**APPLICATIONS**

* Industrial robotics
* Power Tools
* IoT
* Drone
* Medical devices

**FUNCTIONAL BLOCK DIAGRAM**

A diagram of a power controller

Description automatically generated

A diagram of a power controller

Description automatically generated

**DESCRIPTION**

The PMT 200 is a medium wireless power solution up to 40W and can be tailored to fit specific product requirements based on SmartInductive™ Technology. The solutions supply the pow-er, 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 40W wireless power transfer
* Up to 50mm coil to coil distance
* Up to 40mm 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

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**SPECIFICATIONS**

|  |  |  |
| --- | --- | --- |
| **Feature** | **Specification** | **Note** |
| **Wireless Power Transfer** | | |
| Coil size (Symmetric Rx, Tx, coil) | 30/40/70/130mm | Optional customization |
| Max charge power | 40W | Battery charging/fixed voltage |
| Coil to coil distance\* | 50mm (130mm coil)  30mm (70mm coil)  15mm (40mm coil)  10mm (30mm coil) | SmartInductive™  Technology mid-range coupling |
| Coil lateral misalignment (X/Y)\* | 40mm (130mm coil)  30mm (70mm coil)  15mm (40mm coil)  10mm (30mm coil) | SmartInductive™  Technology mid-range coupling |
| Efficiency | >90% | Peak end-to-end |
| Operation Frequency | 100KHz-300KHz |  |
| **Interface (optional)** | | |
| Host Interface | IO/UART (LVTTL) | Digital I/O with customizable functionality |
| **Battery Management** | | |
| Battery charging | CCCV | 1-7 li-lon cells  1-8 LiFePO4 cells  12V/24V 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 | 35 x 35mm/ 32 x 32mm | 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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