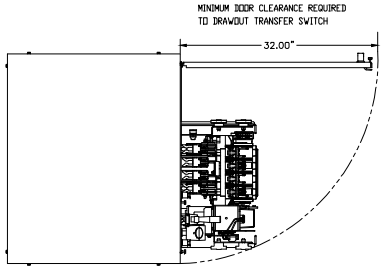
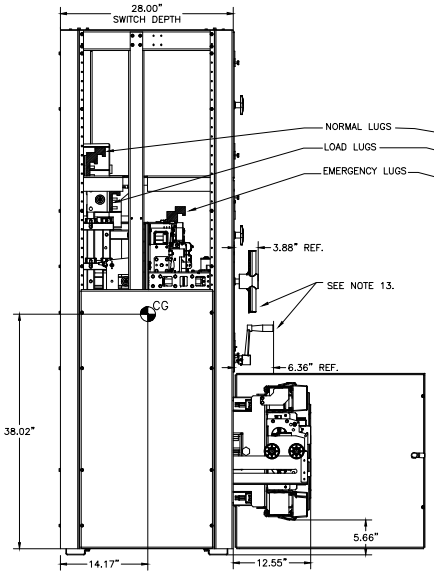
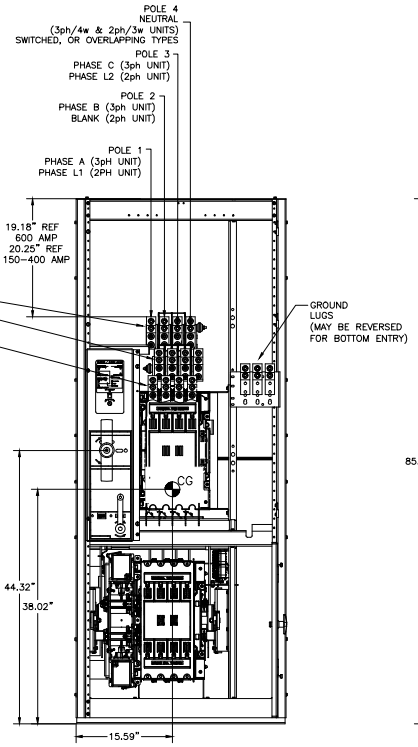
OUTLINE & MOUNTING FOR ASCO® 7000 SERIES FRONT CONNECTED AUTOMATIC TRANSFER & BYPASS-ISOLATION SWITCHES TYPES J7ATB, J7ACTB & J7ADTB RATED 150-600 AMPS



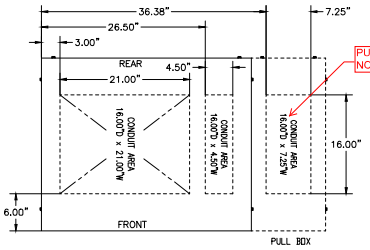
TOP VIEW



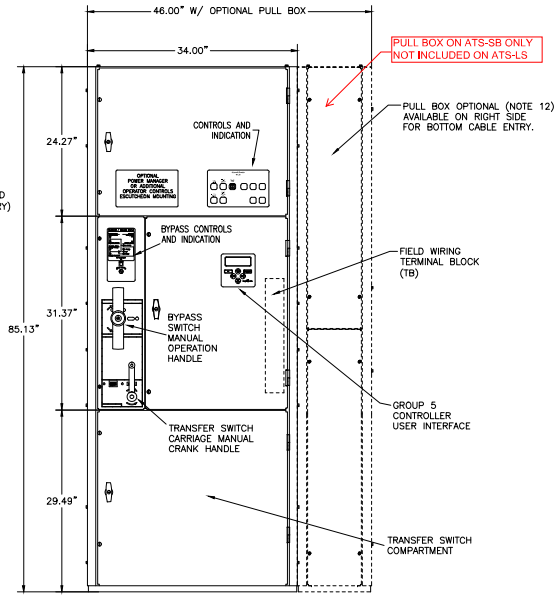
LEFT SIDE VIEW
(TOP COVER REMOVED, TS DRAWN OUT)



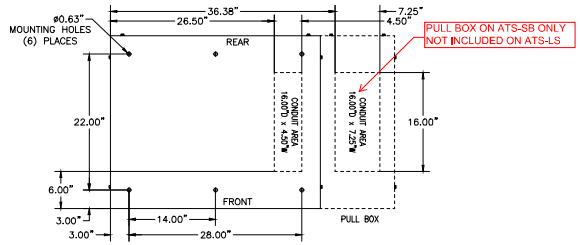
FRONT VIEW
(COVERS AND DOORS REMOVED)



TOP VIEW



FRONT VIEW
(DOORS INSTALLED)



PLAN VIEW

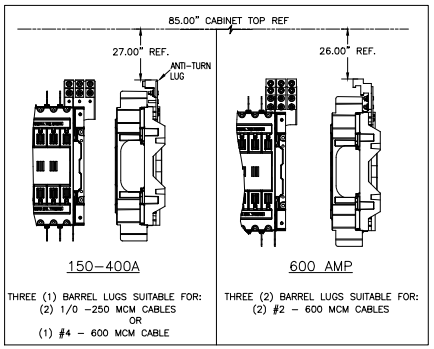
GENERAL NOTES
1. TYPE 1 ENCLOSURES. FREE STANDING. FLOOR MOUNTED. 12 GAUGE FORMED FRAME CONSTRUCTION.
2. NEC STANDARD GAUGE PAN TYPE DOORS WITH LOCKABLE HANDLES AND REMOVABLE COVERS.
3. FINISH: ANSI 61 GRAY, POLYESTER POWDER. UL RECOGNIZED. OTHER ANSI COLORS AVAILABLE. CONSULT FACTORY
4. CONSTRUCTION IS IN ACCORDANCE WITH UL 1008.
5. PADLOCKING PROVISIONS ARE INCLUDED.
   ISOLATION HANDLE: THE TRANSFER SWITCH ISOLATION HANDLE MAY BE PADLOCKED WITH THE TRANSFER SWITCH IN THE FULLY ISOLATED (DISCONNECTED POSITION).
6. UNIT CAN BE ADAPTED FOR CONNECTION OF BUS DUCT FLANGES. (CONSULT FACTORY)
7. RECOMMENDED FRONT CLEARANCE: 32.00" INCHES MINIMUM.
8. A 20% RATED GROUND BUS IS PROVIDED.
9. A FULL RATED NEUTRAL CONNECTION FOR EACH SOURCE AND THE LOAD IS OPTIONAL. WHEN PROVIDED IT IS IN ONE OF THE FOLLOWING FORMATS AS SPECIFIED BY THE CATALOG NO. NEUTRAL TYPE:

   TYPE A: SOLID (COPPER BUS) NEUTRAL
   TYPE B: SWITCHED NEUTRAL POLE
   TYPE C: OVERLAPPING NEUTRAL POLE (NOT AVAILABLE ON 7ADTB & 7ACTB UNITS)

10. APPROXIMATE WEIGHT: 950 LBS.
11. STANDARD OUTLINE FOR A FOUR POLE 600 AMP TRANSFER SWITCH WITH BYPASS/ISOLATION SWITCH SHOWN. SEE DETAIL "A" FOR LUG CONFIGURATION OF SOLID NEUTRAL.
12. IF A PULL BOX IS PROVIDED THE RIGHT SIDE SKINS ARE REMOVED FROM SWITCH ENCLOSURE AND (4) MOUNTING BLOCKS P/N 757047 ARE USED TO CONNECT THE TWO SECTIONS TOGETHER. REFER TO DRAWING 805550 FOR PULL BOX DETAILS. PULL BOX AND SWITCH ENCLOSURE CAN BE SHIPPED AS ONE UNIT OR PULL BOX CAN BE SUPPLIED INDEPENDENTLY.
13. BOTH BYPASS SWITCH MANUAL OPERATION HANDLE & TRANSFER SWITCH CARRIAGE MANUAL CRANK HANDLE CAN BE REMOVED. ALSO NOTE THAT THE TRANSFER SWITCH CARRIAGE MANUAL CRANK HANDLE CAN BE LEFT IN PLACE AND FOLDED DOWN.
14. CG CENTER OF GRAVITY.

CABLING NOTES
1. ALL SIZES SUPPLIED STANDARD WITH MECHANICAL (SCREW TYPE) LUGS. (SEE AMP SIZE BELOW)
   A. LUG MATERIAL: ALUMINUM ALLOY 6061-T6 WITH ELECTRO TIN PLATED FINISH.
   B. SCREW MATERIAL: ALUMINUM ALLOY 6262-T9 WITH ELECTRO TIN PLATED FINISH.
   C. UL LISTED, CSA CERTIFIED.
   D. LUG MAX WIRE TIGHTENING TORQUE PER UL 486B: SEE TABLE BELOW.
2. OPTIONAL COPPER CRIMP LUGS MAY BE SUPPLIED. CONSULT FACTORY.
   A. LUG MATERIAL: HIGH CONDUCTIVITY WROUGHT COPPER FINISH, ELECTRO TIN PLATED.
   B. UL LISTED, CSA CERTIFIED.
   C. LUG MOUNTING HARDWARE TIGHTENING TORQUE: (REFER TO WITHSTAND CURRENT RATING LABEL PROVIDED ON EACH TRANSFER SWITCH).
   D. SUITABLE WIRE BENDING SPACE IS PROVIDED.
3. GROUND LUGS ARE PROVIDED STANDARD AS FOLLOWS:
   (6) #4-600MCM AL/CU CABLES FOR 600 AMP
   (3) 1/0-250MCM AL/CU CABLES FOR 150-400 AMP.
4. CONSULT FACTORY FOR OTHER TERMINATION REQUIREMENTS.

SIZE	CABLE ACCOMMODATIONS (PER PHASE & NEUTRAL)	LUG TORQUE
150-400	SCREW TYPE (STANDARD)- (2) 1/0 - 250 MCM AL/CU OR (1) #4 - 600 MCM AL/CU	500 IN.-LBS.
600	SCREW TYPE (STANDARD)- (2) #2 - 600 MCM AL/CU	375 IN.-LBS.



DETAIL "A"
SOLID NEUTRAL

Autodesk Revit MEP Families avaliable on ASCO Power Technologies web site

REV. TO SHEET	ECN NO.	BY	APP.	DATE
N	255406	TR	BK	06/17/15
	SEE ECN			
M	247885	BYS	JPB	05/01/14
	SEE ECN			
L	235020	BK	BK	01/03/12
	SEE ECN			

PROJECT NAME:
OUTLINE & MOUNTING
150-600 AMP TYPE 1 TB/CTB/DTB
FRONT CONNECTED BYPASS

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	BWM	7/25/06
CHECKED		
PROJECT APPROVAL		
FINAL APPROVAL	BWM	7/25/06

MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-1-003. FOR PLASTIC PARTS SEE MP-1-005
ASSEM. REF. NO.

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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. 802093
DRAWING N REV. N ECN 255406 SHEET 1 OF 1

THREE PHASE WIRING FOR ASCO® 7000 SERIES AUTOMATIC DELAYED TRANSITION TRANSFER & BYPASS-ISOLATION SWITCHES TYPE J7ADTB RATED 150-600 AMPERES

FEATURES, SETTINGS, OPERATION & 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

(CONTINUED). . .

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 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.

