



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).

lnı	put	
Inp	out Voltage	85 - 264VAC 100 - 240VAC Nominal
Inp	out Frequency	47 - 63Hz

Input Current <1.0A rms

Inrush Current <37A at 230VAC cold start

Pow er Factor >0.97

Zero Load Pow er 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 Protetion 120 - 180%

Short Circuit Protection shutdow n, auto-restart (hiccup mode)

Notes

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)

Pow er Density 4.2W/in3

Environmental

Operating Temperature $0-60^{\circ}\text{C}$ (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/s2

EMC & Safety

Emissions FCC class B, CISPR22 class B EN61000-3-2, -3

Immunity EN61000-4-2, -3, -4, -5, -6, -8, -11

 $^{^{\}star}$ Ripple and noise measured with 20MHz bandwidth; 10 μ F tantalum capacitor in parallel with a 0.1 μ F ceramic capacitor.

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 Pow er Supply Body IEC 320 C14 Receptacle

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

Standard Output Cable 6 ft.

Cord Size 4x18aw g

Connector (PSU side) Sw itchcraft DIN-5, P/N 05GM5MX for 18V, 24V & 48V

Mating Connector Sw itchcraft 57GB5FX (5 pin) or equivalent

Output Configuration (12V, 15V)

Standard Output Cable 4 ft.

Cord Size 4x16aw g

Connector (PSU side) Sw itchcraft DIN-8,P/N 15BL8M (male pins)

Mating Connector Sw itchcraft 62GB8FX (8 pin) or equivalent

Output Pin Assignments

DIN-8



Pin 1 +V1

Pin 2 +V1

Pin 3 Return

Pin 4 +V1

Pin 5 Return

Pin 6 +V1

Pin 7 Return

Pin 8 Return



