

THREE PHASE WIRING FOR ASCO® 7000 SERIES AUTOMATIC DELAYED TRANSITION TRANSFER & BYPASS-ISOLATION SWITCHES TYPE 7ADTB RATED 1000-3000 AMPERES

FEATURES, SETTINGS, OPERATION, ACCESSORIES & NOTES

THE FOLLOWING FEATURES AND RELATED SETTINGS ARE PART OF THE GROUP 5 CONTROL PANEL'S USER CONFIGURABLE PARAMETERS. FOR DETAILED INFORMATION REGARDING THE CONFIGURATION OF THESE PARAMETERS AND OTHER FEATURES OF THE GROUP 5 CONTROL PANEL, REFER TO THE GROUP 5 CONTROL PANEL FOR ASCO 7000 SERIES AUTOMATIC TRANSFER SWITCHES USER'S GUIDE (PART NO. 381333-126) PROVIDED WITH EVERY 7000 SERIES AUTOMATIC TRANSFER SWITCH.

THE NOMINAL OPERATING VOLTAGE & FREQUENCY IS PRE-PROGRAMMED AT THE FACTORY BASED ON THE NAMEPLATE DATA PRINTED ON THE TRANSFER SWITCH & CONTROL PANEL NAMEPLATES.

VOLTAGE & FREQUENCY SENSING

THE FOLLOWING SETTINGS ARE EXPRESSED AS A PERCENTAGE OF THE CONTROL PANEL'S NOMINAL VOLTAGE SETTING UNLESS STATED OTHERWISE. ALL SETTINGS ARE ADJUSTABLE IN INCREMENTS OF 1%.

A. RMS VOLTAGE SENSING ON ALL PHASES OF THE NORMAL & EMERGENCY SOURCES.

PARAMETER	RANGE OF SETTINGS	DEFAULT SETTING
NORMAL VOLTAGE DROPOUT	70-98%	85%
NORMAL VOLTAGE PICKUP	85-100%	90%
NORMAL OVER VOLTAGE TRIP	102-115%	OFF
NORMAL VOLTAGE UNBALANCE	YES/NO	NO
NORMAL VOLTAGE UNBALANCE DROPOUT	5-20% OF AVG. NORMAL VOLTAGE	20% (if ON)
NORMAL VOLTAGE UNBALANCE PICKUP	3-18% OF AVG. NORMAL VOLTAGE	10% (if ON)
EMERGENCY VOLTAGE DROPOUT	70-98%	75%
EMERGENCY VOLTAGE PICKUP	85-100%	90%
EMERGENCY OVER VOLTAGE TRIP	102-115%	OFF
EMERGENCY VOLTAGE UNBALANCE	YES/NO	NO
EMERGENCY VOLTAGE UNBALANCE DROPOUT	5-20% OF AVG. EMERGENCY VOLTAGE	20% (if ON)
EMERGENCY VOLTAGE UNBALANCE PICKUP	3-18% OF AVG. EMERGENCY VOLTAGE	10% (if ON)

B. FREQUENCY SENSING OF THE NORMAL & EMERGENCY SOURCES.

PARAMETER	RANGE OF SETTINGS	DEFAULT SETTING
NORMAL FREQUENCY DROPOUT	85-98%	90%
NORMAL FREQUENCY PICKUP	90-100%	95%
NORMAL OVER FREQUENCY TRIP	102-110%	OFF
EMERGENCY FREQUENCY DROPOUT	85-98%	90%
EMERGENCY FREQUENCY PICKUP	90-100%	95%
EMERGENCY OVER FREQUENCY TRIP	102-110%	OFF

TIME DELAYS

THE FOLLOWING TIME DELAY SETTINGS ALL HAVE AN ADJUSTABLE RANGE OF 0-60 min 59 sec UNLESS STATED OTHERWISE. ADJUSTABLE IN INCREMENTS OF 1 sec.
NOTE: SOME TIME DELAYS MAY BE EFFECTED BY CUSTOMER REQUESTED ACCESSORIES PROVIDED WITH THE UNIT. REFER TO THE DESCRIPTIONS PROVIDED UNDER THE "ACCESSORIES" NOTES ON THIS PAGE.

FEATURE	NAME	DEFAULT SETTING
1C	NORMAL SOURCE FAILURE TO ENGINE START	1 sec
2B	TRANSFER TO EMERGENCY ON AVAILABILITY OF EMERGENCY SOURCE	0 sec
1F	EMERGENCY SOURCE FAILURE RETRANSFER (NORMAL SOURCE AVAILABLE)	0 sec
2E	ENGINE COOLDOWN FOLLOWING RETRANSFER TO NORMAL	5 min
3A	RETRANSFER TO NORMAL (NORMAL FAILURE MODE)	30 min
3A	RETRANSFER TO NORMAL (TEST MODE)	30 sec
-	DELAYED TRANSFER (LOAD "OFF" TIME), [0-5 min 59 sec]	3 sec

DESCRIPTIONS OF TIME DELAYS:

- FEAT. 1C - DELAY ON NORMAL SOURCE OUTAGE. STARTS ON FAILURE OF NORMAL SOURCE. RESETS IF NORMAL SOURCE IS ACCEPTED BEFORE EXPIRATION. INHIBITS ENGINE STARTING AND AUTOMATIC TRANSFER UNTIL EXPIRATION.
- FEAT. 2B - DELAY PRIOR TO TRANSFER TO THE EMERGENCY SOURCE. DELAY STARTS ON EXPIRATION OF FEAT. 1C AND WHEN THE EMERGENCY SOURCE HAS BEEN ACCEPTED. DELAY RESETS IF THE EMERGENCY SOURCE FAILS PRIOR TO EXPIRATION. ON EXPIRATION, TRANSFER TO EMERGENCY IS INITIATED UNLESS THE NORMAL SOURCE HAS RECOVERED AND THE "COMMIT TO TRANSFER" FEATURE IS SET TO "NO" COMMIT. PROVIDES A PERIOD FOR EMERGENCY SOURCE STABILIZATION OR STAGING OF MULTIPLE TRANSFER SWITCH CONTROLLED LOADS TO THE EMERGENCY SOURCE.
- FEAT. 1F - DELAY ON RETRANSFER TO NORMAL IN THE EVENT OF EMERGENCY SOURCE FAILURE. DELAY BEGINS ON FAILURE OF THE EMERGENCY SOURCE IF THE NORMAL SOURCE IS ACCEPTABLE. ON EXPIRATION, RETRANSFER TO NORMAL WILL BE INITIATED.
- FEAT. 2E - DELAY ON ENGINE SHUTDOWN (ENGINE COOL DOWN PERIOD). DELAY STARTS FOLLOWING RETRANSFER TO THE NORMAL SOURCE. PROVIDES A PERIOD FOR THE ENGINE-GENERATOR SET TO RUN UNLOADED PRIOR TO SHUTDOWN.
- FEAT. 3A - RETRANSFER TO NORMAL DELAY (NORMAL FAILURE MODE) DELAY STARTS WHEN NORMAL SOURCE IS ACCEPTED (FOLLOWING IT'S FAILURE) AND WHILE THE LOAD IS CONNECTED TO EMERGENCY. RESETS IF NORMAL FAILS PRIOR TO EXPIRATION OR IF THE EMERGENCY SOURCE FAILS BEFORE EXPIRATION AND FEAT. 1F EXPIRES (AUTOMATIC BYPASS ON EMERGENCY SOURCE FAILURE). PROVIDES A PERIOD FOR THE NORMAL SOURCE TO STABILIZE PRIOR TO RETRANSFER.
- FEAT. 3A - RETRANSFER TO NORMAL DELAY (TEST MODE) DELAY STARTS WHEN THE "TRANSFER TEST" SWITCH IS RESET TO "AUTO" (FOLLOWING A USER INITIATED TRANSFER TEST) AND WHILE THE LOAD IS CONNECTED TO EMERGENCY. RESETS IF NORMAL FAILS PRIOR TO EXPIRATION OR IF THE EMERGENCY SOURCE FAILS BEFORE EXPIRATION AND FEAT. 1F EXPIRES (AUTOMATIC BYPASS ON EMERGENCY SOURCE FAILURE).

DELAYED TRANSFER (LOAD "OFF" TIME) - PROVIDES A USER DEFINABLE PERIOD DURING WHICH THE LOAD IS DISCONNECTED FROM BOTH THE NORMAL AND EMERGENCY SOURCES DURING TRANSFER IN EITHER DIRECTION. THE DELAY ("OFF" PERIOD) BEGINS FOLLOWING THE OPENING OF THE SOURCE CONTACTOR, CN OR CE, CONNECTED TO THE SOURCE FROM WHICH TRANSFER IS BEING MADE. UPON EXPIRATION, CLOSURE OF THE OPPOSITE SOURCE CONTACTOR IS INITIATED.

ENGINE EXERCISER

THE ENGINE EXERCISER FEATURE PROVIDES A MEANS TO PERFORM AUTOMATIC EXERCISING OF THE ENGINE-GENERATOR SET EITHER WITH OR WITHOUT LOAD TRANSFER. THE USER CAN PROGRAM UP TO SEVEN DIFFERENT EXERCISE ROUTINES. EACH ROUTINE INCLUDES:

- ENABLE OR DISABLE THE ROUTINE
- ENABLE OR DISABLE TRANSFER OF THE LOAD DURING THE ROUTINE
- SET START TIME OF ROUTINE -
 - TIME OF DAY
 - DAY OF WEEK
 - WEEK OF MONTH (1st, 2nd, 3rd, 4th, ALTERNATE OR ALL)
- SET THE DURATION OF THE ROUTINE

(CONTINUED) . . .

