

NEXT ASSEMBLY 8804M198/199/200/201 8804M664/665	FINAL ASSEMBLY FINAL
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REVISION HISTORY					
REV	DESCRIPTION	ECN	DATE	BY	APPROVED
N	CHANGE LOOP BOARD	4848	9/7/2005	RFB	
L	Change panel & separate 400V.	4578	10/7/2004	MDB	
M	Combined & removed backpanelgeneric	4747	5/5/2005	MDB	

D

D

C

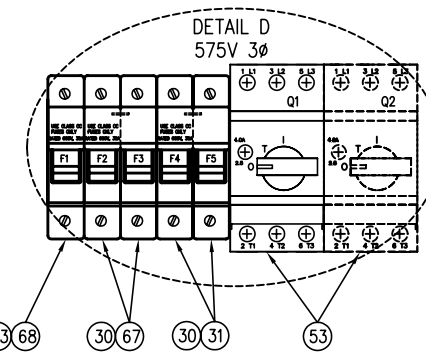
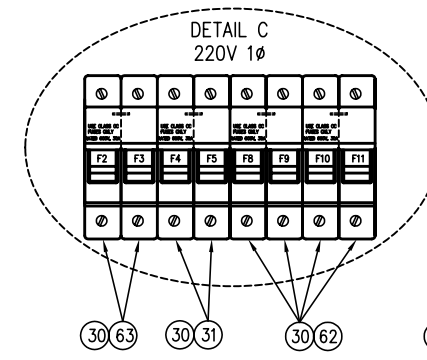
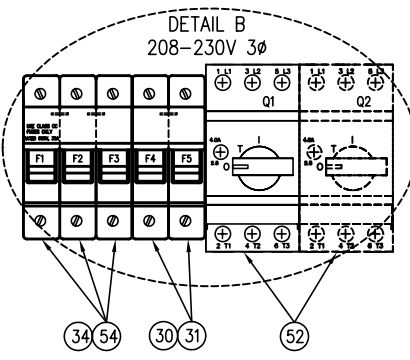
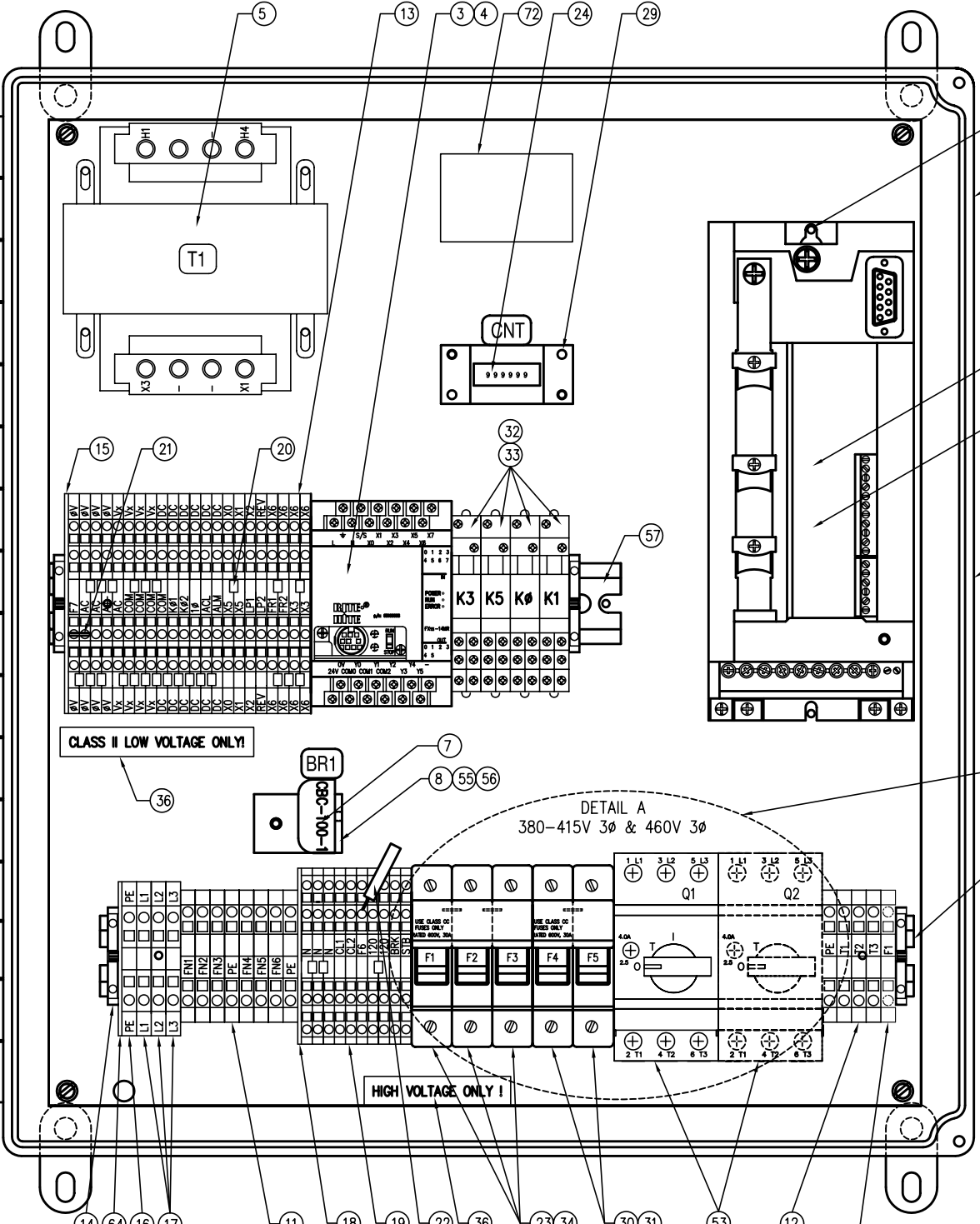
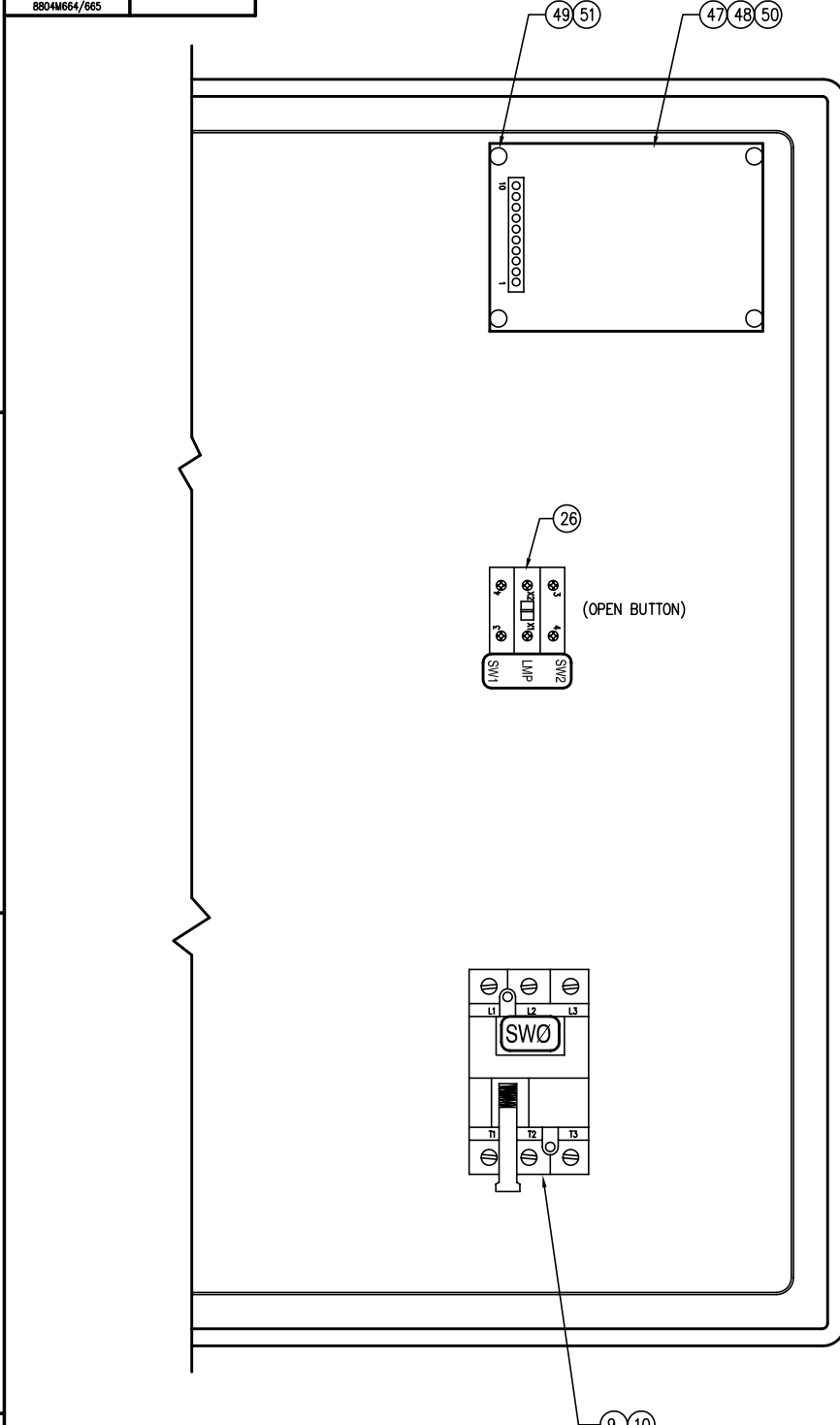
C

