r	8   7	6   5	<b>↓</b> 4	1
	THREE PHASE V	WIRING FOR ASCO 4000 SERIES TRANSFE	ER SWITCHES TYPE G4ATS & G4NTS RATED 4000 AMPERES	
	FEATURES, SETTINGS, OPERATION, ACCESSORIES & NOTES			
	THE FOLLOWING FEATURES AND RELATED SETTINGS ARE PART OF THE GROUP 5 CONTROL PANEL'S USER CONFIGURABLE PARAMETERS. FOR DETAILED INFORMATION REGARDING THE CONFIGURATION OF THESE PARAMETERS AND OTHER FEATURES OF THE GROUP 5 CONTROL PANEL, REFER TO THE GROUP 5 CONTROL PANEL FOR SECONS 4000 SERIES TRANSFER SWITCHES USER'S GUIDE (PART NO. 381333—126) PROVIDED WITH EVERY 4000 SERIES TRANSFER SWITCH.	THE USER CAN PROGRAM UP TO SEVEN DIFFERENT EXERCISE ROUTINES. EACH ROUTINE INCLUD  1. ENABLE OR DISABLE THE ROUTINE	TENTONE SB. THURSTEN SWITCH GEOGLE ON EMERCENCY (NED LED)	D
	THE NOMINAL OPERATING VOLTAGE & FREQUENCY IS PRE—PROGRAMMED AT THE FACTORY BASED ON THE NAMEPLATE DATA PRINTED ON THE TRANSFER SWITCH & CONTROL PANEL NAMEPLATES. <u>VOLTAGE &amp; FREQUENCY SENSING</u>	2. ENABLE OR DISABLE TRANSFER OF THE LOAD DURING THE ROUTINE  3. SET START TIME OF ROUTINE —  — TIME OF DAY  — DAY OF WEEK	FEATURE 9D: EMERGENCY SOURCE ACCEPTED (RED LED)  OPTIONAL ACCESSORIES	
	THE FOLLOWING SETTINGS ARE EXPRESSED AS A PERCENTAGE OF THE CONTROL PANEL'S NOMINAL VOLTAGE SETTING UNLESS STATED OTHERWISE. ALL SETTINGS ARE ADJUSTABLE IN INCREMENTS OF 1%.  A. RMS VOLTAGE SENSING ON ALL PHASES OF THE NORMAL & EMERGENCY SOURCES.	- WEEK OF MONTH (1st, 2nd, 3rd, 4th, ALTERNATE OR ALL) 4. SET THE DURATION OF THE ROUTINE  PARAMETER  RANGE OF SETTING  DEFAULT SET  MONTH  (CLOCK SET) JAN FEB MAR APR MAY JUN JUL AUG SEP  OCT NOV DEC		
	PARAMETER RANGE OF SETTINGS DEFAULT SETTING  NORMAL VOLTAGE DROPOUT 70–98% 85%  NORMAL VOLTAGE PICKUP 85–100% 90%  NORMAL OVER VOLTAGE TRIP 102–115% OFF	DAY	RELAY 1 (RL1) ENERGIZES IF THE EMERGENCY SOURCE HAS BEEN ACCEPTED BY THE	
	NORMAL VOLTAGE UNBALANCE  NORMAL VOLTAGE UNBALANCE DROPOUT  NORMAL VOLTAGE UNBALANCE DROPOUT  NORMAL VOLTAGE UNBALANCE PICKUP  S-20% OF AVG. NORMAL VOLTAGE  10% (if ON)  TO-98%  75%	ENABLE ROUTINE (ROUTINE 1-7) YES/NO TRANSFER LOAD YES/NO START HOUR 0-23 START MINUTE 0-59 RUN WEEK ALL, ALTERNATE, 1st, 2nd, 3rd, 4th, 5th ALL	CONTROLLER.  RELAY 2 (RL2) ENERGIZES IF THE NORMAL SOURCE HAS BEEN ACCEPTED BY THE CONTROLLER.	