PARAMETER	RANGE OF SETTING	DEFAULT SETTING
MONTH (CLOCK SET)	JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC	CURRENT DATE
DAY	1-31	
YEAR	00-99	
HOUR	0-23	
MINUTE	0-59	
ENABLE ROUTINE (ROUTINE 1-7)	YES/NO	NO
TRANSFER LOAD	YES/NO	NO
START HOUR	0-23	0
START MINUTE	0-59	0
RUN WEEK	ALL, ALTERNATE, 1st, 2nd, 3rd, 4th, 5th	ALL
RUN DAY	SUN MON TUE WED THU FRI SAT	SUN
DURATION HOURS	0-23	0
DURATION MINUTES	0-59	0

Eastern Standard Time

SIGNALS & AUXILIARIES

- A. FEATURE 7 - ENGINE START SIGNAL
SIGNAL INITIATED BY DROPOUT OF CONTROL PANEL RELAY (NR) FOLLOWING EXPIRATION OF THE FEATURE 1C TIME DELAY (DELAY TO OVERRIDE MOMENTARY NORMAL SOURCE OUTAGES). FEATURE 7 CLOSURE TO SIGNAL ENGINE START. ENGINE STARTING SIGNAL RESETS FOLLOWING RETRANSFER TO THE NORMAL SOURCE AND EXPIRATION OF THE FEATURE 2E (ENGINE COOL DOWN) TIME DELAY. FEATURE 7 CONSISTS OF A FORM C CONTACT CONNECTED TO THE FIELD CONNECTIONS TERMINAL BLOCK (TB). CONTACTS RATED 5 AMPS AT 32VDC/120VAC RESISTIVE.
- B. FEATURES 14AF & 14BF - TRANSFER SWITCH AUXILIARY POSITION INDICATING CONTACTS. SEVEN (7) FORM C CONTACTS TO INDICATE CONNECTION OF THE TRANSFER SWITCH TO NORMAL (14A) AND SEVEN (7) FOR EMERGENCY (14B). CONTACTS CONNECTED TO THE FIELD CONNECTIONS TERMINAL BLOCK (TB). CONTACTS RATED 10 AMPS, 32 VDC, 250 VAC.
- C. FEATURE 17 - REMOTE TRANSFER TO EMERGENCY. REQUIRES A CUSTOMER SUPPLIED NORMALLY OPEN CONTACT. CLOSING OF THE CONTACT CAUSES ENGINE START AND TRANSFER TO THE EMERGENCY SOURCE. OPENING OF THE CONTACT ACTIVATES THE FEATURE 3A (RETRANSFER TO NORMAL) DELAY PRIOR TO RETRANSFER. IN THE EVENT THE EMERGENCY SOURCE FAILS WHILE THE TRANSFER SWITCH IS CONNECTED TO EMERGENCY AND THE REMOTE CONTACT IS CLOSED, THE TRANSFER SWITCH WILL RETRANSFER TO THE NORMAL SOURCE. CONNECTED TO THE FIELD CONNECTIONS TERMINAL BLOCK (TB).

OPERATION

IF THE NORMAL SOURCE FAILS, THE TRANSFER SWITCH INITIATES STARTING OF THE ENGINE-GENERATOR SET. WHEN PROPER VOLTAGE AND FREQUENCY HAVE BEEN ATTAINED, THE LOAD WILL BE TRANSFERRED TO THE EMERGENCY SOURCE BY MEANS OF A DELAYED TRANSITION, (PROGRAMMED LOAD DISCONNECT PERIOD).

DELAYED TRANSITION TRANSFER TO EMERGENCY WILL CAUSE THE NORMAL SOURCE CONTACTOR (CN) TO OPEN. AFTER THE LOAD DISCONNECT DELAY, AS SET VIA THE USER INTERFACE OF THE GROUP 5 CONTROL PANEL, THE EMERGENCY SOURCE CONTACTOR (CE) WILL CLOSE. DURING THE PERIOD THAT BOTH CONTACTORS ARE OPEN AND THE TIME DELAY IS ACTIVE, A "LOAD DISCONNECT ACTIVE" LED WILL BE LIT (AMBER LED).

WHEN THE NORMAL SOURCE IS RESTORED FOR THE DURATION OF THE FEATURE 3A, RETRANSFER TO NORMAL TIME DELAY SETTING, THE LOAD WILL BE RETRANSFERRED TO THE NORMAL SOURCE IN A DELAYED TRANSITION MANNER.

DELAYED TRANSITION RETRANSFER TO NORMAL WILL CAUSE THE EMERGENCY SOURCE CONTACTOR (CE) TO OPEN. AFTER THE LOAD DISCONNECT TIME DELAY EXPIRES, THE NORMAL SOURCE CONTACTOR (CN) WILL CLOSE.

THE ENGINE WILL CONTINUE TO RUN FOR THE ENGINE COOL DOWN PERIOD, FEATURE 2E.

DELAYED TRANSITION TRANSFER WILL ALSO OCCUR DURING TRANSFER TO EMERGENCY BY OPERATING THE TEST SWITCH. RETRANSFER TO NORMAL WILL OCCUR AS PREVIOUSLY DESCRIBED.

USER CONTROLS AND INDICATIONS

- A. FEATURES 5 & 6B - TRANSFER TEST/RETRANSFER TIME DELAY BYPASS CONTROLS.
TRANSFER TEST:
OPERATION CAUSES A NORMAL SOURCE FAILURE SEQUENCE. ACTIVATE AND HOLD FOR AT LEAST 15 SECONDS TO ALLOW TIME FOR THE ENGINE-GENERATOR TO START.
RETRANSFER TIME DELAY BYPASS:
OPERATION WILL BYPASS THE FEATURE 3A (RETRANSFER TO NORMAL DELAY).
- B. FEATURES 9A & 9B - TRANSFER SWITCH POSITION INDICATORS.
FEATURE 9A: TRANSFER SWITCH CLOSED ON NORMAL (GREEN LED)
FEATURE 9B: TRANSFER SWITCH CLOSED ON EMERGENCY (RED LED)
- C. FEATURES 9C & 9D - SOURCE ACCEPTANCE INDICATORS.
FEATURE 9C: NORMAL SOURCE ACCEPTED (GREEN LED)
FEATURE 9D: EMERGENCY SOURCE ACCEPTED (RED LED)
- D. LOAD DISCONNECT ACTIVE - INDICATES THAT THE TRANSFER SWITCH IS IN THE LOAD DISCONNECTED POSITION (BOTH NORMAL (CN) AND EMERGENCY (CE) CONTACTORS OPEN) (AMBER LED).

BYPASS SWITCH USER CONTROLS & INDICATIONS

- A. SOURCE AVAILABILITY INDICATORS:
NORMAL SOURCE AVAILABLE: (GREEN LED)
EMERGENCY SOURCE AVAILABLE: (RED LED)

BASE CATALOG NUMBER			CATALOG NUMBER SUFFIXES				EXPLANATION OF CATALOG NUMBER CODES												
CATALOG TYPE	NEUTRAL TYPE	PHASE POLES	AMPS	VOLT CODE	CONTROLLER	OPTIONAL ACCESSORY	ENCLOSURE CODE	NEUTRAL TYPE		VOLTAGE CODES 3 PHASE (3 OR 4 WIRE) 50 OR 60 Hz		ENCLOSURE CODES							
								CODE	DESCRIPTION	CODE	NOMINAL VOLTAGE	CODE	TYPE	DESCRIPTION					
7ADTB	A	3	1000	G	5	X	C	BLANK	NONE	A	115	BLANK	1	OPEN TYPE (NO ENCLOSURE)					
			1200	H			D	A	SOLID	B	120	C	2	GENERAL PURPOSE, INDOOR					
			1600	I			E	B	SWITCHING	C	208	E	3R	INDOOR, WATER & DUST RESISTANT					
			2000	J			F			D	220	F	4	OUTDOOR, RAIN PROOF, SLEET & ICE RESISTANT					
			2600	K			G			E	230	G	4X	INDOOR/OUTDOOR, WATERTIGHT & DUST TIGHT					
			3000	L			H			F	240	H	4X	TYPE 4 PLUS CORROSION RESISTANCE (STAINLESS STEEL)					
				M			I			G	277	J	4X	TYPE 4 PLUS CORROSION RESISTANCE (FIBERGLASS)					
				N			J			H	380	K	7	EXPLOSION PROOF					
				O			K			I	400	L	12	INDOOR, INDUSTRIAL ENVIRONMENTS, OIL TIGHT & DUST TIGHT					
				P			L			J	415			(SECURE ENCLOSURES)					
				Q			M			K	440			OUTDOOR, RAINPROOF, SLEET & ICE RESISTANT					
				R			N			L	480	M	3R	INDOOR/OUTDOOR, WATERTIGHT & DUSTTIGHT					
							O			M	550	N	4X	TYPE 4 PLUS CORROSION RESISTANCE (STAINLESS STEEL)					
							P			N	575	P	12	INDOOR, INDUSTRIAL ENVIRONMENTS, OILTIGHT & DUSTTIGHT					
							Q			O	600	Q							
	BLANK FOR NONE													BLANK FOR OPEN TYPE					

B. UNIT NOT IN AUTOMATIC INDICATOR: (RED LED FLASHING)
FLASHES WHEN THE TRANSFER SWITCH IS DISABLED FROM ANY TRANSFER FUNCTIONS DUE TO THE BYPASS SWITCH BEING CLOSED IN EITHER POSITION OR BECAUSE THE TRANSFER SWITCH IS NOT IN THE CONNECTED POSITION.

