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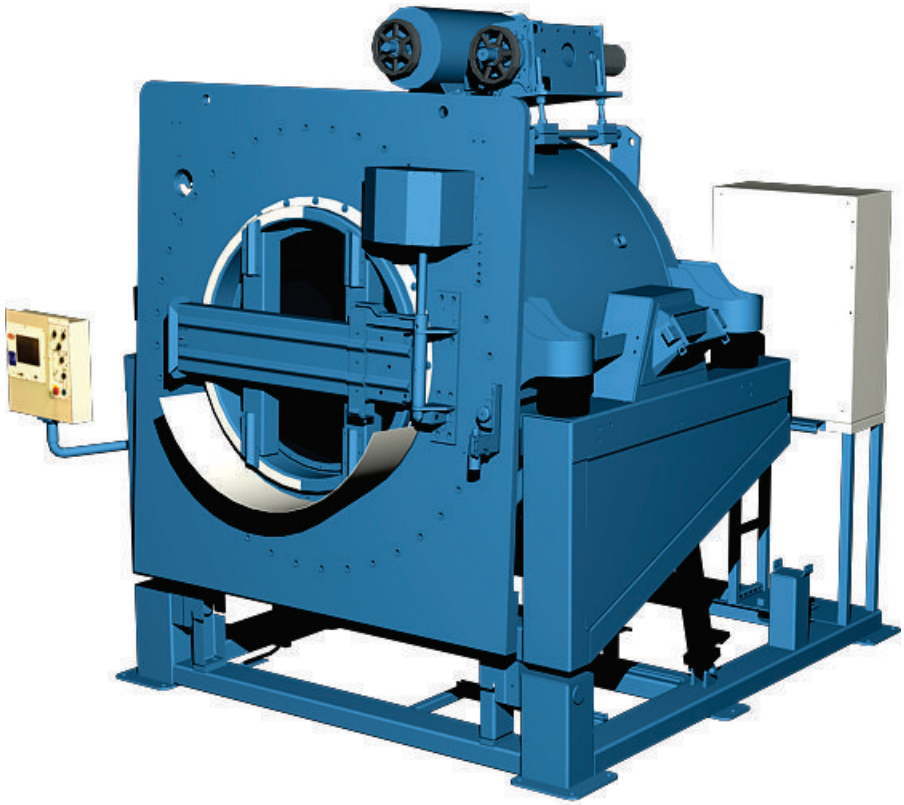
Schematic/Electrical Parts

48040H7K, H7R, M7K

68036H5K, M5K

72046M5K

MilTouch-EX™ Controls



Read the separate safety manual before installing, operating, or servicing

PELLERIN MILNOR CORPORATION POST OFFICE BOX 400, KENNER, LOUISIANA 70063-0400, U.S.A.

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COMPONENT PARTS LIST

W6H3NZPL/2022462N

COMPONENT NUMBER	FUNCTION OF THIS COMPONENT NUMBER	WHERE TO FIND THIS COMPONENT	MILNOR P/N	DESCRIPTION	LOCATION
	>>>CONTROL BOX LAYOUTS				
01	DETAIL-LOW VOLTAGE CONTROL BOX	W6H3NZTG1	B2T2014006	48040H7R/K LOW VOLT C-BOX	SEE FUNCTION
02	DETAIL-HIGH VOLTAGE CONTROL BOX - 68 & 72M5K	W6H3NZTG1	B2T2014015	48/68/72 H/M 7/5 R/K HV BOX	SEE FUNCTION
03	DETAIL-HIGH VOLTAGE CONTROL BOX - 48M5K	W6H3NZTG2	B2T2015005	48M7R/K HV BOX	SEE FUNCTION
04	DETAIL-POWER SUPPLIES	W6H3NZTG2	B2T2014012	MILTOUCH-EX POWER SUPY SET	SEE FUNCTION
05	DETAIL-CONTROL BOARDS INPUTS/OUTPUTS	W6H3NZTG3	B2T2014013	MTOUCH-EX W/E BDS IN/OUT LIST	SEE FUNCTION
06	DETAIL-VALVE SET	W6H3NZTG3	B2T2015003	48M7K, 68-72M5K VALVES	SEE FUNCTION
ACBA	**>>>ACCELEROMETERS**				
ACBA	BOARD-ACCELEROMETER	W6H3NZEB1	EACCLRM5	ASSY:ACCEL 1-5G ADXL 105+TEST	DOOR LATCH
ACBA	BOARD-ACCELEROMETER	W6H3NZEC	EACCLRM5	ASSY:ACCEL 1-5G ADXL 105+TEST	DOOR LATCH
BA	**>>>PRINTED CIRCUIT BOARDS**				
BAD-1	BOARD-ANALOG TO DIGITAL CONVERTER	W6H3NZBW	08BSADCT	BD: SERIAL A-D CONVERT->TEST	CONTROL BOX
BAS	BOARD-16 SNUBBER CIRCUITS	W6H3NZCF	08BNCMBT	COIN MACHINE SNUBBER->TESTED	CONTROL BOX
BAS	BOARD-16 SNUBBER CIRCUITS	W6H3NZEV	08BNCMBT	COIN MACHINE SNUBBER->TESTED	CONTROL BOX
BAS	BOARD-16 SNUBBER CIRCUITS	W6H3NZEVA	08BNCMBT	COIN MACHINE SNUBBER->TESTED	CONTROL BOX
BBAD-1	BOARD-BALANCE A-D	W6H3NZEB1	08BSBADCTE	SR BALANCE A-D BD EXTACTR-TEST	CONTROL BOX
BBAD-1	BOARD-BALANCE A-D	W6H3NZEC	08BSBADCTE	SR BALANCE A-D BD EXTACTR-TEST	CONTROL BOX
BDA-1	BOARD-DIGITAL TO ANALOG CONVERTOR	W6H3NZBW	08BSDACHT	BD:HI-RES SERIAL D-A->TEST	CONTROL BOX
BIO-1	BOARD-8OUTPUT/16INPUT #1	W6H3NZBW	08BS816CHT	BD 8OUT-16IN HIGH SPD->TEST	CONTROL BOX
BIO-2	BOARD-8OUTPUT/16INPUT #2	W6H3NZBW	08BS816CHT	BD 8OUT-16IN HIGH SPD->TEST	CONTROL BOX
BLB	BOARD-LEVEL TRANSDUCER	W6H3NZBW	08BNLTT	LEVEL TRANSDUCER BD->TEST	CONTROL BOX
BMTH-1	BOARD-3 CHANNEL MOTHER	W6H3NZBW	08BS3MTHAT	BD:SERIAL 3 CARD MOTHER->TEST	CONTROL BOX
BMTH-1	BOARD-3 CHANNEL MOTHER	W6H3NZEB1	08BS3MTHAT	BD:SERIAL 3 CARD MOTHER->TEST	CONTROL BOX
BMTH-2	BOARD-3 CHANNEL MOTHER	W6H3NZBW	08BS3MTHAT	BD:SERIAL 3 CARD MOTHER->TEST	CONTROL BOX
BO24-1	BOARD-24 OUTPUT #1	W6H3NZBW	08BSO24AT	BD:SERIAL 24 OUTPUT->TEST	CONTROL BOX
BO24-2	BOARD-24 OUTPUT #2	W6H3NZBW	08BSO24AT	BD:SERIAL 24 OUTPUT->TEST	CONTROL BOX
BO24-3	BOARD-24 OUTPUT #3	W6H3NZBW	08BSO24AT	BD:SERIAL 24 OUTPUT->TEST	CONTROL BOX
BPB	BOARD-ARM9 PROCESSOR+TOUCH SCREEN	W6H3NZBW	08BHA9D4T	ASSY:ARM9 PROC+8.4 OPTREX DSP-TESTED	PROCESSOR BX
BSP	BOARD-SPEED SENSING	W6H3NZBW	08BNDSRAT	BD DRY SAFETY ROTATION->TEST	CONTROL BOX
CB	**>>>CIRCUIT BREAKER**				
CB1	CIRCUIT BREAKER-HYDRAULIC PUMP	W6H3NZVP	09FC016CAA	IEC MINI CIR.BREAK 16A 480V3P	CONTROL BOX
CB2	CIRCUIT BREAKER-RECIRCULATION PUMP	W6H3NZVP	09FC010CAA	IEC MINI CIR.BREAK 10A 480V3P	CONTROL BOX
CD	**>>>RELAY DELAY**				

COMPONENT PARTS LIST

COMPONENT NUMBER	FUNCTION OF THIS COMPONENT NUMBER	WHERE TO FIND THIS COMPONENT	MILNOR P/N	DESCRIPTION	LOCATION
CDDH	DELAY-HDRAULIC DOOR OPEN > 3/6/2019	W6H3NZRH	09CF001071	TDR F1S 2PDT 11PIN 240V60C	CONTROL BOX
CDDH	DELAY-HDRAULIC DOOR OPEN < 3/6/2019	W6H3NZRH	09CA0100A71	ADJUSTABLE TIME DELAY 10S OMRON 200-23	CONTROL BOX
CL	**>>>RELAY-LATCH**				
CLA	LATCH-DOOR SEAL	W6H3NZS+A	09CL2C-C71	RELAY-LATCH DPDT 240V 2-COIL	CONTROL BOX
CLA	LATCH-DOOR SEAL	W6H3NZS+	09CL2C-C71	RELAY-LATCH DPDT 240V 2-COIL	CONTROL BOX
CLA-CHOKE	CHOKE-DOOR SEAL LATCH	W6H3NZS+A	10YCLCHOKE	LATCH HARNES: RF CHOKE	CONTROL BOX
CP	**>>>PHOTOEYE**				
CPLC	LIGHT CURTAIN-EMITTER/RECEIVER	W6H3NZLC	09RPE018LBA	LITE BEAM EMITTER/RECEIVER 600MM BANN	SIDE OF MACH
CPLCC	LIGHT CURTAIN-EMITTER/RECEIVER	W6H3NZLC	09RPE018LBC	LITE BEAM MUTING RELAY MODULE	LOW VOLT BOX
CPSP	PHOTOEYE-SPEED	W6H3NZBW	09RPE013Q	SENSOR E-Z BEAM QUICK CONN DC	MAIN PULLEY
CR	**>>>RELAY-PILOT OR CONTROL**				
CRA	RELAY-DOOR SEALED	W6H3NZS+A	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	CONTROL BOX
CRA	RELAY-DOOR SEALED	W6H3NZS+	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	CONTROL BOX
CRAD	RELAY-BASE BLOCK ON MILTOUCH POWER UP	W6H3NVVP	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	LOW VOLT BOX
CRBO	RELAY-BEAM OK	W6H3NZLC	09C024E24	RELAY 4PDT DIFGLD 14PIN 24DC	CONTROL BOX
CRBO	RELAY-GATE IS CLOSED	W6H3NZLC	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	CONTROL BOX
CRBSL	RELAY-SPEED IS AT OR ABOVE DRAIN SPEED	W6H3NZLC	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	CONTROL BOX
CRC01	RELAY-INTERPRET RELAY #1	W6H3NZCP	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	INT RELAY BX
CRC02	RELAY-INTERPRET RELAY #2	W6H3NZCP	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	INT RELAY BX
CRC03	RELAY-INTERPRET RELAY #3	W6H3NZCP	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	INT RELAY BX
CRC04	RELAY-INTERPRET RELAY #4	W6H3NZCP	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	INT RELAY BX
CRC05	RELAY-INTERPRET RELAY #5	W6H3NZCP	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	INT RELAY BX
CRC06	RELAY-INTERPRET RELAY #6	W6H3NZCP	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	INT RELAY BX
CRC07	RELAY-INTERPRET RELAY #7	W6H3NZCP	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	INT RELAY BX
CRC08	RELAY-INTERPRET RELAY #8	W6H3NZCP	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	INT RELAY BX
CRC09	RELAY-INTERPRET RELAY #9	W6H3NZCP	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	INT RELAY BX
CRC10	RELAY-INTERPRET RELAY #10	W6H3NZCP	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	INT RELAY BX
CRC11	RELAY-INTERPRET RELAY #11	W6H3NZCP	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	INT RELAY BX
CRC12	RELAY-INTERPRET RELAY #12	W6H3NZCP	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	INT RELAY BX
CRC13	RELAY-INTERPRET RELAY #13	W6H3NZCP	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	INT RELAY BX
CRC14	RELAY-INTERPRET RELAY #14	W6H3NZCP	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	INT RELAY BX
CRC15	RELAY-INTERPRET RELAY #15	W6H3NZCP	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	INT RELAY BX
CRD	RELAY-DOOR UNLATCH	W6H3NZS+A	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	CONTROL BOX