	EMERGENCY VOLTAGE PICKUP  EMERGENCY OVER VOLTAGE TRIP  EMERGENCY VOLTAGE UNBALANCE  EMERGENCY VOLTAGE UNBALANCE DROPOUT 5-20% OF AVG. EMERGENCY VOLTAGE 20% (if ON)  EMERGENCY VOLTAGE UNBALANCE PICKUP 3-18% OF AVG. EMERGENCY VOLTAGE 10% (if ON)	RUN DAY DURATION HOURS DURATION MINUTES  SUN MON TUE WED THU FRI SAT 0 0 0 0	RELAY 3 (RL3) ENERGIZES IF THE CONTROLLER'S LOAD DISCONNECT SIGNAL IS ACTIVE.  (FEATURE 31, REFER TO THE GROUP 5 CONTROLLER USER'S MANUAL,  PN 381333-126).	
	B. FREQUENCY SENSING OF THE NORMAL & EMERGENCY SOURCES.	IF THE NORMAL SOURCE FAILS, THE TRANSFER SWITCH INITIATES STARTING OF THE ENGINE— GENERATOR SET. WHEN PROPER VOLTAGE AND FREQUENCY HAVE BEEN ATTAINED, THE LOAD WILL BE TRANSFERRED (AUTOMATIC UNITS, 4ATS) OR PERMITTED TO BE MANUALLY TRANSFERRE	RELAY 4 (RL4) USER CONFIGURED OUTPUT THAT CAN BE USER DEFINED TO OPERATE AS FOLLOWS;  SAME AS RELAY 1. SAME AS RELAY 2.	
С	PARAMETER RANGE OF SETTINGS DEFAULT SETTING  NORMAL FREQUENCY DROPOUT 85–98% 90%  NORMAL FREQUENCY PICKUP 90–100% 95%  NORMAL OVER FREQUENCY TRIP 102–110% OFF  EMERGENCY FREQUENCY DROPOUT 85–98% 90%  EMERGENCY FREQUENCY PICKUP 90–100% 95%	WHEN THE NORMAL SOURCE IS RESTORED FOR THE DURATION OF THE FEATURE 3A (RETRANSF TO NORMAL TIME DELAY) SETTING AND FOLLOWING OPERATION OF THE "TRANSFER TO NORMAL" KEYPAD ON NON—AUTOMATIC UNITS (4NTS), THE LOAD WILL BE RETRANSFERRED TO THE NORM, SOURCE.	* DE-ENERGIZES IF BOTH SOURCES ARE UNACCEPTABLE AND PROVIDES  ER  ONBOARD JUMPER TO PERMIT THE RELAY TO BE USED TO ALLOW AN  EXTERNAL 24 VDC SOURCE TO POWER THE CONTROLLER FOR EXTENDED  ENGINE STARTING TIME DELAY SETTINGS WHEN POWER IS NOT AVAILABLE.	C
	EMERGENCY OVER FREQUENCY TRIP 102-110% OFF  TIME DELAYS	THE ENGINE WILL CONTINUE TO RUN FOR THE ENGINE COOL DOWN PERIOD, FEATURE 2E.  SIGNALS & AUXILIARIES  A. FEATURES 7 & 8— ENGINE START SIGNAL	REFER TO INSTRUCTION SHEET PN 381339-260 FOR INSTRUCTIONS.	
