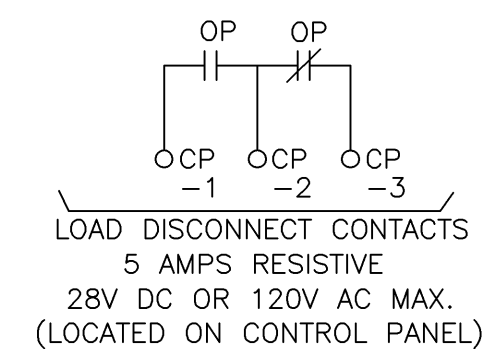
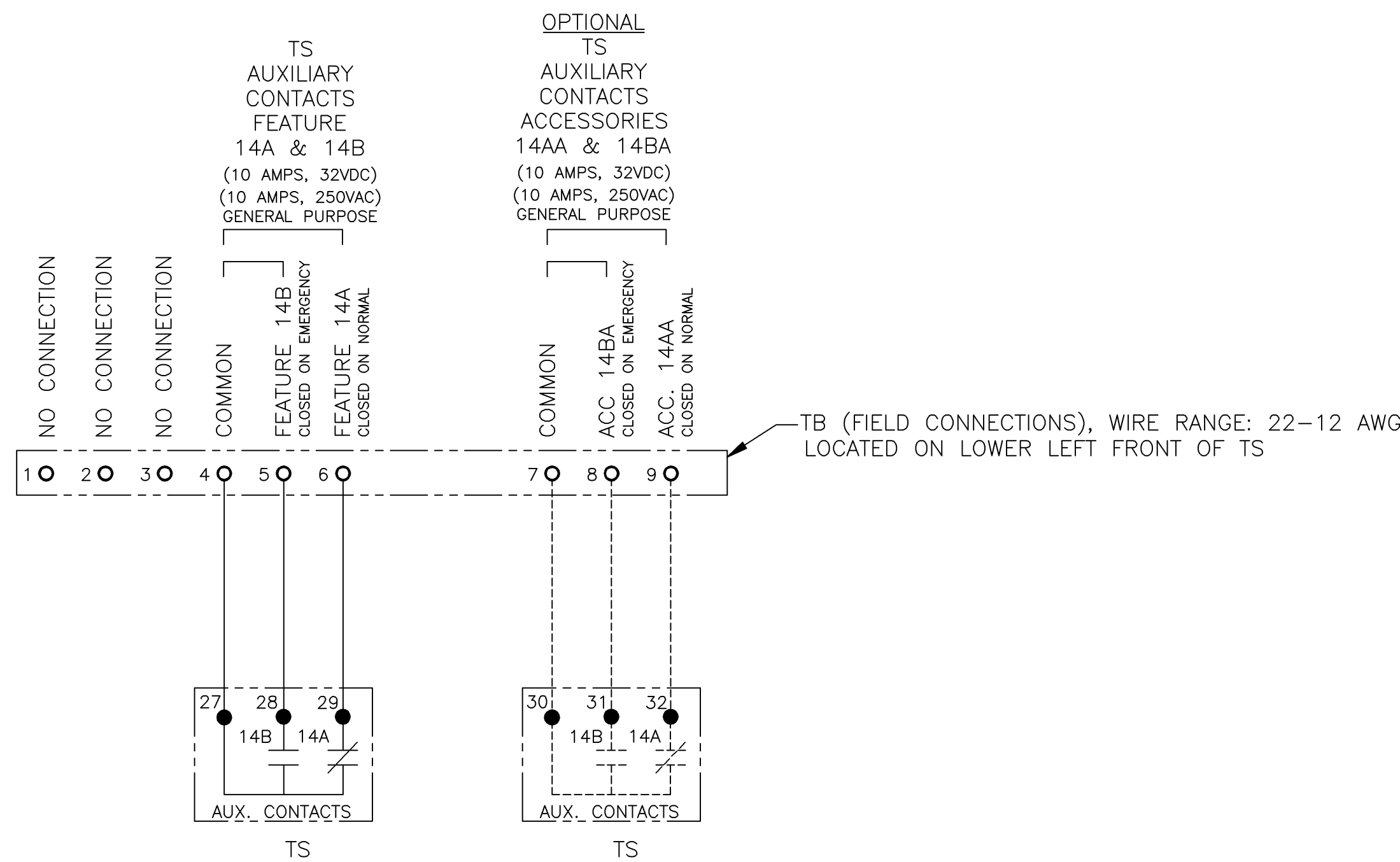
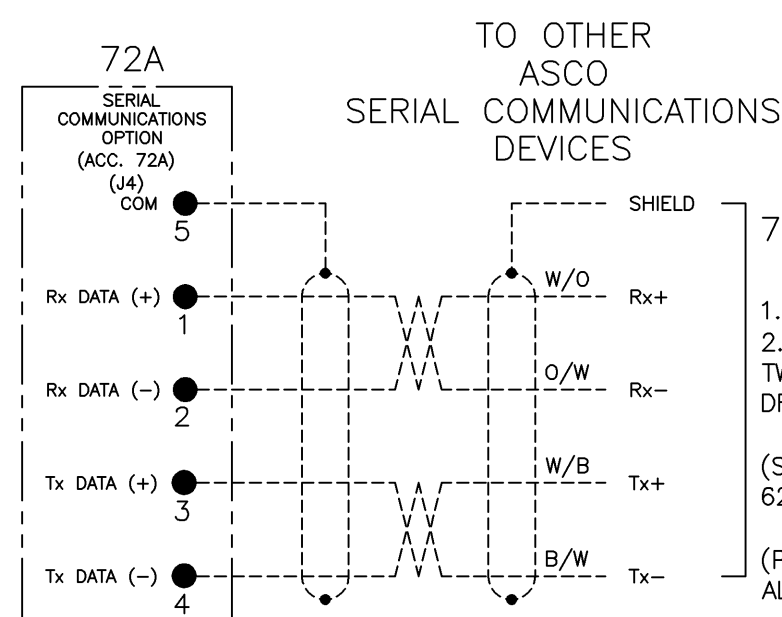


