IMPORTANT SAFETY INSTRUCTIONS SAVE THESE INSTRUCTIONS

This manual contains important instructions that should be followed during installation and maintenance of the Battery Communications Module. Read all instructions before operating the equipment and save this manual for future reference.

CONSIGNES DE SÉCURITÉ IMPORTANTES — CONSERVER CES INSTRUCTIONS

Ce manuel comporte des instructions importantes que vous êtes invité à suivre lors de toute procédure d’installation et de maintenance de le module. Veuillez consulter entièrement ces instructions avant de faire fonctionner l’équipement et conserver ce manuel afin de pouvoir vous y reporter ultérieurement.
Chapter 1  Introduction

The Eaton® Battery Communications Module connects with an external battery system to gather information about the battery status and performance. The module stores battery information and is also capable of transmitting data to a cloud based data storage system.

1.1  Battery Communications Module Overview

The Battery Communications Module (see Figure 1) has the following standard features that provide cost-effective and consistently reliable power and energy services:

- Regularly reads and stores data from the battery system
- Built-in web page to view data locally or through Ethernet connection
- Modbus data to support external systems
- Stores data in the cloud if the appropriate services are included

Figure 1. Eaton Battery Communications Module

1.2  Installation Features

The communications module has provisions to be mounted horizontally or vertically.

AC power wiring can be routed through the hole provided on the side of the unit (see Section 2.3.1 System Wiring Preparation).

Communication connections can be directly plugged into the unit.

Auxiliary power, +24 Vdc, is provided to power any external accessories (such as a wireless modem) required.
1.3 Conventions Used in This Manual

This manual uses these type conventions:

- **Bold type** highlights important concepts in discussions, key terms in procedures, and menu options, or represents a command or option that you type or enter at a prompt.
- **Italic type** highlights notes and new terms where they are defined.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Note icon]</td>
<td>Information notes call attention to important features or instructions.</td>
</tr>
<tr>
<td>![Keys icon]</td>
<td>Brackets are used when referring to a specific key, such as [Enter] or [Ctrl].</td>
</tr>
</tbody>
</table>

1.4 Symbols

The following are examples of symbols used on the equipment to alert you to important information:

**RISK OF ELECTRIC SHOCK** - Observe the warning associated with the risk of electric shock symbol.

![Electric Shock symbol]

**CAUTION: REFER TO OPERATOR'S MANUAL** - Refer to your operator’s manual for additional information, such as important operating and maintenance instructions.

![Warning icon]

This symbol indicates that you should not discard waste electrical or electronic equipment (WEEE) in the trash. For proper disposal, contact your local recycling/reuse or hazardous waste center.

1.5 Safety Warnings

**IMPORTANT**

This manual contains important instructions that should be followed during installation and maintenance of the communications module. Read all instructions before operating the equipment and save this manual for future reference.

**IMPORTANT**

Ce manuel comporte des instructions importantes que vous êtes invité à suivre lors de toute procédure d’installation et de maintenance de le module. Veuillez consulter entièrement ces instructions avant de faire fonctionner l’équipement et conserver ce manuel afin de pouvoir vous y reporter ultérieurement.

**DANGER**

The module contains LETHAL VOLTAGES. All repairs and service should be performed by AUTHORIZED SERVICE PERSONNEL ONLY. There are NO USER SERVICEABLE PARTS inside the module.
Introduction

1.6 For More Information

Visit www.eaton.com/powerquality or contact an Eaton service representative or information on how to obtain copies of this manual.

1.7 Getting Help

If help is needed with any of the following:

• Scheduling initial startup
• Regional locations and telephone numbers
• A question about any of the information in this manual
• A question this manual does not answer

Please call the Customer Reliability Center at:

United States: 1-800-843-9433  
Canada: 1-800-461-9166 ext 260  
All other countries: Call your local service representative

Please use the following e-mail address for manual comments, suggestions, or to report an error in this manual: E-ESSDocumentation@eaton.com
Introduction
Chapter 2 Installation

This chapter explains:

- Installation options
- Communications module location
- Dimensions
- Wall or horizontal mount installation
- Input current and wire ratings
- Signal wire routing

**WARNING**

Risk of electrical shock. Only qualified service personnel (such as a licensed electrician) should perform the electrical installation.

