

Charles Universal Broadband Enclosure

CUBE-RL21221DL1 and CUBE-RL21221DL2

General Description and Installation

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1. GENERAL INTRODUCTION

1.1. Document Purpose

This document provides additional information for the Charles industries' Universal Broadband Enclosure CUBE-RL21221DL1 and CUBE-RL21221DL2 that is not covered in the RL212 family document LT-RL21221XXX. A closed front view of the CUBE is shown in Figure 1.

-NOTE-

Hereafter, the Charles Universal Broadband Enclosure CUBE-RL21221DL1 and CUBE-RL21221DL2 will be referred to as the "CUBE."

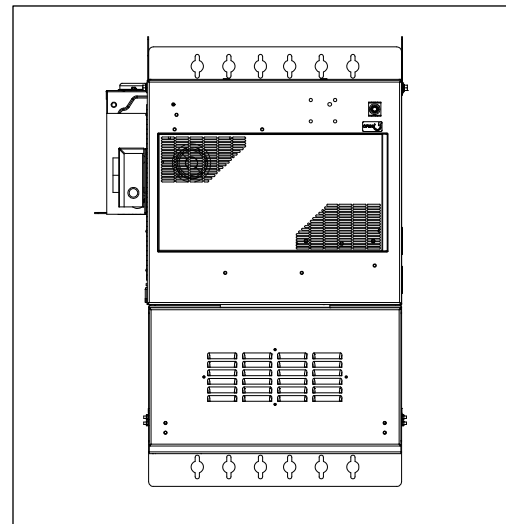


Figure 1 Front View of the CUBE

2. PRODUCT DESCRIPTION

The battery tray is designed to accommodate one 48VDC NiCd battery string of up to 100Ah. The CUBE includes a 750W heat exchanger and an 8-position load center. Figure 2 shows the main components of the CUBE. The RL21221DL2 also has a -48VDC surge suppressor and a -48VDC GE Infinity D power shelf.

