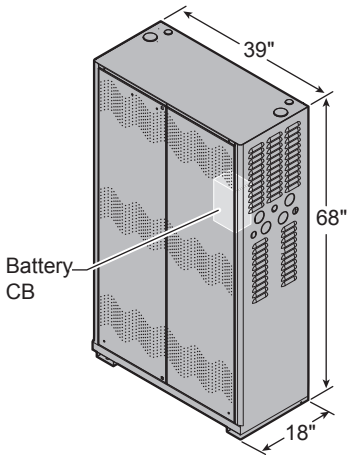
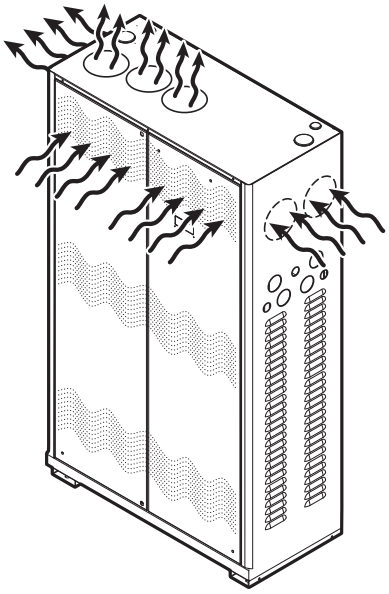
Battery Cabinet

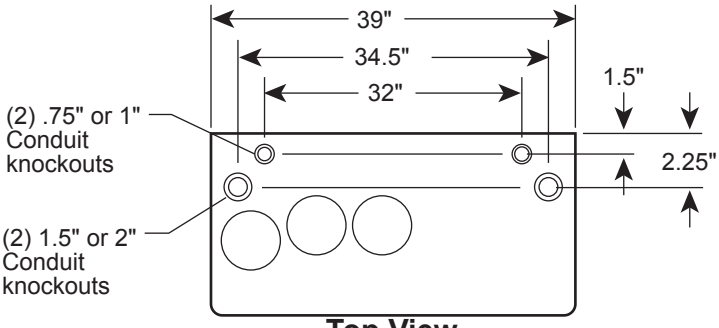


NOTE:

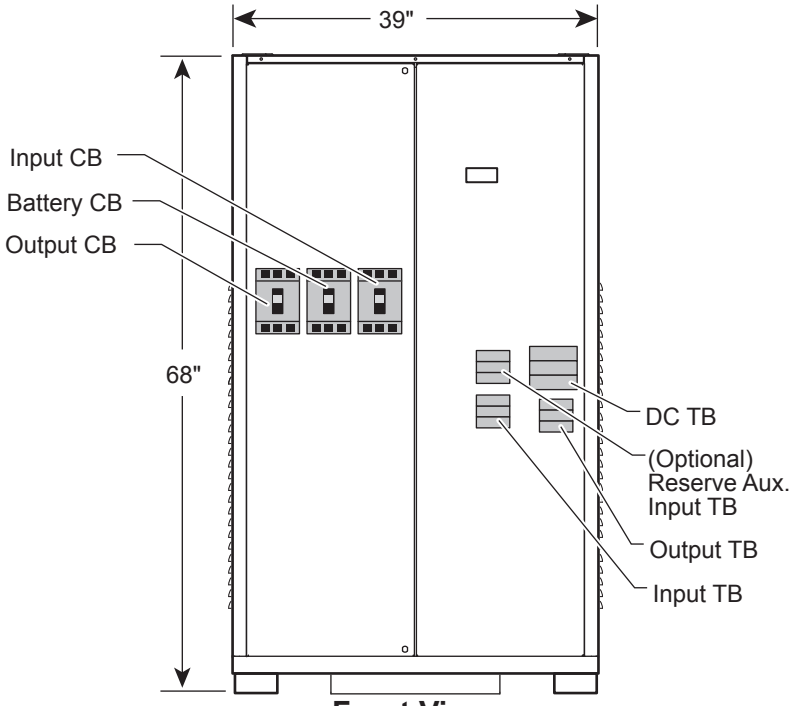
1. Matching Battery Cabinet has same physical dimensions.
2. Each battery cabinet includes 1 CB.
3. Each battery cabinet have top and sides conduit entry and same floor mounting hole dimensions.
4. Optional Seismic Brackets (P/N: 9100-1317-02) are available. When seismic bracket used, 8" min. space required between cabinets. Anchoring hardware to be supply by customer.

