

WERNER ELECTRIC POWER SUMMIT

REACH NEW HEIGHTS IN POWER CONTROL!

Monitor, protect, configure and control all your power needs!

Join us for another **WE TALK TECH** premier event and gain knowledge on motor control, energy management and power quality.

Topics Include:

- Power Quality & Power Monitoring
- Motors & Motor Control
- Software Tools & Networks
- Energy Management
- Test Equipment
- Heat Management



Visit with product specialists during the Power Summit Trade Show! Tradeshow will feature Rockwell Automation, Werner Electric services and Encompass Partner products that will help you streamline your process! (details on back)



Date: February 23rd and 24th

Location: Werner Electric - Cottage Grove

Time: 7:30 am - Registration

8:30am - Welcome/Key Note Speaker from Xcel Energy

9am-11:30am- Tech Sessions, Labs, Tradeshow

11:30am-12:50pm- Lunch and Tradeshow

1pm-2:50pm- Tech Sessions, Labs, Tradeshow

RSVP: Contact Angela Schmollinger
651.769.8137

Limited Space Available!
Class Schedule attached

Cost: FREE

**Trade Show
All Day!**

POWER SUMMIT TRADESHOW

- Rockwell Automation
 - Drives, Soft Starts, Overload Protection
 - Premier Integration

**Rockwell
Automation**

- Cutler Hammer
 - Switch Gear
 - Eaton Enclosed Digital Metering
 - Portable power monitoring equipment

EATON

Cutler-Hammer

- SMC
 - Ethernet IP valve bank
 - fittings
 - tubing
 - cylinders

SMC

- Belden
 - VFD Cables

BELDEN

- Littelfuse
 - POWR-GARD protection relays; current limiting fuses

Littelfuse®

- Emon Dmon
 - Class 2000 Sub-Metering kits
 - Green Class meters

E-Mon®
Energy Monitoring Products

- Brady
 - Panel labeling and code standards

BRADY®

- Panduit-Industrial Ethernet
 - Managed network systems
 - Complete network systems including network racks, grounding, identification and accessories

PANDUIT®

- Fluke
 - Drive Tool Kits with related accessories
 - Test Equipment

FLUKE®

- Hoffman
 - H2OMIT: Condensation solution system
 - T4: Indoor/Outdoor Air Conditioner
 - POLYPRO: Type 4X Polyester Enclosure
 - INTERSAFE: Data Interface Ports

Hoffman®

A Pentair Company

- Block
 - Harmonic Filter; Sine Wave Filter; Motor Filter; EMI Filter

BLOCK

- Burndy
 - Tools and connectors for grounding
 - Standard connections

**FCI BURNDY
PRODUCTS**
Experience. Technology. Answers.

- Oberon
 - Safety and Arc Flash equipment

OBERON

- DataComm Solutions
 - Werner Electric Supply & Van Meter

WE WERNER Electric Supply
DataComm



TIME	Tuesday, February 23						
7:30am - 8:30am	Registration						
8:30am - 9:20am	Welcome & General Session (Xcel Energy - 2010 Programs & Rebates)						
9:30am - 10:20am	Trade Show	MC06 - PowerFlex 750 Series Drives	MS04 - Standby Power/UPS	MC01 - Motors	PQ01 - Power Monitoring	MC05 - MCC Hardware Overview	MS02 - Heat Management
10:30am - 11:20am		MC06 - PowerFlex 750 Series Drives	MC04 - MV Drives	MC02 - Motor Control & Protection	PQ02 - Surge and Surge Suppression	EM01- Wiring Grounding & Code	ST04 - SMC e-Tools
11:30pm - 12:50pm		Lunch					
1:00pm - 1:50pm		ST03 - PowerFlex e-Tools	EM02 - Circuit Protection	PQ04 - Harmonics	PQ03 - Power Factor	MC03 - MV Starters & Soft Starters	MS03 - SCCR & Panel Labeling
2:00pm - 2:50pm		ST05 - Software Troubleshooting Tools	MS01 - Test Equipment	EM04 - PowerMonitor & RS Energy Metrix	EM03 - Switch Gear	ST01 - Industrial Ethernet	ST02 - Proposal Builder Product Configurator
	Trade Show	Labs	Discussion	Discussion/Demo	Discussion	Discussion	Labs
Room Name	Automation Dept	Cherry Room	Cedar Room	Automation Training Room	Training Room 1	Training Room 2	Maple Room

