1200A Automatic Transfer Switch

Transfer Switch Details

#3	ATS	AMPS: 1200	QTY: 3

Product	:	Series 300	Catalog Number	:	H03AUSB31200NGXM
Service Voltage / Hz	:	480V/60Hz	Optional Accessories	:	11BE,44G
Bypass Isolation	:	Not Applicable	Product Description	:	300 Series, Automatic Service Entrance Transfer Switch
No. of Switched Poles: 4	:	4	Neutral Configuration	:	Switched [B]
Withstand Rating: Frame = H, Switch Rating = 1200, Series = 300	:	See WCR Table Below	No. of Cables & Lug Size	:	See Applicable Outline Drawing
Enclosure	:	3R(M)-UL Type 3R secure double door enclosure (See Disclaimer 3)	Service	:	Three Phase, 4-wire
Extended Warranty	:	Not Included	Markings	:	

#	ACCESSORY DESCRIPTIONS	
	Accessory Code	Description
1	11BE	Adds the following features to the Group G controller: (1) Serial RS-485 Modbus Communications (2) Multi-Schedule Engine Exerciser (3) a 300 Entry Event Log and (4) a common alarm output function. When applied on 3-phase systems it also enables: (1) 3-Phase Emergency Source VLL sensing (2) Phase Rotation Monitoring (3) Emergency Source VLL Unbalance Monitoring.
2	44G	Strip heater w/ thermostat, wired to load terminals: 208-600 volts

THREE PHASE WIRING FOR ASCO® 300 SERIES TRANSFER SWITCHES TYPES H3ATS & H3NTS RATED 800, 1000 & 1200 AMPERES

GENERAL INFORMATION

THIS WIRING APPLIES TO 300 SERIES TRANSFER SWITCHES THAT UTILIZE THE "H" FRAME POWER TRANSFER SWITCH RATED 800-1200 AMPERES.

THE GROUP G CONTROLLER PROVIDES EITHER AUTOMATIC (D3ATS) OR NON-AUTOMATIC [MANUAL] (H3NTS) OPERATION BASED ON ITS FACTORY SETTING ACCORDING TO THE CUSTOMER ORDER REQUIREMENTS.

THE TYPE OF TRANSFER SWITCH PROVIDED CAN BE DETERMINED FROM THE PRODUCT IDENTIFICATION MARKINGS LOCATED ON BOTH THE POWER TRANSFER SWITCH AND THE COVER OF THE GROUP G CONTROLLER.

ALL OPERATIONAL SETTINGS AND SEQUENCES OF THE GROUP G CONTROLLER AND ITS RELATED OPTIONAL ACCESSORIES (1UP, 18RX, 23G) ARE PROVIDED IN THE USER'S GUIDE, ASCO GROUP G CONTROLLER FOR AUTOMATIC & NON-AUTOMATIC TRANSFER SWITCHES, PART NUMBER 381333-400.

INFORMATION FOR INSTALLATION AND TESTING OF THE TRANSFER SWITCH IS PROVIDED IN THE INSTALLATION MANUAL, ASCO 3ATS & 3NTS, H-DESIGN 800-1200 A TRANSFER SWITCHES, PART NUMBER 381333-405.

ENGINE CONTROL CONTACTS

FEATURE 7 & FEATURE 8:
ONE SET OF FORM C CONTACTS "NR" (FEAT. 7 N/C, FEAT. 8 N/O) THAT CHANGE POSITION ON EXPIRATION OF THE FEATURE 1C, OVERRIDE MOMENTARY NORMAL SOURCE OUTAGES TIME DELAY, AND RESET ON EXPIRATION OF THE FEATURE 2E ENGINE COOLDOWN TIME DELAY.
AN AUXILIARY CONTACT THAT IS CLOSED WHEN THE TRANSFER SWITCH IS CONNECTED TO THE EMERGENCY SOURCE, IS CONNECTED ACROSS THE N/C CONTACT (FEATURE 7).

AN ADDITIONAL SET OF ENGINE STARTING CONTACTS ARE AVAILABLE ON THE GROUP G CONTROLLER WHEN THE FEATURE SETTING OF THE CONTROLLER OUTPUT CONTACTS "OP1" IS SET TO OPERATE AS "NR2".

ADDITIONAL, OPTIONAL ENGINE STARTING CONTACTS "NR2" ARE AVAILABLE WHEN OPTIONAL ACCESSORY 18RX (RELAY EXPANSION MODULE) IS INCLUDED IN THE TRANSFER SWITCH ASSEMBLY. OUTPUT CONTACTS "OP2" AND/OR "OP3" PROVIDE THE ENGINE STARTING FUNCTION WHEN THE FEATURE SETTING OF EACH IS SET TO OPERATE AS "NR2".

CONTACTS ARE RATED 5 AMPS RESISTIVE AT 30 VDC MAXIMUM, 100 mA AT 5 VDC MINIMUM.

REFER TO USER'S GUIDE, ASCO GROUP G CONTROLLER FOR AUTOMATIC & NON-AUTOMATIC TRANSFER SWITCHES, PART NUMBER 381333-400 FOR SETTING INFORMATION.

LOAD DISCONNECT FEATURE

FEATURE 31: INCLUDES SUB-FEATURES 31F, 31G, 31M, 31N
A SET OF FORM C CONTACTS ARE PROVIDED ON THE GROUP G CONTROLLER AS "OP1". WHEN THE FEATURE SETTING OF "OP1" IS SET TO OPERATE THE CONTACTS AS "FEATURE 31", THE TIME DELAY SETTINGS OF THE SUB-FEATURES ARE AVAILABLE.

"OP1" CAN BE SET TO OPERATE TO PROVIDE THE FOLLOWING FUNCTIONS USING THE TIME DELAY SETTINGS ASSOCIATED WITH EACH SUB-FEATURE;

31F - NORMAL TO EMERGENCY PRE-TRANSFER SIGNAL
31G - EMERGENCY TO NORMAL PRE-TRANSFER SIGNAL
31M - NORMAL TO EMERGENCY POST-TRANSFER SIGNAL
31N - EMERGENCY TO NORMAL POST TRANSFER SIGNAL

THE "OP1" OUTPUT CONTACTS CHANGE POSITION FOLLOWING EACH OF THE ABOVE TIME DELAYS.

ADDITIONAL LOAD DISCONNECT CONTACTS, "FEATURE 31" ARE AVAILABLE WHEN OPTIONAL ACCESSORY 18RX (RELAY EXPANSION MODULE) IS INCLUDED IN THE TRANSFER SWITCH ASSEMBLY. OUTPUT CONTACTS "OP2 AND/OR "OP3" WILL PROVIDE LOAD DISCONNECT FUNCTIONS WHEN THE FEATURE SETTING OF EACH IS SET TO OPERATE AS "FEATURE 31".

ALL OUTPUT CONTACTS ("OP1", "OP2", "OP3") SET TO OPERATE AS "FEATURE 31", SHARE THE COMMON TIME DELAY SETTINGS OF SUB-FEATURES 31F, 31G, 31M, AND 31N.

CONTACTS ARE RATED 5 AMPS RESISTIVE AT 30 VDC MAXIMUM, 100 mA AT 5 VDC MINIMUM.

REFER TO USER'S GUIDE, ASCO GROUP G CONTROLLER FOR AUTOMATIC & NON-AUTOMATIC TRANSFER SWITCHES, PART NUMBER 381333-400 FOR SETTING INFORMATION.

INPHASE TRANSFER FEATURE FOR LOAD TRANSFER

INPHASE TRANSFER CONTROL INITIATES AN INPHASE TRANSFER OF LOADS BETWEEN LIVE SOURCES. THIS IS USED TO PREVENT NUISANCE TRIPPING OF DISTRIBUTION CIRCUIT BREAKERS AND POSSIBLE DAMAGE TO MECHANICAL LOADS ASSOCIATED WITH OUT OF PHASE TRANSFER.

REFER TO USER'S GUIDE, ASCO GROUP G CONTROLLER FOR AUTOMATIC & NON-AUTOMATIC TRANSFER SWITCHES, PART NUMBER 381333-400 FOR SETTING INFORMATION.

SOURCE AVAILABILITY SIGNALS

SIGNALS INDICATING THE AVAILABILITY OF THE NORMAL & EMERGENCY SOURCES IS PROVIDED WHEN OPTIONAL ACCESSORY 18RX (RELAY EXPANSION MODULE) IS INCLUDED IN THE TRANSFER SWITCH ASSEMBLY. OUTPUT CONTACTS "RL5" (EMERGENCY SOURCE AVAILABLE) AND "RL6" (NORMAL SOURCE AVAILABLE) CHANGE POSITION WHEN THE SOURCE IS ACCEPTABLE.

CONTACTS ARE RATED 5 AMPS RESISTIVE AT 30 VDC MAXIMUM, 100 mA AT 5 VDC MINIMUM.