UPS Cabinet

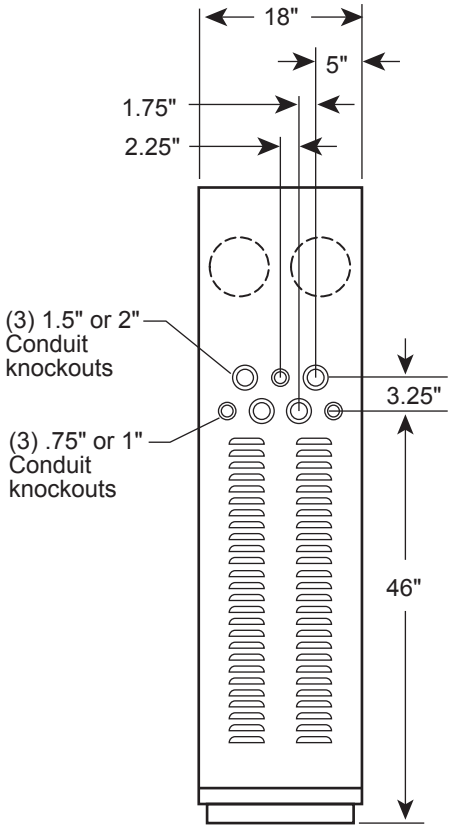




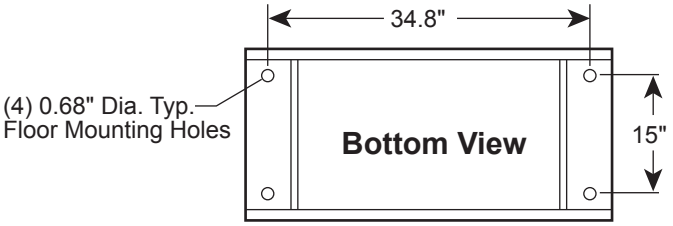
Top View



Front View



Side View
(Both Sides Typ.)

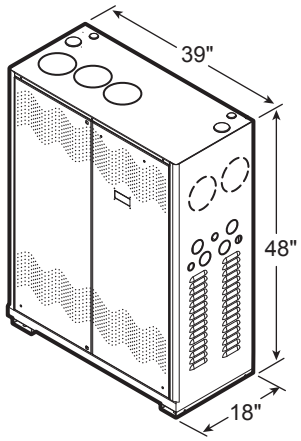


Bottom View

Drawn by: Chun Chi	Date: 2/1/06	**UPS & Battery Cabinet Installations**
Chkd.:	Date:	1 Phase UPS with 90 Min Battery Backup
Appvd.:	Date:	6001-033-01 Rev A

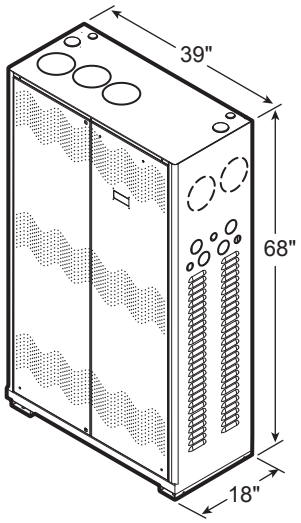
3 kVA (2.1 kW)
3 kVA (3 kW)

UPS & Battery Cabinet are in a Single Cabinet.



5 kVA (3.5 kW), 7.5 kVA (5.25 kW)
5 kVA (5.0 kW)

UPS & Battery Cabinet are in a Single Cabinet.

