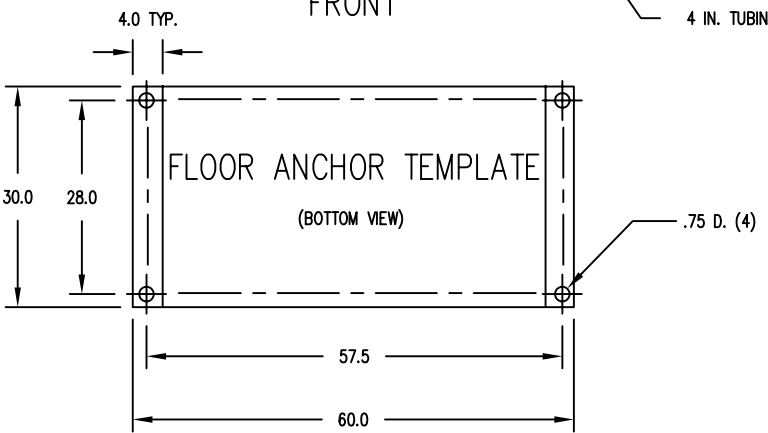
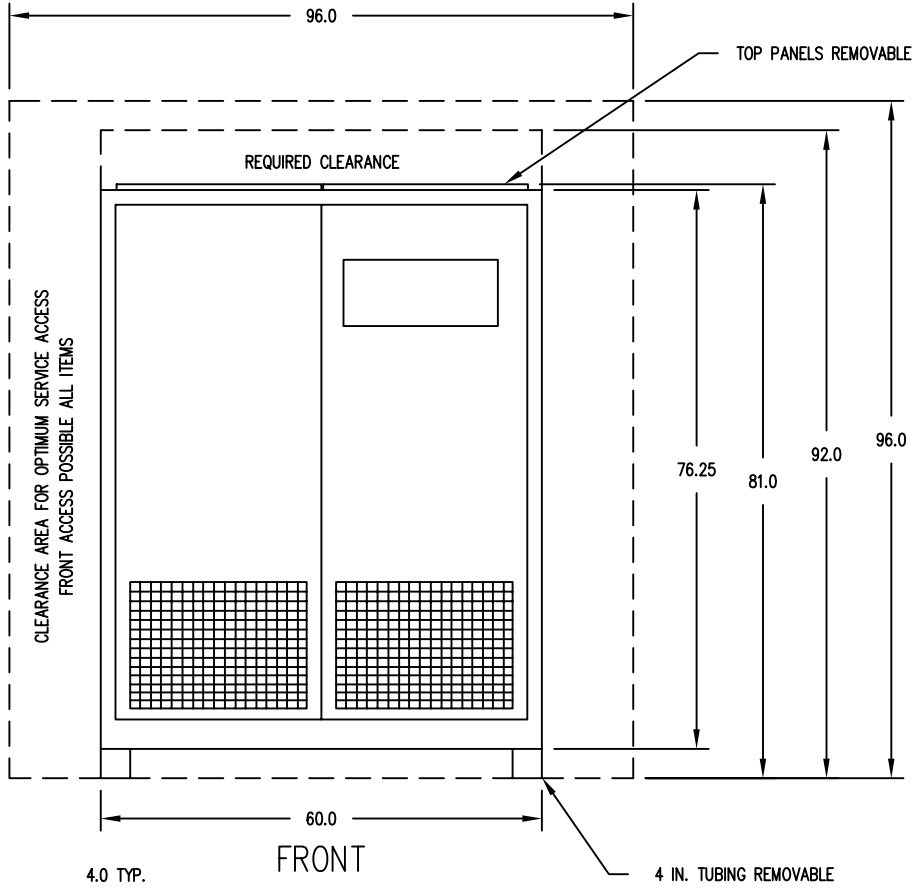


X = 3 FT. IF "NO LIVE OR GROUNDED PARTS ON OTHERSIDE OF WORKING SPACE." [1]

=3.5 FT. IF "GROUNDED PARTS ON THE OTHER SIDE." [1]

=4 FT. IF "EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORKSPACE." [1]

[1] = 1987 NEC SECTION 110-16



### NOTES

1. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.