COMPONENT PARTS LIST

COMPONENT NUMBER	FUNCTION OF THIS COMPONENT NUMBER	WHERE TO FIND THIS COMPONENT	MILNOR P/N	DESCRIPTION	LOCATION
CRD	RELAY-DOOR UNLATCH	W6H3NZS+	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	CONTROL BOX
CRDB	RELAY-RESISTOR TEMP HIGH	W6H3NZS+A	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	CONTROL BOX
CRDB	RELAY-DOOR UNLATCH HIGH	W6H3NZS+	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	CONTROL BOX
CRDOA	RELAY-DOOR FULL OPEN	W6H3NZRH	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	CONTROL BOX
CREI	RELAY-DOOR OPEN AND UNLATCHED	W6H3NZS+A	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	CONTROL BOX
CREI	RELAY-OK TO JOG	W6H3NZS+	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	CONTROL BOX
CRLPB	RELAY-LIGHT BEAM BY PASS	W6H3NZLC	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	CONTROL BOX
CRS+	RELAY-START 3-WIRE	W6H3NZS+A	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	CONTROL BOX
CRS+	RELAY-START 3-WIRE	W6H3NZS+	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	CONTROL BOX
CRS+A	RELAY-START 3-WIRE (SLAVE)	W6H3NZS+A	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	CONTROL BOX
CRS+B	RELAY-START 3-WIRE (SLAVE)	W6H3NZS+A	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	CONTROL BOX
CRSG	RELAY-SIGNAL FOR ROTATION LED BEACON	W6H3NZS+A	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	CONTROL BOX
CRWJ	RELAY-JOG	W6H3NZHDA	09C024D71	RELAY 4PDT DIFGLD 14PN 240V W/LED	CONTROL BOX
CS	**>>>CONTACTOR-MOTOR STARTER**				
CSDO	CONTACTOR-HYDRAULIC PUMP	W6H3NZHD	09MC08C371	16A 3P MCS CONT NR 240V5/6	CONTROL BOX
CSDO	CONTACTOR-HYDRAULIC PUMP	W6H3NZRH	09MC08C371	16A 3P MCS CONT NR 240V5/6	CONTROL BOX
CSR	CONTACTOR-RECIRCULATE	W6H3NZEV	09MC04E371	32A 3P CONT.NR 240V5/6 IEC	CONTROL BOX
CSR	CONTACTOR-RECIRCULATE	W6H3NZEVA	09MC04E371	32A 3P CONT.NR 240V5/6 IEC	CONTROL BOX
CSVP	CONTACTOR-INVERTER 48040 LOW VOLTAGE	W6H3NZS+A	09MC08N371	72A 3P MCS CONT NR 240V5/6	CONTROL BOX
CSVP	CONTACTOR-INVERTER 68036 LOW VOLTAGE	W6H3NZS+A	09MC08T371	115A 3P MCS CONT. NR 240V5/6	CONTROL BOX
CSVP	CONTACTOR-INVERTER 48040 LOW VOLTAGE	W6H3NZS+	09MC08N371	72A 3P MCS CONT NR 240V5/6	CONTROL BOX
CSVS	CONTACTOR-INVERTER 48040 HIGH VOLTAGE	W6H3NZS+A	09MC08G371	37A 3P MCS CONT NR 240V5/6	CONTROL BOX
CSVS	CONTACTOR-INVERTER 68036 HIGH VOLTAGE	W6H3NZS+A	09MC08N371	72A 3P MCS CONT NR 240V5/6	CONTROL BOX
CSVS	CONTACTOR-INVERTER 48040 HIGH VOLTAGE	W6H3NZS+	09MC08G371	37A 3P MCS CONT NR 240V5/6	CONTROL BOX
EB	**>>>BUZZER OR AUDIBLE SIGNAL**				
EBSG	BUZZER-SIGNAL AUDIBLE	W6H3NZS+A	09H016	BUZZ. 230V W/6-32 CTR+6" LEADS	SWITCH PANEL
EBSG	BUZZER-SIGNAL AUDIBLE	W6H3NZS+	09H016	BUZZ. 230V W/6-32 CTR+6" LEADS	SWITCH PANEL
EF	**>>>FUSE OR FUSE HOLDER**				
EF01	FUSE-CONTROL CIRCUIT	W6H3NZLV	09FF006AMA	FUSE BK/ABC 6 AMP 250V BUSS	CONTROL BOX
EF02	FUSE-CONTROL CIRCUIT	W6H3NZLV	09FF006AMA	FUSE BK/ABC 6 AMP 250V BUSS	CONTROL BOX
EF1	FUSE-PRIMARY INCOMING VOLTAGE	W6H3NZLV	09FF005AWN	BUSE BUSS KTK 5AMP 600V=HPS HOLDER	CONTROL BOX
EF2	FUSE-PRIMARY INCOMING VOLTAGE	W6H3NZLV	09FF005AWN	BUSE BUSS KTK 5AMP 600V=HPS HOLDER	CONTROL BOX
EL	**>>>LIGHT-PILOT OR INDICATOR**				

COMPONENT PARTS LIST

W6H3NZPL/2022462N

COMPONENT NUMBER	FUNCTION OF THIS COMPONENT NUMBER	WHERE TO FIND THIS COMPONENT	MILNOR P/N	DESCRIPTION	LOCATION
ELLB-E/R	LIGHT CURTAIN-EMITTER/RECEIVER	W6H3NZLC	09RPE018LBA	LITE BEAM EMITTER/RECEIVER 600MM BANN	CONTROL BOX
ELLB-PS	LIGHT CURTAIN POWER SUPPLY	W6H3NZLC	09RPE018LBD	LITE BEAM SAFETY RATING 24VDC PWR SPLY	CONTROL BOX
ELLB-RM	LIGHT CURTAIN RELAY MODULE	W6H3NZLC	09RPE018LBC	LITE BEAM MUTING RELAY MODULE	CONTROL BOX
ELLPB	LIGHT-LIGHT BEAM BY PASSED BEACON	W6H3NZLC	09H025V71	BEACON ROTARY 8.5"DIA AMBER	TOP OF CNTR BX
ELLPB	LIGHT-LIGHT BEAM BY PASSED LED BEACON	W6H3NZFS	09H025V12	BEACON ROTARY AMBER LED 12VDC	TOP OF CNTR BX
ELSG	LIGHT-SIGNAL VISUAL	W6H3NZS+A	09J060A71	LAMP 1/2" AMB 250V IDI 1051QC3	SWITCH PANEL
ELSG	LIGHT-SIGNAL VISUAL	W6H3NZS+	09J060A71	LAMP 1/2" AMB 250V IDI 1051QC3	SWITCH PANEL
ELSG	LIGHT-OPTIONAL ROTATION LED BEACON	W6H3NZFS	09H025V12	BEACON ROTARY AMBER LED 12VDC	TOP OF CNTR BX
EM	**>>>METERS**				
EMHR	METER-RUN TIME IN HOURS	W6H3NZFS	38C203	HOUR METER 3.8IN 3 HOLE MTG 230V/60C	CONTROL BOX
ES	**>>>POWER SUPPLY-ELECTRONIC**				
ESLC	POWER SUPPLY-LIGHT CURTAIN	W6H3NZLC	09RPE018LBD	LITE BEAM SAFETY RATING 24VDC POWER S	LOW VOLT BOX
ESPS	POWER SUPPLY-CARD CAGE	W6H3NZBW	08PSS3401T	40 WATT POWER SUPPLY TESTED	CONTROL BOX
ESPS-2	POWER SUPPLY-MICROPROCESSOR	W6H3NZBW	08PSS2401T	PRW SUPY 40WATT 120/240V TO 12V TESTED	CONTROL BOX
ESPS-2	POWER SUPPLY-OPTIONAL BEACON LIGHT	W6H3NZFS	08PSS2401T	PRW SUPY 40WATT 120/240V TO 12V TESTED	CONTROL BOX
ET	**>>>THERMAL OVERLOAD DEVICES**				
ETDO	OVERLOAD-HYDRAULIC PUMP MOTOR	W6H3NZHD	09FTD0037T	MCS OL RELAY ADJ. RANGE 3.7-12	CONTROL BOX
ETDO	OVERLOAD-HYDRAULIC PUMP MOTOR	W6H3NZRH	09FTD0037T	E1 PLUS OL RELAY 3.2-16A	CONTROL BOX
ETVS	OVERLOAD-VARIABLE SPEED INVERTER	W6H3NZVP	09FTD0230T	MCS OL RELAY ADJ. RANGE 23-75	CONTROL BOX
EX	**>>>TRANSFORMERS**				
EX37-1	TRANSFORMER-208 TO 240V	W6H3NZLV	09UB25AU71	AUTOXFMR 208V/230V 250VA UL/CSA	CONTROL BOX
EX37-2	TRANSFORMER-380/480 TO 240VAC	W6H3NZLV	09UA025AAB	XFMR 380-480PRI/120-240SEC250V	CONTROL BOX
EX96A	TRANSFORMER-600V TO 480V -48040H7	W6H3NZMT6	09US050A96	XFMR 1PH 5KVA 240/480X120/240	SIDE OF MACH
EX96A	TRANSFORMER-600V TO 480V -68036H5	W6H3NZMT6	09US100A96	XFMR 1PH 10KVA 240/480X120/240	SIDE OF MACH
EX96A	TRANSFORMER-600V TO 480V -72044H5	W6H3NZMT6	09US250A96	XFMR 1PH 25KVA 240/480X120/240	SIDE OF MACH
EX96B	TRANSFORMER-600V TO 480V -48040H7	W6H3NZMT6	09US050A96	XFMR 1PH 5KVA 240/480X120/240	SIDE OF MACH
EX96B	TRANSFORMER-600V TO 480V -68036H5	W6H3NZMT6	09US100A96	XFMR 1PH 10KVA 240/480X120/240	SIDE OF MACH
EX96B	TRANSFORMER-600V TO 480V -72044H5	W6H3NZMT6	09US250A96	XFMR 1PH 25KVA 240/480X120/240	SIDE OF MACH
INVD1-H	BRAKING UNIT-68036H5K 380-480VOLTS	W6H3NZVP	09MVBT25HC	BRAKE MODULE-OPEN CHASSIS	CONTROL BOX
INVD1-L	BRAKING UNIT-68036H5K 200-240VOLTS	W6H3NZVP	09MVBT25LC	BRAKEMODULE OPEN CHASIS INVERT	CONTROL BOX
MT	**>>>MOTORS**				
MTD	MOTOR-DRIVE	W6H3NZVP	MESSAGE SO	SEE SPECIFIC COMPONENT+NAMEPLATE	MACHINE TOP
MTDO	MOTOR-HYDRAULIC PUMP	W6H3NZHD	MESSAGE SO	SEE SPECIFIC COMPONENT+NAMEPLATE	MACHINE REAR

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COMPONENT PARTS LIST

COMPONENT NUMBER	FUNCTION OF THIS COMPONENT NUMBER	WHERE TO FIND THIS COMPONENT	MILNOR P/N	DESCRIPTION	LOCATION
MTDO	MOTOR-HYDRAULIC PUMP	W6H3NZRH	39T050CAN	5HP 4P TEFC 208-230/460 60C	MACHINE REAR
MTLF	FILTER-INVERTER/MOTOR POWER	W6H3NZS+A	09MVFILTR1	INCOME POWER FILTER CAP	CONTROL BOX
MTLF	FILTER-INVERTER/MOTOR POWER	W6H3NZS+	09MVFILTR1	INCOME POWER FILTER CAP	CONTROL BOX
MTVS	FAN-INVERTER COOLING	W6H3NZS+A	13AF235A71	FAN 235CFM 230V 50/60	BACK C-BOX
MTVS	FAN-INVERTER COOLING	W6H3NZS+	13AF235A71	FAN 235CFM 230V 50/60	BACK C-BOX
MVB	**>>>INVERTER BRAKING UNIT**				
MVDBR	RESISTOR-DYNAMIC BRAKE	W6H3NZVP	09MV100RES	RESIST 100 OHM 225WATT ADJ	BELOW C-BX
MVFLT	INV FILTER-DRIVE	W6H3NZVP	09MVFILTR1	INCOME POWER FILTER CAP	CONTROL BOX
MVI	**>>>MOTOR POWER INVERTERS**				
MVINV-H	INVERTER-4840H7K/H7R 380-460 VOLTS	W6H3NZVP	09MWE03996	GA800 INVERTER 39 AMP 460V	CONTROL BOX
MVINV-H	INVERTER-4840H7K/H7R 380-460 VOLTS	W6H3NZVP	09MWA03996	INVERTER 39AMPS 480V F7	CONTROL BOX
MVINV-H	INVERTER-6836H5K 380-460 VOLTS	W6H3NZVP	09MWE07596	GA800 INVERTER 75 AMP 460V	CONTROL BOX
MVINV-H	INVERTER-6836H5K 380-460 VOLTS	W6H3NZVP	09MWC07596	A1000 INVERTER 75 AMP	CONTROL BOX
MVINV-L	INVERTER-4840H7K/F7R 200-240VOLTS	W6H3NZVP	09MWD04774	GA500 INVERTER 47 AMP 230V	CONTROL BOX
MVINV-L	INVERTER-4840H7K/F7R 200-240VOLTS	W6H3NZVP	09MWA07174	F7 INVERTER 71AMP	CONTROL BOX
MVINV-L	INVERTER-6836H5K 200-240VOLTS	W6H3NZVP	09MWE14574	GA800 INVERTER 145 AMP 230V	CONTROL BOX
MVINV-L	INVERTER-6836H5K 200-240VOLTS	W6H3NZVP	09MWC14574	A1000 INVERTER 145AMPS	CONTROL BOX
PX	**>>>PROXIMITY SWITCHES**				
PXDO	PROX SWITCH-DOOR FULL OPEN	W6H3NZRH	09RPS30CAS	PROXSW QK CONN 30M NO-AC SHLD	DOOR
PXRTD	PROX SW-REAR FULL DOWN	W6H3NZRH	09RPS30CAS	PROXSW QK CONN 30M NO-AC SHLD	SIDE OF MACH
PXRTU	PROX SW-REAR FULL UP	W6H3NZRH	09RPS30CAS	PROXSW QK CONN 30M NO-AC SHLD	SIDE OF MACH
PXWP	PROX SW-AT WASH LEVEL	W6H5KZ1A	09RPS30ADS	PROX SW QK CONN 30M NO-DC SHLD	SIDE OF MACH
RS	**>>RESISTORS**				
RS01	RESISTOR 16 OHM 25W	W6H3NZBW	ECEUV8R	LOAD RESISTOR ASSY MILTOUCH	LOW VOLT BOX
RS02	RESISTOR 40 OHM 25W	W6H3NZBW	ECEUMTRES	LOAD RESISTOR ASSY MILTOUCH EX	LOW VOLT BOX
SH	**>>>SWITCH-HAND OPERATED**				
SH01	SWITCH-208-240V SELECT	W6H3NZLV	09N050	TOGSW SPDT NO OFF 10A250V	CONTROL BOX
SHD	SWITCH-ALTERNATE DRAIN	W6H3NZDR	09N400CBNO	CONTACT BLK ONLY 1-NO SQD#ZB2BE101	ALT DRAIN BX
SHDO	SWITCH-OPEN DOOR	W6H3NZRH	09N405PB12	SWASS PB BLUE 1NO/2NC	SWITCH PANEL
SHDOH	SWITCH-DOOR OPEN	W6H3NZS+A	09N405S320	SWASS S3W 2NO	SWITCH PANEL
SHDOH	SWITCH-DOOR OPEN	W6H3NZS+	09N405S320	SWASS S3W 2NO	SWITCH PANEL
SHDOJ	SWITCH-DOOR OPEN JOG	W6H3NZHDA	09N405PB10	SWASS PBBK 1NO	SWITCH PANEL
SHDOJ	SWITCH-DOOR OPEN JOG	W6H3NZRH	09N405PB10	SWASS PBBK 1NO	SWITCH PANEL