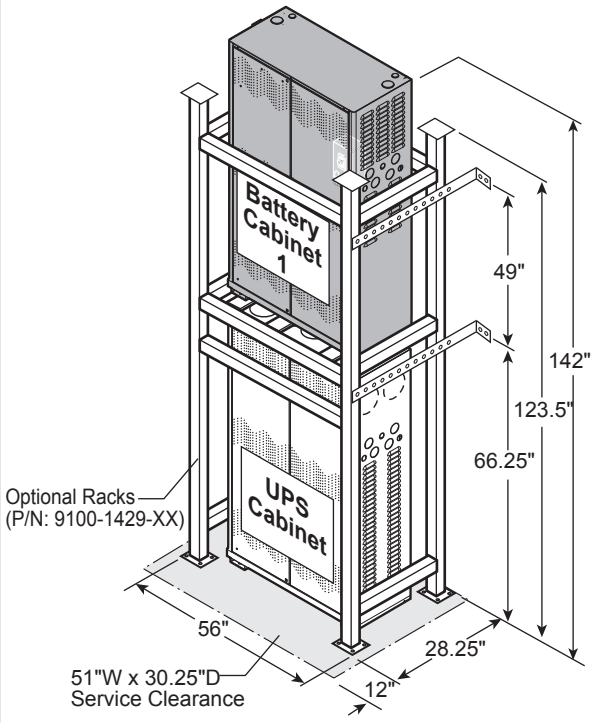


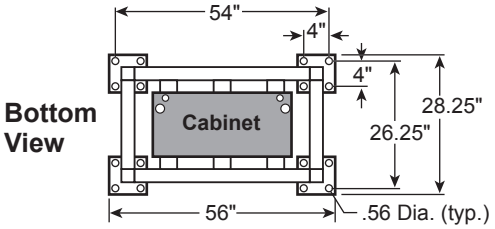
NOTE:

1. Service Clearance Areas are shaded.
2. Each battery cabinet includes 1 C/B.
3. Each battery cabinet have top and both sides conduit entry and same floor mounting hole dimensions as UPS cabinet. (See doc #: 6001-032-03 for detail).
4. Optional Seismic Brackets (P/N: 9100-1317-02) are available. When seismic bracket used, 8" min. space required between cabinets. Anchoring hardware to be supply by the customer.
5. Optional racks (P/N: 9100-1429-XX) available for stack battery cabinets. (see doc #: 6001-032-07).
6. Consult factory for different back-up times and number of battery cabinet require.

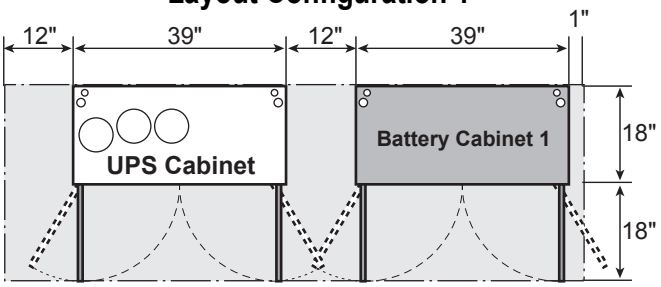
10 kVA (7.0 kW), 7.5 kVA (7.5 kW), 10 kVA (10 kW), 12.5 kVA (8.85 kW), 12.5 kVA (12.5 kW), 15 kVA (10.5 kW), 15 kVA(15 kW), 20 kVA (14 kW)