SIGNALS & AUXILIARIES

A. FEATURE 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 14AE & 14BE – TRANSFER SWITCH AUXILIARY POSITION INDICATING CONTACTS.
SIX (6) FORM C CONTACTS TO INDICATE CONNECTION OF THE TRANSFER SWITCH TO NORMAL (14A) AND SIX (6) 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. 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 & ISOLATION USER CONTROLS & INDICATIONS

A. BYPASS / ISOLATION DISPLAY INDICATORS – LED TYPE, COMMON LAMP TEST

NORMAL SOURCE AVAILABLE – GREEN
EMERGENCY SOURCE AVAILABLE – RED

TRANSFER SWITCH CONNECTED TO NORMAL – GREEN
TRANSFER SWITCH CONNECTED TO EMERGENCY – RED

BYPASS SWITCH CONNECTED TO NORMAL – GREEN
BYPASS SWITCH CONNECTED TO EMERGENCY – RED

LOAD CONNECTED – AMBER

TS IN CONNECTED POSITION – AMBER
TS IN TEST POSITION – AMBER
TS ISOLATED – AMBER

UNIT NOT IN AUTOMATIC – AMBER

B. BYPASS / ISOLATION DISPLAY ENGINE CONTROL SWITCH
TWO (2) POSITIONS:
"AUTO" – ENGINE STARTING CONTROLLED BY TRANSFER SWITCH CONTROL PANEL
"RUN" – SIGNALS ENGINE TO START

C. BYPASS / ISOLATION INTERLOCKS (SOLENOID ACTUATED)
SL1: INTERLOCKS THE TRANSFER SWITCH ISOLATION CRANK WITH THE TRANSFER AND BYPASS SWITCHES TO INSURE THAT:

THE TRANSFER SWITCH CANNOT BE DISCONNECTED WITHOUT BEING BYPASSED.

THE TRANSFER SWITCH CANNOT BE RECONNECTED UNLESS IT IS IN THE SAME POSITION AS THE BYPASS SWITCH.

SL2: INTERLOCKS THE BYPASS SWITCH OPERATOR WHEN THE TRANSFER SWITCH IS IN THE CONNECTED POSITION TO INSURE THAT THE BYPASS SWITCH CANNOT BE OPERATED TO A SOURCE OTHER THAN THAT WHICH THE TRANSFER SWITCH IS CONNECTED TO.

GENERAL NOTES

1. SWITCH SHOWN DE-ENERGIZED AND CONNECTED TO THE NORMAL SOURCE. THE BYPASS SWITCH OPERATOR IS IN THE "OFF" (AUTOMATIC) POSITION WITH THE ISOLATION CRANK (TS) IN THE FULLY CONNECTED POSITION.
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.

ACCESSORIES

ACC. 1BB – 2P D/T CONTACTS THAT OPERATE WHEN EMERGENCY SOURCE VOLTAGE IS PRESENT AT TRANSFER SWITCH TERMINALS.

ACC. 1BG – 2P D/T CONTACTS THAT OPERATE WHEN NORMAL SOURCE VOLTAGE IS PRESENT AT TRANSFER SWITCH TERMINALS.

ACC. 31Z – SELECTIVE LOAD DISCONNECT CIRCUIT TO PROVIDE A PRE-TRANSFER AND/OR POST TRANSFER SIGNAL WHEN TRANSFERRING FROM EMERGENCY TO NORMAL AND/OR NORMAL TO EMERGENCY. ADDITIONALLY, THE SIGNAL CAN BE PROGRAMMED TO OCCUR DURING ALL TRANSFERS OR ONLY WHEN THE TRANSFER IS OCCURRING BETWEEN TWO LIVE SOURCES. THE LENGTH OF THE PRE AND POST TRANSFER DELAYS CAN BE SET TO 0–5 MINUTES, 59 SECONDS. FACTORY SETTINGS:

PARAMETER	SETTING
PRE-TRANSFER N>E (31F TIMER)	3 SEC
POST TRANSFER N>E (31M TIMER)	3 SEC
BYPASS 31F & 31M ON SOURCE FAIL	NO
PRE-TRANSFER E>N (31G TIMER)	3 SEC
POST TRANSFER E>N (31N TIMER)	3 SEC
BYPASS 31G & 31N ON SOURCE FAIL	NO

REFER TO GROUP 5 CONTROL PANEL USER'S GUIDE (PN 381333-126).

OUTPUT RATING: 6 AMPS, 240 VAC (GENERAL PURPOSE)
10 AMPS, 32 VDC RESISTIVE

BASE CATALOG NUMBER				CATALOG NUMBER SUFFIXES			
CATALOG TYPE	NEUTRAL TYPE	PHASE POLES	AMPS	VOLT CODE	CONTROLLER	OPTIONAL ACCESSORY	ENCLOSURE CODE
J7ADTB	A	3	150	C	5	X	C
			200	D			E
			230	E			F
			260	F			H
			400	H			J
			600	J			K
	B			K			L
				L			M
				M			N
				N			P
				P			Q
				Q			R
	BLANK FOR NONE					BLANK FOR NONE	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			BLANK		OPEN TYPE (NO ENCLOSURE)
A	SOLID			C	1	GENERAL PURPOSE, INDOOR
B	SWITCHING	C	208	E	2	INDOOR, WATER & DUST RESISTANT
		D	220	F	3R	OUTDOOR, RAINPROOF, SLEET & ICE RESISTANT
		E	230	G	4	INDOOR/OUTDOOR, WATERTIGHT & DUSTTIGHT
		F	240	H	4X	TYPE 4 PLUS CORROSION RESISTANCE (STAINLESS STEEL)
				J	4X	TYPE 4 PLUS CORROSION RESISTANCE (FIBERGLASS)
		H	380	K	7	EXPLOSION PROOF
		J	400	L	12	INDOOR, INDUSTRIAL ENVIRONMENTS, OILTIGHT & DUSTTIGHT
		K	415			
		L	440			(SECURE ENCLOSURES)
		M	460	M	3R	OUTDOOR, RAINPROOF, SLEET & ICE RESISTANT
		N	480	N	4	INDOOR/OUTDOOR, WATERTIGHT & DUSTTIGHT
		P	550	P	4X	TYPE 4 PLUS CORROSION RESISTANCE (STAINLESS STEEL)
		Q	575	Q	12	INDOOR, INDUSTRIAL ENVIRONMENTS, OILTIGHT & DUSTTIGHT
		R	600			

CATALOG NUMBER _____
ASCO® CERTIFIED TO S.O. _____
BY _____
DATE _____
FORM REV D
PROJECT NAME:

REV. TO SHEET	ECN NO.	BY	APP.	DATE
A	234370	NS	WK	10/28/11
	SEE ECN			
—	213077	AE	WK	04/25/07
	ISSUE			

WIRING DIAGRAM
7000 SERIES (J7ADTB) 3PH 150-600 AMPS
"J" FRAME, GROUP 5 CONTROLS
THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	AE	04/25/07
CHECKED	BK	04/25/07
PROJECT APPROVAL	WK	04/25/07
FINAL APPROVAL		

MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-I-003. FOR PLASTIC PARTS SEE MP-I-005. ASSEM. REF. NO.

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

COMPUTER GENERATED DRAWING
SCALE NONE SIZE DS
DWG. NO. 806099-003
DRAWING A REV. ECN & NO. 234370 SHEET 1 OF 10

TECHNICAL DATA & ACCESSORIES

BYPASS SWITCH AUXILIARY CONTACTS

BP AUXILIARY CONTACT	STATUS (*)	BP SWITCH POSITION (AUX3)		
		EMERG	OFF	NORMAL
81–82	●		X	
83–84			X	
85–86	●	X		
87–88	●	X		
89–90	●	X		
91–92		X		
93–94		X		
101–102			X	
103–104			X	
105–106	●		X	
107–108			X	
109–110	●			X
111–112	●			X
113–114				X
115–116				X
117–118				X
125–126			X	
127–128			X	

BYPASS SWITCH OPERATOR AUXILIARY CONTACTS

	BP AUXILIARY CONTACT	STATUS (*)	BP SWITCH HANDLE POSITION				
			NORMAL (CCW)		OFF	EMERGENCY (CW)	
			BYPASS (±90°)	<> ±20°		<> ±20°	BYPASS (±90°)
(AUX4)	140–141	●					
	140–142	●					
	146–147	●					
	146–148	●					
(AUX5)	137–138	●					
	137–139	●					
	143–144	●					
	143–145	●					

ISOLATION (TRANSFER SWITCH CARRIAGE POSITION) AUXILIARY CONTACTS

IS AUXILIARY CONTACT	STATUS (*)	TRANSFER SWITCH CARRIAGE POSITION				
		CONNECT	> <	TEST	> <	ISOLATE
1–2	●					X
1–3	●	X		X		
4–5	●					X
4–6	●	X		X		
7–8	●	X				X
7–9	●			X		
10–11	●	X				X
10–12	●			X		
13–14	●	X				X
13–15	●			X		
16–17	●	X				X
16–18	●			X		
19–20	●	X				X
19–21	●			X		
22–23	●	X				X
22–24	●			X		
25–26	●	X				X
25–27	●			X		
28–29	●	X				X
28–30	●			X		

(*) CONTACT AVAILABILITY STATUS:

"●" CONTACT PROVIDED & USED IN CIRCUITRY

"BLANK" CONTACT NOT USED. IF PHYSICALLY AVAILABLE, CONTACT IS FOR FACTORY USE ONLY!

REV. TO SHEET	ECN NO.	BY	APP.	DATE
A	234370	NS	WK	10/28/11
	SEE ECN			
—	213077	AE	WK	04/25/07
	ISSUE			

PROJECT NAME:

WIRING DIAGRAM

7000 SERIES (J7ADTB) 3PH 150–600 AMPS

"J" FRAME, GROUP 5 CONTROLS

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	AE	04/25/07
CHECKED	BK	04/25/07
PROJECT APPROVAL	WK	04/25/07
FINAL APPROVAL		

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

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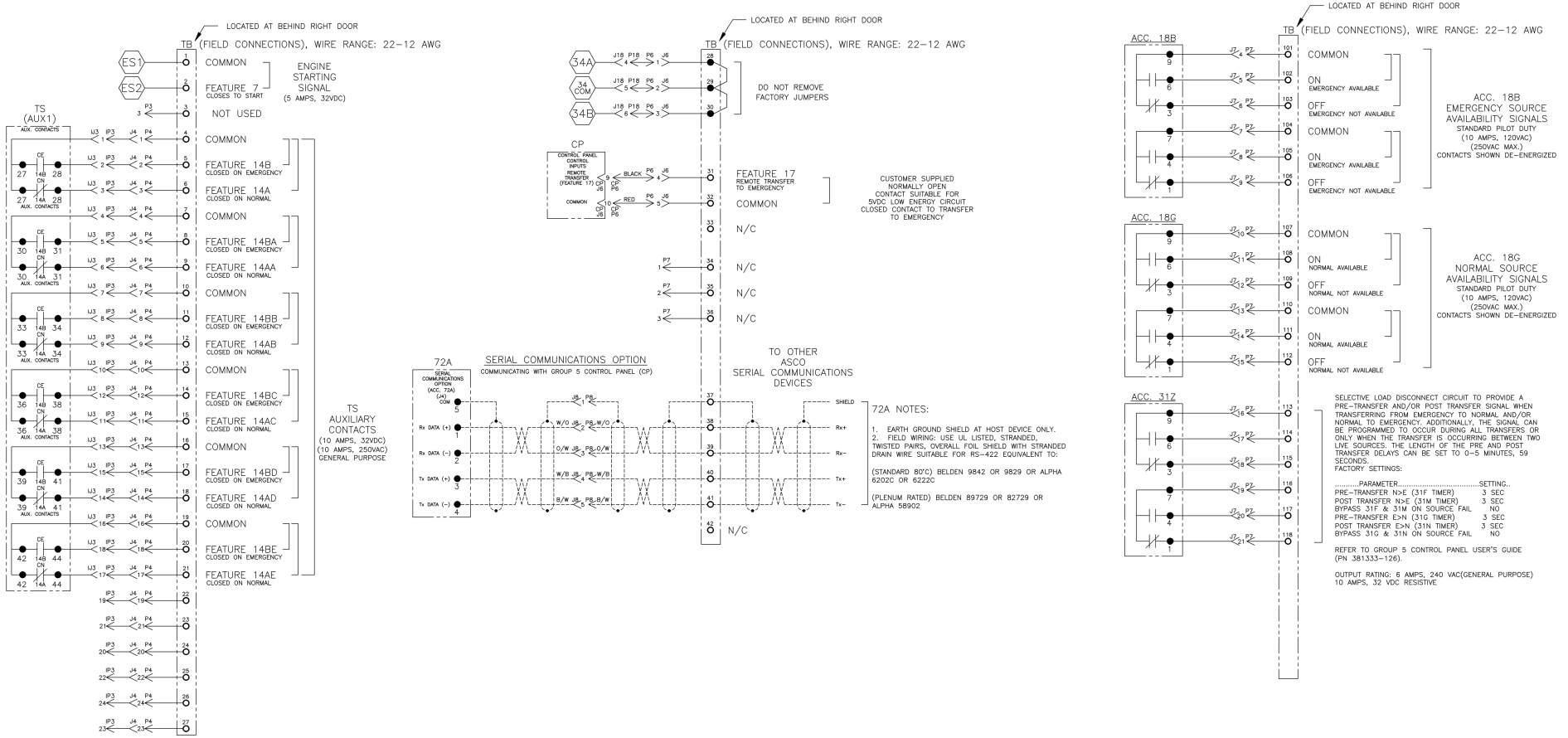
COMPUTER GENERATED DRAWING