**CAUTION**

To prevent electrical shock or damage to the equipment, verify that the circuit breaker or disconnect switch is off at the AC input service panel and locked out/tagged out in accordance with local implementation of National Fire Protection Association (NFPA) 70E, *Standard for Electrical Safety in the Workplace*, requirements.

2.1 Installation Options

The communications module should be mounted on a flat horizontal or vertical surface using the brackets provided. The brackets accommodate either vertical or horizontal mounting orientation. The communications module should be secured to the mounting surface by fasteners appropriately sized for the weight of the device and the mounting surface.

2.2 Communications Module Location

Determine the appropriate location to install the communications module depending on the following factors:

- Environmental conditions (see Section 2.2.1 Environmental Considerations)
- Dimensions and weight (see Section 2.2.2 Dimensions and Weight)
- Wiring access to UPS, network connections, and AC power supply (see Section 2.3.1 System Wiring Preparation)
- Communications module flat horizontal or vertical surface-mount location

2.2.1 Environmental Considerations

For the system to operate properly, the installation site should meet the environmental parameters outlined in this manual and in the manual for the associated UPS and battery systems.

Make sure that the environment meets the following operating restrictions for the Battery Communications Module:

The environmental requirements specified below are the maximum, not to exceed, ratings.

- There shall be at least a 1.8°F (1.0°C) difference between the dry bulb temperature and the wet bulb temperature, at all times, to maintain a non-condensing environment
- The maximum rate of temperature change shall be limited to 3°F over 5 minutes (36°F/hour), based on the ASHRAE Standard 90.1-2013
Observe caution regarding the operating environmental conditions. The newer, more energy efficient data center cooling methods (such as air side economization) can create much wider ranges of temperature and Relative Humidity (RH) in the UPS room and/or data center.

Do not expose the UPS to overly aggressive environments, like salt mist or corrosive gases. High relative humidity accelerates the effects of contaminants. The UPS should be installed in a G1 environment (based on ANSI/ISA S-71.04 classifications). If the UPS is used in a more aggressive environment, it can cause reduced product life and possibly early failure. If the installation location does not meet the recommended environment, contact Eaton service representative for further information.

There are two aspects of this increased operating environment that can, if ignored, create issues:

- One aspect is the creation of microclimates, which are persistent variations of temperature and/or RH within a single room; for example, one side of the room is always cooler than the other side, no matter what the actual temperature is.
- The other aspect is the rate of change of temperature and/or RH, which can occur during transitions within the cooling system. Examples: changing the mixture ratio of inside versus outside air, or external changes in the outside air when going from nighttime into day, and back to night.

### 2.2.2 Dimensions and Weight

#### Table 1. Equipment Weight

<table>
<thead>
<tr>
<th>Model</th>
<th>Shipping Weight kg (lb)</th>
<th>Installed Weight kg (lb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery Communications Module</td>
<td>5.5 (12.0)</td>
<td>5.0 (11.1)</td>
</tr>
</tbody>
</table>

#### Figure 2. Battery Communications Module Dimensions
2.3 Installation

The Battery Communications Module can be installed on a horizontal or vertical (wall-mount) surface.

Figure 3. Mounting Options

![Mounting Options Diagram]

**NOTE** Make sure you use both bolt attachment points to install the controller. Anchors or other mounting hardware must also be rated at 25 pounds each or more in the mounting surface material used. May require a washer (customer-provided) under the mounting hardware head depending on the size hardware used. Washer is recommended for 3/16", #8, M5, or smaller hardware.