### MECHANICAL DATA

WEIGHT: 2450 LBS.  
SIZE: 60 W x 30 D x 81 H  
PAINT TYPE: SHERWIN WILLIAMS POLANE T

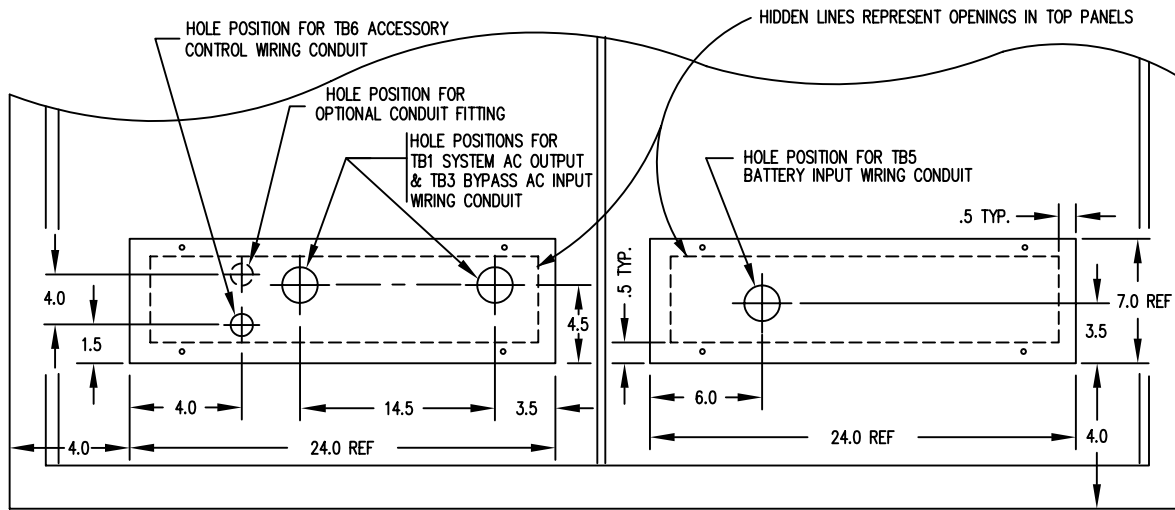
### THERMAL DATA

FOR SPEC. NoS. 5186-360D, 5187-362D:  
HEAT DISSIPATION @ 100% LOAD 11K BTU/HR MAX.  
CONVECTION COOLING  
OPERATING AMBIENT= 0 TO 40°C 20 KVA  
= 0 TO 50°C 18.75 KVA