C. MANUAL ENGINE START SWITCH:
FOR MANUAL STARTING OF ENGINE-GENERATOR SET WHEN ATS IS IN TEST OR ISOLATED MODE. TWO POSITION SELECTOR SWITCH.
ENGINE START - SIGNALS ENGINE-GENERATOR SET TO START.
AUTO - SIGNALS ENGINE GENERATOR-SET TO START FROM AUTOMATIC TRANSFER SWITCH SIGNAL.

D. SOLENOID INTERLOCKS -
SL1: INTERLOCKS THE TRANSFER SWITCH ISOLATION CRANK WITH THE TRANSFER SWITCH AND BYPASS SWITCH TO INSURE THAT THE TRANSFER SWITCH CAN NEVER BE DISCONNECTED WITHOUT BEING BYPASSED AND THAT IT CAN NEVER BE RECONNECTED UNLESS IT IS IN THE SAME POSITION AS THE BYPASS SWITCH.
SL2: INTERLOCKS THE BYPASS SWITCH OPERATOR SO THAT THE BYPASS SWITCH CAN NEVER BE OPERATED TO THE OPPOSITE SOURCE AS THE TRANSFER SWITCH IS CONNECTED TO WHILE IN THE CONNECTED POSITION.

E. OPTIONAL ACCESSORY INDICATOR MATRIX -
AN OPTIONAL ACCESSORY INDICATION MATRIX IS AVAILABLE TO SHOW, IN A ONE-LINE FORMAT, THE OPERATIONAL STATUS OF THE AUTOMATIC TRANSFER & BYPASS/ISOLATION SWITCH AT A SINGLE LOCATION ON THE UNIT.

GENERAL NOTES

- SWITCH SHOWN DE-ENERGIZED AND CONNECTED TO THE NORMAL SOURCE. THE BYPASS SWITCH OPERATOR IS IN THE "OFF" (AUTOMATIC) POSITION WITH THE ISOLATION CRANK (IS) IN THE FULLY CONNECTED POSITION.
- DEVICE SYMBOLS AND DESIGNATIONS ARE IN ACCORDANCE WITH NEMA PUBLICATION ICS 1-1983, PART 1-101A.
- ALL WIRING IS #16 AWG, TINNED, STRANDED COPPER UNLESS OTHERWISE INDICATED.
- ON TERMINAL BLOCKS INDICATES AVAILABLE FIELD CONNECTION POINT.
- ON TERMINAL BLOCKS INDICATES FACTORY CONNECTION POINT.
- CONTROL AND ACCESSORY WIRING IS ROUTED IN ACCORDANCE WITH ASCO ASSEMBLY PROCEDURE GS451261.
- AN OPERATOR'S MANUAL IS FURNISHED WITH EACH AUTOMATIC TRANSFER SWITCH. REFER TO THIS PUBLICATION PRIOR TO INSTALLATION AND OPERATION OF THE UNIT.

TECHNICAL DATA

BYPASS SWITCH AUXILIARY CONTACTS

BP AUXILIARY CONTACT	STATUS (*)	BP SWITCH POSITION (AUX3)		
		EMERG	OFF	NORMAL
81-82				
83-84				
85-86	●			
87-88	●			
89-90				
91-92				
93-94				
95-96				
97-98				
99-100				
101-102				
103-104				
105-106				
107-108				
109-110	●			
111-112	●			
113-114				
115-116				
117-118				
119-120				
121-122				
123-124				
125-126				
127-128				

BYPASS SWITCH OPERATOR AUXILIARY CONTACTS

BP AUXILIARY CONTACT	STATUS (*)	BP SWITCH POSITION (AUX4)		
		EMERG (PULL)	<>	NORMAL (PUSH)
137-138	●			
137-139				
140-141	●			
140-142				

BYPASS SWITCH OPERATOR AUXILIARY CONTACTS

BP AUXILIARY CONTACT	STATUS (*)	BP SWITCH HANDLE POSITION (AUX5)		
		OFF (90°)	<> (75°)	BYPASS (-90°)
143-144	●			
143-145				
146-147				
146-148	●			

ISOLATION (TRANSFER SWITCH CARRIAGE POSITION) AUXILIARY CONTACTS

IS AUXILIARY CONTACT	STATUS (*)	TRANSFER SWITCH CARRIAGE POSITION (AUX3)				
		CONNECT	>	TEST	<	ISOLATE
1-2	●					
4-5	●					
7-8	●					
10-12	●					
13-14	●					
13-15						
16-17	●					
16-18	●					
19-21	●					
22-23	●					
22-24	●					
25-26	●					
28-29	●					
61-62	●					

(*) CONTACT AVAILABILITY STATUS:

● CONTACT PROVIDED & USED IN CIRCUITRY

“BLANK” CONTACT NOT USED. IF PHYSICALLY AVAILABLE, CONTACT IS FOR FACTORY USE ONLY!

CATALOG NUMBER _____

ASCO® CERTIFIED TO

S.O. _____

BY _____

DATE _____

FORM REV N _____

PROJECT NAME: _____

WIRING _____

DIAGRAM _____

7000 SERIES (G7ADTB) 3PH 1000-3000 AMPS

"G" FRAME, GROUP 5 CONTROLS

MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-1-003. FOR PLASTIC PARTS SEE MP-1-005.

