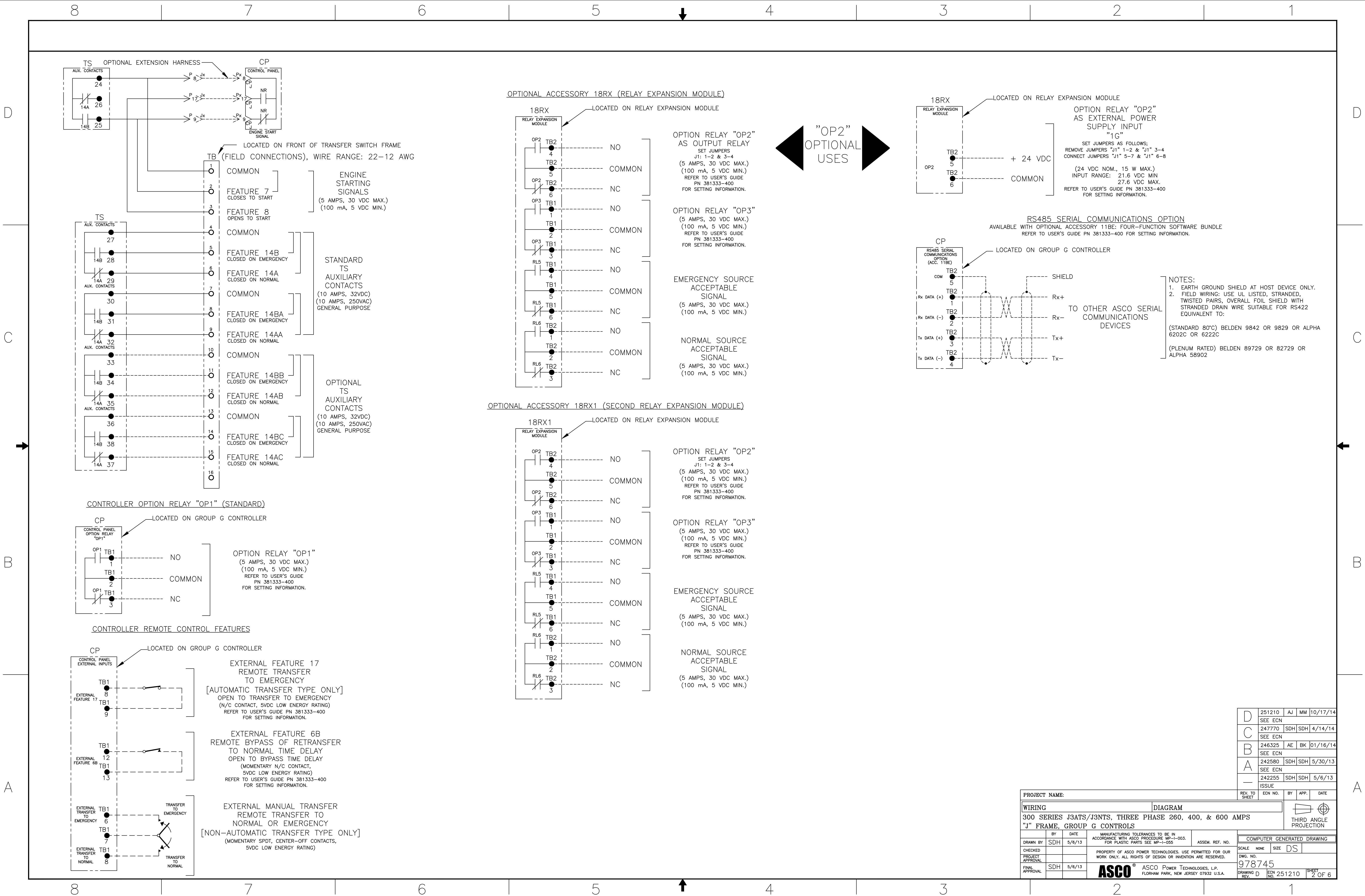


THREE PHASE WIRING FOR ASCO® 300 SERIES TRANSFER SWITCHES (J3ATS/J3NTS) 260, 400, & 600 AMPERES WITH GROUP G CONTROLS

GENERAL INFORMATION

		COMMON ALARM & NOT IN AUTO SIGNALING FEATURES		NON-AUTOMATIC (MANUAL) OPERATION	
THIS WIRING APPLIES TO 300 SERIES TRANSFER SWITCHES THAT UTILIZE THE "J" FRAME POWER TRANSFER SWITCH RATED 26, 400, & 600 AMPERES.		A SET OF FORM C CONTACTS IS PROVIDED ON THE GROUP G CONTROLLER AS "OP1". THE FEATURE SETTING OF "OP1" CAN BE SET TO OPERATE THE CONTACTS AS A "NOT IN AUTO" SIGNAL.		TRANSFER SWITCH ASSEMBLIES FACTORY SET FOR NON-AUTOMATIC OPERATION PROVIDE USER INITIATED, ELECTRICAL OPERATION OF THE TRANSFER SWITCH TO EITHER AVAILABLE SOURCE. THE TRANSFER SWITCH ASSEMBLY IS PHYSICALLY IDENTICAL TO THAT OF THE AUTOMATIC TYPE.	
THE GROUP G CONTROLLER PROVIDES EITHER AUTOMATIC (J3ATS) OR NON-AUTOMATIC [MANUAL] (J3NTS) OPERATION BASED ON ITS FACTORY SETTING ACCORDING TO THE CUSTOMER ORDER REQUIREMENTS.		WHEN "OP1" IS SET FOR "NOT IN AUTO", THE OUTPUT CONTACTS CHANGE POSITION WHEN THE TRANSFER IS BEING INHIBITED FROM TRANSFERRING TO THE EMERGENCY SOURCE (FEATURE 34B) OR THE TRANSFER SWITCH HAS BEEN SET FOR NON-AUTOMATIC (MANUAL) OPERATION.		WHEN THE TRANSFER SWITCH IS SET FOR NON-AUTOMATIC OPERATION, A CUSTOMER PROVIDED SELECTOR SWITCH MAY BE USED TO OPERATE IT FROM A REMOTE LOCATION.	
THE TYPE OF TRANSFER SWITCH PROVIDED CAN BE DETERMINED FROM THE PRODUCT IDENTIFICATION MARKINGS LOCATED ON BOTH THE POWER TRANSFER SWITCH AND THE COVER OF THE GROUP G CONTROLLER.		WHEN OPTIONAL ACCESSORY 11BE "SOFTWARE BUNDLE" IS PART OF THE TRANSFER SWITCH ASSEMBLY, "OP1" MAY ALTERNATIVELY SET FOR A "COMMON ALARM" SIGNAL. THE OUTPUT CONTACTS CHANGE POSITION WHEN A "COMMON ALARM" IS NOT PRESENT AND RESET WHEN A "COMMON ALARM" CONDITION IS PRESENT. THE "COMMON ALARM" SIGNAL CONDITIONS ARE SELECTABLE.		THE FOLLOWING CONTROL PANEL INPUTS PROVIDE REMOTE CONTROL FUNCTIONS FOR THE TRANSFER SWITCH. EACH FUNCTION CAN BE IMPLEMENTED BY THE CUSTOMER PROVIDING THE FORM OF CONTROL DESCRIBED. EACH CONTROL CONTACT MUST BE SUITABLE FOR A 5 VDC LOW ENERGY CIRCUIT.	
ALL OPERATIONAL SETTINGS AND SEQUENCES OF THE GROUP G CONTROLLER AND ITS RELATED OPTIONAL ACCESSORIES (1UP, 18RX, 23G) ARE PROVIDED IN THE USER'S GUIDE, ASCO GROUP G CONTROLLER FOR AUTOMATIC & NON-AUTOMATIC TRANSFER SWITCHES, PART NUMBER 381333-400.		