1. Mark the location of the bracket holes and install appropriate anchors if required (see Figure 2 and Figure 3).
2. Place the controller in position and attach with bolts to the mounting surface (see Figure 4).

Figure 4. Wall or Horizontal Mount Installation

![Wall or Horizontal Mount Installation Diagram]

Use two mounting screws. Screws should be sized for surface material and fastener rating (see note above).
2.3.1 System Wiring Preparation

Read and understand the following notes while planning and performing the installation:

- Refer to national and local electrical codes for acceptable external wiring practices
- Material and labor for external wiring requirements are to be provided by designated personnel
- The communications module is designed for operation on a grounded source of supply
- Follow all applicable NEC and local codes
- Wire sizes listed are for copper wiring only

Table 2. Wiring

<table>
<thead>
<tr>
<th>Connection Points</th>
<th>Communications Module</th>
<th>External Device</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC Power</td>
<td>Fuse inputs</td>
<td>AC source</td>
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<tr>
<td></td>
<td></td>
<td>Use minimum 14 AWG wire protected with a 15A circuit breaker + ground</td>
</tr>
<tr>
<td>Customer Network</td>
<td>Ethernet switch port</td>
<td>Customer system</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ethernet cable, Cat 5e or better</td>
</tr>
<tr>
<td>Battery BMS</td>
<td>Battery port</td>
<td>Battery BMS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ethernet cable, Cat 5e or better</td>
</tr>
</tbody>
</table>

AC input rating: 380-480 Vac, 50/60 Hz, 0.3 A

Figure 5. Battery Communications Module Components

- AC Wiring Input 22.5-mm (7/8") Diameter for 1/2" Trade Size Conduit with Conduit Clamp
- AC Input Voltage 100 - 240 Vac, 380 - 480 Vac
- Ground Terminal Block
- Fuses
- Chassis Ground
- AC to 24 Vdc Power Supply
- Gateway Communicator
- Network Switch
2.4 Battery Communications Module Wiring

Install and connect the Battery Communications Module wiring and cables (see Table 2, Figure 5, and Figure 6).

NOTE

Attach AC power wiring through the hole provided using appropriate methods and strain relief as required by local codes.

1. Connect AC input voltage cables to the module.
2. Install Ethernet cabling between the system and the external components:
   - Battery Management System (BMS) – Required
   - External monitoring system – Optional

Figure 6. Battery Communications Module Connections

2.5 Software and Firmware Installation

Configuration, upgrades, and any required software or firmware installation will be performed by qualified Eaton Service personnel during startup and commissioning.
2.6 Block Diagram

Figure 7. Block Diagram
Chapter 3  Warranty

3.1 Limited Factory Warranty

Eaton Battery Communications Module

WARRANTOR: The warrantor for the limited warranties set forth herein is Eaton Corporation Inc., an Ohio Corporation ("Eaton").

LIMITED WARRANTY: This limited warranty (this “Warranty”) applies only to the original end-user (the “End-User”) of the Eaton Battery Communications Module (the “Product”) and cannot be transferred. This Warranty applies even in the event that the Product is initially sold by Eaton for resale to an End-User. This warranty is not valid unless a separately purchased Startup service is purchased.

LIMITED WARRANTY PERIOD: The period covered by this Warranty for Product installed [and currently located] in the fifty (50) United States and the District of Columbia is twelve (12) months from the date of Product startup or eighteen (18) months from the date of Product shipment, whichever occurs first, for parts coverage and 90 days from the date of Product startup for labor coverage. The period covered by this Warranty for Product installed [and currently located] outside of the fifty (50) United States and the District of Columbia is twelve (12) months from the date of Product startup or eighteen (18) months from the date of Product shipment, whichever occurs first, for parts coverage.

