Join us for Automation Fair® 2012
Philadelphia, PA
November 7-8, 2012

A great opportunity to explore a wide variety of smart, safe, sustainable manufacturing solutions geared toward improving your business profitability.
This year’s 2012 Rockwell Automation on the Move turned out to be another fantastic event. It was held on May 22nd and 23rd at Devos Place in Grand Rapids, MI. This was our ninth year for this event and it brought together Kendall Electric, Rockwell Automation, over 30 of our premier manufacturers, and over 600 customers for two days of seminars, hands-on labs, and great discussions on implementing products and technology in today’s industry. This was our biggest event yet and the largest show held across North America. The continued success of this event is attributed to our loyal customers and the hard work that both Kendall Electric and the local Rockwell employees put into this event.

The event offered over 23 different hands on labs and over 50 different and unique technical seminars. Topics ranged from basic programming techniques, wireless communications, manufacturing intelligence, process, drives and motion control, to maintenance and troubleshooting. People walked away with information to help increase productivity, build equipment more cost effectively, manage production assets, reduce downtime, save energy, and much more.

I would like to personally thank Rockwell Automation, our manufacturers, and all of the Kendall employees that participated in the event. Most of all I would like to thank our customers. This event is truly about supporting and educating our customers not only on the products that we sell and support, but on topics that can help them be more successful in the businesses that they support.

Thanks again and look for similar events in the near future.
Cognex has introduced a new family of In-Sight vision systems, the In-Sight 7000, that expands on and complements the capabilities of the In-Sight 5000 and In-Sight Micro families. Though larger than the In-Sight Micro, the In-Sight 7000 has the same right angle design as the In-Sight 5000 (lens is perpendicular to the body) and is smaller than the In-sight 5000. It also has the same IP67 environmental rating as the In-Sight 5000.

There will be a range of models which cover a variety of application needs starting at just $1,995. The two resolutions, 800 x 600 and 1280 x 1024 pixels, use CMOS sensors with global shutters. The 800 x 600 pixel models will have a frame capture rate of up to 102 per second and the 1280 x 1024 pixel versions will be able to capture up to 60 frames per second. Three different speed ranges will allow cost to performance optimization for your application. There will also be ID models with the capability of reading one and two dimension ID codes and Optical Character Reading (OCR). Additionally there will be OCR only models with the capability of performing OCR with the added bonus of basic software featuring tools for locating the character string within the field of view and image preprocessing tools.

These systems will be powered by a standard 24VDC power supply, and have three built in inputs (one dedicated trigger input and two general use inputs) and three outputs (all programmable and high speed). Ethernet connectivity along with Industrial Protocols (EtherNet/IP, Profinet and MC Protocol) allows integrating them into your control system much easier. RS232 communications will still be available. A third connector on the unit will directly connect to a number of Cognex and third party lights for power and strobe control.

Currently the systems are available to be used with a standard C-Mount lens, but available soon are models that use an M12 S-Mount lens and have built in lighting. The unit will be ordered with the lens and light installed but both will be easily field changeable. A variety of lenses (6mm, 8mm, 12mm, 16mm and 25mm focal lengths) and lights (red, white, green, blue and IR) will be available initially. An advantage to using the S-Mount lens is a new auto focus feature. A button within the software will start the auto focus function and within seconds a crisp clear image will be in view. The focus location can be saved with the job, so a different part with a different job can have a different focus without needing to physically focus the lens or restart the auto focus procedure.

For this new family of vision systems, a new version of the In-Sight Explorer software has been released. Version 4.7 will be the minimum version for use with the In-Sight 7000 family. A new feature in this version is a completely new OCR tool named OCRMax. This powerful new algorithm reads strings of characters on parts that were previously unreadable, and for those existing applications this tool will increase the reliability of the application. It will handle variable length strings, as might be found in mail sorting applications, fonts that are not fixed or proportional, fonts that are skewed or overlapping, dot matrix printed fonts that are not solid characters, and many other tough OCR applications. The new OCRMax tool is available in the spread sheet and EasyBuilder interfaces to suit a wide range of users. The new In-Sight 7000 family is small, fast and easy to setup and use. Models for general vision applications and for specific applications (ID and OCR) will allow optimizing price for performance for your application.

