In This Issue:

- Rockwell Customer Experience Survey
- Tools and Resources from Rockwell Automation
- HD Video Solution for Legacy Analog CCTV Systems
- Fluke Connect
- New Cognex In-Sight 2000
- KCL Educational Seminars
- Dialight Fixtures for Industrial or Hazardous Locations
- DOE 2016 Standards for Distribution Transformers
- Automation Fair Thank you
- Cognex In-Sight Micro 8000 Series
- Cognex In-Sight Micro 8000 Series
Dear (Customer Name),

To understand how Rockwell Automation can better meet your needs, we ask you to complete our Customer Experience survey. Your input is vital to us as we continually strive to improve the products and services we deliver.

To access the survey, single-click on the link below or copy and paste the Web address into your browser. If you experience any difficulties accessing or completing the survey, please contact us at (link to be provided in e-mail).

The survey is accessible for the next three weeks. It takes about 15 minutes to complete. (link to be provided in e-mail)

Thank you in advance for your participation and for your continued business with Rockwell Automation.

Sincerely,

Rockwell Automation
Happy New Year!

We would like to express our appreciation for your business and your friendship in 2015. Please let us know what we can do to help you reach your 2016 goals. We look forward to shared success again this year!

From Your Friends at Kendall Electric

“If everyone is moving forward together, then success takes care of itself.”

- Henry Ford

Tools & Resources from Rockwell Automation

Helping to make your job easier...

Questions on software revisions or compatibility?
Product Compatibility and Download Center (PCDC) can help you find product-related downloads including firmware, release notes, associated software, drivers, tools, and utilities. This tool is useful for answering many questions, including:
- Compatibility Management – What products work together?
- Device/Deployment Management – How do I manage my devices?
- Displays multiple versions of products
Check it out at: http://www.rockwellautomation.com/global/support/pcdc.page?

Need help with an Ethernet/IP system?
EtherNet/IP Toolkit - The EtherNet/IP Toolkit provides easy to use resources for all phases of your EtherNet/IP implementation (Design, Configuration, Commissioning, and Troubleshooting) in one package.
HD Video Solution for Legacy Analog CCTV Systems
By: Tim Stoudt - Data Comm Specialist - Muskegon, MI

Does your facility have an outdated analog CCTV system infrastructure in place? Years ago, the most common CCTV cable installed was a RG-59 coax cable. Camera manufacturers are now deploying technology that will support Full HD (FHD) video resolution over this existing infrastructure. Instead of installing all new cables and new IP cameras, you can now eliminate the cabling upgrade costs, and just focus on the hardware upgrades. Speco Technologies is now offering the HD-TVI product line. They have a nice selection of 4, 8, and 16 channel Digital Video Recorders (DVR) with hard drive sizes starting at 1 terabyte (TB) and going up to 8 terabytes. The HD-TVI camera line consists of both dome and bullet style cameras. The HD-TVI camera features include: indoor/outdoor IP67 rated components, 2 mega pixel (MP) image sensors, dual voltage operation 12VDC and 24VAC, Intensifier Technology, and 5 year product warranties. The HD-TVI DVR’s are backward compatible with the existing Speco analog cameras. This feature helps with upgrade costs and allows someone to migrate from a standard resolution CCTV system to a HD resolution system in phases, rather than having to perform a complete system overhaul.

Speco Technologies has also launched a line of Video Servers. The SecureGuard Video Server product line consists of three server offerings. The SG115, SG315, and SG515 give end users the flexibility to build the video storage device that best fits their needs. These servers can be configured anywhere from 1 camera, all the way up to 144 cameras. They also can be configured with hard drive sizes up to 144 terabytes. The servers come with free, easy-to-use video management software called SecureGuard. Multiple users may access and playback video on the server at the same time. Free software updates, and no licensing fees are great features that the end user will appreciate. The SG115 comes with a 1 year product warranty, while the SG315 and SG515 come with a 3 year product warranty. The SecureGuard servers are configured specifically for each project. A short questionnaire about the specific needs of the project is all we need to get the end user the appropriate server needed for their project.

