ASCO Power Technologies®

SWITCH SUBMITTAL

REVISION 2

# 800A

| TRANSFER SWITCH DETAILS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| ATS NAME | QTY | AMPS / POLES (VOLTS) | BYPASS | TRANSITION TYPE | CATALOG NUMBER | ACCESSORIES | OUTLINE DRAWING | WIRING DIAGRAM | BOM NUMBER |
| | 4 | 0800 / 4 (480V) | N/A | OPEN | H03ATSB30800NGXF | 11BE,44G | 1001394-002 | 1001657 | 1157354 |

| 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 | 200kA | 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

# 800A

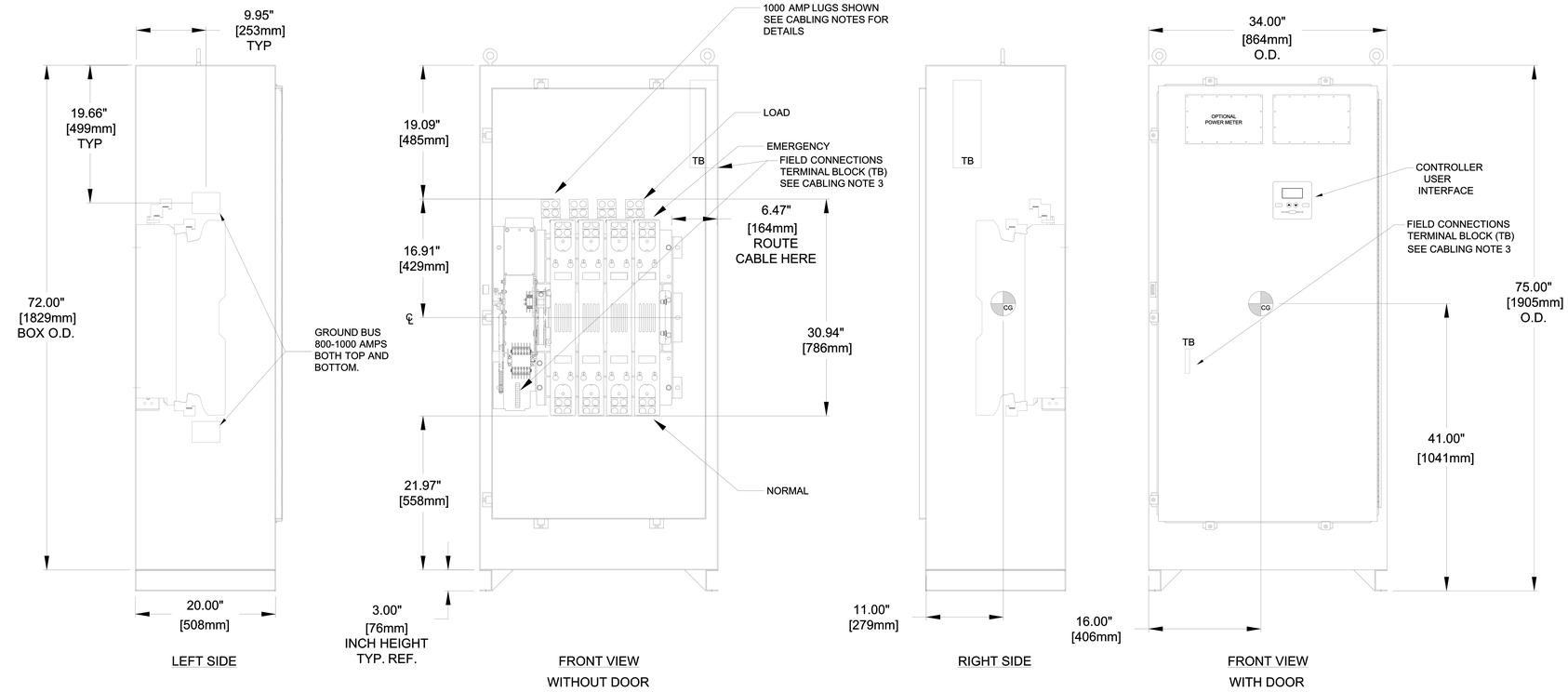
Transfer Switch Details

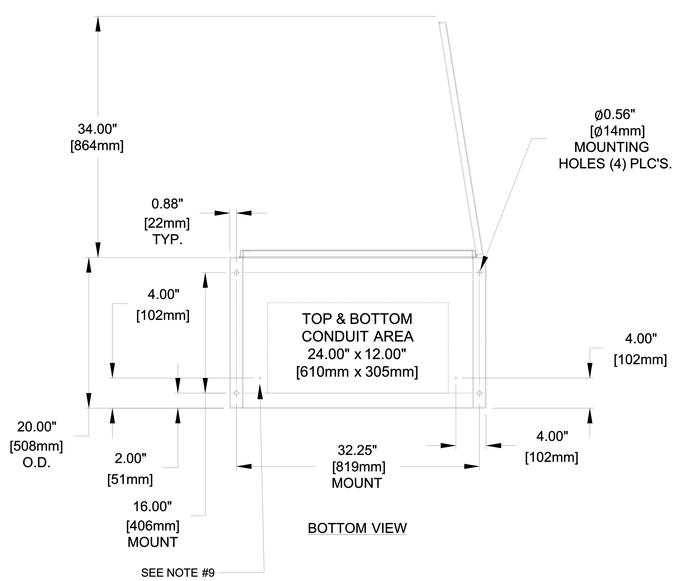
| #1 | ATS | AMPS: 0800 | QTY: 4 |
|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Product | : | Series 300 | Catalog Number | : | H03ATSB30800NGXF |
| Service Voltage / Hz | : | 480V/60Hz | Optional Accessories | : | 11BE,44G |
| Bypass Isolation | : | Not Applicable | Product Description | : | 300 Series, Automatic Open Transition Transfer Switch |
| No. of Switched Poles: 4 | : | 4 | Neutral Configuration | : | Switched [B] |
| Withstand Rating:<br><br>Frame = H, Switch Rating = 0800, Series = 300 | : | See WCR Table Below | No. of Cables & Lug Size | : | 4, 1/0 AWG to 600 MCM |
| Enclosure | : | 3R(F)-UL Type 3R 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 |

# OUTLINE FOR ASCO® SERIES 800-1000 AMPERE "H" FRAME (H3ATS,H3NTS,H3ADTS,H3NDTS) FRONT CONNECTED TRANSFER SWITCHES TYPE 3R, 4, 4X, 12 ENCLOSURE




## GENERAL NOTES

1. TYPE 3R/4/4X/12 ENCLOSURE. FREE STANDING. FLOOR MOUNTED. CODE GAUGE CONSTRUCTION.
2. DOOR HINGED ON RIGHT SIDE. LOCKABLE HASP ON LEFT SIDE, DOOR CLAMPS LEFT TOP AND BOTTOM.
3. FINISH TYPE 3R/4/12: ANSI 61 GRAY, POLYESTER POWDER STANDARD. OTHER ANSI COLORS AVAILABLE CONSULT FACTORY

   TYPE 4X (H) CONSTRUCTED OF 12 GAUGE 304 STAINLESS STEEL.
   TYPE 4X (U) CONSTRUCTED OF 12 GAUGE 316 STAINLESS STEEL.
4. RECOMMENDED CLEARANCES:
   FRONT: 36.00" [914mm].
5. A 20% RATED GROUND BUS IS PROVIDED.
6. UNIT IS DESIGNED FOR COMBINATION TOP AND BOTTOM CABLE ENTRY.
7. NEUTRAL CONFIGURATIONS:
   AN OPTIONAL FULL RATED NEUTRAL CONFIGURATION FOR EACH SOURCE AND THE LOAD MAY BE PROVIDED. WHEN EQUIPPED IT IS IN ONE OF THE FOLLOWING FORMATS AS SPECIFIED BY THE CATALOG NUMBER NO. NEUTRAL TYPE:
   (A) SOLID (COPPER BUS) NEUTRAL
   (B) SWITCHED NEUTRAL POLE
8. CENTER OF GRAVITY (CG)
9. REMOVE BOTTOM KNOCKOUTS FOR TYPE 3R.