Ask your Kendall Electric Account Manager or Automation Specialist about the new In-Sight 7000.
If you are looking for a compact but rugged way to light your machine, look no further than the Waldmann MACH series LED! Utilizing state-of-the-art LED chip technology, the MACH LED produces intense illumination for the most demanding industrial applications. If you have struggled with the maintenance of fluorescents on your machine, then you need to take a look at this fixture. The MACH LED is a completely waterproof (IP67) linear LED luminaire that has a high resistance to coolants/lubricants and is impervious to mechanical vibration. The luminaire body is an extruded aluminum housing with ridges designed for effective heat dissipation. MACH LED provides outstanding lighting levels in a compact, easy-to-install package with both fixed and adjustable mounting options available. The luminaire is available in four different lengths from 7 inches to 28 inches, as well as up to four LED modules in one housing. This product is rated for 50,000 hours and comes with a 10 year worry free warranty.

With this fixture, seeing is believing. Contact your Kendall Account Manager to see a demo of this fixture and for more information on other Waldmann Industrial Lighting Solutions.
The Allen-Bradley SLC Ethernet adapter (1747-AENTR) allows easy migration from SLC system-based control to Logix-based control and Rockwell Automation Integrated Architecture, while maintaining existing field wiring and physical footprint in the control cabinet. This approach lowers conversion time and labor costs, reduces risk by preserving existing field wiring connections, lowers engineering costs and minimizes production downtime.

In today’s economy it is necessary to have migration solutions to help you achieve increased productivity and lessen the risks of maintaining your legacy equipment. You should work with a supplier that has the product, service, and industry knowledge to partner with you on an upgrade strategy that will help you maximize your competitive advantage. Rockwell Automation and its partners will work with you to outline a plan that fits your application needs and long-term goals. We can help you migrate all at once or in phases, at a pace that is comfortable for you and fits your budget. With your goals in mind, Rockwell Automation has developed a migration strategy that will allow you to quickly and easily migrate from SLC-based control to Logix-based control with Integrated Architecture, while maintaining the existing field wiring. This approach will:

- Lower conversion time and labor costs
- Reduce risk by preserving existing field wiring connections
- Lower engineering costs
- Minimize production downtime

**1747-AENTR Ethernet Adaptor**

The SLC Ethernet Adaptor (1747-AENTR) allows SLC I/O racks to be controlled by any Logix Programmable Automation Controller (PAC):

- Must be located in the first slot (slot 0) of an SLC rack
  - Replaces the existing SLC processor
  - Replaces the existing RIO adaptor (1747-ASB) in remote racks
  - Replaces ControlNet adaptor (1747-ACN15, 1747-ACNR15) in remote racks
- Requires RSLogix 5000 v20 or greater and SLC I/O electronic data sheet files
- Supports various network topologies
  - Connects to new or existing Logix controller
  - Device Level Ring (DLR), star and linear Ethernet topologies

**Simplifying SLC Migrations**

- Minimizes risk and reduces field wiring connections labor time
  - Convert I/O without disturbing field wiring connections
  - Code conversion tools reduce time to rewrite controller program
- Improves migration and planning using Integrated Architecture Builder tool
- Supports various network topologies with the proven technology of EtherNet/IP New Control System

**Benefits**

- Increased flexibility with new open architecture
- Reduced development time and costs through re-use of engineering practices
- Maximized returns on existing assets through improved control and monitoring
- Increased access to plant and production information
- One programming environment for discrete, motion, process, drive, batch, and safety control

For more information on Allen-Bradley’s Ethernet Adapter, please contact your Kendall Electric Account Manager or Automation Specialist.
So you need to get some I/O to an area in the plant or perimeter of the building that is not real easy to access and will take more time than you have to give. Does it make sense to use wireless communication for your I/O? It just might make more sense than you think.

Cooper Bussmann Wireless technology provides a seamless foundation for automation infrastructure. Our trusted wireless solutions constantly monitor network performance, detect losses and help define maintenance strategy through cost-effective integration of plant automation systems and field instrumentation. Cooper Bussmann Wireless solutions can be customized to meet and exceed operational expectations. The biggest advantages of wireless are cost, reliable performance and safety.

