

PET750-12-050xD

DC-DC Front-End Power Supply

The PET750-12-050xD is a 750 Watt DC to DC power supply that converts -40 to -72 VDC voltage into an insulated main output of +12 VDC for powering intermediate bus architectures (IBA) in high performance and reliability servers, routers, and network switches. The PET750-12-050xD utilizes digital control architecture for greater efficiency, control and functionality.

This power supply meets international safety standards and displays the CE-Mark for the European Low Voltage Directive (LVD).



Key Features & Benefits

- High Efficiency to 94% at 50% load
- Wide input voltage range: -40 to -72 VDC
- Always-On 5V/3A/15W standby output
- Hot-plug capable
- Parallel operation with active current sharing
- Digital controls for improved performance
- High Density Design 20.5 W/in³
- Small Form Factor (W x H x L): 50.5 x 40.0 x 300 mm
- PMBus® communication interface for control, programming and monitoring
- Over temperature, output over voltage and over current protection
- Status LED with fault signaling

Applications

- Networking Switches
- High Performance Servers
- Routers

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1. ORDERING INFORMATION

PET	750	-	12	-	050	x	D
Product Family	Power Level	Dash	V1 Output	Dash	Width	Airflow	Input
PET Front-Ends	750 W		12 V		50 mm	N: Normal R: Reverse*	D: DC

* Contact factory for availability.

2. OVERVIEW

The PET750-12-050ND DC/DC power supply is a DSP controlled, highly efficient front-end power supply. It incorporates state-of-the-art technology and uses a forward converter topology with active clamp and synchronous rectification to reduce component stresses, thus providing increased system reliability and high efficiency.

With a wide input DC voltage range the PET750-12-050ND maximizes power availability in demanding server, network, and other high availability applications. The supply is fan cooled and ideally suited for integration with a matching airflow path.

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 provides power to external power distribution and management controllers. It is protected with an active OR-ing device for maximum reliability.

Status information is provided with a front-panel LED. In addition, the power supply can be controlled and the fan speed set via the I²C bus. The I²C bus 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.

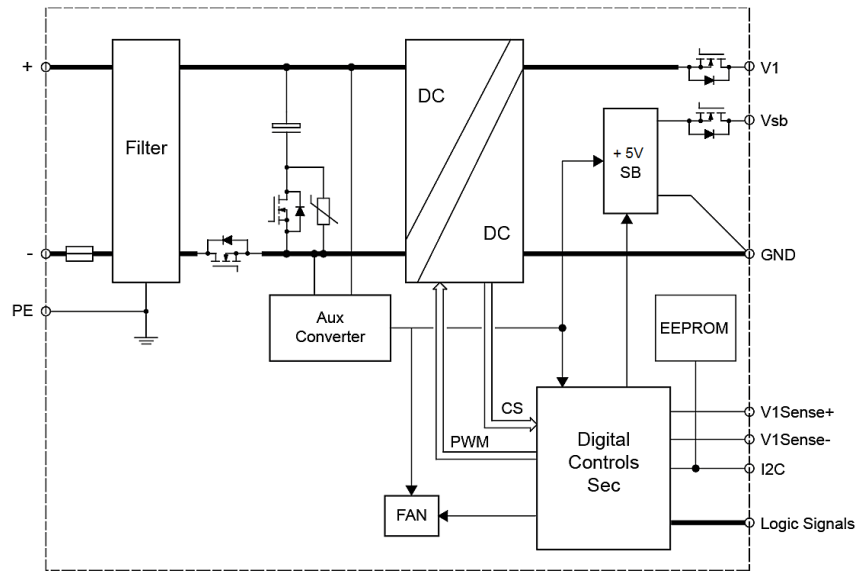


Figure 1. Block Diagram

3. ABSOLUTE MAXIMUM RATING

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 Voltage Continuous			-75	VDC