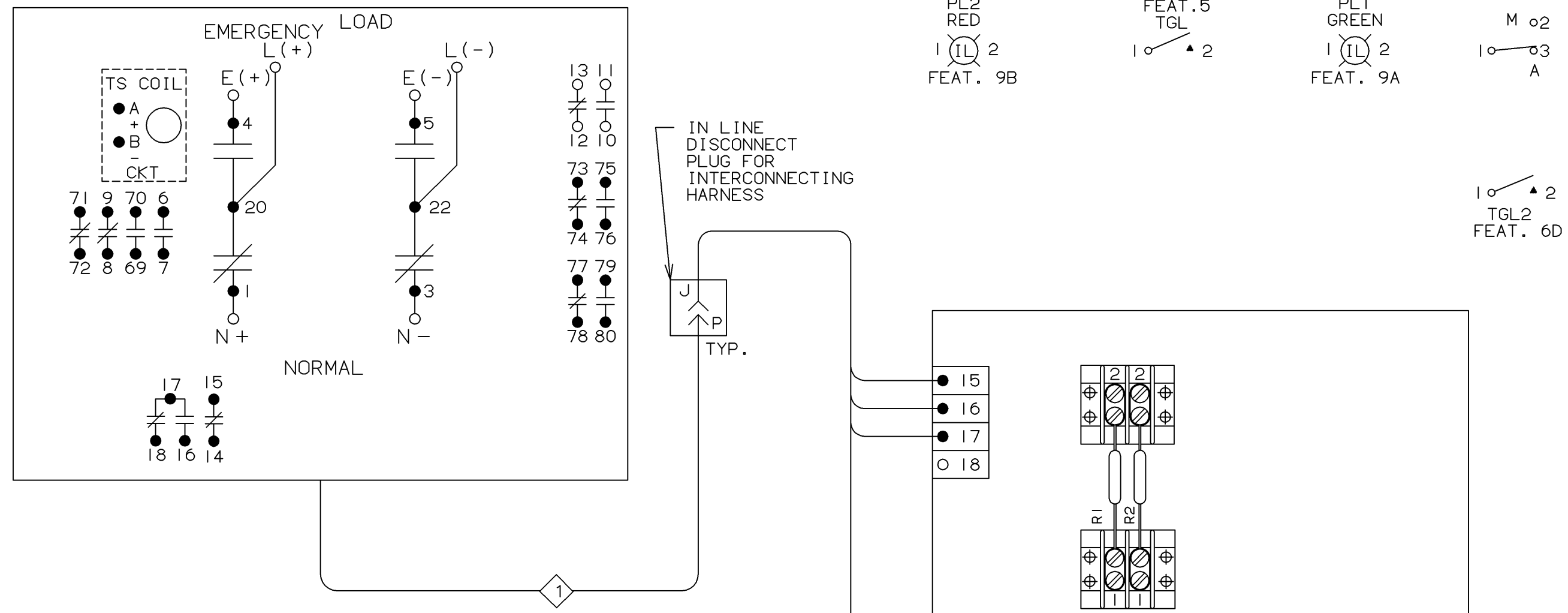


PHYSICAL DIAGRAM

30, 70, 100, 150 AMPS



DC-DC CONTROL PANEL FOR INTERNAL WIRING REFER TO DWG. 387200-427

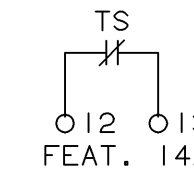
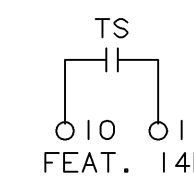
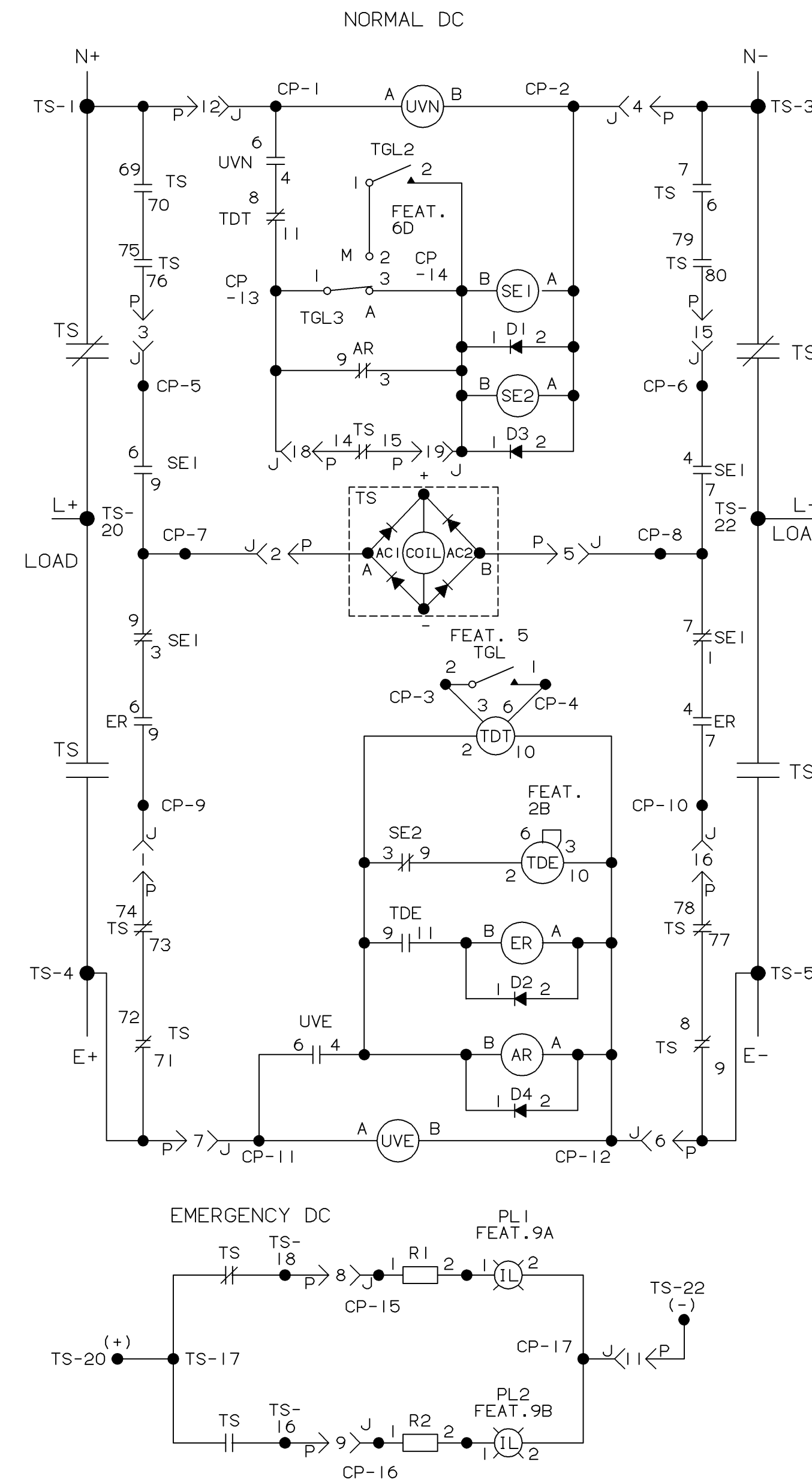
WIRE No.	HARNESS 489097 (P) TS HARNESS	CLR	AWG
1	P-1, TS-74		20
2	P-2, TS-A		
3	P-3, TS-76		
4	P-4, TS-3		
4	TS-7, TS-3		
5	P-5, TS-B		
6	P-6, TS-5		
6	TS-5, TS-9		
7	P-7, TS-4		
7	TS-4, TS-71		
8	P-8, TS-18		
9	P-9, TS-16		
10	P-11, TS-22		
11	P-12, TS-1		
11	TS-69, TS-1		
12	P-15, TS-80		
13	P-16, TS-78		
14	P-18, TS-14		
15	P-19, TS-15		
16	TS-79, TS-6		
17	TS-75, TS-70		
18	TS-77, TS-8		
19	TS-73, TS-72		
21	TS-20, TS-17		
ADD WIRES			
25	P-10		
26	P-13		
27	P-14		
28	P-17		
29	P-20		
30	P-21		
31	P-22		
32	P-23		
33	P-24		

