THREE PHASE WIRING FOR ASCO® 7000 SERIES AUTOMATIC SOFT LOAD TRANSFER SWITCHES TYPE 7ASLS 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).

IN SYNC - IN SYNC TIME DELAY BEGINS BEFORE A CLOSED TRANSITION TRANSFER FOLLOWING ACCEPTANCE OF THE SOURCE TO WHICH TRANSFER IS BEING MADE. ON EXPIRATION OF THE DELAY, THE LOGIC AWAITS AN IN SYNC CONDITION FOR SUBSEQUENT CLOSED TRANSITION TRANSFER.

EXTENDED PARALLEL - EXTENDED PARALLEL TIMER BEGINS WHEN THE SOURCES ARE PARALLELED (CN & CE CLOSED). IF THE TWO SOURCES REMAIN IN PARALLEL WHEN THE DELAY EXPIRES, THE CONTROL LOGIC TAKES THE FOLLOWING ACTIONS:

- THE LOGIC WILL ATTEMPT TO OPERATE THE TRANSFER SWITCH TO A "SAFE" STATE WHERE THE SOURCES WILL NO LONGER BE PARALLELED AND THE LOAD WILL BE SERVICED BY AN AVAILABLE SOURCE.
- THE CONTROL PANEL IS LOCKED OUT FROM ANY FURTHER AUTOMATIC OPERATION.
- THE "TS LOCKED OUT" INDICATOR (RED LED) IS LIT.
- THE UNIT WILL REMAIN LOCKED OUT UNTIL THE "TS LOCKED OUT" PUSH-BUTTON IS DEPRESSED FOR RESET.

FAIL TO SYNC - FAILURE TO SYNC TIMER BEGINS WHEN THE LOGIC BEGINS TO CHECK FOR AN IN SYNC CONDITION FOR WHICH TO ALLOW CLOSED TRANSITION TRANSFER. IF THE DELAY EXPIRES PRIOR TO AN IN SYNC CONDITION OCCURRING, THE "FAILURE TO SYNCHRONIZE" SIGNAL IS ACTIVATED (RED LED) AND CLOSURE OF THE TFR RELAY CONTACT AVAILABLE AT THE FIELD CONNECTIONS TERMINAL BLOCK (TB).

FEAT. 62F - EXTENDED PARALLEL ALARM TIMER BEGINS TIMING WHEN THE SOURCES ARE PARALLELED (CN & CE CLOSED). THE ENABLING OF THE EXTENDED PARALLEL ALARM TIMER OCCURS AT THE SAME TIME THAT THE CONTROLLER'S EXTENDED PARALLEL TIMER BEGINS.

THE FEATURE 62F EXTENDED PARALLEL ALARM TIMER IS INDEPENDENT OF THE CONTROLLER'S EXTENDED PARALLEL TIMER DESCRIBED UNDER "DESCRIPTION OF TIME DELAYS".

ON EXPIRATION OF THE FEATURE 62F EXTENDED PARALLEL ALARM TIME DELAY, OUTPUT RELAY (RL3) (2) FORM C CONTACTS, CONNECTED TO THE FIELD CONNECTIONS TERMINAL BLOCK (TB), TRANSFER.

THE FEATURE 62F EXTENDED PARALLEL ALARM DELAY IS ADJUSTABLE VIA POTENTIOMETER (P2) LOCATED ON THE DUAL OPERATOR CONTROL (DOC) WHICH IS ADJUSTABLE FROM 0-1 SECOND. FACTORY SET AT 1 SEC.

NOTE: THE TIMER SHOULD BE SET ABOVE 0.7 SECONDS TO PERMIT THE CONTROLLER TO ATTEMPT TO OPERATE THE TRANSFER SWITCH TO A "SAFE" STATE WHERE THE SOURCES WILL NO LONGER BE PARALLELED. THE TIMER CAN BE SET LOWER TO BE USED TO ISOLATE THE TWO SOURCES WITH AN EXTERNALLY CONTROLLED FEEDER CIRCUIT BREAKER. HOWEVER THE CONTROLLER MAY NOT BE ABLE TO PLACE THE TRANSFER SWITCH IN A "SAFE" STATE.

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;

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

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	Eastern Standard Time
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

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 IN AN OPEN TRANSITION (BREAK BEFORE MAKE) OPERATION TO THE EMERGENCY SOURCE.

WHEN THE NORMAL SOURCE IS RESTORED FOR THE DURATION OF THE FEATURE 3A, RETRANSFER TO NORMAL TIME DELAY SETTING, THE CONTROLS WILL BEGIN MONITORING PHASE, FREQUENCY, AND VOLTAGE DIFFERENTIAL BETWEEN NORMAL AND EMERGENCY SOURCES.

WHEN THE TWO SOURCES ARE APPROACHING SYNCHRONISM, A CLOSED TRANSITION (MAKE BEFORE BREAK) TRANSFER TO THE NORMAL SOURCE WILL BE INITIATED. THE NORMAL AND EMERGENCY CONTACTORS (CN & CE) WILL BE IN AN OVERLAP CONDITION FOR LESS THAN 0.1 SECONDS.

CLOSED TRANSITION TRANSFER WILL ALSO BE INITIATED DURING A TRANSFER TEST OPERATION CAUSED BY OPERATION OF THE FEATURE 5 TRANSFER TEST SELECTOR SWITCH. RETRANSFER WILL ALSO OCCUR IN A CLOSED TRANSITION MANNER AT THE END OF THE TEST.

CLOSED TRANSITION BYPASS OPERATION: THE "CT BYPASS OPTIONS" DISPLAY OF THE CONTROL PANEL ALLOWS SETTING THE TRANSFER SWITCH'S CLOSED TRANSITION BYPASS BEHAVIOR. CLOSED TRANSITION BYPASS CAUSES THE TRANSFER SWITCH TO INTERRUPT POWER TO THE LOAD DURING TRANSFER. THE AVAILABLE OPTIONS ARE:

- FAIL TO SYNC AUTO BYPASS ENABLE - CAUSES A "FAILURE TO SYNCHRONIZE" CONDITION TO RESULT IN AN AUTOMATIC CLOSED TRANSITION BYPASS. DEFAULT SETTING IS NO AUTOMATIC BYPASS.
- CT BYPASS - ALLOWS SELECTIONS AS TO WHETHER THE CLOSED TRANSITION BYPASS WILL OCCUR WITH OR WITHOUT A DELAYED TRANSITION (LOAD "OFF" TIME). DEFAULT SETTING IS OPEN TRANSITION (NO DELAY).
- DT BYPASS - SETS THE LENGTH OF THE DELAYED TRANSFER (LOAD "OFF" TIME) IF THE PREVIOUS PARAMETER HAS BEEN SELECTED TO OPERATE WITH DELAYED TRANSITION. 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 IN INITIATED.

SIGNALS & AUXILIARIES

A. FEATURES 7 & 8- 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 CLOSES TO SIGNAL ENGINE START. FEATURE 8 OPENS 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. FEATURES 7 & 8 ARE PROVIDED AS A SINGLE FORM C CONTACT CONNECTED TO THE FIELD CONNECTIONS TERMINAL BLOCK (TB). CONTACT RATED 5 AMPS AT 32 VDC/120VAC RESISTIVE.

B. FEATURES 14AD & 14BD - TRANSFER SWITCH AUXILIARY POSITION INDICATING CONTACTS. FIVE (5) FORM C CONTACTS TO INDICATE CONNECTION OF THE TRANSFER SWITCH TO NORMAL (14A) AND FIVE (5) 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).

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. EXTENDED PARALLEL TIME - INDICATES THAT THE MAIN CONTACTORS (CN & CE) HAVE BEEN SIMULTANEOUSLY CLOSED FOR A PERIOD EXCEEDING THE TIME ALLOTTED. (RED LED)

E. FAILURE TO SYNCHRONIZE - INDICATES THE THE TWO SOURCES DID NOT MEET THE PARAMETERS REQUIRED FOR A CLOSED TRANSITION TRANSFER. (RED LED)

F. TS LOCKED OUT - INDICATES THAT A FAILURE OF THE TRANSFER SWITCH OPERATOR HAS OCCURRED AND THAT THE TRANSFER SWITCH HAS TAKEN CORRECTIVE ACTION AS REQUIRED. ONCE THIS FAILURE RECOVERY OPERATION TAKES PLACE, THE TRANSFER SWITCH IS PREVENTED FROM FURTHER OPERATION UNTIL THE CONDITION IS CORRECTED. ONCE THE CONDITION IS CORRECTED, THE TS LOCKED OUT SWITCH MAY BE DEPRESSED TO RESET THE CONTROL PANEL (RED LED).

G. ALARM RESET SWITCH - RESETS FAILURE TO SYNCHRONIZE AND EXTENDED PARALLEL ALARMS.

H. CLOSED TRANSITION BYPASS SWITCH - BYPASSES CLOSED TRANSITION TRANSFER WHEN OPERATED DURING THE PERIOD WHILE THE TRANSFER SWITCH CONTROL PANEL IS MONITORING FOR AN INPHASE CONDITION. CAUSES OPEN TRANSITION TRANSFER TO THE OPPOSITE SOURCE IF CONDITIONS PERMIT.

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 AUTOMATIC TRANSFER SWITCH. REFER TO THIS PUBLICATION PRIOR TO INSTALLATION AND OPERATION OF THE UNIT.

7000 SERIES SOFT LOAD TRANSFER SYSTEM

THE SOFT LOAD CONTROL SYSTEM CONSISTS OF THE FOLLOWING ASSEMBLIES

7000 SERIES CLOSED TRANSITION TRANSFER SWITCH INCLUDING GROUP 5 CONTROLS.

ASCO SOFT LOAD CONTROLLER WITH THE FOLLOWING FEATURES
- SINGLE BOARD COMPUTER
- LOCAL COMMUNICATIONS FOR INTEGRATED CONTROL
- GRAPHICAL USER INTERFACE (GUI) WITH TOUCH SCREEN INTERFACE
- TRIPLE REDUNDANT ON BOARD POWER SUPPLY TO SELECT POWER FROM UTILITY, GENERATOR OR GENERATOR BATTERY SOURCE.
- ANALOG CONTROL OUTPUTS FOR CONTROL OF ENGINE-GENERATOR ELECTRONIC SPEED GOVERNING AND VOLTAGE REGULATION CONTROLS.

ASCO "POWERMANAGER" TRANSDUCER CONNECTED TO UTILITY SOURCE TERMINALS AND CURRENT TRANSFORMERS TO PROVIDE CONTINUOUS MONITORING OF UTILITY
- ELECTRICAL PARAMETERS INCLUDING
  - VOLTS
  - AMPERES
  - FREQUENCY
  - INSTANTANEOUS WATTS
  - INSTANTANEOUS VARS
  - INTERVAL WATT DEMAND
  - AND OTHER FEATURES
- LOCAL COMMUNICATIONS TO INTERFACE WITH SOFT LOAD CONTROLLER
- MULTI-FUNCTIONAL PROTECTIVE RELAYING FUNCTIONS
  - Phase directional over current (device 67).
  - Reverse power (device 32).
  - Negative sequence over current (device 46).
  - Negative sequence voltage (device 47).
  - Under/over frequency (device 81).
  - Under/over voltage (devices 27/59).
  - Device 86 lockout

ASCO "POWERMANAGER" TRANSDUCER CONNECTED TO GENERATOR SOURCE TERMINALS AND CURRENT TRANSFORMERS TO PROVIDE CONTINUOUS MONITORING OF GENERATOR ELECTRICAL PARAMETERS INCLUDING
- VOLTS
- AMPERES
- FREQUENCY
- INSTANTANEOUS WATTS
- INSTANTANEOUS VARS
- INTERVAL WATT DEMAND
- AND OTHER FEATURES
- LOCAL COMMUNICATIONS TO INTERFACE WITH SOFT LOAD CONTROLLER
- MULTI-FUNCTIONAL PROTECTIVE RELAYING FUNCTIONS
  - Reverse power (device 32).
  - Excessive reverse VAR for loss of excitation (device 40)
  - KW overload prealarm
  - KW overload alarm
  - Over/under voltage (27/59)
  - Over/under frequency (81)

REFER TO THE OPERATOR'S MANUAL FOR ASCO SERIES 7SLTS SOFT-LOAD TRANSFER SWITCHES

NOTE: (FEAT 6B BECOMES PUSH BUTTON)

