Eaton UL924 Addendum (8-15kVA, 10-15kVA and 20-30kVA UPS)

In addition to the standard user’s guides supplied with the Eaton 9155 and 9355 Series UPS please review this addendum; which contains a listing of specific changes made to meet all UL924 Emergency Lighting System requirements.

IMPORTANT SAFETY INSTRUCTIONS — SAVE THESE INSTRUCTIONS

These systems are designed and tested as a set and require both the inverter (UPS) and added battery cabinet(s) as listed to supply a minimum 90 minutes of on-battery runtime in the event of a power outage for EMERGENCY EGRESS LIGHTING. These systems are designed for dedicated egress lighting only.

These systems have been specifically modified to require mechanical means to shut off or turn to bypass mode (or otherwise disable) as required by Life Safety Codes within the UL924 standard. All modifications done to achieve UL924 listings do not interfere with standard accessories typically available for use with these 8-30kVA Eaton products. Examples include Seismic Kits and Options Cabinets.*

* This is true for some 8-30kVA 480V Models. The UL approved 20-30kVA system is used accompanied with an Options Cabinet (part number BHKBT004200 for 20-30kVA 480/277V requirements). Standalone transformers S27N11S15N and S24N27S15 used for 277VAC single phase requirements.

IMPORTANT

When using electrical equipment, basic safety precautions should always be practiced including the following:

- Do not let power supply cords touch hot surfaces.
- Do not mount near gas or electric heaters.
- Use caution when servicing batteries. If acid is spilled or spread on the skin or eyes, flush with fresh water and contact a physician immediately.
- Do not use this equipment for other than its intended purpose.

For More Information

Refer to the Eaton 9155 UPS 8-15kVA User’s Guide, Eaton 9355 UPS 10-15kVA User’s Guide or the Eaton 9355 UPS 20-30kVA User’s Guide for the following additional information:

- Installation instructions, including site preparation, planning for installation, wiring and safety information, and detailed illustrations of cabinets with dimensional and connection point drawings

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

EATON

Powering Business Worldwide
UL924 Mechanical Configuration

UL924 Specifications for 15kVA UPS and Below
Summary of mechanical changes for inverter and matching Battery Cabinet(s)

- Battery Harness Retention Brackets are also added on all 15KVA and below systems to DC Battery connectors which are supplied and are required to be re-installed before system activation is complete.
- Breaker Covers are applied over any exposed circuit breakers requiring a small tool to disconnect (open) but can be switched on by a finger.

Figure 1. Battery Harness Retention Bracket and Breaker Cover

- Bolts added to secure front panel (or Bezel) which otherwise exposes a means of disconnect.

Figure 2. Front Panel Retention Bolt

- Restricted Access Button Plate may be installed over front panel display buttons which require a pen tip or other small tool to activate.
**Figure 3. Restricted Access Button Plate**

**UL924 Specifications for 20kVA UPS and Above**

Summary of mechanical changes for inverter and matching Battery Cabinet(s)

Modifications include:

- Restricted Access Button Plate may be over front panel display buttons, or recessed buttons, either of which require a pen tip or other small tool to activate.
- Front panel is secured with locking latches which require a tool to access.

**Figure 4. Restricted Access Button Plate**
## UL924 Configuration Specifications

**Table 1. Single Phase 277VAC 15kVA UPS Chassis Models UL Listed UL924 Configurations**

<table>
<thead>
<tr>
<th>kVA Rating</th>
<th>Output Rating</th>
<th>Controller Module</th>
<th>External Battery Module and Quantity</th>
<th>Transformers and Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.8kVA 1PH</td>
<td>6.8kW*</td>
<td>BH10KEL2081P100</td>
<td>BHEBM96EL600 (Qty 2)</td>
<td>S27N11S15N (Qty 1) S24N27S15 (Qty 1)</td>
</tr>
<tr>
<td>9kVA 1PH</td>
<td>9kW*</td>
<td>BH15KEL2081P10T</td>
<td>BHEBM96EL600 (Qty 3)</td>
<td>S27N11S15N (Qty 1) S24N27S15 (Qty 1)</td>
</tr>
</tbody>
</table>

*The UL approved 277 VAC 10–15kVA system is used accompanied with standalone transformers 9kW Max Output Rated added to the line up to meet 277V requirement. NOTE these transformers can be used for any single phase 277VAC application up to 9kW max output.

