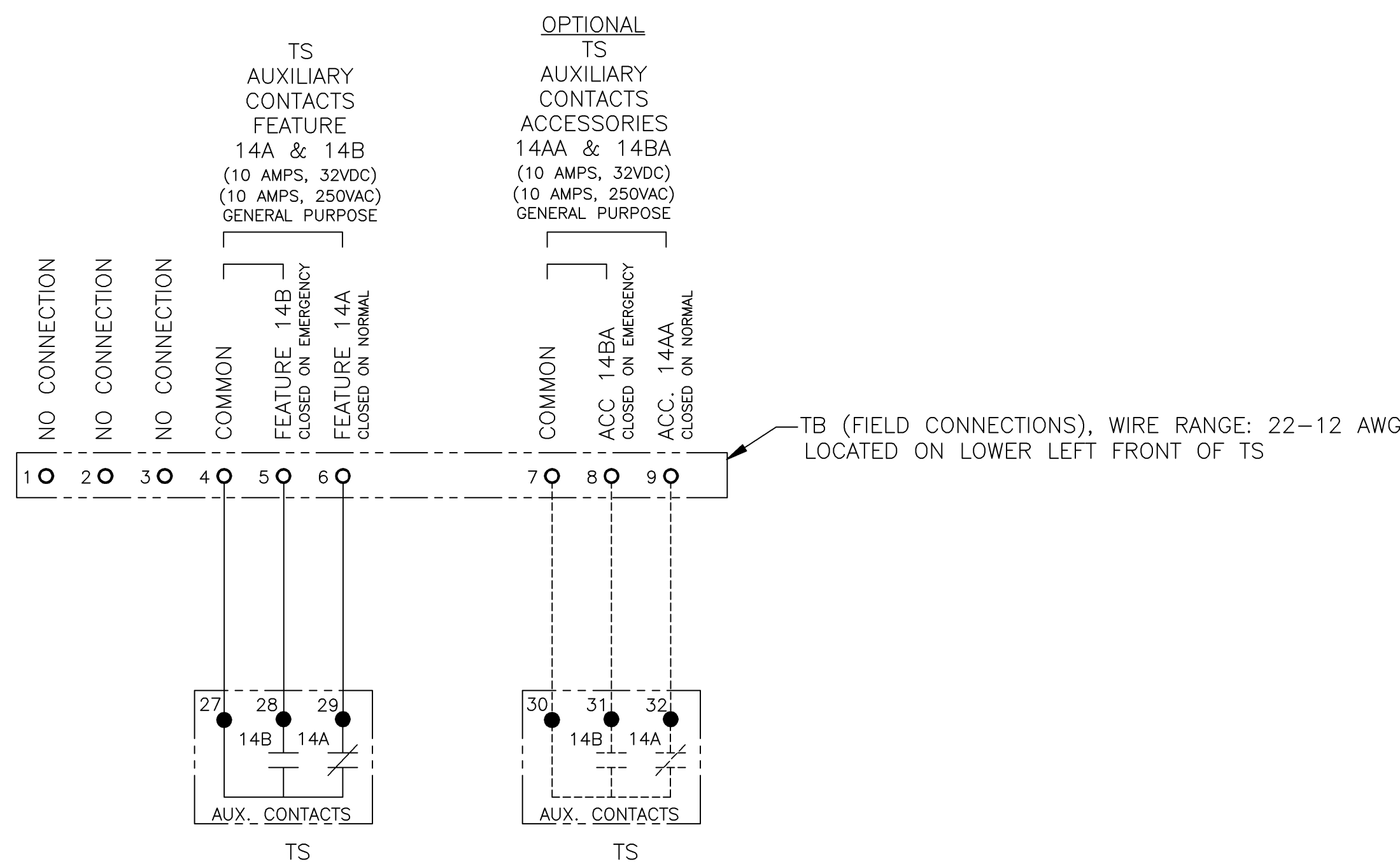


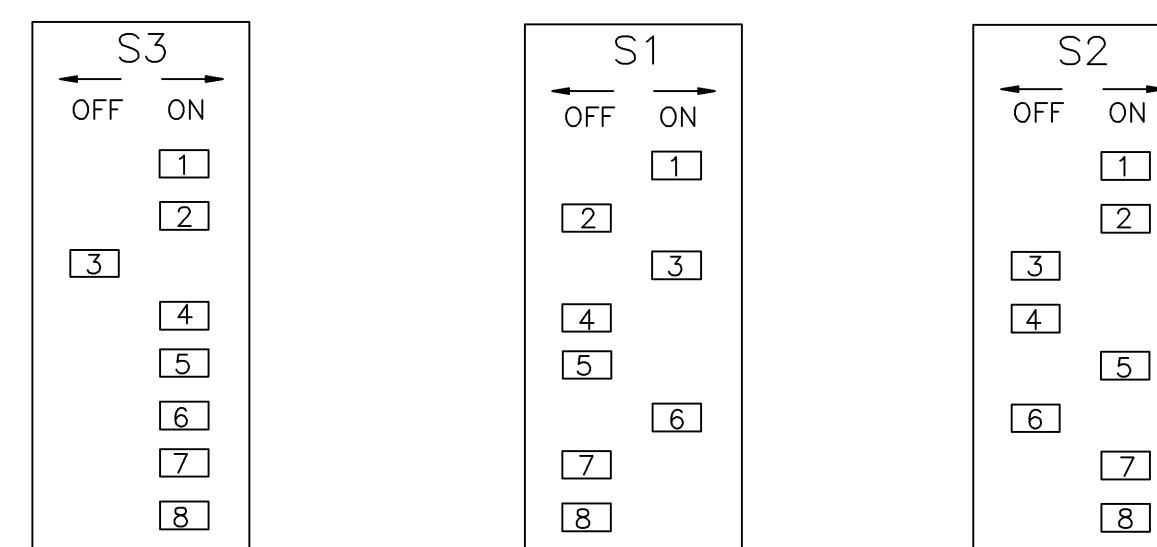
SINGLE PHASE WIRING FOR ASCO® SERIES H386 NON-AUTOMATIC TRANSFER SWITCHES RATED 600, 800, 1000 & 1200 AMPERES WITH GROUP I CONTROLS