TIME	Wednesday, February 24						
7:30am - 8:30am	Registration						
8:30am - 9:20am	Welcome & General Session (Xcel Energy - 2010 Programs & Rebates)						
9:30am - 10:20am	Trade Show	MC06 - PowerFlex 750 Series Drives	EM02 - Circuit Protection	MC01 - Motors	PQ01 - Power Monitoring	ST01 - Industrial Ethernet	MS02 - Heat Management
10:30am - 11:20am		MC06 - PowerFlex 750 Series Drives	MC04 - MV Drives	MC02 - Motor Control & Protection	PQ02 - Surge and Surge Suppression	EM01- Wiring Grounding & Code	ST04 - SMC e-Tools
11:30pm - 12:50pm		Lunch					
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	Trade Show	Labs	Discussion	Discussion/Demo	Discussion	Discussion	Labs
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Session Description	Duration
Power Quality	
PQ01-Portable Power Monitoring equipment Portable metering equipment has developed into a powerful array of instruments from single task efficiency and harmonics to full power quality analysis with waveform classification. With the detection and classification of power quality events, a clear specification can be written for protective equipment: saving time and money. The presenter will provide an overview of power quality basics and demonstrate the operation of both energy efficiency meters and power quality apparatus.	1 hour
PQ02 - Surge and Surge Suppression Transient Voltages and Surges encompass over 95% of power quality problems that disrupt or degrade critical micro-processor control and equipment. Transients will be defined and discussed in relationship to other power quality anomalies. IEEE recommendations and UL listing changes will be explained. Participants will leave with a clear understanding of how to minimize the impacts of surge and transient events, increasing reliability and reducing operating costs.	1 hour
PQ03 - Power Factor and Correction Utilities across the country are increasing efficiency requirements. Power Factor will be defined and myths of kW based energy savings will be debunked. Harmonics can cause problems with the introduction of Power Factor Capacitor equipment. Therefore, a portion of the presentation will include harmonic solutions. Return on Investment will be demonstrated through power factor capacitor applications.	1 hour
PQ04 - Harmonics Get an understanding of what power line harmonics are, what creates them, how they are measured, and what countermeasures can be taken to reduce them. IEEE-519 provides guidelines for limits and is usually referenced on specifications for electrical equipment bids. This session provides the information required to confidently discuss this subject and address specifications in the future.	1 hour
Motors and Motor Control	
MC01 - Motors The AC induction motor is the topic of this session. Students will learn about the physical characteristics of the motor (enclosure types, frames, bearings, insulation) as well as how they work (magnetism) and what makes a motor "inverter duty".	1 hour
MC02 - Motor Control and Protection The various types of motor control technologies (Starters, Soft starters, VFD's and motor overload protection) will be discussed and demonstrated. Understanding how motors operate with these different technologies is just part of what you will get out of this session.	1 hour
MC03 - Medium Voltage Starters and Soft Starters During this session students will be shown a product overview and offering. Arc resistant products will be shown as well as the Intellicanter technology. The OneGear products will be showcased during this session.	1 hour
MC04 - Medium Voltage Drives This session provides details on the product offerings and technology of the Rockwell Automation medium voltage drives. The power ratings, current source control and direct-to-drive technology and the power quality of this technology will be discussed.	1 hour
MC05 - MCC Hardware Overview The Motor Control Center (MCC) class provides fundamental knowledge and tools to become familiar with low voltage (LV) CENTERLINE MCC structures and units for LV MCCs. This class utilizes a mix of presentations, discussions and hands-on demonstrations. Upon successful completion of this class the student should know: advantages of MCCs for motor control, basic design features and advantages of CENTERLINE MCCs, basic MCC unit types (FVNR, FVR, Soft Starters, Drives), from the standard catalog offering, and how MCCs use bus bracing, circuit breakers and fuses for fault protection.	1 hour
MC06 - PowerFlex 750 Series Low Voltage Drives The latest generation of VFD's from Rockwell Automation will be highlighted in this session. Students will have the opportunity to get familiar with the hardware in an instructor led hands-on lab environment.	1 hour