THREE PHASE WIRING FOR ASCO® SERIES J386 NON-AUTOMATIC TRANSFER SWITCHES RATED 600 AMPERES WITH GROUP I CONTROLS

FIELD CONNECTIONS



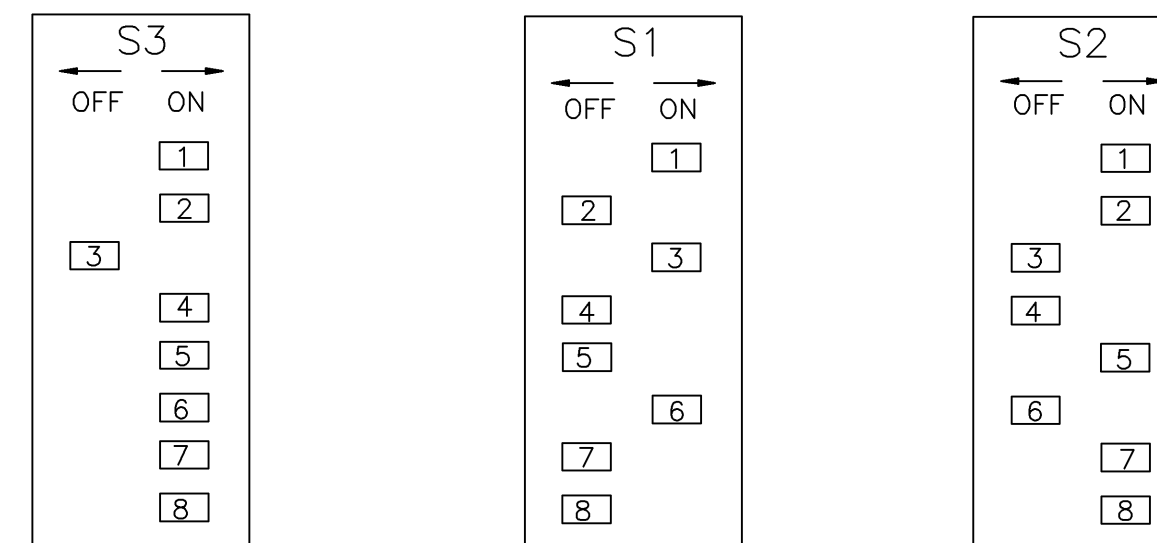
ACC. 72A SERIAL COMMUNICATIONS OPTION COMMUNICATING WITH GROUP 1 CONTROL PANEL (CP)



- 72A 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.

STANDARD FACTORY SETTINGS FOR CONTROL PANEL

1. FACTORY SETTINGS FOR DIP SWITCH S1, S2 & S3



- P1 (TIMER E/N) SET UP FOR FULL CCW.
- P2 (TIMER N/E) SET UP FOR FULL CCW.
- NORMAL SOURCE VOLTAGE (PU/N) PICKUP FACTORY SETTING IS 90% (S1-ACTUATOR 3 ON). SETTING S1-ACTUATOR 3 OFF IS FOR 95% NORMAL SOURCE VOLTAGE PICKUP.
- EMERGENCY SOURCE VOLTAGE PICKUP FACTORY SETTING 90% (NON ADJUSTABLE). EMERGENCY SOURCE VOLTAGE DROPOUT FACTORY SETTING 75% (NON ADJUSTABLE). EMERGENCY SOURCE FREQUENCY PICKUP FACTORY SETTING 95% (NON ADJUSTABLE).

! WARNING:
ANY CHANGE IN THESE SETTINGS MAY AFFECT THE NORMAL OPERATION OF THE TRANSFER SWITCH.

GENERAL NOTES

- SWITCH SHOWN DE-ENERGIZED AND CONNECTED TO THE NORMAL SOURCE.
- 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.
- O 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 TRANSFER SWITCH. REFER TO THIS PUBLICATION PRIOR TO INSTALLATION AND OPERATION OF THE UNIT.
- GROUND STRAP ON CONTROL PANEL IS AFFIXED TO CHASSIS (ENCLOSURE) AT LOWER LEFT CONTROL PANEL MOUNTING STUD.

FEATURES

- SELECTOR SWITCH (SS) FOR MANUAL TRANSFER TO NORMAL AND EMERGENCY. THREE POSITION, MOMENTARY, SPRING RETURN TO CENTER SELECTOR SWITCH.
- FEATURES 14A & 14B - TRANSFER SWITCH AUXILIARY POSITION INDICATING CONTACTS. ONE (1) FORM C CONTACT TO INDICATE CONNECTION OF THE TRANSFER SWITCH TO NORMAL (14A) AND ONE (1) FOR EMERGENCY (14B). CONTACT CONNECTED TO THE FIELD CONNECTIONS TERMINAL BLOCK (TB). CONTACTS RATED 10 AMPS, 32 VDC, 250 VAC.
- SIGNAL LIGHT PL1, (GREEN LED), INDICATES WHEN TRANSFER SWITCH IS CONNECTED TO NORMAL SOURCE. (STD. FEAT. 9A)
- SIGNAL LIGHT PL2, (RED LED), INDICATES WHEN TRANSFER SWITCH IS CONNECTED TO NORMAL SOURCE. (STD. FEAT. 9B)
- ONE SET OF FORM C CONTACTS (1 N/O & 1 N/C) THAT CHANGE POSITION ON EXPIRATION OF THE NORMAL SOURCE OUTAGE DELAY AND RESET ON EXPIRATION OF THE UNLOADED RUNNING (ENGINE COOL DOWN) DELAY. OUTPUT CONTACTS (NR) ARE RATED 6 AMPS RESISTIVE AT 28V DC OR 120V AC MAXIMUM.