FIELD CONNECTIONS



STANDARD FACTORY SETTINGS FOR CONTROL PANEL

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



2. P1 (TIMER E/N) SET UP FOR FULL CCW.
3. P2 (TIMER N/E) SET UP FOR FULL CCW.
4. 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.
5. 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

1. SWITCH SHOWN DE-ENERGIZED AND CONNECTED TO THE NORMAL SOURCE.
2. DEVICE SYMBOLS AND DESIGNATIONS ARE IN ACCORDANCE WITH NEMA PUBLICATION ICS 1-1983, PART 1-101A.
3. ALL WIRING IS #16 AWG, TINNED, STRANDED COPPER UNLESS OTHERWISE INDICATED.
4. ○ ON TERMINAL BLOCKS INDICATES AVAILABLE FIELD CONNECTION POINT.
5. ● ON TERMINAL BLOCKS INDICATES FACTORY CONNECTION POINT.
6. CONTROL AND ACCESSORY WIRING IS ROUTED IN ACCORDANCE WITH ASCO ASSEMBLY PROCEDURE GS451261.
7. AN OPERATOR'S MANUAL IS FURNISHED WITH EACH TRANSFER SWITCH. REFER TO THIS PUBLICATION PRIOR TO INSTALLATION AND OPERATION OF THE UNIT.
8. GROUND STRAP ON CONTROL PANEL IS AFFIXED TO CHASSIS (ENCLOSURE) AT LOWER LEFT CONTROL PANEL MOUNTING STUD.

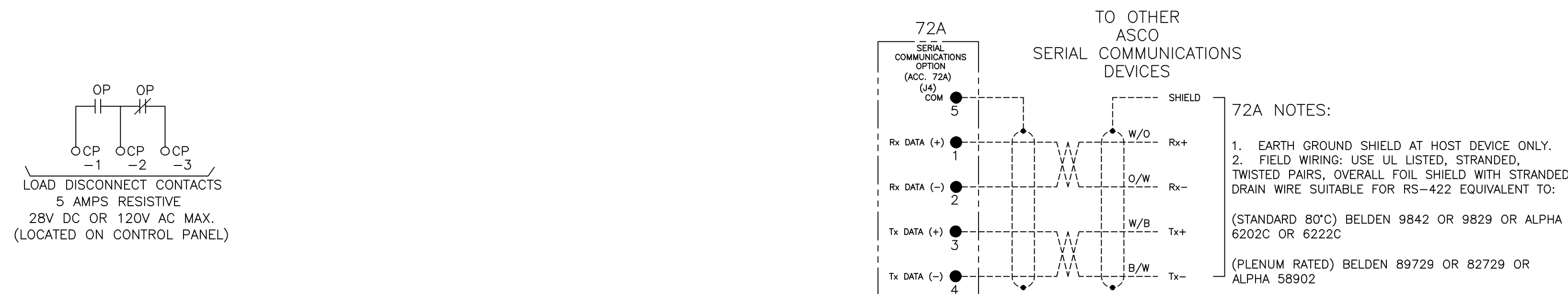
FEATURES

- A. SELECTOR SWITCH (SS) FOR MANUAL TRANSFER TO NORMAL AND EMERGENCY. THREE POSITION, MOMENTARY, SPRING RETURN TO CENTER SELECTOR SWITCH.
- B. 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.
- C. SIGNAL LIGHT PL1, (GREEN LED), INDICATES WHEN TRANSFER SWITCH IS CONNECTED TO NORMAL SOURCE. (STD. FEAT. 9A)
- D. SIGNAL LIGHT PL2, (RED LED), INDICATES WHEN TRANSFER SWITCH IS CONNECTED TO EMERGENCY SOURCE. (STD. FEAT. 9B)
- E. 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. 60- 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.

