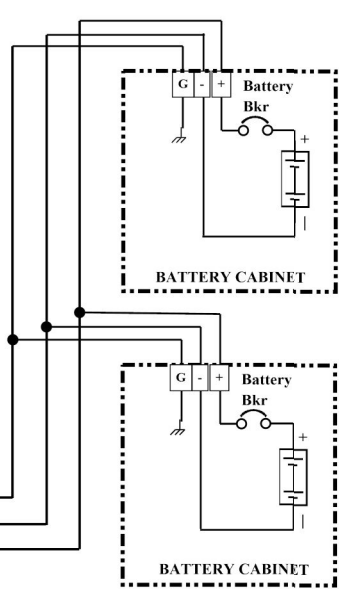
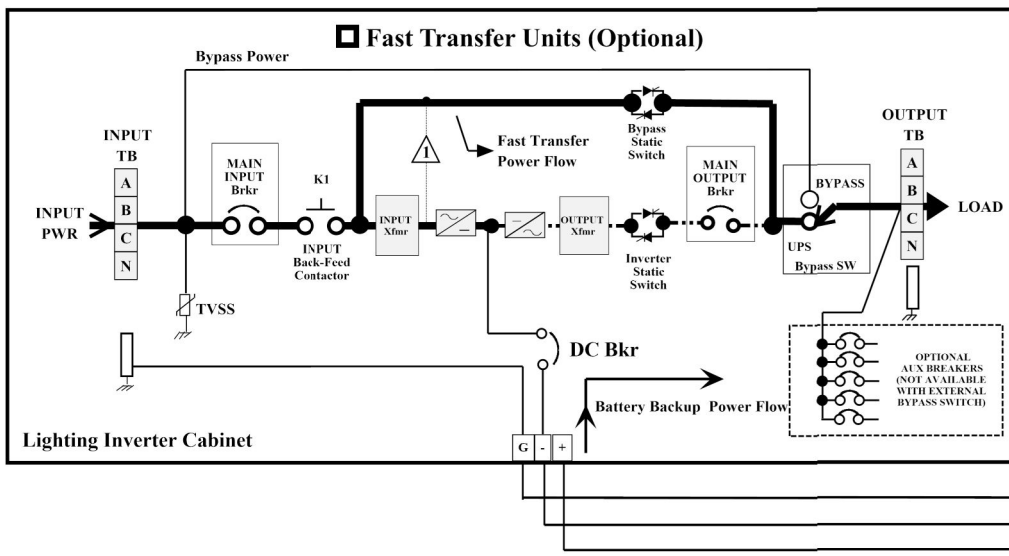
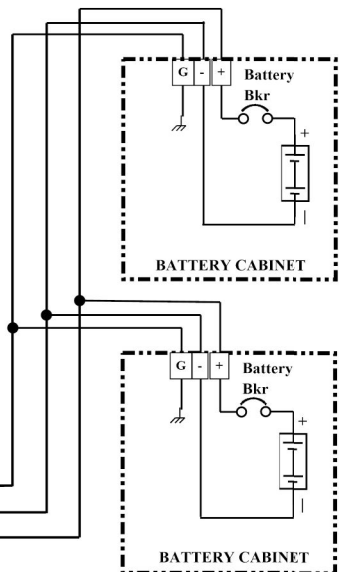
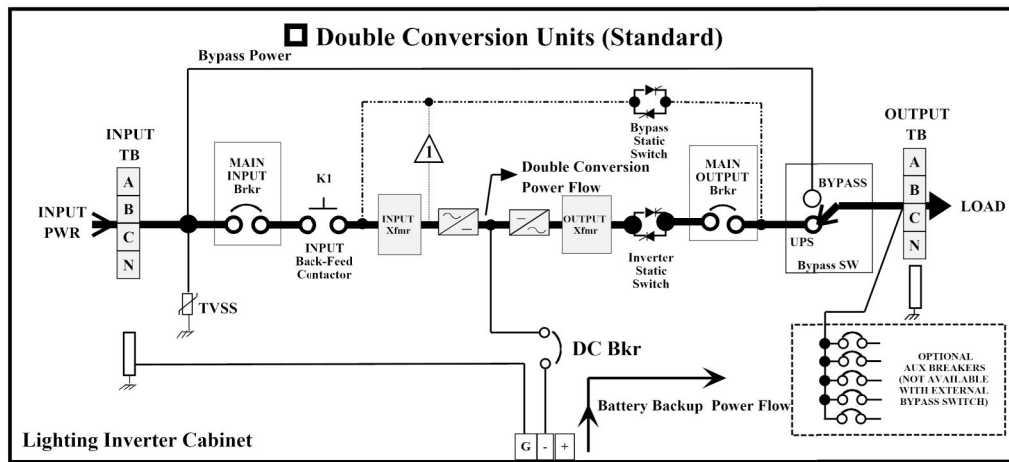


3 PHASE LIGHTING INVERTER TYPICAL SINGLE LINE DIAGRAM



NOTES:

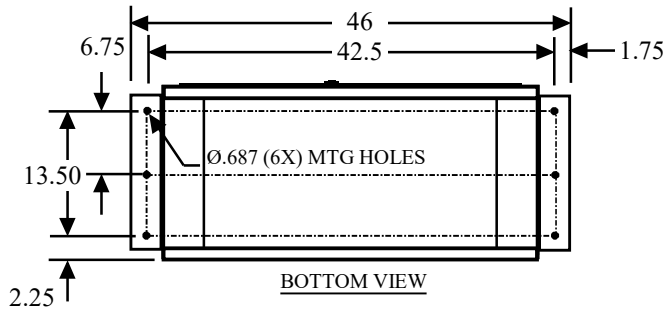
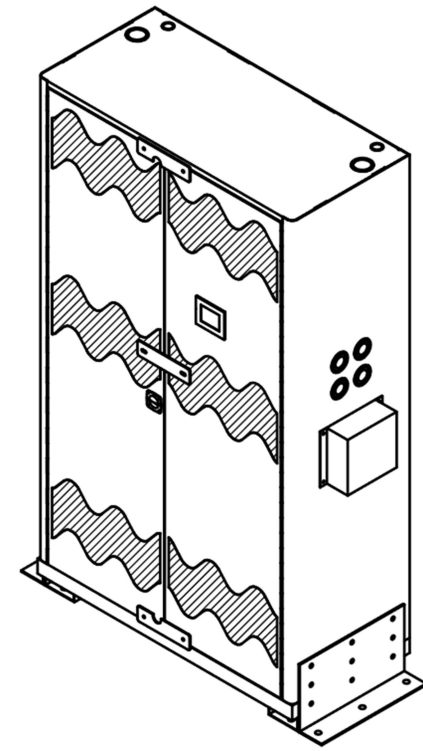
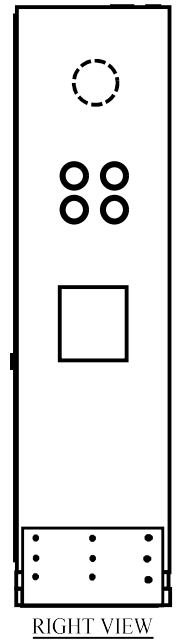
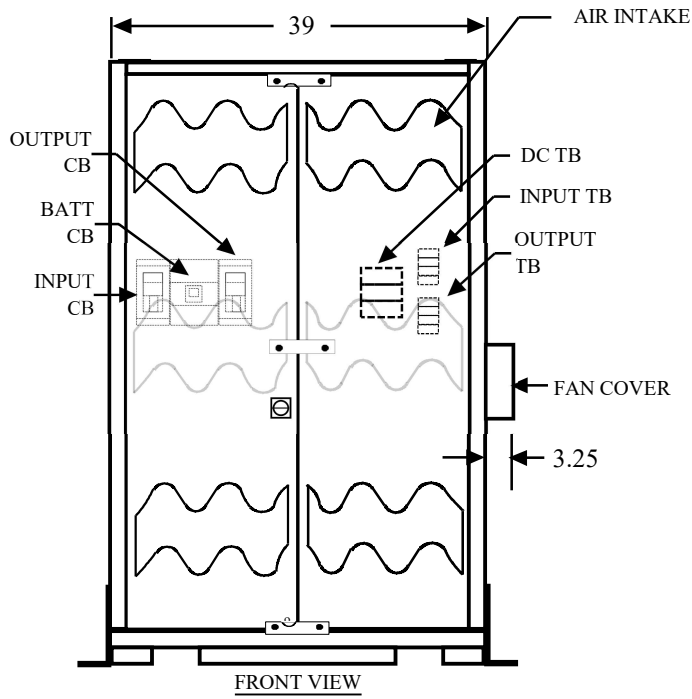
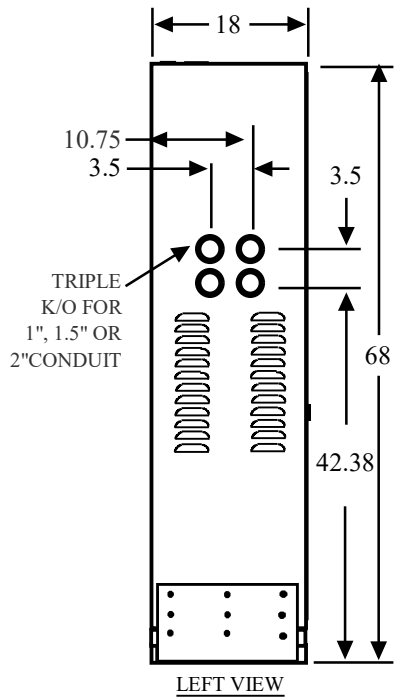
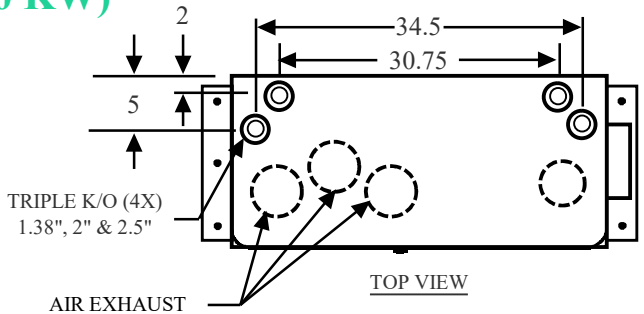
⚠ Optional Delta Input Power available using External Transformer must be sized min 25% larger than UPS capacity.