## CABLING NOTES

1. ALL SIZES SUPPLIED STANDARD WITH MECHANICAL (SCREW TYPE) LUGS. (SEE AMP SIZE BELOW)
   A. LUG MATERIAL: ALUMINUM ALLOY 6061-T6 WITH ELECTRO TIN PLATED FINISH.
   B. SCREW MATERIAL: ALUMINUM ALLOY 6262-T9 WITH ELECTRO TIN PLATED FINISH.
   C. UL LISTED, CSA CERTIFIED.
   D. LUG SCREW TIGHTENING TORQUE PER UL 486B: 19 FT-LBS.
   E. SUITABLE WIRE BENDING SPACE IS PROVIDED. (SEE AMP SIZE BELOW)
2. GROUND LUGS ARE PROVIDED STANDARD AS FOLLOWS. (SEE AMP SIZE BELOW).
3. CUSTOMER TERMINAL BLOCKS:
   FOR ALL 300 SERIES 3NDTS, 3ADTS UNITS THE TB WILL BE MOUNTED ON THE UPPER RIGHT INSIDE OF ENCLOSURE.
   FOR ALL 3ATS AND 3NTS UNITS TB WILL BE MOUNTED ON THE TRANSFER SWITCH FRAME AS INDICATED.

## NOTES 800-1000 AMP SWITCHES

1. SUPPLIED WITH STANDARD MECHANICAL (SCREW TYPE) LUGS ON THE NORMAL, EMERGENCY & LOAD BUS STABS. ONE (1) LUG PER PHASE AND NEUTRAL EACH SUITABLE FOR CONNECTION OF FOUR (4) 1/0 -750MCM CU/AL CABLE.
   A. SUITABLE WIRE BENDING SPACE IS PROVIDED FOR UP TO FOUR (4) 600MCM CABLES PER TERMINAL PER NEC.
2. GROUND LUGS ARE PROVIDED STANDARD AS FOLLOWS;
   (12) 1/0 - 750MCM CU/AL CABLE CONNECTIONS.

| REV. TO SHEET | ECN NO. | BY | APP. | DATE |
|---|---|---|---|---|
| E | 289439 | TR | NS | 05/07/21 |
| | SEE ECN | | | |
| D | 279762 | WK | BK | 07/09/19 |
| | SEE ECN | | | |
| C | 272603 | VOM | EL | 5/22/18 |
| | SEE ECN | | | |
| B | 251397 | BK | BK | 10/24/14 |
| | SEE ECN | | | |
| A | 247887 | TR | BK | |
| | SEE ECN | | | |
| - | 245213 | BWM | SDH | 11/4/13 |
| | NEW ISSUE | | | |

PROJECT NAME:

COMPOSITE OUTLINE
300 SERIES, 75x34x20
"H" FRAME 800-1000 AMP, TYPE 3R/4/4X/12

THIRD ANGLE PROJECTION

| | BY | DATE |
|---|---|---|
| DRAWN BY | BWM | 11/4/13 |
| CHECKED | | |
| PROJECT APPROVAL | | |
| FINAL APPROVAL | SDH | 11/4/13 |

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

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

COMPUTER GENERATED DRAWING

SCALE NONE | SIZE DS

DWG. NO. 1001394-002

DRAWING REV. E | ECN NO. 289439 | SHEET 1 OF 1

# 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<br>3NTS | A<br>B<br><br>BLANK FOR NONE | 3 | 800<br>1000<br>1200 | C<br>D<br>E<br>F<br><br>H<br>J<br>K<br>L<br>M<br>N<br>P<br>Q<br>R | G | X<br><br>BLANK FOR NONE | C<br>E<br>F<br>G<br>H<br>J<br>K<br>L<br><br>M<br>N<br>P<br>Q<br><br>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<br>3NTS | AUTOMATIC<br>MANUAL | A<br>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 |
| | | | | | | | | (SECURE ENCLOSURES) |
| | | | | | | M | 3R | OUTDOOR, RAINPROOF, SLEET & ICE RESISTANT |
| | | | | | | N | 4 | INDOOR/OUTDOOR, WATERTIGHT & DUSTTIGHT |
| | | | | | | P | 4X | TYPE 4 PLUS CORROSION RESISTANCE (STAINLESS STEEL) |
| | | | | | | Q | 12 | INDOOR, INDUSTRIAL ENVIRONMENTS, OILTIGHT & DUSTTIGHT |

| | | | | |
|---|---|---|---|---|
| H | 317801 | SVM | SVM | 09/15/25 |
| | SEE ECN | | | |
| 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 | | | |

REV. TO SHEET | ECN NO. | BY | APP. | DATE

CATALOG NUMBER
ASCO® CERTIFIED TO
S.O.
BY
DATE
FORM REV H
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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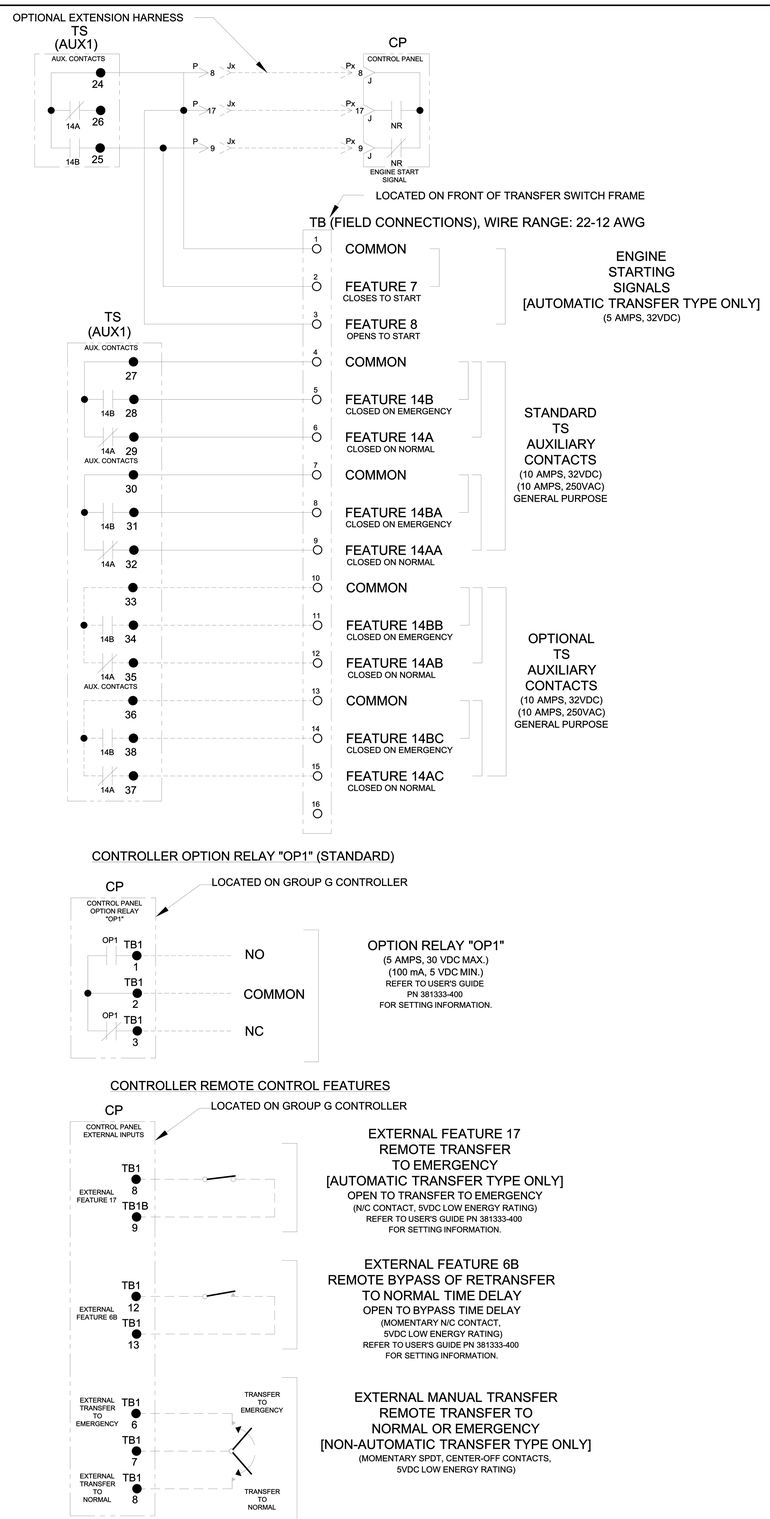
COMPUTER GENERATED DRAWING
SCALE NONE SIZE DS
DWG. NO. 1001657
DRAWING REV. H ECN NO. 317801 SHEET 1 OF 6