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



- 72A NOTES:**
1. EARTH GROUND SHIELD AT HOST DEVICE ONLY.
 2. 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

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	VOLTAGE CODES	ENCLOSURE CODES	DESCRIPTION	TYPE	DESCRIPTION
H	386	A B C	2	600 800 1000 1200	C D E F	H J K L M N P Q R	X	C F G	BLANK A B C	1 PHASE (2 OR 3 WIRE) 50 OR 60 Hz	BLANK C F G L	BLANK NONE SOLID SWITCHING OVERLAPPING	1 3R 4 12	OPEN TYPE (NO ENCLOSURE) GENERAL PURPOSE, INDOOR OUTDOOR, RAINPROOF, SLEET & ICE RESISTANT INDOOR/OUTDOOR, WATERTIGHT & DUSTTIGHT INDOOR, INDUSTRIAL ENVIRONMENTS, OILTIGHT & DUSTTIGHT

CATALOG NUMBER _____
ASCO CERTIFIED TO S.O. _____
 BY _____
 DATE _____

FORM REV H

PROJECT NAME: _____

WIRING _____ DIAGRAM _____

SERIES H386 TS 1PH 600-1200 AMPS
 "H" FRAME, GROUP 1 CONTROLS

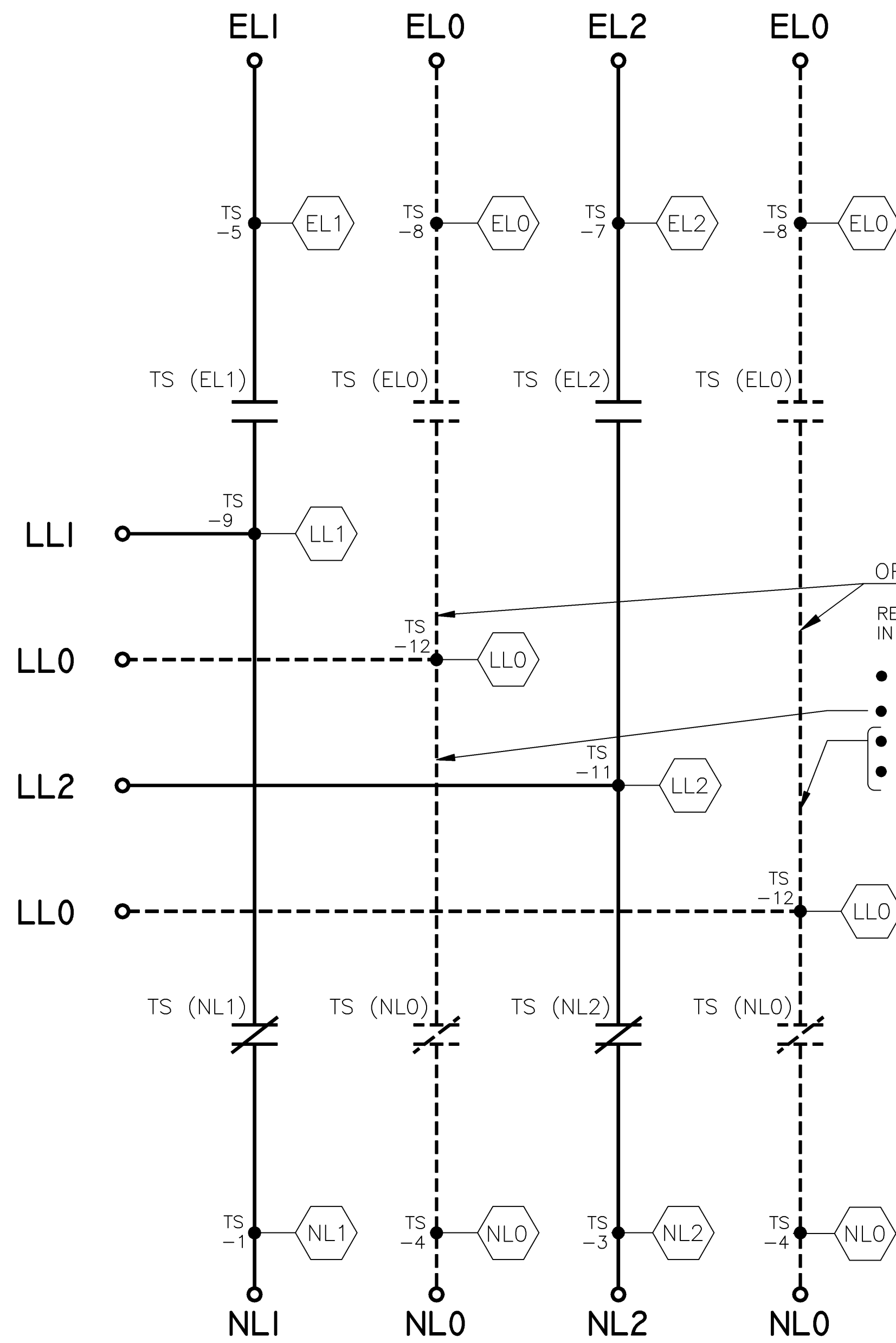
DRAWN BY: BWM	DATE: 4/01	MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-1-003. FOR PLASTIC PARTS SEE MP-1-055	ASSEM. REF. NO.	COMPUTER GENERATED DRAWING
CHECKED BY: BK	DATE: 5/30/01	PROPERTY OF ASCO POWER TECHNOLOGIES. USE PERMITTED FOR OUR WORK ONLY. ALL RIGHTS OF DESIGN OR INVENTION ARE RESERVED.	SCALE: 1:1	SIZE: DS
FINAL APPROVAL: WK	DATE: 5/30/01	ASCO POWER TECHNOLOGIES, L.P. FLORHAM PARK, NEW JERSEY 07932 U.S.A.	DWG. NO.: 713506	SHEET 10F4