COMMON ALARM & NOT IN AUTO SIGNALING FEATURES

A SET OF FORM C CONTACTS IS PROVIDED ON THE GROUP G CONTROLLER AS "OP1". THE FEATURE SETTING OF "OP1" CAN BE SET TO OPERATE THE CONTACTS AS A "NOT IN AUTO" SIGNAL.

WHEN "OP1" IS SET FOR "NOT IN AUTO", THE OUTPUT CONTACTS CHANGE POSITION WHEN THE TRANSFER IS BEING INHIBITED FROM TRANSFERRING TO THE EMERGENCY SOURCE (FEATURE 34B) OR THE TRANSFER SWITCH HAS BEEN SET FOR NON-AUTOMATIC (MANUAL) OPERATION.

WHEN OPTIONAL ACCESSORY 11BE "SOFTWARE BUNDLE" IS PART OF THE TRANSFER SWITCH ASSEMBLY, "OP1" MAY ALTERNATIVELY SET FOR A "COMMON ALARM" SIGNAL. THE OUTPUT CONTACTS CHANGE POSITION WHEN A "COMMON ALARM" IS NOT PRESENT AND RESET WHEN A "COMMON ALARM" CONDITION IS PRESENT. THE "COMMON ALARM" SIGNAL CONDITIONS ARE SELECTABLE.

ADDITIONAL "COMMON ALARM" AND "NOT IN AUTO" CONTACTS ARE AVAILABLE WHEN OPTIONAL ACCESSORY 18RX (RELAY EXPANSION MODULE) IS INCLUDED IN THE TRANSFER SWITCH ASSEMBLY. OUTPUT CONTACTS "OP2 AND/OR "OP3" WILL PROVIDE SIGNAL FUNCTIONS WHEN THE FEATURE SETTING OF EACH IS SET TO OPERATE AS "COMMON ALARM" OR "NOT IN AUTO".

CONTACTS ARE RATED 5 AMPS RESISTIVE AT 30 VDC MAXIMUM, 100 mA AT 5 VDC MINIMUM.

REFER TO USER'S GUIDE, ASCO GROUP G CONTROLLER FOR AUTOMATIC & NON-AUTOMATIC TRANSFER SWITCHES, PART NUMBER 381333-400 FOR SETTING INFORMATION.

EXTERNAL POWER SUPPLY COMPATIBILITY

USE OF AN EXTERNAL POWER SUPPLY IS USEFUL WHEN REQUIRED TO EXTEND THE FOLLOWING CONTROLLER TIME DELAYS BEYOND 6 SECONDS;

FEATURE 1C - OVERRIDE MOMENTARY NORMAL SOURCE OUTAGES
FEATURE 1F - OVERRIDE MOMENTARY EMERGENCY SOURCE OUTAGES

AN EXTERNAL POWER SUPPLY IS ALSO USEFUL WHEN THE TRANSFER SWITCH IS USED WITH COMMUNICATIONS FEATURES BY ENABLING THE CONTROLLER TO CONTINUE COMMUNICATING.

AN EXTERNAL POWER SOURCE MAY BE PROVIDED TO THE CONTROLLER, UNTIL THE NORMAL SOURCE OR EMERGENCY SOURCE IS AVAILABLE, BY USE OF;

- AN EXTERNAL 24 VDC POWER SUPPLY WITH ACCESSORY 18RX (RELAY EXPANSION MODULE)
  OR
- OPTIONAL ACCESSORY 1UP (UNINTERRUPTIBLE POWER SUPPLY MODULE)

EXTERNAL 24 VDC POWER SUPPLY "1G":
AN EXTERNAL 24 VDC POWER SUPPLY MAY BE USED TO POWER THE CONTROLLER WHEN ACCESSORY 18RX (RELAY EXPANSION MODULE) IS INCLUDED IN THE TRANSFER SWITCH ASSEMBLY. OUTPUT CONTACTS "OP2" WILL PROVIDE EXTERNAL 24 VDC POWER SUPPLY FUNCTIONALITY WHEN ITS FEATURE SETTING IS SET TO OPERATE AS "1G". ADDITIONALLY, JUMPERS MUST BE RECONFIGURED ON ACCESSORY 18RX (RELAY EXPANSION MODULE) TO ENABLE THIS FUNCTION AS FOLLOWS;

REMOVE JUMPERS "J1" 1-2 & "J1" 3-4
CONNECT JUMPERS "J1" 5-7 & "J1" 6-8

THE OUTPUT CONTACTS CHANGE POSITION WHEN EITHER THE NORMAL SOURCE OR EMERGENCY SOURCE IS AVAILABLE AND RESET WHEN NEITHER SOURCE IS AVAILABLE. THE "OP2" N/C CONTACT SWITCHES CUSTOMER PROVIDED +24 VDC FROM THE EXTERNAL POWER SUPPLY TO THE CONTROLLER.

REFER TO USER'S GUIDE, ASCO GROUP G CONTROLLER FOR AUTOMATIC & NON-AUTOMATIC TRANSFER SWITCHES, PART NUMBER 381333-400 FOR SETTING INFORMATION.

ACCESSORY 1UP (UNINTERRUPTIBLE POWER SUPPLY):
WHEN OPTIONAL ACCESSORY 1UP IS INCLUDED IN THE TRANSFER SWITCH ASSEMBLY, THE CONTROLLER IS PROVIDED WITH LIMITED RESERVE POWER (APPROXIMATELY 3 MINUTES).

LOAD CURRENT METERING

WHEN OPTIONAL ACCESSORY 23GB IS PART OF THE TRANSFER SWITCH ASSEMBLY, THREE PHASE CURRENT MEASUREMENTS ARE AVAILABLE FOR DISPLAY ON THE GROUP G CONTROLLER.

REFER TO USER'S GUIDE, ASCO GROUP G CONTROLLER FOR AUTOMATIC & NON-AUTOMATIC TRANSFER SWITCHES, PART NUMBER 381333-400 FOR INFORMATION ON USE.

ADVANCED-FUNCTION SOFTWARE BUNDLE

WHEN OPTIONAL ACCESSORY 11BE IS PART OF THE TRANSFER SWITCH ASSEMBLY, AN ADVANCED-FUNCTION SOFTWARE BUNDLE IS AVAILABLE TO PERFORM THE FOLLOWING FUNCTIONS;

- SERIAL COMMUNICATIONS (RS-485)
- PROGRAMMABLE ENGINE EXERCISER
- EVENT LOG
- COMMON ALARM SIGNAL CAPABILITY ON GROUP G CONTROLLER "OP1" OUTPUT.

(3 PHASE SENSING ONLY)
- 3 PHASE EMERGENCY SOURCE SENSING.
- PHASE ROTATION SENSING.
- EMERGENCY VOLTAGE UNBALANCE SENSING.

REFER TO USER'S GUIDE, ASCO GROUP G CONTROLLER FOR AUTOMATIC & NON-AUTOMATIC TRANSFER SWITCHES, PART NUMBER 381333-400 FOR INFORMATION ON THESE FUNCTIONS.

NON-AUTOMATIC (MANUAL) OPERATION

TRANSFER SWITCH ASSEMBLIES FACTORY SET FOR NON-AUTOMATIC OPERATION PROVIDE USER INITIATED, ELECTRICAL OPERATION OF THE TRANSFER SWITCH TO EITHER AVAILABLE SOURCE. THE TRANSFER SWITCH ASSEMBLY IS PHYSICALLY IDENTICAL TO THAT OF THE AUTOMATIC TYPE.

WHEN THE TRANSFER SWITCH IS SET FOR NON-AUTOMATIC OPERATION, A CUSTOMER PROVIDED SELECTOR SWITCH MAY BE USED TO OPERATE IT FROM A REMOTE LOCATION.

REMOTE CONTROL FEATURES

THE FOLLOWING CONTROL PANEL INPUTS PROVIDE REMOTE CONTROL FUNCTIONS FOR THE TRANSFER SWITCH. EACH FUNCTION CAN BE IMPLEMENTED BY THE CUSTOMER PROVIDING THE FORM OF CONTROL DESCRIBED. EACH CONTROL CONTACT MUST BE SUITABLE FOR A 5 VDC LOW ENERGY CIRCUIT.

EXTERNAL FEATURE 17: REMOTE TRANSFER TO EMERGENCY FEATURE (FOR AUTOMATIC TRANSFER TYPE ONLY) - REQUIRES A CUSTOMER SUPPLIED, NORMALLY CLOSED CONTACT. OPENING OF THE CONTACT CAUSES ENGINE START AND TRANSFER TO THE EMERGENCY SOURCE. RE-CLOSURE OF THE CONTACT ACTIVATES THE FEATURE 3A "RETRANSFER TO NORMAL (IF JUST TEST) TIME DELAY PRIOR TO RETRANSFER. IN THE EVENT THAT THE EMERGENCY SOURCE FAILS WHILE THE TRANSFER SWITCH IS CONNECTED TO EMERGENCY AND THE CUSTOMER SUPPLIED CONTACT IS OPEN, THE TRANSFER SWITCH WILL AUTOMATICALLY RETRANSFER TO THE NORMAL SOURCE.