B

B

A

A



REV	DESCRIPTION	ECN	DATE	BY	APPROVED
81	53850449	8804M803	LABEL, FRENCH, SET, 8600, ELECTRICAL		
80	53850422	8804M523	LABEL, FRENCH, CBOX, 8600, 18x16		
79	53850446	8804M802	LABEL, DUTCH, SET, 8600, ELECTRICAL		
78	53850361	8804M789	LABEL, GERMAN, CBOX, 8600, 18x16		
77	53850450	8804M804	LABEL, GERMAN, SET, 8600, ELECTRICAL		
76	53850361	8804M789	LABEL, GERMAN, CBOX, 8600, 18x16		
75	53850451	8804M805	LABEL, SPANISH, SET, 8600, ELECTRICAL		
74	53850427	8804M599	LABEL, SPANISH, CBOX, 8600, 18x16		
73	2	75600041	WIRE, 14 AWG, 600V, GREEN/YELLOW (NOT SHOWN)		
72	1	-	UL LABEL, ENCLOSED CONTROL PANEL		
71	-	-	-		
70	-	-	-		
69	1	73550017	XFMR, 2.0KVA, 600/240(NOT SHOWN - SHIP LOOSE)		
68	1	51000019	FUSE HOLDER, 1 POLE, 600V, 30A		
67	2	51000038	FUSE, 3.5AMP, 600V, KLDK		
66	-	-	-		
65	-	-	-		
64	2	73100046	TERMINAL, END BAR, SGL TIER		
63	2	51000033	FUSE, 10A, 600V, CC TIME DELAY		
62	4	51000012	FUSE, 5AMP, 600V, CC TIME DELAY		
61	12	67850065	SCR, FHMH, #6 x 9/16 BLK K-LATH		
60	-	-	-		
59	-	-	-		
58	2	74110001	WSHR, FLAT, 1/4 x 3/4 x 1/16, ZNC		
57	1	38120023	DIN RAIL, LOW-PROFILE, 10"		
56	1	67850041	SCR, FHM5, PHLP, #8-32 x 7/8", ZNC		
55	2	74100002	WASHR, FLAT, 13/64 x 1/2 x .036, ZNC		
54	3	51000047	FUSE, 7AMP, 600V, CC, KLDK		
53	1	51950030	STARTER, MOTOR, MANUAL, 0.4-63A		
52	1	51950031	STARTER, MOTOR, MANUAL, 0.63-1A		
51	4	67850022	SCR, FHM5, PHLP, #6-32 x 3/8, ZNC		
50	1	17500001	CTRLR, INDUCTIONLOOP, PCB, 24VDC		
49	4	71300004	STANDOFF, ALUMINUM, #6 x 3/8 LG		
48	1	65000275	8804M585		
47	2	72800036	TAPE, FOAM DBL, .015 x 1 x 108"		
46	1SET	53850310	8804M564		
45	2SET	53850309	8804M563		
44	1SET	53850308	8804M562		
43	-	-	-		
42	-	-	-		
41	-	-	-		
40	-	-	-		
39	-	-	-		
38	1	15650208	8804M270		
37	1	53850430	8804M598		
36	1	53850447	8804M800		
35	1	53850381	8804M557		
34	1	51000013	FUSE HOLDER, 3 POLE, 600V, 30AMPS		
33	3	70350001	SOCKET, RELAY, 2 POLE, 250 VAC, 5AMP		
32	3	66450003	RELAY, 24VAC, DPDT, 5 AMP		
31	2	51000034	FUSE, 1AMP, 600V, CC, KLDK		
30	1	51000003	FUSE HOLDER, 2 POLE, 600V, 30AMP		
29	2	67850106	SCR, PH5M5, PHLP, TYPE 'B', #6 x 1/2		
28	1	38120026	DIN RAIL, LOW PROFILE, 14"		
27	1	53300018	INV, KEYPAD, KEB (NOT SHOWN)		
26	1	72700107	SM, PB, FLASHING LED, GRN		
25	1	52000019	HARNSS, CBOX, 8600, KEB (NOT SHOWN)		
24	1	17600021	COUNTER		
23	3	51000046	FUSE, 4.5AMP, 600V, CC, KLDK		
22	1	51000039	FUSE, 1 AMP, 120V, RESETTABLE, PTC		
21	1	51000035	FUSE, 2.5AMP, 30V, RESETTABLE, PTC		
20	28	53500001	JMPR, TERM BLK, GRN, WAGO		
19	10	73100002	TERMINAL, SGL TIER, GRAY, 4HL		
18	1	73100008	TERMINAL, END BAR, SGL TIER, 4HL		
17	3	73100047	TERMINAL, SGL TIER, GRAY, 2HL		
16	1	73100046	TERMINAL, GND, SGL TIER, #24-10AWG		
15	1	73100006	TERMINAL, END BAR, DEL TIER, 2HL		
14	4	73100024	TERMINAL, END STOP, SCREWLESS		
13	22	73100001	TERMINAL, DEL TIER, GRAY, 2HL		
12	9	73100009	TERMINAL, SGL TIER, GRAY, 2HL		
11	3	73100005	TERMINAL, GRD, 2HL, 12AWG		
10	1	72700153	OPERATOR, SWITCH, DISCONNECT		
9	1	72700007	SWTCH, POWER DISCONNECT		
8	1	14500454	8804M579		
7	1	68270004	RECTIFIER, CLUTCH, 1A, 120V		
6	1	53300019	INV, 1HP, 230V, 3PH, 50/60HZ, KEB		
5	1	53300021	INV, 1HP, 480V, 3PH, 50/60HZ, KEB		
4	OR	1	73550010		
3	1	73550009	XFMR, 150VA, 380/415/575V/24/120		
2	1	73550009	XFMR, 150VA, 208/230/480V/24/120		
1	4	1	PLC PROGRAM, STANDARD		
	3	1	PLC, MITSUBISHI, 14 I/O, FX1S		
	2	1	8804M585		
	1	1	43750103	8804M558	
			ENCLOSURE, MACHINED, CONTROL BOX, FIBERGLASS, 8600		