ADDITIONAL "COMMON ALARM" AND "NOT IN AUTO" CONTACTS ARE AVAILABLE WHEN OPTIONAL ACCESSORY 18RX (RELAY EXPANSION MODULE) IS INCLUDED IN THE TRANSFER SWITCH ASSEMBLY. OUTPUT CONTACTS "OP2 AND/OR "OP3" WILL PROVIDE SIGNAL FUNCTIONS WHEN THE FEATURE SETTING OF EACH IS SET TO OPERATE AS "COMMON ALARM" OR "NOT IN AUTO".		EXTERNAL FEATURE 17: REMOTE TRANSFER TO EMERGENCY FEATURE (FOR AUTOMATIC TRANSFER TYPE ONLY) – REQUIRES A CUSTOMER SUPPLIED, NORMALLY CLOSED CONTACT. OPENING OF THE CONTACT CAUSES ENGINE START AND TRANSFER TO THE EMERGENCY SOURCE. RE-CLOSURE OF THE CONTACT ACTIVATES THE FEATURE 3A "RETRANSFER TO NORMAL (IF JUST TEST) TIME DELAY PRIOR TO RETRANSFER. IN THE EVENT THAT THE EMERGENCY SOURCE FAILS WHILE THE TRANSFER SWITCH IS CONNECTED TO EMERGENCY AND THE CUSTOMER SUPPLIED CONTACT IS OPEN, THE TRANSFER SWITCH WILL AUTOMATICALLY RETRANSFER TO THE NORMAL SOURCE.	
INFORMATION FOR INSTALLATION AND TESTING OF THE TRANSFER SWITCH IS PROVIDED IN THE INSTALLATION MANUAL, ASCO 3ATS, 3ADTS, 3NTS & 3NDTS, J-DESIGN 150-600 A TRANSFER SWITCHES, PART NUMBER 381333-404.		CONTACTS ARE RATED 5 AMPS RESISTIVE AT 30 VDC MAXIMUM, 100 mA AT 5 VDC MINIMUM.		EXTERNAL FEATURE 6B: REMOTE BYPASS OF RETRANSFER TO NORMAL TIME DELAY – REQUIRES A CUSTOMER SUPPLIED, NORMALLY CLOSED CONTACT. OPENING OF THE CONTACT BYPASSES FEATURE 3A RETRANSFER TO NORMAL DELAY IF ACTIVE.	
ENGINE CONTROL CONTACTS		REFER TO USER'S GUIDE, ASCO GROUP G CONTROLLER FOR AUTOMATIC & NON-AUTOMATIC TRANSFER SWITCHES, PART NUMBER 381333-400 FOR SETTING INFORMATION.		REFER TO USER'S GUIDE, ASCO GROUP G CONTROLLER FOR AUTOMATIC & NON-AUTOMATIC TRANSFER SWITCHES, PART NUMBER 381333-400 FOR SETTING INFORMATION.	
FEATURE 7 & FEATURE 8: ONE SET OF FORM C CONTACTS "NR" (FEAT. 7 N/C, FEAT. 8 N/O) THAT CHANGE POSITION ON EXPIRATION OF THE FEATURE 1C, OVERRIDE MOMENTARY NORMAL SOURCE OUTAGES TIME DELAY, AND RESET ON EXPIRATION OF THE FEATURE 2E ENGINE COOLDOWN TIME DELAY. AN AUXILIARY CONTACT THAT IS CLOSED WHEN THE TRANSFER SWITCH IS CONNECTED TO THE EMERGENCY SOURCE, IS CONNECTED ACROSS THE N/C CONTACT (FEATURE 7).		EXTERNAL POWER SUPPLY COMPATIBILITY			
AN ADDITIONAL SET OF ENGINE STARTING CONTACTS ARE AVAILABLE ON THE GROUP G CONTROLLER WHEN THE FEATURE SETTING OF THE CONTROLLER OUTPUT CONTACTS "OP1" IS SET TO OPERATE AS "NR2".		USE OF AN EXTERNAL POWER SUPPLY IS USEFUL WHEN REQUIRED TO EXTEND THE FOLLOWING CONTROLLER TIME DELAYS BEYOND 6 SECONDS;			
ADDITIONAL OPTIONAL ENGINE STARTING CONTACTS "NR2" ARE AVAILABLE WHEN OPTIONAL ACCESSORY 18RX (RELAY EXPANSION MODULE) IS INCLUDED IN THE TRANSFER SWITCH ASSEMBLY. OUTPUT CONTACTS "OP2" AND/OR "OP3" PROVIDE THE ENGINE STARTING FUNCTION WHEN THE FEATURE SETTING OF EACH IS SET TO OPERATE AS "NR2".		FEATURE 1C – OVERRIDE MOMENTARY NORMAL SOURCE OUTAGES FEATURE 1F – OVERRIDE MOMENTARY EMERGENCY SOURCE OUTAGES			
