

SUMMARY OF EQUIPMENT

THE FIRSTLINE UNINTERRUPTIBLE POWER SUPPLY (UPS) IS A TRUE ON-LINE, DOUBLE CONVERSION, THREE PHASE SYSTEM THAT CAN PREVENT THE LOSS OF ELECTRONIC INFORMATION AND MINIMIZE EQUIPMENT DOWN TIME.

THE FIRSTLINE UPS CONSTANTLY MONITORS THE INCOMING ELECTRICAL POWER AND PROTECTS THE CONNECTED LOAD BY REMOVING VOLTAGE SPIKES, SAGS, TRANSIENTS, AND OTHER DAMAGING IRREGULARITIES THAT ARE COMMON IN COMMERCIAL UTILITY POWER. THE UPS SUPPLIES THE CLEAN, CONSISTENT POWER THAT SENSITIVE ELECTRONIC EQUIPMENT REQUIRES FOR RELIABLE OPERATION. DURING BROWNOUTS, BLACKOUTS, AND OTHER POWER INTERRUPTIONS, THE BATTERIES PROVIDE EMERGENCY POWER TO SAFEGUARD OPERATION.

THE FRONT DISPLAY PANEL PROVIDES ACCESS TO DETAILED INFORMATION REGARDING THE STATUS OF THE UTILITY, LOAD, AND FIRSTLINE UPS.

THE BLOCK DIAGRAM BELOW SHOWS THE MAIN FUNCTIONAL SUBASSEMBLIES OF THE FIRSTLINE UPS. THE AC THREE PHASE UTILITY SUPPLY IS RECTIFIED TO PROVIDE DIRECT CURRENT. THE INVERTER WHICH PROVIDES THE THREE PHASE OUTPUT, AND ELECTRONIC STATIC SWITCH.

PROVIDED THE UTILITY IS WITHIN LIMITS, THE INVERTER WILL MATCH THE OUTPUT FREQUENCY WITH THE UTILITY FREQUENCY. THE INVERTER HAS ITS OWN INTERNAL CONTROL TO STABILIZE THE OUTPUT FREQUENCY IF THE UTILITY FREQUENCY IS OUT OF LIMITS. THE ELECTRONIC STATIC SWITCH SWITCHES THE OUTPUT FROM THE INVERTER TO THE UTILITY, WITHOUT INTERRUPTION, TO MEET ANY LOAD CURRENT SURGES.

