ASCO Power Technologies®

SWITCH SUBMITTAL

REVISION 1

Bypass Isolation Switch

TRANSFER SWITCH DETAILS									
ATS NAME	QTY	AMPS / POLES (VOLTS)	BYPASS	TRANSITION TYPE	CATALOG NUMBER	ACCESSORIES	OUTLINE DRAWING	WIRING DIAGRAM	BOM NUMBER
	1	1200 / 4 (480V)	YES	OPEN	H07ATBB31200N5XM	6J,31BG,40LY4,44G,125A,150B	736939-070	735259-3053	1507756

Transfer Switch Withstand and Closing Ratings																					
				300, 4000 & 7000 Series																	
ATS NAME	FRAME SIZE	SWITCH RATING AMPS		CURRENT LIMITING FUSES				SPECIFIC BREAKER			TIME BASED				Short Time Ratings[3] (sec)							
															480V Max.				600V Max.			
		Transfer Switches	Bypass Switches	480V Max.	600V Max.	MAX SIZE, A	CLASS	240V Max.	480V Max.	600V Max.	Time(Sec)	240V Max.	480V Max.	600V Max.	.13	.2	.3	.5	.1	.13	.3	.5
-	H	800 - 1000	800 - 1000	200kA	200kA	1600[4]	L	150kA[6]	150kA[6]	65kA	0.05	50kA	50kA	50kA	36kA			-	36kA			-

NOTES:
1) All WCR values indicated are tested in accordance with the requirements of UL 1008, 7th Edition.
2) Application requirements may permit higher WCR for certain switch sizes.
3) Short Time ratings are provided for applications involving circuit breakers that utilize trip delay settings for system selective coordination
4) Max fuse rating is 1200A on front connected H frame switches
6) Rating shown is for Bypass switches only, Transfer Switch rating is 100kA
8) These frames are only available on the 7000 Series product

Bypass Isolation Switch

Transfer Switch Details

#2	ATS	AMPS: 1200	QTY: 1

Product	:	7000 Series Bypass Transfer Switches	Catalog Number	:	H07ATBB31200N5XM
Service Voltage / Hz	:	480V/60Hz	Optional Accessories	:	6J,31BG,40LY4,44G,125A,150B
Bypass Isolation	:	YES	Product Description	:	7000 Series, Automatic Open Transition ByPass Switch
No. of Switched Poles: 4	:	4	Neutral Configuration	:	Switched [B]
Withstand Rating: Frame = H, Switch Rating = 1200, Series = 7000	:	See WCR Table Below	No. of Cables & Lug Size	:	4, #1/0 AWG to 600 MCM
Enclosure	:	3R(M)-UL Type 3R secure double door enclosure (See Disclaimer 3)	Service	:	Three Phase, 4-wire
Extended Warranty	:	5 Years Year/s	Markings	:	

#	ACCESSORY DESCRIPTIONS	
	Accessory Code	Description
1	6J	This Accessory makes the switch Non-Automatic and it will be labeled as such. Selector switch for the selection of automatic or manual transfer to normal and emergency. Transfer mode: Selects automatic or manual operation. Manual mode control: selects transfer to normal or emergency.
2	31BG	Group 5: Status Relay Bundle - Provides 1 relay (3 total) for each of the following statuses, Normal Source Acceptability, Emergency Source Acceptability, Pre & Post Transfer Signal. Each relay has 2 NO/NC (Form C) sets of contacts rated for 6A at 120Vac, 250Vac Max. Group Q: "STANDARD 2A, 30VDC. This is for additional ratings Status Relay Bundle - Provides 1 relay (3 total) for each of the following statuses, Normal Source Acceptability, Emergency Source Acceptability, Pre & Post Transfer Signal. Each relay has 2 NO/NC (Form C) sets of contacts rated for 6A at 120Vac, 250Vac Max."
3	40LY4	Left Side Pull Box Type 3R, cannot ship loose, 1200A H Frame only
4	44G	208-240VAC and or 440-480VAC Accessory 44 Strip heater is designed to keep humidity and or temperature within the ATS enclosure at acceptable levels. This accessory consists of a mounting bracket with strip heater, thermostat and terminal block.
5	125A	This Product Meets Or Exceeds The Requirement Of The International Building Code For Importance Factor 1.5 Electrical Equipment. For Use In Zone 4 Or Less Severe Seismic Regions. Consult ASCO for details
6	150B	Group-5: Tech Bundle - Includes the following: 5210 Power Meter monitoring load side, Ethernet Comm Module, Extended 25sec ride through via internal buffer module, Provisions for customer supplied 24Vdc backup power, Bypass/ISO status wired to IO module for external communication (Contains acc 135SB, 1PS1, & 72EE2). PowerLogic Source Controller: Tech Bundle - Includes the following: PM 5000 Power Meter monitoring load side, Ethernet Comm Module, Extended 25sec ride through via internal buffer

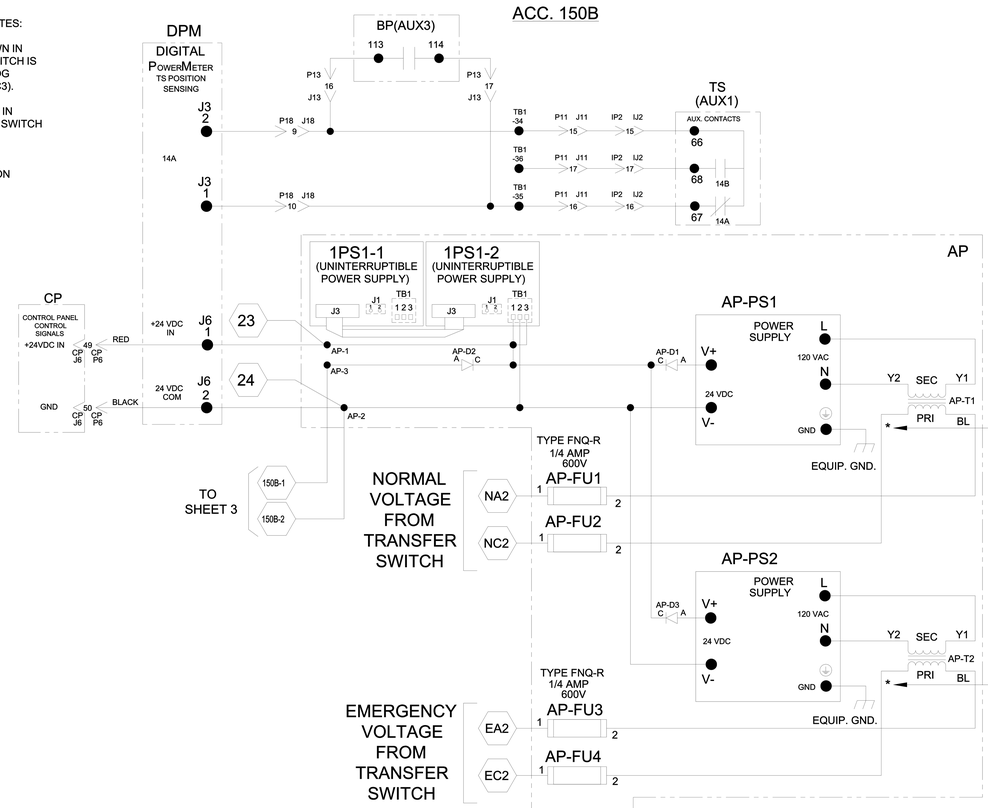
ADDITIONAL CIRCUITS

DIGITAL POWER METER (TB1) WIRING NOTES:

1. TB1 MUST BE WIRED IN A DELTA (SHOWN IN PHANTOM) IN ALL CASES WHERE THE SWITCH IS NOT SUPPLIED WITH A NEUTRAL (CATALOG NUMBER DOES NOT CONTAIN A3, B3 OR C3).

2. TB1 MUST BE WIRED IN A WYE (SHOWN IN CONTINUOUS) IN ALL CASES WHERE THE SWITCH IS SUPPLIED WITH A NEUTRAL (CATALOG NUMBER CONTAINS A3, B3 OR C3).

3. REFER TO ADDITIONAL WIRING (150B) ON WIRE RUN LISTING.

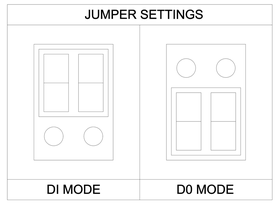


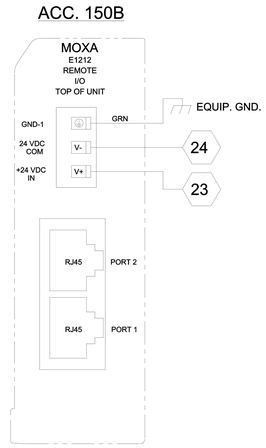
CURRENT TRANSFORMER RATIO TABLE	
SWITCH RATING	CT RATIO
600A	600:5A
800A	800:5A
1000A	1000:5A
1200A	1200:5A

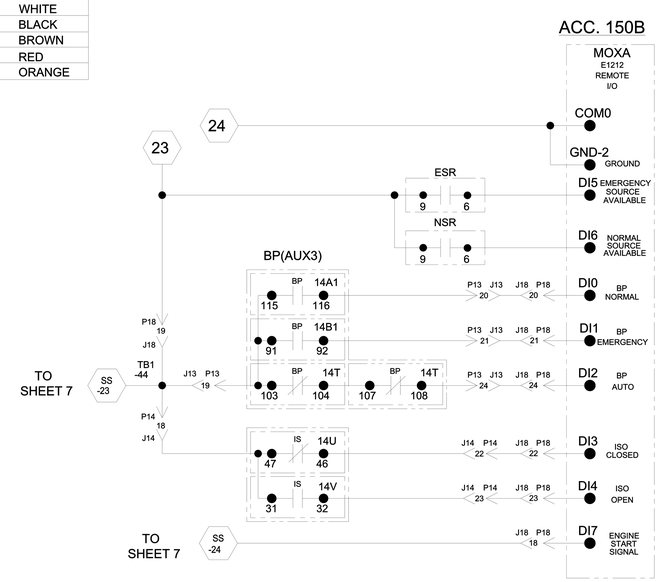
MOXA ioLogik E1212 WIRING NOTES:

DIO'S REQUIRE CONFIGURING THE JUMPERS INSIDE THE ENCLOSURE. REMOVE SCREW LOCATED ON THE BACK PANEL AND OPEN THE COVER TO CONFIGURE THE JUMPERS.

DEFAULT IS DO MODE
SET TO DI MODE FOR ALL INPUTS (8).







REV. TO SHEET	ECN NO.	BY	APP.	DATE
-	301259	RPP	HSL	12/21/22
	ISSUE			

PROJECT NAME:

WIRING DIAGRAM

7000 SERIES (H7ATB) 3PH 600-1200 AMPS
"H" FRAME, GROUP 5 CONTROLS

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	RPP	12/21/22
CHECKED	HSL	12/21/22
PROJECT APPROVAL	MM	12/21/22
FINAL APPROVAL		

MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-I-003. FOR PLASTIC PARTS SEE MP-I-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. 735259-3053

DRAWING REV. - ECN NO. 301259 SHEET 6 OF 11

THREE PHASE WIRING FOR ASCO® 7000 SERIES AUTOMATIC TRANSFER & BYPASS-ISOLATION SWITCHES TYPE H7ATB RATED 600-1200 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 7000 ASCO 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).

FEAT. 27 - INPHASE TRANSFER CONTROL LOGIC TO INITIATE AN INPHASE TRANSFER OF LOADS BETWEEN LIVE SOURCES. USED TO PREVENT NUISANCE TRIPPING OF CIRCUIT BREAKERS AND POSSIBLE DAMAGE TO MECHANICAL LOADS CAUSED BY OUT OF PHASE TRANSFER.
ACTIVATED VIA THE GROUP 5 CONTROL PANEL USER INTERFACE (TRANSFER CONTROL CENTER) BY SELECTING "IN-PHASE MONITOR ENABLE" = YES. AN ADJUSTABLE DELAY (0.0-3.0 sec, FACTORY SET TO 1.5 sec, IN INCREMENTS OF 0.1 sec) DELAYS SENSING TO PERMIT STABILIZATION OF THE SOURCES PRIOR TO SENSING. FACTORY SETTING IS DISABLED UNLESS SPECIFIED TO BE FACTORY ACTIVATED AT THE TIME OF ORDER.

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. 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 14AG & 14BG - TRANSFER SWITCH AUXILIARY POSITION INDICATING CONTACTS.
EIGHT (8) FORM C CONTACTS TO INDICATE CONNECTION OF THE TRANSFER SWITCH TO NORMAL (14A) AND EIGHT (8) 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.

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.

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

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)

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) POSITION)
"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. 6J(K) SELECTOR SWITCHES FOR THE SELECTION OF AUTOMATIC OR MANUAL TRANSFER TO NORMAL AND EMERGENCY.

TRANSFER MODE - SELECTS AUTOMATIC OR MANUAL OPERATION.

