

GenSet Wiring Diagram Index

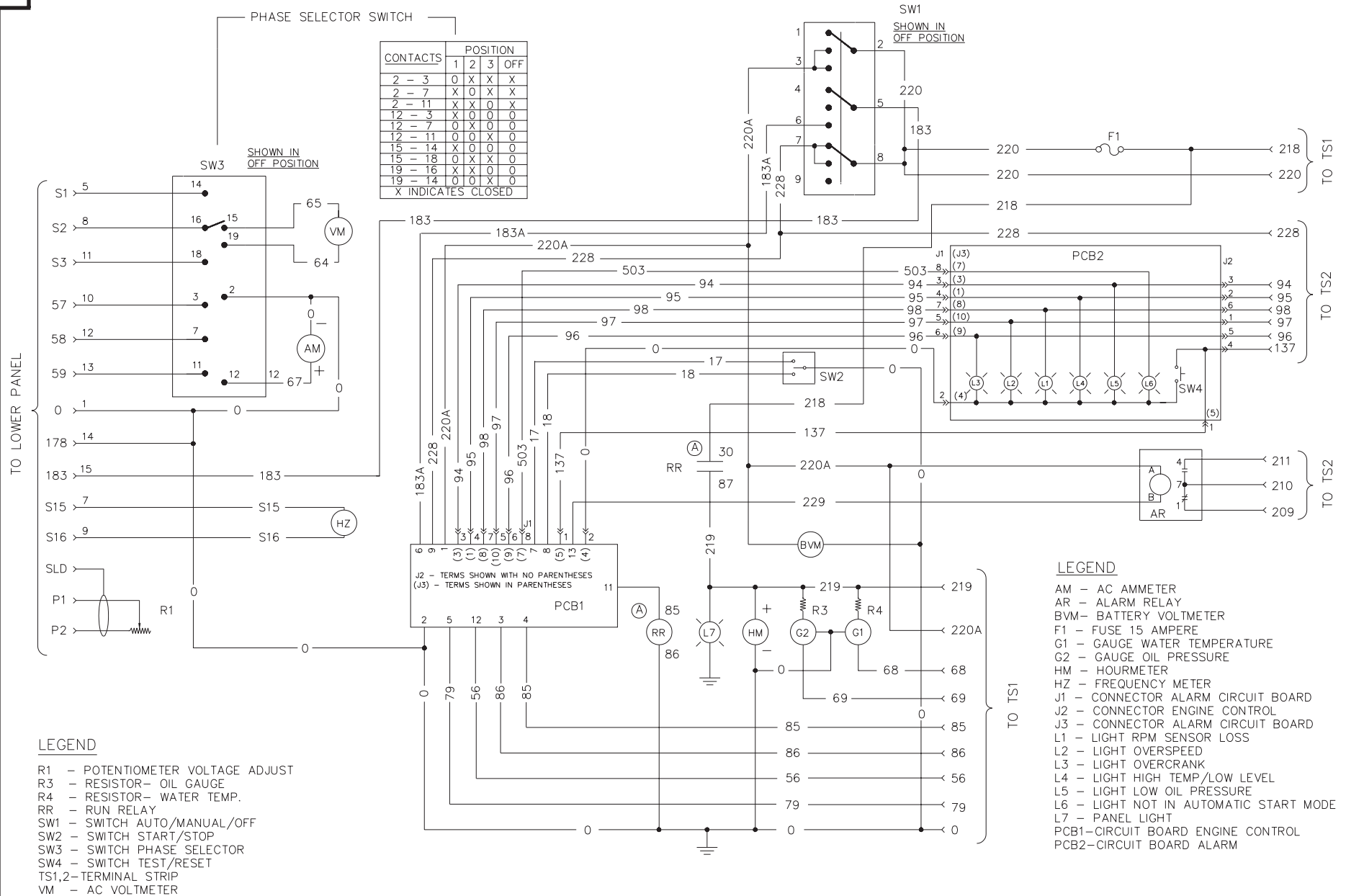
	SD400	SD500	SD625	SD800	SD1020
GenSet Schematic Diagram	A8506	A8506	A8508	A8510	A8510
GenSet Wiring Diagram	A8507	A8507	A8509	A8511	A8511
Alternator Connection Options	A8513	A8513	A8513	A8513	A8513
“C Panel” Interconnection Diagram	A7296	A7296	A7296	A7296	A7296
	SD1200, SD1635	SD1350, SD1500, SD1825, SD2000			
GenSet Schematic Diagram	C2097	C2349			
GenSet Wiring Diagram	C2096	C2350			

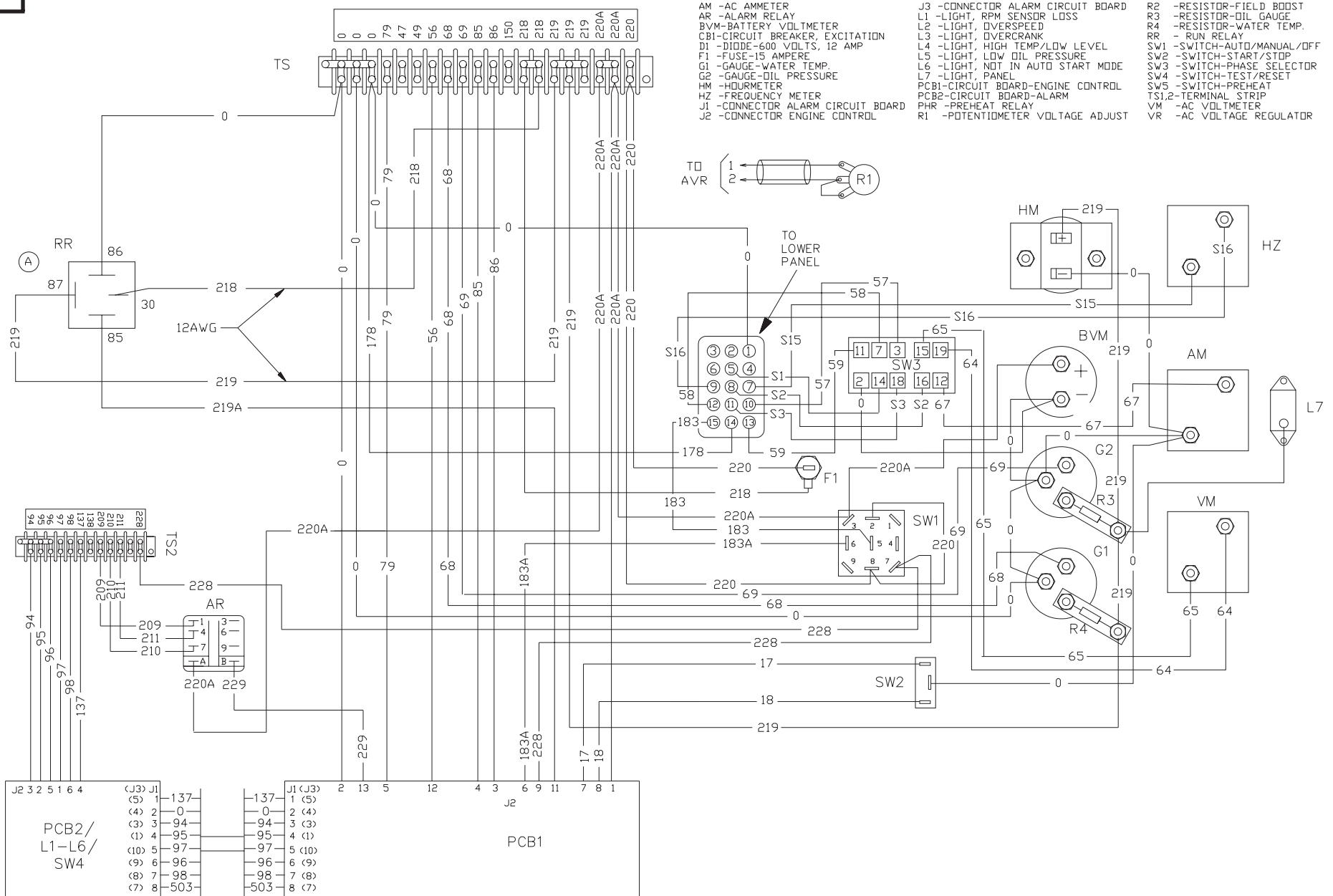
Control Panel Diagrams

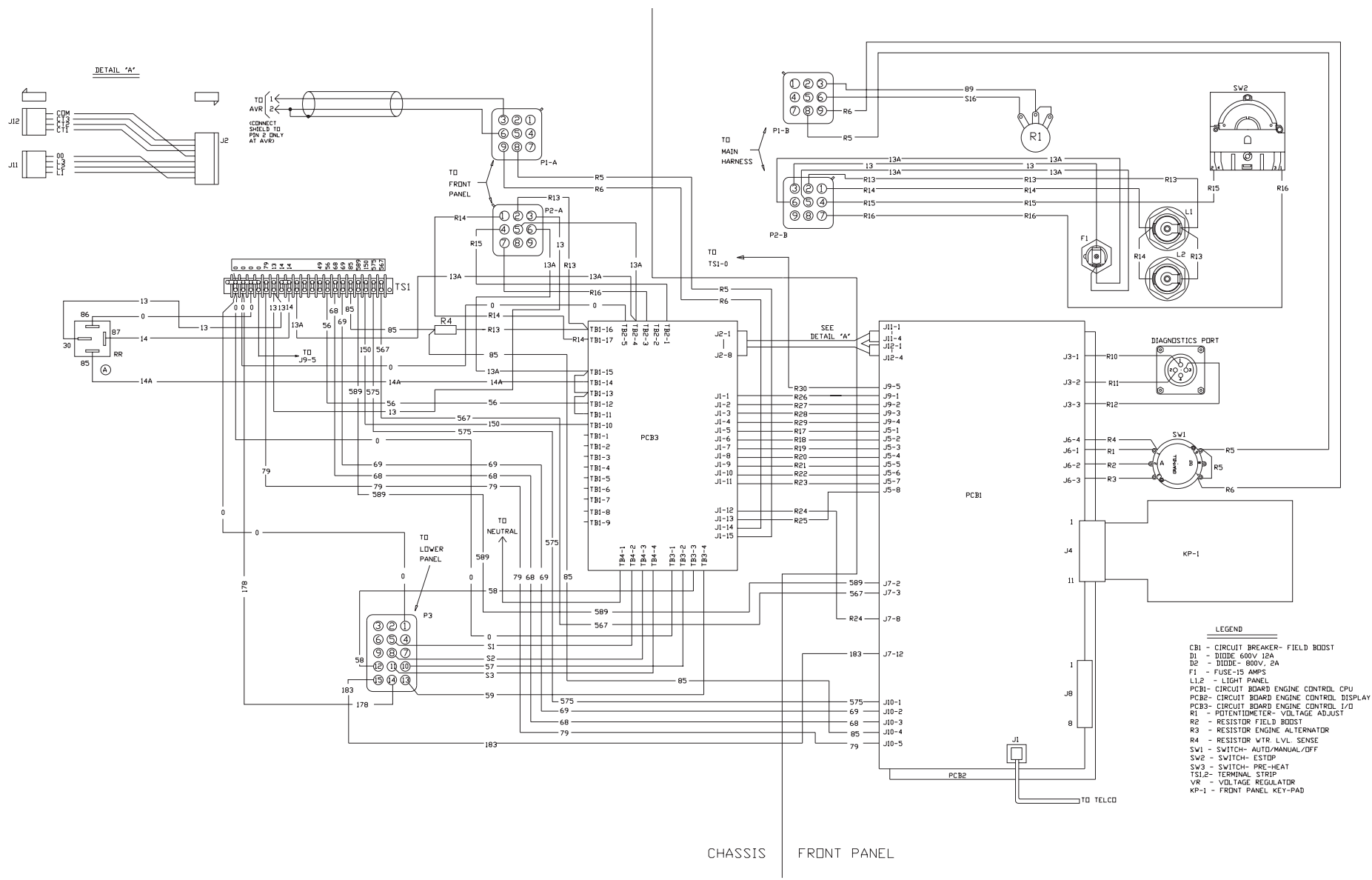
	"C Panel"	RamPower "D Panel"	"E Panel"
Schematic Diagram	A4722	A5799	C1375
Wiring Diagram	A4723	A5798	C1376
Remote Annunciator Harness		A8797	

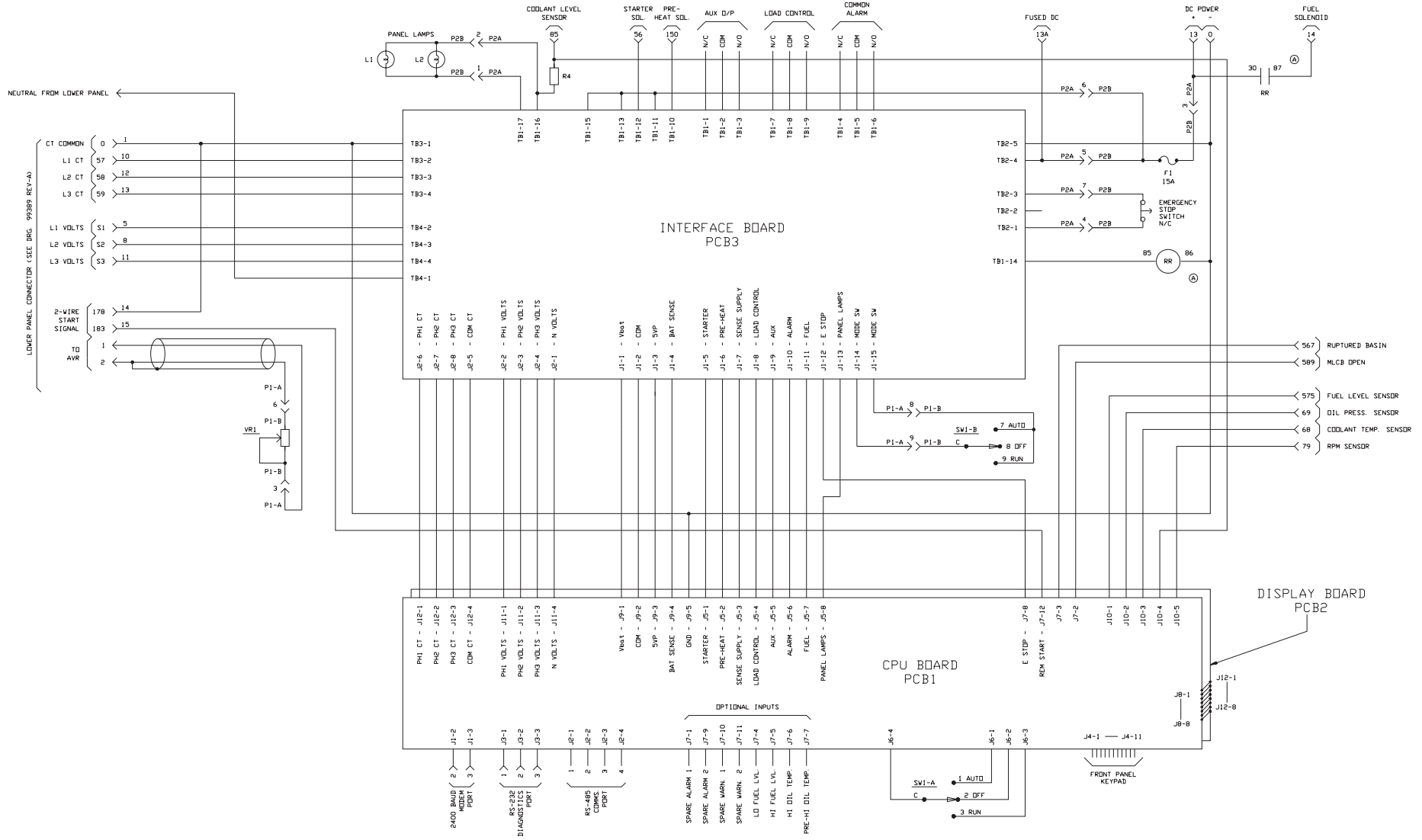
Control Panel Option Drawings

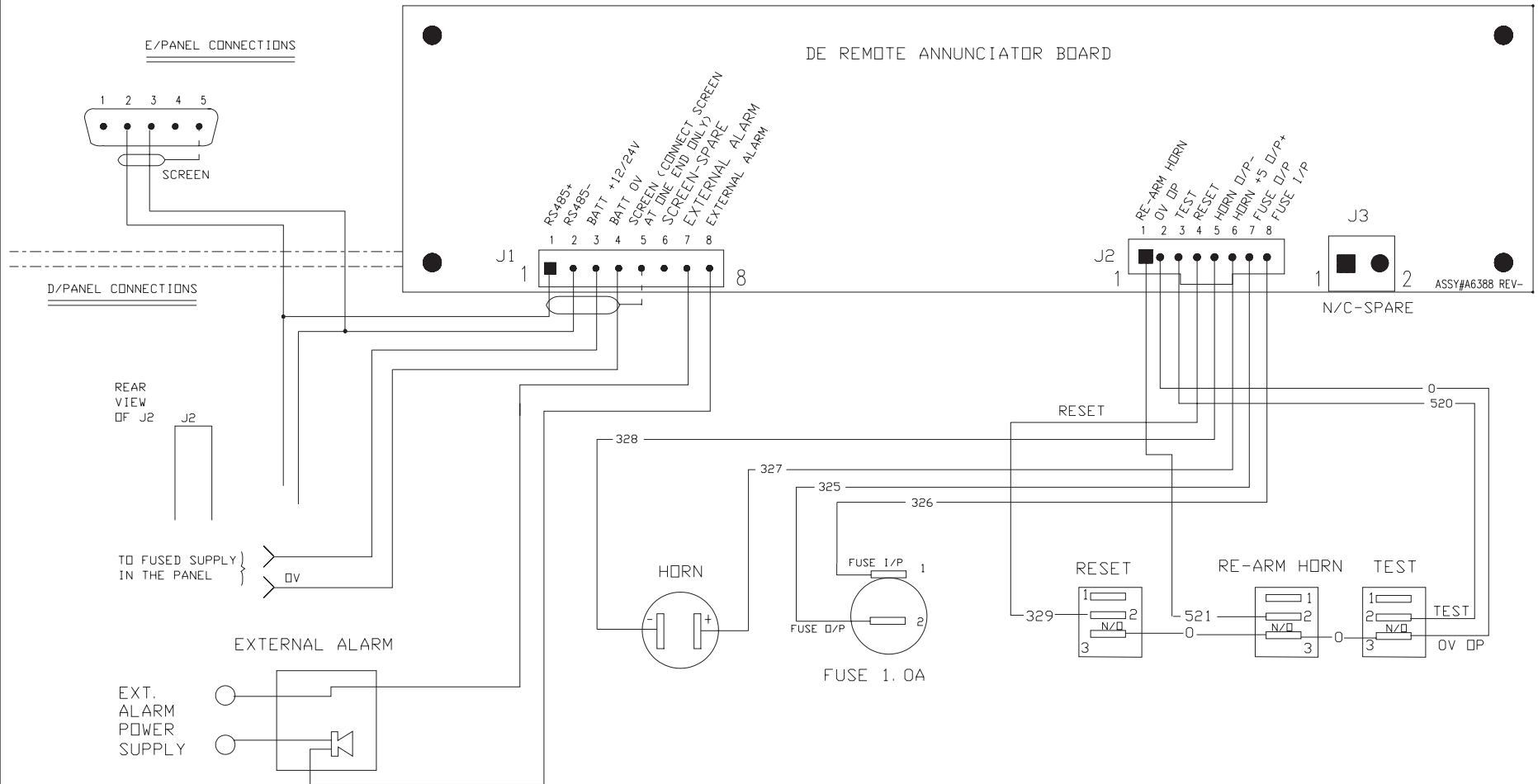
Drawing Number	Drawing Type	Description of Drawing	Rev Date
A6398	Wiring Diagram	Wiring for Overvolts Relay	01/05/98
A7169	Diagram	"D" and "E" Panel Remote Annunciator Connection Diagram	03/04/98
A8797	Schematic	"D" Panel Remote Annunciator Harness	08/13/98
C2455	Schematic	"C" Panel 24 VDC Shunt Trip	04/23/99
C2717	Wiring Diagram	Control Box Heater	05/11/99
C3115	Schematic	"C" Panel Additions to Diagram A4722	06/21/99
C3116	Wiring Diagram	"C" Panel Additions to Diagram A4723	06/21/99
C3256	Schematic	"E" Panel Shunt Trip	07/06/99
C3257	Wiring Diagram	"E" Panel Shunt Trip	07/06/99

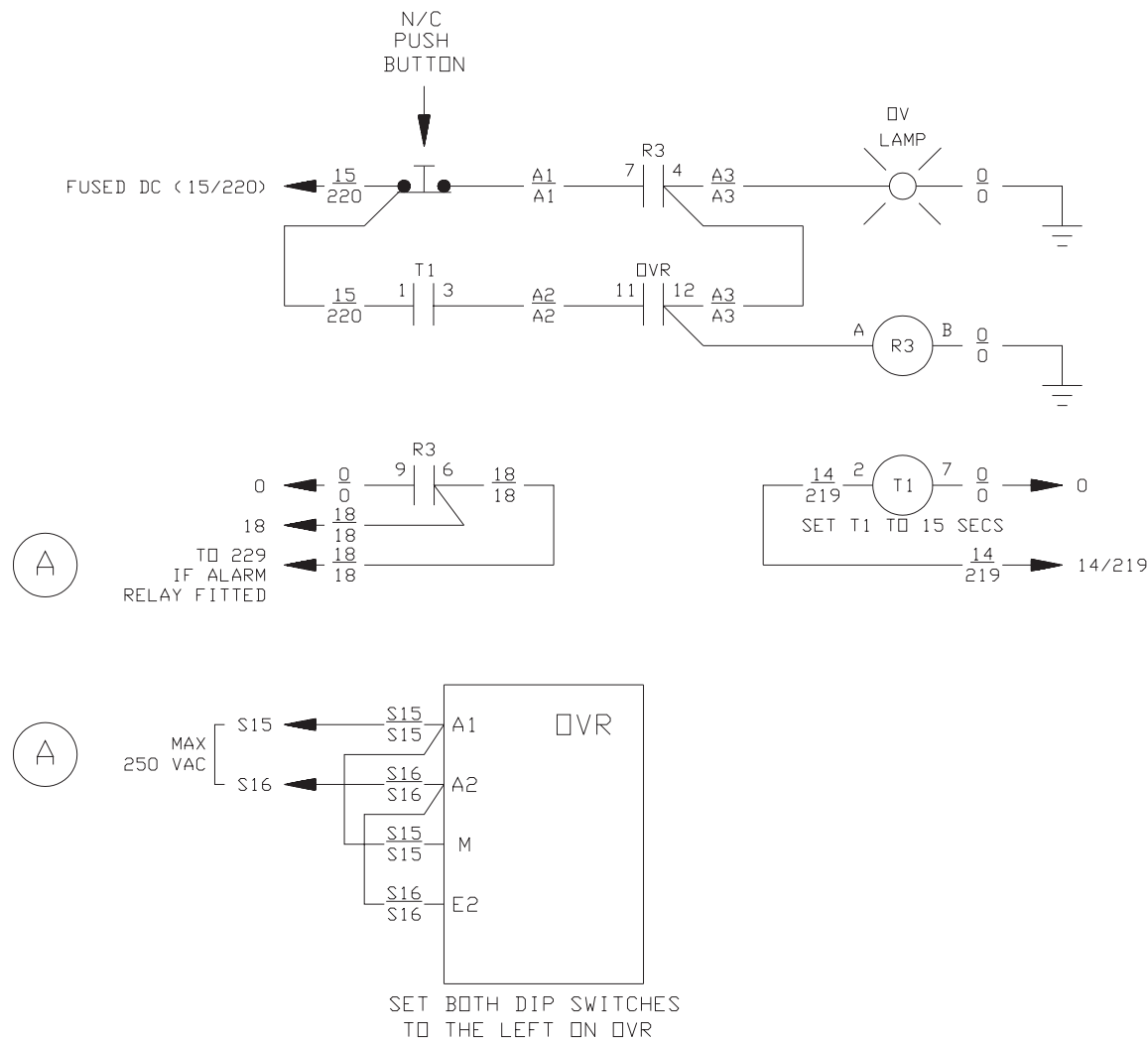












A

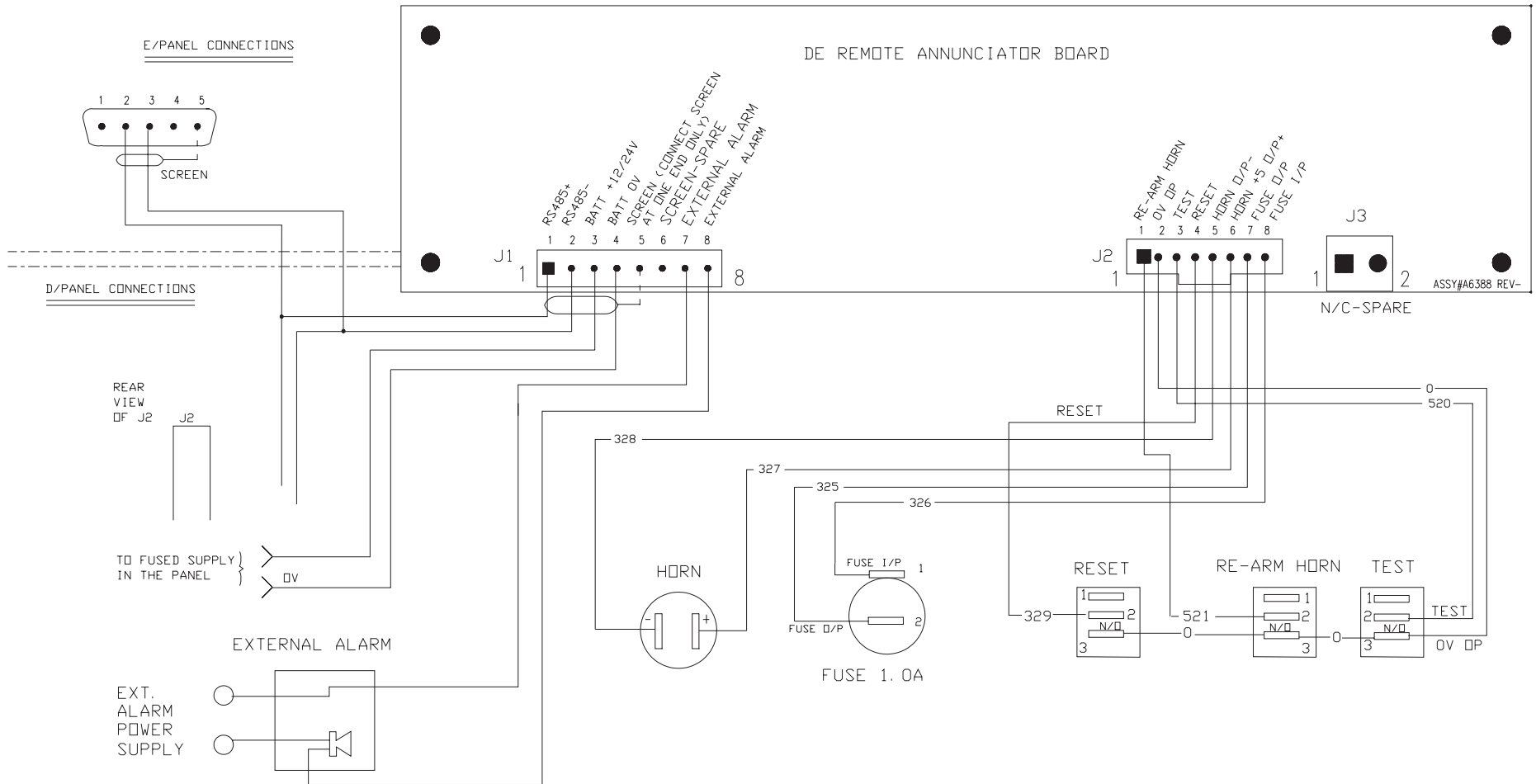
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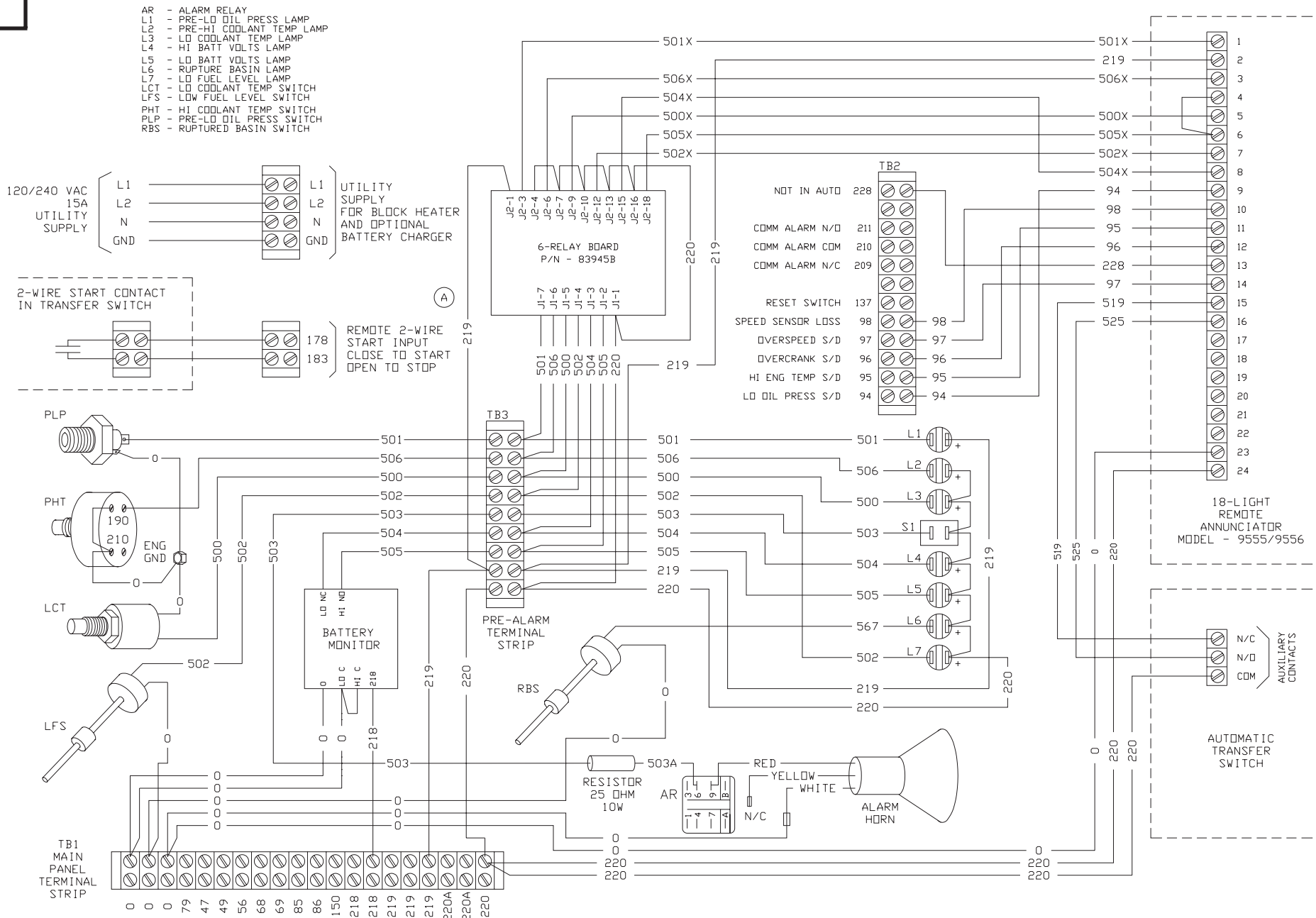
NOTE:
15 - TOP WIRE # FOR 12 VDC SYS.
220 - BOTTOM WIRE # FOR 24 VDC SYS.

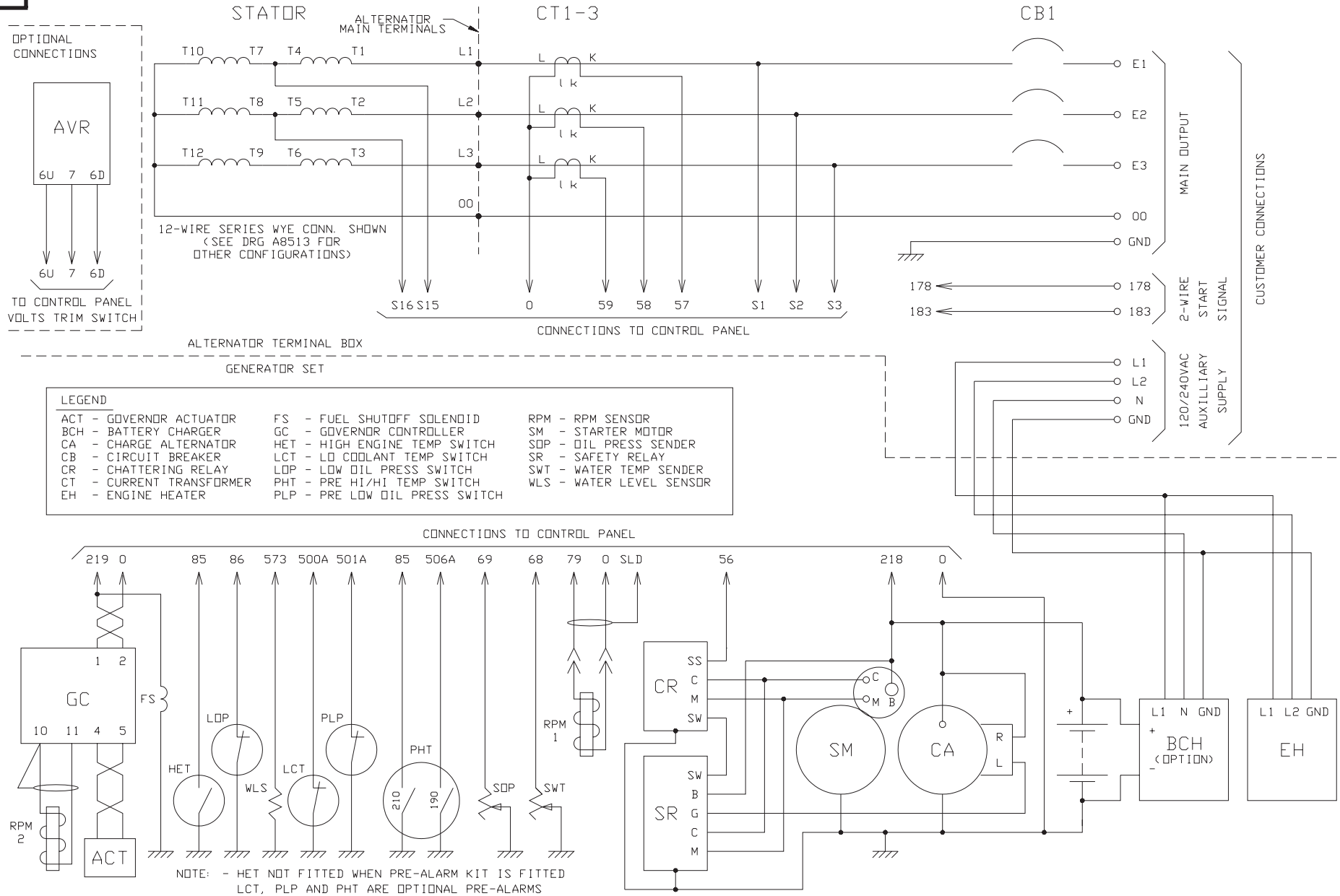
LEGEND

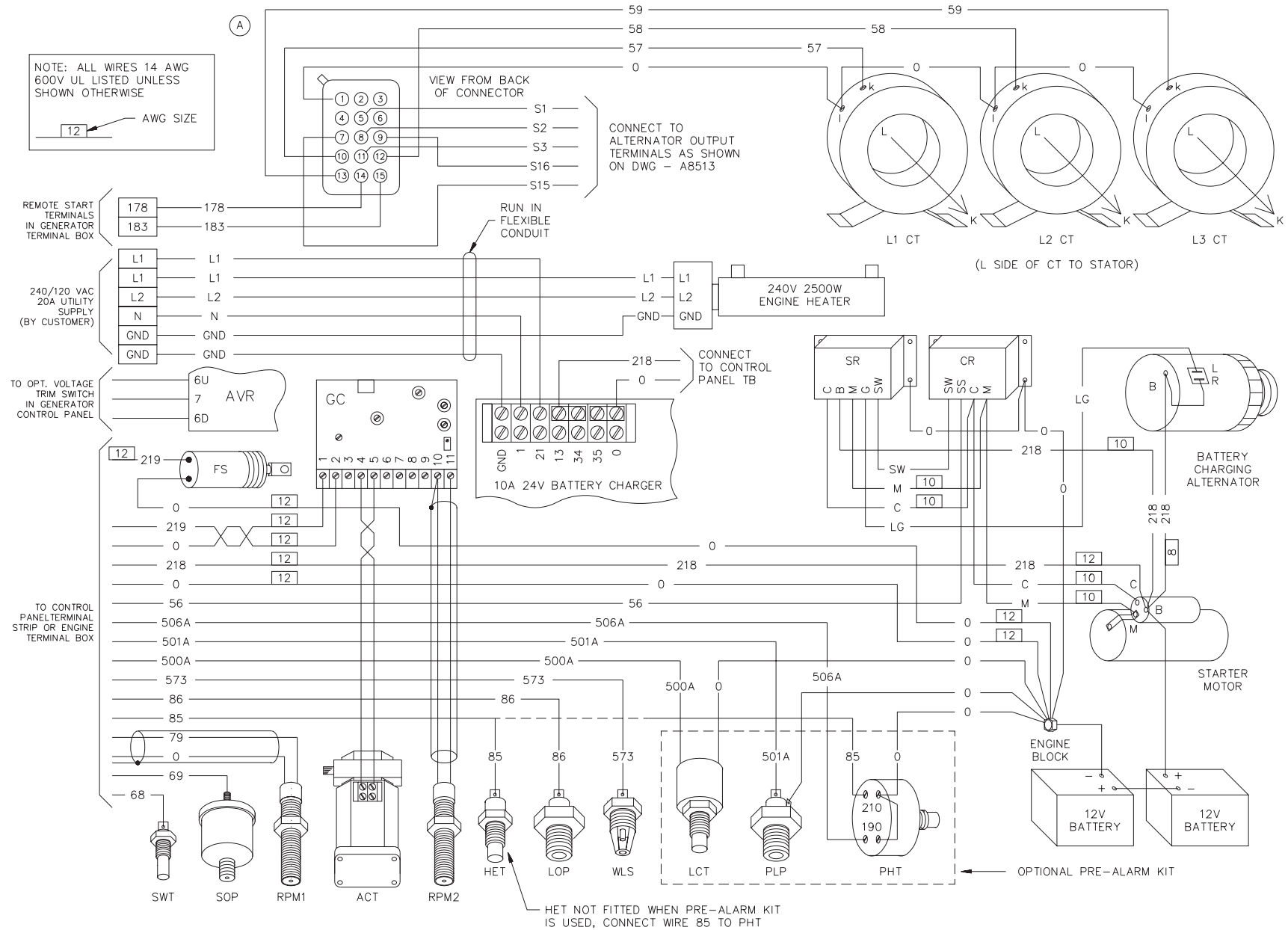
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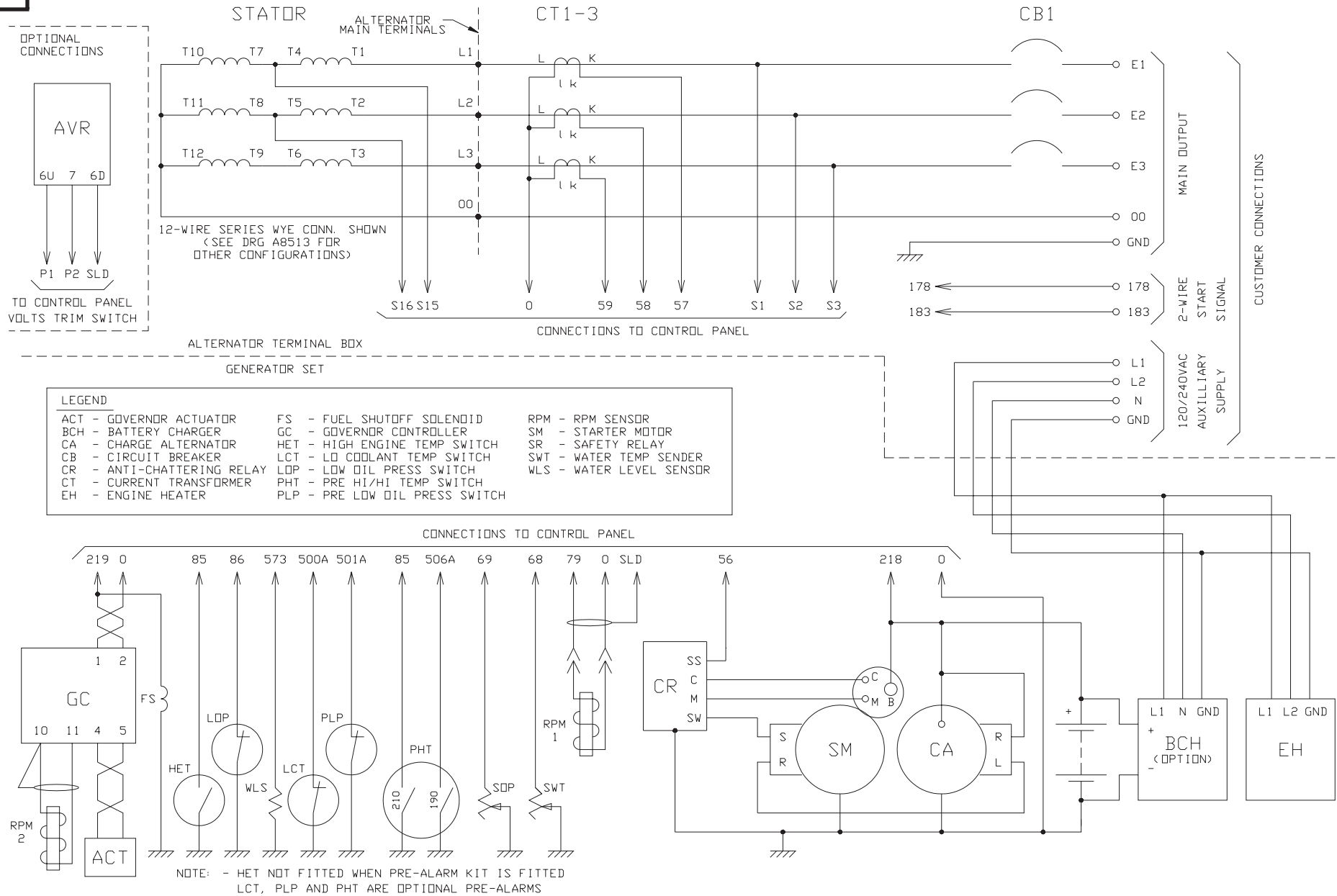
T1	- TIME DELAY ON RELAY
R3	- RELAY
OVR	- OVERVOLTAGE RELAY
N/C PB	- PUSH BUTTON
OV LAMP	- OVERVOLTAGE LAMP