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617429

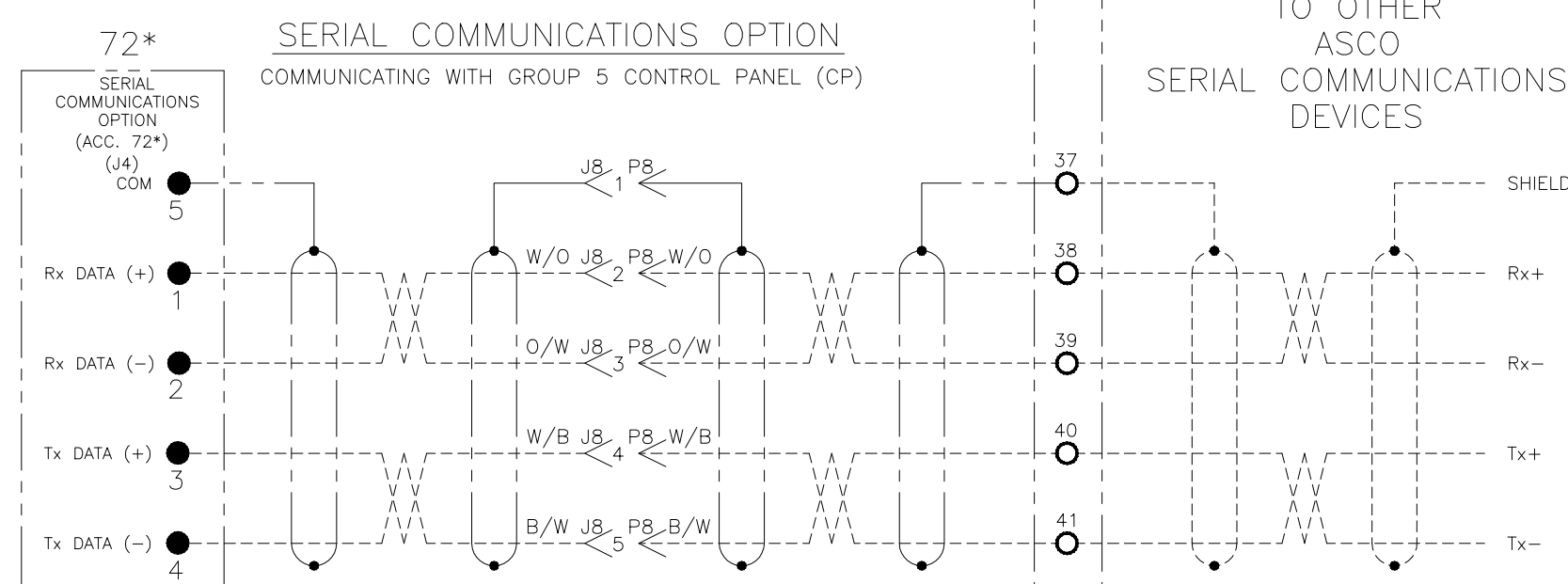
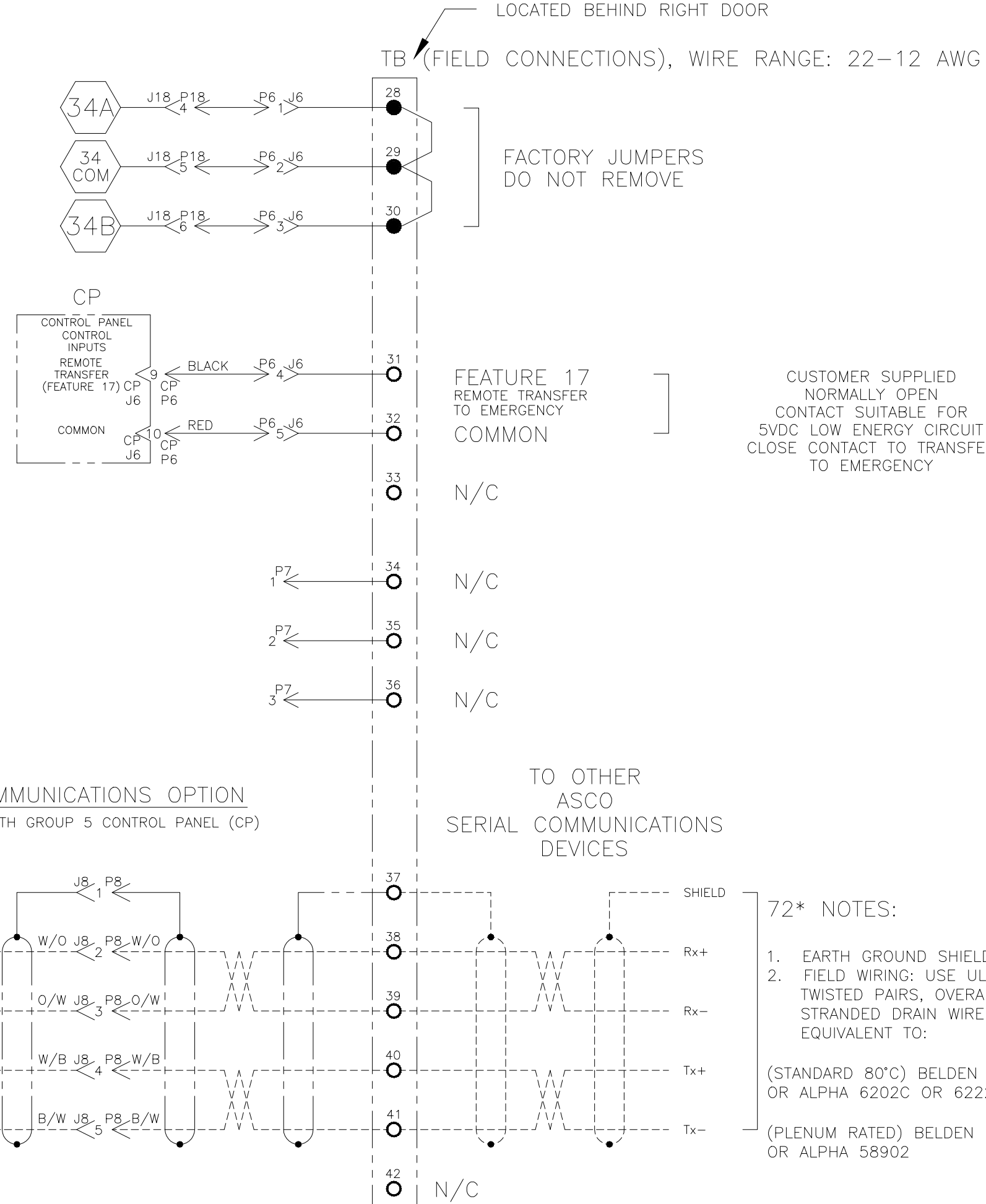
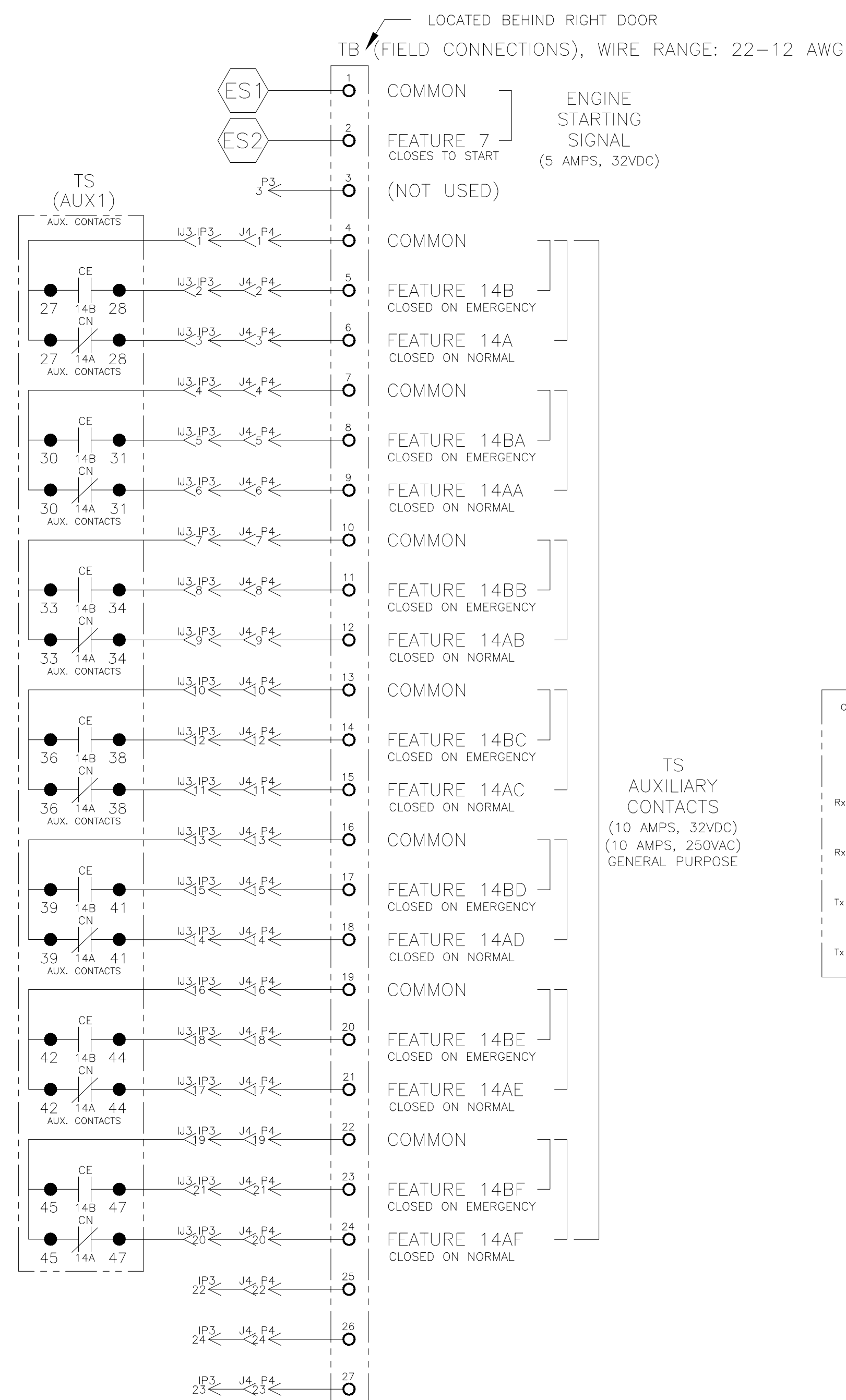
REV. N

ECN NO. 283680

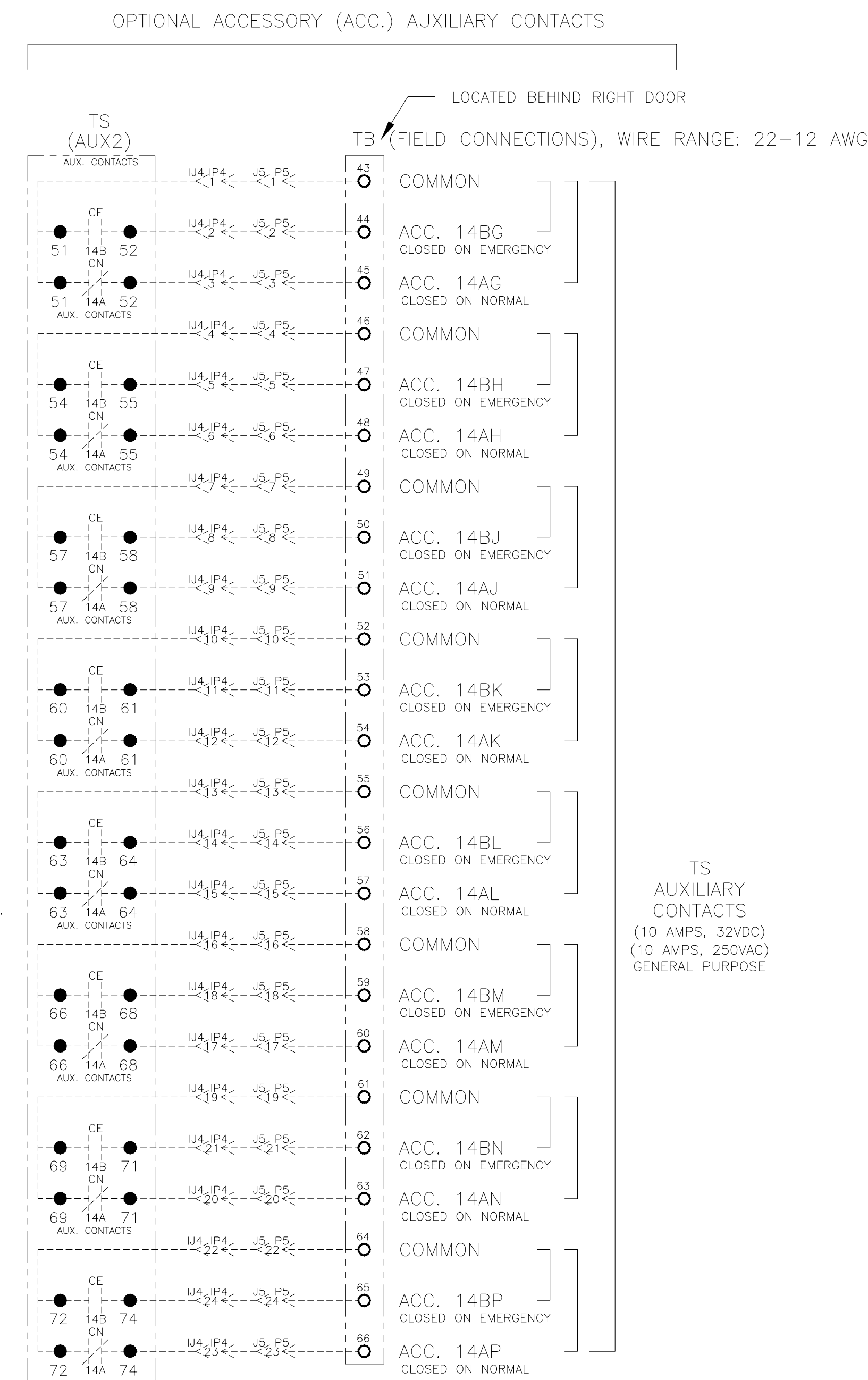
SHEET 1 OF 8

N	283680	TR	BK	03/11/20
	SEE ECN			
M	220784	KK	WK	11/18/08
	SEE ECN			
L	215011	WK	BK	09/06/07
	SEE ECN			
K	166909	SDH	SDH	04/30/04
	SEE ECN			
J	161899	SDH	SDH	10/10/02
	SEE ECN			
H	160160	BK	WK	03/06/02
	SEE ECN			
G	160048	WK	WK	02/14/02
	SEE ECN			