If you are interested in more information on the HD-TVI or SecureGuard Server product lines, please contact your Kendall Electric Account Manager or Data Comm Specialist.
Fluke Connect
By: David Townsend - Account Manager - Birmingham, AL

Wireless technology has been out for years where applications are supported by WiFi, smart phones, and tablets. For testing tools on equipment, there haven’t been a lot of options until the last couple of years. Fluke Corporation has come out with a new multi-product wireless control technology called Fluke Connect. With more than 30 Fluke test tools now available, we can now wirelessly transmit data from test tools to an iOS, Android device, or PC and then secure the data in the Fluke cloud.

Fluke Connect features four major functions:

• Sharelive enables real time video calls. This allows technicians to communicate the status or installation of a tool or device with live data sharing.
• Auto Record helps to facilitate measurements. This will allow you to save measurements and images to smart devices or to the Fluke Cloud.
• Equipment Log allows you to take measurements with equipment and store the historical data in one place for that test tool.
• TrendIt tool allows you to make graphs based on live data directly on to your smart device.

Fluke is providing value to customers by making it easier to share information while also making it a safer environment for your team to work when taking measurements or readings. If you would like to find out more information or see a demonstration of Fluke Connect contact your local Kendall Electric Account Manager.

FLUKE CONNECT™ TOOLS

<table>
<thead>
<tr>
<th>Infared Cameras</th>
<th>Digital Multimeters</th>
<th>Current Meters</th>
<th>Voltage Meters</th>
<th>Temperature Meters</th>
<th>Process Tools</th>
<th>Insulation Testers</th>
<th>Accessories</th>
</tr>
</thead>
</table>
Machine vision is one of the most powerful tools in the current production landscape. Today, manufacturers are striving to create defect-free products at a faster rate than ever before. Few things can be more frustrating than discovering that a batch of parts are missing a clip, the width on a gasket is slightly too small, or that something was printed with a bad date code, resulting in large rework or scrapping of items. All of these are things that can be solved by using a vision system.

So, why doesn’t everyone use machine vision for inspection? Great question! One of the biggest hurdles for vision systems has been overcoming acceptable part variation. Sometimes, the parts you are inspecting change slightly, which can cause false failures. Or, the plant lighting can change, which throws off your inspection.

Cognex has a tool that can account for this type of variation – PatMax®. PatMax® is the industry’s performance standard for part and feature location. It utilizes advanced geometric pattern matching technology to reliably and accurately locate parts. Even under the most challenging conditions, this tool can significantly reduce or eliminate fixturing requirements and cost. For locating parts or features, PatMax® provides the maximum vision inspection yield and reliability available in a vision system. No other vision system on the market today can accommodate the type of variation that PatMax® can.

The newest Cognex vision platform to be released is Insight Micro 8000 series. This is the world’s smallest, full-line vision system. These systems are Power over Ethernet (PoE), which simplifies wiring. They are smart cameras, which means that there is no separate controller taking up space in your panel. Without a controller, the system is under 3 inches long and less than 1¼” wide. Additionally, they use standard C-mount lenses – no adapter needed.

If you’ve used the previous series of In-Sight Micro cameras, the 8000 series cameras are faster, they support new PatMax® Redline, and are available in a 5MP option.

If you have a potential application, please contact your Kendall Electric Account Manager or Automation Engineer. We have a full-time Vision Engineer on staff to evaluate vision applications to make sure you end up with the best system for your application.
NEW In-Sight 2000

By: Andy Atherton - Automation Engineer - Grand Rapids, MI

Have you ever had a sensing application that a standard photosensor just couldn’t handle? You don’t need or want the complexity of a full vision system. The next generation of vision sensor, the Cognex In-Sight 2000, may be just what you need to easily solve your application. The added benefit is; it uses the same software as the rest of the In-Sight family so there is no need to install or learn a separate software package, while still providing an affordable solution that is quick and easy to configure and maintain.

