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Phoenix Digital manufactures redundant self-healing Ethernet communication systems for level 0-2 industrial control networking applications. It is a superior alternative to customers struggling with the complexity and cost of traditional IT solutions. The PDC system incorporates gigabit speed, distributed switchcore technology, enhanced diagnostics, and tight Logix5000™ integration. This advanced networking technology is used on control applications that “have to run at all costs”, support hot add/drop expansion requirements, and provide the user a ten second MTTR (Mean Time to Repair) should an issue occur. The PDC system makes installation as simple as setting a DIP switch. This makes it easier to expand networking capabilities and results in simpler system architectures which are fully supported by the current maintenance staff and don’t require IT certification or training.

Many recent PDC customers require robust, redundant, secure high performance control systems they can self maintain, and they have chosen Phoenix Digital for their critical applications.

Features of the PDC system include:

1. One DIP switch set-up for the entire network
2. No software configuration
3. No IT certification requirements
4. No switch based programming
5. Full 2-channel redundancy with healover
6. Cat 5/6 copper, multimode or singlemode fiber, cabling options
7. 80% Engineering savings in design, layout, documentation, and test
8. Ten Second MTTR (Mean Time to Repair) by the plant maintenance tech
9. Ten Second recovery on power loss
10. Inherent network security

For more information, contact your Kendall Electric Account Manager today.
Eaton’s B-Line series Vibration Isolation Systems

Do you need to dampen the noise and help protect sensitive equipment in your facility? The answer is vibration isolation.

Vibration isolation products are key to dampening the noise of transformers and gear and fan motors in buildings. Not only is vibration annoying, the vibration frequency produced by equipment may have a negative effect on sensitive gear through harmonics. Harmonics is defined as a component frequency of an oscillation or wave.

If frequencies of vibration are allowed to pass into the structure, they may cause significant damage to the building and surrounding systems. Vibration isolators help keep the equipment vibration frequencies separate from the structure to the degree necessary to help provide longer lasting, quality building operations.

Vibration isolators are used in all new construction and renovations. Transformers, electric fans, generators, switchgear, harmonics filters, and variable frequency drives are all examples of products with rotating equipment that are typically isolated.

The type and size of isolator device is dependant upon the size, weight, and mounting orientation.

Equipment, when ground mounted on a housekeeping pad or exterior mounted on steel dunnage, uses either isolation pads or spring mounts. Seismic force resistant mounts and snubbers may also be purchased.

Depending on the deflection needs, suspended vibration producing equipment may be isolated using rubber isolators or spring isolators.

Eaton provides complete turn-key services.

Eaton’s team of experts understand the codes required by health care facilities and other essential use facilities. They can assist contractors and installers by specifying, sizing, and providing stamped drawings for isolation and seismic layout for supports for cable trays and conduit racks. Contact Kendall Electric for Eaton’s complete turn-key services.

Here are the steps needed to get started:
1) Provide the equipment specification
2) Provide the specification section (usually 260548)
3) Provide an answer for the following:
   - Will equipment be floor mounted or suspended?
   - Is there a seismic requirement?

For more information on Eaton’s B-Line series vibration isolation systems, contact your Kendall Electric Account Manager today.
Leviton Wi-Fi Lighting Controls are Easy to Install and Powerful for Your Customers

“Can I schedule my outside lights to turn on 30 minutes before sunset?”

“Can I use Amazon Alexa to control lights with my voice?”

“What happens when I go on vacation?”

What do you say when your customers ask these questions? Are you advising them of the best options for their home using the technology that’s available today? While it was once true that home automation was costly, required training, and almost ensured multiple trips to a single job, that’s no longer the reality of today’s smart home.

Introducing Leviton Decora Smart™ with Wi-Fi. No hubs, gateways, or bridges to hide. Free remote access, time-based schedules, and optional voice control using Amazon Alexa or Google Home. Enact vacation mode to randomize the lights, use countdown timers in bathrooms and hallways, and connect to popular third-party products using IFTTT. And the best part – compatible with low-wattage LEDs like a single recessed can or a strand of holiday lights, using “off means off technology”.

Today’s intelligent lighting solutions wire exactly the same as regular lighting control devices. Just install the Decora Smart™ Wi-Fi devices the way you always have and then direct your customers to a mobile app for the Wi-Fi connectivity (or do it yourself and charge for your time/expertise!).

