

# WAVESTAR™ POWERHUB PDU SERIES 400/500/625/750kVA



PDI

The PDI Wavestar™ PowerHub Power Distribution System provides the highest available power density of any PDU. PDI's award winning PDI $\alpha$  intelligent monitoring system is standard with these units; this system integrates the proven PDU monitoring with PDI's patented Branch Circuit Monitoring System and allows precise load control and management. Together these features result in:

- Less Floor Space
- Lower Energy Costs
- Higher Density Power
- Better Reliability

**SPACE SAVINGS** The Wavestar™ PowerHub Power Distribution System uses a high power high efficiency transformer in place of the many smaller lower power transformers found on legacy PDUs, often resulting in a space savings of 20-50%.

**LOWER ENERGY COSTS** PDI's best-in-class ultra-high efficiency, eco-friendly transformers yield significant energy savings, substantially lowering data center operating costs.

**SCALABILITY** The Wavestar™ PowerHub PDU is the smart way to add scalability to your critical environment. The internal distribution system allows the data center manager to easily add distribution as servers are added to the site, resulting in a better return on investment.

**INTELLIGENT MONITORING** The PDI $\alpha$  system increases the visibility of the actual loads on the raised floor which gives the data center manager a better decision making tool at their fingertips. PDI $\alpha$  (Power Distribution Intelligence Quotient) equals the ability to make better decisions based upon real time reporting of load / capacity data.

## CUSTOMIZED SOLUTIONS FOR YOUR OPERATION

Versatile product, coupled with advanced engineering expertise, delivers the best performing platform for your critical application.

## FEATURES

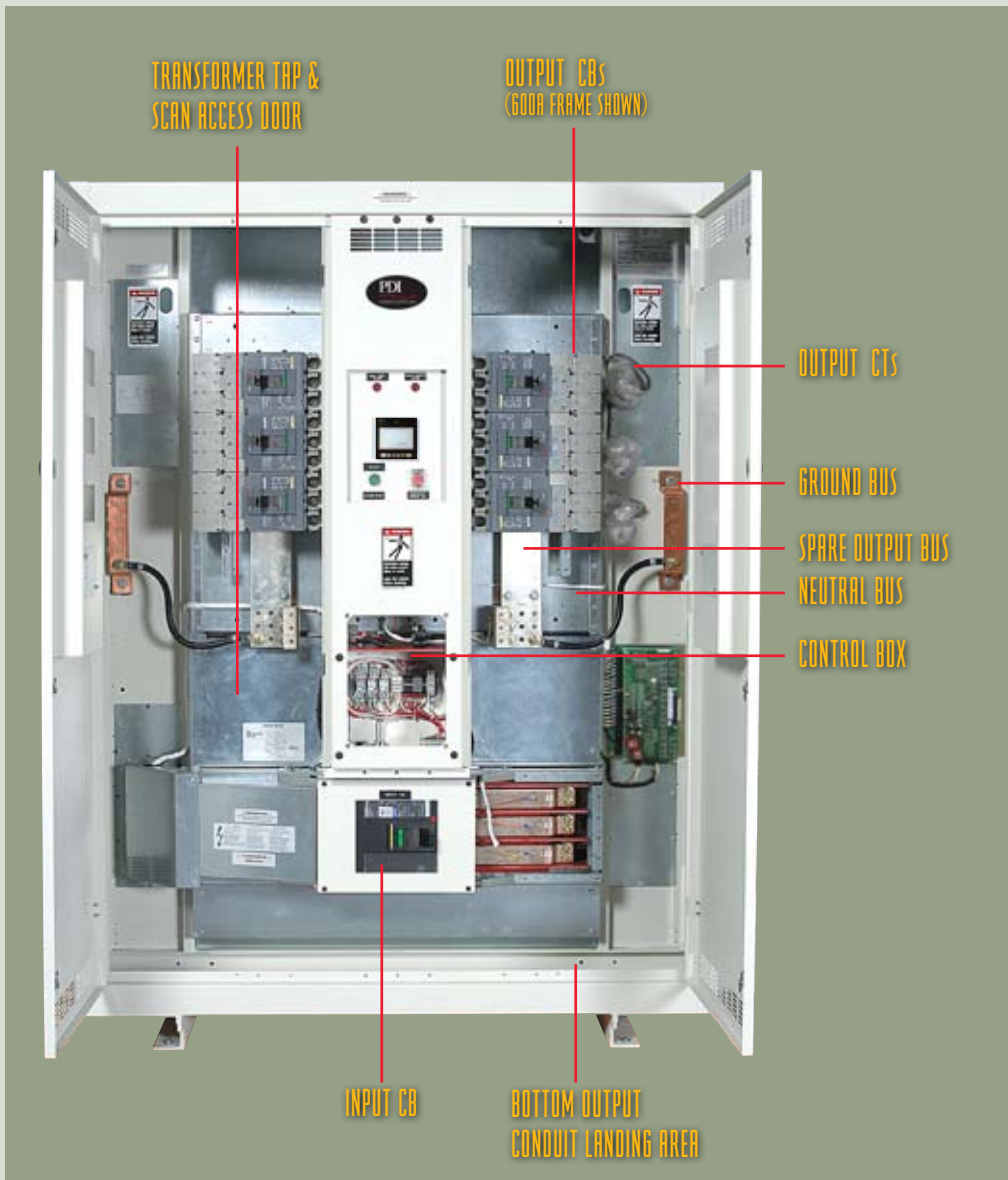
- Central welded bus on the input and the output allows true front access and simplifies ongoing maintenance
- Ultra high efficiency data center grade transformer for energy cost savings
- Reduces power distribution footprint by up to 50%
- Highest available power PDU density
- Available per circuit output monitoring option optimizes current utilization while guarding all single points of failure
- Optional 100% rated circuit electronic trip breakers for precision control
- Customizable to meet specific requirements
- UL Listed