FIELD CONNECTIONS



- 72* NOTES:
- EARTH GROUND SHIELD AT HOST DEVICE ONLY.
 - FIELD WIRING: USE UL LISTED, STRANDED, TWISTED PAIRS, OVERALL FOIL SHIELD WITH STRANDED DRAIN WIRE SUITABLE FOR RS-422 EQUIVALENT TO:
 - (STANDARD 80°C) BELDEN 9842 OR 9829 OR ALPHA 6202C OR 6222C
 - (PLENUM RATED) BELDEN 89729 OR 82729 OR ALPHA 58902



TS AUXILIARY CONTACTS (10 AMPS, 32VDC) (10 AMPS, 250VAC) GENERAL PURPOSE

N	283680	TR	BK	03/11/20
	SEE ECN			
M	220784	KK	WK	11/18/08
	SEE ECN			
L	215011	WK	BK	09/06/07
	SEE ECN			

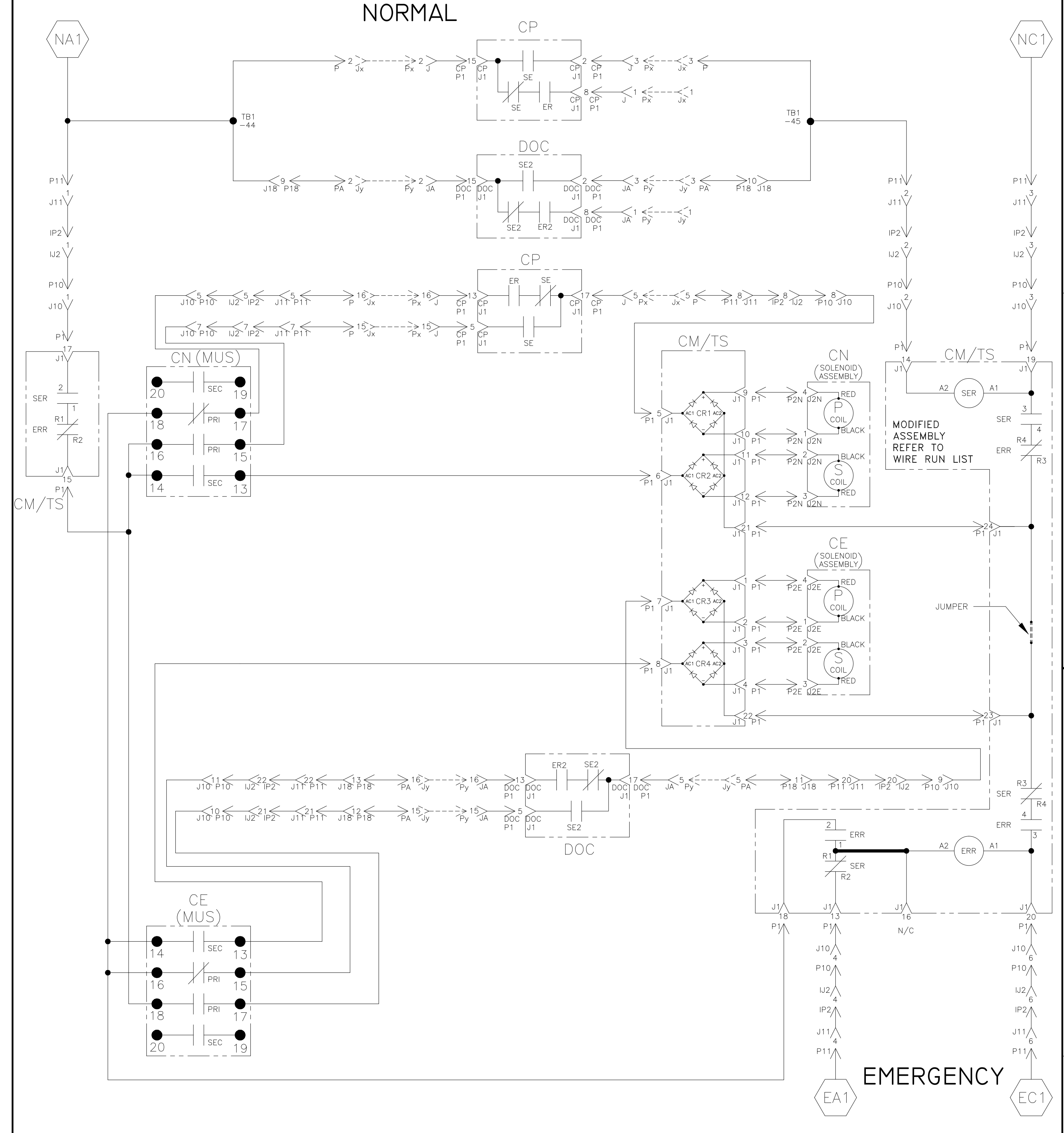
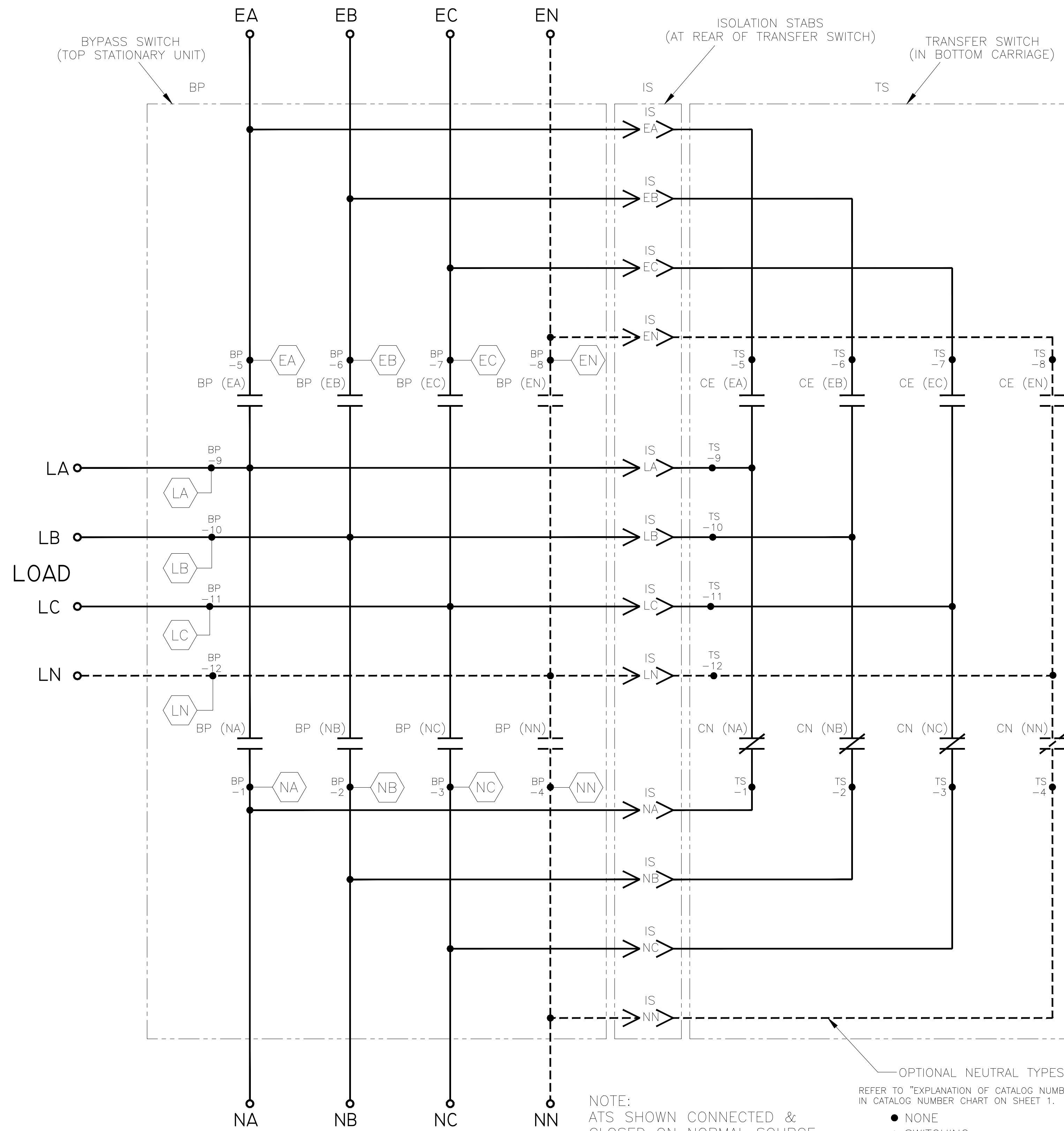
PROJECT NAME:		REV. TO SHEET	ECN NO.	BY	APP.	DATE
WIRING DIAGRAM						
7000 SERIES (G7ADTB) 3PH 1000-3000 AMPS "G" FRAME, GROUP 5 CONTROLS						
DRAWN BY	YZ	DATE	11/97	MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-1-003. FOR PLASTIC PARTS SEE MP-1-005	ASSEM. REF. NO.	COMPUTER GENERATED DRAWING
CHECKED				PROPERTY OF ASCO POWER TECHNOLOGIES. USE PERMITTED FOR OUR WORK ONLY. ALL RIGHTS OF DESIGN OR INVENTION ARE RESERVED.		SCALE NONE SIZE DS
PROJECT APPROVAL						DWG. NO. 617429
FINAL APPROVAL	SDH	DATE	11/97			617429
						DRAWING NO. 283680 SHEET 2 OF 8

MAIN POWER POLES

TS OPERATOR CIRCUIT

EMERGENCY

NORMAL



NOTE:
ATS SHOWN CONNECTED &
CLOSED ON NORMAL SOURCE.
BYPASS SWITCH IN
(AUTOMATIC) POSITION.