MANUAL MODE CONTROL - SELECTS TRANSFER TO NORMAL OR EMERGENCY.

(K) - OPTIONAL KEY SELECTOR

ACC. 31BG QTY 2 FORM C CONTACTS THAT OPERATE WHEN EMERGENCY SOURCE VOLTAGE IS ACCEPTABLE AT TRANSFER SWITCH TERMINALS.

QTY 2 FORM C CONTACTS THAT OPERATE WHEN NORMAL SOURCE VOLTAGE IS ACCEPTABLE AT TRANSFER SWITCH TERMINALS

QTY 2 FORM C CONTACTS FOR LOAD DISCONNECT. PROVIDING 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).

ACCESSORIES CONTINUED....

ACC. 150B ACCESSORY BUNDLE GROUPS INCLUDED, ACC. 1PS1, 72EE2, 135SB

ACC 1PS1: TWO UNINTERRUPTIBLE POWER SUPPLIES (UPS'S) IN PARALLEL, 24VDC. FOR POWERING THE TS CONTROL PANEL, "DIGITAL POWER METER" AND COMMUNICATION DEVICES WHEN NORMAL AND EMERGENCY SOURCES ARE NOT PRESENT. UNINTERRUPTED POWER IS PROVIDED BY THE UPS'S FOR A PERIOD RANGING FOR APPROXIMATELY 1 MINUTE DEPENDING ON THE LOAD REQUIREMENTS. A CUSTOMER CONNECTION IS PROVIDED FOR A CUSTOMER SUPPLIED EXTERNAL 24VDC SOURCE WHICH IS USED AS A SECONDARY POWER SOURCE FOR THE UPS'S.
FACTORY SETTING:
EXTERNAL BATTERY - YES

ACC 72EE2: THE 5170 QUAD-ETHERNET MODULE PROVIDES COMMUNICATION FROM THE TRANSFER SWITCH CONTROLLER AND METER TO EXTERNAL DEVICES VIA ETHERNET/SERIAL COMMUNICATION.

ACC 135SB: ASCO "DIGITAL POWER METER" AND THE "MOXA E1212 ETHERNET REMOTE I/O" MONITORING THE LOAD SOURCE. FOR MEASUREMENT OF VOLTAGE, FREQUENCY & CURRENT AND CALCULATION OF POWER, ENERGY & POWER FACTOR. THE "DIGITAL POWER METER" CAN COMMUNICATE DATA TO HOST DEVICES WHICH ARE PART OF ASCO COMMUNICATIONS SYSTEMS VIA ACC. 72EE2 SERIES MODULE. THE "DIGITAL POWER METER" IS CONNECTED TO MEASURE SINGLE PHASE 2 OR 3 WIRE OR THREE PHASE 3 OR 4 WIRE SYSTEMS BASED ON THE CONFIGURATION OF THE TRANSFER SWITCH SPECIFIED.

THE "DIGITAL POWER METER" AND THE MOXA E1212 SHALL BE POWERED WITH 24Vdc THAT IS DERIVED FROM THE NORMAL OR EMERGENCY SOURCES.
THE FOLLOWING ACCESSORIES ALONG WITH TWO EXTERNAL 24Vdc POWER SUPPLIES ARE WIRED TO THE "DIGITAL POWER METER" AND THE "MOXA E1212". THE "MOXA E1212" IS INTER WIRED TO THE DISCRETE INPUTS AND OUTPUTS.
ACCESSORIES 14A1, 14B1, 14T, 14U, 14V, NORMAL, EMERGENCY SOURCE AVAILABILITY (FROM THE SWITCH OR BYPASS POWER SUPPLY) AND ENGINE START (BID).

TABLE A. DISCRETE INPUT

NUMBER	LABEL (FACTORY SETTING)	ACCESSORY	ACCESSORY DESCRIPTION
DI0	BP NORMAL	14A1	BYPASS CONNECTED TO NORMAL SOURCE
DI1	BP EMERGENCY	14B1	BYPASS CONNECTED TO EMERGENCY SOURCE
DI2	BP IN AUTO	14T	BYPASS SWITCH IN AUTOMATIC POSITION
DI3	ISO CLOSED	14U	ISOLATION HANDLE IN CLOSED POSITION
DI4	ISO OPEN	14V	ISOLATION HANDLE IN OPEN POSITION
DI5	EMERG SRCE AVAL	N/A	EMERGENCY SOURCE AVAILABILITY PROVIDED BY MEANS THAT DO NOT REQUIRE AN OPERATIONAL GROUP 5 CONTROLLER
DI6	NORM SRCE AVAL	N/A	NORMAL SOURCE AVAILABILITY PROVIDED BY MEANS THAT DO NOT REQUIRE AN OPERATIONAL GROUP 5 CONTROLLER
DI7	ENGINE START	N/A	WIRED TO ENGINE START SIGNAL TO INDICATE

BASE CATALOG NUMBER				CATALOG NUMBER SUFFIXES			
CATALOG TYPE	NEUTRAL TYPE	PHASE POLES	AMPS	VOLT CODE	CONTROLLER	OPTIONAL ACCESSORY	ENCLOSURE CODE
H7ATB	A B C BLANK FOR NONE	3	600 800 1000 1200	A B C D E F G H J K L M N P Q R	5	X BLANK FOR NONE	C E F G H J K L M N P Q BLANK FOR OPEN TYPE

EXPLANATION OF CATALOG NUMBER CODES

NEUTRAL TYPE		VOLTAGE CODES 3 PHASE (3 OR 4 WIRE) 50 OR 60 Hz		ENCLOSURE CODES		
CODE	DESCRIPTION	CODE	NOMINAL VOLTAGE	CODE	TYPE	DESCRIPTION
BLANK	NONE	A	115	BLANK		OPEN TYPE (NO ENCLOSURE)
A	SOLID	B	120	C	1	GENERAL PURPOSE, INDOOR
B	SWITCHING	C	208	E	2	INDOOR, WATER & DUST RESISTANT
C	OVERLAPPING	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)
		G	277	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 M

REV. TO SHEET	ECN NO.	BY	APP.	DATE
A	304986	RPP	HSL	08/16/23
	SEE ECN			
-	301259	RPP	HSL	12/21/22
	ISSUE			

PROJECT NAME:
WIRING DIAGRAM
7000 SERIES (H7ATB) 3PH 600-1200 AMPS
"H" FRAME, GROUP 5 CONTROLS
THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	RPP	12/21/22
CHECKED	HSL	12/21/22
PROJECT APPROVAL	MM	12/21/22
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. 735259-3053
DRAWING REV. A ECN NO. 304986 SHEET 1 OF 11

TECHNICAL DATA

BYPASS SWITCH AUXILIARY CONTACTS

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

BYPASS SWITCH OPERATOR AUXILIARY CONTACTS

BP AUXILIARY CONTACT	STATUS (*)	BP HANDLE POSITION (AUX4)	
		EMERG (OUT)	NORMAL (IN)
137-138	●		
137-139			
140-141	●		
140-142			

BYPASS SWITCH OPERATOR AUXILIARY CONTACTS

BP AUXILIARY CONTACT	STATUS (*)	BP SWITCH HANDLE POSITION (AUX5)		
		OFF	<> ±10°	BYPASS (±90°)
143-144	●			
143-145	●			
146-147	●			
146-148	●			

ISOLATION (TRANSFER SWITCH CARRIAGE POSITION) AUXILIARY CONTACTS

IS AUXILIARY CONTACT	STATUS (*)	TRANSFER SWITCH CARRIAGE POSITION				
		CONNECT	> <	TEST	> <	ISOLATE
1-2	●					
1-3	●					
4-5	●					
4-6	●					
7-8	●					
7-9	●					
10-11	●					
10-12	●					
13-14	●					
13-15	●					
16-17	●					
16-18	●					
19-20	●					
19-21	●					
22-23	●					
22-24	●					
25-26	●					
25-27	●					
28-29	●					
28-30	●					
31-32	●					
36-34						
36-35						
47-46	●					
47-48	●					
58-59						

(*) CONTACT AVAILABILITY STATUS:

" " ●CONTACT PROVIDED & USED IN CIRCUITRY

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

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	ISSUE			

PROJECT NAME:

WIRING DIAGRAM

7000 SERIES (H7ATB) 3PH 600-1200 AMPS

"H" FRAME, GROUP 5 CONTROLS

THIRD ANGLE PROJECTION

	BY	DATE
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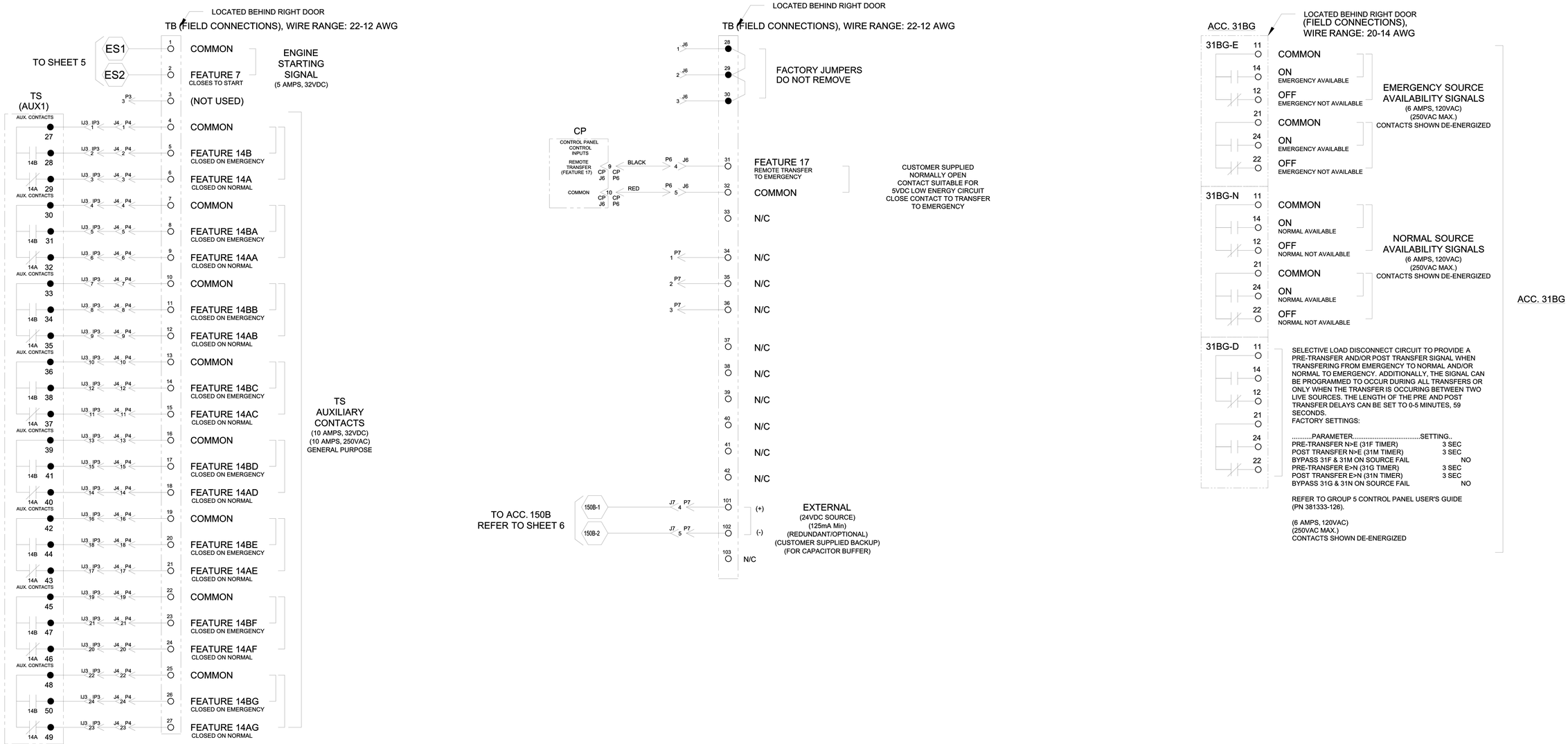
SCALE NONE SIZE DS