OPTIONAL ACCESSORIES

- ACC. 6Q- KEY OPERATED TRANSFER CONTROL SWITCH. FOR TRANSFERRING TO NORMAL OR EMERGENCY. THREE POSITION MOMENTARY SPRING RETURN TO CENTER. KEY REMOVABLE IN CENTER POSITION.
- ACC. 9C- SIGNAL LIGHT (PL3 GREEN LED) INDICATES NORMAL SOURCE AVAILABLE.
- ACC. 9D- SIGNAL LIGHT (PL4 RED LED) INDICATES EMERGENCY SOURCE AVAILABLE.
- ACC. 14AA (2) AUXILIARY CONTACT CLOSED ON NORMAL.
- ACC. 14BA (2) AUXILIARY CONTACT CLOSED ON EMERGENCY.
- ACC. 27 - INPHASE TRANSFER CONTROL LOGIC TO INITIATE AN INPHASE TRANSFER OF LOADS BETWEEN LIVE SOURCES. USED TO PREVENT NUISANCE TRIPPING OF CIRCUIT BREAKERS AND POSSIBLE DAMAGE TO MECHANICAL LOADS CAUSED BY OUT OF PHASE TRANSFER. ACTIVATED BY SETTING A DIP SWITCH ON THE CONTROL PANEL. (FACTORY SET AS DISABLED). (REFER TO OPERATOR'S MANUAL FURNISHED WITH EACH TRANSFER SWITCH REGARDING CONTROL PANEL SETTINGS).
- ACC. 31 - ONE SET OF FORM C CONTACTS (1 N/O & 1 N/C) THAT CHANGE POSITION ON ACTIVATION OF A SELECTABLE TIME DELAY BEFORE TRANSFER (LD TDBT) AND RESET EITHER IMMEDIATELY FOLLOWING TRANSFER OR FOR THE SAME DELAYS SET FOR PRE-SIGNAL BEFORE TRANSFER. SELECTABLE AS 0, 3, 10 OR 20 SECONDS. FACTORY SET AT 0. (REFER TO THE OPERATOR'S MANUAL FURNISHED WITH EACH TRANSFER SWITCH REGARDING CONTROL PANEL SETTINGS). OUTPUT CONTACTS (OP) ARE RATED 5 AMPS RESISTIVE AT 28V DC OR 120V AC MAXIMUM.
- ACC. 37B- EXTENSION HARNESS FOR UNITS SHIPPED OPEN TO ACCOMMODATE CUSTOMER MOUNTING OF CONTROLS AND SWITCH. EXTENSION IS 72IN (1828mm) LONG.
- ACC. 43M- PROVISIONS FOR CUSTOMER SUPPLIED 3-POSITION SELECTOR SWITCH. POSITION 1- LOCAL CONTROL ENABLE. POSITION 2- REMOTE CONTROL TRANSFER TO NORMAL. POSITION 3- REMOTE CONTROL TRANSFER TO EMERGENCY.
- ACC. 72A- SERIAL COMMUNICATIONS INTERFACE. RS-485 SERIAL INTERFACE TO CONTROL PANEL. FOR REMOTE MONITORING AND CONTROL FROM ASCO COMMUNICATIONS BASED PRODUCTS.

BASE CATALOG NUMBER				CATALOG NUMBER SUFFIXES				EXPLANATION OF CATALOG NUMBER CODES					
TS FRAME	CATALOG TYPE	NEUTRAL TYPE	PHASE POLES	AMPS	VOLT CODE	CONTROLLER	OPTIONAL ACCESSORY	ENCLOSURE CODE	NEUTRAL TYPE CODE	DESCRIPTION	VOLTAGE CODES 3 PHASE (3 OR 4 WIRE) 50 OR 60 Hz	ENCLOSURE CODES	DESCRIPTION
J	386	A B C	3	600	H J K L M N P Q R	1	X	C F G L	BLANK A B C	NONE SOLID SWITCHING OVERLAPPING	C D E F H J K L M N P Q R	BLANK C F G L	OPEN TYPE (NO ENCLOSURE) GENERAL PURPOSE, INDOOR OUTDOOR, RAINPROOF, SLEET & ICE RESISTANT INDOOR/OUTDOOR, WATERTIGHT & DUSTTIGHT INDOOR, INDUSTRIAL ENVIRONMENTS, OILTIGHT & DUSTTIGHT
		BLANK FOR NONE					BLANK FOR NONE	BLANK FOR OPEN TYPE					

CATALOG NUMBER _____

ASCO® CERTIFIED TO S.O. _____

BY _____ DATE _____

FORM REV - _____

PROJECT NAME: _____

WIRING DIAGRAM

SERIES J386 TS GROUP 1 CONTROLS

DRAWN BY JPB 3/23/06

CHECKED BY JPB 3/23/06

ASCO POWER TECHNOLOGIES, L.P. FLORHAM PARK, NEW JERSEY 07932 U.S.A.