CONTACTS ARE RATED 5 AMPS RESISTIVE AT 30 VDC MAXIMUM, 100 mA AT 5 VDC MINIMUM.		AN EXTERNAL POWER SUPPLY IS ALSO USEFUL WHEN THE TRANSFER SWITCH IS USED WITH COMMUNICATIONS FEATURES BY ENABLING THE CONTROLLER TO CONTINUE COMMUNICATING.			
REFER TO USER'S GUIDE, ASCO GROUP G CONTROLLER FOR AUTOMATIC & NON-AUTOMATIC TRANSFER SWITCHES, PART NUMBER 381333-400 FOR SETTING INFORMATION.		AN EXTERNAL POWER SOURCE MAY BE PROVIDED TO THE CONTROLLER, UNTIL THE NORMAL SOURCE OR EMERGENCY SOURCE IS AVAILABLE, BY USE OF;			
LOAD DISCONNECT FEATURE		OR			
FEATURE 31: INCLUDES SUB-FEATURES 31F, 31G, 31M, 31N A SET OF FORM C CONTACTS ARE PROVIDED ON THE GROUP G CONTROLLER AS "OP1". WHEN THE FEATURE SETTING OF "OP1" IS SET TO OPERATE THE CONTACTS AS "FEATURE 31", THE TIME DELAY SETTINGS OF THE SUB-FEATURES ARE AVAILABLE.		- AN EXTERNAL 24 VDC POWER SUPPLY WITH ACCESSORY 18RX (RELAY EXPANSION MODULE) - OPTIONAL ACCESSORY 1UP (UNINTERRUPTIBLE POWER SUPPLY MODULE)			
"OP1" CAN BE SET TO OPERATE TO PROVIDE THE FOLLOWING FUNCTIONS USING THE TIME DELAY SETTINGS ASSOCIATED WITH EACH SUB-FEATURE;		EXTERNAL 24 VDC POWER SUPPLY "1G": AN EXTERNAL 24 VDC POWER SUPPLY MAY BE USED TO POWER THE CONTROLLER WHEN ACCESSORY 18RX (RELAY EXPANSION MODULE) IS INCLUDED IN THE TRANSFER SWITCH ASSEMBLY. OUTPUT CONTACTS "OP2" WILL PROVIDE EXTERNAL 24 VDC POWER SUPPLY FUNCTIONALITY WHEN ITS FEATURE SETTING IS SET TO OPERATE AS "1G". ADDITIONALLY, JUMPERS MUST BE RECONFIGURED ON ACCESSORY 18RX (RELAY EXPANSION MODULE) TO ENABLE THIS FUNCTION AS FOLLOWS;			
31F – NORMAL TO EMERGENCY PRE-TRANSFER SIGNAL 31G – EMERGENCY TO NORMAL PRE-TRANSFER SIGNAL 31M – NORMAL TO EMERGENCY POST-TRANSFER SIGNAL 31N – EMERGENCY TO NORMAL POST TRANSFER SIGNAL		REMOVE JUMPERS "J1" 1-2 & "J1" 3-4 CONNECT JUMPERS "J1" 5-7 & "J1" 6-8			
THE "OP1" OUTPUT CONTACTS CHANGE POSITION FOLLOWING EACH OF THE ABOVE TIME DELAYS.		THE OUTPUT CONTACTS CHANGE POSITION WHEN EITHER THE NORMAL SOURCE OR EMERGENCY SOURCE IS AVAILABLE AND RESET WHEN NEITHER SOURCE IS AVAILABLE. THE "OP2" N/C CONTACT SWITCHES CUSTOMER PROVIDED +24 VDC FROM THE EXTERNAL POWER SUPPLY TO THE CONTROLLER.			