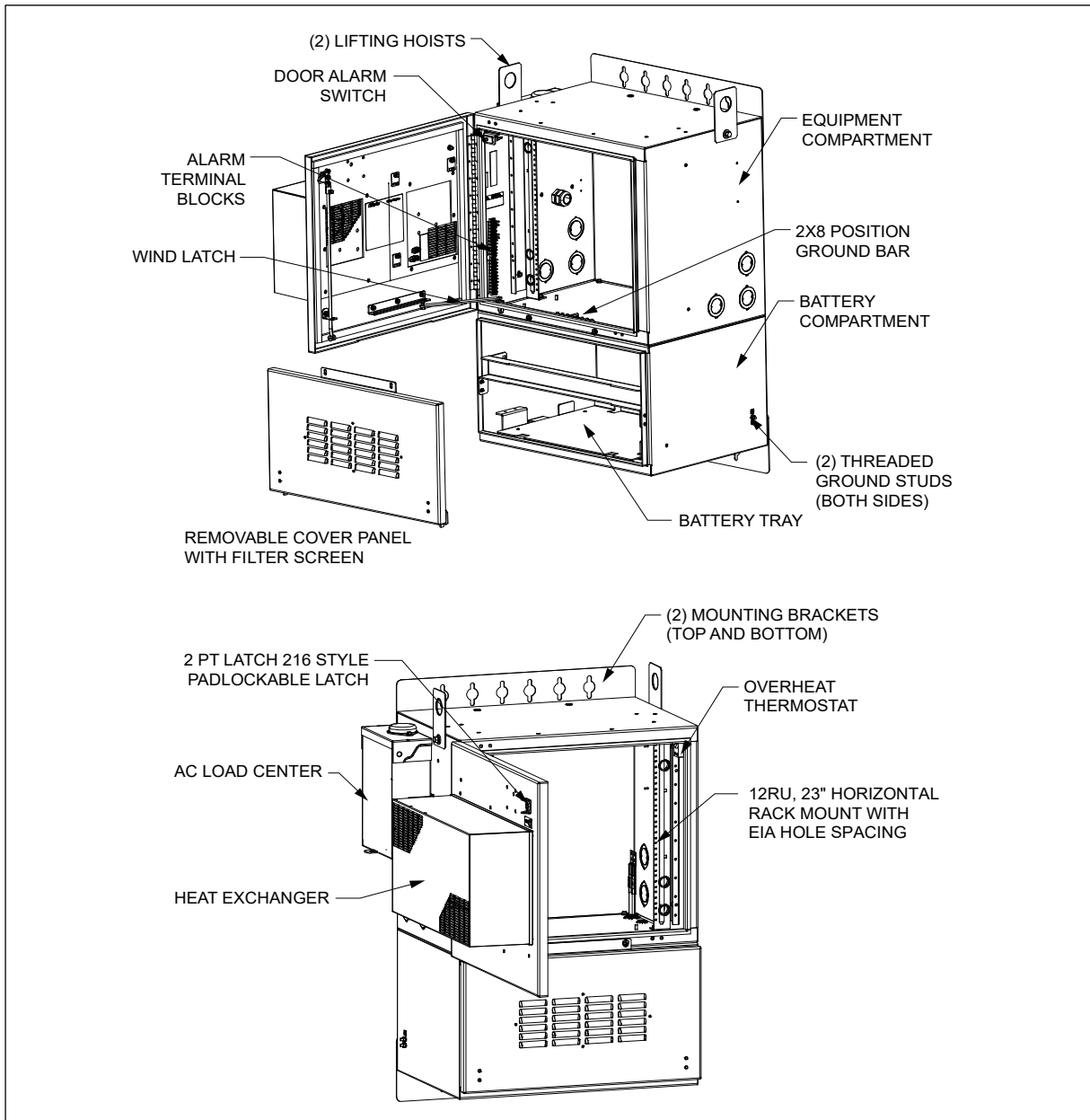


Figure 2 CUBE Components
 RL21221DL1 shown. RL21221DL2 also includes a surge suppressor and power system.

3. CUBE WIRING AND EQUIPMENT

After the CUBE is properly mounted in the desired location, apply No-Ox where bus bar and other 2-hole lug connections will be made. Install ground and power connections. Always ground the equipment first, before making any other connections.

	WARNING	Perform all bonding and grounding connections prior to any electrical and communications connections.
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In order to prevent condensation prior to being placed in service, do not remove the desiccant until the CUBE is sealed and power is applied. A basic electrical diagram is shown in Figures 3 and 4.

3.1. AC Voltage Connections

The incoming AC voltage is a single phase 208/240V at 60Hz and is connected to the 80A service disconnect in the AC load center. The maximum wire size for this breaker is 2AWG. Use wire that is sized per National Electrical Code NFPA70 table 310.16.

Generator Inlet and Manual Transfer Switch: The CUBE is normally powered from the 208/240VAC from the utility. In the event of a power outage, an external 50A NEMA 3R-rated generator can be connected to the generator inlet. The generator inlet uses the 2-pole 50A breaker in the load center.

When power from the main utility is off, slide the main breaker to the “OFF” position. Re-position and secure the transfer switch in the load center, and turn on the generator breaker. When power from the main utility is restored, slide the generator breaker into the “OFF” position, re-position and secure the transfer switch back to the normal position, and turn the main breaker back on.

3.2. Power System (RL21221DL2 Only)

The CUBE is equipped with a 200A, -48VDC GE power system that has a controller, an alarm cable, and slots for four 50A rectifiers (rectifiers are customer supplied). Refer to the GE documentation located inside the CUBE for information regarding the power supply operations and configuration.

Note: unlike most other members of this product family, this model has no GFCI.