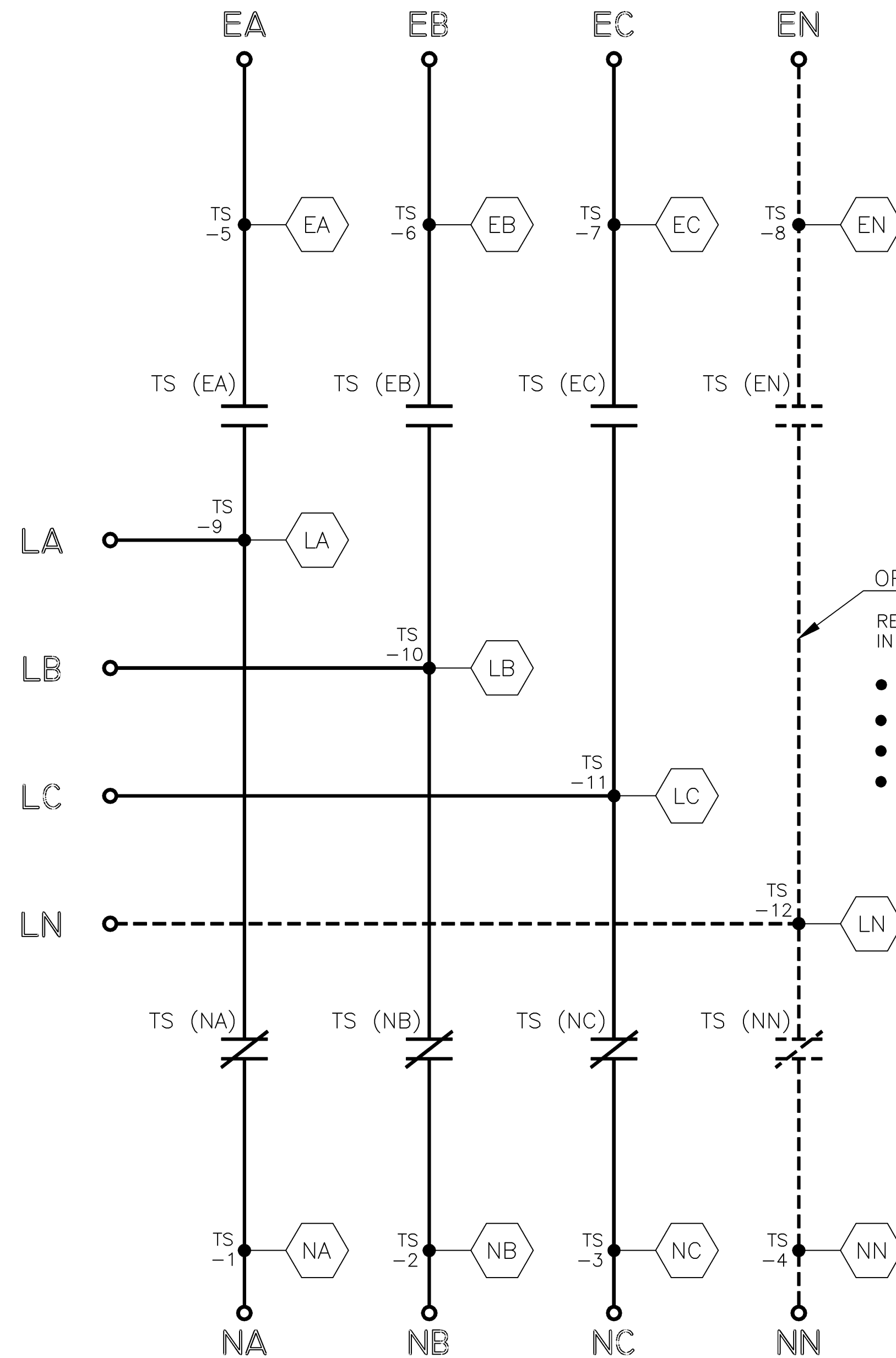
A	208603	WK	AE	05/08/06
				SEE ECN
	208012	JPB	JPB	3/23/06
				ISSUE
CHANGE LETTER	ECN NO.	BY	APP.	DATE
AE	AN	AM	AJ	AL
CH	AV	AA	PS	AR
AG	AP	AC	AS	AT
SUBSIDIARY DISTRIBUTION				
COMPUTER GENERATED DRAWING				
SCALE	1:1	ACAD	FILE	
SIZE	DWG. NO.	DS793981		
CHANGE LETTER	ECN NO.	208603	SHEET 1 OF 4	