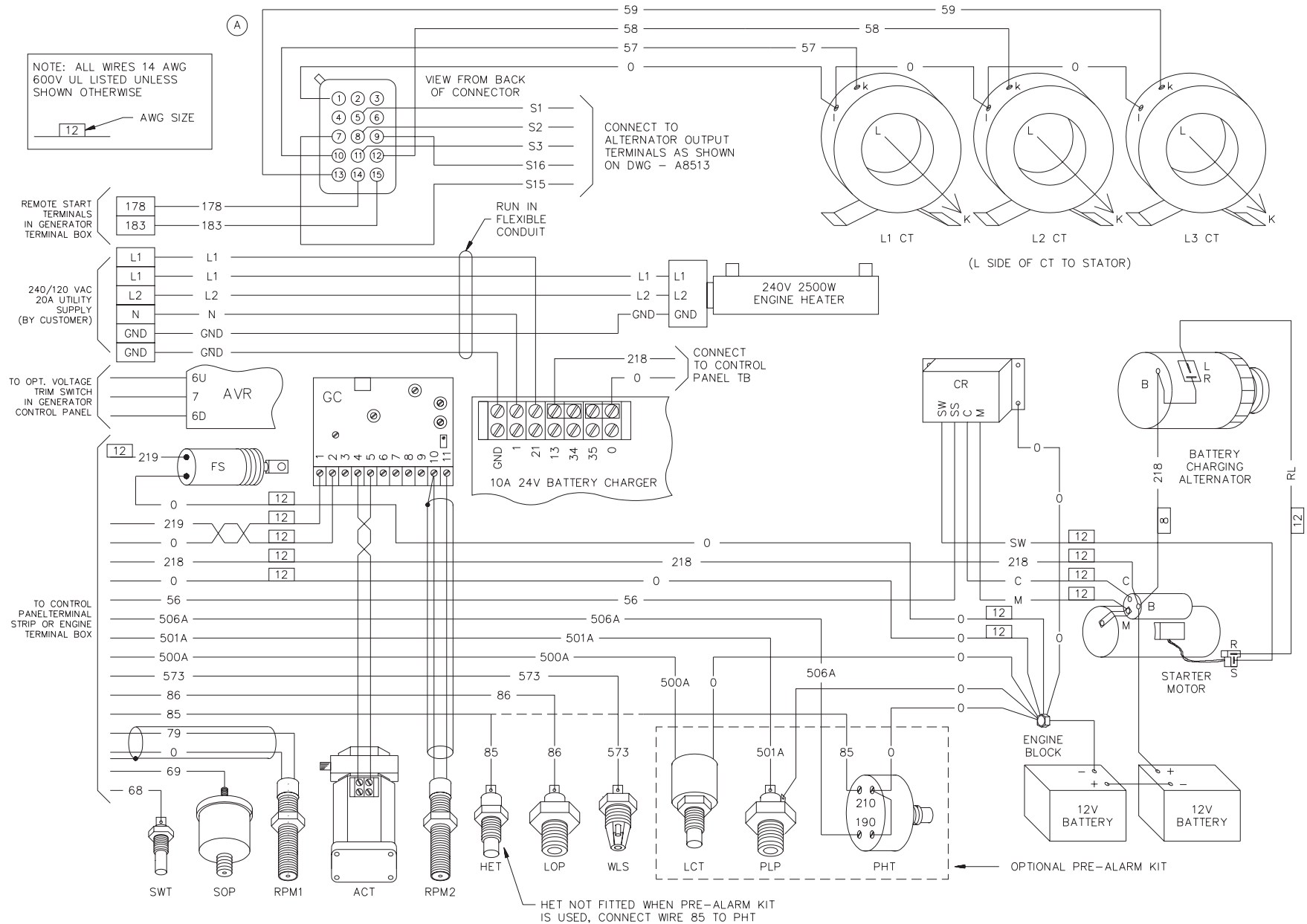


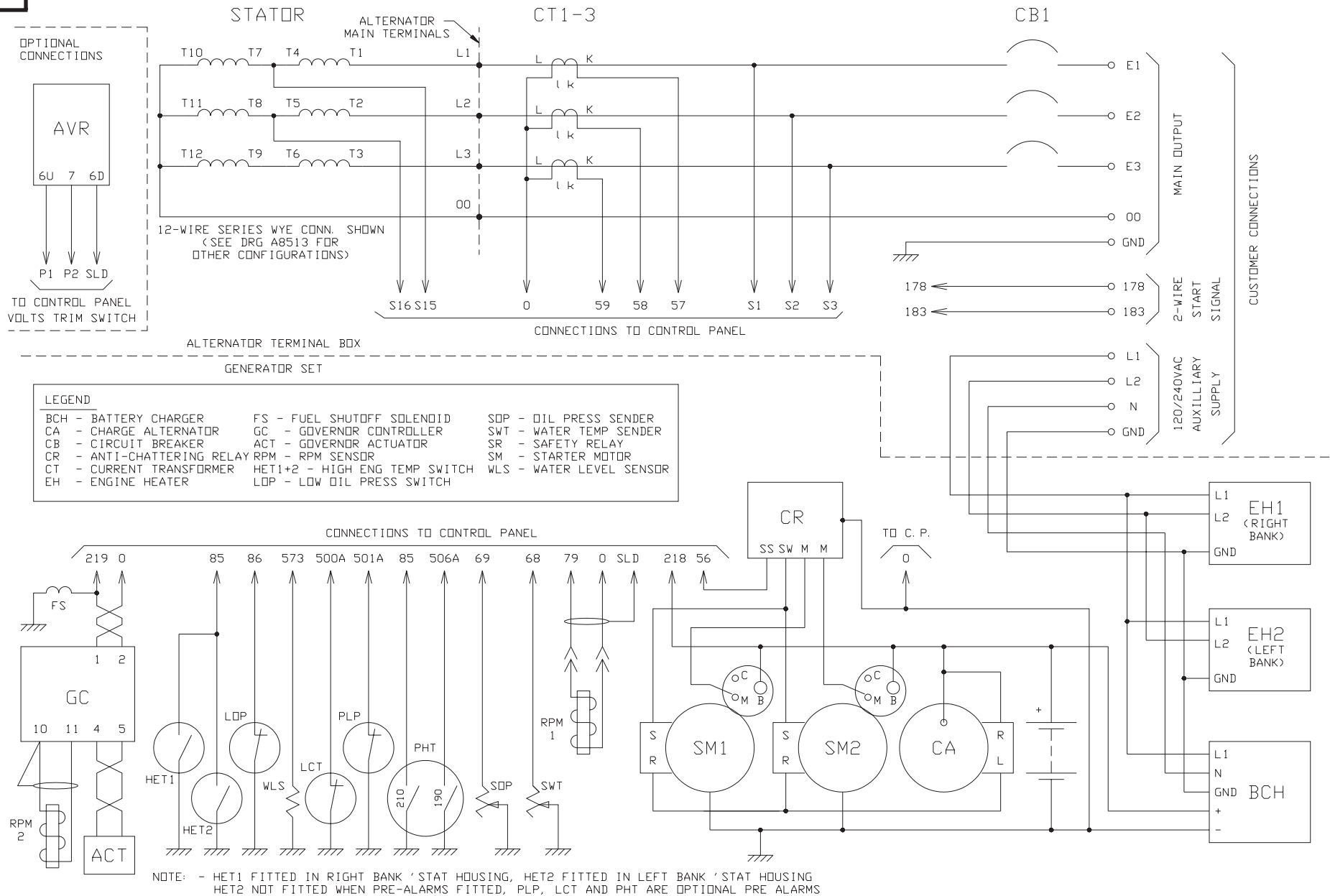






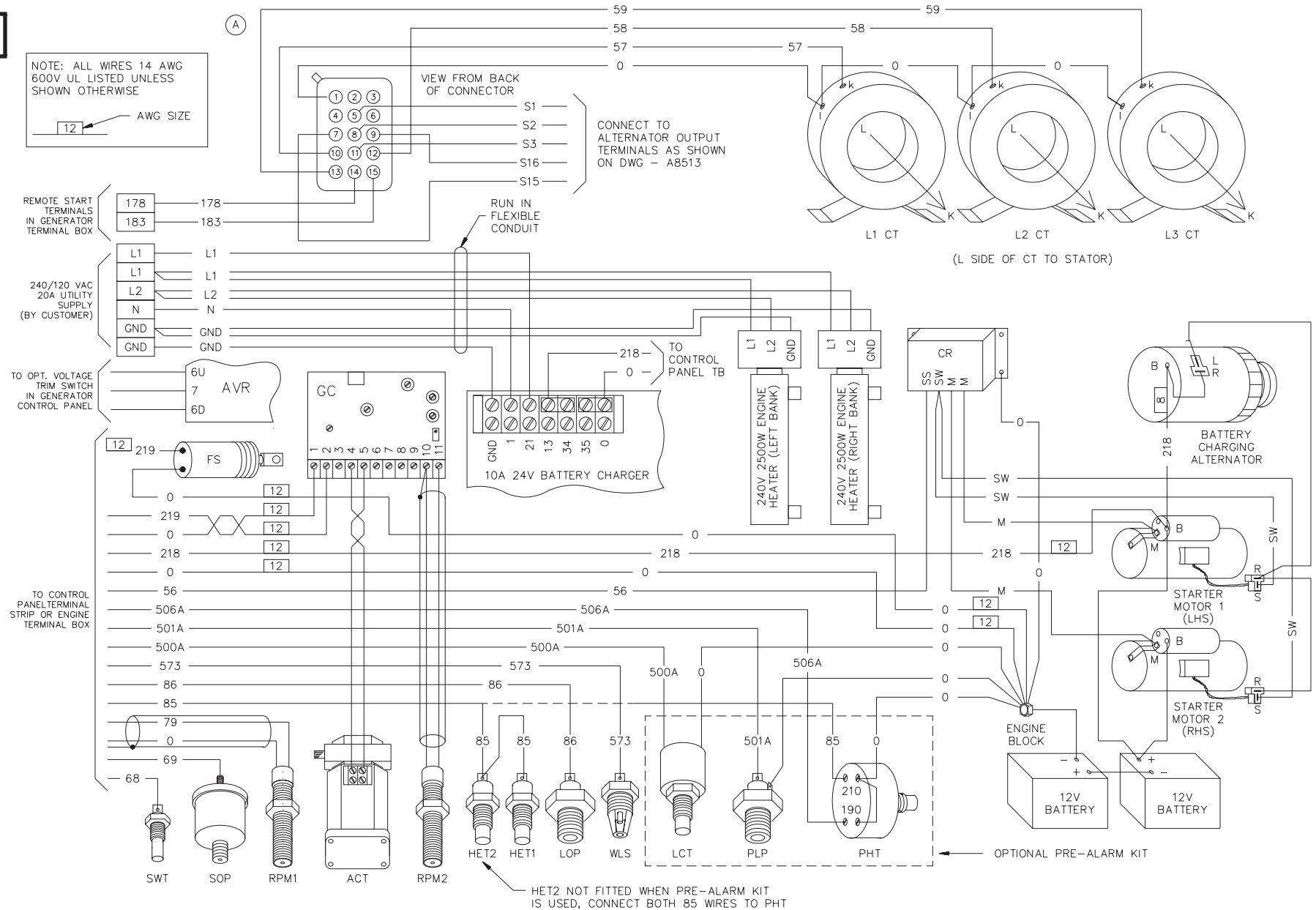


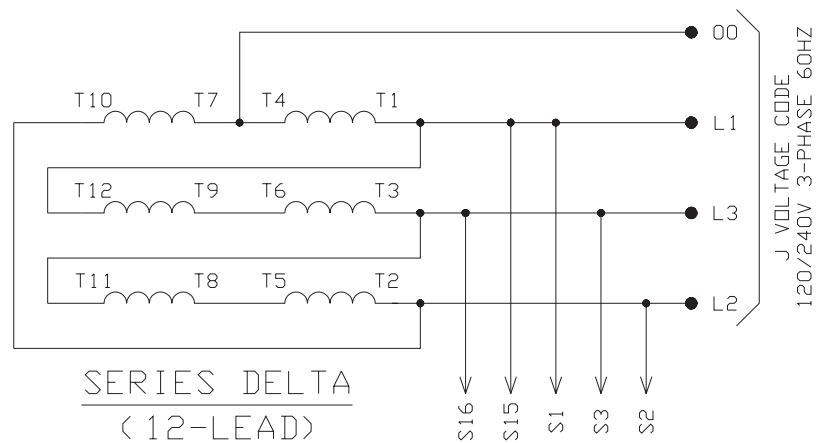
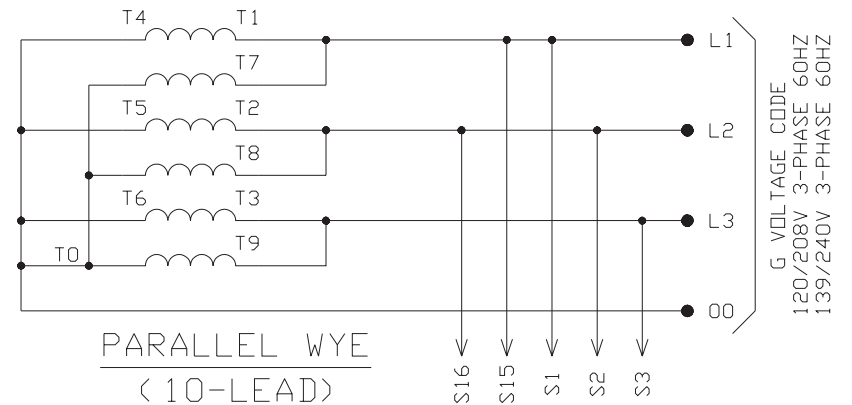
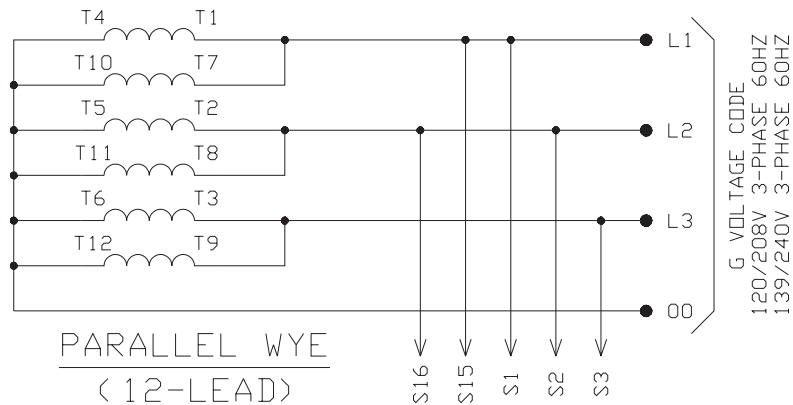
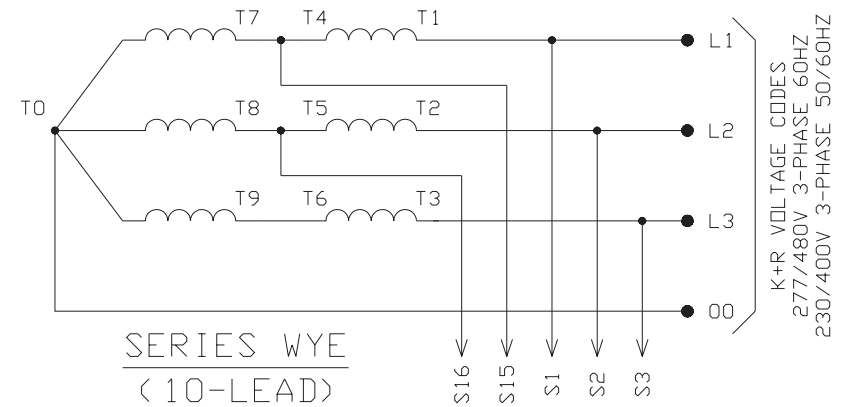
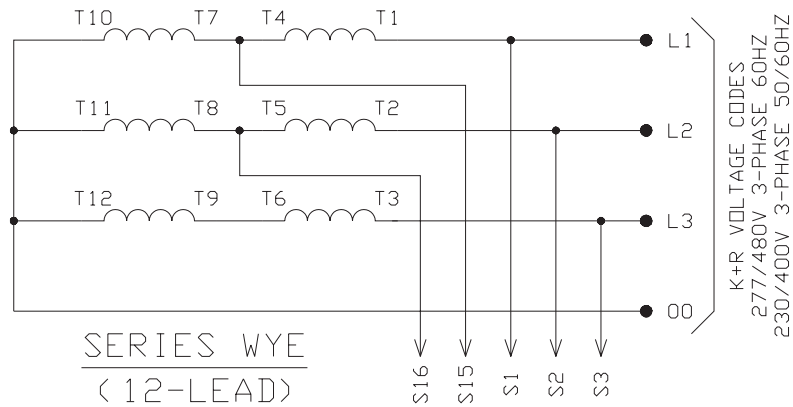




NOTE: ALL WIRES 14 AWG
600V UL LISTED UNLESS
SHOWN OTHERWISE

12 AWG SIZE

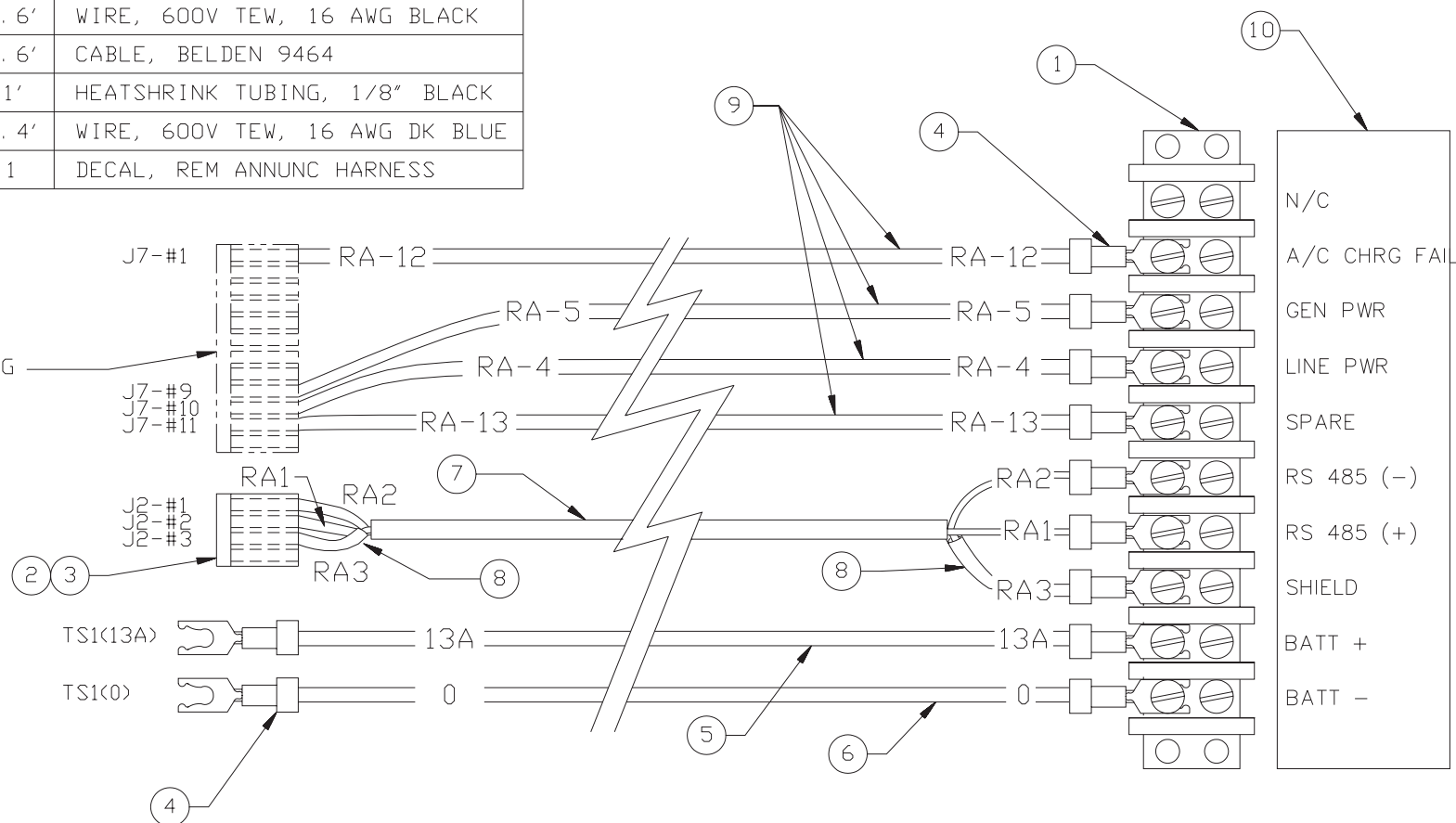


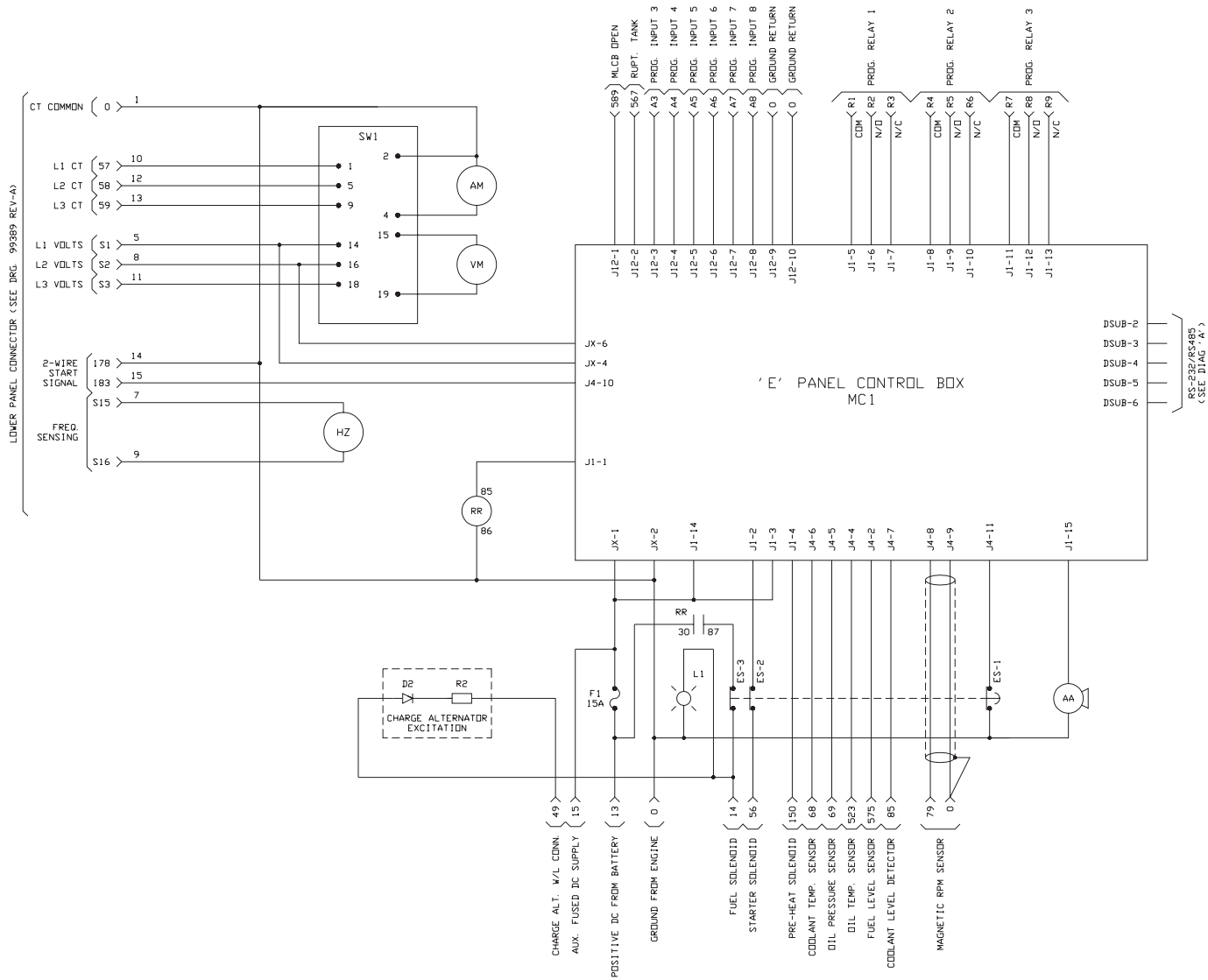


NOTE: S1, S2, S3, S15 AND S16
METERING CONNECTIONS TO CONTROL
PANEL ARE SHOWN FOR CLARITY.

ITEM	PART NO.	QTY	DESCRIPTION
1	91471	1	TERM BLOCK, 10 POS. #6 PANEL
2	73194F	1	CONNECTOR HOUSING , 4P .156 CTR
3	71270	7	CONNECTOR CONTACTS, AMP SL156
4	61446	11	LUG, SPD 22-18 I-T
5	93914A	1.6'	WIRE, 600V TEW, 16 AWG RED
6	93914B	1.6'	WIRE, 600V TEW, 16 AWG BLACK
7	86156	1.6'	CABLE, BELDEN 9464
8	50696	.1'	HEATSHRINK TUBING, 1/8" BLACK
9	55199L	6.4'	WIRE, 600V TEW, 16 AWG DK BLUE
10	A9994	1	DECAL, REM ANNUNC HARNESS

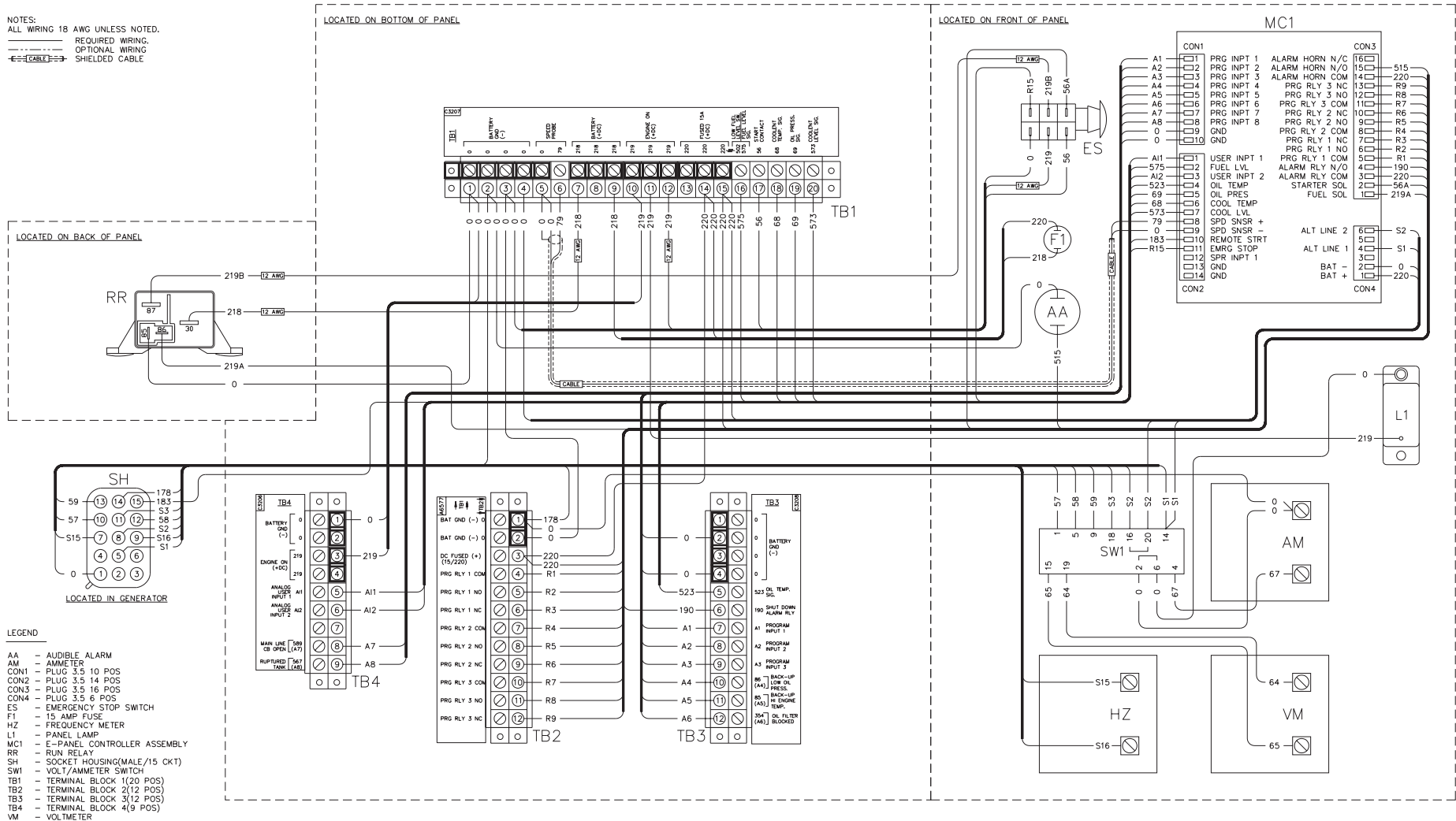
WIRES AND PINS
ARE TO BE
ADDED TO EXISTING
12-PIN CONNECTOR



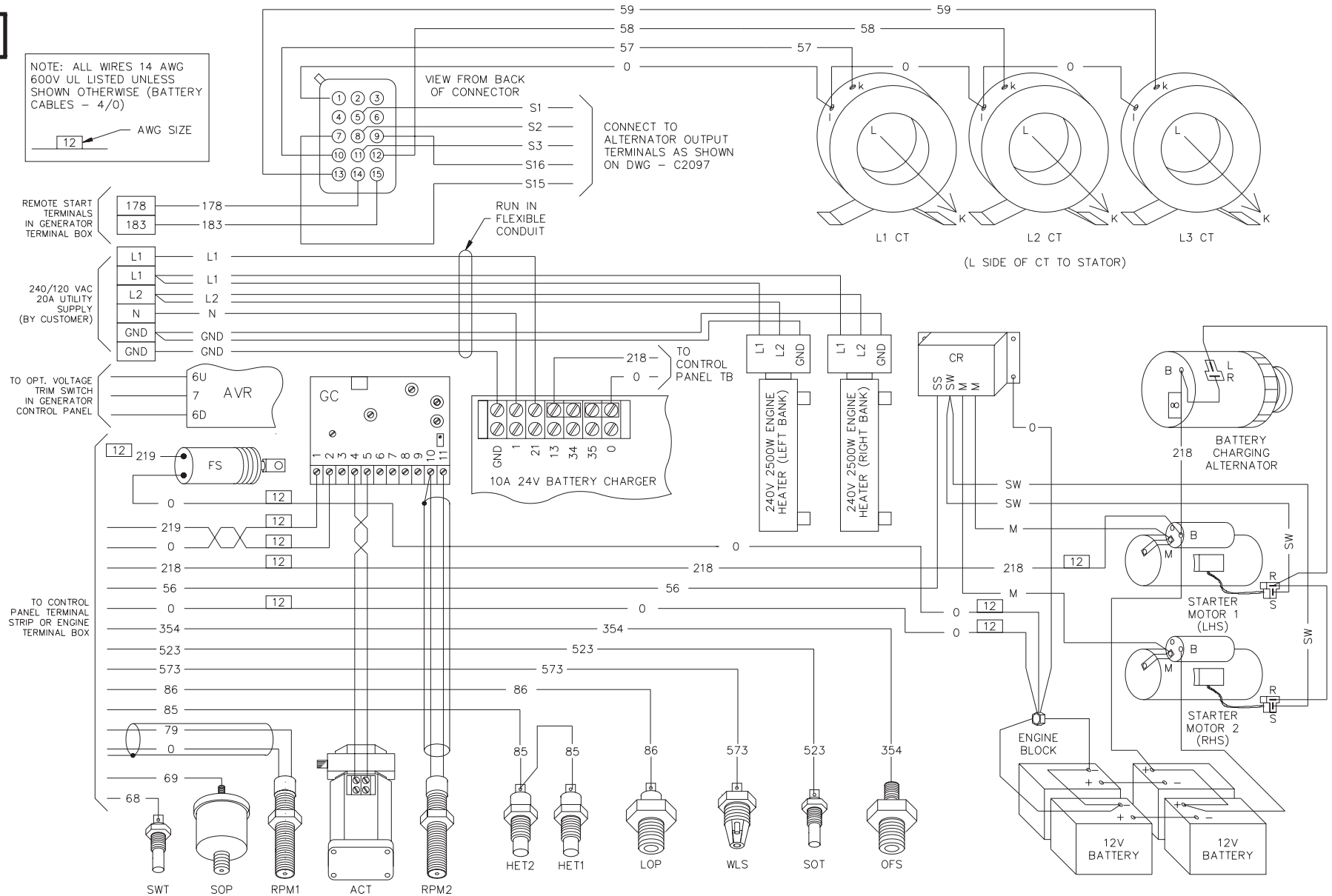


CODE	QTY	PART NO.	DESCRIPTION
AA	1	61286	AUDIBLE ALARM
AM	1	VARIDUS	AMMETER
D2	1	25192	CHARGE ALT EXCITER DIODE
ES	1	98426A	EMERGENCY STOP BUTTON
ES1-3	3	98426C	NORMALLY CLOSED CONTACTS
HZ	1	VARIDUS	FREQUENCY METER
L1	1	70202	PANEL LAMP
MC1	1	A4087	E-PANEL CONTROLLER ASSEMBLY
R2	1	44213	CHARGE ALT EXCITER RESISTOR
SW1	1	61945	VOLT/AMMETER SWITCH
VM	1	VARIDUS	VOLTMETER
RR	1	86035	RUN RELAY (70A)
F1	1	32300	PANEL FUSE (15A)

NOTES:
ALL WIRING 18 AWG UNLESS NOTED.
----- REQUIRED WIRING.
----- OPTIONAL WIRING.
===== SHIELDED CABLE



- LEGEND
- AA - AUDIBLE ALARM
 - AM - AMMETER
 - CON1 - PLUG 3.5 10 POS
 - CON2 - PLUG 3.5 14 POS
 - CON3 - PLUG 3.5 16 POS
 - CON4 - PLUG 3.5 6 POS
 - ES - EMERGENCY STOP SWITCH
 - F1 - 15 AMP FUSE
 - HZ - FREQUENCY METER
 - L1 - PANEL LAMP
 - MC1 - E-PANEL CONTROLLER ASSEMBLY
 - RR - RUN RELAY
 - SH - SOCKET HOUSING(MALE/15 CKT)
 - SW1 - VOLT/AMMETER SWITCH
 - TB1 - TERMINAL BLOCK 1(20 POS)
 - TB2 - TERMINAL BLOCK 2(12 POS)
 - TB3 - TERMINAL BLOCK 3(12 POS)
 - TB4 - TERMINAL BLOCK 4(12 POS)
 - VM - VOLTMETER

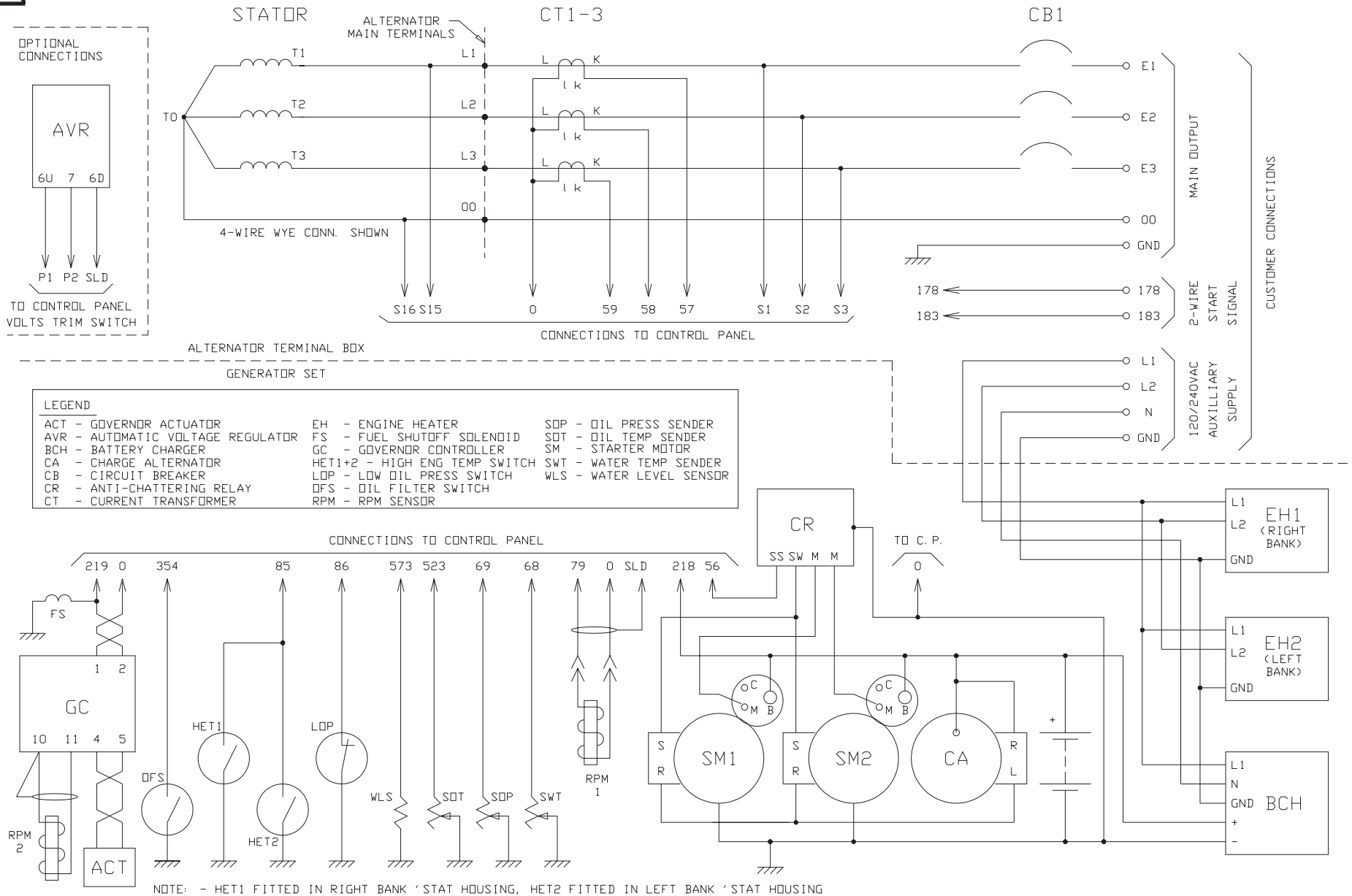


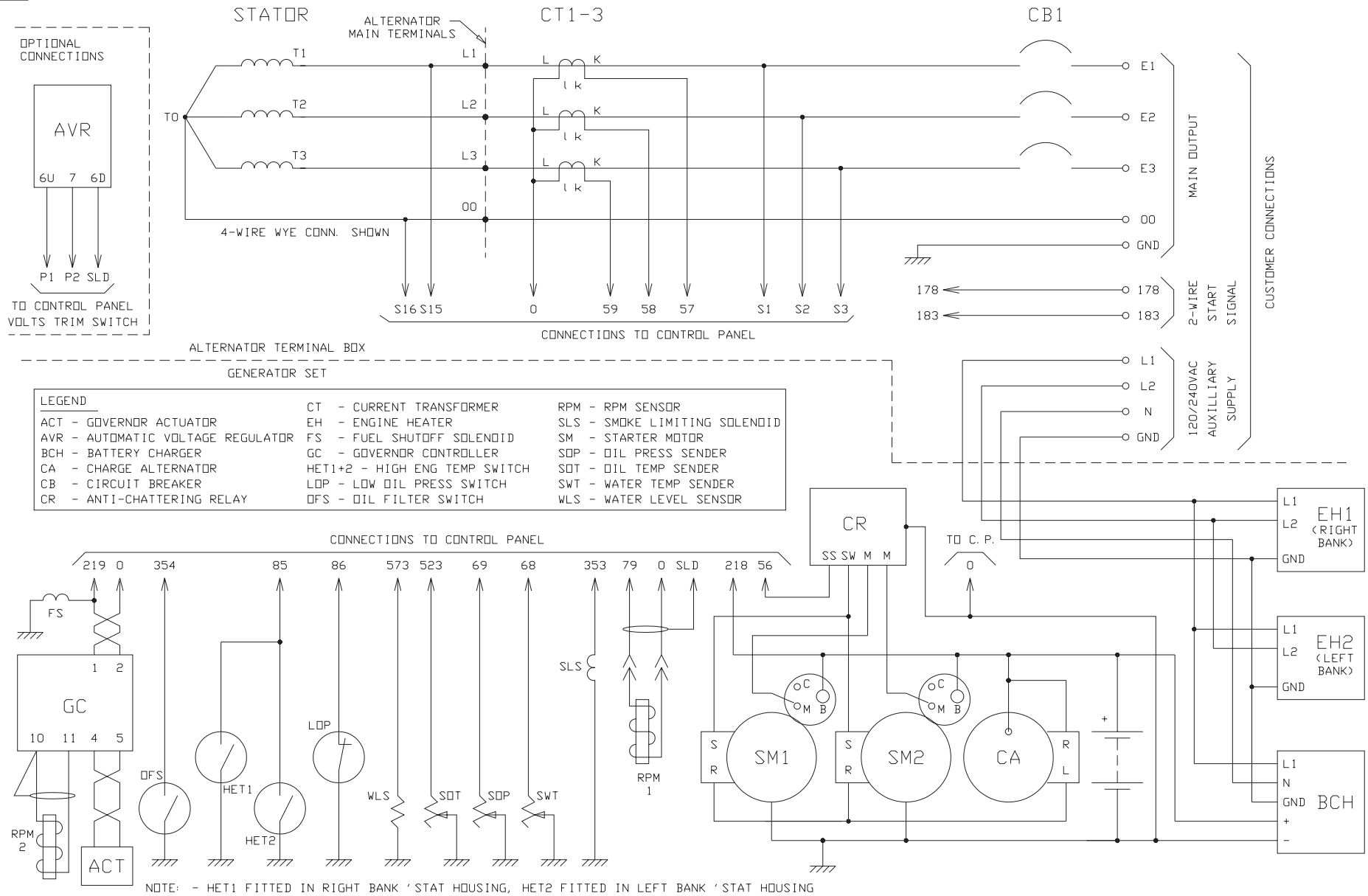
LEGEND

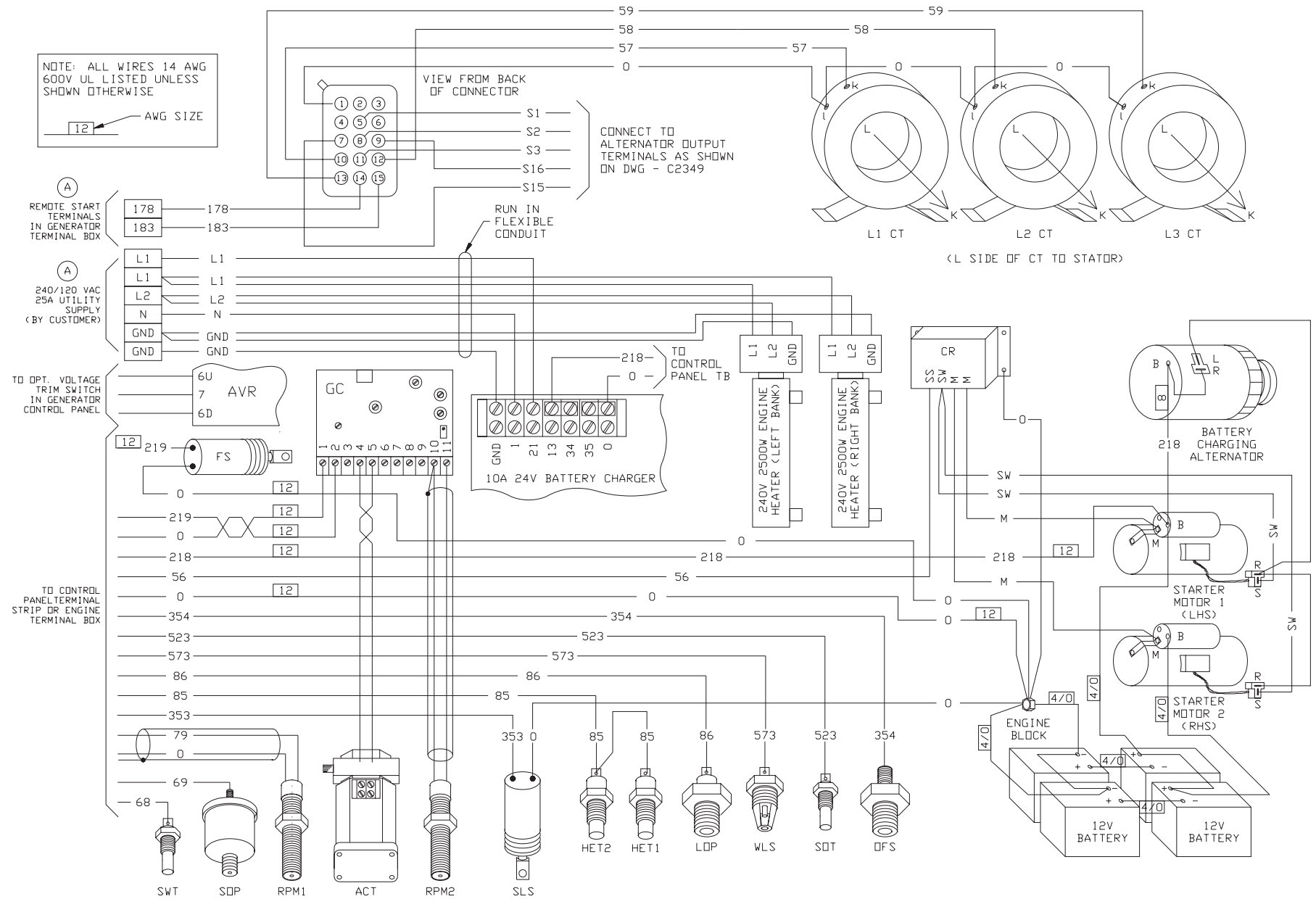
ACT - ACTUATOR
 AVR - AUTOMATIC VOLTAGE REGULATOR
 CR - ANTI-CHATTER RELAY
 CT - CURRENT TRANSFORMER
 FS - FUEL SOLENOID
 GC - GOVERNOR CONTROL

HET1+2 - HI ENG TEMP. SW.
 LOP - LOW OIL PRESS. SW.
 OFS - OIL FILTER SWITCH
 RPM1 - PANEL SPEED SENSOR
 RPM2 - GOV. SPEED SENSOR
 SOP - OIL PRESS SENDER

SOT - OIL TEMP SENDER
 SWT - COOLANT TEMP SENDER
 WLS - COOLANT LEVEL SW.