Go with the Decora® standard and match the entire house, intelligent or non-intelligent, single device or side-by-side in a multi-gang application. As well, six color options - black, gray, ivory, light almond, white, and brown - are available for you to match the style in every room.

Leviton® has been an industry leader in home automation for more than 30 years and wireless controls for a dozen years. All Decora Smart™ devices are supported with a five-year limited warranty.

Leviton is making every house a smart home – let’s start with yours! Learn more at: kendallelectric.com/dl/LEVDS and contact your Kendall Electric Account Manager about Decora Smart™ today.
Check out our Decora Smart Commercial at: kendallelectric.com/dl/LDS
Introducing DIS Sensors

Unique non-contact solutions for tilt and non-coupled rotary encoding

Kendall Electric now offers the DIS-Sensors line of non-contact MEMS based tilt sensors and unique Hall Effect encoders.

The line consists of:

- Accelerometers: 2 and 3 axes
- Inclinometers: 1 and 2 axes up to 360 degrees
- Tilt switches: 1 and 2 axes
- Hall Effect, non-contact absolute rotary encoders

Inclinometers, Tilt switches, and Accelerometers

The QG40, QG65, and QG76 series sensors measure the angle of inclination in one or two axes with a variety of mounting options and outputs, and are based on robust MEMS technology. The tilt switch has configurable switching outputs, whereas the inclinometer outputs the actual angle.

- Functions: Leveling, tilt protection, roll and pitch measurement, angle measurement of machine arms, tilt and tip over protection
- Applications: Concrete pumps, cranes, elevated work platforms, solar panels, air suspension systems, agricultural machinery, fork lifts, stackers
- SIL2 rated QG series sensors are also available for applications with SIL safety requirements

The QG40, QG65, and QG76 series accelerometers measure G-force due to acceleration in one, two, or three axes.

QR series non-contact rotary encoders

The QR series of rotary encoders enable contact-free measurement of an angular displacement from 0° to 360° with NO MECHANICAL COUPLING OR OPTICS. The encoder can even measure through non-ferrous materials (aluminum, stainless steel) and bulk materials like sand or plastic resin pellets.

- Functions: Replaced potentiometers and traditional encoders, verify rotational movement
- Applications: Agricultural machinery, excavators, mobile and fixed waste compacters, valve control, robotics, material handling augers, automated indexing tables

Learn more about us at DIS Sensors USA at: kendallelectric.com/dl/DSU or use the product selector at kendallelectric.com/dl/DIS to help decide which type of sensor is best suited to your specific needs.

For additional information, contact your Kendall Electric Account Manager today.
The Wraptor™ A6500 from Brady

Making the identification process easier for you

When you need to move through your work fast and eliminate a time-consuming manual process, the Wraptor™ A6500 Printer Applicator turns a series of labor-intensive, inefficient tasks into a modern automated process. This efficient print-and-apply machine helps you move your productivity forward, saving time and labor by printing and applying labels in just five seconds.

You’ll benefit from the innovation Brady brings to this machine, including:

- A full-color capacitive touch screen and an icon-based user interface that make this machine easy to use
- High-performance wire wrap and self-laminating materials that provide a reliable wrap
- Enhanced connectivity with three USB ports and 32GB of internal memory to store commonly used job files
- Complete compatibility with all Brady Workstation Wire ID apps and suites, as well as LabelMark version 6.5 software

The Wraptor™ A6500 Wire ID Printer Applicator also accepts a variety of materials for your wire identification needs — materials engineered to meet the high quality standard you’ve come to expect from Brady.

Contact your Kendall Electric Account Manager for additional information about the Wraptor™ A6500 today.
Selecting the Best Luminaire for the Right Space

Many electrical professionals are now familiar with the benefits of LEDs as an illumination technology. This extraordinary light source has transformed the way lighting can be used and implemented. The primary task of an LED luminaire is to provide the necessary light to the illuminated environment, and deliver on the promise and potential of the LED technology. Protecting the customer’s expectations and your reputation requires careful evaluation of products and manufacturers.

When selecting the right luminaire, one of the first steps in the evaluation process is generating a layout and calculating the lighting requirements for the space. By providing basic details such as dimensions and desired lighting levels, the layout helps determine if the product is a good fit for the application, space, and customer requirements. Simple, free online tools are available to provide an early estimate for these critical steps, without the hassle or expense of using lighting simulation software.