**Cost-Saving**
Wireless communication systems can be installed in industrial applications at a fraction of the cost of laying cable. Cabled solutions can cost hundreds or even thousands of dollars per installed foot. To install (or repair) a wired system, the expense and effort of laying cable or conduit, buying permits, hiring labor, renting machines, trenching, and backfilling can add up. Wireless systems are easy to install and configure, saving you up to 90% in project costs and drastically reducing project completion time.

**Reliable Performance in Tough, Unpredictable Environments**
Wireless solutions are also a convenient choice for unpredictable industrial environments like mining, refining and general processing that need constant monitoring or have devices that are not easily accessible due to distance. Systems can be tested in advance, prior to purchase and installation, to ensure suitability to a chosen application. Therefore users can be sure to get a solution that meets their specific needs. In applications where devices may be mobile or may be moved, wireless systems are also ideal, and maintenance and repair is painless.

**Safety First**
Wireless remote controls allow a machine operator to control and run a machine in hazardous zones from a safe, advantageous location. This also allows an operator to more readily predict potential dangers, such as proximity to power lines, and quickly adjust operations to suit.

**Waste Water Case Study**
A waste water plant wanted an on-line monitoring system for failure alarms on sewerage pump stations. The pump stations were fitted with local alarms. However if these were unheard, sewage overflow would result and cause numerous environmental complaints.

The plant used Cooper Bussmann Industrial Wireless I/O units as a cost effective solution. Pump run and fault status as well as wet-well overflow status are transmitted back to a central computer. Because of the intelligent network functionality in the Cooper Bussmann Wireless units, each pump station only has to transmit as far as the next similarly equipped pump station, negating the need for expensive mast and antenna installations.

See your Kendall account manager for more details on Wireless Made Simple.
Pentair Technical Products has announced updates and enhancements to several Hoffman enclosures. These updates went into effect on 4-30-12. The updated products are the Heavy-Duty Free-Stand Disconnect Enclosures (Bulletin A28), Two Door Free-Standing Disconnect Enclosures with Floor Stands (Bulletin A21) and the Sequester products (Bulletin A28X). The Sequester products are the enclosures with external disconnects.

Several changes have been made to these enclosures including lift off hinges for easy door removal and improved latch rod guides that allow for smoother and quieter operation. These improvements will enhance the products and allow for easier field modification. The new design has become the New Stock Standard. The Key enhancements are as follows:

- Products will be painted gray inside and out. This will enhance delivery time.
- Concealed liftoff hinges allow for easier removal of doors for field modification.
- Improved composite rod guide provides smoother operation and quieter opening and closing of enclosure doors.
- Door corners are now formed instead of welded.
- Now utilize a closed cell gasket.
- The lifting eyebolt nut is now removable.

White interiors are still available but are now considered a non-stock item.

The part numbers for these new enclosures will include a suffix “G”. Example: A72XM2818FTC “G”.

The effected enclosures will continue to meet the same UL agency requirements.

The changes were made to better align the large enclosures with current market requirements and customer expectations. The new enclosure design will maintain the quality that is expected of Hoffman, while being competitively priced.

If you have any questions, please contact your Kendall Electric Account Manager.
Are all power supplies the same? I would have to say “No”. Allen-Bradley offers 2 styles of switch mode power supplies designed and manufactured to accept wide ranges of AC and DC input voltages. The 1606-XLE Essential and 1606-XLS Performance lead the industry in performance, high efficiency and long product life since they incorporate long life electrolytic capacitors and low thermal-loss circuitry. Single and three-phase inputs have also been tested to meet global safety standards.

The 1606-XLE Essential Power Supply is cost effective and high performance. It is ultra slim and used for DC control power applications. It is highly reliable and has a long service life. The smaller width of these power supplies also saves panel space.

The 1606-XLS Performance Switch Mode has many advantages over competitors. To begin, it is more efficient since it has a lower input current and power loss, which leads to energy savings and less heat in the panel. A cooler panel results in being able to use a smaller transformer, thus leading to less panel space use, a smaller enclosure and significant cost savings. Less heat in the panel results in a smaller transformer requirement, and panel space savings. Also there is less heat to dissipate through air-conditioning or venting. Heavy-duty cam lock spring clamps provide shock and vibration resistance. The superior design of the Bulletin 1606 power supply provides optimal performance and long product life - at least 2X the hours of operation for MTBF (Mean Time Between Failure) versus competitors.