PDI

creating the perfect wave

## PDI'S CLEAR ADVANTAGES

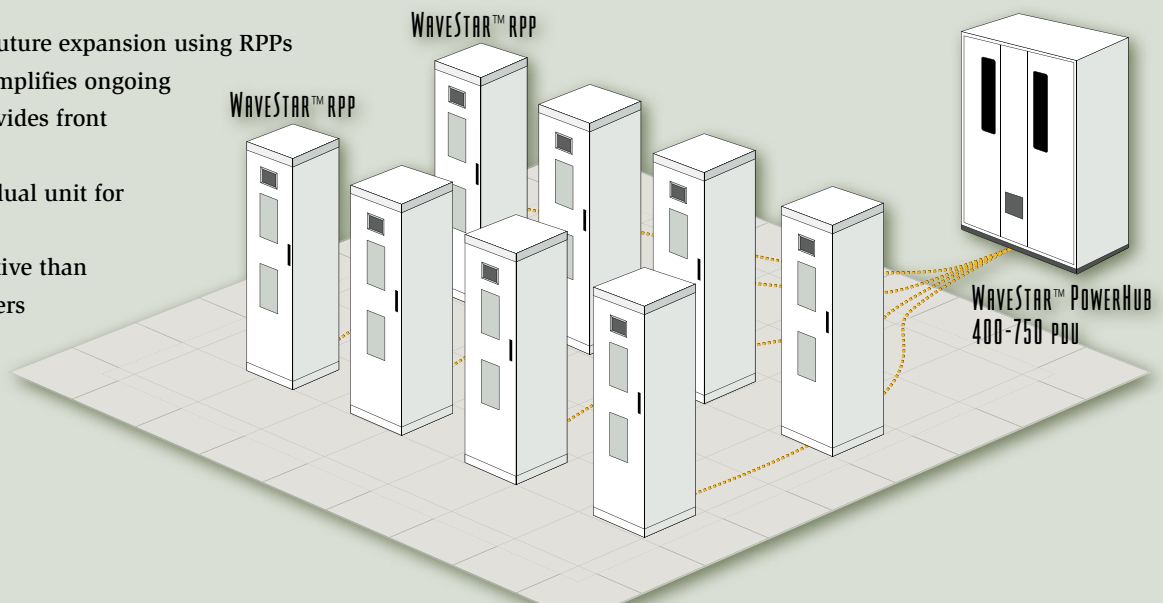
- Award winning monitoring system that actively reports real time load data
- Centralized input and output bus permits fast and easy contractor connections and simplifies future expansion
- Rugged ergonomic construction selected by many Fortune 500 companies
- Best combination of footprint and power density in the industry
- Eco-friendly green design offers ultra high efficiency transformers which reduces cooling requirements and minimizes total operating costs
- Vertically integrated manufacturing facilities provide best combination of customized solutions and speed to market resulting in improved project timelines
- Line and match solutions backed by experienced data center design teams simplify and deliver product solutions for complex applications



