



HPRI Series 3 Phase 60 Hz 90 to 180 kVA, 120/208 Vac Output 48 VDC Modular Inverter System

**The Philtek HPRI 3 Phase Modular Inverter System features both
Expandable and Redundant capabilities**



*Inverter System as shown above:
180 kVA / 168 kW 3 Phase N+1 Redundant*

The System is comprised of:

Inverter Modules “Plug and Play”

- 10 KVA output, minimum one for each phase
- Modules are the same as used in the Single Phase Inverter System
- High frequency PWM technology, quiet operation
- Parallel connected with automatic load sharing per phase
- “Hot Pluggable”, allows installation or removal of modules without de-energizing the system
- Inverter Output isolation transformer provides galvanic isolation between DC and AC circuits.

Static Bypass Switch and Controller

- Output power rating self configured
- 2 mSec transfer time, Online Mode
- Microprocessor Controlled with LCD display and Industrial style LED Mimic Diagram

- User configured to operate in the Online (Inverter preferred)
- Plug in modular construction, can be removed or installed with no output interruption during Maintenance Bypass
- RS-232 Communication Port

AC Power Plant

- Constructed of heavy duty 23” racks
- Make Before Break Maintenance Bypass Switch provides uninterrupted output during bypass
- AC line Circuit Breaker for overload protection during Static Bypass
- Fully enclosed AC and DC power bus bars, pre-wired to terminal blocks for external connections
- Docking tray provides easy plug-in and removal of Inverter Module

System Specifications *(Subject to change without notice)*

DC Input

Nominal	48 V
Range	42 to 60 V
Current	See Table

Inverter AC Output

Power	See Table
Connection	4 wires (Y) + Gnd
Voltage	120/208V 3 Phase 60 Hz
Regulation	± 1%
Dynamic Regulation:	
100 % step load	± 4%
Recovery	< 8 mSec
Efficiency	84% to 88%
Distortion (linear load)	< 1.0 % THD
Non Linear Load Capability	Up to 100 %
Active P.F. Corrected Loads	Compatible
Load Power Factor	0.8 PF
Frequency Tolerance	± 0.1 % free running
Overload	120 % for 10 minutes
Synchronization:	
Range	± 1.5 Hz
Rate	1 Hz per Sec

Bypass AC

Connection	4 wires (Y) + Gnd
Voltage	120/208V 3Phase 60 Hz
Current	Same as output current see Table

Static Bypass Switch

Transfer Time	2 mSec typical, Online 4.2 mSec max, Online 8.4 mSec max, Offline
Voltage Tolerance	± 10 %
Frequency Tolerance	± 1.5 Hz
Overload:	120 % for 10 Minutes 1000 % for 8 ms

Environmental

Temperature	0° C to 40° C
Humidity	95 % RH
Cooling	Forced Air with Temperature Controlled Fans

Inverter Modules

<i>Output</i>	<i>Model #</i>
10 kVA @ 0.8 PF, 120 Vac, 1Φ	HPRI-INV2-10K-48-N

Inverter System 48 VDC Input, 120/208 VAC, 60 Hz, 3 Phase Output

Output kVA / kW	90 kVA / 72 kW	120 kVA / 96 kW	150 kVA / 120 kW
*AC Power Plant + Controller Model #	HPRI 180K-48-3N+3R3N	HPRI 180K-48-3N+4R3N	HPRI 180K-48-3N+5R3N
Inverter Modules Required	9 x 10 kVA	12 x 10 kVA	15 x 10 kVA
AC Output Current per Phase	250 Amp AC	333 Amp AC	417 Amp AC
DC Input Current @ 42 V	3 x 680 Amp DC	4 x 680 Amp DC	5 x 680 Amp DC
*AC Power Plant Racks	4	5	6
Overall Dim. W"xD"xH"	98 x 29 x 84	122.5 x 29 x 84	147 x 29 x 84
Total Weight (Net)	4,205 Lbs.	5,460 Lbs.	6,715 Lbs.

Inverter System 48 VDC Input, 120/208 VAC, 60 Hz, 3 Phase Output

Output kVA / kW	180 kVA / 144 kW	*180 kVA/168 kW or 180 kVA/144 kW N+1	*180 kVA/180 kW or 180 kVA/ 168 kW N+1
*AC Power Plant + Controller Model #	HPRI 180K-48-3N+6R3N	HPRI 180K-48-3N+7R3N	HPRI 180K-48-3N+8R3N
Inverter Modules Required	18 x 10 kVA	21 x 10 kVA	24 x 10 kVA
AC Output Current per Phase	500 Amp AC	500 Amp AC	500 Amp AC
DC Input Current @ 42 V	6 x 680 Amp DC	*7 or 6 x 680 Amp DC	*8 or 7 x 680 Amp DC
AC Power Plant Racks	7	8	9
Overall Dim. W"xD"xH"	171.5 x 29 x 84	196 x 29 x 84	220.5 x 29 x 84
Total Weight (Net)	7,970 Lbs.	9,225 Lbs.	10,500 Lbs

Ordering Information:

First determine your power requirement, then select the appropriate **AC Power Plant + Controller** and quantity of **Inverter Modules** from the above tables

For example:

180 kVA / 144 kW output with N+1 redundancy requires

Qty 1	HPRI 180K-48-3N+7R3N
Qty 21	HPRI-INV2-10K-48-N

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