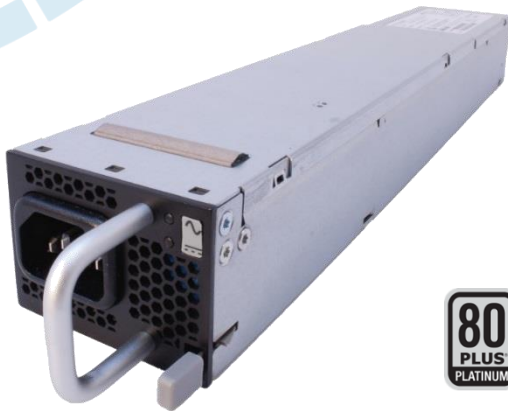


PFE600-12-054xA



The PFE600-12-054xA is a 600 Watt, AC to DC power-factor-corrected (PFC) power supply that converts standard AC mains power into a main output of 12 VDC for powering intermediate bus architectures (IBA) in high performance and reliability servers, routers, and network switches.

The PFE600-12-054xA meets international safety standards and displays the CE-Mark for the European Low Voltage Directive (LVD).

Key Features & Benefits

- Best-in-class, 80 PLUS certified “Platinum” efficiency
- Wide input voltage range: 90-264 VAC
- AC input with power factor correction
- Always-On 16.5 W programmable standby output (3.3/5V)
- Hot-plug capable
- Parallel operation with active digital current sharing
- Full digital controls for improved performance
- High density design: 14.0 W/in³
- Small form factor: 54.5 x 40.0 x 321.5 mm
- I²C communication interface for control, programming and monitoring with PSM1 and PMBus™ protocol
- Overtemperature, output overvoltage and overcurrent protection
- 256 Bytes of EEPROM for user information

Applications

- High performance servers
- Routers
- Switches

North America

+1-866.513.2839

Asia-Pacific

+86.755.29885888

Europe, Middle East

+353 61 225 977

PFE600-12-054xA

1. ORDERING INFORMATION

PFE	600	-	12	-	054	x	A
Product Family	Power Level	Dash	V1 Output	Dash	Width	Airflow	Input
PFE Front-Ends	600 W		12 V		54 mm	N: Normal R: Reversed	A: AC

2. OVERVIEW

The PFE600-12-054xA AC-DC power supply is a mainly DSP controlled, highly efficient front-end. It incorporates resonance-soft-switching technology and interleaved power trains to reduce component stresses, providing increased system reliability and very high efficiency. With a wide input operating voltage range and no derating of output power with input voltage and temperature, the PFE600-12-054xA maximizes power availability in demanding server, switch, and router applications. The front-end is fan cooled and ideally suited for server integration with a matching airflow path.

The PFC stage is controlled using a state-of-the-art integrated control-IC to guarantee best efficiency and unity power factor over a wide operating range.

The DC-DC stage uses soft switching resonant techniques in conjunction with synchronous rectification. An active OR-ing device on the output ensures no reverse load current and renders the supply ideally suited for operation in redundant power systems.

The always-on standby output with selectable voltage level (3.3/5 V) provides power to external power distribution and management controllers. Its protection with an active OR-ing device provides for maximum reliability.

Status information is provided with front-panel LEDs. In addition, the power supply can be controlled and the fan speed set via the I²C bus. It allows full monitoring of the supply, including input and output voltage, current, power, and inside temperatures.

Cooling is managed by a fan controlled by the DSP controller. The fan speed is adjusted automatically depending on the actual power demand and supply temperature and can be overridden through the I²C bus.

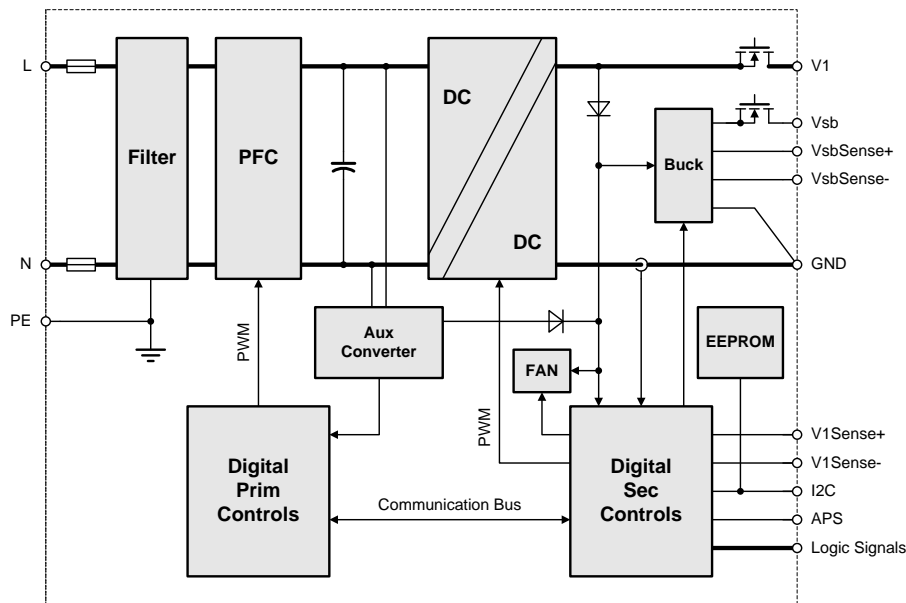


Figure 1 – PFE600-12-054xA Block Diagram

3. ABSOLUTE MAXIMUM RATINGS

Stresses in excess of the absolute maximum ratings may cause performance degradation, adversely affect long-term reliability and cause permanent damage to the supply.

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
$V_{i\ maxc}$ Maximum Input	Continuous			264	VAC

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