Summer 2007

Consulting Engineer Newsletter

Welcome to Eaton's Consulting Engineer Newsletter

The purpose of this Newsletter is to provide you, the Electrical Consultant or power system designer, with timely, technical information that will help you stay current on important topics in the electrical system design field, and with new products and services from Eaton.

This first edition includes four articles we think will be of interest to you:

Eaton's new, 2006 Consulting Application Guide
Available to order now through our Consultant Resource Page on the web

Is Selective Coordination Really the Safest Solution?
Proposed changes to the NEC code and the effects on system safety

New Powerware BladeUPS for Data Center and IT Applications
The industry's most energy efficient, rack-based UPS

Cutler Hammer "E-Z" Trim Panelboards
Innovative "Door-in-Door" trim installs in seconds and is changing the panelboard market. Labor

Eaton Introduces Updated Consulting Application Guide and Product Specification Guide

Order your copy now!

Includes updated Product Spec Guide files (MSWord format) supporting both CSI Master Format 1995 and Master Format 2004 section numbering formats.

What do you reach for when you need layout information for electrical equipment? Or if you need quick dimensional or rating information? For years, electrical system designers have reached for Eaton's award-winning Consulting Application Guide.

Eaton recently reaffirmed its long-standing commitment to electrical consultants with the release of the fourteenth edition of its award-winning Consulting Application Guide (CAG), the most comprehensive resource for engineers involved in the design and specification of electrical power distribution equipment. The guide features Eaton's electrical products and systems representing Cutler-Hammer®. and Powerware®.

Continuously published and updated since 1972, the Consulting Application Guide stems from the original Westinghouse® Construction Specifications, Catalog 55-000.

Six product categories

"While new engineers understand theory from their recent studies, they tend to focus on each component rather than the configuration of a complete distribution system" noted Bradford Roth, Eaton Application Engineer and CAG Committee Chairperson. The guide is organized into the following categories for ease of use:

- Power Management Products

savings and safety features are of utmost importance to your customers.

Please feel free to forward this email to anyone else in your organization that would find this resource valuable.

To register to receive future editions of Eaton's Consulting Engineering Newsletter, please send your request to ConsultantSupportEG@eaton.com

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For Additional Questions or Information

If you would like to receive additional information about any of Eaton's electrical products please contact your local Eaton Application Engineer or send an email to:

ConsultantSupportEG@eaton.com

- Medium Voltage Equipment
- Unit Substations & Transformers
- Circuit Breakers & Safety Switches
- Low Voltage Distribution Equipment
- Control Products and Specialty Products

Section 1 - Power Distribution System Design

The first section of the Consulting Application Guide is titled "Power Distribution Systems Design" and includes information on topics including Protection and Coordination, Grounding and Ground Fault Protection, Generator System Design, Power Quality, and overall System Design and Analysis. The information in this section comes from the combined experience of dozens of Eaton's product and application engineers, and is written specifically to assist engineers responsible for designing complex electrical power systems.

How to access

The 2006 Consulting Application Guide is available in both hardcopy and electronic (CD) form, and is also accessible on-line at Eaton's new "Consultant Resource Page" on the web. To get your personal copy of this valuable resource, please visit our Consultant Resource Page and simply click on, "Click here to request your copy". And while you're at the site, take a look at some of the other helpful information available to electrical system designers.

Each copy of the 2006 Consulting Application Guide is shipped with a CD that includes an electronic copy of the guide, the new Product Spec Guide and Time/Current curves for our Cutler-Hammer circuit breakers, relays, and medium voltage fuses.

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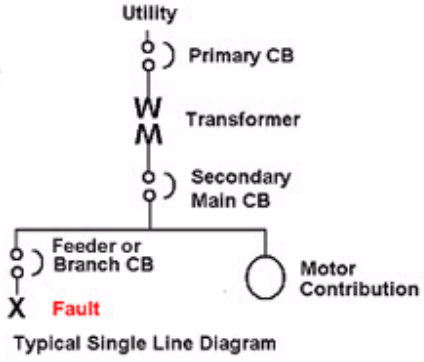
Is Selective Coordination Really the Safest Solution

Proposed changes to the NEC code and the effects on system safety



Typical Single Line Diagram

In 2005, the National Electric Code (NEC) mandated total selective coordination for all current ranges in emergency systems, legally required standby systems, and the essential electrical systems in health care facilities. This mandate had previously applied only to elevator circuits

At first glance, this appears to be a worthy goal in the pursuit of optimized safety and reliability, but there is concern from several organizations that a broad mandate of this type might actually be counter-productive and unnecessarily increase the risk for hazardous arc flash incidents, equipment damage, fires and extended downtime, as well as adding to equipment cost and equipment space requirements.