2. Optional Wrap around Bypass Switch is available.

3-PH LIGHTING INVERTER FUNCTIONAL BLOCK DIAGRAM		SHT 1 OF 1
CRUCIAL POWER PRODUCTS <small>SUBJECT TO CHANGE WITHOUT NOTICE</small>		
DRAWN : SS	9/6/22	415-TD-010
APPVD : HN	9/6/22	


**ELECTRONIC
CABINET ONLY
(8 KW THRU 50 KW)**

**WAVE RIDER 3 INVERTER CABINET
SHAKER TABLE TEST CERTIFIED BY (HCAI)**

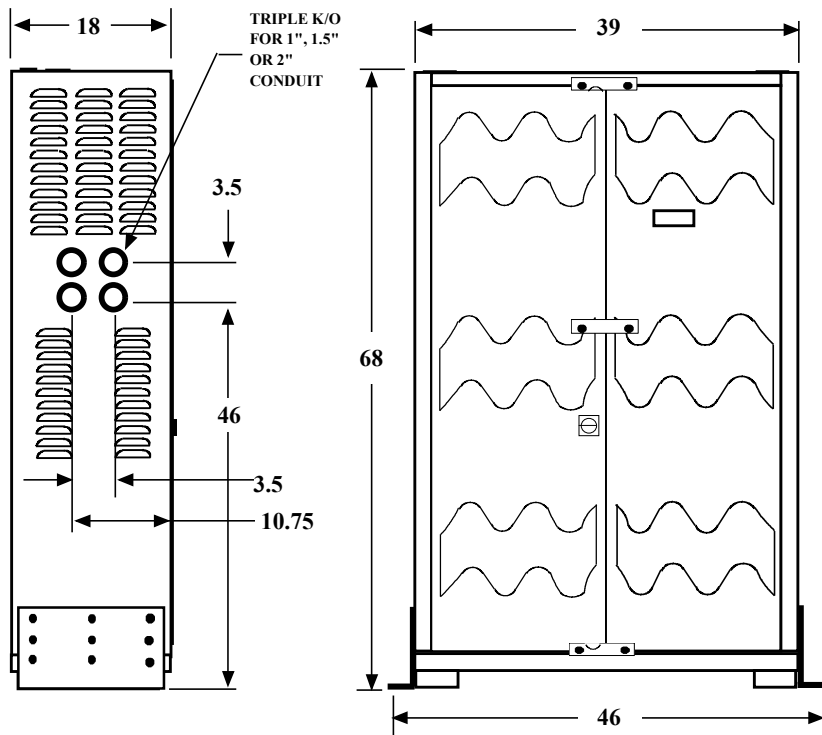
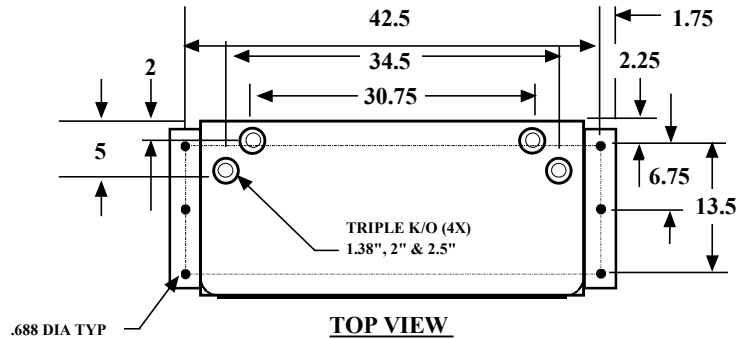


NOTES:

1) CONSTRUCTION: NEMA1 INDOOR.
2) SHAKE TABLE TESTED.

WAVE RIDER 3 SHAKER TABLE TESTED INVERTER CABINET		SHT 1 OF 1
 CRUCIAL POWER PRODUCTS SUBJECT TO CHANGE WITHOUT NOTICE		
DRAWN : SHERRIS.	12/26/22	415-SV-TD-011
APPVD : HN	12/26/22	REV A

BATTERY CABINET (12KVA/8KW), STANDARD VRLA BATTERY SHAKER TABLE TEST CERTIFIED BY (HCAI)



LEFT SIDE VIEW

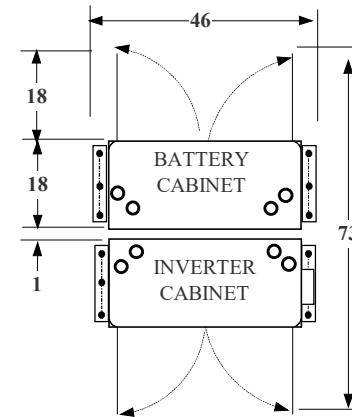
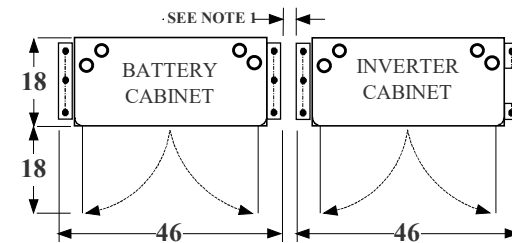
FRONT VIEW

NOTES:

- 1) SPACING IS OPTIONAL NOT REQUIRED BY MFR.
- 2) CONSTRUCTION: NEMA1 INDOOR.
- 3) SHAKE TABLE TESTED.

