**ASCO**° SINGLE PHASE WIRING FOR 300 SERIES TRANSFER SWITCHES TYPES H3ATS & H3NTS RATED 600, 800, 1000 & 1200 AMPERES GENERAL INFORMATION **COMMON ALARM & NOT IN AUTO SIGNALING FEATURES NON-AUTOMATIC (MANUAL) OPERATION** THIS WIRING APPLIES TO 300 SERIES TRANSFER SWITCHES THAT UTILIZE THE "H" FRAME POWER TRANSFER SWITCH RATED 600-1200 AMPERES. TRANSFER SWITCH ASSEMBLIES FACTORY SET FOR NON-AUTOMATIC OPERATION PROVIDE USER A SET OF FORM C CONTACTS IS PROVIDED ON THE GROUP G CONTROLLER AS "OP1". THE INITIATED, ELECTRICAL OPERATION OF THE TRANSFER SWITCH TO EITHER AVAILABLE SOURCE. THE FEATURE SETTING OF "OP1" CAN BE SET TO OPERATE THE CONTACTS AS A "NOT IN AUTO" THE GROUP G CONTROLLER PROVIDES EITHER AUTOMATIC (D3ATS) OR NON-AUTOMATIC [MANUAL] TRANSFER SWITCH ASSEMBLY IS PHYSICALLY IDENTICAL TO THAT OF THE AUTOMATIC TYPE. (H3NTS) OPERATION BASED ON ITS FACTORY SETTING ACCORDING TO THE CUSTOMER ORDER WHEN THE TRANSFER SWITCH IS SET FOR NON-AUTOMATIC OPERATION, A CUSTOMER PROVIDED REQUIREMENTS. WHEN "OP1" IS SET FOR "NOT IN AUTO". THE OUTPUT CONTACTS CHANGE POSITION WHEN THE SELECTOR SWITCH MAY BE USED TO OPERATE IT FROM A REMOTE LOCATION. TRANSFER IS BEING INHIBITED FROM TRANSFERRING TO THE EMERGENCY SOURCE (FEATURE THE TYPE OF TRANSFER SWITCH PROVIDED CAN BE DETERMINED FROM THE PRODUCT IDENTIFICATION 34B) OR THE TRANSFER SWITCH HAS BEEN SET FOR NON-AUTOMATIC (MANUAL) OPERATION. MARKINGS LOCATED ON BOTH THE POWER TRANSFER SWITCH AND THE COVER OF THE GROUP G REMOTE CONTROL FEATURES CONTROLLER. THE FOLLOWING CONTROL PANEL INPUTS PROVIDE REMOTE CONTROL FUNCTIONS FOR THE TRANSFER WHEN OPTIONAL ACCESSORY 11BE "SOFTWARE BUNDLE" IS PART OF THE TRANSFER SWITCH SWITCH. EACH FUNCTION CAN BE IMPLEMENTED BY THE CUSTOMER PROVIDING THE FORM OF CONTROL ALL OPERATIONAL SETTINGS AND SEQUENCES OF THE GROUP G CONTROLLER AND ITS RELATED ASSEMBLY, "OP1" MAY ALTERNATIVELY SET FOR A "COMMON ALARM" SIGNAL. THE OUTPUT DESCRIBED. EACH CONTROL CONTACT MUST BE SUITABLE FOR A 5 VDC LOW ENERGY CIRCUIT. OPTIONAL ACCESSORIES (1UP, 18RX, 23G) ARE PROVIDED IN THE USER'S GUIDE, CONTACTS CHANGE POSITION WHEN A "COMMON ALARM" IS NOT PRESENT AND RESET WHEN A ASCO GROUP G CONTROLLER FOR AUTOMÁTIC & NON-AUTOMÁTIC TRANSFER SWITCHES, "COMMON ALARM" CONDITION IS PRESENT. THE "COMMON ALARM" SIGNAL CONDITIONS ARE EXTERNAL FEATURE 17: REMOTE TRANSFER TO EMERGENCY FEATURE (FOR AUTOMATIC TRANSFER TYPE PART NUMBER 