DWG. NO. 735259-3053

DRAWING REV. A ECN NO. 304986 SHEET 2 OF 11

FIELD CONNECTIONS



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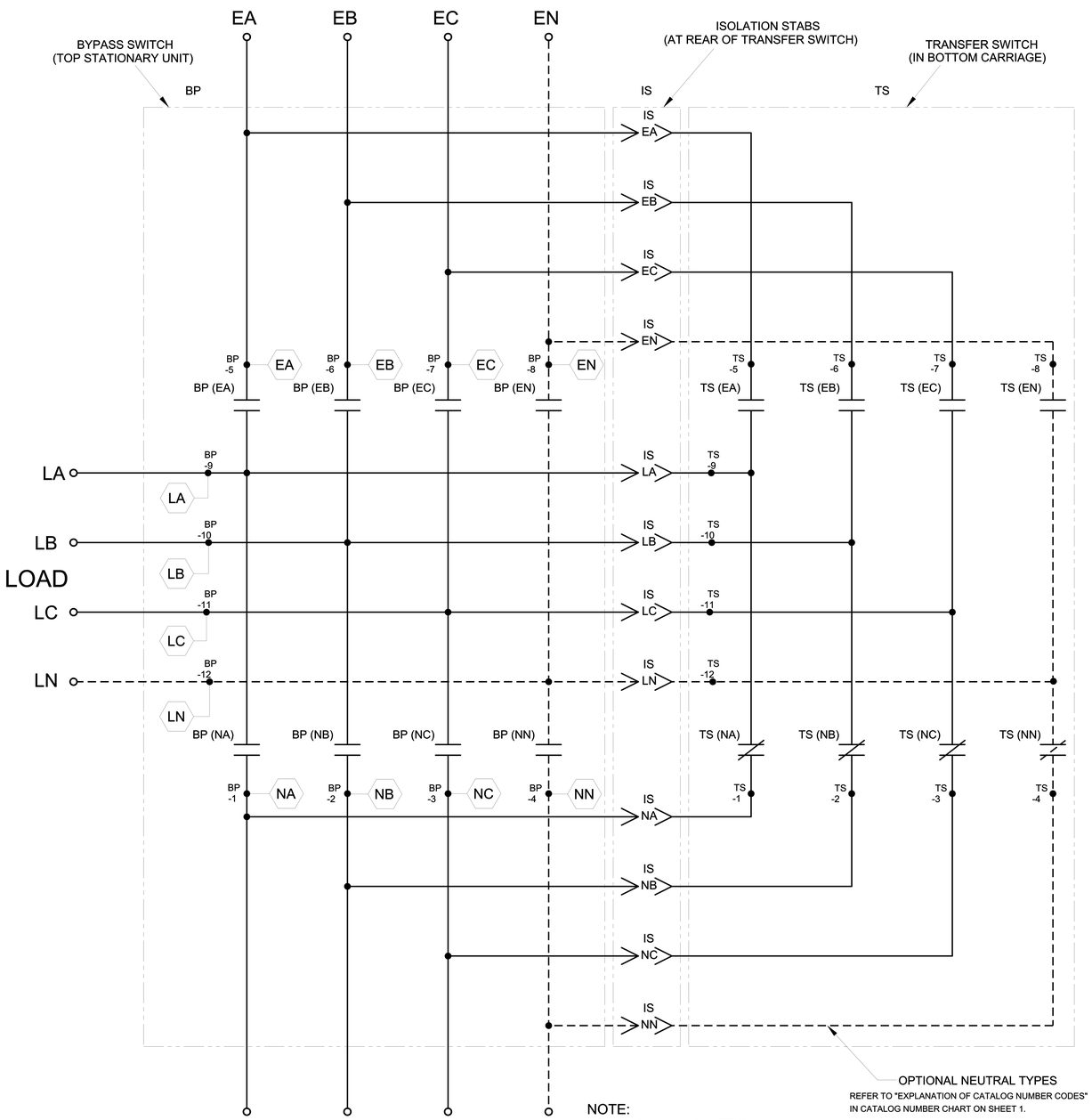
SCALE NONE SIZE DS

DWG. NO. 735259-3053

DRAWING REV. A ECN NO. 304986 SHEET 3 OF 11

MAIN POWER POLES

EMERGENCY

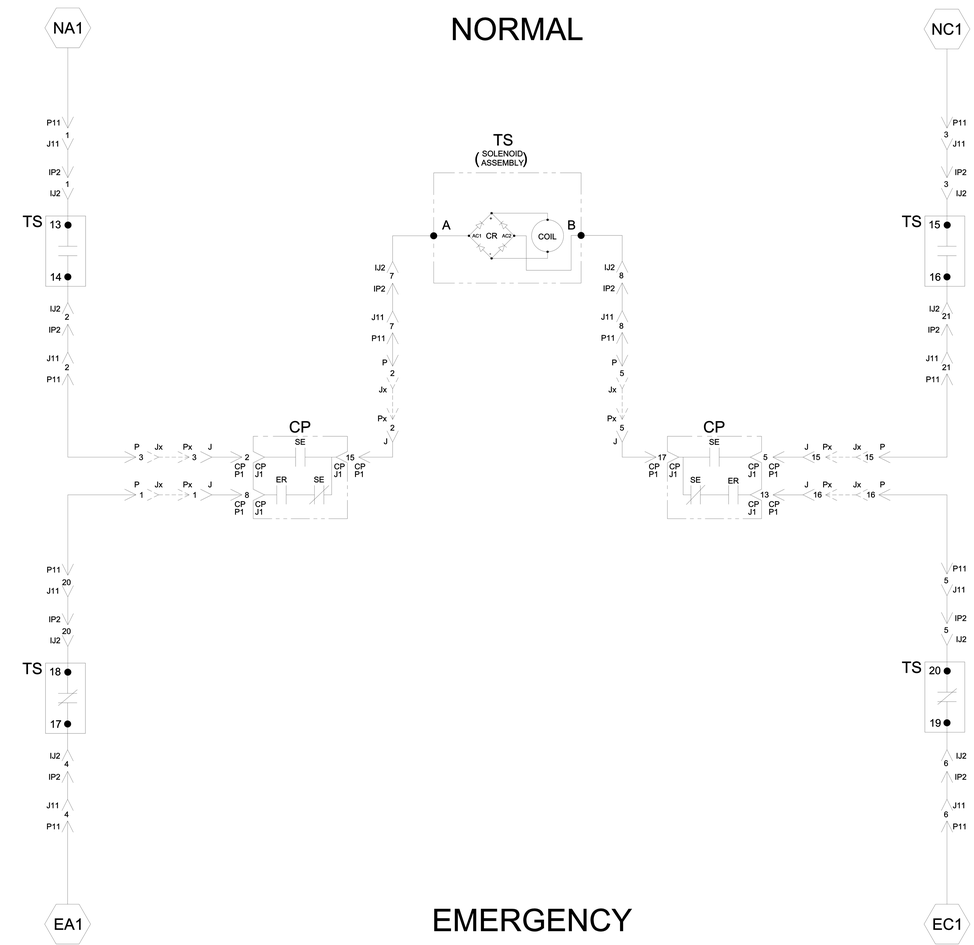


NOTE:
ATS SHOWN CLOSED ON
NORMAL SOURCE.
BYPASS SWITCH IN
(AUTOMATIC) POSITION.

NORMAL

TS OPERATOR CIRCUIT

NORMAL



EMERGENCY

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

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

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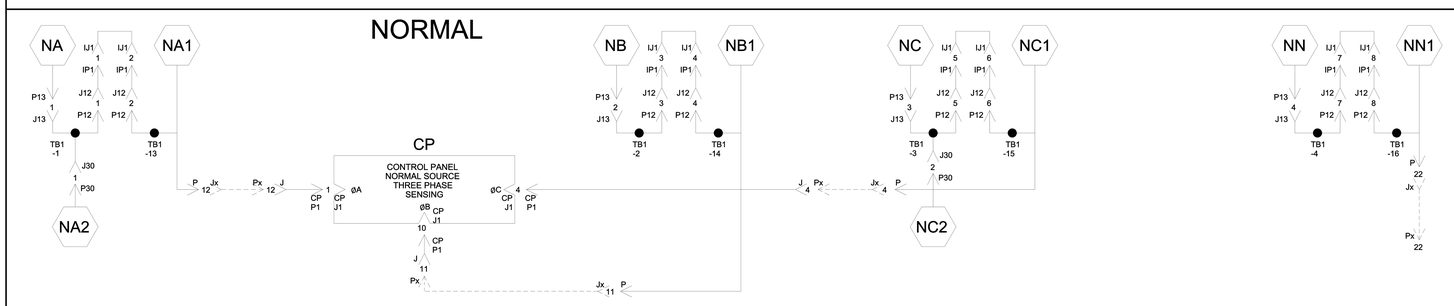
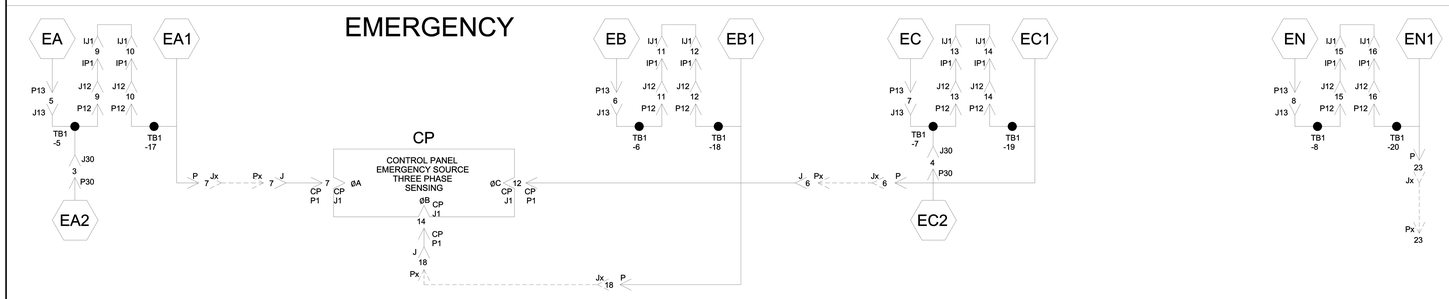
DWG. NO. 735259-3053

DRAWING REV. A ECN NO. 304986 SHEET 4 OF 11

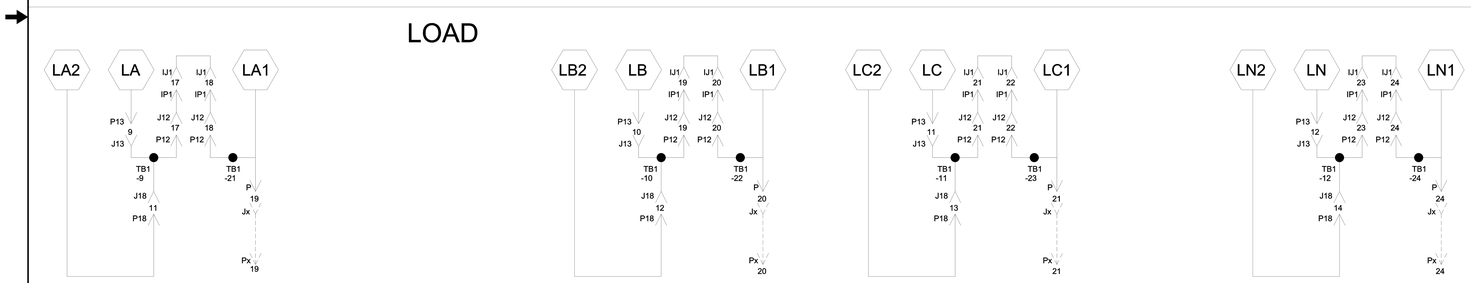
NORMAL SOURCE CIRCUITS



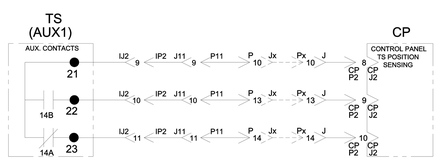
EMERGENCY SOURCE CIRCUITS

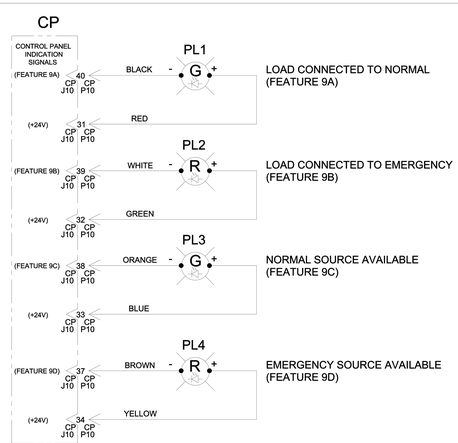


LOAD TERMINAL CIRCUITS

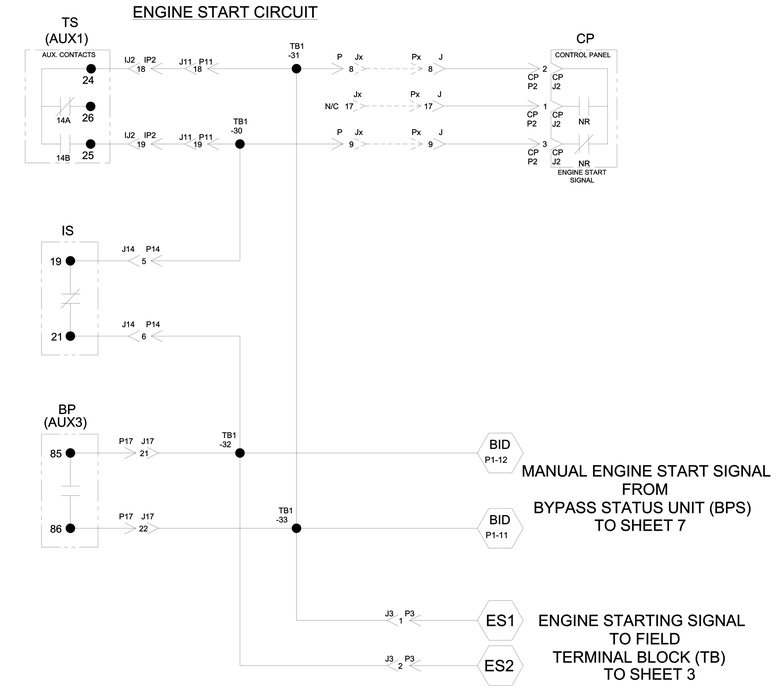


CONTROL SIGNALS & INDICATION

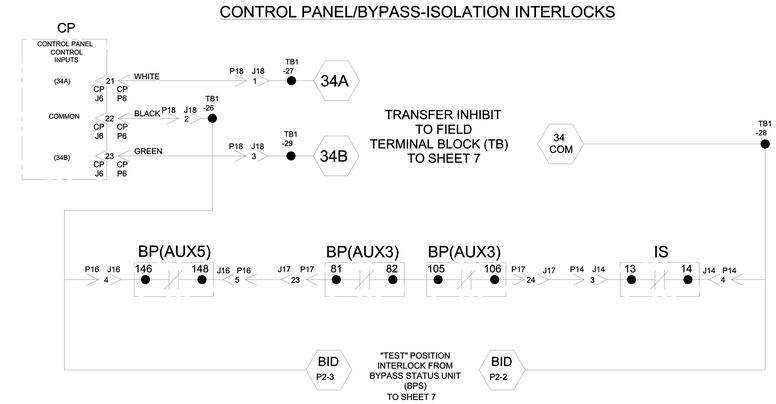




ENGINE START CIRCUIT



CONTROL PANEL/BYPASS-ISOLATION INTERLOCKS



A	304986	RPP	HSL	08/16/23
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	ISSUE			
	REV. TO SHEET	ECN NO.	BY	APP.	DATE