EXTERNAL FEATURE 6B: REMOTE BYPASS OF RETRANSFER TO NORMAL TIME DELAY - REQUIRES A CUSTOMER SUPPLIED, NORMALLY CLOSED CONTACT. OPENING OF THE CONTACT BYPASSES FEATURE 3A RETRANSFER TO NORMAL DELAY IF ACTIVE.

REFER TO USER'S GUIDE, ASCO GROUP G CONTROLLER FOR AUTOMATIC & NON-AUTOMATIC TRANSFER SWITCHES, PART NUMBER 381333-400 FOR SETTING INFORMATION.

NOTES

1. SWITCH SHOWN DE-ENERGIZED CONNECTED TO NORMAL SOURCE.
2. DEVICE SYMBOLS AND DESIGNATIONS ARE IN ACCORDANCE WITH NEMA PUB. ICS 1, PART 1-101A.
2. ALL WIRING IS #16 AWG, TINNED, STRANDED COPPER UNLESS OTHERWISE INDICATED.
3. INDICATES CUSTOMER CONNECTION POINTS.
4. INDICATES FACTORY CONNECTION POINTS.
5. CONNECTION POINTS THAT HAVE BOTH CUSTOMER CONNECTIONS AND FACTORY CONNECTIONS ARE SHOWN OPEN AS CUSTOMER CONNECTION POINTS.
6. THE TRANSFER UNIT IS MOUNTED ON THE BACK INSIDE SURFACE OF THE ENCLOSURE. THE CONTROL PANEL AND ANY OPTIONAL ACCESSORIES ARE MOUNTED ON THE INSIDE SURFACE OF THE DOOR.
7. AN OPERATOR'S MANUAL IS FURNISHED WITH EACH AUTOMATIC TRANSFER SWITCH. REFER TO THIS PUBLICATION PRIOR TO INSTALLATION AND OPERATION OF THE SWITCH.
8. GROUND STRAP ON CONTROL PANEL IS AFFIXED TO CHASSIS (ENCLOSURE) AT LOWER LEFT CONTROL PANEL MOUNTING STUD.

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

CATALOG TYPE		NEUTRAL TYPE		VOLTAGE CODES 3 PHASE (3 OR 4 WIRE) 50 OR 60 Hz		ENCLOSURE CODES		
CODE	DESCRIPTION	CODE	DESCRIPTION	CODE	NOMINAL VOLTAGE	CODE	TYPE	DESCRIPTION
3ATS 3NTS	AUTOMATIC MANUAL	A B	SOLID SWITCHING			BLANK		OPEN TYPE (NO ENCLOSURE)
						C	1	GENERAL PURPOSE, INDOOR
						E	2	INDOOR, WATER & DUST RESISTANT
						F	3R	OUTDOOR, RAINPROOF, SLEET & ICE RESISTANT
						G	4	INDOOR/OUTDOOR, WATERTIGHT & DUSTTIGHT
						H	4X	TYPE 4 PLUS CORROSION RESISTANCE (STAINLESS STEEL)
						J	4X	TYPE 4 PLUS CORROSION RESISTANCE (FIBERGLASS)
						K	7	EXPLOSION PROOF
						L	12	INDOOR, INDUSTRIAL ENVIRONMENTS, OILTIGHT & DUSTTIGHT
				C	208			
				D	220			
				E	230			
				F	240			
				H	380			
				J	400			
				K	415			
				L	440			
				M	460			(SECURE ENCLOSURES)
				N	480	M	3R	OUTDOOR, RAINPROOF, SLEET & ICE RESISTANT
				P	550	N	4	INDOOR/OUTDOOR, WATERTIGHT & DUSTTIGHT
				Q	575	P	4X	TYPE 4 PLUS CORROSION RESISTANCE (STAINLESS STEEL)
				R	600	Q	12	INDOOR, INDUSTRIAL ENVIRONMENTS, OILTIGHT & DUSTTIGHT

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

REV. TO SHEET	ECN NO.	BY	APP.	DATE
G	278250	TR	BK	04/22/19
	SEE ECN			
F	275211	TR	BK	10/15/18
	SEE ECN			
E	255133	TR	BK	6/4/15
	SEE ECN (REMOVED 600A)			
D	248402	AE	BK	
	SEE ECN			
C	247772	SDH	SDH	4/14/14
	SEE ECN			
B	246325	AE	BK	01/16/14
	SEE ECN			
A	245959	BK	BK	12/23/13
	SEE ECN			
-	245204	BK	BK	11/07/13
	ISSUE			

WIRING DIAGRAM
300 SERIES (H3ATS/H3NTS) 3PH 800-1200 AMPS
"H" FRAME, GROUP G CONTROLS

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	DJB	11/07/13
CHECKED	BK	11/07/13
PROJECT APPROVAL	BK	11/07/13
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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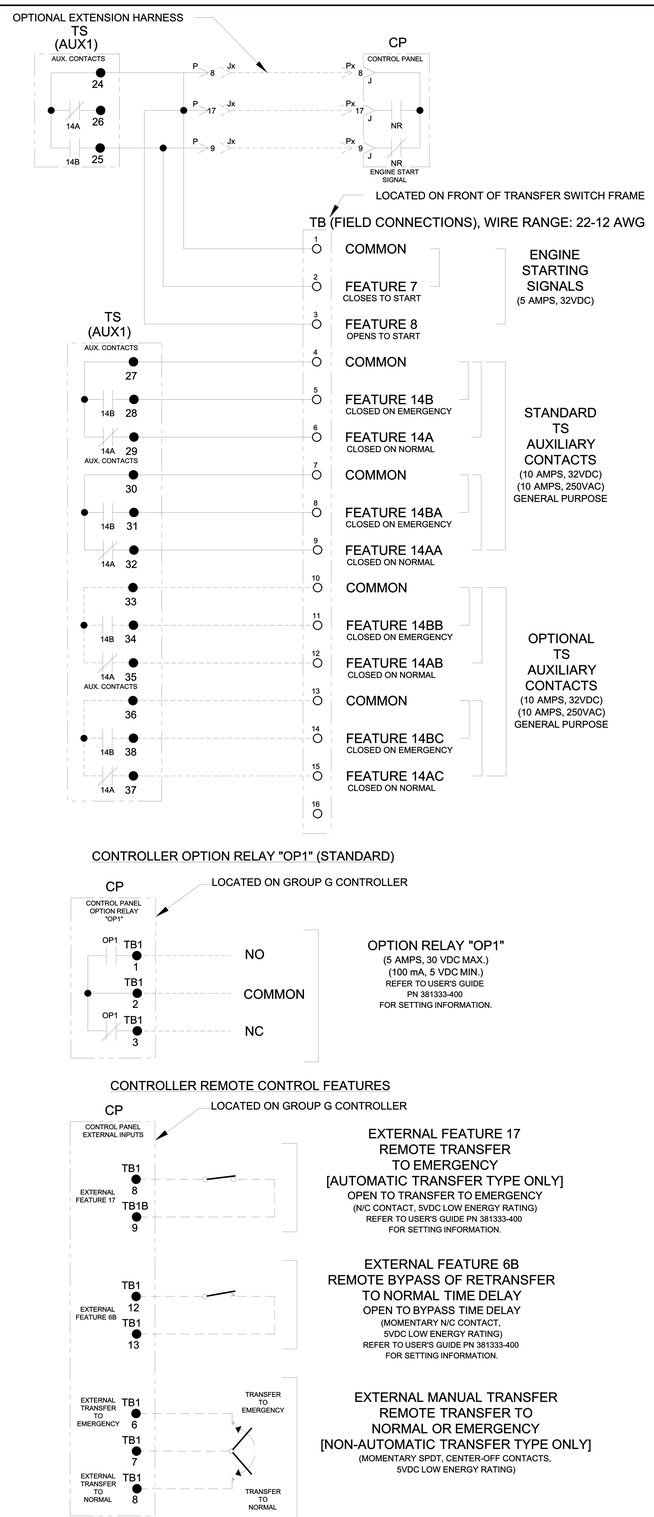
COMPUTER GENERATED DRAWING
SCALE NONE SIZE DS
DWG. NO.
1001657
DRAWING REV. G ECN NO. 278250 SHEET 1 OF 6