COMPONENT PARTS LIST

COMPONENT NUMBER	FUNCTION OF THIS COMPONENT NUMBER	WHERE TO FIND THIS COMPONENT	MILNOR P/N	DESCRIPTION	LOCATION
SHMD	SWITCH-MILDATA LOCAL/REMOTE	W6H3NZEVA	09N405M210	SWASS M2W 1NO	PROCESSOR BX
SHRM	SWITCH-MOVE	W6H3NZRH	09N405S320	SWASS S3W 2NO	SWITCH PANEL
SHSAD	SWITCH-SAMPLE DESIRED	W6H3NZDR	09N400CBNO	CONTACT BLK ONLY 1-NO SQD#ZB2BE101	SAMPLE SWPL
SHSMA	SWITCH-MASTER	W6H3NZS+A	09N405M210	SWASS M2W 1NO	SWITCH PANEL
SHSMA	SWITCH-MASTER	W6H3NZS+	09N405M210	SWASS M2W 1NO	SWITCH PANEL
SHSOE	SWITCH-EMERGENCY STOP	W6H3NZS+A	09N505	SW ASSY EMER STOP	SWITCH PANEL
SHSOE	SWITCH-EMERGENCY STOP	W6H3NZS+	09N505	SW ASSY EMER STOP	SWITCH PANEL
SHSOE	SWITCH-EMERGENCY STOP ILLUMINATED	W6H3NSFS	09N507B	ESTOP ILLUMINATED 240VAC 1-NC CONTACT	SWITCH PANEL
SHWDO	SWITCH-DOOR OPEN/CLOSE	W6H3NZHDA	09N405S320	SWASS S3W 2NO	SWITCH PANEL
SHWDO	SWITCH-DOOR OPEN/CLOSE	W6H3NZRH	09N405S320	SWASS S3W 2NO	SWITCH PANEL
SHWJ	SWITCH-JOG	W6H3NZHDA	09N405PB11	SWASS PBBK 1NO/1NC	SWITCH PANEL
SHWJ	SWITCH-JOG	W6H3NZVP	09N405S310	SWASS S3W 1NO	SWITCH PANEL
SK	**>>>SWITCH-KEY OPERATED**				
SKLPB	SWITCH-LIGHT CURTAIN BY PASS	W6H3NZLC	09N127C	KEYSW SPST 7A120VAC SCREW TERM	CONTROL BOX
SM	**>>>SWITCH-MECHANICAL OPERATED**				
SMEB	SWITCH-EXCURSION	W6H3NZI1	09R008A	MICSW SPDT BZE6-2RN183	UNDER SHELL
SMPLL	SWITCH-DOOR CLOSED	W6H3NZS+A	09R012	MICSW SPDT PAINTED BZE6-RN 01	DOOR LATCH
SMPLL	SWITCH-DOOR CLOSED	W6H3NZS+	09R012	MICSW SPDT PAINTED BZE6-RN 01	DOOR LATCH
SMWVB	SWITCH-VIBRATION	W6H3NZS+A	09R020	SWITCH NC VIBR#WZ-2RW84429-P52	CONTROL BOX
SMWVB	SWITCH-VIBRATION	W6H3NZS+	09R020	SWITCH NC VIBR#WZ-2RW84429-P52	CONTROL BOX
SP	**>>>SWITCH-PRESSURE OPERATED**				
SPBP	PRESSURE SW-BEARING SEAL	W6H3NZI1	09N082B05	PRESSW NASON CLOSE @ 5 LB	AIR VALVE BX
SPD	PRESSURE SW-LEVEL OK TO OPEN DOOR	W6H3NZS+A	09N086A	PRESS SWITCH EATON #738-761	CONTROL BOX
SPD	PRESSURE SW-LEVEL OK TO OPEN DOOR	W6H3NZS+	09N086A	PRESS SWITCH EATON #738-761	CONTROL BOX
SPOF	PRESSURE SW-OVERFLOW	W6H3NZEV	09N069	PRESS SW 4"WC INVENSYS 738-719	LEVEL SW BOX
SPOF	PRESSURE SW-OVERFLOW	W6H3NZEVA	09N069	PRESS SW 4"WC INVENSYS 738-719	LEVEL SW BOX
ST	**>>>SWITCH-TEMPERATURE OPERATED**				
STDB	SWITCH-THERMOSTAT	W6H3NZS+A	30RA175T	THERMOSTAT OPEN AT 175F	CONTROL BOX
VE	**>>>VALVE-ELECTRIC OPERATED**				
VEAD	VALVE-ALTERNATE DRAIN	W6H3NZDR	96R301A71	1/8" AIRPILOT 3W NC 240V50/60	ALT DRAIN BX
VEBP	VALVE-BEARING PRESSURE	W6H3NZEV	96TBC2BA71	1/4" N/C 2WAY 220V50/60C VALVE	AIR VALVE BX
VEBP	VALVE-BEARING PRESSURE	W6H3NZEVA	96TBC2BA71	1/4" N/C 2WAY 220V50/60C VALVE	AIR VALVE BX
VEC01	VALVE-CHEMICAL #1 FLUSH	W6H3NZCF	96P013G71	3/4" 2WAYPLASTCVAL 240V/60C	SUPPLY INJEC

COMPONENT PARTS LIST

COMPONENT NUMBER	FUNCTION OF THIS COMPONENT NUMBER	WHERE TO FIND THIS COMPONENT	MILNOR P/N	DESCRIPTION	LOCATION
VEC02	VALVE-CHEMICAL #2 FLUSH	W6H3NZCF	96P013G71	3/4" 2WAYPLASTCVAL 240V/60C	SUPPLY INJEC
VEC03	VALVE-CHEMICAL #3 FLUSH	W6H3NZCF	96P013G71	3/4" 2WAYPLASTCVAL 240V/60C	SUPPLY INJEC
VEC04	VALVE-CHEMICAL #4 FLUSH	W6H3NZCF	96P013G71	3/4" 2WAYPLASTCVAL 240V/60C	SUPPLY INJEC
VEC05	VALVE-CHEMICAL #5 FLUSH	W6H3NZCF	96P013G71	3/4" 2WAYPLASTCVAL 240V/60C	SUPPLY INJEC
VEC06	VALVE-CHEMICAL #6	W6H3NZCX	MESSAGE EW	SUPPLIED BY OTHERS	SUPPLY VLVST
VEC07	VALVE-CHEMICAL #7	W6H3NZCX	MESSAGE EW	SUPPLIED BY OTHERS	SUPPLY VLVST
VEC08	VALVE-CHEMICAL #8	W6H3NZCX	MESSAGE EW	SUPPLIED BY OTHERS	SUPPLY VLVST
VEC09	VALVE-CHEMICAL #9	W6H3NZCX	MESSAGE EW	SUPPLIED BY OTHERS	SUPPLY VLVST
VEC10	VALVE-CHEMICAL #10	W6H3NZCX	MESSAGE EW	SUPPLIED BY OTHERS	SUPPLY VLVST
VEC11	VALVE-CHEMICAL #11	W6H3NZCX	MESSAGE EW	SUPPLIED BY OTHERS	SUPPLY VLVST
VEC12	VALVE-CHEMICAL #12	W6H3NZCX	MESSAGE EW	SUPPLIED BY OTHERS	SUPPLY VLVST
VEC13	VALVE-CHEMICAL #13	W6H3NZCX	MESSAGE EW	SUPPLIED BY OTHERS	SUPPLY VLVST
VEC14	VALVE-CHEMICAL #14	W6H3NZCX	MESSAGE EW	SUPPLIED BY OTHERS	SUPPLY VLVST
VEC15	VALVE-CHEMICAL #15	W6H3NZCX	MESSAGE EW	SUPPLIED BY OTHERS	SUPPLY VLVST
VEDL	VALVE-DOOR UNLATCH	W6H3NZS+A	96R301A71	1/8" AIRPILOT 3W NC 240V50/60	AIR VALVE BOX
VEDL	VALVE-DOOR UNLATCH	W6H3NZS+	96R301A71	1/8" AIRPILOT 3W NC 240V50/60	AIR VALVE BOX
VEDRR	VALVE-REUSE DRAIN	W6H3NZEV	96R301A71	1/8" AIRPILOT 3W NC 240V50/60	AIR VALVE BX
VEDRR	VALVE-REUSE DRAIN	W6H3NZEVA	96R301A71	1/8" AIRPILOT 3W NC 240V50/60	AIR VALVE BX
VEDRS	VALVE-DRAIN	W6H3NZEV	96D350A71	DRINVAL 3"MTRDR 240V 50/60C	REAR OF MACH
VEDRS	VALVE-DRAIN	W6H3NZEVA	96D350A71	DRINVAL 3"MTRDR 240V 50/60C	REAR OF MACH
VEEB1	VALVE-BALANCE RIB 1	W6H3NZEB2	96P053A71	3/4"VALVE 240V HAYS#6-2110IS-240	REAR OF MACH
VEEB2	VALVE-BALANCE RIB 2	W6H3NZEB2	96P053A71	3/4"VALVE 240V HAYS#6-2110IS-240	REAR OF MACH
VEEB3	VALVE-BALANCE RIB 3	W6H3NZEB2	96P053A71	3/4"VALVE 240V HAYS#6-2110IS-240	REAR OF MACH
VEFL	VALVE-FLUSH	W6H3NZCF	96P013G71	3/4" 2WAYPLASTCVAL 240V/60C	SUPPLY INJEC
VEHDC	VALVE-HYDRAULIC DOOR CLOSED	W6H3NZHD	96RH706E71	VLVPARKER 220V50/240V60 7GPM	MACHINE REAR
VEHDC	VALVE-HYDRAULIC DOOR CLOSED	W6H3NZHDA	96RH706E71	VLVPARKER 220V50/240V60 7GPM	MACHINE REAR
VEHDO	VALVE-HYDRAULIC DOOR OPEN	W6H3NZHD	96RH706E71	VLVPARKER 220V50/240V60 7GPM	MACHINE REAR
VEHDO	VALVE-HYDRAULIC DOOR OPEN	W6H3NZHDA	96RH706E71	VLVPARKER 220V50/240V60 7GPM	MACHINE REAR
VEHTD	VALVE-HYDRAULIC TILT DOWN	W6H3NZRH	96RH711E71	DIRECTIONAL CNT VLV D05NG10 230V	MACHINE REAR
VEHTU	VALVE-HYDRAULIC TILT UP	W6H3NZRH	96RH711E71	DIRECTIONAL CNT VLV D05NG10 230V	MACHINE REAR
VEMTM	VALVE-MACHINE TO MACHINE	W6H3NZEV	96R301A71	1/8" AIRPILOT 3W NC 240V50/60	AIR VALVE BX
VEMTM	VALVE-MACHINE TO MACHINE	W6H3NZEVA	96R301A71	1/8" AIRPILOT 3W NC 240V50/60	AIR VALVE BX
VEMTT	VALVE-MACHINE TO TANK	W6H3NZEV	96R301A71	1/8" AIRPILOT 3W NC 240V50/60	AIR VALVE BX

COMPONENT PARTS LIST

COMPONENT NUMBER	FUNCTION OF THIS COMPONENT NUMBER	WHERE TO FIND THIS COMPONENT	MILNOR P/N	DESCRIPTION	LOCATION
VEMTT	VALVE-MACHINE TO TANK	W6H3NZEVA	96R301A71	1/8" AIRPILOT 3W NC 240V50/60	AIR VALVE BX
VEPPO	VALVE-DOOR SEAL	W6H3NZS+A	96R302A71	1/8" AIRPILOT 3W NO 240V50/60	AIR VALVE BOX
VEPPO	VALVE-DOOR SEAL	W6H3NZS+	96R302A71	1/8" AIRPILOT 3W NO 240V50/60	AIR VALVE BOX
VESTM	VALVE-STEAM	W6H3NZEV	96R301A71	1/8" AIRPILOT 3W NC 240V50/60	AIR VALVE BX
VESTM	VALVE-STEAM	W6H3NZEVA	96R301A71	1/8" AIRPILOT 3W NC 240V50/60	AIR VALVE BX
VEWC	VALVE-COLD WATER	W6H3NZEV	96R301A71	1/8" AIRPILOT 3W NC 240V50/60	AIR VALVE BX
VEWC	VALVE-COLD WATER	W6H3NZEVA	96R301A71	1/8" AIRPILOT 3W NC 240V50/60	AIR VALVE BX
VEWH	VALVE-HOT WATER	W6H3NZEV	96R301A71	1/8" AIRPILOT 3W NC 240V50/60	AIR VALVE BX
VEWH	VALVE-HOT WATER	W6H3NZEVA	96R301A71	1/8" AIRPILOT 3W NC 240V50/60	AIR VALVE BX
VEWVX	VALVE-EXTRA WATER	W6H3NZEV	96R301A71	1/8" AIRPILOT 3W NC 240V50/60	AIR VALVE BX
VEWVX	VALVE-EXTRA WATER	W6H3NZEVA	96R301A71	1/8" AIRPILOT 3W NC 240V50/60	AIR VALVE BX
WF	**>>>FLOW METER**				
WFM	METER-WATER	W6H3NZBW	30F515	FLOW SENSOR SIGNET #P51530-PO	INLET PIPING

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PELLERIN MILNOR CORPORATION
LIMITED STANDARD WARRANTY

We warrant to the original purchaser that MILNOR machines including electronic hardware/software (hereafter referred to as "equipment"), will be free from defects in material and workmanship for a period of one year from the date of shipment (unless the time period is specifically extended for certain parts pursuant to a specific MILNOR published extended warranty) from our factory with no operating hour limitation. This warranty is contingent upon the equipment being installed, operated and serviced as specified in the operating manual supplied with the equipment, and operated under normal conditions by competent operators.