ENVIRONMENTAL

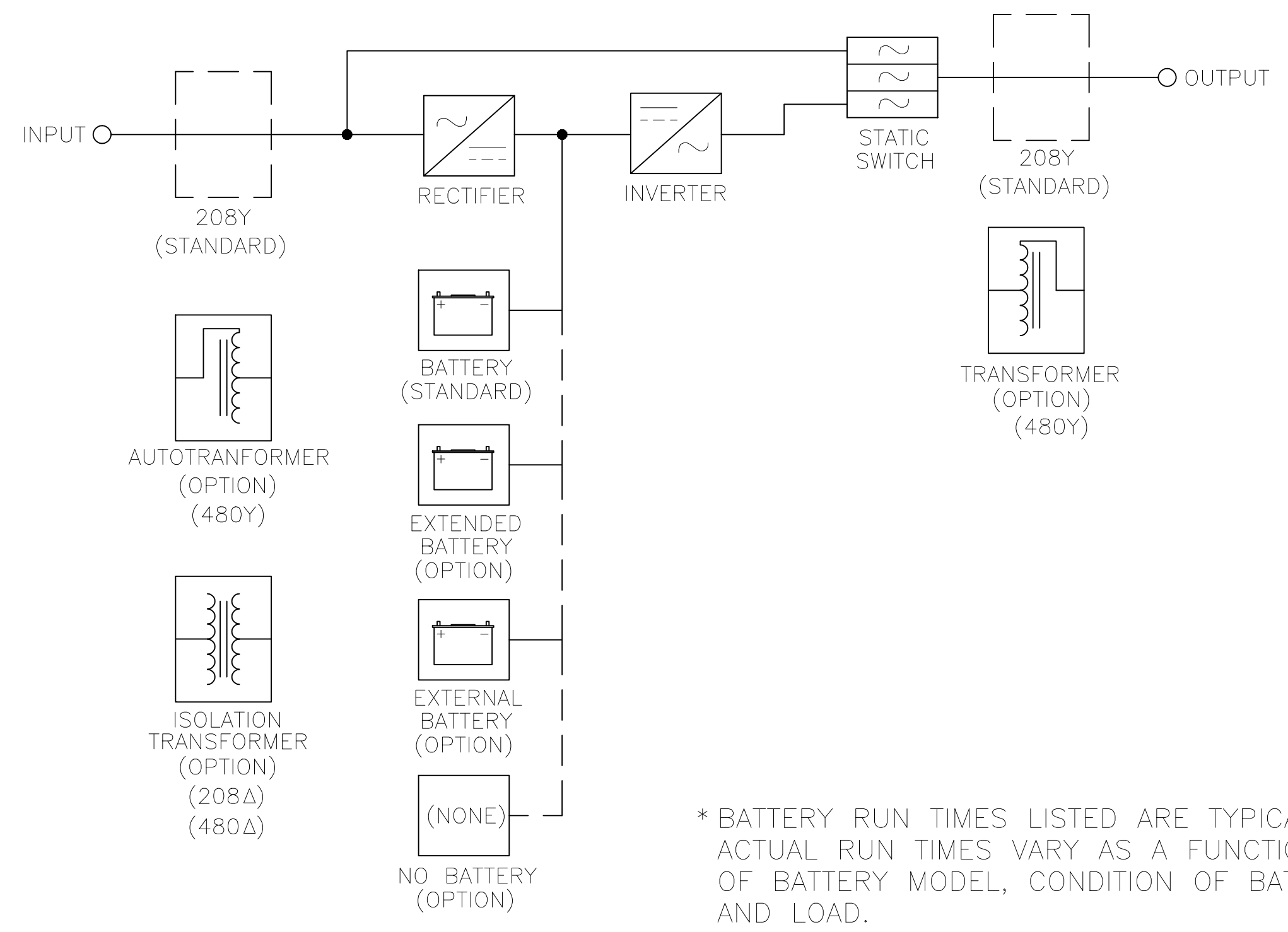
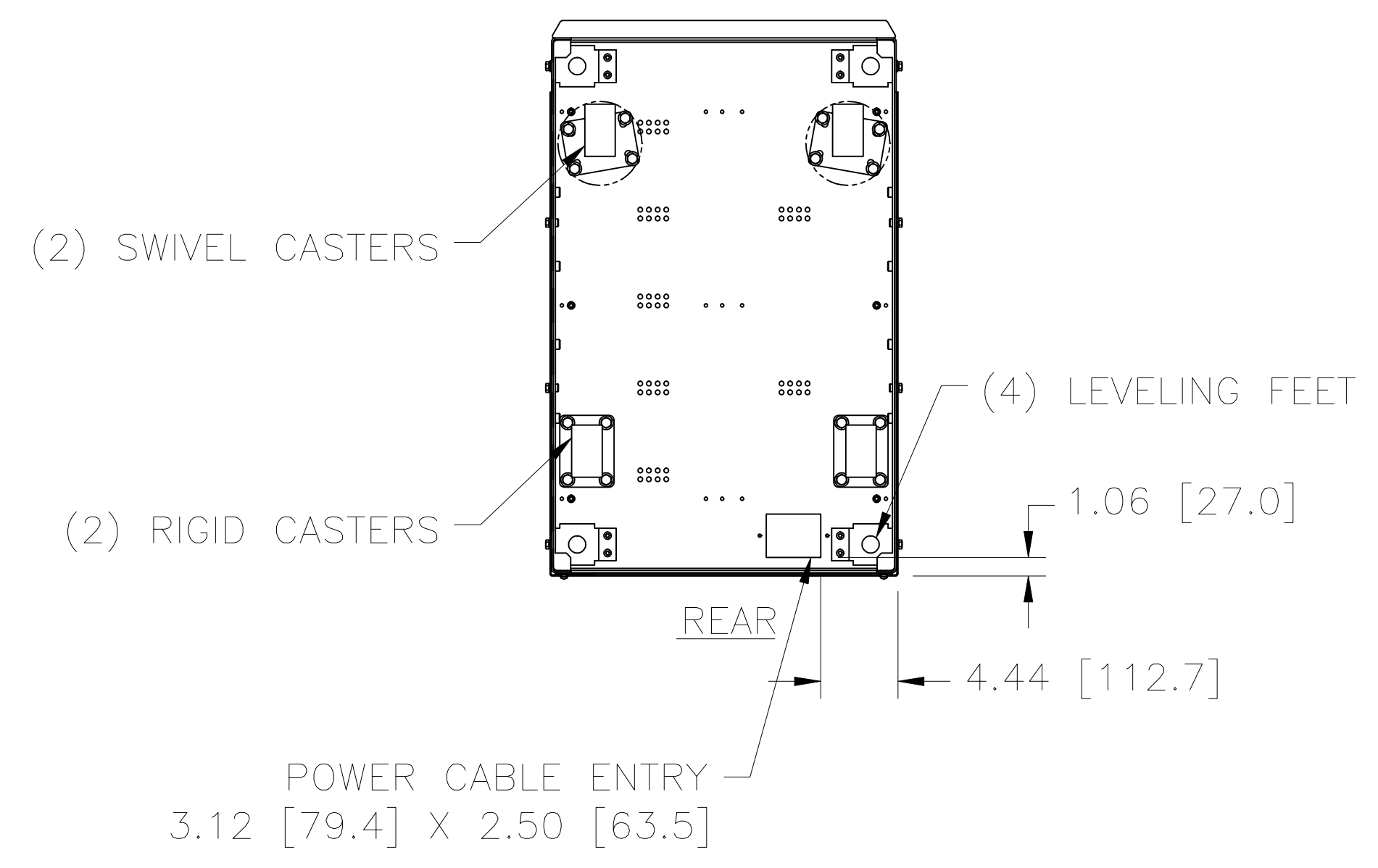
OPERATING TEMPERATURE: 0°C TO 40°C
 ALTITUDE: 0-3300 FEET [1000 METERS] (WITHOUT DERATING)
 RELATIVE HUMIDITY: 0-95%, NON-CONDENSING