380-460V 3Ø SHOWN (DETAIL A)  
REF. DETAIL B FOR 208-230V 3Ø  
REF. DETAIL C FOR 220V 1Ø  
REF. DETAIL D FOR 575V 3Ø

OPTIONAL LOOP

ENGLISH

208-230V 3Ø & 380-460V 3Ø OPTION ONLY

PREANNOUNCE OPTIONAL, ADD (1)

575V 3Ø OPTION, ADD (1) - 220V 1Ø OPTION, ADD (3)

380 - 460V 3Ø OPTION ONLY

ADD (1) FOR 575V

208-230V 3Ø OR 220V 1Ø OPTION ONLY

460 - 480V 3Ø OPTION ONLY

INCH TOLERANCES		DO NOT SCALE DRAWING	
OVER	UP TO	DATE	MM-DD-YY
0	0.125	DRAWN BY	RJK
0.125	0.25	DATE	3/5/2002
0.25	1.25	CHECKED BY	
1.25	5	APPROVED BY	
5	15	DATE	
15	40	INITIAL ECN	3449
40	80	DATE ISSUED	3/18/2002
80	125	REF	

**RITE-HITE DOORS INC.**

CONTROL BOX 8600 FREEZER DOOR  
AC MOTOR, KEB INV.

SIZE MODEL NUMBER  
D 8600

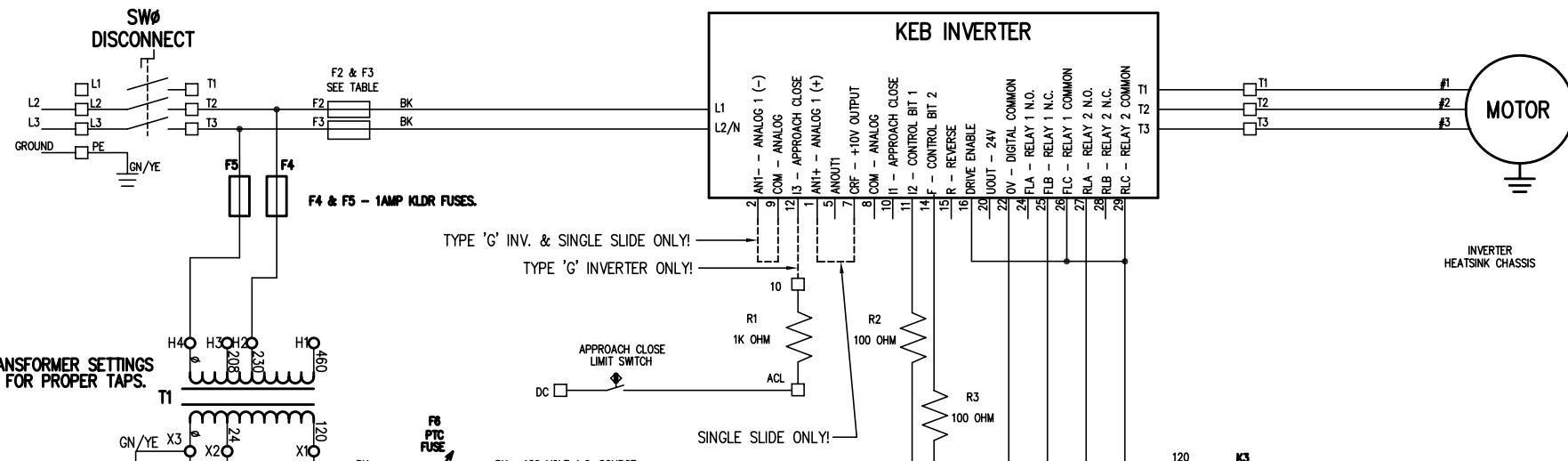
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REV  
N