Providing we receive written notification of a warranted defect within 30 days of its discovery, we will—at our option—repair or replace the defective part or parts, EX Factory (labor and freight specifically NOT included). We retain the right to require inspection of the parts claimed defective in our factory prior to repairing or replacing same. We will not be responsible, or in any way liable, for unauthorized repairs or service to our equipment, and this warranty shall be void if the equipment is tampered with, modified, or abused, used for purposes not intended in the design and construction of the machine, or is repaired or altered in any way without MILNOR's written consent.

Parts damaged by exposure to weather, to aggressive water, or to chemical attack are not covered by this warranty. For parts which require routine replacement due to normal wear—such as gaskets, contact points, brake and clutch linings, belts, hoses, and similar parts—the warranty time period is 90 days.

We reserve the right to make changes in the design and/or construction of our equipment (including purchased components) without obligation to change any equipment previously supplied.

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WE NEITHER ASSUME, NOR AUTHORIZE ANY EMPLOYEE OR OTHER PERSON TO ASSUME FOR US, ANY OTHER RESPONSIBILITY AND/OR LIABILITY IN CONNECTION WITH THE SALE OR FURNISHING OF OUR EQUIPMENT TO ANY BUYER.

BMP720097/19036

BIUUUD19 (Published) Book specs- Dates: 20081231 / 20081231 / 20081231 Lang: ENG01 Applic: UUU

How to Get the Necessary Repair Components

This document uses Simplified Technical English.
Learn more at http://www.asd-ste100.org.

You can get components to repair your machine from the approved supplier where you got this machine. Your supplier will usually have the necessary components in stock. You can also get components from the Milnor® factory.

Tell the supplier the machine model and serial number and this data for each necessary component:

- The component number from this manual
- The component name if known
- The necessary quantity
- The necessary transportation requirements
- If the component is an electrical component, give the schematic number if known.
- If the component is a motor or an electrical control, give the nameplate data from the used component.

To write to the Milnor factory:

Pellerin Milnor Corporation
Post Office Box 400
Kenner, LA 70063-0400
UNITED STATES

Telephone: 504-467-2787
Fax: 504-469-9777
Email: parts@milnor.com

— End of BIUUUD19 —

BIUUUK01 (Published) Book specs- Dates: 20130308 / 20130308 / 20130308 Lang: ENG01 Applic: PCR UUU

How to Use Milnor® Electrical Schematic Diagrams

Milnor® electrical schematic manuals contain a table of contents/component list and a set of schematic drawings. These documents are cross referenced and must be used together.

The table of contents/components list shows, for every component on every schematic in the manual, the component item number (explained in detail below), statement of function, parent schematic number, part number, description and electric box location. In older manuals, two component lists are provided: List 1 sorts the components by function, and List 2 by type of component. Newer schematic manuals include only the list sorted by component number.

The schematic drawings use symbols for each electromechanical component, and indicate the function of each. Integrated circuits are not shown, but the function of each microprocessor input and output is stated. Certain electrical components not pertinent to circuit logic, such as wire connectors, are not represented on the schematic.

Most machines require several schematics to describe the complete control system and all the options available on the included models. In most manuals there are some schematic pages that don't apply to your specific machine because certain options and configurations are mutually exclusive or are not necessary in all markets. You may find it helpful to mark or remove such pages. A schematic page that only applies to a subset of machines will normally state, in the title, which models and/or options it covers. Compare this with the nameplate on your machine and with your purchase records.

Each schematic is devoted to circuits with common functions (e.g., microprocessor inputs, motor contactors). Schematics appear in the manual in alphanumeric order.

1. Component Prefix Classifications and Descriptions

Component item numbers consist of up to six characters and appear as part of a component's symbol on the schematic. The first two characters indicate the general class of component, and the remaining characters are a mnemonic for the function. For example, “CD” is the code for all time delay relays, and “SR” stands for safety reset. Thus, CDSR is a time delay relay that serves as a safety reset.

The following are descriptions of electrical components used in Milnor® machines. Descriptions are in alphabetical order by the component class code (two character prefix).

> **Note 1:** Some component class codes do not have a corresponding symbol, but are represented by a box and an accompanying note describing the component. Examples of such codes are BA (printed circuit board), ED (electronic display), and ES (electronic power supply).

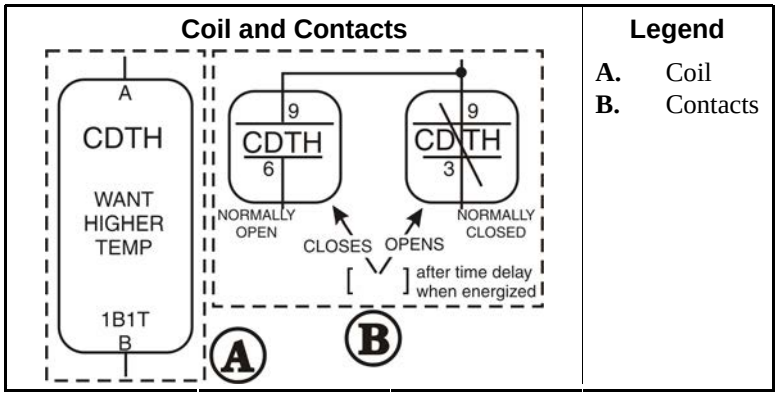
BA=Printed Circuit Board—Insulating substrate on which a thin pattern of copper conductors has been formed to connect discrete electronic components also mounted on the board.

CB=Circuit Breaker (Figure 1)—Automatic switch that opens an electric circuit in abnormal current conditions (e.g., an overload).

Figure 1: Circuit Breaker (CB)

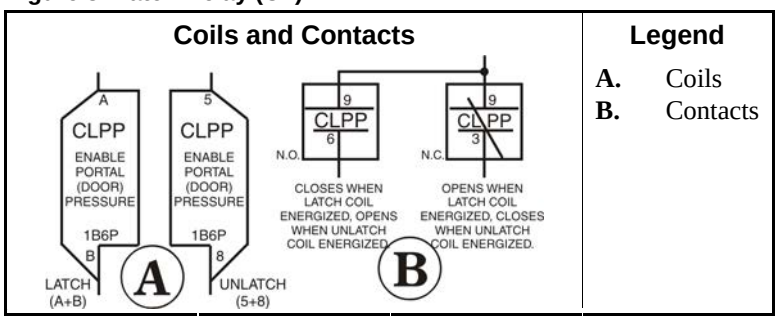
CD=Control, Time Delay Relay (Figure 2)—A relay whose contacts switch only after a fixed or adjustable delay, once voltage has been applied to its coil. The contacts switch back to normal (de-energized state) immediately when the voltage is removed.

Figure 2: Time Delay Relay (CD)



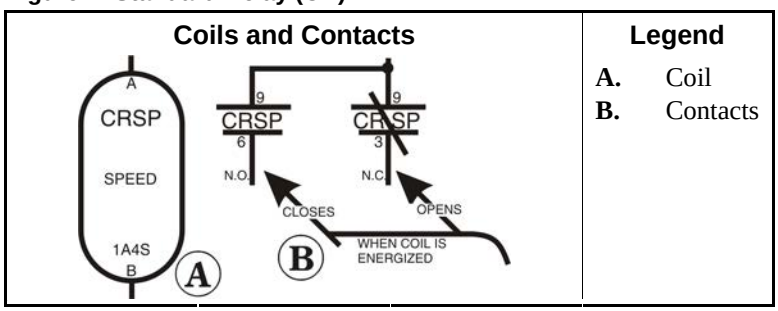
CL=Control, Latch Relay (Figure 3)—A relay which latches in an energized or set position when operated by one coil (the latch/set coil). The relay stays latched even though coil voltage is removed. The relay releases or unlatches when voltage is applied to a second coil (the unlatch/reset coil).

Figure 3: Latch Relay (CL)



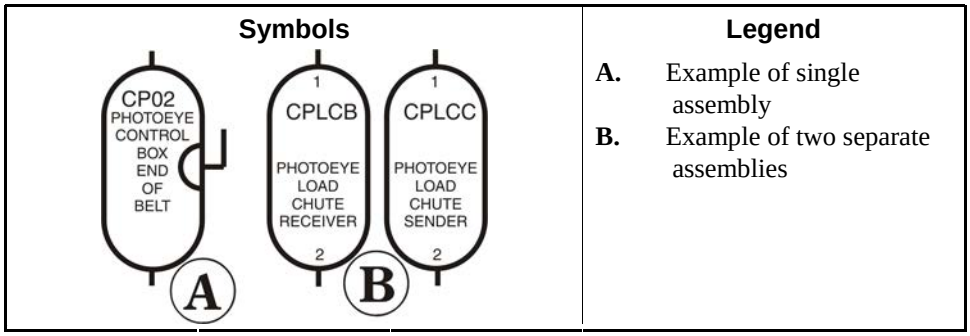
CR=Control, Relay (Figure 4)—A relay whose contacts switch immediately when voltage is applied to its coil and revert to normal when the voltage is removed.

Figure 4: Standard Relay (CR)



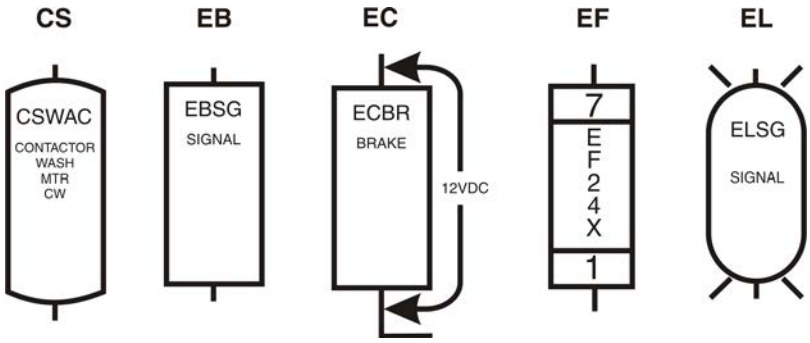
CP=Control, Photo-Eye (Figure 5)—Photo-eyes sense the presence of an object without direct physical contact. Photo-eyes consist of a transmitter, receiver, and output module. These components may be housed in one assembly with the transmitter bouncing light off of a reflector to the receiver, or these components can be housed in two separate assemblies with the transmitter pointed directly at the receiver. The photo-eye can be set to turn on its output either when the light beam becomes blocked (dark operate) or when it becomes un-blocked (light operate).

Figure 5: Photo-eye (CP)



CS=Control, Contactor/Motor Starter (Figure 6)—A relay capable of handling heavier electrical loads, usually a motor.

Figure 6: Other Control Symbols



EB=Electric Buzzer (Figure 6)—An audible signaling device.

EC=Electric Clutch (Figure 6)—A clutch consists of a coil and a rotor. The rotor has two separate rotating plates. These plates are free to rotate independent of each other until the coil is energized. Once energized the two plates turn as one.

ED=Electronic Display—A visual presentation of data, such as an LCD (liquid crystal display), LED (light emitting diode) display, or VFD (vacuum florescent display).

EF=Electric Fuse (Figure 6)—A fuse is an over-current safety device with a circuit opening fusible member which is heated and severed by the passage of over-current through it.

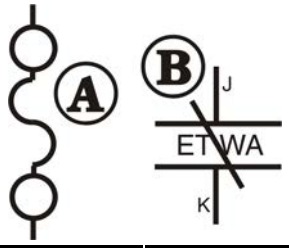
EL=Electric Light (Figure 6)—Indicator lights may be either incandescent or fluorescent.

EM=Electro Magnet Solenoid—A device consisting of a core surrounded by a wire coil through which an electric current is passed. While current is flowing, iron is attracted to the core (e.g., a pinch tube drain valve solenoid).

ES=Electronic Power Supply—A device that converts AC (alternating current) to filtered and regulated DC (direct current). The input voltage to the power supply is usually 120 or 240 VAC. The output is +5, +12, and -12 VDC.

ET=Thermal Overload (Figure 7)—A safety device designed to protect a motor. A thermal overload consists of an overload block, heaters, and an auxiliary contact. The auxiliary contact is normally installed in a safety (three-wire) circuit that stops power to the motor contactor coil when a motor overload occurs.

Figure 7: Thermal Overload (ET)

Schematic Symbol	Legend
	**A.** Heater (one per phase) **B.** Overload relay; contacts open if overload condition exists

EX=Electrical Transformer (Figure 8)—A device that transfers electrical energy from one isolated circuit to another, often raising or lowering the voltage in the process.

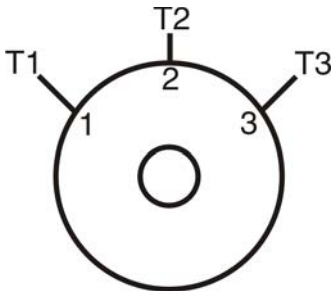
KB=Keyboard—Device similar to a typewriter for making entries to a computer.

