Panduit Fault Managed Power System
Higher Power. Longer Distance. Superior Safety.

Overview
The Panduit Fault Managed Power System (FMPS) is a novel remote power delivery system that allows System Integrators to safely and easily deliver power to wireless systems. The Panduit FMPS is the first in the market to comply with the new UL 1400-1 Standard for a safer, more reliable, and easy-to-install power alternative for wireless systems and eliminates many complicated requirements for traditional power. It delivers significant power over longer distances using standard multi-conductor cables without the need for conduit, junction boxes, breaker panels, or permits. Such innovations simplify installation, and increase deployment speed while reducing deployment costs. This is ideal for larger venues or complex installations that require centralized power management.

The Panduit FMPS offers remote monitoring and control capabilities that provide total visibility into power usage to manage and troubleshoot remotely. The plug-and-play configuration is flexible and scalable allowing for growth with increasing wireless demands while a hot-swappable configuration minimizes equipment downtime and business interruptions.

The Panduit Fault Managed Power System is a safe, efficient, reliable, and practical remote power delivery system that will go the distance.

- Redundant fault management for ultimate safety making it safe to handle like Class 2 power
- Substantially more power over long distances using less copper
- Hot-Swappalbe configuration for ultimate flexibility and upgradability
- Simple to install, startup, and troubleshoot
- Endless remote monitoring and control capabilities
- Novel remote power delivery system
- The first in the market to comply with new UL 1400-1 Standard
- Powers in-building wireless systems and more
The Panduit FMPS has a new patent-protected technology that transports power through a Pulse Current waveform. Pulse Current is comprised of short duration pulses (e.g., 3ms), where each pulse contains a power ON and power OFF period. Delivering power in this way allows the system to detect faults and stop power transmission almost instantly.

The Panduit FMPS consists of two main components:

**Transmitter Chassis**
The Transmitter Chassis takes standard AC power (for example, 110/220V outlets or 208V source from a rack-PDU) and converts it into high voltage (360V) limited current DC power. It then transforms the DC power signal into a Pulse Current waveform delivered over a Class 4 multi-conductor cable. Each pulse has a short duration of time (e.g., 3ms). The redundant fault management system within the Transmitter Chassis will almost instantly detect a fault (e.g., a cable short or a person touching the wires). Once a fault is detected, it triggers the system to stop power transmission within milliseconds, making it safer than traditional powering methods. Delivering power in this manner enables the use of a thin copper cable and wiring methods afforded to communications wiring per NEC guidelines* where cables housed in conduit are not required, and technicians may complete the installation.

**Receiver**
The Receiver receives the Pulse Current waveform delivered by the Transmitter through Class 4 multi-conductor cables. It then converts the Pulse Current waveform into +/-48 VDC power, which can power multiple end devices.

*Class 2 is safe because of power limitation, Panduit FMPS Transmitter Chassis is safe because energy will be limited by the fault prevention system during a fault. Panduit Fault Managed Power System is the first in the market to comply with UL 1400-1 Standard which refers to this technology as a Class 4 Power System. It is referred to as Class 4 power in a new NEC Article 726.*

Figure 1: The Panduit FMPS takes power, coverts it to higher voltages, and then transforms the power into a Pulse Current waveform that is delivered over Class 4 multi-conductor cable as shown in the image above.
**Feature Summary**

**Safe High-Voltage Power**

A fault management system that detects and almost instantly stops power transmission when a fault occurs, making it a safe power delivery system that has all the safety benefits of Class 2 power systems.

**Significant Power Over Long Distance**

Up to 30x the power and up to 30x the distance* of a Class 2 power system using less copper pairs and thinner wire gauge, saving up to 60% on cable costs†.

*Panduit Internal Time Study, 2017  
†Field tested by industry experts.

**Simple & Efficient Installation**

No conduit, junction boxes, circuit breakers, or permits are required as with traditional power. Technicians may install copper and fiber cabling simultaneously for greater cost and time savings over traditional power, saving up to 40% on material and installation costs. The centralized design of the Panduit FMPS makes it easy to back up and provides ultimate flexibility for larger venues, unique locations, and places where conduit is challenging to install. Easy-to-install connectors for secure and reliable connectivity accompanied with cable management solutions provide savings on rack space.

**Latest Industry Standard Compliance**

Safe and compliant with the latest industry standards, for peace of mind when hiring technicians. Gain faster approval from local Jurisdiction Having Authorities (JHA) and expedite installation.

**Remote Monitoring & Control**

Monitor, troubleshoot, and control systems remotely through web-based access or SNMP interface. Increase operational efficiency with full visibility into power usage and the ability to remotely shutdown individual components to help avoid costly site visits.

**Hot-Swappable Components**

Easy to move/add/change for a flexible and scalable power delivery system to grow with rising wireless demands. Minimizes equipment downtime and reduces business interruptions. Intelligent LED indicators on all system components for easier installation, onsite maintenance, and troubleshooting.
The Panduit Fault Managed Power System delivers optimal safety, efficiency, and reliability for optimal control. System Integrators may deploy cutting-edge technology with centralized power to unique locations, over longer distances, with a scalable, flexible design to future-proof initial deployments.

Welcome to the new world of power distribution with the Panduit Fault Managed Power System.

For more information on the the Panduit Fault Managed Power System offering, visit www.panduit.com/fmps.

### Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>PXTC1ARA</td>
<td>FMPS Transmitter Chassis 4.8kW</td>
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<tr>
<td>PXU1AJANNXX</td>
<td>FMPS Power Supply Unit 1.6kW, AC</td>
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<tr>
<td>PXTM1AF</td>
<td>FMPS Transmitter Module 600W</td>
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<tr>
<td>PXR1AJD</td>
<td>FMPS Receiver 1.6kW, 48VDC</td>
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<tr>
<td>PXUP316AWH-UQ</td>
<td>Class 4 Cable, 3-Pair, 16 AWG</td>
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or by phone: 800.777.3300