### ENVIRONMENTAL DATA

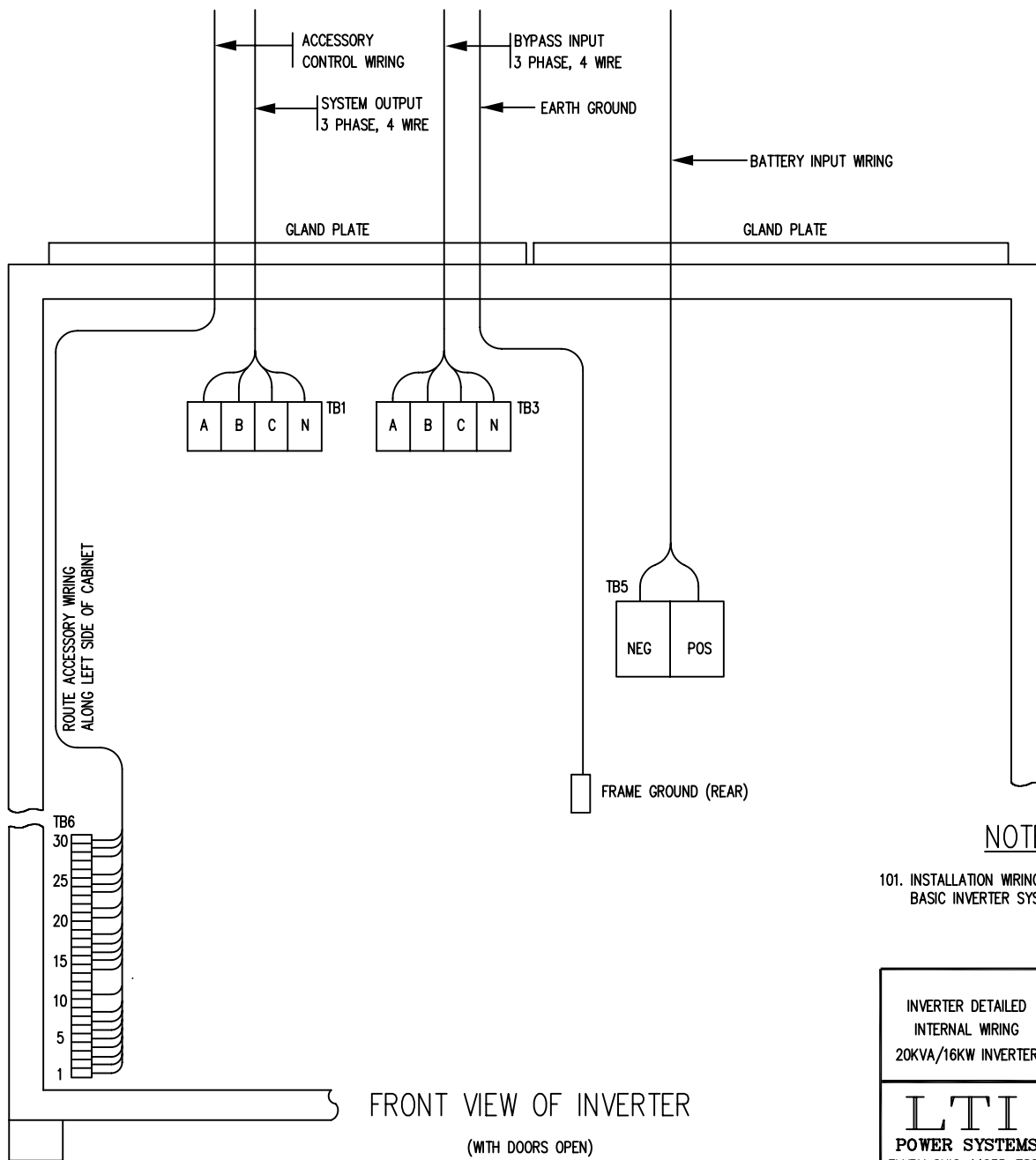
NEMA 1= INDOOR DUTY, OPEN VENTILATED, NON-CORROSIVE  
HUMIDITY RANGE= 10% TO 100% NON-CONDENSING  
ALTITUDE DERATING= NONE BELOW 7000 FT.  
3%/1000 FT. ABOVE  
AUDIBLE NOISE GENERATED < or = 68DBA, 5 FT. IN FRONT OF UNIT, 4 FT. FROM FLOOR

INSTALLERS' CONNECTIONS 20KVA/16KW, 60 HZ INVERTER	
DESIGN B. HOWALD	DATE
DRAWN WALLACE	DATE 4-24-89
CHKD	DATE
APPD	DATE
<b>LTI</b> POWER SYSTEMS ELYRIA, OHIO 44035-7822	
IC5187-362D IC5186-360D	
SHEET 1 OF 5	ISSUE



TOP VIEW OF INVERTER

RECOMMENDED GLAND PLATE PUNCHING DETAIL  
 (SEE FOLLOWING PAGES FOR RECOMMENDED WIRE AND CONDUIT SIZES)



NOTES

101. INSTALLATION WIRING NOT SUPPLIED WITH BASIC INVERTER SYSTEM

INVERTER DETAILED INTERNAL WIRING 20KVA/16KW INVERTER	IC5187-362D IC5186-360D
<b>LTI</b> POWER SYSTEMS ELYRIA, OHIO 44035-7822	
SHEET 2 OF 5	ISSUE

FRONT VIEW OF INVERTER

(WITH DOORS OPEN)

