

Charles Universal Broadband Enclosure

CUBE-RL20721AE2

General Description and Installation

1. GENERAL INTRODUCTION	1
1.1. Document Purpose	1
2. PRODUCT DESCRIPTION	1
3. CUBE WIRING AND EQUIPMENT.....	3
3.1. AC Voltage Connection.....	4
3.2. -48VDC Power System.....	4
4. SPECIFICATIONS.....	4

1. GENERAL INTRODUCTION

1.1. Document Purpose

This document provides additional information for the CUBE-RL20721AE2 of the Charles Industries' Universal Broadband Enclosure (CUBE) product line that is not included in the family document, LT-RL20721ABx. Figure 1 shows a closed front view of the enclosure.

-NOTE-

Hereafter, the Charles Universal Broadband Enclosure CUBE-RL20721AE2 will be referred to as the "CUBE."

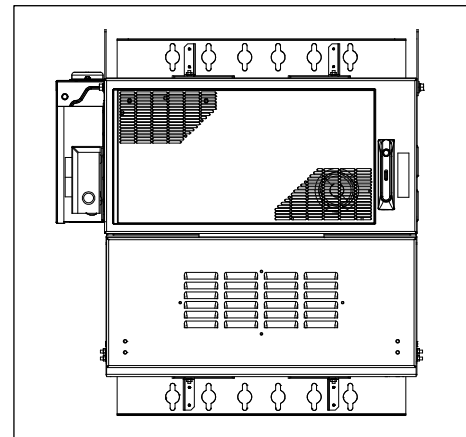


Figure 1 Front View of the CUBE

2. PRODUCT DESCRIPTION

The CUBE includes a GE SPS -48VDC power shelf with a controller and two 20A rectifiers. It also has a 750W heat exchanger and an AC load center with a 30A generator inlet. The battery tray supports one string of VRLA batteries up to 100Ah and equipped with a temperature probe. Figure 2 shows the main components of the CUBE.

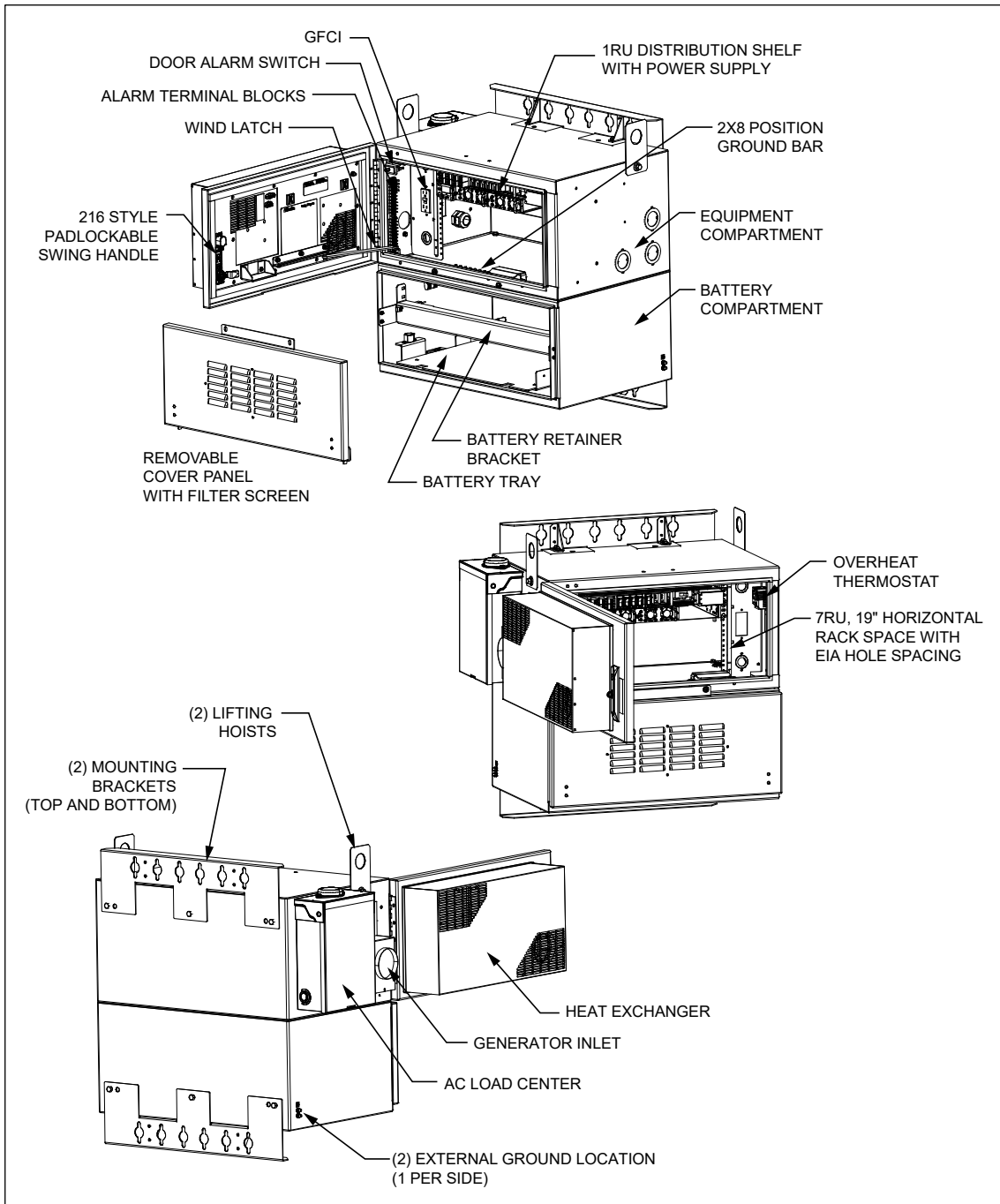



Figure 2 CUBE Components

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 Figure 3.