Allen-Bradley’s Power Boost technology allows the 1606-XLS series to handle big inrush currents upon startup. For example, a 1606-XLS 10A power supply with 150% power boost is capable of handling 15A inrush current for 5 seconds upon startup of a machine. Competitors, on the other hand, have to rely on sizing a bigger power supply to handle the huge inrush resulting in more panel space used, less energy savings, and more heat generated in the panel.

So when selecting a power supply, remember they are not all the same. Allen-Bradley is the industry leader in regards to efficiency. These efficiencies reduce costs, enclosure space, and transformer sizing; providing significant cost savings, while improving product reliability.

Please contact your Kendall Account Manager for further assistance on Allen-Bradley Power Supplies.
Have you experienced issues with fluid getting into your servo motor and shortening its expected life? Flex-Cable has a Patent Pending solution.

One of our customers was experiencing this issue due to the placement of their servo motors in a deep draw die that has coolant flooding onto everything to aid in the draw process. The motors were lasting 2-3 weeks. They would short internally from the coolant getting in. Although the motors were equipped with a shaft “seal kit”, this was not enough to keep them dry given the negative pressure inside the motor case when the motor was shut down and cooling. The factory tech-support for the servo motor manufacturer was called in and proposed a solution to drill the motor case to install an air fitting which allows positive pressure to be applied to the interior of the motor. Unfortunately, drilling a hole into the motor case would also void the manufacturer’s warranty. Flex-Cable was visiting the plant with me on an unrelated issue, and in passing we were told about the problem and the customer’s dislike of the proposed solution. Wheels turned and a unique solution was conceived.

The over-molding process that Flex-Cable uses, involves putting a metal molding adapter onto the back of the connectors used. This allows some clearance through the connector which allows air to pass through. A modification to the adapter made by Flex-Cable allowed them to introduce dry air into the back of the low voltage encoder connector which makes its way through the cable connector into the motor connector and on into the motor itself. Dry Air or Nitrogen, under positive pressure, is then introduced into the motor without voiding the manufacturer’s warranty!

The initial prototype has been installed since the beginning of December 2011 and is still running without a single failure. The customer loves it and has ordered more!

Consult your local Kendall Electric Account Manager for your Flex-Cable solution.

PURGE CABLE PRODUCT SPECIFICATIONS:
Allows positive (coolant or wash-down applications) or negative (clean room applications) pressure to be applied to the motor case through the encoder connector.

- Integral to the connector backshell (molded)
- 1/8" ID tubing connection
- Recommended pressure (Positive) 3-7 psi, (Negative) 23 – 19 in. of Mercury
- Air fitting position swivels around connector body.
- Current configuration is with 23mm DIN threaded connectors which fit a large number of servo motor applications
- Application of the purge fitting to other connector families is possible depending on connector construction
Did you see Allen-Bradley’s new SC300 Safety Camera at Rockwell Automation On the Move in Grand Rapids?

If you are an OEM that builds machines and typically have a small area or an unusually shaped operator area and you need some type of safety device for hand detection (less than 4.5ft across), the Allen-Bradley GuardMaster SC300 offers an easy to install solution that might be exactly what you’re looking for. The SC300 offers a cost-effective solution for a variety of machine guarding applications. The GuardMaster SC300 is a Type 3 vision-based protective device designed for use in a variety of machine guarding applications. This product is best suited for, but not limited to, light and medium industrial guarding applications with a square or rectangular frame in front of the machine hazard area and an environmental rating requirement of IP54.

The GuardMaster SC300 is easier to install than traditional light curtains because there is only one sensor and reflective strip to mount. The sensing function is performed by the SC300 viewing a two-dimensional image against a passive pattern as the background.

Contact your Kendall Electric Account Manager or check out the YouTube video link below to see the SC300 demo at Automation Fair 2011.

http://www.youtube.com/watch?feature=player_embedded&v=yyuxLBtXeqY
Thermal imaging cameras have come along way. It used to be a very expensive tool with very limited use. The cameras were made to detect loose connections on wires and connectors. This came with a price in the $30,000 to $40,000 range and the quality of the picture was so poor you didn’t know what you were looking at.