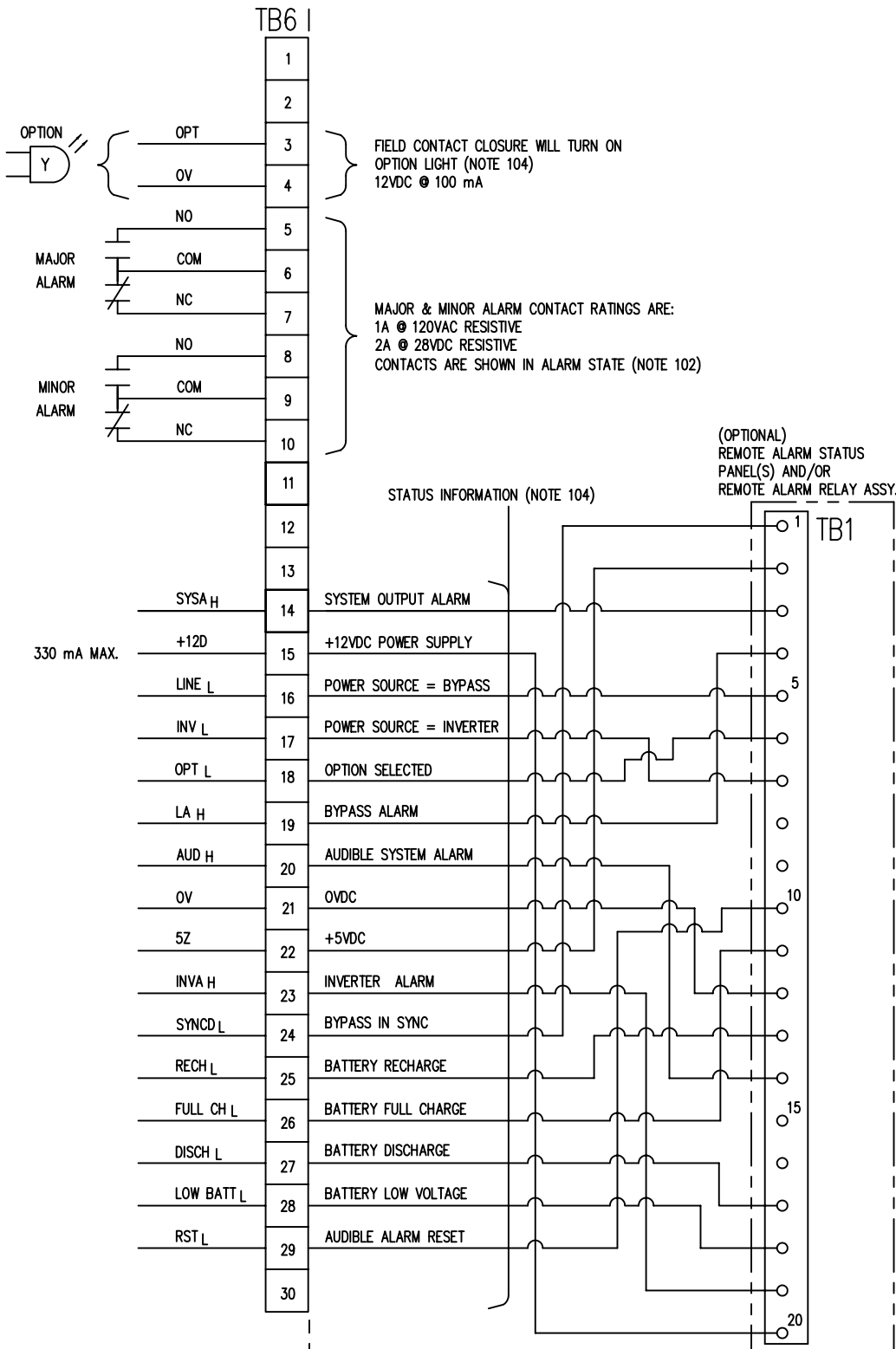
# INVERTER SYSTEM

# FIELD WIRING

(NOTE 103)