SERVICE CLEARANCES

FROM SIDE OF CABINET: 24.00 [609.6]
 FROM FRONT OF CABINET: 36.00 [914.4]

UL LISTED TO UL 1778, FILE NO.: E191175
 220Y/127 MODELS ARE NOT UL LISTED

NOTE: ADD -1 TO MODEL NUMBER FOR 208V OR 480V DELTA INPUT OPTION.



* BATTERY RUN TIMES LISTED ARE TYPICAL. ACTUAL RUN TIMES VARY AS A FUNCTION OF BATTERY MODEL, CONDITION OF BATTERY AND LOAD.

FIRSTLINE UPS SPECIFICATIONS

MODEL	KVA	INPUT VOLTAGE (+10%, -20%) 60 HZ	OUTPUT VOLTAGE (±1%) 60 HZ	RATED INPUT CURRENT (AMPS)	MAXIMUM OUTPUT CURRENT (AMPS)	BATTERY RUN TIME (MINUTES)*
FLU-10S-20-1	10	208Y/120	208Y/120	34	28	9
FLU-10S-22-1	10	220Y/127	220Y/127	34	26	10
FLU-10S-20-2	10	208Y/120	208Y/120	34	28	24
FLU-10S-22-2	10	220Y/127	220Y/127	34	26	26
FLU-10S-42-1	10	480Y/277	208Y/120	15	28	9
FLU-10S-44-1	10	480Y/277	480Y/277	15	12	9