# FIELD CONNECTIONS



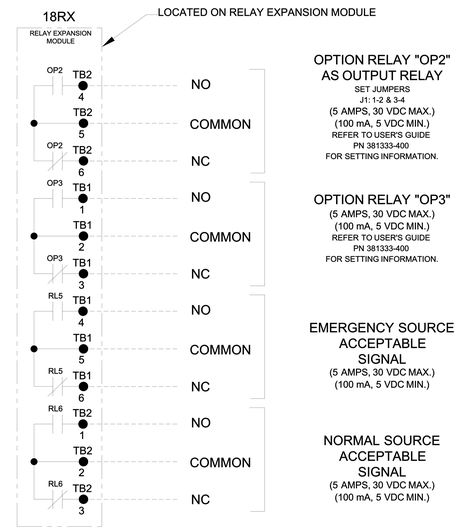

## CONTROLLER OPTION RELAY "OP1" (STANDARD)



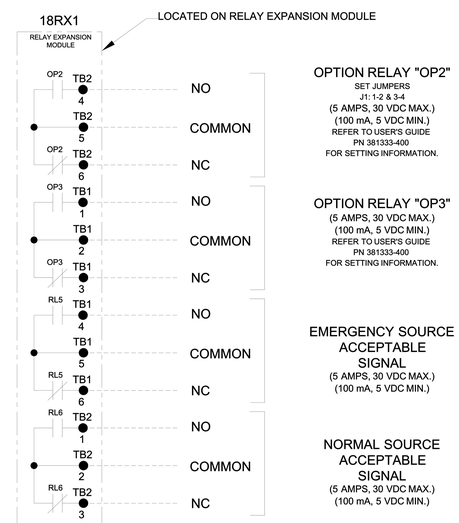

## CONTROLLER REMOTE CONTROL FEATURES



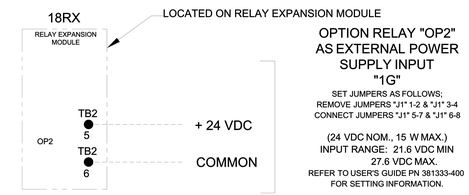

## OPTIONAL ACCESSORY 18RX (RELAY EXPANSION MODULE)




## OPTIONAL ACCESSORY 18RX1 (SECOND RELAY EXPANSION MODULE)

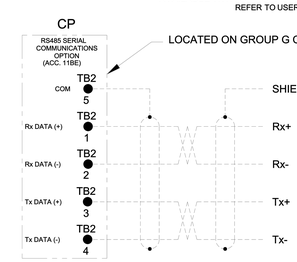



"OP2" OPTIONAL USES




## 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 |
|---|---|---|---|---|
| H | 317801 SEE ECN | SVM | SVM | 09/15/25 |
| G | 278250 SEE ECN | TR | BK | 04/22/19 |
| F | 275211 SEE ECN | TR | BK | 10/15/18 |
| E | 255133 SEE ECN (REMOVED 600A) | TR | BK | 6/4/15 |
| D | 248402 SEE ECN | AE | BK | |
| C | 247772 SEE ECN | SDH | SDH | 4/14/14 |
| B | 246325 SEE ECN | AE | BK | 01/16/14 |
| 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

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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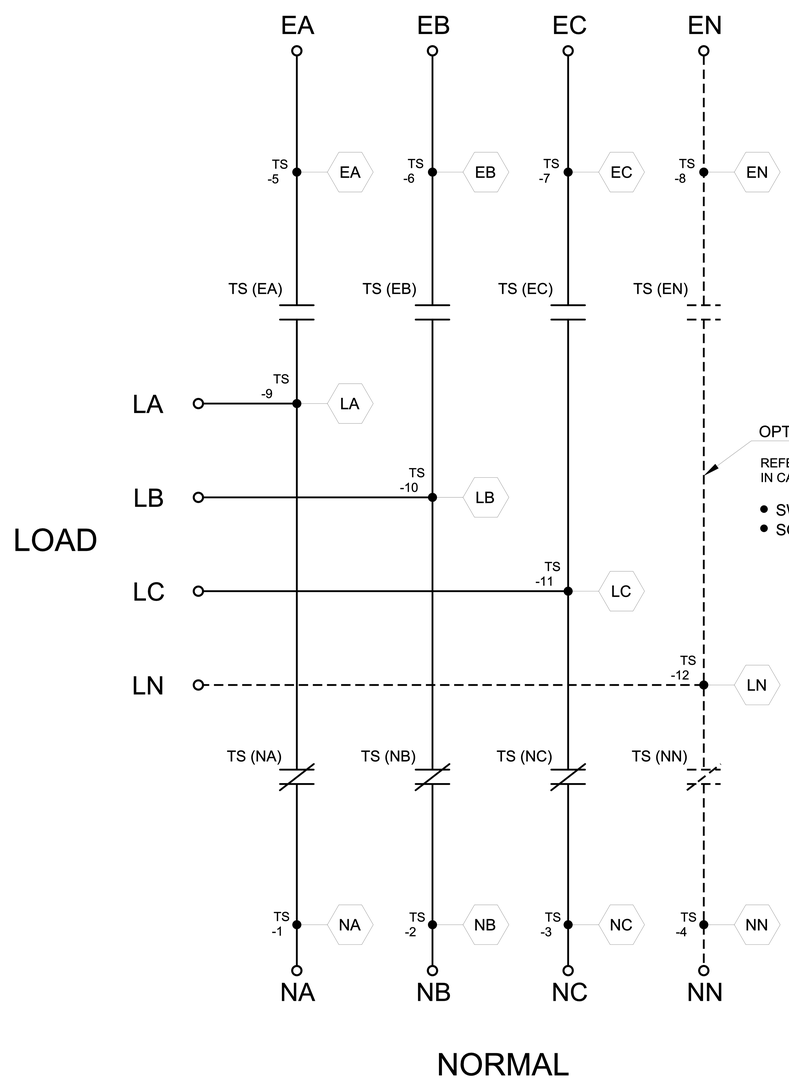
COMPUTER GENERATED DRAWING