LEDVANCE, maker of SYLVANIA general lighting in the US and Canada, offers a free lighting layout tool which is preloaded with the technical details of SYLVANIA indoor and outdoor luminaires. A great example are SYLVANIA Edge-Lit Panels, which have a slim design that is beneficial for installation in tight ceiling spaces and offer low glare with uniform illumination. Offered in three sizes with up to 47 percent in energy savings, these luminaires are ideal in place of traditional fluorescent troffers, or as new installations in educational, office, retail or hospitality applications. This product is a main contender when needing a room calculation, and therefore the free layout tool creates an estimate report and 3D lighting layout to show spacing between fixtures and luminaire quantities, as well as lighting levels and total power usage. This resource is a great tool for anyone looking to quickly validate a product for a particular application before making a final decision.

SYLVANIA LED interior and exterior luminaires and retrofit kits are the ideal solution to fit everyday application needs. The portfolio has been designed with the needs and requests of electrical contractors in mind along with each intended application to provide high performance, energy savings, simple installation and proven quality. The portfolio features SYLVANIA Flood Light, Wall Pack, Canopy, Garage, Vapor Tight, High Bay, Edge-Lit Panel, Volumetric Troffer, and Surface Mount luminaires.

Visit kendallelectric.com/dl/SYL to access the SYLVANIA Lighting Layout Tool and get started today.

If you have any questions, contact your Kendall Electric Account Manager.
Open Offices & Classrooms
SYLVANIA Edge Lit Panel

Illuminance Target: 30-50 footcandles avg.
Fixture Mounting Height = Bottom of Fixture to Finished Floor
Initial Illuminance Measured At Desk Height
80/50/20 reflectances

Summary Table

<table>
<thead>
<tr>
<th>Fixture Spacing (AxB)</th>
<th>8 ft Mounting Height</th>
<th>10 ft Mounting Height</th>
<th>12 ft Mounting Height</th>
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<td>On Center</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>8'x10'</td>
<td>10'x10'</td>
<td>12'x10'</td>
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<td></td>
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<td>12'x10'</td>
</tr>
<tr>
<td>1'x4' 32W</td>
<td>PANELF1A/032UNVD835/14G/WH</td>
<td>44fc / 3.2</td>
<td>36fc / 2.9</td>
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<tr>
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<td>PANELF1A/032UNVD835/22G/WH</td>
<td>47fc / 3.2</td>
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<tr>
<td>40W</td>
<td>PANELF1A/040UNVD835/24G/WH</td>
<td>62fc / 3.3</td>
<td>51fc / 2.8</td>
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Eaton’s Arc Quenching Switchgear drastically reduces incident energy to provide an unprecedented level of protection for your personnel, switchgear, and process uptime.

The Arc Quenching Switchgear detects and mitigates an arc flash in less than four milliseconds, and reacts more than ten times faster than systems that rely on a circuit breaker. A faster clearing time results in lower incident energy, which reduces PPE requirements and arc flash boundaries.

The Arc Quenching Switchgear can be used with common arc flash safety solutions to create a layered approach to equipment and personnel protection. It is compatible with Zone Selective Interlocking (ZSI), Arcflash Reduction Maintenance System, Bus differential relays, and other arc flash safety solutions. The Arc Quenching Switchgear can be used to comply with the NEC section 240.87 and is a UL recognized device per UL 2748. Unlike other methods for arc energy reduction, Arc Quenching Switchgear does not require additional administrative controls in order to be effective. It also does not interfere with selective coordination.

How does it work? When the Arc Quenching Device (AQD) receives a trigger signal from the Eaton Arc Flash Relay, it produces a lower impedance path in a controlled micro-environment within the Arc Containment Vessels located in the AQD. The lower impedance current path collapses the voltage and causes the original arc flash to immediately extinguish as the current begins to flow into the AQD. This quenching operation occurs in less than four milliseconds. The arcing continues safely contained inside the AQD until the upstream power circuit breaker trips.

Continued on next page...
The APT-TH Series Power Transducers monitor watt consumption of three phase loads. They provide an analog signal proportional to the active power consumed by the monitored load. The three current carrying conductors pass through the three windows of the top section and the matching voltage input at the terminals.

The APT-TH is a one-piece solution for measuring power; no external current transformers are needed and installation is easy. The design of the APT-TH ensures that the transducer is always correctly orientated. If connected improperly by mismatching the current and voltage inputs, or placing a conductor through the sensing window back to front rather than front to back, the LED will change color from green to amber. The LED will also turn amber if the phase A conductor is placed through the phase B sensing window, or if power factor is lower than 0.50.