MAIN POWER POLES

TS OPERATOR CIRCUIT

EMERGENCY

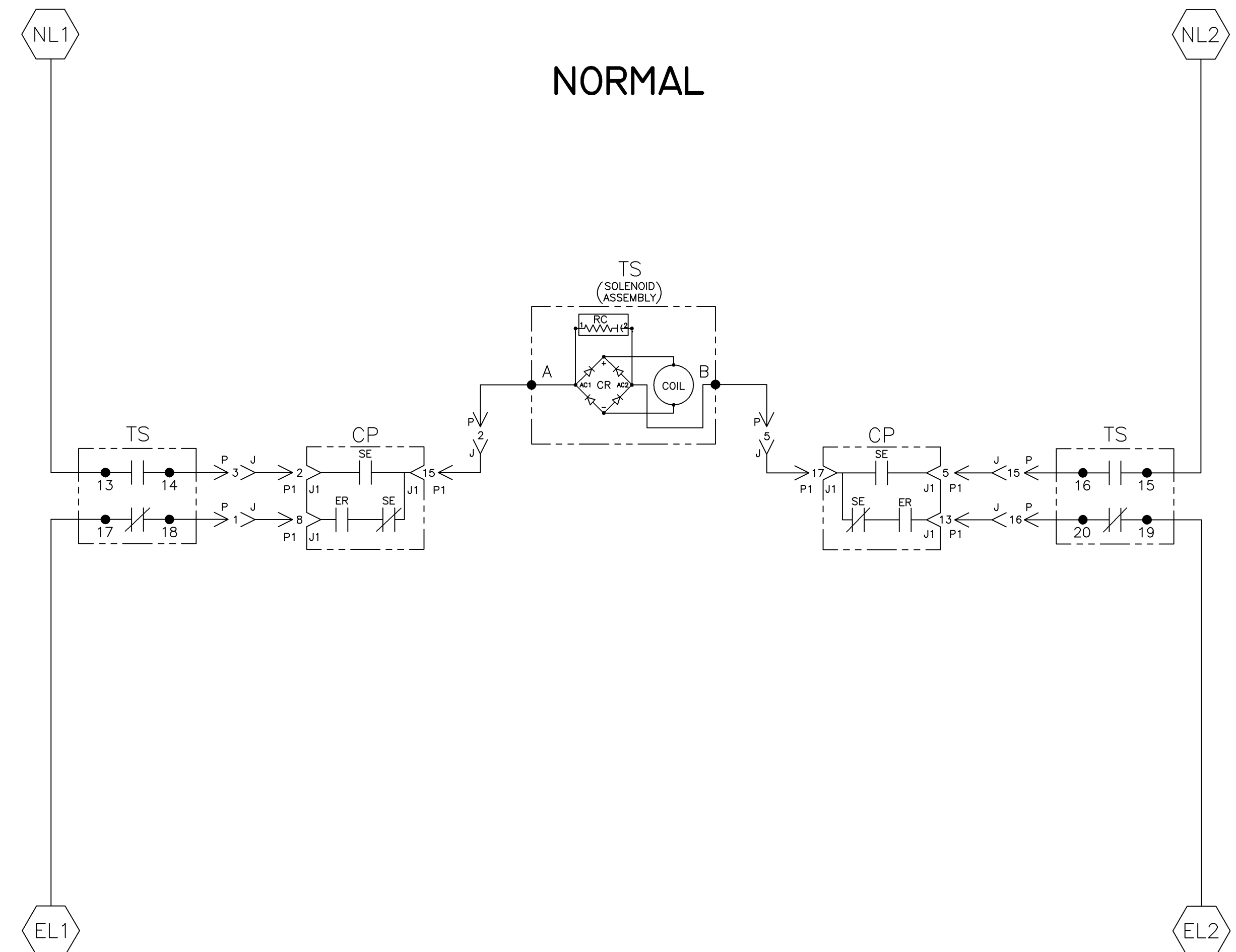
NORMAL



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.



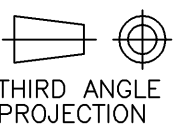
EMERGENCY

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.