MAIN POWER POLES

TS OPERATOR CIRCUIT

EMERGENCY

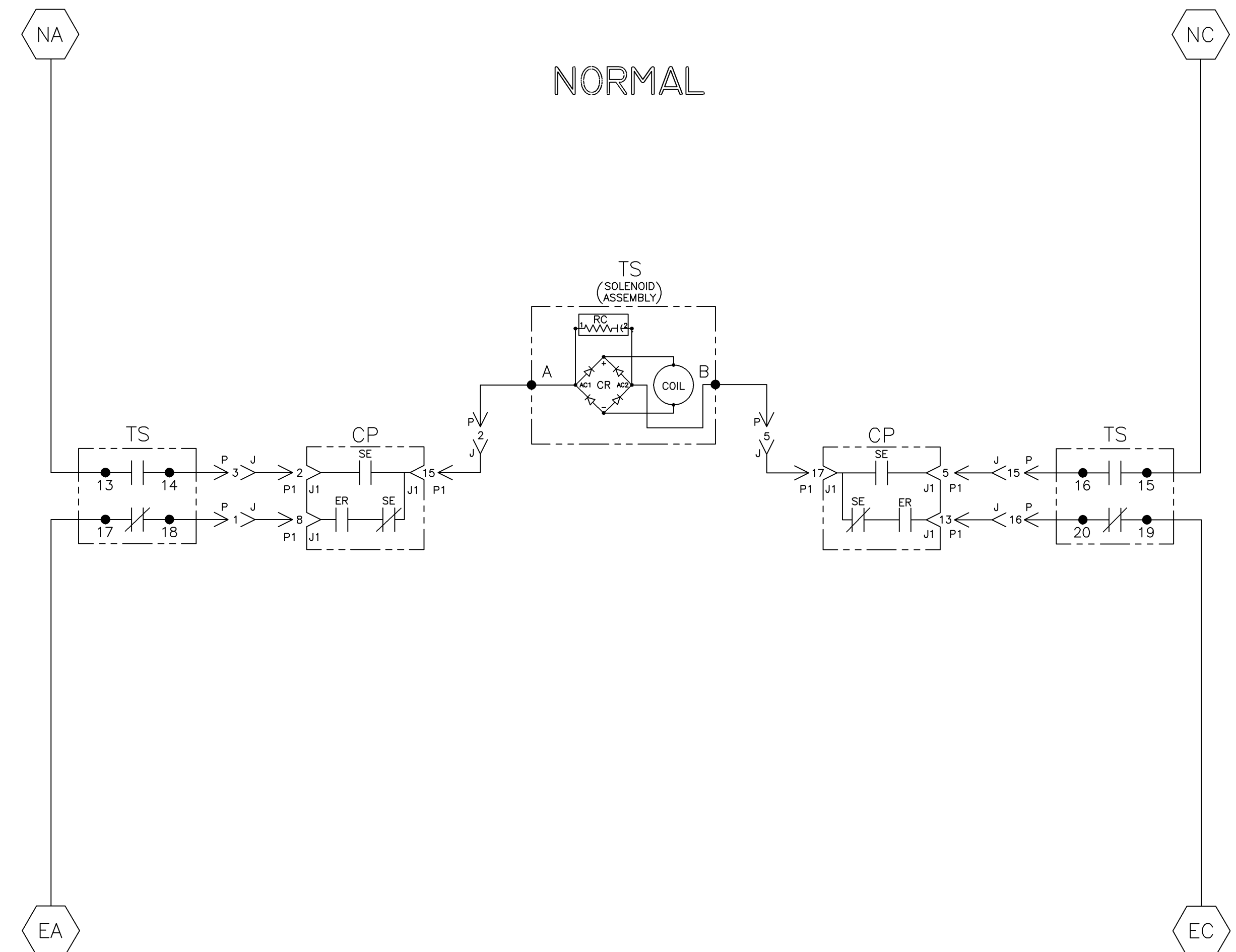
NORMAL



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

- NONE
- SWITCHING CONTACTS
- OVERLAPPING CONTACTS
- SOLID BUS PLATE

NOTE:
 TS SHOWN CLOSED ON NORMAL SOURCE.



EMERGENCY

TS	SOLENOID POSITION			
	CLOSED BEFORE NORMAL	BEFORE TDC	BEFORE TDC	CLOSED EMERG
13-14				
15-16				
17-18				
19-20				

TDC (TOP DEAD CENTER)
 TRANSFER SWITCH TEST & ADJUSTMENT PROCEDURE
 SPECIFIES CONTROL CUT-OFF (CONTACT OPENING)
 SETTING.

PROJECT NAME:		WIRING DIAGRAM		THIRD ANGLE PROJECTION	
SERIES J386 TS		GROUP 1 CONTROLS		COMPUTER GENERATED DRAWING	
DRAWN BY	JPB	DATE	3/23/06	ASSEMBLY REF. NO.	
CHECKED		MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-1-003. FOR PLASTIC PARTS SEE MP-1-055.			
DRAWING APPROVAL		PROPERTY OF ASCO POWER TECHNOLOGIES. USE PERMITTED FOR OUR WORK ONLY. ALL RIGHTS OF DESIGN OR INVENTION ARE RESERVED.			
FINAL APPROVAL	JPB	DATE	3/23/06	SCALE	1:1
ASCO		ASCO POWER TECHNOLOGIES, L.P.		SIZE	DWG. NO.
FLORHAM PARK, NEW JERSEY 07932 U.S.A.		DS793981		LETTER	ACAD
		CHANGE A		ECN NO.	2108603
		SHEET		2 OF 4	

WIRE RUN LISTING

WIRE No.	HARNESS 781247 (P) MAIN TS	AWG CLR
1	P-1,TS-18	18
2	P-2,TS-A	
3	P-3,TS-14	
4	P-4,TS-3	
4	TS-3,TS-15	
5	P-5,TS-B	
6	P-6,TS-7	
6	TS-7,TS-19	
7	P-7,TS-5	
7	TS-5,TS-17	
8	P-8,TS-24	
8	TS-24,TB-1	
9	P-9,TS-25	
9	TS-25,TB-2	
10	P-10,TS-21	
11	P-11,TS-2	
12	P-12,TS-1	
12	TS-1,TS-13	
13	P-13,TS-22	
14	P-14,TS-23	
15	P-15,TS-16	
16	P-16,TS-20	
17	P-17,TB-3	
18	P-18,TS-6	
19	P-19,TS-9	
20	P-20,TS-10	
21	P-21,TS-11	
22	P-22,TS-4	
23	P-23,TS-8	
24	P-24,TS-12	
25	TS-27,TB-4	
26	TS-28,TB-5	
27	TS-29,TB-6	

WIRE No.	OPTIONAL ACC. 14AA & 14BA	AWG CLR
32	TS-30,TB-7	18
33	TS-31,TB-8	
34	TS-32,TB-9	

WIRE No.	HARNESS 619510-037 (P13) DOOR CONTROLS & INDICATORS	AWG CLR
140	P13-5,PL1(-)	22
141	P13-8,PL1(+)	
142	P13-6,PL2(-)	
143	P13-7,PL2(+)	
144	P13-9,PL3(-) * SEE NOTE	
145	P13-10,PL4(-) *	
146	P13-11,PL3(+)	
146	PL3(+),PL4(+)	
147	CP-6,SS-13	
148	CP-10,SS-23	
149	CP-7,SS-14	
149	SS-14,SS-24	

* NOTE: CONNECTIONS ARE OPTIONAL FOR ACC. 9C, 9D

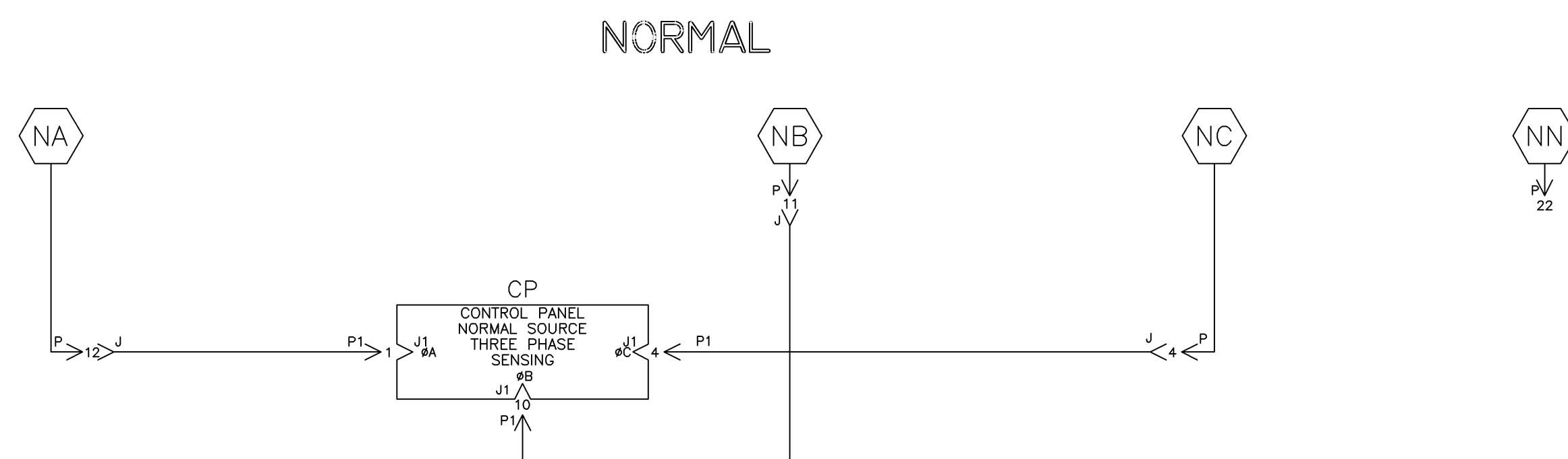
WIRE No.	HARNESS 619510-037 WITH 8Q KEY OPTION REMOVE WIRES	AWG CLR
147	CP-6,SS-13	
148	CP-10,SS-23	
149	CP-7,SS-14	
149	SS-14,SS-24	