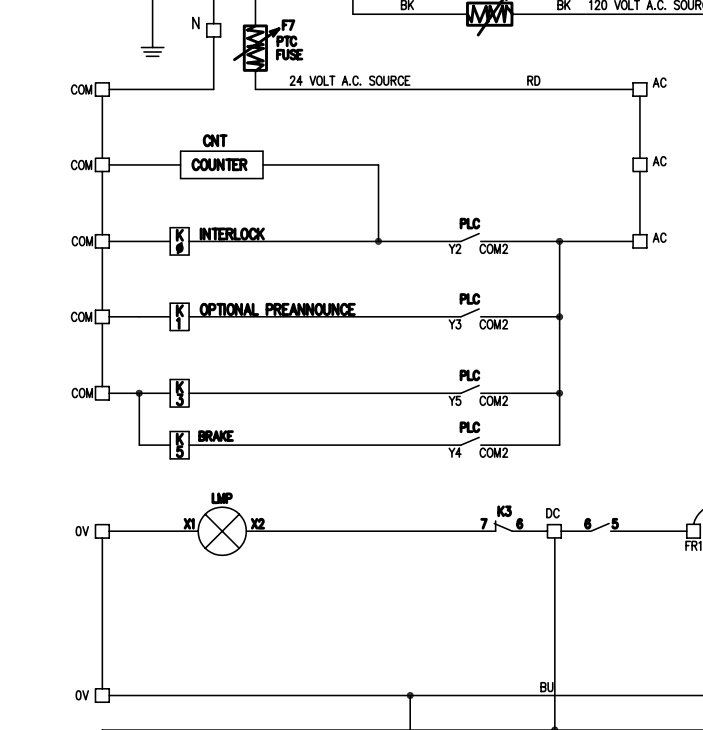
SCALE 9"=1' PART # 1730... SHEET 1

REVISION HISTORY					
REV	DESCRIPTION	EON	DATE	BY	APPROVED
D	ADD SUPPRESSION RESISTORS	4552	8/19/2004	RPB	
E	CE CHANGES	4759	5/12/2005	RPB	
F	CHANGE LOOP BOARD	4848	9/7/2005	RPB	

**1Ø INCOMING POWER FROM END USER SUPPLIED DISCONNECT (SEE TABLE)**  
 USE COPPER CONDUCTORS RATED AT 60°C OR HIGHER  
 \*SEE FIELD WIRING DIAGRAM FOR 220VOLT SINGLE PHASE WIRING.\*



BRANCH CIRCUIT PROTECTION				
NOTE: BRANCH CIRCUIT PROTECTION MUST BE SUPPLIED BY THE END USER AND COMPLY WITH ALL NATIONAL AND LOCAL ELECTRICAL CODES. SIZING FOR PROTECTIVE DEVICES MAY BE BASED ON INTERMITTENT DUTY.				
MODEL	VOLTAGE	MOTOR F.L.A.	TOTAL F.L.A.	SERVICE AMPS
8600 (NO FANS)	220 1 PHASE	3.0	8.7	30
	208		6.3	
	230-240	6.3		
	380-415	4.0		
	440-480	4.0		
8600 (BI-PART)	220 1 PHASE	3.0	9.7	30
	208		7.3	
	230-240	7.3		
	380-415	5.0		
	440-480	5.0		
8600 (SINGLE SLIDE)	220 1 PHASE	3.0	9.2	30
	208		6.8	
	230-240	6.8		
	380-415	4.5		
	440-480	4.5		
	575	3.0	4.0	15



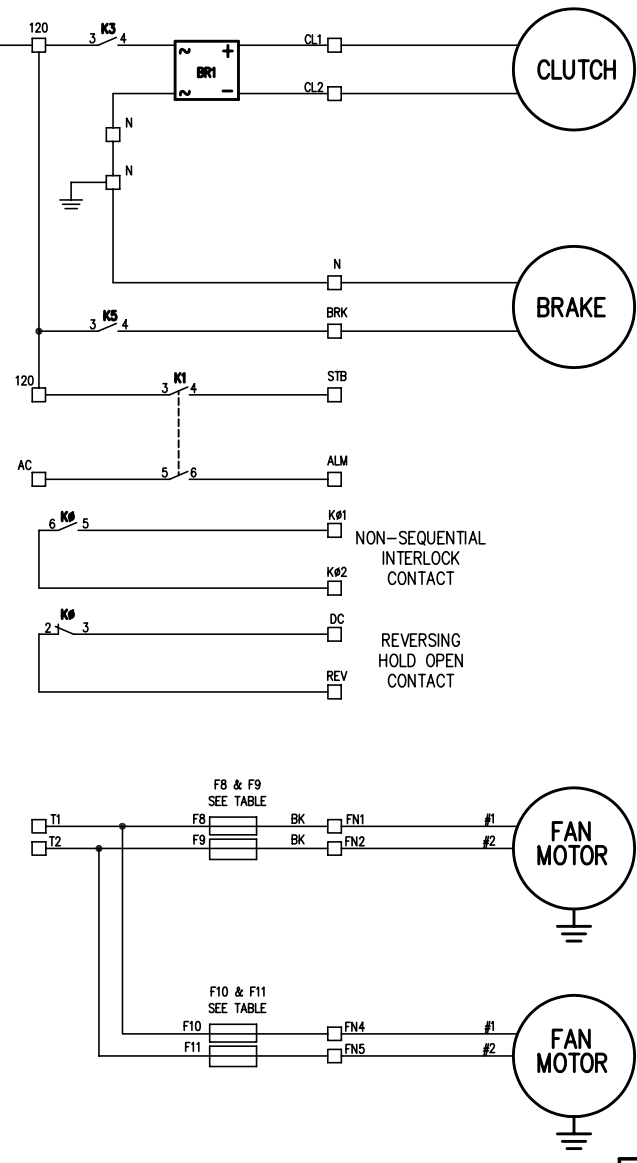
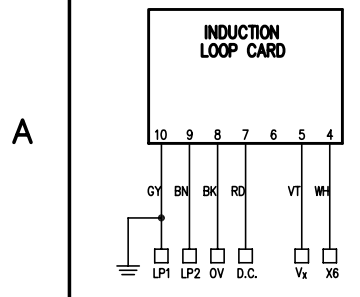
SCREW TERMINAL MIN TORQUE SETTING		
COMPONENT	TORQUE (IN-LBS)	DRIVER SETTING
STARTER	20	6
DISCONNECT	20	6
INTERLOCK	20	6
INVERTER	5	2
OVERLOAD	20	6
TRANSFORMER	20	6
TERMINALS	12	5
RELAYS	12	5
PLC	10	4

TORQUE INSTRUCTIONS:  
 1. TIGHTEN TO RECOMMENDED MIN TORQUE SETTING.  
 2. PULL TEST ALL WIRES.  
 3. IF WIRE PULLS OUT, TORQUE AGAIN TO MINIMUM VALUE, GENTLY HAND TIGHTEN UNTIL WIRE CANNOT BE PULLED LOOSE.

STANDARD TRANSFORMER SETTINGS	
LINE VOLTAGE	TAPS
208	H4-H3
220-240	H4-H2
440-480	H4-H1

OPTIONAL TRANSFORMER SETTINGS	
LINE VOLTAGE	TAPS
380	H4-H3
415	H4-H2
575	H4-H1

FUSING			
VOLTAGE	PH	DEVICE	RATING
220	1	F2,F3	10A KLDR
		F8,F9,F10,F11	5A CCMR
208-240	3	F1,F2,F3	7A KLDR
		F1,F2,F3	4.5A KLDR
575	3	F1	10A KLDR
		F2,F3	3.5A KLDR
ALL	-	F4,F5	1A KLDR
		F6	2.5A PTC
		F7	1A PTC



\*NEUTRAL TERMINALS ARE ON THE HIGH VOLTAGE BUS.  
 \*\*COM TERMINALS ARE ON THE LOW VOLTAGE BUS.  
 -ALL NEUTRAL & COM WIRES ARE BU/WH.  
 -NEUTRALS & COMMONS ARE GROUND REFERRED.