Layout Configuration 3

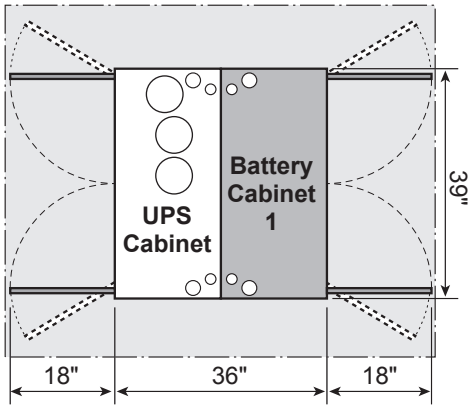




Layout Configuration 1

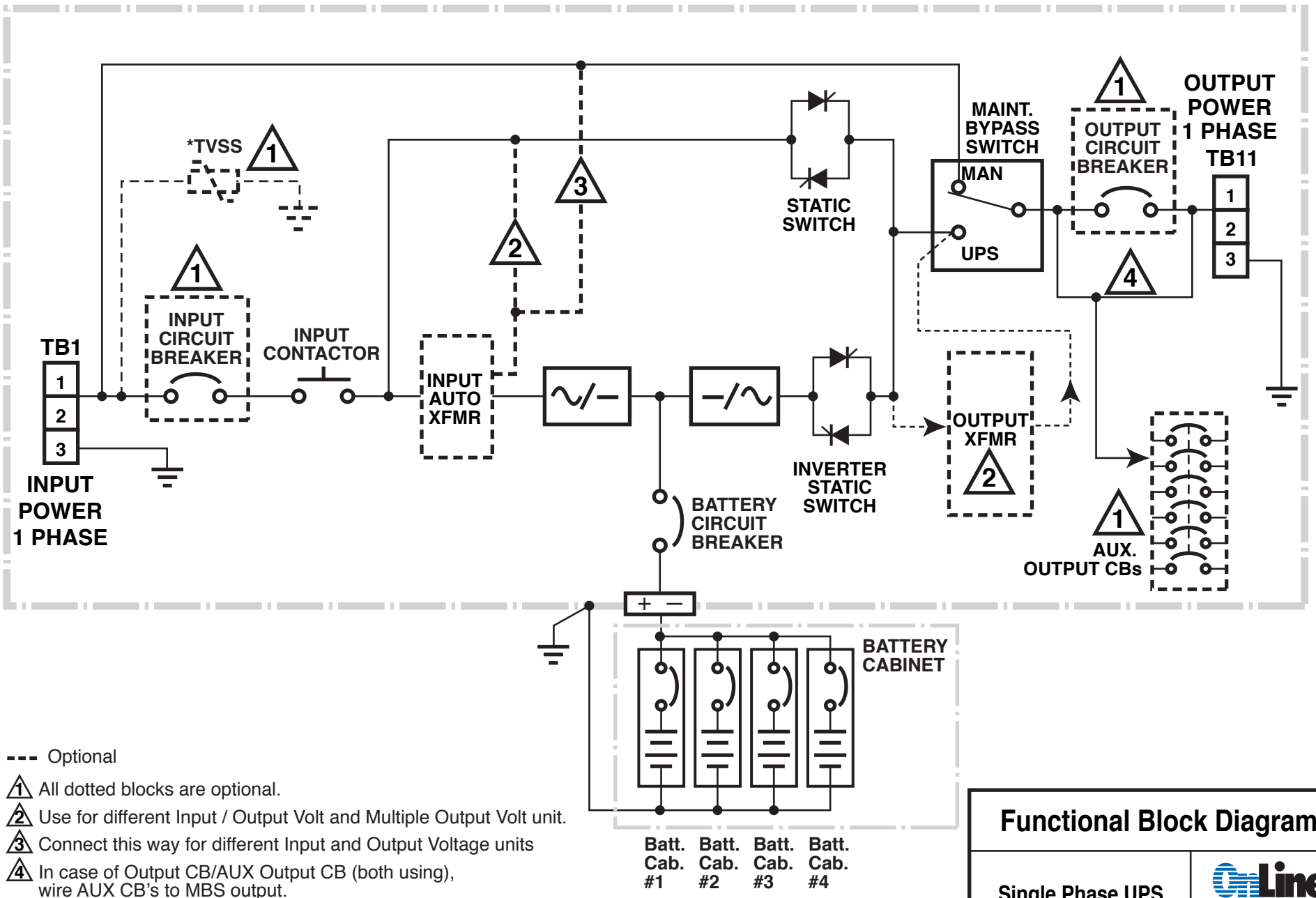


Layout Configuration 2



Drawn by: Chun Chi	Date: 2/1/06	**Battery Cabinet Installations**	
Chkd.:	Date:	1 Phase UPS with 90 Min Battery Backup	OnLine POWER
Appvd.:	Date:		6001-033-02 Rev A

