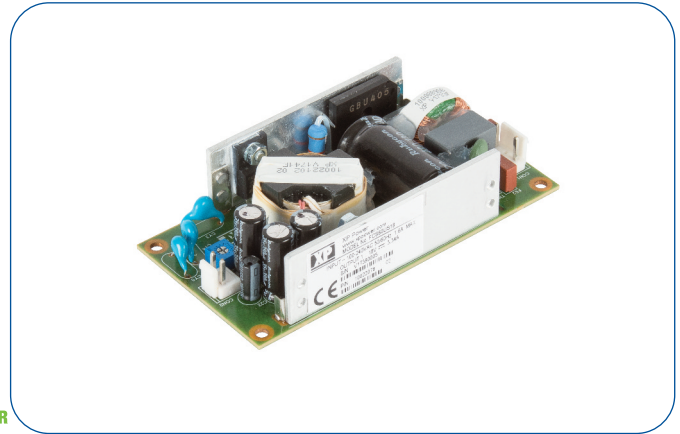


60 Watts

- 60 W Convection Rating
- 2" by 4" 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



The FCS60 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 4". The FCS60 provides up to 60W convection-cooled and operates down to 80 VAC. 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 FCS60 series to be used in a wide range of applications.

Dimensions:

FCS60:

2.00 x 4.00 x 1.04" (50.8 x 101.6 x 26.4 mm)

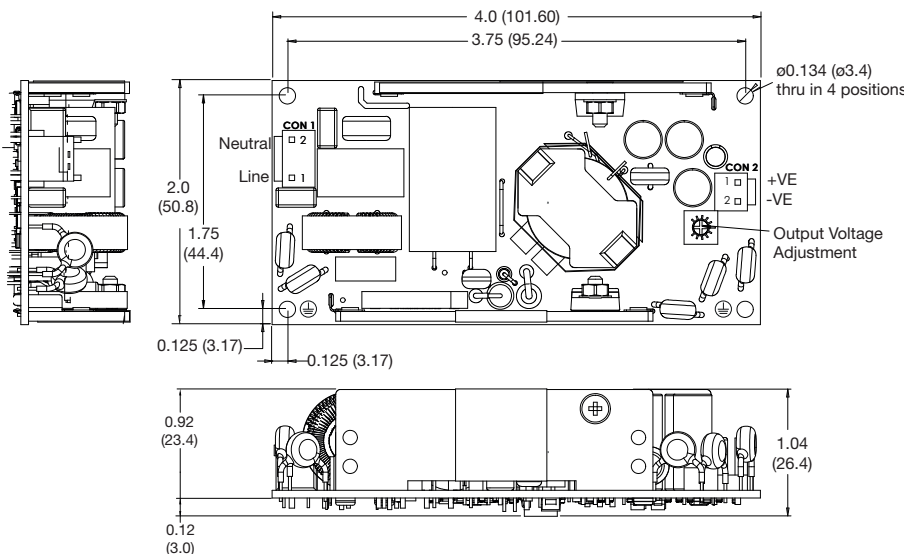
Models & Ratings

Output Power	Output Voltage	Output Current	Efficiency ⁽¹⁾	Model Number
60 W	12.0 V	5.00 A	85%	FCS60US12
60 W	15.0 V	4.00 A	85%	FCS60US15
60 W	18.0 V	3.33 A	85%	FCS60US18
60 W	24.0 V	2.50 A	85%	FCS60US24
60 W	36.0 V	1.67 A	86%	FCS60US36
60 W	48.0 V	1.25 A	86%	FCS60US48

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

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

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: 0.25 lbs (112 g) approx.

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		85		%	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		0.9/0.5		A	115/230 VAC
Inrush Current			60	A	264 VAC cold start, 25 °C
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			1.0	% pk-pk	20 MHz bandwidth
Overvoltage Protection	115		140	%Vnom	Continuous trip and restart (hiccup)
Overload Protection	110		160	% I nom	
Short Circuit Protection					Continuous trip and restart (hiccup)
Temperature Coefficient			0.05	%/°C	

General

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Efficiency		85		%	115/230 VAC 100% load
Isolation: Input to Output Input to Ground Output to Ground	4000			VAC	2 MOPP
	1500			VAC	1 MOPP
	500			VAC	1 MOPP at output voltage
Power Density			7.2	W/in ³	
Mean Time Between Failure	500			kHrs	MIL-HDBK-217F, Notice 2 +25 °C GB
Weight		0.25 (112)		lb(g)	