



FWC100 Series

100 Watt ITE Desktop Power Supply

- High Efficiency: Level V
- High Power Density 4.2W/in³
- Lifetime Expectation >5 years
- Hold-up Time >48ms at full load
- Power Factor Correction
- EISA and CEC Compliant
- LED Indicator
- Class I

Overview

The FWC100 series is an external, switch mode power supply that offers leading edge converter efficiencies of up to 90% at 115 VAC. This high efficiency results in a compact size, lower internal temperature, and enhanced reliability. The FWC100 offers a power density of 4.2 watts per cubic inch and is ideal for applications requiring high power in a lightweight package. The FWC100 is well suited for IT, data, and telecom equipment and meets IEC 60950-1 standards.

The convection cooled FWC100 series measures 7.09" x 2.27" x 1.52" (180.2mm x 57.5mm x 38.6mm), weighs 1.52 lbs. (0.69kg), comes standard with an LED indicator, and has power factor correction. The 100 watt desktop power supply is available in models ranging from 12VDC to 48VDC. It is comprehensively protected against over-voltage, over-temperature, and short circuit conditions, and its demonstrated mean time between failure exceeds 200,000 hours. Designing with a FWC100 ensures a highly efficient, highly reliable power solution that reduces operating cost and ensures silent, maintenance-free operation.

Elpac Part Number	Output Voltage	Output Current	Peak Current ¹	Total Regulation ²	Typical Efficiency ³
FWC100012A-12B	12.0V	8.3A	10.0A	±5%	88%
FWC100015A-12B	15.0V	6.6A	8.0A	±5%	88%
FWC100018A-11B	18.0V	5.5A	6.7A	±5%	88%
FWC100024A-11B	24.0V	4.1A	5.0A	±5%	89%
FWC100048A-11B	48.0V	2.0A	2.5A	±5%	90%

Notes

1 Maximum peak load (120W) lasting 500ms with a maximum 10% duty cycle.

2 Includes initial setting, line regulation, load regulation, and thermal drift.

3 Typical at 115VAC (including output cable).

Input

Input Voltage	85 - 264VAC 100 - 240VAC Nominal
Input Frequency	47 - 63Hz

Input Current	<1.0A rms
Inrush Current	<37A at 230VAC cold start
Power Factor	>0.97
Zero Load Power Consumption	<0.5W
Touch Leakage Current	<150µA @ 132VAC @ 60Hz <200µA @ 264VAC @ 60Hz

Output

Output Voltage	See Table
Total Regulation	+/-5%
Minimum Load	No minimum load required
Start-Up Delay	~1s
Hold-Up Time	>48ms at any input voltage
Ripple & Noise	<1% pk-pk *
Over Voltage Protection	110-135%
Over Temperature Protection	Active - Recoverable; plus Passive - Non Recoverable
Over Current Protection	120 - 180%
Short Circuit Protection	shutdown, auto-restart (hiccup mode)

Notes

* Ripple and noise measured with 20MHz bandwidth; 10µF tantalum capacitor in parallel with a 0.1µF ceramic capacitor.

General

Efficiency	Avg Efficiency 88.8% @ 115VAC; 89.8% @ 230VAC
MTBF	min. 200,000 hours demonstrated
Size	7.09" x 2.27" x 1.52" 180.2mm x 57.5mm x 38.6mm
Weight	1.52 lbs (0.69 kg)
Power Density	4.2W/in ³

Environmental

Operating Temperature	0 – 60°C (Full load to 40°C, derate linearly to 50% load at 60°C)
Storage Temperature	-40°C to +85°C
Relative Humidity	5-95%, non-condensing
Cooling	Natural Convection
Vibration	All units production tested to 19.6m/s ²

EMC & Safety

Emissions	FCC class B, CISPR22 class B EN61000-3-2, -3
Immunity	EN61000-4-2, -3, -4, -5, -6, -8, -11

Certified by TUV to the following:



cTUVus

UL 60950-1

CAN/CSA-22.2 No.60950-1

CB per IEC60950-1

CE marked to LVD & EMC

Input Configuration

Standard Input Cable	6 ft cable with US standard (Nema 5-15) 3 prong connector
Connection on Power Supply Body	IEC 320 C14 Receptacle

Output Configuration (18V, 24V, 48V)

Standard Output Cable	6 ft.
Cord Size	4x18awg
Connector (PSU side)	Switchcraft DIN-5, P/N 05GM5MX for 18V, 24V & 48V
Mating Connector	Switchcraft 57GB5FX (5 pin) or equivalent

Output Configuration (12V, 15V)

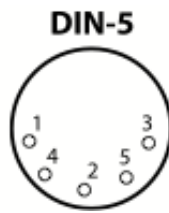
Standard Output Cable	4 ft.
Cord Size	4x16awg
Connector (PSU side)	Switchcraft DIN-8, P/N 15BL8M (male pins)
Mating Connector	Switchcraft 62GB8FX (8 pin) or equivalent

Output Pin Assignments



Pin 1	+V1
Pin 2	+V1
Pin 3	Return
Pin 4	+V1
Pin 5	Return
Pin 6	+V1
Pin 7	Return
Pin 8	Return

Output Pin Assignments



Pin 1	Return
Pin 2	Return
Pin 3	+V1
Pin 4	Return
Pin 5	+V1