	THE FOLLOWING TIME DELAY SETTINGS ALL HAVE AN ADJUSTABLE RANGE OF 0-60 min 59 sec UNLESS STATED OTHERWISE. ADJUSTABLE IN INCREMENTS OF 1 sec.  NOTE: SOME TIME DELAYS MAY BE EFFECTED BY CUSTOMER REQUESTED ACCESSORIES PROVIDED WITH THE UNIT. REFER TO THE DESCRIPTIONS PROVIDED UNDER THE "ACCESSORIES" NOTES ON THIS PAGE.	SIGNAL INITIATED BY DROPOUT OF CONTROL PANEL RELAY (NR) FOLLOWING EXPIRATION OF THE FEATURE 1C TIME DELAY (DELAY TO OVERRIDE MOMENTARY NORMAL SOURCE OUTAGES). 1C DELAY IS BYPASSED ON NON-AUTOMATIC UNITS (4NTS), WHEN TRANSFER IS INITIATED BY OPERATION OF THE "TRANSFER TO NORMAL" KEYPAD AND THE NORMAL SOURCE IS AVAILABLE. FEATURE 7 CLOSES TO SIGNAL ENGINE START. FEATURE 8 OPENS TO SIGNAL ENGINE START. ENGINE STARTING SIGNAL RESETS FOLLOWING RETRANSFER TO THE NORMAL SOURCE AND	THE	
<b>→</b>	NAME   DEFAULT SETTING	EXPIRATION OF THE FEATURE 2E (ENGINE COOL DOWN) TIME DELAY. FEATURES 7 & 8 ARE PROVIDED AS A SINGLE FORM C CONTACT CONNECTED TO THE FIELD CONNECTIONS TERMINAL BLOCK (TB) LOCATED ON THE FRONT OF THE TRANSFER SWITCH FRAME. CONTACT RATED 5 AMPS AT 32 VDC/120VAC RESISTIVE.	1. SWITCH SHOWN DE-ENERGIZED AND CONNECTED TO THE NORMAL SOURCE.  2. DEVICE SYMBOLS AND DESIGNATIONS ARE IN ACCORDANCE WITH NEMA PUBLICATION ICS 1-1983, PART 1-101A.	<b>—</b>
	3A RETRANSFER TO NORMAL (NORMAL FAILURE MODE) 3A RETRANSFER TO NORMAL (TEST MODE) 30 sec DELAYED TRANSFER (LOAD "OFF" TIME), [0-5 min 59 sec] 3 sec  DESCRIPTIONS OF TIME DELAYS:	B. FEATURES 14AA & 14BA — TRANSFER SWITCH AUXILIARY POSITION INDICATING CONTACTS.  TWO (2) FORM C CONTACTS EACH TO INDICATE CONNECTION OF THE TRANSFER SWITCH TO NORMAL (14A) OR EMERGENCY (14B). CONTACTS CONNECTED TO THE FIELD CONNECTIONS TERMINAL BLOCK (TB) LOCATED ON THE FRONT OF THE TRANSFER SWITCH FRAME. CONTACTS RATED 10 AMPS, 32 VDC, 250 VAC.	3. ALL WIRING IS #16 AWG, TINNED, STRANDED COPPER UNLESS OTHERWISE INDICATED. 4. O ON TERMINAL BLOCKS INDICATES AVAILABLE FIELD CONNECTION POINT.	
	FEAT. 1C — DELAY ON NORMAL SOURCE OUTAGE. STARTS ON FAILURE OF NORMAL SOURCE. RESETS IF NORMAL SOURCE IS ACCEPTED BEFORE EXPIRATION. INHIBITS ENGINE STARTING AND AUTOMATIC TRANSFER UNTIL EXPIRATION.  FEAT. 2B — DELAY PRIOR TO TRANSFER TO THE EMERGENCY SOURCE. DELAY STARTS ON	C. FEATURE 17 — REMOTE TRANSFER TO EMERGENCY. REQUIRES A CUSTOMER SUPPLIED NORMALLY OPEN CONTACT. CLOSING OF THE CONTACT CAUSE ENGINE START AND TRANSFER TO THE EMERGENCY SOURCE ON AUTOMATIC UNITS (4ATS). OPENING OF THE CONTACT ACTIVATES THE FEATURE 3A (RETRANSFER TO NORMAL) DELAY PRICTOR RETRANSFER. IN THE EVENT THE EMERGENCY SOURCE FAILS WHILE THE TRANSFER SWITCH CONNECTED TO EMERGENCY AND THE REMOTE CONTACT IS CLOSED, THE TRANSFER SWITCH W	PROCEDURE GS451261.  OR  IS  7. AN OPERATOR'S MANUAL IS FURNISHED WITH EACH TRANSFER SWITCH.	