PROJECT NAME:

WIRING DIAGRAM

7000 SERIES (H7ATB) 3PH 600-1200 AMPS
"H" FRAME, GROUP 5 CONTROLS

THIRD ANGLE PROJECTION

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SCALE NONE SIZE DS

DWG. NO. 735259-3053

DRAWING REV. A ECN NO. 304986 SHEET 5 OF 11

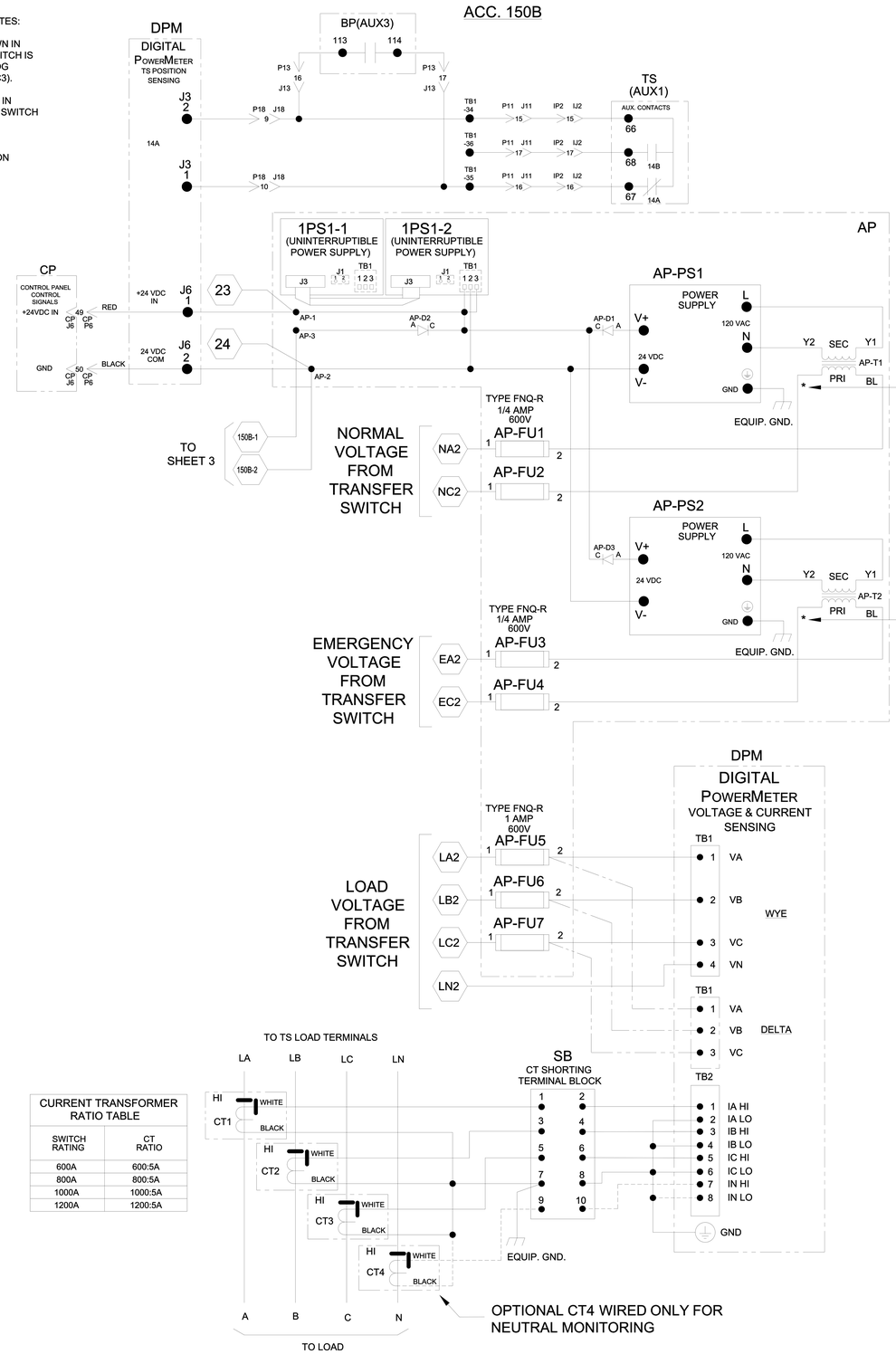
ADDITIONAL CIRCUITS

DIGITAL POWER METER (TB1) WIRING NOTES:

1. TB1 MUST BE WIRED IN A DELTA (SHOWN IN PHANTOM) IN ALL CASES WHERE THE SWITCH IS NOT SUPPLIED WITH A NEUTRAL (CATALOG NUMBER DOES NOT CONTAIN A3, B3 OR C3).

2. TB1 MUST BE WIRED IN A WYE (SHOWN IN CONTINUOUS) IN ALL CASES WHERE THE SWITCH IS SUPPLIED WITH A NEUTRAL (CATALOG NUMBER CONTAINS A3, B3 OR C3).

3. REFER TO ADDITIONAL WIRING (150B) ON WIRE RUN LISTING.



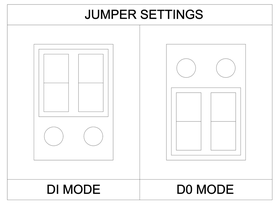
CURRENT TRANSFORMER RATIO TABLE	
SWITCH RATING	CT RATIO
600A	600:5A
800A	800:5A
1000A	1000:5A
1200A	1200:5A

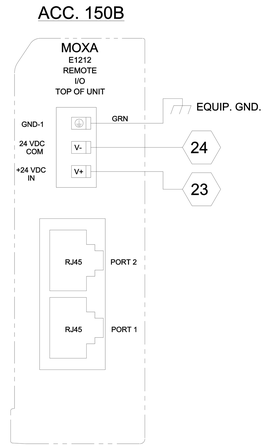
TABLE A PRIMARY TRANS TAPS	
VOLTS	* COLOR
208	WHITE
220-240	BLACK
380-416	BROWN
440-480	RED
550-600	ORANGE

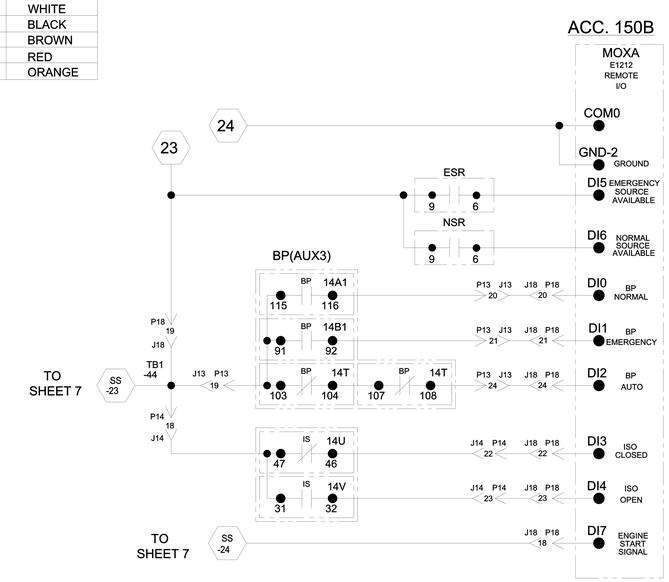
MOXA ioLogik E1212 WIRING NOTES:

DIO'S REQUIRE CONFIGURING THE JUMPERS INSIDE THE ENCLOSURE. REMOVE SCREW LOCATED ON THE BACK PANEL AND OPEN THE COVER TO CONFIGURE THE JUMPERS.

DEFAULT IS DO MODE
SET TO DI MODE FOR ALL INPUTS (8).







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		ISSUE			

PROJECT NAME:

WIRING DIAGRAM

7000 SERIES (H7ATB) 3PH 600-1200 AMPS
"H" FRAME, GROUP 5 CONTROLS

THIRD ANGLE PROJECTION

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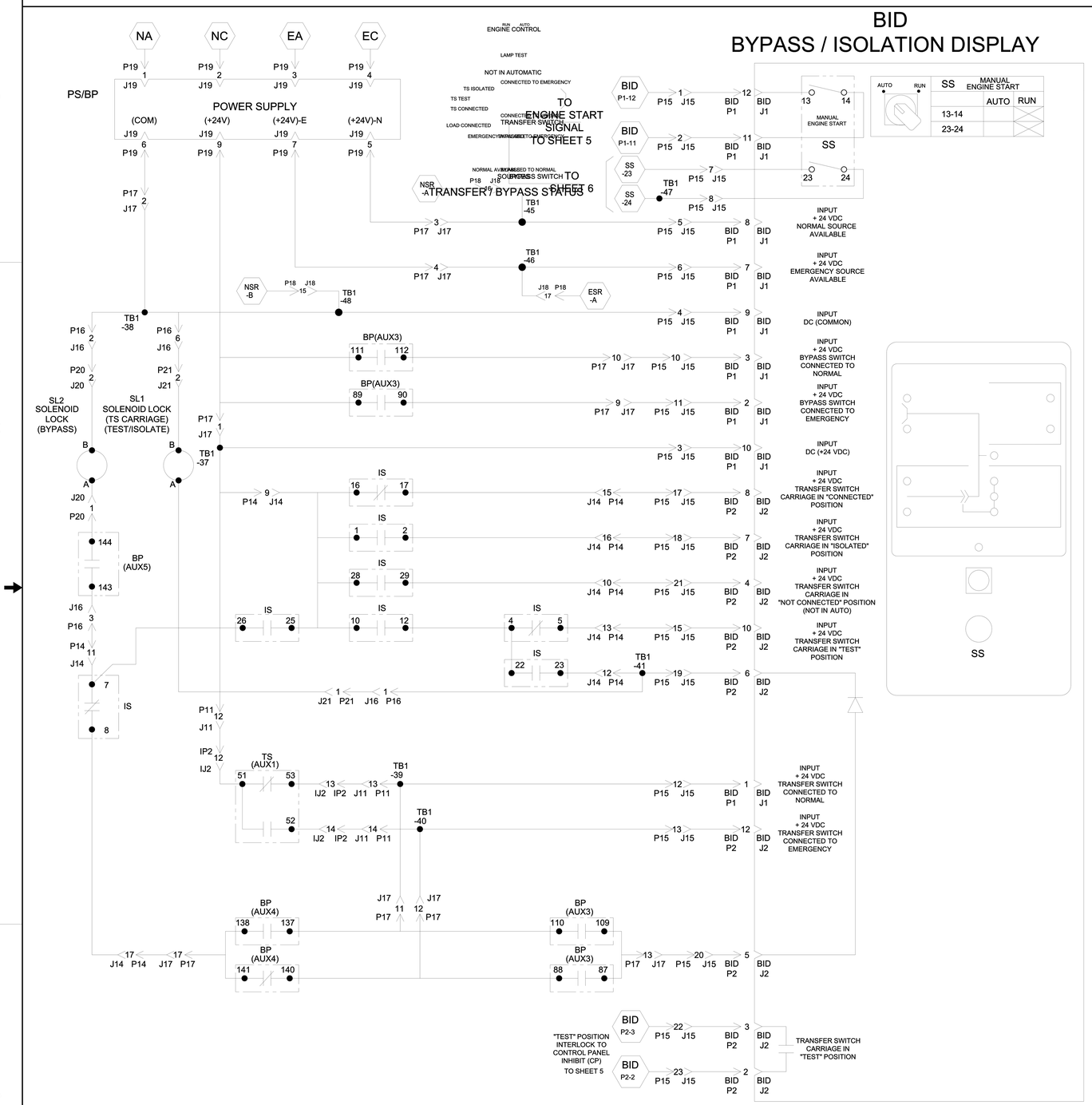
SCALE NONE SIZE DS