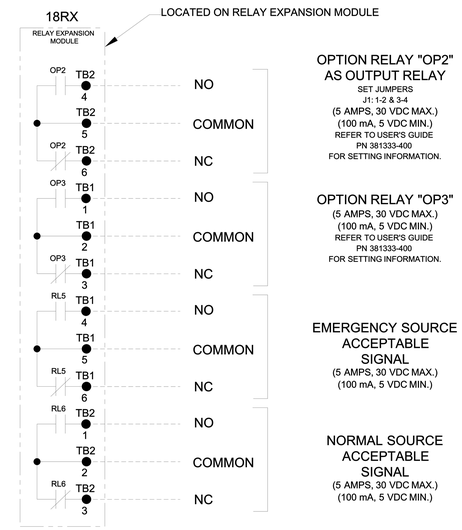
FIELD CONNECTIONS



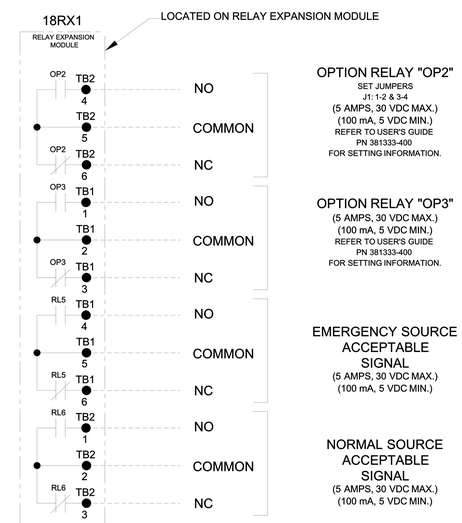
CONTROLLER OPTION RELAY "OP1" (STANDARD)

CONTROLLER REMOTE CONTROL FEATURES

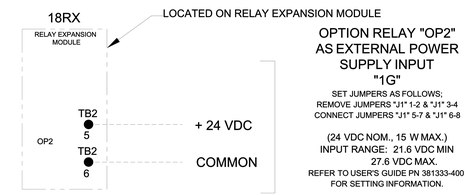
OPTIONAL ACCESSORY 18RX (RELAY EXPANSION MODULE)



OPTIONAL ACCESSORY 18RX1 (SECOND RELAY EXPANSION MODULE)

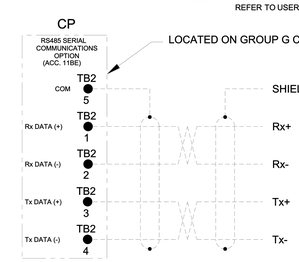


"OP2" OPTIONAL USES



RS485 SERIAL COMMUNICATIONS OPTION

AVAILABLE WITH OPTIONAL ACCESSORY 11BE: ADVANCED-FUNCTION SOFTWARE BUNDLE
REFER TO USER'S GUIDE PN 381333-400 FOR SETTING INFORMATION.



NOTES:
1. EARTH GROUND SHIELD AT HOST DEVICE ONLY.
2. FIELD WIRING: USE UL LISTED, STRANDED, TWISTED PAIRS, OVERALL FOIL SHIELD WITH STRANDED DRAIN WIRE SUITABLE FOR RS422 EQUIVALENT TO:

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

(PLENUM RATED) BELDEN 89729 OR 82729
OR ALPHA 58902

REV. TO SHEET	ECN NO.	BY	APP.	DATE
G	278250	TR	BK	04/22/19
	SEE ECN			
F	275211	TR	BK	10/15/18
	SEE ECN			
E	255133	TR	BK	6/4/15
	SEE ECN (REMOVED 600A)			
D	248402	AE	BK	
	SEE ECN			
C	247772	SDH	SDH	4/14/14
	SEE ECN			
B	246325	AE	BK	01/16/14
	SEE ECN			
A	245959	BK	BK	12/23/13
	SEE ECN			
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	ISSUE			

PROJECT NAME:

WIRING DIAGRAM
300 SERIES (H3ATS/H3NTS) 3PH 800-1200 AMPS
"H" FRAME, GROUP G CONTROLS

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	DJB	11/07/13
CHECKED	BK	11/07/13
PROJECT APPROVAL	BK	11/07/13
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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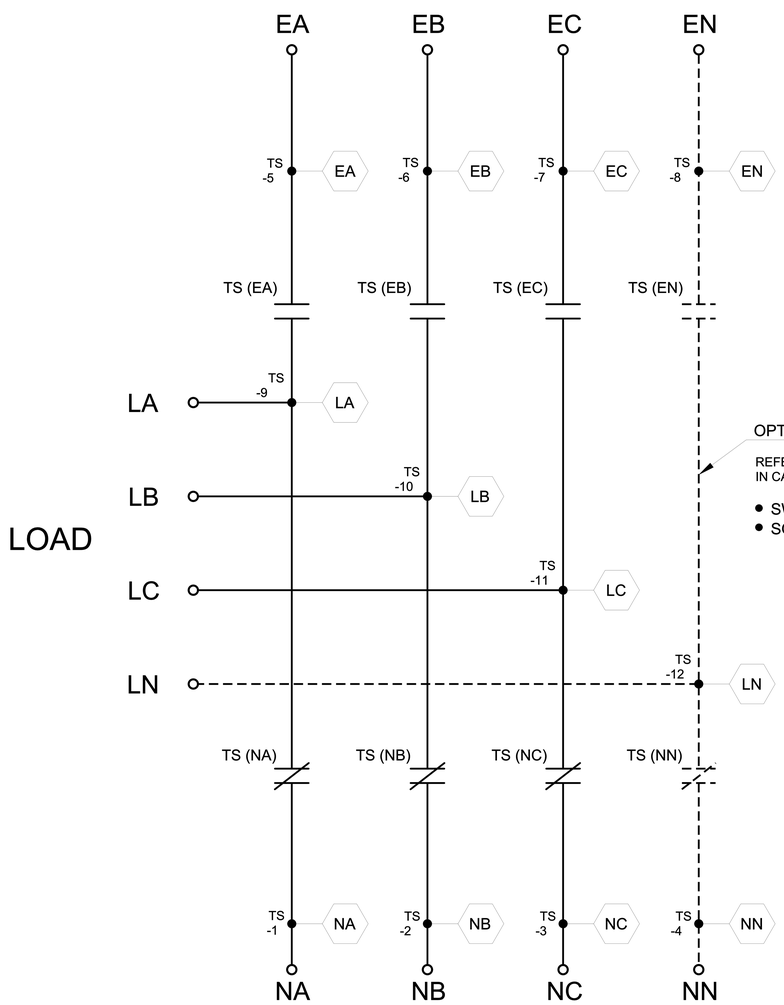
COMPUTER GENERATED DRAWING

SCALE NONE | SIZE DS

DWG. NO. 1001657

DRAWING REV. G | ECN NO. 278250 | SHEET 2 OF 6

MAIN POWER POLES



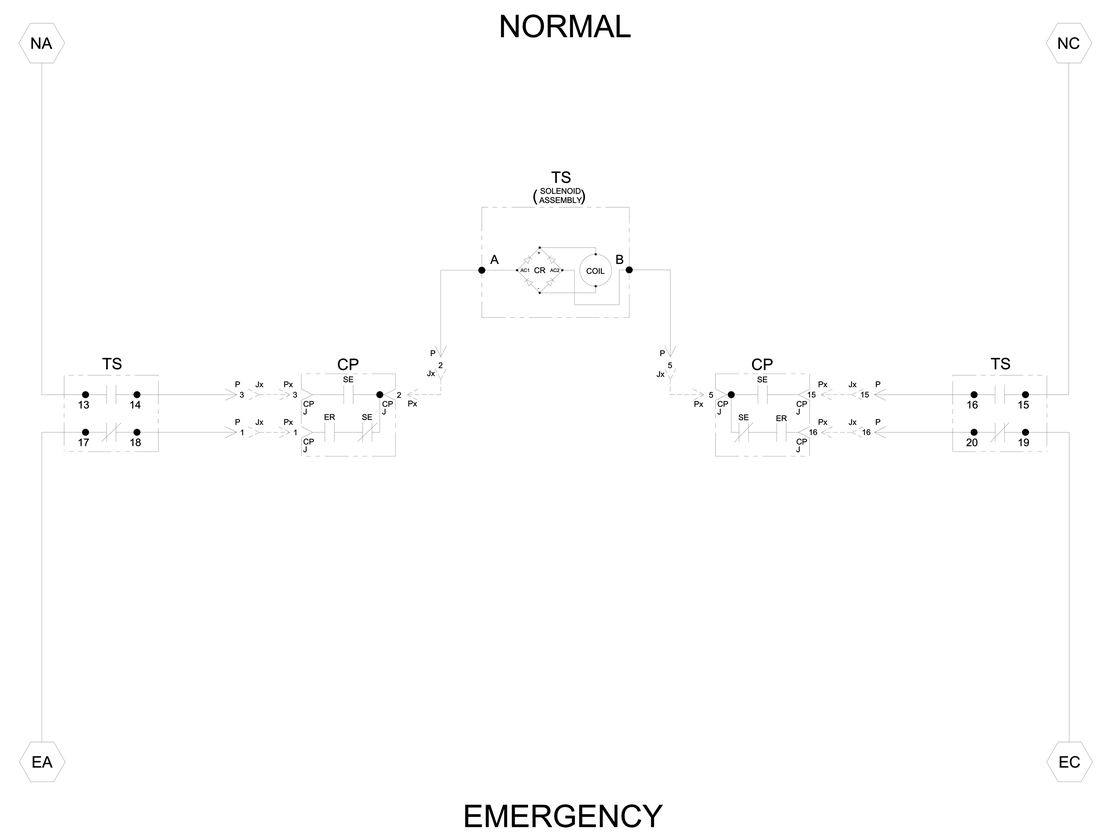
OPTIONAL NEUTRAL TYPES

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

- SWITCHING CONTACTS
- SOLID BUS PLATE

NOTE:
ATS/NTS SHOWN CLOSED ON NORMAL SOURCE.