OPTIONAL NEUTRAL TYPES
REFER TO "EXPLANATION OF CATALOG NUMBER CODES"
IN CATALOG NUMBER CHART ON SHEET 1.

- NONE
- SWITCHING
- SOLID BUS PLATE

CN (MUS) CONTACTS		SOLENOID POSITION	
MUS	CLOSED NORMAL	AFTER TDC *	OPEN
13-14	X	X	X
15-16	X	X	X
17-18	X	X	X
19-20	X	X	X

CE (MUS) CONTACTS		SOLENOID POSITION	
MUS	OPEN	AFTER TDC *	CLOSED EMERG.
13-14	X	X	X
15-16	X	X	X
17-18	X	X	X
19-20	X	X	X

* AFTER SOLENOID CORE PASSES THROUGH TOP DEAD CENTER POSITION.

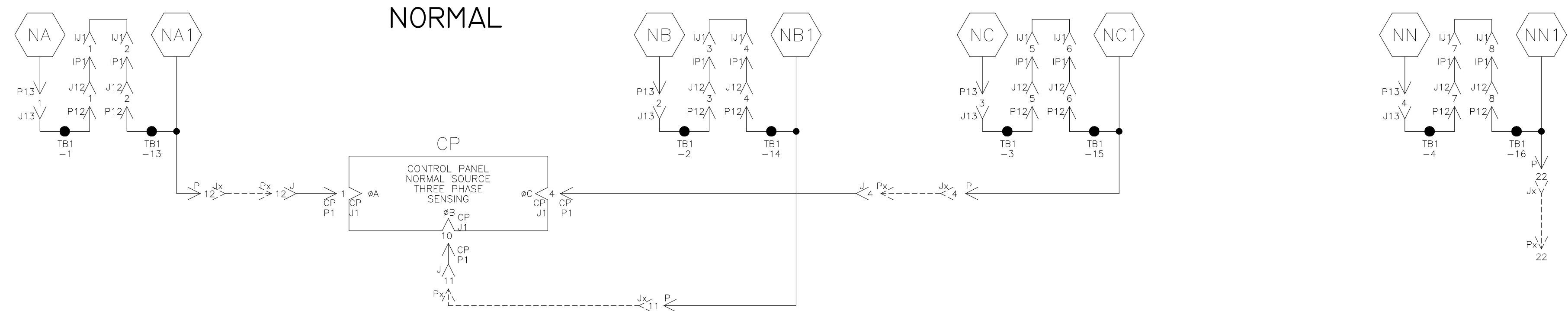
PROJECT NAME:		WIRING DIAGRAM	
7000 SERIES (G7ADTB) 3PH 1000-3000 AMPS "G" FRAME, GROUP 5 CONTROLS			
BY	DATE	SCALE	SIZE
YZ	11/97	NONE	DS
DRAWN BY		COMPUTER GENERATED DRAWING	
CHECKED		DWG. NO.	
PROJECT APPROVAL		617429	
FINAL APPROVAL		DRAWING NO. ECN NO. 283680	
SDH 11/97		SHEET 3 OF 8	

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FLORHAM PARK, NEW JERSEY 07932 U.S.A.

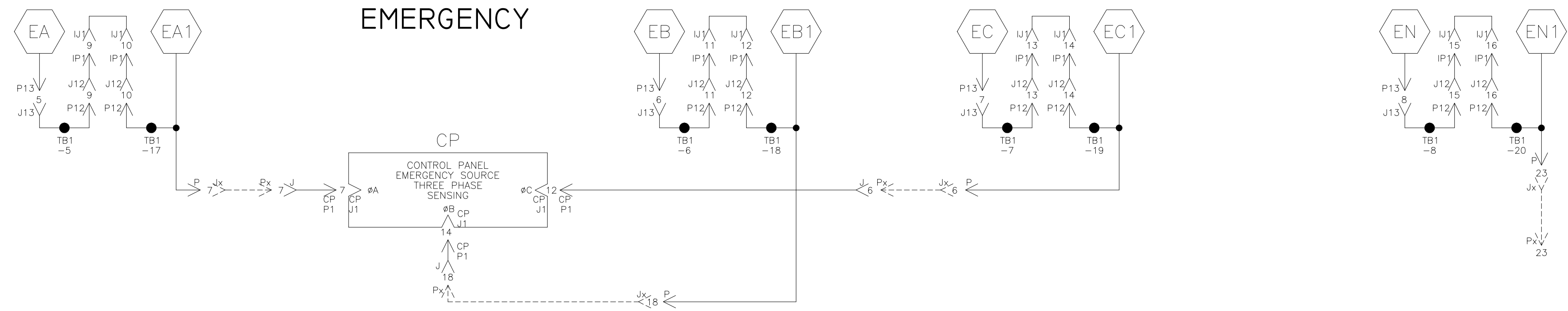
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M	220784	KK	WK	11/18/08
L	215011	WK	BK	09/06/07