MN=Electronic Monitor (CRT)—A cathode ray tube used for visual presentation of data.

MR=Motors (Figure 9)—Electromechanical device that converts electrical energy into mechanical energy.

Figure 8: Transformer (EX)

Figure 9: Electric Motor (MR)

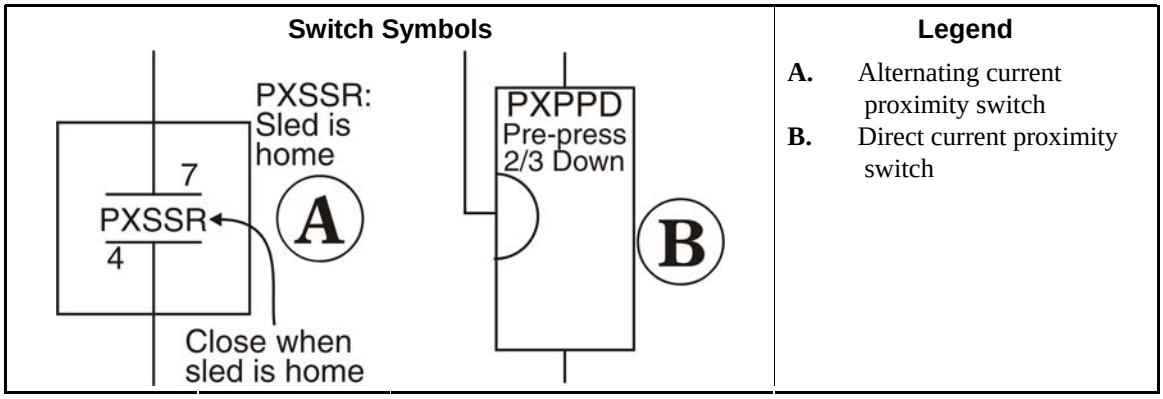


MV=Motor (Variable Speed) Inverter—To vary the speed of an AC motor, the volts to frequency ratio must be kept constant. The motor will overheat if this ratio is not maintained. The motor variable speed inverter converts three phase AC to DC. The inverter then uses this DC voltage to generate AC at the proper voltage and frequency for the commanded speed.

Note 2: Switch symbols used in the schematics and described below always depict the switch in its un-actuated state.

PX=Proximity Switch (Figure 10)—A device which reacts to the proximity of an target without physical contact or connection. The actuator or target causes a change in the inductance of the proximity switch which causes the switch to operate. Proximity switches can be two-wire (AC) or three-wire (DC) devices.

Figure 10: Proximity Switches (PX)



SC=Switch, Cam Operated (Figure 11)—A switch in which the electrical contacts are opened and/or closed by the mechanical action of a cam(s). Applications include 35-50 pound timer operated machines, Autospot, timer reversing motor assembly, and some balancing systems.

SH=Switch, Hand Operated (Figure 12)—A switch that is manually operated (e.g., *Start button*, *Master switch*, etc.).

Figure 11: Cam Switch (SC)

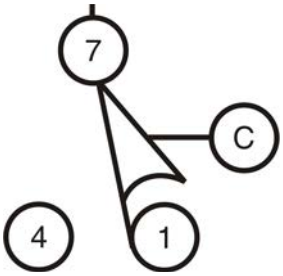
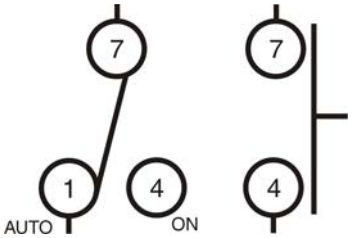


Figure 12: Hand Operated Switch (SH)



SK=Switch, Key Lock (Figure 13)—A switch that requires a key to operate. This prevents unauthorized personnel from gaining access to certain functions (e.g., the *Program menu*).

SL=Switch, Level Operated (Figure 14)—A switch connected to a float that causes the switch to open and close as the level changes.

Figure 13: Key Switch (SK)

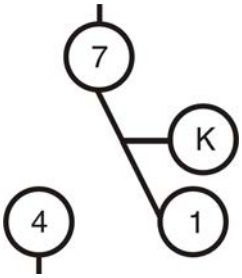
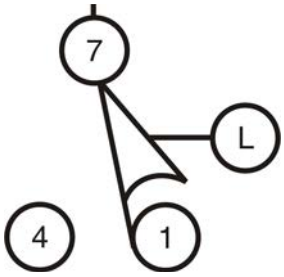


Figure 14: Level Switch (SL)



SM=Switch, Mechanically Operated (Figure 15)—A switch that is mechanically operated by a part of or the motion of the machine (e.g., door closed switch, tilt limit switches, etc.)

SP=Switch, Pressure Operated (Figure 16)—A switch in which a diaphragm presses against a switch actuator.

Figure 15: Mechanical Switch (SM)

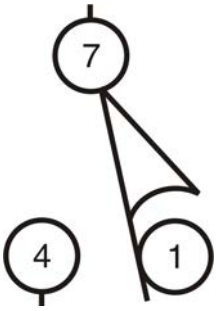
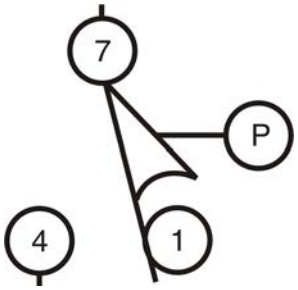


Figure 16: Pressure Switch (SP)



ST=Switch, Temperature Operated (Figure 17)—A switch that is actuated at a preset temperature (e.g., dryer safety probes) or has adjustable set points (e.g., Motometers or Combistats).

TB=Terminal Board (Figure 18)—A strip or block for attaching or terminating wires.

Figure 17: Temperature Switch (ST)

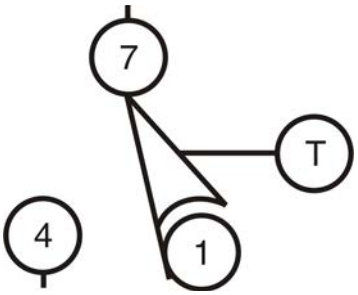
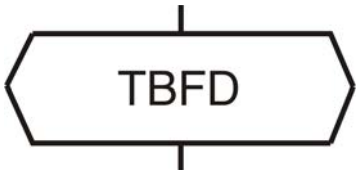


Figure 18: Terminal Board (TB)



VE=Valve, Electric Operated (Figure 19)—A valve operated by an electric coil to control the flow of fluid. The fluid can be air, water or hydraulic.

Figure 19: Electrically Operated Valve (VE)

ZF=Rectifier (Figure 20)—A solid state device that converts alternating current to direct current.

Figure 20: Bridge Rectifier (ZF)

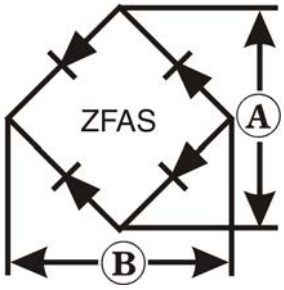
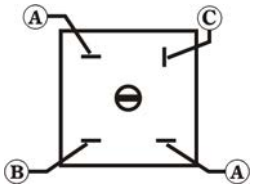
Component Symbol	Legend
	**A.** Alternating current input **B.** Direct current output

Figure 21: Bridge Rectifier

Component	Legend
	**A.** Alternating current in **B.** Negative direct current out **C.** Positive direct current out

WC=Wiring Connector—A coupling device for joining two cables or connecting a cable to an electronic circuit or piece of equipment. Connectors are male or female, according to whether they plug into or receive the mating connector.

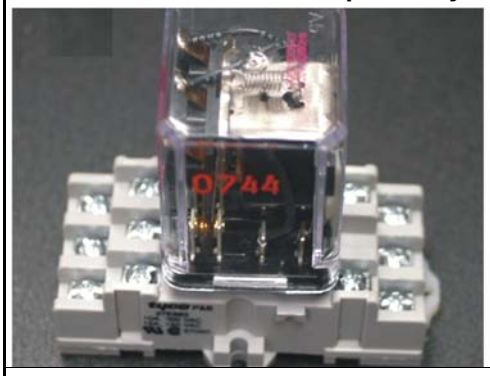
2. Component Terminal Numbering

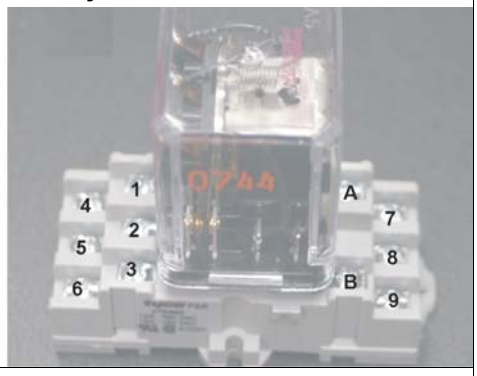
CAUTION 1: Risk of Mis-wiring—Due to electrical component manufacturing inconsistencies, the pin numbers imprinted on components such as connectors and relay bases used on Milnor machines often do not correspond to the pin numbers shown in the schematics.

- Ignore pin numbers imprinted on in-line connectors (e.g., Molex connectors) and relay bases.
- Use the pin identification illustrations herein to identify pins on these components.

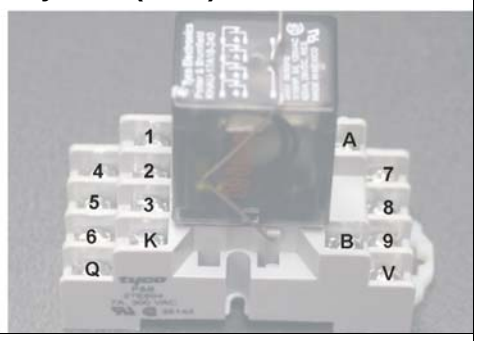
Figure 22: Plug-in Relays

11-pin Relay with Grey Base

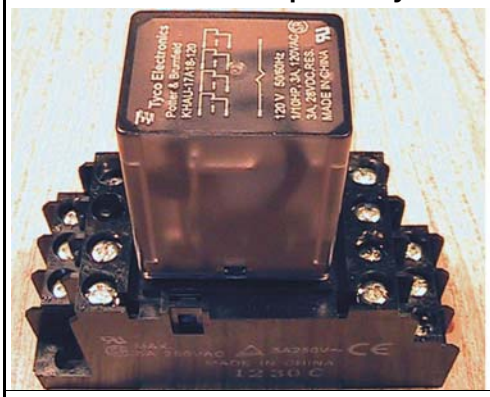


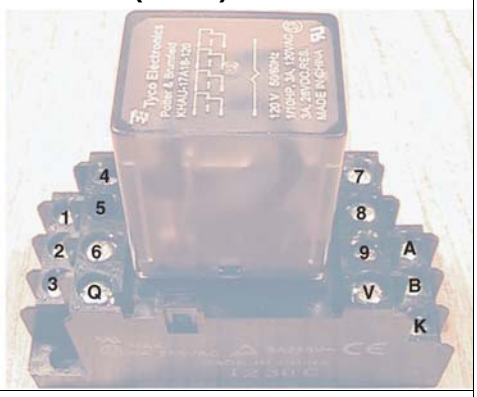


14-pin Relay with Grey Base (older)

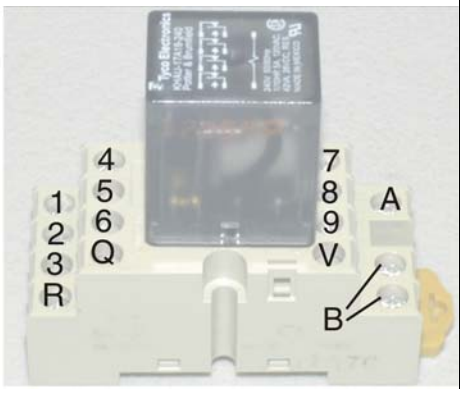


14-pin Relay with Black Base (newer)





14-pin Relay with Beige Base (rare)