RECOMMENDED SYSTEM LAYOUT

STANDARD VRLA BATTERY		
KVA/KW	BATTERY CABINET QTY	BATTERY CABINET QTY
	90 MIN.	120 MIN.
10KVA/8KW	1	1

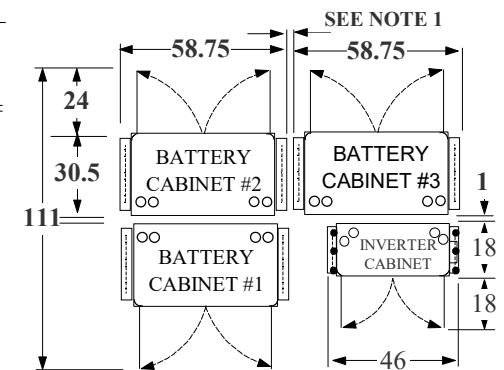
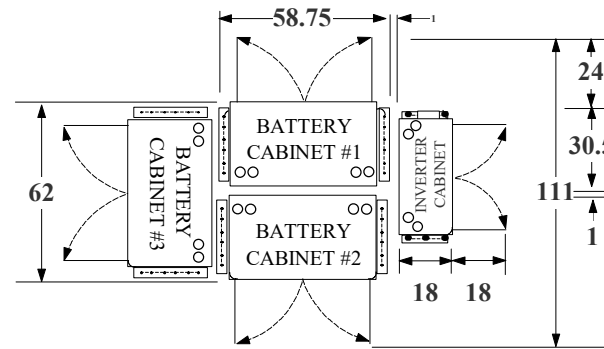
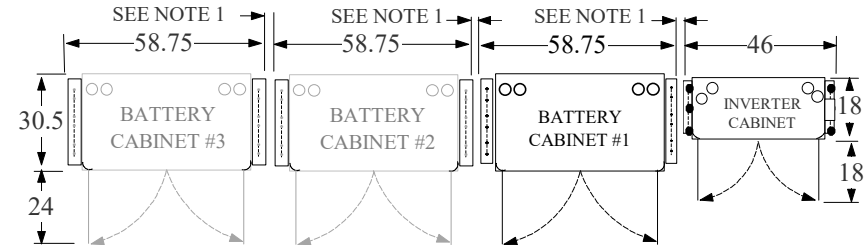
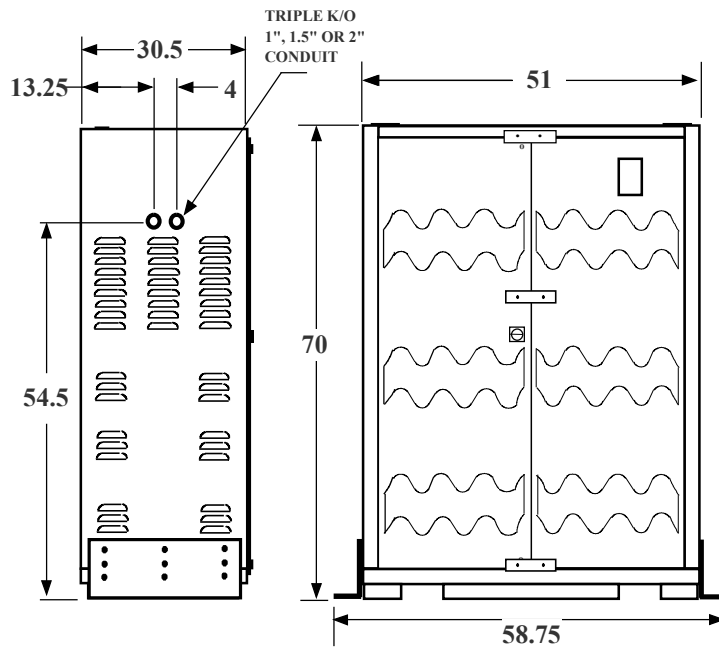
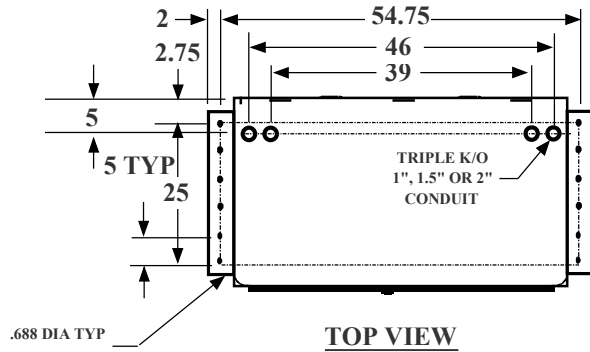


WAVE RIDER 3 SHAKER TABLE TESTED BATTERY CABINET (39" WIDE)		SHT 1 OF 1
CRUCIAL POWER PRODUCTS SUBJECT TO CHANGE WITHOUT NOTICE		
DRAWN : SHERRIS.	12/26/22	415-SV-TD-012
APPVD : HN	12/26/22	REV A

BATTERY CABINET (12 KW THRU 50 KW), STANDARD VRLA BATTERY SHAKER TABLE TEST CERTIFIED BY (HCAI)