Rev. A ECO # 8434



--- Optional

1 All dotted blocks are optional.

2 Use for different Input / Output Volt and Multiple Output Volt unit.

3 Connect this way for different Input and Output Voltage units

4 In case of Output CB/AUX Output CB (both using), wire AUX CB's to MBS output.

* Standard for Fire Alarm Backup (FAB) System

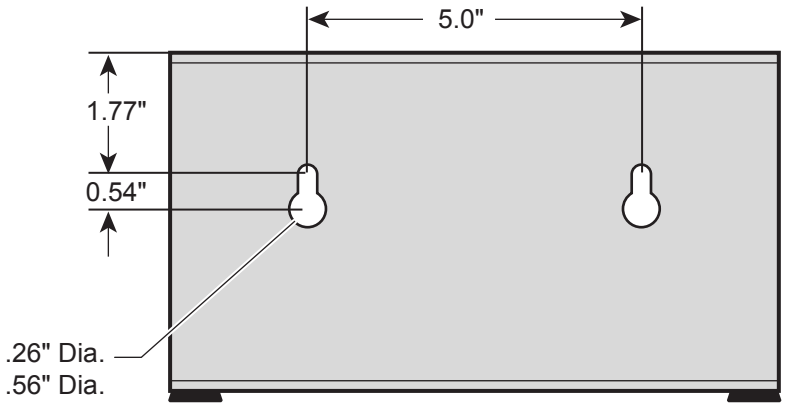
Functional Block Diagram

Single Phase UPS

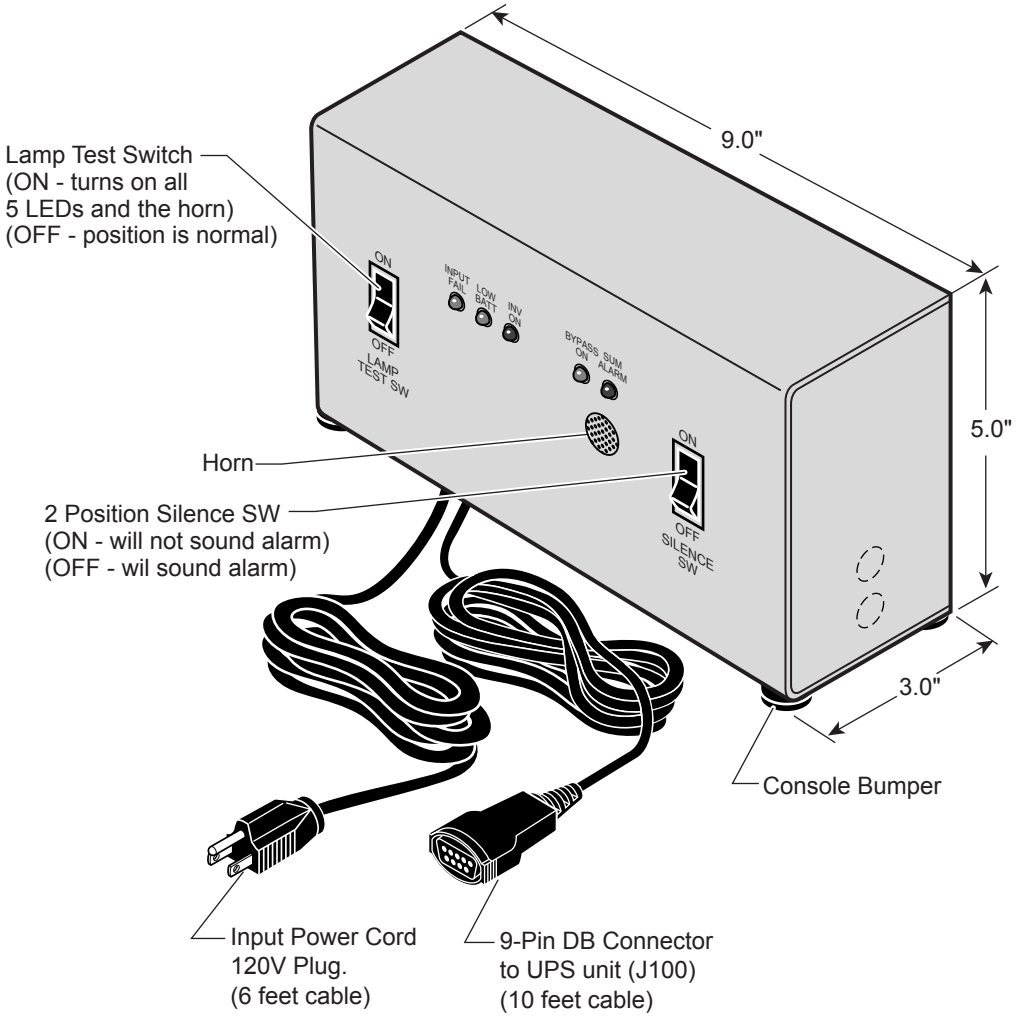
OnLine POWER

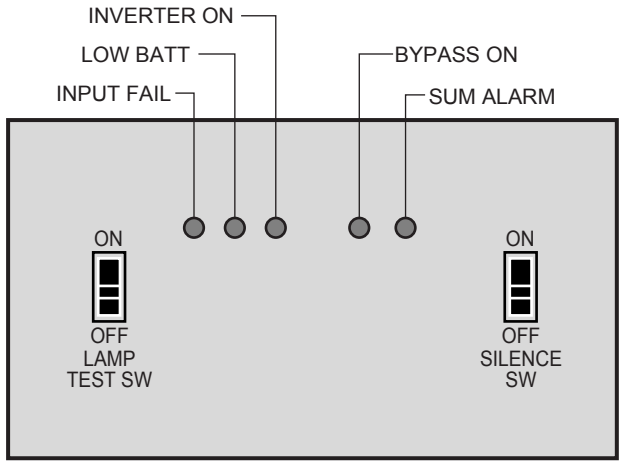
6001-033-03 Rev B

Remote Status Panel assembly as shown includes:
□ -□10 feet cable with DB Connector.
□ -□6 feet Power Cord with 120 Plug.
□ Contact Factory for other cable length.
Available in console mount style.
Finish in Black
P/N: 9100-1020-03 - Single Phase
P/N: 9100-1020-04 - Three Phase



REAR VIEW
(Wall Mounting)





FRONT VIEW