ADDITIONAL LOAD DISCONNECT CONTACTS, "FEATURE 31" ARE AVAILABLE WHEN OPTIONAL ACCESSORY 18RX (RELAY EXPANSION MODULE) IS INCLUDED IN THE TRANSFER SWITCH ASSEMBLY. OUTPUT CONTACTS "OP2 AND/OR "OP3" WILL PROVIDE LOAD DISCONNECT FUNCTIONS WHEN THE FEATURE SETTING OF EACH IS SET TO OPERATE AS "FEATURE 31".		REFER TO USER'S GUIDE, ASCO GROUP G CONTROLLER FOR AUTOMATIC & NON-AUTOMATIC TRANSFER SWITCHES, PART NUMBER 381333-400 FOR SETTING INFORMATION.			
ALL OUTPUT CONTACTS ("OP1", "OP2", "OP3") SET TO OPERATE AS "FEATURE 31", SHARE THE COMMON TIME DELAY SETTINGS OF SUB-FEATURES 31F, 31G, 31M, AND 31N.		ACCESSORY 1UP (UNINTERRUPTIBLE POWER SUPPLY): WHEN OPTIONAL ACCESSORY 1UP IS INCLUDED IN THE TRANSFER SWITCH ASSEMBLY, THE CONTROLLER IS PROVIDED WITH LIMITED RESERVE POWER (APPROXIMATELY 3 MINUTES).			
CONTACTS ARE RATED 5 AMPS RESISTIVE AT 30 VDC MAXIMUM, 100 mA AT 5 VDC MINIMUM.		LOAD CURRENT METERING			
REFER TO USER'S GUIDE, ASCO GROUP G CONTROLLER FOR AUTOMATIC & NON-AUTOMATIC TRANSFER SWITCHES, PART NUMBER 381333-400 FOR SETTING INFORMATION.		WHEN OPTIONAL ACCESSORY 23GB IS PART OF THE TRANSFER SWITCH ASSEMBLY, THREE PHASE CURRENT MEASUREMENTS ARE AVAILABLE FOR DISPLAY ON THE GROUP G CONTROLLER.			
INPHASE TRANSFER FEATURE FOR LOAD TRANSFER		REFER TO USER'S GUIDE, ASCO GROUP G CONTROLLER FOR AUTOMATIC & NON-AUTOMATIC TRANSFER SWITCHES, PART NUMBER 381333-400 FOR INFORMATION ON USE.			
INPHASE TRANSFER CONTROL INITIATES AN INPHASE TRANSFER OF LOADS BETWEEN LIVE SOURCES. THIS IS USED TO PREVENT NUISANCE TRIPPING OF DISTRIBUTION CIRCUIT BREAKERS AND POSSIBLE DAMAGE TO MECHANICAL LOADS ASSOCIATED WITH OUT OF PHASE TRANSFER.		FOUR-FUNCTION SOFTWARE BUNDLE			
REFER TO USER'S GUIDE, ASCO GROUP G CONTROLLER FOR AUTOMATIC & NON-AUTOMATIC TRANSFER SWITCHES, PART NUMBER 381333-400 FOR SETTING INFORMATION.		WHEN OPTIONAL ACCESSORY 11BE IS PART OF THE TRANSFER SWITCH ASSEMBLY, A FOUR-FUNCTION SOFTWARE BUNDLE IS AVAILABLE TO PERFORM THE FOLLOWING FUNCTIONS;			
SOURCE AVAILABILITY SIGNALS		- SERIAL COMMUNICATIONS (RS-485) - PROGRAMMABLE ENGINE EXERCISER - EVENT LOG - COMMON ALARM SIGNAL CAPABILITY ON GROUP G CONTROLLER "OP1" OUTPUT.			
SIGNALS INDICATING THE AVAILABILITY OF THE NORMAL & EMERGENCY SOURCES IS PROVIDED WHEN OPTIONAL ACCESSORY 18RX (RELAY EXPANSION MODULE) IS INCLUDED IN THE TRANSFER SWITCH ASSEMBLY. OUTPUT CONTACTS "RL5" (EMERGENCY SOURCE AVAILABLE) AND "RL6" (NORMAL SOURCE AVAILABLE) CHANGE POSITION WHEN THE SOURCE IS ACCEPTABLE.		REFER TO USER'S GUIDE, ASCO GROUP G CONTROLLER FOR AUTOMATIC & NON-AUTOMATIC TRANSFER SWITCHES, PART NUMBER 381333-400 FOR INFORMATION ON THESE FUNCTIONS.			
CONTACTS ARE RATED 5 AMPS RESISTIVE AT 30 VDC MAXIMUM, 100 mA AT 5 VDC MINIMUM.					

