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Spring 2014

GE Hitachi Nuclear PARTS e-Newsletter

In this issue of the GE Hitachi Nuclear PARTS e-Newsletter, you will find information about our [New Product Introductions \(NPI\)](#) process, a NUMAC obsolescence solution called the [Universal Front Panel](#), an update on our participation in the [RAPID online database](#), and debris filtering technology called [Feedwater Debris Strainer](#). Please provide us with feedback on this e-Newsletter by emailing nuclearparts@ge.com. For an archived copy of the most recent PARTS e-Newsletter, please click on this [link](#). For current news and events, follow GEH (@gehuclear) on Twitter: www.twitter.com/gehuclear.

Safety First: Tips for the Nuclear Workplace

Safety Tip:

Support a safety conscious work environment by adopting safety communication in your organization. Safety communication includes plant-level communication, job-related communication, worker-level communication, equipment labeling, operating experience, and documentation. Organizational leaders frequently use formal and informal communication to reinforce that nuclear safety is a priority and teach desired behaviors to encourage a safe work environment. The flow of information up the organization is seen as just as important as the flow of information down the organization.

New and Improved: Product and Services Success Stories

New Product Introductions: Innovative Technologies Solving Customer Needs

New Product Introductions (NPI) at GE Hitachi deliver innovative technologies through excellence in program management, integrated product development, and responsiveness to customer feedback. Through engagement of cross-functional teams, the NPI process ensures new products and services are developed with the necessary business and technical rigor to mitigate risks and generate high quality output. Communication with customers is an essential element of the NPI process, since customer requests are the basis for most NPI projects. In support of making it easier to do business with GEH, NPI is evolving to become more entrepreneurial and focusing on innovations that drive results and add value for our customers. Through a simplification program called FastWorks, GEH will engage customers early and often with better, faster results.

In support of FastWorks and NPI, GE Hitachi Nuclear Energy PARTS is hosting a webinar to receive feedback from customers about the upcoming launch of the EntelliGuard Trip Unit. The purpose of this webinar is to interface in real-time with our global customers and answer questions about this new product including technical specifications and requirements for receiving a quote from GEH. To participate in this upcoming webinar event highlighting the features and benefits the EntelliGuard Trip Unit, please contact Rick Sanderson at richard.sanderson@ge.com

Your GEH PARTS
Customer Account Leader is:



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[Click here to learn more about the EntelliGuard Trip Unit](#)

Enhanced Performance: Technical Solutions to Your Parts Issues

NUMAC Universal Front Panel: A Solution for Obsolete Displays

As electronic displays in nuclear plant control rooms become obsolete with age and advances in technology, the industry is often finding it difficult to identify suitable replacements. GE Hitachi Nuclear Energy (GEH) provides a solution to this problem—the NUMAC Universal Front Panel Display. The Universal Front Panel Display can replace both large and small electroluminescent displays and can be used in all NUMAC chassis applications with an existing display (with the exception of the Operator Display Module). It has been qualified for use in all safety-related applications and currently meets all existing requirements for NUMAC displays. Now, one standardized universal panel can be used to replace all three types of displays currently in use across 20 different instruments.

Features and benefits of the Universal Front Panel include:

- 8.4-inch LCD display with 800 x 600 pixel resolution divided into two regions:
 - Display area: 800 x 400 pixels
 - Header area: 800 x 200 pixels
- “Plug & Play” capability with automatic detection for type and scale
- Amber monochrome with color capability for future functionality
- Includes GEK addendums
- Quick and easy ordering
- Simple installation

To receive your quote for the Universal Front Panel for your GE electronic equipment, please contact Brad Detamore at bradley.detamore@ge.com or send your RFQ to nuclearparts@ge.com.



[Click here to find out more about the Universal Front Panel](#)

Best Practices: Tools You Can Use

RAPID Online Database: Over 3,500 GEH Parts Listed

GE Hitachi Nuclear PARTS is now participating in the RAPID Nuclear Parts Virtual Inventory System found here: <http://www.rapidpartsmart.com/>.