SCALE NONE SIZE DS

DWG. NO. 806099-003

DRAWING A REV. A ECN NO. 234370 SHEET 2 OF 10

FIELD CONNECTIONS



REV.			
A	234370 NS WK 10/28/11	SEE ECN	
—	213077 AE WK 04/25/07	ISSUE	

PROJECT NAME:

WIRING DIAGRAM

7000 SERIES (J7ADTB) 3PH 150–600 AMPS
"J" FRAME, GROUP 5 CONTROLS

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	AE	04/25/07
CHECKED	BK	04/25/07
PROJECT APPROVAL	WK	04/25/07
FINAL APPROVAL		

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

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COMPUTER GENERATED DRAWING

SCALE NONE SIZE DS

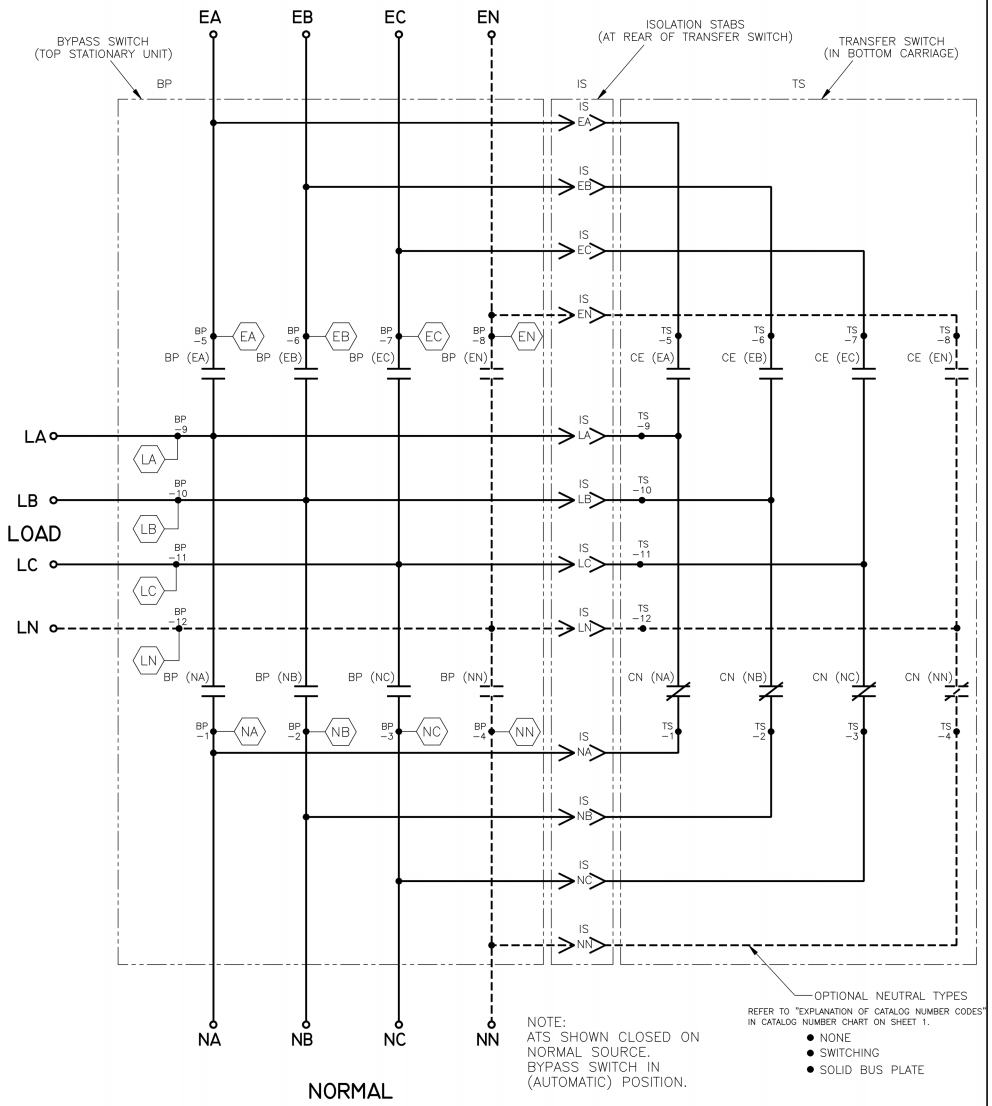
DWG. NO. 806099–003

DRAWING A REV. ECN NO. 234370

SHEET 3 OF 10

MAIN POWER POLES

EMERGENCY

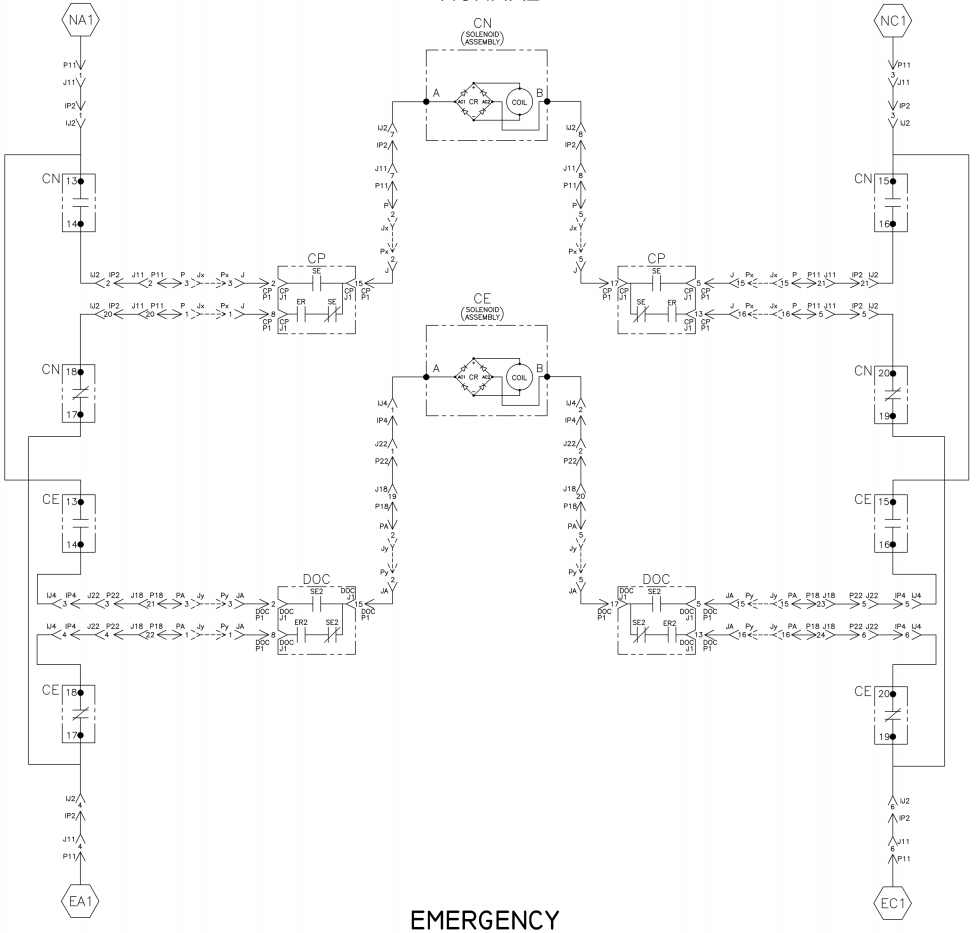


NOTE:
ATS SHOWN CLOSED ON NORMAL SOURCE. BYPASS SWITCH IN (AUTOMATIC) POSITION.

NORMAL

TS OPERATOR CIRCUIT

NORMAL



EMERGENCY

CN CONTROL CONTACTS						
CN	SOLENOID POSITION					
	CN CLOSED	BEFORE TDC	>	<	BEFORE TDC	CN OPEN
13–14						
15–16						
17–18						
19–20						

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

CE CONTROL CONTACTS						
CE	SOLENOID POSITION					
	CE CLOSED	BEFORE TDC	>	<	BEFORE TDC	CE OPEN
13–14						
15–16						
17–18						
19–20						

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

REV.	TO SHEET	ECN NO.	BY	APP.	DATE
A		234370	NS	WK	10/28/11
		SEE ECN			
—		213077	AE	WK	04/25/07
		ISSUE			

PROJECT NAME:

WIRING DIAGRAM
7000 SERIES (J7ADTB) 3PH 150–600 AMPS
"J" FRAME, GROUP 5 CONTROLS

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	AE	04/25/07
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FINAL APPROVAL		

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

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COMPUTER GENERATED DRAWING

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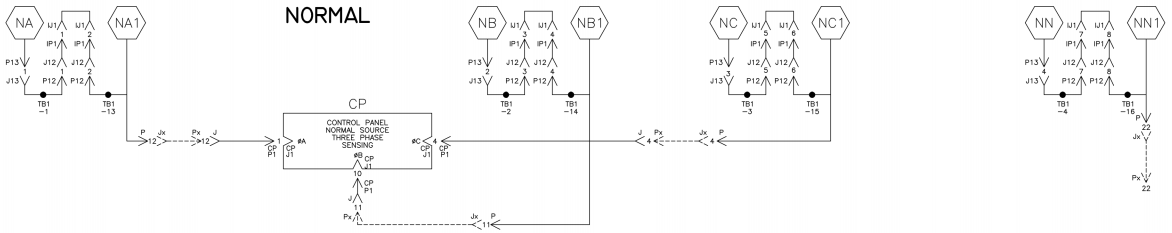
DWG. NO. 806099-003