SCALE NONE SIZE DS

DWG. NO. 1001657

DRAWING REV. H ECN NO. 317801 SHEET 2 OF 6

## MAIN POWER POLES



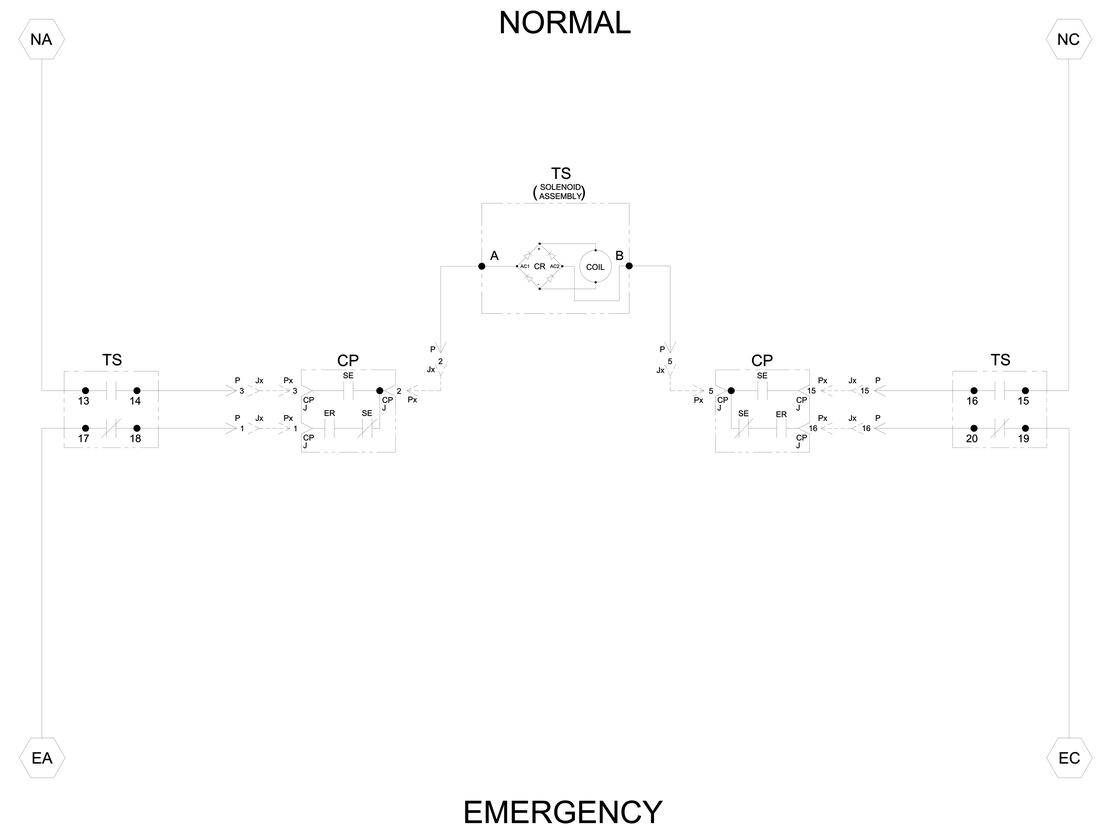

OPTIONAL NEUTRAL TYPES

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 |
|---|---|---|---|---|
| H | 317801 SEE ECN | SVM | SVM | 09/15/25 |
| G | 278250 SEE ECN | TR | BK | 04/22/19 |
| F | 275211 SEE ECN | TR | BK | 10/15/18 |
| E | 255133 SEE ECN | TR | BK | 6/4/15 (REMOVED 600A) |
| D | 248402 SEE ECN | AE | BK | |
| C | 247772 SEE ECN | SDH | SDH | 4/14/14 |
| B | 246325 SEE ECN | AE | BK | 01/16/14 |
| 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

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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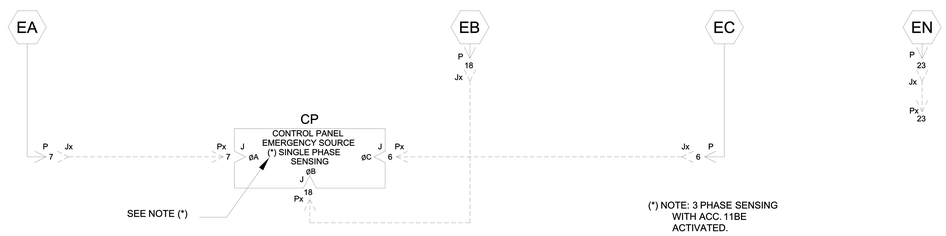
SCALE NONE SIZE DS