RECOMMENDED SYSTEM LAYOUT

STANDARD VRLA BATTERY		
KVA/KW	BATTERY CABINET QTY 90 MIN.	BATTERY CABINET QTY 120 MIN.
15KVA/12KW	1	1
20KVA/16KW	1	1
25KVA/20KW	1	1
30KVA/24KW	1	2
40KVA/32KW	2	2
50KVA/40KW	2	2
50KW	2	3



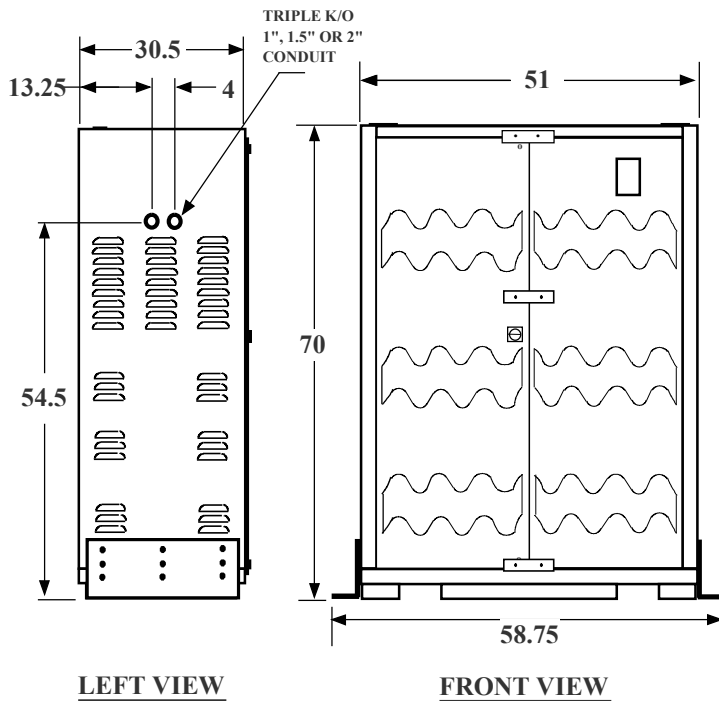
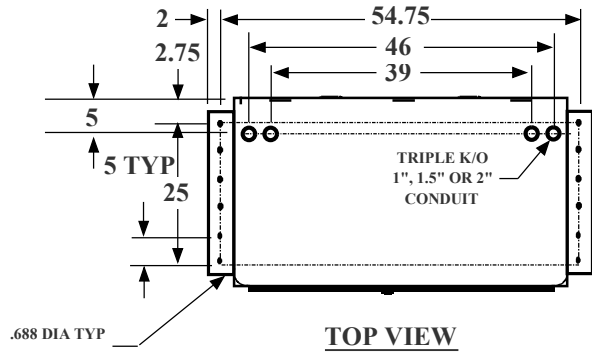
NOTES:

- 1) SPACING IS OPTIONAL NOT REQUIRED BY MFR.
- 2) CONSTRUCTION: NEMA1 INDOOR.
- 3) SHAKE TABLE TESTED.

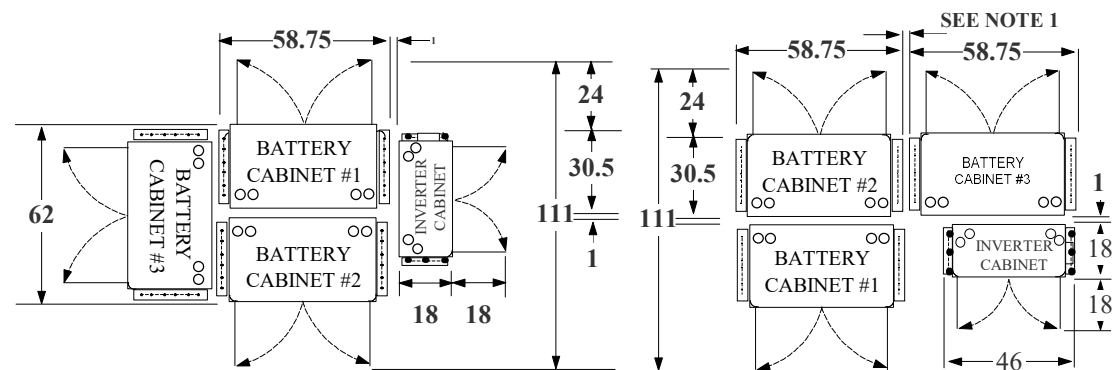
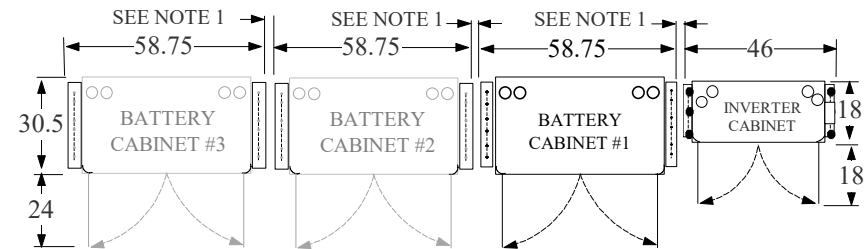
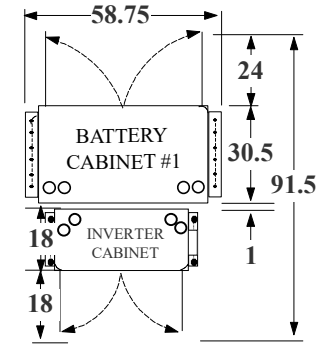
WAVE RIDER 3 SHAKER TABLE TESTED BATTERY CABINET (51" WIDE)		SHT 1 OF 1
CRUCIAL POWER PRODUCTS SUBJECT TO CHANGE WITHOUT NOTICE		
DRAWN : SHERRIS.	12/26/22	415-SV-TD-013
APPVD : HN	12/26/22	REV A