TS OPERATOR CIRCUIT



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.

REV. TO SHEET	ECN NO.	BY	APP.	DATE
G	278250 SEE ECN	TR	BK	04/22/19
F	275211 SEE ECN	TR	BK	10/15/18
E	255133 SEE ECN	TR (REMOVED	BK 600A)	6/4/15
D	248402 SEE ECN	AE	BK	
C	247772 SEE ECN	SDH	SDH	4/14/14
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A	245959 SEE ECN	BK	BK	12/23/13
-	245204 ISSUE	BK	BK	11/07/13

PROJECT NAME:

WIRING DIAGRAM

300 SERIES (H3ATS/H3NTS) 3PH 800-1200 AMPS
"H" FRAME, GROUP G CONTROLS

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COMPUTER GENERATED DRAWING

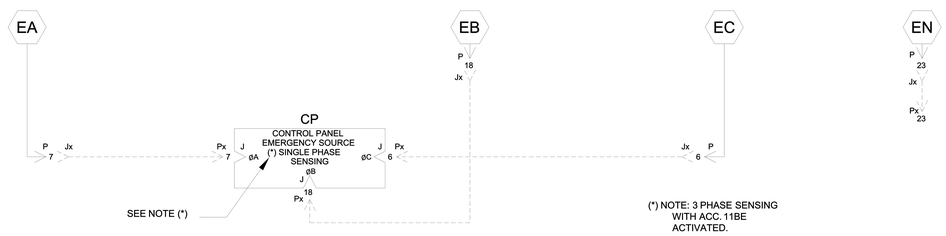
SCALE NONE SIZE DS

DWG. NO. 1001657

DRAWING REV. G ECN NO. 278250 SHEET 3 OF 6

EMERGENCY SOURCE CIRCUITS

EMERGENCY

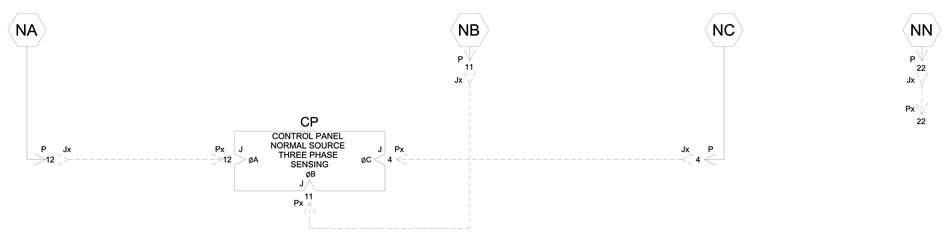


LOAD TERMINAL CIRCUITS

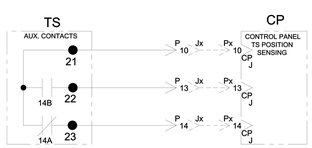
LOAD

NORMAL SOURCE CIRCUITS

NORMAL

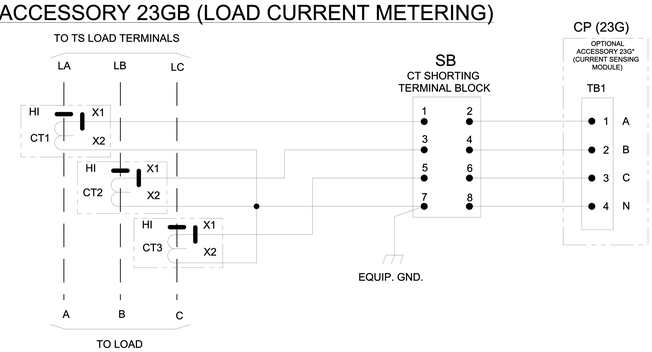


CONTROL CIRCUITS



ADDITIONAL CIRCUITS

OPTIONAL ACCESSORY 23GB (LOAD CURRENT METERING)



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

REV. TO SHEET	ECN NO.	BY	APP.	DATE
G	278250	TR	BK	04/22/19
	SEE ECN			
F	275211	TR	BK	10/15/18
	SEE ECN			
E	255133	TR	BK	6/4/15
	SEE ECN (REMOVED 600A)			
D	248402	AE	BK	
	SEE ECN			
C	247772	SDH	SDH	4/14/14
	SEE ECN			
B	246325	AE	BK	01/16/14
	SEE ECN			
A	245959	BK	BK	12/23/13
	SEE ECN			
-	245204	BK	BK	11/07/13
	ISSUE			

PROJECT NAME:

WIRING DIAGRAM

300 SERIES (H3ATS/H3NTS) 3PH 800-1200 AMPS

"H" FRAME, GROUP G CONTROLS

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	DJB	11/07/13
CHECKED	BK	11/07/13
PROJECT APPROVAL	BK	11/07/13
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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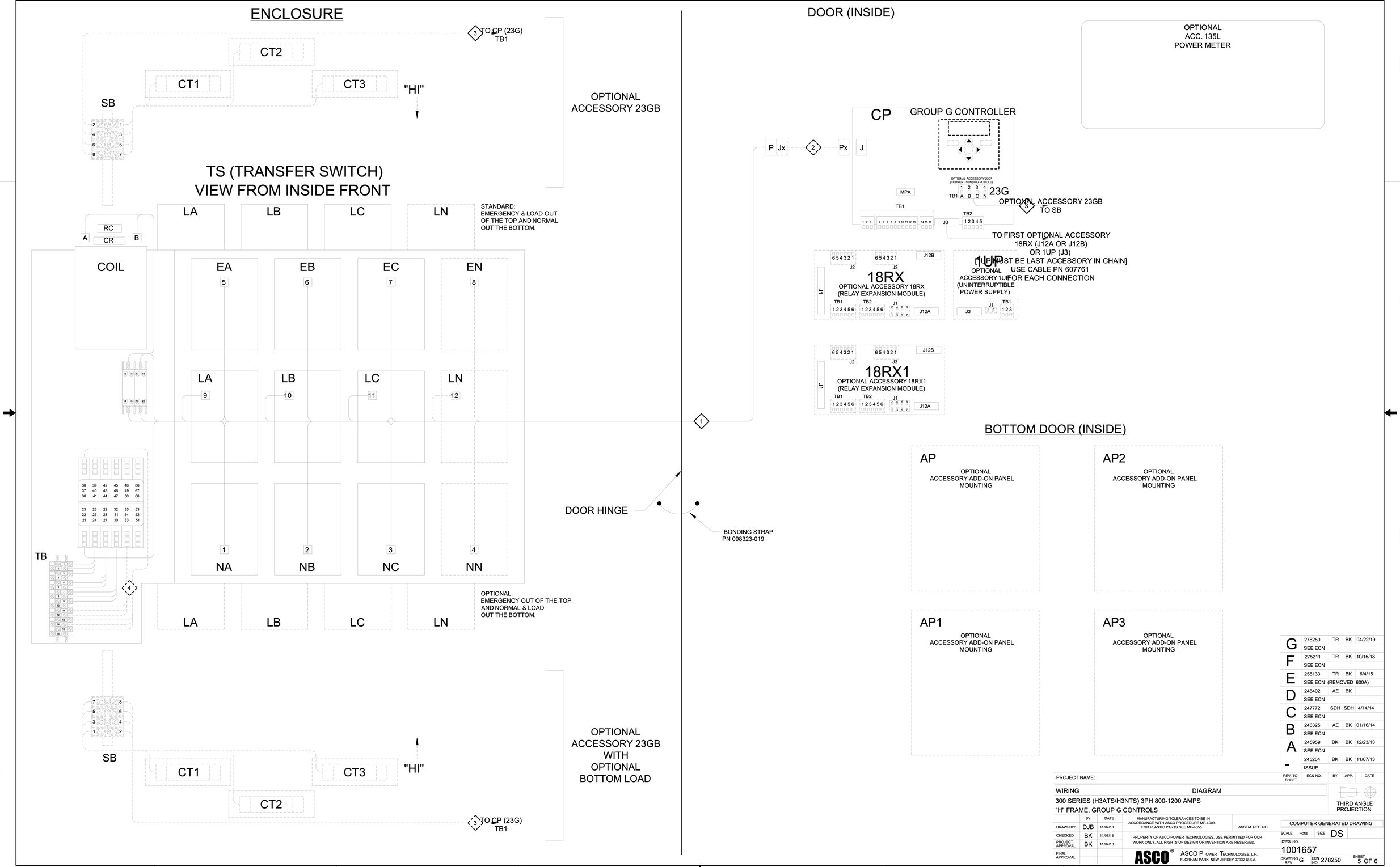
FLORHAM PARK, NEW JERSEY 07932 U.S.A.