The In-Sight 2000 is a fully contained system with an integrated lens, a new powerful integrated light (patent pending), and it uses the same cables as the other In-Sight systems. The lens and high output diffuse ring light are field interchangeable so if some aspect of your application changes you don’t need to buy a completely different unit; just change the lens or light or both.

A range of available lenses allow for flexibility in mounting locations. Additionally, the modular body of the In-Sight 2000 can be adjusted to either a straight or right angled configuration to better fit into your specific mounting situation.

Three models will be available to meet various application requirements and budgets. The base unit features a pattern matching tool for basic presence/absence applications. The midrange model offers a variety of tools to handle a wide range of applications and the expanded tool set of the high end model will take you beyond the capabilities of a typical vision sensor. All three models also include software fixturing so that part location and orientation does not need to be exact and logic capabilities to tailor the outputs to your specific needs.

The In-Sight 2000 uses the intuitive EasyBuilder software which quickly guides you through configuring and deploying your application in simple steps. The simplified graphical controls allow setting the tool parameters quickly and easily and the proven, powerful Cognex vision tools will help ensure the reliability of the inspection.

The next time you struggle to make that photosensor work to assure the quality of your part, consider the Cognex In-Sight 2000. The affordability, flexibility, ease of implementation and maintenance, and reliability may be just what you need to do the job. Contact your Kendall Electric Account Manager or Automation Engineer for more information about the Cognex In-Sight 2000.
KCL Educational Seminars

By: Richard Cross - Automation Engineer - Holland, MI

Kendall Connection Live, or KCL as it is commonly called, are live monthly training seminars held at various Kendall Electric locations. These seminars are led by the Kendall Automation Engineers and include technical content on Rockwell Automation products along with various other vendor products.

KCL is the newly rebranded name of the popular Kendall Technical Automation Club (KTAC) in Michigan and Indiana and the Automation Lunchbox trainings in Tennessee, Alabama and Georgia.

KTAC sessions began at the Grand Rapids Scribner Avenue location in March of 2005 and grew from there. Automation Lunchboxes have also been around for several years. Both groups were envisioned and implemented by our very own Automation Engineers. The original training sessions were created to help educate customers on our numerous products, not just from a sales point of view, but from a deep technical perspective as well.

Over the years, we have hosted many sessions on many different topics. My personal favorites are the How-To Sessions. These are training sessions where we, the engineers, demonstrate how to use a specific product. This usually includes the programming and configuration of the device along with a live demo of how to best utilize it in your application. Throw in lunch or breakfast for everyone and you’ve got a very valuable training session. Did I mention that we do all of this for no charge?

I have summarized a few of the most recent KCL sessions on the next page. If any of the topics listed interest you, I highly recommend that you consider attending your local Kendall Connection Live sessions. The Kendall KCL sessions are held monthly at many Kendall Electric locations. You can find an upcoming list of KCL sessions on our training Website.

training.kendallelectric.com

If you do not receive monthly KCL topic notification e-mails, please contact us and we will add you to the list. For this and any further information on your local KCL seminars, please contact your Kendall Electric Account Manager or Automation Engineer.

“Setting goals is the first step in turning the invisible into the visible.”
-Tony Robbins

“The key is not to prioritize what’s on your schedule, but to schedule your priorities.”
-Stephen R. Covey

Let Kendall Electric help you schedule your training goals for 2016. Contact your Account Manager today!

Check our Training Website regularly for upcoming classes near you.

training.kendallelectric.com

Continued on next page.
### Common Mode Noise – VFD Installation Best Practices
Learn about the best application practices when installing and maintaining Variable Frequency Drives when common mode or stray currents are electrically or magnetically induced into the grounding system or other non-intentional conductors. Common mode currents are those which flow on all intentional conductors in the same direction and return via some external path such as ground paths.