That is not to say that selective coordination does not have its place. In the lower overload/fault current range, selective coordination is beneficial because it provides selective overcurrent isolation in the current range where faults are most likely to occur. However, by requiring that total selective fault protection be implemented in the higher current ranges, where fault occurrences are extremely rare, the mandate may actually result in higher arc-fault energy thus reducing electrical safety.

To read more about this important topic, please visit Eaton's Consultants Resource Page or click here to directly access a copy of a topical white paper entitled "Optimum Safety, Reliability and Electrical System Performance Through Balanced Selective Coordination and Protection."

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New Powerware BladeUPS for Data Center and IT Applications

The industry's most energy efficient, rack-based UPS

Eaton recently introduced the Powerware® BladeUPS,™ the industry's most energy efficient, rack-based uninterruptible power system (UPS) designed and optimized for today's high-powered blade servers and high-density computing environments.

The Powerware BladeUPS is a new three-phase system that delivers industry-leading energy efficiency, scalability and flexibility, and reflects Eaton's commitment to provide award-winning products that address the challenges of designing and managing high-density data centers. The Powerware BladeUPS is the latest product in Eaton's series of Powerware-branded, rack-based solutions that also include enclosures and accessories, along with a complete line of remote monitoring and power-quality equipment.

"As data centers increasingly deploy high density, small form factor computing platforms such as blade server technology – power density, energy efficiency and cooling are becoming highly-critical requirements," said Ed Komoski, vice president and general manager of Eaton's Power Quality Systems Division. "The Powerware BladeUPS addresses the evolving requirements within the data center by delivering twice the backup power of competitive, modular solutions while dissipating only one-third of the heat. This innovative UPS also represents the first truly scalable three-phase system that fits into a standard 19-inch rack enclosure."

The Powerware BladeUPS helps lower IT and facility managers' energy costs while delivering the most scalable and flexible power protection architecture for data centers and IT environments. With 12kW in only a 6U form factor, the Powerware BladeUPS has twice the power density of any comparable product in the marketplace. For additional information on the Powerware BladeUPS and to download the product data sheet, visit www.powerware.com/bladeups.

To learn more about Eaton's complete line of Powerware products and service portfolio, visit our Web site at www.powerware.com.

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Click photo for 45 sec. installation video

Eaton Introduces New EZ Trim Panelboards

Door-in-Door Trim Installs in Seconds -- With NO Tools

EZ™ TRIM

Labor savings and safety are important issues for electrical contractors and for your customers. It's rare that an innovation in a product like electrical panelboards can have a meaningful impact on issues like these, but that's the case with Eaton's new EZ Trim Panelboards.

Today's standard panelboard trim uses a painted steel cover bolted to the box housing the circuit breaker interior. The hinged door for circuit breaker access is attached to this steel cover. Door-in-Door trim historically includes an additional hinge on the bolted cover, allowing for wiring and the addition of circuit breakers without completely unbolting and removing the cover.

The drawback to standard trim is the difficulty in bolting and unbolting the cover. Generally, this requires two people. Door-in-Door trim solves this issue as the cover is bolted to the box only one time. However, Door-in-Door trim traditionally is more costly. The new EZ Trim is a Door-in-Door panel trim that latches to the box without the use of bolts or loose connecting hardware. No tools are needed and one person can typically mount the trim.

The advantages of the new trim design include:

- Installs in seconds rather than minutes
- Virtually eliminates sharp edges
- No tools needed
- Door-in-Door standard

Does it seem hard to believe? 'Click Here' to see a 45 second video showing the side-by-side installation of an EZ Trim and a conventional panelboard trim.

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