BASE CATALOG NUMBER / CATALOG NUMBER SUFFIXES

CATALOG TYPE	NEUTRAL TYPE	PHASE POLES	AMPS	VOLT CODE	CONTROLLER	OPTIONAL ACCESSORY	ENCLOSURE CODE
7ASLS	A B BLANK FOR NONE	3	1000 1200 1600 2000 2600 3000	A B C D E F G H J K L M N P Q R	5	X BLANK FOR NONE	C M N P Q BLANK FOR OPEN TYPE

EXPLANATION OF CATALOG NUMBER CODES

NEUTRAL TYPE		VOLTAGE CODES 3 PHASE (3 OR 4 WIRE) 50 OR 60 Hz		ENCLOSURE CODES		
CODE	DESCRIPTION	CODE	NOMINAL VOLTAGE	CODE	TYPE	DESCRIPTION
BLANK	NONE	A	115	BLANK		OPEN TYPE (NO ENCLOSURE)
A	SOLID	B	120	C	1	GENERAL PURPOSE, INDOOR
B	SWITCHING	C	208			(SECURE ENCLOSURES)
		D	220	M	3R	OUTDOOR, RAINPROOF, SLEET & ICE RESISTANT
		E	230	N	4	INDOOR/OUTDOOR, WATERTIGHT & DUSTTIGHT
		F	240	P	4X	TYPE 4 PLUS CORROSION RESISTANCE (STAINLESS STEEL)
		G	277	Q	12	INDOOR, INDUSTRIAL ENVIRONMENTS, OILTIGHT & DUSTTIGHT
		H	380			
		J	400			
		K	415			
		L	440			
		M	460			
		N	480			
		P	550			
		Q	575			
		R	600			

CATALOG NUMBER _____
ASCO® CERTIFIED TO
S.O. _____
BY _____
DATE _____
FORM REV G

REV.	ECN NO.	BY	APP.	DATE
G	237098 SEE ECN	TR	BK	05/15/12
F	212323 SEE ECN	MJB	JPB	3/6/07
E	206209 SEE ECN	KH	BK	10/10/05
D	201688 SEE ECN	WK	WK	09/09/04

PROJECT NAME:

WIRING | DIAGRAM
7000 SERIES (G7ASLS) 3PH 1000-3000 AMPS
"G" FRAME, GROUP 5 CONTROLS

THIRD ANGLE PROJECTION

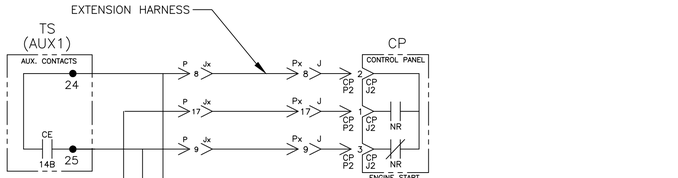
	BY	DATE
DRAWN BY	DRS	2/1/02
CHECKED	BK	2/1/02
PROJECT APPROVAL	WK	2/1/02
FINAL APPROVAL		

MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-1-003. FOR PLASTIC PARTS SEE MP-1-055
ASSEM. REF. NO.

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

COMPUTER GENERATED DRAWING
SCALE NONE | SIZE DS
DWG. NO. 725705
DRAWING REV. G | ECN NO. 237098 | SHEET 1 OF 10

FIELD CONNECTIONS

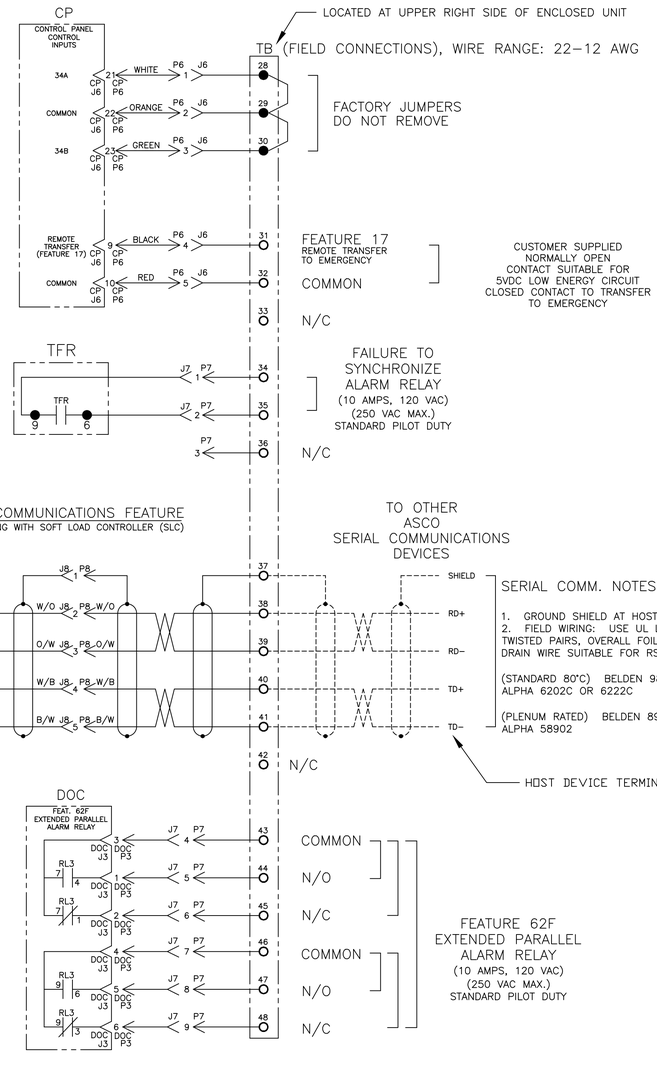


LOCATED AT UPPER RIGHT SIDE OF ENCLOSED UNIT.

TB (FIELD CONNECTIONS), WIRE RANGE: 22–12 AWG

1	COMMON	ENGINE STARTING SIGNALS (5 AMPS, 32VDC)
2	FEATURE 7 CLOSES TO START	
3	FEATURE 8 OPENS TO START	
4	COMMON	TS AUXILIARY CONTACTS (10 AMPS, 32VDC) (10 AMPS, 250VAC) GENERAL PURPOSE
5	FEATURE 14B CLOSED ON EMERGENCY	
6	FEATURE 14A CLOSED ON NORMAL	
7	COMMON	
8	FEATURE 14BA CLOSED ON EMERGENCY	
9	FEATURE 14AA CLOSED ON NORMAL	
10	COMMON	
11	FEATURE 14BB CLOSED ON EMERGENCY	
12	FEATURE 14AB CLOSED ON NORMAL	
13	COMMON	
14	FEATURE 14BC CLOSED ON EMERGENCY	
15	FEATURE 14AC CLOSED ON NORMAL	
16	COMMON	
17	FEATURE 14BD CLOSED ON EMERGENCY	
18	FEATURE 14AD CLOSED ON NORMAL	
25		
26		
27		

TS (AUX1) AUX. CONTACTS: 27 CE 28 / 14B CN / 27 14A 28; 30 CE 31 / 14B CN / 30 14A 31; 33 CE 34 / 14B CN / 33 14A 34; 36 CE 38 / 14B CN / 36 14A 38; 39 CE 41 / 14B CN / 39 14A 41



LOCATED AT UPPER RIGHT SIDE OF ENCLOSED UNIT

TB (FIELD CONNECTIONS), WIRE RANGE: 22–12 AWG

28		FACTORY JUMPERS DO NOT REMOVE
29		
30		
31	FEATURE 17 REMOTE TRANSFER TO EMERGENCY	CUSTOMER SUPPLIED NORMALLY OPEN CONTACT SUITABLE FOR 5VDC LOW ENERGY CIRCUIT CLOSED CONTACT TO TRANSFER TO EMERGENCY
32	COMMON	
33	N/C	
34		FAILURE TO SYNCHRONIZE ALARM RELAY (10 AMPS, 120 VAC) (250 VAC MAX.) STANDARD PILOT DUTY
35		
36	N/C	
37		TO OTHER ASCO SERIAL COMMUNICATIONS DEVICES
38		
39		
40		
41		
42	N/C	
43	COMMON	FEATURE 62F EXTENDED PARALLEL ALARM RELAY (10 AMPS, 120 VAC) (250 VAC MAX.) STANDARD PILOT DUTY
44	N/O	
45	N/C	
46	COMMON	
47	N/O	
48	N/C	

SERIAL COMMUNICATIONS FEATURE
COMMUNICATING WITH SOFT LOAD CONTROLLER (SLC)

SHIELD, RD+, RD–, TD+, TD–

SERIAL COMM. NOTES:

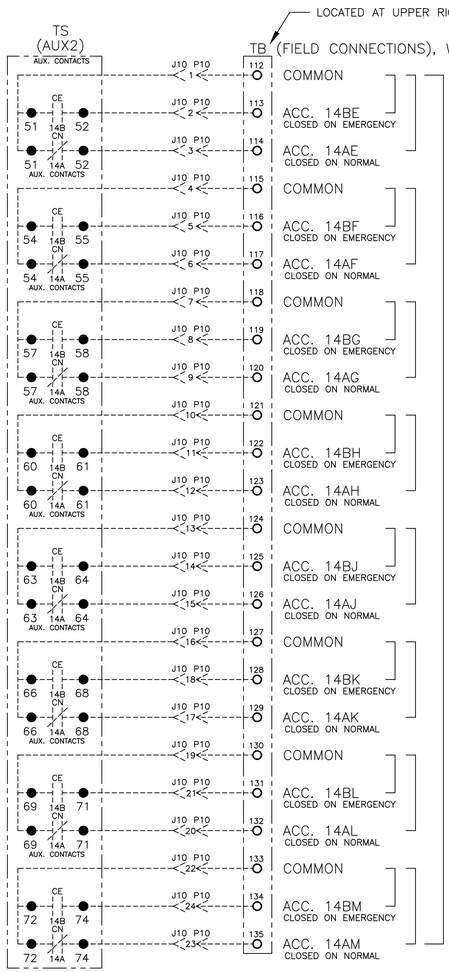
1. GROUND SHIELD AT HOST DEVICE ONLY.
2. FIELD WIRING: USE UL LISTED, STRANDED, TWISTED PAIRS, OVERALL FOIL SHIELD WITH STRANDED DRAIN WIRE SUITABLE FOR RS–422 EQUIVALENT TO:

(STANDARD 80°C) BELDEN 9842 OR 9829 OR ALPHA 6202C OR 6222C

(PLENUM RATED) BELDEN 89729 OR 82729 OR ALPHA 58902

HOST DEVICE TERMINATIONS

OPTIONAL ACCESSORY (ACC.) AUXILIARY CONTACTS



LOCATED AT UPPER RIGHT SIDE OF ENCLOSED UNIT

TB (FIELD CONNECTIONS), WIRE RANGE: 22–12 AWG

112	COMMON	TS AUXILIARY CONTACTS (10 AMPS, 32VDC) (10 AMPS, 250VAC) GENERAL PURPOSE
113	ACC. 14BE CLOSED ON EMERGENCY	
114	ACC. 14AE CLOSED ON NORMAL	
115	COMMON	
116	ACC. 14BF CLOSED ON EMERGENCY	
117	ACC. 14AF CLOSED ON NORMAL	
118	COMMON	
119	ACC. 14BG CLOSED ON EMERGENCY	
120	ACC. 14AG CLOSED ON NORMAL	
121	COMMON	
122	ACC. 14BH CLOSED ON EMERGENCY	
123	ACC. 14AH CLOSED ON NORMAL	
124	COMMON	
125	ACC. 14BJ CLOSED ON EMERGENCY	
126	ACC. 14AJ CLOSED ON NORMAL	
127	COMMON	
128	ACC. 14BK CLOSED ON EMERGENCY	
129	ACC. 14AK CLOSED ON NORMAL	
130	COMMON	
131	ACC. 14BL CLOSED ON EMERGENCY	
132	ACC. 14AL CLOSED ON NORMAL	
133	COMMON	
134	ACC. 14BM CLOSED ON EMERGENCY	
135	ACC. 14AM CLOSED ON NORMAL	

G	237098	TR	BK	05/15/12
	SEE ECN			
REV. TO SHEET	ECN NO.	BY	APP.	DATE

PROJECT NAME:

WIRING DIAGRAM

7000 SERIES (G7ASLS) 3PH 1000–3000 AMPS
"G" FRAME, GROUP 5 CONTROLS

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	DRS	2/1/02
CHECKED	BK	2/1/02
PROJECT APPROVAL	WK	2/1/02
FINAL APPROVAL		

MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-1-003. FOR PLASTIC PARTS SEE MP-1-055

ASSEM. REF. NO.

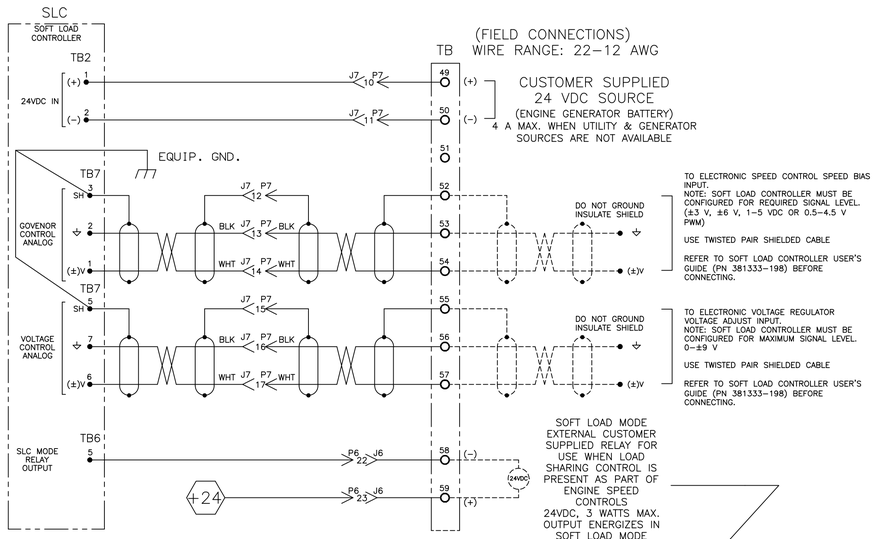
ASCO® ASCO Power Technologies, L.P. FLORHAM PARK, NEW JERSEY 07932 U.S.A.

COMPUTER GENERATED DRAWING

SCALE NONE | SIZE DS

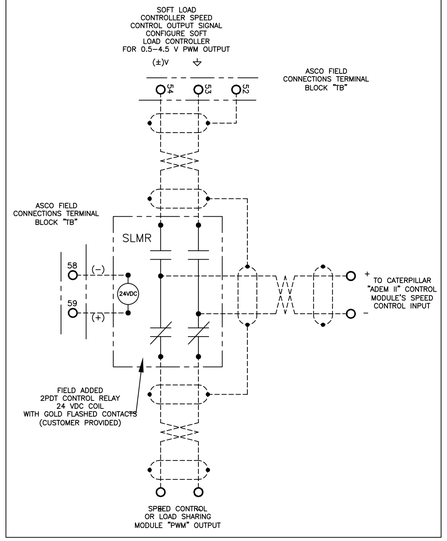
DWG. NO. 725705

DRAWING REV. G | ECN NO. 237098 | SHEET 2 OF 10



TYPICAL INTERFACE CONNECTIONS

CATERPILLAR "ADEM II" ENGINE CONTROLLER INTERFACE

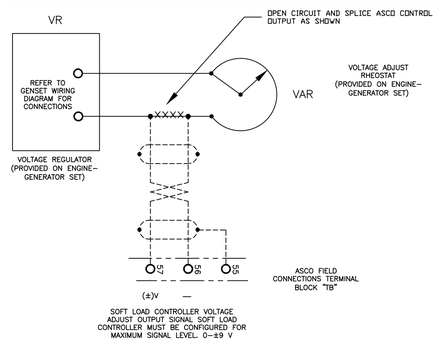


VOLTAGE REGULATOR INTERFACE

TYPICAL CONNECTIONS FOR:

BASLER SR4
CATERPILLAR VR3
CATERPILLAR DIGITAL VOLTAGE REGULATOR

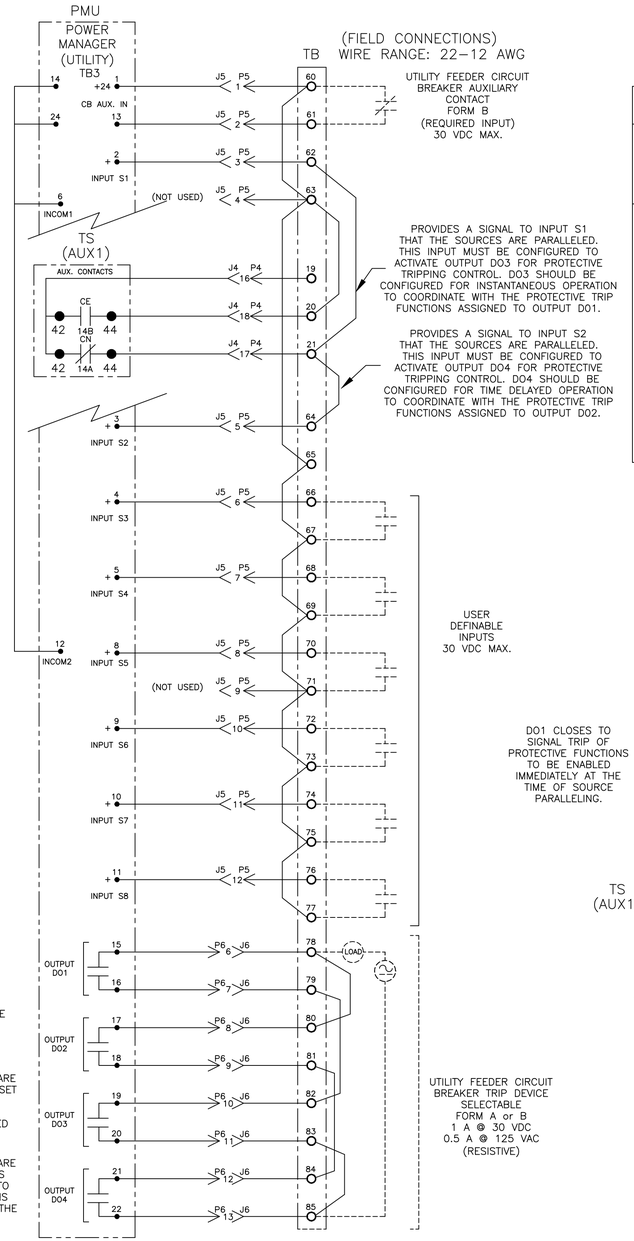
CONSULT FACTORY FOR OTHER TYPES

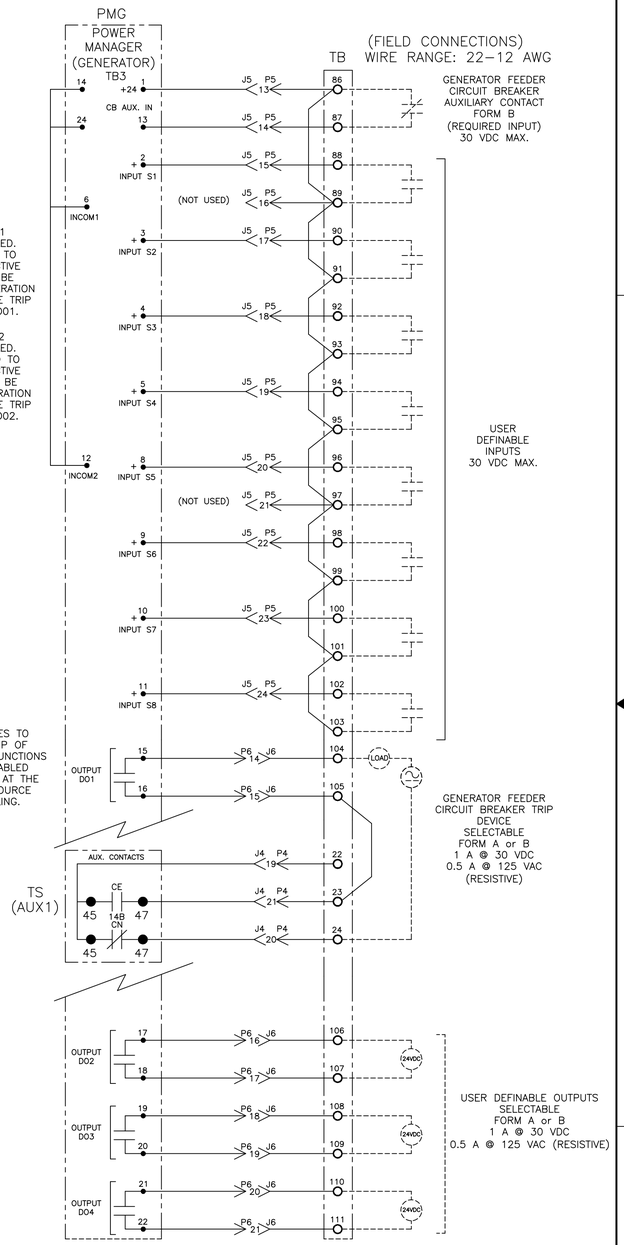


NOTES:

1.) DO NOT USE EXTERNAL VAR/PF CONTROLLER.

2.) REVERSE CONNECTIONS TO TB–56 & TB–57 IF IMPROPER VOLTAGE CONTROL OCCURS DURING SOFT LOAD OPERATING MODE.





REV. TO SHEET	ECN NO.	BY	APP.	DATE
G	237098	TR	BK	05/15/12
	SEE ECN			

PROJECT NAME:

WIRING DIAGRAM

7000 SERIES (G7ASLS) 3PH 1000–3000 AMPS
"G" FRAME, GROUP 5 CONTROLS

THIRD ANGLE PROJECTION

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MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP–I–003. FOR PLASTIC PARTS SEE MP–I–055

ASSEM. REF. NO.

COMPUTER GENERATED DRAWING

SCALE NONE SIZE DS

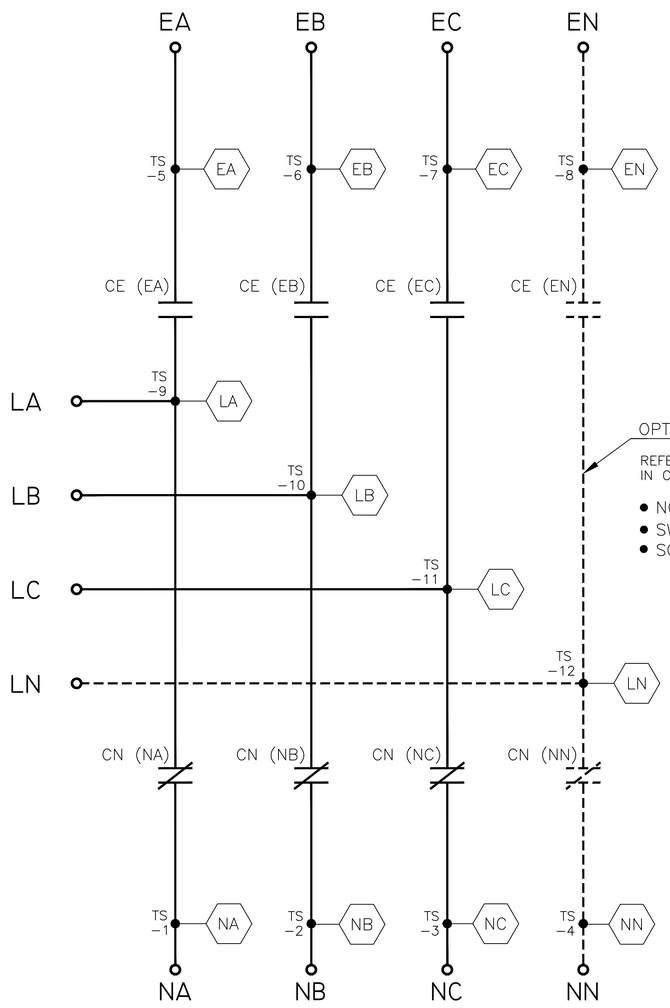
DWG. NO. 725705

DRAWING REV. G ECN NO. 237098 SHEET 3 OF 10

ASCO® ASCO Power Technologies, L.P.
Florham Park, New Jersey 07932 U.S.A.

MAIN POWER POLES

EMERGENCY



OPTIONAL NEUTRAL TYPES

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

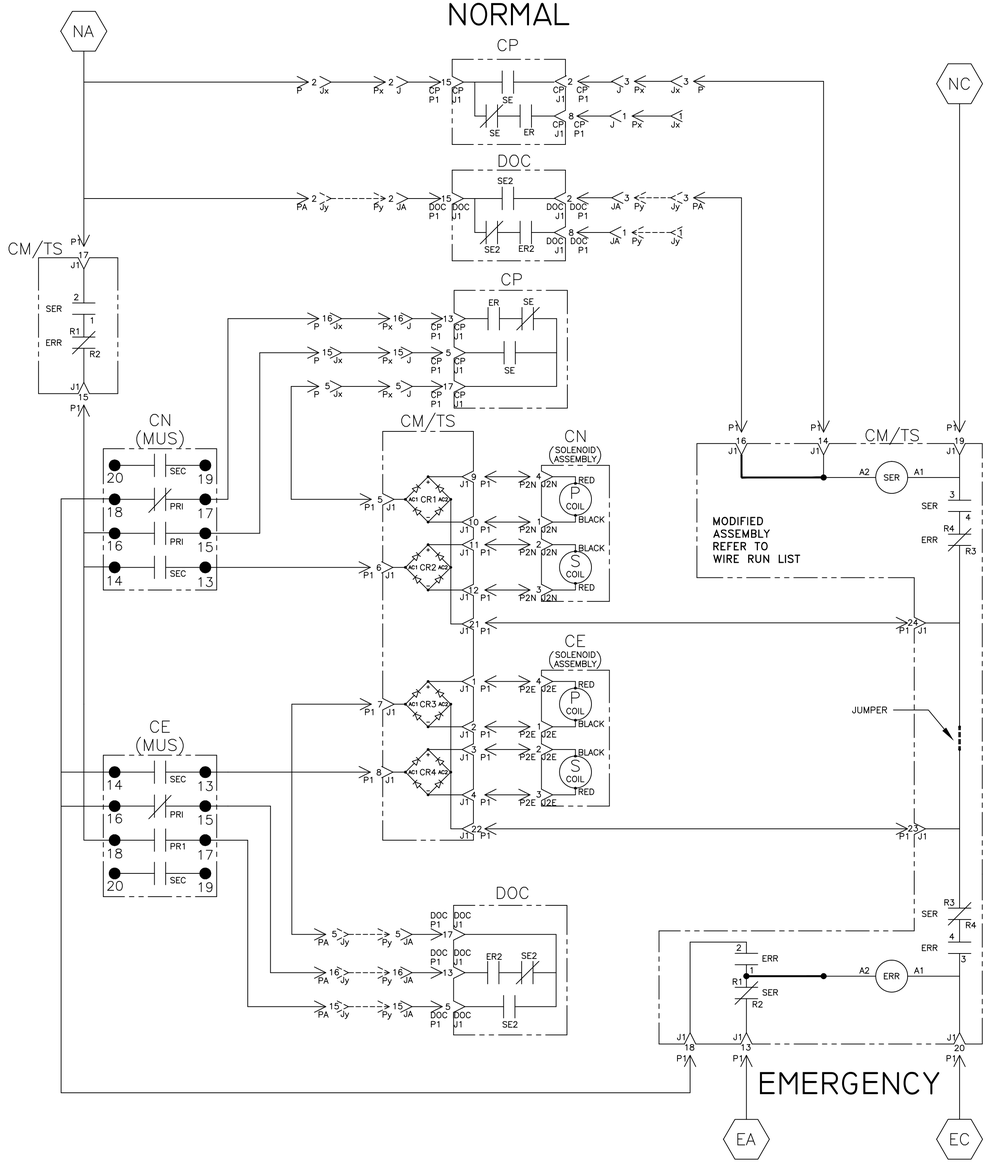
- NONE
- SWITCHING
- SOLID BUS PLATE

NORMAL

NOTE:

ATS SHOWN CLOSED ON NORMAL SOURCE.

TS OPERATOR CIRCUIT



CN (MUS) CONTACTS					
MUS	SOLENOID POSITION				
	NORM	>	AFTER TDC *	<	OPEN
13–14		X		X	
15–16				X	X
17–18	X	X			
19–20			X	X	

CE (MUS) CONTACTS					
MUS	SOLENOID POSITION				
	OPEN	>	AFTER TDC *	<	EMER
13–14		X		X	
15–16	X	X			
17–18				X	X
19–20		X	X		

* AFTER SOLENOID CORE PASSES THROUGH TOP DEAD CENTER POSITION.

G	237098	TR	BK	05/15/12
REV. TO SHEET	SEE ECN NO.	BY	APP.	DATE

PROJECT NAME:

WIRING DIAGRAM

7000 SERIES (G7ASLS) 3PH 1000–3000 AMPS

"G" FRAME, GROUP 5 CONTROLS

THIRD ANGLE PROJECTION

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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

SCALE NONE SIZE DS

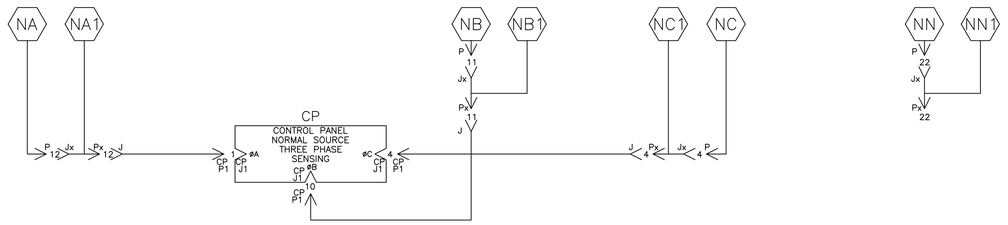
DWG. NO. 725705

DRAWING REV. G ECN NO. 237098 SHEET 4 OF 10

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

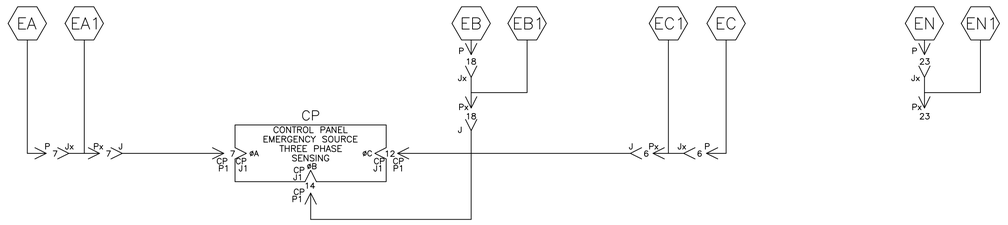
NORMAL SOURCE CIRCUITS

NORMAL



EMERGENCY SOURCE CIRCUITS

EMERGENCY

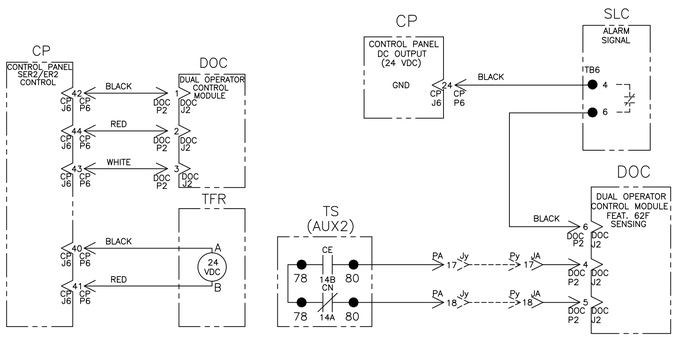


LOAD TERMINAL CIRCUITS

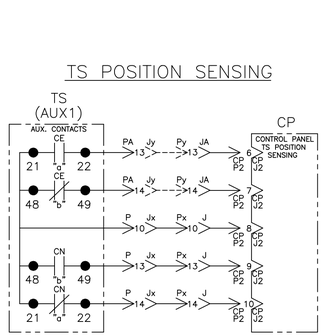
LOAD

CONTROL SIGNALS & INDICATION

SER2/ER2 CONTROL

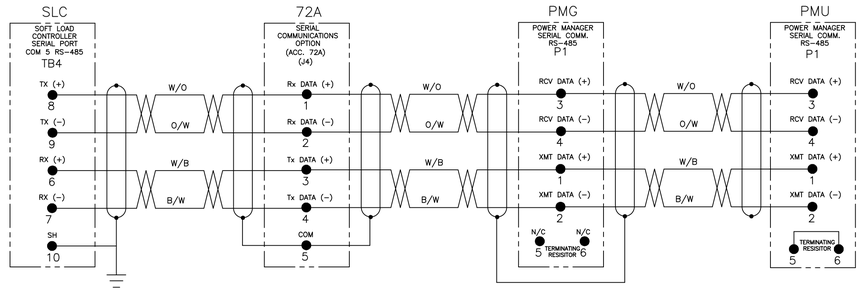


TS POSITION SENSING

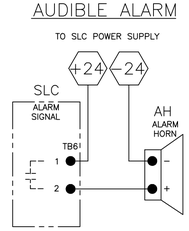


CONTROL SIGNALS & INDICATION

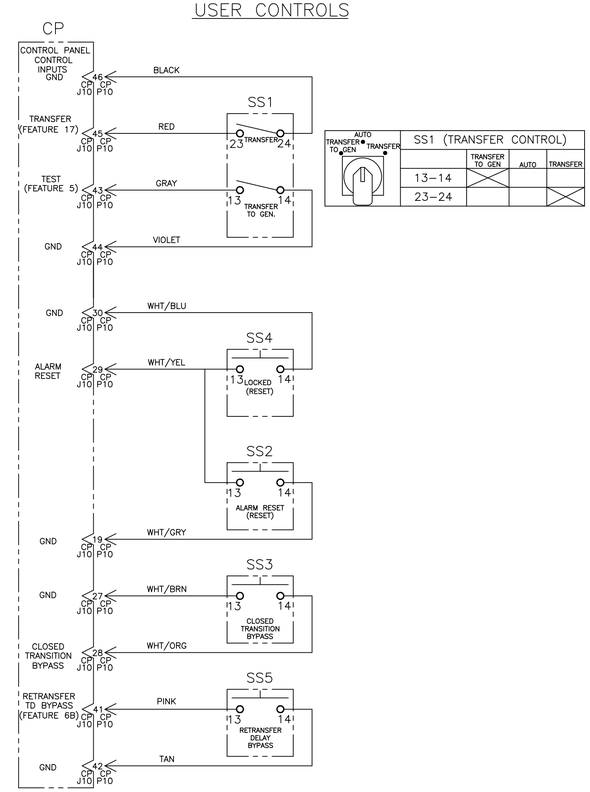
LOCAL COMMUNICATIONS



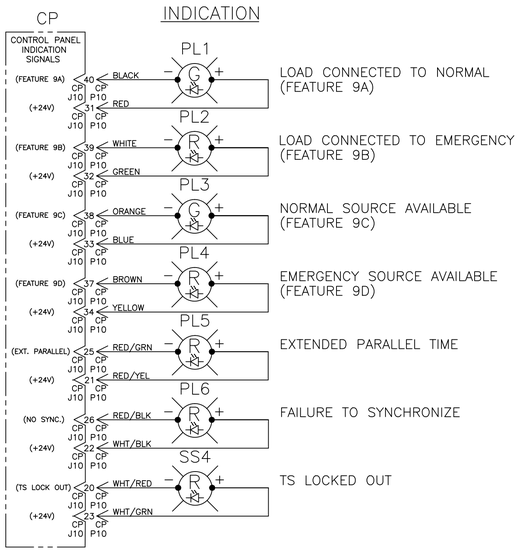
AUDIBLE ALARM



USER CONTROLS



INDICATION



LOAD CONNECTED TO NORMAL (FEATURE 9A)

LOAD CONNECTED TO EMERGENCY (FEATURE 9B)

NORMAL SOURCE AVAILABLE (FEATURE 9C)

EMERGENCY SOURCE AVAILABLE (FEATURE 9D)

EXTENDED PARALLEL TIME

FAILURE TO SYNCHRONIZE

TS LOCKED OUT

REV.	TO SHEET	ECN NO.	BY	APP.	DATE
G		237098	TR	BK	05/15/12
		SEE ECN			

PROJECT NAME:

WIRING DIAGRAM

7000 SERIES (G7ASLS) 3PH 1000–3000 AMPS
"G" FRAME, GROUP 5 CONTROLS

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	DRS	2/1/02
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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

SCALE NONE SIZE DS

DWG. NO. 725705

DRAWING REV. G ECN NO. 237098 SHEET 5 OF 10

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

ADDITIONAL CONTROL CIRCUITS

SOFT LOAD CONTROL ADD-ON PANEL

AP-TU

BASED ON NAMEPLATE VOLTAGE CODE (REFER TO AOP WIRING)

PRI

SEC

TYPE FNM 3.5 AMPS CL-250V AP-FU7

AP-TB

SLC SOFT LOAD CONTROLLER TB2 19 VAC UTILITY IN

AP-PMU ASCO PowerManager Xp UTILITY SOURCE MONITORING & PROTECTION

BASED ON NAMEPLATE NEUTRAL TYPE (REFER SHEET 1) WIRE "WYE" CONNECTIONS IF NEUTRAL WIRE "DELTA" CONNECTIONS IF NO NEUTRAL

TB1: VA, VB, VC, VA, VC, VB

TB2: IA HI, IA LO, IB HI, IB LO, IC HI, IC LO, IN HI, IN LO — DELTA — N/C, N/C — GND

TYPE KTK 1 AMP CL-600V

AP-FU1, AP-FU2, AP-FU3

NORMAL VOLTAGE FROM TRANSFER SWITCH: NA1, NB1, NC1, NN1

TB1: VA, VN, VB, VN, VC, VN

WYE

TB3: +24V, DC IN, 24V GND

SBN CT SHORTING TERMINAL BLOCK

TO NORMAL SOURCE: A, B, C

HI / NCT1, NCT2, NCT3

EQUIP. GND.

NA, NB, NC

TO TS NORMAL TERMINALS

AP-TB: +24, -24

SLC SOFT LOAD CONTROLLER TB2: (+), (-) 24VDC OUT

CP CONTROL PANEL DC INPUT (24 VDC)

RED — CP P6 49 — CP J6 — +24 VDC

BLACK — CP P6 50 — CP J6 — GND

AP-PMG ASCO PowerManager Xp GENERATOR SOURCE MONITORING & PROTECTION

TYPE KTK 1 AMP CL-600V

AP-FU4, AP-FU5, AP-FU6

EMERGENCY VOLTAGE FROM TRANSFER SWITCH: EA1, EB1, EC1, EN1

TB1: VA, VN, VB, VN, VC, VN

WYE

TB3: +24V, DC IN, 24V GND

SBE CT SHORTING TERMINAL BLOCK

TO EMERGENCY SOURCE: A, B, C

HI / ECT1, ECT2, ECT3

EQUIP. GND.

EA, EB, EC

TO TS EMERGENCY TERMINALS

BASED ON NAMEPLATE NEUTRAL TYPE (REFER SHEET 1) WIRE "WYE" CONNECTIONS IF NEUTRAL WIRE "DELTA" CONNECTIONS IF NO NEUTRAL

AP-TG

BASED ON NAMEPLATE VOLTAGE CODE (REFER TO AOP WIRING)

PRI

SEC

TYPE FNM 3.5 AMPS CL-250V AP-FU8

AP-TB

SLC SOFT LOAD CONTROLLER TB2 19 VAC GEN IN

CURRENT TRANSFORMER RATIO TABLE

SWITCH RATING	CT RATIO
1000A	1200:5A
1200A	1200:5A
1600A	2000:5A
2000A	2000:5A
2600A	3000:5A
3000A	3000:5A

REV.	TO SHEET	ECN NO.	BY	APP.	DATE
G		237098	TR	BK	05/15/12
		SEE ECN			

PROJECT NAME:

WIRING DIAGRAM

7000 SERIES (G7ASLS) 3PH 1000-3000 AMPS
"G" FRAME, GROUP 5 CONTROLS

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

COMPUTER GENERATED DRAWING

SCALE NONE SIZE DS

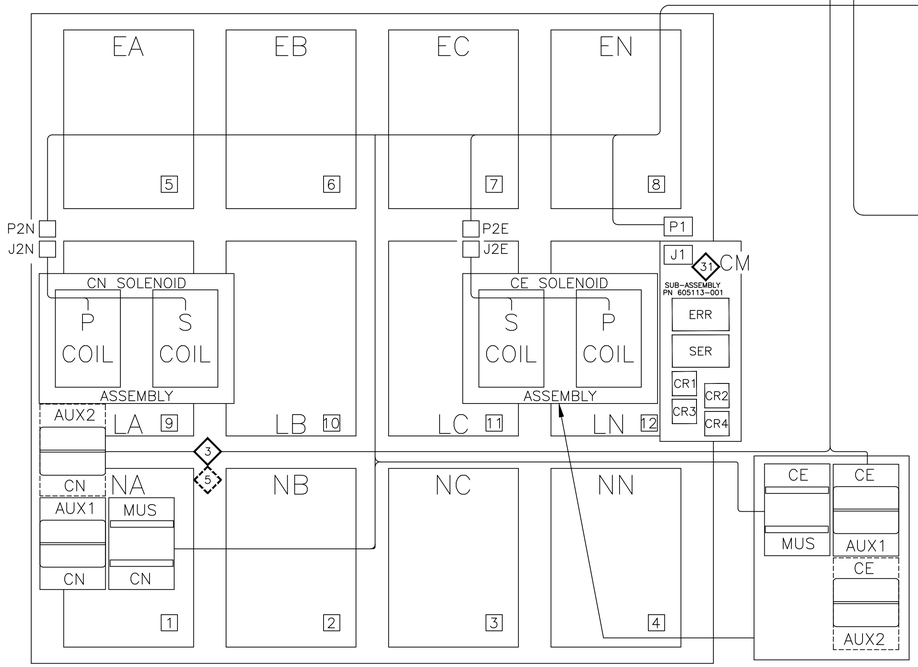
DWG. NO. 725705

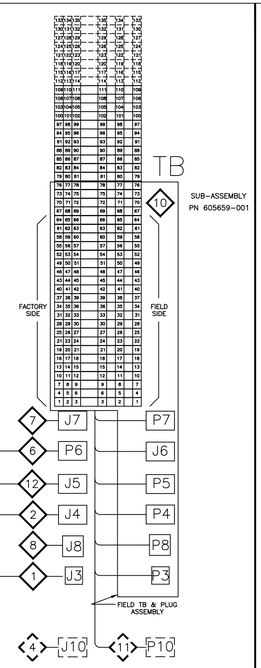
DRAWING REV. G ECN NO. 237098 SHEET 6 OF 10

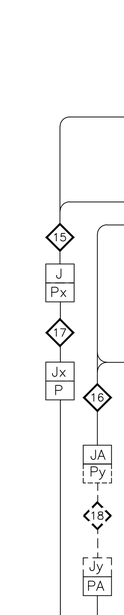
PHYSICAL DIAGRAM

ENCLOSURE

TS (TRANSFER SWITCH)

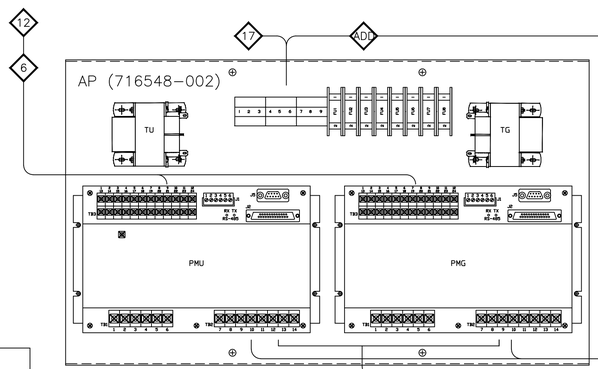






DOOR, INSIDE (PANEL "R")

BONDING STRAP
PN 098323-019



OPERATOR CONTROLS

ID	DESCRIPTION
PL1	TS CONNECTED TO NORMAL (GREEN)
PL2	TS CONNECTED TO EMERGENCY (RED)
PL3	NORMAL SOURCE ACCEPTED (GREEN)
PL4	EMERGENCY SOURCE ACCEPTED (RED)
PL5	EXTENDED PARALLEL TIME (RED)
PL6	FAILURE TO SYNCHRONIZE (RED)
SS1	TRANSFER CONTROL
SS2	ALARM RESET
SS3	CLOSED TRANSITION BYPASS
SS4	TS LOCKED OUT (RED)
SS5	TRANSITION MODE
AH	ALARM

REV. TO SHEET	ECN NO.	BY	APP.	DATE
G	237098	TR	BK	05/15/12
	SEE ECN			

PROJECT NAME:

WIRING DIAGRAM

7000 SERIES (G7ASLS) 3PH 1000-3000 AMPS
"G" FRAME, GROUP 5 CONTROLS

THIRD ANGLE PROJECTION

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FINAL APPROVAL		

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ASSEM. REF. NO.

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

COMPUTER GENERATED DRAWING

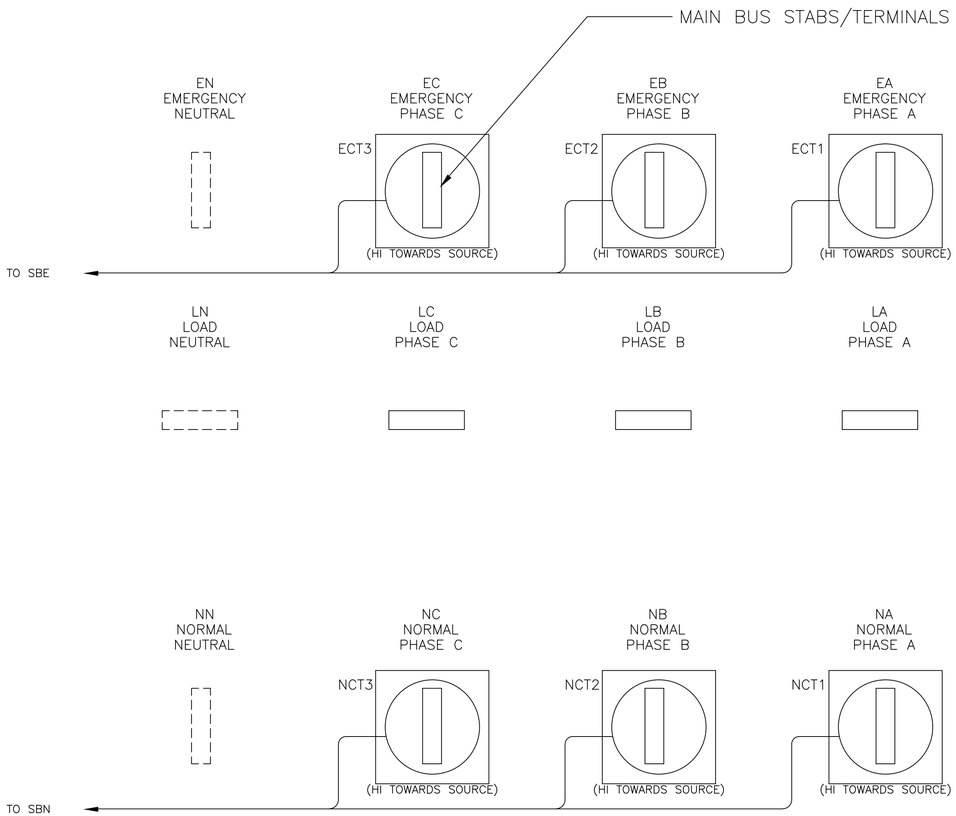
SCALE NONE SIZE DS

DWG. NO. 725705

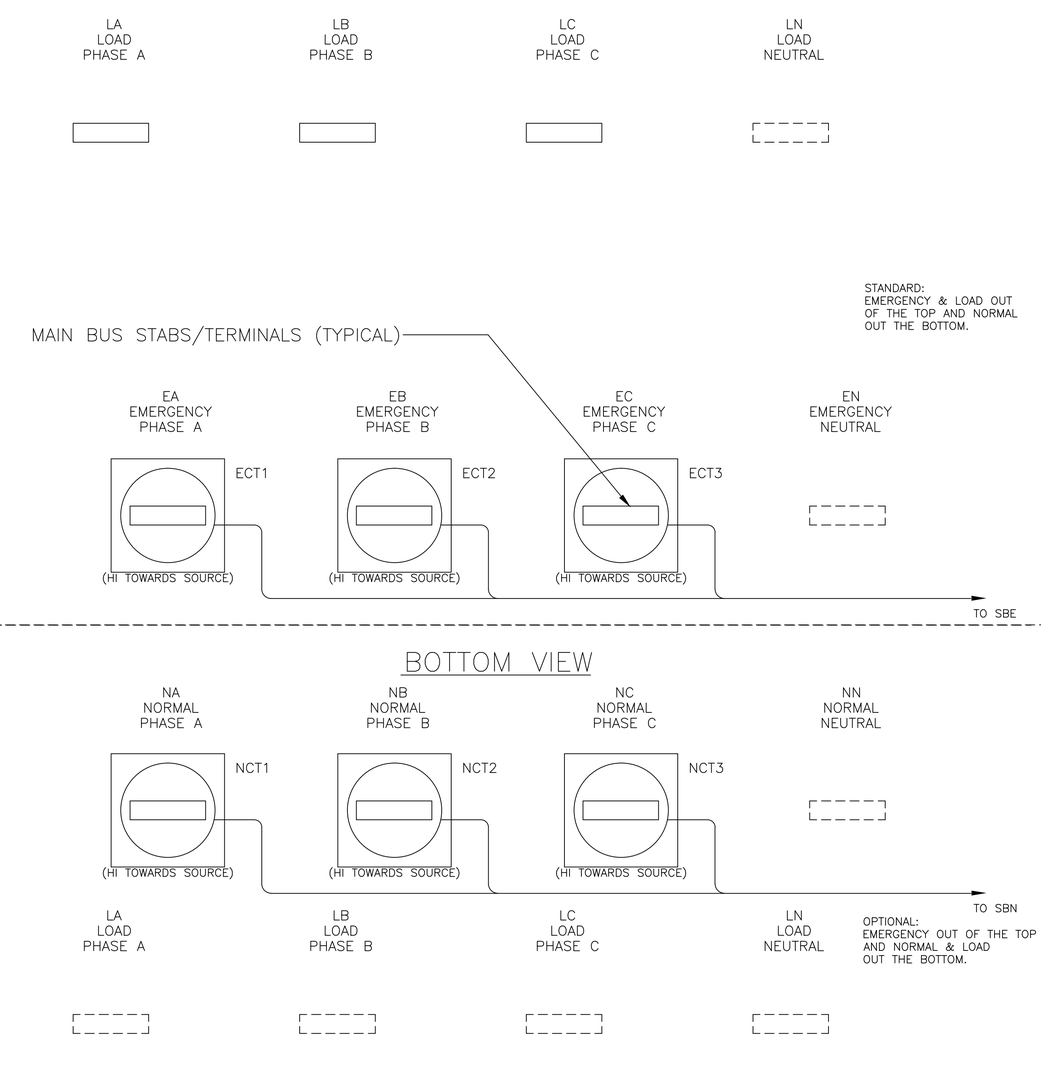
DRAWING REV. G ECN NO. 237098 SHEET 7 OF 10

PHYSICAL DIAGRAM (CONTINUED)

REAR CONNECTED SWITCH
1000 – 3000 AMP. TS REAR VIEW



FRONT CONNECTED SWITCH
1000 – 2000 AMP. TS TOP VIEW



REV. TO SHEET	ECN NO.	BY	APP.	DATE
G	237098	TR	BK	05/15/12
	SEE ECN			

PROJECT NAME:

WIRING DIAGRAM

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

COMPUTER GENERATED DRAWING

SCALE NONE SIZE DS

DWG. NO. 725705

DRAWING REV. G ECN NO. 237098 SHEET 8 OF 10

WIRE RUN LISTING

1 ← HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

WIRE No.	HARNESS 619510-026 (P,P1,P2N,P2E,J3,) MAIN TS	CLR	AWG
1	P-2,TS-1		16
1	P1-17,TS-1		
1	PA-2,TS-1		
2	P-3,P1-14		
3	P-4,TS-3		
3	P1-19,TS-3		
22	P-5,P1-5		
5	P-6,TS-7		
5	P1-20,TS-7		
4	P-7,TS-5		
4	P1-13,TS-5		
6	P-8,CE(AUX1)-24		
6	CE(AUX1)-24,J3-1		
7	P-9,CE(AUX1)-25		
7	CE(AUX1)-25,J3-2		
8	P-10,CE(AUX1)-21		
8	CE(AUX1)-21,CN(AUX1)-21		
8	CN(AUX1)-21,CN(AUX1)-48		
9	P-11,TS-2		
10	P-12,TS-1		
11	P-13,CN(AUX1)-49		
12	P-14,CN(AUX1)-22		
200	P-15,CN(MUS)-15		
13	P-16,CN(MUS)-17		
14	P-17,J3-3		
15	P-18,TS-6		
16	P-19,TS-9		
17	P-20,TS-10		
18	P-21,TS-11		
19	P-22,TS-4		
20	P-23,TS-8		
21	P-24,TS-12		
31	P1-1,P2E-4		
32	P1-2,P2E-1		
33	P1-3,P2E-2		
34	P1-4,P2E-3		
23	P1-6,CN(MUS)-13		
39	P1-8,CE(MUS)-13		
24	P1-9,P2N-4		
25	P1-10,P2N-1		
26	P1-11,P2N-2		
27	P1-12,P2N-3		
29	P1-15,CE(MUS)-18		
29	CE(MUS)-18,CN(MUS)-14		
29	CN(MUS)-14,CN(MUS)-16		
28	P1-18,CE(MUS)-16		
28	CE(MUS)-16,CE(MUS)-14		
28	CE(MUS)14,CN(MUS)-18		
30	P1-21,P1-24		
35	P1-22,P1-23		
202	PA-3,P1-16		
38	PA-5,P1-7		
211	PA-13,CE(AUX1)-22		
212	PA-14,CE(AUX1)-49		
213	PA-15,CE(MUS)-17		
214	PA-16,CE(MUS)-15		
215	PA-17,CE(AUX2)-80		
216	PA-18,CN(AUX2)-80		
223	CE(AUX2)-78,CN(AUX2)-78		
	REMOVE WIRES		
	ADD WIRES		
199	J3-4		
300	P-1		
201	PA-1		
203	PA-4		
204	PA-6		
205	PA-7		
206	PA-8		
207	PA-9		
208	PA-10		
209	PA-11		
210	PA-12		
217	PA-19		
218	PA-20		
219	PA-21		
220	PA-22		
221	PA-23		
222	PA-24		

2 ← HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☒

WIRE No.	HARNESS 609051-001 (J4) TS STD. AUX. CONTACTS	CLR	AWG
40	J4-1,CE(AUX1)-27		16
41	J4-2,CE(AUX1)-28		
42	J4-3,CN(AUX1)-28		
43	J4-4,CE(AUX1)-30		
44	J4-5,CE(AUX1)-31		
45	J4-6,CN(AUX1)-31		
46	J4-7,CE(AUX1)-33		
47	J4-8,CE(AUX1)-34		
48	J4-9,CN(AUX1)-34		
49	J4-10,CE(AUX1)-36		
50	J4-11,CN(AUX1)-38		
51	J4-12,CE(AUX1)-38		
52	J4-13,CE(AUX1)-39		
53	J4-14,CN(AUX1)-41		
54	J4-15,CE(AUX1)-41		
55	J4-16,CE(AUX1)-42		
56	J4-17,CN(AUX1)-44		
57	J4-18,CE(AUX1)-44		
58	J4-19,CE(AUX1)-45		
59	J4-20,CN(AUX1)-47		
60	J4-21,CE(AUX1)-47		
61	J4-22,CE(AUX1)-48		
62	J4-23,CN(AUX1)-50		
63	J4-24,CE(AUX1)-50		
	REMOVE WIRES		
61	J4-22,CE(AUX1)-48		
62	J4-23,CN(AUX1)-50		
63	J4-24,CE(AUX1)-50		

3 ← HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

WIRE No.	HARNESS 609051-001-A TS STD. AUX. CONTACTS	CLR	AWG
40	CE(AUX1)-27,CN(AUX1)-27		16
43	CE(AUX1)-30,CN(AUX1)-30		
46	CE(AUX1)-33,CN(AUX1)-33		
49	CE(AUX1)-36,CN(AUX1)-36		
52	CE(AUX1)-39,CN(AUX1)-39		
55	CE(AUX1)-42,CN(AUX1)-42		
58	CE(AUX1)-45,CN(AUX1)-45		
8	CE(AUX1)-48,CN(AUX1)-48		

4 ← HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

WIRE No.	HARNESS 609051-002 (J10) TS OPT. AUX. CONTACTS	CLR	AWG
70	J10-1,CE(AUX2)-51		16
71	J10-2,CE(AUX2)-52		
72	J10-3,CN(AUX2)-52		
73	J10-4,CE(AUX2)-54		
74	J10-5,CE(AUX2)-55		
75	J10-6,CN(AUX2)-55		
76	J10-7,CE(AUX2)-57		
77	J10-8,CE(AUX2)-58		
78	J10-9,CN(AUX2)-58		
79	J10-10,CE(AUX2)-60		
80	J10-11,CE(AUX2)-61		
81	J10-12,CN(AUX2)-61		
82	J10-13,CE(AUX2)-63		
83	J10-14,CE(AUX2)-64		
84	J10-15,CN(AUX2)-64		
85	J10-16,CE(AUX2)-66		
86	J10-17,CN(AUX2)-68		
87	J10-18,CE(AUX2)-68		
88	J10-19,CE(AUX2)-69		
89	J10-20,CN(AUX2)-71		
90	J10-21,CE(AUX2)-71		
91	J10-22,CE(AUX2)-72		
92	J10-23,CN(AUX2)-74		
93	J10-24,CE(AUX2)-74		

5 ← HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

WIRE No.	HARNESS 609051-002-A TS OPT. AUX. CONTACTS	CLR	AWG
70	CE(AUX2)-51,CN(AUX2)-51		16
73	CE(AUX2)-54,CN(AUX2)-54		
76	CE(AUX2)-57,CN(AUX2)-57		
79	CE(AUX2)-60,CN(AUX2)-60		
82	CE(AUX2)-63,CN(AUX2)-63		
85	CE(AUX2)-66,CN(AUX2)-66		
88	CE(AUX2)-69,CN(AUX2)-69		
91	CE(AUX2)-72,CN(AUX2)-72		

6 ← HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☒

WIRE No.	HARNESS 619510-049 (P6) FIELD INPUTS/OUTPUTS	CLR	AWG
100	P6-1,CP-P6-21	WHT	
101	P6-2,CP-P6-22	WHT	22
102	P6-3,CP-P6-23	WHT	(5 COND)
103	P6-4,CP-P6-9	WHT	
104	P6-5,CP-P6-10	WHT	
105	P6-6,PMU-TB3-15		16
106	P6-7,PMU-TB3-16		
107	P6-8,PMU-TB3-17		
108	P6-9,PMU-TB3-18		
109	P6-10,PMU-TB3-19		
110	P6-11,PMU-TB3-20		
111	P6-12,PMU-TB3-21		
112	P6-13,PMU-TB3-22		
113	P6-14,PMG-TB3-15		
114	P6-15,PMG-TB3-16		
115	P6-16,PMG-TB3-17		
116	P6-17,PMG-TB3-18		
117	P6-18,PMG-TB3-19		
118	P6-19,PMG-TB3-20		
119	P6-20,PMG-TB3-21		
120	P6-21,PMG-TB3-22		
121	P6-22,SLC-TB6-5		
122	P6-23,AP-TB-2		
123	P6-24		
	ADD WIRES		
310	CP-P6-24,SLC-TB6-4	BLK	22
311	DOC-P2-6,SLC-TB6-6	BLK	22
387	CP-P6-50,AP-TB-3	BLK	22
388	CP-P6-49,AP-TB-2	RED	(2 COND)

7 ← HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☒

WIRE No.	HARNESS 619510-050 (J7) FIELD INPUTS/OUTPUTS	CLR	AWG
			16
130	J7-1,TFR-9		
131	J7-2,TFR-6		
132	J7-3		
133	J7-4,DOC-P3-3		
134	J7-5,DOC-P3-1		
135	J7-6,DOC-P3-2		
136	J7-7,DOC-P3-4		
137	J7-8,DOC-P3-5		
138	J7-9,DOC-P3-6		
139	J7-10,SLC-TB2-1		
140	J7-11,SLC-TB2-2		
141	J7-12,SLC-TB7-3	SHLD	16
142	J7-13,SLC-TB7-2	BLK	(2 COND)
143	J7-14,SLC-TB7-1	WHT	
144	J7-15,SLC-TB7-5	SHLD	16
145	J7-16,SLC-TB7-7	BLK	(2 COND)
146	J7-17,SLC-TB7-6	WHT	
147	J7-18		
148	J7-19		
149	J7-20		
150	J7-21		
151	J7-22		
152	J7-23		
153	J7-24		
	ADD WIRES		
144	SLC-TB7-5,SLC-TB7-3	GRN	16
144	SLC-TB7-3,EQUIP. GND.	GRN	

8 ← HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☒

WIRE No.	HARNESS 605454-005 (J8) OPTIONAL SERIAL I/O	CLR	AWG
160	J8-1,72A-5	SHLD	
161	J8-2,72A-1	WHT/ORG	22
162	J8-3,72A-2	ORG/WHT	(4 COND)
163	J8-4,72A-3	WHT/BLU	
164	J8-5,72A-4	BLU/WHT	
165	J8-6		
166	J8-7		
167	J8-8		
168	J8-9		
	REMOVE WIRES		
160	J8-1,72A-5	SHLD	
161	J8-2,72A-1	WHT/ORG	22
162	J8-3,72A-2	ORG/WHT	(4 COND)
163	J8-4,72A-3	WHT/BLU	
164	J8-5,72A-4	BLU/WHT	
	ADD WIRES		
160	J8-1,SLC-TB4-5	SHLD	
161	J8-2,SLC-TB4-1	WHT/ORG	22
162	J8-3,SLC-TB4-2	ORG/WHT	(4 COND)
163	J8-4,SLC-TB4-3	WHT/BLU	
164	J8-5,SLC-TB4-4	BLU/WHT	

10 ← HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☒

WIRE No.	SUB-ASSEMBLY 605659-001 (P3,P4,J6,P7,P8,P5,TB) SL FIELD TB	CLR	AWG
6	TB-1,P3-1		16
7	TB-2,P3-2		
14	TB-3,P3-3		
40	TB-4,P4-1		
41	TB-5,P4-2		
42	TB-6,P4-3		
43	TB-7,P4-4		
44	TB-8,P4-5		
45	TB-9,P4-6		
46	TB-10,P4-7		
47	TB-11,P4-8		
48	TB-12,P4-9		
49	TB-13,P4-10		
51	TB-14,P4-12		
50	TB-15,P4-11		
52	TB-16,P4-13		
53	TB-17,P4-15		
54	TB-18,P4-14		
55	TB-19,P4-16		
56	TB-20,P4-18		
57	TB-21,P4-17		
58	TB-22,P4-19		
59	TB-23,P4-21		
60	TB-24,P4-20		
61	TB-25,P4-22		
62	TB-26,P4-24		
63	TB-27,P4-23		
100	TB-28,J6-1		
101	TB-29,J6-2		
102	TB-30,J6-3		
103	TB-31,J6-4		
104	TB-32,J6-5		
130	TB-34,P7-1		
131	TB-35,P7-2		
132	TB-36,P7-3		
160	TB-37,P8-1	SHLD	
161	TB-38,P8-2	WHT/ORG	24
162	TB-39,P8-3	ORG/WHT	(4 COND)
163	TB-40,P8-4	WHT/BLU	
164	TB-41,P8-5	BLU/WHT	
133	TB-43,P7-4		16
134	TB-44,P7-5		
135	TB-45,P7-6		
136	TB-46,P7-7		
137	TB-47,P7-8		
138	TB-48,P7-9		
139	TB-49,P7-10		
140	TB-50,P7-11		
141	TB-52,P7-12	SHLD	16
142	TB-53,P7-13	BLK	(2 COND)
143	TB-54,P7-14	WHT	
144	TB-55,P7-15	SHLD	16
145	TB-56,P7-16	BLK	(2 COND)
146	TB-57,P7-17	WHT	
121	TB-58,J6-22		16
122	TB-59,J6-23		
360	TB-60,P5-1		
361	TB-61,P5-2		
362	TB-62,P5-3		
363	TB-63,P5-4		
364	TB-64,P5-5		
365	TB-66,P5-6		
366	TB-68,P5-7		
367	TB-70,P5-8		
368	TB-71,P5-9		
369	TB-72,P5-10		
370	TB-74,P5-11		
371	TB-76,P5-12		
105	TB-78,J6-6		
106	TB-79,J6-7		
107	TB-80,J6-8		
108	TB-81,J6-9		
109	TB-82,J6-10		
110	TB-83,J6-11		
111	TB-84,J6-12		
112	TB-85,J6-13		
372	TB-86,P5-13		
373	TB-87,P5-14		
374	TB-88,P5-15		
375	TB-89,P5-16		
376	TB-90,P5-17		
377	TB-92,P5-18		
378	TB-94,P5-19		
379	TB-96,P5-20		
380	TB-97,P5-21		
381	TB-98,P5-22		
382	TB-100,P5-23		
383	TB-102,P5-24		
113	TB-104,J6-14		
114	TB-105,J6-15		
115	TB-106,J6-16		
116	TB-107,J6-17		
117	TB-108,J6-18		
118	TB-109,J6-19		
119	TB-110,J6-20		
120	TB-111,J6-21		
	JUMPERS		
	–TB-28,TB-29 FIELD SIDE		
	–TB-29,TB-30 FIELD SIDE		
600	TB-60,TB-63 FACTORY SIDE		
600	TB-63,TB-65 FACTORY SIDE		
600	TB-65,TB-67 FACTORY SIDE		
600	TB-67,TB-69 FACTORY SIDE		
600	TB-69,TB-71 FACTORY SIDE		
600	TB-71,TB-73 FACTORY SIDE		
600	TB-73,TB-75 FACTORY SIDE		
600	TB-75,TB-77 FACTORY SIDE		

10 ← HARNESS LOCATOR — IF HARNESS IS MODIFIED ☒

WIRE No.	SUB-ASSEMBLY 605659-001 CONTINUED...	CLR	AWG
105	TB-78,TB-80 FIELD SIDE		16
106	TB-79,TB-82 FIELD SIDE		
108	TB-81,TB-84 FIELD SIDE		
110	TB-83,TB-85 FIELD SIDE		
601	TB-86,TB-89 FACTORY SIDE		
601	TB-89,TB-91 FACTORY SIDE		
601	TB-91,TB-93 FACTORY SIDE		
601	TB-93,TB-95 FACTORY SIDE		
601	TB-95,TB-97 FACTORY SIDE		
601	TB-97,TB-99 FACTORY SIDE		
601	TB-99,TB-101 FACTORY SIDE		
601	TB-101,TB-103 FACTORY SIDE		
	ADD WIRES		
199	P3-4		
147	P7-18		
148	P7-19		
149	P7-20		
150	P7-21		
151	P7-22		
152	P7-23		
153	P7-24		
123	J6-24		
165	P8-6		
166	P8-7		
167	P8-8		
168	P8-9		
603	TB-62,TB-21 FIELD SIDE		
604	TB-21,TB-64 FIELD SIDE		
605	TB-63,TB-20 FIELD SIDE		
63	TB-105,TB-23 FIELD SIDE		

15 ← HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

WIRE No.	HARNESS 483763 (J,CP–P1,CP–P2) CONTROL PANEL	CLR	AWG
350	J-1,CP-P1-8		18
1	J-2,CP-P1-15		
2	J-3,CP-P1-2		
3	J-4,CP-P1-4		
4	J-5,CP-P1-17		
5	J-6,CP-P1-12		
4	J-7,CP-P1-7		
6	J-8,CP-P2-2		
7	J-9,CP-P2-3		
8	J-10,CP-P2-8		
9	J-11,CP-P1-10		
10	J-12,CP-P1-1		
11	J-13,CP-P2-9		
12	J-14,CP-P2-10		
200	J-15,CP-P1-5		
13	J-16,CP-P1-13		
14	J-17,CP-P2-1		
15	J-18,CP-P1-14		
	ADD WIRES		
16	J-19		
17	J-20		
18	J-21		
19	J-22		
20	J-23		
21	J-24		

16 ← HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☒

WIRE No.	HARNESS 619385 (JA,CP–P2,CP–P6) CONTROL MODULE	CLR	AWG
1	JA-2,DOC-P1-15		16
202	JA-3,DOC-P1-2		
201	JA-1,DOC-P1-8		
214	JA-16,DOC-P1-13		
213	JA-15,DOC-P1-5		
38	JA-5,DOC-P1-17		
211	JA-13,CP-P2-6		
212	JA-14,CP-P2-7		
	ADD WIRES		
203	JA-4		
204	JA-6		
205	JA-7		
206	JA-8		
207	JA-9		
208	JA-10		
209	JA-11		
210	JA-12		
215	JA-17,DOC-P2-4		
216	JA-18,DOC-P2-5		
217	JA-19		
218	JA-20		
219	JA-21		
220	JA-22		
221	JA-23		
222	JA-24		

17 ← HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☒

WIRE No.	HARNESS 309320-005 8" EXTENSION HARNESS	CLR	AWG
350	Jx-1,Py-1		16
1	Jx-2,Px-2		
2	Jx-3,Px 3		
3	Jx-4,Px-4		
4	Jx-5,Px-5		
5	Jx-6,Px-6		
4	Jx-7,Px-7		
6	Jx-8,Px-8		
7	Jx-9,Px-9		
8	Jx-10,Px-10		
9	Jx-11,Px-11		
10	Jx-12,Px-12		
11	Jx-13,Px-13		
12	Jx-14,Px-14		
200	Jx-15,Px-15		
13	Jx-16,Px-16		
14	Jx-17,Px-17		
15	Jx-18,Px-18		
16	Jx-19,Px-19		
17	Jx-20,Px-20		
18	Jx-21,Px-21		
19	Jx-22,Px-22		
20	Jx-23,Px-23		
21	Jx-24,Px-24		
	REMOVE WIRES		
3	Jx-4,Px-4		
5	Jx-6,Px-6		
4	Jx-7,Px-7		
9	Jx-11,Px-11		
10	Jx-12,Px-12		
15	Jx-18,Px-18		
19	Jx-22,Px-22		
20	Jx-23,Px-23		
	ADD WIRES		
3	Jx-4,AP-FU3-1		
3	AP-FU3-1,Px-4		
5	Jx-6,AP-FU6-1		
5	AP-FU6-1,Px-6		
4	Jx-7,AP-FU4-1		
4	AP-FU4-1,Px-7		
9	Jx-11,AP-FU2-1		
9	AP-FU2-1,Px-11		
10	Jx-12,AP-FU1-1		
10	AP-FU1-1,Px-12		
15	Jx-18,AP-FU5-1		
15	AP-FU5-1,Px-18		
19	Jx-22,Px-22 SEE ADDITIONAL WIRING		
20	Jx-23,Px-23 SEE ADDITIONAL WIRING		

18 ← HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

WIRE No.	HARNESS 309320-005 OPTIONAL 8 IN. EXTENSION HARNESS	CLR	AWG
201	Jy-1,Py-1		16
1	Jy-2,Py-2		
202	Jy-3,Py-3		
203	Jy-4,Py-4		
38	Jy-5,Py-5		
204	Jy-6,Py-6		
205	Jy-7,Py-7		
206	Jy-8,Py-8		
207	Jy-9,Py-9		
208	Jy-10,Py-10		
209	Jy-11,Py-11		
210	Jy-12,Py-12		
211	Jy-13,Py-13		
212	Jy-14,Py-14		
213	Jy-15,Py-15		
214	Jy-16,Py-16		
215	Jy-17,Py-17		
216	Jy-18,Py-18		
217	Jy-19,Py-19		
218	Jy-20,Py-20		
219	Jy-21,Py-21		
220	Jy-22,Py-22		
221	Jy-23,Py-23		
222	Jy-24,Py-24		

31 ← HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☒

WIRE No.	SUB-ASSEMBLY 605113-001 (J1,OM) DUAL SOLENOID UNIT	CLR	AWG
	CONTROL MODULE ASSEMBLY		16
	J1-1,CR3-(+)		
	J1-2,CR3-(–)		
	J1-3,CR4-(+)		
	J1-4,CR4-(–)		
	J1-5,CR1-AC1		
	J1-6,CR2-AC1		
	J1-7,CR3-AC1		
	J1-8,CR4-AC1		
	J1-9,CR1-(+)		
	J1-10,CR1-(–)		
	J1-11,CR2-(+)		
	J1-12,CR2-(–)		
	J1-13,SER-R2		
	J1-14,SER-A2		
	J1-15,ERR-R2		
	J1-16,ERR-A2		
	J1-17,SER-2		
	J1-18,ERR-2		
	J1-19,SER-A1		
	SER-A1,SER-3		
	J1-20,ERR-A1		
	ERR-A1,ERR-3		
	J1-21,CR1-AC2		
	CR1-AC2,CR2-AC2		
	J1-22,CR3-AC2		
	CR3-AC2,CR4-AC2		
	J1-23,SER-R3		
	J1-24,ERR-R3		
	SER-R3,ERR-R3		
	SER-1,ERR-R1		
	SER-R1,ERR-1		
	SER-4,ERR-R4		
	SER-R4,ERR-4		
	NOTE: SUB-ASSEMBLY NO WIRE NUMBERS NEEDED		
	REMOVE WIRES		
	J1-16,ERR-A2		
	ADD WIRES		
	J1-16,SER-A2		
	ERR-1,ERR-A2		

REV.	TO SHEET	ECN NO.	BY	APP.	DATE
G		237098	TR	BK	05/15/12
		SEE ECN			

PROJECT NAME:

WIRING — DIAGRAM

7000 SERIES (G7ASLS) 3PH 1000–3000 AMPS
"G" FRAME, GROUP 5 CONTROLS

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	DRS	2/1/02
CHECKED	BK	2/1/02
PROJECT APPROVAL	WK	2/1/02
FINAL APPROVAL		

MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-I-003. FOR PLASTIC PARTS SEE MP-I-055

ASSEM. REF. NO.

COMPUTER GENERATED DRAWING

SCALE NONE | SIZE DS

DWG. NO. 725705

DRAWING REV. G | ECN NO. 237098 | SHEET 9 OF 10

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

WIRE RUN LISTING

⟨13⟩ HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

WIRE No.	HARNESS 619510-052 PMG,PMU,SLC	CLR	AWG
143	AP-TB-2,SLC-TB6-1		16
387	AP-TB-3,AH-(-)		
390	PMU-P1-3,PMG-P1-3	WHT/ORG	24
391	PMU-P1-4,PMG-P1-4	ORG/WHT	(4 COND)
392	PMU-P1-1,PMG-P1-1	WHT/BLU	
393	PMU-P1-2,PMG-P1-2	BLU/WHT	
394	PMU-P1-5,PMU-P1-6	BLK	22
390	PMG-P1-3,72A-1	WHT/ORG	24
391	PMG-P1-4,72A-2	ORG/WHT	(4 COND)
392	PMG-P1-1,72A-3	WHT/BLU	
393	PMG-P1-2,72A-4	BLU/WHT	
500	SHLD(PMU),SHLD(PMG) **		24
	TIE SHIELD WIRES TOGETHER		
500	SHLD(PMG),72A-5		
409	AP-TB-5,SLC-TB2-5		16
426	AP-TB-6,SLC-TB2-6		
410	AP-TB-7,SLC-TB2-7		
427	AP-TB-8,SLC-TB2-8		
417	SBN-2,AP-PMU-TB2-7		
418	SBN-4,AP-PMU-TB2-9		
419	SBN-6,AP-PMU-TB2-11		
502	SBN-8,AP-PMU-TB2-8		16-GRN
502	AP-PMU-TB2-8,AP-PMU-TB2-10		16-GRN
502	AP-PMU-TB2-10,AP-PMU-TB2-12		16-GRN
502	AP-PMU-TB2-12,AP-PMU-GND		16-GRN
420	SBE-2,AP-PMG-TB2-7		16
421	SBE-4,AP-PMG-TB2-9		
423	SBE-6,AP-PMG-TB2-11		
503	SBE-8,AP-PMG-TB2-8		16-GRN
503	AP-PMG-TB2-8,AP-PMG-TB2-10		16-GRN
503	AP-PMG-TB2-10,AP-PMG-TB2-12		16-GRN
503	AP-PMG-TB2-12,AP-PMG-GND		16-GRN

⟨12⟩ HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

WIRE No.	HARNESS 619510-051 (J5) PMU/PMG FIELD INPUTS	CLR	AWG
360	J5-1,PMU-TB3-1		16
361	J5-2,PMU-TB3-13		
362	J5-3,PMU-TB3-2		
363	J5-4		
364	J5-5,PMU-TB3-3		
365	J5-6,PMU-TB3-4		
366	J5-7,PMU-TB3-5		
367	J5-8,PMU-TB3-8		
368	J5-9		
369	J5-10,PMU-TB3-9		
370	J5-11,PMU-TB3-10		
371	J5-12,PMU-TB3-11		
372	J5-13,PMG-TB3-1		
373	J5-14,PMG-TB3-13		
374	J5-15,PMG-TB3-2		
375	J5-16		
376	J5-17,PMG-TB3-3		
377	J5-18,PMG-TB3-4		
378	J5-19,PMG-TB3-5		
379	J5-20,PMG-TB3-8		
380	J5-21		
381	J5-22,PMG-TB3-9		
382	J5-23,PMG-TB3-10		
383	J5-24,PMG-TB3-11		

⟨11⟩ HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

WIRE No.	HARNESS 605454-011 (P10,TB) OPT. AUX. CONTACTS	CLR	AWG
70	P10-1,TB-112		16
71	P10-2,TB-113		
72	P10-3,TB-114		
73	P10-4,TB-115		
74	P10-5,TB-116		
75	P10-6,TB-117		
76	P10-7,TB-118		
77	P10-8,TB-119		
78	P10-9,TB-120		
79	P10-10,TB-121		
80	P10-11,TB-122		
81	P10-12,TB-123		
82	P10-13,TB-124		
83	P10-14,TB-125		
84	P10-15,TB-126		
85	P10-16,TB-127		
86	P10-18,TB-128		
87	P10-17,TB-129		
88	P10-19,TB-130		
89	P10-21,TB-131		
90	P10-20,TB-132		
91	P10-22,TB-133		
93	P10-23,TB-135		
92	P10-24,TB-134		

⟨DC⟩ HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☒

WIRE No.	HARNESS 713083-003 (CP-P10) DOOR CONTROLS & INDICATORS	CLR	AWG
170	CP-P10-40,PL1(-)	BLK	22
171	CP-P10-31,PL1(+)	RED	(2 COND)
172	CP-P10-39,PL2(-)	WHT	
173	CP-P10-32,PL2(+)	GRN	
174	CP-P10-38,PL3(-)	ORG	
175	CP-P10-33,PL3(+)	BLU	22
176	CP-P10-37,PL4(-)	BRN	(25 COND)
177	CP-P10-34,PL4(+)	YEL	
178	CP-P10-25,PL5(-)	RED/GRN	
179	CP-P10-21,PL5(+)	RED/YEL	
180	CP-P10-26,PL6(-)	RED/BLK	
181	CP-P10-22,PL6(+)	WHT/BLK	
182	CP-P10-20,SS4(-)	WHT/RED	
183	CP-P10-23,SS4(+)	WHT/GRN	
184	CP-P10-44,SS1-24	VIO	
185	CP-P10-43,SS1-23	GRY	
186	CP-P10-41,SS1-13	PINK	
187	CP-P10-42,SS1-14	TAN	
188	CP-P10-30,SS4-14	WHT/BLU	
189	SS4-13,SS2-13	WHT/YEL	
189	CP-P10-29,SS4-13	WHT/YEL	
190	CP-P10-19,SS2-14	WHT/GRY	
191	CP-P10-28,SS3-14	WHT/ORG	
192	CP-P10-27,SS3-13	WHT/BRN	
	REMOVE WIRES		
184	CP-P10-44,SS1-24	VIO	
185	CP-P10-43,SS1-23	GRY	
186	CP-P10-41,SS1-13	PNK	
187	CP-P10-42,SS1-14	TAN	
	ADD WIRES		
184	CP-P10-44,SS1-14	VIO	
185	CP-P10-43,SS1-13	GRY	
186	CP-P10-45,SS1-23	RED	
187	CP-P10-46,SS1-24	BLK	
204	CP-P10-41,SS5-13	PNK	
205	CP-P10-42,SS5-14	TAN	

WIRE No.	ADDITIONAL WIRING	CLR	AWG
132	CP-P6-40,TFR-A	BLK	22
133	CP-P6-41,TFR-B	RED	(2 COND)
134	CP-P6-42,DOC-P2-1	BLK	
135	CP-P6-43,DOC-P2-3	WHT	22
136	CP-P6-44,DOC-P2-2	RED	(4 COND)
388	SLC-TB6-2,AH-(+)		16
500	72A-5,SLC-TB4-10	SHLD	
500	SLC-TB4-10,CHASSIS GND	SHLD	
390	72A-1,SLC-TB4-8	WHT/ORG	22
391	72A-2,SLC-TB4-9	ORG/WHT	(4 COND)
392	72A-3,SLC-TB4-6	WHT/BLU	
393	72A-4,SLC-TB4-7	BLU/WHT	
387	AP-TB-4,SLC-TB2-4		16
388	AP-TB-1,SLC-TB2-3		
411	NCT1-X1,SBN-1		
412	NCT2-X1,SBN-3		
413	NCT3-X1,SBN-5		
500	SBN-7,CHASSIS GND	GRN	
500	SBN-7,NCT1-X2	GRN	
500	NCT1-X2,NCT2-X2	GRN	
500	NCT2-X2,NCT3-X2	GRN	
414	ECT1-X1,SBE-1		
415	ECT2-X1,SBE-3		
416	ECT3-X1,SBE-5		
501	SBE-7,CHASSIS GND	GRN	
501	SBE-7,ECT1-X2	GRN	
501	ECT1-X2,ECT2-X2	GRN	
501	ECT2-X2,ECT3-X2	GRN	

WIRE No.	ADDITIONAL WIRING ⟨WYE⟩	CLR	AWG
402	FU2-2,PMU-TB1-3		16
22	Jx-22,PMU-TB1-2		
22	PMU-TB1-2,PMU-TB1-4		
22	PMU-TB1-4,PMU-TB1-6		
405	FU5-2,PMG-TB1-3		
23	Jx-23,PMG-TB1-2		
23	PMG-TB1-2,PMG-TB1-4		
23	PMG-TB1-4,PMG-TB1-6		

WIRE No.	ADDITIONAL WIRING ⟨DELTA⟩	CLR	AWG
401	PMU-TB1-1,PMU-TB1-4		16
402	FU2-2,PMU-TB1-2		
402	PMU-TB1-2,PMU-TB1-6		
403	PMU-TB1-3,PMU-TB1-5		
22	Jx-22,Px-22		
404	PMG-TB1-1,PMG-TB1-4		
405	FU5-2,PMG-TB1-2		
405	PMG-TB1-2,PMG-TB1-6		
406	PMG-TB1-3,PMG-TB1-5		
23	Jx-23,Px-23		

POWERMANAGER TB1 WIRING:

1. WIRE IN WYE IF SWITCH IS SUPPLIED WITH A NEUTRAL (CATALOG NUMBER CONTAINS A3, B3 OR C3).
2. WIRE IN DELTA IF SWITCH IS NOT SUPPLIED WITH A NEUTRAL (CATALOG NUMBER DOES NOT CONTAIN A3, B3 OR C3).

WIRE No.	ADDITIONAL WIRING	CLR	AWG
			16

WIRE No.	ADDITIONAL WIRING	CLR	AWG
			16

G	237098	TR	BK	05/15/12
	SEE ECN			
REV. TO SHEET	ECN NO.	BY	APP.	DATE

PROJECT NAME:

WIRING | DIAGRAM

7000 SERIES (G7ASLS) 3PH 1000-3000 AMPS
"G" FRAME, GROUP 5 CONTROLS

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	DRS	2/1/02
CHECKED	BK	2/1/02
PROJECT APPROVAL	WK	2/1/02
FINAL APPROVAL		

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

SCALE NONE | SIZE DS

DWG. NO. 725705

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

DRAWING REV. G | ECN NO. 237098 | SHEET 10 OF 10