THIRD ANGLE PROJECTION

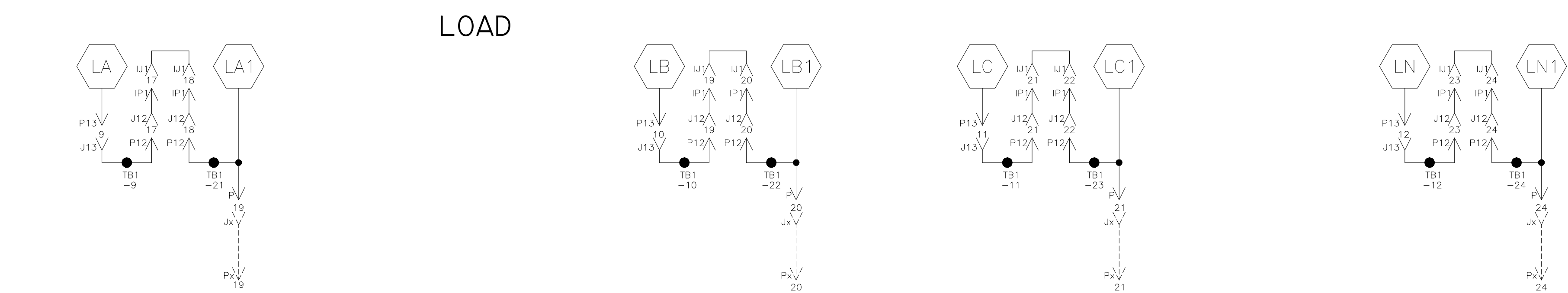
NORMAL SOURCE CIRCUITS



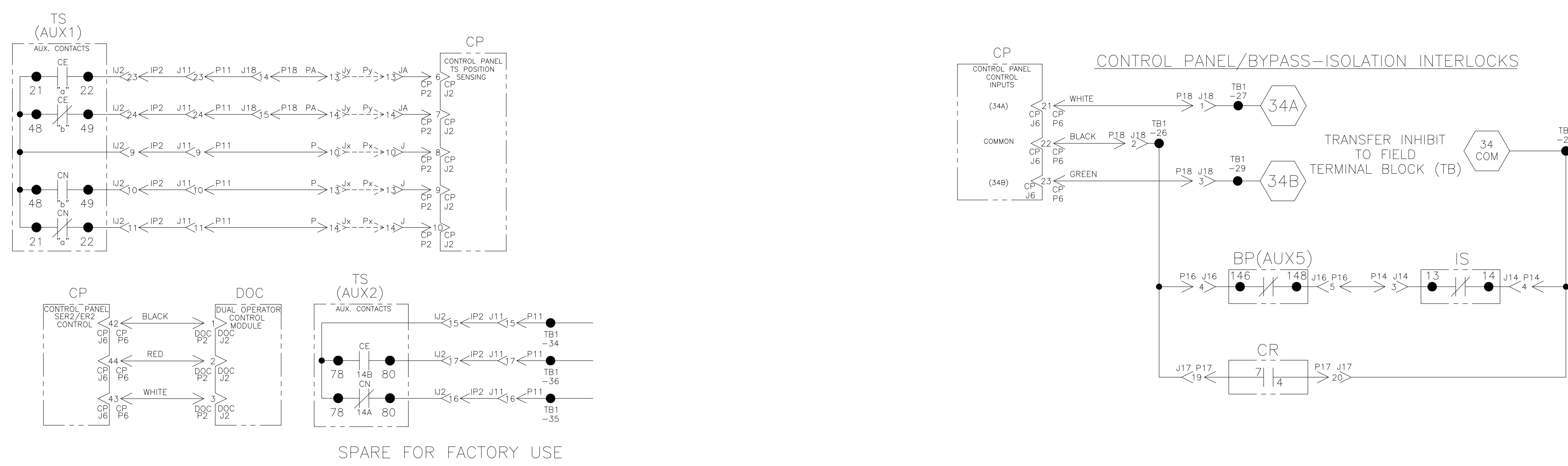
EMERGENCY SOURCE CIRCUITS



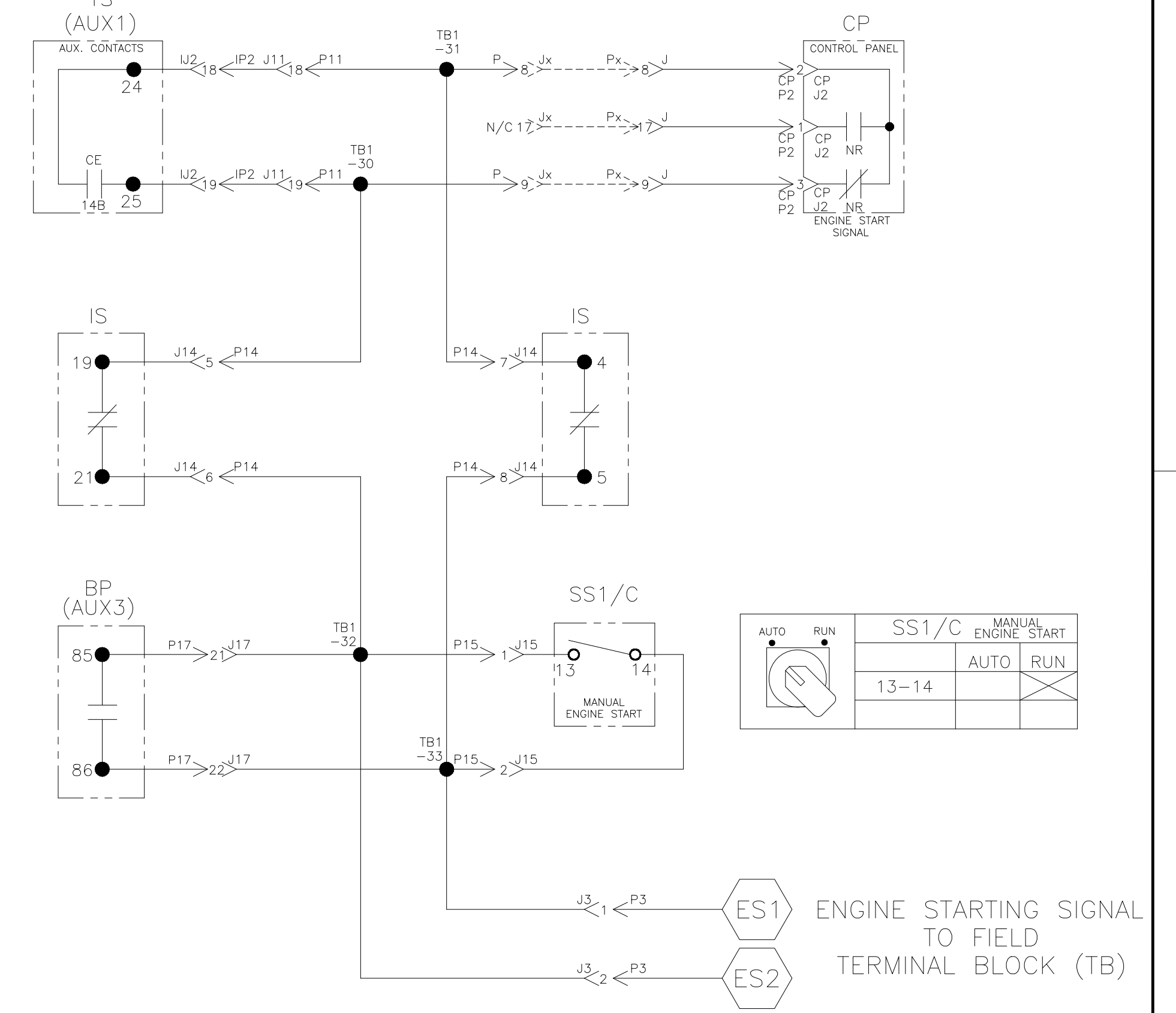
LOAD TERMINAL CIRCUITS



CONTROL SIGNALS & INDICATION

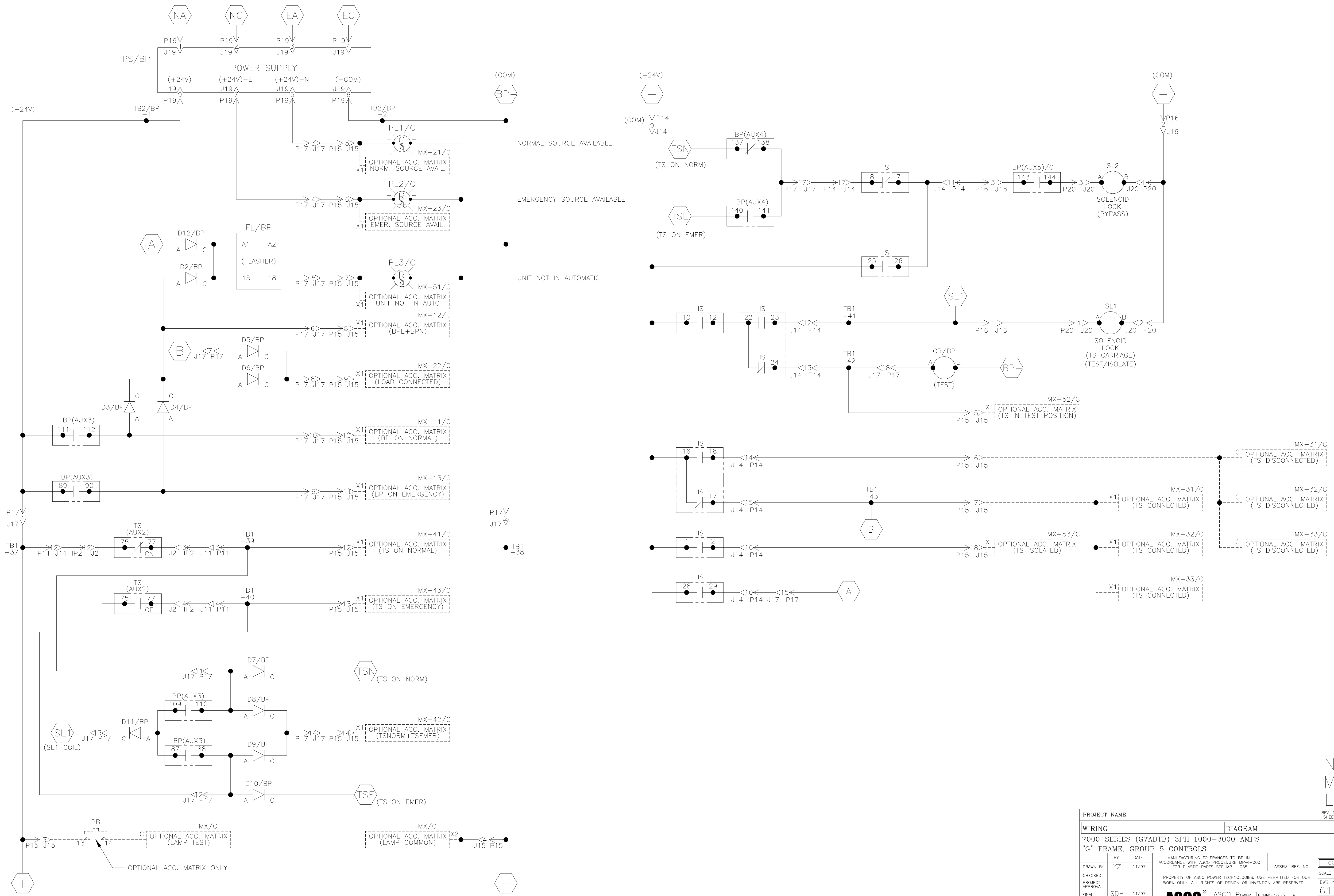


ENGINE START CIRCUIT



PROJECT NAME:		REV. TO SHEET	ECN NO.	BY	APP.	DATE
WIRING DIAGRAM		215011	WK BK	09/06/07	SEE ECN	
7000 SERIES (G7ADTB) 3PH 1000-3000 AMPS		MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-1-003. FOR PLASTIC PARTS SEE MP-1-005.		SCALE		SIZE DS
"G" FRAME, GROUP 5 CONTROLS		PROPERTY OF ASCO POWER TECHNOLOGIES, USE PERMITTED FOR OUR WORK ONLY. ALL RIGHTS OF DESIGN OR INVENTION ARE RESERVED.		COMPUTER GENERATED DRAWING		
DRAWN BY	YZ	DATE	11/97	ASSEM. REF. NO.	617429	
CHECKED				DRAWING NO.		283680
PROJECT APPROVAL				SHEET		4 OF 8
FINAL APPROVAL	SDH	DATE	11/97	ASCO POWER TECHNOLOGIES, L.P.		
				FLORHAM PARK, NEW JERSEY 07932 U.S.A.		