With the new Fluke cameras that are out on the market today, all of this has changed. The cameras have become very affordable, starting in the $3,000 to $4,000 range and actually giving you a lot more functionality than the more expensive cameras. Fluke has added new features like the IR-Photo Notes which gives you up to three digital photos per infrared image to precisely document and clarify potential problems. The IR-Fusion technology is the industry’s first point-and-shoot technology camera that gives you aligned digital and infrared images every time. Also you get excellent alignment in picture-in-picture mode. The camera also has an exclusive Auto Blend mode that aligns the digital and infrared images into a single view.

For more information on Fluke Imagers, please contact your Kendall Electric Account Manager or nearest Kendall Electric Location.

The lightest, most rugged and easiest-to-use professional thermal imager have now arrived.

Ti125 Industrial-Commercial Thermal Imager
Ti110 Industrial-Commercial Thermal Imager
TiR125 Building Diagnostic Thermal Imager
TiR110 Building Diagnostic Thermal Imager
Ti100 General Use Thermal Imager
Lumark’s Crosstour series LED fixtures have an innovative design that delivers light in an energy efficient, optically controlled manner. This small LED power house comes in a stylish, slim profile (incorporates ADA specifications) with a rugged die cast aluminum housing. The Crosstour package is versatile and can be used in a wide variety of applications such as wall pack, post or bollard, flood lighting, inverted, or for low level installations. Typical commercial and residential applications include building entrances, apartments, schools, stairways, pathways, and loading docks. These fixtures are available with either bright white 5000k, or warm 3500k LEDs and in come in 10 watt, 20 watt and 30 watt models.

The universal back box mounts to 3-1/2 and 4” round and octagonal, 4 square, and single masonry boxes for easy retrofit applications. The back box has three conduit openings allow for through wiring or mounting photo electric controls. The fixtures are U.L. listed for wet location and ground mount; IP66 rated. They come in a durable carbon bronze or summit white polyester powder coat finish.

For more information on this durable, economical and versatile product, please contact your local Kendall Electric Account Manager.

**PRODUCT SPECIFICATIONS**

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<thead>
<tr>
<th></th>
<th>10 Watt model</th>
<th>20 Watt model</th>
<th>30 watt model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lumens</td>
<td>720</td>
<td>1430</td>
<td>2650</td>
</tr>
<tr>
<td>Forward throw</td>
<td>30’</td>
<td>40’</td>
<td>50’</td>
</tr>
<tr>
<td>Mounting height</td>
<td>8’-12’</td>
<td>8’-25’</td>
<td>8’-25’</td>
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<tr>
<td>Replaces metal halide</td>
<td>70 watt</td>
<td>150 watt</td>
<td>175 watt</td>
</tr>
</tbody>
</table>

**SPECIFICATIONS**

- Patent pending, slim, low-profile LED design
- Wall, surface, post, bollard, low-level, inverted, floodlight mounting
- Die-cast aluminum, hinged, removable door and back box
- Secure lock-hinge and single-point closure
- Mounts to a variety of junction boxes or conduit entries
- Silicone-sealed optical LED lens, Available in 5000K or 3500K (CCT)
- 120V, 120-277V and 347V models available
- Optional floodlighting kit converts from wall to floodlight
Do you think all repair facilities are the same? Many of us fall into the trap of believing that this is true. Hence the lowest price is your best bet for all of your repair needs. However, the truth is that all repair services are not created equal. When you get products repaired through Rockwell Automation factory authorized repair facilities, your product is not just repaired, it is remanufactured. What is the difference? Rockwell Automation uses a seven step process on all of their repairs to ensure the products are “like new” again. This gives you the peace of mind that your part has been repaired right the first time, and that you will avoid unwanted “warranty failures” in the future, which can lead to costly downtime. If you are currently not sending your Allen-Bradley or Reliance Electric parts to Kendall Electric to be repaired, give us a call and find out how remanufactured repairs can benefit you.