DRAWING REV. A ECN NO. 234370 SHEET 4 OF 10

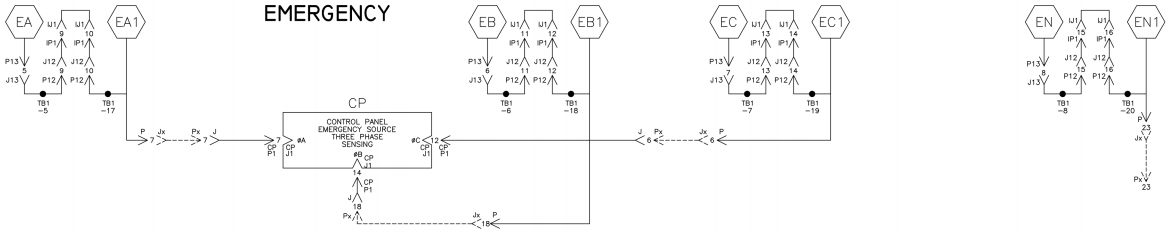
NORMAL SOURCE CIRCUITS

NORMAL



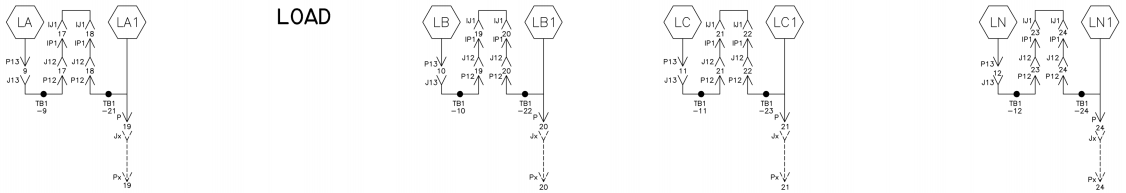
EMERGENCY SOURCE CIRCUITS

EMERGENCY



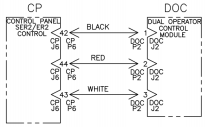
LOAD TERMINAL CIRCUITS

LOAD

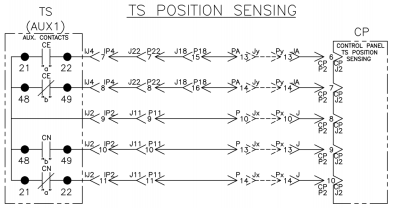


CONTROL SIGNALS & INDICATION

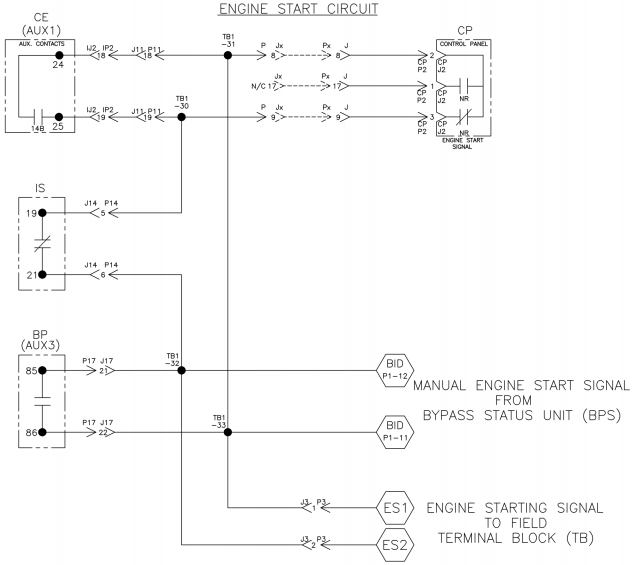
SER2/ER2 CONTROL



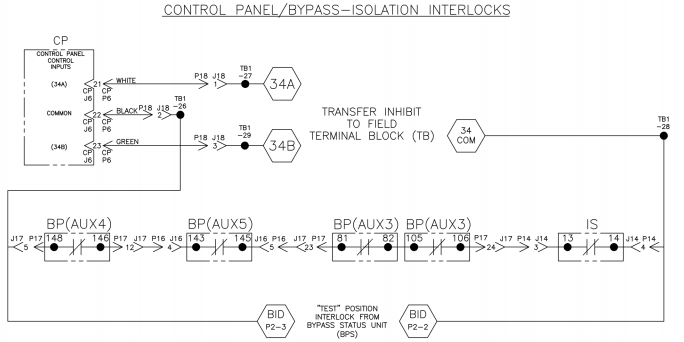
TS POSITION SENSING



ENGINE START CIRCUIT



CONTROL PANEL/BYPASS-ISOLATION INTERLOCKS



REV.	ECN NO.	BY	APP.	DATE
A	234370	NS	WK	10/28/11
	SEE ECN			
—	213077	AE	WK	04/25/07
	ISSUE			

PROJECT NAME:

WIRING DIAGRAM

7000 SERIES (J7ADTB) 3PH 150-600 AMPS

"J" FRAME, GROUP 5 CONTROLS

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	AE	04/25/07
CHECKED	BK	04/25/07
PROJECT APPROVAL	WK	04/25/07
FINAL APPROVAL		

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

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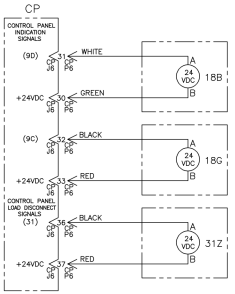
DWG. NO. 806099-003

DRAWING A REV. ECN / NO. 234370 SHEET 5 OF 10

ADDITIONAL CIRCUITS

ACC. 18B, 18G, 31Z



A	234370	NS	WK 10/28/11
	SEE ECN		
—	213077	AE	WK 04/25/07
	ISSUE		

REV. TO SHEET	ECN NO.	BY	APP.	DATE

PROJECT NAME:

WIRING DIAGRAM

7000 SERIES (J7ADTB) 3PH 150-600 AMPS
"J" FRAME, GROUP 5 CONTROLS

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	AE	04/25/07
CHECKED	BK	04/25/07
PROJECT APPROVAL	WK	04/25/07
FINAL APPROVAL		

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

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COMPUTER GENERATED DRAWING

SCALE NONE SIZE DS

DWG. NO. 806099-003

DRAWING & REV. A

ECN # NO. 234370

SHEET 6 OF 10

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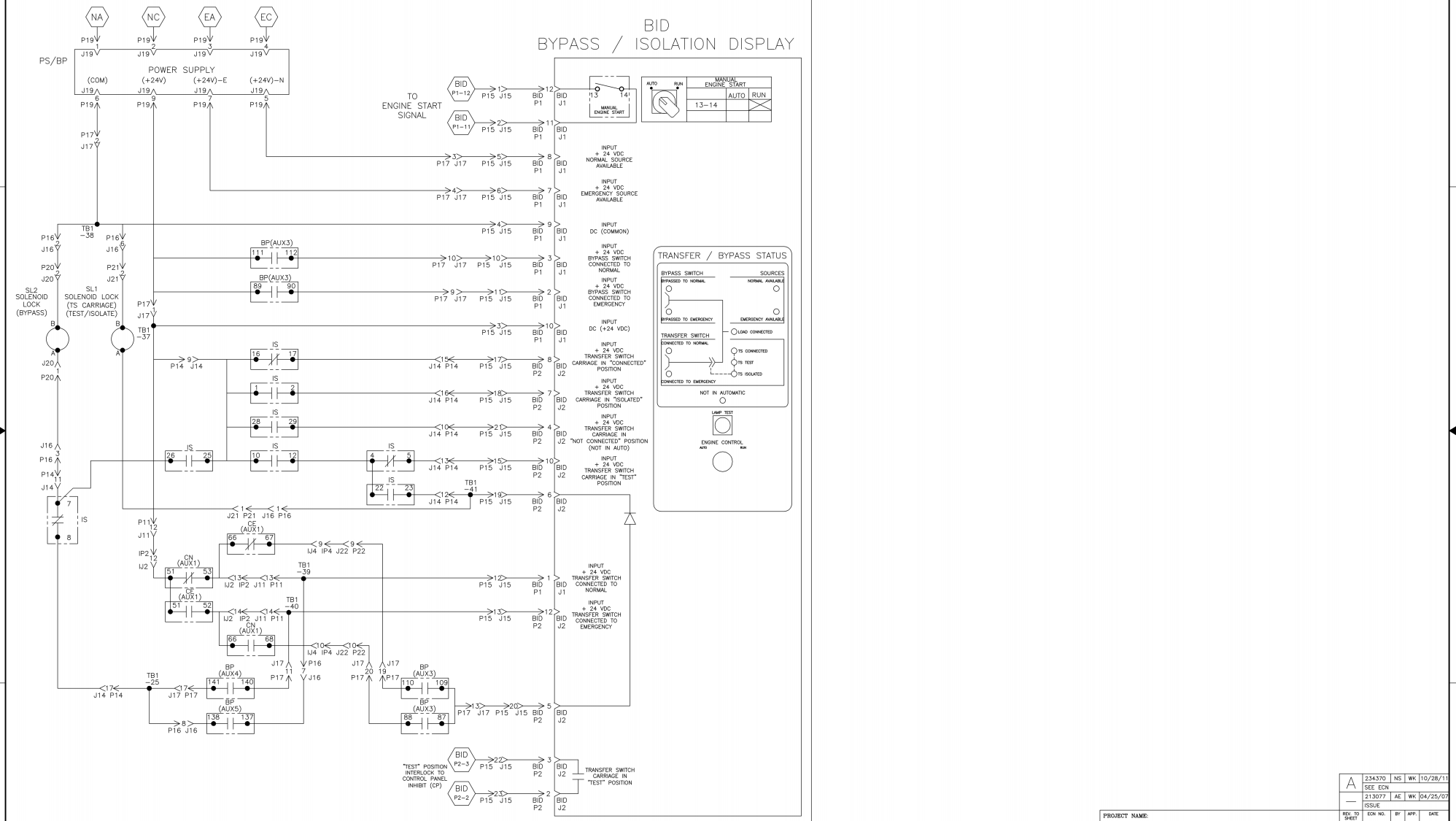
FLORHAM PARK, NEW JERSEY 07932 U.S.A.

BYPASS / ISOLATION INTERLOCKING & INDICATION



REV.	TO SHEET	ECN NO.	BY	APP.	DATE
A		234370	NS	WK	10/28/11
		SEE ECN			
—		213077	AE	WK	04/25/07
		ISSUE			

PROJECT NAME:

WIRING DIAGRAM

7000 SERIES (J7ADTB) 3PH 150–600 AMPS
"J" FRAME, GROUP 5 CONTROLS

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	AE	04/25/07
CHECKED	BK	04/25/07
PROJECT APPROVAL	WK	04/25/07
FINAL APPROVAL		

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

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COMPUTER GENERATED DRAWING

SCALE NONE SIZE DS

DWG. NO. 806099-003

DRAWING A REV. ECN NO. 234370 SHEET 7 OF 10

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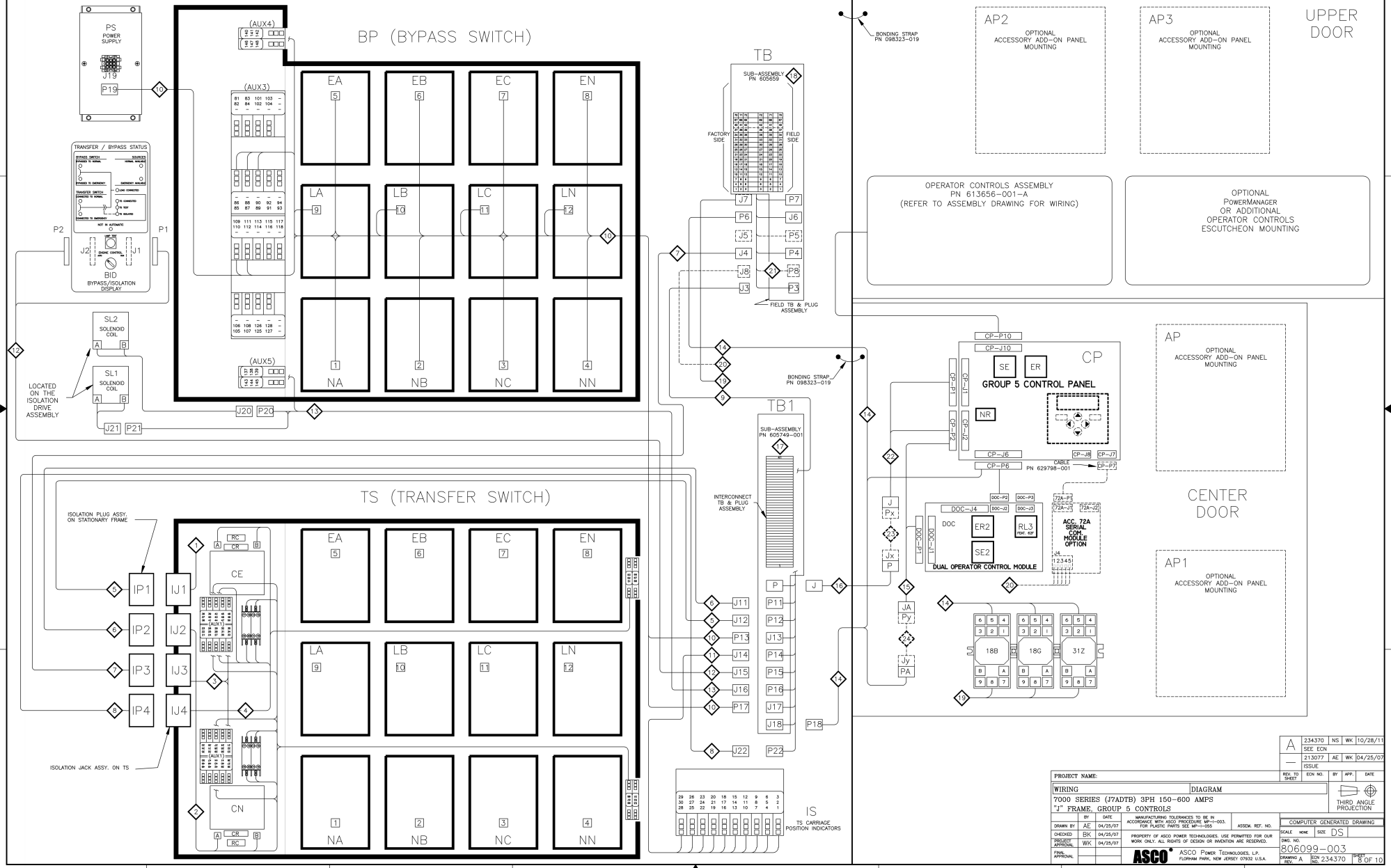
PHYSICAL DIAGRAM



