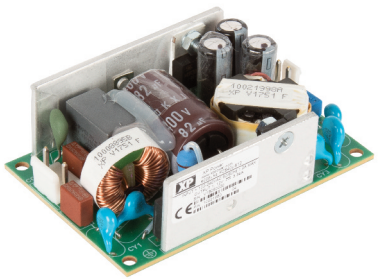
FCS40 Series

AC-DC Power Supplies

XP Power

40 Watts

- 40 W Convection Rating
- 2″ by 3″ Footprint
- Low 1.04″ Profile
- High Efficiency
- Medical, ITE and Household Appliance Approvals
- Class I & Class II Installations
- High Power Density
- Less than 0.3 W No Load Input Power
- 3 Year Warranty



GREEN XP POWER

Dimensions:

FCS40:
2.00 x 3.00 x 1.04″ (50.8 x 76.2 x 26.4 mm)

The FCS40 series is designed to minimize the no load power consumption and maximize efficiency to facilitate equipment design to meet the latest environmental legislation. Approved for medical and ITE applications in either Class I or Class II installations, this range of single output AC-DC power supplies are packaged in a low profile 1.04" height with a foot print of just 2" by 3". The FCS40 provides up to 40W convection-cooled over the full 90-264 VAC input range, and operates down to 80 VAC with minimal de-rating. The power supply features two AC line fuses and low leakage currents required by medical applications. The low profile, low noise and safety approvals covering ITE and medical standards allows the versatile FCS40 series to be used in a wide range of applications.

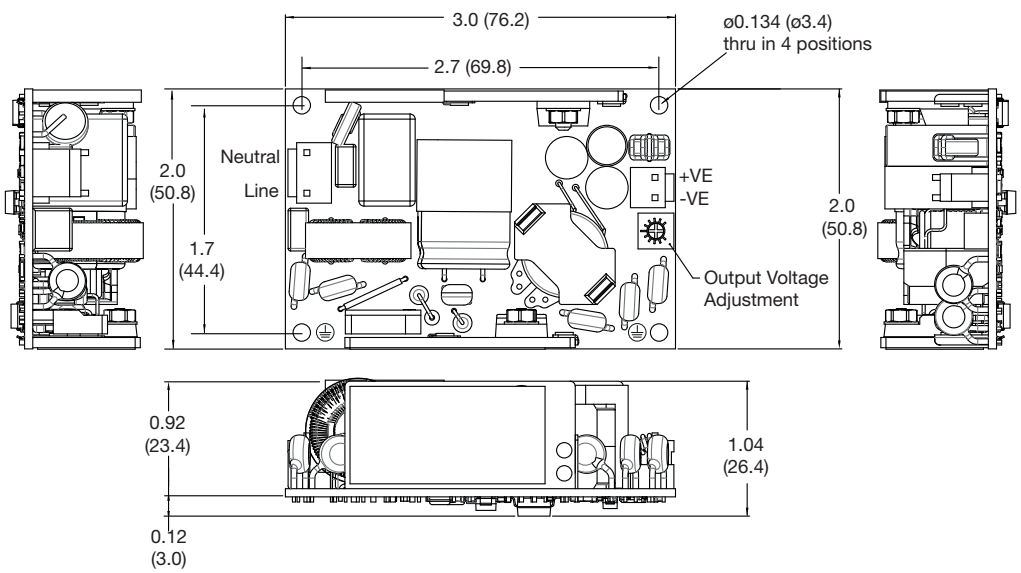
Models & Ratings

Output Power	Output Voltage	Output Current	Efficiency[1]	Model Number
40 W	12.0 V	3.34 A	82%	FCS40US12
40 W	15.0 V	2.67 A	85%	FCS40US15
40 W	18.0 V	2.23 A	85%	FCS40US18
40 W	24.0 V	1.67 A	85%	FCS40US24
40 W	36.0 V	1.11 A	84%	FCS40US36
40 W	48.0 V	0.83 A	86%	FCS40US48

Notes

1. Typical efficiency measured at full load and 230 VAC input.

Mechanical Details



CN1 - Input Connector	
Pin 1	Line
Pin 2	Not Fitted
Pin 3	Neutral

Mates with JST housing VHR-3N and JST Series SVH-21T-P1.1 crimp terminals

CN2 - Output Connector	
Pin 1	+Vout
Pin 2	-Vout

Mates with JST housing VHR-2N and JST Series SVH-21T-P1.1 crimp terminals

Notes

1. All dimensions shown in inches (mm). Tolerance: ±0.02 (0.5)
2. Weight: 0.19 lbs (86 g) approx.

Mounting hole marked with ⏚ must be connected to safety earth for class I applications

Summary

Characteristic		Minimum	Typical	Maximum	Units	Notes & Conditions
Input Range		80	115/230	264	VAC	Derate output from 100% at 90 VAC to 90% at 85 VAC and 80% at 80 VAC
No Load Input Power				0.3	W	
Efficiency			86		%	230 VAC (see models and ratings table)
Operating Temperature		-25		+70	°C	See derating curve (fig.1)
Safety Approvals	ITE	IEC60950-1, IEC62368-1, EN62368-1, cUL62368-1				
	Medical	IEC60601-1 Ed 3.1 Including Risk Management, ANSI/AAMI ES60601-1 & CSA C22.2 No.6061-1:08, EN60601-1				
	Household	IEC60335-1				

Input

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Input Voltage - Operating	80	115/230	264	VAC	Derate output from 100% at 90 VAC to 90% at 85 VAC and 80% at 80 VAC
Input Frequency	47	50/60	63	Hz	Agency approval, 47-63 Hz
Power Factor					EN61000-3-2 class A
Input Current - Full Load		0.8/0.4		A	115/230 VAC
Inrush Current			60	A	264 VAC cold start, 25 ºC
Earth Leakage Current			270	µA	264 VAC/60 Hz
No load Input Power			0.3	W	
Input Protection	T3.15 A/250 A, 250 V Internal fuse fitted in line and neutral.				

Output - Main Output

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Output Voltage	12		48	VDC	See Models and Ratings table
Initial Set Accuracy			±1	%	50% load, 115/230 VAC
Output Voltage Adjustment	±10			%	
Minimum Load	0			A	No minimum load required
Start Up Delay		1	2	s	
Output Rise Time			50	ms	
Hold Up Time	8.3/20			ms	Min at full load 115/230 VAC
Line Regulation			±0.5	%	90-264 VAC
Load Regulation			1	%	0-100% load.
Transient Response			4	%	Recovery within 1% in less than 500 µs for a 50-75% and 75-50% load step
Over/Undershoot			5	%	Full load
Ripple & Noise			1	% pk-pk	20 MHz bandwidth
Overvoltage Protection	115		140	%Vnom	Continuous trip and restart (hiccup)
Overload Protection	110		180	% I nom	
Short Circuit Protection					Continuous trip and restart (hiccup)
Temperature Coefficient			0.05	%/°C	