WHAT THIS LIMITED WARRANTY COVERS: The warrantor warrants that the Eaton Battery Communications Module electronics and Eaton-provided accessories (individually and collectively, the “Warranted Items”) are free from defects in material and workmanship. If, in the opinion of Eaton, a Warranted Item is defective and the defect is within the terms of this Warranty, Eaton’s sole obligation will be to repair or replace such defective item (including by providing service, parts, and labor, as applicable), at the option of Eaton. The Warranted Item will be repaired or replaced onsite at the End-User’s location or such other location as determined by Eaton. Any parts that are replaced may be new or reconditioned. All parts replaced by Eaton shall become the property of Eaton.

WHAT THIS LIMITED WARRANTY DOES NOT COVER: This Warranty does not cover any defects or damages caused by: (a) failure to properly store the Product before installation; (b) shipping and delivery of the Product if shipping is FOB Factory; (c) neglect, accident, fire, flood, lightning, vandalism, acts of God, Customer’s neglect, abuse, misuse, misapplication, incorrect installation; (d) repair or alteration not authorized in writing by Eaton personnel or performed by an authorized Eaton Customer Service Engineer or Agent; or (e) improper testing, operation, maintenance, adjustment, or any modification of any kind not authorized in writing by Eaton personnel or performed by an authorized Eaton Customer Service Engineer or Agent. This Warranty is not valid: (a) unless an authorized Eaton Customer Service Engineer (in the USA) or Agent (outside of the USA) performs startup and commissioning of the Product; (b) if the Product is moved to a new location by someone other than an authorized Eaton Customer Service Engineer (in the USA) or Agent (outside of the USA); or (c) if the Product’s serial numbers have been removed or are illegible. Any Warranted Items repaired or replaced pursuant to this Warranty will be warranted for the remaining portion of the original Warranty subject to all the terms thereof. Labor warranty is not provided for Product located outside of the fifty (50) United States or the District of Columbia. Any equipment, parts, or materials included in the Product and not manufactured by Eaton are warranted solely by the manufacturer of such equipment, parts, or materials and are not included as part of this Warranty.

THIS WARRANTY IS THE END-USER’S SOLE RESPONSIBILITY AND IS EXPRESSLY IN LIEU OF, AND THERE ARE NO OTHER EXPRESSED OR IMPLIED GUARANTEES OR WARRANTIES (INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PURPOSE, WHICH ARE EXPRESSLY DISCLAIMED).

LIMITATION OF LIABILITY: In no event shall Eaton be liable for any indirect, incidental, special, or consequential damages of any kind or type whatsoever, or based on any claim or cause of action, however denominated. Eaton shall not be responsible for failure to provide service or parts due to causes beyond Eaton’s reasonable control. In no case will Eaton’s liability under this Warranty exceed the replacement value of the Warranted Items.
**END-USER’S OBLIGATIONS:** In order to receive the benefits of this Warranty, the End-User must use the Product in a normal way, follow the Product’s user’s guide, and protect against further damage to the Product if there is a covered defect.

**OTHER LIMITATIONS:** Eaton’s obligations under this Warranty are expressly conditioned upon receipt by Eaton of all payments due to it (including interest charges, if any). During such time as Eaton has not received payment of any amount due to it for the Product, in accordance with the contract terms under which the Product is sold, Eaton shall have no obligation under this Warranty. Also during such time, the period of this Warranty shall continue to run and the expiration of this Warranty shall not be extended upon payment of any overdue or unpaid amounts.

**COSTS NOT RELATED TO WARRANTY:** The End-User shall be invoiced for, and shall pay for, all services not expressly provided for by the terms of this Warranty, including without limitation site calls involving an inspection that determines no corrective maintenance is required. Any costs for replacement equipment, installation, materials, freight charges, travel expenses, or labor of Eaton representatives outside the terms of this Warranty will be borne by the End-User.