INCH TOLERANCES		DO NOT SCALE DRAWING	
OVER	UP TO	DATE	MM-DD-YY
0	0.125	3/18/2002	
0.125	0.25		
0.25	1.25		
1.25	5		
5	15		
15	40		
40	80		
80	-		

ITEM	QTY	PART NO.	DESCRIPTION
PARTS LIST / MATERIAL			
<b>RITE-HITE DOORS INC.</b>			
-SCHEMATIC 220V 1Ø - ISO-TEK - AC MOTOR KEB INVERTER			
DRAWN BY		DATE	TITLE
CHECKED BY		DATE	
APPROVED BY		DATE	
INITIAL EON		DATE ISSUED	SCALE
3449		3/18/2002	9"=1'
REV		DWG NO	SHEET
F		8804E032	1 of 1

STANDARD TRANSFORMER SETTINGS	
LINE VOLTAGE	TAPS
208	H4-H3
220-240	H4-H2
440-480	H4-H1

OPTIONAL TRANSFORMER SETTINGS	
LINE VOLTAGE	TAPS
380	H4-H3
415	H4-H2
575	H4-H1

FUSING			
VOLTAGE	PH	DEVICE	RATING
220	1	F2,F3	10A KLR
		F8,F9,F10,F11	5A CCMR
208-240	3	F1,F2,F3	7A KLR
380-480	3	F1,F2,F3	4.5A KLR
575	3	F1	10A KLR
		F2,F3	3.5A KLR
		F4,F5	1A KLR
ALL	-	F6	2.5A PTC
		F7	1A PTC

**OPTIONAL COMPONENTS**

INDUCTION LOOP CONTROLLER

SINGLE SLIDE

PREANNOUNCE TO CLOSE (K1)

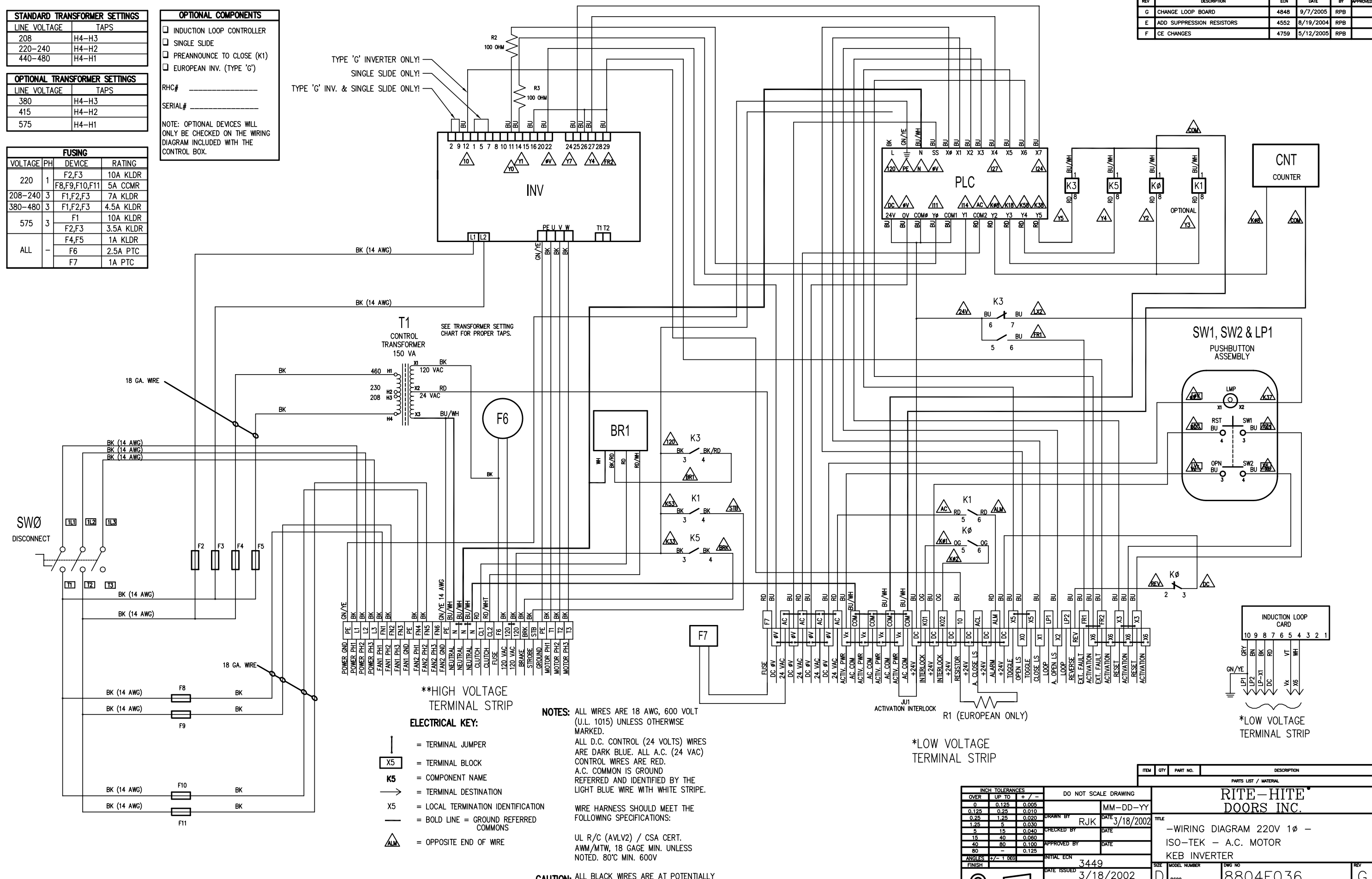
EUROPEAN INV. (TYPE 'G')

RHC# \_\_\_\_\_

SERIAL# \_\_\_\_\_

NOTE: OPTIONAL DEVICES WILL ONLY BE CHECKED ON THE WIRING DIAGRAM INCLUDED WITH THE CONTROL BOX.

REVISION HISTORY					
REV	DESCRIPTION	ECN	DATE	BY	APPROVED
G	CHANGE LOOP BOARD	4848	9/7/2005	RPB	
E	ADD SUPPRESSION RESISTORS	4552	8/19/2004	RPB	
F	CE CHANGES	4759	5/12/2005	RPB	



TYPE 'G' INVERTER ONLY!  
SINGLE SLIDE ONLY!  
TYPE 'G' INV. & SINGLE SLIDE ONLY!