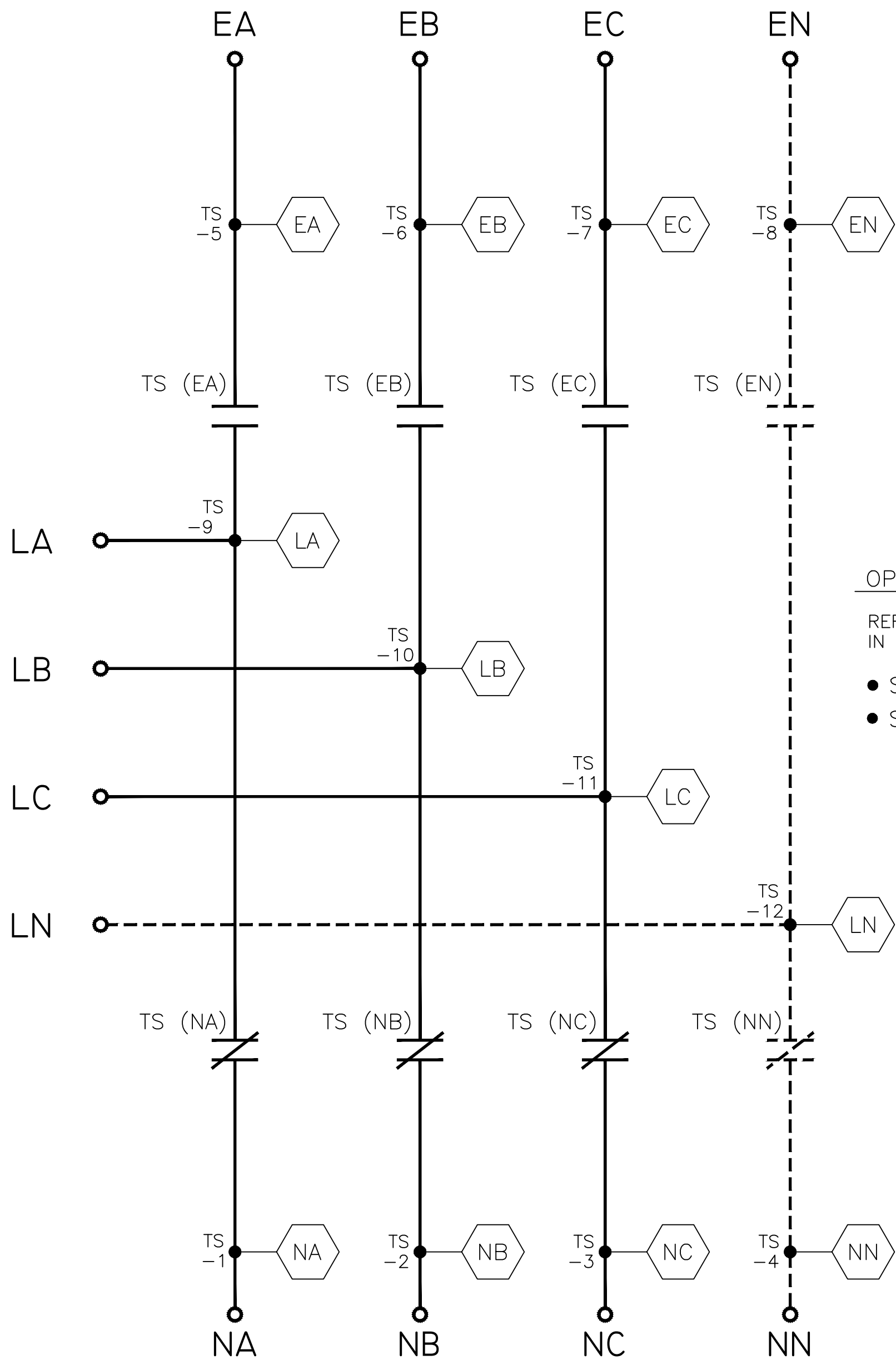


MAIN POWER POLES

TS OPERATOR CIRCUIT

EMERGENCY

NORMAL



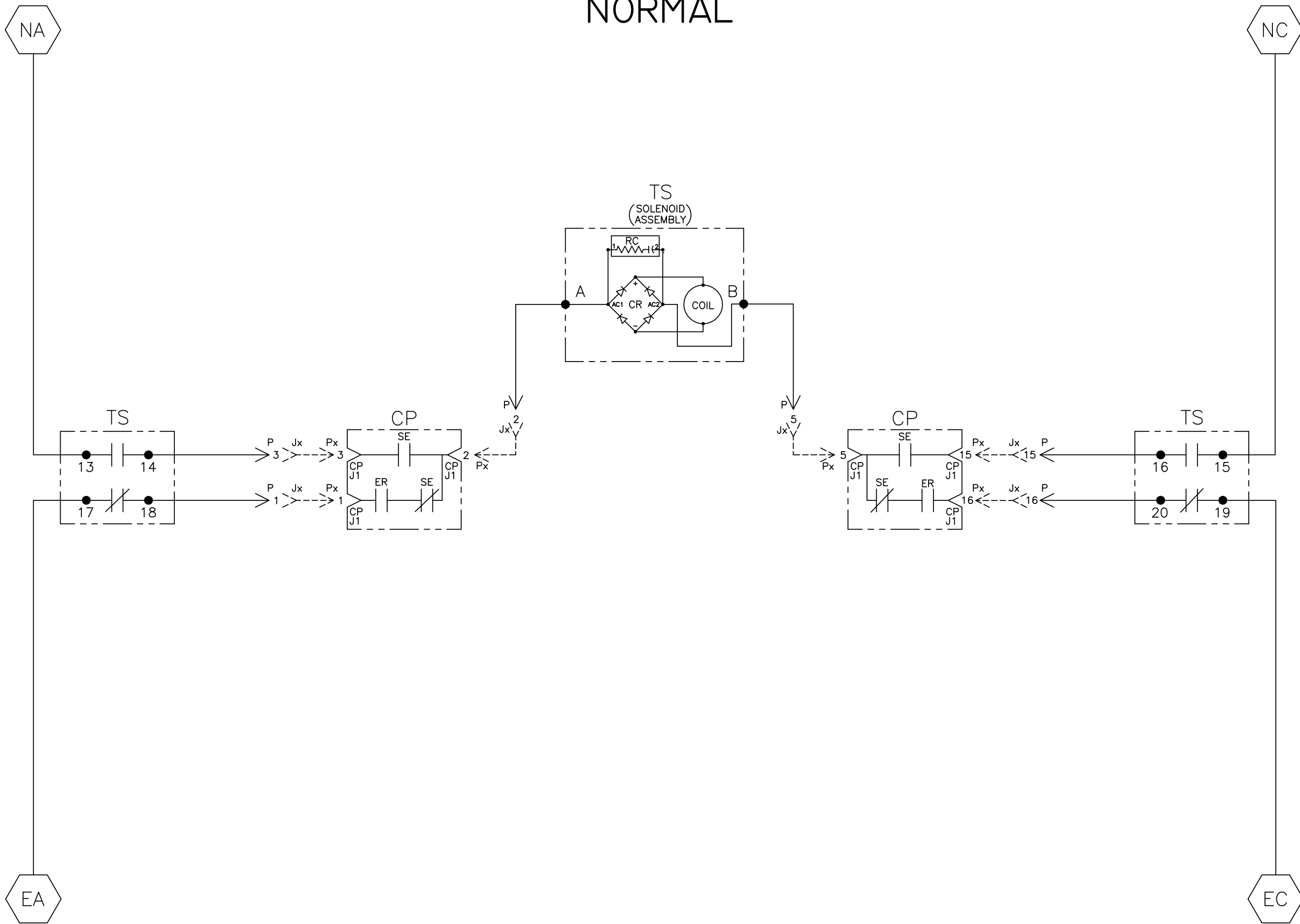
OPTIONAL NEUTRAL TYPES

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

- SOLID BUS PLATE
- SWITCHING CONTACTS

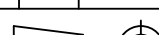
NORMAL

NOTE:
ATS SHOWN CLOSED ON NORMAL SOURCE.