Legend

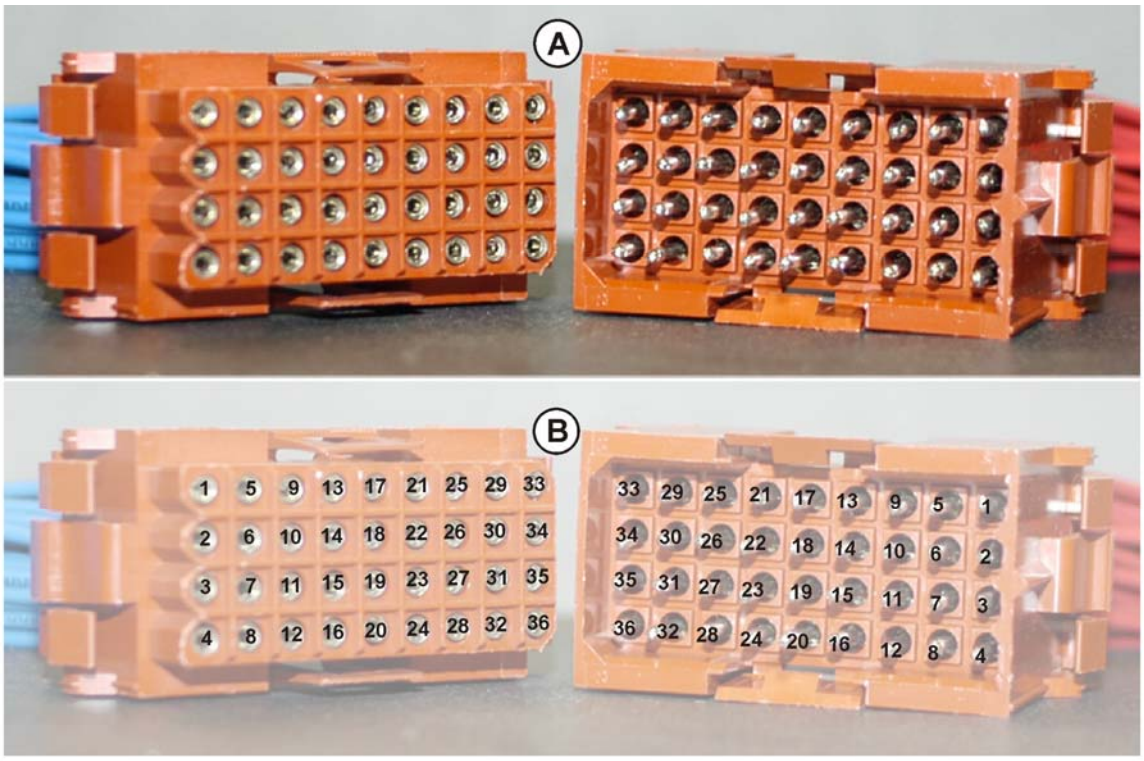
Left. View of relay and base

Right. Same view, showing pin numbers

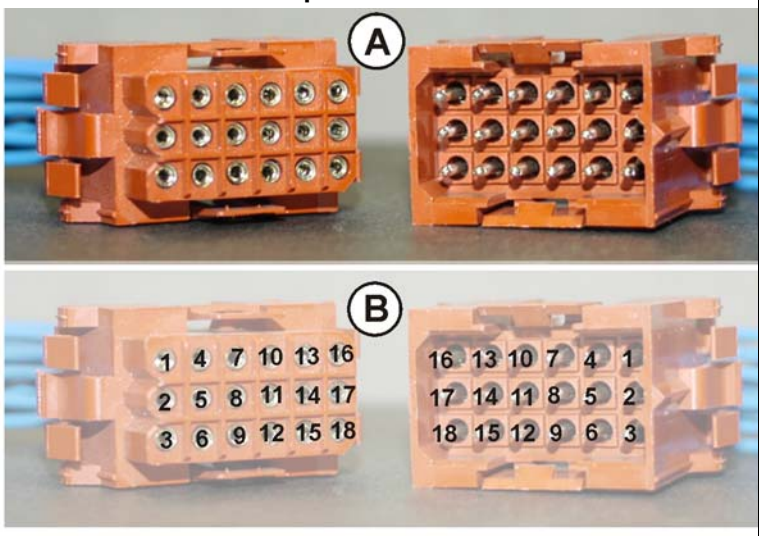
Note 3: Relay functional names ending with the letter "M" (e.g., CRxxM) are not discrete components but are a component of a printed circuit board. They are usually not individually replaceable.

Figure 23: AMP Connector Pin Locations

36-pin Connector



18-pin Connector

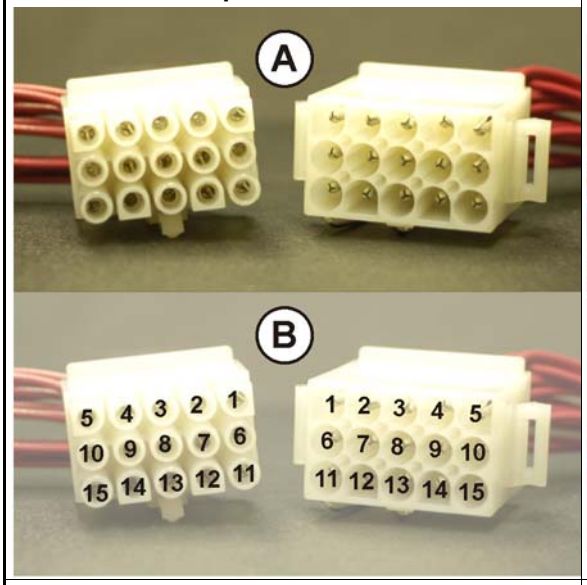


Legend

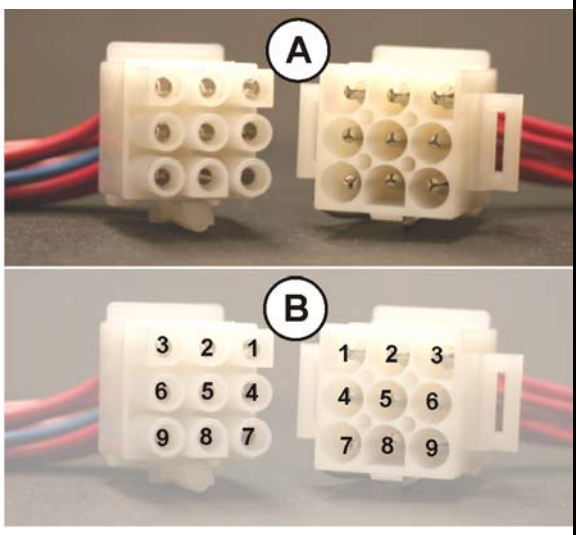
A. View of mating halves of connector
B. Same view, showing assigned pin numbers

Figure 24: Molex Connector Pin Locations

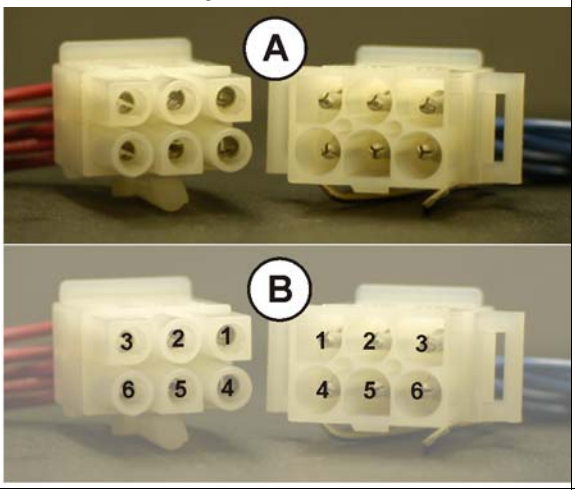
15-pin Connector



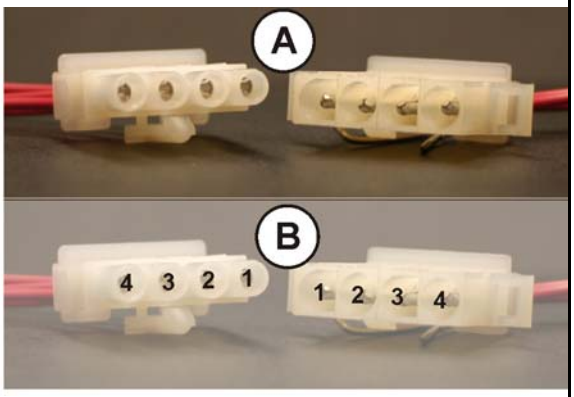
9-pin Connector



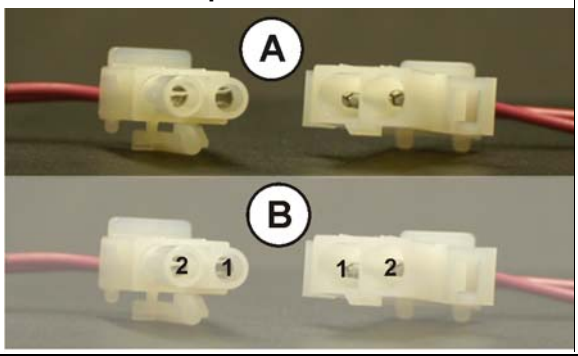
6-pin Connector



4-Pin Connector



2-pin Connector



Legend

A. View of mating halves of connector
B. Same view, showing assigned pin numbers

Figure 25: Pressure Switch

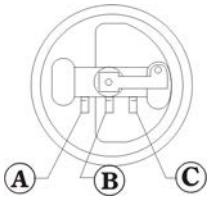
Component	Legend
	**A.** Contact 1—Normally open **B.** Contact 2—Normally closed **C.** Contact 3—Common

Figure 26: Toggle Switch

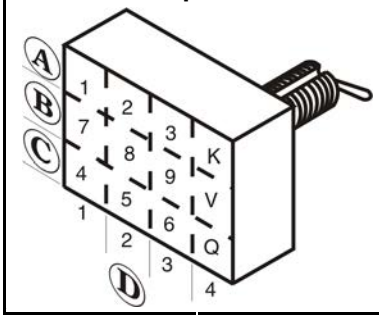
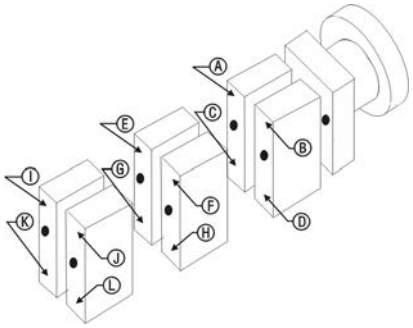
Component	Legend
	**A.** Normally closed contacts **B.** Common contacts **C.** Normally open contacts **D.** Pole

Figure 27: Switch with Replaceable Contact Blocks

Rotary or Push-button Switch Component	Legend
	**A.** Terminal 7 **B.** Terminal 8 **C.** Terminal 4 if normally open; terminal 1 if normally closed **D.** Terminal 5 if normally open; terminal 2 if normally closed **E.** Terminal V **F.** Terminal 9 **G.** Terminal Q if normally open; terminal K if normally closed **H.** Terminal 6 if normally open; terminal 3 if normally closed **I.** Terminal W **J.** Terminal X **K.** Terminal R if normally open; terminal L if normally closed **L.** Terminal S if normally open; terminal M if normally closed

3. Features of Milnor® Electrical Schematic Diagrams

Document BMP010012 (following this section) is a sample schematic, based on a schematic diagram for the Milnor® gas dryer. For the purposes of this exercise, the schematic is shown gray and explanations of the items on the schematic are shown black.

The item numbers below correspond to the circled item numbers shown on the drawing.

1. The first six characters of the drawing number (W6DRYG) indicate that this is a wiring diagram (W), identify the generation of controls (6), and identify the type of machine (DRYG=Gas Dryer). These characters appear in the drawing number of every schematic in the set.

   The characters following the first six are unique to each drawing. The two characters identified as the page number are an abbreviation for the function performed by the depicted

circuitry (S+=three-wire circuit) and establish the order in which the schematic occurs in the manual (schematics are arranged in alpha-numeric order in the manual).

Whenever circuitry changes are significant enough to warrant publishing a new schematic drawing, the new drawing number will be the same as the old except for the major revision letter (A in the example).

2. Included in the drawing title are the class of control system, the title of this circuit, and the circuit voltage.
3. Line numbers are provided along the bottom edge of the drawing. These permit service personnel in the field and at the Milnor® factory to quickly relate circuit locations when discussing troubleshooting over the phone. Page and line numbers are referenced on the drawing as explained in items five and six below.
4. Relay contacts show the page and line number on which the relay coil may be found. This is the type of cross referencing most frequently used in troubleshooting.
5. Relay coils show the page and line number on which its associated contacts are located.
6. Relay contacts and relay coils show the physical location of the relay.
7. The designation MTA applies to electronic circuit board connections. Typically, a control system will contain several different types of circuit boards and one or more boards of each type. A numerical suffix identifies the board type and a numerical prefix identifies which one of several boards of a given type is being depicted. For example, the designation 1MTA5 identifies this as the first I/O board (8 output, 16 input board) in the control system. As shown on the drawing, a pin number follows the board number, separated by a dash. Thus, 1MTA5-9 is pin 9 on this board. The numerical designations for board types vary from one control system to another. Some of the board types commonly encountered on the Mark V and Mark VI washer-extractor control and their designations are as follows:
   - MTM1-MTM8 = Mother board
   - MTA1-MTA5 = 8 output, 16 input (8/16) boards
   - MTA11-MTA14 = 24 output boards
   - MTA30-MTA40 = processor boards
   - MTA41-MTA43 = digital to analog (D/A) boards
   - MTA51-MTA55 = analog to digital (A/D) boards
   - MTA81-MTA85 = balance A-D board

   The complete listing of the boards utilized in a given control system can be found in the component list for that system.
8. Wire numbers, as described earlier in this section, are shown at appropriate locations on the schematic drawing.
9. Where diamond symbols appear at the end of a conductor, these are match points for continuing the schematic on another drawing. The page and line number that continues the circuit is printed adjacent to the diamond symbol. Where more than one match point appears on the referenced page, match diamonds containing corresponding letters.