WIRE No.	ADD WIRES	AWG CLR
147	CP-6,SS-1NO	
148	CP-10,SS-2NO	
149	CP-7,SS-1COM	
149	SS-1COM,SS-2COM	

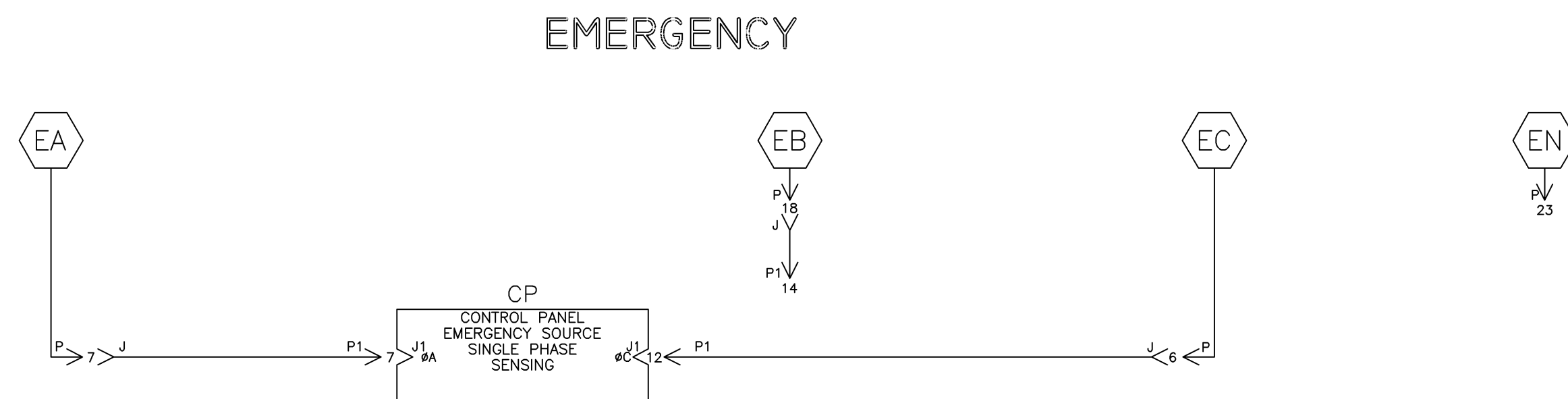
WIRE No.	HARNESS 483763 (J, P1, P2) TS-CP HARNESS	AWG CLR
1	J-1,P1-8	16
2	J-2,P1-15	
3	J-3,P1-2	
4	J-4,P1-4	
5	J-5,P1-17	
6	J-6,P1-12	
7	J-7,P1-7	
8	J-8,P2-2	
9	J-9,P2-3	
10	J-10,P2-8	
11	J-11,P1-10	
12	J-12,P1-1	
13	J-13,P2-9	
14	J-14,P2-10	
15	J-15,P1-5	
16	J-16,P1-13	
17	J-17,P2-1	
18	J-18,P1-14	