# NOTES

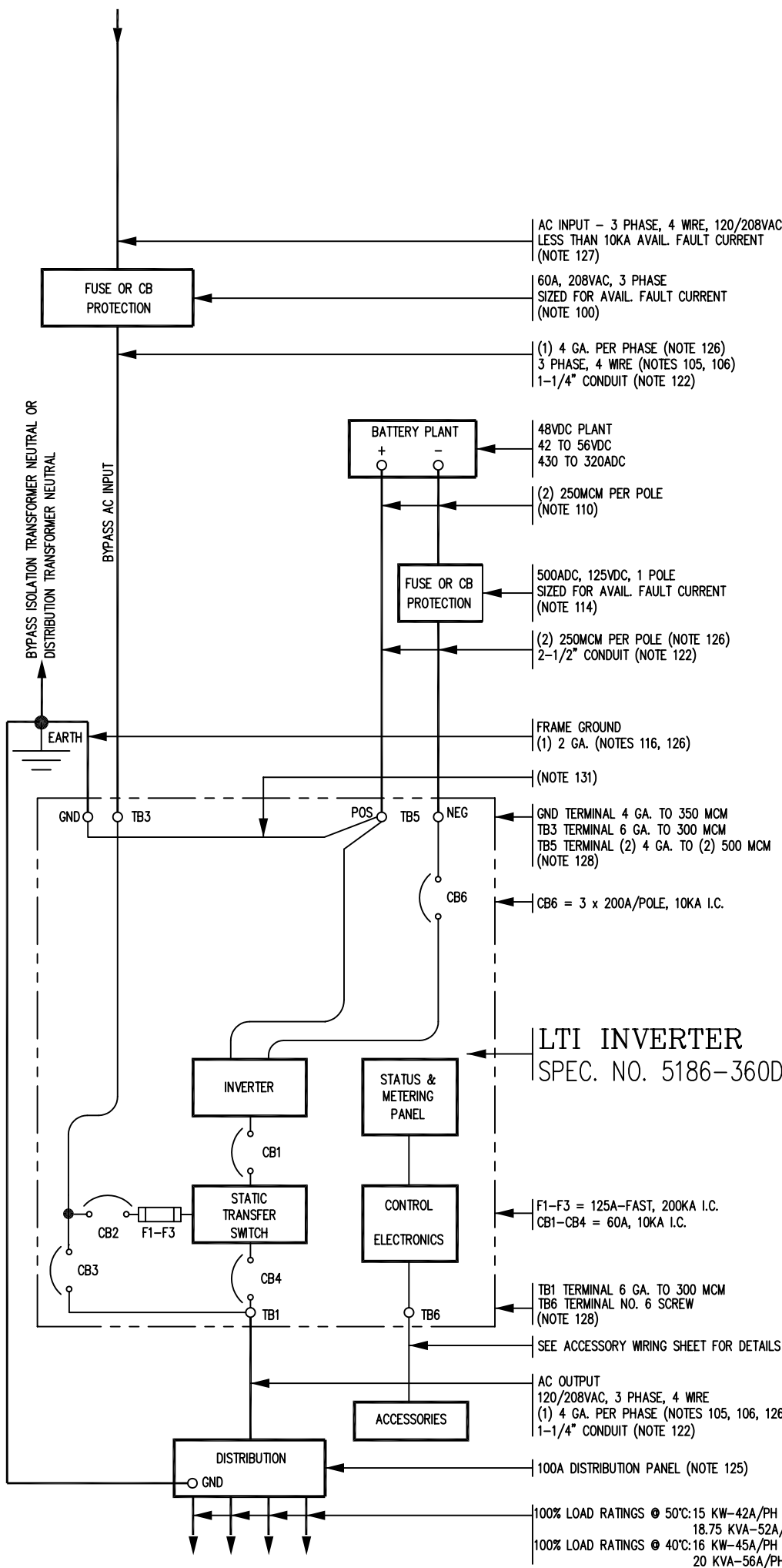
- 102. SIZE WIRES PER EXTERNAL LOAD VOLTAGE & CURRENT REQUIREMENTS. IF USED FOR 120VAC, RUN IN SEPARATE CONDUIT FROM STATUS WIRING.
- 103. ACCESSORY LEADS SHALL BE 22-28 GA. MULTI-CONDUCTOR STRANDED CABLE SUCH AS ALPHA NO. 5214 OR BELDEN NO. 9431 OR 16 GA. INDIVIDUAL WIRE. FIELD WIRES TO BE LUGGED FOR NO. 6 SCREW, MAX. LUG WIDTH < .31 IN.
- 104. INVERTER SYSTEM STATUS INFORMATION, 12VDC LEVELS. WIRES TO BE RUN IN CONDUIT SEPARATE FROM ALL AC SIGNALS. 100 FT. MAX. FOR 28GA. 1000 FT. MAX. FOR 16 GA.