381333-400. SELECTABLE. ONLY) - REQUIRES A CUSTOMER SUPPLIED, NORMALLY CLOSED CONTACT. OPENING OF THE CONTACT INFORMATION FOR INSTALLATION AND TESTING OF THE TRANSFER SWITCH IS PROVIDED IN THE CAUSES ENGINE START AND TRANSFER TO THE EMERGENCY SOURCE. RE-CLOSURE OF THE CONTACT <u>ADDITIONAL "COMMON ALARM" AND "NOT IN AUTO" CONTACTS</u> ARE AVAILABLE WHEN OPTIONAL INSTALLATION MANUAL, ASCO 3ATS & 3NTS, H-DESIGN 600-1200 A TRANSFER SWITCHES. ACTIVATES THE FEATURE 3A "RETRANSFER TO NORMAL (IF JUST TEST) TIME DELAY PRIOR TO ACCESSORY 18RX (RELAY EXPANSION MODULE) IS INCLUDED IN THE TRANSFER SWITCH PART NUMBER 381333-405. RETRANSFER. IN THE EVENT THAT THE EMERGENCY SOURCE FAILS WHILE THE TRANSFER SWITCH IS ASSEMBLY. OUTPUT CONTACTS "OP2 AND/OR "OP3" WILL PROVIDE SIGNAL FUNCTIONS WHEN CONNECTED TO EMERGENCY AND THE CUSTOMER SUPPLIED CONTACT IS OPEN, THE TRANSFER SWITCH THE FEATURE SETTING OF EACH IS SET TO OPERATE AS "COMMON ALARM" OR "NOT IN AUTO". **ENGINE CONTROL CONTACTS** WILL AUTOMATICALLY RETRANSFER TO THE NORMAL SOURCE. <u>FEATURE 7 & FEATURE 8:</u> CONTACTS ARE RATED 5 AMPS RESISTIVE AT 30 VDC MAXIMUM, 100 mA AT 5 VDC MINIMUM. EXTERNAL FEATURE 6B: REMOTE BYPASS OF RETRANSFER TO NORMAL TIME DELAY — REQUIRES A ONE SET OF FORM C CONTACTS "NR" (FEAT. 7 N/C, FEAT. 8 N/O) THAT CHANGE POSITION ON CUSTOMER SUPPLIED, NORMALLY CLOSED CONTACT. OPENING OF THE CONTACT BYPASSES FEATURE 3A EXPIRATION OF THE FEATURE 1C, OVERRIDE MOMENTARY NORMAL SOURCE OUTAGES TIME DELAY, AND REFER TO USER'S GUIDE, ASCO GROUP G CONTROLLER FOR AUTOMATIC & NON-AUTOMATIC RETRANSFER TO NORMAL DELAY IF ACTIVE. RESET ON EXPIRATION OF THE FEATURE 2E ENGINE COOLDOWN TIME DELAY. TRANSFER SWITCHES, PART NUMBER 381333-400 FOR SETTING INFORMATION. AN AUXILIARY CONTACT THAT IS CLOSED WHEN THE TRANSFER SWITCH IS CONNECTED TO THE REFER TO USER'S GUIDE, ASCO GROUP G CONTROLLER FOR AUTOMATIC & NON-AUTOMATIC TRANSFER EMERGENCY SOURCE, IS CONNECTED ACROSS THE N/C CONTACT (FEATURE 7). EXTERNAL POWER SUPPLY COMPATIBILITY SWITCHES, PART NUMBER 381333-400 FOR SETTING INFORMATION. USE OF AN EXTERNAL POWER SUPPLY IS USEFUL WHEN REQUIRED TO EXTEND THE FOLLOWING AN ADDITIONAL SET OF ENGINE STARTING CONTACTS ARE AVAILABLE ON THE GROUP G CONTROLLER CONTROLLER TIME DELAYS BEYOND 6 SECONDS; WHEN THE FEATURE SETTING OF THE CONTROLLER OUTPUT CONTACTS "OP1" IS SET TO OPERATE AS "NR2". FEATURE 1C - OVERRIDE MOMENTARY NORMAL SOURCE OUTAGES FEATURE 1F - OVERRIDE