**OBTAINING WARRANTY SERVICE:** In the USA, call the Eaton Customer Reliability Center 7x24 at 800-843-9433. Outside of the USA, call your local Eaton sales or service representative, or call the Eaton Customer Reliability Center in the USA at 919-870-3028. For comments or questions about this Limited Factory Warranty, write to the Customer Quality Representative, 3301 Spring Forest Road, Raleigh, North Carolina 27616 USA.

### 3.2 Eaton End-User License Agreement

**IMPORTANT, READ CAREFULLY. THIS END USER LICENSE AGREEMENT (THE “AGREEMENT”) IS A BINDING CONTRACT BETWEEN YOU, THE END-USER (THE “LICENSEE”) AND EATON INTELLIGENT POWER LIMITED, IRELAND, OR ONE OF ITS AFFILIATES (“EATON” OR “LICENSOR”). BY OPERATING THIS UNINTERRUPTIBLE POWER SUPPLY (UPS) PRODUCT INCLUDING SOFTWARE EMBEDDED IN IT (FIRMWARE), YOU, THE LICENSEE, ARE AGREEING TO BE BOUND BY THE TERMS, CONDITIONS, AND LIMITATIONS OF THIS AGREEMENT. READ THE TERMS AND CONDITIONS OF THIS AGREEMENT CAREFULLY BEFORE, INSTALLING OR OPERATING THE PRODUCT. IF YOU DO NOT AGREE TO THE TERMS OF THIS AGREEMENT, PROMPTLY RETURN THE UNUSED PRODUCT TO EATON.**

**1.0 DEFINITIONS**

1.1 **Documentation.** “Documentation” means the user guides and manuals for the installation and use of the UPS, whether made available over the internet, provided in CD-ROM, DVD, hard copy or other form.

1.2 **Firmware.** “Firmware” means software programs that are embedded in the product for which Licensee is granted a license hereunder, the Documentation therefore and, to the extent available, Updates thereto. The Firmware is licensed hereunder in object code (machine readable) form only except that certain software programs may include limited portions in source code (human-readable) form.

1.3 **Update.** “Update” means a subsequent release of the Firmware, if and when developed by Eaton. An Update does not include any release, new version, option, or future product, which Eaton licenses separately.

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3.1 Termination. This Agreement and the license granted hereunder automatically terminates if Licensee breaches any provision of this Agreement. Eaton may terminate this license at any time with or without cause.

3.2 Effect of Termination. Immediately upon termination of this Agreement or the license granted hereunder, Licensee will cease using the product. The parties’ rights and obligations under the following sections of this Agreement will survive termination of this Agreement: Article 1.0, Section 2.1, Section 2.3, Section 2.4, Article 3.0, Article 4.0 and Article 5.0.

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4.1 Infringement. If Licensee learns of a threat, demand, allegation, or indication that the UPS with its firmware infringes or misappropriates any third party intellectual property rights (including but not limited to any patent, copyright, trademark, trade dress, or trade secret) (“Intellectual Property Claim”), Licensee will notify Eaton promptly of such claim. Eaton may, in its sole discretion, elect to assume sole control of the defense and settlement of said Intellectual Property Claim and Licensee will provide reasonable information and assistance to Eaton for the defense of such claim.

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LICENSE NOTICES:
Eaton Intelligent Power Limited
Eaton House,
30 Pembroke Road,
Dublin 4,
D04 Y0C2,
Ireland

5.4 Severability. If any provision of this Agreement is held to be invalid or unenforceable, the remaining provisions of this Agreement will remain in full force.

5.5 Waiver. The waiver by either party of any default or breach of this Agreement will not constitute a waiver of any other or subsequent default or breach. Failure to enforce or delay in enforcing any provision of this Agreement will not constitute a waiver of any rights under any provisions of this Agreement.