SCALE NONE SIZE DS

DWG. NO. 1001657

DRAWING REV. G ECN NO. 278250 SHEET 4 OF 6

PHYSICAL DIAGRAM



G	278250	TR	BK	04/22/19
	SEE ECN			
F	275211	TR	BK	10/15/18
	SEE ECN			
E	255133	TR	BK	6/4/15
	SEE ECN (REMOVED 600A)			
D	248402	AE	BK	
	SEE ECN			
C	247772	SDH	SDH	4/14/14
	SEE ECN			
B	246325	AE	BK	01/16/14
	SEE ECN			
A	245959	BK	BK	12/23/13
	SEE ECN			
-	245204	BK	BK	11/07/13
	ISSUE			

PROJECT NAME:

REV. TO SHEET	ECN NO.	BY	APP.	DATE

WIRING DIAGRAM

300 SERIES (H3ATS/H3NTS) 3PH 800-1200 AMPS

"H" FRAME, GROUP G CONTROLS

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	DJB	11/07/13
CHECKED	BK	11/07/13
PROJECT APPROVAL	BK	11/07/13
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. 1001657

DRAWING REV. G ECN NO. 278250 SHEET 5 OF 6

WIRE RUN LISTING

1 HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☒

WIRE No.	HARNESS 713082 (P) MAIN TS	CLR	AWG
1	P-1,TS-18		16
2	P-2,TS-A		
3	P-3,TS-14		
4	P-4,TS-3		
4	TS-3,TS-15		
5	P-5,TS-B		
6	P-6,TS-7		
6	TS-7,TS-19		
7	P-7,TS-5		
7	TS-5,TS-17		
8	P-8,TS-24		
8	TS-24,TB-1		
9	P-9,TS-25		
9	TS-25,TB-2		
10	P-10,TS-21		
11	P-11,TS-2		
12	P-12,TS-1		
12	TS-1,TS-13		
13	P-13,TS-22		
14	P-14,TS-23		
15	P-15,TS-16		
16	P-16,TS-20		
17	P-17,TB-3		
18	P-18,TS-6		
19	P-19,TS-9		
20	P-20,TS-10		
21	P-21,TS-11		
22	P-22,TS-4		
23	P-23,TS-8		
24	P-24,TS-12		
25	TS-27,TB-4		
26	TS-28,TB-5		
27	TS-29,TB-6		
	ADD WIRES		
31	TS-30,TB-7		
32	TS-31,TB-8		
33	TS-32,TB-9		

2 HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

WIRE No.	HARNESS 309320-005 (Px,Jx OPTIONAL 8" EXTENSION HARNESS	CLR	AWG
1	Px-1,Jx-1		16
2	Px-2,Jx-2		
3	Px-3,Jx-3		
4	Px-4,Jx-4		
5	Px-5,Jx-5		
6	Px-6,Jx-6		
7	Px-7,Jx-7		
8	Px-8,Jx-8		
9	Px-9,Jx-9		
10	Px-10,Jx-10		
11	Px-11,Jx-11		
12	Px-12,Jx-12		
13	Px-13,Jx-13		
14	Px-14,Jx-14		
15	Px-15,Jx-15		
16	Px-16,Jx-16		
17	Px-17,Jx-17		
18	Px-18,Jx-18		
19	Px-19,Jx-19		
20	Px-20,Jx-20		
21	Px-21,Jx-21		
22	Px-22,Jx-22		
23	Px-23,Jx-23		
24	Px-24,Jx-24		
	REMOVE WIRES		
	ADD WIRES		

3 HARNESS LOCATOR

WIRE No.	OPTIONAL ACCESSORY 23GB (CT,SB,CP(23G)-TB1)	CLR	AWG
300	CT1-X1,SB-1		16
301	CT2-X1,SB-3		
302	CT3-X1,SB-5		
300	SB-2,CP(23G)-TB1-1		
301	SB-4,CP(23G)-TB1-2		
302	SB-6,CP(23G)-TB1-3		
303	CT1-X2,CT2-X2	GRN	
303	CT2-X2,CT3-X2	GRN	
303	CT3-X2,SB-7	GRN	
303	SB-7,EQUIP-GND	GRN	
303	SB-8,CP(23G)-TB1-4	GRN	

4 HARNESS LOCATOR — BOX CHECKED IF HARNESS IS MODIFIED ☐

WIRE No.	OPTIONAL AUX. CONTACTS	CLR	AWG
35	TB-10,TS(AUX1)-33		16
36	TB-11,TS(AUX1)-34		
37	TB-12,TS(AUX1)-35		
38	TB-13,TS(AUX1)-36		
39	TB-14,TS(AUX1)-38		
40	TB-15,TS(AUX1)-37		

WIRE No.	ADDITIONAL WIRES	CLR	AWG
			16

G	278250	TR	BK	04/22/19
	SEE ECN			
F	275211	TR	BK	10/15/18
	SEE ECN			
E	255133	TR	BK	6/4/15
	SEE ECN (REMOVED 600A)			
D	248402	AE	BK	
	SEE ECN			
C	247772	SDH	SDH	4/14/14
	SEE ECN			
B	246325	AE	BK	01/16/14
	SEE ECN			
A	245959	BK	BK	12/23/13
	SEE ECN			
-	245204	BK	BK	11/07/13
	ISSUE			

PROJECT NAME:

REV. TO SHEET	ECN NO.	BY	APP.	DATE

WIRING DIAGRAM

300 SERIES (H3ATS/H3NTS) 3PH 800-1200 AMPS

"H" FRAME, GROUP G CONTROLS

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	DJB	11/07/13
CHECKED	BK	11/07/13
PROJECT APPROVAL	BK	11/07/13
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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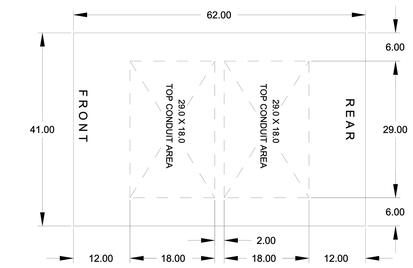
COMPUTER GENERATED DRAWING

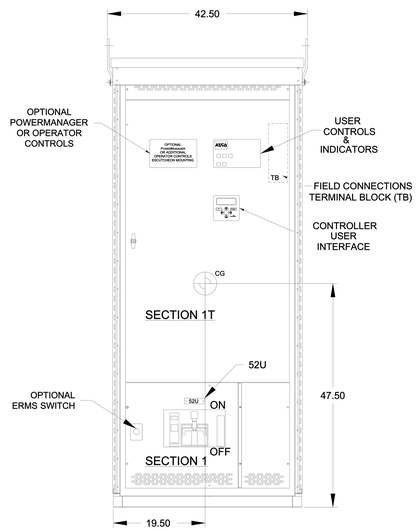
SCALE NONE SIZE DS

DWG. NO. 1001657

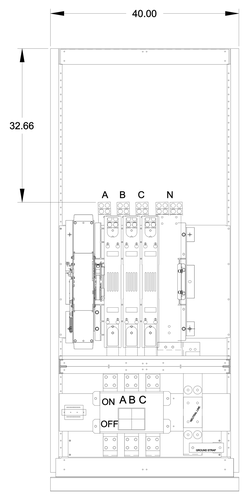
DRAWING REV. G ECN NO. 278250 SHEET 6 OF 6