— End of BIUUUK01 —

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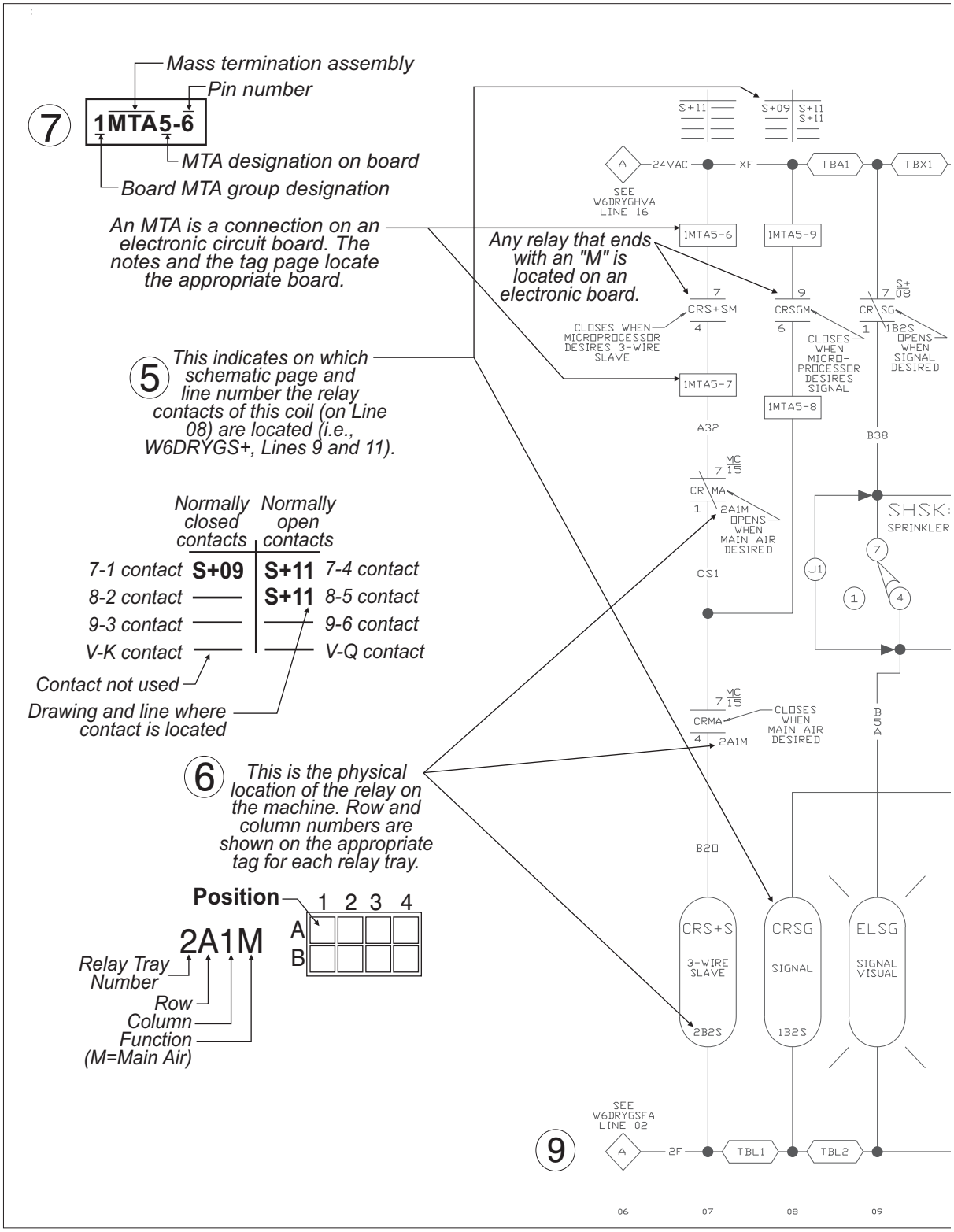
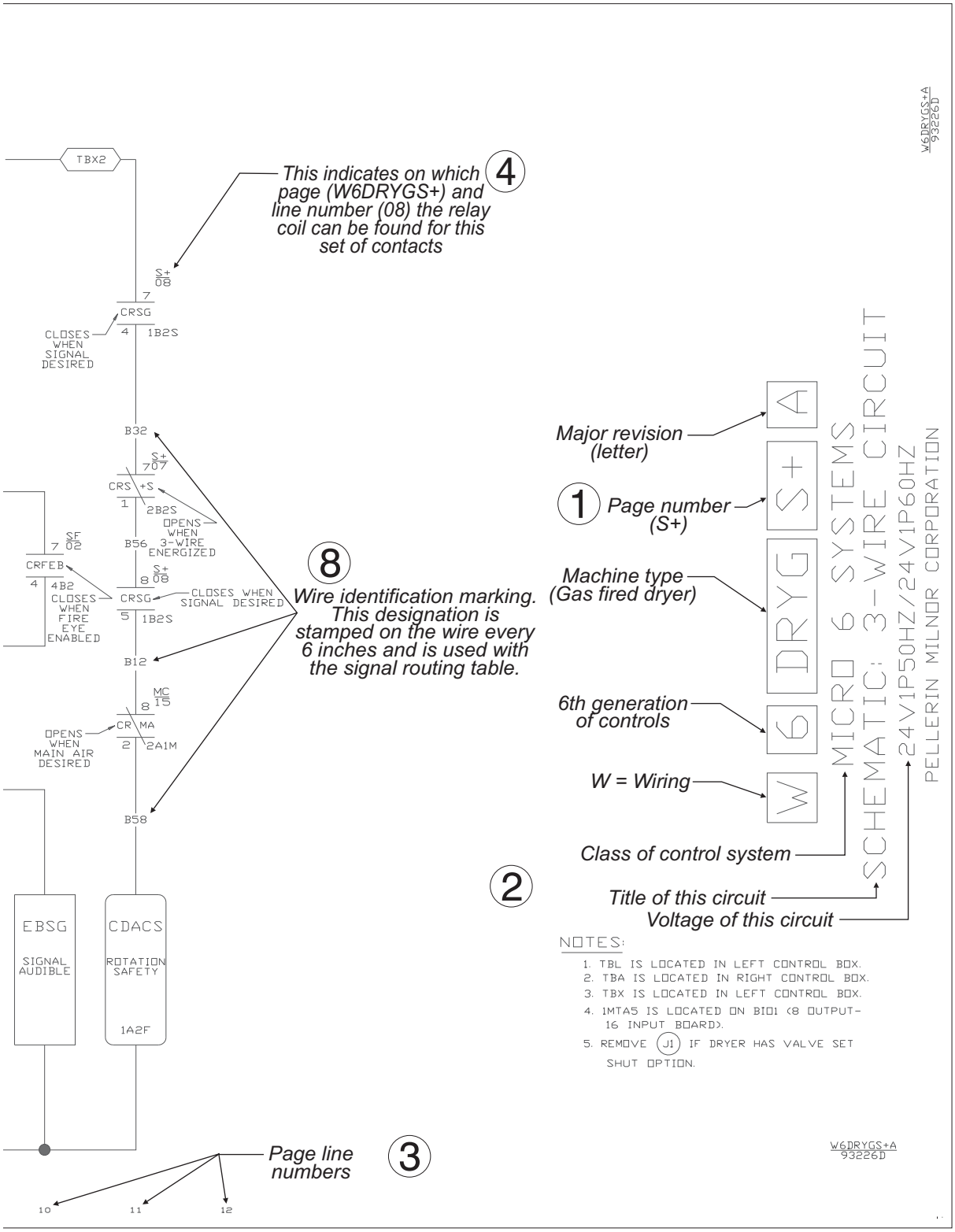
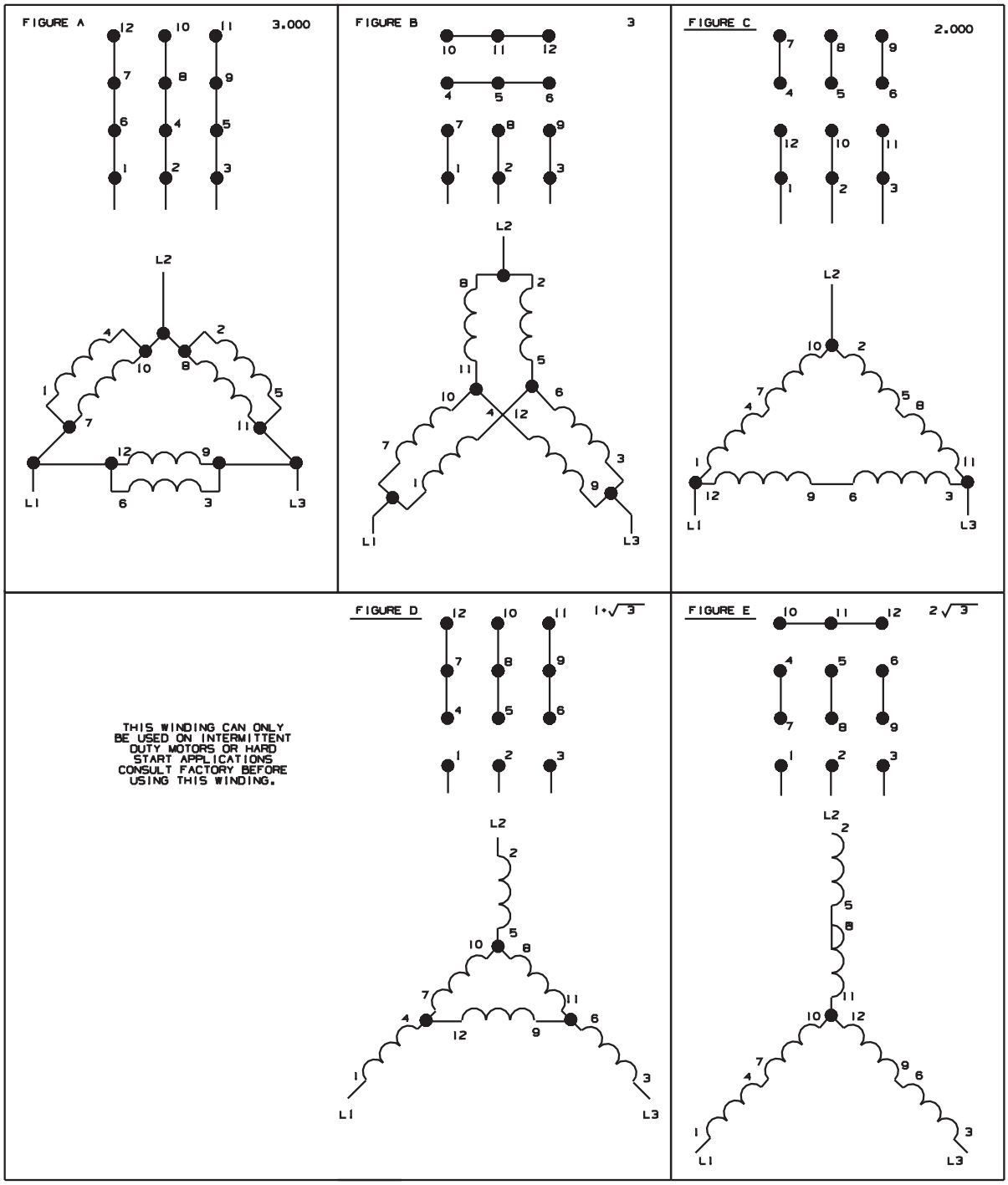


BMP010012 (left) / 2018343



BMP010012 (right) / 2018343

FIGURE	ELECTRICAL VALUES	SUFFIXES									
		B		H		M		T		U	
		50HZ	60HZ	50HZ	60HZ	50HZ	60HZ	50HZ	60HZ	50HZ	60HZ
A	1.000	208	230			200	220	220	240	200-220	208-240
B	$\sqrt{3}$				208	346	380	380		346-380	380
C	2.000	416	460	220	240	400	440	440	480	400-440	440-480
D	$1+\sqrt{3}$						600				600
E	$2\sqrt{3}$			380							



06 07 08 09 10 11 12 13 14 15 16 17

BMP850029

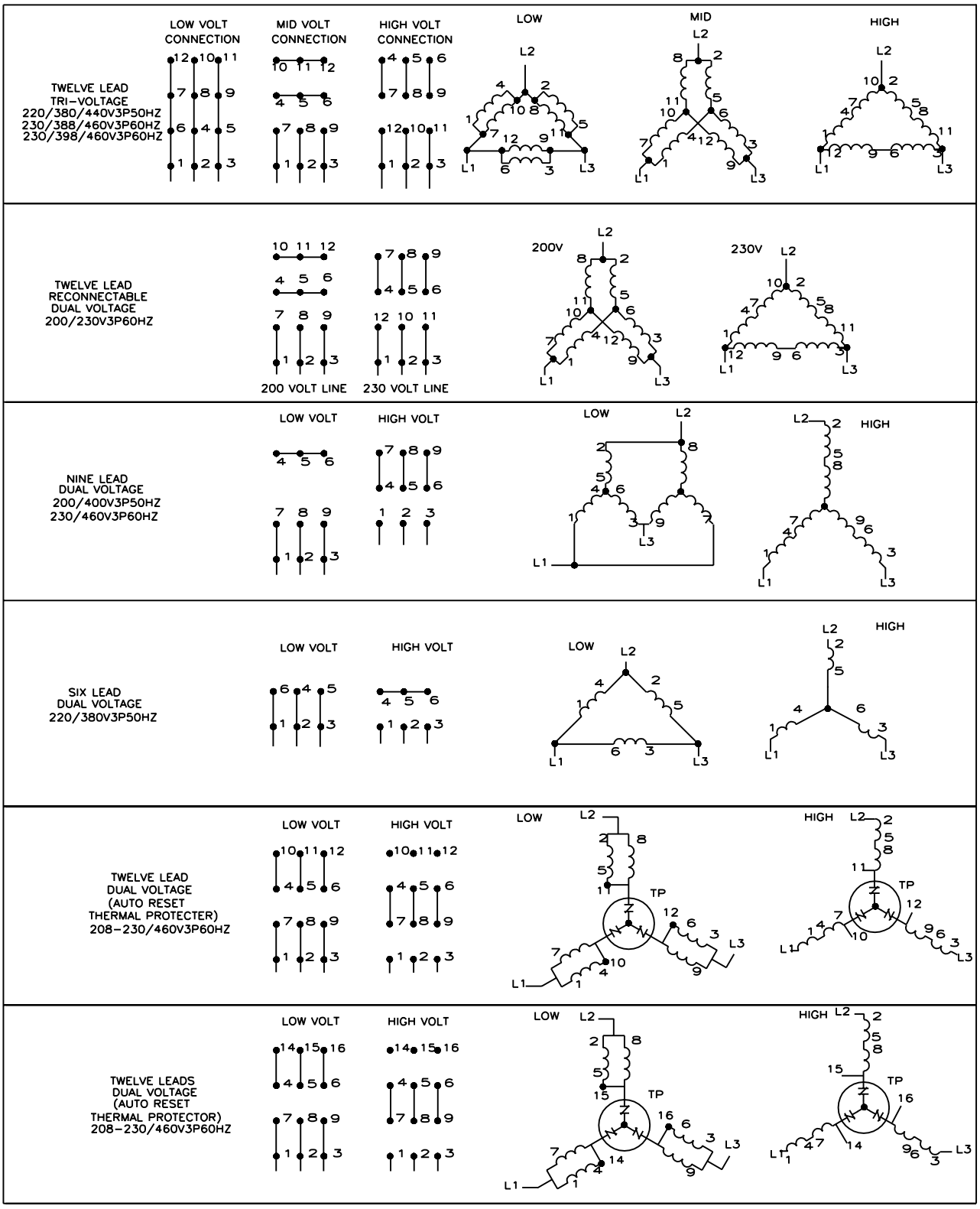
MOTOR CONNECTION DIAGRAMS

THREE PHASE SINGLE SPEED MOTORS WITH MULTIPLE VOLTAGE RATINGS

(ONLY FOR MOTOR SUFFIXES LISTED)