Drawn by: Chun Chi	Date: 7/14/05	**UPS Remote Status Panel**	
Chkd.:SHERRI S.	Date:7/15/05	Installation Drawing	OnLine POWER
Appvd.:H. BAIK ECO#7789	Date:7/15/05		9100-1020-XX Rev A

LOADS & DISTRIBUTION: CABINET

LIVE LOAD PER SHELF (BASED ON CLIENT SUPPLIED DATA) = wLL
DEAD LOAD PER SHELF = wDL
SEISMIC BASE SHEAR DETERMINED IN ACCORDANCE WITH SECTION 1630.2.1

WHERE: V = ((2.5 x Ca x I) / R) x Wtotal
Wtotal = (wLL/1 + wDL)
SEISMIC ZONE = 4
Ca = 0.44Na WHERE Ca = 0.44Na AND Na = 1

I = 1.00
SOIL COEF. = Sd
R (LONGITUDINAL) = 5.6 (SECTION 2228.5.2)
R (TRANVERSE) = 4.4 (SECTION 2228.5.2)
wDL = 20 LB
n = 1 SINGLE ROW UNITS
DEPTH = 18 in

LONGITUDINAL DIRECTION:
Vlong = [2.5*0.44*1*(2050/1+100)/5.6]/1.4
= 302 lb
Fi = V Whi/ ∑Wh

TRANSVERSE DIRECTION:
Vtrans = [2.5*0.44*1*(2050/1+100)/4.5]/1.4
= 384 lb
Fi = V Whi/ ∑Wh

SEISMIC DISTRIBUTION:

LEVEL	h IN	WEIGHT LB	HEIGHT IN	W X H LB-IN	Fi (long) LB	Fi (trans) LB
1	3.0	410	3.0	1,230	4.9	6.2
2	17.0	410	20.0	8,200	32.6	41.5
3	17.0	410	37.0	15,170	60.3	76.8
4	17.0	410	54.0	22,140	88.1	112.1
5	17.0	410	71.0	29,110	115.8	147.3
	71 IN			∑ = 75,850	302 LB	384 LB

TOTAL FRAME LOAD = 2150 LB

OVERTURNING ANALYSIS: CABINET

ANALYSIS OF OVERTURNING WILL BE BASED ON SECTION 2228.7.1
DEPTH = 18 in
TOP LEVEL HEIGHT = 71 in

FULLY LOADED:
Total Shear = 384 lb
Mot = ∑(Fi*hi) * 1.15
= 23,233 in-lb
Mst = ∑(Wp+wDL)*D/2
= (2050 lb + 100 lb)*18 in/2
= 19,350 in-lb
Puplift = 1(Mot - Mst)/Depth
= (23233-19350)/18
= 216. lb <= UPLIFT

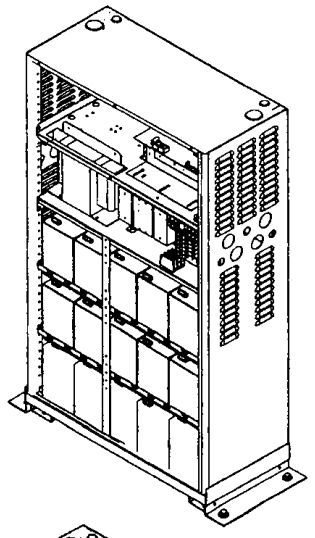
TOP SHELF LOADED:
Shear = 77 lb
Mot = Vtop * ht
= 77 lb * 71 in
= 5,452 in-lb
Mst = (Wp+wDL)*D/2
= (410 lb + 100 ib)*18/2
= 4,590 in-ib
Puplift = 1(Mot - Mst)/Depth
= 48 lb <= UPLIFT

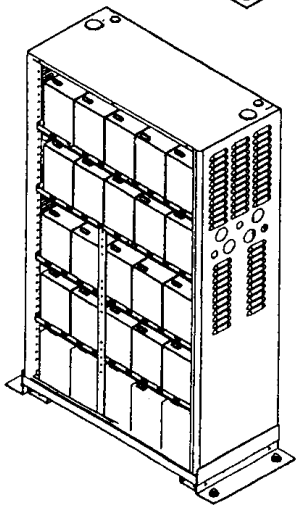
ANCHORS
QUANTITY = 2
PULLOUT = 1250 LB <=== 33 1/3% INCREASE FOR SHORT TEM LOADING DUE TO SEISMIC
SHEAR = 2453 LB <=== 33 1/3% INCREASE FOR SHORT TEM LOADING DUE TO SEISMIC
Eq. = (Ps/Pt) ^ 5/3 + (Vs/Vt) ^ 5/3 ≤ 1.0

INTERACTION EQUATION:
FULLY LOADED = (216 lb/2500 lb) ^ 5/3 + (192 lb/4906 lb) ^ 5/3
= 0.02 <1.0 OK

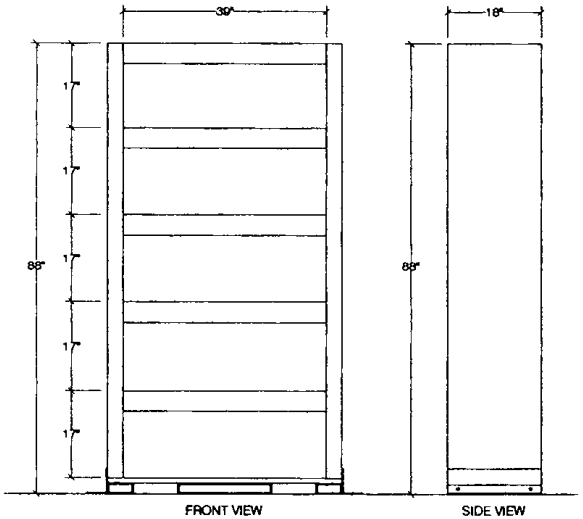
TOP SHELF LOADED = (48 lb/2500 lb) ^ 5/3 + (38 lb/4906 lb) ^ 5/3
= 0.00 <1.0 OK

