

PMT300

DC Power User Manual



DESCRIPTION

The PMT 300 is a medium to high wireless power solution up to 300W and can be tailored to fit specific product requirements based on SmartInductive™ Technology. The solutions supply the power, magnetics, and interface to meet customer product requirements. The solutions deliver pinnacle flexibility, safety, and cost-efficiency for a 100% wireless life

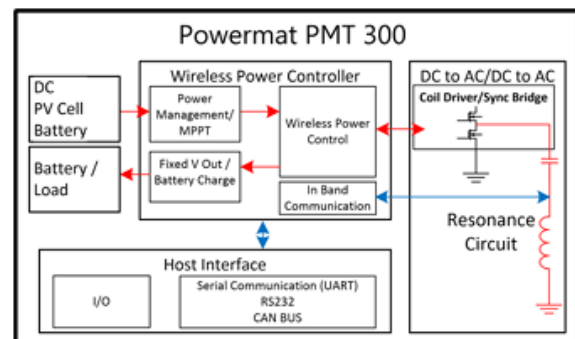
FEATURES

- Up to 300W wireless power transfer
- Up to 200mm coil to coil distance
- Up to 70mm lateral misalignment
- Advanced battery charging algorithm
- Optimizing power transfer efficiency in low power mode
- Software based DC-to-DC functionality
- In-band communication (WPT management and proprietary host system communication)
- Enhanced Foreign Object Detection (FOD)
- Operation frequency 100-300KHz
- Cost-effective: Software-based wireless power transfer and communication algorithms

APPLICATIONS

- Industrial and commercial robotics
- High power domestic robotics
- Large drones
- High power telecom edge technology (CPE)
- Handheld devices and power tools
- E-bikes
- E-carts
- Large batteries

FUNCTIONAL BLOCK DIAGRAM



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SPECIFICATIONS

Feature	Specification	Note
Wireless Power Transfer		
Coil size (Symmetric Rx, Tx, coil)	70mm/130mm/200mm	Optional customization
Max charge power	300W	Battery charging/fixed voltage
Coil to coil distance*	200mm (200mm coil) 50mm (130mm coil) 35mm (70mm coil)	SmartInductive™ Technology mid-range coupling
Coil lateral misalignment (X/Y)*	70mm (200mm coil) 50mm (130mm coil) 30mm (70mm coil)	SmartInductive™ Technology mid-range coupling
Efficiency	>90%	Peak end-to-end
Operation Frequency	100KHz-300KHz	
Interface (optional)		
Host Interface	IO/UART (RS232/LVTTL)/CAN	Digital I/O with customizable functionality
Battery Management		
Battery charging	CCCV	3-9 li-Ion cells 3-10 LiFePO ₄ cells 12V/24V/36V lead-acid battery
Battery voltage	Up to 30V on Rx module	Software controlled DCDC over the inductive link
Maximum charge current	10A	
Fuel gauging		Software algorithm
Battery protection	OV, OC, OT, UT	Software algorithm
PCB Dimensions		
PCB Dimensions	55mm x 55mm	Can be customized
Environmental		
Operating	0°C ~ 70°C	
Storage	-40°C ~ 85°C	

*Coil distance and lateral misalignment are coil size dependent

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