### New L3 Safety and Logix L8 Controller, Studio 5000 v28 and PV5500
- Introducing the next generation of CompactLogix Safety Controllers. Compact GuardLogix L30, 33 and 36. Learn about the features and benefits of this platform.
- Come see a comparison of the L7 & L8 ControlLogix Controller. We will try to secure an L8 controller for this KCL to show a firsthand comparison of the performance improvements of the L7 versus the L8. Come early for a ringside seat.
- The above 2 topics require the use of Studio 5000 v28 software. We’ll discuss what’s new with v28.
- It was introduced in v27, but we haven’t been able to show it until now. You may have seen it at Automation Fair, but let’s take a deeper dive and learn about its pros and cons.

### What’s New in Industrial Control
Check out the brand new Rockwell Automation Component Trailer at this month’s KCL. It is a rolling demo of all the latest and greatest Industrial Control and Safety components. Some of the newer components that will be highlighted include:
- 440C-CR30 Programmable Safety Relay
- 1494U Disconnect
- DySC Voltage Sag Protection & Monitoring
- Industrial UPS

### Rockwell Automation Fair Recap
Learn about the exciting new products recently introduced or on the horizon for Rockwell Automation and their Encompass™ Partners.

### Industrial Network Monitoring Tool by Panduit
Learn about a proven solution that will make your next Ethernet network or device installation simple and fast. IntraVUE™ is an Easy to use powerful Graphical Visualization Software, from Panduit Company. This software tool is usable for all skill sets, and is portable for ease of use. It can provide Real-time Reports and Simplify Ethernet support, while remaining scalable and secure.

### How-To’s and RSLogix 5000 Version Info
**How-To #1:** RFideas badge reader: Come see a demonstration of an Ethernet-based badge reader connected to a Logix processor. We will cover hardware settings, add-on profile and ladder logic necessary to accomplish this task.

**How-To #2:** RTA Automation’s 490-NBX: Not everything is Ethernet/IP enabled; watch how a 490-NBX can take the difficulty out of connecting TCP/IP devices to your MicroLogix, SLC, PLC5, Compact or ControlLogix.

**How-To #3:** Cognex Dataman 260 series: Barcode reading has just gotten smaller and easier to do. We'll show you the new Dataman 260 series in this How-To; besides testing it against codes, we’ll navigate around the new v5.5 software to familiarize you with the new layout.

### Discussion on RSLogix 5000 versions:
A new old version, v20.04, was recently released. We’ll discuss the reasons why you need to upgrade to this version as well as go over the whole RSLogix 5000/Studio 5000 version landscape... up to v28.

---

### SAVE THE DATES

#### RAOTM
**Rockwell Automation on the Move**

- **August 17-18, 2016**
  - DeVos Place
  - Grand Rapids, MI

#### Automation Fair 2016

- **November 9-10, 2016**
  - Georgia World Congress Center
  - Atlanta, GA
Dialight has many applications to fit your needs anywhere from the manufacturing floor to oil, gas and pharmaceutical. For industrial use applications, they offer high bay, low bay, and linear options. For hazardous locations, they offer the same fixtures and floodlights as well.

One application that we have looked at recently is a manufacturing plant that does rubber extrusion. The customer has looked at several options of upgrading their current 400 watt metal halide lighting to reduce energy consumption. One of the key factors of a lighting upgrade is cleaning. The general guideline is, you should clean your fixtures about once a year. This customer does so to keep the film from rubber extrusion off of the fixture and keep light output as high as possible. They have looked a fluorescent solution, but the time it takes to clean a 6 lamp fluorescent fixture was not ideal.

The Dialight fixture appeared to be a great option to make maintenance as easy as it could be. This fixture also has a temperature rating of 149°F that allows it to keep up with the heat in the customer’s facility during the summer months.

Key features for these Dialight fixtures include a 10 year warranty and an L70 rating of 100,000 hours. Most Dialight fixtures are also wet location rated, and they also offer a wire-less control.