Features
- One-piece solution for measuring power — no external current transformers needed.
- Three ample sensing windows — wire carrying 200 A fits easily.
- LED Indicator — shows correct phase relationship match.
- Easy installation — DIN rail or panel mount.

Applications
- Monitor pumps to detect open intake or outflow lines, cavitation or failing bearings.
- Measure wattage/horsepower of grinding and milling equipment to optimize feed rate.
- Detect broken or missing tools or drill bits.
- Monitor equipment so the constant output proportional to wattage consumed can be compared with utility bills for a cost per hour or cost per operation of a machine or process.

For additional information, contact your Kendall Electric Account Manager today.
The built world is going wireless, and there may be no wireless opportunity offering a greater benefit to the design and construction community than wireless lighting control.

These new lighting control systems replace obtrusive and increasingly complex control wiring with a secure and reliable wireless signal. While there are many benefits to this swap, the basic ability to provide the enhanced, code-mandated control functionality, without running the cumbersome and costly control wire, is a long-awaited improvement in the world of lighting design for both new and retrofit projects.

One example of this is Eaton’s LumaWatt Pro, a connected lighting solution that combines a broad selection of energy-efficient LED luminaires with a powerful wireless sensor system. The sensors control the lighting system in compliance with the latest energy codes and collect valuable data about building performance and use. Software applications turn the granular data into information through energy dashboards and specialized apps that make it simple and help optimize the use of building resources, beyond lighting.

The distributed network of smart LED lighting, gives the ability for reliable tracking, saving time looking for equipment.

**Are monthly heating and cooling cost rising?**

The LumaWatt Pro system can save energy by enabling demand-driven heating or cooling. LumaWatt Pro’s Aire integrates with a building management system (BMS) by using the data collected by LumaWatt Pro’s advanced distributed sensor network and occupancy application. Aire enables facility managers to direct cooling or heating in real-time to the space where occupants are working. Increase employee productivity and gain operational efficiencies.

**A flexible solution for any building.**

The LumaWatt Pro system can create significant savings in the time and materials necessary to complete the design, installation, and commissioning phases of a project. The system also satisfies code-mandated performance requirements, improves operational efficiencies, and offers greater flexibility to better adapt to the evolving needs of space and the codes that regulate them. The LumaWatt Pro system is suitable for (but not limited to) retail, industrial, healthcare and office settings.

**Make better decisions with visual insights.**

LumaWatt Pro’s Space application provides actionable insight into building usage, with detailed occupancy views and graphs leveraging LumaWatt Pro’s Sensor Network data. Seeing detailed, non-intrusive views of workspaces and employee movement allows an increase in productivity, optimized workspaces, and the ability to drive cost-saving initiatives.

**Losing time looking for equipment?**

With LumaWatt Pro’s asset tracking feature, save time looking for misplaced equipment using Bluetooth connection points, which locate items with data tags attached. The system will reveal its exact whereabouts through a cloud-based app.

**Solve high-value problems beyond lighting with Eaton’s Wireless Connected Lighting System: LumaWatt Pro**

The wireless characteristic makes the LumaWatt Pro system an advantageous solution for both new construction and retrofit projects, enabling any space to be equipped with the new controls and functionalities now required by code. At the same time, this system does not require any additional control wiring or expose a project to any of the delays associated with control wiring mistakes. System flexibility improves, because the functionality and configuration of the control system is no longer determined by the physical wiring of the system, and changes may be easily made through software.

Talk to your Kendall Electric Account Manager about LumaWatt Pro today. For additional information and articles about wireless lighting systems, please visit:

LumaWatt Pro: kendallelectric.com/dl/LW

The case for wireless lighting controls in retrofit projects: kendallelectric.com/dl/WLC

The long-awaited solution to pulling control wires: wireless lighting control systems: kendallelectric.com/dl/PCW
EATON Lighting solutions

cloud-based applications

energy manager

building LAN

wireless gateway

Industrial

LED round high-bay with occupancy and daylighting sensor

Outdoor

LED area, site and roadway lighting with occupancy and daylighting sensor

Office

architectural LED lighting fixtures with occupancy and daylighting sensor

receptacle

receptacle relay controller

wireless wallstation

tile mount sensor

ambient LED lighting fixtures with occupancy and daylighting sensor

KENDALL ELECTRIC
Unique Angled Trough
*Cuts Total Installation Time by 80%, while Improving Safety and Productivity for Contractors*

It’s tough enough for electrical contractors to meet specifications and deadlines within a given budget. Why wouldn’t you take advantage of technology that saves your team from outdated, unnecessary manual assembly and labor?