MOMENTARY EMERGENCY SOURCE OUTAGES ADDITIONAL, OPTIONAL ENGINE STARTING CONTACTS "NR2" ARE AVAILABLE WHEN OPTIONAL ACCESSORY 18RX (RELAY EXPANSION MODULE) IS INCLUDED IN THE TRANSFER SWITCH ASSEMBLY. OUTPUT AN EXTERNAL POWER SUPPLY IS ALSO USEFUL WHEN THE TRANSFER SWITCH IS USED WITH CONTACTS "OP2" AND/OR "OP3" PROVIDE THE ENGINE STARTING FUNCTION WHEN THE FEATURE COMMUNICATIONS FEATURES BY ENABLING THE CONTROLLER TO CONTINUE COMMUNICATING. SETTING OF EACH IS SET TO OPERATE AS "NR2". AN EXTERNAL POWER SOURCE MAY BE PROVIDED TO THE CONTROLLER, UNTIL THE NORMAL SOURCE CONTACTS ARE RATED 5 AMPS RESISTIVE AT 30 VDC MAXIMUM, 100 MA AT 5 VDC MINIMUM. OR EMERGENCY SOURCE IS AVAILABLE, BY USE OF; REFER TO USER'S GUIDE, ASCO GROUP G CONTROLLER FOR AUTOMATIC & NON-AUTOMATIC AN EXTERNAL 24 VDC POWER SUPPLY WITH ACCESSORY 18RX (RELAY EXPANSION MODULE) TRANSFER SWITCHES, PART NUMBER 381333-400 FOR SETTING INFORMATION. - OPTIONAL ACCESSORY 1UP (UNINTERRUPTIBLE POWER SUPPLY MODULE) LOAD DISCONNECT FEATURE EXTERNAL 24 VDC POWER SUPPLY "1G": FEATURE 31: INCLUDES SUB-FEATURES 31F, 31G, 31M, 31N AN EXTERNAL 24 VDC POWER SUPPLY MAY BE USED TO POWER THE CONTROLLER WHEN ACCESSORY A SET OF FORM C CONTACTS ARE PROVIDED ON THE GROUP G CONTROLLER AS "OP1". WHEN THE 18RX (RELAY EXPANSION MODULE) IS INCLUDED IN THE TRANSFER SWITCH ASSEMBLY. OUTPUT FEATURE SETTING OF "OP1" IS SET TO OPERATE THE CONTACTS AS "FEATURE 31", THE TIME DELAY CONTACTS "OP2" WILL PROVIDE EXTERNAL 24 VDC POWER SUPPLY FUNCTIONALITY WHEN ITS FEATURE SETTINGS OF THE SUB-FEATURES ARE AVAILABLE. SETTING IS SET TO OPERATE AS "1G". ADDITIONALLY, JUMPERS MUST BE RECONFIGURED ON ACCESSORY 18RX (RELAY EXPANSION MODULE) TO ENABLE THIS FUNCTION AS FOLLOWS; "OP1" CAN BE SET TO OPERATE TO PROVIDE THE FOLLOWING FUNCTIONS USING THE TIME DELAY SETTINGS ASSOCIATED WITH EACH SUB-FEATURE; REMOVE JUMPERS "J1" 1-2 & "J1" 3-4 31F - NORMAL TO EMERGENCY PRE-TRANSFER SIGNAL CONNECT JUMPERS "J1" 5-7 & "J1" 6-8 31G - EMERGENCY TO NORMAL PRE-TRANSFER SIGNAL THE OUTPUT CONTACTS CHANGE POSITION WHEN EITHER THE NORMAL SOURCE OR EMERGENCY 31M - NORMAL TO EMERGENCY POST-TRANSFER SIGNAL 31N - EMERGENCY TO NORMAL POST TRANSFER SIGNAL 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. THE "OP1" OUTPUT CONTACTS CHANGE POSITION FOLLOWING EACH OF THE ABOVE TIME DELAYS. REFER TO USER'S GUIDE. ASCO GROUP G CONTROLLER FOR AUTOMATIC & NON-AUTOMATIC TRANSFER ADDITIONAL LOAD DISCONNECT CONTACTS, "FEATURE 31" ARE AVAILABLE WHEN OPTIONAL ACCESSORY SWITCHES, PART NUMBER 381333-400 FOR SETTING INFORMATION. 