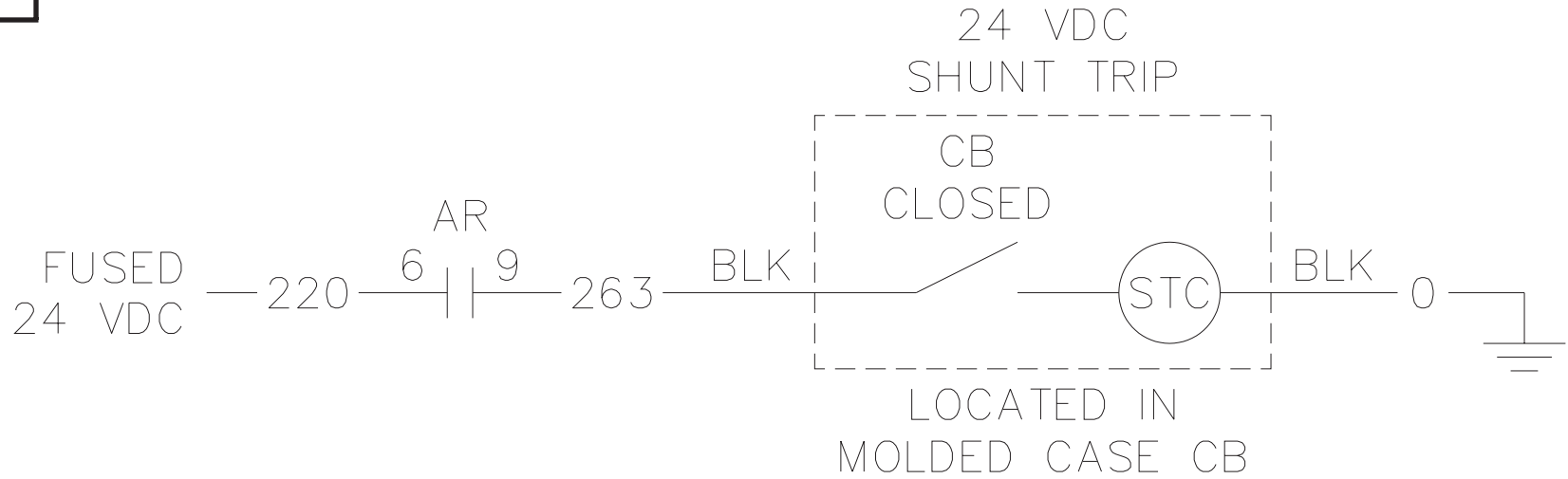






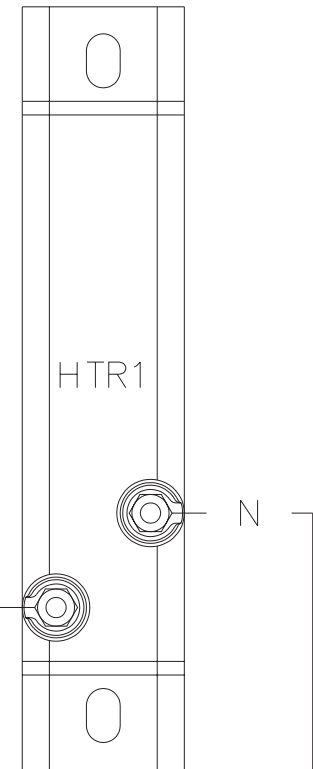
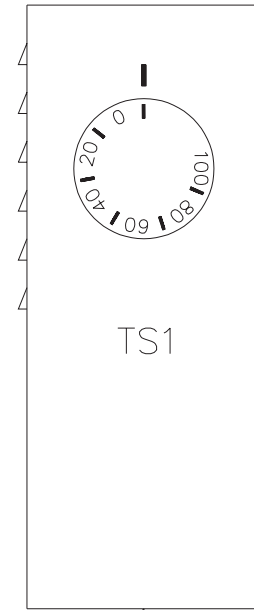
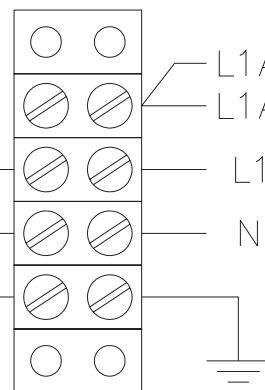
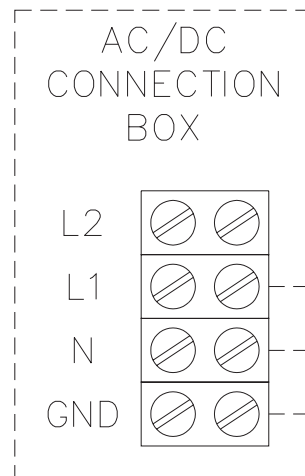
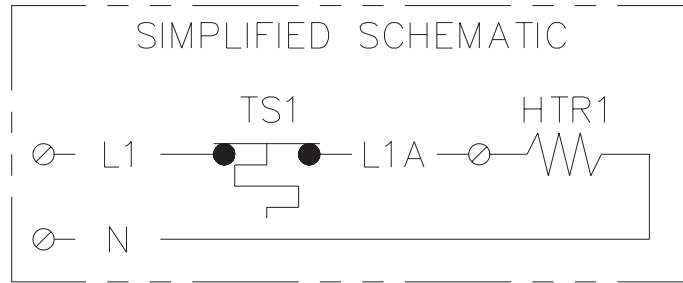
LEGEND

ACT	- ACTUATOR	HET1+2 - HI ENG TEMP SW.	SDP - OIL PRESS SENSOR
AVR	- AUTOMATIC VOLTAGE REGULATOR	LDP - LOW OIL PRESS SW.	SDT - OIL TEMP SENSOR
CR	- ANTI-CHATTER RELAY	DPS - OIL FILTER SWITCH	SWT - COOLANT TEMP SENSOR
CT	- CURRENT TRANSFORMER	RP1M - PANEL SPEED SENSOR	WLS - COOLANT LEVEL SW.
FC	- FUEL SOLENOID	RP2M - GOV. SPEED SENSOR	
GS	- GOVERNOR CONTROL	SLS - SMOKE LIMITING SOLENOID	



LEGEND

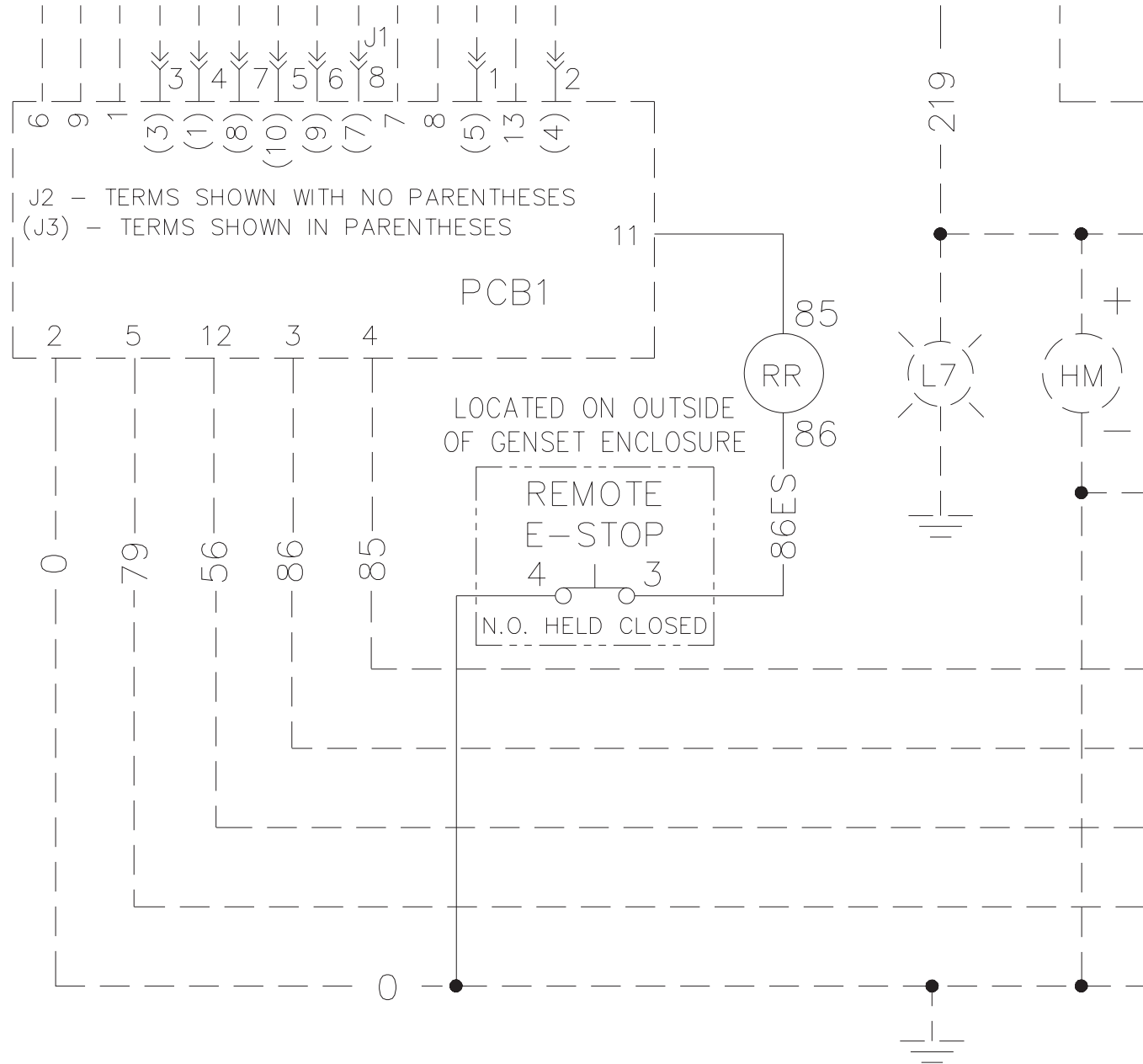
AR — ALARM RELAY
CB — CIRCUIT BREAKER
STC — SHUNT TRIP COIL



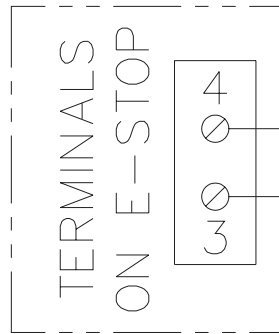
LEGEND

HTR1 – HEATER ELEMENT

TS1 – TEMPERATURE SWITCH

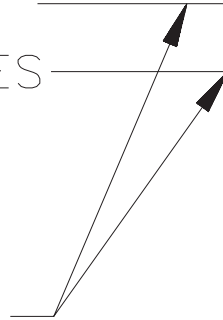


LOCATED ON OUTSIDE
OF GENSET ENCLOSURE

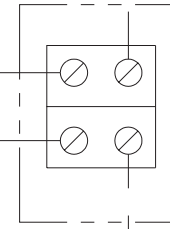


CUSTOMER WIRING
12 AWG MTW MIN.

0
86ES



RR



TERMINALS INSIDE
AC/DC CONNECTION BOX
LOCATED ON SIDE
OF ALTERNATOR

86ES

86

87

219

85

30

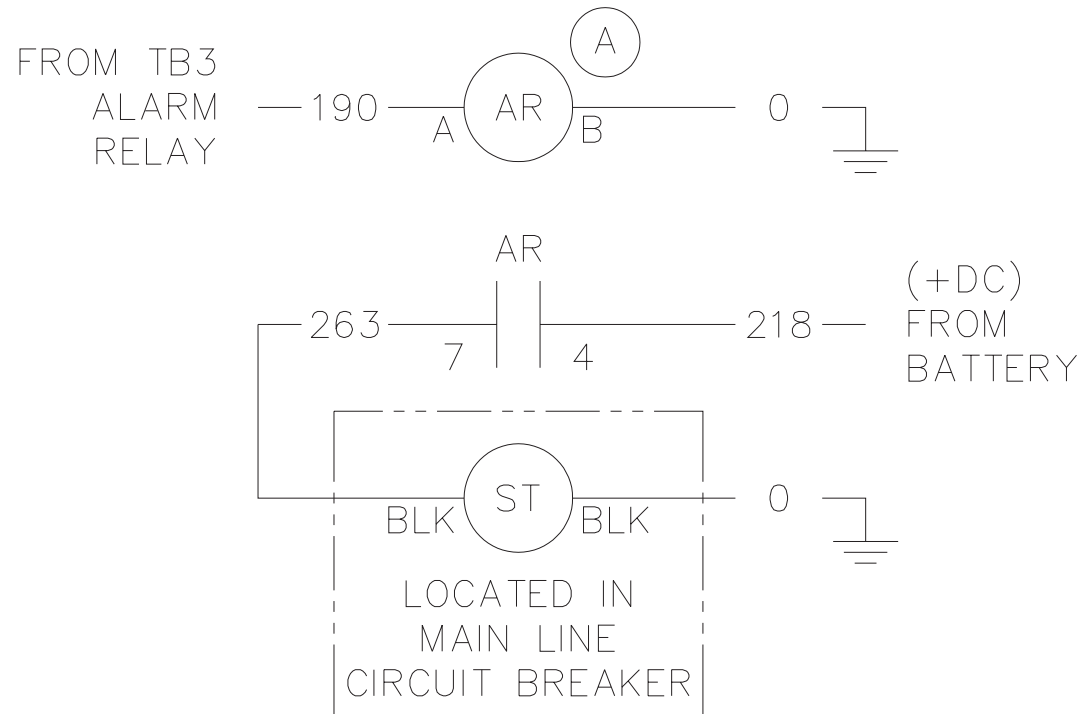
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ADDITIONS TO SCHEMATIC DIAGRAM A4723

LEGEND

AR — ALARM RELAY

ST — SHUNT TRIP



NOTES:

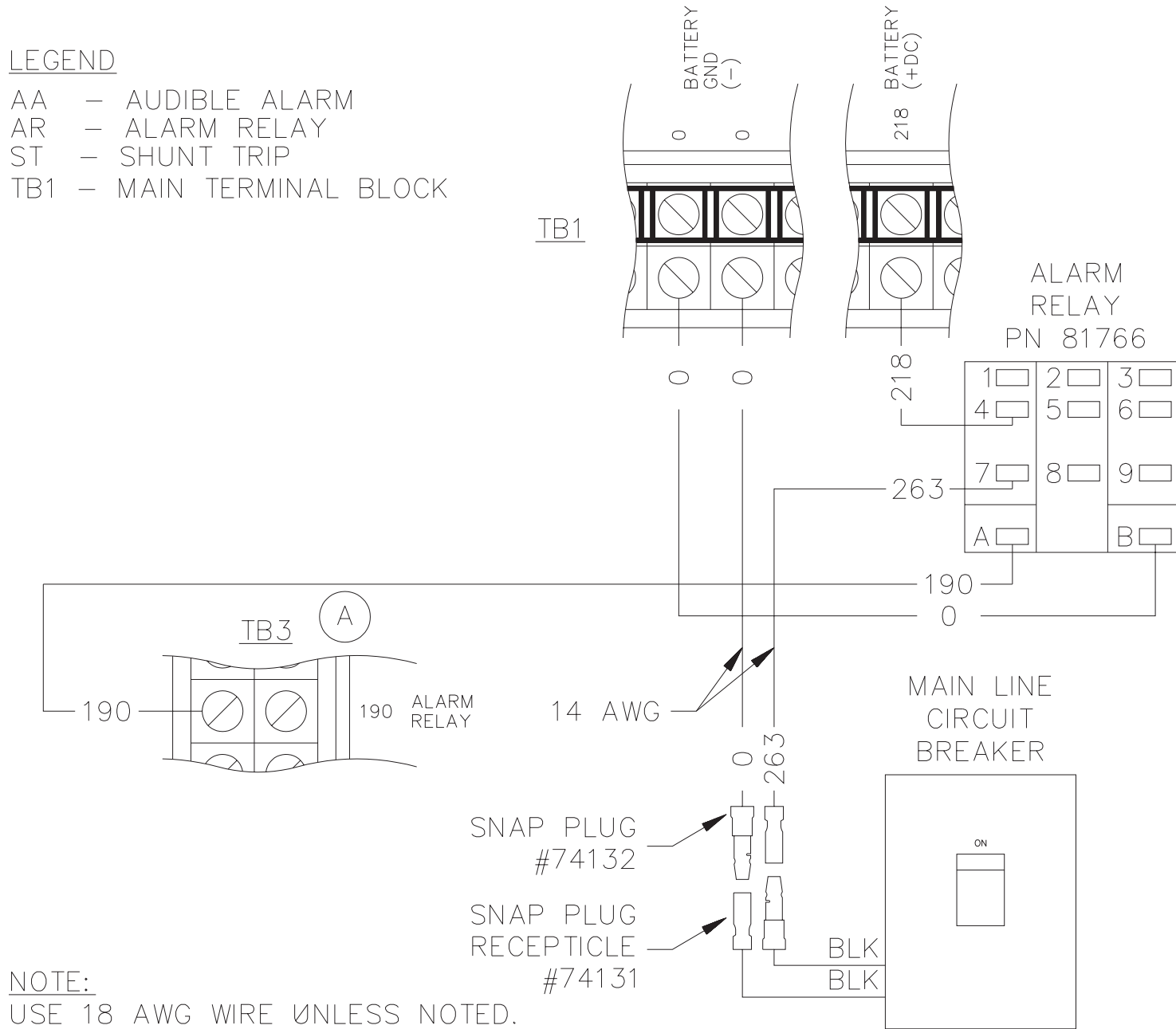
— — — EXISTING WIRING.

———— NEW WIRING

ADDITIONS TO SCHEMATIC DIAGRAM C1375

LEGEND

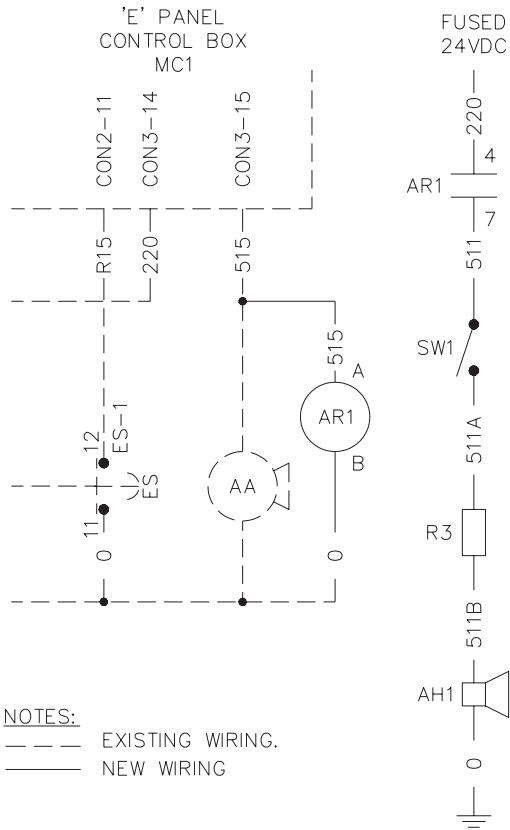
AA - AUDIBLE ALARM
 AR - ALARM RELAY
 ST - SHUNT TRIP
 TB1 - MAIN TERMINAL BLOCK



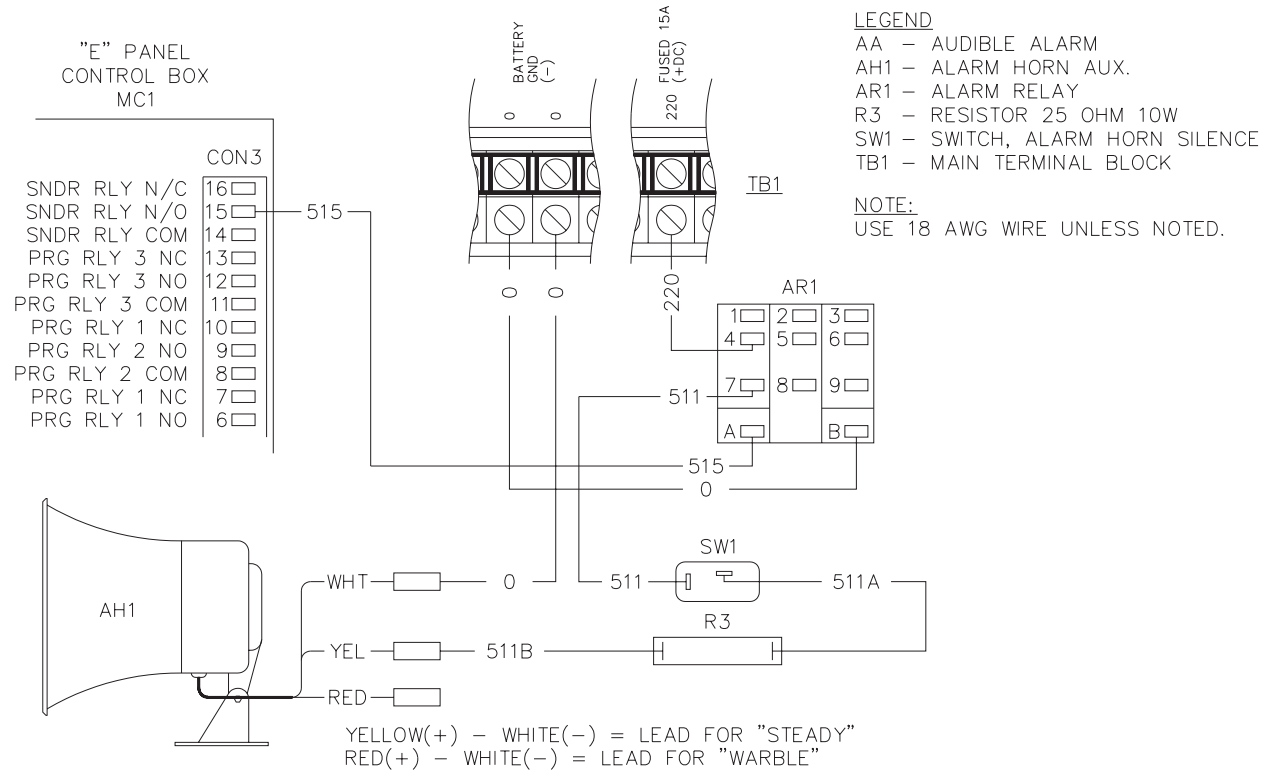
NOTE:
 USE 18 AWG WIRE UNLESS NOTED.

ADDITIONS TO SCHEMATIC DIAGRAM A4722

SCHEMATIC DIAGRAM
ADDITIONS TO SCHEMATIC DIAGRAM C1375



WIRING DIAGRAM
ADDITIONS TO SCHEMATIC DIAGRAM C1376



SEE C3366 FOR PARTS LIST.

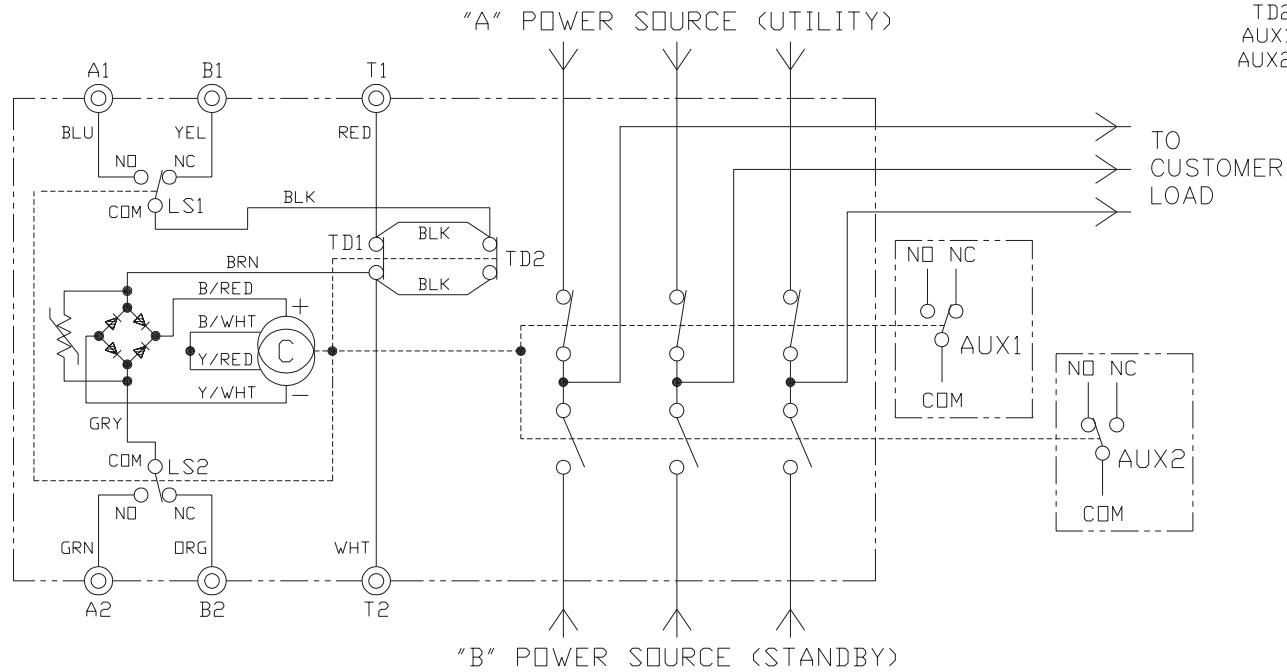
TRANSFER SWITCH DRAWINGS

INDEX TO TRANSFER SWITCH DRAWINGS

DRAWING NUMBER	DRAWING TYPE			DESCRIPTION OF DRAWING	REV. DATE
A8047	Schematic			W Type Transfer Switch with Neutral	08/21/98
A8834	Wiring Diagram			208/240 VDC Transfer Switch with Inphase Monitor	08/25/98
A8835	Schematic			208/240 VDC Transfer Switch with Inphase Monitor	08/25/98
A8836	Wiring Diagram			416 VDC 3-Pole Transfer Switch with Inphase Monitor	08/25/98
A8837	Schematic			416 VDC 3-Pole Transfer Switch with Inphase Monitor	08/25/98
A8838	Wiring Diagram			416 VDC 4-Pole Transfer Switch with Inphase Monitor	08/25/98
A8839	Schematic			416 VDC 4-Pole Transfer Switch with Inphase Monitor	08/25/98
A8840	Wiring Diagram			480/600 VDC Transfer Switch with Inphase Monitor	08/25/98
A8841	Schematic			480/600 VDC Transfer Switch with Inphase Monitor	08/25/98
64135	Wiring Diagram			3 and 4 Pole Transfer Switch	08/07/90
64142	Wiring Diagram			2 Pole Transfer Switch	08/07/90
71324	Schematic			Mervyn's Transfer Switch	04/20/89
72214	WD & Sch.			Y Type Transfer Switch	03/23/90
72446	Schematic			Transfer Switch	05/29/87
72447	Wiring Diagram			Transfer Switch	05/29/87
73658	Schematic			Wn Type Transfer Switch	09/29/87
74324	Wiring Diagram			240 VDC WN Type Transfer Switch with CPU and TDC	12/02/87
74325	Schematic			240 VDC WN Type Transfer Switch with CPU and TDC	12/02/87
74328	Wiring Diagram			416 VDC WN Type Transfer Switch with CPU and TDC	12/03/87
74329	Schematic			416 VDC WN Type Transfer Switch with CPU and TDC	12/03/87
74332	Wiring Diagram			480/600 VDC WN Type Transfer Switch with CPU and TDC	08/19/96
74333	Schematic			480/600 VDC WN Type Transfer Switch with CPU and TDC	08/20/96
74497	Sch & WD			100 Amp 2-Pole Transfer Switch	07/28/89
74498	Sch & WD			200 Amp 2-Pole Transfer Switch	07/28/89
74499	Sch & WD			100 and 200 Amp 3-Pole Transfer Switch	07/28/89
74699	Wiring Diagram			240 VDC Y Type 3 & 4 Pole Transfer Switch with TDN	03/03/88
75017	Schematic			240 VDC Y Type Transfer Switch with CPU and TDN	03/08/88
75018	Sch & WD			GTS — Y-Type — 240 Volt with TDN	11/27/90
75018A	Sch & WD			GTS — Y-Type — 208/240 Volt with TDN and Logic	11/27/90
76964	Wiring Diagram			3-Pole Wn Type Multi Volt Transfer Switch with TDN and Logic	01/30/92
76965	Schematic			3 & 4-Pole Wn Type Multi Volt Transfer Switch with TDN and Logic	01/30/92
80653	Schematic			Y-Type 208/240/ Volt Single Phase — MCI	07/12/90
81222	WD & Sch.			UL Switch — 100 AZP	01/31/91
83594	Wiring Diagram			Wn Type Transfer Switch — Dayton	01/10/92
83595	Schematic			Wn Type Transfer Switch — Dayton	11/25/91
86160	WD & Sch.			100 and 200 Amp, 3-Pole Transfer Switch	05/14/93

INDEX TO TRANSFER SWITCH DRAWINGS

[illegible]



LEGEND

C = CLOSING COIL (DUAL COIL BOBBIN)
 LS1 = SOURCE SELECTING LIMIT SWITCH
 LS2 = SOURCE SELECTING LIMIT SWITCH
 TD1 = POWER SWITCHING CONTACTS
 TD2 = POWER SWITCHING CONTACTS
 AUX1 = AUXILIARY SWITCHES
 AUX2 = AUXILIARY SWITCHES

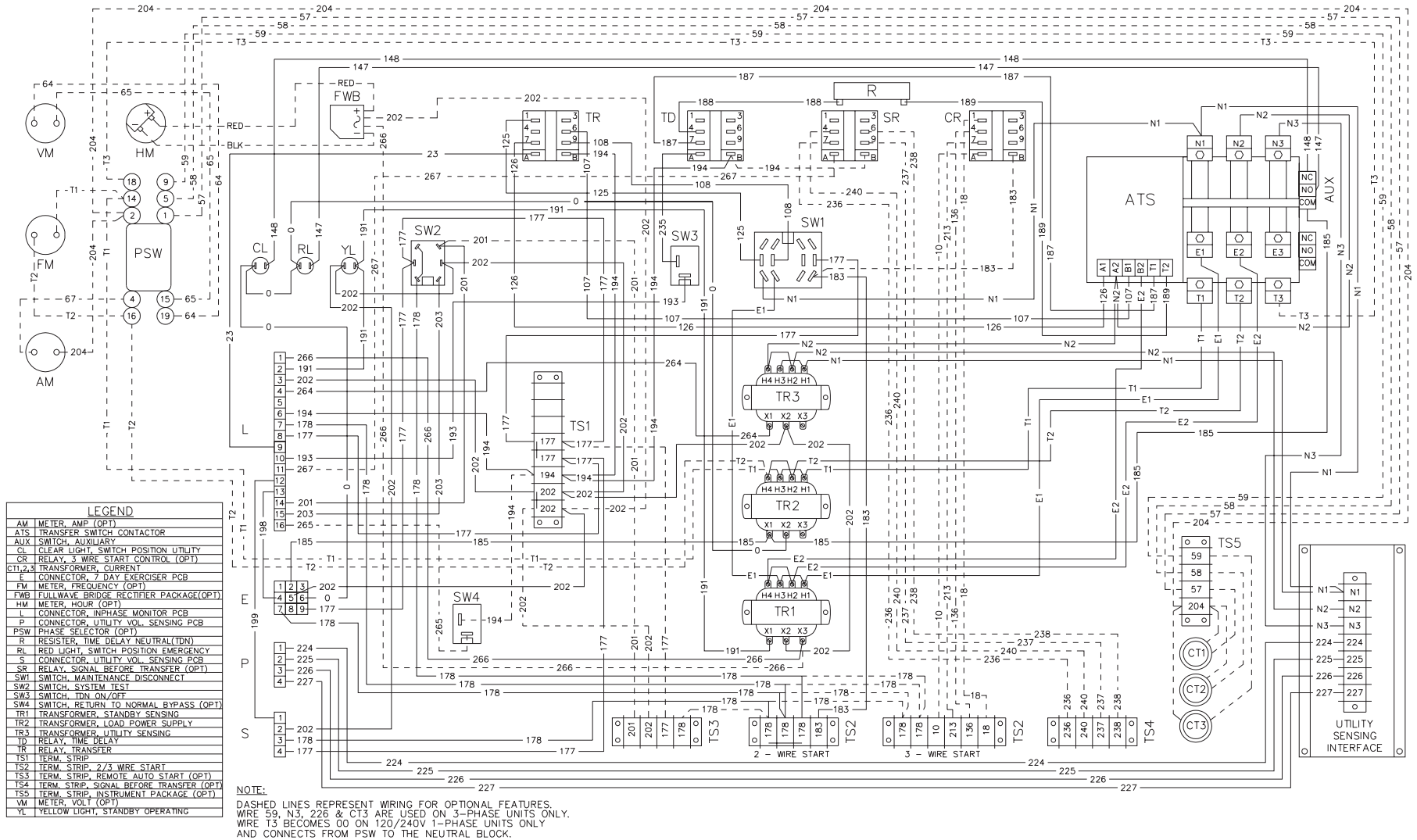
WIRE COLORS

BLU = BLUE WIRE
 YEL = YELLOW WIRE
 RED = RED WIRE
 BLK = BLACK WIRE
 BRN = BROWN WIRE
 GRN = GREEN WIRE
 ORN = ORANGE WIRE
 WHT = WHITE WIRE
 B/RED = BLUE INSUL. ON TER./
 WITH RED WIRE
 B/WHT = BLUE INSUL. ON TER./
 WITH WHITE WIRE
 Y/RED = YELLOW INSUL. ON TER./
 WITH RED WIRE
 Y/WHT = YELLOW INSUL. ON TER./
 WITH WHITE WIRE

NOTE:
 ALL CONTACTS SHOWN WITH
 MAIN POWER CONTACTS CLOSED
 IN UTILITY POSITION

SWITCH POSITION		UTILITY	NEUTRAL	STANDBY
AUX. 1	COM-NC	X	0	0
	COM-NO	0	X	X
AUX. 2	COM-NC	0	0	X
	COM-NO	X	X	0

X = CLOSED 0 = OPEN

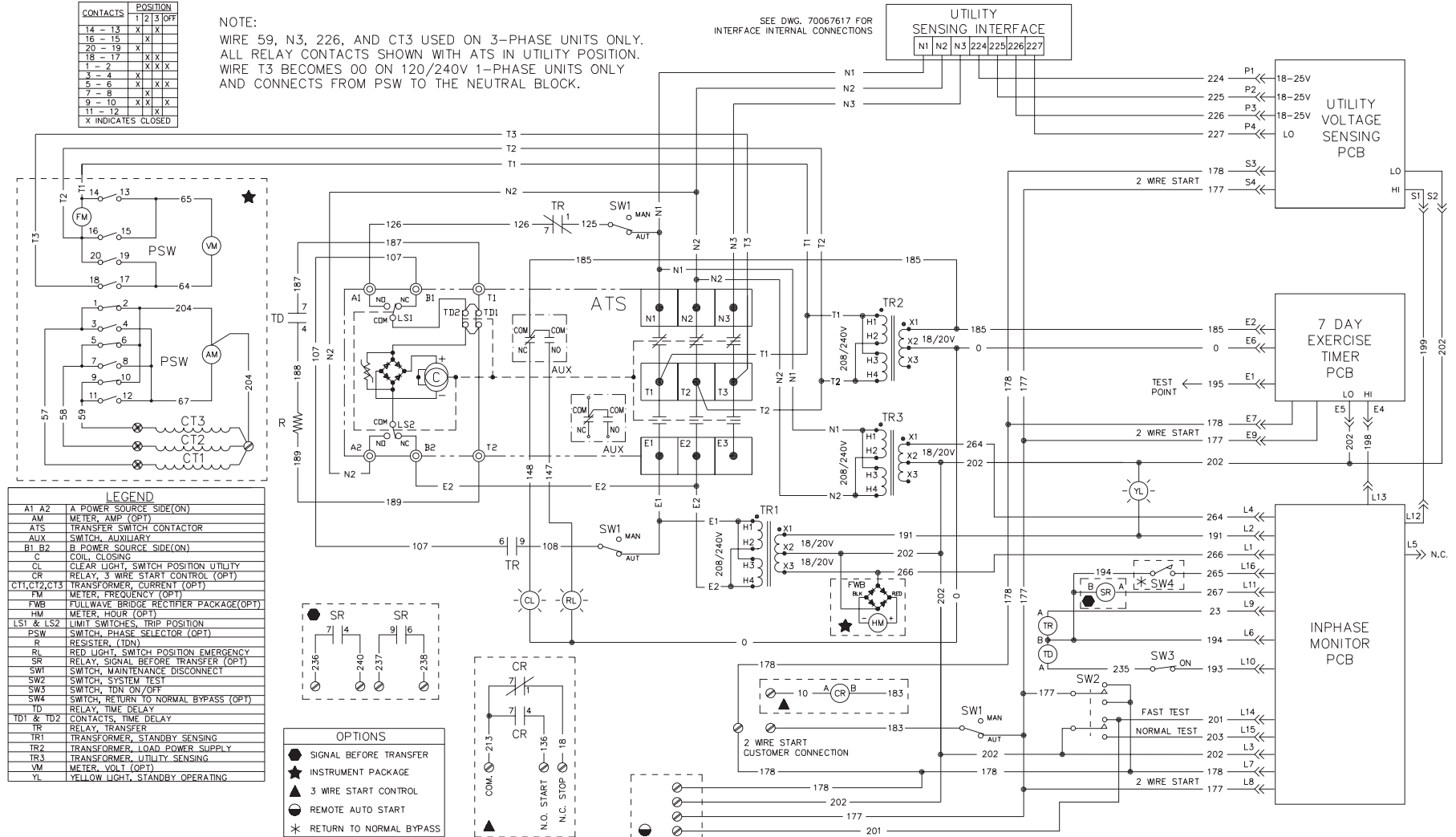


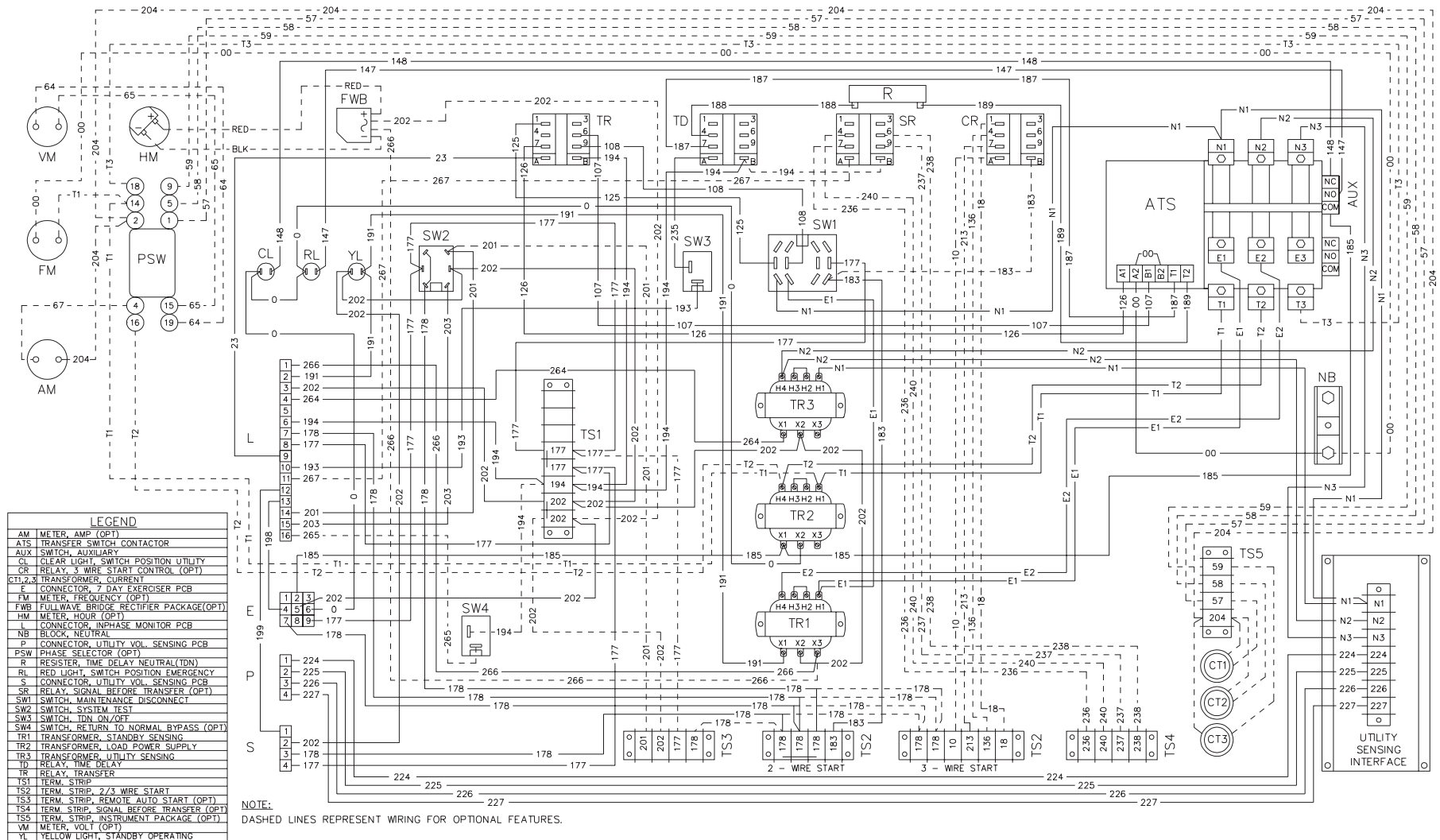
CONTACTS	POSITION
14 - 13	X X
16 - 15	X
20 - 19	X
18 - 17	X X
1 - 2	X X X
3 - 4	X X X
5 - 6	X X X
7 - 8	X X X
9 - 10	X X X
11 - 12	X X
X INDICATES CLOSED	

NOTE:

WIRE 59, N3, 226, AND CT3 USED ON 3-PHASE UNITS ONLY.
ALL RELAY CONTACTS SHOWN WITH ATS IN UTILITY POSITION.
WIRE T3 BECOMES 00 ON 120/240V 1-PHASE UNITS ONLY
AND CONNECTS FROM PSW TO THE NEUTRAL BLOCK.