The Hoffman Angled Trough helps cut total installation time by 80% for electrical contractors who traditionally have had to manually bend 90-degree conduits for wire distribution. Created for use in wire distribution, junctions, and terminations in a variety of indoor commercial applications, including above and below the panel, the Angled Trough’s patented angled design provides flexibility for wire distribution, frees up valuable real estate on the wall, and simplifies mounting and assembly.

Customers already are enthusiastically embracing how the Hoffman Angled Trough is changing electrical contracting.

“The Angled Trough is the enclosure that alleviates the labor, time, cost, and manpower it takes to make 90-degree conduit bends down to a large MCC center, and allows us to meet our job deadlines much easier,” said Greg Bills, a senior applications engineer at Walker Industrial.

“The manual process of bending conduits to ready them for wires can take up to 45 minutes – now, with the Angled Trough, distributing wires and installing the enclosure on average only takes eight minutes,” Bills said. “That is a substantial gain in labor and cost savings,” he said, adding it also has helped reduce job-related injuries. “It simplifies the installation process.”

In addition to customer accolades, the Hoffman Angled Trough is winning rave reviews from industry pundits – including winning the prestigious “Showstopper” award for innovation at the NECA show in 2017. Considered the premier electrical construction industry event, the NECA Show brings together the best of the best in power, light, and communication technology from around the world.

“Our focus is to reduce installation time and costs while improving safety – and we’re thrilled our customers and the industry’s experts agree,” said Matt Behrns, Director of Product Marketing. “For more than 70 years at Hoffman, we’ve remained committed to providing tailored solutions for reliable protection that help sustain – and advance – the industries we serve.”

To learn more about the Hoffman Angled Trough, watch our Success Story at: kendallelectric.com/dl/AT

Contact your Kendall Electric Account Manager for additional information.
What's New on the Kendall E-Commerce Sites

Submitted By: Tom Lyford - Information Systems, E-Commerce - The Kendall Group

As 2017 came to an end, the E-Commerce group at The Kendall Group was busy improving our Shop.KendallElectric.com site. As the e-commerce world changes, we are constantly working to make sure our functionality meets the requirements our customers expect from us.

What’s New?

When changes are made, we will update a new addition to the website called “What’s New”. You can find this link on the main menu of the website.

Clicking on this link will take you to a page providing information on the latest updates, when the change was made, and a link to more information on how to use the functionality.

What's New?

The following items have been added, updated, or removed within the Kendall Group Shop Sites.

Please read the information below to learn more about the functionality. Some items may have links to even more details, or instructions on usage.

November 6, 2017

- Export Shopping Cart

Export line items from shopping cart to .CSV or .XLS file.

By choosing to export the line items from the shopping cart, the user has the ability to save the data into one of the file formats presented, and then can use that data within their internal systems to create POs, Quotes, or other business documents.

Detailed instructions on how to use this functionality can be found here.

August 28, 2017

- Bid Approval

Complete checkout for quoted material.

When reviewing quotes from The Kendall Group online, users can now click “Approve Bid” to order the material with the quoted pricing.

Detailed instructions on how to use this functionality can be found here.

Check back to this page regularly to find out about recent enhancements to our website and how to take advantage of them.

Recent updates to the system include:

- Export Shopping Cart – The ability to export line items in a CSV or XLS format
- Import to Quick Pad – The ability to import a XLS file directly into the Quick Pad
- Ship-to Selection – For customers with multiple ship-tos, a required ship-to selection
- Price Book Download – Download a price book with your current Kendall pricing on items. Request access from your Kendall Account Manager
- Page Content Feedback – New method to inform us of page content improvements including attribute, image, pricing, or other items

Detailed instructions on how to use all of these functions can be found in the Help section of the shop site.

In the future, we will be adding more documentation to the help screens and creating videos that users can watch that explain how to use certain features of the website. We look forward to your feedback on these changes and you can email us at ecommerce@kendallgroup.com with your questions or comments.

shop.kendallelectric.com
Contact the Kendall Electric location nearest you for all of your electrical and datacom needs.