REV.	TO SHEET	ECN NO.	BY	APP.	DATE
A		234370	NS	WK	10/28/11
		SEE ECN			
—		213077	AE	WK	04/25/07
		ISSUE			

PROJECT NAME:

WIRING DIAGRAM

7000 SERIES (J7ADTB) 3PH 150-600 AMPS
"J" FRAME, GROUP 5 CONTROLS

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	AE	04/25/07
CHECKED	BK	04/25/07
PROJECT APPROVAL	WK	04/25/07
FINAL APPROVAL		

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COMPUTER GENERATED DRAWING

SCALE NONE SIZE DS

DWG. NO. 806099-003

DRAWING A REV. ECN NO. 234370 SHEET 8 OF 10

WIRE RUN LISTING

① HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

HARNESS 605674-001 (U1) TS

WIRE No.		CLR	AWG
1	IJ1-1,U1-2		16
2	IJ1-3,U1-4		
3	IJ1-5,U1-6		
4	IJ1-7,U1-8		
5	IJ1-9,U1-10		
6	IJ1-11,U1-12		
7	IJ1-13,U1-14		
8	IJ1-15,U1-16		
9	IJ1-17,U1-18		
10	IJ1-19,U1-20		
11	IJ1-21,U1-22		
12	IJ1-23,U1-24		

② HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

HARNESS 806064-001-A (U2) TS

WIRE No.		CLR	AWG
1	IJ2-1,CN-13		16
1	CN-13,CE-13		
21	IJ2-2,CN-14		
3	IJ2-3,CN-15		
3	CN-15,CE-15		
5	IJ2-4,CN-17		
5	CN-17,CE-17		
24	IJ2-5,CN-20		
7	IJ2-6,CN-19		
7	CN-19,CE-19		
14	IJ2-7,CN-CR-AC1		
15	IJ2-8,CN-CR-AC2		
28	IJ2-9,CN(AUX1)-48		
28	CN(AUX1)-48,CN(AUX1)-21		
28	CN(AUX1)-21,CE(AUX1)-48		
28	CE(AUX1)-48,CE(AUX1)-21		
30	IJ2-10,CN(AUX1)-49		
29	IJ2-11,CN(AUX1)-22		
31	IJ2-12,CN(AUX1)-51		
31	CN(AUX1)-51,CE(AUX1)-51		
32	IJ2-13,CN(AUX1)-53		
32	CN(AUX1)-53,CE(AUX1)-66		
33	IJ2-14,CN(AUX1)-66		
33	CN(AUX1)-66,CE(AUX1)-52		
35	IJ2-16,CN(AUX1)-47		
36	IJ2-17,CE(AUX1)-47		
120	IJ2-18,CE(AUX1)-24		
38	IJ2-19,CE(AUX1)-25		
39	IJ2-20,CN-18		
40	IJ2-21,CN-16		
319	CN(AUX1)-45,CE(AUX1)-45		
420	CE(AUX1)-67,IJ4-9		PIN
421	CN(AUX1)-68,IJ4-10		PIN
	ADD WIRES		
34	IJ2-15		
41	IJ2-22		
42	IJ2-23		
43	IJ2-24		

③ HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

HARNESS 806064-002-A (U3) TS

WIRE No.		CLR	AWG
50	IJ3-1,CN(AUX1)-27		16
50	CN(AUX1)-27,CE(AUX1)-27		
51	IJ3-2,CE(AUX1)-28		
52	IJ3-3,CN(AUX1)-28		
53	IJ3-4,CN(AUX1)-30		
53	CN(AUX1)-30,CE(AUX1)-30		
54	IJ3-5,CE(AUX1)-31		
55	IJ3-6,CN(AUX1)-31		
56	IJ3-7,CN(AUX1)-33		
56	CN(AUX1)-33,CE(AUX1)-33		
57	IJ3-8,CE(AUX1)-34		
58	IJ3-9,CN(AUX1)-34		
59	IJ3-10,CN(AUX1)-36		
59	CN(AUX1)-36,CE(AUX1)-36		
60	IJ3-11,CN(AUX1)-38		
61	IJ3-12,CE(AUX1)-38		
62	IJ3-13,CN(AUX1)-39		
62	CN(AUX1)-39,CE(AUX1)-39		
63	IJ3-14,CN(AUX1)-41		
64	IJ3-15,CE(AUX1)-41		
65	IJ3-16,CN(AUX1)-42		
65	CN(AUX1)-42,CE(AUX1)-42		
66	IJ3-17,CN(AUX1)-44		
67	IJ3-18,CE(AUX1)-44		
	ADD WIRES		
68	IJ3-19		
69	IJ3-20		
70	IJ3-21		
71	IJ3-22		
72	IJ3-23		
73	IJ3-24		

④ HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

HARNESS 806064-003-A (U4) TS

WIRE No.		CLR	AWG
228	IJ4-1,CE-CR-AC1		16
229	IJ4-2,CE-CR-AC2		
320	IJ4-3,CE-14		
322	IJ4-4,CE-18		
321	IJ4-5,CE-16		
323	IJ4-6,CE-20		
324	IJ4-7,CE(AUX1)-22		
325	IJ4-8,CE(AUX1)-49		
	REMOVE WIRES		
	ADD WIRES		
326	IJ4-11		
327	IJ4-12		
328	IJ4-13		
329	IJ4-14		
330	IJ4-15		
331	IJ4-16		
332	IJ4-17		
333	IJ4-18		
334	IJ4-19		
335	IJ4-20		
336	IJ4-21		
337	IJ4-22		
338	IJ4-23		
339	IJ4-24		

⑤ HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

HARNESS 605674-006-D (IP1,J12) STATIONARY FRAME

WIRE No.		CLR	AWG
1	IP1-1,J12-1		16
1	IP1-2,J12-2		
2	IP1-3,J12-3		
2	IP1-4,J12-4		
3	IP1-5,J12-5		
3	IP1-6,J12-6		
4	IP1-7,J12-7		
4	IP1-8,J12-8		
5	IP1-9,J12-9		
5	IP1-10,J12-10		
6	IP1-11,J12-11		
6	IP1-12,J12-12		
7	IP1-13,J12-13		
7	IP1-14,J12-14		
8	IP1-15,J12-15		
8	IP1-16,J12-16		
9	IP1-17,J12-17		
9	IP1-18,J12-18		
10	IP1-19,J12-19		
10	IP1-20,J12-20		
11	IP1-21,J12-21		
11	IP1-22,J12-22		
12	IP1-23,J12-23		
12	IP1-24,J12-24		

⑥ HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

HARNESS 605674-006-D (IP2,J11) STATIONARY FRAME

WIRE No.		CLR	AWG
1	IP2-1,J11-1		16
21	IP2-2,J11-2		
3	IP2-3,J11-3		
5	IP2-4,J11-4		
24	IP2-5,J11-5		
7	IP2-6,J11-6		
14	IP2-7,J11-7		
15	IP2-8,J11-8		
28	IP2-9,J11-9		
30	IP2-10,J11-10		
29	IP2-11,J11-11		
31	IP2-12,J11-12		
32	IP2-13,J11-13		
33	IP2-14,J11-14		
34	IP2-15,J11-15		
35	IP2-16,J11-16		
36	IP2-17,J11-17		
120	IP2-18,J11-18		
38	IP2-19,J11-19		
39	IP2-20,J11-20		
40	IP2-21,J11-21		
41	IP2-22,J11-22		
42	IP2-23,J11-23		
43	IP2-24,J11-24		
	REMOVE WIRES		
	ADD WIRES		

⑦ HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

HARNESS 605674-006-C (IP3,J4) STATIONARY FRAME

WIRE No.		CLR	AWG
50	IP3-1,J4-1		16
51	IP3-2,J4-2		
52	IP3-3,J4-3		
53	IP3-4,J4-4		
54	IP3-5,J4-5		
55	IP3-6,J4-6		
56	IP3-7,J4-7		
57	IP3-8,J4-8		
58	IP3-9,J4-9		
59	IP3-10,J4-10		
60	IP3-11,J4-11		
61	IP3-12,J4-12		
62	IP3-13,J4-13		
63	IP3-14,J4-14		
64	IP3-15,J4-15		
65	IP3-16,J4-16		
66	IP3-17,J4-17		
67	IP3-18,J4-18		
68	IP3-19,J4-19		
69	IP3-20,J4-20		
70	IP3-21,J4-21		
71	IP3-22,J4-22		
72	IP3-23,J4-23		
73	IP3-24,J4-24		

⑧ HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

HARNESS 605674-006-B (IP4,J22) STATIONARY FRAME

WIRE No.		CLR	AWG
228	IP4-1,J22-1		16
229	IP4-2,J22-2		
320	IP4-3,J22-3		
322	IP4-4,J22-4		
321	IP4-5,J22-5		
323	IP4-6,J22-6		
324	IP4-7,J22-7		
325	IP4-8,J22-8		
420	IP4-9,J22-9		
421	IP4-10,J22-10		
	REMOVE WIRES		
	ADD WIRES		
326	IP4-11		
327	IP4-12		
328	IP4-13		
329	IP4-14		
330	IP4-15		
331	IP4-16		
332	IP4-17		
333	IP4-18		
334	IP4-19		
335	IP4-20		
336	IP4-21		
337	IP4-22		
338	IP4-23		
339	IP4-24		

