Charles Universal Broadband Enclosure
CUBE-PM64015PN1
General Description and Installation

1. GENERAL INTRODUCTION

1.1. Document Purpose

This document provides additional information for the CUBE-PM64015PN1 of the Charles Industries' Universal Broadband Enclosure (CUBE) product line that is not included in the family document, LT-PM64015xxx. Figure 1 shows a closed front view of the enclosure.

Figure 1   Front View of the CUBE

> *-NOTE-*
>
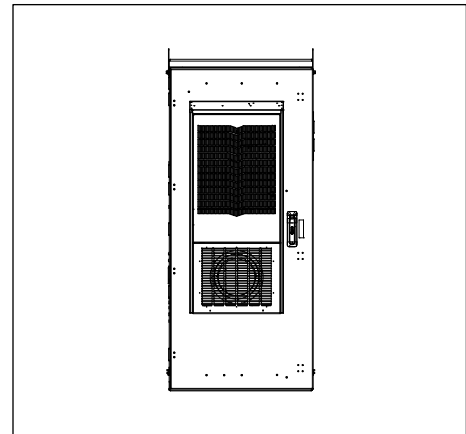> *Hereafter, the Charles Universal Broadband Enclosure CUBE-PM64015PN1 will be referred to as the "CUBE."*

2. PRODUCT DESCRIPTION

The CUBE includes a 2250W DC powered thermosiphon. Figure 2 shows the components of the CUBE.

(4) LIFTING HOISTS

SOLAR SHIELD

ALARM TERMINAL PANEL

REMOVABLE PANEL (THIS SIDE ONLY)

3PT LATCH 216 STYLE PADLOCKABLE DOOR HANDLE

(2) 2x8 POSITION GROUND BARS

GFCI OUTLET

WIND LATCH

DOOR ALARM SWITCH

OVERHEAT THERMOSTAT

40RU, 23" HORIZONTAL RACK SPACING

(2) QTR TURN 216 STYLE PADLOCKABLE LATCHES

REMOVABLE REAR PANEL

(4) QTR TURN 216 STYLE LATCHES

THERMOSIPHON

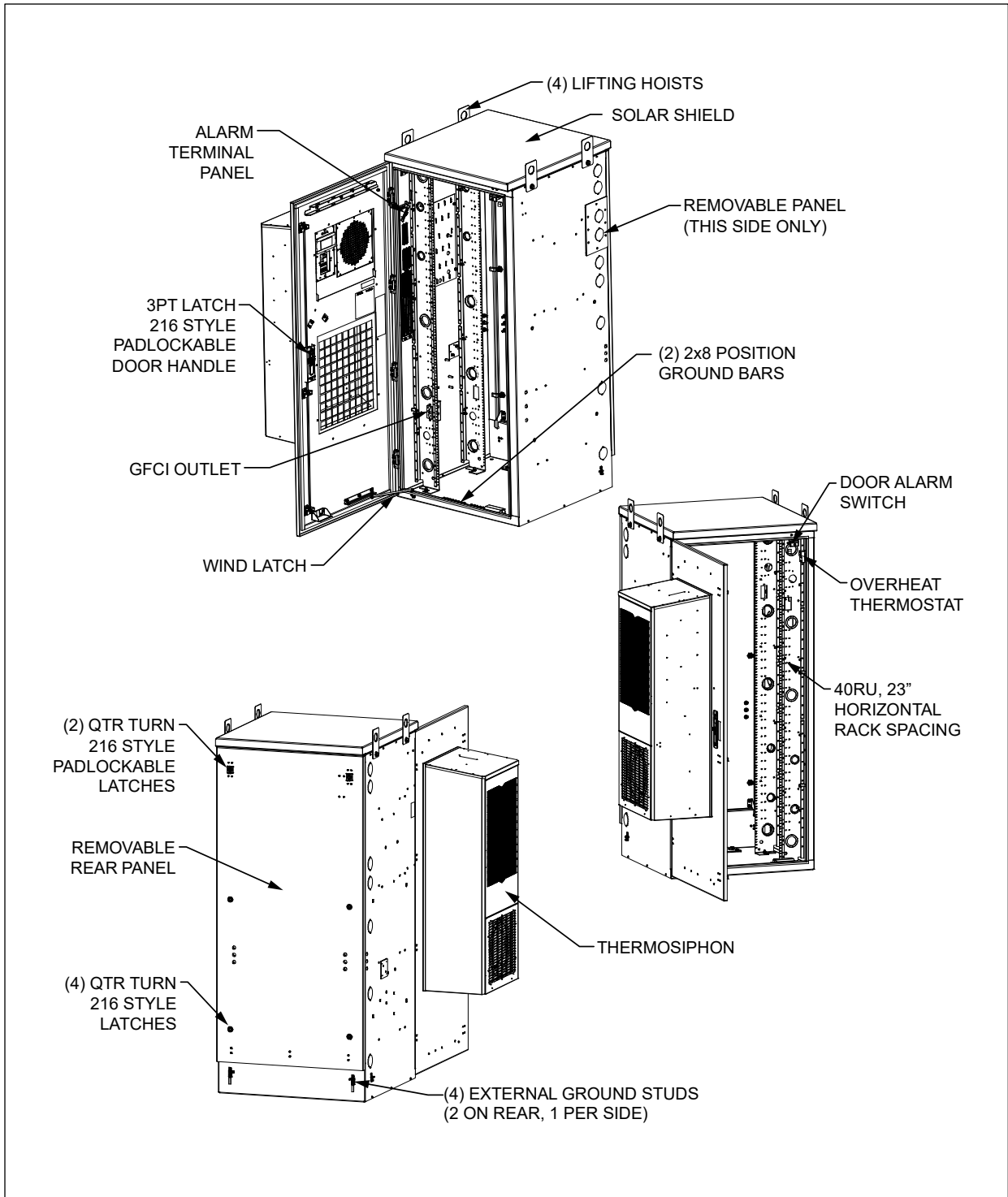(4) EXTERNAL GROUND STUDS (2 ON REAR, 1 PER SIDE)