H	212659	WK	BK	03/30/07
G	203916	TR	BK	03/31/05
F	166900	SDH	SDH	04/26/04
E	166704	BWM	WK	04/01/04
D	166172	AJM	BK	02/17/04
C	162498	BWM	WK	1/03

PROJECT NAME:		REV. TO SHEET	ECN NO.	BY	APP.	DATE
WIRING DIAGRAM						
SERIES H386 TS 1PH 600-1200 AMPS						
"H" FRAME, GROUP 1 CONTROLS						
DRAWN BY	BY	DATE	MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-1-003. FOR PLASTIC PARTS SEE MP-1-055	ASSEM. REF. NO.	COMPUTER GENERATED DRAWING	
CHECKED	BK	5/30/01	PROPERTY OF ASCO POWER TECHNOLOGIES. USE PERMITTED FOR OUR WORK ONLY. ALL RIGHTS OF DESIGN OR INVENTION ARE RESERVED.		SCALE	1:1
PROJECT APPROVAL					SIZE	DS
FINAL APPROVAL	WK	5/30/01	ASCO POWER TECHNOLOGIES, L.P. FLORHAM PARK, NEW JERSEY 07932 U.S.A.		DWG. NO.	713506
					DRAWING H	ECN NO. 212659
					REV.	20F4



THIRD ANGLE PROJECTION

WIRE RUN LISTING

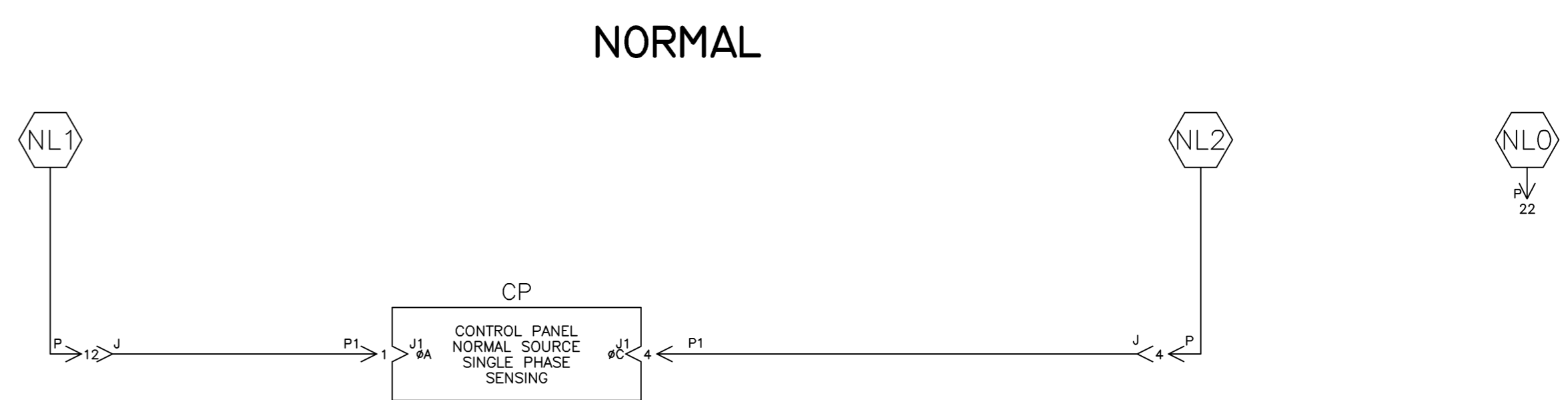
1 ← HARNESS LOCATOR			BOX CHECKED IF HARNESS IS MODIFIED
WIRE No.	713082 (P) MAIN TS	AWG CLR	
1	P-1,TS-18	16	
2	P-2,TS-A		
3	P-3,TS-14		
4	P-4,TS-3		
4	TS-3,TS-15		
5	P-5,TS-B		
6	P-6,TS-7		
6	TS-7,TS-19		
7	P-7,TS-5		
7	TS-5,TS-17		
8	P-8,TS-24		
8	TS-24,TS-1		
9	P-9,TS-25		
9	TS-25,TS-2		
10	P-10,TS-21		
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,TS-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,TS-4		
26	TS-28,TS-5		
27	TS-29,TS-6		
DEAD END WIRES			
11	P-11,TS-2		
18	P-18,TS-6		
20	P-20,TS-10		