T1 CONTROL TRANSFORMER 150 VA  
SEE TRANSFORMER SETTING CHART FOR PROPER TAPS.

**\*\*HIGH VOLTAGE TERMINAL STRIP**

**ELECTRICAL KEY:**

- | = TERMINAL JUMPER
- X5 = TERMINAL BLOCK
- K5 = COMPONENT NAME
- = TERMINAL DESTINATION
- X5 = LOCAL TERMINATION IDENTIFICATION
- = BOLD LINE = GROUND REFERRED COMMONS
- ⚡ = OPPOSITE END OF WIRE

**NOTES:** ALL WIRES ARE 18 AWG, 600 VOLT (U.L. 1015) UNLESS OTHERWISE MARKED.

ALL D.C. CONTROL (24 VOLTS) WIRES ARE DARK BLUE. ALL A.C. (24 VAC) CONTROL WIRES ARE RED.

A.C. COMMON IS GROUND REFERRED AND IDENTIFIED BY THE LIGHT BLUE WIRE WITH WHITE STRIPE.

WIRE HARNESS SHOULD MEET THE FOLLOWING SPECIFICATIONS:

UL R/C (AVLV2) / CSA CERT.

AWM/MTW, 18 GAGE MIN. UNLESS NOTED. 80°C MIN. 600V

**CAUTION:** ALL BLACK WIRES ARE AT POTENTIALLY LETHAL VOLTAGES.

\*LOW VOLTAGE TERMINAL STRIP

INDUCTION LOOP CARD

10 9 8 7 6 5 4 3 2 1

GRY BK RD WH VT

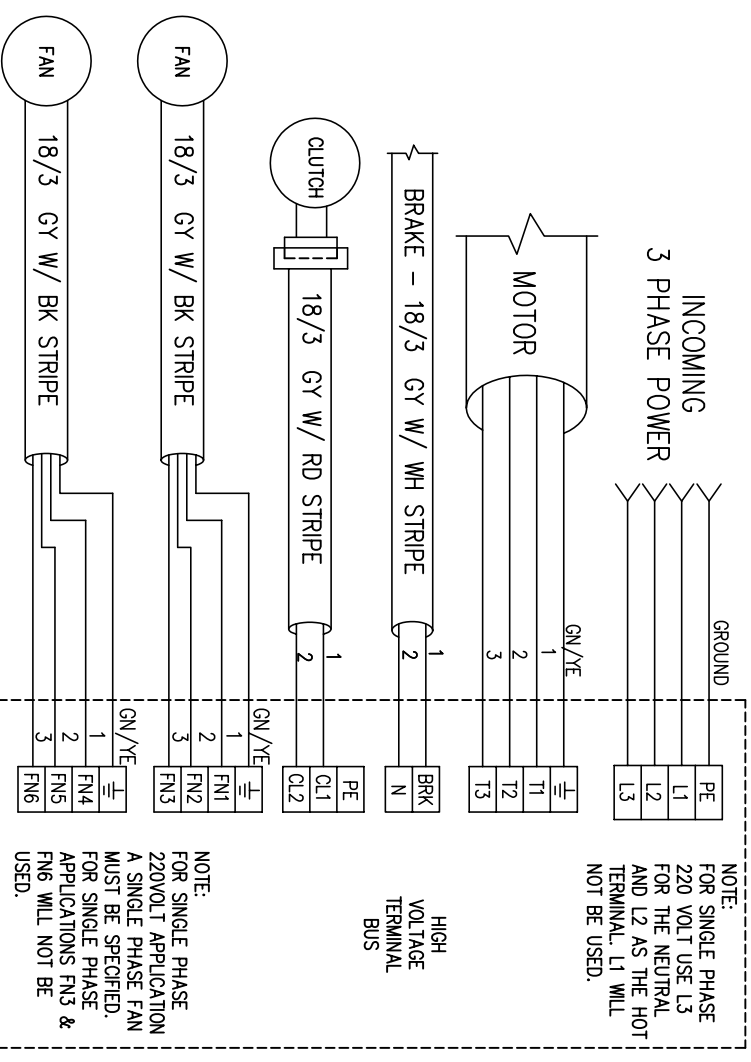
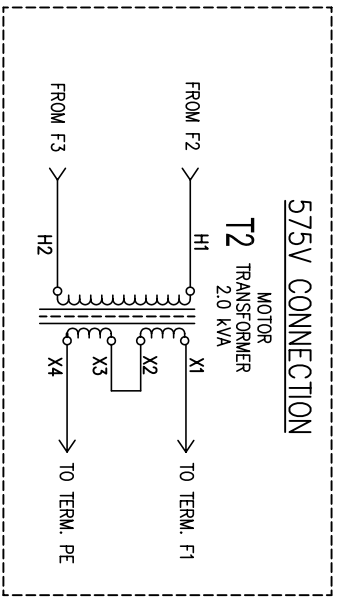
LP1 LP2 LP-X1 DC VA X6

\*LOW VOLTAGE TERMINAL STRIP

INCH TOLERANCES		DO NOT SCALE DRAWING	
OVER	UP TO	+	-
0	0.125	0.005	0.010
0.125	0.25	0.010	0.015
0.25	1.25	0.020	0.030
1.25	5	0.030	0.040
5	15	0.040	0.050
15	40	0.050	0.060
40	80	0.060	0.070
80	-	0.070	0.080

ITEM	QTY	PART NO.	DESCRIPTION
PARTS LIST / MATERIAL			
<b>RITE-HITE DOORS INC.</b>			
DRAWN BY: RJK		DATE: 3/18/2002	
CHECKED BY:		DATE:	
APPROVED BY:		DATE:	
INITIAL ECN: 3449		DATE ISSUED: 3/18/2002	
DATE ISSUED: 3/18/2002		REV: G	
SCALE: 8"=1'		SHEET 1 of 1	

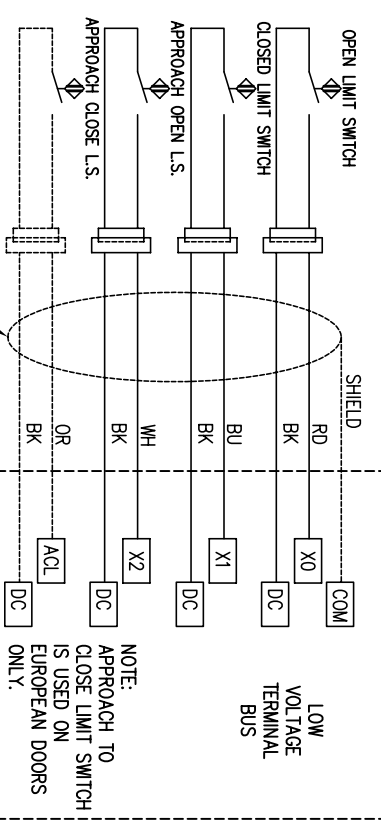
REVISION HISTORY				
REV	DESCRIPTION	EON	DATE	BY
K	UPDATE CABLES	4817	7/25/2005	RPB
H	UL 508A CHANGES	4104	4/18/2003	RPB
J	Sup oct from Mond. field wiring	4552	5/19/2004	MDB



NOTE:  
FOR SINGLE PHASE  
220 VOLT USE L3  
FOR THE NEUTRAL  
AND L2 AS THE HOT  
TERMINAL. L1 WILL  
NOT BE USED.