5.6 Entire Agreement. This Agreement constitutes the complete agreement between the parties and supersedes all prior or contemporaneous agreements or representations, written or oral, concerning the subject matter of this Agreement. This Agreement may not be modified or amended except in a writing specifically referencing this Agreement and signed by a duly authorized representative of each party. No other act, document, usage or custom will be deemed to amend or modify this Agreement. The Firmware, or portions thereof, may also be subject to additional paper or electronic license agreements. In such cases, the terms of this Agreement will be supplemental to those in the additional agreements, to the extent not inconsistent with the additional agreements. If a copy of this Agreement in a language other than English is included with the Firmware or Documentation, it is included for convenience and the English language version of this Agreement will control.

5.7 Heirs, Successors, and Assigns. Each and all of the covenants, terms, provisions and agreements herein contained will be binding upon and inure to the benefit of the parties hereto and, to the extent expressly permitted by this Agreement, their respective heirs, legal representatives, successors and assigns.

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5.13 Confidentiality. Licensee acknowledges that confidential aspects of the Firmware (including any proprietary source code) are a trade secret of Eaton, the disclosure of which would cause substantial harm to Eaton that could not be remedied by the payment of damages alone and such confidential aspects of the Firmware shall not be disclosed to third parties without the prior written consent of Eaton. Accordingly, Eaton will be entitled to preliminary and permanent injunctive and other equitable relief for any breach of this Section 5.13.

5.14 Note on JAVA Support. The Firmware may contain support for programs written in JAVA. JAVA technology is not fault tolerant and is not designed, manufactured, or intended for use or resale as online control equipment in hazardous environments requiring fail-safe performance, such as in the operation of nuclear facilities, aircraft navigation or communications systems, air traffic control, direct life support machines, or weapons systems, in which the failure of JAVA technology could lead directly to death, personal injury, or severe physical or environmental damage. EATON DISCLAIMS ALL DAMAGES INCLUDING DIRECT, INDIRECT AND CONSEQUENTIAL DAMAGES RELATING TO THE FAILURE OF ANY SOFTWARE INCLUDING JAVA PROGRAMS AND/OR JAVA TECHNOLOGY.

5.15 Governing Law. This Agreement will be interpreted and enforced in accordance with the laws of Ireland, without regard to choice of law principles. Any claim or suit with respect to this Agreement shall be brought in the Courts of Ireland, unless mandatory law imposes otherwise.
3.3 Eaton Cybersecurity Recommendations

The Eaton Battery Communications Module has been designed with cybersecurity as an important consideration. A number of features are offered in the product to address cybersecurity risks. These Cybersecurity Recommendations provide information to help users to deploy and maintain the product in a manner that minimizes the cybersecurity risks. These Cybersecurity Recommendations are not intended to provide a comprehensive guide to cybersecurity, but rather to complement customers’ existing cybersecurity programs.

Eaton is committed to minimizing the cybersecurity risk in its products and deploying cybersecurity best practices in its products and solutions, making them more secure, reliable and competitive for customers.