DWG. NO. 1001657

DRAWING REV. H ECN NO. 317801 SHEET 3 OF 6

## EMERGENCY SOURCE CIRCUITS

### EMERGENCY

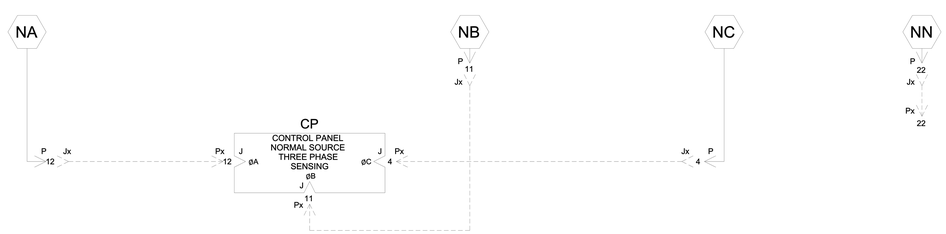



## LOAD TERMINAL CIRCUITS

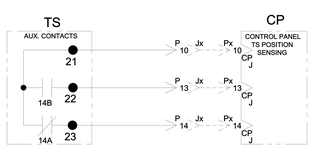
### LOAD

## NORMAL SOURCE CIRCUITS

### NORMAL



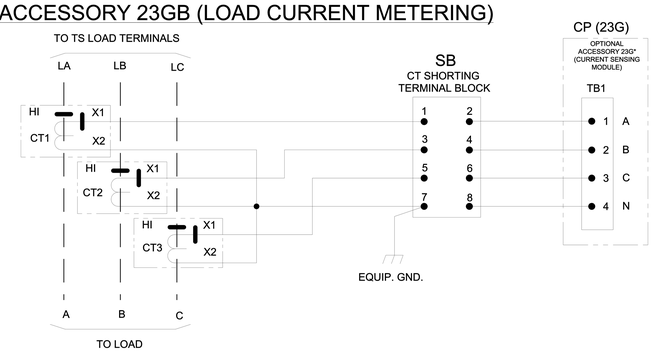

## CONTROL CIRCUITS




## ADDITIONAL CIRCUITS

### OPTIONAL ACCESSORY 23GB (LOAD CURRENT METERING)

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




| | | | | |
|---|---|---|---|---|
| H | 317801 | SVM | SVM | 09/15/25 |
| | SEE ECN | | | |
| 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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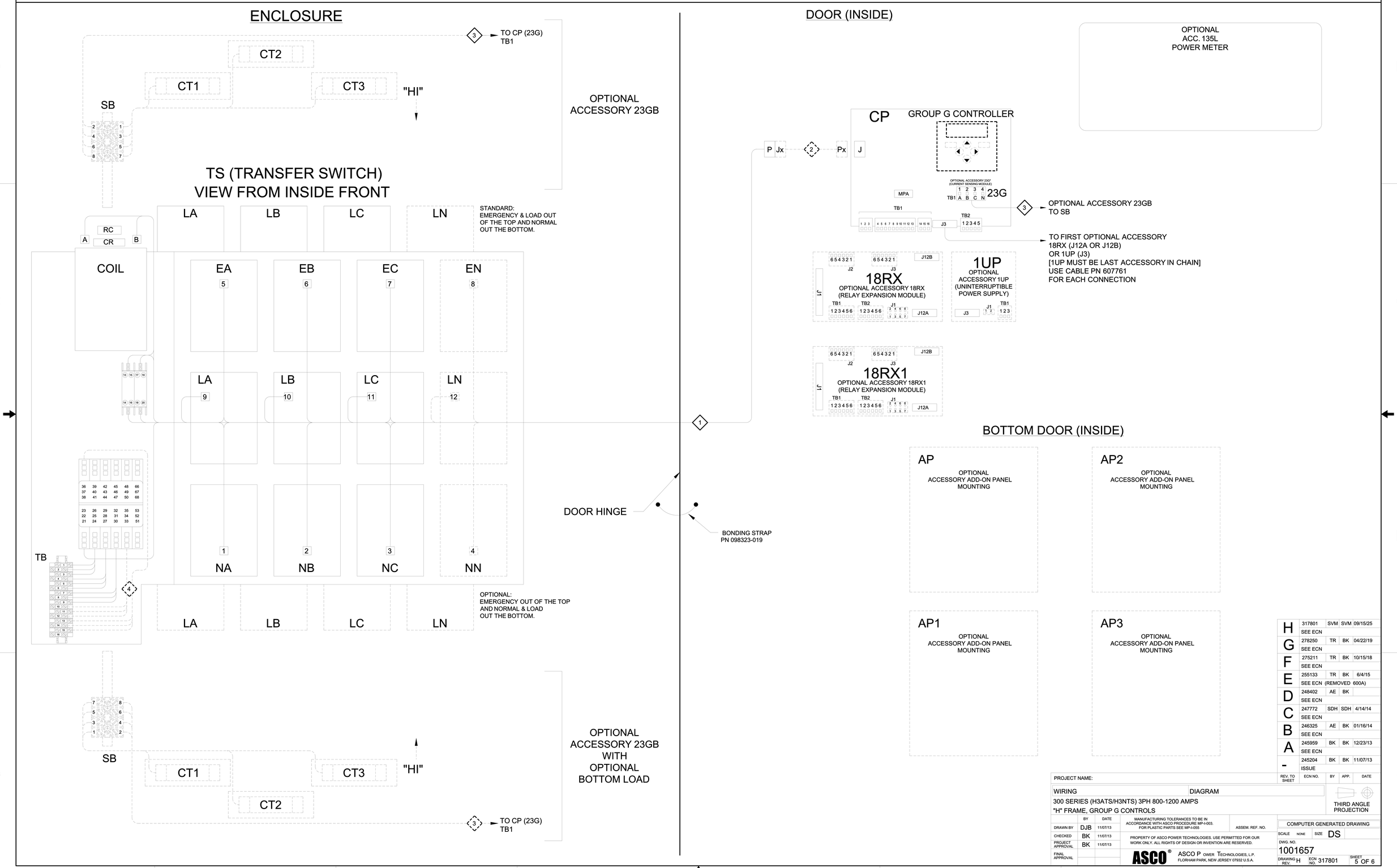
SCALE NONE SIZE DS

DWG. NO. 1001657

DRAWING REV. H ECN NO. 317801 SHEET 4 OF 6

# PHYSICAL DIAGRAM




| | | | | |
|---|---|---|---|---|
| H | 317801 | SVM | SVM | 09/15/25 |
| | SEE ECN | | | |
| 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 | | | |

REV. TO SHEET | ECN NO. | BY | APP. | DATE

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 | | |

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COMPUTER GENERATED DRAWING

SCALE NONE | SIZE DS

DWG. NO. 1001657

DRAWING REV. H | ECN NO. 317801 | 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 |

| | | | | |
|---|---|---|---|---|
| H | 317801 | SVM | SVM | 09/15/25 |
| | SEE ECN | | | |
| 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 |
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SCALE NONE SIZE DS

DWG. NO. 1001657

DRAWING REV. H ECN NO. 317801 SHEET 6 OF 6

# 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.**

# Flexible Power Transfer Solutions for Commercial & Industrial Applications

ASCO Power Technologies™

## ASCO SERIES 300
## Power Transfer Switches

se.com

Life Is On | Schneider Electric

# ASCO SERIES 300 Automatic Transfer Switches

Power outages impact small and large facilities alike. ASCO SERIES 300 Automatic Transfer Switches offer rugged design and reliable performance to small and mid-size commercial and industrial facilities in packaged solutions that are easy to select, procure, install, and operate.

## Product Details

Transfer Switch Overview

Every SERIES 300 generator transfer switch is engineered with ASCO's reliability expertise in a package that makes backup power accessible for small and mid-size facilities. Leveraging knowledge derived from a century of critical power transfer experience, each SERIES 300 is backed by the same ASCO technical support and service that solves the most demanding critical power challenges facing facilities today.

ASCO's SERIES 300 lineup offers flexible backup power solutions for businesses of every size.

# SERIES 300 Automatic Transfer Switches

## Designed to Fit Anywhere

The ASCO SERIES 300 product line provides the most compact design of generator power transfer switches in the industry.

Available to mount on walls or floors, all models through 2000 amperes are designed to be completely front-accessible. This permits installation flush against walls while allowing installation of cabling and connections from the front of the switch. Cable entrance plates are standard on 1600 and 2000 amperes units; these allow use of optional side-mounted pull boxes for additional cable bending space.