The Rockwell Automation Seven Step Remanufacturing Process

1. Receipt and Verification
2. Revisions and Enhancements
3. Component Verification/Replacement
4. Dynamic Functional Testing
5. Environmental Testing
6. Final Quality Inspection
7. Secure Shipping

The Rockwell Automation Seven Step Remanufacturing Process restores your Allen-Bradley® equipment to its original operating condition, extending equipment life and allowing it to function in “like new” or better condition. Rockwell Automation is the only company that can provide this service.

What you need to remember:

Only genuine Allen-Bradley replacement parts are used, ensuring original design and performance. Substituting parts can void manufacturer’s warranty and UL listings.

Only Allen-Bradley can provide current upgrades. Design information is not available on basic level schematics.

Upgrades/revisions are provided at no extra cost when remanufactured.

Over 60 percent of all Allen-Bradley PC boards have been upgraded over the years.
Dramatic advances in LED technology have broadened the applicability of LED illumination, creating an exciting new option for hazardous, industrial and other highly demanding locations. Compared to traditional HID (high intensity discharge) technologies, LED light sources can deliver longer life, enhanced energy efficiency, greater eco-friendliness, lowered maintenance demands and equal or better quality of light. The Champ® VMV LED Series is a perfect example of Cooper Crouse-Hinds innovation, with up to 58% reduction in energy costs and 60,000 hours of continuous operation.

About 2 years ago, a local steel mill was looking for a better solution for lighting in their caster area where they run their lights 24/7. They were using 250w MH luminaires. The challenges they faced were; bulbs and ballasts not lasting very long from the high heat and vibration of the caster area, and complaints from workers because of low light conditions when the lights failed. This created visibility issues and a burden on maintenance to continually replace bulbs and ballasts.

At that time, Cooper Crouse-Hinds had recently come out with their Champ® VMV LED Series Luminaires. After demonstrating the Champ® VMV LED at our annual “Fish Fry/Product Fair” that year, they decided to test them in their facility. They put three fixtures in some of their most challenging locations within the caster area. The modular design of the Champ® VMV LED made it an easy drop-in replacement. They used the ¾” pendant mount hub option, allowing them to replace the old fixture with the Champ® VMV LED quicker than they could repair their existing MH fixture. After a trial period, instead of replacing bulbs and ballasts, they began replacing the 250w MH fixtures with the new Champ® VMV LED. Charted below are realized benefits:

As a result, they have had zero failures, a more reliable light source improving lighting and providing safer working conditions, lower maintenance costs to keeping the lights on, and have reduced energy consumption by roughly 50% per fixture.

<table>
<thead>
<tr>
<th>Wattage</th>
<th>250 Watt Metal Halide</th>
<th>Champ® VMV9L2ADM2/UNV1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintenance Time</td>
<td>4 hours/month</td>
<td>0</td>
</tr>
<tr>
<td>Energy Savings</td>
<td>0</td>
<td>50%</td>
</tr>
<tr>
<td>Life (running 24/7)</td>
<td>up to 2 years</td>
<td>7+ years</td>
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</tbody>
</table>

To learn more about how Kendall Electric and Cooper Crouse-Hinds can help you lower your maintenance costs and reduce your utility bills using LEDs and other lighting products, please contact your Kendall Electric Account Manager.
Allen-Bradley® Training Schedule

Because of the complexity industrial control that is currently being installed in factory automation, the need for a thorough understanding and knowledge of equipment is imperative to keep your company productive and profitable. Training from Allen-Bradley can reduce downtime because employees trained on equipment can solve problems faster. It also maximizes utilization of equipment because personnel knowledgeable about all performance capabilities of equipment will use those capabilities to the best advantage and potential. Additionally, Allen-Bradley’s training increases worker participation towards your company’s goals and objectives. Many productive suggestions for solving ongoing problems and increasing productivity come from workers who fully understand control equipment.

To enroll in any of these classes, contact your local Kendall Electric, or register online at www.kendallelectric.com.

The class location key for Wayland includes Kendall Locations: B=Battle Creek, G=Grand Rapids. You can find class curriculum maps on our website under training for your Kendall location under the Rockwell Regional Training Schedule.

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Course</th>
<th>Days</th>
<th>Cost (MI)</th>
<th>Troy (MI)</th>
<th>Wayland (MI)</th>
<th>Fishers (IN)</th>
<th>Fort Wayne (IN)</th>
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Call the Kendall Electric location nearest you for all of your electrical needs.