BYPASS / ISOLATION INTERLOCKING & INDICATION



REV. TO SHEET	ECN NO.	BY	APP.	DATE
PROJECT NAME: WIRING DIAGRAM				
7000 SERIES (G7ADTB) 3PH 1000-3000 AMPS				
"G" FRAME, GROUP 5 CONTROLS				
DRAWN BY	YZ	DATE	11/97	MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-1-003. FOR PLASTIC PARTS SEE MP-1-005.
CHECKED				ASSEM. REF. NO.
PROJECT APPROVAL				SCALE NONE SIZE DS
FINAL APPROVAL	SDH	11/97		COMPUTER GENERATED DRAWING
DRAWING NO. 617429			PROPERTY OF ASCO POWER TECHNOLOGIES, USE PERMITTED FOR OUR WORK ONLY. ALL RIGHTS OF DESIGN OR INVENTION ARE RESERVED.	
REV. N			ECN NO. 283680	SHEET 5 OF 8
ASCO ASCO POWER TECHNOLOGIES, L.P. FLOHAM PARK, NEW JERSEY 07932 U.S.A.				

WIRE RUN LISTING

Table 1: HARNESS LOCATOR 605674-001 (J1) TS. WIRE No. 1-12, CLR, AWG 16.

Table 2: HARNESS LOCATOR 619510-024 (J2,P10) TS. WIRE No. 1-43, CLR, AWG 16.

Table 3: HARNESS LOCATOR 605674-004-A (J4) TS OPT. AUX. CONTACTS. WIRE No. 80-532, CLR, AWG 16.

Table 4: HARNESS LOCATOR 605674-003-A (J3) TS STD. AUX. CONTACTS. WIRE No. 50-73, CLR, AWG 16.

Table 5: HARNESS LOCATOR 609051-001-A TS STD. AUX. CONTACTS. WIRE No. 50-73, CLR, AWG 16.

Table 6: HARNESS LOCATOR 619510-025 (P1,P2N,P2E,J10) TS CONTROL. WIRE No. 1-114, CLR, AWG 16.

Table 7: HARNESS LOCATOR 605674-006 (IP2,J11) STATIONARY FRAME. WIRE No. 1-532, CLR, AWG 16.

Table 8: HARNESS LOCATOR 605674-004-A (J4) TS OPT. AUX. CONTACTS. WIRE No. 80-103, CLR, AWG 16.

Table 9: HARNESS LOCATOR 609051-002-A TS OPT. AUX. CONTACTS. WIRE No. 80-101, CLR, AWG 16.

Table 10: HARNESS LOCATOR 605674-006 (IP1,J12) STATIONARY FRAME. WIRE No. 1-114, CLR, AWG 16.

Table 11: HARNESS LOCATOR 605674-007 (J3,TB1) ENGINE START. WIRE No. 120-123, CLR, AWG 16.

Table 12: HARNESS LOCATOR 605674-006 (IP2,J11) STATIONARY FRAME. WIRE No. 1-532, CLR, AWG 16.

Table 13: HARNESS LOCATOR 605674-010 (P13,B7) BP HIGH VOLTAGE. WIRE No. 1-404, CLR, AWG 16.

Table 14: HARNESS LOCATOR 605674-006 (IP3,J4) STATIONARY FRAME. WIRE No. 60-73, CLR, AWG 16.

Table 15: HARNESS LOCATOR 605674-006 (IP4,J5) STATIONARY FRAME(OPT). WIRE No. 80-103, CLR, AWG 16.

Table 16: HARNESS LOCATOR 605674-007 (J3,TB1) ENGINE START. WIRE No. 120-123, CLR, AWG 16.

Table 17: HARNESS LOCATOR 619510-038 (J15,PL1-PL3,SS1) STD. BP CONTROL/INDICATION. WIRE No. 121-170, CLR, AWG 16.

Table 18: HARNESS LOCATOR 605674-010 (P13,B7) BP HIGH VOLTAGE. WIRE No. 1-404, CLR, AWG 16.

Table 19: HARNESS LOCATOR 605674-013 (J15,MX,SS1,JP) OPT. BP CONTROL/INDICATION. WIRE No. 121-202, CLR, AWG 16.

Table 20: HARNESS LOCATOR 605674-011 (J14,JS) ISOLATION AUX. CONTACTS. WIRE No. 140-170, CLR, AWG 16.

Table 21: HARNESS LOCATOR 605674-007 (J3,TB1) ENGINE START. WIRE No. 120-123, CLR, AWG 16.

Table 22: HARNESS LOCATOR 619510-038 (J15,PL1-PL3,SS1) STD. BP CONTROL/INDICATION. WIRE No. 121-170, CLR, AWG 16.

Table 23: HARNESS LOCATOR 605674-013 (J15,MX,SS1,JP) OPT. BP CONTROL/INDICATION. WIRE No. 121-202, CLR, AWG 16.

Table 24: HARNESS LOCATOR 605674-014 (J16,SL1,SL2,BP(AUX5)) BP/IS INTERLOCKS. WIRE No. 154-170, CLR, AWG 16.

Table 25: HARNESS LOCATOR 605674-015 (P17,BP) BP LOW VOLTAGE. WIRE No. 31-170, CLR, AWG 16.

Table 26: HARNESS LOCATOR 605674-015 (P17,BP) BP LOW VOLTAGE. WIRE No. 31-170, CLR, AWG 16.

Table 27: HARNESS LOCATOR 605674-013 (J15,MX,SS1,JP) OPT. BP CONTROL/INDICATION. WIRE No. 121-202, CLR, AWG 16.

Table 28: HARNESS LOCATOR 605674-016 (P6,P18) INTERNAL CONTROL & FIELD INPUTS. WIRE No. 210-244, CLR, AWG 16.

Table 29: HARNESS LOCATOR 605674-015 (P17,BP) BP LOW VOLTAGE. WIRE No. 31-170, CLR, AWG 16.

Table 30: HARNESS LOCATOR 605674-015 (P17,BP) BP LOW VOLTAGE. WIRE No. 31-170, CLR, AWG 16.

Table 31: HARNESS LOCATOR 605674-016 (P6,P18) INTERNAL CONTROL & FIELD INPUTS. WIRE No. 210-244, CLR, AWG 16.

PROJECT NAME: WIRING DIAGRAM 7000 SERIES (G7ADTB) 3PH 1000-3000 AMPS "G" FRAME, GROUP 5 CONTROLS. Includes revision table and ASCO logo.

WIRE RUN LISTING

Table 21: HARNESS LOCATOR. WIRE No. 350, HARNESS 605674-017, CONTROL PANEL EXTENSION. Includes columns for WIRE No., HARNESS, CLR, and AWG.

Table 22: HARNESS LOCATOR. WIRE No. 1-12, SUB-ASSEMBLY 605749, MAIN INTERCONNECT ASSEMBLY. Includes columns for WIRE No., SUB-ASSEMBLY, CLR, and AWG.

Table 23: HARNESS LOCATOR. WIRE No. 190, SUB-ASSEMBLY 605749, MAIN INTERCONNECT ASSEMBLY (CONTINUED). Includes columns for WIRE No., SUB-ASSEMBLY, CLR, and AWG.

Table 24: HARNESS LOCATOR. WIRE No. 1-12, SUB-ASSEMBLY 605749, MAIN INTERCONNECT ASSEMBLY. Includes columns for WIRE No., SUB-ASSEMBLY, CLR, and AWG.

Table 25: HARNESS LOCATOR. WIRE No. 481, SUB-ASSEMBLY 605749, MAIN INTERCONNECT ASSEMBLY (CONTINUED). Includes columns for WIRE No., SUB-ASSEMBLY, CLR, and AWG.

Table 26: HARNESS LOCATOR. WIRE No. 120, SUB-ASSEMBLY 605659, STD. FIELD TB. Includes columns for WIRE No., SUB-ASSEMBLY, CLR, and AWG.

Table 27: HARNESS LOCATOR. WIRE No. 270, HARNESS (J7) OPTIONAL FIELD OUTPUTS. Includes columns for WIRE No., HARNESS, CLR, and AWG.

Table 28: HARNESS LOCATOR. WIRE No. 300, HARNESS 605454-005, (J8) OPTIONAL SERIAL I/O. Includes columns for WIRE No., HARNESS, CLR, and AWG.

Table 29: HARNESS LOCATOR. WIRE No. 349, HARNESS 619385, (JAC-CP-P2,DOC-P1) DOC. Includes columns for WIRE No., HARNESS, CLR, and AWG.

Table 30: HARNESS LOCATOR. WIRE No. 350, HARNESS 483763, (J,CP-P1,CP-P2) CONTROL PANEL. Includes columns for WIRE No., HARNESS, CLR, and AWG.

Table 31: HARNESS LOCATOR. WIRE No. 349, HARNESS 309320-005, OPTIONAL 8 IN. EXTENSION HARNESS. Includes columns for WIRE No., HARNESS, CLR, and AWG.

Table 32: HARNESS LOCATOR. WIRE No. 1, SUB-ASSEMBLY 605113-001, (J1,CM) DUAL SOLENOID UNIT CONTROL MODULE ASSEMBLY. Includes columns for WIRE No., SUB-ASSEMBLY, CLR, and AWG.

Table 33: WIRE No., ADDITIONAL WIRING, CLR, AWG. Includes columns for WIRE No., ADDITIONAL WIRING, CLR, and AWG.

Table 34: WIRE No., ADDITIONAL WIRING, CLR, AWG. Includes columns for WIRE No., ADDITIONAL WIRING, CLR, and AWG.

PROJECT NAME: WIRING DIAGRAM. 7000 SERIES (G7ADTB) 3PH 1000-3000 AMPS "G" FRAME, GROUP 5 CONTROLS. Includes revision table, drawing info, and ASCO logo.