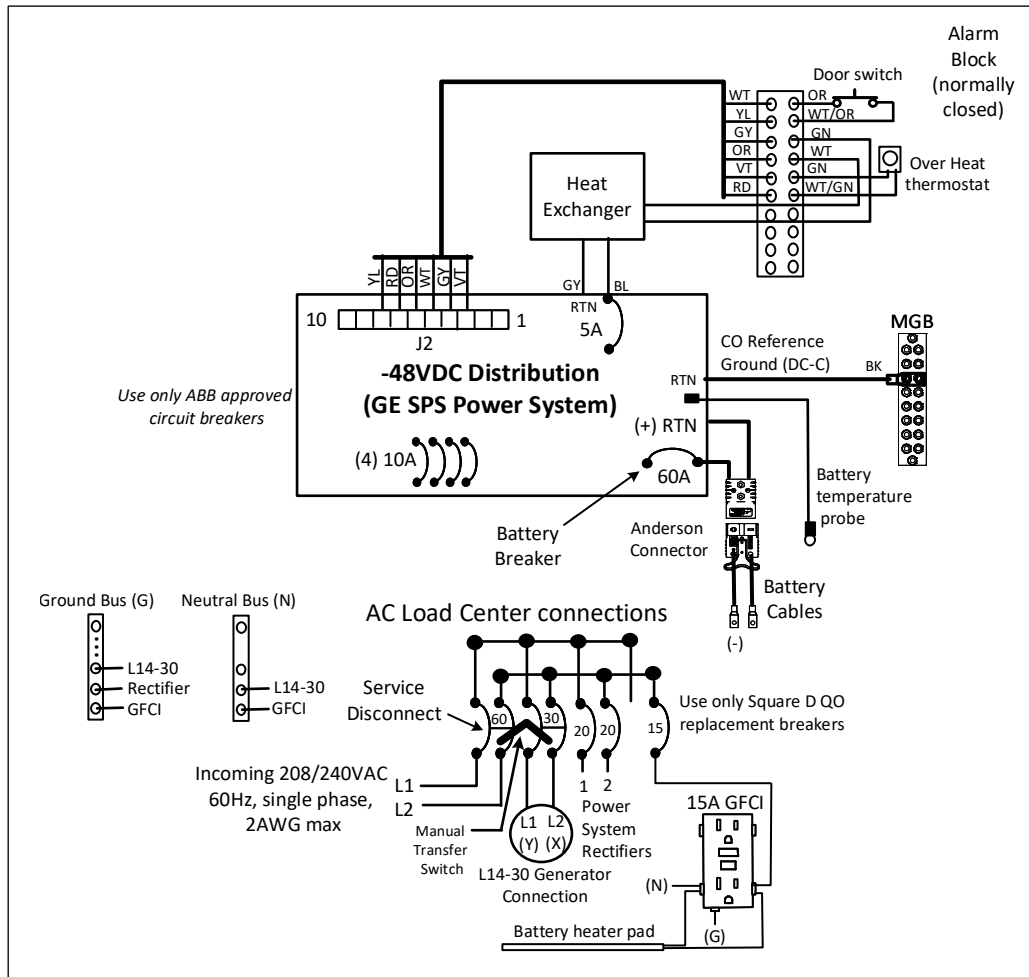


Figure 3 Electrical Diagram

3.1. AC Voltage Connection

The installer connects the utility’s incoming single phase 208/240VAC (60Hz) to the 60A service disconnect in the AC load center. The 15A circuit breaker is connected to the GFCI receptacle, which powers the battery heater pad.

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 30A generator can be connected to the NEMA 3R rated L14-30 generator inlet. The generator inlet uses the 2-pole 30A breaker in the load center. When power from the main utility is off, turn off the main breaker, slide the manual transfer switch in the load center upward into the generator position, and turn on the generator breaker.

When power from the main utility is restored, turn off the generator breaker to physically turn the main breaker back on, and slide the manual transfer switch downward back to the normal position to turn the main breaker back on.

3.2. -48VDC Power System

The CUBE is equipped with an ABB Slimline Power System (SPS) that has two 20A rectifiers, a controller, a 1RU -48VDC 19” distribution shelf, and an alarm cable wired to the alarm terminal block. The distribution shelf has eight Snapack breaker positions.

Refer to the ABB power supply documentation located inside the CUBE for information regarding the power supply operations and configuration.

4. SPECIFICATIONS

Physical	
Weight	Approx. 160 lbs. as shipped
Electrical	
Power System	-48VDC, ABB Slimline (SPS) 150028853 (2) 20A Rectifiers ABB CC109165602
Supported Batteries	-48V VRLA with temp probe and monitoring, up to 100Ah

Table 1 CUBE Specifications