

MAXIMIZE YOUR ENERGY EFFICIENCY PROGRAM WITH THE ONICS OES-11



THE HARMFUL EFFECTS OF HARMONICS

With the introduction of chip driven equipment and non-linear loads to modern day facilities, harmonic distortion is a common problem in electrical power systems that can lead to reduced efficiency, equipment damage, and even system failure. In fact, a white paper published by Eaton addresses the [harmful effects of harmonics](#) including:

- Overheating of electrical distribution equipment, cables, transformers, standby generators, etc.
- High voltages and circulating currents
- Equipment malfunctions due to excessive voltage distortion
- Increased internal energy losses in connected equipment, causing component failure and shortened life span
- Nuisance tripping of branch circuit breakers
- Metering errors
- Fires in wiring and distribution systems and more

MITIGATING POWER HARMONIC DISTORTION IN YOUR FACILITY

The landscape of harmonic distortion mitigation in commercial and industrial facilities has long been dominated by power harmonic filtration devices. Perhaps your facility is currently using active or passive power harmonic filtration technology, and that's a great way to positively impact your power electrical system.

Even with the reliability and energy improvements from the application of active and passive power harmonic filtering, neutral and ground harmonics provide an arguably greater opportunity due to a lack of attention in the past. The amount of energy found in neutral and ground systems tie directly to both utility savings and reduced negative effects on most electronic and even mechanical systems.

In fact, an EPRI technical paper ([Industrial and Utility Harmonic Mitigation Guidelines and Case Studies](#), November 2000) cites neutral harmonics as a concern for facilities, but the negative impact of neutral and ground harmonics on a facility's power electrical system has yet to receive the attention it deserves.

WHAT IS ONICS OES-11?

Onics Energy Solutions offers the Onics OES-11 Passive Neutral and Ground Harmonic Filter, a compact, versatile inductive device installed on the cold side of every electrical panel to mitigate harmful harmonics on ground and neutral in a facility's electrical system and reduce energy waste.

MADE IN USA

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To learn more about the Onics OES-11 device, visit onicsenergy.com/filter

FACILITY BENEFITS

By installing the Onics OES-11 Passive Neutral and Ground Harmonic Filters, a facility can complement its power harmonics equipment with benefits such as:

- Decreased Electricity Costs
- Increased Equipment Reliability
- Reduced Maintenance Requests
- Lower Voltage & Energy Losses



ESG BENEFITS

Companies installing Onics are also able to advance ESG Goals:

- Increased Energy Efficiency
- Reduced kWh Consumption
- Reduced Scope 1 GHG Emissions

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MITIGATING HARMONIC DISTORTION ON NEUTRAL AND GROUND

However, recent advancements in the mitigation of harmonics on neutral and ground have paved the way for more innovative technologies such as the [Onics OES-11 Passive Neutral and Ground Harmonic Filter](#). Launched in 2018 and manufactured in the USA, Onics OES-11 has emerged as a reliable and efficient solution for the mitigation - and in some cases elimination - of harmonic distortion on neutral and ground.

To complement the benefits of power harmonic filters in your facility, you should consider addressing harmonic distortion on neutral and ground with the Onics OES-11 Passive Harmonic Filter. The Onics OES-11 is a low pass inductive filter that runs in parallel with neutral or ground and requires no third-party electrical components to operate. Hardwired in parallel, the filter can be installed on any size electrical service without absorbing a substantial amount of energy while mitigating harmonic content on neutral and ground. The device is rated for panels up to 600V and can be installed in 30 minutes or less on the cold side of each electrical panel in your facility.

OES-11 HIGHLIGHTS

- Passive, inductive, non-invasive
- No 3rd party electrical components required
- No maintenance required
- Rated for 20 year lifespan
- Hardwired in parallel on every wye-connected electrical panel or ground application
- Takes <30 minutes to install per device

MADE IN USA

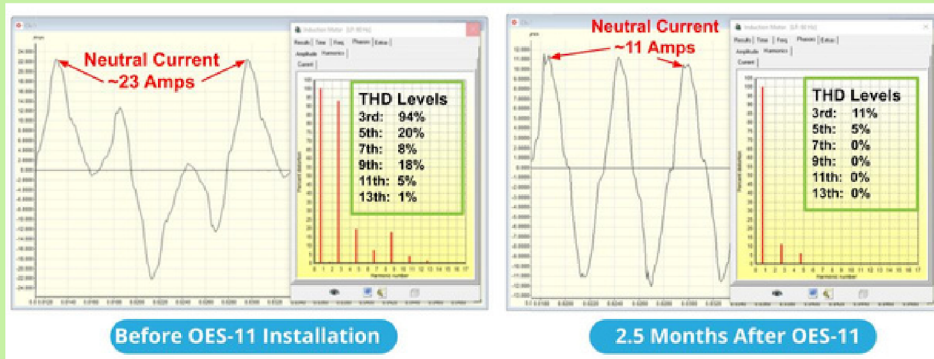
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VISUALIZING THE IMPACT OF ONICS OES-11

In a cutting edge collaboration, Onics and Dr. Howard Penrose, Ph.D., CMRP of MotorDoc LLC have further expanded practical applications of neutral and ground harmonics mitigation by marrying the Onics OES-11 technology with Empath ECMS-EI, which leverages electrical and current signature analysis to [visualize the positive energy impact of the Onics OES-11](#) on a facility's power electrical system.



GET STARTED

Want to explore how Onics OES-11 can maximize your current power harmonic mitigation strategy?

Complete the Onics Facility Intake Form at onicsenergy.com/contact

View The Case Study at onicsenergy.com/energy-savings