

AFI PS-48V-60W-1



- Rugged Design for Industrial Applications
- Up to 89% Efficiency
- Full Power to +60 °C
- Wide Adjustment Range

Specification

Input

Input Voltage	• 85-264 VAC, 90-375 VDC
Input Frequency	• 47-63 Hz
Input Current	• 1.1A (115VAC), 0.59A (230VAC)
Inrush Current	• 5-18 W: 10/18 A at 115/230 VAC 30 W: 20/40 A at 115/230 VAC 60 W: 30/60 A at 115/230 VAC
Power Factor	• EN61000-3-2, class A
Earth Leakage Current	• 0.8 mA max
Input Protection	• Internal fuse T2A, 250 VAC fitted in line

Output

Output Voltage	• 48V Output
Voltage Trim	• 48V to 55V
Output Current	• 1.25A
Initial Set Accuracy	• ±1%
Minimum Load	• No minimum load required
Start Up Delay	• <1 s (may increase at low temperature extremes)
Start Up Rise Time	• <150 ms Hold Up Time 20/30 ms at 115/230 VAC DNR60)
Line Regulation	• 5-18 W: ±1.0% max 30-60 W: ±0.5% max
Load Regulation	• 5-18 W: ±2.0% max 30-60 W: ±0.5% max
Parallel Operation	• Redundancy module available for load currents up to 10 A (not with standby system), contact sales
Transient Response	• 4% max deviation recovery to within 1% in 2 ms for a 50% load change
Ripple & Noise	• 50 mV pk-pk, 20 MHz bandwidth (may increase at low temperature extremes)
Overvoltage Protection	• Output clamps at 120-145% Vnom, auto recovery
Overload Protection	• 105-150% power limited (DNR30/60)
Short Circuit Protection	• Power limited, auto recovery
Temperature Coefficient	• ±0.03%/°C

General

Efficiency	• 89%
Isolation	• 3000 VAC Input to Output, 1500 VAC Input to Ground, 500 VAC Output to Ground
Switching Frequency	• 132 KHz typical, 55-90 kHz
Signals	• DC ON indicator LED Green:
MTBF	• 800 kHrs typical Bellcore, Issue 6 at +40 °C, GB (DNR05/10/18), 530 kHrs typical Bellcore, Issue 6 at +40 °C, GB
DIN Rail	• Compatible with TS35/7.5 or TS35/15

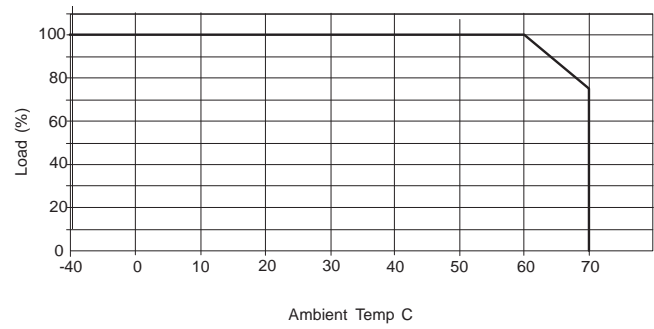
Environmental

Operating Temperature	• -40°C to +70°C, start up at -35°C derate linearly from 60 °C (see derating curve)
Cooling	• Convection-cooled with 25mm free space all sides
Operating Humidity	• 20-95% RH, non-condensing
Storage Temperature	• -40 °C to +85 °C
Shock	• 15 g, 11 ms, X, Y & Z axis, 3 shocks/axis in both directions
Vibration	• 2 g, 10 Hz to 500 Hz, along X, Y & Z axis, 60 mins/axis, mounted on rail

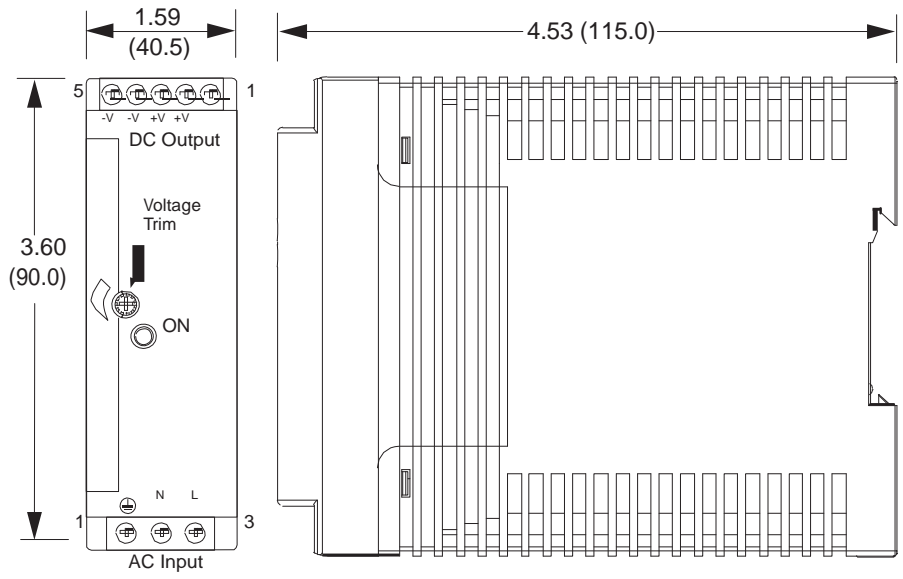
EMC & Safety

Emissions	• EN55022, level B conducted & radiated
Harmonic Currents	• EN61000-3-2, class A
Voltage Flicker	• EN61000-3-3
ESD Immunity	• EN61000-4-2, level 4, Perf Criteria A
Radiated Immunity	• EN61000-4-3, level 3, Perf Criteria A
EFT/Burst	• EN61000-4-4, level 4, Perf Criteria A
Surge	• EN61000-4-5, installation class 3, Perf Criteria A
Conducted Immunity	• EN61000-4-6, level 3, Perf Criteria A
Magnetic Field & Interruptions	• EN61000-4-8, level 4 Perf Criteria A Dips • EN61000-4-11, 30% 10 ms, 60% 100 ms, 100% 5000 ms Perf Criteria A, B, B
Safety Approvals	• EN60950-1, UL508 Pollution Degree 2, UL1310 class 2 power recognised, See note 3 & ratings table, UL60950-1 Overvoltage Category II, UL508 Overvoltage Category III, SEMI F47 ANSI/ISA 12.12.01. Class 1, Division 2 Groups A,B,C and D

Derating Curve



Mechanicals



Notes

1. All dimensions in inches (mm).
2. Weight 0.8 lb (350 g) approx.
3. Tolerance: ± 0.02 (0.5) maximum.

Connections		
Conn	Pin	Designation
AC Input	1	Ground
	2	Neutral
	3	Line
DC Output	1	Positive
	2	Positive
	3	Negative
	4	Negative