4 HARNESS LOCATOR		
WIRE No.	OPTIONAL ACC. 14AA & 14BA	AWG CLR
32	TS-30,TS-7	16
33	TS-31,TS-8	
34	TS-32,TS-9	

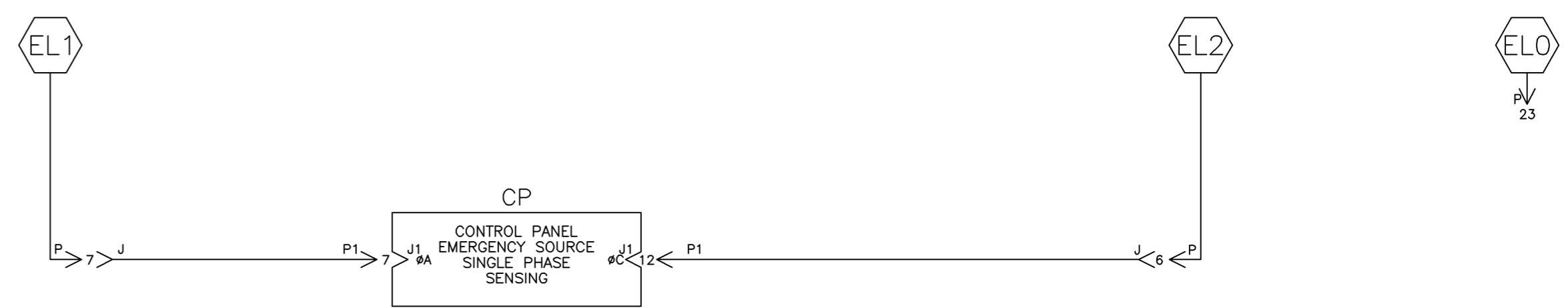
2 ← HARNESS LOCATOR			BOX CHECKED IF HARNESS IS MODIFIED
WIRE No.	HARNESS 619510-037 (P3) DOOR CONTROLS & INDICATORS	AWG CLR	
140	P3-5,PL1(-)	22	
141	P3-8,PL1(+)		
142	P3-6,PL2(-)		
143	P3-7,PL2(+)		
144	P3-9,PL3(-)		
145	P3-10,PL4(-)		
146	P3-11,PL3(+)		
146	PL3(+),PL4(+)		
147	CP-6,SS-13		
148	CP-10,SS-23		
149	CP-7,SS-14		
149	SS-14,SS-24		
* NOTE: CONNECTIONS ARE OPTIONAL FOR ACC. 9C, 9D			
HARNESS 619510-037 WITH 6Q KEY OPTION REMOVE WIRES			
147	CP-6,SS-13		
148	CP-10,SS-23		
149	CP-7,SS-14		
149	SS-14,SS-24		
ADD WIRES			
147	CP-6,SS-1NO		
148	CP-10,SS-2NO		
149	CP-7,SS-1COM		
149	SS-1COM,SS-2COM		

3 ← HARNESS LOCATOR			BOX CHECKED IF HARNESS IS MODIFIED
WIRE No.	HARNESS 483763 (J,P1,P1) CONTROL PANEL	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		
ADD WIRES			
19	J-19		
20	J-20		
21	J-21		
22	J-22		
23	J-23		
24	J-24		