<table>
<thead>
<tr>
<th>Table 3. Cybersecurity Recommendations</th>
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<td><strong>Time Synchronization</strong></td>
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| **Network Security**    | The Battery Communications Module supports network communication with other devices in the environment. This capability can present risks if it’s not configured securely. Following are Eaton recommended best practices to help secure the network. Additional information about various network protection strategies is available in Eaton Cybersecurity Considerations for Electrical Distribution Systems [R1]. Eaton recommends segmentation of networks into logical enclaves, denying traffic between segments except that which is specifically allowed, and restricting communication to host-to-host paths (for example, using router ACLs and firewall rules). This helps to protect sensitive information and critical services and creates additional barriers in the event of a network perimeter breach. At a minimum, a
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<td><strong>utility</strong></td>
<td>Industrial Control Systems network should be segmented into a three-tiered architecture (as recommended by NIST SP 800-82[R3]) for better security control.</td>
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<td><strong>Communication Protection</strong></td>
<td>The Battery Communications Module provides the option to encrypt its network communications. Please ensure that encryption options are enabled. You can secure the product’s communication capabilities by taking the following steps: Eaton recommends using your own certificate. Eaton recommends opening only those ports that are required for operations and protect the network communication using network protection systems like firewalls and intrusion detection systems / intrusion prevention systems. Use the information below to configure your firewall rules to allow access needed for the Battery Communications Module to operate smoothly. Eaton recommends using “whitelisting” when allowing access to the Battery Communications Module.</td>
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<td><strong>Remote Access</strong></td>
<td>Remote access to devices/systems creates another entry point into the network. Strict management and validation of termination of such access is vital for maintaining control over overall ICS security.</td>
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| **Logging and Event Management** | • Eaton recommends logging all relevant system and application events, including all administrative and maintenance activities.  
• Logs should be protected from tampering and other risks to their integrity (for example, by restricting permissions to access and modify logs, transmitting logs to a security information and event management system, etc.).  
• Ensure that logs are retained for a reasonable and appropriate length of time.  
• Review the logs regularly. The frequency of review should be reasonable, taking into account the sensitivity and criticality of the system | device and any data it processes.                                                                 |
| **Secure Maintenance**        | **Best Practices**  
Update device firmware prior to putting the device into production. Thereafter, apply firmware updates and software patches regularly. Eaton publishes patches and updates for its products to protect them against vulnerabilities that are discovered. Eaton encourages customers to maintain a consistent process to promptly monitor for and install new firmware updates. Please check Eaton’s cybersecurity website for information bulletins about available firmware and software updates. See Vulnerability Management below. |
| **Business Continuity / Cybersecurity Disaster Recovery** | Software can be re-installed from released software packages in the event of corrupted software.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| **Sensitive Information Disclosure** | Eaton recommends that sensitive information (i.e. connectivity, log data, personal information) that may be stored by the Battery Communications Module be adequately protected through the deployment of organizational security practices. Device does not store sensitive information. |

Warranty
Table 3. Cybersecurity Recommendations (Continued)

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<td>Decommissioning or</td>
<td>It is best practice to purge data before disposing of any device containing data. Guidelines for decommissioning are provided in NIST SP 800-88. Eaton recommends that products containing embedded flash memory be securely destroyed to ensure data is unrecoverable.</td>
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<tr>
<td>Zeroisation</td>
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<td>• Embedded Flash Memory on Boards and Devices</td>
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<td>Eaton recommends the following methods for disposing of motherboards, peripheral cards such as network adapters, or any other adapter containing non-volatile flash memory.</td>
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<td>– Destroy: Shred, disintegrate, pulverize, or Incinerate by burning the device in a licensed incinerator</td>
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<td>Vulnerability Management</td>
<td>In general, Eaton recommends monitoring vendor sites, the ICS CERT, and NIST National Vulnerability Database (NVD) for known vulnerabilities in products and mitigating or remediating the vulnerabilities as recommended though patches, updates, or compensating controls. Eaton publishes cybersecurity notifications and known vulnerabilities for its products on <a href="http://www.eaton.com/cybersecurity">www.eaton.com/cybersecurity</a>. Users are also able to report cybersecurity issues and receive automated cybersecurity notifications on this site. Eaton recommends registering for these notifications. The product is composed of components that can be configured to meet a range of connectivity, functionality, and security needs. For cybersecurity notifications, general software updates, and vulnerability management policies the user should reference then individual vendor sites. Eaton:</td>
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<td><a href="http://www.eaton.com/cybersecurity">www.eaton.com/cybersecurity</a></td>
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<td><a href="http://www.cybectec.com/customers/">www.cybectec.com/customers/</a></td>
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<td>Users are encouraged to keep a track of the security patches released by the COTS vendors and apply them to their environment as appropriate. Note: Many compliance frameworks and security best practices require a monthly vulnerability review. For many non-COTS products vulnerabilities will be communicated directly through the vendor site.</td>
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References:


