THREE PHASE WIRING FOR ASCO 7000 SERIES AUTOMATIC DELAYED TRANSITION TRANSFER & BYPASS-ISOLATION SWITCHES TYPE 7ADTB RATED 3000 - 4000 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).

DELAYED TRANSFER (LOAD "OFF" TIME) –
PROVIDES A USER DEFINABLE PERIOD DURING WHICH THE LOAD IS DISCONNECTED FROM BOTH THE NORMAL AND EMERGENCY SOURCES DURING TRANSFER IN EITHER DIRECTION. 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 IS INITIATED.

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

SIGNALS & AUXILIARIES

A. FEATURES 7 – 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. ENGINE STARTING SIGNAL RESETS FOLLOWING RETRANSFER TO THE NORMAL SOURCE AND EXPIRATION OF THE FEATURE 2E (ENGINE COOL DOWN) TIME DELAY.
FEATURE 7 CONSISTS OF A FORM A CONTACT CONNECTED TO THE FIELD CONNECTIONS TERMINAL BLOCK (TB). CONTACTS RATED 5 AMPS AT 32VDC/120VAC RESISTIVE.

B. FEATURES 14AC & 14BB – TRANSFER SWITCH AUXILIARY POSITION INDICATING CONTACTS.
FOUR (4) FORM A CONTACTS TO INDICATE CONNECTION OF THE TRANSFER SWITCH TO NORMAL (14A) AND THREE (3) 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).

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 TO THE EMERGENCY SOURCE BY MEANS OF A DELAYED TRANSITION, (PROGRAMMED LOAD DISCONNECT PERIOD).

DELAYED TRANSITION TRANSFER TO EMERGENCY WILL CAUSE THE NORMAL SOURCE CONTACTOR (CN) TO OPEN. AFTER THE LOAD DISCONNECT DELAY, AS SET VIA THE USER INTERFACE OF THE GROUP 5 CONTROL PANEL, THE EMERGENCY SOURCE CONTACTOR (CE) WILL CLOSE. DURING THE PERIOD THAT BOTH CONTACTORS ARE OPEN AND THE TIME DELAY IS ACTIVE, A "LOAD DISCONNECT ACTIVE" LED WILL BE LIT (AMBER LED).

WHEN THE NORMAL SOURCE IS RESTORED FOR THE DURATION OF THE FEATURE 3A, RETRANSFER TO NORMAL TIME DELAY SETTING, THE LOAD WILL BE RETRANSFERRED TO THE NORMAL SOURCE IN A DELAYED TRANSITION MANNER.

DELAYED TRANSITION RETRANSFER TO NORMAL WILL CAUSE THE EMERGENCY SOURCE CONTACTOR (CE) TO OPEN. AFTER THE LOAD DISCONNECT TIME DELAY EXPIRES, THE NORMAL SOURCE CONTACTOR (CN) WILL CLOSE.

THE ENGINE WILL CONTINUE TO RUN FOR THE ENGINE COOL DOWN PERIOD. FEATURE 2E.

DELAYED TRANSITION TRANSFER WILL ALSO OCCUR DURING TRANSFER TO EMERGENCY BY OPERATING THE TEST SWITCH. RETRANSFER TO NORMAL WILL OCCUR AS PREVIOUSLY DESCRIBED.

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. LOAD DISCONNECT ACTIVE – INDICATES THAT THE TRANSFER SWITCH IS IN THE LOAD DISCONNECTED POSITION (BOTH NORMAL (CN) AND EMERGENCY (CE) CONTACTORS OPEN) (AMBER LED).

BYPASS SWITCH USER CONTROLS & INDICATIONS

A. SOURCE AVAILABILITY INDICATORS:
NORMAL SOURCE AVAILABLE: (GREEN LED)
EMERGENCY SOURCE AVAILABLE: (RED LED)

B. BYPASS SWITCH POSITION INDICATORS:
BYPASS SWITCH NORMAL CONTACTS CLOSED: (GREEN, LED)
BYPASS SWITCH EMERGENCY CONTACTS CLOSED: (RED, LED)

C. ISOLATION CONTACTS POSITION INDICATORS:
ISOLATION CONTACTS IN DISCONNECTED POSITION: (RED, LED)
ISOLATION CONTACTS IN TEST POSITION: (AMBER, LED)
ISOLATION CONTACTS IN CONNECTED POSITION: (GREEN, LED)

D. TRANSFER SWITCH POSITION INDICATORS:
TRANSFER SWITCH CLOSED ON NORMAL: (GREEN, LED)
TRANSFER SWITCH CLOSED ON EMERGENCY: (RED, LED)

E. SOLENOID INTERLOCKS –
SL1: INTERLOCKS THE TRANSFER SWITCH ISOLATION CRANK WITH THE TRANSFER SWITCH AND BYPASS SWITCH TO INSURE THAT THE TRANSFER SWITCH CAN NEVER BE DISCONNECTED WITHOUT BEING BYPASSED AND THAT IT CAN NEVER BE RECONNECTED UNLESS IT IS IN THE SAME POSITION AS THE BYPASS SWITCH.
SL2: INTERLOCKS THE BYPASS SWITCH OPERATOR, WHILE IN THE CONNECTED POSITION, SO THAT THE BYPASS SWITCH CAN NEVER BE OPERATED TO THE SOURCE OPPOSITE OF WHICH THE TRANSFER IS CONNECTED.

GENERAL NOTES

1. SWITCH SHOWN DE-ENERGIZED AND CONNECTED TO THE NORMAL SOURCE. THE BYPASS SWITCH OPERATOR IS IN THE "AUTOMATIC" POSITION (NORMAL & EMERGENCY BYPASS CONTACTS OPEN). THE ISOLATION HANDLE IS IN THE "CLOSED" POSITION (ATS CONNECTED).
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. O 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.

TECHNICAL DATA

BYPASS SWITCH AUXILIARY CONTACTS

AUX. CONT.	BYPASS HANDLE POSITION: EMERG	AUTO	NORMAL
1-2	X		X
7-8		X	
9-10	X		X
11-12		X	
13-14	X		X
15-16		X	
17-18	X		X
19-20		X	
21-22	X		X
3-4	THESE CONTACTS CAN BE EITHER OPEN OR CLOSED IN AUTOMATIC POSITION DEPENDING UPON WHETHER HANDLE IS IN OR OUT		
6-5			

ISOLATION AUXILIARY CONTACTS

AUX. CONT.	CARRIAGE IN		MAIN CONT. ENGAGE		TEST POSITION		CARRIAGE OUT
1-2	X	X	X	X	X		
3-4	X		X		X		X
5-6					X	X	X
7-8					X	X	
26-27	X						
13-14	X						X
15-16							X
26-28	X	X	X	X	X	X	X
19-20	X						
23-24					X	X	X
17-18	X	X	X	X	X	X	
17-21	X						X

CATALOG NUMBER SUFFIXES

BASE CATALOG NUMBER: CATALOG TYPE	NEUTRAL TYPE	PHASE POLES	AMPS	VOLT CODE	CONTROLLER	OPTIONAL ACCESSORY	ENCLOSURE CODE
7ADTB	A	3	3000 4000	A B C D E F G H J K L M N P Q R	5	X	C E F G H J K L
	BLANK FOR NONE					BLANK FOR NONE	BLANK FOR OPEN TYPE

EXPLANATION OF CATALOG NUMBER CODES

NEUTRAL TYPE: CODE	DESCRIPTION
BLANK	NONE
A	SOLID

VOLTAGE CODES (3 PHASE (3 OR 4 WIRE) 50 OR 60 Hz): CODE	NOMINAL VOLTAGE
A	115
B	120
C	208
D	220
E	230
F	240
G	277
H	380
J	400
K	415
L	440
M	460
N	480
P	550
Q	575
R	600

ENCLOSURE CODES: CODE	TYPE	DESCRIPTION
BLANK		OPEN TYPE (NO ENCLOSURE)
C	1	GENERAL PURPOSE, INDOOR
E	2	INDOOR, WATER & DUST RESISTANT
F	3R	OUTDOOR, RAINPROOF, SLEET & ICE RESISTANT
G	4	INDOOR/OUTDOOR, WATERTIGHT & DUSTTIGHT
H	4X	TYPE 4 PLUS CORROSION RESISTANCE (STAINLESS STEEL)
J	4X	TYPE 4 PLUS CORROSION RESISTANCE (FIBERGLASS)
K	7	EXPLOSION PROOF
L	12	INDOOR, INDUSTRIAL ENVIRONMENTS, OILTIGHT & DUSTTIGHT

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

PROJECT NAME:
WIRING DIAGRAM
7000 SERIES (7ADTB)
GROUP 5 CONTROLS

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	JPB	12/98
CHECKED		
DRAFTING APPROVAL		
FINAL APPROVAL	JPB	12/98

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.

CHANGE LETTER	ECN NO.	BY	APP.	DATE
B	157944	BWM	BK	6/13/01
	SEE ECN			
A	153491	BK	BK	12/16/99
	SEE ECN			
—	150103	JPB	JPB	12/98
	ISSUE			

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

COMPUTER GENERATED DRAWING
SCALE ACAD FILE A0
SIZE DWG. NO. DS617430
CHANGE LETTER B ECN NO. 157944 SHEET 1 OF 8

FIELD CONNECTIONS

LOCATED AT UPPER RIGHT SIDE OF "TS" ENCLOSED UNITS

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

ES1 — 1 — COMMON
ES2 — 2 — FEATURE 7 CLOSES TO START
ENGINE STARTING SIGNAL (5 AMPS, 32VDC)
3 P3 — 3 — (NOT USED)

TS AUX. CONTACTS

CN 12 14A 13	J12-P12 1	J4-P4 1 → 4 — FEATURE 14A CLOSED ON NORMAL
CN 31 14A 32	J12-P12 2	J4-P4 2 → 5
	J12-P12 3	J4-P4 3 → 6 — FEATURE 14AA CLOSED ON NORMAL
	J12-P12 4	J4-P4 4 → 7
CN 15 14A 16	J12-P12 5	J4-P4 5 → 8 — FEATURE 14AB CLOSED ON NORMAL
	J12-P12 6	J4-P4 6 → 9
CN 76 14A 77	J12-P12 7	J4-P4 7 → 10 — FEATURE 14AC CLOSED ON NORMAL
	J12-P12 8	J4-P4 8 → 11

TS AUXILIARY CONTACTS FEATURE 14AC (10 AMPS, 32VDC) (10 AMPS, 250VAC) GENERAL PURPOSE

CE 10 14B 11	J12-P12 9	J4-P4 9 → 12 — FEATURE 14B CLOSED ON EMERGENCY
	J12-P12 10	J4-P4 10 → 13
CE 33 14B 34	J12-P12 12	J4-P4 12 → 14 — FEATURE 14BA CLOSED ON EMERGENCY
	J12-P12 11	J4-P4 11 → 15
CE 37 14B 36	J12-P12 13	J4-P4 13 → 16 — FEATURE 14BB CLOSED ON EMERGENCY
	J12-P12 15	J4-P4 15 → 17

TS AUXILIARY CONTACTS FEATURE 14BB (10 AMPS, 32VDC) (10 AMPS, 250VAC) GENERAL PURPOSE

P12 14	J4-P4 14 → 18
P12 16	J4-P4 16 → 19
P12 18	J4-P4 18 → 20
P12 17	J4-P4 17 → 21
P12 19	J4-P4 19 → 22
P12 21	J4-P4 21 → 23
P12 20	J4-P4 20 → 24
P12 22	J4-P4 22 → 25
P12 24	J4-P4 24 → 26
P12 23	J4-P4 23 → 27

LOCATED AT UPPER RIGHT SIDE OF "TS" ENCLOSED UNITS

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

34A — WHITE P6 1 → J6 — 28
34 COM — BLACK P6 2 → J6 — 29
34B — GREEN P6 3 → J6 — 30
FACTORY JUMPERS DO NOT REMOVE

CP CONTROL PANEL CONTROL INPUTS

REMOTE TRANSFER (FEATURE 17) CP J6 9 — BLACK P6 4 → J6 — 31 — FEATURE 17 REMOTE TRANSFER TO EMERGENCY
COMMON CP J6 10 — RED P6 5 → J6 — 32 — COMMON
CUSTOMER SUPPLIED NORMALLY OPEN CONTACT SUITABLE FOR 5VDC LOW ENERGY CIRCUIT CLOSE CONTACT TO TRANSFER TO EMERGENCY

33 — N/C
P7 1 — 34 — N/C
P7 2 — 35 — N/C
P7 3 — 36 — N/C

SERIAL COMMUNICATIONS OPTION

COMMUNICATING WITH GROUP 5 CONTROL PANEL (CP)

72A SERIAL COMMUNICATIONS OPTION (FEATURE 72A)

N/C	5		
RCV DATA (+)	1	W/O J8 P8 W/O	37 — SHIELD
RCV DATA (–)	2	O/W J8 P8 O/W	38 — RD+
XMT DATA (+)	3	W/B J8 P8 W/B	39 — RD–
XMT DATA (–)	4	B/W J8 P8 B/W	40 — TD+
			41 — TD–
			42 — N/C

TO OTHER ASCO SERIAL COMMUNICATIONS DEVICES

72A 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

CHANGE LETTER	ECN NO.	BY	APP.	DATE
B	157944	BVH	BK	6/13/01
	SEE ECN			
A	153491	BK	BK	12/16/99
	SEE ECN			
—	150103	JPB	JPB	12/98
	ISSUE			

PROJECT NAME:

WIRING DIAGRAM
7000 SERIES (7ADTB)
GROUP 5 CONTROLS

THIRD ANGLE PROJECTION

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

	BY	DATE
DRAWN BY	JPB	12/98
CHECKED		
DRAFTING APPROVAL		
FINAL APPROVAL	JPB	12/98

MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-1-003. FOR PLASTIC PARTS SEE MP-1-005

ASSEM. REF. NO.

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

COMPUTER GENERATED DRAWING

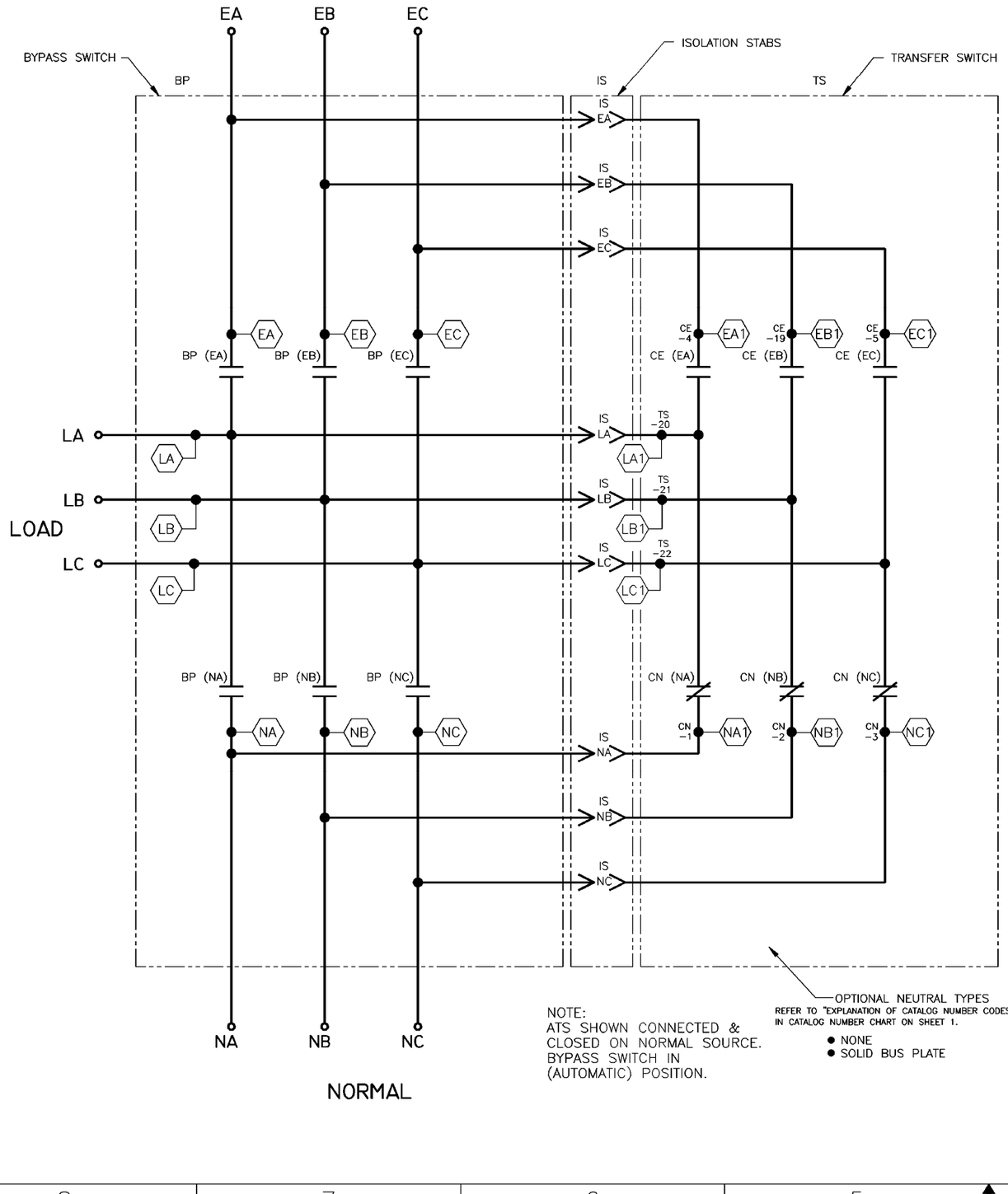
SCALE ACAD FILE A0

SIZE DWG. NO. DS617430

CHANGE LETTER B ECN NO. 157944 SHEET 2 OF 8

MAIN POWER POLES

EMERGENCY

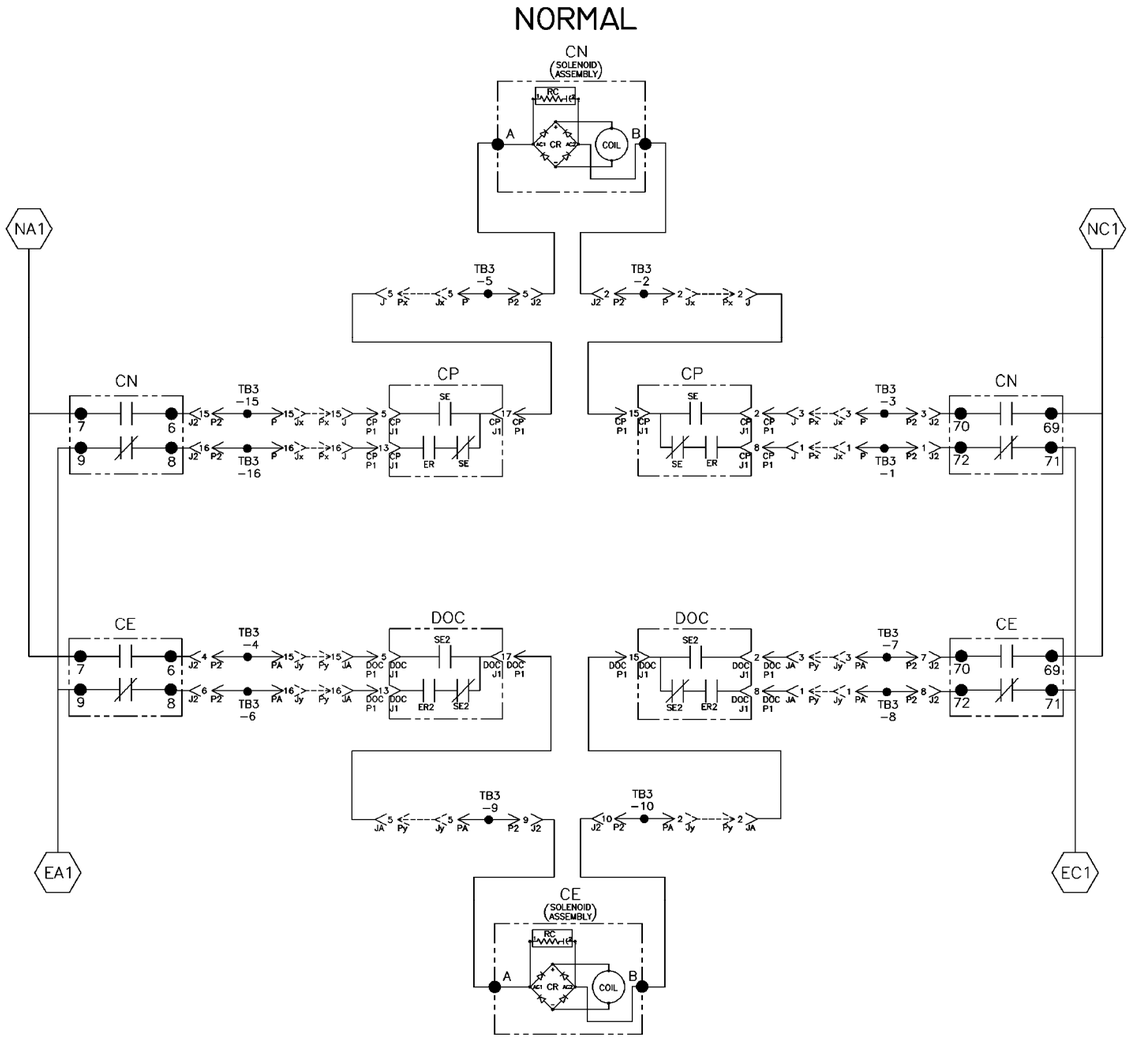


NOTE:
ATS SHOWN CONNECTED & CLOSED ON NORMAL SOURCE. BYPASS SWITCH IN (AUTOMATIC) POSITION.

NORMAL

TS OPERATOR CIRCUIT

NORMAL



EMERGENCY

CN (MUS) CONTACTS						
MUS	SOLENOID POSITION					
	CLOSED NORMAL	BEFORE TDC>	>	<	BEFORE <TDC	OPEN
7–6						
69–70						
8–9						
71–72						

CE (MUS) CONTACTS						
MUS	SOLENOID POSITION					
	OPEN	BEFORE TDC>	>	<	BEFORE <TDC	CLOSED EMERG.
7–6						
69–70						
8–9						
71–72						

LTR	ECN NO.	BY	APP.	DATE
B	157944	BVH	BK	6/13/01
	SEE ECN			
A	153491	BK	BK	12/16/99
	SEE ECN			
—	150103	JPB	JPB	12/98
	ISSUE			

SUBSIDIARY DISTRIBUTION

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

PROJECT NAME:
WIRING DIAGRAM
7000 SERIES (7ADTB)
GROUP 5 CONTROLS

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	JPB	12/98
CHECKED		
DRAFTING APPROVAL		
FINAL APPROVAL	JPB	12/98

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

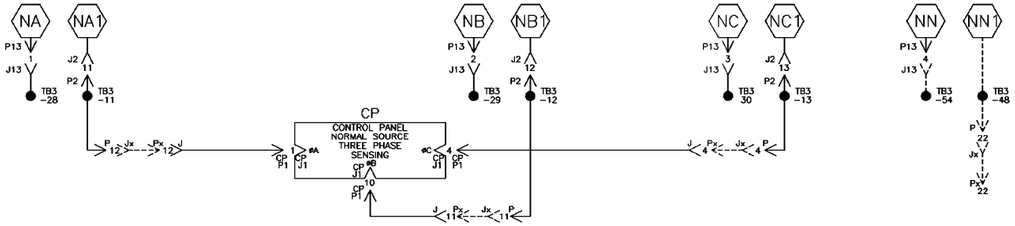
SCALE ACAD FILE A0

SIZE DWG. NO. DS617430

CHANGE LETTER B ECN NO. 157944 SHEET 3 OF 8

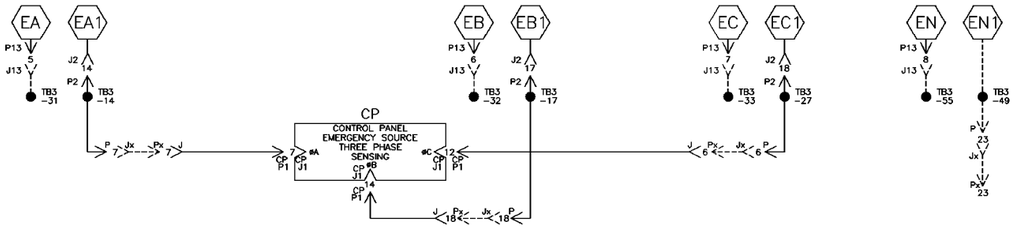
NORMAL SOURCE CIRCUITS

NORMAL



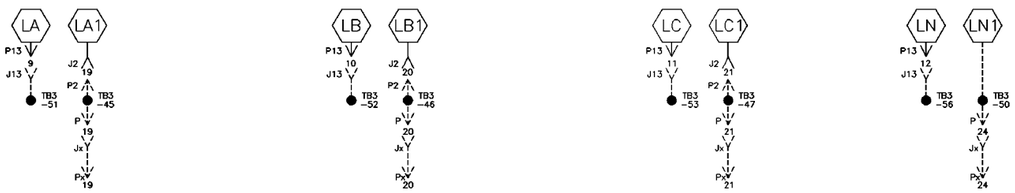
EMERGENCY SOURCE CIRCUITS

EMERGENCY

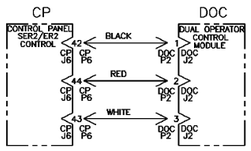


LOAD TERMINAL CIRCUITS

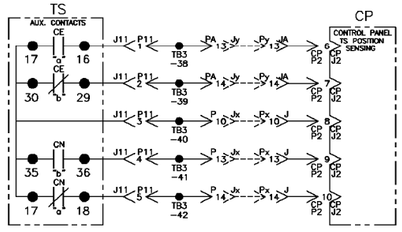
LOAD



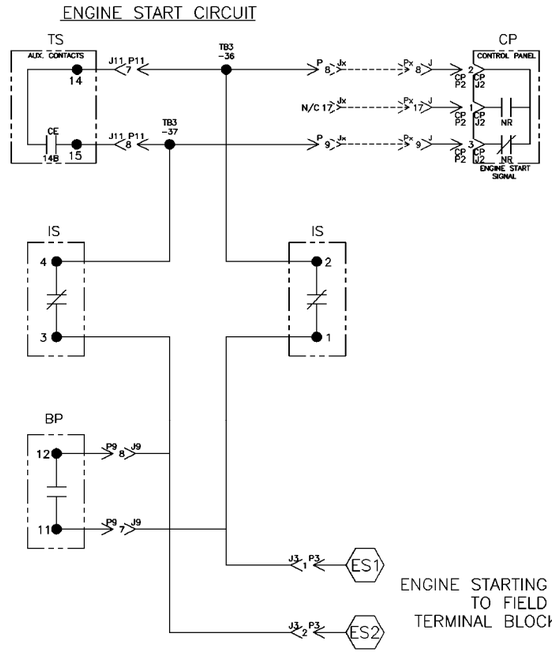
CONTROL SIGNALS & INDICATION



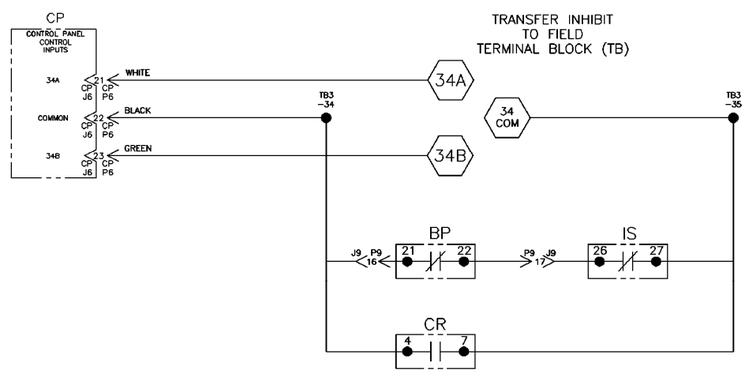
TS POSITION SENSING



ENGINE START CIRCUIT



CONTROL PANEL/BYPASS-ISOLATION INTERLOCKS



CHANGE LETTER	ECN NO.	BY	APP.	DATE
B	157944	BWH	BK	6/13/01
	SEE ECN			
A	153491	BK	BK	12/16/99
	SEE ECN			
—	150103	JPB	JPB	12/98
	ISSUE			

PROJECT NAME:

WIRING DIAGRAM
7000 SERIES (7ADTB)
GROUP 5 CONTROLS

THIRD ANGLE PROJECTION

SUBSIDIARY DISTRIBUTION

	BY	DATE
DRAWN BY	JPB	12/98
CHECKED		
DRAFTING APPROVAL		
FINAL APPROVAL	JPB	12/98

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

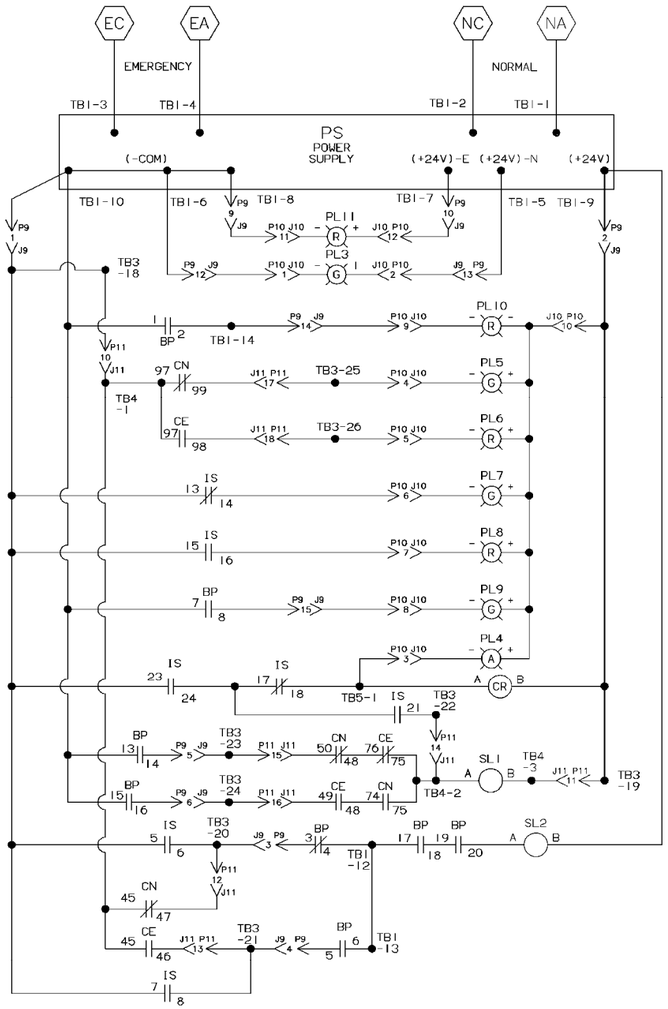
SCALE ACAD FILE A0

SIZE DWG. NO. DS617430

CHANGE LETTER B ECN NO. 157944 SHEET 4 OF 8

BYPASS / ISOLATION INTERLOCKING & INDICATION

ADDITIONAL CIRCUITS



PROJECT NAME:					
WIRING DIAGRAM 7000 SERIES (7ADTB) GROUP 5 CONTROLS					
	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	JPB	12/98			
CHECKED			PROPERTY OF ASCO POWER TECHNOLOGIES. USE PERMITTED FOR OUR WORK ONLY. ALL RIGHTS OF DESIGN OR INVENTION ARE RESERVED.		
DRAFTING APPROVAL					
FINAL APPROVAL	JPB	12/98	ASCO® ASCO POWER TECHNOLOGIES, L.P. FLORHAM PARK, NEW JERSEY 07932 U.S.A.		

THIRD ANGLE PROJECTION

CHANGE LETTER	ECN NO.	BY	APP.	DATE
B	157944	BWM	BK	6/13/01
	SEE ECN			
A	153491	BK	BK	12/16/99
	SEE ECN			
—	150103	JPB	JPB	12/98
	ISSUE			

SUBSIDIARY DISTRIBUTION

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

COMPUTER GENERATED DRAWING

SCALE	ACAD	FILE A0
SIZE B	DWG. NO. DS617430	
CHANGE LETTER B	ECN NO. 157944	SHEET 5 OF 8

PHYSICAL DIAGRAM

NOTE: REFER TO INSTALLATION DWG. FOR CABLING OR BUS CONNECTIONS. NORMAL, EMERG. & LOAD

STATUS INDICTORS

ID	DESCRIPTION
PL3	NORMAL SOURCE AVAILABLE
PL4	TS IN TEST POSITION
PL5	TS CONTACTS CLOSED ON NORMAL
PL6	TS CONTACTS CLOSED ON EMERGENCY
PL7	TS CONNECTED TO SOURCE
PL8	TS DISCONNECTED FROM SOURCE
PL9	BYPASS CONTACT SCLOSED ON NORMAL
PL10	BYPASS CONTACT CLOSED ON EMERGENCY
PL11	EMERGENCY SOURCE AVAILABLE

TS LEFT DOOR (INSIDE)

BYPASS DOORS (INSIDE)

TS RIGHT DOOR (INSIDE)

INTERCONNECTING TERMINAL BLOCK

TB

FIELD TB & PLUG ASSEMBLY

OPTIONAL POWERMASTER OR ADDITIONAL OPERATOR CONTROLS ESCUTCHEON MOUNTING

OPERATOR CONTROLS PN 613656-001 (REFER TO ASSEMBLY DRAWING FOR WIRING)

CP

GROUP 5 CONTROL PANEL

DUAL OPERATOR CONTROL MODULE

ACC. 72A SERIAL COM MODULE OPTION

CABLE PN 409672

AP

OPTIONAL ACCESSORY ADD-ON PANEL MOUNTING

TB5

TB4

SLI

CE

CN

ATS

TRANSFER SWITCH

LOAD

EMERGENCY SOURCE

NORMAL SOURCE

STATIONARY PLUG MOUNTING

TB PS

BYPASS SWITCH

BYPASS HANDLE

SL2

STATUS INDICATOR

ISOLATION HANDLE

AP1

OPTIONAL ACCESSORY ADD-ON PANEL MOUNTING

AP2

OPTIONAL ACCESSORY ADD-ON PANEL MOUNTING

BONDING STRAP PN 098323-019

ENCLOSURE

CHANGE LETTER	ECN NO.	BY	APP.	DATE
B	157944	BWM	BK	6/13/01
	SEE ECN			
A	153491	BK	BK	12/16/99
	SEE ECN			
—	150103	JPB	JPB	12/98
	ISSUE			

SUBSIDIARY DISTRIBUTION

PROJECT NAME:

WIRING DIAGRAM
7000 SERIES (7ADTB)
GROUP 5 CONTROLS

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	JPB	12/98
CHECKED		
DRAFTING APPROVAL		
FINAL APPROVAL	JPB	12/98

MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-4-003. FOR PLASTIC PARTS SEE MP-4-055

ASSEM. REF. NO.

COMPUTER GENERATED DRAWING

SCALE ACAD FILE AO

SIZE DWG. NO. DS617430

CHANGE LETTER B ECN NO. 157944 SHEET 6 OF 8

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

WIRE RUN LISTING

1 — HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☒

WIRE No.	HARNESS 619510-027 (P2,P11,TB3)	CLR	AWG
1	P2-1,TB3-1		16
2	P2-2,TB3-2		
3	P2-3,TB3-3		
4	P2-4,TB3-4		
5	P2-5,TB3-5		
6	P2-6,TB3-6		
7	P2-7,TB3-7		
8	P2-8,TB3-8		
9	P2-9,TB3-9		
10	P2-10,TB3-10		
11	P2-11,TB3-11		
12	P2-12,TB3-12		
13	P2-13,TB3-13		
14	P2-14,TB3-14		
15	P2-15,TB3-15		
16	P2-16,TB3-16		
17	P2-17,TB3-17		
27	P2-18,TB3-27		
38	P11-1,TB3-38		
39	P11-2,TB3-39		
40	P11-3,TB3-40		
41	P11-4,TB3-41		
42	P11-5,TB3-42		
43	P11-6,TB3-43		
36	P11-7,TB3-36		
37	P11-8,TB3-37		
44	P11-9,TB3-44		
18	P11-10,TB3-18		
19	P11-11,TB3-19		
20	P11-12,TB3-20		
21	P11-13,TB3-21		
22	P11-14,TB3-22		
23	P11-15,TB3-23		
24	P11-16,TB3-24		
25	P11-17,TB3-25		
26	P11-18,TB3-26		
28	P11-19,TB3-28		
30	P11-20,TB3-30		
31	P11-21,TB3-31		
33	P11-22,TB3-33		
	REMOVE WIRES		
43	P11-6,TB3-43		
44	P11-9,TB3-44		
28	P11-19,TB3-28		
30	P11-20,TB3-30		
31	P11-21,TB3-31		
33	P11-22,TB3-33		
	ADD WIRES		
45	P2-19		
46	P2-20		
47	P2-21		
48	P2-22		
49	P2-23		
50	P2-24		
43	P11-6		
44	P11-9		
28	P11-19		
30	P11-20		
31	P11-21		
33	P11-22		
55	P11-23		
56	P11-24		

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

WIRE No.	HARNESS 619510-028 (P,PA,TB3)	CLR	AWG
1	P-1,TB3-1		16
2	P-2,TB3-2		
3	P-3,TB3-3		
30	P-4,TB3-30		
5	P-5,TB3-5		
33	P-6,TB3-33		
31	P-7,TB3-31		
29	P-8,TB3-29		
28	P-12,TB3-28		
32	P-18,TB3-32		
43	PA-17,TB3-43		
44	PA-18,TB3-44		
	REMOVE WIRES		
30	P-4,TB3-30		
33	P-6,TB3-33		
31	P-7,TB3-31		
29	P-11,TB3-29		
28	P-12,TB3-28		
32	P-18,TB3-32		
43	PA-17,TB3-43		
44	PA-18,TB3-44		
	ADD WIRES		
12	P-4,TB3-13		
27	P-6,TB3-27		
14	P-7,TB3-14		
12	P-11,TB3-12		
11	P-12,TB3-11		
57	P-17		
17	P-18,TB3-17		
45	P-19		
46	P-20		
47	P-21		
48	P-22		
49	P-23		
50	P-24		
64	PA-4		
66	PA-6		
67	PA-7		
68	PA-8		
69	PA-9		
70	PA-10		
71	PA-11		
72	PA-12		
43	PA-17		
44	PA-18		
79	PA-19		
80	PA-20		
81	PA-21		
82	PA-22		
83	PA-23		
84	PA-24		

3 — HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☒

WIRE No.	HARNESS 619510-011 (J2,J11,J12,TB4) TS	CLR	AWG
1	J2-1,CN-72		16
2	J2-2,CN-B		
3	J2-3,CN-70		
4	J2-4,CE-6		
5	J2-5,CN-A		
6	J2-6,CE-8		
7	J2-7,CE-70		
8	J2-8,CE-72		
9	J2-9,CE-A		
10	J2-10,CE-B		
11	J2-11,CN-1		
12	J2-12,CN-2		
13	J2-13,CN-3		
14	J2-14,CE-4		
15	J2-15,CN-6		
16	J2-16,CN-8		
17	J2-17,CE-19		
27	J2-18,CE-5		
45	J2-19,TS-20		
46	J2-20,TS-21		
47	J2-21,TS-22		
48	J2-22,CN-NN		
49	J2-23,CE-EN		
50	J2-24,TS-LN		
18	J11-10,TB4-1		
18	TB4-1,CN-97		
18	CN-97,CE-97		
18	CE-97,CN-45		
18	CN-45,CE-45		
38	J11-1,CE-16		
41	J11-2,CE-29		
40	J11-3,CE-30		
41	J11-4,CN-36		
42	J11-5,CN-18		
43	J11-6,CE-73		
36	J11-7,CE-14		
37	J11-8,CE-15		
44	J11-9,CN-40		
19	J11-11,TB4-3		
19	TB4-3,SL1-B		
20	J11-12,CN-47		
21	J11-13,CE-46		
22	J11-14,TB4-2		
22	TB4-2,SL1-A		
22	TB4-2,CE-75		
22	CE-75,CN-75		
23	J11-15,CN-50		
24	J11-16,CE-49		
25	J11-17,CN-99		
26	J11-18,CE-98		
91	J12-1,CN-12		
93	J12-2,CN-13		
93	J12-3,CN-31		
94	J12-4,CN-32		
95	J12-5,CN-15		
96	J12-6,CN-16		
97	J12-7,CN-76		
98	J12-8,CN-77		
99	J12-9,CE-10		
100	J12-10,CE-11		
101	J12-11,CE-34		
102	J12-12,CE-33		
103	J12-13,CE-37		
105	J12-15,CE-38		
13	J11-20,CN-69		
13	CN-69,CE-69		
27	J11-22,CE-71		
27	CE-71,CN-71		
14	J11-21,CE-9		
14	CE-9,CN-9		
11	J11-19,CN-7		
11	CN-7,CE-7		
89	CE-17,CE-30		
89	CE-30,CN-35		
89	CN-35,CN-17		
90	CE-74,CN-39		
91	CN-48,CE-76		
92	CE-48,CN-74		
	REMOVE WIRES		
43	J11-6,CE-73		
44	J11-9,CN-40		
11	J11-19,CN-7		
13	J11-20,CN-69		
14	J11-21,CE-9		
27	J11-22,CE-71		
90	CE-74,CN-39		
	ADD WIRES		
13	CN-69,CN-3		
27	CE-71,CE-5		
14	CE-9,CE-4		
11	CN-7,CN-1		
43	J11-6		
44	J11-9		
11	J11-19		
13	J11-20		
14	J11-21		
27	J11-22		
47	J11-23		
48	J11-24		
104	J12-14		
106	J12-16		
107	J12-17		
108	J12-18		
109	J12-19		
110	J12-20		
111	J12-21		
112	J12-22		
113	J12-23		
114	J12-24		

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

WIRE No.	HARNESS 619510-030 (J3,IS) ENGINE START	CLR	AWG
85	J3-1,IS-1		16
86	J3-2,IS-3		
	ADD WIRES		
87	J3-3		
88	J3-4		

5 — HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☒

WIRE No.	HARNESS 619510-029 (J9,J13,P10,IS,TB3)	CLR	AWG
120	P10-1,J9-12		16
121	P10-2,J9-13		
122	P10-3,TB5-1		
25	P10-4,TB3-25		
26	P10-5,TB3-26		
123	P10-6,IS-14		
124	P10-7,IS-16		
125	P10-8,J9-15		
126	P10-9,J9-14		
19	P10-10,TB3-19		
127	P10-11,J9-9		
128	P10-12,J9-10		
18	J9-1,TB3-18		
19	J9-2,TB3-19		
20	J9-3,TB3-20		
21	J9-4,TB3-21		
23	J9-5,TB3-23		
24	J9-6,TB3-24		
85	J9-7,IS-1		
86	J9-8,IS-3		
34	J9-16,TB3-34		
131	J9-17,IS-26		
253	J13-1,TB5-2		
254	J13-2,CRA-13		
252	J13-3,TB5-3		
251	J13-5,CRB-23		
255	J13-6,CRB-13		
250	J13-7,CRB-33		
	REMOVE WIRES		
253	J13-1,TB5-2		
254	J13-2,CRA-13		
252	J13-3,TB5-3		
251	J13-5,CRB-23		
255	J13-6,CRB-13		
250	J13-7,CRB-33		
	ADD WIRES		
133	P10-13		
134	P10-14		
135	P10-15		
136	P10-16		
137	P10-17		
138	P10-18		
139	P10-19		
140	P10-20		
141	P10-21		
142	P10-22		
143	P10-23		
144	P10-24		
151	J9-11		
158	J9-18		
159	J9-19		
160	J9-20		
161	J9-21		
162	J9-22		
163	J9-23		
164	J9-24		
253	J13-1,TB3-28		
254	J13-2,TB3-29		
252	J13-3,TB3-30		
251	J13-5		
255	J13-6		
250	J13-7		
308	J13-8		
309	J13-9		
310	J13-10		
311	J13-11		
312	J13-12		
313	J13-13		
314	J13-14		
315	J13-15		
316	J13-16		
317	J13-17		
318	J13-18		
319	J13-19		
320	J13-20		
321	J13-21		
322	J13-22		
323	J13-23		
324	J13-24		

8 — HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

WIRE No.	HARNESS (IS,CR,TB5) INTERCONNECT	CLR	AWG
18	TB3-18,IS-13		16
18	IS-13,IS-15		
18	IS-15,IS-23		
18	IS-23,IS-5		
18	IS-5,IS-7		
174	IS-17,IS-24		
122	TB5-1,CR-A		
122	TB5-1,IS-18		
36	TB3-36,IS-2		
37	TB3-37,IS-4		
35	TB3-35,CR-7		
35	TB3-35,IS-27		
34	TB3-34,CR-4		
19	TB3-19,CR-5		
20	TB3-20,IS-6		
21	TB3-21,IS-8		
22	TB3-22,IS-21		

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

WIRE No.	HARNESS 619510-005 (P6) FIELD INPUTS	CLR	AWG
180	P6-1,CP-P6-21	WHT	
34	P6-2,CP-P6-22	ORG	22 (12 COND)
181	P6-3,CP-P6-23	GRN	
182	P6-4,CP-P6-9	BLK	
183	P6-5,CP-P6-10	RED	
	REMOVE WIRES		
34	P6-2,CP-P6-22	ORG	
	ADD WIRES		
35	P6-2,TB3-35		16
34	CP-P6-22,TB3-34	BLK	22 (7 COND)
222	CP-P6-42,DOC-P2-1	BLK	22
223	CP-P6-44,DOC-P2-2	RED	(4 COND)
224	CP-P6-43,DOC-P2-3	WHT	
226	P6-6		
227	P6-7		
228	P6-8		
229	P6-9		
230	P6-10		
231	P6-11		
232	P6-12		
233	P6-13		
234	P6-14		
235	P6-15		
236	P6-16		
237	P6-17		
238	P6-18		
239	P6-19		
240	P6-20		
241	P6-21		
242	P6-22		
243	P6-23		
244	P6-24		

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

WIRE No.	HARNESS 619510-010 (P9,P13,TB1,BP) INTERCONNECTION	CLR	AWG
18	P9-1,TB1-10		16
18	BP-1,TB1-10		
18	TB1-10,TB1-8		
18	TB1-8,TB1-6		
18	TB1-10,BP-7		
18	BP-7,BP-13		
18	BP-13,BP-15		
19	P9-2,TB1-9		
19	TB1-9,SL2-B		
20	P9-3,BP-3		
21	P9-4,BP-5		
23	P9-5,BP-14		
24	P9-6,BP-16		
85	P9-7,BP-11		
86	P9-8,BP-12		
127	P9-9,TB1-8		
128	P9-10,TB1-7		
120	P9-12,TB1-6		
121	P9-13,TB1-5		
126	P9-14,TB1-14		
126	TB1-14,BP-2		
125	P9-15,BP-8		
34	P9-16,BP-21		
131	P9-17,BP-22		
171	BP-6,TB1-13		
171	TB1-13,TB1-12		
171	TB1-12,BP-4		
171	BP-4,BP-17		
172	BP-18,BP-19		
173	BP-20,SL2-A		
250	TB1-3,EC		
250	P13-7,EC		
251	TB1-4,EA		
251	P13-5,EA		
252	TB1-2,NC		
252	P13-3,NC		
253	TB1-1,NA		
253	P13-1,NA		
254	P13-2,NB		
255	P13-6,EB		
304	P13-4,NN		
308	P13-8,EN		
309	P13-9,LA		
310	P13-10,LB		
311	P13-11,LC		
312	P13-12,LN		
	ADD WIRES		
151	P9-11		
158	P9-18		
159	P9-19		
160	P9-20		
161	P9-21		
162	P9-22		
163	P9-23		
164	P9-24		
313	P13-13		
314	P13-14		
315	P13-15		
316	P13-16		
317	P13-17		
318	P13-18		
319	P13-19		
320	P13-20		
321	P13-21		
322	P13-22		
323	P13-23		
324	P13-24		

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

WIRE No.	HARNESS 605454-005 (J8) OPTIONAL SERIAL I/O	CLR	AWG
261	J8-1,SHLD	SHLD	
262	J8-2,72A-1	WHT/ORG	22
263	J8-3,72A-2	ORG/WHT	(4 COND)
264	J8-4,72A-3	WHT/BLU	
265	J8-5,72A-4	BLU/WHT	
266	J8-6		
267	J8-7		
268	J8-8		
269	J8-9		

14 — HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

WIRE No.	HARNESS 605454-007 (P8,TB) OPTIONAL SERIAL I/O	CLR	AWG
261	P8-1,TB-37	SHLD	
262	P8-2,TB-38	WHT/ORG	22
263	P8-3,TB-39	ORG/WHT	(4 COND)
264	P8-4,TB-40	WHT/BLU	
265	P8-5,TB-41	BLU/WHT	
266	P8-6		
267	P8-7		
268	P8-8		
269	P8-9		

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

WIRE No.	HARNESS 48.3763 (J,CP-P1,CP-P2) CONTROL PANEL	CLR	AWG
1	J-1,CP-P1-8		16
2	J-2,CP-P1-15		
3	J-3,CP-P1-2		
30	J-4,CP-P1-4		
5	J-5,CP-P1-17		
33	J-6,CP-P1-12		
31	J-7,CP-P1-7		
36	J-8,CP-P2-2		
37	J-9,CP-P2-3		
40	J-10,CP-P2-8		
29	J-11,CP-P1-10		
28	J-12,CP-P1-1		
41	J-13,CP-P2-9		
42	J-14,CP-P2-10		
15	J-15,CP-P1-5		
15	J-16,CP-P1-13		
57	J-17,CP-P2-1		
32	J-18,CP-P1-14		
	ADD WIRES		
45	J-19		
46	J-20		
47	J-21		
48	J-22		
49	J-23		
50	J-24		

CHANGE LETTER	ECN NO.	BY	APP.	DATE
B	157944	BWM	BK	6/13/01
	SEE ECN			
A	153491	BK	BK	12/16/99
	SEE ECN			
—	150103	JPB	JPB	12/98
	ISSUE			

PROJECT NAME:
WIRING DIAGRAM
7000 SERIES (7ADTB)
GROUP 5 CONTROLS

THIRD ANGLE PROJECTION

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

	BY	DATE
DRAWN BY	JPB	12/98
CHECKED		
DRAFTING APPROVAL		
FINAL APPROVAL	JPB	12/98

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: ACAD FILE A0

SIZE DWG. NO. DS617430

CHANGE LETTER B ECN NO. 157944 SHEET 7 OF 8

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.	SUB-ASSEMBLY 605659 (P3,P4,J6,P7,TB) STD. FIELD TB	CLR	AWG
85	TB-1,P3-1		16
86	TB-2,P3-2		
87	TB-3,P3-3		
91	TB-4,P4-1		
92	TB-5,P4-2		
93	TB-6,P4-3		
94	TB-7,P4-4		
95	TB-8,P4-5		
96	TB-9,P4-6		
97	TB-10,P4-7		
98	TB-11,P4-8		
99	TB-12,P4-9		
100	TB-13,P4-10		
101	TB-14,P4-12		
102	TB-15,P4-11		
103	TB-16,P4-13		
104	TB-17,P4-15		
105	TB-18,P4-14		
106	TB-19,P4-16		
107	TB-20,P4-18		
108	TB-21,P4-17		
109	TB-22,P4-19		
110	TB-23,P4-21		
111	TB-24,P4-20		
112	TB-25,P4-22		
113	TB-26,P4-24		
114	TB-27,P4-23		
180	TB-28,J6-1		
34	TB-29,J6-2		
181	TB-30,J6-3		
182	TB-31,J6-4		
183	TB-32,J6-5		
271	TB-34,P7-1		
272	TB-35,P7-2		
273	TB-36,P7-3		
	JUMPERS		
	TB-28,TB-29		
	TB-29,TB-30		
	ADD WIRES		
88	P3-4		
226	J6-6		
227	J6-7		
228	J6-8		
229	J6-9		
230	J6-10		
231	J6-11		
232	J6-12		
233	J6-13		
234	J6-14		
235	J6-15		
236	J6-16		
237	J6-17		
238	J6-18		
239	J6-19		
240	J6-20		
241	J6-21		
242	J6-22		
243	J6-23		
244	J6-24		
274	P7-4		
275	P7-5		
276	P7-6		
277	P7-7		
278	P7-8		
279	P7-9		
280	P7-10		
281	P7-11		
282	P7-12		
283	P7-13		
284	P7-14		
285	P7-15		
286	P7-16		
287	P7-17		
288	P7-18		
289	P7-19		
290	P7-20		
291	P7-21		
292	P7-22		
293	P7-23		
294	P7-24		

16 — HARNESS LOCATOR (BOX CHECKED IF HARNESS IS MODIFIED ☐)

WIRE No.	HARNESS 619510-039 (J10) STATUS INDICATOR	CLR	AWG
120	J10-1,PL3(-)		16
121	J10-2,PL3(+)		
122	J10-3,PL4(-)		
25	J10-4,PL5(-)		
26	J10-5,PL6(-)		
123	J10-6,PL7(-)		
124	J10-7,PL8(-)		
124	J10-8,PL9(-)		
126	J10-9,PL10(-)		
19	J10-10,PL10(+)		
19	PL10(+),PL5(+)		
19	PL5(+),PL6(+)		
19	PL6(+),PL7(+)		
19	PL7(+),PL8(+)		
19	PL8(+),PL9(+)		
19	PL9(+),PL4(+)		
127	J10-11,PL11(-)		
128	J10-12,PL11(+)		
133	J10-13		
134	J10-14		
135	J10-15		
136	J10-16		
137	J10-17		
138	J10-18		
139	J10-19		
140	J10-20		
141	J10-21		
142	J10-22		
143	J10-23		
144	J10-24		

17 — HARNESS LOCATOR (BOX CHECKED IF HARNESS IS MODIFIED ☐)

WIRE No.	HARNESS 309320-002 (P12,J4) EXTENSION 6FT	CLR	AWG
91	P12-1,J4-1		16
92	P12-2,J4-2		
93	P12-3,J4-3		
94	P12-4,J4-4		
95	P12-5,J4-5		
96	P12-6,J4-6		
97	P12-7,J4-7		
98	P12-8,J4-8		
99	P12-9,J4-9		
100	P12-10,J4-10		
102	P12-11,J4-11		
101	P12-12,J4-12		
103	P12-13,J4-13		
105	P12-14,J4-14		
104	P12-15,J4-15		
106	P12-16,J4-16		
108	P12-17,J4-17		
107	P12-18,J4-18		
109	P12-19,J4-19		
111	P12-20,J4-20		
110	P12-21,J4-21		
112	P12-22,J4-22		
114	P12-23,J4-23		
113	P12-24,J4-24		

18 — HARNESS LOCATOR (BOX CHECKED IF HARNESS IS MODIFIED ☐)

WIRE No.	HARNESS 309320-005 (Px,Jx) OPTIONAL 8" EXTENSION HARNESS	CLR	AWG
1	Px-1,Jx-1		16
2	Px-2,Jx-2		
3	Px-3,Jx-3		
30	Px-4,Jx-4		
5	Px-5,Jx-5		
33	Px-6,Jx-6		
31	Px-7,Jx-7		
36	Px-8,Jx-8		
37	Px-9,Jx-9		
40	Px-10,Jx-10		
29	Px-11,Jx-11		
28	Px-12,Jx-12		
41	Px-13,Jx-13		
42	Px-14,Jx-14		
15	Px-15,Jx-15		
16	Px-16,Jx-16		
57	Px-17,Jx-17		
32	Px-18,Jx-18		
45	Px-19,Jx-19		
46	Px-20,Jx-20		
47	Px-21,Jx-21		
48	Px-22,Jx-22		
49	Px-23,Jx-23		
50	Px-24,Jx-24		

19 — HARNESS LOCATOR (BOX CHECKED IF HARNESS IS MODIFIED ☐)

WIRE No.	HARNESS (J7) FEILD OUTPUTS (OPTIONAL)	CLR	AWG
271	J7-1		16
272	J7-2		
273	J7-3		
274	J7-4		
275	J7-5		
276	J7-6		
277	J7-7		
278	J7-8		
279	J7-9		
280	J7-10		
281	J7-11		
282	J7-12		
283	J7-13		
284	J7-14		
285	J7-15		
286	J7-16		
287	J7-17		
288	J7-18		
289	J7-19		
290	J7-20		
291	J7-21		
292	J7-22		
293	J7-23		
294	J7-24		

20 — HARNESS LOCATOR (BOX CHECKED IF HARNESS IS MODIFIED ☒)

WIRE No.	HARNESS 619385 (JA,DOC,CP-P2) CONTROL MODULE	CLR	AWG
8	JA-1,DOC-P1-8		16
10	JA-2,DOC-P1-15		
7	JA-3,DOC-P1-2		
9	JA-5,DOC-P1-17		
38	JA-13,CP-P2-6	PIN	
39	JA-14,CP-P2-7	PIN	
4	JA-15,DOC-P1-5		
6	JA-16,DOC-P1-13		
	ADD WIRES		
64	JA-4		
66	JA-6		
67	JA-7		
68	JA-8		
69	JA-9		
70	JA-10		
71	JA-11		
72	JA-12		
43	JA-17		
44	JA-18		
79	JA-19		
80	JA-20		
81	JA-21		
82	JA-22		
83	JA-23		
84	JA-24		

21 — HARNESS LOCATOR (BOX CHECKED IF HARNESS IS MODIFIED ☐)

WIRE No.	HARNESS 309320-005 (Py,Jy) OPTIONAL 8" EXTENSION HARNESS	CLR	AWG
8	Jy-1,Py-1		16
10	Jy-2,Py-2		
7	Jy-3,Py-3		
64	Jy-4,Py-4		
9	Jy-5,Py-5		
66	Jy-6,Py-6		
67	Jy-7,Py-7		
68	Jy-8,Py-8		
69	Jy-9,Py-9		
70	Jy-10,Py-10		
71	Jy-11,Py-11		
72	Jy-12,Py-12		
38	Jy-13,Py-13		
39	Jy-14,Py-14		
4	Jy-15,Py-15		
6	Jy-16,Py-16		
43	Jy-17,Py-17		
44	Jy-18,Py-18		
79	Jy-19,Py-19		
80	Jy-20,Py-20		
81	Jy-21,Py-21		
82	Jy-22,Py-22		
83	Jy-23,Py-23		
84	Jy-24,Py-24		

WIRE No.	ADDITIONAL WIRING	CLR	AWG

WIRE No.	ADDITIONAL WIRING	CLR	AWG

CHANGE LETTER	ECN NO.	BY	APP.	DATE
B	157944	BWM	BK	6/13/01
	SEE ECN			
A	153491	BK	BK	12/16/99
	SEE ECN			
—	150103	JPB	JPB	12/98
	ISSUE			

PROJECT NAME:

WIRING DIAGRAM
7000 SERIES (7ADTB)
GROUP 5 CONTROLS

THIRD ANGLE PROJECTION

SUBSIDIARY DISTRIBUTION

AE ☐	AH ☐	AM ☐	AV ☐	AL ☐	☐		
CH ☐	AV ☐	AA ☐	PS ☐	AR ☐	☐		
AG ☐	AP ☐	AC ☐	AS ☐	☐	☐		

	BY	DATE
DRAWN BY	JPB	12/98
CHECKED		
DRAFTING APPROVAL		
FINAL APPROVAL	JPB	12/98

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 ACAD FILE A0

SIZE DWG. NO. DS617430

CHANGE LETTER B ECN NO. 157944 SHEET 8 OF 8