BATTERY CABINET (8 KW THRU 50 KW), LONG LIFE BATTERY SHAKER TABLE TEST CERTIFIED BY (HCAI)

RECOMMENDED SYSTEM LAYOUT



LONG LIFE BATTERY		
KVA/KW	BATTERY CABINET QTY 90 MIN.	BATTERY CABINET QTY 120 MIN.
10KVA/8KW	1	1
15KVA/12KW	1	1
20KVA/16KW	1	1
25KVA/20KW	1	1
30KVA/24KW	1	2
40KVA/32KW	2	2
50KVA/40KW	2	3
50KW	3	3



NOTES:

- 1) SPACING IS OPTIONAL NOT REQUIRED BY MFR.
- 2) CONSTRUCTION: NEMA1 INDOOR.
- 3) SHAKE TABLE TESTED.

WAVE RIDER 3 SHAKER TABLE TESTED LONG LIFE BATTERY CABINET (51" WIDE)		SHT 1 OF 1	
CRUCIAL POWER PRODUCTS			
SUBJECT TO CHANGE WITHOUT NOTICE			
DRAWN : SHERRIS.	12/26/22	415-SV-TD-014	REV A
APPVD : HN	12/26/22		

REMOTE STATUS PANEL

SIDE MOUNT PROVISION

BACK MOUNT PROVISION

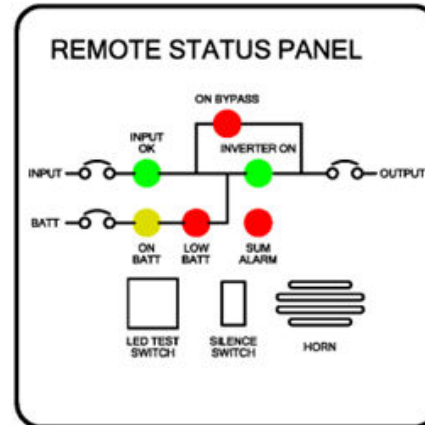


**TO UPS P100 TERMINAL BLOCK
SEE INSTALLATION INSTRUCTION SHIPPED WITH THE ASSEMBLY**

USE BUMPERS FOR CONSOLE INSTALL

Remote Status Panel displays the following:

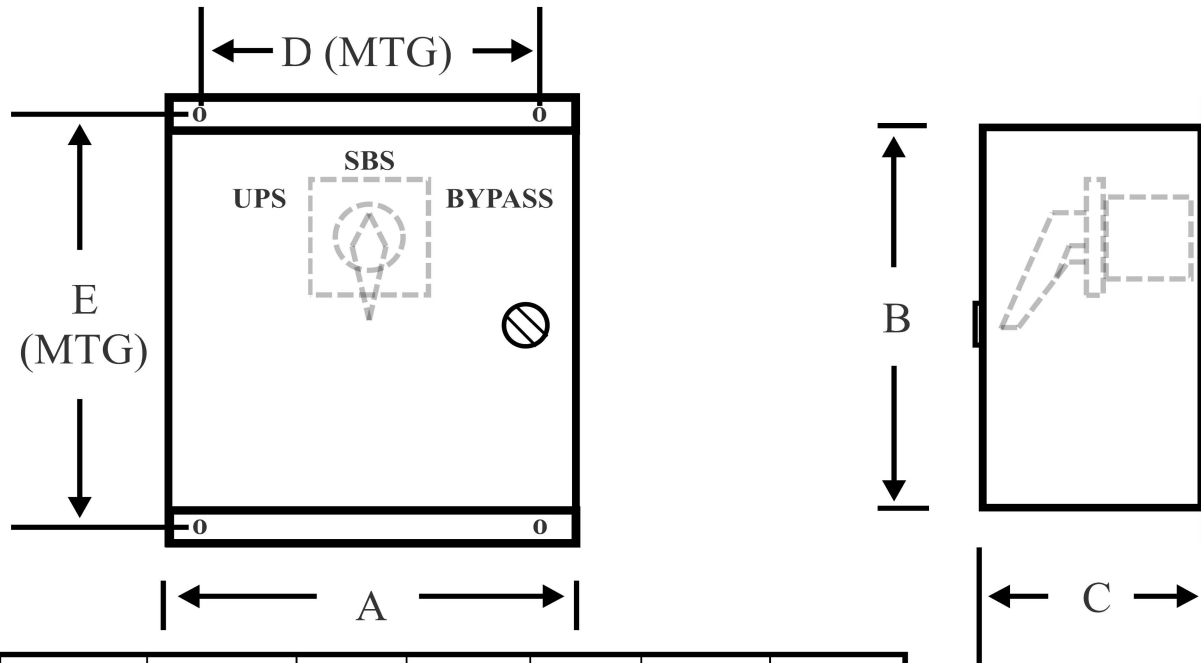
INPUT OK:	Input power is within acceptable range
INVERTER ON:	Inverter is on
ON BYPASS:	Unit is on Bypass Mode
ON BATT:	Unit is running from Battery
LOW BATT:	Battery voltage is at low voltage before shutdown
SUM ALARM:	Unit is on critical alarm such as: Over temperature, DC OV/UV
HORN:	Audible warning for alarm condition
SILENCE WATCH:	Silences the audible warning
LED TEST:	Tests the LED's by push in