This online inventory system helps nuclear customers source out-of-stock components and parts for their plants. Now that GEH is participating, sourcing professionals are able to quickly search, view and request quotes for safety and non-safety parts sold by GEH. In addition, the “Advanced Search” feature available on RAPID helps buyers find equivalents or replacements for obsolete parts and supports searching by manufacturer, part number and part description or keyword.

Over 3,500 GEH parts are currently listed online in the RAPID database, including mechanical, electronic, electrical and motors parts. Each part listing contains the relevant product line contact information and all information is updated weekly.

The benefits of using RAPID to source GEH parts include:

- 24/7 customer self-service, as GEH part numbers, product line contacts, safety classifications, and quantities in stock are available online
- Peace of mind associated with purchasing OEM-supplied parts; subject matter expert support is included with all GEH parts listed on RAPID
- Quick quoting and delivery of in-stock items, if required to meet emergent needs

GEH is committed to delivering high-quality parts sourced through RAPID to our customers experiencing emergency part needs or contingency stocking needs. Participation in the RAPID Virtual Inventory System is part of our effort to make it easier to do business with GEH. For more information about GEH's participation in RAPID, please contact Brad Detamore at bradley.detamore@ge.com.



[Click here to search the RAPID Nuclear Parts Virtual Inventory](#)

Working Together: How Other GE Businesses Can Help

Feedwater Debris Strainer:

Captures and Retains Debris To Protect Fuel From Debris Related Failures

GEH's Feedwater Debris Strainer (FWDS) provides additional protection against debris related fuel failures. GEH's FWDS reduces the risk that debris related to maintenance activities, modifications, component wear and power uprates will enter the reactor vessel. Debris or foreign material that enters the reactor pressure vessel can cause fuel damage or control rod drive malfunction.

The innovative design of the GEH FWDS maximizes debris capture and retention with minimal pressure drop and impact on the feedwater system. The FWDS offers best-in-class debris separation capability through the following benefits:

- 100% catch rate of wires and particles above 0.016" diameter
- Captures debris of all lift/mass profiles
- Consistent debris capture at all flow rates
- Low pressure drop (Dp) minimizes impact to pump NPSH margin
- Remote debris sensing approximates strainer debris load in real time without visual inspection
- Uninterrupted multi-cycle operation
- Installation across all feedwater lines in a single outage
- Debris risk mitigation for major modifications and EPU's

FWDS services offered by GEH include the following:

- Project management
- Engineering
- Hardware assembly plus filter spare
- Installation

For more information about GEH's FWDS and associated services, please contact Paul Doverspike at paul.doverspike@ge.com

Upcoming GEH Events & Industry Conferences:

- Tenth Annual GE BWR Nuclear Instrumentation & Control Users Conference, Wilmington, NC, USA. June 2-6, 2014.
For additional information, please contact Dan Waltermire at: dan.waltermire@ge.com
- EPRI Circuit Breakers Users Group Meeting, Raleigh, NC, USA. June 9-12, 2014.
For additional information please visit: <http://www.cvent.com/events/2014-circuit-breakers-users-group-meeting/>
- Utilities Services Alliance Nuclear Generator & Supplier Executive Summit, Carlsbad, CA, USA. June 4-6, 2014. For additional information please visit <http://www.usainc.org/>
- RAPID Technical Conference and Vendor Exhibit, Clearwater Beach, FL, USA. June 22-25, 2014. For additional information, please visit <https://www.eiseverywhere.com/ehome/49591>
- Nuclear Utility Obsolescence Group Meeting, Jersey City, NJ, USA. July 21-23, 2014.
For additional information, please visit <http://www.nuog.org/Annual.aspx>



[Click here to see the Feedwater Debris Strainer factsheet](#)



GEH Resources:

- GEH Energy Technical Training
<http://www.geenergylearningcenter.com>
- Boiling Water Reactors Owners Group (BWROG):
http://site.ge-energy.com/prod_serv/products/nuclear/en/bwr_owners_group/index.htm
- GEH Press Releases / Newsroom:
http://www.ge-energy.com/about/press_releases.jsp
- GE Social Media Subscriptions -LinkedIn, Facebook, YouTube:
http://www.ge-energy.com/about/websites_and_social_media.jsp
- Follow GE Hitachi (@gehnuclear) on Twitter:
<http://www.twitter.com/gehnuclear>

Have questions / comments / suggestions?