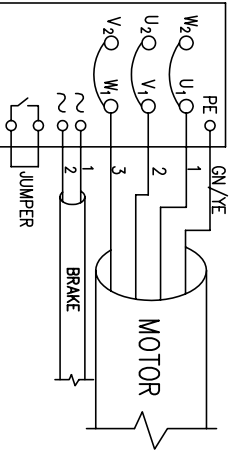
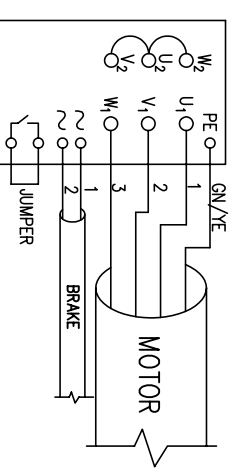
HIGH  
VOLTAGE  
TERMINAL  
BUS

NOTE:  
FOR SINGLE PHASE  
220VOLT APPLICATION  
A SINGLE PHASE FAN  
MUST BE SPECIFIED.  
FOR SINGLE PHASE  
APPLICATIONS FN3 &  
FN6 WILL NOT BE  
USED.



NOTE:  
APPROACH TO  
CLOSE LIMIT SWITCH  
IS USED ON  
EUROPEAN DOORS  
ONLY.

USE ONLY FACTORY SUPPLIED CABLE FOR  
MOTOR, PHOTOEYES, & LIMIT SWITCHES.



LIMIT TOLERANCES		DO NOT SCALE DRAWING	
OVER	0.125	MM-DD-YY	
0.125	0.125	DATE	11/14/1995
0.25	1.25	DRAWN BY	RJK
1.25	5	CHECKED BY	
5	15	APPROVED BY	
15	40	DATE	
40	80	INITIAL EON	3061
80	0.125	DATE ISSUED	1/12/2001
FINISH	1/2-1 REG	SCALE	9" = 1'

RTTE-HITE  
DOORS INC.