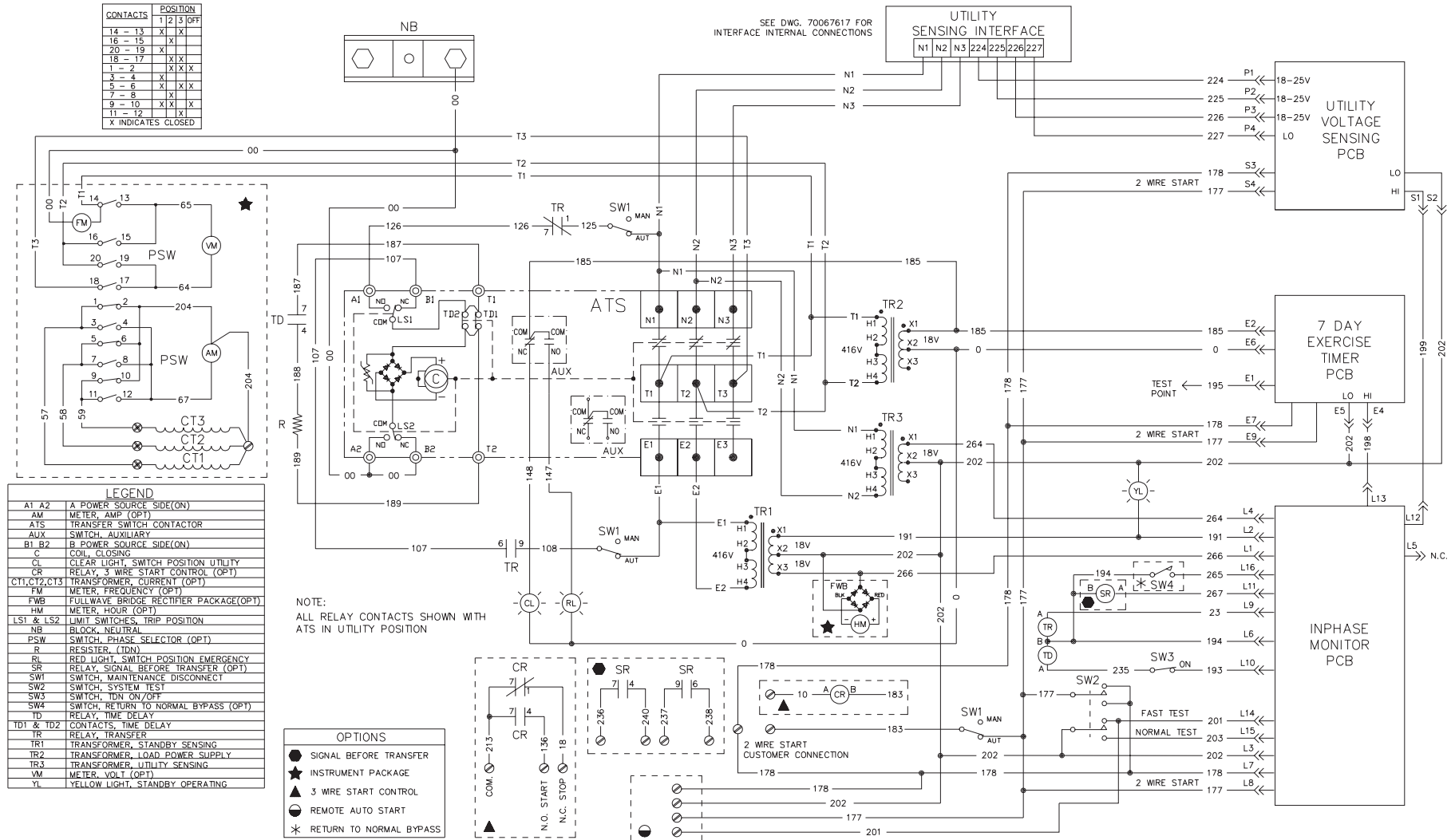
SEE DWG. 70067617 FOR
INTERFACE INTERNAL CONNECTIONS

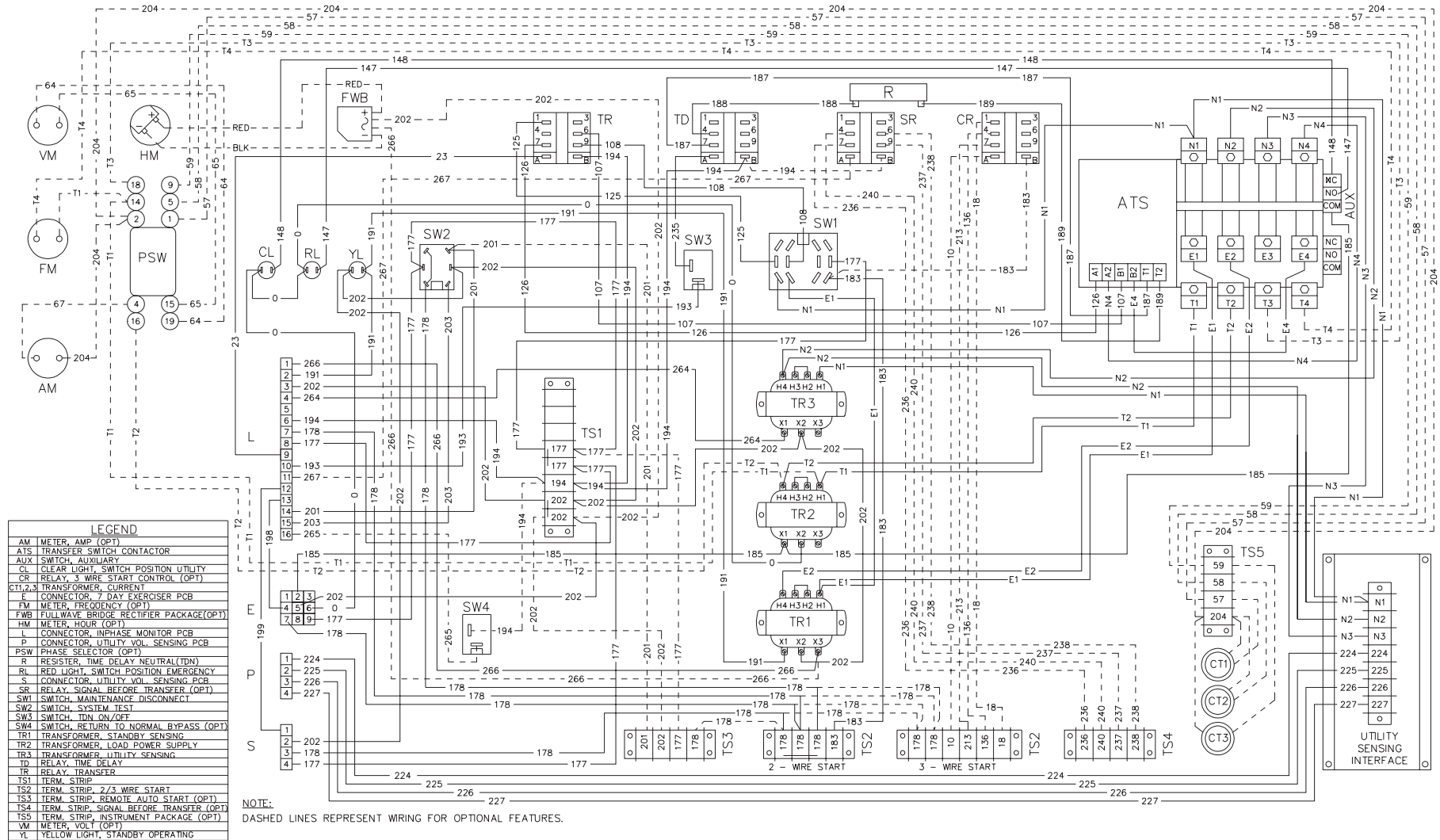




CONTACTS	POSITION			
	1	2	3	OFF
14 - 13	X		X	
16 - 15		X		
20 - 19	X			
18 - 17		X	X	
1 - 2		X	X	X
3 - 4	X			
5 - 6	X		X	X
7 - 8		X		
9 - 10	X	X		X
11 - 12			X	

X INDICATES CLOSED





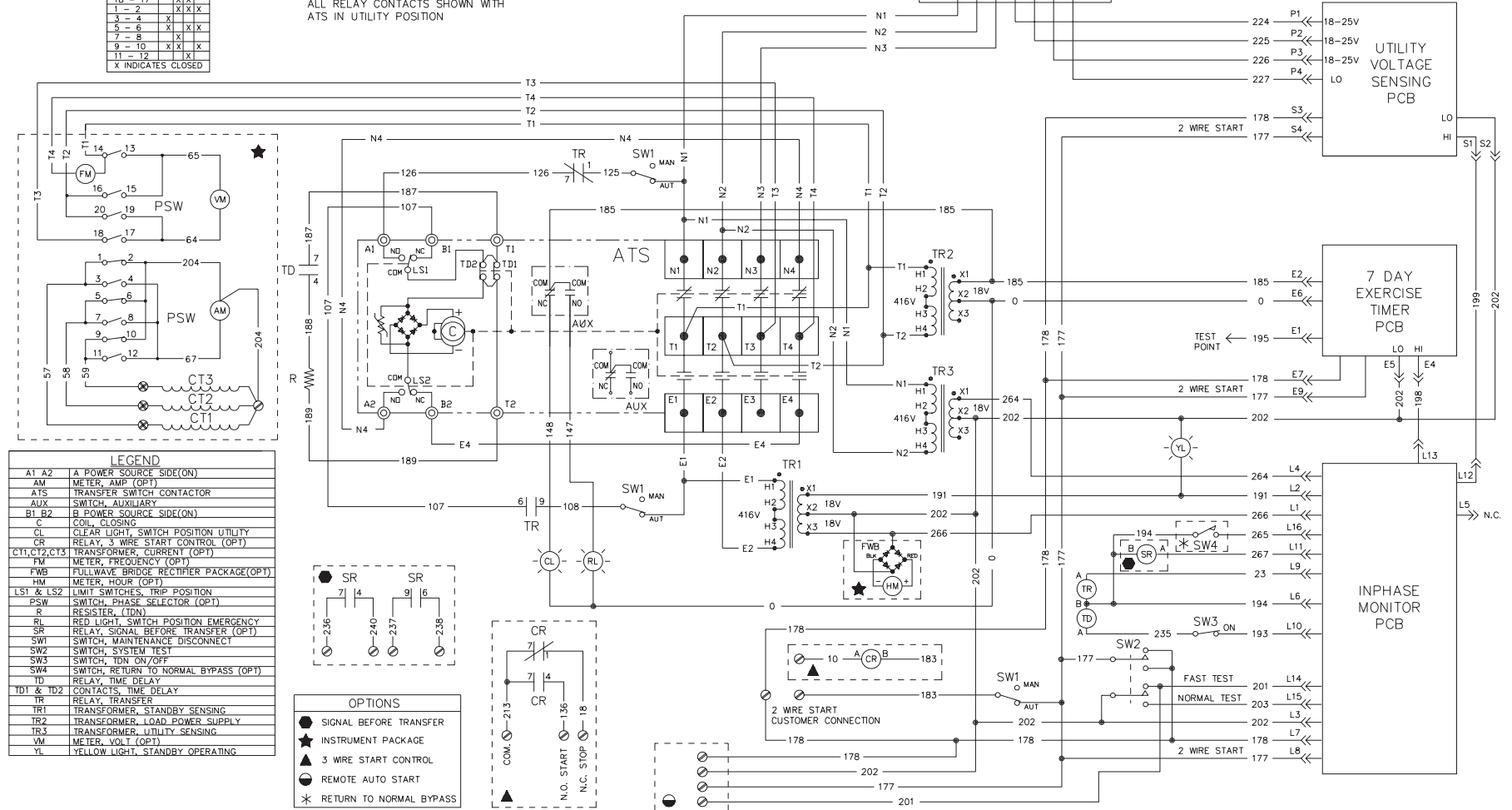
CONTACTS	POSITION
14 - 13	X X
16 - 15	X
20 - 19	X
18 - 17	X X
1 - 2	X X X
3 - 4	X
5 - 6	X X X
7 - 8	X X
9 - 10	X X X
11 - 12	X

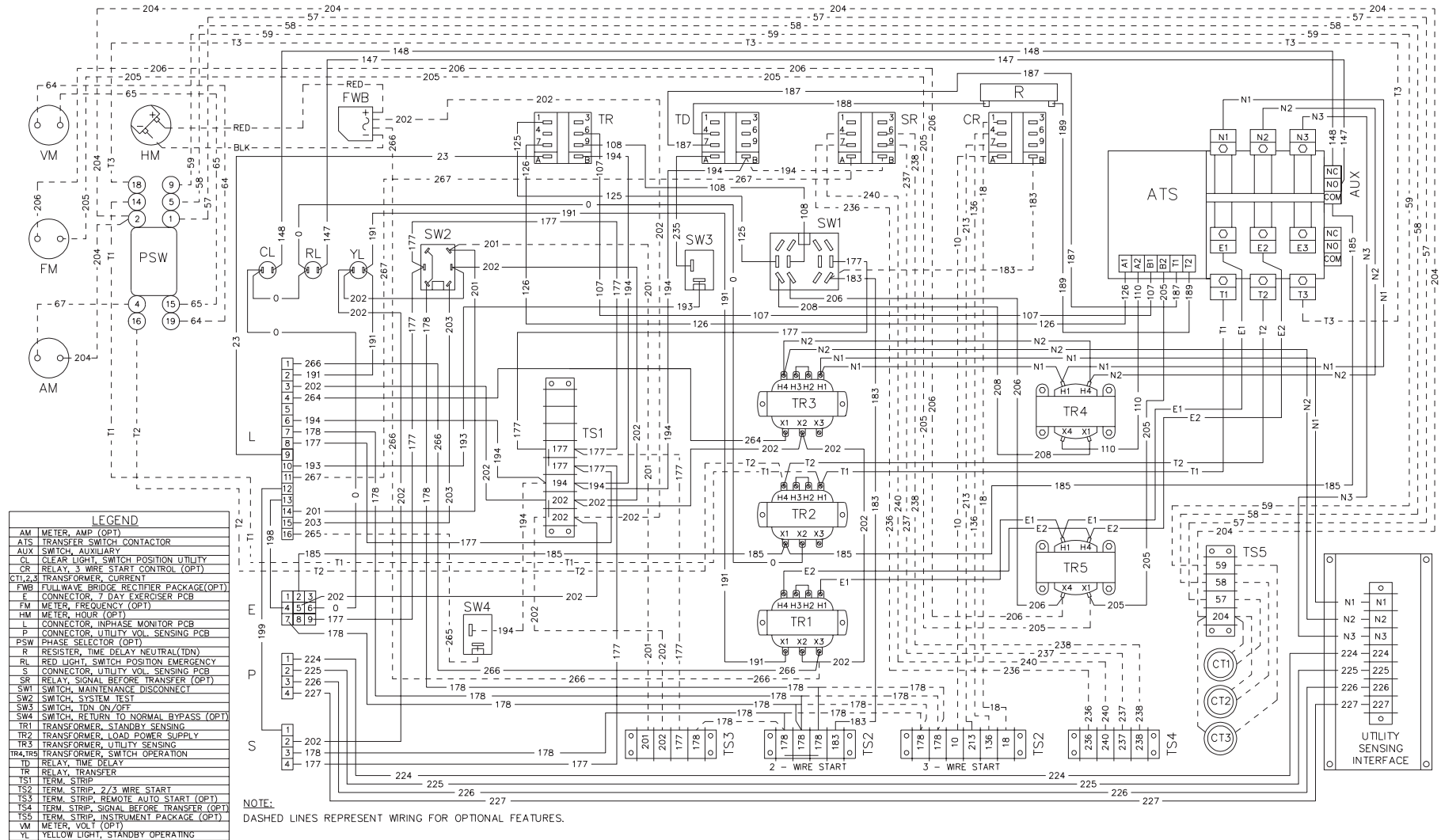
X INDICATES CLOSED

NOTE:
ALL RELAY CONTACTS SHOWN WITH
ATS IN UTILITY POSITION

SEE DWG. 70067617 FOR
INTERFACE INTERNAL CONNECTIONS

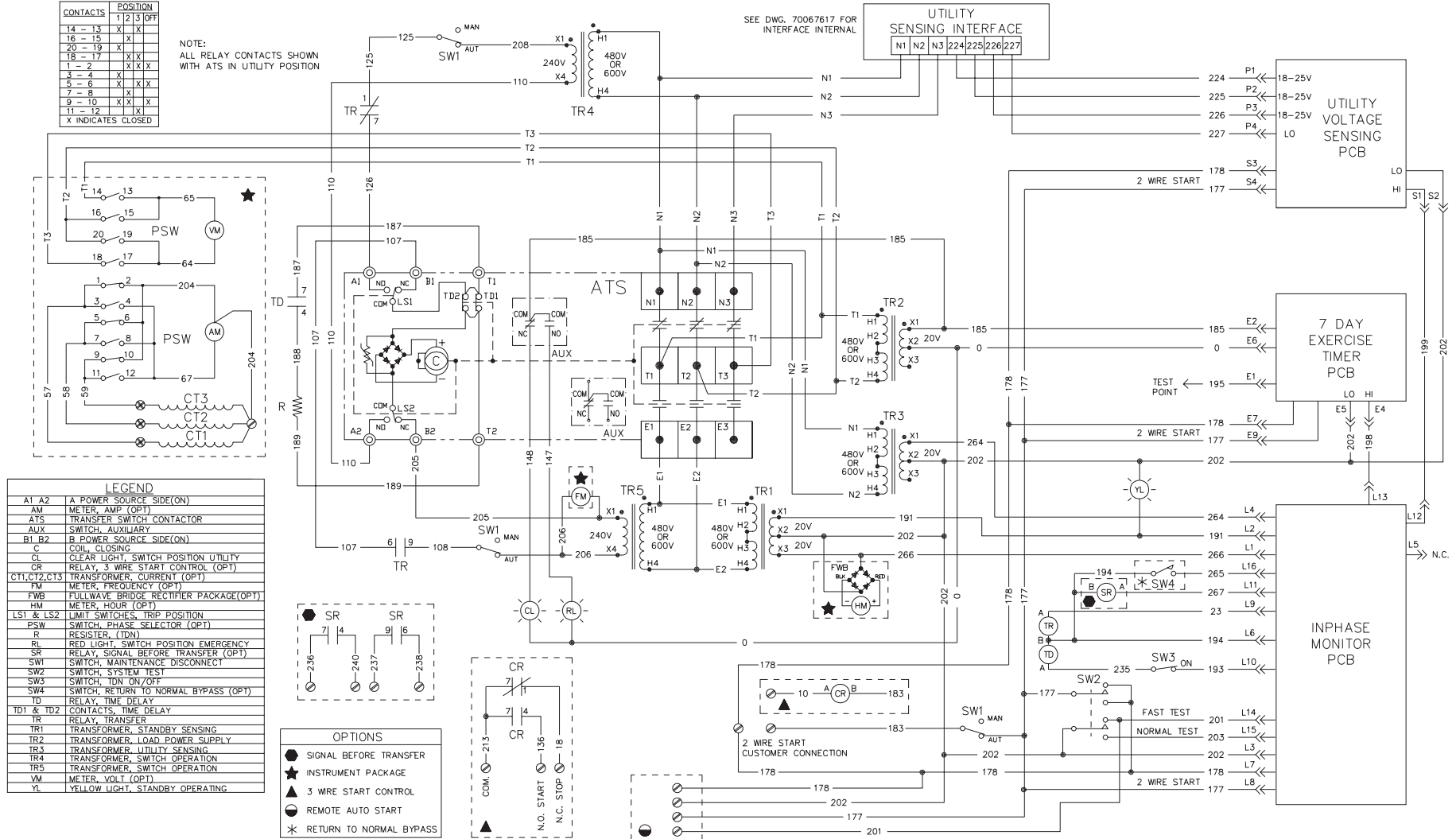
UTILITY
SENSING INTERFACE
N1 N2 N3 224 225 226 227

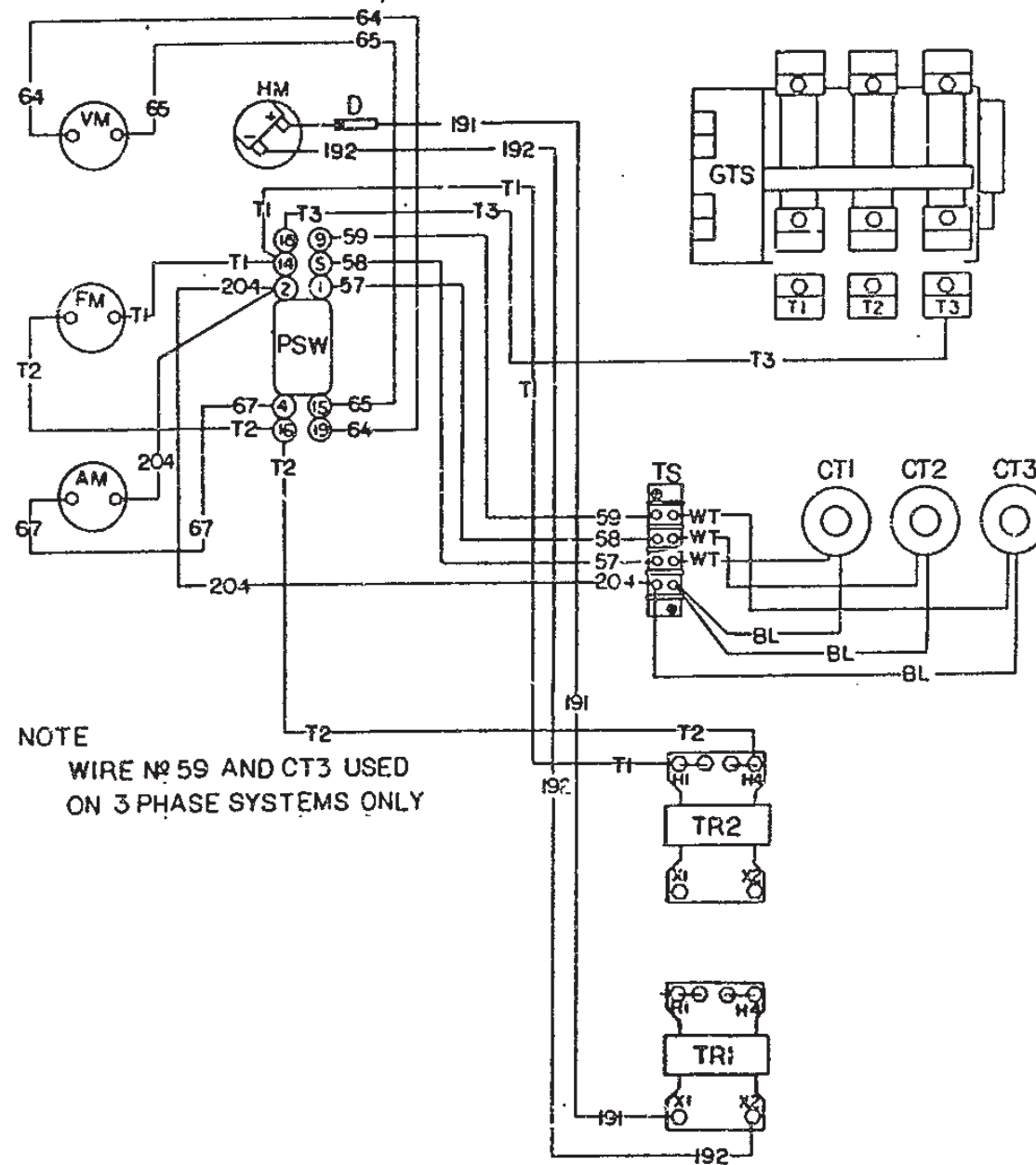


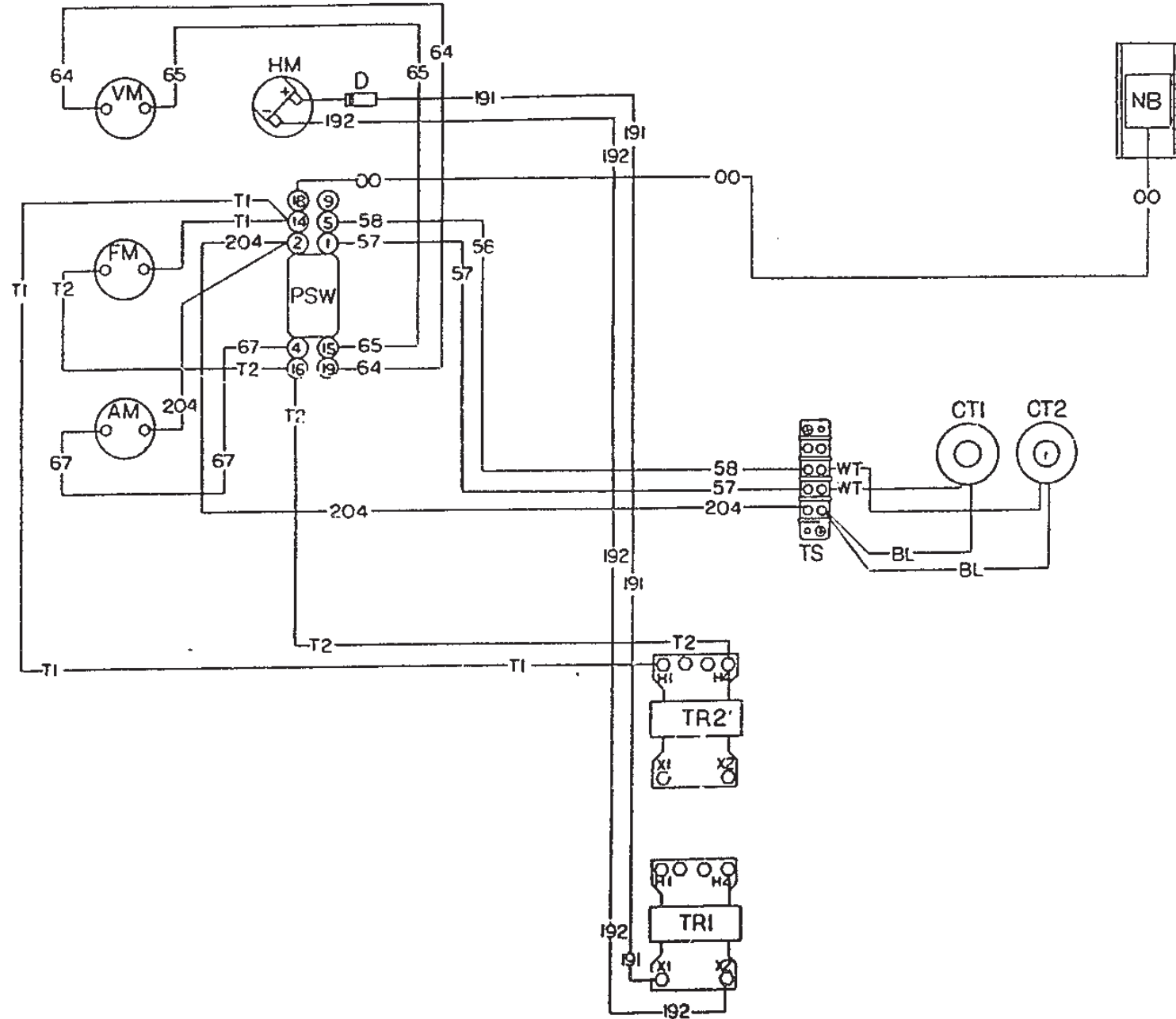


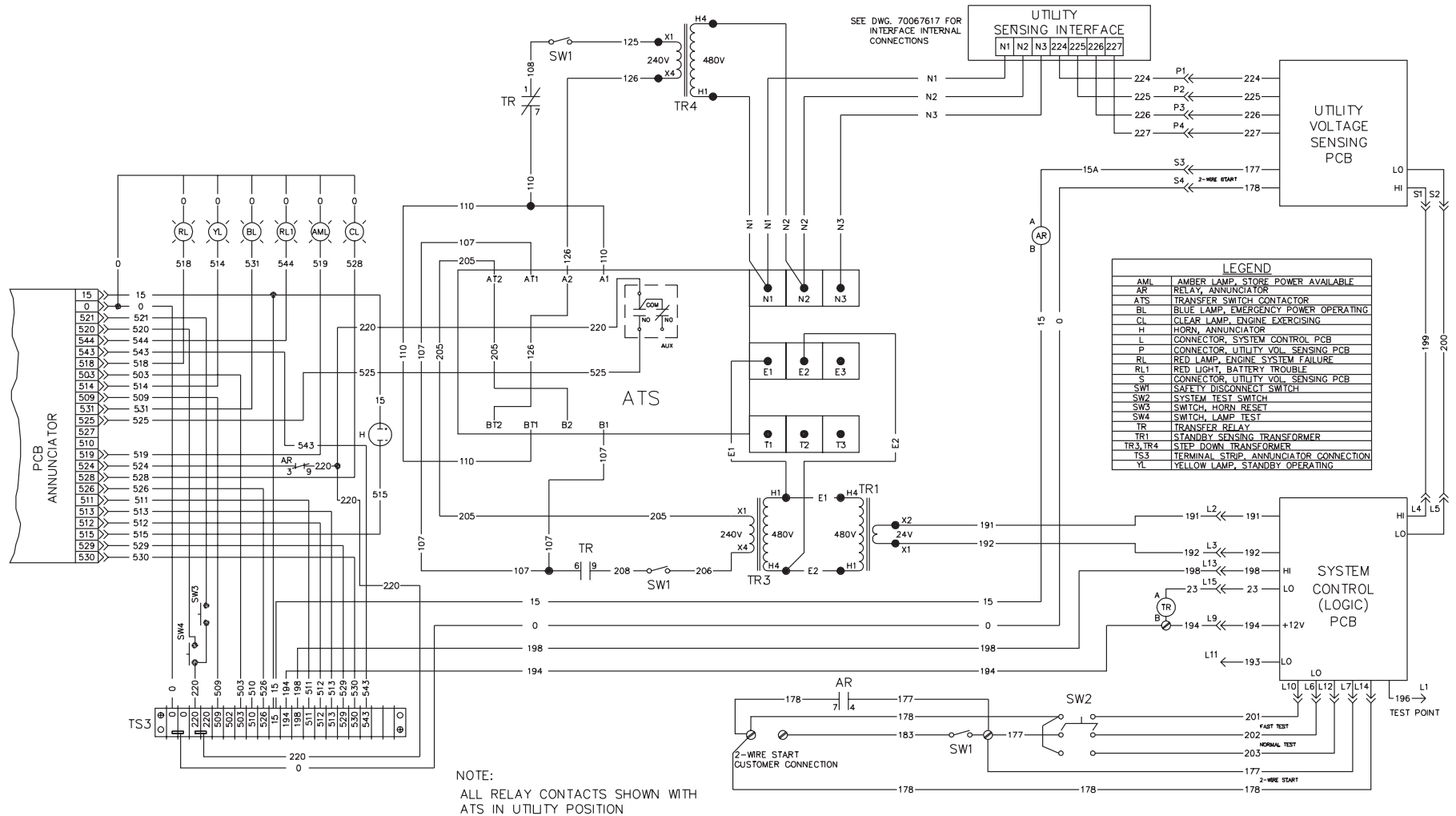
CONTACTS	POSITION		
	1	2	3 OFF
14 - 13	X	X	
16 - 15	X	X	
20 - 19	X	X	
18 - 17	X	X	
1 - 2	X	X	X
4 - 5	X	X	X
6 - 8	X	X	X
7 - 8	X	X	X
9 - 10	X	X	X
11 - 12	X	X	X
X INDICATES CLOSED			