Email nuclearparts@ge.com or call 1-800-425-8108 during EST business hours. We are interested in hearing your thoughts about this e-Newsletter. To provide feedback, please use the survey link found below:

<http://supportcentral.ge.com/esurvey/takesurvey.asp?p=17778&d=3748712>



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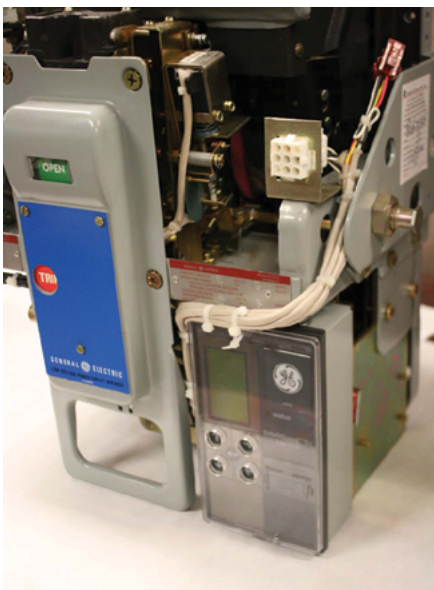
GEH Parts – Electrical EntelliGuard® TU Trip Unit

fact sheet

Product

The EntelliGuard® TU trip unit is the latest generation GE trip unit for low-voltage applications.

- The EntelliGuard® TU can be used as a replacement trip unit on AK and AKR series circuit breakers for AC applications
- The EntelliGuard® TU meets or exceeds all applicable UL, ANSI, NEMA, and IEC standards



GE has channeled its decades of trip system experience into the development of the EntelliGuard TU.

This Trip Unit incorporates advanced algorithms that enable arc flash protection and selectivity (Non-safety only) at the same time. Upgrade and conversion kits are ANSI C37.59 design verification tested to ensure safe, reliable operation



Ease of Installation

- Trip unit only replacement for MVT+ or RMS-9 Trip Units. No rewiring required when upgrading/changing out trip units
- Conversion kit replacement on breakers with EC trip units and previous generation trip units
- Installed on new AK-11A-25 circuit breakers to fit AKD-5 switchgear
- Installation of the conversion kit available by GEH as part of breaker refurbishment

Features

The EntelliGuard® TU delivers a flexible, repeatable solution to protect your plant for years to come.

- System reliability and protection – more flexible curve shaping to meet your every need while maximizing protection with faster time bands
- Simplified diagnostics – instantly monitor current and identify exact fault conditions
- Eliminates obsolescence concerns – this latest generation device is the centerpiece of the GE Low Voltage solution

Availability

Anticipated to be available for non-safety and safety-related application by 2nd Quarter 2014 with qualification documentation to support 50.59

For additional information pertaining to this service or any other Electronics need, please contact:

1-800-425-8108

nuclearparts@ge.com

visit us at www.ge-energy.com/nuclear



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NUMAC Universal Front Panel Display

A New Solution for Obsolete Displays

As nuclear plant control room electronic displays become obsolete with age and advances in technology, the nuclear industry is often finding it difficult to find suitable replacements. GE Hitachi Nuclear Energy (GEH) provides a solution to this problem—the NUMAC Universal Front Panel Display.

The NUMAC Standard

Using the latest LCD technology, the NUMAC Universal Display can be used to replace both large and small electroluminescent displays.

The universal front panel can be used in all NUMAC chassis applications where an existing display is used (with the exception of the Operator Display Module). It has been qualified for use in all safety-related applications, and currently meets all existing requirements for NUMAC displays. Now, one standardized universal panel can be used to replace all three types of displays currently in use, encompassing 20 different instruments.