ACCESSORY WIRING 20KVA/16KW INV.		IC5187-362D IC5186-360D
 LTI POWER SYSTEMS ELYRIA, OHIO 44035-7822		
SHEET 3 OF 5		ISSUE

# NOTES

- 100. SEPARATE DISCONNECTS RECOMMENDED. DISCONNECT OR INDICATION OF DISCONNECT STATUS TO BE WITHIN LINE OF SIGHT OF INVERTER SYSTEM.
- 105. WIRE SIZE RECOMMENDATIONS BASED ON 75°C. COPPER CONDUCTORS OPERATING IN 30°C. AMBIENT AND NEC TABLES 250-95 & 310-16. INCREASE CONDUCTOR SIZE FOR LONG RUNS.
- 106. WIRE SIZE BASED ON NEUTRAL CONDUCTOR CARRYING HARMONIC CURRENT EQUAL TO RATED PHASE CURRENT. SEE NEC TABLE 310-16, NOTES 8(a) AND 10(c). SIZE NEUTRAL CONDUCTOR LARGER IF SYSTEM CONTAINS HIGHER HARMONIC CURRENTS. NEUTRAL BUS WILL ACCEPT OVERSIZE OR DOUBLE NEUTRAL CONDUCTORS.
- 110. VOLTAGE DROP FOR 100 FT. LOOP LENGTH IS LESS THAN 1 VOLT USING RECOMMENDED WIRE SIZE. SEE INSTALLATION MANUAL FOR OTHER LOOP LENGTHS AND BATTERY RESERVE CALCULATIONS.
- 114. BATTERY DISCONNECT TO BE RATED FOR DC INTERRUPTING CAPACITY GREATER THAN FAULT CURRENT OF BATTERY PLANT (TYPICALLY 10,000 AMPS.)
- 116. ALL GROUNDS SHOWN SHALL BE CONNECTED SEPARATELY TO A SINGLE GROUNDING POINT AT THE BYPASS SERVICE EQUIPMENT, PER IEEE STD. 446-1980, FIG. 72.
- 122. CONDUIT SIZE BASED ON RECOMMENDED CONDUCTOR SIZE AND 1987 NEC, CHAPTER 9, TABLE 3A.
- 125. DISTRIBUTION PANEL SIZED TO SUPPORT INVERTER 100% RATING PER NEC CODE.
- 126. FOR WIRING ENTERING INVERTER CABINET, WIRE BEND RADIUS ALLOWANCE SET UP FOR WIRE SIZE LISTED. IF INCREASED SIZES ARE REQUIRED, ENTRY WIRING MUST BE SUFFICIENTLY FLEXIBLE.
- 127. ALLOWABLE SOURCE IMPEDANCE RANGE AS MEASURED AT INVERTER LINE TERMINALS:  
208V: .006 Ω TO .18 Ω  
480V: .019 Ω TO 1.0 Ω
- 128. TORQUE PRESSURE TERMINALS TO VALUE LISTED ON TERMINAL BLOCK OR VALUES LISTED IN UL1778.
- 129. ALL CURRENT RATINGS LISTED ARE RMS.
- 131. BATTERY PLANT POSITIVE GROUND CONNECTION PROVIDED IN INVERTER. JUMPER REMOVAL OPTIONAL AFTER INSTALLATION AND TESTING.