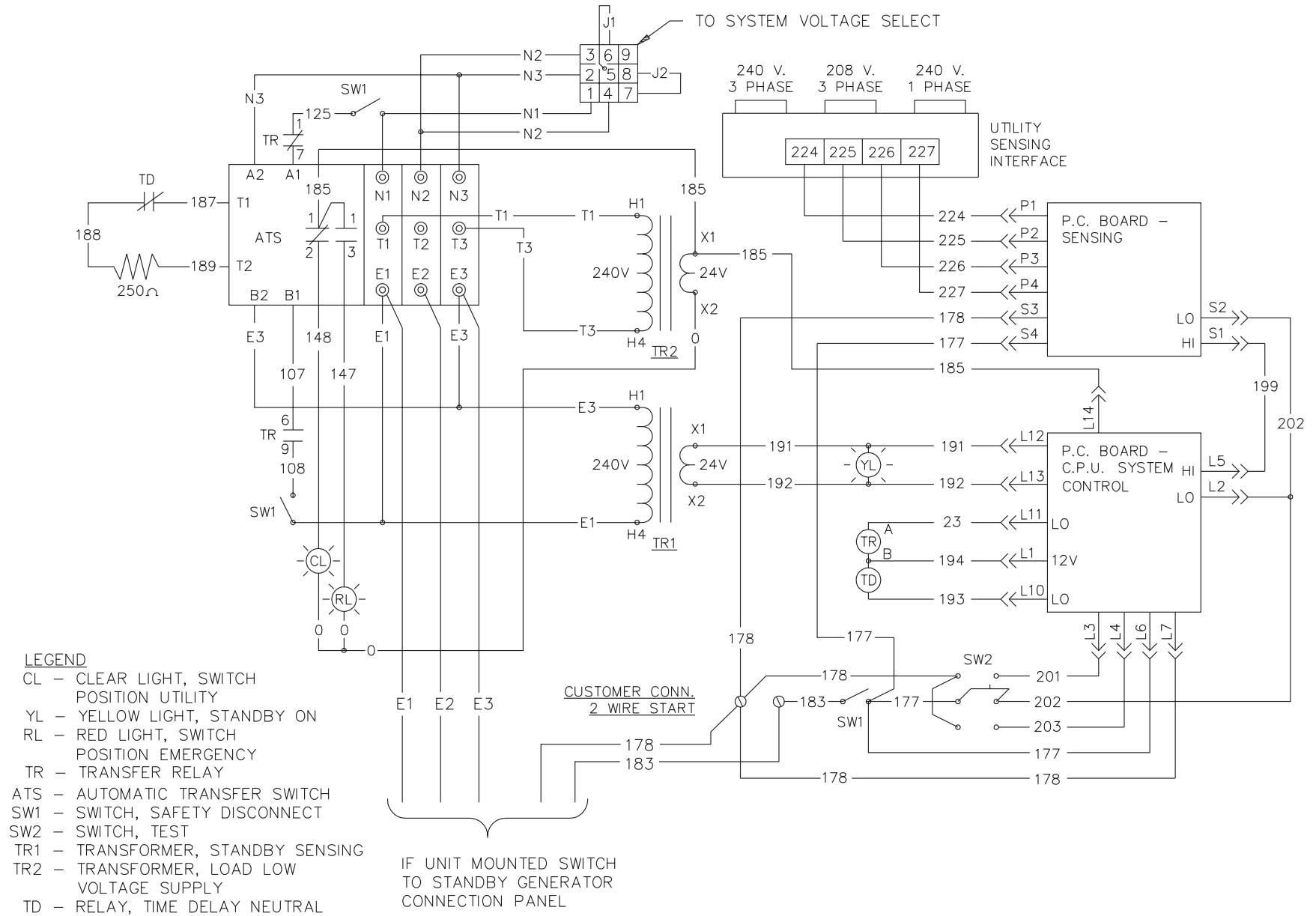
NOTE:
ALL RELAY CONTACTS SHOWN
WITH ATS IN UTILITY POSITION

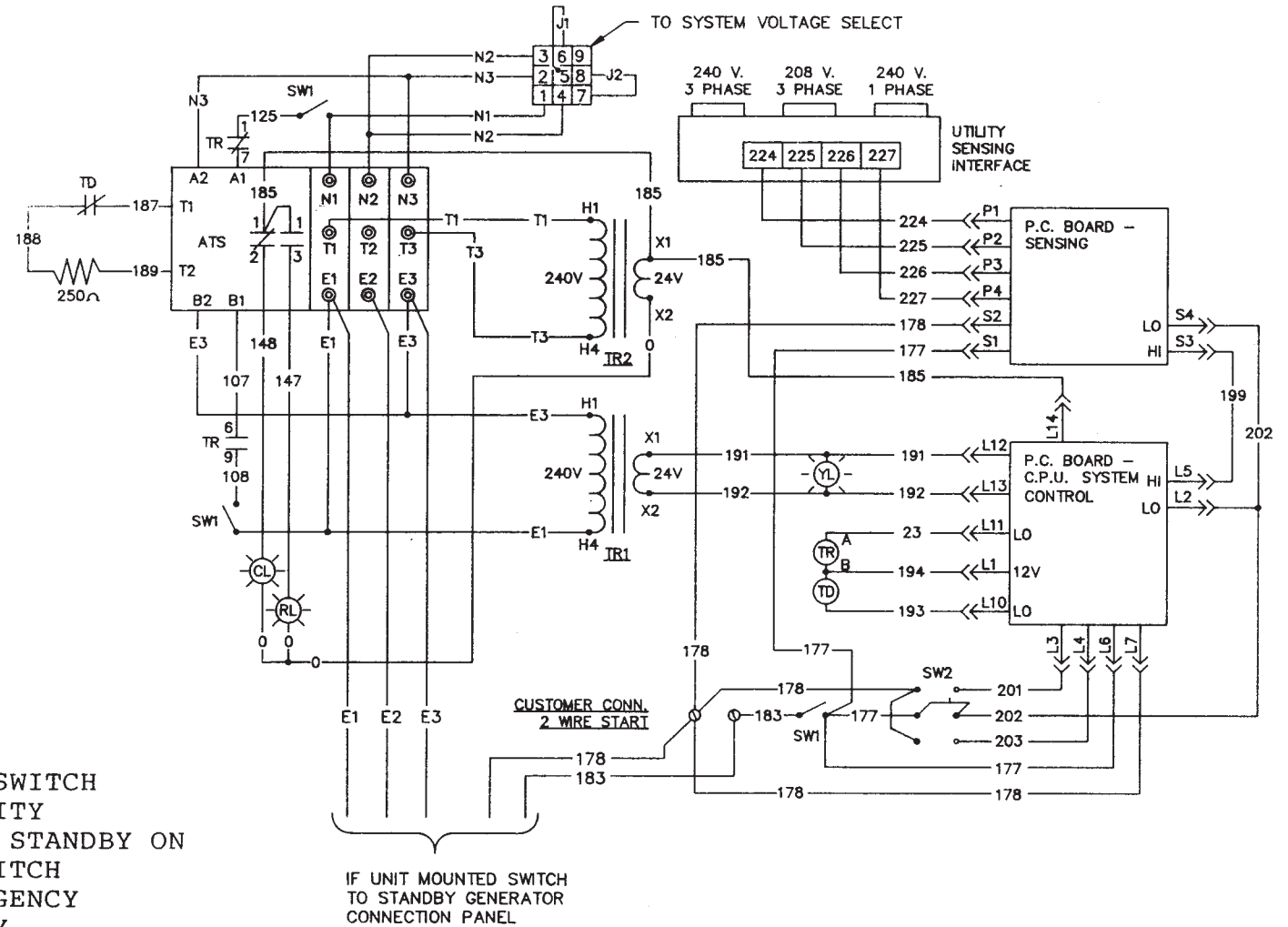






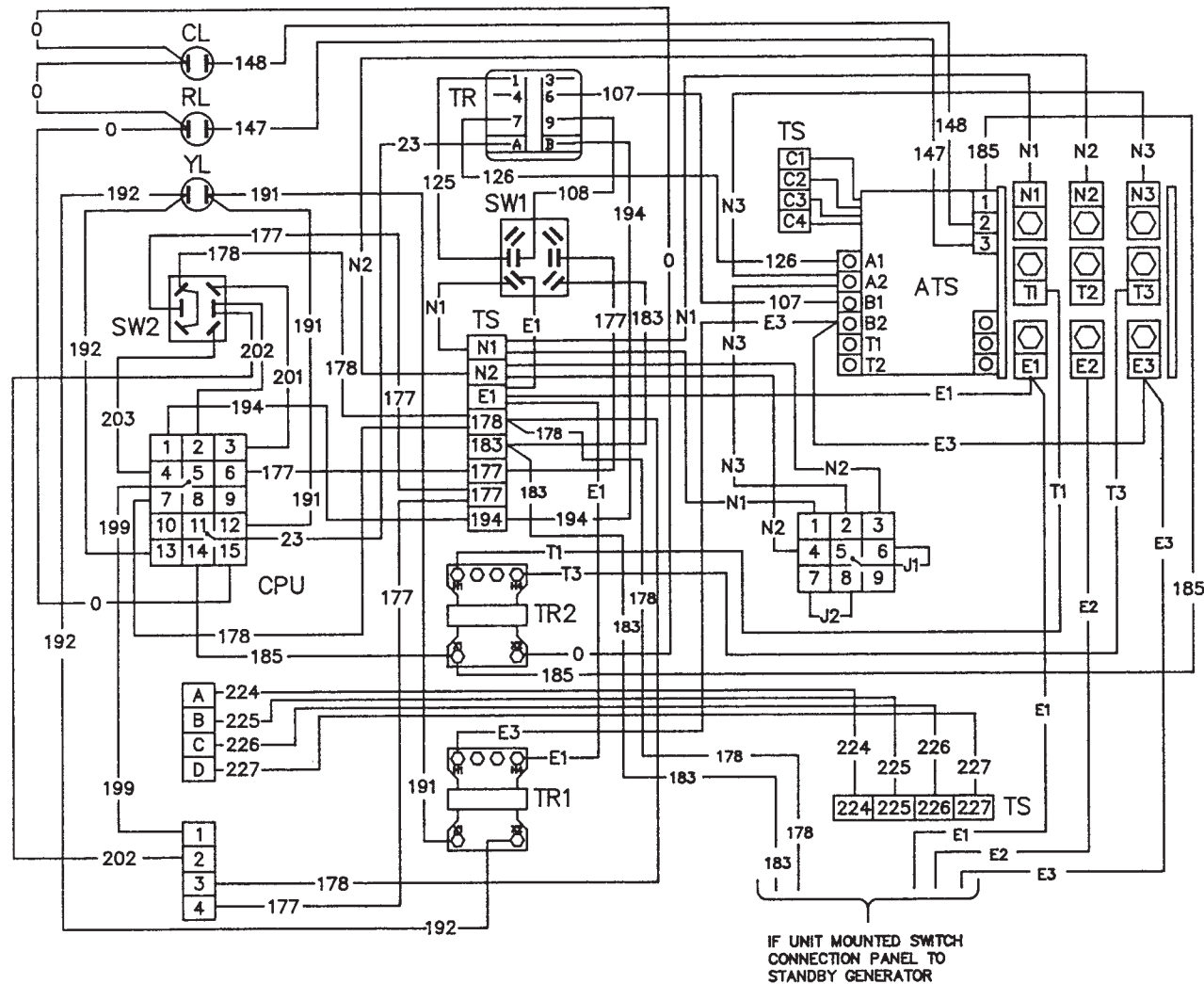




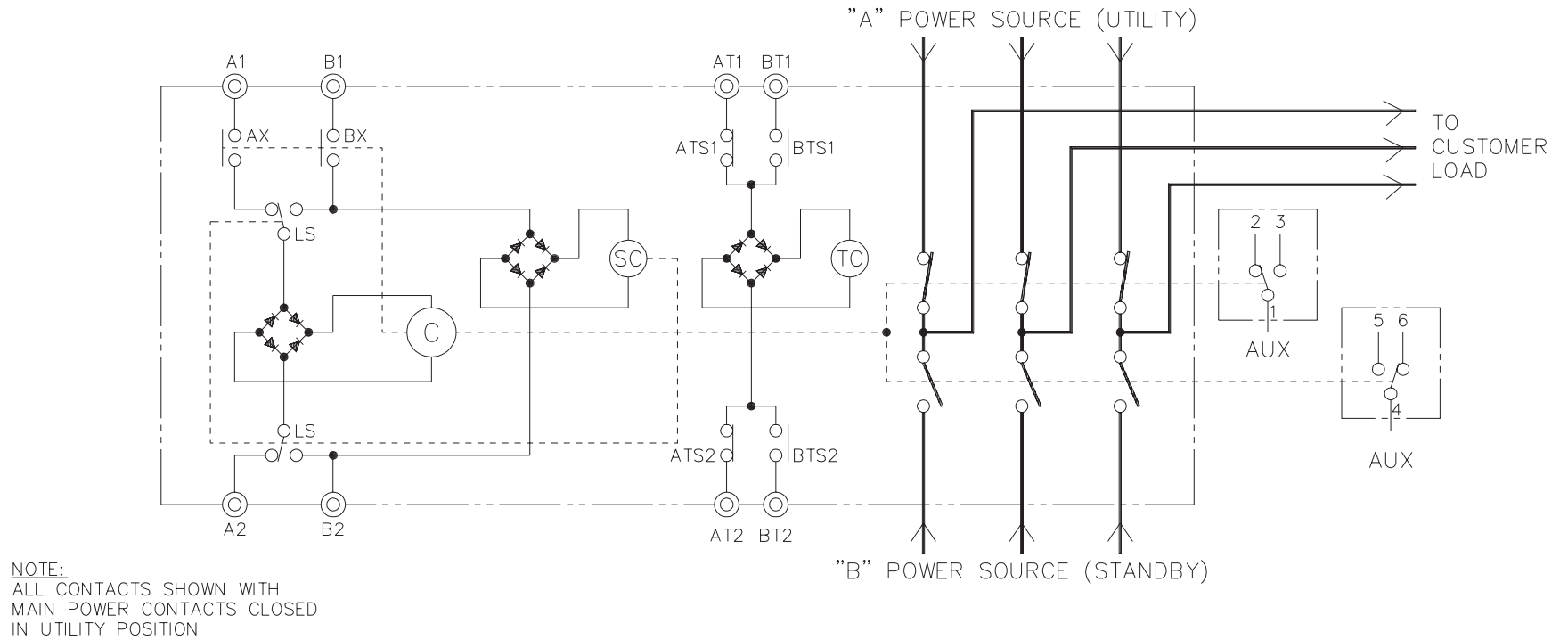


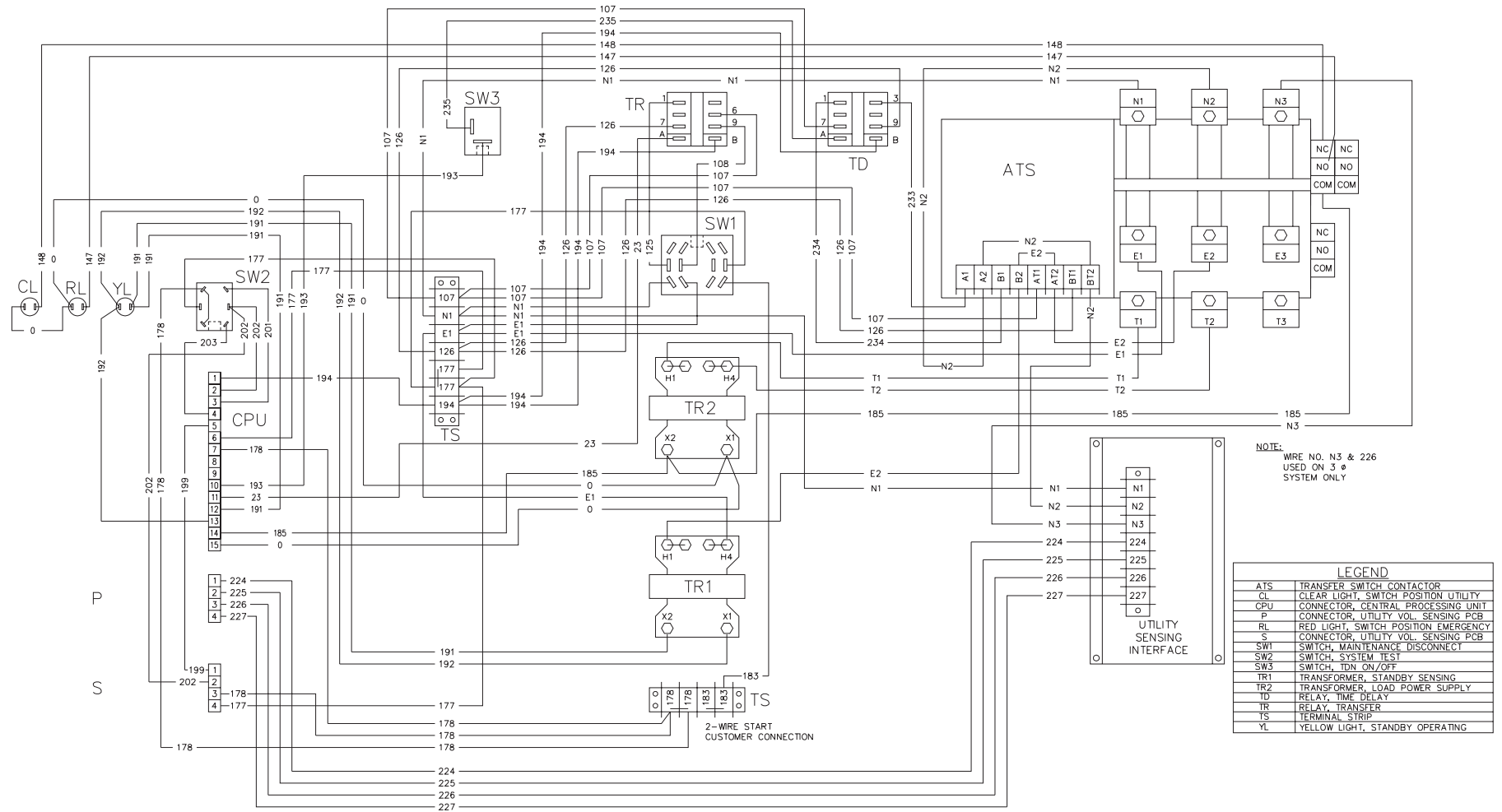
LEGEND

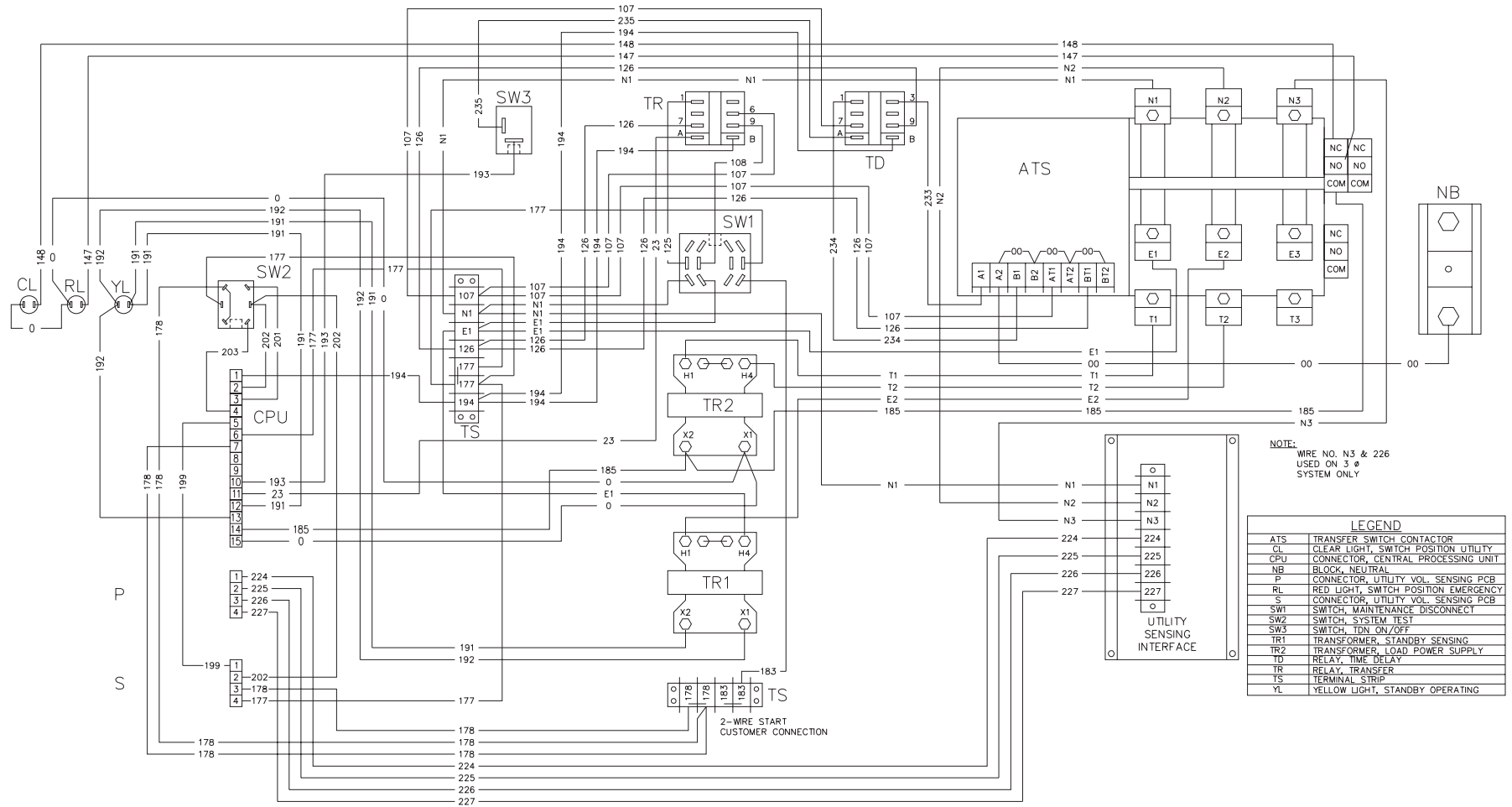
- CL - CLEAR LIGHT, SWITCH POSITION UTILITY
- YL - YELLOW LIGHT, STANDBY ON
- RL - RED LIGHT, SWITCH POSITION EMERGENCY
- TR - TRANSFER RELAY
- ATS - AUTOMATIC TRANSFER SWITCH
- SW1 - SWITCH, SAFETY DISCONNECT
- SW2 - SWITCH, TEST
- TR1 - TRANSFORMER, STANDBY SENSING
- TR2 - TRANSFORMER, LOAD LOW VOLTAGE SUPPLY
- TD - RELAY, TIME DELAY NEUTRAL

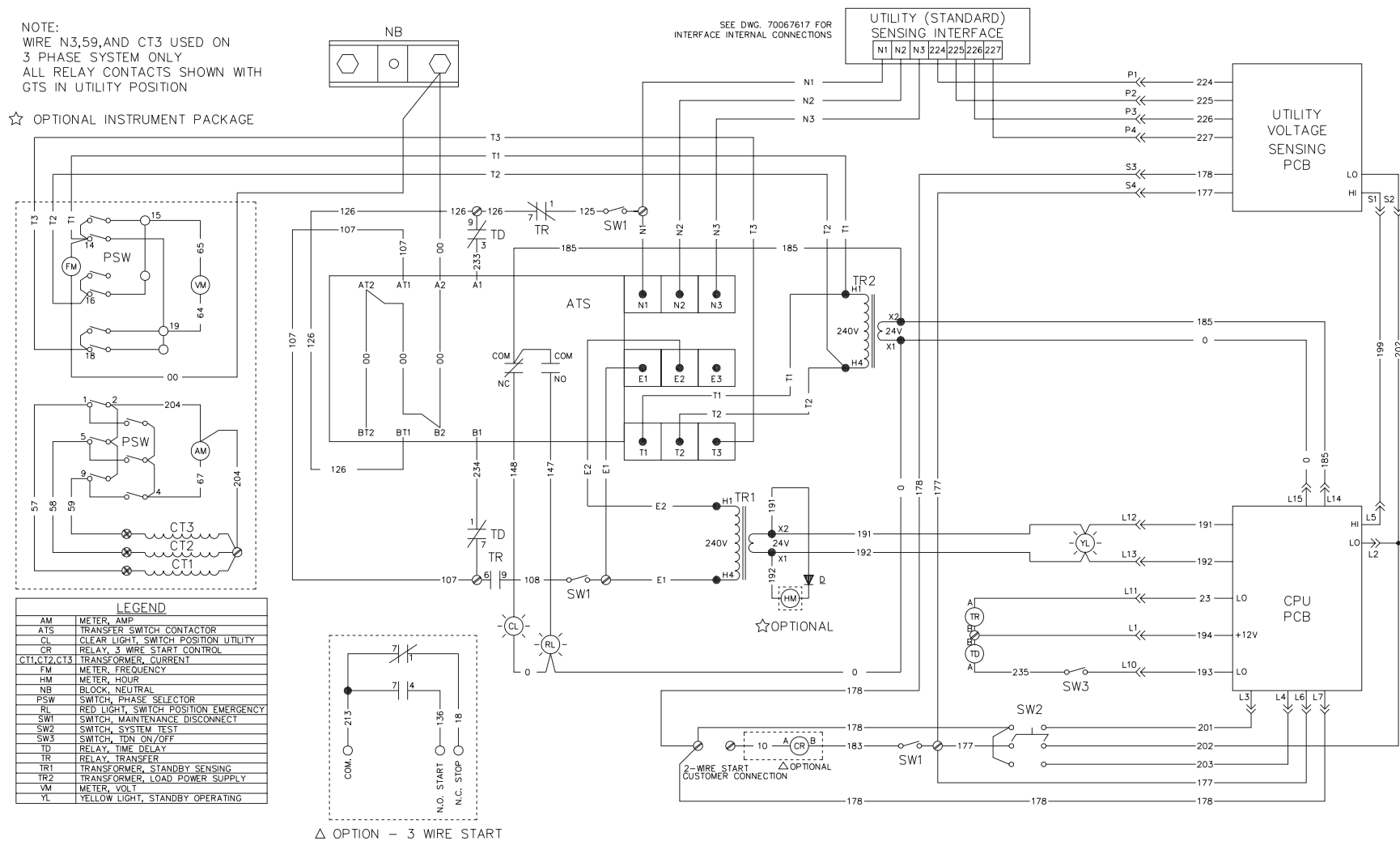


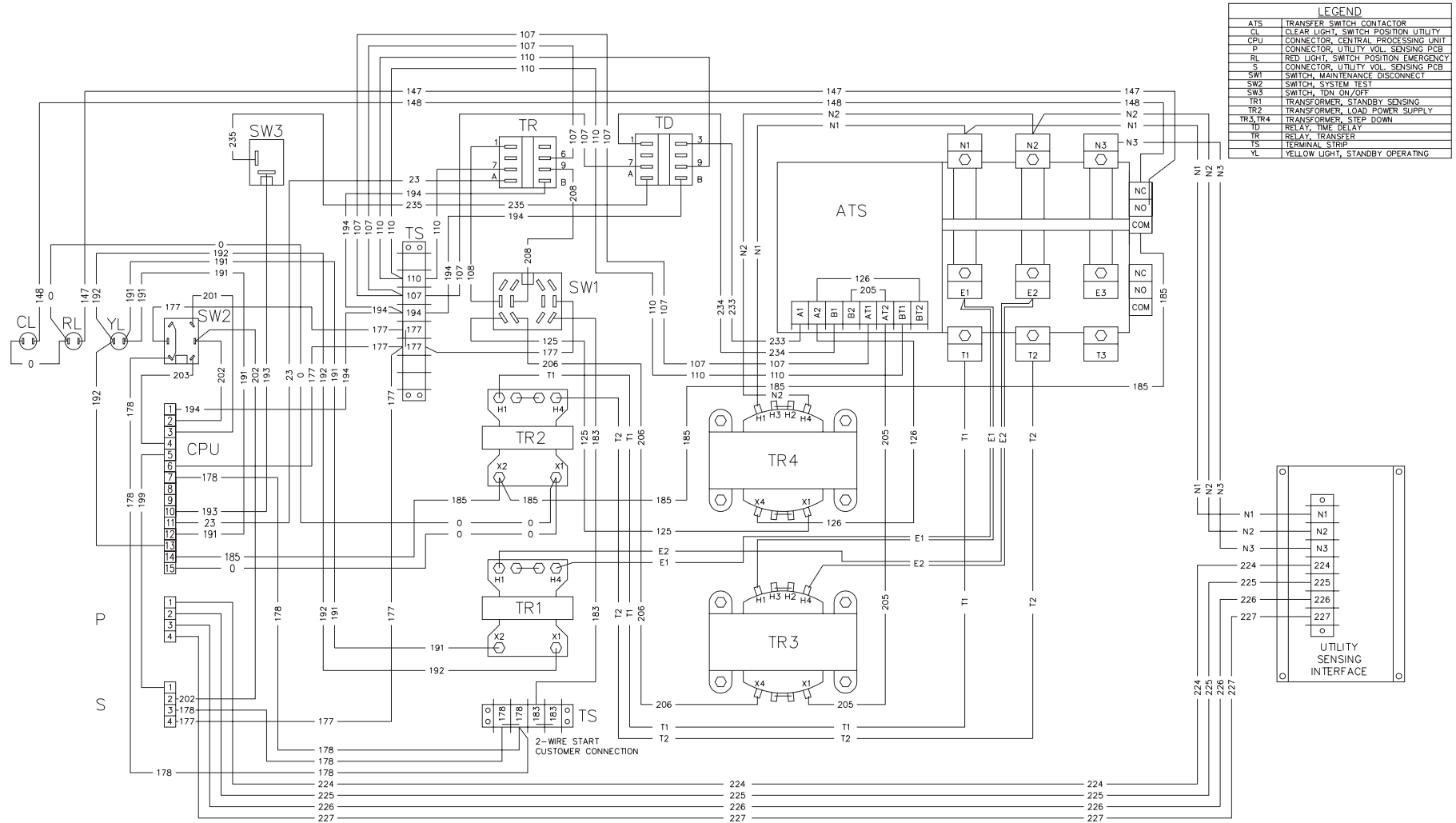
C = Closing coil
 LS = Selective switch
 Ax Bx = Control switch
 SC = Selective coil
 TC = Trip coil
 AUX = Auxiliary switch
 ATS1 ATS2 = Trip control switch
 BTS1 BTS2 = Trip control switch
 A1 A2 = A Power Source Side(ON)
 B1 B2 = B Power Source Side(ON)
 AT1 AT2 = A Power Source Side(Trip)
 BT1 BT2 = B Power Source Side(Trip)



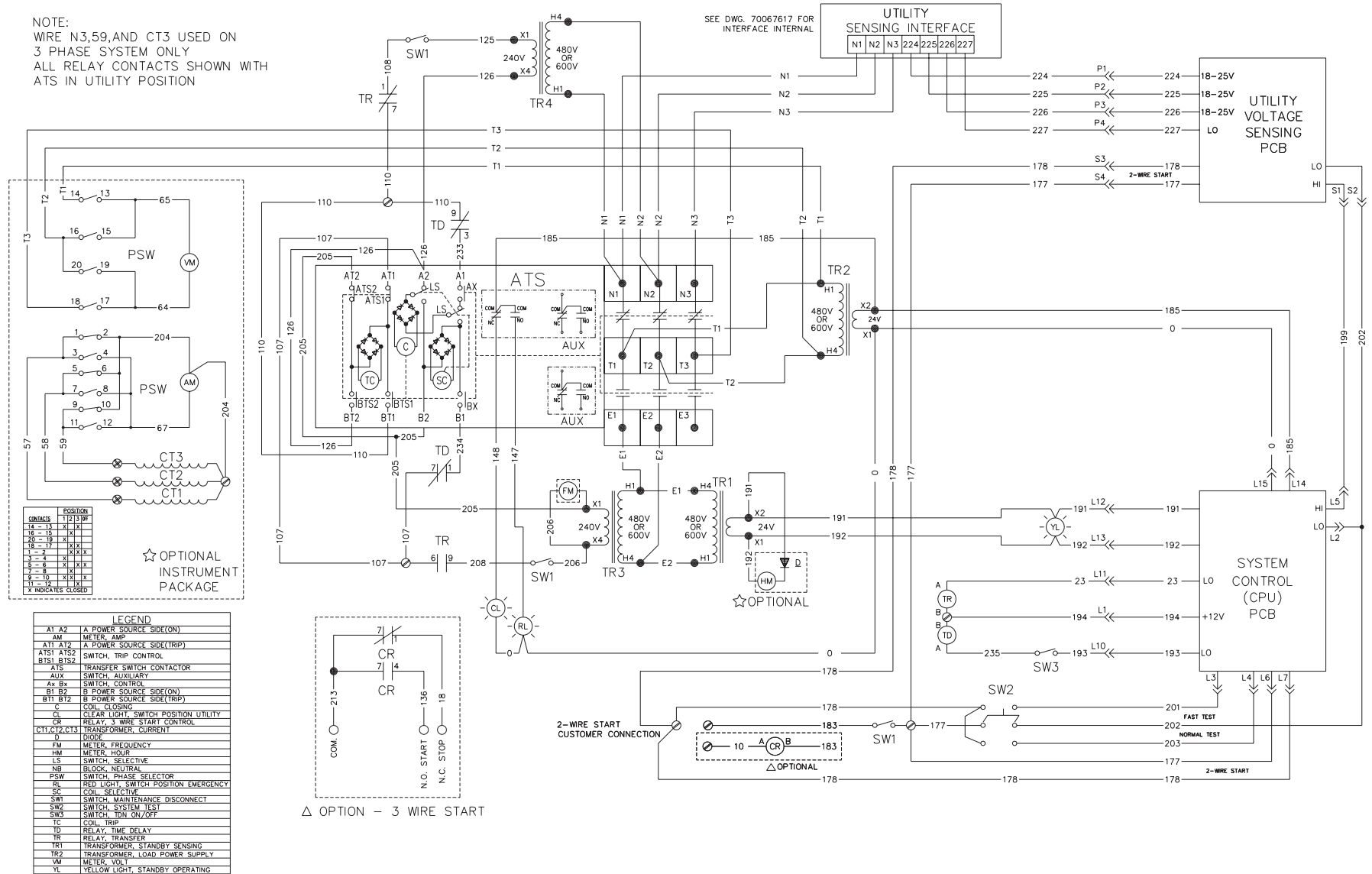




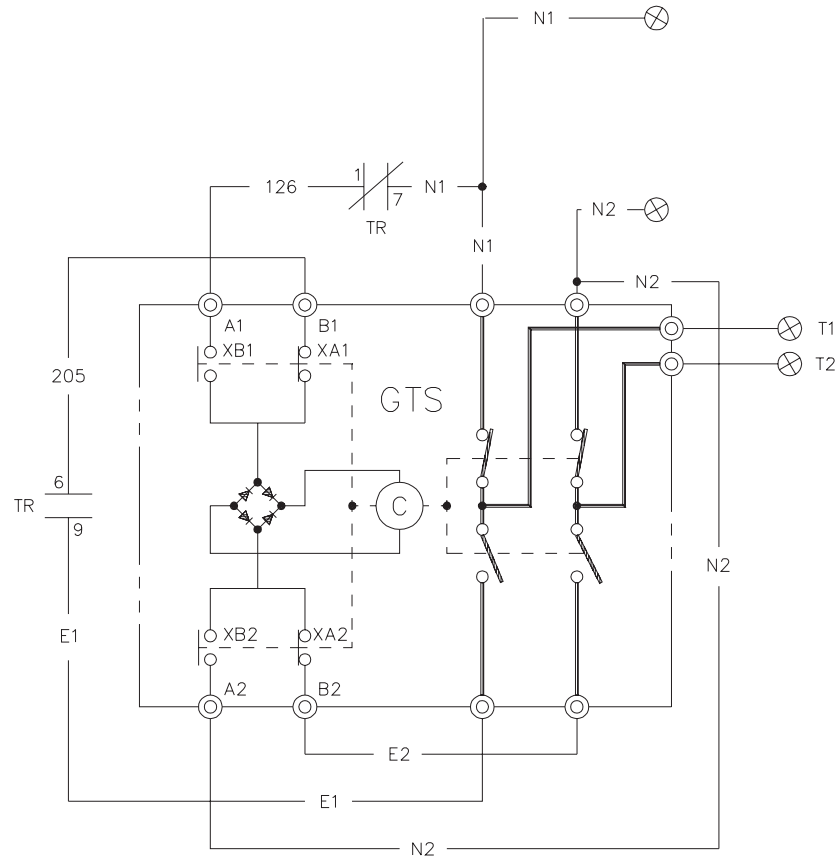




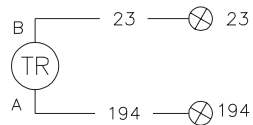
NOTE:
WIRE N3,59,AND CT3 USED ON
3 PHASE SYSTEM ONLY
ALL RELAY CONTACTS SHOWN WITH
ATS IN UTILITY POSITION



SCHEMATIC DIAGRAM

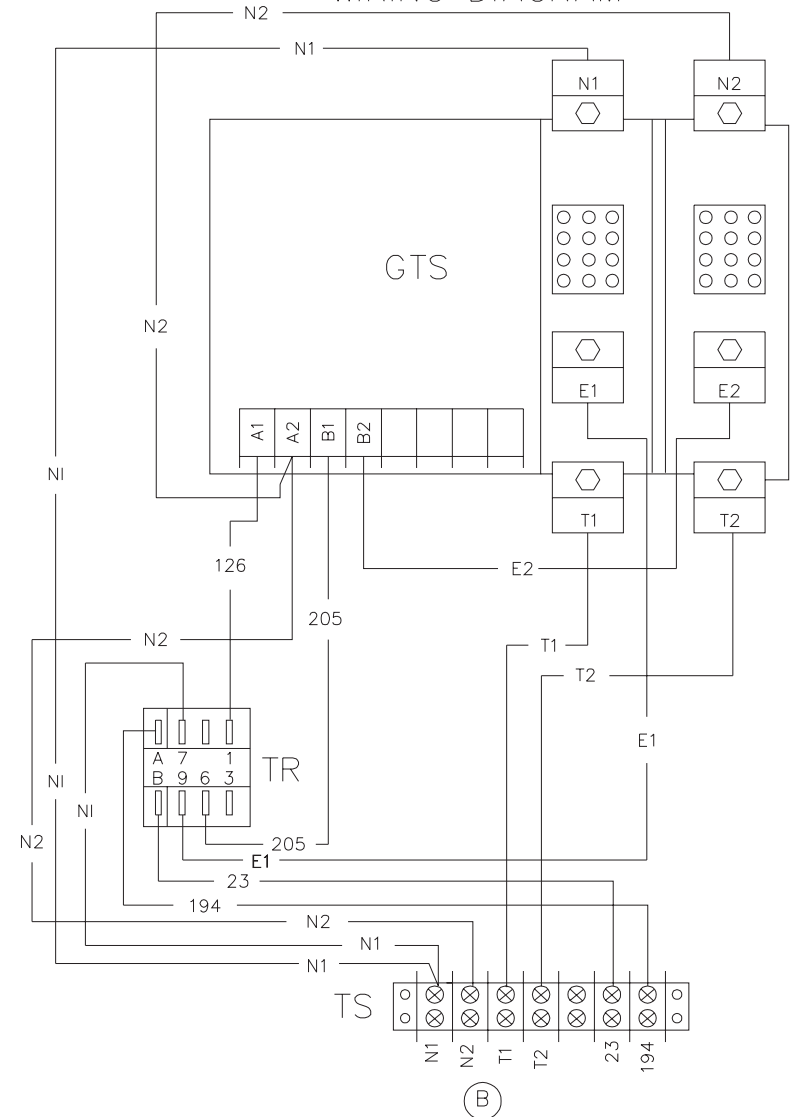


LEGEND	
XA1,XA2,XB1,XB2	- LIMIT SWITCHES, ACTUATOR
C	- CONTACTOR ACTUATING COIL
GTS	- TRANSFER SWITCH CONTACTOR
TR	- RELAY, TRANSFER
TS	- TERMINAL STRIP (CUSTOMER CONNECTION)

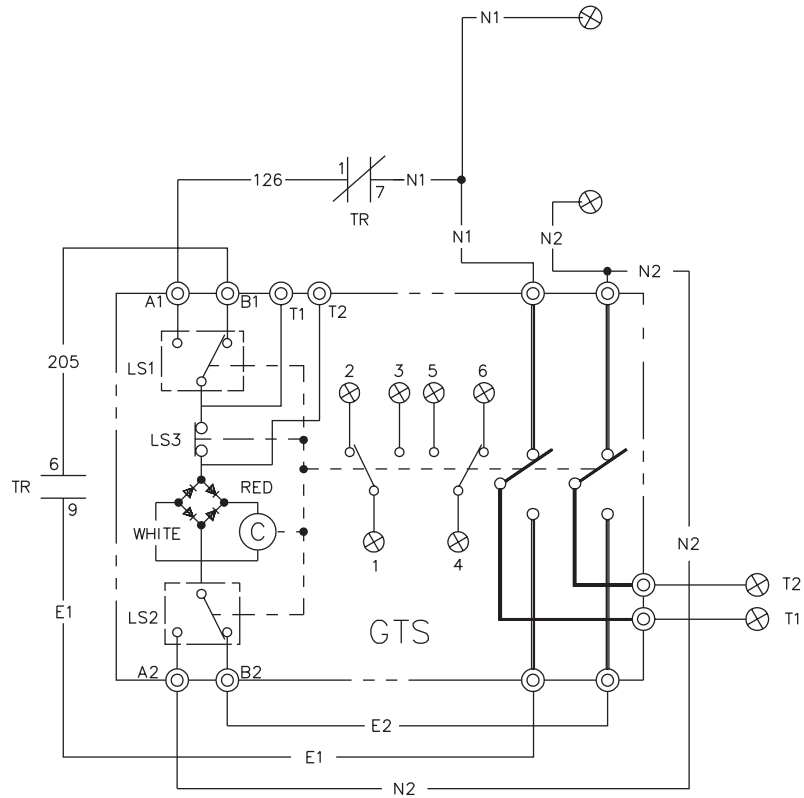


NOTE:
ALL CONTACTS SHOWN WITH
TRANSFER SWITCH IN UTILITY
POSITION.

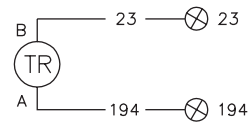
WIRING DIAGRAM



SCHEMATIC DIAGRAM

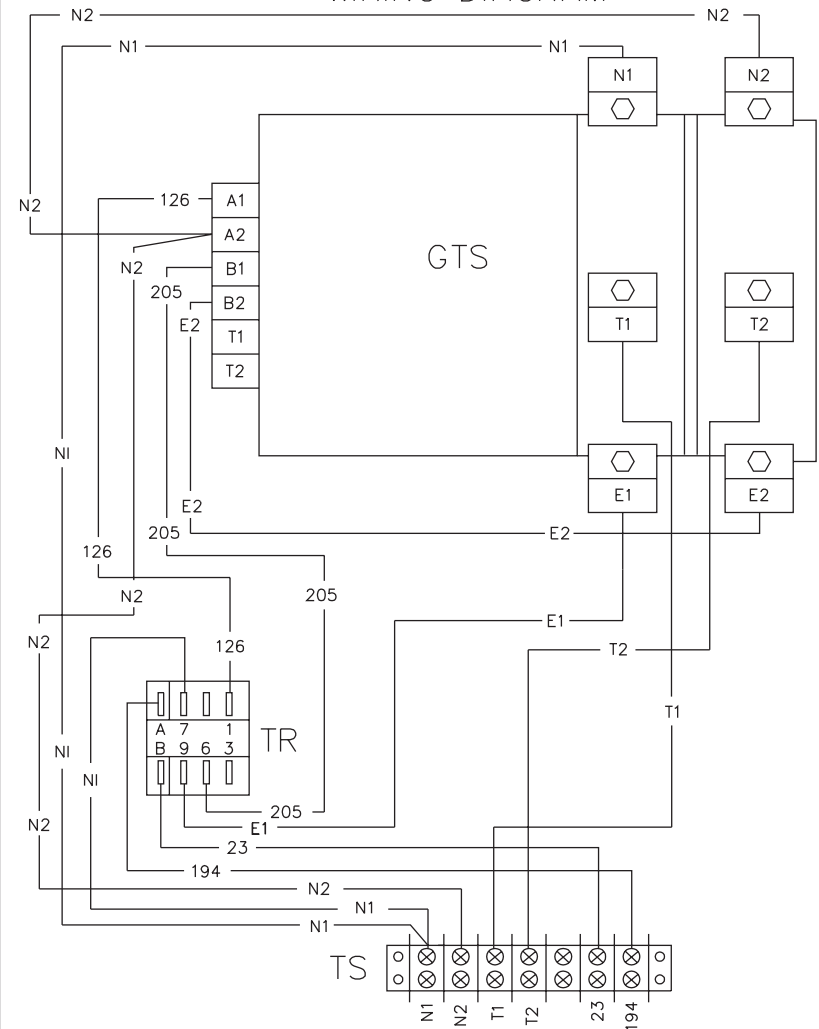


LEGEND	
C	CONTACTOR ACTUATING COIL
GTS	TRANSFER SWITCH CONTACTOR
LS1,LS2,LS3	LIMIT SWITCHES, ACTUATOR
TR	RELAY, TRANSFER
TS	TERMINAL STRIP (CUSTOMER CONNECTION)

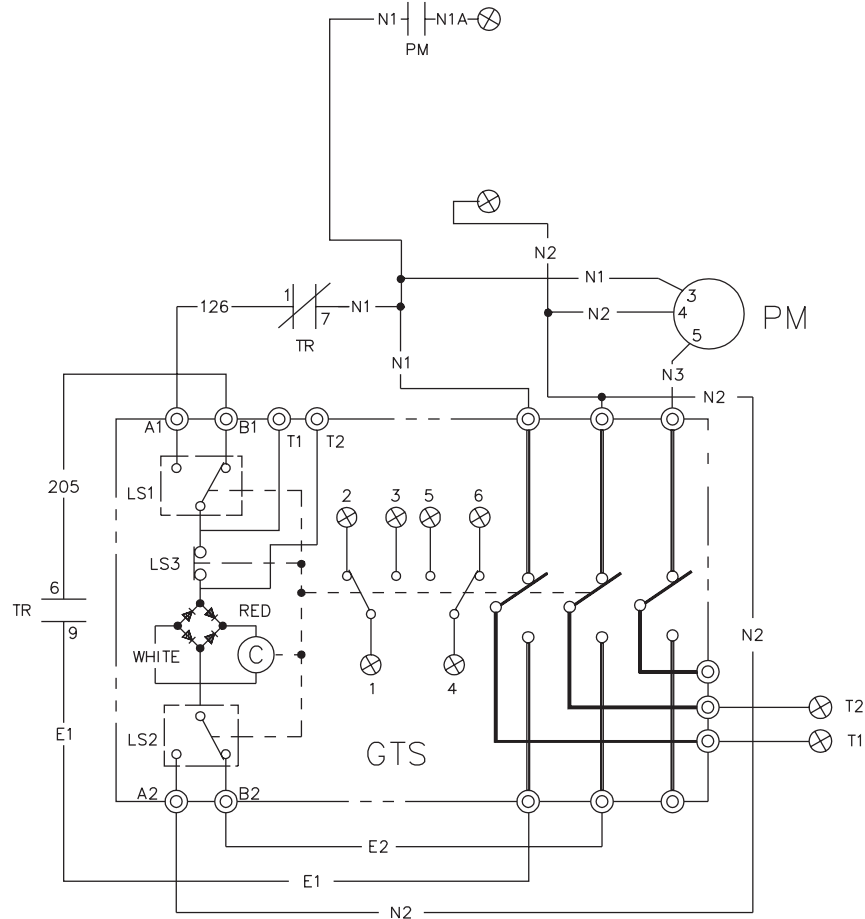


NOTE:
ALL CONTACTS SHOWN WITH
TRANSFER SWITCH IN UTILITY
POSITION.

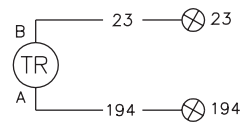
WIRING DIAGRAM



SCHEMATIC DIAGRAM

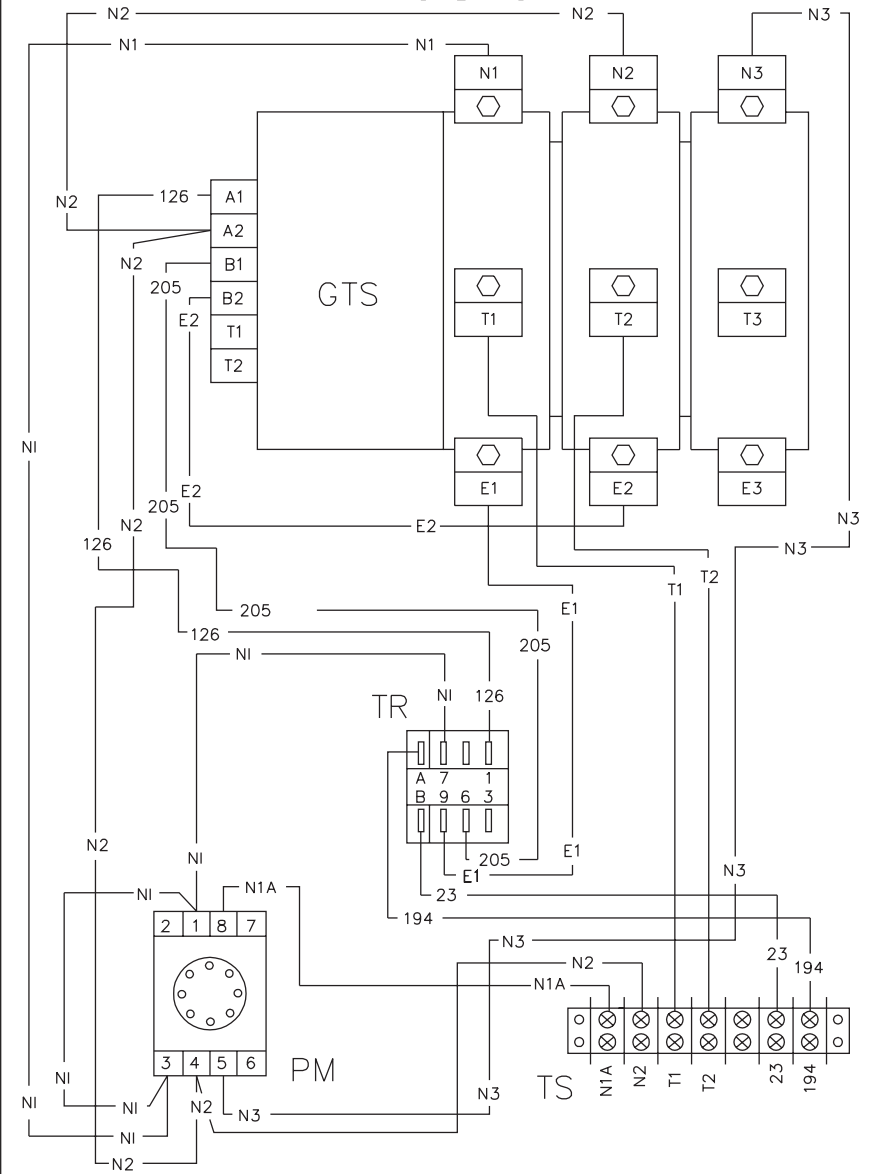


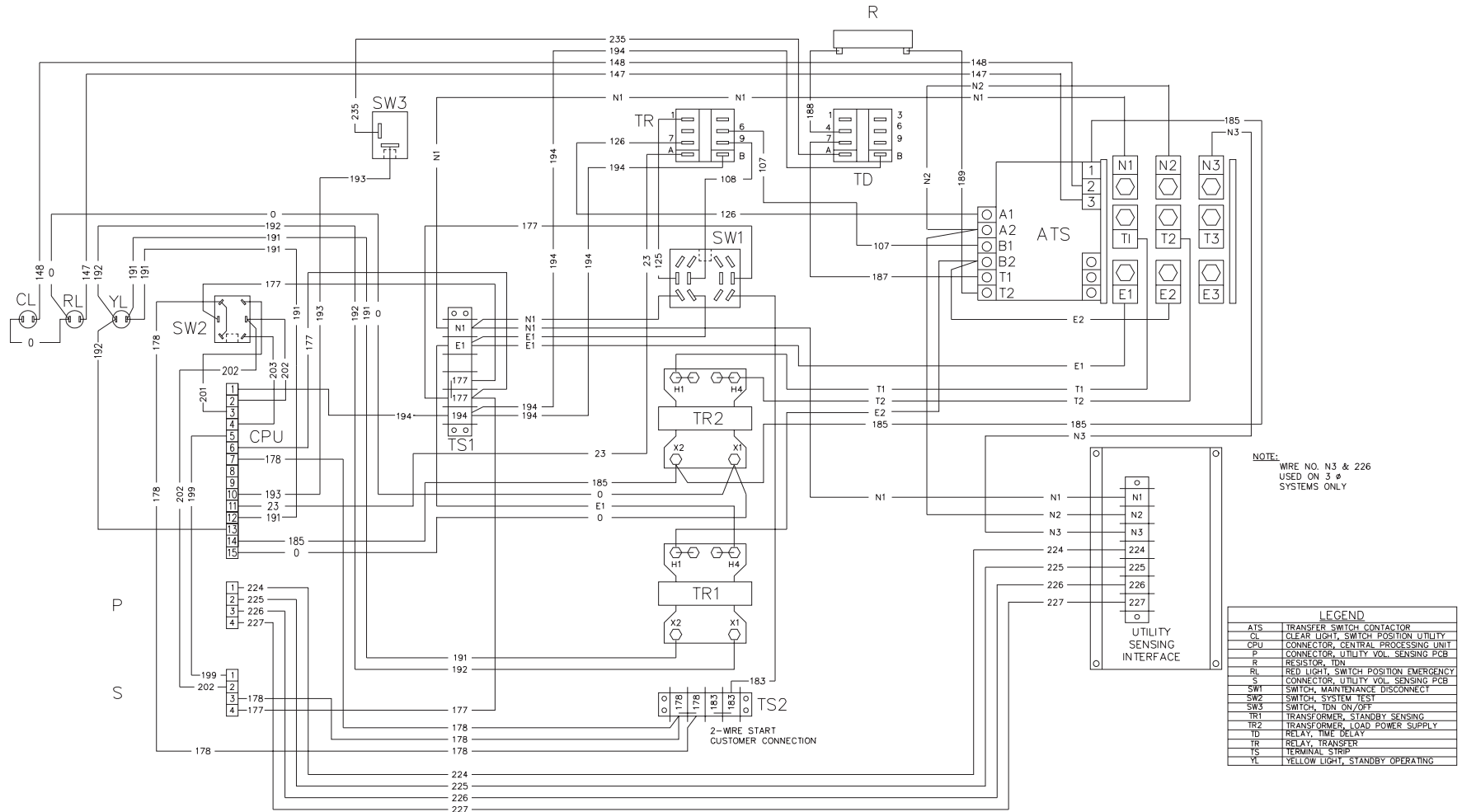
- LEGEND**
- C - CONTACTOR ACTUATING COIL
 - GTS - TRANSFER SWITCH CONTACTOR
 - LS1,LS2,LS3 - LIMIT SWITCHES, ACTUATOR
 - PM - POWER MONITOR, 3 PHASE UTILITY
 - TR - RELAY, TRANSFER
 - TS - TERMINAL STRIP (CUSTOMER CONNECTION)



NOTE:
ALL CONTACTS SHOWN WITH
TRANSFER SWITCH IN UTILITY
POSITION.