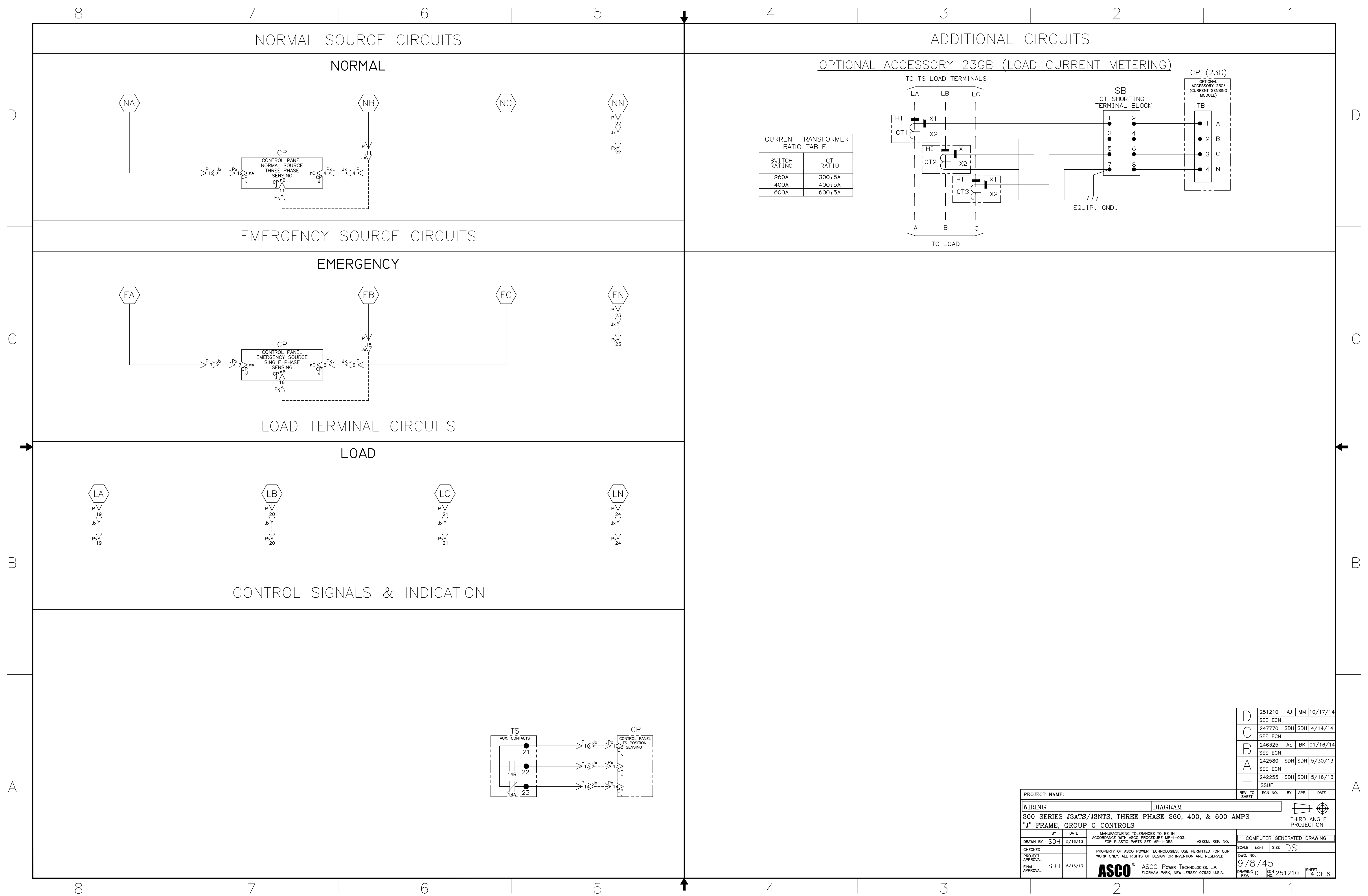
TS CONTROL CONTACTS					
TS	SOLENOID POSITION				
	CLOSED BEFORE NORMAL	BEFORE TDC	TDC >	BEFORE TDC	CLOSED EMERG
13-14					
15-16					
17-18					
19-20					