UNLESS OTHERWISE SPECIFIED, TOLERANCE IS ± DECIMALS: HOLES .005 ANGLES 1° DRAFT 1-1/2°

MATERIAL: ALL DIMENSIONS APPLY AFTER PLATING

TITLE: SPECIFICATION CONTROL DRAWING FIRSTLINE UPS 10 KVA SHORT UNINTERRUPTIBLE POWER SUPPLY

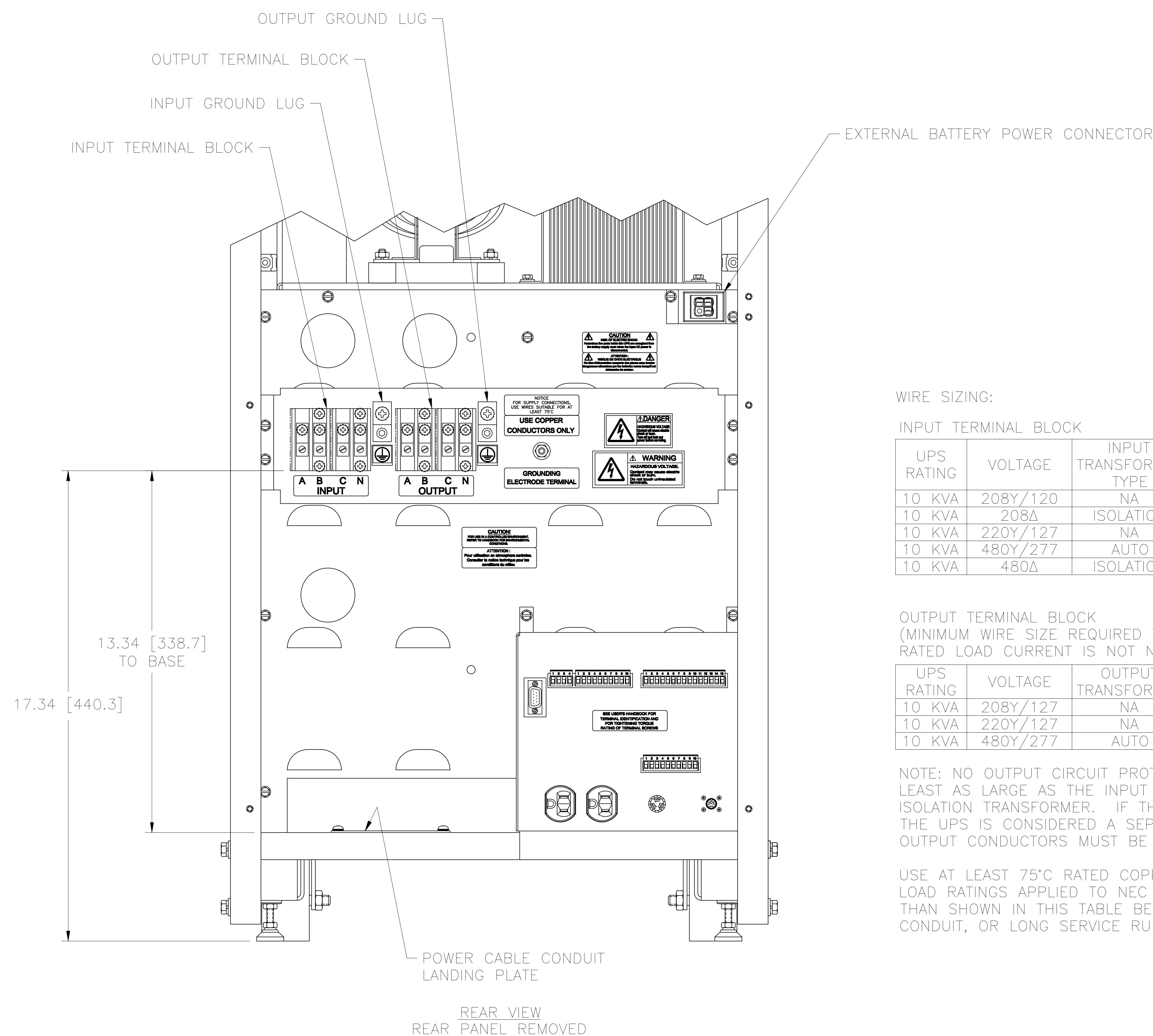
DRAWN BY: S.A. SMITH DATE: 12/9/09 FIRST USED ON: DO NOT SCALE DWG.