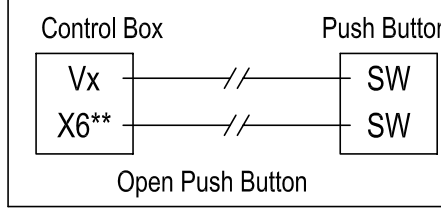
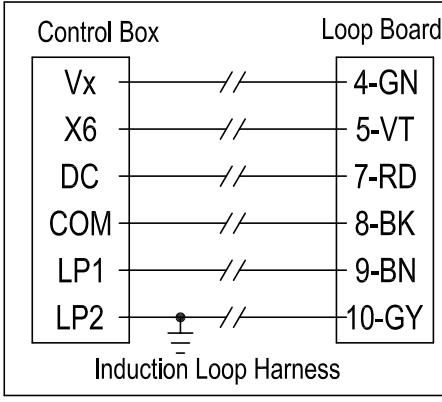
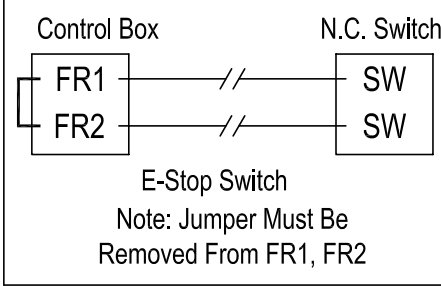
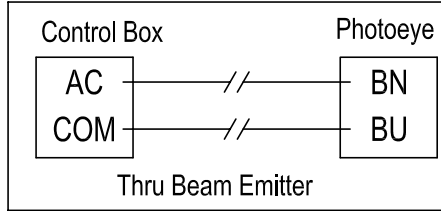
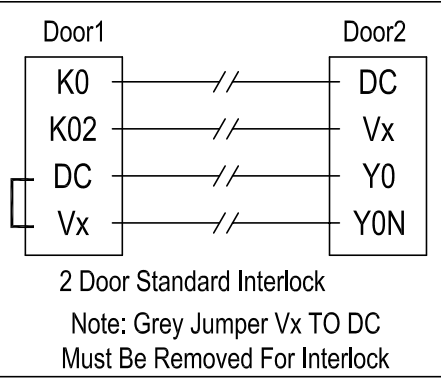
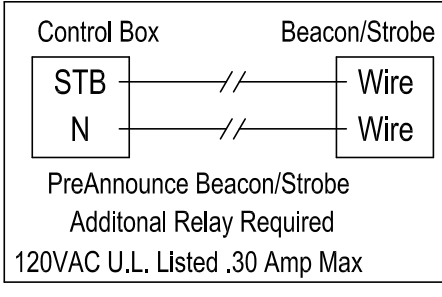
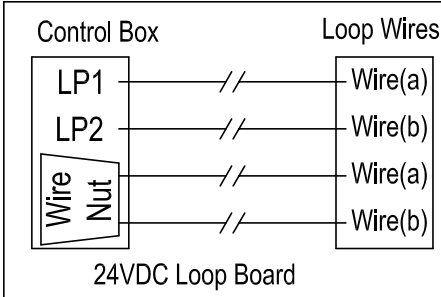
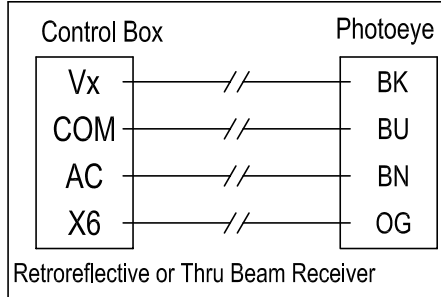
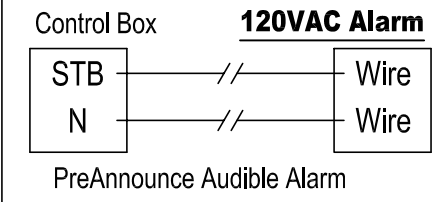
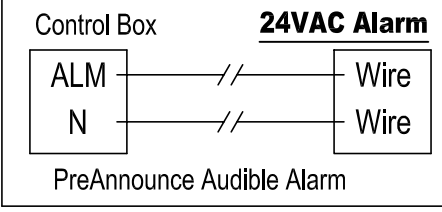
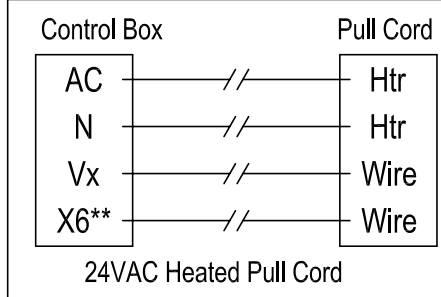
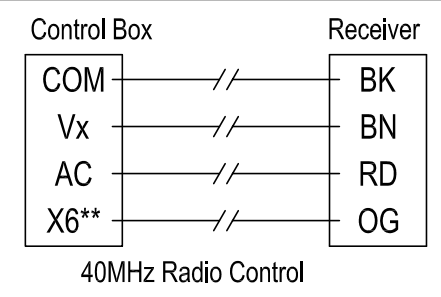
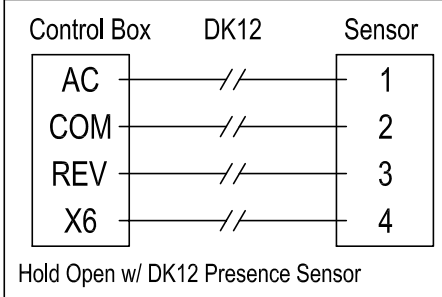
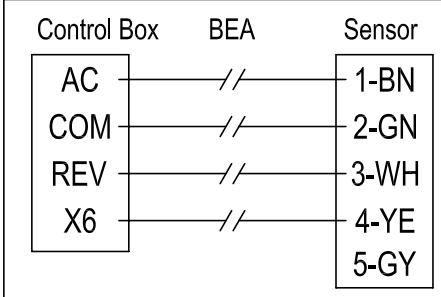
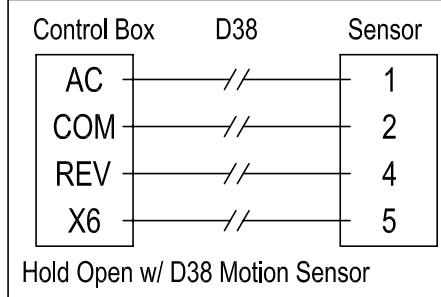
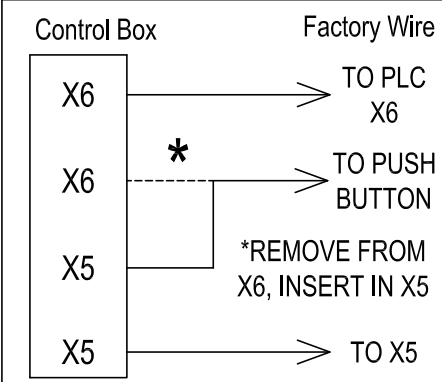
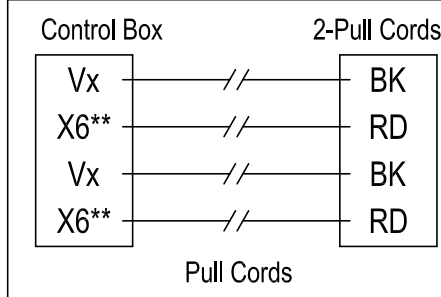
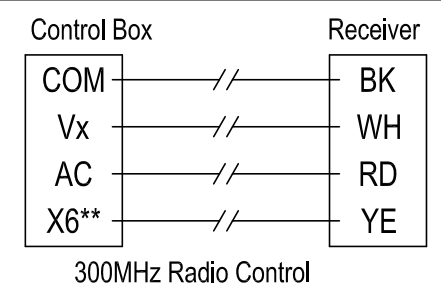
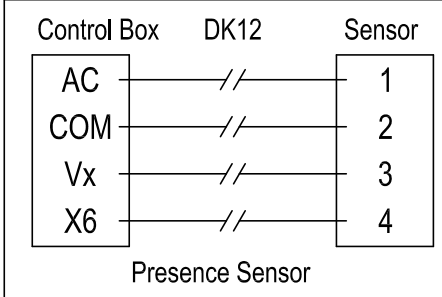
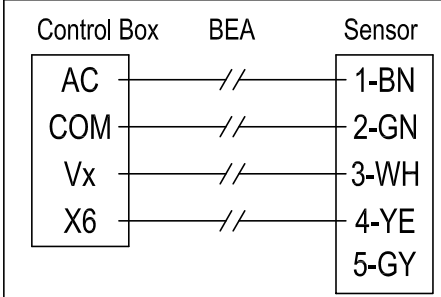
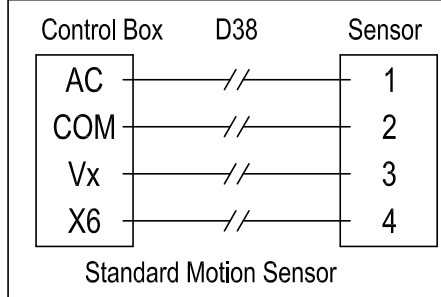
EXTERNAL FIELD WIRING DIAGRAM  
AC MOTOR  
8600

MODEL NUMBER  
8804E020

NEXT ASSEMBLY

REVISION HISTORY

REV	DESCRIPTION	ECN	DATE	BY	APPROVED
A	CHANGE LOOP BOARD	4848	9/7/2005	RPB	
B	ADD 120V ALARM	4994	2/20/2006	RPB	



ACTIVATION WIRING CONFIGURATIONS

Note: Terminals #X6 are automatic reclose.  
\*\*For true toggle operation use terminals #X5.  
(Pull cords, push button or radio controls only.)

ITEM	QTY	PART NO.	DESCRIPTION
PARTS LIST / MATERIAL			

INCH TOLERANCES			DO NOT SCALE DRAWING	
OVER	UP TO	+ / -	DATE	MM-DD-YY
0	0.125	0.005	DRAWN BY	8/19/2004
0.125	0.25	0.010	CHECKED BY	DATE
0.25	1.25	0.020	APPROVED BY	DATE
1.25	5	0.030	INITIAL ECN	4552
5	15	0.040	DATE ISSUED	8/19/2004
15	40	0.060	REF	
40	80	0.100		
80	-	0.125		
ANGLES	+/- 1 DEG			
FINISH				

**RITE-HITE<sup>®</sup>**  
**DOORS INC.**

TITLE  
**ACTIVATION WIRING DIAGRAM**  
**AC MOTOR**  
**8600**

SIZE	MODEL NUMBER	DWG NO	REV
B	8600	8804E044	B
SCALE	PART #	SHEET	
9"=1'			