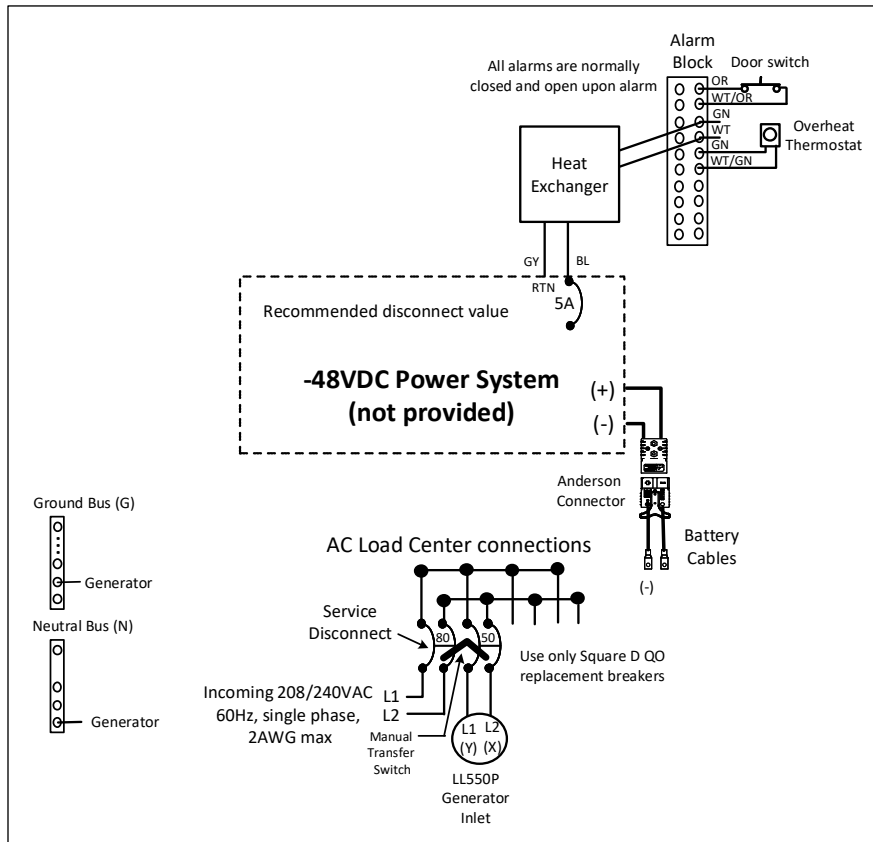


Figure 3 RL21221DL1 Electrical Diagram

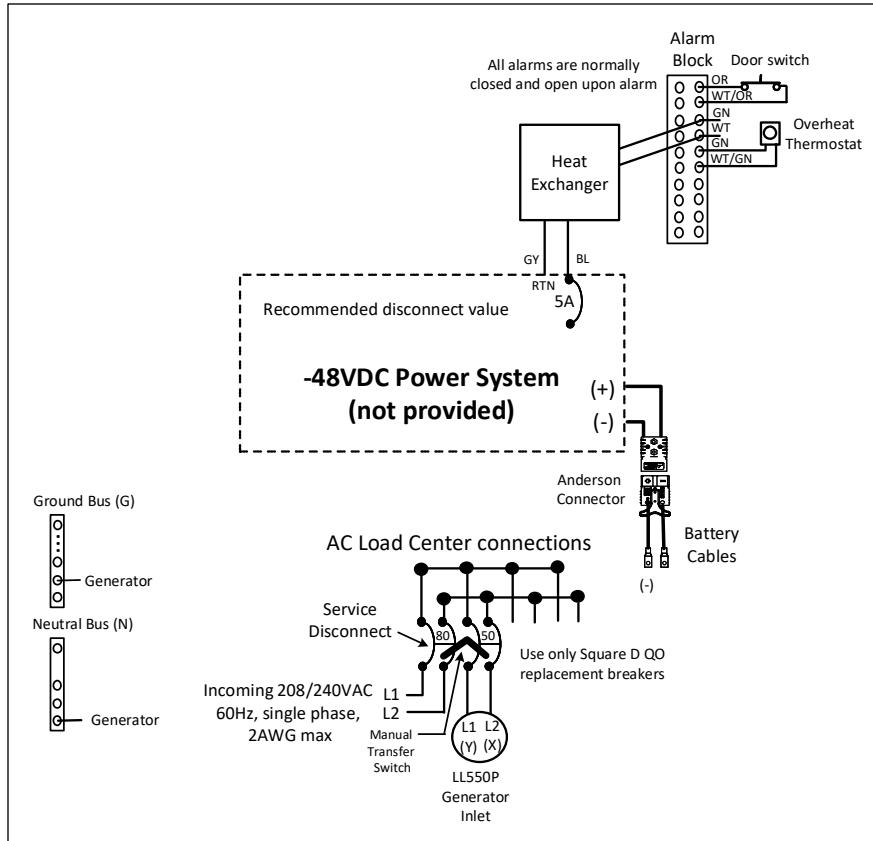


Figure 4 RL21221DL2 Electrical Diagram

4. SPECIFICATIONS

Physical	
Weight	Approx. 125 lbs. as shipped
Electrical	
AC Load Center	Square D QO816L100RB
Thermal	
Heat Exchanger	-48VDC, 750W, Vikinor VHC-030-DC
Maximum Heat Dissipation	700W@19°C above ambient with solar

Table 1 CUBE Specifications (see family document for full list)