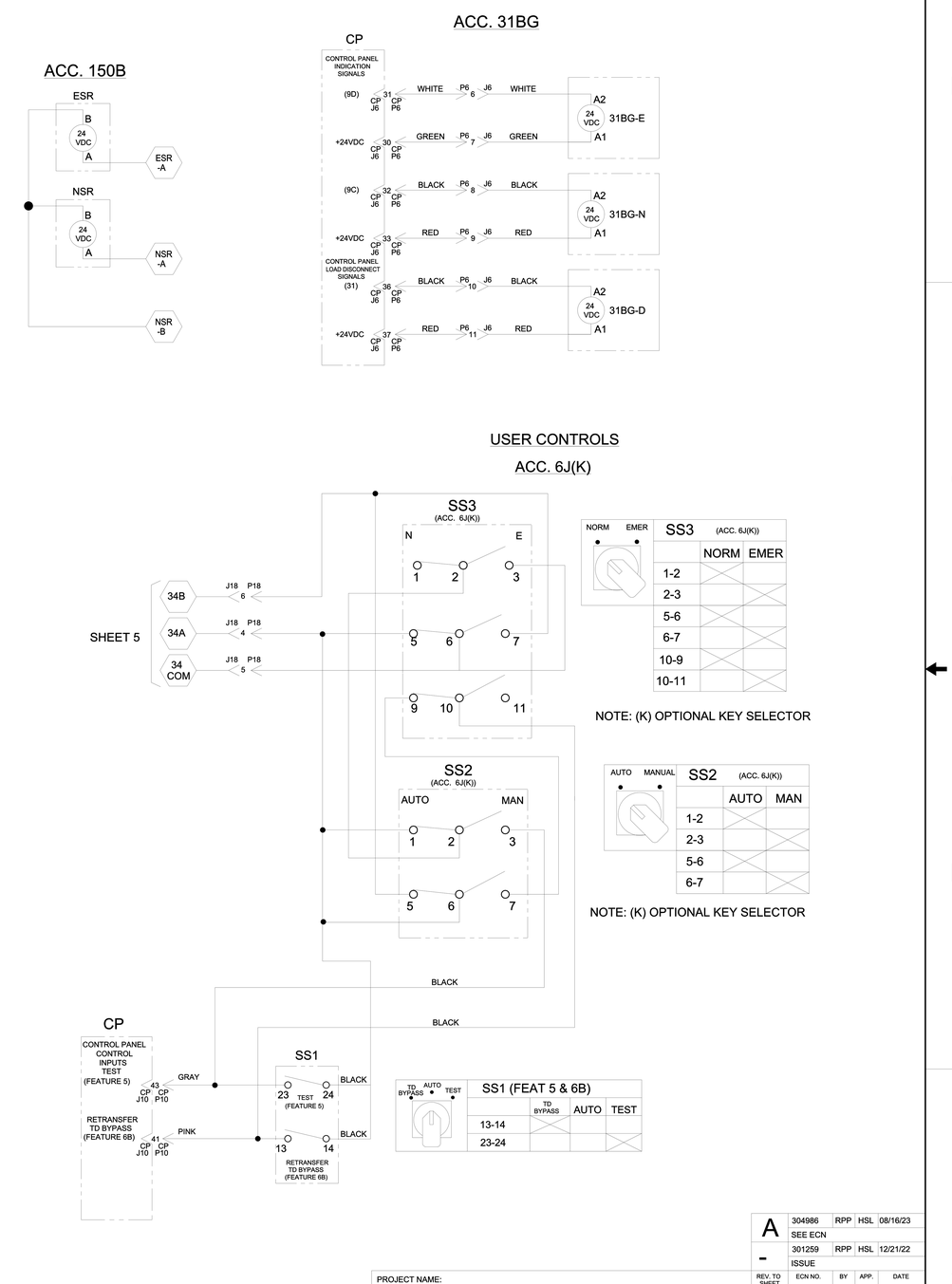
DWG. NO. 735259-3053

DRAWING REV. A ECN NO. 304986 SHEET 6 OF 11

BYPASS / ISOLATION INTERLOCKING & INDICATION



ADDITIONAL CIRCUITS (CONTINUED)



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-	301259 ISSUE	RPP	HSL	12/21/22

PROJECT NAME:

WIRING DIAGRAM

7000 SERIES (H7ATB) 3PH 600-1200 AMPS
"H" FRAME, GROUP 5 CONTROLS

THIRD ANGLE PROJECTION

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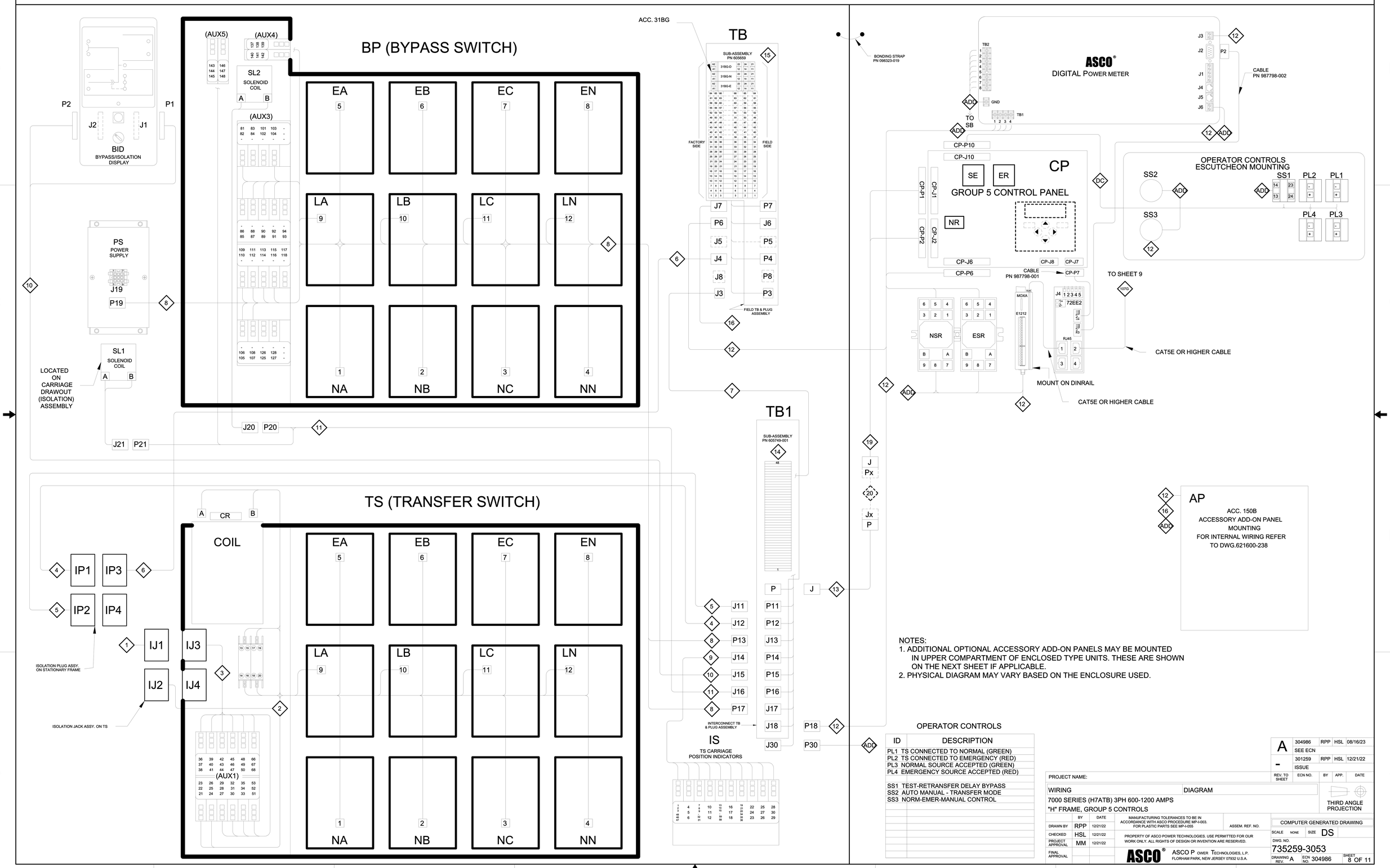
SCALE NONE SIZE DS

DWG. NO. 735259-3053

DRAWING REV. A ECN NO. 304986 SHEET 7 OF 11

PHYSICAL DIAGRAM



NOTES:
1. ADDITIONAL OPTIONAL ACCESSORY ADD-ON PANELS MAY BE MOUNTED IN UPPER COMPARTMENT OF ENCLOSED TYPE UNITS. THESE ARE SHOWN ON THE NEXT SHEET IF APPLICABLE.
2. PHYSICAL DIAGRAM MAY VARY BASED ON THE ENCLOSURE USED.

OPERATOR CONTROLS

ID	DESCRIPTION
PL1	TS CONNECTED TO NORMAL (GREEN)
PL2	TS CONNECTED TO EMERGENCY (RED)
PL3	NORMAL SOURCE ACCEPTED (GREEN)
PL4	EMERGENCY SOURCE ACCEPTED (RED)
SS1	TEST-RETRANSFER DELAY BYPASS
SS2	AUTO MANUAL - TRANSFER MODE
SS3	NORM-EMER-MANUAL CONTROL

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-	301259 ISSUE	RPP	HSL	12/21/22

PROJECT NAME:

WIRING DIAGRAM
7000 SERIES (H7ATB) 3PH 600-1200 AMPS
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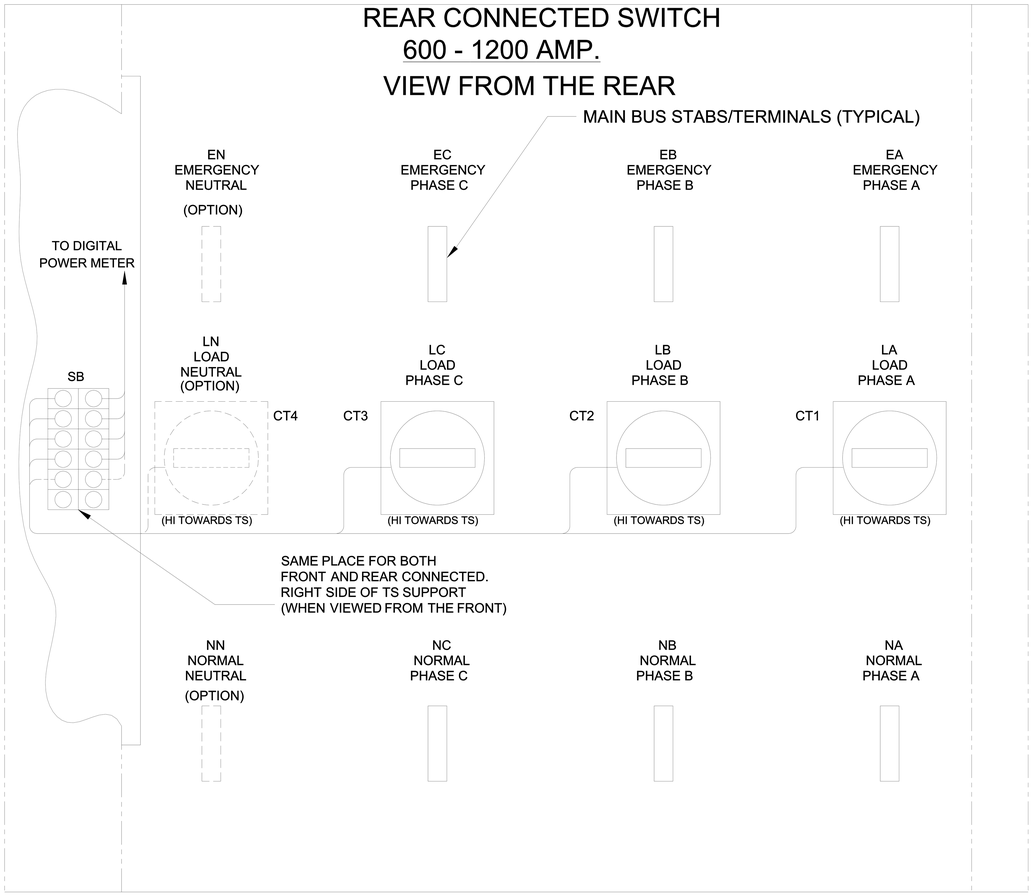
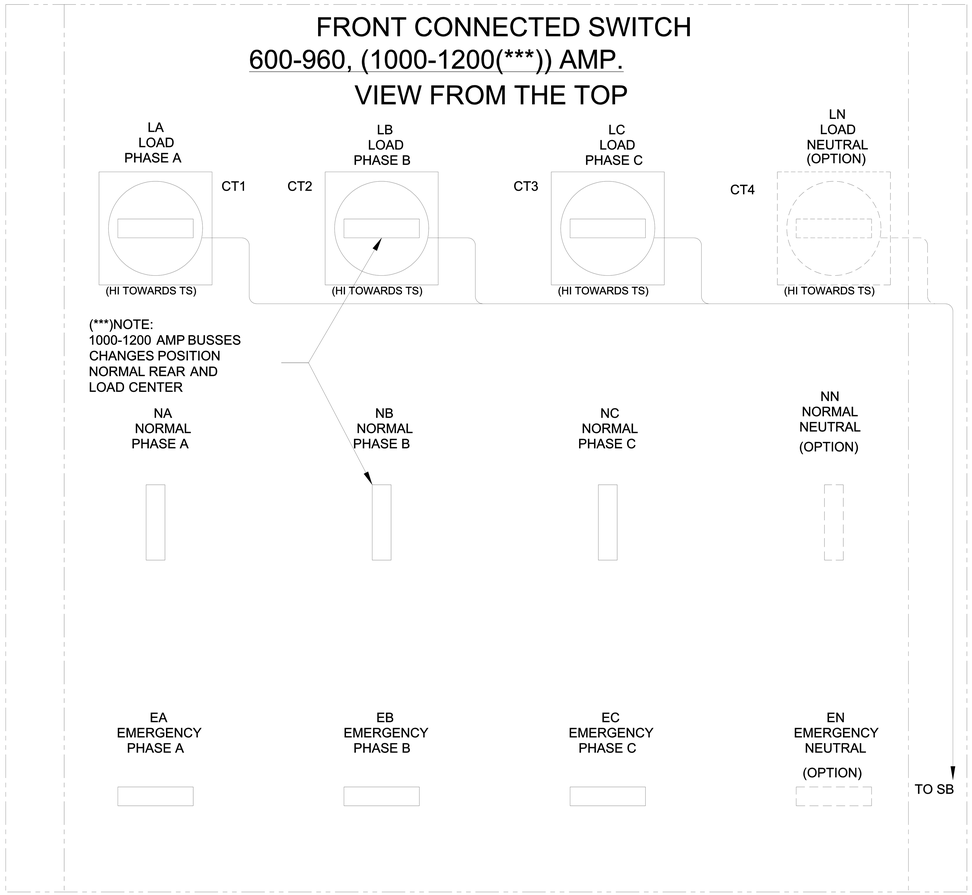
SCALE NONE SIZE DS