## CENTRALIZED POWER DISTRIBUTION WITH REMOTE PANELBOARDS

### ADVANTAGES

- Condenses overall power distribution system footprint by up to 60%
- Uses a high efficiency transformer vs. a standard PDU transformer
- Extra CBs simplifies future expansion using RPPs
- Welded bus design simplifies ongoing maintenance and provides front access design
- Available as manual dual unit for AB bus designs
- Often more cost effective than distributed transformers



## INTELLIGENT MONITORS WITH PDI PROVIDE REAL TIME LOAD MANAGEMENT DATA RESULTING IN BETTER DATA CENTER CAPACITY UTILIZATION

- System Level Monitoring (per input feed)
- Output Circuit Breaker Monitoring
- Branch Circuit Monitoring – Current and Voltage available

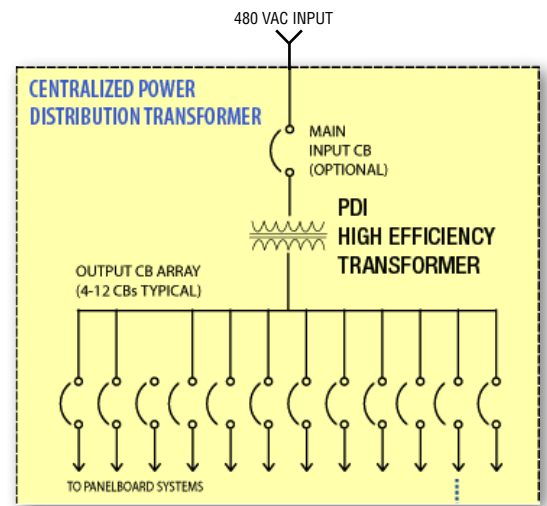
### OUTPUT CIRCUIT MONITORING

- Monitors individual output circuit breakers power levels (optional)
- Greatly improves reliability by alerting operators before main circuit breakers exceed the trip level



### WaveStar™ MONITOR

- Graphics display which captures PDU and BCMS functions for precise load management



### PDI TRANSFORMER CAPABILITIES

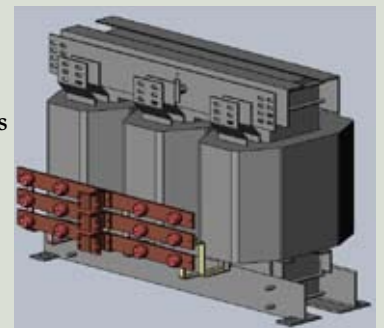
- Among the largest and most modern power transformer manufacturing facilities in the United States
- Dry type transformers, and power magnetics up to 4 MVA
- Providing high quality OEM and complex specialty magnetics solutions
- Produced over of 15,000 high power transformers with excellent field reliability
- Tenured high quality work force