**NOTE** The preferred interconnection scheme for 277VAC systems is to supply the output transformer in a line-to-line fashion without UPS output neutral to substantially reduce leakage currents.

**NOTE** Circuit breaker recommendations service side (lower input transformer) full load current at 45A and breaker at 60A.

**NOTE** Circuit breaker recommendations load side (output transformer) full load current at 40A and breaker at 55A.

**Table 2. Single Phase 208/240VAC 15kVA UPS Chassis Models UL Listed UL924 Configurations**

<table>
<thead>
<tr>
<th>kVA Rating</th>
<th>Output Rating</th>
<th>Controller Module</th>
<th>External Battery Module and Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.7kVA 1PH</td>
<td>5.7kW</td>
<td>BH8KEL2081P100</td>
<td>BHEBM96EL600 (Qty 1)</td>
</tr>
<tr>
<td>6.8kVA 1PH</td>
<td>6.8kW</td>
<td>BH10KEL2081P100</td>
<td>BHEBM96EL600 (Qty 2)</td>
</tr>
<tr>
<td>10.7kVA 1PH</td>
<td>10.7kW</td>
<td>BH15KEL2081P100</td>
<td>BHEBM96EL600 (Qty 3)</td>
</tr>
</tbody>
</table>

**Table 3. Three Phase 208VAC 15kVA UPS Chassis Models UL Listed UL924 Configurations**

<table>
<thead>
<tr>
<th>kVA Rating</th>
<th>Output Rating</th>
<th>Controller Module</th>
<th>External Battery Module and Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.5kVA 3PH</td>
<td>8.5kW</td>
<td>BH10KEL2083P100</td>
<td>BHEBM96EL600 (Qty 2)</td>
</tr>
<tr>
<td>13.1kVA 3PH</td>
<td>13.1kW</td>
<td>BH15KEL2083P100</td>
<td>BHEBM96EL600 (Qty 3)</td>
</tr>
</tbody>
</table>

**Table 4. Three Phase 208VAC 30kVA UPS Chassis Models UL Listed UL924 Configurations**

<table>
<thead>
<tr>
<th>kVA Rating</th>
<th>Output Rating</th>
<th>Controller Module</th>
<th>External Battery Cabinet and Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>18kVA 3PH</td>
<td>18kW*</td>
<td>BH20KEL2083P100</td>
<td>BH EBC72EL600 (Qty 2)</td>
</tr>
<tr>
<td>24kVA 3PH</td>
<td>24kW*</td>
<td>BH30KEL2083F100</td>
<td>BH EBC72EL600 (Qty 2)</td>
</tr>
<tr>
<td>27kVA 3PH</td>
<td>27kW*</td>
<td>BH30KEL2083P100</td>
<td>BH EBC72EL600 (Qty 3)</td>
</tr>
</tbody>
</table>

*The optional UPS Accessory Module BHKBT004200 can be used with the 20/30kVA 208V solution to allow for 480V input/480V output to the UL924 UPS/Battery system.
Getting Help

If help is needed with any of these instructions, 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 comments, suggestions, or to report an error in these instructions:

E-ESSDocumentation@eaton.com

Eaton is a registered trademark of Eaton or its subsidiaries and affiliates. All other trademarks are property of their respective companies.

©Copyright 2017–2020 Eaton, Raleigh, NC, USA. All rights reserved. No part of this document may be reproduced in any way without the express written approval of Eaton.