В	EXPIRATION OF FEAT. 1C AND WHEN THE EMERGENCY SOURCE HAS BEEN ACCEPTED. DELAY RESETS IF THE EMERGENCY SOURCE FAILS PRIOR TO EXPIRATION. ON EXPIRATION, TRANSFER TO EMERGENCY IS INITIATED UNLESS THE NORMAL SOURCE HAS RECOVERED AND THE "COMMIT TO TRANSFER" FEATURE IS SET TO "NO" COMMIT. PROVIDES A PERIOD FOR EMERGENCY SOURCE STABILIZATION OR STAGING OF MULTIPLE TRANSFER SWITCH CONTROLLED LOADS TO THE EMERGENCY SOURCE.	RETRANSFER TO THE NORMAL SOURCE. LOCATED ON TERMINAL BLOCK (TB1) ON THE REAR OF THE OPERATOR INTERFACE MODULE ON THE FRONT DOOR.  USER CONTROLS AND INDICATIONS  A. FEATURES 5 & 6B — "TRANSFER TEST" & "RETRANSFER TO NORMAL" KEYPAD CONTROLS.	REFER TO THIS PUBLICATION PRIOR TO INSTALLATION AND OPERATION OF THE UNIT.	В
	FEAT. 1F — DELAY ON RETRANSFER TO NORMAL IN THE EVENT OF EMERGENCY SOURCE FAILURE. DELAY BEGINS ON FAILURE OF THE EMERGENCY SOURCE IF THE NORMAL SOURCE IS ACCEPTABLE. ON EXPIRATION, RETRANSFER TO NORMAL WILL BE INITIATED.	STANDARD ON AUTOMATIC UNITS (4ATS).  TRANSFER TEST" KEYPAD:  OPERATION CAUSES A NORMAL SOURCE FAILURE SEQUENCE. ACTIVATE AND HOLD FOR AT LEAT 15 SECONDS TO ALLOW TIME FOR THE ENGINE—GENERATOR TO START.  "PETRANGEED TO NORMAL" (ESTARDA)	ST	
	FEAT. 2E — DELAY ON ENGINE SHUTDOWN (ENGINE COOL DOWN PERIOD). DELAY STARTS FOLLOWING RETRANSFER TO THE NORMAL SOURCE. PROVIDES A PERIOD FOR THE ENGINE—GENERATOR SET TO RUN UNLOADED PRIOR TO SHUTDOWN.	"RETRANSFER TO NORMAL" KEYPAD: OPERATION WILL BYPASS THE FEATURE 3A (RETRANSFER TO NORMAL DELAY) INITIATING RETRANSFER TO THE NORMAL SOURCE.  FEATURE 6Z & 6C — MANUAL TRANSFER CONTROL, "TRANSFER TO EMERGENCY" & "TRANSFE	NTS FACTORY CP SETTINGS  SETTING PARAMETER DEFAULT FACTORY	
	FEAT. 3A — RETRANSFER TO NORMAL DELAY (NORMAL FAILURE MODE)  DELAY STARTS WHEN NORMAL SOURCE IS ACCEPTED (FOLLOWING IT'S FAILURE) AND WHILE THE LOAD IS CONNECTED TO EMERGENCY. RESETS IF NORMAL FAILS PRIOR TO EXPIRATION OR IF THE EMERGENCY SOURCE FAILS BEFORE EXPIRATION AND FEAT. 1F EXPIRES (AUTOMATIC BYPASS ON EMERGENCY SOURCE FAILURE). PROVIDES A PERIOD FOR THE NORMAL SOURCE TO STABILIZE PRIOR TO RETRANSFER.	NORMAL" KEYPAD CONTROLS. STANDARD ON NON-AUTOMATIC UNITS (4NTS).  "TRANSFER TO EMERGENCY" KEYPAD:  OPERATION CAUSES IMMEDIATE ENGINE START IF NORMAL IS AVAILABLE AND TRANSFER TO THE EMERGENCY SOURCE WHEN THE EMERGENCY SOURCE IS AVAILABLE THE TRANSFER SWITCH W REMAIN CONNECTED TO THE EMERGENCY SOURCE UNTIL THE UNIT IS MANUALLY RETRANSFERI TO THE NORMAL SOURCE.	<pre>CTEST OR MANUAL MODE INPUT&gt; TEST OPERATION</pre>	