- 30 through 3000 amperes in compact designs
- Up to 600 VAC, single or three phase
- Listed to UL 1008 - Standard for Safety - Transfer Switch Equipment
- True double-throw operation: The single solenoid design is inherently interlocked to prevent simultaneous connections of two power sources.
- Will not transfer to a dead source - single solenoid operator derives power from the destination source
- Easy-to-navigate 128x64 graphical LCD display with keypad provides LED indicators for switch position, source availability, not-in-auto mode, and alert conditions.
- Integrated, multilingual, user interface for configuration and monitoring
- Available Delayed Transition operation
- Optional Relay Expansion Module with extra relays for accessory outputs
- Soft keys for test function and time delay bypass
- Emergency source failure alert indication
- Optional Historical Event Log
- Displays statistical ATS monitoring information
- Built-in diagnostic functions
- Password protection to prevent unauthorized actions
- Adjustable delay feature prevents nuisance transfer due to momentary utility power outages and generator dips
- ASCO's patented Predictive Outage Detection feature senses voltage instability conditions or flickers and proactively starts the generator for protection of equipment and reduction of downtime
- Auxiliary contacts signal position of main contacts - two for normal and two for emergency position
- Standard solid neutral terminals
- Restriction of Hazardous Substances (RoHS) compliant controller
- Standard 2 year warranty. Optional 1, 2, and 3 year extensions

### Power Knowledge

Basic Automatic Transfer Switch Functions

SERIES 300 Power Transfer Switch rated 200 amps

# SERIES 300 Automatic Switching Solutions

## Automatic and Non-Automatic Transfer Switching

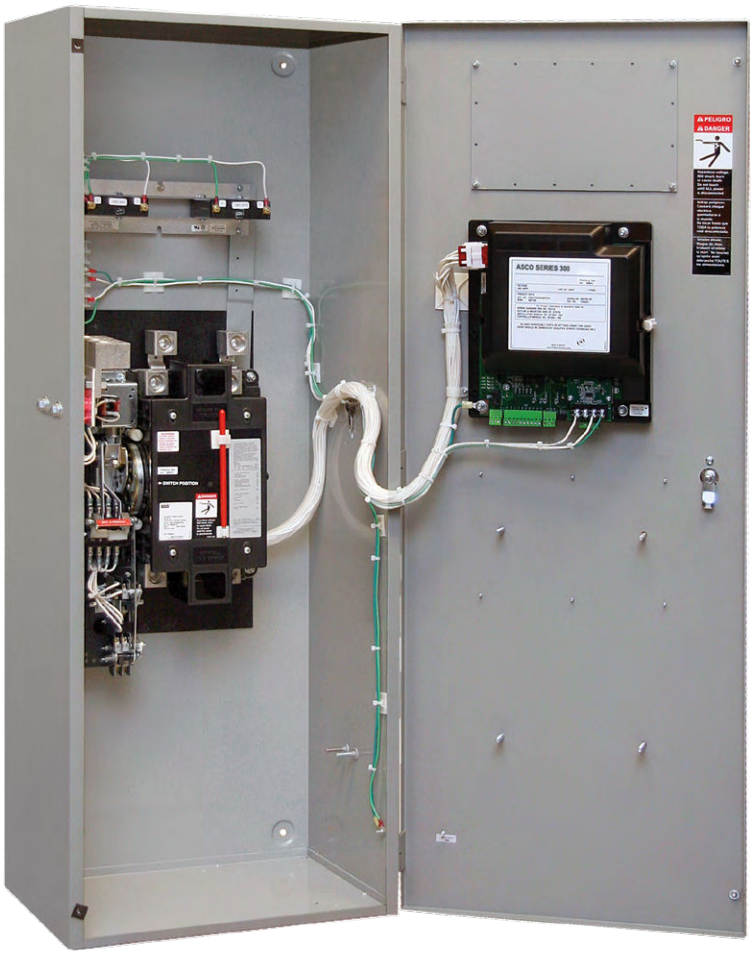
ASCO Transfer Switches are available in both automatic and non-automatic types. Both are electrically operated. For automatic transfer switches, the controller initiates transfer between power sources . For non-automatic transfer switches, a user initiates transfer using local or remote controls.

SERIES 300 non-automatic transfer switches offer the following features:

- Models range from 30 through 3000 amperes, up to 600V
- Controller prevents inadvertent operation under low voltage conditions
- Source acceptability lights inform operator when sources are available to accept load
- Standard in-phase monitor for transferring motor loads betweem live sources

### Power Knowledge

Non-Automatic and Manual Transfer Switches for Backup Power Applications

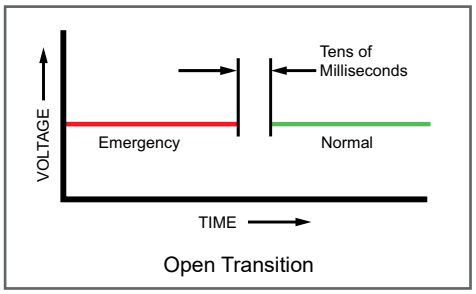



400 Amp, Type 1 Enclosure

## Open Transition Transfer Switching

ASCO Transfer Switches are available with a standard, 2-position, open transition models that reliably transfer loads in less than 50 milliseconds. Open transition switches are suitable for a wide range of applications.

- 30 to 3000 amps
- Single-operator switching mechanism prevents simultaneous connection of both sources
- Available In-Phase Monitor can be activated for transferring motor loads

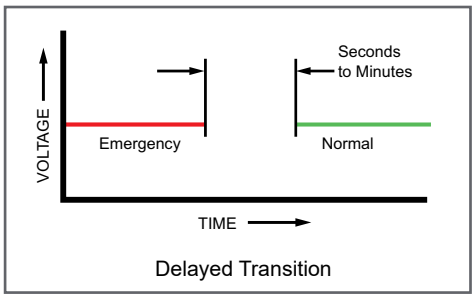


Open Transition

## Delayed Transition Transfer Switching

ASCO Delayed Transition Transfer Switches transfer loads between power sources using a timed load disconnect position with an adjustable delay.

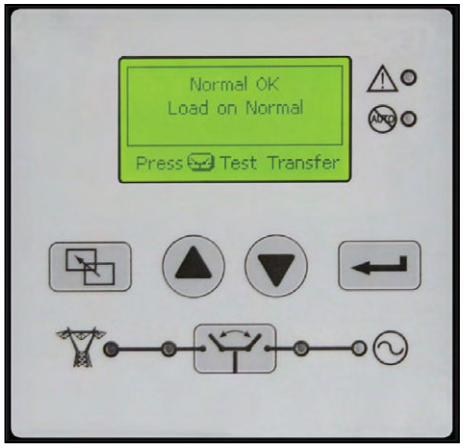
- 150 through 3000 amps
- Reliable, field-proven, dual-solenoid operating mechanism
- Mechanical interlocks to prevent simultaneous connection of both power sources
- Adjustable delay for load disconnect - 0 to 5 minutes
- Non-automatic models available in manual operation configuration
- Automatic models available with load shed feature



Delayed Transition

# SERIES 300 Group G Controller

The SERIES 300 Group G Controller is reliable and field-proven. It provides all of the voltage, frequency, control, timing, and diagnostic functions required for most emergency and standby power applications.




- Touch pad programming
- Displays active timers
- On-board diagnostics
- Password protection
- Voltage and frequency sensing
- Status and control functions
- Patented Predictive Outage Detection feature

### Power Knowledge

- Transition Mode Basics
- Transferring Motor Loads between Power Sources
- Transferring Loads with Zero Power Interruption

### Product Details

- Group G Controller

# Transfer Switch Communications and Metering

## Options to Customize Functionality and Increase Value

### Product Details

5300 SERIES Annunciators

### Remote Annunciation

**Monitor Power Equipment Status from Anywhere**

Monitoring and control transfer switches from across the room, building, or from Internet.