CHECKER: SAS DATE: 4/8/10 WEIGHT APPROX.: CAGE CODE: 83008

ENGINEER: R. BAKER DATE: 4/8/10 SCALE: 1/8 SHEET 1 OF 2

DWG. NO. 096-6009

STACO ENERGY PRODUCTS CO.
 A Components Corporation of America Company
 301 Cassin Boulevard Dayton, Ohio 45403 USA



WIRE SIZING:

INPUT TERMINAL BLOCK

UPS RATING	VOLTAGE	INPUT TRANSFORMER TYPE	PHASE CONDUCTOR MIN/MAX	NEUTRAL CONDUCTOR MIN/MAX	NEUTRAL CONDUCTOR W/NON-LINEAR LOADS MIN/MAX	GROUND CONDUCTOR MIN/MAX
10 KVA	208Y/120	NA	#6/2-0	#6/2-0	#6/2-0	#8/1-0
10 KVA	208Δ	ISOLATION	#6/2-0	(NONE)	(NONE)	#8/1-0
10 KVA	220Y/127	NA	#6/2-0	#6/2-0	#6/2-0	#8/1-0
10 KVA	480Y/277	AUTO	#10/2-0	#10/2-0	#6/2-0	#8/1-0
10 KVA	480Δ	ISOLATION	#10/2-0	(NONE)	(NONE)	#8/1-0

OUTPUT TERMINAL BLOCK

(MINIMUM WIRE SIZE REQUIRED TO SUPPORT RATED LOAD. SMALLER WIRE MAY BE USED IF RATED LOAD CURRENT IS NOT NEEDED AND THE APPROPRIATE CIRCUIT PROTECTION IS APPLIED.)

UPS RATING	VOLTAGE	OUTPUT TRANSFORMER	PHASE CONDUCTOR	NEUTRAL CONDUCTOR	NEUTRAL CONDUCTOR W/NON-LINEAR LOADS	GROUND CONDUCTOR
10 KVA	208Y/127	NA	#8	#8	#6	#8
10 KVA	220Y/127	NA	#8	#8	#6	#8
10 KVA	480Y/277	AUTO	#12	#12	#10	#8

NOTE: NO OUTPUT CIRCUIT PROTECTION IS REQUIRED IF THE OUTPUT CONDUCTOR SIZES ARE AT LEAST AS LARGE AS THE INPUT CONDUCTORS, UNLESS THE UPS IS EQUIPPED WITH AN INPUT ISOLATION TRANSFORMER. IF THE UPS IS EQUIPPED WITH AN INPUT ISOLATION TRANSFORMER, THE UPS IS CONSIDERED A SEPARATELY DERIVED SOURCE AND CIRCUIT PROTECTION FOR THE OUTPUT CONDUCTORS MUST BE PROVIDED.

USE AT LEAST 75°C RATED COPPER WIRE. MINIMUM WIRE SIZE IS BASED ON 208Y/120 FULL LOAD RATINGS APPLIED TO NEC CODE TABLE 310-16. CODE MAY REQUIRE A LARGE AWG SIZE THAN SHOWN IN THIS TABLE BECAUSE OF TEMPERATURE, NUMBER OF CONDUCTORS IN THE CONDUIT, OR LONG SERVICE RUNS. FOLLOW LOCAL REQUIREMENTS.

UNLESS OTHERWISE SPECIFIED, TOLERANCE IS #		UNITS		TITLE:	
DECIMALS	HOLE	ANGLES	DRAFT	SPECIFICATION CONTROL DRAWING	
.XX .010	.005	1°	1-1/2°	FIRSTLINE UPS 10 KVA SHORT UNINTERRUPTIBLE POWER SUPPLY	
.XXX .005				DRAWN BY S.A. SMITH DATE 12/9/09 FIRST USED ON DO NOT SCALE DWG.	
MATERIAL:		ALL DIMENSIONS APPLY AFTER PLATING		CHECKER SAS DATE 4/8/10 WEIGHT APPROX. CAGE CODE 83008	DWG. NO. 096-6009
The information and design disclosed herein was originated by and is the property of STACO ENERGY PRODUCTS CO., which reserves all patent, proprietary, design, manufacturing, reproduction, use and sale rights therein, and to any article disclosed therein except to the extent rights are expressly granted to others. The foregoing does not apply to vendor proprietary parts.				ENGINEER R. BAKER DATE 4/8/10 SCALE 1/2 SHEET 2 OF 2	