DWG. NO. 735259-3053

DRAWING REV. A ECN NO. 304986 SHEET 8 OF 11

PHYSICAL DIAGRAM (CONTINUED)





(FRONT DOOR THIS SIDE)

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DWG. NO. 735259-3053

DRAWING REV. A ECN NO. 304986 SHEET 9 OF 11

WIRE RUN LISTING

1 HARNESS LOCATOR — HARNESS 605674-001 (IJ1) TS

BOX CHECKED IF HARNESS IS MODIFIED ☐

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

2 HARNESS LOCATOR — HARNESS 736828-001 (IJ2) TS

BOX CHECKED IF HARNESS IS MODIFIED ☐

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

3 HARNESS LOCATOR — HARNESS 736828-002 (IJ3) TS STD. AUX. CONTACTS

BOX CHECKED IF HARNESS IS MODIFIED ☐

WIRE No.		CLR	AWG
50	IJ3-1,TS(AUX1)-27		16
51	IJ3-2,TS(AUX1)-28		
52	IJ3-3,TS(AUX1)-29		
53	IJ3-4,TS(AUX1)-30		
54	IJ3-5,TS(AUX1)-31		
55	IJ3-6,TS(AUX1)-32		
56	IJ3-7,TS(AUX1)-33		
57	IJ3-8,TS(AUX1)-34		
58	IJ3-9,TS(AUX1)-35		
59	IJ3-10,TS(AUX1)-36		
60	IJ3-11,TS(AUX1)-37		
61	IJ3-12,TS(AUX1)-38		
62	IJ3-13,TS(AUX1)-39		
63	IJ3-14,TS(AUX1)-40		
64	IJ3-15,TS(AUX1)-41		
65	IJ3-16,TS(AUX1)-42		
66	IJ3-17,TS(AUX1)-43		
67	IJ3-18,TS(AUX1)-44		
68	IJ3-19,TS(AUX1)-45		
69	IJ3-20,TS(AUX1)-46		
70	IJ3-21,TS(AUX1)-47		
71	IJ3-22,TS(AUX1)-48		
72	IJ3-23,TS(AUX1)-49		
73	IJ3-24,TS(AUX1)-50		

4 HARNESS LOCATOR — HARNESS 605674-006-A (IP1,J12) STATIONARY FRAME

BOX CHECKED IF HARNESS IS MODIFIED ☐

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		

5 HARNESS LOCATOR — HARNESS 605674-006-A (IP2,J11) STATIONARY FRAME

BOX CHECKED IF HARNESS IS MODIFIED ☐

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		

6 HARNESS LOCATOR — HARNESS 605674-006 (IP3,J4) STATIONARY FRAME

BOX CHECKED IF HARNESS IS MODIFIED ☐

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		

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

BOX CHECKED IF HARNESS IS MODIFIED ☐

WIRE No.		CLR	AWG
120	J3-1,TB1-33		16
121	J3-2,TB1-32		
	ADD WIRES		
122	J3-3		
123	J3-4		

8 HARNESS LOCATOR — HARNESS 736828-003 (P13, P17, P19, BP) BP

BOX CHECKED IF HARNESS IS MODIFIED ☒

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		
177	P17-9,BP(AUX3)-90		
176	P17-10,BP(AUX3)-112		
32	P17-11,BP(AUX3)-110		
32	BP(AUX3)-110,BP(AUX4)-137		
33	P17-12,BP(AUX3)-88		
33	BP(AUX3)-88,BP(AUX4)-140		
149	P17-13,BP(AUX3)-87		
149	BP(AUX3)-87,BP(AUX3)-109		
190	P17-17,BP(AUX4)-138		
190	BP(AUX4)-138,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		
150	BP(AUX3)-82,BP(AUX3)-105		
150	P17-23,BP(AUX3)-81		
150	P17-24,BP(AUX3)-106		
	REMOVE WIRES		
	ADD WIRES		
26	P13-13		
140	P13-14		
27	P13-15		
34	P13-16,BP(AUX3)-113		
35	P13-17,BP(AUX3)-114		
342	P13-18		
343	P13-19,BP(AUX3)-115		
344	P13-20,BP(AUX3)-116		
345	P13-21,BP(AUX3)-92		
346	P13-22		
347	P13-23		
348	P13-24,BP(AUX3)-108		
173	P17-5		
174	P17-6		
157	P17-7		
175	P17-8		
178	P17-14		
152	P17-15		
189	P17-16		
155	P17-18		
191	P17-19		
151	P17-20		
343	BP(AUX3)-91,BP(AUX3)-103		
343	BP(AUX3)-103,BP(AUX3)-115		
550	BP(AUX3)-104,BP(AUX3)-107		

9 HARNESS LOCATOR — HARNESS 736828-006 (J14,IS) ISOLATION AUX. CONTACTS

BOX CHECKED IF HARNESS IS MODIFIED ☒

WIRE No.		CLR	AWG
150	J14-3,IS-13		16
151	J14-4,IS-14		
33	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		
159	J14-1		
160	J14-2		
169	J14-7		
168	J14-8		
156	J14-14		
343	J14-18,IS-31		
162	J14-19		
163	J14-20		
164	J14-21		
165	J14-22,IS-46		
166	J14-23,IS-32		
167	J14-24		
343	IS-31,IS-47		

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

BOX CHECKED IF HARNESS IS MODIFIED ☒

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		16
343	J15-7,BID-SS-23		
226	J15-8,BID-SS-24		
391	J15-9		
395	J15-14		
508	J15-16		
405	J15-24		

11 HARNESS LOCATOR — HARNESS 736828-005 (J16, P20, P21, J20) BP/IS INTERLOCKS

BOX CHECKED IF HARNESS IS MODIFIED ☐

WIRE No.		CLR	AWG
154	J16-1,P21-1		16
170	J16-2,P20-2		
153	J16-3,BP(AUX5)-143		
191	J16-4,BP(AUX5)-146		
150	J16-5,BP(AUX5)-148		
170	J16-6,P21-2		
192	BP(AUX5)-144,P20-1		

12 HARNESS LOCATOR — HARNESS 736828-004 (P6,P18) INTERNAL CONTROL & FIELD INPUTS

BOX CHECKED IF HARNESS IS MODIFIED ☒

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		
243	P6-4,CP-P6-9	BLK	22
244	P6-5,CP-P6-10	RED	(2 COND)
			16
	REMOVE WIRES		
210	P18-4,P6-1		
151	P18-5,P6-2		
211	P18-6,P6-3		
	ADD WIRES		
210	P18-4,SS3-5		
151	P18-5,SS3-6		
211	P18-6,SS3-7		
215	P18-7		
216	P18-8		
34	P18-9,DPM-J3-2		
35	P18-10,DPM-J3-1		
9	P18-11,AP-FU5-1		
10	P18-12,AP-FU6-1		
11	P18-13,AP-FU7-1		
12	P18-14, (SEE ADD'L WIRES 150B)		
170	P18-15,NSR-B		
171	P18-16,NSR-A		
172	P18-17,ESR-A		
226	P18-18,MOXA-DI7		
343	P18-19,ESR-9		
344	P18-20,MOXA-DI0		
345	P18-21,MOXA-DI1		
165	P18-22,MOXA-DI3		
166	P18-23,MOXA-DI4		
348	P18-24,MOXA-DI2		
245	P6-6,CP-P6-31	WHT	
246	P6-7,CP-P6-30	GRN	22
247	P6-8,CP-P6-32	BLK	(4 COND)
248	P6-9,CP-P6-33	RED	
249	P6-10,CP-P6-36	BLK	22
250	P6-11,CP-P6-37	RED	(2 COND)
251	P6-12		16
252	P6-13		
253	P6-14		
254	P6-15		
255	P6-16		
256	P6-17		
257	P6-18		
258	P6-19		
259	P6-20		
260	P6-21		
261	P6-22		
262	P6-23		
263	P6-24		
343	CP-P6-49,DPM-J6-1	RED	22
274	CP-P6-50,DPM-J6-2	BLK	(2 COND)

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

BOX CHECKED IF HARNESS IS MODIFIED ☐

WIRE No.		CLR	AWG
310	P-1,J-1		16
1	P-2,J-2		
21	P-3,J-3		
3	P-4,J-4		
5	P-5,J-5		
7	P-6,J-6		
5	P-7,J-7		
37	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		
26	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		

DC HARNESS LOCATOR — HARNESS 713083-001 (CP-P10) DOOR CONTROLS & INDICATORS

BOX CHECKED IF HARNESS IS MODIFIED ☒

WIRE No.		CLR	AWG
130	CP-P10-40,PL1(-) BLK		22
131	CP-P10-31,PL1(+) RED		(12 COND)
132	CP-P10-39,PL2(-) WHT		
133	CP-P10-32,PL2(+) GRN		
134	CP-P10-38,PL3(-) ORG		
135	CP-P10-33,PL3(+) BLU		
136	CP-P10-37,PL4(-) BRN		
137	CP-P10-34,PL4(+) YEL		
325	CP-P10-43,SS1-23 GRY		
326	CP-P10-44,SS1-24 VIO		
327	CP-P10-41,SS1-13 PNK		
328	CP-P10-42,SS1-14 TAN		
	REMOVE WIRES		
326	CP-P10-44,SS1-24 VIO		
328	CP-P10-42,SS1-14 TAN		
	ADD WIRES		

REV. TO SHEET	ECN NO.	BY	APP.	DATE
A	304986	RPP	HSL	08/16/23
	SEE ECN			
-	301259	RPP	HSL	12/21/22
	ISSUE			

PROJECT NAME:

WIRING DIAGRAM

7000 SERIES (H7ATB) 3PH 600-1200 AMPS

"H" FRAME, GROUP 5 CONTROLS

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	RPP	12/21/22
CHECKED	HSL	12/21/22
PROJECT APPROVAL	MM	12/21/22
FINAL APPROVAL		

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

ASSEM. REF. NO.

COMPUTER GENERATED DRAWING

SCALE NONE SIZE DS

DWG. NO. 735259-3053

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DRAWING REV. A ECN NO. 304986 SHEET 10 OF 11

WIRE RUN LISTING

14 HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

SUB-ASSEMBLY 605749-001 (TB1,P,P11,P12,J13,P14,P15,P16,J17,J18)
MAIN INTERCONNECT ASSEMBLY

WIRE No.		CLR	AWG
1	P-2,P11-7		16
21	P-3,P11-2		
3	P-4,TB1-15		
5	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		
150	J17-23,P16-5		
150	J17-24,P14-3		

14 HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

SUB-ASSEMBLY 605749-001 (TB1,P,P11,P12,J13,P14,P15,P16,J17,J18)
MAIN INTERCONNECT ASSEMBLY (CONTINUED....)