WIRE No.	ADD WIRES	AWG CLR
19	J-19	
20	J-20	
21	J-21	
22	J-22	
23	J-23	
24	J-24	

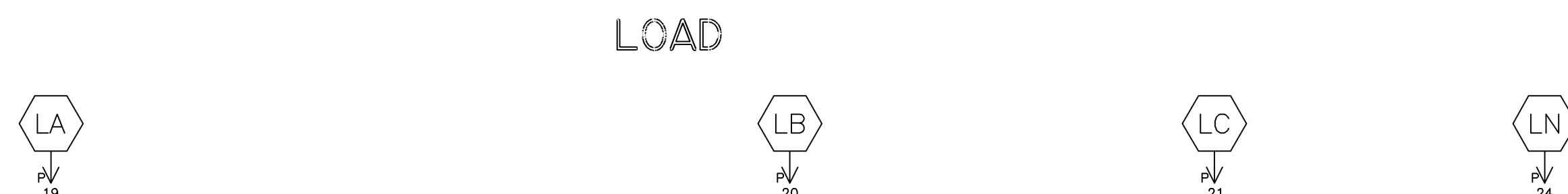
NORMAL SOURCE CIRCUITS



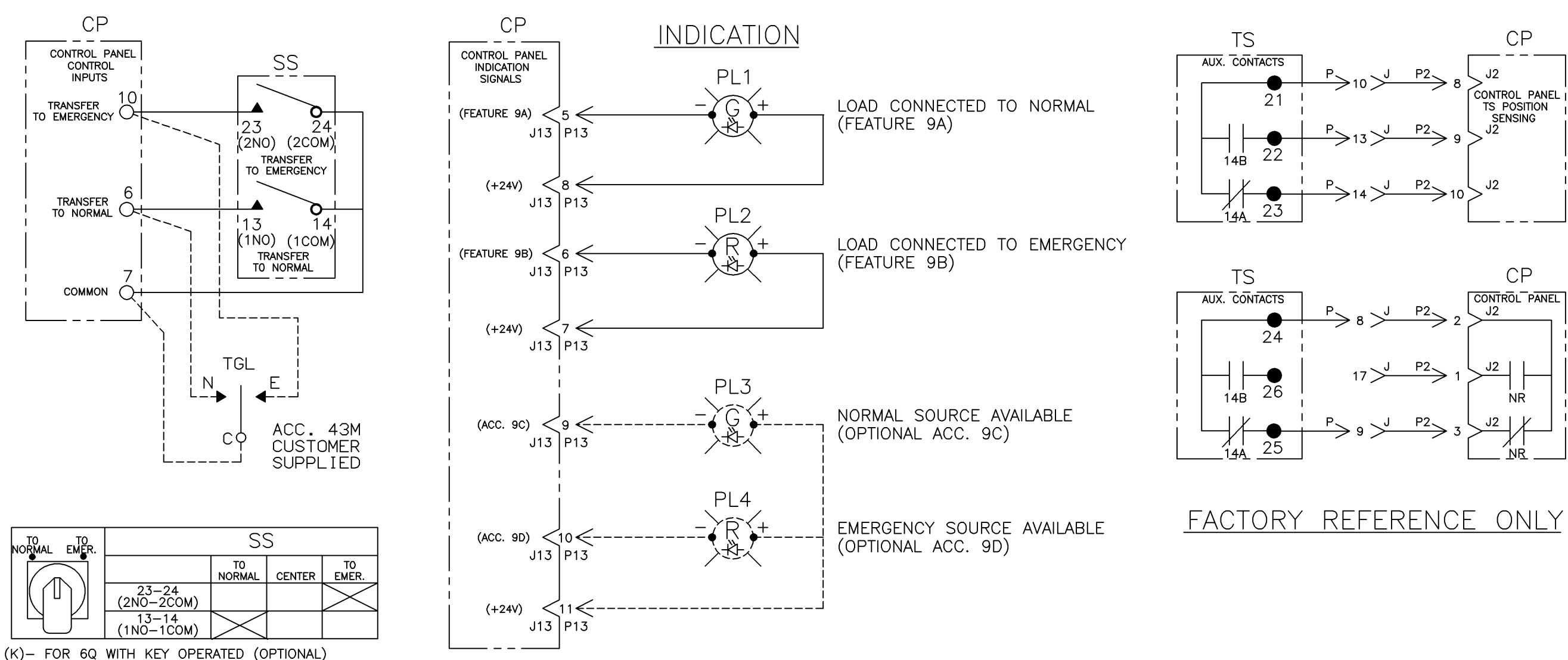
EMERGENCY SOURCE CIRCUITS



LOAD TERMINAL CIRCUITS



CONTROL SIGNALS & INDICATION



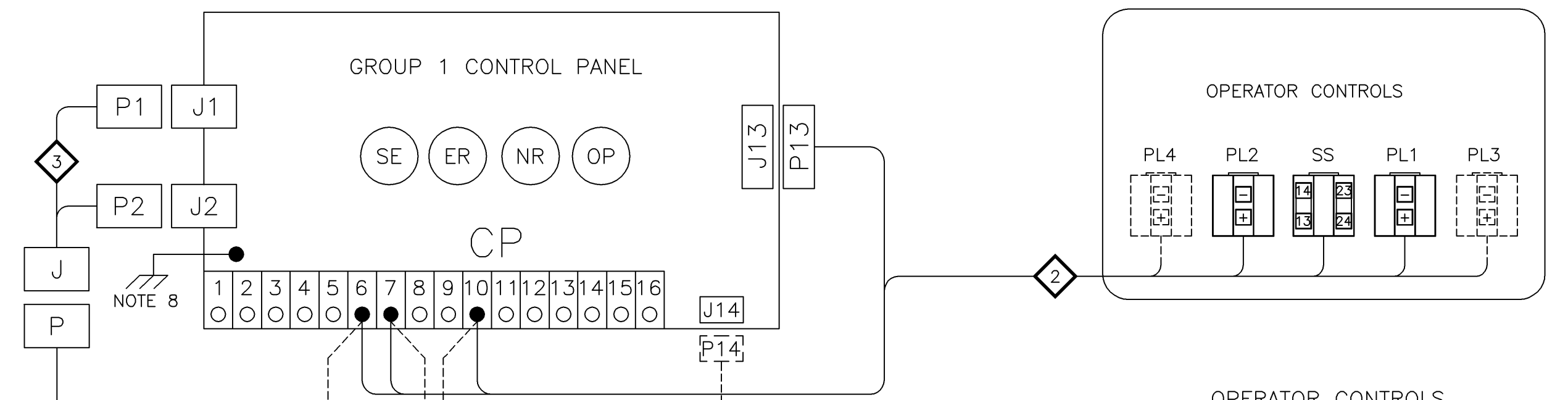
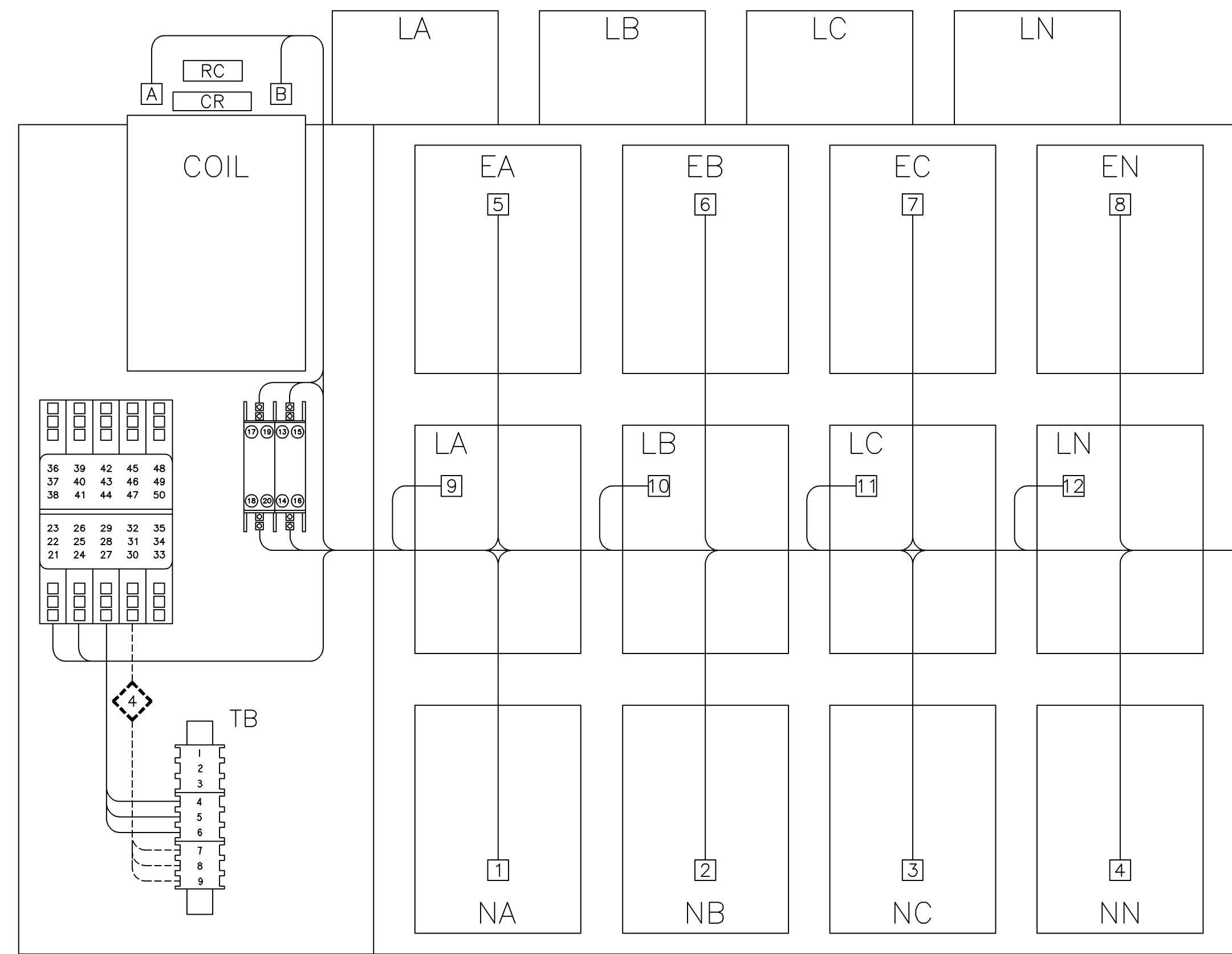
PROJECT NAME:		WIRING DIAGRAM	
SERIES J386 TS		GROUP 1 CONTROLS	
DRAWN BY	DATE	MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-1-003. FOR PLASTIC PARTS SEE MP-1-055	ASSEM. REF. NO.
CHECKED	3/23/06	PROPERTY OF ASCO POWER TECHNOLOGIES. USE PERMITTED FOR OUR WORK ONLY. ALL RIGHTS OF DESIGN OR INVENTION ARE RESERVED.	SCALE 1:1
DRAWING APPROVAL		ASCO	ACAD FILE
FINAL APPROVAL	JPB 3/23/06	ASCO POWER TECHNOLOGIES, L.P. FLORHAM PARK, NEW JERSEY 07932 U.S.A.	COMPUTER GENERATED DRAWING