If you have a need to replace any lighting from a 1,000 watt metal halide to lighting a paint booth, this is the fixture to look at. Contact your Kendall Electric Account Manager to learn more about the Dialight family of fixtures.
The US Department of Energy (DOE) has modified its energy efficiency standards for distribution transformers to require greater efficiency ratings designed to save an average of 18% in energy losses in low voltage dry-type distribution transformers and an average of 13% in energy losses in medium voltage dry-type transformers. This equates to 3.63 quadrillion BTUs of energy for equipment sold over the 30 year period of 2016 to 2045, and a projected savings of up to $12.9 billion in total costs for consumers over the same period.

(source: https://www1.eere.energy.gov/buildings/appliance_standards/product.aspx/productid/66)

The DOE ruling requires all liquid-filled and dry-type distribution transformers manufactured in the US on or after January 1, 2016 and sold into any US state after this date to comply with the new energy efficiency standards.

(source: http://www.hammondpowersolutions.com/files/HPS-DOE-2016-Flyer1.pdf)

Hammond Power Solutions offers a complete line of DOE 2016 conforming transformers designed for General Purpose, K Factor and Harmonic Mitigation applications. In addition, they offer the HPS Titan; an encapsulated transformer designed for applications in harsh and hazardous (Class 1 Division 2 A, B, C, D rated) locations.

For more information on DOE 2016 and Hammond Power Solutions, please visit www.hammondpowersolutions.com or contact your Kendall Electric Account Manager.

We would like to thank our customers and vendor partners who were with us at Automation Fair in November. It was an impressive event with over 150 exhibits and 15,000 in attendance.

If you weren’t able to attend, contact your Kendall Electric Account Manager to hear about some of the new products and technologies featured at the show.

Thank you for attending this event with us and we hope to see you at Automation Fair again this year!
<table>
<thead>
<tr>
<th>State</th>
<th>Location</th>
<th>Address</th>
<th>Phone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td>MI</td>
<td>Alpena, MI 49707</td>
<td>1240 US 23 North 989-356-3411</td>
<td>1-800-968-3411</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Battle Creek, MI 49037</td>
<td>131 Grand Trunk Ave 269-965-6897</td>
<td>1-800-965-6899</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Benton Harbor, MI 49022</td>
<td>1405 South M-139 269-925-3244</td>
<td>1-800-255-5214</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cadillac, MI 49601</td>
<td>909 W. 13th Street 231-775-9734</td>
<td>1-800-442-1711</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Coldwater, MI 49036</td>
<td>646 E. Chicago Rd. 517-278-4518</td>
<td>1-800-695-5464</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Grand Haven, MI 49417</td>
<td>1436 Fulton Ave. 616-844-7017</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Grand Rapids, MI 49504</td>
<td>832 Scribner Ave., N.W. 616-459-8327</td>
<td>1-800-442-2523</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Grand Rapids S. MI 49512</td>
<td>4525 44th St. SE 616-459-8327</td>
<td>1-800-968-9880</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Holland, MI 49442</td>
<td>11581 Greenway Dr. 616-936-4625</td>
<td>1-800-968-9880</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jenison, MI 49492</td>
<td>6726 Roger Dr. 616-662-0185</td>
<td>1-800-292-0802</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lansing, MI 48917</td>
<td>7633 Lanac St. 517-322-2411</td>
<td>1-800-968-3600</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Midland, MI 48642</td>
<td>4600 James Savage Rd. 989-496-3600</td>
<td>1-800-968-3600</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Montgomery, AL 36166</td>
<td>6064 Perimeter Pkwy. 334-356-1845</td>
<td>1-866-711-8021</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nashville, TN 37203</td>
<td>1330 N Michigan St. 615-322-2411</td>
<td>1-800-968-3600</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oak Ridge, TN 37830</td>
<td>745 Emory Valley Rd. 865-482-4906</td>
<td>1-800-832-8742</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pigeon Forge, TN 37863</td>
<td>117 Golf Rd. 865-453-4638</td>
<td>1-800-532-8742</td>
<td></td>
</tr>
</tbody>
</table>

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