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 <u> ACCESSORY 1UP (UNINTERRUPTIBLE POWER SUPPLY):</u> WHEN OPTIONAL ACCESSORY 1UP IS INCLUDED IN THE TRANSFER SWITCH ASSEMBLY. THE CONTROLLER SETTING OF EACH IS SET TO OPERATE AS "FEATURE 31". IS PROVIDED WITH LIMITED RESERVE POWER (APPROXIMATELY 3 MINUTES). ALL OUTPUT CONTACTS ("OP1", "OP2", "OP3") SET TO OPERATE AS "FEATURE 31", SHARE THE LOAD CURRENT METERING COMMON TIME DELAY SETTINGS OF SUB-FEATURES 31F, 31G, 31M, AND 31N. WHEN OPTIONAL ACCESSORY 23GB IS PART OF THE TRANSFER SWITCH ASSEMBLY. THREE PHASE CONTACTS ARE RATED 5 AMPS RESISTIVE AT 30 VDC MAXIMUM, 100 mA AT 5 VDC MINIMUM. CURRENT MEASUREMENTS ARE AVAILABLE FOR DISPLAY ON THE GROUP G CONTROLLER. REFER TO USER'S GUIDE, ASCO GROUP G CONTROLLER FOR AUTOMATIC & NON-AUTOMATIC REFER TO USER'S GUIDE, ASCO GROUP G CONTROLLER FOR AUTOMATIC & NON-AUTOMATIC TRANSFER TRANSFER SWITCHES, PART NUMBER 381333-400 FOR SETTING INFORMATION. SWITCHES, PART NUMBER 381333-400 FOR INFORMATION ON USE. INPHASE TRANSFER FEATURE FOR LOAD TRANSFER FOUR-FUNCTION SOFTWARE BUNDLE WHEN OPTIONAL ACCESSORY 11BE IS PART OF THE TRANSFER SWITCH ASSEMBLY, A FOUR-FUNCTION INPHASE TRANSFER CONTROL INITIATES AN INPHASE TRANSFER OF LOADS BETWEEN LIVE SOURCES. SOFTWARE BUNDLE IS AVAILABLE TO PERFORM THE FOLLOWING FUNCTIONS; THIS IS USED TO PREVENT NUISANCE TRIPPING OF DISTRIBUTION CIRCUIT BREAKERS AND POSSIBLE DAMAGE TO MECHANICAL LOADS ASSOCIATED WITH OUT OF PHASE TRANSFER. - SERIAL COMMUNICATIONS (RS-485) - PROGRAMMABLE ENGINE EXERCISER REFER TO USER'S GUIDE, ASCO GROUP G CONTROLLER FOR AUTOMATIC & NON-AUTOMATIC TRANSFER SWITCHES, PART NUMBER 381333-400 FOR SETTING INFORMATION. EVENT LOG - COMMON ALARM SIGNAL CAPABILITY ON GROUP G CONTROLLER "OP1" OUTPUT. SOURCE AVAILABILITY SIGNALS REFER TO USER'S GUIDE, ASCO GROUP G CONTROLLER FOR AUTOMATIC & NON-AUTOMATIC TRANSFER SIGNALS INDICATING THE AVAILABILITY OF THE NORMAL & EMERGENCY SOURCES IS PROVIDED WHEN SWITCHES, PART NUMBER 381333-400 FOR INFORMATION ON THESE FUNCTIONS. 