		CHANGE LETTER	SIZE DWG. NO. DS793981
			CHANGE A ECN NO. 208603 SHEET 3 OF 4

PHYSICAL DIAGRAM

ENCLOSURE

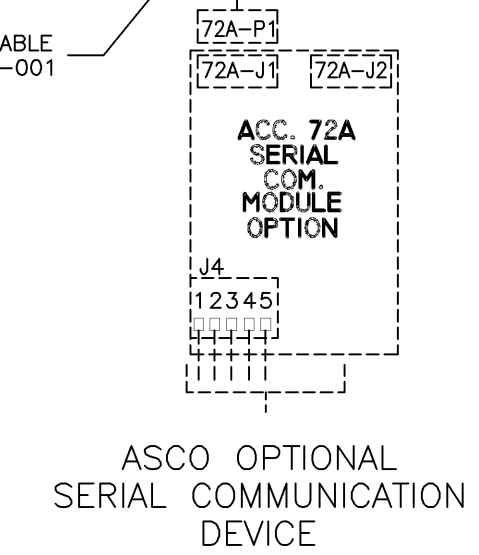
DOOR (INSIDE)

TS (TRANSFER SWITCH)
VIEW FROM INSIDE FRONT



OPERATOR CONTROLS

ID	DESCRIPTION
PL1	TS CONNECTED TO NORMAL (GREEN)
PL2	TS CONNECTED TO EMERGENCY (RED)
PL3	NORMAL SOURCE AVAILABLE (GREEN)
PL4	EMERGENCY SOURCE AVAILABLE (RED)
SS	TRANSFER CONTROL (TEST - TD BYPASS)



DOOR HINGE

BONDING STRAP
PN 098323-019

PROJECT NAME: WIRING DIAGRAM

SERIES J386 TS
GROUP 1 CONTROLS

CHANGE LETTER	ECN NO.	BY	APP.	DATE
A	208603	WK	AE	05/08/06
—	208012	JPB	JPB	3/23/06

ISSUE

AE	AN	AM	AJ	AL
CH	AV	AA	PS	AR
AG	AP	AC	AS	

THIRD ANGLE PROJECTION

COMPUTER GENERATED DRAWING

SCALE: 1:1 ACAD FILE

SIZE: DS793981

ASCO POWER TECHNOLOGIES, L.P.
FLORHAM PARK, NEW JERSEY 07932 U.S.A.

CHANGE LETTER: A ECN NO.: 208603 SHEET NO.: 4 OF 4