⑨ HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

HARNESS 605674-007-A (J3,TB1) ENGINE START

WIRE No.		CLR	AWG
120	IJ3-1,TB1-33		16
121	IJ3-2,TB1-32		
	ADD WIRES		
122	IJ3-3		
123	IJ3-4		

⑩ HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☒

HARNESS 806064-004 (P13, P17, P19, BP) BP

WIRE No.		CLR	AWG
1	P13-1,BP-1		16
1	BP-1,P19-1		
2	P13-2,BP-2		
3	P13-3,BP-3		
3	BP-3,P19-2		
4	P13-4,BP-4		
5	P13-5,BP-5		
5	BP-5,P19-3		
6	P13-6,BP-6		
7	P13-7,BP-7		
7	BP-7,P19-4		
8	P13-8,BP-8		
9	P13-9,BP-9		
10	P13-10,BP-10		
11	P13-11,BP-11		
12	P13-12,BP-12		
31	P17-1,BP(AUX3)-111		
170	P17-2,P19-6		
171	P17-3,P19-5		
172	P17-4,P19-7		
191	P17-5,BP(AUX4)-148		
177	P17-9,BP(AUX3)-90		
176	P17-10,BP(AUX3)-112		
33	P17-11,BP(AUX3)-88		
33	BP(AUX3)-88,BP(AUX4)-140		
173	P17-12,BP(AUX4)-146		
32	BP(AUX3)-110,BP(AUX5)-137		
149	P17-13,BP(AUX3)-87		
149	BP(AUX3)-87,BP(AUX3)-109		
190	P17-17,BP(AUX4)-141		
121	P17-21,BP(AUX3)-85		
120	P17-22,BP(AUX3)-86		
31	P19-9,BP(AUX3)-89		
31	BP(AUX3)-89,BP(AUX3)-111		
501	BP(AUX3)-82,BP(AUX3)-105		
500	P17-23,BP(AUX3)-81		
150	P17-24,BP(AUX3)-106		
	REMOVE WIRES		
33	P17-11,BP(AUX3)-88		
33	BP(AUX3)-88,BP(AUX4)-140		
32	BP(AUX3)-110,BP(AUX5)-137		
	ADD WIRES		
26	P13-13		
140	P13-14		
27	P13-15		
340	P13-16		
341	P13-17		
342	P13-18		
343	P13-19		
344	P13-20		
345	P13-21		
346	P13-22		
347	P13-23		
348	P13-24		
174	P17-6		
504	P17-7		
175	P17-8		
33	P17-11,BP(AUX4)-140		
178	P17-14		
505	P17-15		
189	P17-16		
506	P17-18		
420	P17-19,BP(AUX3)-110		
421	P17-20,BP(AUX3)-88		

⑪ HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

HARNESS 806064-007 (J14,IS) ISOLATION AUX. CONTACTS

WIRE No.		CLR	AWG
150	J14-3,IS-13		16
151	J14-4,IS-14		
38	J14-5,IS-19		
121	J14-6,IS-21		
31	J14-9,IS-10		
152	J14-10,IS-29		
153	J14-11,IS-26		
154	J14-12,IS-23		
155	J14-13,IS-5		
157	J14-15,IS-17		
158	J14-16,IS-2		
190	J14-17,IS-8		
31	IS-10,IS-1		
31	IS-1,IS-16		
31	IS-16,IS-25		
31	IS-25,IS-28		
159	IS-12,IS-22		
159	IS-12,IS-4		
153	IS-7,IS-26		
	REMOVE WIRES		
	ADD WIRES		
507	J14-1		
160	J14-2		
169	J14-7		
168	J14-8		
156	J14-14		
161	J14-18		
162	J14-19		
163	J14-20		
164	J14-21		
165	J14-22		
166	J14-23		
167	J14-24		

⑫ HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

HARNESS 736883 (J15, BID-P1, BID-P2) BYPASS ISOLATION DISPLAY

WIRE No.		CLR	AWG
121	J15-1,BID-P1-12		22
120	J15-2,BID-P1-11		
31	J15-3,BID-P1-10		
170	J15-4,BID-P1-9		
171	J15-5,BID-P1-8		
172	J15-6,BID-P1-7		
176	J15-10,BID-P1-3		
177	J15-11,BID-P1-2		
32	J15-12,BID-P1-1		
33	J15-13,BID-P2-12		
155	J15-15,BID-P2-10		
157	J15-17,BID-P2-8		
158	J15-18,BID-P2-7		
154	J15-19,BID-P2-6		
149	J15-20,BID-P2-5		
152	J15-21,BID-P2-4		
191	J15-22,BID-P2-3		
151	J15-23,BID-P2-2		
	ADD WIRES		
389	J15-7		
390	J15-8		
391	J15-9		
395	J15-14		
508	J15-16		
405	J15-24		

⑬ HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

HARNESS 806064-006 (J16, P20, P21) P/S INTERLOCKS

WIRE No.		CLR	AWG
154	J16-1,P21-1		16
170	J16-2,P20-2		
153	J16-3,P20-1		
173	J16-4,BP(AUX5)-143		
500	J16-5,BP(AUX5)-145		
170	J16-6,P21-2		
32	J16-7,BP(AUX5)-137		
190	J16-8,BP(AUX5)-138		
	ADD WIRES		
524	J16-9		
525	J16-10		
526	J16-11		
527	J16-12		
528	J16-13		
529	J16-14		
530	J16-15		
531	J16-16		
532	J16-17		
533	J16-18		
534	J16-19		
535	J16-20		
536	J16-21		
537	J16-22		
538	J16-23		
539	J16-24		

⑭ HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☒

HARNESS 736828-004-A (PA,P6,P18,CP-P6,DOC-P2,TFR) INTERNAL CONTROL & FIELD INPUTS

WIRE No.		CLR	AWG
210	P18-1,CP-P6-21	WHT	22
191	P18-2,CP-P6-22	BLK	(4 COND)
211	P18-3,CP-P6-23	GRN	
210	P18-4,P6-1		16
151	P18-5,P6-2		
211	P18-6,P6-3		
324	P18-15,PA-13		
325	P18-16,PA-14		
36	P18-17,PA-17		
35	P18-18,PA-18		
228	P18-19,PA-2		
229	P18-20,PA-5		
320	P18-21,PA-3		
322	P18-22,PA-1		
321	P18-23,PA-15		
323	P18-24,PA-16		
243	P6-4,CP-P6-9	BLK	22
244	P6-5,CP-P6-10	RED	(2 COND)
313	CP-P6-42,DOC-P2-1	BLK	
314	CP-P6-44,DOC-P2-2	RED	22
315	CP-P6-43,DOC-P2-3	WHT	(4 COND)
316	CP-P6-24,DOC-P2-6	GRN	
318	CP-P6-40,TFR-A	BLK	22
317	CP-P6-41,TFR-B	RED	(2 COND)
	REMOVE WIRES		
316	CP-P6-24,DOC-P2-6	GRN	
318	CP-P6-40,TFR-A	BLK	
317	CP-P6-41,TFR-B	RED	
	ADD WIRES		
215	P18-7		16
216	P18-8		
217	P18-9		
218	P18-10		
219	P18-11		
220	P18-12		
221	P18-13		
222	P18-14		
600	CP-P6-30,18B-B	GRN	
601	CP-P6-31,18B-A	WHT	22
602	CP-P6-32,18C-A	BLK	(4 COND)
603	CP-P6-33,18C-B	RED	
604	CP-P6-36,31Z-A	BLK	22
605	CP-P6-37,31Z-B	RED	(2 COND)

⑮ HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

HARNESS 619385 (JA,CP-P2,DOC-P1) DOC

WIRE No.		CLR	AWG
228	JA-2,DOC-P1-15		16
320	JA-3,DOC-P1-2		
322	JA-1,DOC-P1-8		
323	JA-16,DOC-P1-13		
321	JA-15,DOC-P1-5		
229	JA-5,DOC-P1-17		
324	JA-13,CP-P2-6		PIN
325	JA-14,CP-P2-7		PIN
	REMOVE WIRES		
	ADD WIRES		
509	JA-4		
510	JA-6		
511	JA-7		
512	JA-8		
513	JA-9		
514	JA-10		
515	JA-11		
516	JA-12		
36	JA-17		
35	JA-18		
517	JA-19		
349	JA-20		
350	JA-21		
351	JA-22		
352	JA-23		
353	JA-24		

⑯ HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

HARNESS 309320-006 (P,J) CONTROL PANEL EXTENSION

WIRE No.		CLR	AWG
39	P-1,J-1		16
14	P-2,J-2		
21	P-3,J-3		
3	P-4,J-4		
15	P-5,J-5		
7	P-6,J-6		
5	P-7,J-7		
120	P-8,J-8		
38	P-9,J-9		
28	P-10,J-10		
2	P-11,J-11		
1	P-12,J-12		
30	P-13,J-13		
29	P-14,J-14		
40	P-15,J-15		
24	P-16,J-16		
312	P-17,J-17		
6	P-18,J-18		
9	P-19,J-19		
10	P-20,J-20		
11	P-21,J-21		
4	P-22,J-22		
8	P-23,J-23		
12	P-24,J-24		

A	234370	NS	WK	10/28/11
	SEE ECN			
—	213077	AE	WK	04/25/07
	ISSUE			

REV. TO SHEET	ECN NO.	BY	APP.	DATE

PROJECT NAME:

WIRING | DIAGRAM

7000 SERIES (J7ADTB) 3PH 150-600 AMPS

"J" FRAME, GROUP 5 CONTROLS

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	AE	04/25/07
CHECKED	BK	04/25/07
PROJECT APPROVAL	WK	04/25/07
FINAL APPROVAL		

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

ASSEM. REF. NO.

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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. 806099-003

DRAWING A REV. | ECN NO. 234370 | SHEET 9 OF 10

WIRE RUN LISTING

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

WIRE No.	SUB-ASSEMBLY 605749-001 (TB1,P,P11,P12,J13,P14,P15,P16,J17,J18) MAIN INTERCONNECT ASSEMBLY	CLR	AWG
14	P-2,P11-7		16
21	P-3,P11-2		
3	P-4,TB1-15		
15	P-5,P11-8		
7	P-6,TB1-19		
5	P-7,TB1-17		
120	P-8,TB1-31		
38	P-9,TB1-30		
28	P-10,P11-9		
2	P-11,TB1-14		
1	P-12,TB1-13		
30	P-13,P11-10		
29	P-14,P11-11		
24	P-16,P11-5		
6	P-18,TB1-18		
9	P-19,TB1-21		
10	P-20,TB1-22		
11	P-21,TB1-23		
4	P-22,TB1-16		
8	P-23,TB1-20		
12	P-24,TB1-24		
1	P11-1,TB1-13		
3	P11-3,TB1-15		
5	P11-4,TB1-17		
7	P11-6,TB1-19		
31	P11-12,TB1-37		
32	P11-13,TB1-39		
33	P11-14,TB1-40		
34	P11-15,TB1-34		
35	P11-16,TB1-35		
36	P11-17,TB1-36		
120	P11-18,TB1-31		
38	P11-19,TB1-30		
39	P11-20,P-1		
40	P11-21,P-15		
1	P12-1,TB1-1		
1	P12-2,TB1-13		
2	P12-3,TB1-2		
2	P12-4,TB1-14		
3	P12-5,TB1-3		
3	P12-6,TB1-15		
4	P12-7,TB1-4		
4	P12-8,TB1-16		
5	P12-9,TB1-5		
5	P12-10,TB1-17		
6	P12-11,TB1-6		
6	P12-12,TB1-18		
7	P12-13,TB1-7		
7	P12-14,TB1-19		
8	P12-15,TB1-8		
8	P12-16,TB1-20		
9	P12-17,TB1-9		
9	P12-18,TB1-21		
10	P12-19,TB1-10		
10	P12-20,TB1-22		
11	P12-21,TB1-11		
11	P12-22,TB1-23		
12	P12-23,TB1-12		
12	P12-24,TB1-24		
1	J13-1,TB1-1		
2	J13-2,TB1-2		
3	J13-3,TB1-3		
4	J13-4,TB1-4		
5	J13-5,TB1-5		
6	J13-6,TB1-6		
7	J13-7,TB1-7		
8	J13-8,TB1-8		
9	J13-9,TB1-9		
10	J13-10,TB1-10		
11	J13-11,TB1-11		
12	J13-12,TB1-12		
151	P14-4,TB1-28		
38	P14-5,TB1-30		
121	P14-6,TB1-32		
31	P14-9,TB1-37		
153	P14-11,P16-3		
154	P14-12,TB1-41		
155	P14-13,P15-15		
157	P14-15,P15-17		
158	P14-16,P15-18		
190	P14-17,J17-17		
121	P15-1,TB1-32		
120	P15-2,TB1-33		
31	P15-3,TB1-37		
170	P15-4,TB1-38		
171	P15-5,J17-3		
172	P15-6,J17-4		
176	P15-10,J17-10		
177	P15-11,J17-9		
32	P15-12,TB1-39		
33	P15-13,TB1-40		
154	P15-19,TB1-41		
149	P15-20,J17-13		
152	P15-21,P14-10		
191	P15-22,TB1-26		
151	P15-23,TB1-28		
154	P16-1,TB1-41		
170	P16-2,TB1-38		
191	P16-4,TB1-26		
170	P16-6,TB1-38		
31	J17-1,TB1-37		
170	J17-2,TB1-38		
32	J17-11,TB1-39		
33	J17-12,TB1-40		
121	J17-21,TB1-32		
120	J17-22,TB1-33		
500	J17-23,P16-5		
150	J17-24,P14-3		