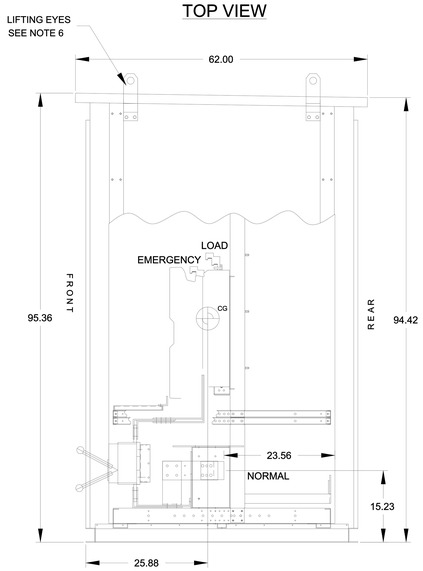
TOP VIEW



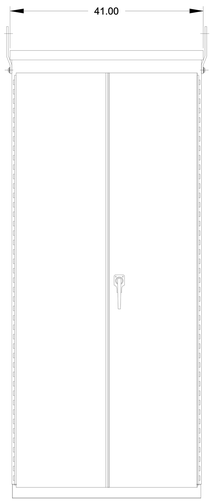
FRONT VIEW



FRONT VIEW WITHOUT COVER

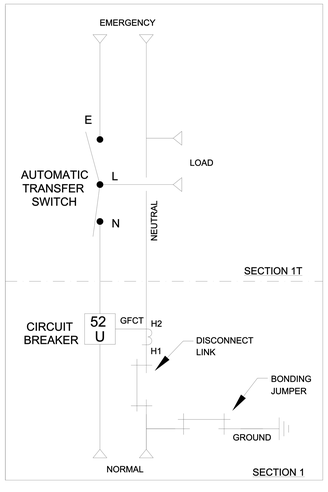


RIGHT SIDE VIEW

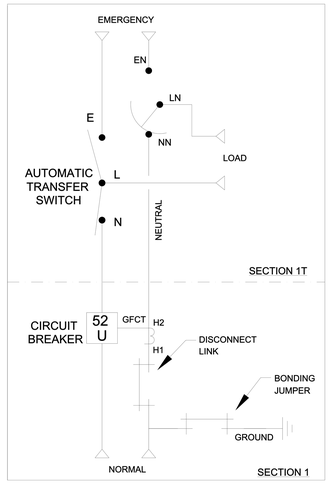


FRONT & REAR VIEW

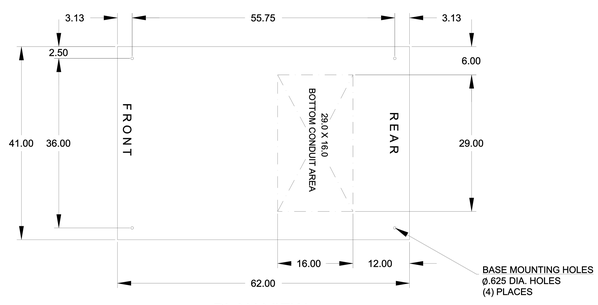
ONE LINE DIAGRAMS



(WITH SOLID NEUTRAL)



(WITH SWITCHED/OVERLAPPING NEUTRAL)



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 & REAR ACCESS.
4. RECOMMENDED CLEARANCES: FRONT: 36" REAR: 30"
5. EXTERIOR VENTS ARE SUPPLIED WITH POLYESTER DUST FILTERS.
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.
7. EXTERIOR VENTS:
   1000A: NO VENTS.
   1200A: VENTS ARE SUPPLIED WITH POLYESTER DUST FILTERS.
8. CG CENTER OF GRAVITY
9. APPROXIMATE WEIGHT : 2050 lbs

SYSTEM NOTES

1. SYSTEM RATING: 1000 AMPS, 1200 AMPS.
   SHORT CIRCUIT RATING: 50,000 RMS SYM @ 480V.
   THE EMERGENCY SOURCE MUST BE PROTECTED BY A REMOTE OVERCURRENT PROTECTION DEVICE AS LISTED ON THE MARKINGS ON THE TRANSFER SWITCH.
2. ALL BUS IS SILVER-PLATED COPPER, BASED ON 1000A PER SQ. IN. DENSITY.
3. GROUND: 20% RATED.
4. NEUTRAL: 100% RATED.
5. APPLICABLE LABEL(S): U.L. 891, SUITABLE ONLY FOR USE AS SERVICE EQUIPMENT.

TRANSFER SWITCH

1. H FRAME AUTOMATIC 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.

CIRCUIT BREAKER: ITEM 52U

1. SQUARE "D" 80% RATED TYPE 'RJF', 3000AF/1000AT, 3000AF/1200AT,
   STATIONARY MOUNTED, MANUALLY OPERATED,
   WITH LONG DELAY, SHORT DELAY, INSTANTANEOUS AND GROUND FAULT TRIP SETTINGS.
   SHORT CIRCUIT RATING: AIC 65,000 RMS SYM @ 480V.
2. OPTIONAL ENERGY REDUCTION MAINTENANCE SETTING SYSTEM MAY BE SUPPLIED.
3. OPTIONAL 100% RATED
4. U.L. 489

REV. TO SHEET	ECN NO.	BY	APP.	DATE
F	253087	SG	RN	02/11/15
	SEE ECN			
E	248049	VAK	RN	
	SEE ECN			
D	245413	RN		11-14-13
	SEE ECN			
C	221393	DP	RN	1/14/09
	ADDED "80% RATED"			
B	218107	AE	WK	04/24/08
	SEE ECN			
A	213340	RN		5-10-07
	SEE ECN			
L	306943	SG	MCH	12/28/23
	SEE ECN			
K	295685	YK	RN	5/19/22
	SEE ECN			
J	277317	NC	RN	2/19/19
	SEE ECN			
H	264333	BG	RN	11/23/16
	SEE ECN			
G	261928	RG	RN	07/05/16
	SEE ECN			

PROJECT NAME:

OUTLINE | MOUNTING

HAUS, 1000A - 1200A, RJF SE BREAKER ON NORMAL
TYPE 3R/3RX, 96 X 41 X 62

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	RN	04/24/07
CHECKED		
PROJECT APPROVAL		
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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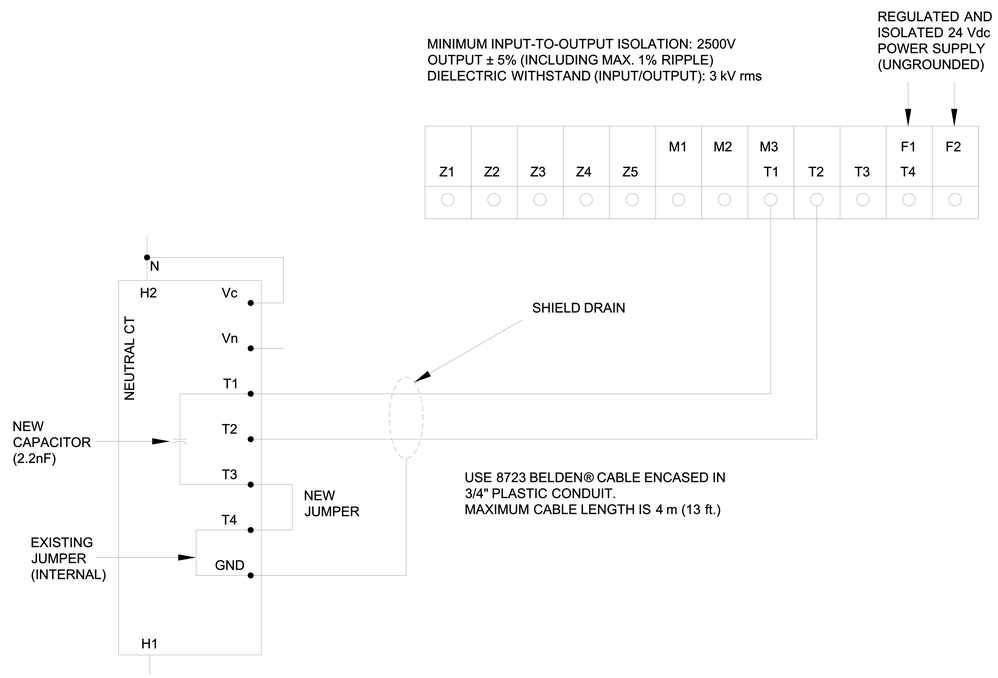
COMPUTER GENERATED DRAWING