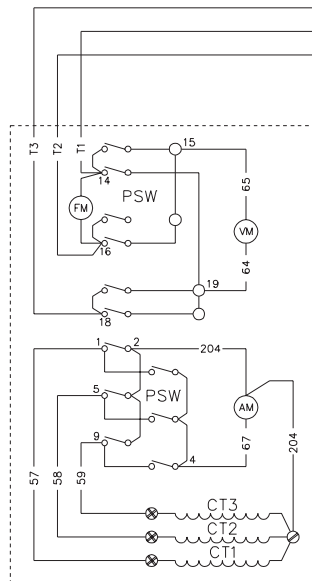
WIRING DIAGRAM



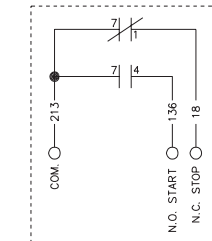


NOTE:
WIRE N3,59,AND CT3 USED ON
3 PHASE SYSTEM ONLY
ALL RELAY CONTACTS SHOWN WITH
ATS IN UTILITY POSITION

☆ OPTIONAL INSTRUMENT PACKAGE



LEGEND	
AM	METER, AMP
ATS	TRANSFER SWITCH CONTACTOR
CL	CLEAR LIGHT, SWITCH POSITION UTILITY
CR	RELAY, 3 WIRE START CONTROL
CT1,CT2,CT3	TRANSFORMER, CURRENT
FM	METER, FREQUENCY
HM	METER, HOUR
PSW	SWITCH, PHASE SELECTOR
R	RESISTOR, TDN
RL	RED LIGHT, SWITCH POSITION EMERGENCY
SW1	SWITCH, MAINTENANCE DISCONNECT
SW2	SWITCH, SYSTEM TEST
SW3	SWITCH, TDN ON/OFF
TD	RELAY, TIME DELAY
TR	RELAY, TRANSFER
TR1	TRANSFORMER, STANDBY SENSING
TR2	TRANSFORMER, LOAD POWER SUPPLY
VM	METER, VOLT
YL	YELLOW LIGHT, STANDBY OPERATING

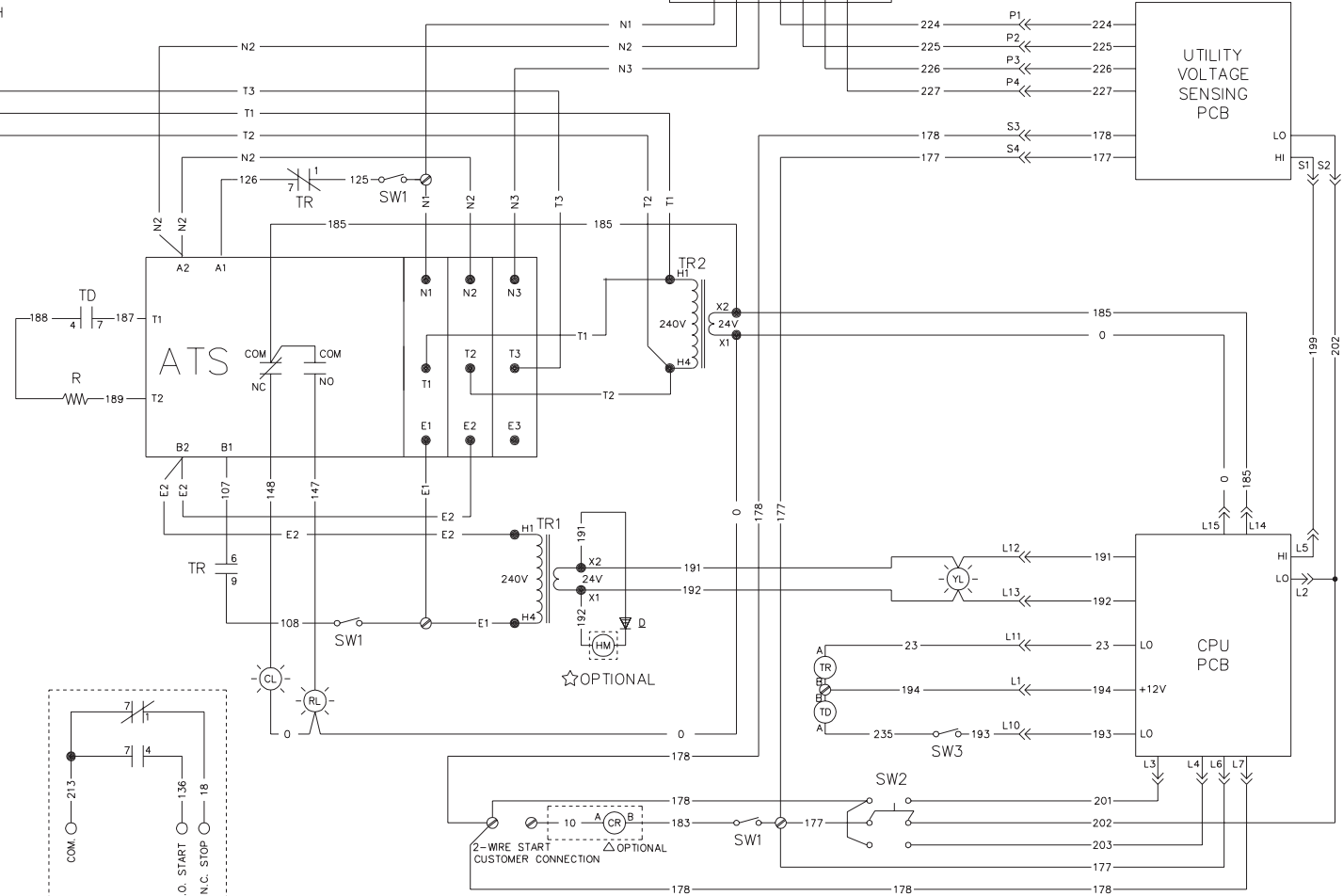


△ OPTION - 3 WIRE START

SEE DWG. 70067617 FOR
INTERFACE INTERNAL CONNECTIONS

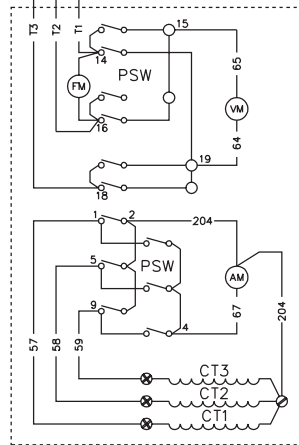
UTILITY (STANDARD)
SENSING INTERFACE

N1 N2 N3 224 225 226 227

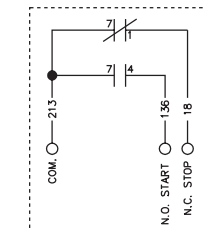


NOTE:
WIRE N3,59,AND CT3 USED ON
3 PHASE SYSTEM ONLY
ALL RELAY CONTACTS SHOWN WITH
ATS IN UTILITY POSITION

☆ OPTIONAL INSTRUMENT PACKAGE

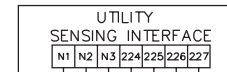


LEGEND	
AM	METER, AMP
ATS	TRANSFER SWITCH CONTACTOR
CL	CLEAR LIGHT, SWITCH POSITION UTILITY
CR	RELAY, 3 WIRE START CONTROL
CT1,CT2,CT3	TRANSFORMER, CURRENT
FM	METER, FREQUENCY
HM	METER, HOUR
PSW	SWITCH, PHASE SELECTOR
R	RESISTOR, TDN
RL	RED LIGHT, SWITCH POSITION EMERGENCY
SW1	SWITCH, MAINTENANCE DISCONNECT
SW2	SWITCH, SYSTEM TEST
SW3	SWITCH, TDN ON/OFF
TD	RELAY, TIME DELAY
TR	RELAY, TRANSFER
TR1	TRANSFORMER, STANDBY SENSING
TR2	TRANSFORMER, LOAD POWER SUPPLY
VM	METER, VOLT
YL	YELLOW LIGHT, STANDBY OPERATING
E, L, P, S	CIRCUIT BOARD CONNECTORS

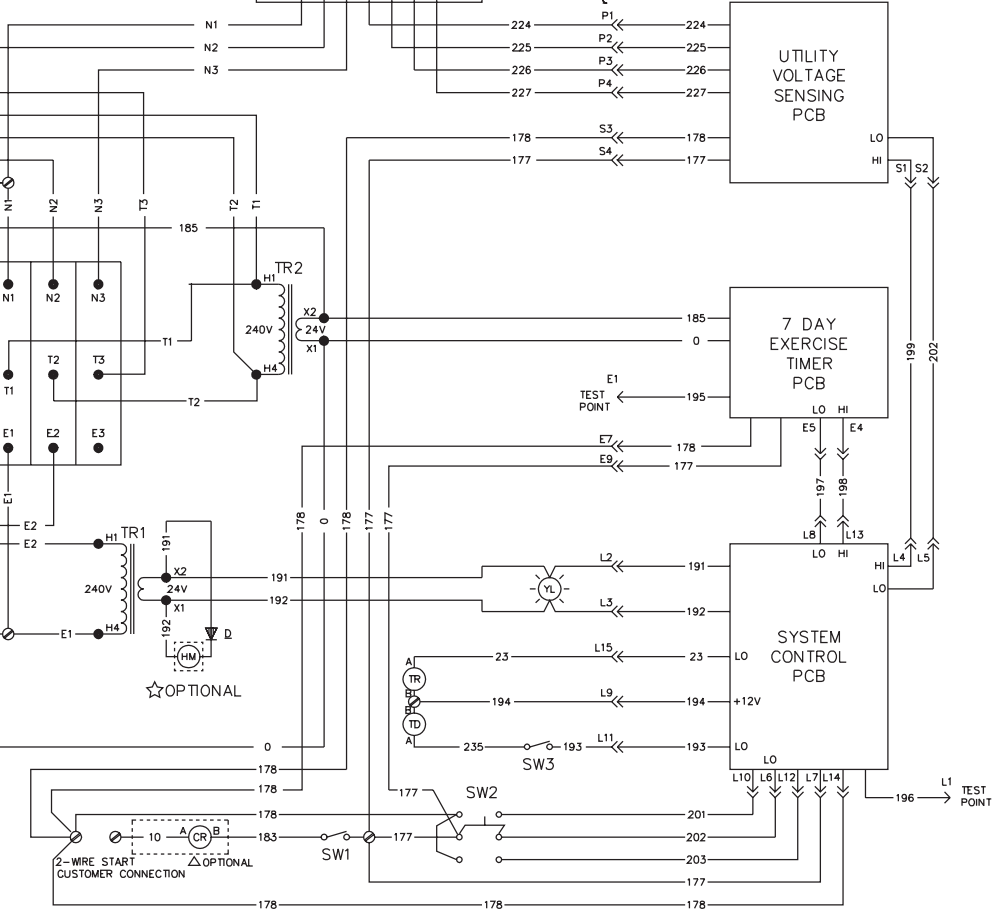


△ OPTION - 3 WIRE START

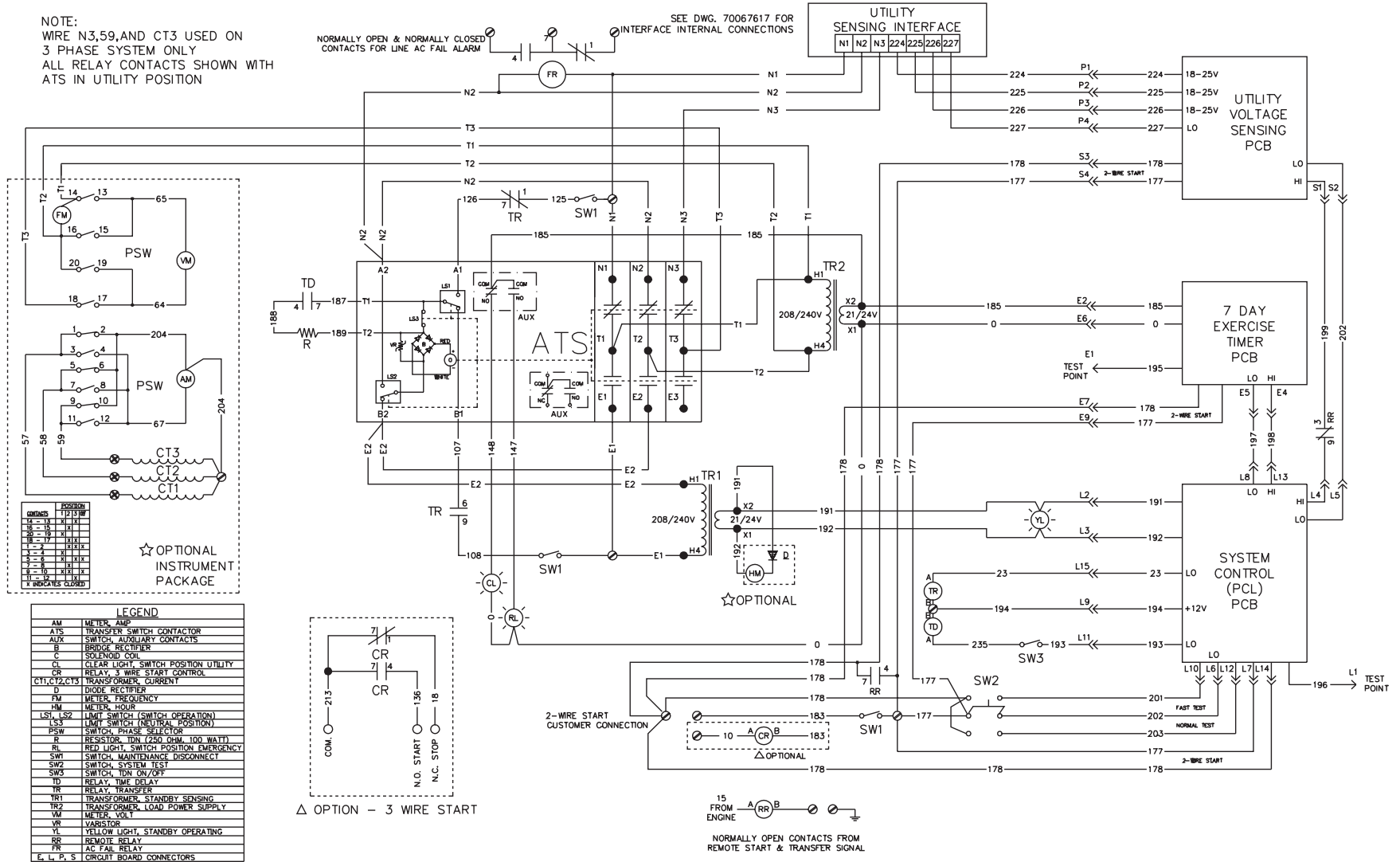
SEE DWG. 70067617 FOR
INTERFACE INTERNAL CONNECTIONS

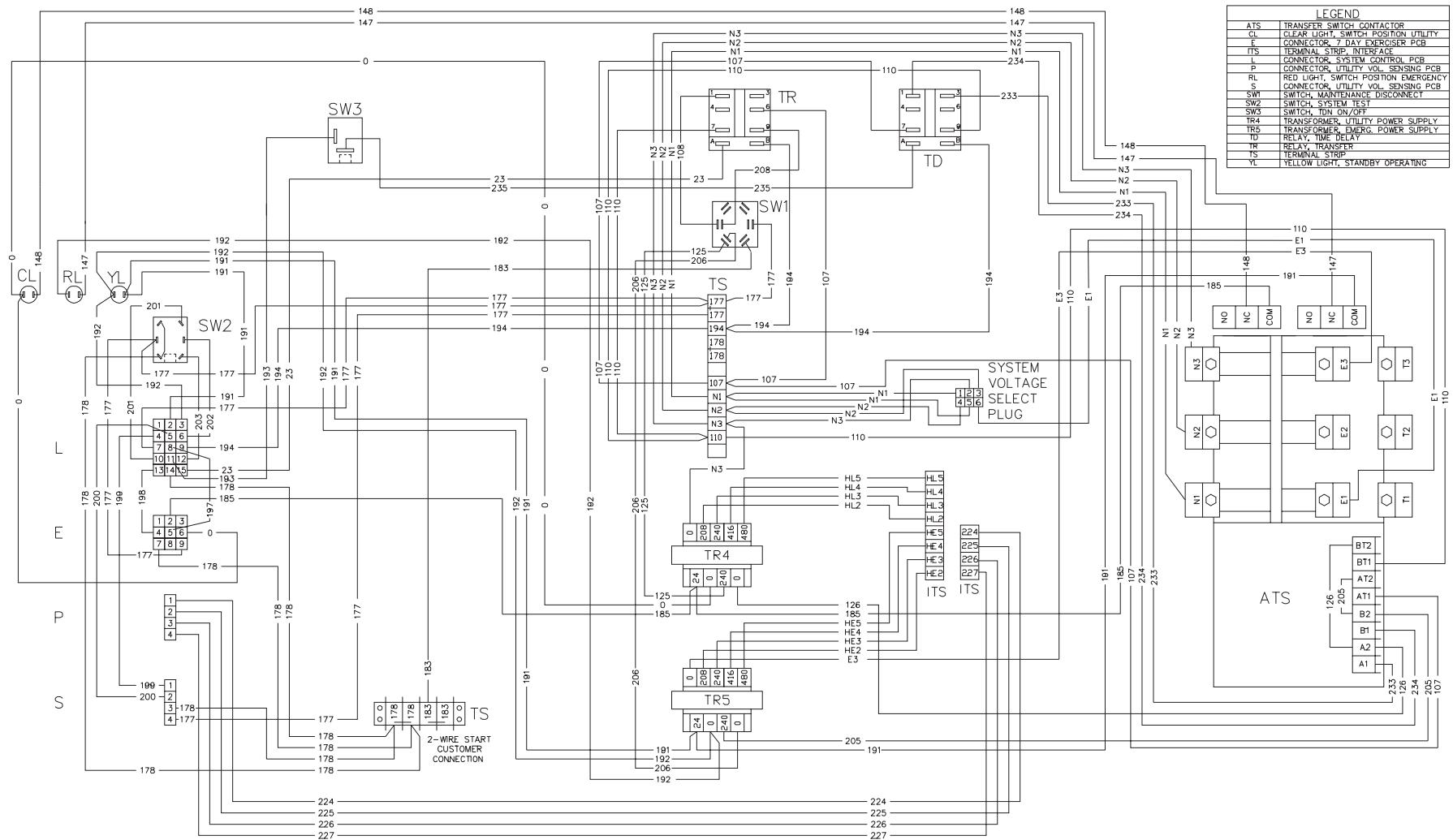


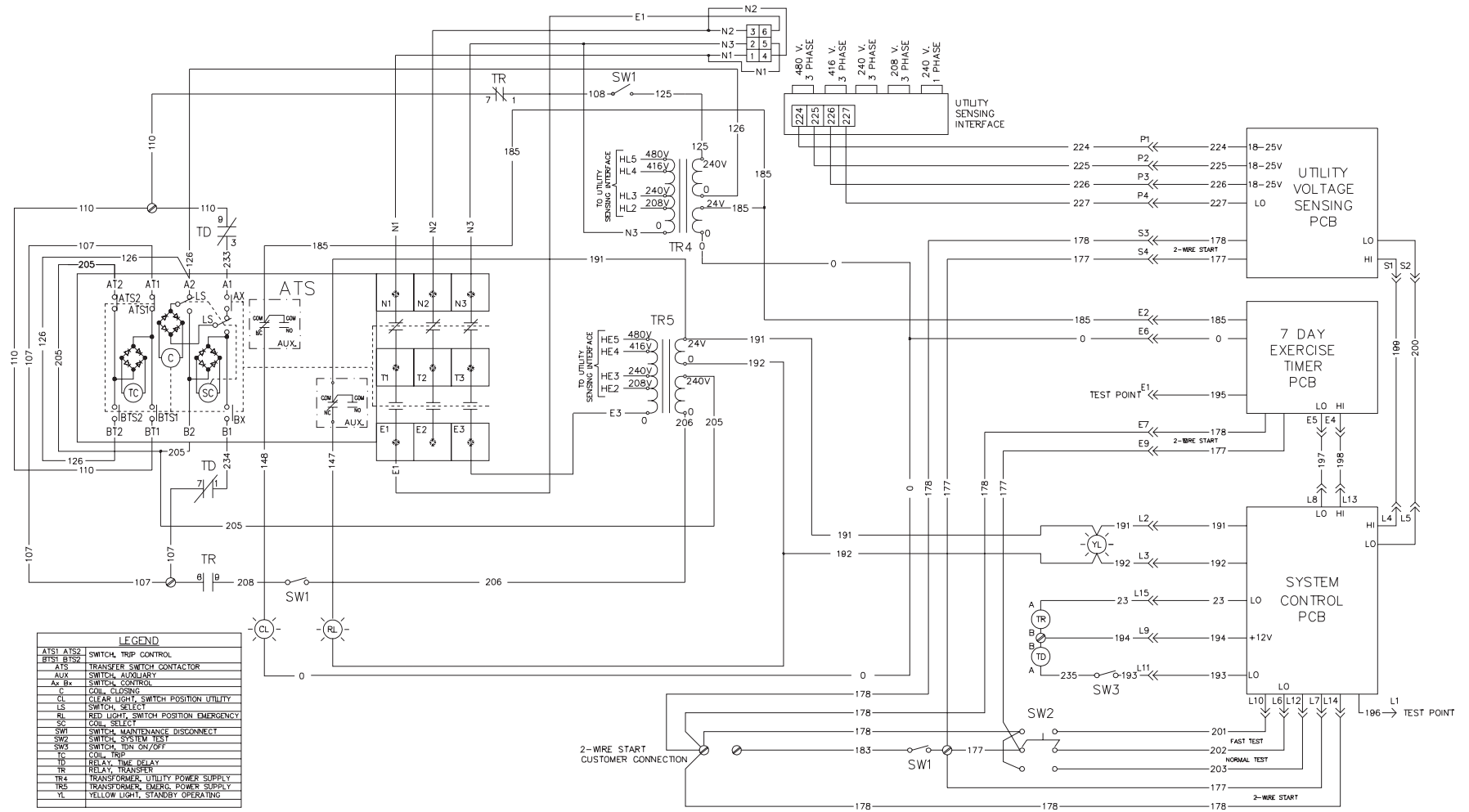
75018A

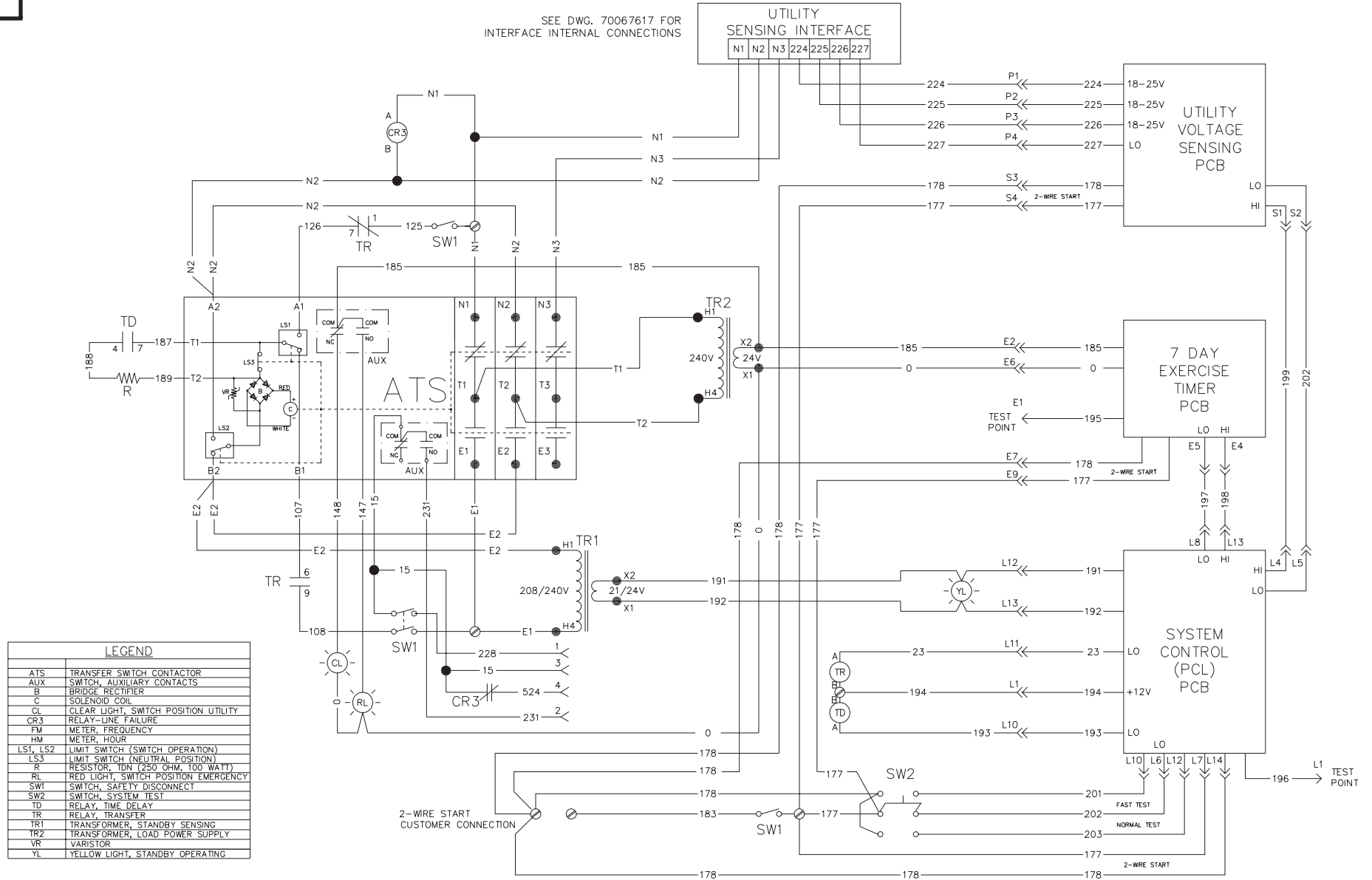


NOTE:
WIRE N3,59,AND CT3 USED ON
3 PHASE SYSTEM ONLY
ALL RELAY CONTACTS SHOWN WITH
ATS IN UTILITY POSITION

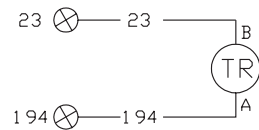
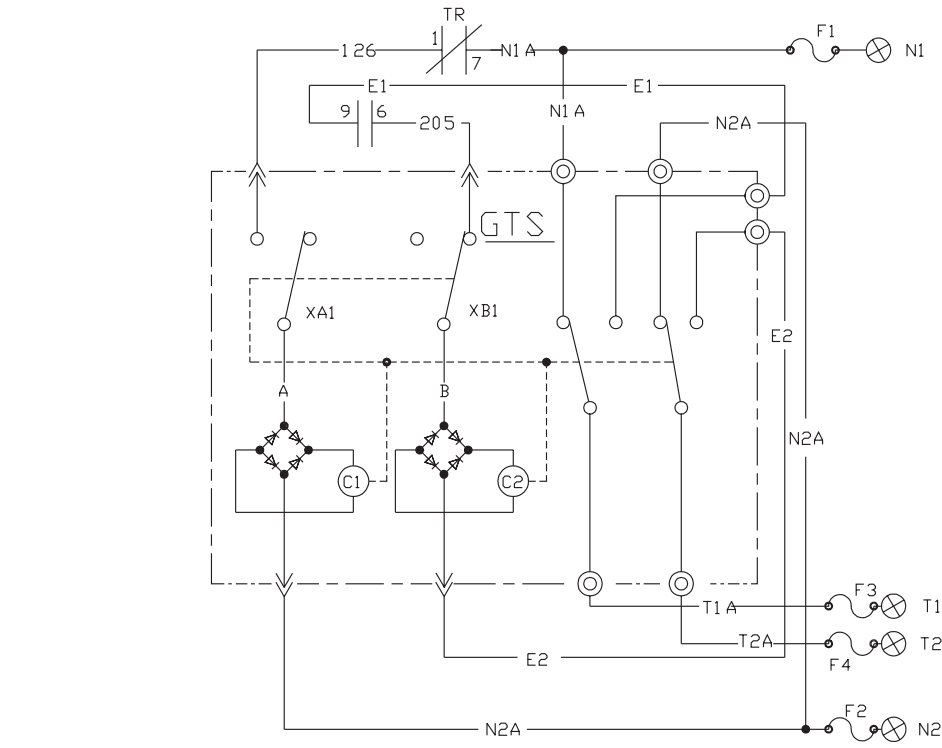








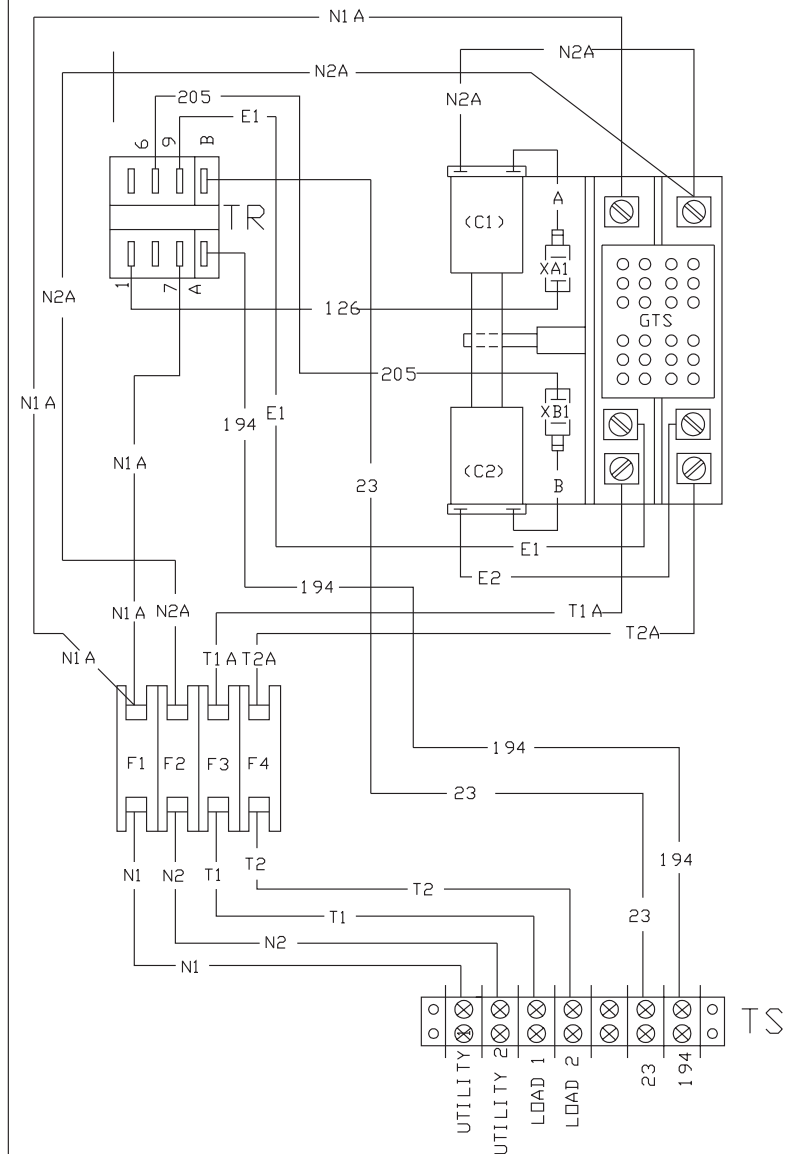
SCHEMATIC DIAGRAM

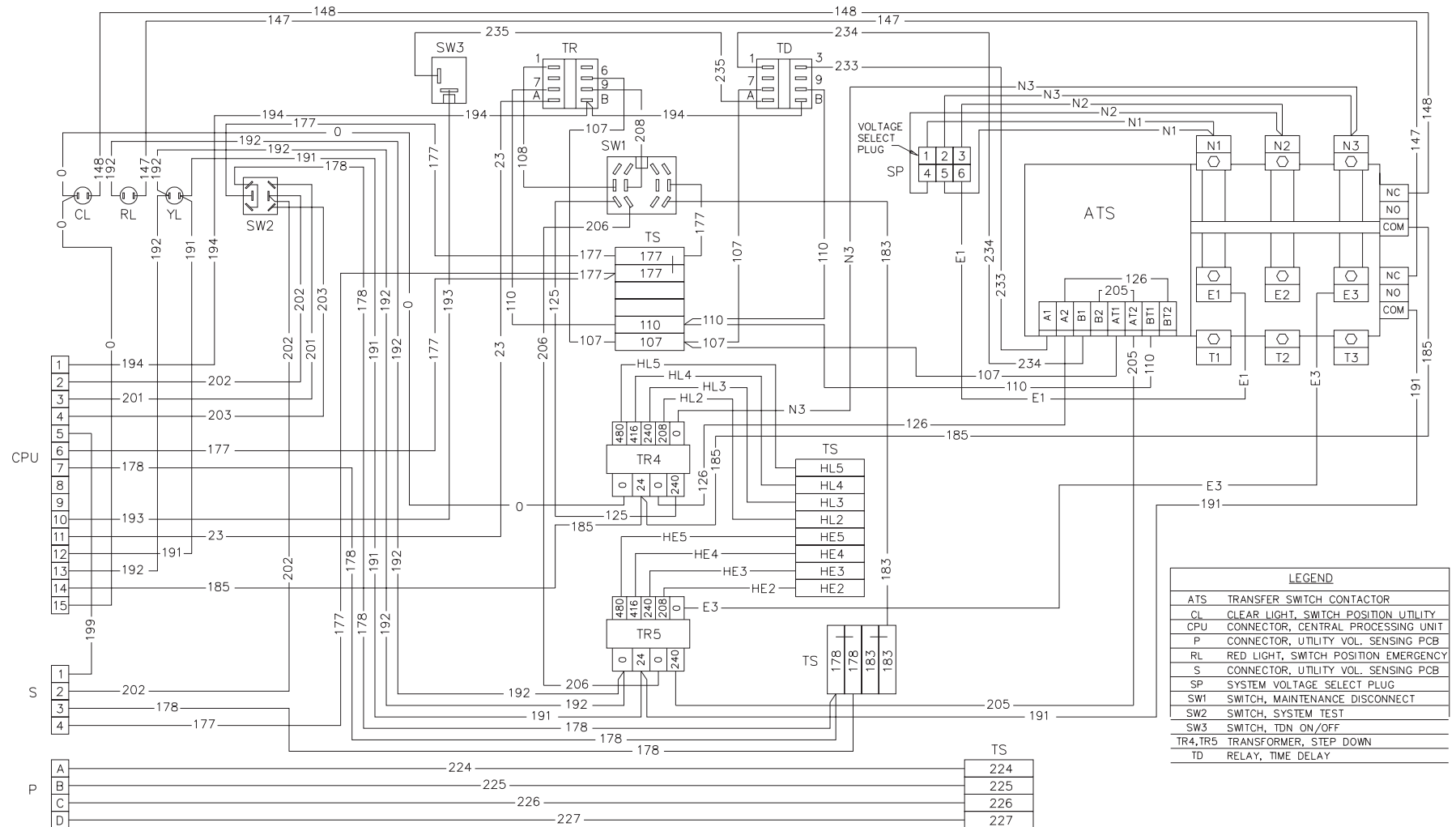


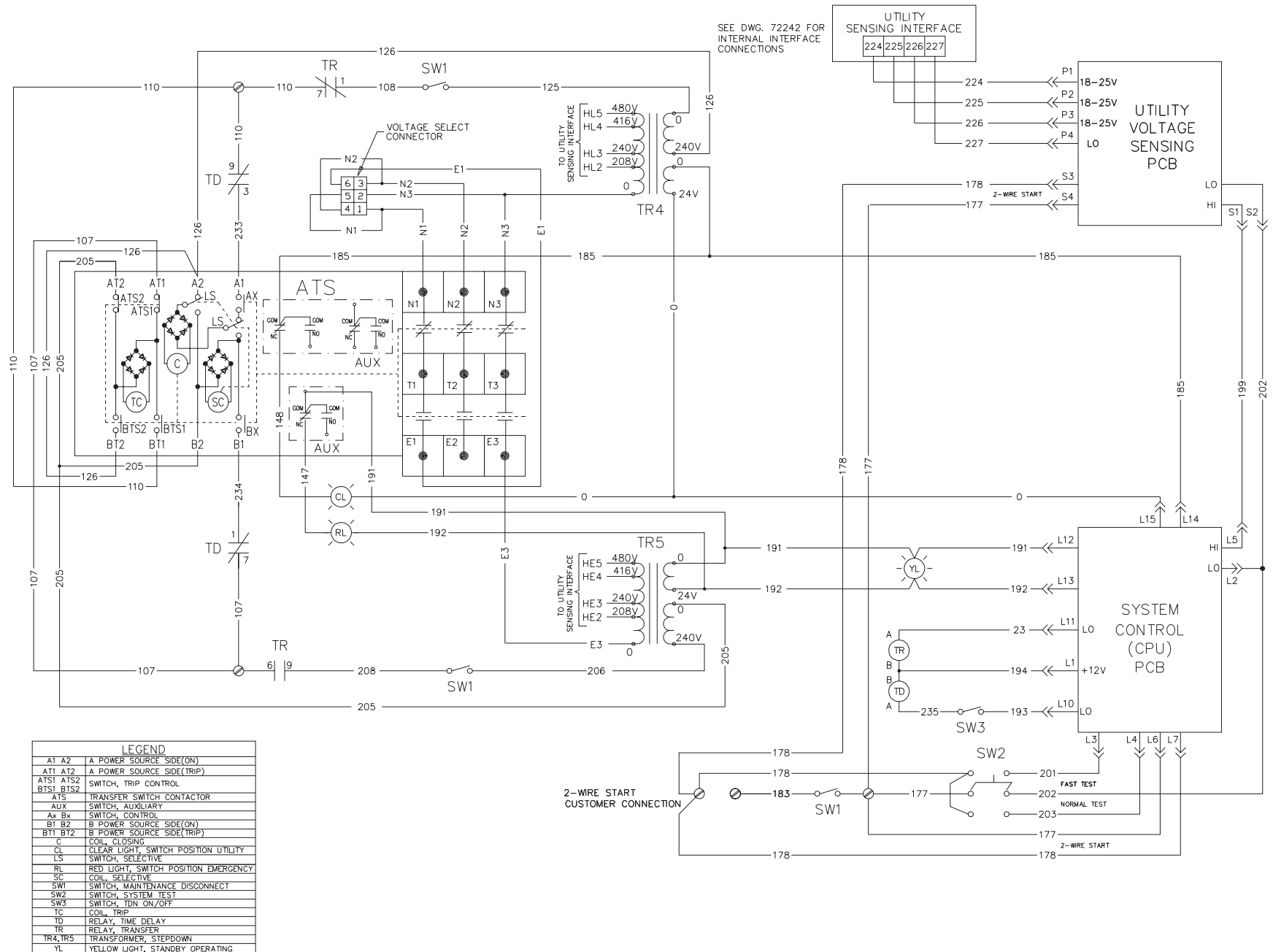
NOTE:
ALL CONTACTS SHOWN WITH
TRANSFER SWITCH IN UTILITY
POSITION.

LEGEND	
C1 -	SOLENOID COIL (UTILITY CLOSING)
C2 -	SOLENOID COIL (STANDBY CLOSING)
GTS -	TRANSFER SWITCH CONTACTOR
TR -	RELAY, TRANSFER
TS -	TERMINAL STRIP (CUSTOMER CONNECTION)
XA1, XB1 -	LIMIT SWITCHES, ACTUATOR
F1, F2, F3, F4 -	FUSE, 2A SENSING

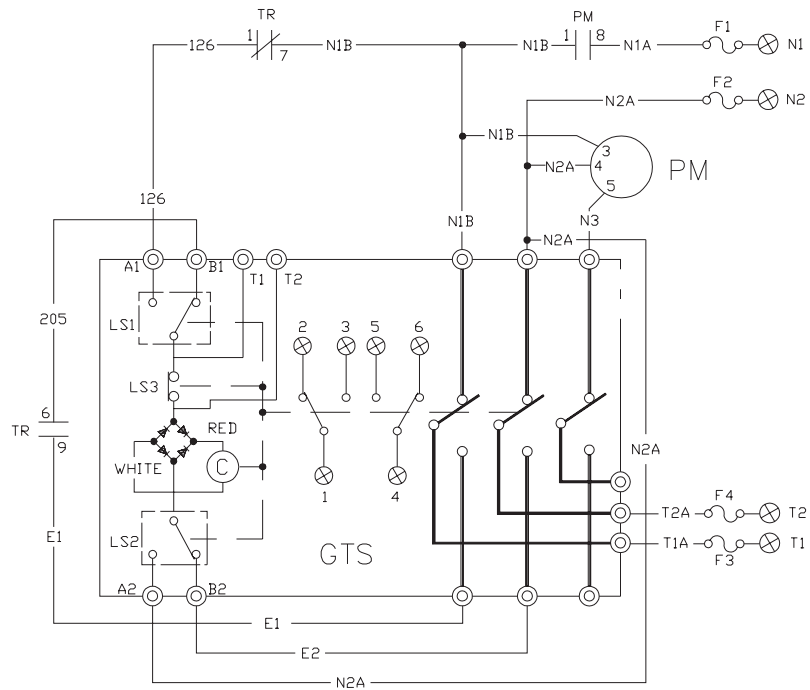
WIRING DIAGRAM



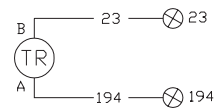




SCHEMATIC DIAGRAM



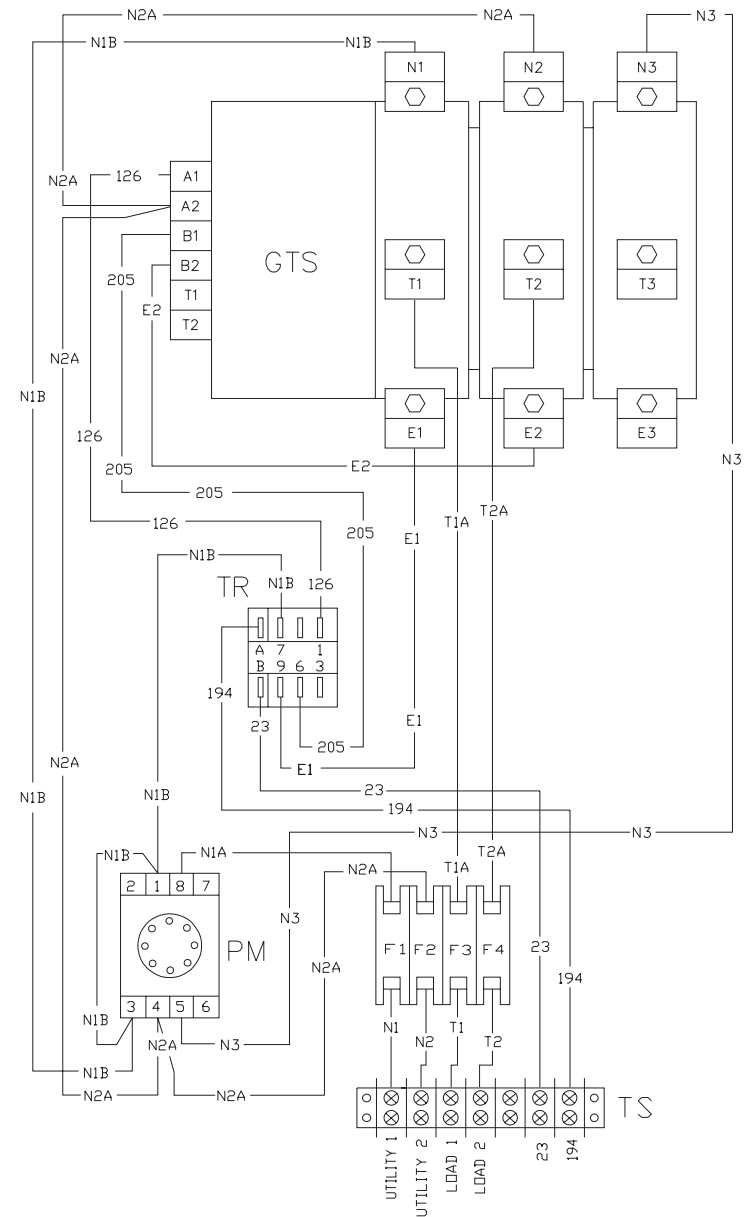
LEGEND	
C	- CONTACTOR ACTUATING COIL
GTS	- TRANSFER SWITCH CONTACTOR
PM	- POWER MONITOR, 3 PHASE UTILITY
TR	- RELAY, TRANSFER
TS	- TERMINAL STRIP (CUSTOMER CONNECTION)
LS1,LS2,LS3	- LIMIT SWITCHES, ACTUATOR
F1,F2,F3,F4	- FUSE 2A SENSING



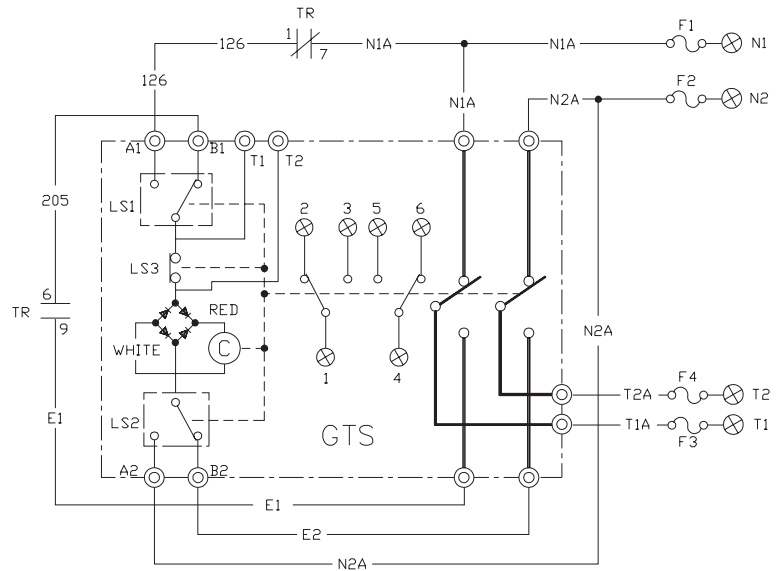
NOTES:

- 1.) ALL CONTACTS SHOWN WITH TRANSFER SWITCH IN UTILITY POSITION.
- 2.) FOR SINGLE PHASE OPERATION, ADD JUMPER WIRE FROM PM TERMINALS 1 TO 8.