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

WIRE No.	SUB-ASSEMBLY 605749-001 (TB1,P,P11,P12,J13,P14,P15,P16,J17,J18) MAIN INTERCONNECT ASSEMBLY (CONTINUED)	CLR	AWG
210	J18-1,TB1-27		16
191	J18-2,TB1-26		
211	J18-3,TB1-29		
210	J18-4,TB1-27		
151	J18-5,TB1-28		
211	J18-6,TB1-29		
120	TB1-31,TB1-33		
	REMOVE WIRES		
190	P14-17,J17-17		
191	P16-4,TB1-26		
33	J17-12,TB1-40		
32	J17-11,TB1-39		
	ADD WIRES		
312	P-17		
41	P11-22		
42	P11-23		
43	P11-24		
26	J13-13		
140	J13-14		
27	J13-15		
340	J13-16		
341	J13-17		
342	J13-18		
343	J13-19		
344	J13-20		
345	J13-21		
346	J13-22		
347	J13-23		
348	J13-24		
507	P14-1		
160	P14-2		
169	P14-7		
168	P14-8		
156	P14-14		
190	P14-17,TB1-25		
161	P14-18		
162	P14-19		
163	P14-20		
164	P14-21		
165	P14-22		
166	P14-23		
167	P14-24		
389	P15-7		
390	P15-8		
391	P15-9		
395	P15-14		
508	P15-16		
405	P15-24		
173	P16-4,J17-12		
32	P16-7,TB1-39		
190	P16-8,TB1-25		
524	P16-9		
525	P16-10		
526	P16-11		
527	P16-12		
528	P16-13		
529	P16-14		
530	P16-15		
531	P16-16		
532	P16-17		
533	P16-18		
534	P16-19		
535	P16-20		
536	P16-21		
537	P16-22		
538	P16-23		
539	P16-24		
191	J17-5,TB1-26		
174	J17-6		
504	J17-7		
175	J17-8		
33	J17-11,TB1-40		
178	J17-14		
505	J17-15		
189	J17-16		
190	J17-17,TB1-25		
506	J17-18		
420	J17-19,P22-9		
421	J17-20,P22-10		
215	J18-7		
216	J18-8		
217	J18-9		
218	J18-10		
219	J18-11		
220	J18-12		
221	J18-13		
222	J18-14		
324	J18-15,P22-7		
325	J18-16,P22-8		
36	J18-17		
35	J18-18		
228	J18-19,P22-1		
229	J18-20,P22-2		
320	J18-21,P22-3		
322	J18-22,P22-4		
321	J18-23,P22-5		
323	J18-24,P22-6		

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

WIRE No.	SUB-ASSEMBLY 605659 (P3,P4,J6,P7,TB) STD. FIELD TB	CLR	AWG
120	TB-1,P3-1		16
121	TB-2,P3-2		
122	TB-3,P3-3		
50	TB-4,P4-1		
51	TB-5,P4-2		
52	TB-6,P4-3		
53	TB-7,P4-4		
54	TB-8,P4-5		
55	TB-9,P4-6		
56	TB-10,P4-7		
57	TB-11,P4-8		
58	TB-12,P4-9		
59	TB-13,P4-10		
61	TB-14,P4-12		
60	TB-15,P4-11		
62	TB-16,P4-13		
64	TB-17,P4-15		
63	TB-18,P4-14		
65	TB-19,P4-16		
67	TB-20,P4-18		
66	TB-21,P4-17		
68	TB-22,P4-19		
70	TB-23,P4-21		
69	TB-24,P4-20		
71	TB-25,P4-22		
73	TB-26,P4-24		
72	TB-27,P4-23		
210	TB-28,J6-1		
151	TB-29,J6-2		
211	TB-30,J6-3		
243	TB-31,J6-4		
244	TB-32,J6-5		
270	TB-34,P7-1		
271	TB-35,P7-2		
272	TB-36,P7-3		
	JUMPERS		
	TB-28,TB-29		
	TB-29,TB-30		
	ADD WIRES		
123	P3-4		
245	J6-6		
246	J6-7		
247	J6-8		
248	J6-9		
249	J6-10		
250	J6-11		
251	J6-12		
252	J6-13		
253	J6-14		
254	J6-15		
255	J6-16		
256	J6-17		
257	J6-18		
258	J6-19		
259	J6-20		
260	J6-21		
261	J6-22		
262	J6-23		
263	J6-24		
273	P7-4,TB-101		
274	P7-5,TB-102		
275	P7-6,TB-103		
276	P7-7,TB-104		
277	P7-8,TB-105		
278	P7-9,TB-106		
279	P7-10,TB-107		
280	P7-11,TB-108		
281	P7-12,TB-109		
282	P7-13,TB-110		
283	P7-14,TB-111		
284	P7-15,TB-112		
285	P7-16,TB-113		
286	P7-17,TB-114		
287	P7-18,TB-115		
288	P7-19,TB-116		
289	P7-20,TB-117		
290	P7-21,TB-118		
291	P7-22		
292	P7-23		
293	P7-24		

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

WIRE No.	HARNESS (J7) OPTIONAL FIELD OUTPUTS	CLR	AWG
270	J7-1		16
271	J7-2		
272	J7-3		
273	J7-4,18B-9		
274	J7-5,18B-6		
275	J7-6,18B-3		
276	J7-7,18B-7		
277	J7-8,18B-4		
278	J7-9,18B-1		
279	J7-10,18G-9		
280	J7-11,18G-6		
281	J7-12,18G-3		
282	J7-13,18G-7		
283	J7-14,18G-4		
284	J7-15,18G-1		
285	J7-16,31Z-9		
286	J7-17,31Z-6		
287	J7-18,31Z-3		
288	J7-19,31Z-7		
289	J7-20,31Z-4		
290	J7-21,31Z-1		
291	J7-22		
292	J7-23		
293	J7-24		

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

WIRE No.	HARNESS 605454-005 (J8) OPTIONAL SERIAL I/O	CLR	AWG
300	J8-1,72A-5	SHLD	22 (4 COND) SHIELDED TWTP
301	J8-2,72A-1	WHT/ORG	
302	J8-3,72A-2	ORG/WHT	
303	J8-4,72A-3	WHT/BLU	
304	J8-5,72A-4	BLU/WHT	
305	J8-6		
306	J8-7		
307	J8-8		
308	J8-9		

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

WIRE No.	HARNESS 605454-007 (P8,TB) OPTIONAL SERIAL I/O	CLR	AWG
300	P8-1,TB-37	SHLD	22 (4 COND) SHIELDED TWTP
301	P8-2,TB-38	WHT/ORG	
302	P8-3,TB-39	ORG/WHT	
303	P8-4,TB-40	WHT/BLU	
304	P8-5,TB-41	BLU/WHT	
305	P8-6		
306	P8-7		
307	P8-8		
308	P8-9		

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

WIRE No.	HARNESS 483763 (J,CP-P1,CP-P2) CONTROL PANEL	CLR	AWG
39	J-1,CP-P1-8		16
14	J-2,CP-P1-15		
21	J-3,CP-P1-2		
3	J-4,CP-P1-4		
15	J-5,CP-P1-17		
7	J-6,CP-P1-12		
5	J-7,CP-P1-7		
120	J-8,CP-P2-2		
38	J-9,CP-P2-3		
28	J-10,CP-P2-8		
2	J-11,CP-P1-10		
1	J-12,CP-P1-1		
30	J-13,CP-P2-9		
29	J-14,CP-P2-10		
40	J-15,CP-P1-5		
24	J-16,CP-P1-13		
312	J-17,CP-P2-1		
6	J-18,CP-P1-14		
	ADD WIRE		
9	J-19		
10	J-20		
11	J-21		
4	J-22		
8	J-23		
12	J-24		

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

WIRE No.	HARNESS 309320-005 OPTIONAL 8 IN. EXTENSION HARNESS	CLR	AWG
39	Jx-1,Px-1		16
14	Jx-2,Px-2		
21	Jx-3,Px-3		
3	Jx-4,Px-4		
15	Jx-5,Px-5		
7	Jx-6,Px-6		
5	Jx-7,Px-7		
120	Jx-8,Px-8		
38	Jx-9,Px-9		
28	Jx-10,Px-10		
2	Jx-11,Px-11		
1	Jx-12,Px-12		
30	Jx-13,Px-13		
29	Jx-14,Px-14		
40	Jx-15,Px-15		
24	Jx-16,Px-16		
312	Jx-17,Px-17		
6	Jx-18,Px-18		
9	Jx-19,Px-19		
10	Jx-20,Px-20		
11	Jx-21,Px-21		
4	Jx-22,Px-22		
8	Jx-23,Px-23		
12	Jx-24,Px-24		

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

WIRE No.	HARNESS 309320-005 OPTIONAL 8 IN. EXTENSION HARNESS	CLR	AWG
322	Jy-1,Py-1		16
228	Jy-2,Py-2		
320	Jy-3,Py-3		
509	Jy-4,Py-4		
229	Jy-5,Py-5		
510	Jy-6,Py-6		
511	Jy-7,Py-7		
512	Jy-8,Py-8		
513	Jy-9,Py-9		
514	Jy-10,Py-10		
515	Jy-11,Py-11		
516	Jy-12,Py-12		
324	Jy-13,Py-13		
325	Jy-14,Py-14		
321	Jy-15,Py-15		
323	Jy-16,Py-16		
36	Jy-17,Py-17		
35	Jy-18,Py-18		
517	Jy-19,Py-19		
349	Jy-20,Py-20		
350	Jy-21,Py-21		
351	Jy-22,Py-22		
352	Jy-23,Py-23		
353	Jy-24,Py-24		

WIRE No.	ADDITIONAL WIRING	CLR	AWG
153	J20-1,SL2-A		16
170	J20-2,SL2-B		
154	J21-1,SL1-A		
170	J21-2,SL1-B		
502	CN-CR-(+),CN-COIL-BLK1		
503	CN-CR-(-),CN-COIL-BLK2		
230	CE-CR-(+),CE-COIL-BLK1		
231	CE-CR-(-),CE-COIL-BLK2		

WIRE No.	ADDITIONAL WIRING	CLR	AWG
			16

REV.	ECN NO.	BY	APP.	DATE
A	234370	NS	WK	10/28/11
	SEE ECN			
—	213077	AE	WK	04/25/07
	ISSUE			

PROJECT NAME:

WIRING | DIAGRAM

7000 SERIES (J7ADTB) 3PH 150-600 AMPS
"J" FRAME, GROUP 5 CONTROLS

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	AE	04/25/07
CHECKED	BK	04/25/07
PROJECT APPROVAL	WK	04/25/07
FINAL APPROVAL		

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

ASSEM. REF. NO.