	FEAT. 3A — RETRANSFER TO NORMAL DELAY (TEST MODE)  DELAY STARTS WHEN THE "TRANSFER TEST" SWITCH IS RESET TO "AUTO" (FOLLOWING DUSER INITIATED TRANSFER TEST) AND WHILE THE LOAD IS CONNECTED TO EMERGENCY.  RESETS IF NORMAL FAILS PRIOR TO EXPIRATION OR IF THE EMERGENCY SOURCE FAILS  BEFORE EXPIRATION AND FEAT. 1F EXPIRES (AUTOMATIC BYPASS ON EMERGENCY	THE TRANSFER SWITCH WILL REMAIN CONNECTED TO THE NORMAL SOURCE UNTIL THE UNIT IS MANUALLY TRANSFERRED TO THE EMERGENCY SOURCE.	ER. S	
	SOURCE FAILURE). <u>MOTOR LOAD TRANSFER FEATURE</u> FEAT. 27 — INPHASE TRANSFER CONTROL LOGIC TO INITIATE AN INPHASE TRANSFER	BASE CATALOG NUMBER CATALOG NUMBER SUFFIXES  CATALOG NEUTRAL PHASE TYPE POLES AMPS CODE CONTROLLER ACCESSORY CODE  CODE DES	EXPLANATION OF CATALOG NUMBER CODES  L TYPE 3 PHASE (3 OR 4 WIRE)	
٨	OF LOADS BETWEEN LIVE SOURCES. USED TO PREVENT NUISANCE TRIPPING OF CIRCUI' BREAKERS AND POSSIBLE DAMAGE TO MECHANICAL LOADS CAUSED BY OUT OF PHASE TRANSFER.  ACTIVATED VIA THE GROUP 5 CONTROL PANEL USER INTERFACE (TRANSFER CONTROL	CUIT SE BLANK NON C A SOL E B SWIT		221384 TR WK 1/13/09
A	CENTER) BY SELECTING "IN-PHASE MONITOR ENABLE" = YES. AN ADJUSTABLE DELAY (0.0-3.0 sec, FACTORY SET TO 1.5 sec, IN INCREMENTS OF 0.1 sec) DELAYS SENSING TO PERMIT STABILIZATION OF THE SOURCES PRIOR TO SENSING. FACTORY SETTING IS DISABLED UNLESS SPECIFIED TO BE FACTORY ACTIVATED AT THE TIME OF ORDER.	Y AATS B 3 4000 G H J S X G H J K L S C	E 230 G 4 INDOOR/OUTDOOR, WATERTIGHT & DUSTTIGHT F 240 H 4X TYPE 4 PLUS CORROSION RESISTANCE (STAINLESS STEEL) G 277 J 4X TYPE 4 PLUS CORROSION RESISTANCE (FIBERGLASS) H 380 K 7 EXPLOSION PROOF  WIRING  WIRING	REV. TO SHEET ECN NO. BY APP. DATE
			K 415 L 440 M 460 M 3R OUTDOOR, RAINPROOF, SLEET & ICE RESISTANT N 480 N 4 INDOOR/OUTDOOR, WATERTIGHT & DUSTTIGHT  K 415 C FRAME, GROUP 5 CONTROLS  MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-I-003. FOR PLASTIC PARTS SEE MP-I-055	ASSEM. REF. NO.  THIRD ANGLE PROJECTION  COMPUTER GENERATED DRAWING  SCALE 1:1 SIZE D.S.
		BLANK FOR NONE  R  BLANK FOR FOR NONE  OPEN TYPE	P 550 575 600 P 4X 12 TYPE 4 PLUS CORROSION RESISTANCE (STAINLESS STEEL) INDOOR, INDUSTRIAL ENVIRONMENTS, OILTIGHT & DUSTTIGHT PROJECT APPROVAL APPROVAL APPROVAL APPROVAL APPROVAL APPROVAL ASCO POWER TECHNOLOGIES. USE PER APPROVAL APPROVAL ASCO POWER TECHNOLOGIES. USE PER ASCO POWER TECHNOLOGIES.	ARE RESERVED. DWG. NO.
•	8 7	6 5	<b>1</b> 3 2	1









