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PCN # [0470464-PCN]

CXRF-HP 48-12kW/480 Firmware Version 3.04 Reliability Improvements

1. Supplier Information Alpha Technologies, Ltd. 7700 Riverfront Gate, Burnaby, BC V5J 5M4 Canada	1.6 Supplier Contact Info Contact: JD Fraser Associate Product Manager 604-218-9059 jd.fraser@alpha.ca												
2. Product Change Notification Number PCN # 0470464-PCN	3. Issue Date of Change July 24, 2020												
4. System Affected Major System Affected: CXRF12 Subsystem Affected: CXRF-HP 48-12kW/480 Firmware Hardware Affected: N Firmware Affected: Y Software Affected: N													
5. New Product ID <table border="1" data-bbox="188 1186 773 1304"> <thead> <tr> <th colspan="2">Software / Firmware</th> </tr> <tr> <th>Model</th> <th>Revision</th> </tr> </thead> <tbody> <tr> <td>0350084-003</td> <td>3.04</td> </tr> </tbody> </table>	Software / Firmware		Model	Revision	0350084-003	3.04	6. Old Product ID <table border="1" data-bbox="799 1186 1383 1304"> <thead> <tr> <th colspan="2">Software / Firmware</th> </tr> <tr> <th>Model</th> <th>Revision</th> </tr> </thead> <tbody> <tr> <td>0350084-003</td> <td>3.03</td> </tr> </tbody> </table>	Software / Firmware		Model	Revision	0350084-003	3.03
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7. New CLEI Code N/A	8. Old CLEI Code PWRAARFAB												
9. Associated Products or Changes Affected 0350084-003 Firmware File													
10. Drawing Number N/A													
11. Classification of Change B	12. Reason for Classification Product change which was made to incorporate improvement in the design that result in better operation, and longer life.												



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13. Reason for Change The change is due to improvements of design to the existing product that results in better operation.	
14.1 Description of Change Improved rectifiers reliability by raising the internal bus protection voltage ~10% (60V) resulting in a reduction of inrush current during brownout conditions. This change results in a minimal reduction in AC power loss holdover time, which shall have minimal impacts for modern power systems.	
14.2 Change Verification Procedures Physically inspect the CXRF 48-12.0kW rectifier for hardware revision number P or greater. Login into the CXC HP controller software revision 5.10 or greater and go to the Modules page to confirm the firmware on the CXRF 48-12.0kW rectifier is 3.04 or greater	
15. Safety Notification Reliability improvements for rectifier operation	
16. Material Affected N/A	
17. Documentation Affected 0350084-003_E_CXRF-HP48-12KW-V2_SOFTWARE_README_V3.04.PDF	
18. Supplier Implementation Date July 24, 2020	19. Modification Completion Date July 31, 2020
20. Modification Location Burnaby, B.C., Canada	
21. Modification Cost N/A	
22. Location and Quantity of Equipment N/A	
23. Attachments Readme - 0350084-003 E CXRF-HP48-12KW-V2 SOFTWARE README V3.04.PDF	



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24. Comments

- The firmware requires a CXC HP controller with V5.10 or later application software
- The firmware requires Hardware revision of Rev P or later for CXRF-HP 48-12kW/480
- The output over-voltage protection threshold needs to be set at minimum of 2V above the output voltage setpoint
- All the rectifiers with the same system should be updated to the latest firmware version