USE (2) 1/2"Ø x 3-1/2" MIN. EMBED. HILTI KWIK BOLT II (I.C.B.O. #4827) OF APPROVED EQUAL.
PULL OUT CAPACITY IS THAT OF \WITHOUT SPECIAL INSPECTION.



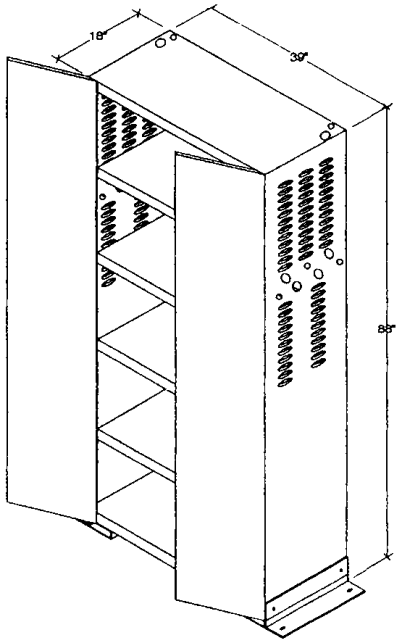


TYPICAL LOADING PROFILE



FRONT VIEW SIDE VIEW

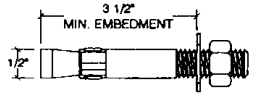
CABINET ELEVATIONS



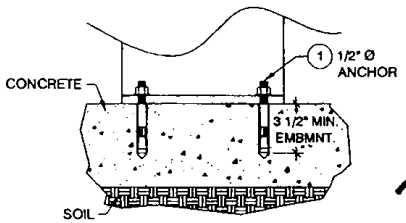
GENERAL CONFIGURATION

NOTES:

1. DESIGNED PER CHAPTER 22, DIVISION X OF THE 2001 CBC & 2002 L.A. COUNTY BLDG. CODE. SEISMIC ZONE 4, Na = 1.0.
2. STORAGE CAPACITY: 410# PER LEVEL.
3. ASTM A570 FOR SHAPE Fy = 50,000 PSI GRADE 50.
4. ALL BOLTS A307 (UNLESS OTHERWISE NOTED).
5. ANCHORS HILTI KWIK BOLT II, ICC #ESR-1355 OR APPROVED EQUAL.
6. SPECIAL INSPECTION IS NOT REQUIRED FOR ANCHOR INSTALLATION.
7. CONCRETE 5" THICK x 2,500 PSI.
8. SOIL BEARING PRESSURE 1,000 PSF.



(2) REQ'D PER BASE PLATE



1 ANCHOR

REV.	DATE	BY	DESCRIPTION
1	03/22/06	V.L.	ADD TYPICAL LOADING PROFILE

REGISTERED PROFESSIONAL ENGINEER SAL E. FATEEN No. 25[illegible] Exp 12-31-[illegible] CIVIL STATE OF CALIFORNIA

SEIZMIC EST. 1985

SEIZMIC
MATERIAL HANDLING ENGINEERING
161 Atlantic Street
Pomona, California 91768
Tel.(909)869-0969-(909)869-0961

TYPE: ON LINE PWR	DRAWN BY: L.E.	DATE: 7/15/04
CALIFORNIA CONTRACTORS LICENSE NO.865374	LAST REV. BY: V.L.	DATE: 03/22/06
	APRVD BY: SAL E. FATEEN	SCALE: N.T.S.

DESCRIPTION: **CABINET DETAIL**

ADDRESS: **ON LINE POWERS, INC.**
5940 TRIUMPH STREET
COMMERCE, CA 90040

DRAWING NUMBER: **04-0959A**