NOTES:
 1. ALL DIMENSIONS ARE IN INCHES.
 2. 7.5KW CAN BE IN 39" OR 51" WIDE CABINET DEPENDING ON THE BATTERY TYPE.

REMOTE STATUS PANEL ASSEMBLY		SHT 1 OF 1
CRUCIAL POWER PRODUCTS SUBJECT TO CHANGE WITHOUT NOTICE		
DRAWN : M.TANG	12/07/22	410-SV-TD-014
APPVD : H.N	12/07/22	
		REV A

MAKE BEFORE BREAK EXTERNAL WRAP AROUND BY-PASS SWITCH



RATING	VOLTAGE	DIM A	DIM B	DIM C	DIM D (MTG)	DIM E (MTG)
350 AMPS	600V	30	36	16	28.5	34.5
240 AMPS	600V	30	30	12	28.5	28.5
175 AMPS	600V	20	20	12	18.5	18.5
110 AMPS	600V	14	16	10	12	16.75
55 AMPS	600V	14	16	8	12	16.75

NOTES:

- 1) SWITCH CONTACTS ARE THREE PHASE L-NEUTRAL "MAKE BEFORE-BREAK"
- 2) CONTACTS MARKED "UPS" ARE CLOSED IN THE "UPS" POSITION
- 3) CONTACTS MARKED "BYPASS" ARE CLOSED IN THE "BYPASS" POSITION
- 4) CONTACTS MARKED "SBS" ARE CLOSED IN THE "SBS" POSITION
- 5) WRAP AROUND BY-PASS SWITCH IS FOR SAME INPUT/OUTPUT VOLTAGES ONLY
- 6) WRAP AROUND BY-PASS SWITCH CAN ONLY BE USED WITHOUT ANY BUILT-IN SECONDARY DISTRIBUTION CIRCUIT BREAKERS IN UPS

Technical Drawing: External Bypass Switch

WAVE RIDER 3 / 4		SHT
EXTERNAL WRAP AROUND BY-PASS SWITCH		1 OF 1
CRUCIAL POWER PRODUCTS SUBJECT TO CHANGE WITHOUT NOTICE		
DRAWN : SS	10/31/22	415-TD-016
APPVD : HN	10/31/22	
		REV A

HCAI Certification (pg. 1 of 3)



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION FACILITIES DEVELOPMENT DIVISION

APPLICATION FOR HCAI SPECIAL SEISMIC CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY

APPLICATION #: OSP-0499

HCAI Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: Crucial Power Products

Manufacturer's Technical Representative: Sherri Shahsavari

Mailing Address: 14000 S Broadway, Los Angeles, CA 90061

Telephone: (323) 721-5017

Email: sherris@onlinepower.com

Product Information

Product Name: UPS and Batteries

Product Type: Lighting Inverter Systems

Product Model Number: See Attachment

General Description: Single phase or three phase emergency lighting inverter with battery backup inside of a carbon steel electrical cabinet enclosure.

Mounting Description: Rigid, Floor Mounted

Tested Seismic Enhancements: Seismic enhancements made to the test units and/or modifications required to address anomalies during the tests shall be incorporated into the production units.

Applicant Information

Applicant Company Name: TRU Compliance, by Structural Integrity Associates, Inc.

Contact Person: Galen Reid

Mailing Address: 5215 Hellyer Ave. Suite 210, San Jose, CA 95138

Telephone: (541) 604-7225

Email: greid@structint.com

Title: Director, TRU Compliance



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION FACILITIES DEVELOPMENT DIVISION

California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)

Company Name: STRUCTURAL INTEGRITY ASSOCIATES, INC.