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. EXPLANATION OF CATALOG NUMBER CODES BASE CATALOG NUMBER CATALOG NUMBER SUFFIXES CATALOG NUMBER TS |CATALOG|NEUTRAL| PHASE | AMPS VOLT CONTROLLER OPTIONAL ENCLOSURACCESSORY CODE OPTIONAL | ENCLOSUR CERTIFIED TO CATALOG TYPE | NEUTRAL TYPE ENCLOSURE CODES FRAME TYPE | TYPE | POLES | CODE DESCRIPTION CODE DESCRIPTION CODE NOMINAL 1. SWITCH SHOWN DE-ENERGIZED CONNECTED TO NORMAL SOURCE. DESCRIPTION CODE TYPE 2. DEVICE SYMBOLS AND DESIGNATIONS ARE IN ACCORDANCE WITH NEMA PUB. ICS 1, PART 3ATS AUTOMATIC |BLANK|NONE OPEN TYPE (NO ENCLOSURE) 3NTS MANUAL A SOLID GENERAL PURPOSE, INDOOR 2. ALL WIRING IS #16 AWG, TINNED, STRANDED COPPER UNLESS OTHERWISE INDICATED. B | SWITCHING INDOOR, WATER & DUST RESISTANT 3. O INDICATES CUSTOMER CONNECTION POINTS. FORM REV 220 OUTDOOR, RAINPROOF, SLEET & ICE RESISTANT 4. • INDICATES FACTORY CONNECTION POINTS. ISSUE 600 230 INDOOR/OUTDOOR, WATERTIGHT & DUSTTIGHT 5. CONNECTION POINTS THAT HAVE BOTH CUSTOMER CONNECTIONS AND FACTORY CONNECTIONS REV. TO ECN NO. BY APP. DATE PROJECT NAME: 4X TYPE 4 PLUS CORROSION RESISTANCE (STAINLESS STEEL) 240 800 ARE SHOWN OPEN AS CUSTOMER CONNECTION POINTS. 4X TYPE 4 PLUS CORROSION RESISTANCE (FIBERGLASS) 3NTS 1000 6. THE TRANSFER UNIT IS MOUNTED ON THE BACK INSIDE SURFACE OF THE ENCLOSURE. DIAGRAM K | 7 | EXPLOSION PROOF 1200 THE CONTROL PANEL AND ANY OPTIONAL ACCESSORIES ARE MOUNTED ON THE INSIDE 12 | INDOOR, INDUSTRIAL ENVIRONMENTS, OILTIGHT & DUSTTIGHT 300 SERIES (H3ATS/H3NTS) 1PH 600-1200 AMPS THIRD ANGLE SURFACE OF THE DOOR. "H" FRAME, GROUP G CONTROLS PROJECTION 7. AN OPERATOR'S MANUAL IS FURNISHED WITH EACH AUTOMATIC (SECURE ENCLOSURES) TRANSFER SWITCH. REFER TO THIS PUBLICATION PRIOR TO INSTALLATION AND BY DATE MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-I-003. 3R OUTDOOR, RAINPROOF, SLEET & ICE RESISTANT COMPUTER GENERATED DRAWING OPERATION OF THE SWITCH. 480 DRAWN BY | DJB | 12/23/13 ASSEM, REF, NO. FOR PLASTIC PARTS SEE MP-I-055 4 | INDOOR/OUTDOOR, WATERTIGHT & DUSTTIGHT 8. GROUND STRAP ON CONTROL PANEL IS AFFIXED TO CHASSIS (ENCLOSURE) 550 P | 4X | TYPE 4 PLUS CORROSION RESISTANCE (STAINLESS STEEL) PROPERTY OF ASCO POWER TECHNOLOGIES. USE PERMITTED FOR OUR AT LOWER LEFT CONTROL PANEL MOUNTING STUD. 575 PROJECT Q | 12 | INDOOR, INDUSTRIAL ENVIRONMENTS, OILTIGHT & DUSTTIGHT WORK ONLY. ALL RIGHTS OF DESIGN OR INVENTION ARE RESERVED. BK 11/07/13 **BLANK** BLANK BLANK 600 ASCO Power Technologies, L.P. FOR NONE NONE OPEN TY FLORHAM PARK, NEW JERSEY 07932 U.S.A.  $\frac{\text{DRAWING}}{\text{PEV}} - \frac{\text{ECN}}{\text{NO}} 245959 = \frac{\text{SHEET}}{10\text{F}} 6$ **REQUEST A QUOTE** 