Adapts with the Future

The new front panel has been carefully designed with flexibility in mind so that it can be updated in the future to incorporate the latest advances in display technology. The flexible architecture also allows new functionalities to be easily added, which will help keep your NUMAC display usable for years to come.



Key Features

- 8.4-inch LCD display with 800 x 600 pixel resolution divided into two regions:
 - Display area: 800 x 400 pixels
 - Header area: 800 x 200 pixels
- “Plug & Play” capability with automatic detection for type and scale
- Amber monochrome with color capability for future functionality
- Includes GEK addendums

Easy Installation

- Standardized product with quick and easy ordering, provisioning, and installation
- Replacement product with equivalency documentation in scope of delivery

To receive additional information pertaining to this part or any other electronics need, contact:

Request Quote:

1-800-425-8108

nuclearparts@ge.com

or send request to fax # 1-866-323-8692



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Feedwater Debris Strainer (FWDS)

fact sheet

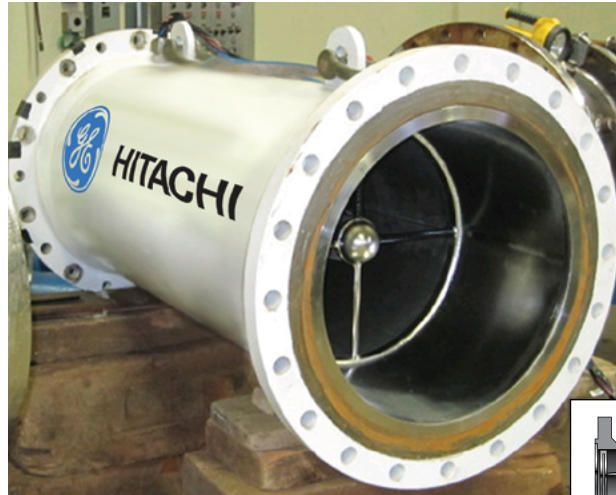
Captures and retains debris to prevent debris related failures

The “in-line” feedwater debris strainer (FWDS) is designed to provide additional protection of unwanted debris in primary systems (BWRs) and secondary systems (PWRs) by capturing and retaining debris. As plants continue to upgrade systems and equipment, GEH’s innovative design reduces the risk that debris related to maintenance activities enters systems through feedwater lines. The effectiveness of the GEH FWDS is it’s innovative design, developed through an extensive design and testing process, which maximizes debris capture capability while maintaining flow and pressure drop performance.

Application of the FWDS is in-line with current feedwater flow lines as an integrated system made up of a housing, custom flange, strainer assembly and pressure drop sensing instrumentation and is designed for both BWR and PWR reactor designs.

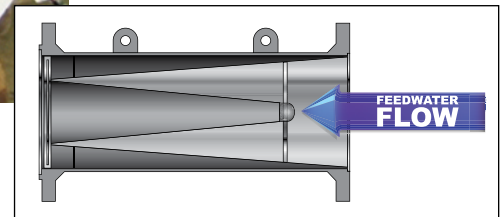
GE Hitachi Nuclear Energy (GEH) is the industry leader in Boiling Water Reactor (BWR) technology with over 50 years of experience in the nuclear industry.

GEH offers a wide range of products and services that ensure safe operation and maintenance of the plant, while bringing greater efficiency and output.



Services Include:

- Project Management
- Engineering
- Hardware Assembly plus Filter Spare
- Installation



Product Benefits

Best in class debris separation capability

- Additional fuel protection from large and small debris distributed by feedwater (BWRs)
- Protection of Steam Generator U tubes from large and small debris (PWRs)
- 100% catch rate of wires and particles above 0.016” diameter
- Captures debris of all lift/mass profiles
- Consistent debris capture at all flow rates
- Low pressure drop (Δp) minimizes impact to pump NPSH margin
- Low maintenance...
 - Remote debris sensing approximates strainer debris load in real time without visual inspection
 - Uninterrupted multi-cycle operation
- Installation across all feedwater lines in a single outage
- Debris risk mitigation for major modifications (EPU, etc.)



For more information, contact your GE Hitachi Nuclear Energy sales representative or visit us at www.ge-energy.com/nuclear



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