SCALE 1/16" = 1" | SIZE DS

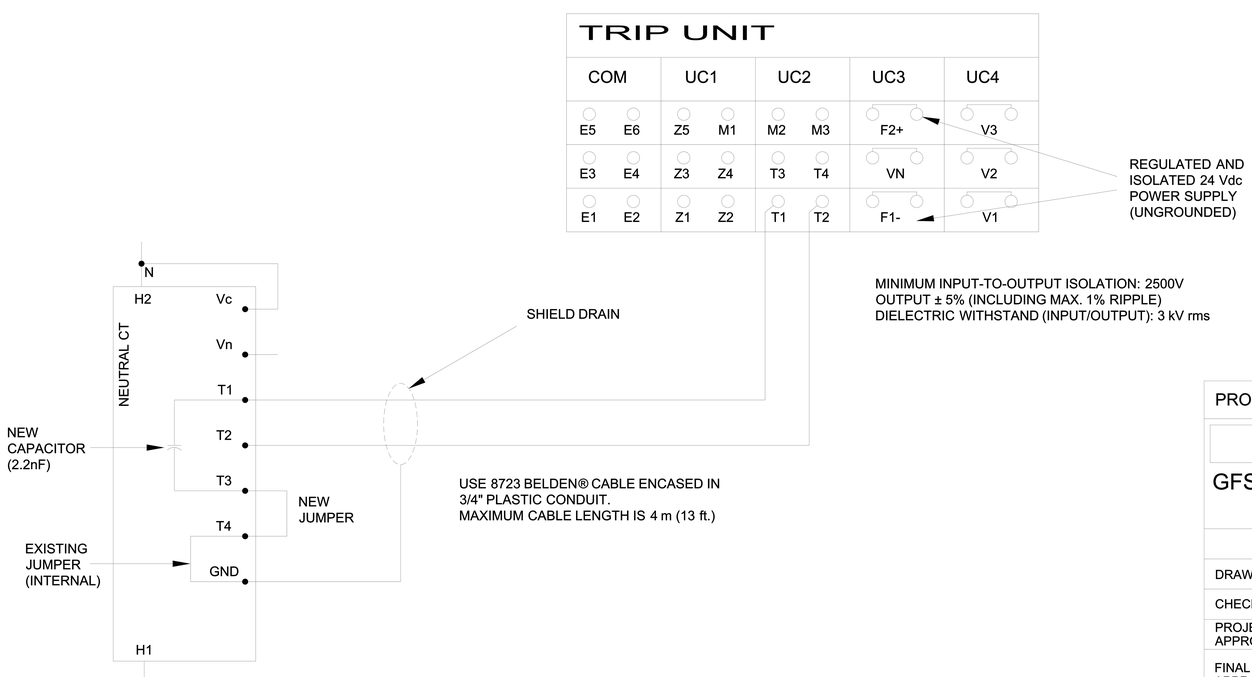
DWG. NO. 754578-051

DRAWING REV. L | ECN NO. 306943 | SHEET 1 OF 1

WIRING SCHEMATIC FOR POWERPACT P- & R-FRAME CIRCUIT BREAKERS



WIRING SCHEMATIC FOR 800-3000 A NT/NW CIRCUIT BREAKERS



REV. TO SHEET	ECN NO.	BY	APP.	DATE
F	257650	TRD	MM	10/23/15
	SEE ECN			
E	227403	TRD	WK	05/13/10
	SEE ECN			
D	226452	AE	BK	03/16/10
	SEE ECN			
C	223197	DAJ	BK	10/20/09
	SEE ECN			
B	211947	MJB	BK	2/7/07
	SEE ECN			
-	167055	CC	BK	05/13/04
	ISSUE			

PROJECT NAME:

GFS CIRCUITRY.

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	CC	05/13/04
CHECKED	BK	05/13/04
PROJECT APPROVAL	BK	05/13/04
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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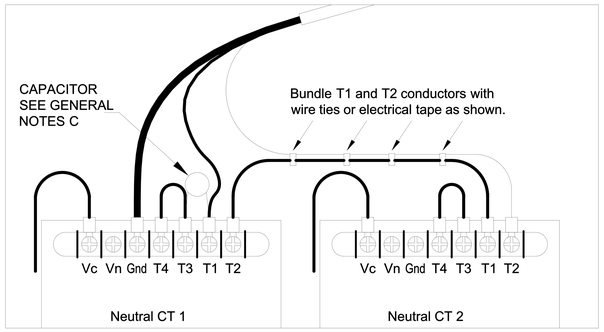
COMPUTER GENERATED DRAWING

SCALE | SIZE BS

DWG. NO. 758574

DRAWING REV. F | ECN NO. 257650 | SHEET 1 OF 2

WIRING SCHEMATIC FOR 3200-6000 A NW CIRCUIT BREAKERS



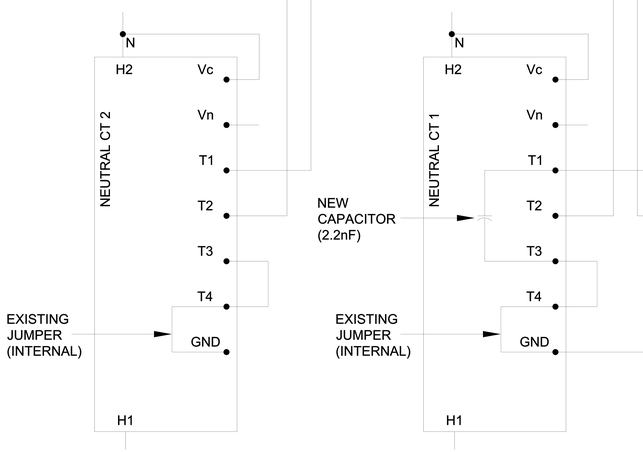
TRIP UNIT

COM		UC1		UC2		UC3	UC4
E5	E6	Z5	M1	M2	M3	F2+	V3
E3	E4	Z3	Z4	T3	T4	VN	V2
E1	E2	Z1	Z2	T1	T2	F1-	V1

REGULATED AND
ISOLATED 24 Vdc
POWER SUPPLY
(UNGROUNDED)

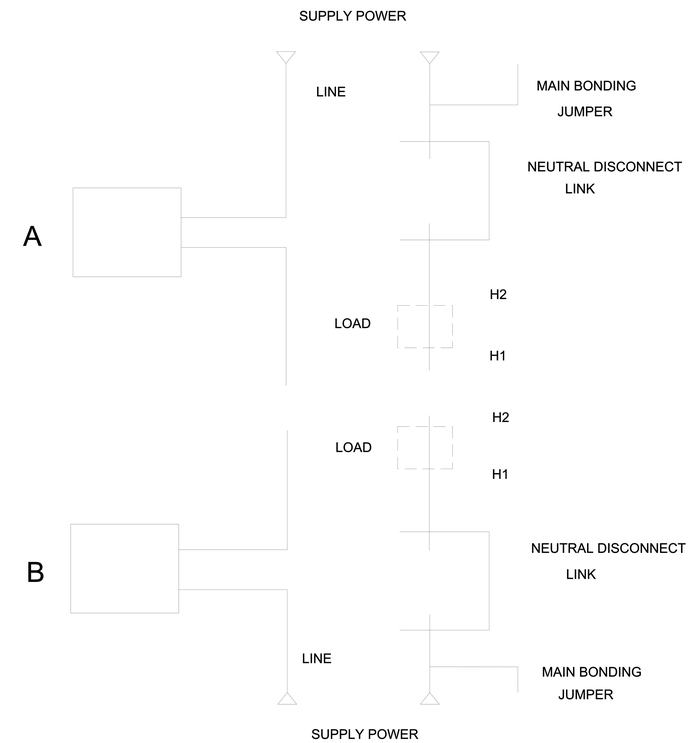
SHIELD DRAIN

MINIMUM INPUT-TO-OUTPUT ISOLATION: 2500V
OUTPUT ± 5% (INCLUDING MAX. 1% RIPPLE)
DIELECTRIC WITHSTAND (INPUT/OUTPUT): 3 kV rms



USE 8723 BELDEN® CABLE ENCASED IN
3/4" PLASTIC CONDUIT.
MAXIMUM CABLE LENGTH IS 4 m (13 ft.)

LINE DIAGRAM FOR NW BREAKER



REV. TO SHEET	ECN NO.	BY	APP.	DATE
F	257650	TRD	MM	10/23/15
	SEE ECN			
E	227403	TRD	WK	05/13/10
	SEE ECN			
D	226452	AE	BK	03/16/10
	SEE ECN			
C	223197	DAJ	BK	10/20/09
	SEE ECN			
B	211947	MJB	BK	2/7/07
	SEE ECN			
-	167055	CC	BK	05/13/04
	ISSUE			

GENERAL NOTES

A. IF LOAD IS CONNECTED TO LOWER END OF CIRCUIT BREAKER, CONNECT THE LOAD NEUTRAL TO THE H1 END OF THE NEUTRAL CURRENT TRANSFORMER.

B. IF SUPPLY POWER IS CONNECTED TO THE LOWER END OF THE CIRCUIT BREAKER ,CONNECT THE SUPPLY NEUTRAL TO THE H1 END OF THE NEUTRAL CURRENT TRANSFORMER.

C. CAPACITOR 2.2NF IS PROVIDED WITH CIRCUIT BREAKER.

PROJECT NAME:

GFS CIRCUITRY.

THIRD ANGLE PROJECTION

	BY	DATE
DRAWN BY	CC	05/13/04
CHECKED	BK	05/13/04
PROJECT APPROVAL	BK	05/13/04
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 | SIZE BS

DWG. NO. 758574

DRAWING REV. F | ECN NO. 257650 | SHEET 2 OF 2