WIRE No.		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		
170	P15-4,TB1-38		
171	P15-5,J17-3		
172	P15-6,J17-4		
	ADD WIRES		
312	P-17		
41	P11-22		
42	P11-23		
43	P11-24		
26	J13-13		
140	J13-14		
27	J13-15		
34	J13-16,TB1-34		
35	J13-17,TB1-35		
342	J13-18		
343	J13-19,TB1-44		
344	J13-20,J18-20		
345	J13-21,J18-21		
346	J13-22		
347	J13-23		
348	J13-24,J18-24		
159	P14-1		
27	P14-2		
169	P14-7		
168	P14-8		
156	P14-14		
343	P14-18,TB1-44		
162	P14-19		
163	P14-20		
164	P14-21		
165	P14-22,J18-22		
166	P14-23,J18-23		
167	P14-24		
170	P15-4,TB1-48		
171	P15-5,TB1-45		
172	P15-6,TB1-46		
343	P15-7,TB1-44		
226	P15-8,TB1-47		
175	P15-9		
178	P15-14		
156	P15-16		
400	P15-24		
401	P16-7		
402	P16-8		
403	P16-9		
404	P16-10		
405	P16-11		
406	P16-12		
407	P16-13		
408	P16-14		
409	P16-15		
410	P16-16		
411	P16-17		
412	P16-18		
413	P16-19		
414	P16-20		
415	P16-21		
416	P16-22		
417	P16-23		
418	P16-24		
171	J17-3,TB1-45		
172	J17-4,TB1-46		
173	J17-5		
174	J17-6		
157	J17-7		
175	J17-8		
178	J17-14		
419	J17-15		
189	J17-16		
155	J17-18		
420	J17-19		
421	J17-20		
215	J18-7		
216	J18-8		
34	J18-9,TB1-34		
35	J18-10,TB1-35		
9	J18-11,TB1-9		
10	J18-12,TB1-10		
11	J18-13,TB1-11		
12	J18-14,TB1-12		
170	J18-15,TB1-48		
171	J18-16,TB1-45		
172	J18-17,TB1-46		
226	J18-18,TB1-47		
343	J18-19,TB1-44		
170	TB1-38,TB1-48		
1	J30-1,TB1-1		
3	J30-2,TB1-3		
5	J30-3,TB1-5		
7	J30-4,TB1-7		

15 HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

SUB-ASSEMBLY 605659 (P3,P4,J6,P7,TB) STD. FIELD TB

WIRE No.		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	J6-6,31BG-E-A2 WHT		
246	J6-7,31BG-E-A1 GRN		22
247	J6-8,31BG-N-A2 BLK		(4 COND)
248	J6-9,31BG-N-A1 RED		
249	J6-10,31BG-D-A2 BLK		22
250	J6-11,31BG-D-A1 RED		(2 COND)
251	J6-12		16
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		
276	P7-7		
277	P7-8		
278	P7-9		
279	P7-10		
280	P7-11		
281	P7-12		
282	P7-13		
283	P7-14		
284	P7-15		
285	P7-16		
286	P7-17		
287	P7-18		
288	P7-19		
289	P7-20		
290	P7-21		
291	P7-22		
292	P7-23		
293	P7-24		

16 HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

HARNESS (J7) OPTIONAL FIELD OUTPUTS

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

19 HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

HARNESS 483763 (J,CP-P1,CP-P2) CONTROL PANEL

WIRE No.		CLR	AWG
310	J-1,CP-P1-8		16
1	J-2,CP-P1-15		
21	J-3,CP-P1-2		
3	J-4,CP-P1-4		
5	J-5,CP-P1-17		
7	J-6,CP-P1-12		
5	J-7,CP-P1-7		
37	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		

20 HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

HARNESS 309320-005 OPTIONAL 8 IN. EXTENSION HARNESS

WIRE No.		CLR	AWG
310	Jx-1,Px-1		16
1	Jx-2,Px-2		
21	Jx-3,Px-3		
3	Jx-4,Px-4		
5	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		

ADDITIONAL WIRING

WIRE No.		CLR	AWG
192	J20-1,SL2-A		16
170	J20-2,SL2-B		
154	J21-1,SL1-A		
170	J21-2,SL1-B		
26	TS-CR-(+),TS-COIL-BLK1		
27	TS-CR-(-),TS-COIL-BLK2		
463	CT1-WHT,SB-1	WHT	
463	SB-2,DPM-TB2-1		
464	CT2-WHT,SB-3	WHT	
464	SB-4,DPM-TB2-3		
465	CT3-WHT,SB-5	WHT	
465	SB-6,DPM-TB2-5		
461	CT3-BLK,CT2-BLK	BLK	
461	CT2-BLK,CT1-BLK	BLK	
461	CT1-BLK,SB-7	BLK	
461	SB-7,EQUIP. GND.	GRN	
461	DPM-TB2-2,DPM-TB2-4	GRN	
461	DPM-TB2-4,DPM-TB2-6	GRN	
461	SB-8,DPM-TB2-2	GRN	
461	DPM-TB2-6,DPM-GND	GRN	
170	NSR-B,ESR-B		
343	ESR-9,NSR-9		
343	NSR-9,MOXA-V(+)		
343	MOXA-V(+),AP-1		
343	AP-1,DPM-J6-1		
274	DPM-J6-2,AP-2		
274	AP-2,MOXA-V(-)		
274	MOXA-V(-),MOXA-COM0	WHT	22
274	MOXA-COM0,MOXA-GND-2	WHT	
461	MOXA-GND-1,EQUIP. GND.	GRN	16
520	MOXA-DI5,ESR-6		
521	MOXA-DI6,NSR-6		
1	P30-1,AP-FU1-1		
3	P30-2,AP-FU2-1		
5	P30-3,AP-FU3-1		
7	P30-4,AP-FU4-1		
210	SS1-14,SS1-24	BLK	22
210	SS1-24,SS2-6	BLK	
325	SS1-23,SS2-3	BLK	
327	SS1-13,SS3-10	BLK	
211	SS3-7,SS2-5		16
151	SS3-6,SS3-3		
210	SS2-1,SS3-5		
210	SS2-1,SS2-6		
436	SS3-9,SS2-7		
437	SS3-2,SS2-2		

ADDITIONAL WIRING (150B) <WYE>

WIRE No.		CLR	AWG
458	DPM-TB1-1,AP-FU5-2		16
459	DPM-TB1-2,AP-FU6-2		
460	DPM-TB1-3,AP-FU7-2		
12	P18-14,DPM-TB1-4		

ADDITIONAL WIRING (150B) <DELTA>

WIRE No.		CLR	AWG
458	DPM-TB1-1,AP-FU5-2		16
459	DPM-TB1-2,AP-FU6-2		
460	DPM-TB1-3,AP-FU7-2		

ADDL. WIRING (150B) <WYE> W/NEUTRAL MONITORING

WIRE No.		CLR	AWG
466	CT4-WHT,SB-9	WHT	16
466	SB-10,DPM-TB2-7		
461	CT4-BLK,CT3-BLK	BLK	
461	DPM-TB2-8,DPM-GND	GRN	

DIGITAL POWER METER TB1 WIRING:

1. WIRE IN WYE IF SWITCH IS SUPPLIED WITH A NEUTRAL (CATALOG NUMBER CONTAINS A3, B3 OR C3).

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

REV. TO SHEET	ECN NO.	BY	APP.	DATE
A	304986	RPP	HSL	08/16/23
	SEE ECN			
-	301259	RPP	HSL	12/21/22
	ISSUE			

PROJECT NAME:

WIRING — DIAGRAM
7000 SERIES (H7ATB) 3PH 600-1200 AMPS
"H" FRAME, GROUP 5 CONTROLS

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	RPP	12/21/22
CHECKED	HSL	12/21/22
PROJECT APPROVAL	MM	12/21/22
FINAL APPROVAL		

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

ASSEM. REF. NO.

COMPUTER GENERATED DRAWING

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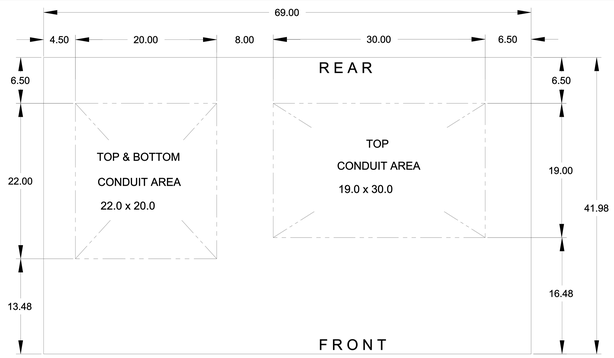
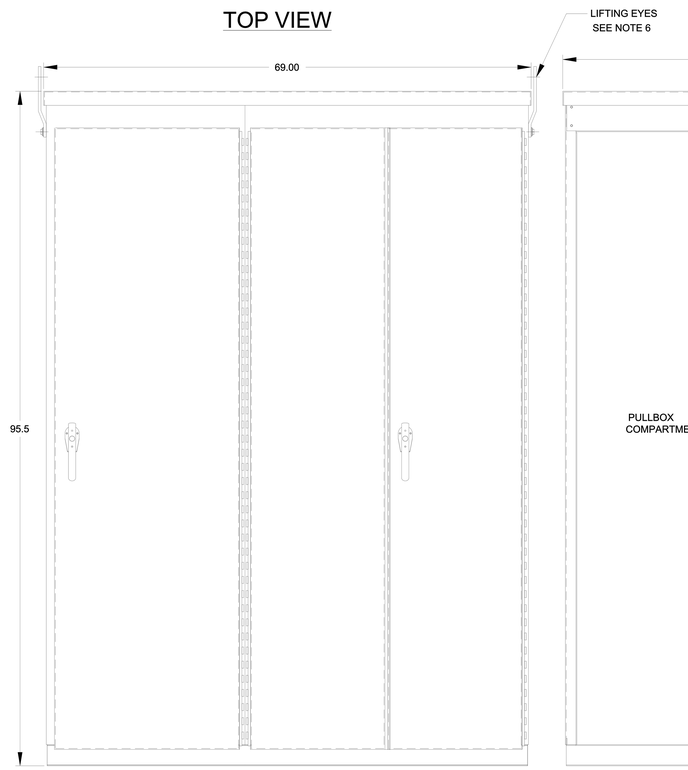
ASCO® ASCO POWER TECHNOLOGIES, L.P. FLORHAM PARK, NEW JERSEY 07932 U.S.A.

SCALE NONE | SIZE DS | DWG. NO. 735259-3053

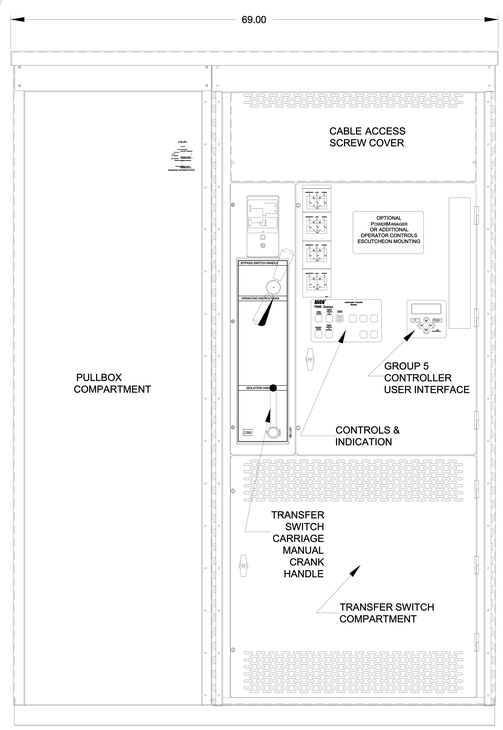
DRAWING REV. A | ECN NO. 304986 | SHEET 11 OF 11