WIRE No.	ADDITIONAL WIRES	CLR	AWG
1	J-1, CP-9		20
2	J-2, CP-7		
3	J-3, CP-5		
4	J-4, CP-2		
5	J-5, CP-8		
6	J-6, CP-11		
7	J-7, CP-12		
8	J-8, CP-15		
9	J-9, CP-16		
10	J-11, CP-17		
10	CP-17, PL1-2		
10	PL1-2, PL2-2		
11	J-12, CP-1		
12	J-15, CP-6		
13	J-16, CP-10		
14	J-18, CP-13		
14	CP-13, TGL3-1		
15	J-19, CP-14		
15	CP-14, TGL2-2		
15	TGL2-2, TGL3-3		
34	CP-3, TGL-2		
35	CP-4, TGL-1		
36	R1-2, PL1-1		
37	R2-2, PL2-1		
38	TGL2-1, TGL3-2		

FRAME	CATALOG TYPE	NEUTRAL TYPE	PHASE POLES	AMPS	VOLT CODE	CONTROLLER	OPTIONAL ACCESSORY	ENCLOSURE CODE
D	432		2	30 70 100 150	K	1	X	C E F G H J K L M N P Q

NEUTRAL TYPE		VOLTAGE CODES DC 2 WIRE		ENCLOSURE CODES	
CODE	DESCRIPTION	CODE	NOMINAL VOLTAGE	CODE	DESCRIPTION
BLANK	NONE	BLANK		BLANK	OPEN TYPE (NO ENCLOSURE) GENERAL PURPOSE, INDOOR
C		1	110	M	INDOOR, WATER & DUST RESISTANT
E		2	115	N	INDOOR/OUTDOOR, WATER TIGHT & DUST TIGHT
F		3R	120	P	INDOOR/OUTDOOR, RAINPROOF, SLEET & ICE RESISTANT
G		4	125	Q	INDOOR/OUTDOOR, WATER TIGHT & DUST TIGHT TYPE 4 PLUS CORROSION RESISTANCE (STAINLESS STEEL)
H		4X			INDOOR/OUTDOOR, WATER TIGHT & DUST TIGHT TYPE 4 PLUS CORROSION RESISTANCE (FIBERGLASS)
J		4X			INDOOR, INDUSTRIAL ENVIRONMENTS, OILTIGHT & DUST TIGHT
K		7			EXPLOSION PROOF
L		12			INDOOR, INDUSTRIAL ENVIRONMENTS, OILTIGHT & DUST TIGHT
M		3R			(SECURE ENCLOSURES)
N		4			INDOOR/OUTDOOR, WATER TIGHT & DUST TIGHT
P		4X			INDOOR/OUTDOOR, RAINPROOF, SLEET & ICE RESISTANT
Q		12			INDOOR, INDUSTRIAL ENVIRONMENTS, OILTIGHT & DUST TIGHT

ELEMENTARY DIAGRAM



STANDARD FEATURES

- VOLTAGE SENSING**
- A. CLOSE DIFFERENTIAL VOLTAGE SENSING OF BOTH NORMAL & EMERGENCY SOURCE PICKUP IS ADJUSTABLE FROM 83.3% TO 100% OF NOMINAL AND THE DROPOUT IS ADJUSTABLE FROM 79.2% TO 100% OF NOMINAL VOLTAGE. FACTORY SET TO PICKUP AT 95% AND DROPOUT AT 85% OF NOMINAL UNLESS OTHERWISE SPECIFIED.
- MANUAL CONTROLS**
- B. MOMENTARY TYPE TEST SWITCH TO SIMULATE NORMAL FAILURE. (AFTER OPERATION OF FEAT. 5 TOGGLE AND EXPIRATION OF THE TDE TIME DELAY (FEAT. 2B), LOAD WILL BE ENERGIZED BY EMERGENCY SOURCE UNTIL ADJUSTABLE TDT TIME DELAY EXPIRES. SWITCH AUTOMATICALLY TRANSFERS TO NORMAL IF EMERGENCY FAILS DURING TEST INTERVAL. TDT FACTORY SET AT MODE "D", (10 MINUTES.) INSTALLED AND CONNECTED ON ENCLOSURE DOOR. SHIPPED LOOSE ON OPEN TYPE. **STANDARD FEATURE 5.**
- C. PERMITS SELECTION OF MANUAL OR AUTOMATIC RETRANSFER TO NORMAL. MANUAL IS AUTOMATICALLY BYPASSED IF EMERGENCY FAILS WHILE NORMAL IS AVAILABLE. OPEN TGL3 FOR MANUAL MODE. MOMENTARILY CLOSE TGL2 TO RETRANSFER TO NORMAL. INSTALLED AND CONNECTED ON ENCLOSURE DOOR. SHIPPED LOOSE ON OPEN TYPE. **STANDARD FEATURE 6D.**
- INDICATORS**
- D. ONE SET AUXILIARY CONTACTS CONSISTING OF: ONE CONTACT CLOSED WHEN A.T.S. IS CONNECTED TO NORMAL AND ONE CONTACT CLOSED WHEN A.T.S. IS CONNECTED TO EMERGENCY. NOTE: ADDITIONAL AUXILIARY CONTACTS ARE AVAILABLE AS OPTIONS. **STANDARD FEATURE 14A/14B.** CONTACTS ARE RATED 10 AMPS AT 480 VOLTS A.C.
- E. ONE SET OF SIGNAL LIGHTS CONSISTING OF: PL1 (GREEN) INDICATES WHEN A.T.S. IS CONNECTED TO NORMAL SOURCE AND PL2 (RED) INDICATES WHEN A.T.S. IS CONNECTED TO EMERGENCY SOURCE. INSTALLED ON DOOR OF ENCLOSURE TYPE. SHIPPED LOOSE FOR OPEN TYPE. REFER TO OPERATOR'S MANUAL FOR REPLACEMENT BULB NUMBER. **STANDARD FEATURE 9A/9B.**
- TIME DELAY**
- F. TRANSFER TO EMERGENCY TIME DELAY (TDE). ADJUSTABLE FROM 1 TO 999 SEC FACTORY SET AT 3 SEC UNLESS OTHERWISE SPECIFIED. TDE SET AT MODE "A". NOTE: IF TDE EXCEEDS TDT TIME DELAY, THE FEATURE 5 TEST FUNCTION WILL BE DEFEATED. **FEATURE 2B.**
- GENERAL NOTES**
- SWITCH SHOWN DE-ENERGIZED CONNECTED TO NORMAL SOURCE.
  - DEVICE SYMBOLS AND DESIGNATIONS ARE IN ACCORDANCE WITH NEMA PUB. ICS-1983, PART 1-101A.
  - ALL WIRES ARE #20 AWG ON 30-150 AMPS.
  - O INDICATES CUSTOMER CONNECTION POINTS.
  - INDICATES FACTORY CONNECTION POINTS.
  - CONNECTION POINTS THAT HAVE BOTH CUSTOMER CONNECTIONS AND FACTORY CONNECTIONS ARE SHOWN OPEN AS CUSTOMER CONNECTION POINTS.
  - ON ENCLOSURE TYPE SWITCHES THE TRANSFER UNIT IS MOUNTED ON THE BACK INSIDE SURFACE AND THE CONTROL PANEL ON THE INSIDE DOOR SURFACE.
  - ROUTE ALL CONTROL AND ADD-ON PANEL WIRES 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 SWITCH

CATALOG NUMBER \_\_\_\_\_

**ASCO** CERTIFIED TO S.O. \_\_\_\_\_

BY \_\_\_\_\_

DATE \_\_\_\_\_

FORM REV C

PROJECT NAME: \_\_\_\_\_

WIRING DIAGRAM

DC AUTOMATIC TRANSFER SWITCH

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
DJB	10/03/02			SCALE NONE SIZE DS
CHECKED	BWM	10/03/02	PROPERTY OF ASCO POWER TECHNOLOGIES. USE PERMITTED FOR OUR WORK ONLY. ALL RIGHTS OF DESIGN OR INVENTION ARE RESERVED.	DWG. NO. 733599
PROJECT APPROVAL	SDH	10/03/02		DRAWING F
FINAL APPROVAL				ECN NO. 224308 SHEET 1 OF 1