Name: Andrew Coughlin

California License Number: S6082

Mailing Address: 5215 Hellyer Ave, Suite 101, San Jose, CA 95138-1025

Telephone: (415) 635-8461

Email: acoughlin@structint.com

Certification Method

GR-63-Core

ICC-ES AC156

IEEE 344

IEEE 693

NEBS 3

Other (Please Specify): _____

Testing Laboratory

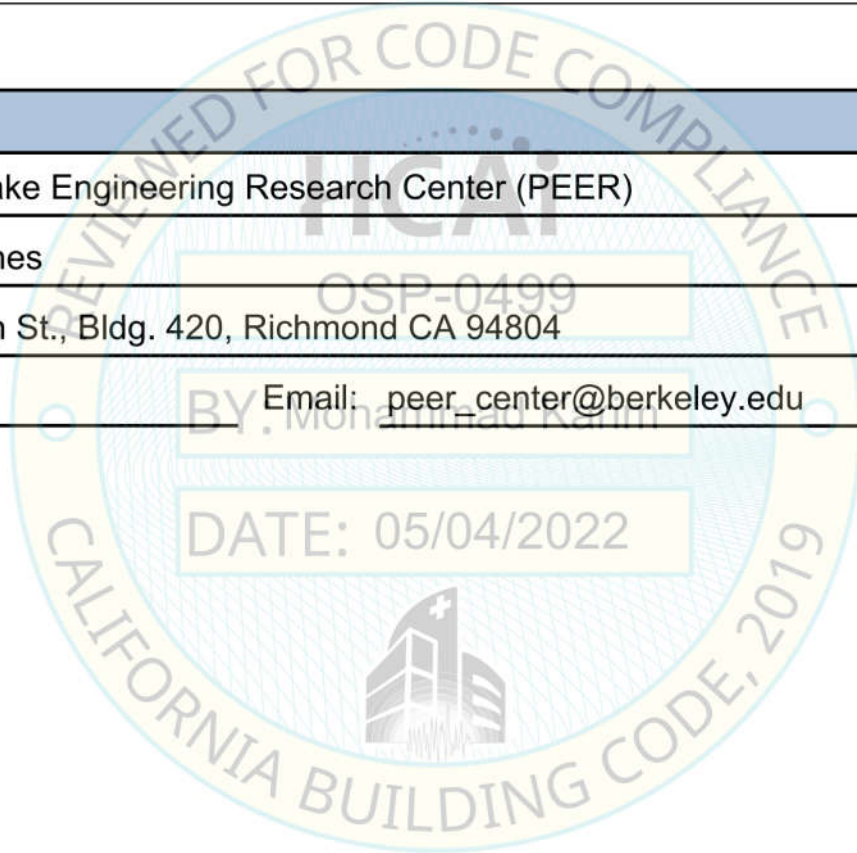
Company Name: Pacific Earthquake Engineering Research Center (PEER)

Contact Person: Clement B Barthes

Mailing Address: 1301 South 46th St., Bldg. 420, Richmond CA 94804

Telephone: (510) 642-3437

Email: peer_center@berkeley.edu





DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION FACILITIES DEVELOPMENT DIVISION

Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) = 1.44 (SDS = 2.0g); 1.35 (SDS = 3.0g)

SDS (Design spectral response acceleration at short period, g) = 2.0 (z/h = 1.0); 3.0 (z/h = 0.0)

a_p (Amplification factor) = 1.0

R_p (Response modification factor) = 2.5

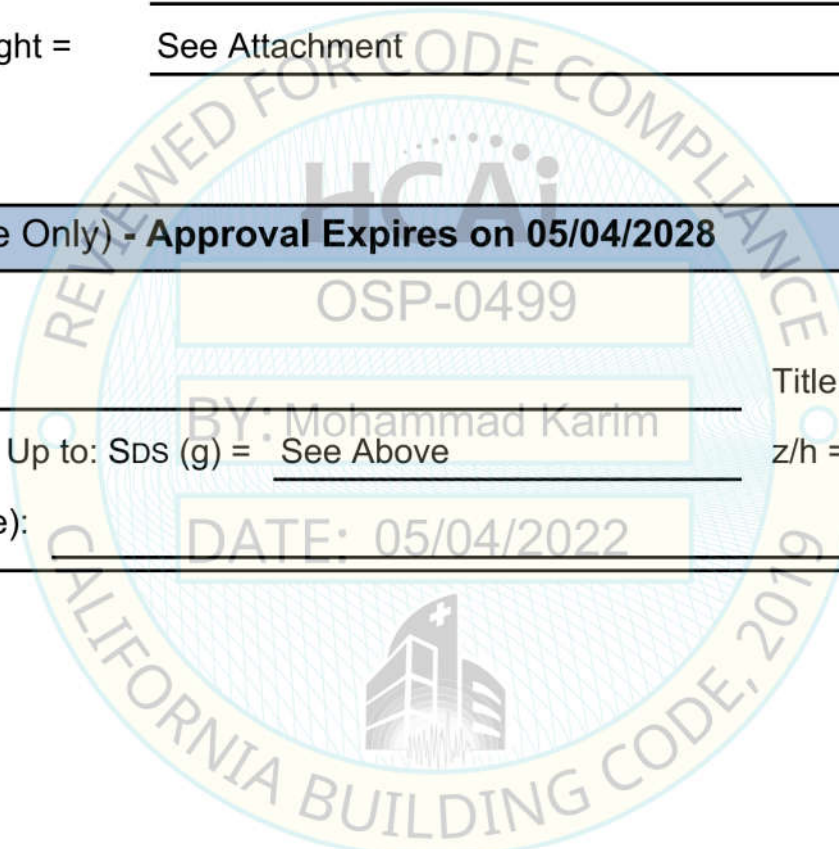
Ω_0 (System overstrength factor) = 2.0

I_p (Importance factor) = 1.5

z/h (Height ratio factor) = 1 and 0

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment



HCAI Approval (For Office Use Only) - Approval Expires on 05/04/2028

Date: 5/4/2022

Name: Mohammad Karim

Title: Supervisor, Health Facilities

Special Seismic Certification Valid Up to: SDS (g) = See Above

z/h = See Above

Condition of Approval (if applicable): _____