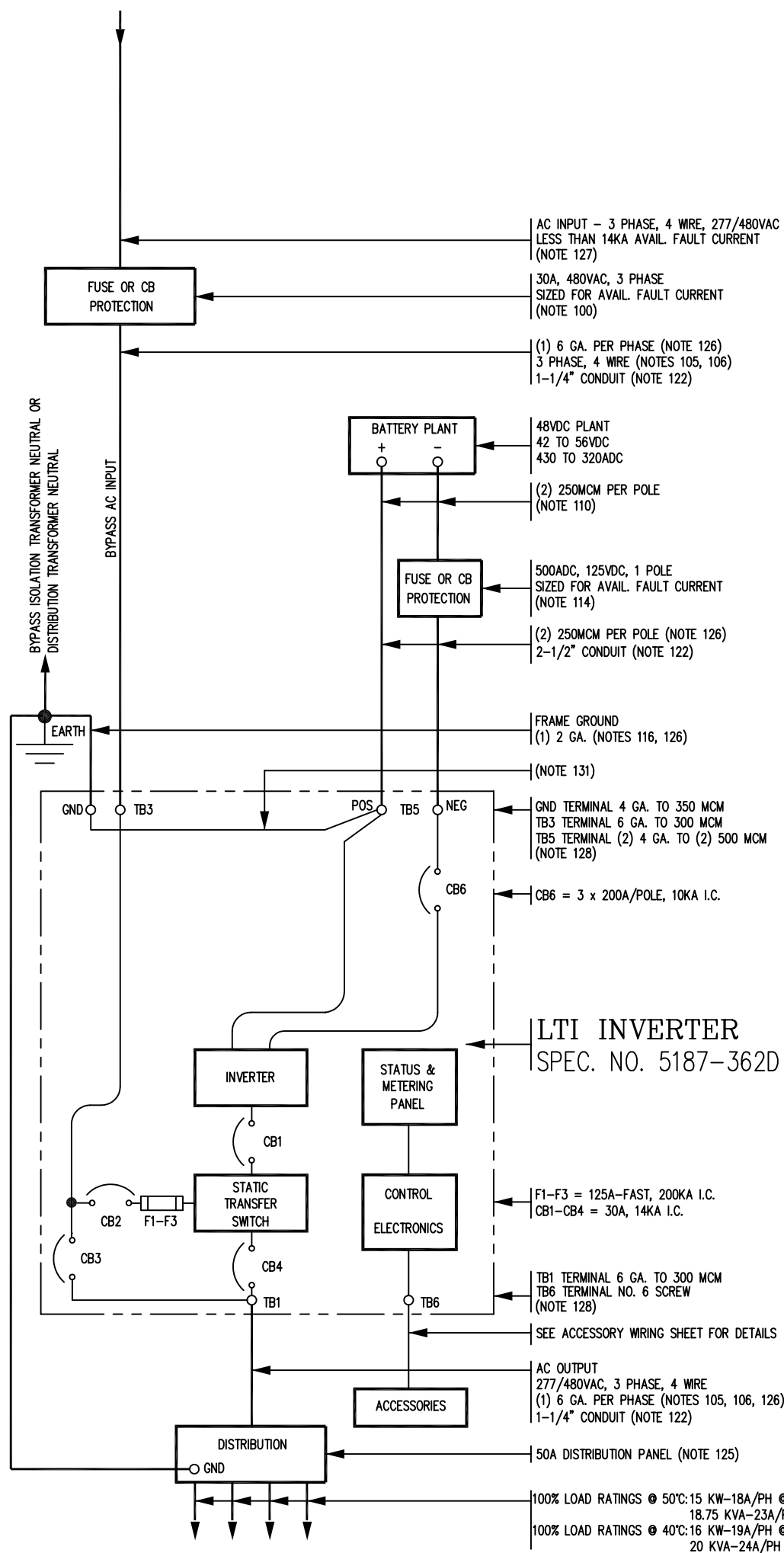


THIS SHEET FOR LTI INVERTER:  
SPEC. NO. 5186-360D

BLOCK SCHEMATIC FACILITY WIRING 20KVA/16KW INVERTER 120/208V OUT	IC5187-362D IC5186-360D
<b>LTI</b> POWER SYSTEMS ELYRIA, OHIO 44035-7822	SHEET 4 OF 5 ISSUE

# NOTES

- 100. SEPARATE DISCONNECTS RECOMMENDED. DISCONNECT OR INDICATION OF DISCONNECT STATUS TO BE WITHIN LINE OF SIGHT OF INVERTER SYSTEM.
- 105. WIRE SIZE RECOMMENDATIONS BASED ON 75°C. COPPER CONDUCTORS OPERATING IN 30°C. AMBIENT AND NEC TABLES 250-95 & 310-16. INCREASE CONDUCTOR SIZE FOR LONG RUNS.
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- 129. ALL CURRENT RATINGS LISTED ARE RMS.
- 131. BATTERY PLANT POSITIVE GROUND CONNECTION PROVIDED IN INVERTER. JUMPER REMOVAL OPTIONAL AFTER INSTALLATION AND TESTING.



THIS SHEET FOR LTI INVERTER:  
SPEC. NO. 5187-362D

BLOCK SCHEMATIC FACILITY WIRING 20KVA/16KW INVERTER 277/480V OUT	<p>IC5187-362D</p> <p>IC5186-360D</p>
<p><b>LTI</b></p> <p>POWER SYSTEMS ELYRIA, OHIO 44035-7822</p>	
SHEET 5 OF 5	