5310 – LED annunciator – Single ATS

5350 – LED annunciator – up to 8 ATSs

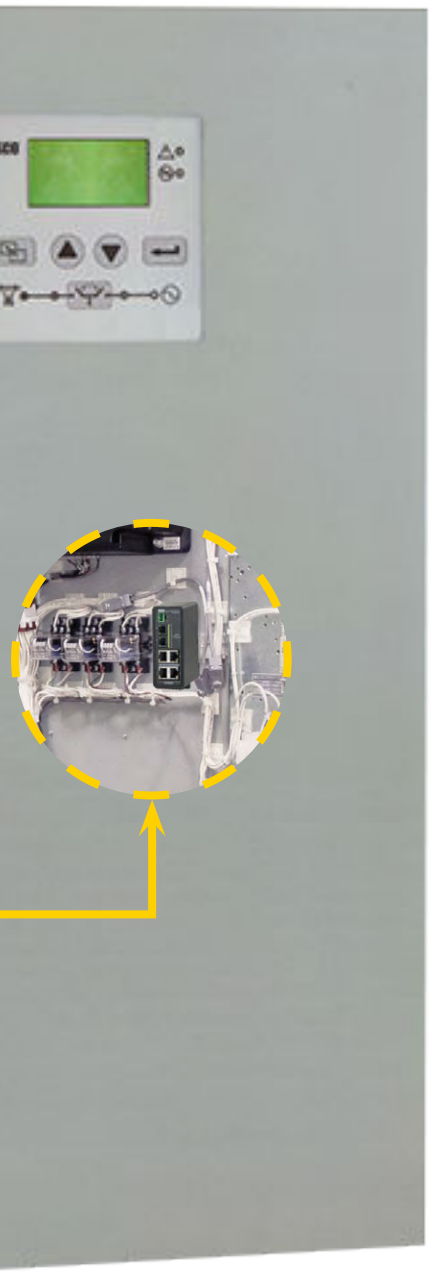
### Product Details

5140 Connectivity Module

### Communication

**Turn Transfer Switches into Power Information Portals**

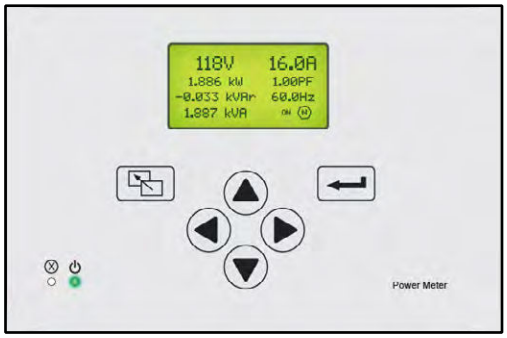
5140 Connectivity Module – Makes status and power information from a single switch available to via ModBUS, SNMP, and web pages.



## Metering

**Transfer Switches are the Perfect Place to Monitor Power Flow, Power Conditions, and Power Events**

5210 Power Meter – Provides deeper insight into circuit status and conditions.




## Product Details

5210 Power Meter

# SERIES 300 Optional Accessories

| | |
|---|---|
| **Communications** | |
| 11BE | Feature Bundle. Programmable engine exerciser with seven independenct routines run the generator with or without loads, on a daily, weekly, bi-weekly, or monthly basis. Controlled from the user interface keypad.<br>• Event log display shows the event number, time and date, type and reason (if applicable).<br>• Stores up to 300 events<br>• RS485 Communication Port enabled common alarm output contact<br>• On three-phase systems, Accessory 11BE enables line-to-line voltage imbalance sensing and three-phase sensing capabilities for the Emergency power source as well as the Phase Rotation checking for both power sources. |
| 18RX | Relay Expansion Module provides accessory relays and includes one Form C contact for normal source availability (18G), and one Form C contact for emergency source availability (18B) (contact rating 5 amperes @ 30 VDC or @ 125 VAC resistive) (100 ma, 4 VDC min) Additional output relay is provided the default is to indicate a common alarm. |
| 72EE | Connectivity module provides remote monitoring and control capabilities and includes accessory 11BE feature bundle |
| **Environment and Power** | |
| 44A | Strip heater with thermostat for cold environment to prevent internal condensation and icing. External 120-volt AC power source required. |
| 44G | Strip heater with thermostat, wired to load terminals on 208-240, 360-380, 460-480, 550-600 volt models. Contains wiring harnesses for all transfer switch sizes. |
| 1UP | UPS back up power runs controller and LCD display for 30 seconds without AC power |
| **Extension Harness** | |
| 37B | Six-foot extension harness for open type units to accommodate customer mounting of controls and switch |
| 37C | Nine-foot extension harness for open type units to accommodate customer mounting of controls and switch |
| **Indicators** | |
| 62W | Audible alarm with silencing feature to signal transfers to emergency. (For D-frame models, may require oversize enclosure depending on accessory combination). |
| **Customer Control Circuits** | |
| 30A | Load-shed circuit initiated by opening of a customer-supplied contact (Open Transition model only) |
| 30B | Load-shed circuit initiated by removal of customer-supplied control voltage (Open Transition model only) |
| 30AA | Load-shed circuit initiated by opening of a customer-supplied contact (Delayed Transition model only) |
| 30BA | Load-shed circuit initiated by removal of customer-supplied control voltage (Delayed Transition model only) |
| **Surge Protection** | |
| 73 | Surge suppressor rated 65 kA |
| **Metering** | |
| 23GA, 23GB | Load Current Metering card measures either single or three-phase load current. Not available with Power Meter option 135L. Use 23GA for Single-Phase, 23GB for Three-Phase. |
| 135L | Power Meter on load side (includes shorting block and current transformers). Not available with Load Current Metering options 23GA or 23GB. |

## Field Conversion Kits

| Kit No. | Description |
|---|---|
| 935147 | Advanced Function Bundle Retrofit Kit (11BE) - See above accessory 11BE description for details. |
| 935148 | REX Module with Source Availability Contacts (Acc. 18RX) |
| 935149 | UPS to allow controller to run for 30 seconds minimum without AC Power (Acc. 1UP) |
| 935150 | 1/3 Phase load current sensing card only (Acc. 23GA/GB) |
| K613127-001 | Strip Heater (125 watt) 120 volt (Acc. 44A) |
| K613127-002 | Strip Heater (125 watt) 208-480 volt (Acc. 44G) |
| 948551 | Quad-Ethernet Module (Acc. 72EE) |
| K609027 | Cable Pull Box (1600-2000 amperes) |

# Withstand and Close-on Ratings

Withstand and Close-on Ratings for all 7000 SERIES Power Transfer Switches, including 0.5 second (30-cycle) designs.