Software Tools & Networks	
ST01 - Industrial Ethernet Design Guidelines Learn best practices and design recommendations for proper Ethernet installation in the industrial environment. We will be discussing Ethernet media that include Cables (Copper & Fiber), and switches (managed & unmanaged	1 hour
ST02 - Proposal Builder Product Configurator Proposal builder provides access to information on a broad range of AB products and services. It has an easy product selection interface to make it simple to determine the exact catalog number for the item you need, then gives access to current list pricing, and a comprehensive supplemental product information list. This tool contains features such as product selection wizards, agreement pricing, a spare parts generator, and the ability to separate part numbers to see what components they consist of. All of these features and more can help you select the correct product based on your requirements and give you the information you need fast.	1 hour
ST03 - PowerFlex e-Tools The software tools available to assist you with configuration of the drive will be highlighted in this session. Want to learn how to: Connect PowerFlex drives on Ethernet, Size dynamic brake resistors, Configure catalog numbers then don't miss this session.	1 hour
ST04 - SMC eTools Increase your working knowledge of SMCs by learning the latest in SMC-3 and SMC-FLEX eTools. The focus of the class is to guide the student through the latest in application wizard tools such as Short circuit protection device selection, SMC estimation wizard, and SMC thermal wizard.	1 hour
ST05 - Software Troubleshooting Tools This session offers students an instructor led hands-on experience with PowerFlex drives and SMC-Flex products. The diagnostics and troubleshooting capabilities will be highlighted with the use of Drive Tools SP software.	1 hour
Energy Management	
EM01 - Wiring, Grounding & Code This session will provide information on power grounding methods and practices including demonstrations. The benefits of vdf cable will also be provided during this session.	1 hour
EM02 - Circuit Protection This seminar will review the application and selection of fusible over current protection devices, ground fault and specialty protection relay products. Time will be allocated to address questions regarding customer specific applications	1 hour
EM03 - Switch Gear This session will be an introduction to Innovative Packaging Solutions for Switchgear and Switchboards. We will discuss the various layout options available for 5/15kV Switchgear and 480V Switchgear/Switchboards to assist in minimizing the space requirements needed for your electrical equipment rooms.	1 hour
EM04 - Power Monitoring & RS EnergyMetrix Energy management is critical to the success of many businesses. Use power monitoring equipment to measure water, air, gas, electric and steam usage and log and access the data with RSEnergyMetrix Software. This session provides an overview of power monitoring equipment and software, a live demonstration will show the capabilities of this equipment.	1 hour
Miscellaneous	
MS01 - Test Equipment During this session students will be introduced to the Variable Frequency Drive test equipment "drive tool kits". Multimeters, insulation meters, process clamp meters, and current clamp test equipment will be demonstrated.	1 hour
MS02 - Heat Management At this session, considerations for selecting an enclosure containing components that are heat sensitive will be presented. We will discuss how different materials, finishes, and internal components affect your product selection. Also covered will be the products available to help keep your components cool, how to calculate heat loss, and select the correct product for your needs.	1 hour
MS03 - SCCR & Panel Labeling UNDERSTANDING NEC ARTICLE 409 & UL 508A SUPPLEMENT SB-SHORT CIRCUIT CURRENT RATINGS This presentation will cover the new requirements of NEC Article 409 and UL 508A Supplement-SB for panel Short Circuit Current Ratings ... otherwise referred to as SCCR. A short exercise in determining the SCCR of an industrial control panel will be done at the end of the presentation.	1 hour
MS04 - Standby Power, Generators/UPS This presentation provides a complete uninterruptible power train methodology including Generators, ATS, High Efficiency UPS, and Flywheel (battery alternatives). High efficiency has been one of the important advances in UPS design and UPS upgrade projects have been included in customer utility rebate programs. UPS topology and reliability through proper specification can add reliability and reduce operating costs.	1 hour