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.**

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.
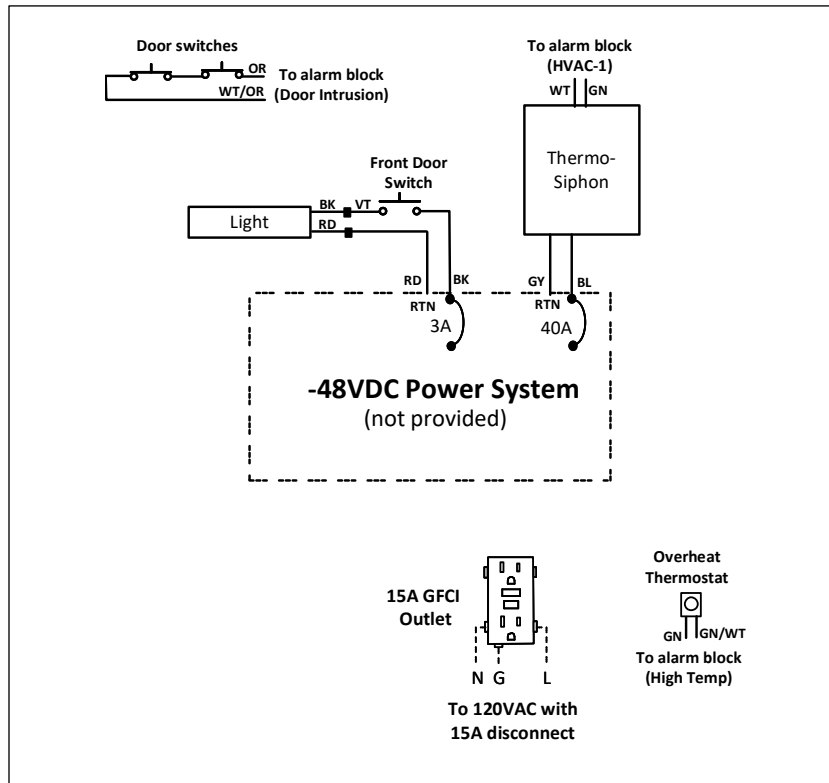

Figure 3   Electrical Diagram

3.1. Thermosiphon Operation

The DC powered thermosiphon in the equipment compartment has a speed controller and includes an internal and an external fan. The fans' speed increases with increasing ambient temperature. Fan settings are defined below.

Fan Setting	Internal	External
Turn-on Setting	-40°C	35°C
Medium Temp Setting	35°C	35°C
High Temp Setting	45°C	45°C

For more information, refer to the thermosiphon documentation found inside the CUBE.

> *-NOTE-*
> *Changing the speed controller default factory set points can lead to system performance issues, such as equipment failures, increased power use, unnecessary alarms, noise, condensation build up, fan failure caused by excessive runtimes and vibration.*
> *Avoid placing items in front of the thermosiphon's return and supply vents. Maintain a minimum of 6" clearance to enable proper air flow.*

3.2. Alarm Terminal Panel

All alarm wiring is connected to the 40-position alarm panel. Refer to the family practice LT-PM64012xxx for more information about the panel. The following table shows the macro alarm block wiring for this unit.

Alarm ID	Color	POS	Color	POS2
Door Intrusion	ORG	CC1	WHT/ORG	RET1
HVAC Failure	BLK	CC12	WHT	RET12
High Temp	GRN	CC13	WHT/GRN	RET13

4. SPECIFICATIONS

Physical	
Weight	Approx. 362 lbs. as shipped
Thermal	
Thermosiphon	2250W, Vikinor VHT-225-DC
Maximum Heat Dissipation	2090W@19°C above ambient with solar

Table 1   **CUBE Specifications**