# PHASE PERFECT 8480V

Digital Phase Converter

### **Product Specifications**

Model:

PT410

10 HP

#### PHASEPERFECT® 480V Digital Phase Converter

The ultimate technology for converting single-phase electrical power to three-phase electrical power. In fact, the three-phase power produced by Phase Perfect® is often superior in power quality to utility supplied three-phase.

Phase Perfect® utilizes the latest advances in solid state power switching technology. Unlike rotary phase converters, it does not rely on a motor to generate a voltage. Proprietary software controls power switching devices that generate three-phase power with much more precision and efficiency. Its patented design makes it a true solid-state environment, unlike any other phase converter on the market.

#### **POWER QUALITY**

Phase Perfect® 480V produces true sinusoidal three-phase output voltages. Because the output voltage is a sine wave with very low harmonic distortion, all types of three-phase equipment can be safely powered. Input current is true sinusoidal, near unity (.99) power factor and does not produce harmonics which pollutes the power grid.

The Phase Perfect® is a logical replacement for rotary converters due to the superior cost and operating efficiencies, solid-state design (no moving parts), and long-term protection for sensitive and costly equipment.



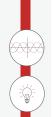
Image Note: System pictured above is equipped with optional MCCB disconnect and NEMA 3R rated enclosure. Other options are available.

#### **Product Features**

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Balanced 480V three-phase voltages & electronic power factor correction

98% power efficiency

NEMA 1 & NEMA 3R (indoor & outdoor) rated enclosures w/ insect guards

Automatic brownout and over-voltage protection w/ fault & overload protection

High momentary overload current capacity

- IEEE 519 Compliant
- Single-phase To Three-phase Conversion
- The Only 480V Solid-State Phase Converter Replaces Rotary
- Patented Technology
- · Superior Power Quality
- Efficient Power Consumption
- Safely Power Any 480v Equipment Within Its Rated Capacity
- Easy Setup & Installation
- Huge Cost Savings Compared To Installing Utility Three-phase Service
- Does Not Create Harmonics On Power Grid







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## **IEEE 519 Compliant**

#### **Optional Integrated Add-Ons**

MCCB Service Rated Disconnect

Raycap Strikesorb® Surge Protection

#### Wiring Guidelines

Wire Sizes (Full Load - Max Power)

Ground Wire Size: 8 AWG Minimum Input Wire Size: 14 AWG 14 AWG

**Torque** 

10-14 AWG 35 lb-in 8 AWG 40 lb-in 2/0 to 6 AWG 120 lb-in

**Input / Output Power Terminals** 

Input / Output: 3/16"

Optional MCCB

Output Wire Size:

Disconnect 1/8"

\*Allen Wrench Required

#### NOTE:

Wire used within the motor circuit and all field wiring terminals must be rated at least 75° C.

Electrical Specifications				
Rated HP	10 HP			
Input Voltage	440V to 520V			
Output Voltage	Equal to Input			
Rated Input Current	32A			
Rated Output Current	18A			
Output KVA	15 KVA			
Phase to Phase Voltage Balance	Less Than 1%			
Momentary Overload Current (4 seconds)	90A			
Standby Power Consumption	68W			

Single-Phase Input				
Single Phase Characteristics	Sinusoidal 2% Total Harmonic Distortion			
Power Factor	Near Unity All Load Conditions (.99)			
Voltage	440-520 V			
Recommended Max Single-Phase Circuit Breaker Size	40A			

Three-Phase Output	
	Sinusoidal 3% Total Harmonic Distortion
Phase-to-Phase Voltage Balance	Better than 1% (NEMA MG1 Standard for Voltage Unbalance)

Protective Functions				
Over Current	Automatic Shutdown			
Under-Voltage	Automatic Shutdown <440 V			
Over-Voltage	Automatic Shutdown >520 V			
Internal Temperature Sensor	Automatic Shutdown			

General			
Efficiency	98% Typical		
Operating Temperature Range	0°C (32°F) to 50°C (122°F)		
Storage Temperature	-20°C (-4°F) to 50°C (122°F)		
Enclosure Specifications	Indoor: NEMA 1 Outdoor: NEMA 3R		
Enclosure Dimensions	28 x 22 x 15 in.		
Weight	64 lbs		

#### Certifications









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#### **Part Number Nomenclature**

PHASEPERFECT® 480V

Digital Phase Converter

Part Number Examples:

NEMA 1 Indoor: NEMA 3R Outdoor: PT407R-BS

PT407-BS

UL508A Panel Shop **Integrated Options** 

Series	Input Voltage	Rated HP	Enclosure Rating	-	Branch Circuit Protection	Surge Arrestor
PHASE PERFECT® 480V Digital Phase Converter	4 4 480V	07 07 - 7.5 HP 10 - 10 HP 15 - 15 HP 20 - 20 HP 30 - 30 HP	NEMA 1 Indoor Rated  R  NEMA 3R Rated Outdoor Type Rain / Bug Proof	-	MCCB Service Disconnect	Strikesorb® Surge Arrestor



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#### **Line Drawing**