NORMAL SOURCE CIRCUITS



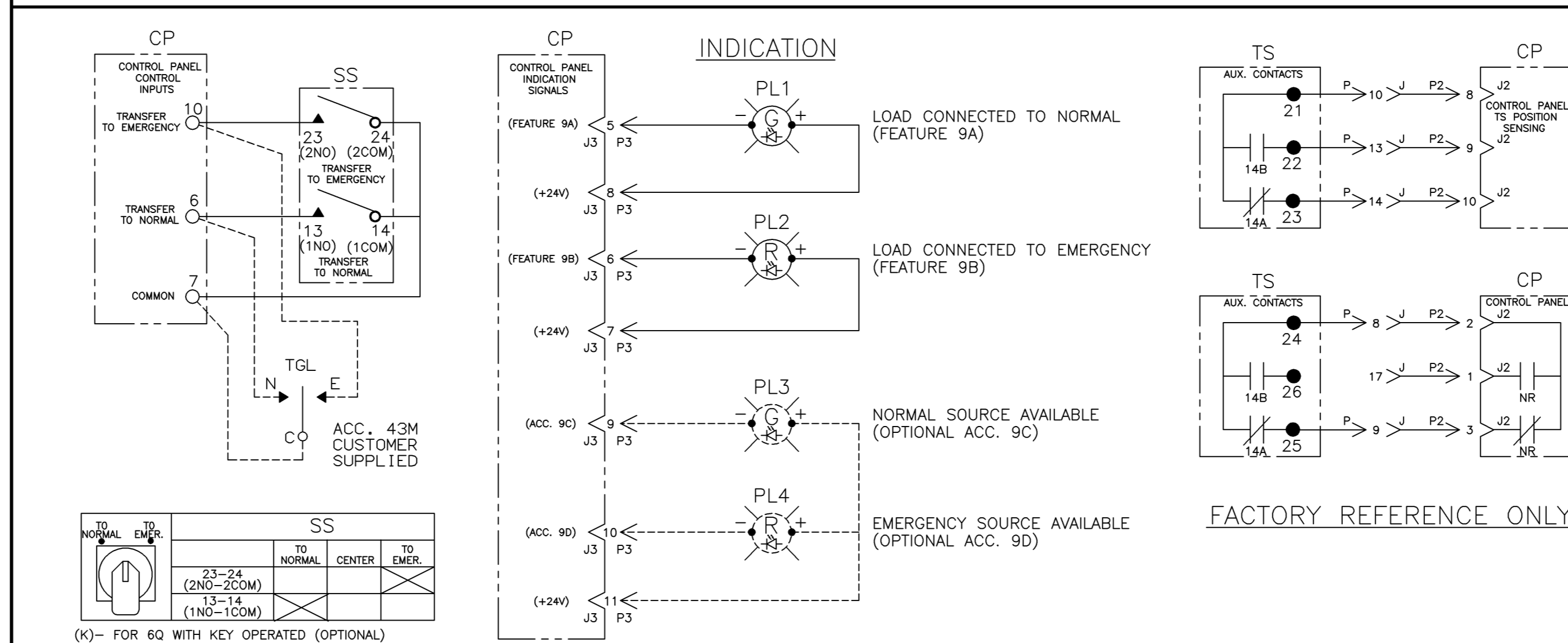
EMERGENCY SOURCE CIRCUITS



LOAD TERMINAL CIRCUITS



CONTROL SIGNALS & INDICATION



PROJECT NAME:		WIRING DIAGRAM	
SERIES H386 TS 1PH 600-1200 AMPS			
"H" FRAME, GROUP 1 CONTROLS			
BY	DATE	MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-I-003. FOR PLASTIC PARTS SEE MP-I-055	ASSEM. REF. NO.
CHECKED	BK 5/30/01	PROPERTY OF ASCO POWER TECHNOLOGIES. USE PERMITTED FOR OUR WORK ONLY. ALL RIGHTS OF DESIGN OR INVENTION ARE RESERVED.	SCALE 1:1 SIZE DS
PROJECT APPROVAL			COMPUTER GENERATED DRAWING
FINAL APPROVAL	WK 5/30/01	ASCO POWER TECHNOLOGIES, L.P. FLOHAM PARK, NEW JERSEY 07932 U.S.A.	DWG. NO. 713506
			DRAWING H ECN NO. 212659 SHEET 30F4

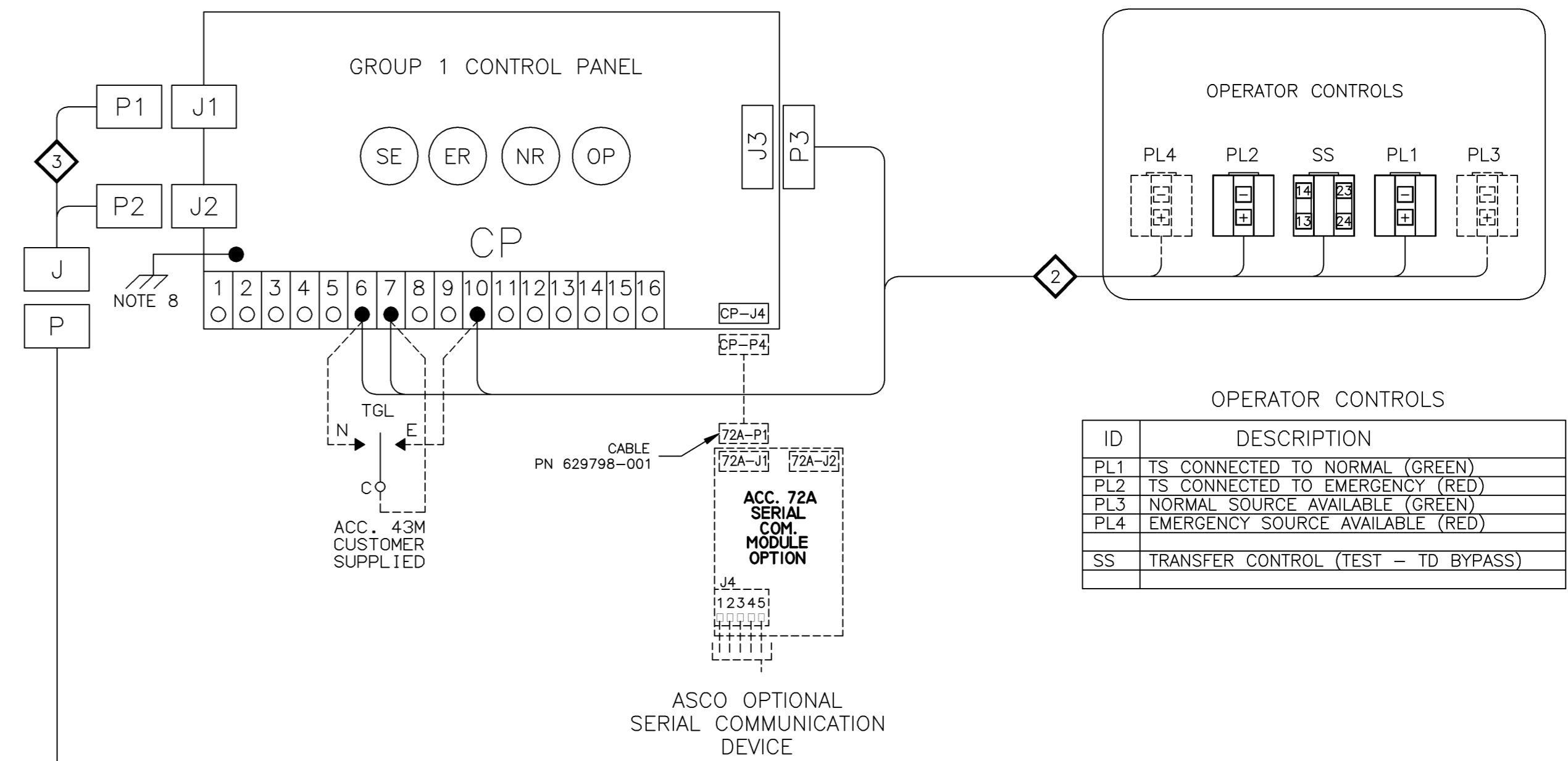
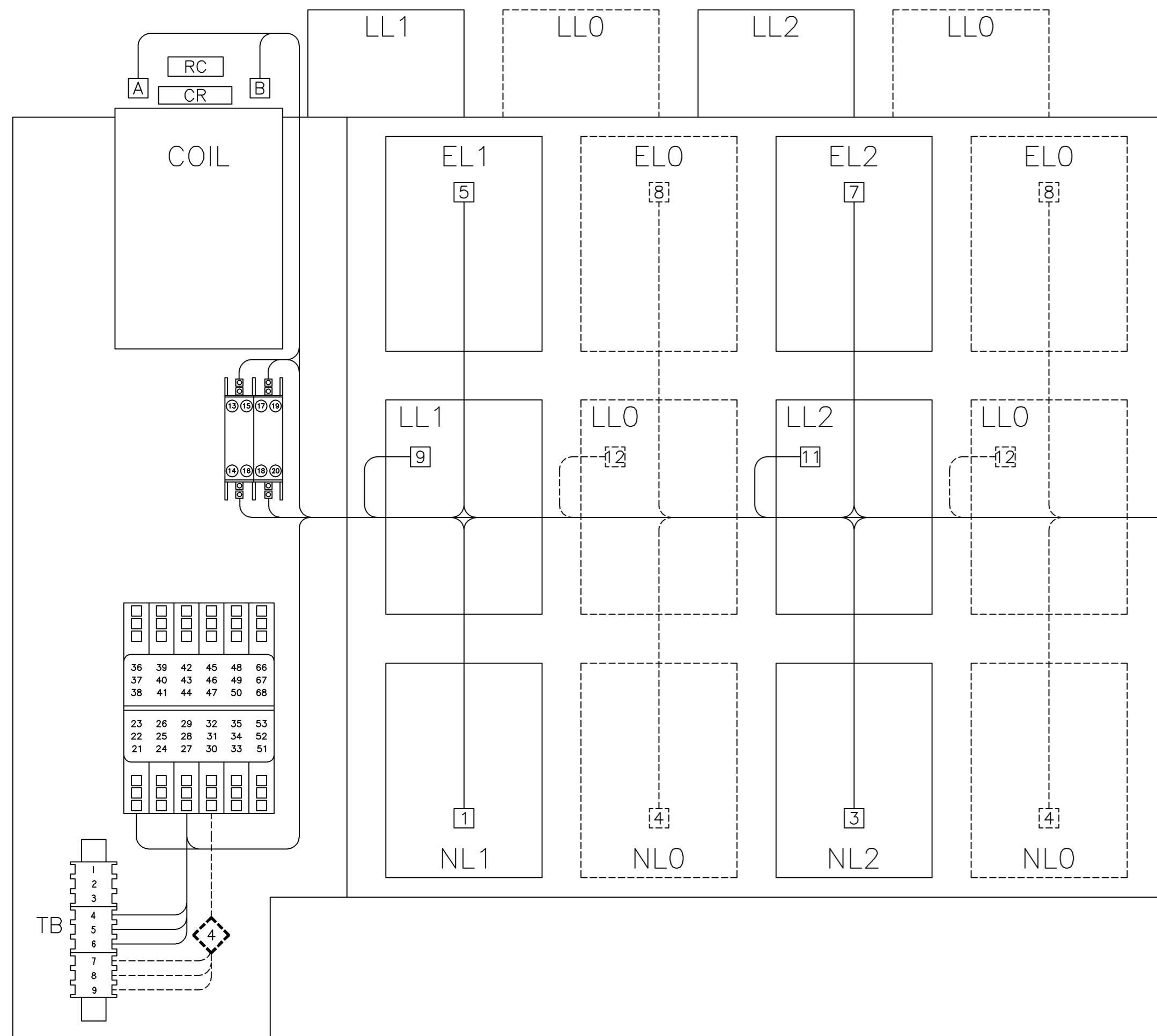
H	212659	WK	BK	03/30/07
	SEE ECN			
G	203916	TR	BK	03/31/05
	SEE ECN			