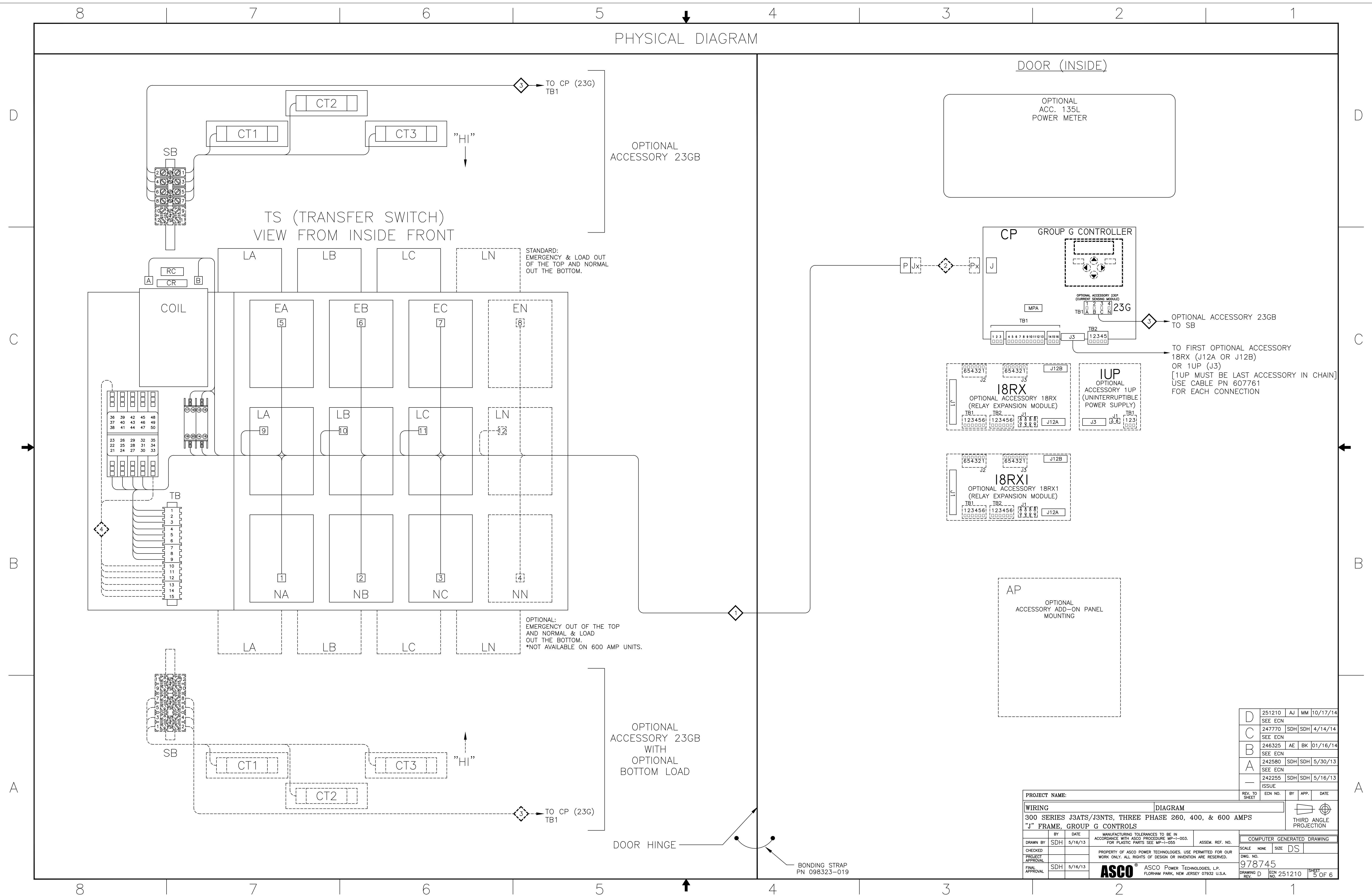
TDC (TOP DEAD CENTER)
TRANSFER SWITCH TEST & ADJUSTMENT PROCEDURE SPECIFIES CONTROL CUT-OFF (CONTACT OPENING) SETTING.

PROJECT NAME:				REV. TO SHEET	ECN NO.	BY	APP.	DATE
WIRING				DIAGRAM				
300 SERIES J3ATS/J3NTS, THREE PHASE 260, 400, & 600 AMPS								
"J" FRAME, GROUP G CONTROLS						THIRD ANGLE PROJECTION		
BY		DATE		MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-1-003. FOR PLASTIC PARTS SEE MP-1-055.		ASSEM. REF. NO.		
DRAWN BY		SDH		5/6/13		COMPUTER GENERATED DRAWING		
CHECKED				PROPERTY OF ASCO POWER TECHNOLOGIES. USE PERMITTED FOR OUR WORK ONLY. ALL RIGHTS OF DESIGN OR INVENTION ARE RESERVED.		SCALE		
PROJECT APPROVAL						NONE		
FINAL APPROVAL		SDH		5/6/13		SIZE DS		
						DWG. NO.		
						978745		
						DRAWING REV. D		
						ECN NO. 251210		
						SHEET 3 OF 6		

ASCO

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DCBA