WIRING DIAGRAM

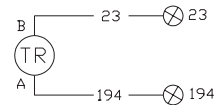


SCHEMATIC DIAGRAM



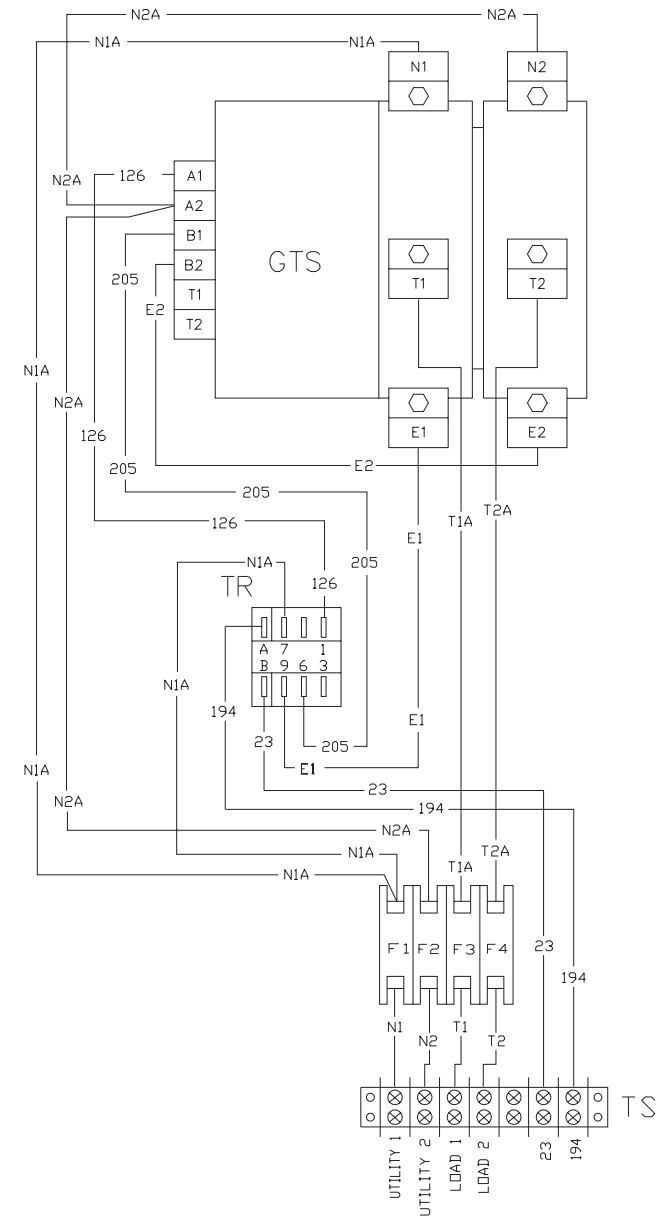
LEGEND

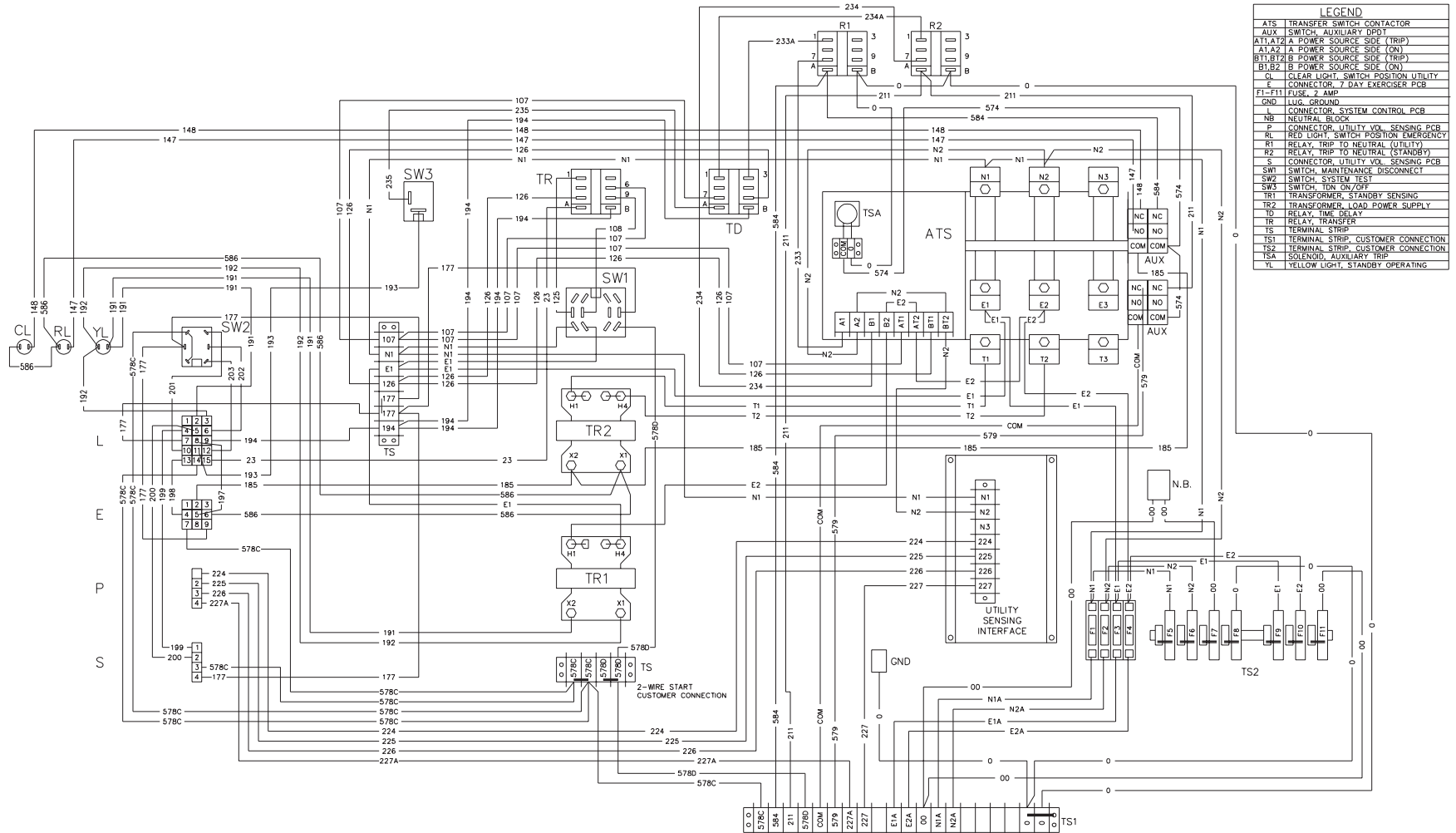
C - CONTACTOR ACTUATING COIL
GTS - TRANSFER SWITCH CONTACTOR
TR - RELAY, TRANSFER
TS - TERMINAL STRIP (CUSTOMER CONNECTION)
LS1,LS2,LS3 - LIMIT SWITCHES, ACTUATOR
F1,F2,F3,F4 - FUSE 2A SENSING



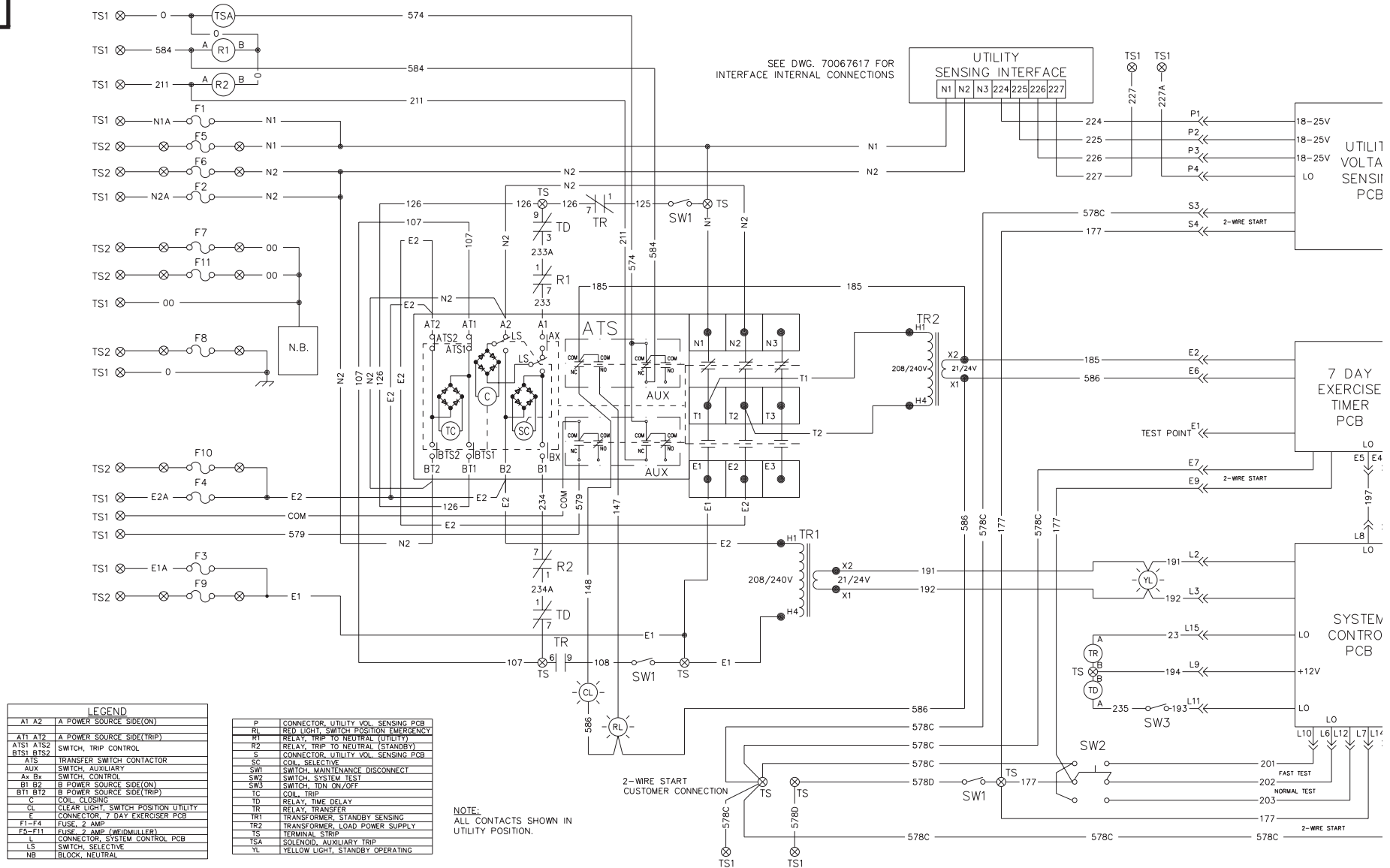
NOTE:
ALL CONTACTS SHOWN WITH
TRANSFER SWITCH IN UTILITY
POSITION.

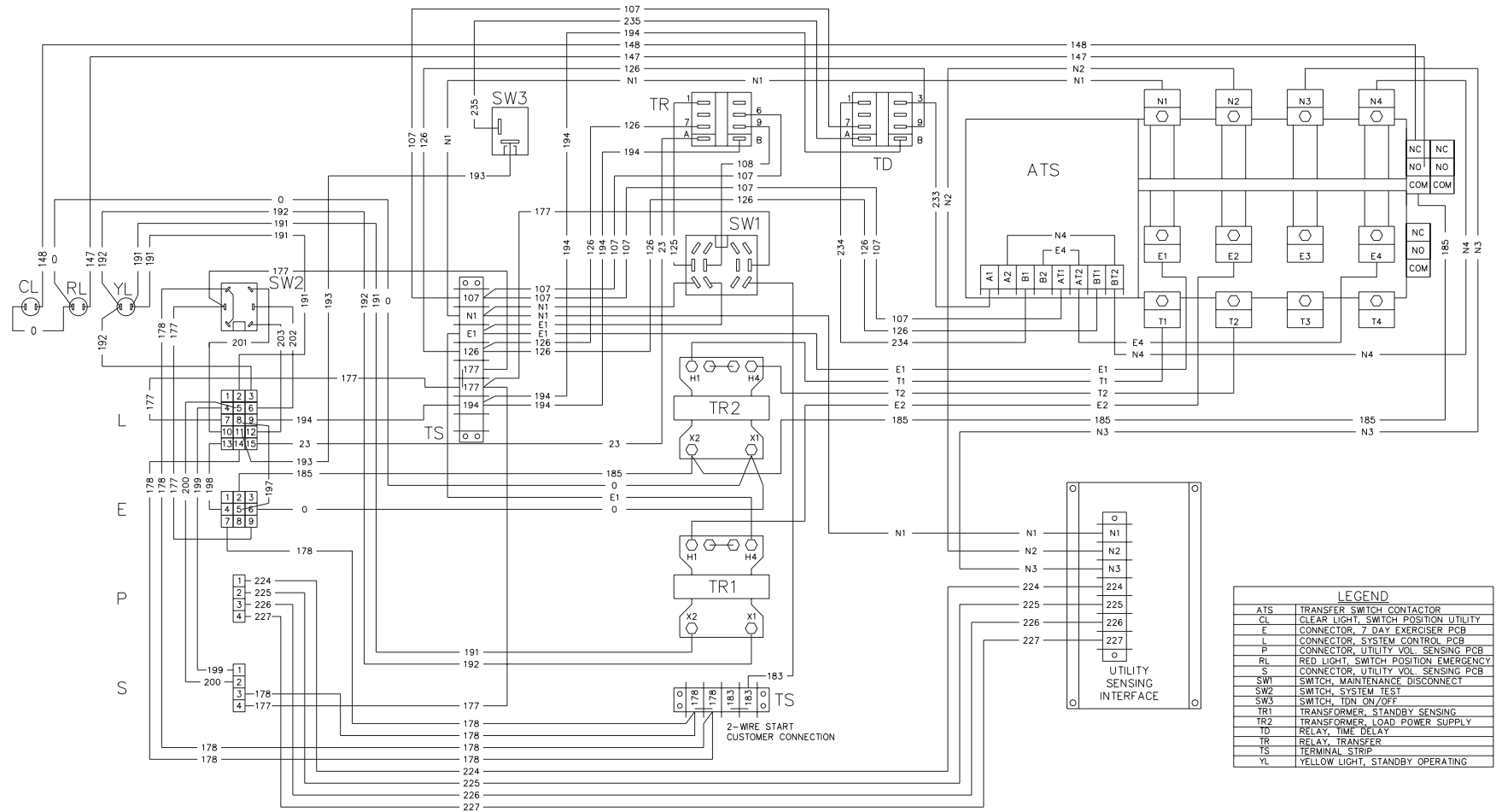
WIRING DIAGRAM



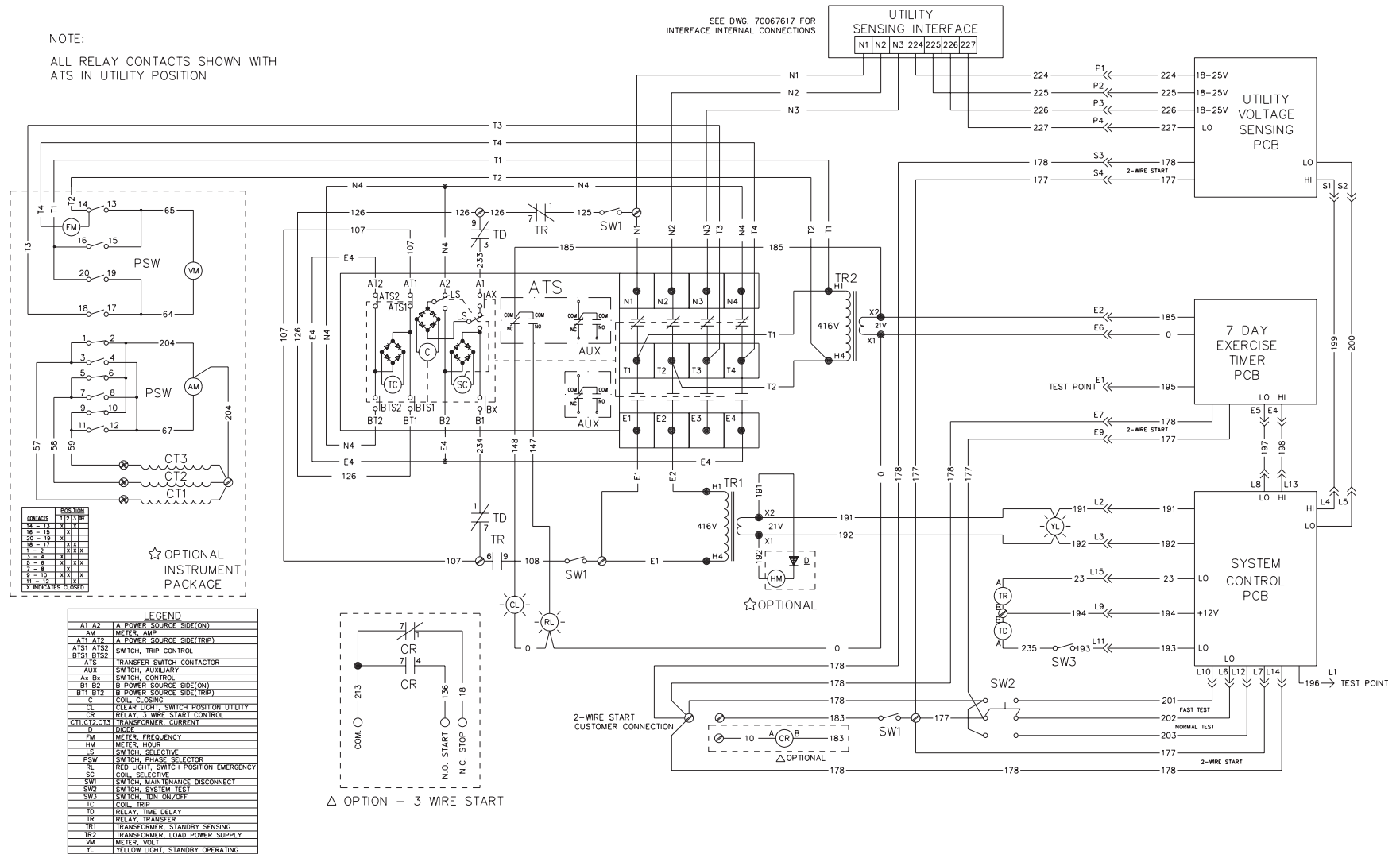


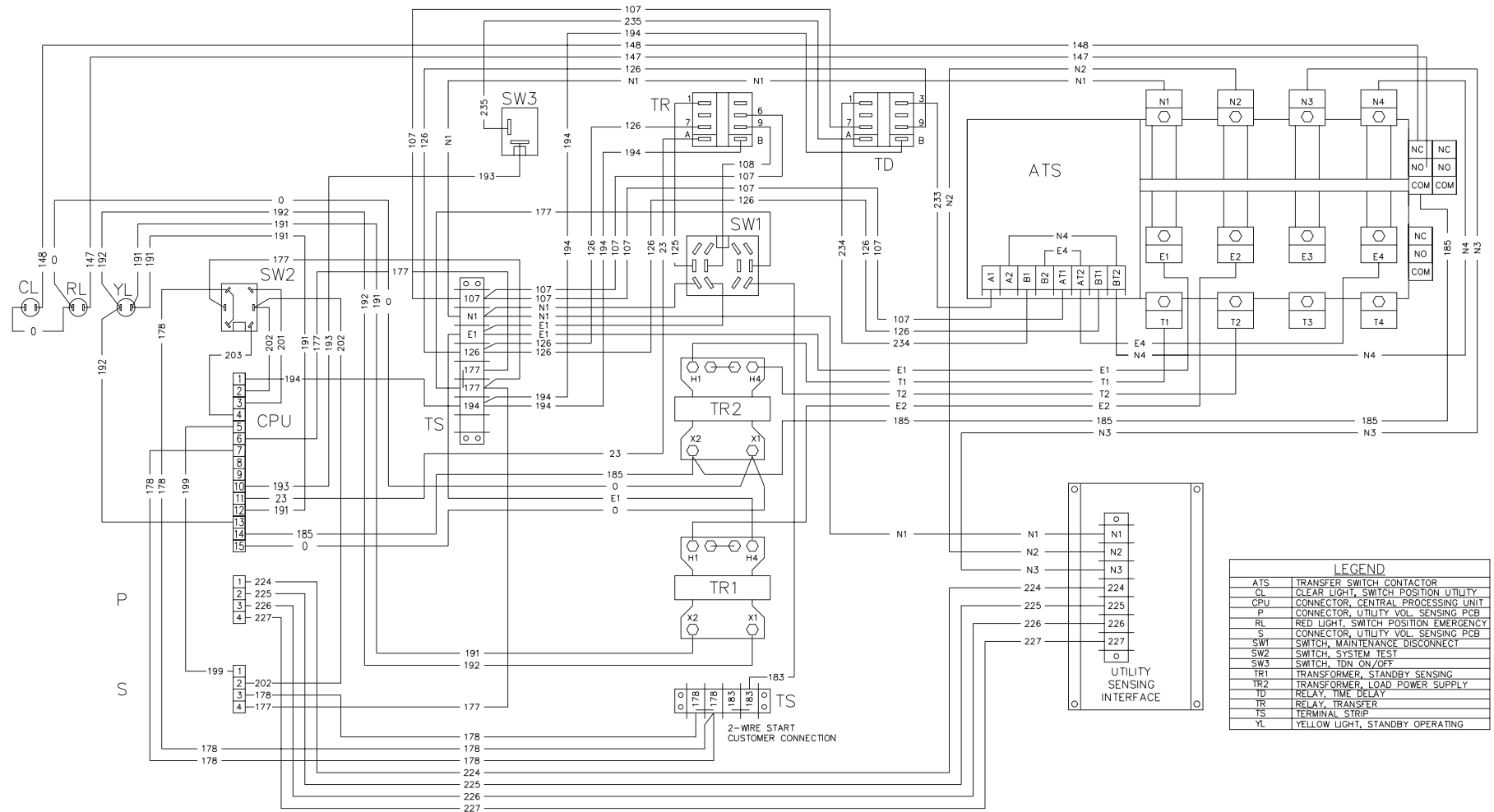
LEGEND	
ATS	TRANSFER SWITCH CONTACTOR
AUX	SWITCH, AUXILIARY DPDT
AT1A2A	A POWER SOURCE SIDE (TRIP)
AT1A2A	A POWER SOURCE SIDE (ON)
BT1B2B	B POWER SOURCE SIDE (TRIP)
BT1B2B	B POWER SOURCE SIDE (ON)
CL	CLEAR LIGHT, SWITCH POSITION UTILITY
F1	FUSE, 2 AMP
F1-F11	CONNECTOR, 7 DAY EXERCISER PCB
GND	LOG. GROUND
NC	CONNECTOR, SYSTEM CONTROL PCB
NB	NEUTRAL BLOCK
P	CONNECTOR, UTILITY VOL. SENSING PCB
RL	RED LIGHT, SWITCH POSITION EMERGENCY
R1	RELAY, TRIP TO NEUTRAL (UTILITY)
R2	RELAY, TRIP TO NEUTRAL (STANDBY)
S	CONNECTOR, UTILITY VOL. SENSING PCB
SW1	SWITCH, MAINTENANCE DISCONNECT
SW2	SWITCH, SYSTEM TEST
SW3	SWITCH, ON/OFF
TR1	TRANSFORMER, STANDBY SENSING
TR2	TRANSFORMER, LOAD POWER SUPPLY
TR	RELAY, TRANSFER
TS	TERMINAL STRIP
TS1	TERMINAL STRIP, CUSTOMER CONNECTION
TS2	TERMINAL STRIP, CUSTOMER CONNECTION
TSA	SOLENOID, AUXILIARY TRIP
YL	YELLOW LIGHT, STANDBY OPERATING





LEGEND	
ATS	TRANSFER SWITCH CONTACTOR
CL	CLEAR LIGHT, SWITCH POSITION UTILITY
E	CONNECTOR, 7 DAY EXERCISER PCB
L	CONNECTOR, SYSTEM CONTROL PCB
P	CONNECTOR, UTILITY VOL. SENSING PCB
RL	RED LIGHT, SWITCH POSITION EMERGENCY
S	CONNECTOR, UTILITY VOL. SENSING PCB
SW1	SWITCH, MAINTENANCE DISCONNECT
SW2	SWITCH, SYSTEM TEST
SW3	SWITCH, TDN ON/OFF
TR1	TRANSFORMER, STANDBY SENSING
TR2	TRANSFORMER, LOAD POWER SUPPLY
TD	RELAY, TIME DELAY
TR	RELAY, TRANSFER
TS	TERMINAL STRIP
YL	YELLOW LIGHT, STANDBY OPERATING

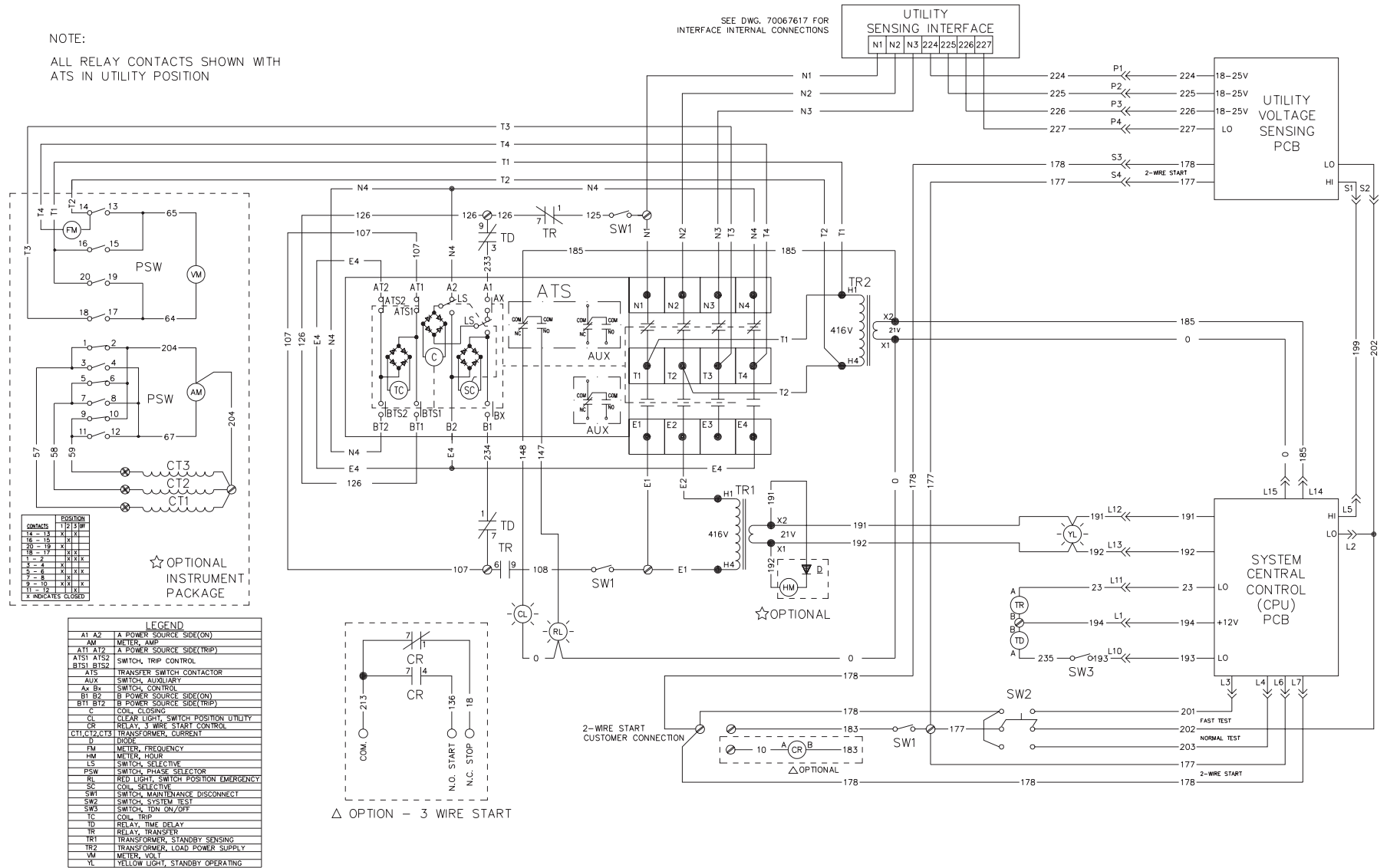


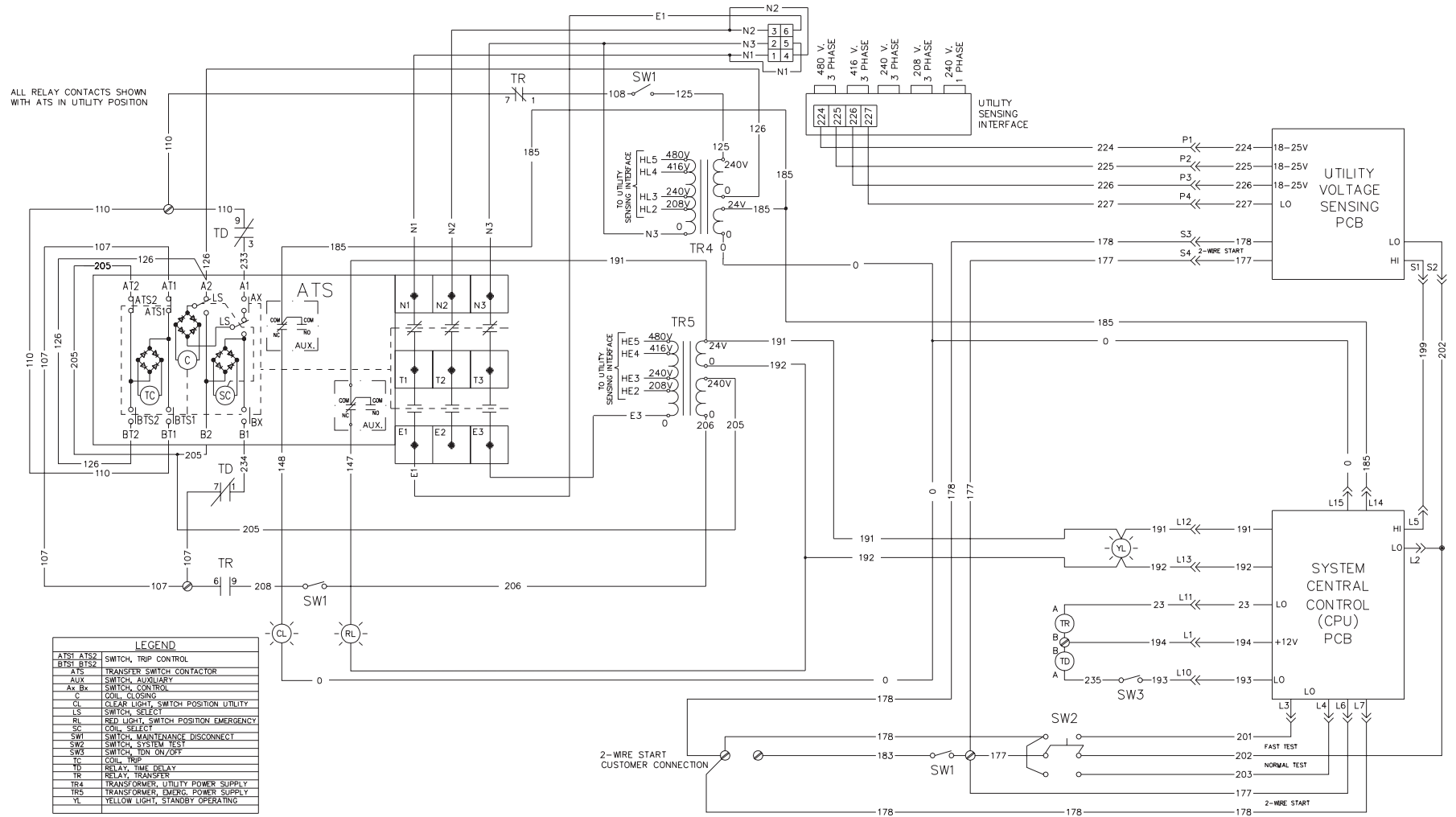


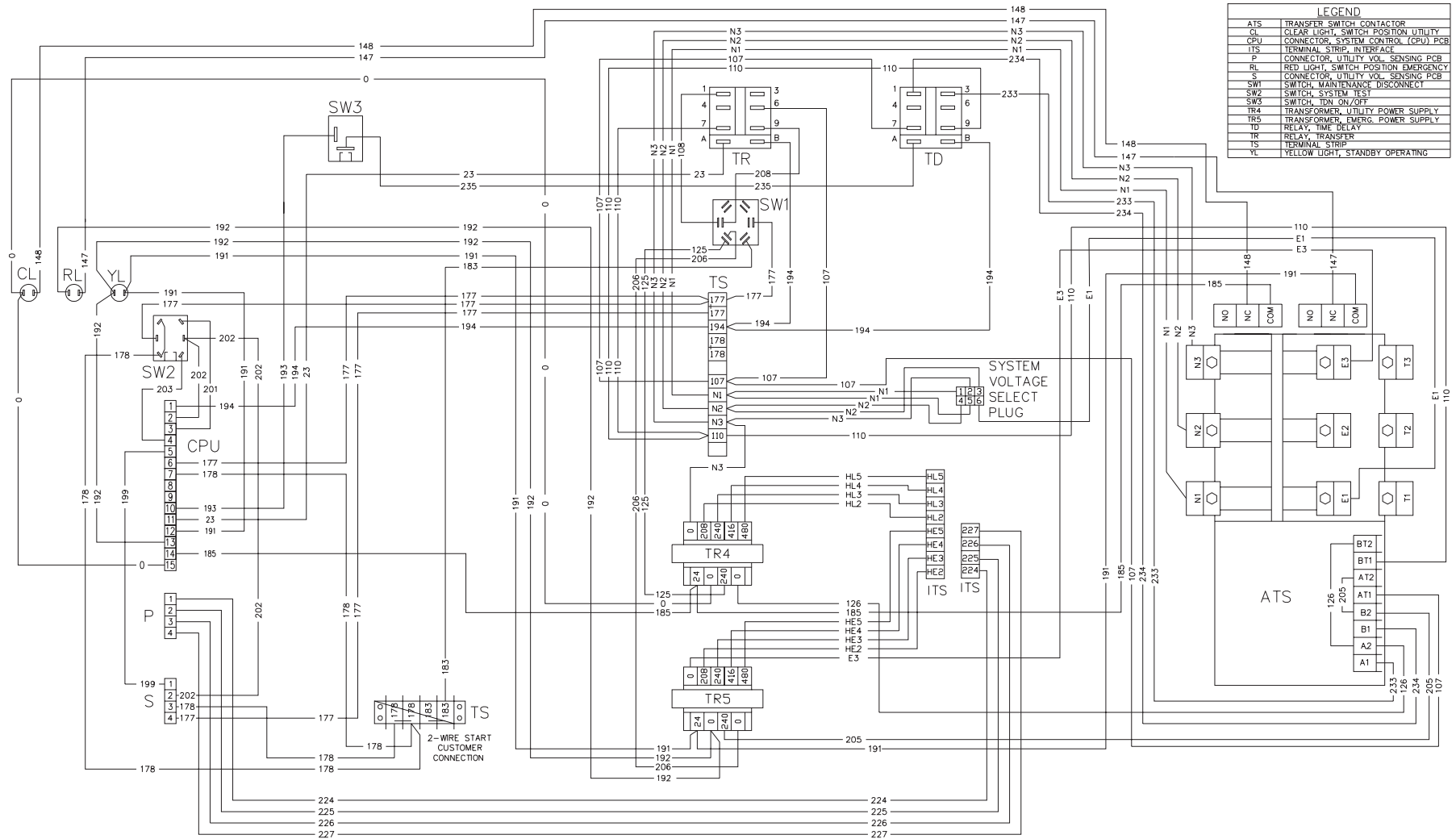
LEGEND	
ATS	TRANSFER SWITCH CONTACTOR
CL	CLEAR LIGHT, SWITCH POSITION UTILITY
CPU	CONNECTOR, CENTRAL PROCESSING UNIT
P	CONNECTOR, UTILITY VOL. SENSING PCB
RL	RED LIGHT, SWITCH POSITION EMERGENCY
S	CONNECTOR, UTILITY VOL. SENSING PCB
SW1	SWITCH, MAINTENANCE DISCONNECT
SW2	SWITCH, SYSTEM TEST
SW3	SWITCH, TDN ON/OFF
TR1	TRANSFORMER, STANDBY SENSING
TR2	TRANSFORMER, LOAD POWER SUPPLY
TD	RELAY, TIME DELAY
TR	RELAY, TRANSFER
TS	TERMINAL STRIP
YL	YELLOW LIGHT, STANDBY OPERATING

NOTE:

ALL RELAY CONTACTS SHOWN WITH
ATS IN UTILITY POSITION





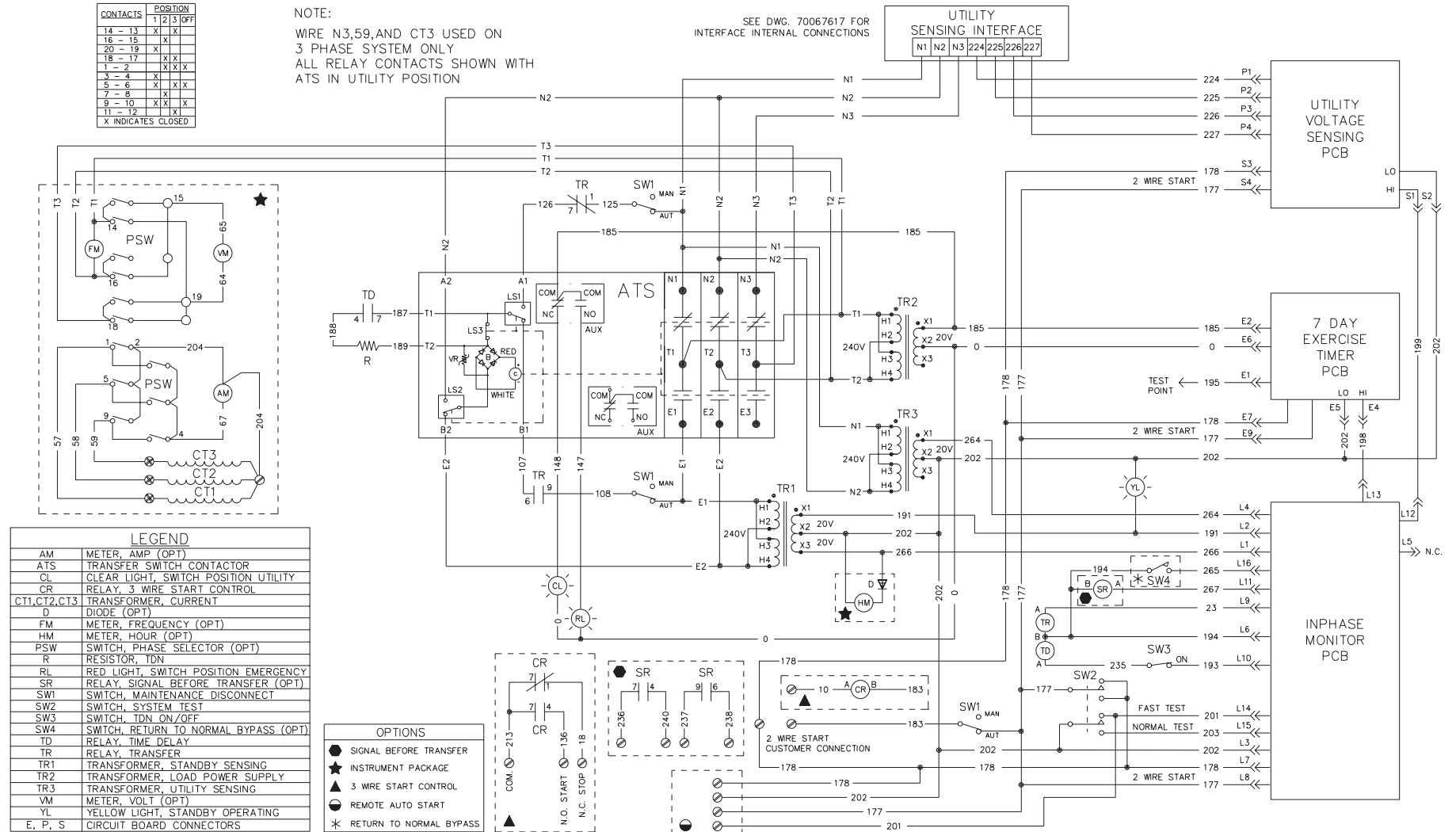


CONTACTS	POSITION
	1 2 3 OFF
14 - 13	X X
16 - 15	X
20 - 19	X
18 - 17	X X
1 - 2	X X X
3 - 4	X
5 - 6	X X X
7 - 8	X
9 - 10	X X X
11 - 12	X
X INDICATES CLOSED	

NOTE:

WIRE N3,59,AND CT3 USED ON
3 PHASE SYSTEM ONLY
ALL RELAY CONTACTS SHOWN WITH
ATS IN UTILITY POSITION

SEE DWG. 70067617 FOR
INTERFACE INTERNAL CONNECTIONS



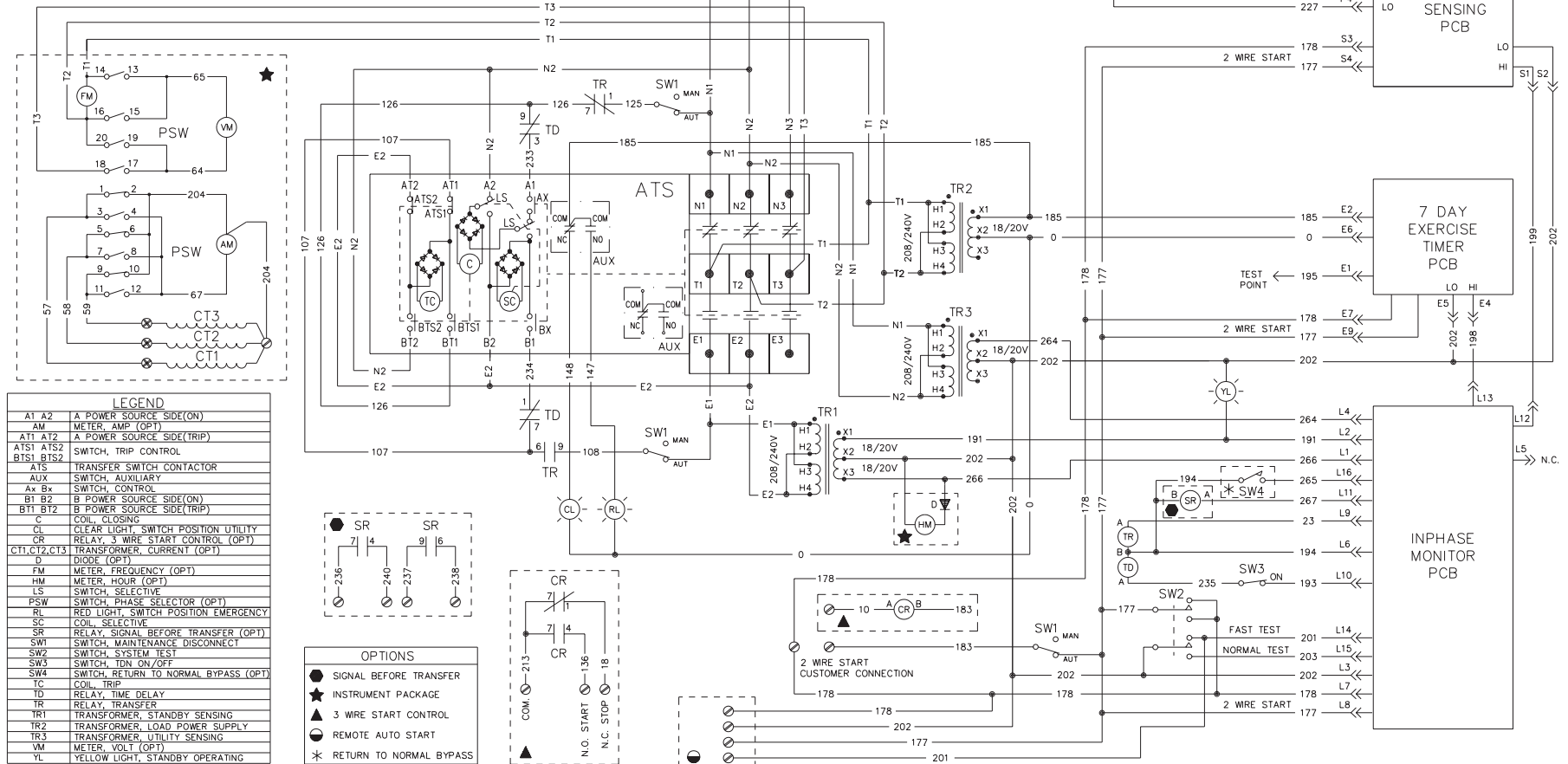
CONTACTS	POSITION			
	1	2	3	OFF
14 - 13	X		X	
16 - 15		X		
20 - 19	X			
18 - 17		X	X	
1 - 2		X	X	X
3 - 4	X			
5 - 6	X		X	X
7 - 8		X		
9 - 10	X	X		X
11 - 12			X	

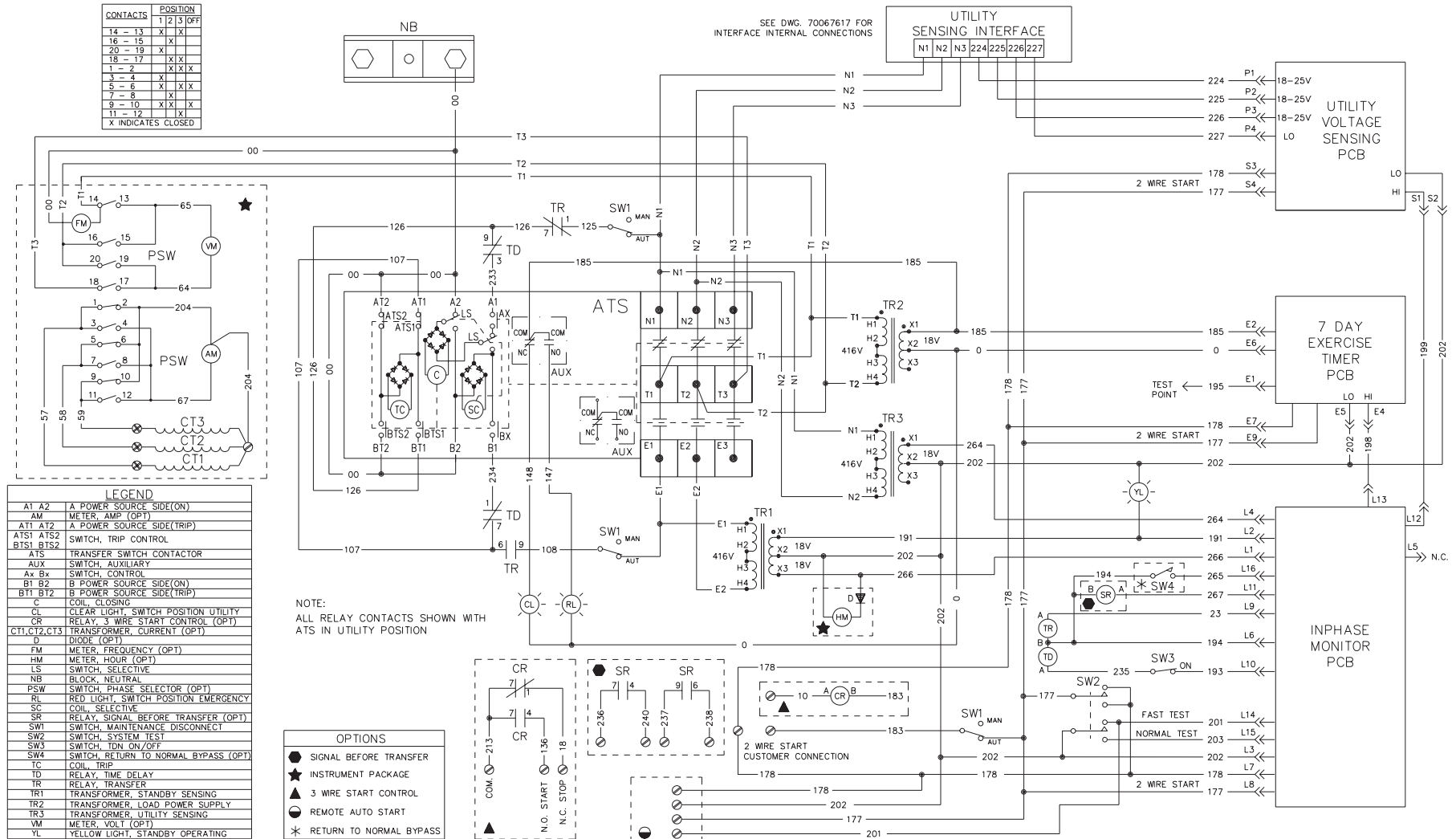
X INDICATES CLOSED

NOTE:

WIRE N3,59, AND CT3 USED ON
3 PHASE SYSTEM ONLY
ALL RELAY CONTACTS SHOWN WITH
ATS IN UTILITY POSITION

SEE DWG. 70067617 FOR
INTERFACE INTERNAL CONNECTIONS

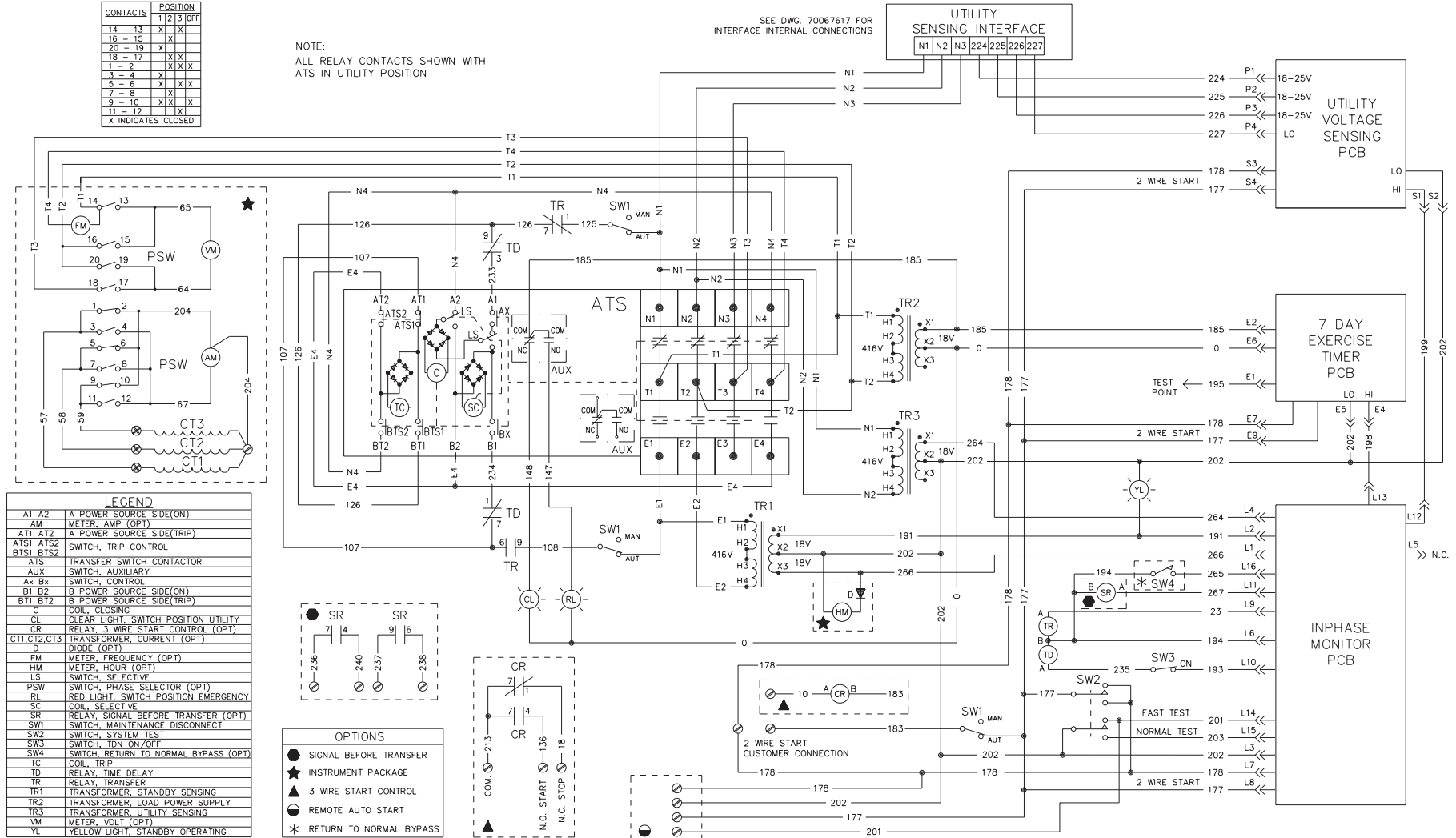


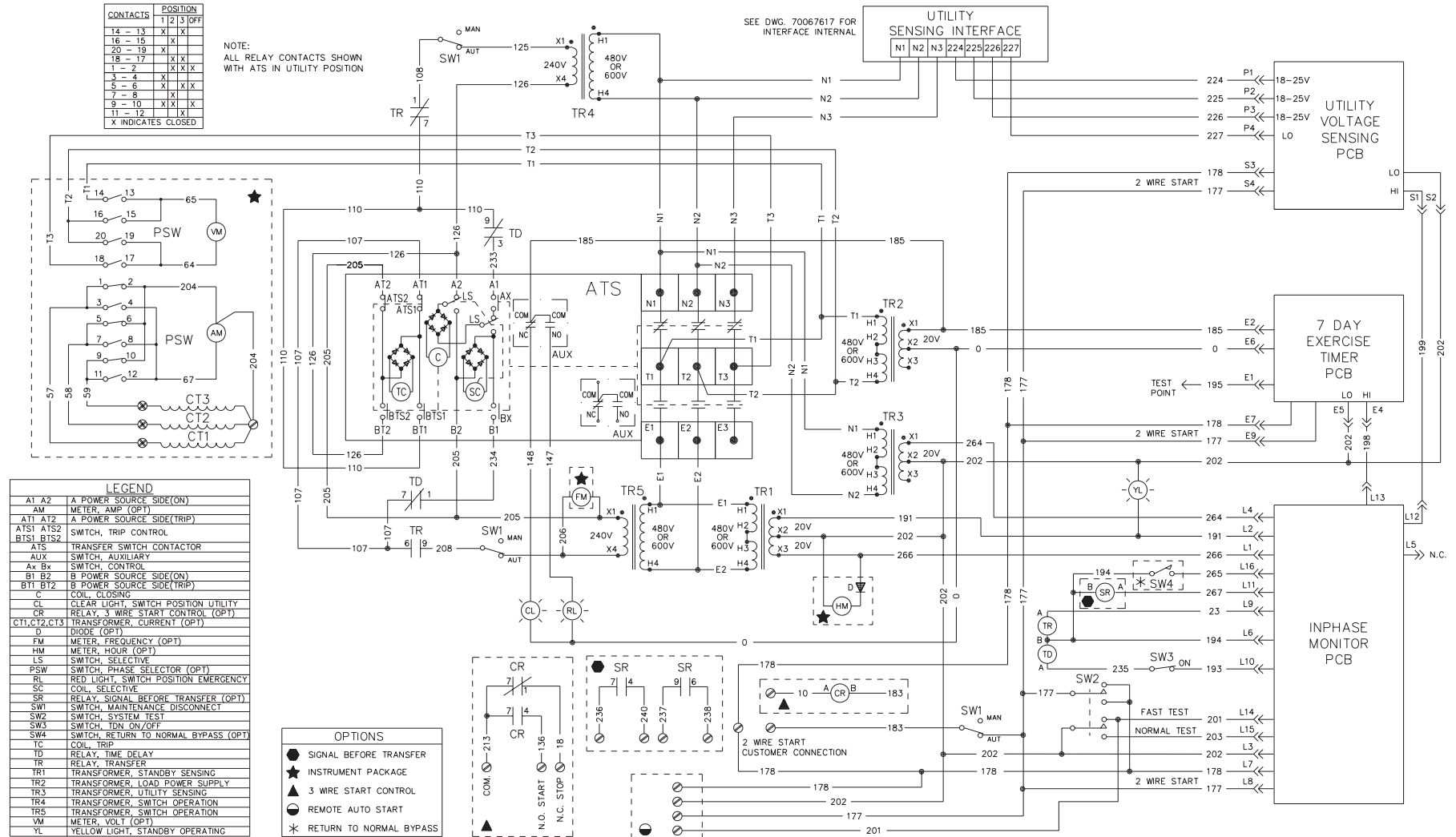


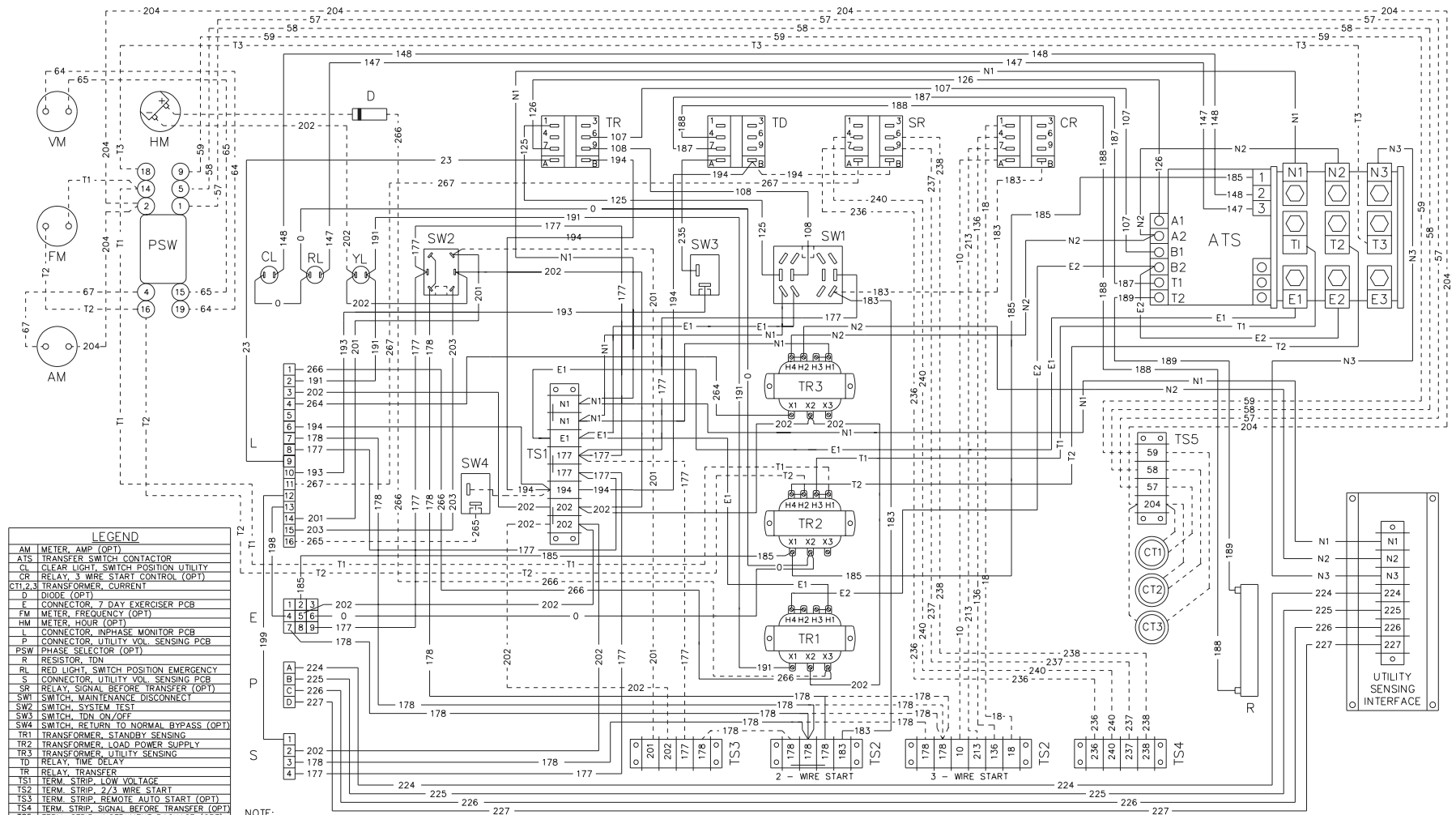
CONTACTS	POSITION	1	2	3	OFF
14 - 13	X	X			
16 - 15	X				
20 - 19	X				
18 - 17	X	X			
1 - 2	X	X	X		
4 - 5	X	X	X		
6 - 7	X	X	X		
7 - 8	X				
9 - 10	X	X			
11 - 12	X				
X INDICATES CLOSED					

NOTE:
ALL RELAY CONTACTS SHOWN WITH
ATS IN UTILITY POSITION

SEE DWG. 70067617 FOR
INTERFACE INTERNAL CONNECTIONS

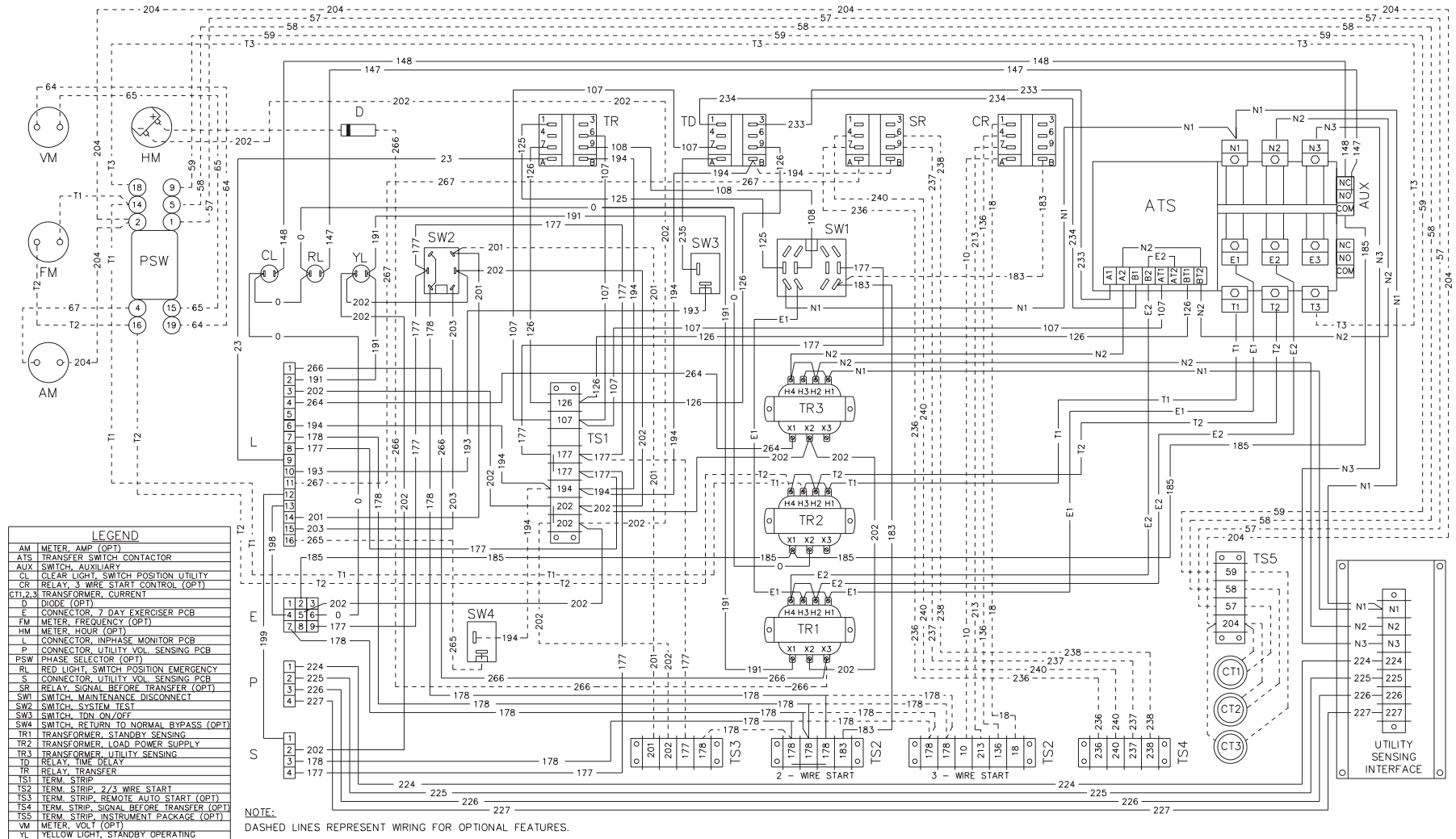


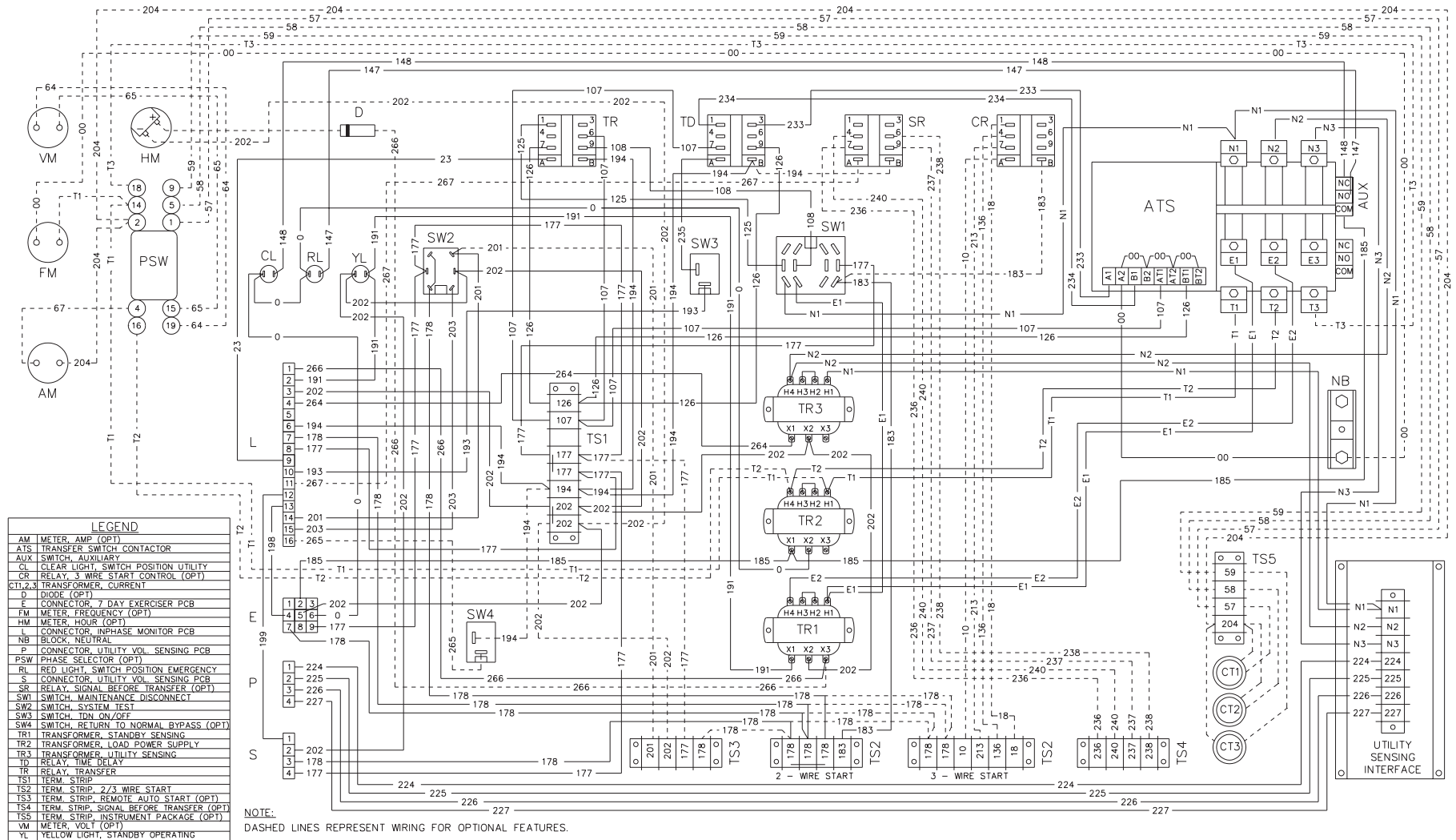


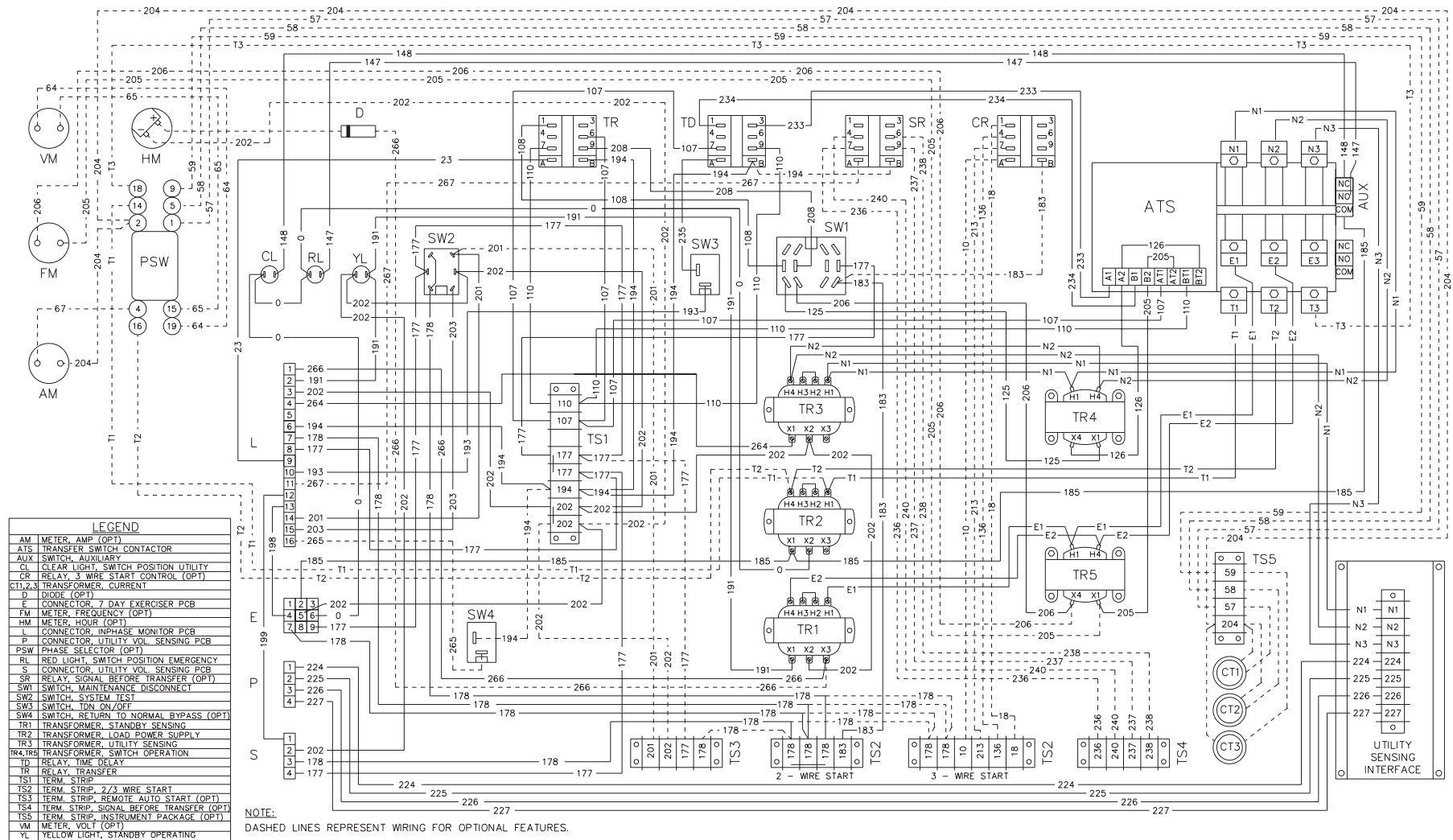


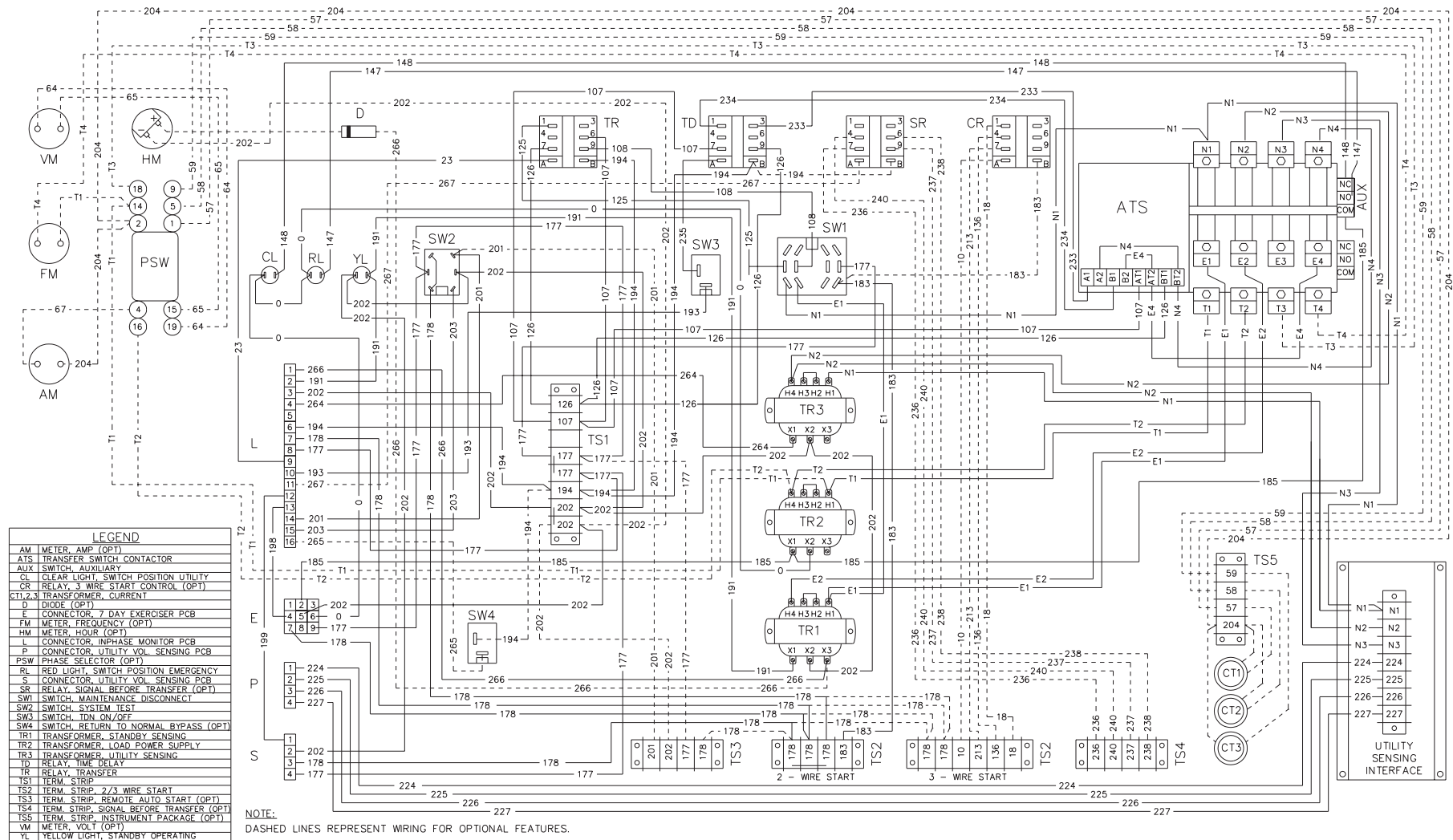
LEGEND	
AM	METER, AMP (OPT)
ATS	TRANSFER SWITCH CONTACTOR
CL	CLEAR LIGHT, SWITCH POSITION UTILITY
CR	RELAY, 3 WIRE START CONTROL (OPT)
CT1,2,3	TRANSFORMER, CURRENT
D	DIODE (OPT)
E	CONNECTOR, 7 DAY EXERCISER PCB
FM	METER, FREQUENCY (OPT)
HM	METER, HOUR (OPT)
IP	CONNECTOR, INPHASE MONITOR PCB
P	CONNECTOR, UTILITY VOL. SENSING PCB
PSW	PHASE SELECTOR (OPT)
R	RESISTOR, TDN
RL	RED LIGHT, SWITCH POSITION EMERGENCY
S	CONNECTOR, UTILITY VOL. SENSING PCB
SR	RELAY, SIGNAL BEFORE TRANSFER (OPT)
SW1	SWITCH, MAINTENANCE DISCONNECT
SW2	SWITCH, SYSTEM TEST
SW3	SWITCH, TDN ON/OFF
SW4	SWITCH, RETURN TO NORMAL BYPASS (OPT)
TR1	TRANSFORMER, STANDBY SENSING
TR2	TRANSFORMER, LOAD POWER SUPPLY
TR3	TRANSFORMER, UTILITY SENSING
TR	RELAY, TRANSFER
TS1	TERM. STRIP, LOW VOLTAGE
TS2	TERM. STRIP, 2/3 WIRE START
TS3	TERM. STRIP, REMOTE AUTO START (OPT)
TS4	TERM. STRIP, SIGNAL BEFORE TRANSFER (OPT)
TS5	TERM. STRIP, INSTRUMENT PACKAGE (OPT)
VM	METER, VOLT (OPT)
YL	YELLOW LIGHT, STANDBY OPERATING

NOTE:
DASHED LINES REPRESENT WIRING FOR OPTIONAL FEATURES.

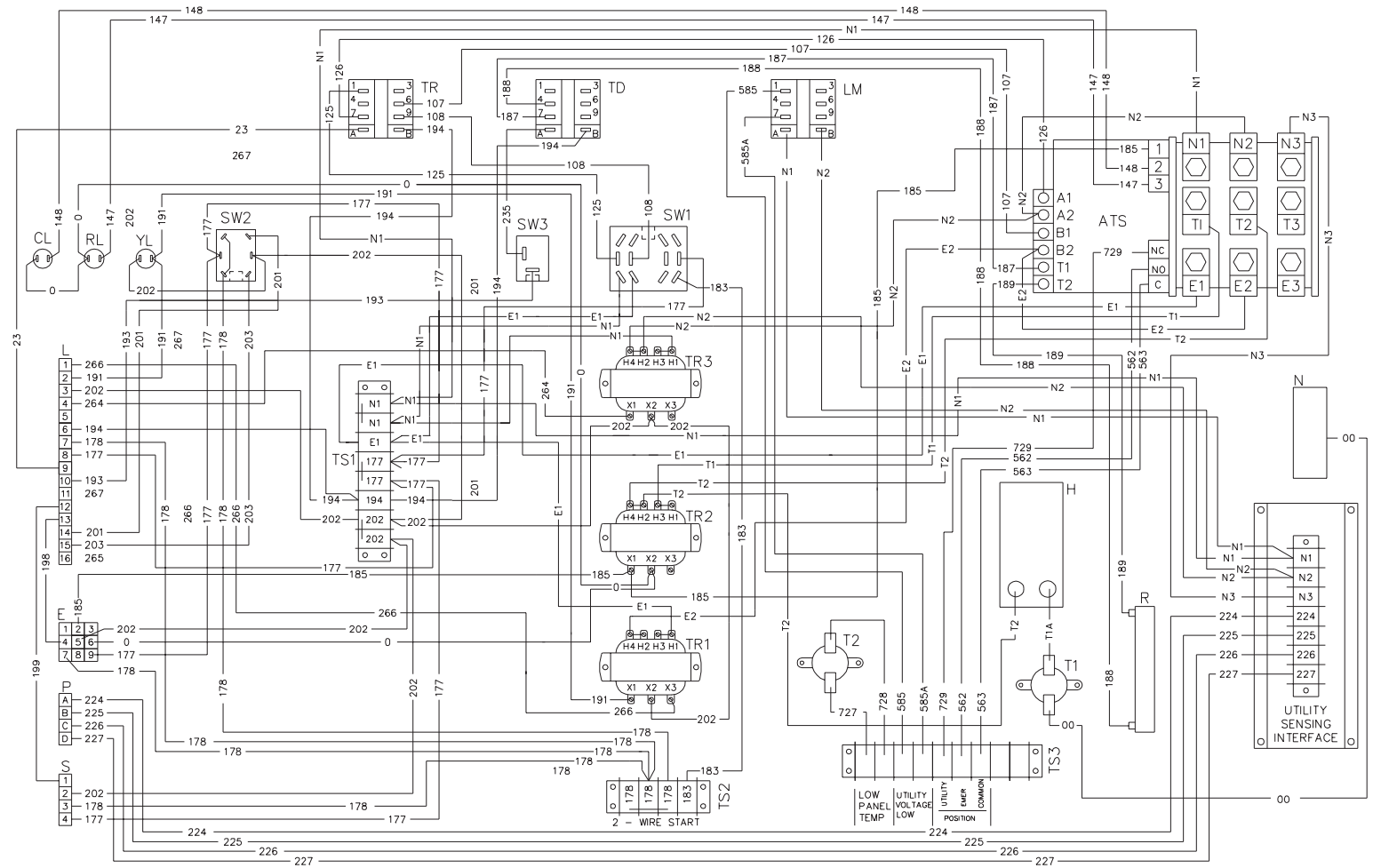






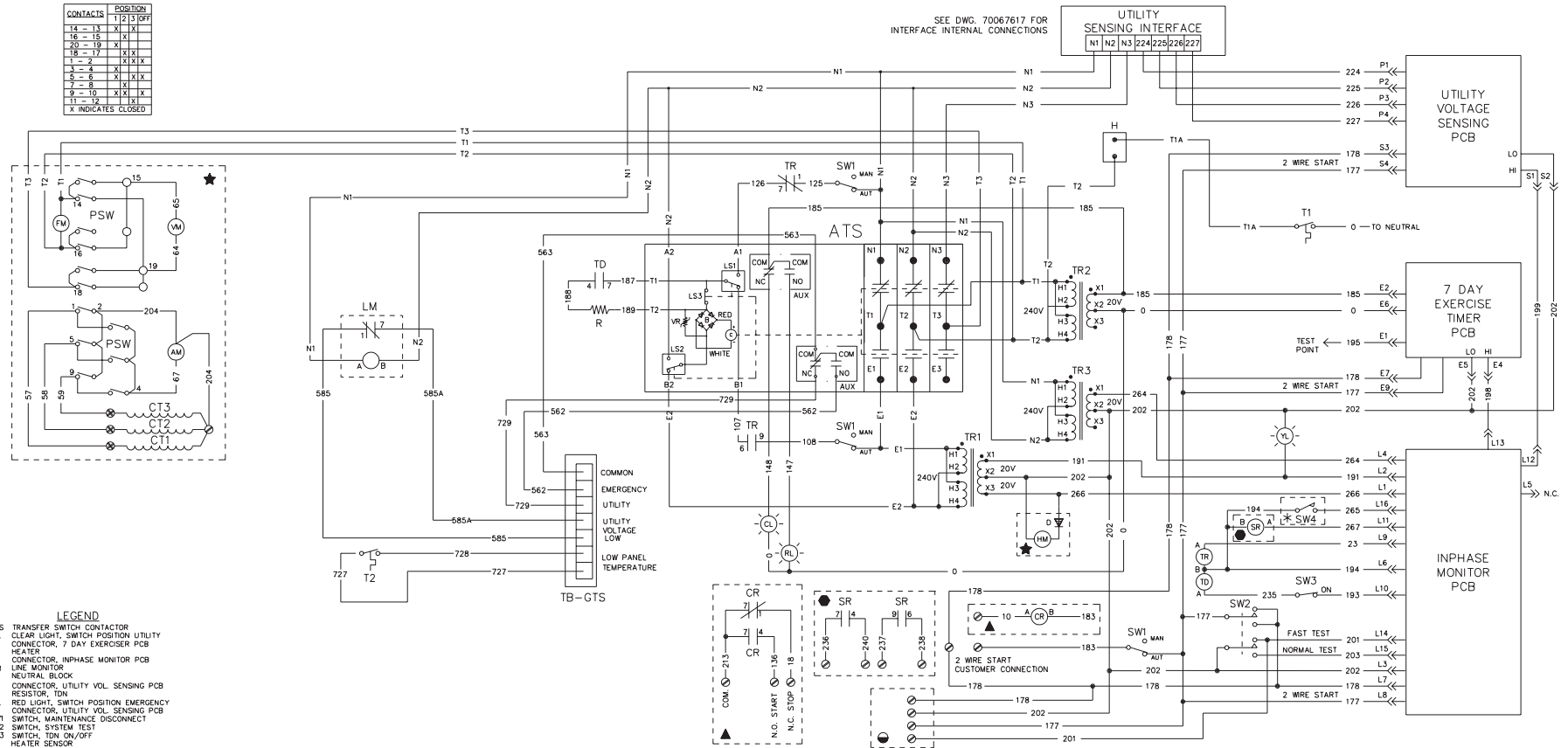


LEGEND	
ATS	TRANSFER SWITCH, CONTACTOR
CL	CLEAR LIGHT, SWITCH POSITION UTILITY
F	CONNECTOR, 7 DAY EXERCISER PCB
H	HEATER
L	CONNECTOR, INPHASE MONITOR PCB
LM	LINE MONITOR
N	NEUTRAL BLOCK
P	CONNECTOR, UTILITY VOL. SENSING PCB
R	RESISTOR, TDN
RL	RED LIGHT, SWITCH POSITION EMERGENCY
S	CONNECTOR, UTILITY VOL. SENSING PCB
SW1	SWITCH, MAINTENANCE DISCONNECT
SW2	SWITCH, SYSTEM TEST
SW3	SWITCH, TDN ON/OFF
T1	HEATER THERMOSTAT
T2	HEATER THERMOSTAT
TD	RELAY, TIME DELAY
TR	RELAY, TRANSFER
TR1	TRANSFORMER, STANDBY SENSING
TR2	TRANSFORMER, LOAD POWER SUPPLY
TR3	TRANSFORMER, UTILITY SENSING
TS1	TERM. STRIP, LOW VOLTAGE
TS2	TERM. STRIP, 2/3 WIRE START
TS3	TERM. STRIP, CUSTOMER CONNECTION
YL	YELLOW LIGHT, STANDBY OPERATING



CONTACTS	POSITION
14 - 15	X
16 - 17	X
18 - 19	X
1 - 2	X
3 - 4	X
5 - 6	X
7 - 8	X
9 - 10	X
11 - 12	X
13 - 14	X

X INDICATES CLOSED

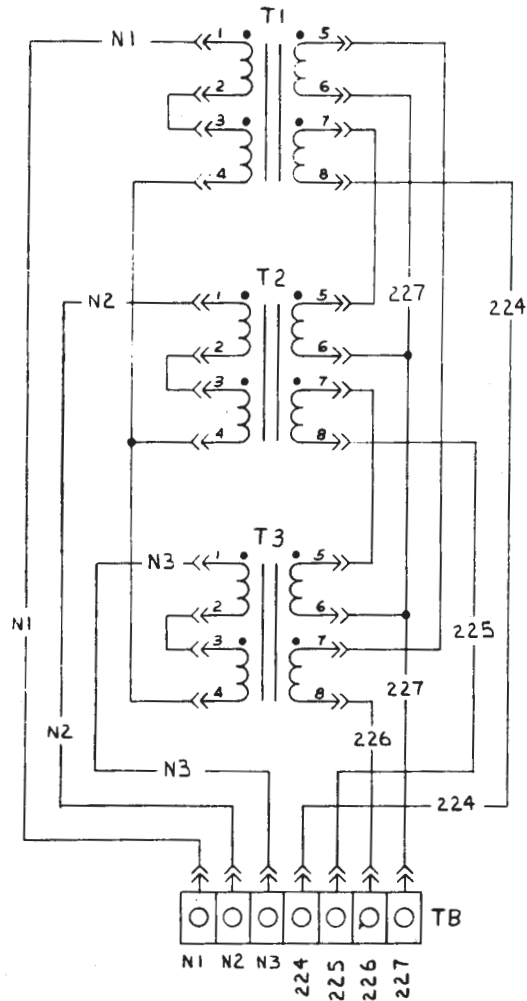


- LEGEND**
- ATS TRANSFER SWITCH CONTACTOR
 - CL CLEAR LIGHT, SWITCH POSITION UTILITY
 - C CONNECTOR, 7 DAY EXERCISER PCB
 - H HEATER
 - L CONNECTOR, INPHASE MONITOR PCB
 - LM LINE MONITOR
 - N NEUTRAL BLOCK
 - P CONNECTOR, UTILITY VOL. SENSING PCB
 - R RESISTOR, TDV
 - RL RED LIGHT, SWITCH POSITION EMERGENCY
 - S CONNECTOR, UTILITY VOL. SENSING PCB
 - SW1 SWITCH, MAINTENANCE DISCONNECT
 - SW2 SWITCH, SYSTEM TEST
 - SW3 SWITCH, TDN ON/OFF
 - T1 HEATER SENSOR
 - T2 HEATER THERMOSTAT
 - TD RELAY, TIME DELAY
 - TR RELAY, TRANSFER
 - TR1 TRANSFORMER, STANDBY SENSING
 - TR2 TRANSFORMER, LOAD POWER SUPPLY
 - TR3 TRANSFORMER, UTILITY SENSING
 - TS1 TERM. STRIP, LOW VOLTAGE
 - TS2 TERM. STRIP, 2/3 WIRE START
 - TS3 TERM. STRIP, CUSTOMER CONNECTION
 - YL YELLOW LIGHT, STANDBY OPERATING

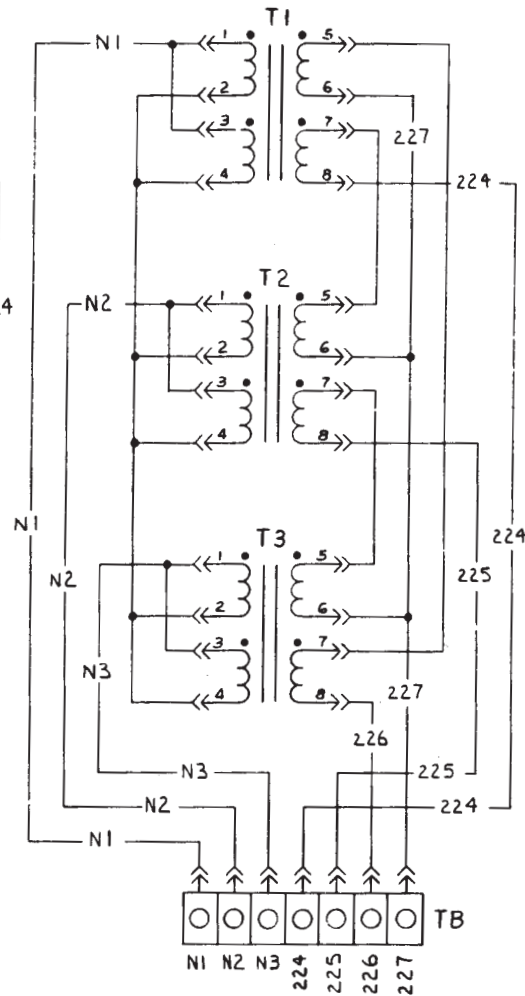
- OPTIONS**
- SIGNAL BEFORE TRANSFER
 - ★ INSTRUMENT PACKAGE
 - ▲ 3 WIRE START CONTROL
 - REMOTE AUTO START
 - * RETURN TO NORMAL BYPASS

NOTE:
WIRE N3,59,AND CT3 USED ON
3 PHASE SYSTEM ONLY
ALL RELAY CONTACTS SHOWN WITH
ATS IN UTILITY POSITION

A
for
416/480/600 VOLT
THREE PHASE
OPERATION



B
for
208/240 VOLT
THREE PHASE
OPERATION



C
for
240 VOLT
SINGLE PHASE
OPERATION