F	166900	SDH	SDH	04/26/04
	SEE ECN			
E	166704	BWM	WK	04/01/04
	SEE ECN			
D	166172	AJM	BK	02/17/04
	SEE ECN			
C	162498	BWM	WK	1/03
	SEE ECN			

PHYSICAL DIAGRAM

ENCLOSURE

DOOR (INSIDE)

TS (TRANSFER SWITCH)
VIEW FROM INSIDE FRONT



DOOR HINGE

BONDING STRAP
PN 098323-019

H	212659	WK	BK	03/30/07
G	203916	TR	BK	03/31/05
F	166900	SDH	SDH	04/26/04
E	166704	BWM	WK	04/01/04
D	166172	AJM	BK	02/17/04
C	162498	BWM	WK	1/03

PROJECT NAME: **WIRING** **DIAGRAM**

SERIES H386 TS 1PH 600-1200 AMPS
"H" FRAME, GROUP 1 CONTROLS

REV. TO SHEET	ECN NO.	BY	APP.	DATE

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

PROPERTY OF ASCO POWER TECHNOLOGIES. USE PERMITTED FOR OUR WORK ONLY. ALL RIGHTS OF DESIGN OR INVENTION ARE RESERVED.

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

COMPUTER GENERATED DRAWING
SCALE: 1:1 SIZE: DS
DWG. NO. **713506**
DRAWING H. ECN NO. 212659 SHEET 4 OF 4