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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. 806099-003

DRAWING REV. A ECN NO. 234370

SHEET 10 OF 10

ASCO Power Technologies®

We Keep Your Power On

EMERSON Network Power

May 18, 2016

ASCO POWER TECHNOLOGIES L.P, CHICAGO SALES OFFICE 603 E. DIEHL ROAD, SUITE 139, NAPERVILLE, IL 60563 FAX# 630-505-4055

Automatic Transfer Switch Bill of Material

Webster University

Designation	Amps	Poles	Neutral	Voltage	Service Entrance	Bypass	Transition	Catalog Number	Accessories Included
ATS-LS	230	4	Switched	480	No	Yes	Delayed	J7ADTBB30230N5XC	18B,18G,31Z,72EE2
ATS-SB	400	4	Switched	480	No	Yes	Delayed	J7ADTBB30400N5XC	18B,18G,31Z,67JB,72EE2

ACCESSORIES DESCRIPTION

Accessory Code	Description
18B/18G	2pole D/T contacts that operate when emergency and normal source voltage is present at transfer switch terminals
31Z	Selective Load disconnect circuit to provide a pre-transfer and/or post transfer signal when transferring from emergency to normal and/or normal to emergency. The signal can be programmed to occur during all transfers or only when the transfer is occurring between two live sources. The length of the pre and post transfer delays can be set to 0-5 minutes 59 seconds.
67JB	Side pullbox for J Bypass Switch 150A-600A
72EE2	5170 Quad-Ethernet Module provides transfer switch dashboard screen with password protected control capabilities, email alerts and open protocol support in a single module with an integrated 4 port Ethernet switch.

ATS-LS
Detailed Information

AMPS : 0400			
Product Description	: 7000 Series, ~~Delayed~~ Open Transition, Not Service Entrance Rated	Catalog Number	: J7ADTBB30400N5XC
Service Voltage	: 277/480	Optional Accessories	: 18B/18G,31Z,67JB,72EE2
By-pass Isolation	: ~~Yes~~ NO See Addendum 2-2	Number of Poles	: 4, Switched [B] Neutral
Withstand Rating Frame = J, Switch Rating = 0400 , Series = 7000	: See WCR table above	Quantity of Cables & Lug Size	: (2) 1/0 – 250 MCM AL/CU or (1) #4 – 600 MCM AL/CU
Enclosure	1(C) Type 1 Enclosure	Service	: Three Phase, 4-wire

ACCESSORIES DESCRIPTION

Accessory Code	Description
18B/18G	2pole D/T contacts that operate when emergency and normal source voltage is present at transfer switch terminals
31Z	Selective Load disconnect circuit to provide a pre-transfer and/or post transfer signal when transferring from emergency to normal and/or normal to emergency. The signal can be programmed to occur during all transfers or only when the transfer is occurring between two live sources. The length of the pre and post transfer delays can be set to 0-5 minutes 59 seconds.
67JB	Side pullbox for J Bypass Switch 150A-600A
72EE2	5170 Quad-Ethernet Module provides transfer switch dashboard screen with password protected control capabilities, email alerts and open protocol support in a single module with an integrated 4 port Ethernet switch.

DRAWINGS FOR APPROVAL

Drawing Number	Description
802093	Composite Enclosure Outline and Mounting Diagram
806099-003	Three Phase Wiring Diagram

ASCO Power Technologies

EMERSON Network Power

ATS-SB
Detailed Information

AMPS : 0400			
Product Description	: 7000 Series, ~~Delayed~~ Open Transition, Not Service Entrance Rated	Catalog Number	: J7ADTBB30400N5XC
Service Voltage	: 277/480	Optional Accessories	: 18B/18G,31Z,67JB,72EE2
By-pass Isolation	: ~~Yes~~ NO See Addendum 2-2	Number of Poles	: 4, Switched [B] Neutral
Withstand Rating Frame = J, Switch Rating = 0400 , Series = 7000	: See WCR table above	Quantity of Cables & Lug Size	: (2) 1/0 – 250 MCM AL/CU or (1) #4 – 600 MCM AL/CU
Enclosure	1(C) Type 1 Enclosure	Service	: Three Phase, 4-wire

ACCESSORIES DESCRIPTION

Accessory Code	Description
18B/18G	2pole D/T contacts that operate when emergency and normal source voltage is present at transfer switch terminals
31Z	Selective Load disconnect circuit to provide a pre-transfer and/or post transfer signal when transferring from emergency to normal and/or normal to emergency. The signal can be programmed to occur during all transfers or only when the transfer is occurring between two live sources. The length of the pre and post transfer delays can be set to 0-5 minutes 59 seconds.
67JB	Side pullbox for J Bypass Switch 150A-600A
72EE2	5170 Quad-Ethernet Module provides transfer switch dashboard screen with password protected control capabilities, email alerts and open protocol support in a single module with an integrated 4 port Ethernet switch.

DRAWINGS FOR APPROVAL

Drawing Number	Description
802093	Composite Enclosure Outline and Mounting Diagram
806099-003	Three Phase Wiring Diagram

WM TAO & ASSOCIATES
CONSULTING ENGINEERS

Shop Drawing Submittal Review

Transmitted To: Cannon Design

Date: July 27, 2016

Attention: **stl-cac@cannondesign.com**

Contact Person / WTA Field Inspector: Patrick Garner

Project Name: Webster University-**ISB**

Reviewed by: Bill Shaw

Project No. WT 14127.01

☐ UPS ☐ Courier ☒ **Email**

Copies	No.	Description
1 PDF	264000E02	(Submittal No. 264000-002)
		• ATS Distribution

Remarks:

c: **Kelvin Patel**
Kpatel@cannondesign.com

☐ Furnish as Submitted ☒ **Furnish as Noted**

☐ Rejected ☐ Revise & Resubmit

☐ Reviewed ☐

Corrections or comments made on shop drawings during this review do not relieve contractor from compliance with requirements of drawings and specifications. This check is only for review of general conformance with the design concept of project and general compliance with information given in contract documents. Contractor is responsible for: confirming and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating his work with that of all other trades; and performing his work in a safe and satisfactory manner.

7955 Manchester Road, Suite 125 • St. Louis, Missouri 63143-2711 • Phone: 314-884-7600 • Fax: 314-884-7601

If enclosures are not as noted, please notify us at once.

Sara Trout (314) 884-7645

WTASHOP - Webster ISB - 26 4000-002

From: STL-CAC <STL-CAC@CANNONDESIGN.COM>
To: 'Patrick Garner' <pgarner@wmtao.com>, WTASHOP <wtashop@wmtao.com>
Date: 7/5/2016 11:41 AM
Subject: Webster ISB - 26 4000-002
Cc: "Patel, Kelvin" <kpatel@CANNONDESIGN.COM>, "Grossman, Lynn" <lgrossman@C...
Attachments: 264000-002 ATS Distribution.pdf

Attached for review.

Melissa Pirtle
Construction Admin
CANNONDESIGN
1100 Clark Ave
St. Louis, Missouri 63102
T 314.425.8797 • M
cannondesign.com

CANNONDESIGN

SUBMITTAL IDENTIFICATION SHEET

To be completed by Contractor/CM

WEBSTER UNIVERSITY ISB
PROJECT NAME

8274 BIG BEND BLVD
ADDRESS

NUMBER

WEBSTER UNIVERSITY
OWNER

CANNON DESIGN
ARCHITECT / ENGINEER

Joe Voypick
SUBMITTED BY

264000-002
CONTRACTOR / CM SUBMITTAL NO.

CANNON DESIGN SUBMITTAL NO.

DRAWING / DETAIL REFERENCE

264000
SPECIFICATION SECTION / PARAGRAPH

Guarantee Electrical
MANUFACTURER / SUPPLIER

ITEM / PRODUCT ID

REQUIRED DATE

PRIORITY

◯ CRITICAL

ITEM BEING SUBMITTED (check only one)

- ◯ Shop Drawings
- ◯ Samples (_____ copies)
- ◯ LEED Submittal
- ◯ Certification / Qualifications
- ◯ Record Documents
- ◉ Product Data
- ◯ Coordination Drawing
- ◯ Calculations
- ◯ Schedules
- ◯ O&M Manuals
- ◯ Other _____

ITEM BEING SUBMITTED FOR (check only one)

◉ Action ◯ Information Only ◯ Record

REMARKS OR DEVIATIONS

CONTRACTOR / CM CERTIFICATION
(SUBMITTALS NOT CERTIFIED WILL BE RETURNED WITHOUT REVIEW)

PARIC

PARIC CORPORATION
SUBMITTAL STAMP

THIS SHOP DRAWING HAS BEEN REVIEWED BY PARIC CORPORATION

Subcontractor remains responsible for dimensions, quantities, coordination with other trades and compliance with contract documents.

By:
Devin D. Gates

Joe Voypick
REVIEWED BY

7/5/16
DATE

To be completed by Reviewer

26 4000-002
CANNON DESIGN SUBMITTAL NUMBER

7/5/16
RECEIVED DATE

- ◯ A. No Exceptions Taken
  No further review of submittal is required.
- ◯ B. Make Corrections Noted
  Incorporate corrections in work; resubmission is not required.
- ◯ C. Revise and Resubmit
  Revise as noted, and resubmit for review.
- ◯ D. Rejected
  Submittal is not in compliance with Contract Documents; provide new submittal.
- ◯ E. For Record / Information Only
  Submittal was reviewed for Record / Information purposes only.
- ◯ F. Not Required for Review
  Submittal is not required by Contract Documents and has not been reviewed.

Review is for conformance with the design concept of this project and for general compliance with contract documents. Contractor is responsible for quantities, dimensions and compliance with contract documents and for information that pertains to fabrication processes, construction techniques and coordination of this work with all trades which will be affected thereby. This review is null and void if submittal deviates from contract documents and does not indicate or note deviations.

A/E COMMENTS ◯ See attached sheet(s) for additional comments

REVIEWED BY

DATE

77 Westport Plaza
Suite 250
St. Louis, MO 63146

TRANSMITTAL

No. 15051-0115

Paric Corporation

PROJECT: 15051-Webster University Interdisciplinary Science Building

DATE: 07/05/2016

TO: Cannon Design
1100 Clark Ave
St Louis MO 63102

RE: ATS Distribution

ATTN: Kelvin Patel

JOB: 15051

WE ARE SENDING:	SUBMITTED FOR:	ACTION TAKEN:
☐ Shop Drawings	☑ Approval	☐ Approved as Submitted
☐ Letter	☐ Your Use	☐ Approved as Noted
☐ Prints	☐ As Requested	☐ Returned After Loan
☐ Change Order	☐ Review and Comment	☐ Resubmit
☐ Plans		☐ Submit
☐ Samples	**SENT VIA:**	☐ Returned
☐ Specifications	☐ Attached	☐ Returned for Corrections
☑ Other: Product Data	☐ Separate Cover Via:	☐ Due Date:

Item	*Package*	*Code*	*Rev.*	*Copies*	*Date*	*Description*	*Status*
Submittal		264000-002	1		07/05/2016	ATS Distribution	Submitted

NOTES:

CC: Paric Corporation, Kathy Bathe

Project Coordinator: Paric Corporation, Kathy Bathe

Signed: _____
Devin Gates

GUARANTEE
ELECTRICAL CONSTRUCTION

3415 Bent Avenue
St. Louis, MO 63116
Phone: (314) 772-5400
Fax: (314) 772-2526

Transmittal

To Paric Corporation

Date 7/1/16

Job Number 11317

Job Name Webster Univ. ISB Building

Attention Devin Gates

Transmittal Number 11317-006

We are sending you:

- X Attached
- ___ Under separate cover, the following:
- ___ Preliminary Drawings
- ___ Samples
- ___ Construction Drawings
- ___ Copy of Letter
- ___ Specifications
- ___ Other

Quantity	Drawing #	Date/Revision	Description
1			Submittal for ATS Distribution - Spec Section
			26 40 00

These are transmitted as checked:

- X For Your Review & Comment
- X For Approval
- ___ For Your File
- ___ As Requested
- ___ Approved As Noted
- ___ Returned For Corrections
- ___ Approved As Submitted
- ___

Copy: Transmittal Enclosure

___ ___
___ ___
___ ___

Rick Branstetter

Signed: Rick Branstetter, Project Manager