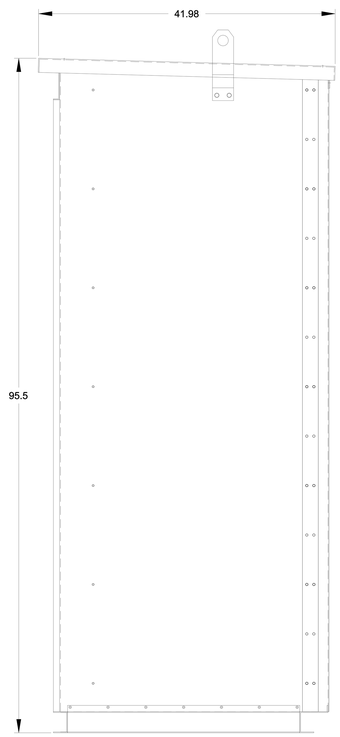
TOP VIEW



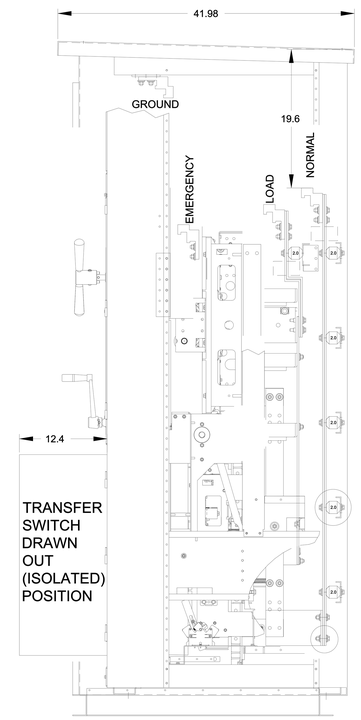
FRONT VIEW



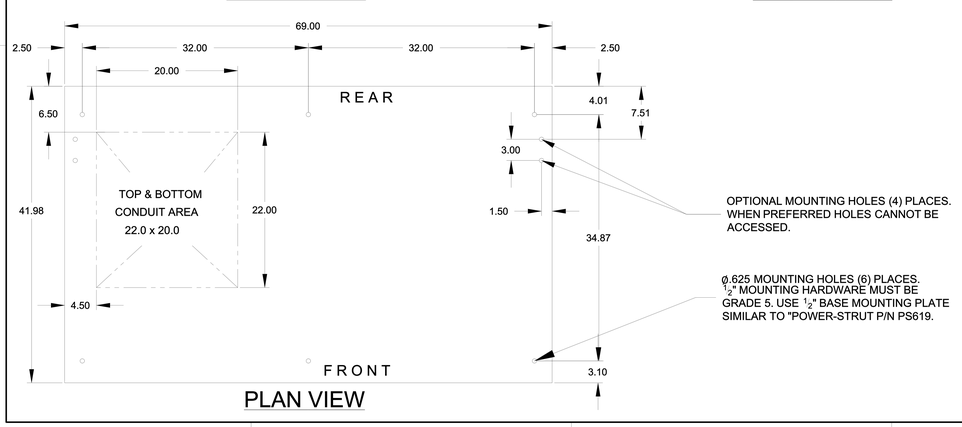
FRONT VIEW



SIDE VIEW



SIDE VIEW



PLAN VIEW

GENERAL NOTES

1. FLOOR MOUNTED ENCLOSURE.
   TYPE 3R CONSTRUCTED FROM CODE GAUGE STEEL.
   FINISH: TYPE 3R, ANSI 61 GRAY POLYESTER SEMI GLOSS ELECTROSTATIC POWDER.
   TYPE 3RX EXTERIOR CONSTRUCTED FROM CODE GAUGE STAINLESS STEEL.
   (R) EXTERIOR CONSTRUCTED FROM TYPE 304 STAINLESS STEEL.
   (S) EXTERIOR CONSTRUCTED FROM TYPE 316 STAINLESS STEEL.
2. EXTERIOR DOORS HAVE PADLOCKABLE HANDLES WITH 3-POINT LATCH
3. DESIGNED FOR FRONT ACCESS.
4. RECOMMENDED CLEARANCES: FRONT: 36" REAR: NONE
5. SHIPS AS 1 UNIT (NO SHIPPING SPLIT)
6. LIFTING PLATES: SECTIONS ARE SUPPLIED WITH LIFTING PLATES. INSPECT PLATES FOR DAMAGE AND TORQUE BOLTS TO 45 FT LBS BEFORE USE. REFER TO ANSI/NEMA PB 2.1 FOR PROPER HANDLING OF EQUIPMENT. AFTER INSTALLATION OF SECTION, REMOVE LIFTING PLATES. REINSTALL BOLTS INTO EXTERIOR HOLES AND TORQUE TO APPROXIMATELY 20 FT LBS.

TRANSFER SWITCH

1. H FRAME ISOLATION-BYPASS TRANSFER SWITCH 1000A-1200A.
2. TRANSFER SWITCH RATING: 1000 AMPS, 1200 AMPS
   SHORT CIRCUIT RATING WHEN PROTECTED BY A CIRCUIT BREAKER
   TIME RESPONSE, MAXIMUM 0.05 SECONDS: 50,000 RMS SYM @ 480V.
   SPECIFIC BREAKER RATING: 65,000 RMS SYM @ 480V.
3. A FULL RATED NEUTRAL CONNECTION FOR EACH SOURCE AND THE LOAD IS OPTIONAL.
   WHEN PROVIDED IT IS IN ONE OF THE FOLLOWING FORMATS.
   A. SOLID NEUTRAL
   B. SWITCHED NEUTRAL POLE
   C. OVERLAPPING NEUTRAL POLE
4. UL 1008

TERMINATIONS 1000A-1200A

1. SUPPLIED WITH MECHANICAL (SCREW TYPE) LUGS FOR CU/AL CABLE.
   NORMAL: (4) 1/0 - 600MCM PER PHASE & NEUTRAL
   LOAD: (4) 1/0 - 600MCM PER PHASE & NEUTRAL
   EMERGENCY: (4) 1/0 - 600MCM PER PHASE & NEUTRAL
   GROUND: (12) 1/0 - 600MCM
   A. SUITABLE WIRE BENDING SPACE IS PROVIDED AS PER NEC.
2. OPTIONAL LUGS MAY BE SUPPLIED.

REV. TO SHEET	ECN NO.	BY	APP.	DATE
E	274296	NC	RN	8/28/18
	SEE ECN			
D	270494	WK	BK	01/02/18
	SEE ECN			
C	265751	SY	RN	02/28/17
	SEE ECN			
B	249932	SM	RN	
	SEE ECN			
A	249865	SM	RN	
	SEE ECN			
-	249725	SV	RN	
	NEW ISSUE			

PROJECT NAME:

OUTLINE | MOUNTING

HATB 1000A - 1200A, FRONT CONNECTED, PULLBOX ON LEFT
TYPE 3R/3RX, 96 x 69 x 42, SEISMIC

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	SV	07-25-14
CHECKED	RN	
PROJECT APPROVAL		
FINAL APPROVAL		

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

ASSEM. REF. NO.

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

COMPUTER GENERATED DRAWING

SCALE NONE | SIZE DS

DWG. NO. 736939-070

DRAWING REV. E | ECN NO. 274296 | SHEET 1 OF 1

EQUIPMENT STORAGE REQUIREMENTS

Equipment provided by Schneider-Electric and/or ASCO Power Technologies that is stored for a short-term duration (i.e., days to weeks) or long-term duration (i.e., months to years), must be kept in a cool, dry, temperature-controlled environment. Storage of equipment in open warehouses, locations without proper temperature and humidity control, and/or outdoor storage is not acceptable without the utilization of heating elements, thermostats, humidistats, and protection from weather and dirt. Failure to comply may result in moisture ingress and/or condensation to form resulting in rusting and or corrosion, component and/or equipment failure and replacement, and/or nullification of any manufacturer warranty.

For **General Instructions for Proper Handling, Installation, Operation, and Maintenance of Deadfront Distribution Switchboards Rated 600 Volts or Less**, refer to ANSI NEMA PB 2.1-2013

Copies of the following documents should be included on the submittals, depending on the units that are on the proposal:

For ASCO Power Technology's **Switchgear and Switchboards**, refer to Instruction Bulletin **381333-393**.
For Schneider-Electric/Square D's **Power Zone 4 (PZ4) Switchgear**, refer to Instruction Bulletin **80298-002-09**.
For Schneider-Electric/Square D's **Power Zone 4 (PZ4) NEMA 3R Walk-In Switchgear**, refer to Instruction Bulletin **80298-156-02**.
For Schneider-Electric/Square D's **Quality, Efficient, Delivery" (QED2) Switchboard**, refer to Instruction Bulletin **80043-055-14**.
For Schneider-Electric/Square D's **Masterclad Metal-Clad Indoor Switchgear**, refer to Instruction Bulletin **6055-30.**

ASCO Power Technologies™

7000 SERIES Bypass-Isolation Transfer Switches

Data Sheet

ASCO Bypass-Isolation Automatic Transfer Switches are available in open transition, closed transition, and delayed transition designs. The bypass-isolation features allow the primary automatic transfer switch to be inspected, tested, and maintained without interrupting power to the load. They also provide redundant power transfer if the ATS is disabled or removed from service.

J-Frame
150-600 amps

H-Frame
600-1200 amps

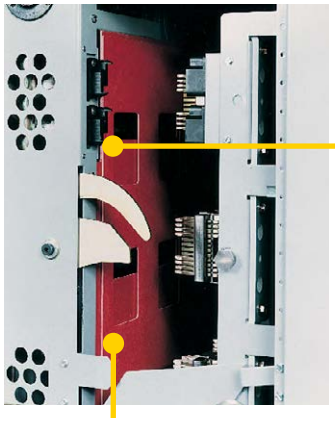
G-Frame
1000-3000 amps

G-Frame
4000 amps

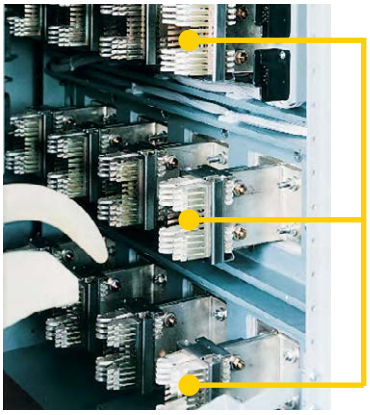
- Available 150 to 4000 amps
- Bypass switch and transfer switch have identical electrical ratings
- Mechanical interlocks prevent unintended operation
- Bypass contacts carry current only during bypass operation
- Draw-out design eases transfer switch maintenance
- The bypass switch has dead-front quick-make, quick-break operation for transferring loads between live sources
- Bypass switch is rated for use as a 3-position manual transfer switch
- Bypass and isolation functions are simple, requiring only two operating handles
- Bypass-Isolation Handles are permanently mounted
- No toggle switches, push buttons, selector switches, or levers are required for bypass-isolation operation
- Mechanical indicators show bypass and transfer switch positions
- 800 to 1200 amp models available in shallow depth, front-connected, or rear-connected designs

Transfer Switch Draw-out Features

- Automatic secondary disconnects remove control power as switch is withdrawn
- Draw-out carriage eases switch mechanism maintenance and removal via commercially available breaker hoists
- Optional transfer switch lifting yoke kit
- Optional automatic shutters isolate bus when the transfer switch is withdrawn, 1600-3000 Amp only



Optional Automatic Shutters
(1600-3000 amps)

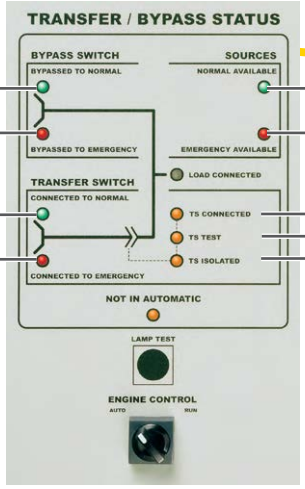


Self-Aligning Jaws

Life Is On | Schneider Electric

ASCO 7000 SERIES Bypass-Isolation Transfer Switches

Transfer / Bypass Status Panel

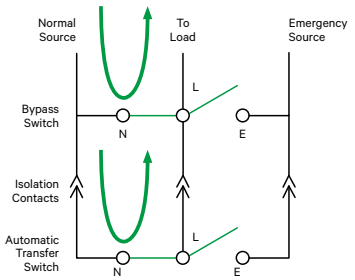


Instantly see the status of power availablility and switch positions.

Bypass and Isolation - Simple as 1, 2, 3

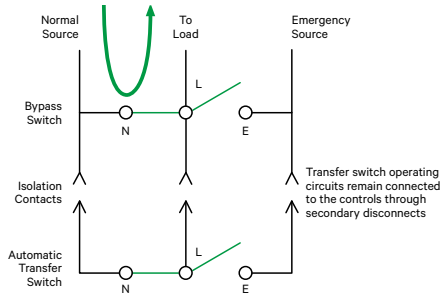
1 Bypass

Push in the transfer switch bypass handle and turn it counter clockwise



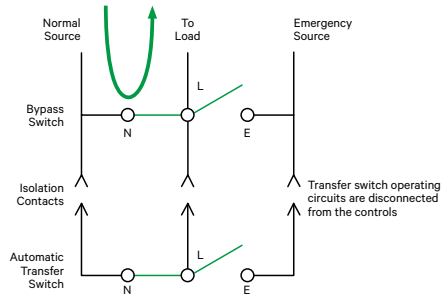
2 Set in Test Position

Turn isolation handle counter clockwise until window shows "Test"



3 Isolation Position

Turn isolation handle counter clockwise until window shows "isolate"



Power Knowledge

Application and Design Factors for Automatic Transfer and Bypass-Isolation Switches

Part 1

Part 2

3D Bypass Switch Animation

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