| Frame | 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 |
| D | 30 | - | 100kA<br>200kA<br>35kA | -<br>35kA<br>35kA | 300<br>200<br>200 | J<br>J<br>RK1 | 22kA | 25kA | 10kA | 0.025 | 10kA | 10kA | 10kA | - | | | | - | | | |
| D | 70, 100 | - | 35kA<br>200kA | 35kA<br>35kA | 200<br>200 | RK1<br>J | 150kA | 85kA | 25kA | 0.025 | 10kA | 10kA | 10kA | - | | | | - | | | |
| D | 150 | - | 35kA<br>200kA | 35kA<br>35kA | 200<br>200 | RK1<br>J | 150kA | 85kA | 25kA | 0.025 | 10kA | 10kA | 10kA | - | | | | - | | | |
| D | 200 | - | 200kA<br>35kA | 35kA<br>35kA | 200<br>200 | J<br>RK1 | 200kA | 85kA | 14kA | 0.025 | 10kA | 10kA | 10kA | - | | | | - | | | |
| D | 230 | - | 100kA | - | 300 | J | 200kA | 85kA | 14kA | 0.025 | 10kA | 10kA | - | - | | | | - | | | |
| E | 260, 400 | - | 200kA | - | 600 | J | 65kA | 42kA | 22kA | 0.05 | 35kA | 35kA | 22kA | - | | | | - | | | |
| J | 150, 200, 230, 260 | 150, 200, 230, 260 | 200kA | 200kA | 600<br>800 | J<br>L | 200kA | 200kA | 100kA | 0.05 | 65kA | 42kA[5] | 35kA | 7.5kA | | - | | - | | | |
| J | 400 | 400 | 200kA | 200kA | 600<br>800 | J<br>L | 200kA | 200kA | 100kA | 0.05 | 65kA | 42kA[5] | 35kA | 7.5kA | | - | | - | | | |
| J | 600 | 600 | 200kA<br>200kA | 200kA<br>200kA | 800<br>600 | L<br>J | 200kA | 200kA | 100kA | 0.05 | 65kA | 42kA[5] | 35kA | 7.5kA[9] | | - | | - | | | |
| H[8] | 600 | 600 | 200kA | 200kA | 1600 | L | 65kA | 150kA[6] | 65kA | 0.05 | 50kA | 50kA | 50kA | 36kA | | | - | 36kA | | | - |
| P[8] | 600 | 600 | 200kA | 200kA | 1600 | L | 65kA | 150kA[6] | 65kA | 0.05 | 50kA | 50kA | 50kA | 36kA | | | 30kA | 36kA | | | - |
| P[8] | 800 | 800 - 1200 | 200kA | 200kA | 1600 | L | 65kA | 150kA[6] | 65kA | 0.05 | 50kA | 50kA | 50kA | 36kA | | | 30kA | 36kA | | | - |
| H | 800 - 1200 | 800 - 1200 | 200kA | 200kA | 1600[4] | L | 65kA | 150kA | 65kA | 0.05 | 50kA | 50kA | 50kA | 36kA | | | - | 36kA | | | - |
| Q[8] | 600-1600 | 600-1600 | 200kA | 200kA | 2000 | L | 65kA | 65kA | 65kA | 0.05 | 65kA | 65kA | 65kA | 50kA | | | | 50kA | | | |
| S[8] | 800 - 1200 | 800 - 1200 | 200kA | 200kA | 2500 | L | 100kA | 100kA | 65kA | 0.05 | 100kA | 100kA | 65kA | 65kA | | | | 65kA | | | |
| G[8] | 1000 - 1200 | 1000 - 1200 | 200kA | 200kA | 2000 | L | 85kA | 85kA | 85kA | 0.05 | 85kA | 85kA | 85kA | - | | | | - | | | |
| G | 1600 - 2000 (Front Connected TS Only) | | 200kA | 200kA | 2500 | L | 85kA | 85kA | 85kA | 0.05 | 85kA | 85kA | 85kA | 42kA | | | 36kA | - | | | |
| G[8] | 1600 - 2000 | 1600 - 2000 | 200kA | 200kA | 3000 | L | 200kA | 200kA | 100kA | 0.05 | 100kA | 100kA | 100kA | 42kA | | | 36kA | 42kA | | | - |
| S[8] | 1600 - 2000 | 1600 - 2000 | 200kA | 200kA | 2500 | L | 100kA | 100kA | 85kA | 0.05 | 100kA | 100kA | 85kA | 85kA | | | 65kA | 85kA | | | 65kA |
| G | 2600 - 3000 | 2600 - 3000 | 200kA | 200kA | 4000 | L | 125kA[6] | 125kA[6] | 100kA | 0.05 | 100kA | 100kA | 100kA | 42kA | | | 36kA | 42kA | | | - |
| G[8] | 3200 | - | 200kA | - | 4000 | L | 100kA | 100kA | - | 0.05 | 100kA | 100kA | - | - | | | | - | | | |
| G | 4000 | 4000 | 200kA | 200kA | 5000 | L | 100kA | 100kA | 100kA | 0.05 | 100kA | 100kA | 100kA | 85KA | 65kA | | | 65kA | | | |
| U[8] | 2600 - 4000 | 2600 - 4000 | 200kA | 200kA | 5000 | L | 125kA | 125kA | 125kA | 0.05 | 125kA | 125kA | 125kA | 100kA | | | | 100kA | | | |

Notes:

1. All WCR values indicated are tested in accordance with the requirements of UL 1008, 7th Edition. See ASCO Pub. 1128 for more WCR information
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
5. Switches utilizing overlapping neutral (code "C") have 35kA, 0.050 Sec time based rating at 480V Max
6. Rating shown is for Bypass switches only, Transfer Switch rating is 100kA for the G frame and 65kA max for the H and P frames. See ASCO Pub. 1128.
7. See ASCO for Service Entrance Switch ratings
8. These frames are only available on the 7000 Series product
9. Short Time Rating applies to 600A Bypass switch only, the 600A Transfer Switch does not have a Short Time Rating

All units are RMS Symmetrical Amperes.

All Withstand and Close-on Rating (WCR) values are established by testing in accordance with UL 1008. For the latest ratings, including transfer switch ratings when used with specific circuit breakers, see **ASCO Publication 1128** for more WCR information.

Application characteristics may permit higher WCRs for certain switch sizes.
Contact ASCO Power Technologies for more information.

## Power Knowledge

- UL 1008 Transfer Switch Withstand and Closing Ratings
- Performance Testing for Transfer Switches

## Additional SERIES 300 Product Information

| Transfer Switches and Panels | Controls | Technical Information |
|---|---|---|
| Manual Transfer Switch | Group G Controller | Withstand and Closing Ratings |
| Manual Transfer Switch with Quick Connects | | Weights and Dimensions and Ordering Info |
| Quick Connect Power Panel | | Drawings |
| Dual Purpose Quick Connect Power Panel | | Wiring Diagrams |

# SERIES 300 Manual Transfer Switching and Quick Connection Solutions

ASCO SERIES 300 Manual Transfer Switching and Quick Connection Solutions offer reliable service and application flexibility for a wide range of facilities.

## Manual Transfer Switches

- Three-position, easy-to-use center-off switch
- Compact design - easy to install and maintain
- Designed to handle demands of motors and inrush currents

### Power Knowledge

Differences Between Manual, Non-Automatic, & Automatic Transfer Switches

### Product Details

SERIES 300 Manual Transfer Switch

## Manual Transfer Switches with Quick Connects

- The ASCO SERIES 300 Manual Transfer Switch with Integrated Quick Connects provides a total temporary power connection and transfer solution
- Enables connection and control of a temporary or portable generator
- Provides a complete UL 1008-listed solution in a single unit

### Product Details

SERIES 300 Manual Transfer Switch with Quick Connects

## Quick Connect Panels

- Listed to UL 1008 Transfer Switch Accessory standard
- Utilizes standard Cam-Lok™ receptacles for quick connections
- Standard Type 3R construction is weatherproof with or without cable
- Utilizes standard Series 16 Single Pole quick connect receptacles

### Power Knowledge

NEC Requirement for Permanent Manual Switching Means

### Product Details

SERIES 300 Quick Connect Power Panel

## Dual-Purpose Manual Transfer Switches with Quick Connects

- Provides both supplemental backup power and load testing connectivity through a single device.
- Listed by ETL to UL 891
- Utilizes standard Series 16 Single Pole quick connect receptacles

### Product Details

SERIES 300 Dual Purpose Quick Connect Power Panel

Life Is On | Schneider Electric

ASCO Power Technologies - Global Headquarters
160 Park Avenue
Florham Park, NJ 07932
Tel: 800 800 ASCO

www.se.com/us/en/brands/ascopower/
customercare@ascopower.com

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