



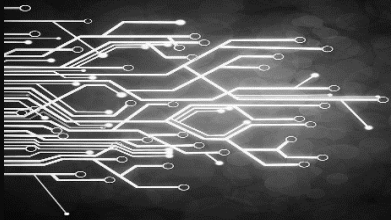
P1Advantage™

Harmonic Filter with Power Factor Correction

The P1Advantage™ can improve the power system by mitigating harmonics (THDi) caused by non-linear loads to less than 5% while simultaneously correcting power factor to over 99%

A wide-angle photograph of a city skyline at night, with numerous skyscrapers illuminated by lights. The lights are reflected in the water in the foreground. The image is in black and white with a blue tint.

One Solution for Ideal Power Quality



P1Advantage™



HARMONICS:

Non-linear loads create Harmonics

Devices Creating Harmonics:

- variable speed drives
- air conditioning equipment
- oil pumpjacks
- rectifiers
- battery chargers
- medical equipment
- robotics
- florescent & LED lighting
- computers
- processing, pumping and manufacturing equipment
- modern electrical devices

Harmonics damage equipment by creating voltage and current distortions that affect the electrical system as a whole.

Symptoms of Harmonics include:

- reduction in efficiency and lifespan of equipment
- device overheating
- motor vibration
- lighting malfunction
- flickering lights
- excessive nominal current
- premature breaker tripping
- PLC malfunctioning

RESULTS:

Decreases the amount of electricity used and **eliminates** harmful harmonics

Mitigates the 5th, 7th, 11th, and 13th harmonics, and their multiples, in a three-phase power system

When operated within designed parameters, the current Total Harmonic Distortion (THDi) is typically reduced by over **80%** resulting in an average THDi of 5% or less

Reduces Voltage Total Harmonic Distortion (THDv) typically to less than 2%

Outperforms any harmonic filter for THDi & THDv values

Improves Power Factor over 99%

Power Factor is the measurement of power quality, with 100% being perfect. The presence of harmonics can result in facilities having a Power Factor less than 50%

SAVINGS:

Typical electrical cost savings are 10% - 20% per year, and can be over 20% in some circumstances

Premature Equipment Failure:

Extends the life of your motor and other devices by over

Capital Cost Saving: Capacitor banks and other filters are no longer required resulting in capital and maintenance savings

ROI: In approx. 6-24 months, the savings from decreased electricity usage will be greater than the cost of the P1Advantage

Financing Available: \$0 capital outlay, cost savings can be realized on month one

Extends the life of motors and parts

20-year Warranty / Estimated 40 year life span

TECHNICAL DATA:

Ideal for any non-linear load: VFDs, rectifiers, motors, integration into MCC units

Frequency: 60 Hz or 50 Hz

Voltage: < 690V

Product: 5 HP to 2000 HP

Load Type: Three-phase, up to 100% non-linear

Size of Enclosure, example: a 500 HP unit is 25"W X 20"D X 58"H

Device is matched to each non-linear electrical load

Passive device, simply installed between the power source and VFD.

Certification & Labeling:

UL Certified.

40-year life with minimal maintenance