*WELDED BUS BARS ADD RELIABILITY AND BETTER PERFORMANCE*



### ENERGY SAVING TRANSFORMER TECHNOLOGY

- Designed to optimize efficiency at specified load level (efficiencies as high as 99% at 500 kVA)
- Optimized for non-linear / computer loads; designed to minimize stray losses (component of magnetic losses that increases dramatically with non-linear profile of the load); result can be upwards of 1-3% higher efficiency vs. standard transformers
- Results in less heat rejection; less cooling required and lower energy costs
- Transformers are designed and built by PDI to customer specification
- Medium voltage input models available
- Factory acceptance tests performed on each transformer
- Transformer options include:
  - low inrush
  - specific impedance requirements
  - TP-1



# WAVESTAR™ CENTRALIZED POWER DISTRIBUTION MODULE: 400 / 500 / 625 / 750 kVA

## SPECIFICATIONS

### ELECTRICAL SPECIFICATIONS

- Transformer kVA: 400, 500, 625, 750 kVA
- Input Voltage: 480 VAC, 600 VAC 3-phase,  
3 wire plus ground, 60Hz
- Output Voltage: 208-120@ 60Hz (240 VAC available)  
3-phase, 4 wire plus ground, 60Hz
- Output Circuit Breakers: 225 AF / 100-225 AT (x 14 max.)  
400 AF / 400 AT (x 8 max.)  
600 AF / 500-600 AT (x 8 max.)
- Neutral Bus: 200% rated
- Transformer Type: Data Center Grade;  
Delta-Wye isolation
- Transformer Specifications: K-rated; 150°C rise; copper wound  
(AI windings available);  
NEMA TP-1 efficiency
- Heat Rejection: 400 kVA (20,000 BTUh)  
(BTUh)<sup>3</sup> 500 kVA (25,500 BTUh)  
625 kVA (32,500 BTUh)  
750 kVA (38,200 BTUh)
- Input Current: 400 kVA (481); 500 kVA (602);  
(A@ 480VAC) 625 kVA (753); 750 kVA (903)

### ENVIRONMENTAL SPECIFICATIONS

- Operating Temp: 0°C to 40°C up 10,000 feet  
without de-rating
- Enclosure: NEMA TP-1 (powder coated)

### PHYSICAL SPECIFICATIONS

- Dimensions:<sup>1</sup> 400-500 kVA: 82"H x 36"D x 48" W  
600-800 kVA: 82"H x 38"D x 66"W
- Input/Output Bussing: Configurable for top or bottom
- Access: Front only (some systems may require  
side or rear access depending on final  
installation)
- System Weight:<sup>4</sup> 400 kVA = 2900 lbs  
500 kVA = 3900 lbs  
625 kVA = 3900 lbs  
750 kVA = 4690 lbs)
- Bussing:<sup>2</sup> Welded copper contiguous bus

<sup>1</sup> Dimensions subject to change, confirm dimensions per submittal drawing

<sup>2</sup> Dimensions subject to change, confirm dimensions per submittal drawing

<sup>3</sup> Heat rejection stated for TP-1 type transformers only

<sup>4</sup> System weight will vary according to specific configurations

### MONITORING

- Standard Monitor: PDI WaveStar™ monitor  
(input and output monitoring)
- Options: Per circuit output monitoring
- Communications: Serial RS-485 Modbus; SNMP
- Thermal: Dual transformer thermal switches

### OPTIONS

- TVSS (Transient Voltage Surge Suppression)
- Dual Input with interlocks
- Low inrush transformer
- 100% rated circuit breakers
- Square-D Powerlogic monitoring
- IR transparent scan windows
- Shunt trip per output circuit breaker
- Integrated BCMS Monitoring for current and voltage

**PDI**  = POWER DISTRIBUTION INTELLIGENCE QUOTIENT  
YOUR SMART MONITORING SOLUTION

**PDI**

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