PELLERIN MILNOR CORPORATION

BMP850029
993628

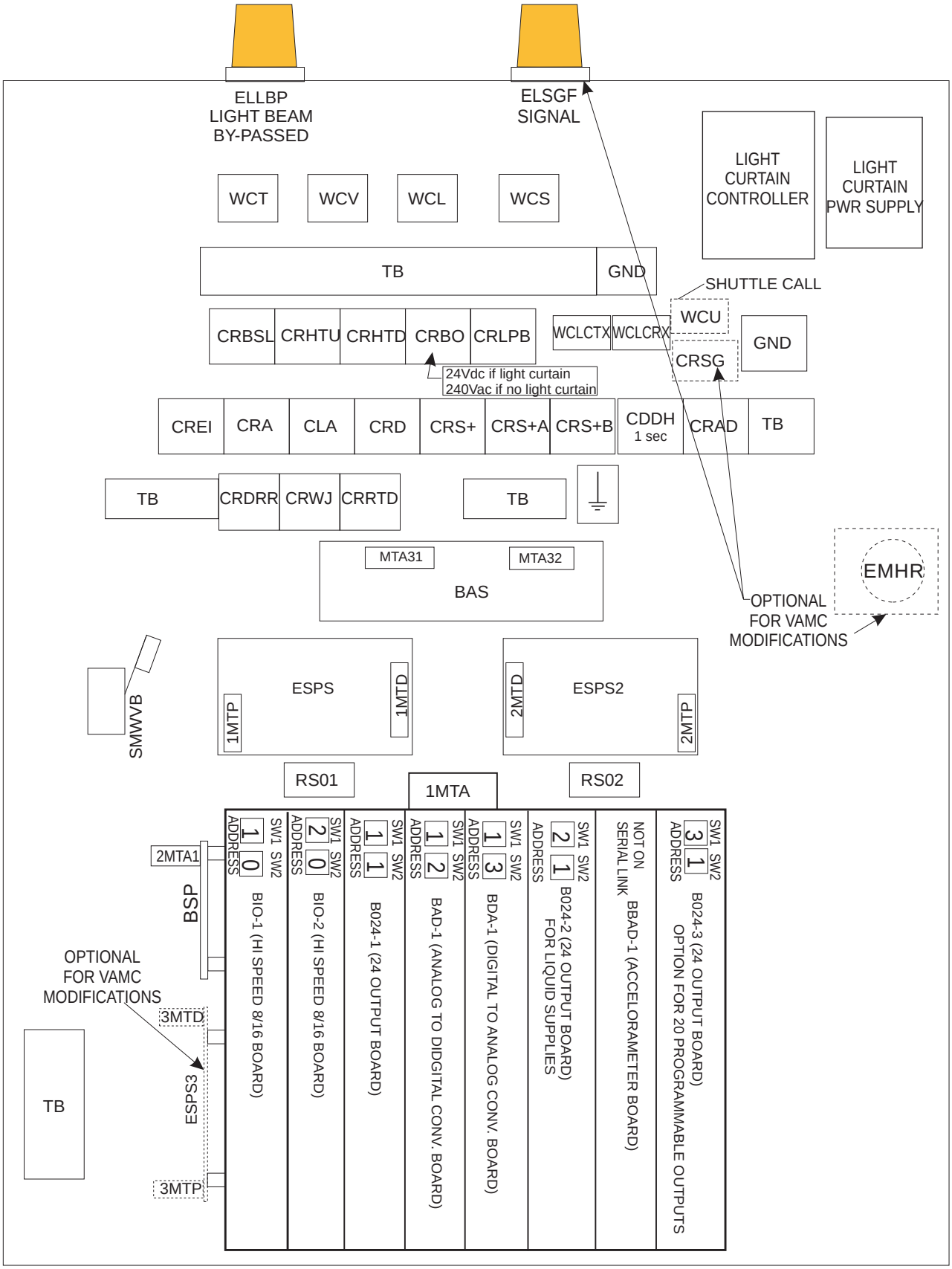


W80008

THREE PHASE
MOTOR CONNECTION DIAGRAMS
SINGLE SPEED MOTORS WITH MULTIPLE VOLTAGE RATINGS

PELLERIN MILNOR CORPORATION

W80008
2001253A

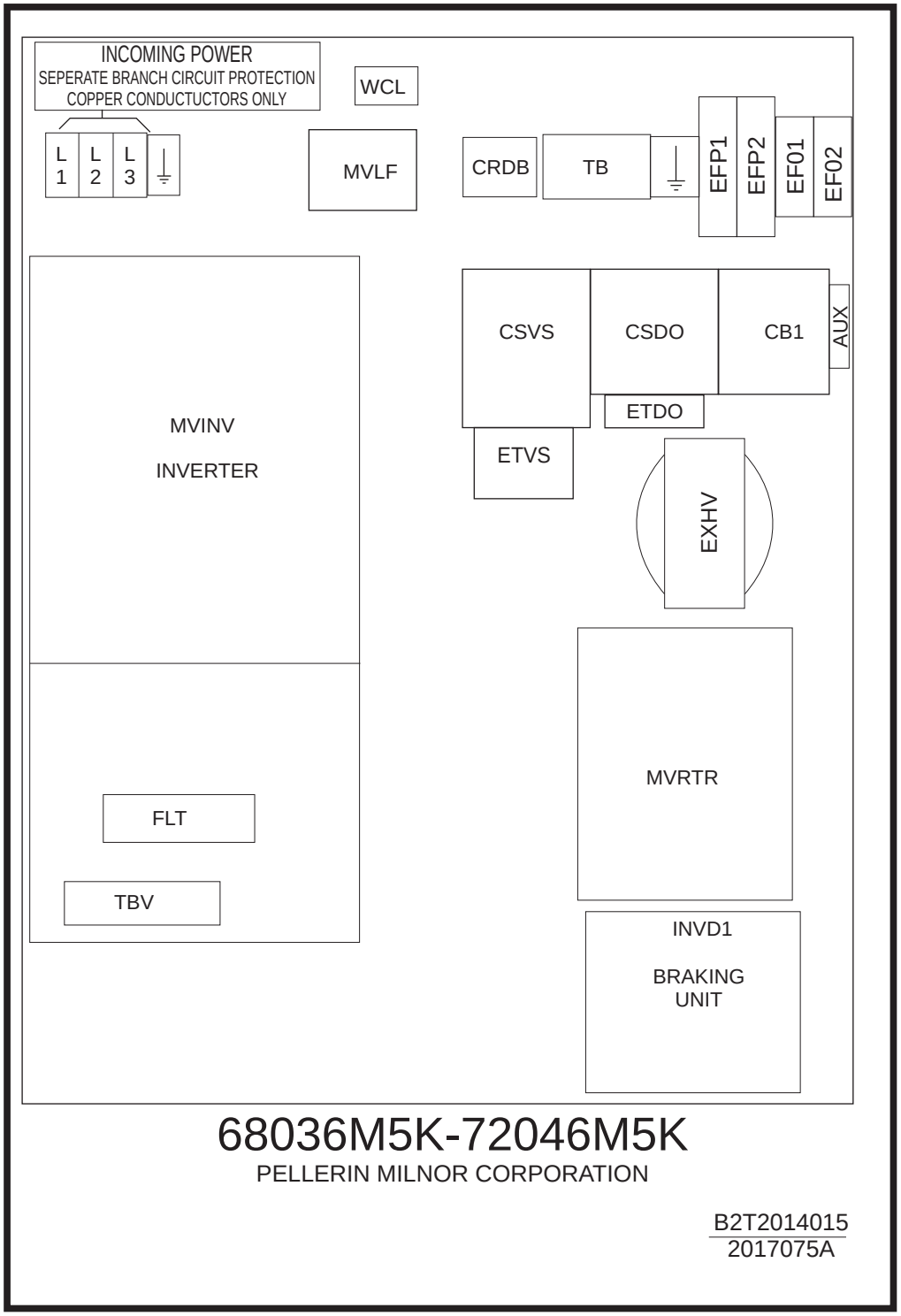


48040M7R/K - 68036H5K
68036M5K - 72046M5K
LOW VOLTAGE CONTROL BOX

PELLERIN MILNOR CORPORATION

B2T2014006
2021022A

W6H3NZTG1
2021022B



68036M5K-72046M5K

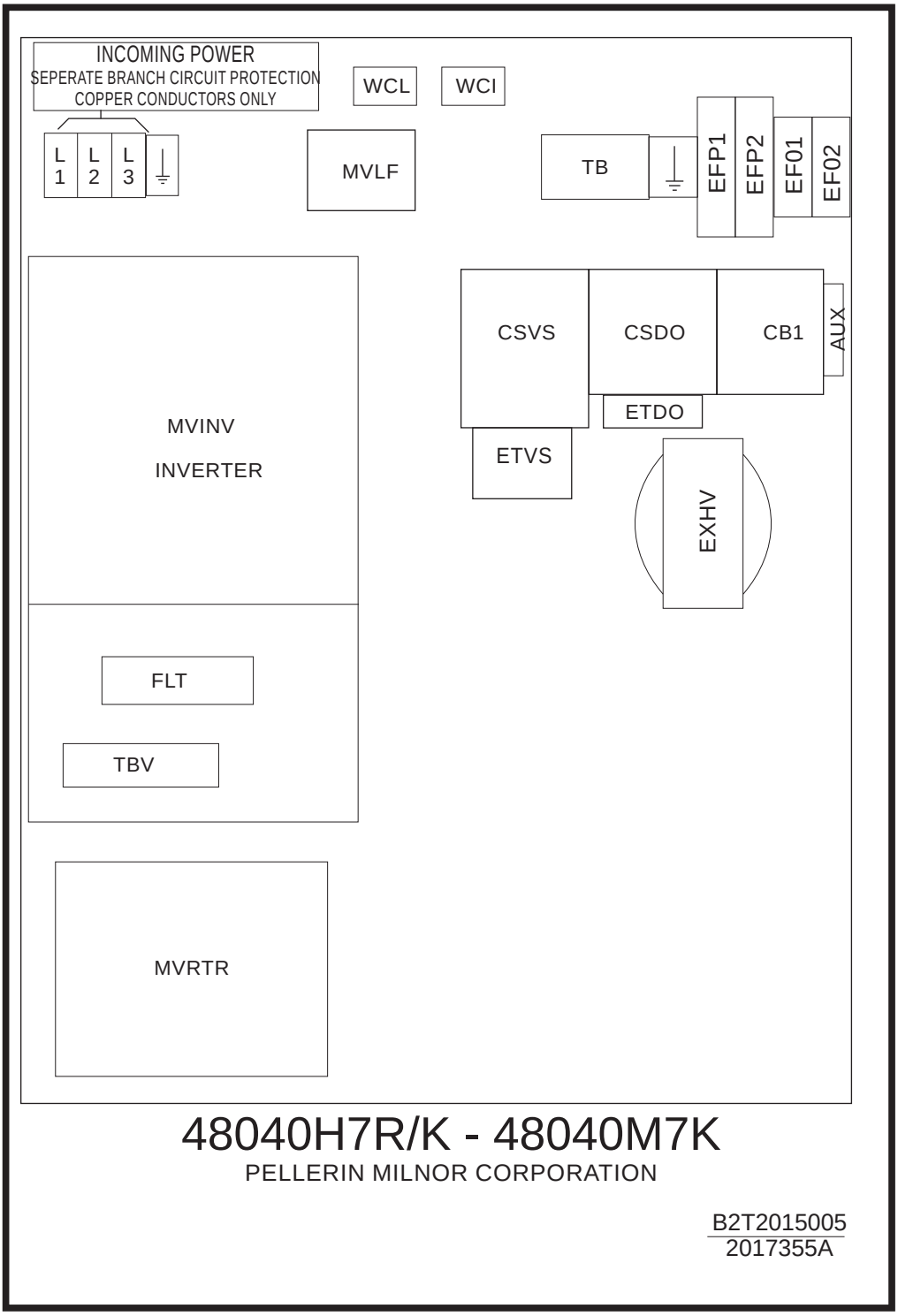
PELLERIN MILNOR CORPORATION

B2T2014015
2017075A

W6H3NZTG1

MICRO 6 SYSTEMS CONTROL BOX LAYOUTS

PELLERIN MILNOR CORPORATION



48040H7R/K - 48040M7K

PELLERIN MILNOR CORPORATION

B2T2015005
2017355A

W6H3NZTG2
2018352B

IMPORTANT
SETTING MILTOUCH-EX™ POWER SUPPLIES

! ESPS and ESPS2 ARE DIFFERENT. TAKE CARE TO NOT MIX UP PART NUMBERS. IF WRONG POWER SUPPLY IS USED PERMANENT BOARD DAMAGE WILL OCCUR.

TO TEST POWER SUPPLIES OUTPUT

1. MAKE SURE MACHINE IS ON.
2. USING HIGH QUALITY DIGITAL VOLTMETER (FLUKE MODEL 77 OR EQUAL) MEASURE THE VOLTAGE ON ANY ONE OF BOARDS IN THE CARD CAGE *MTA#2 BETWEEN PINS 3 (+5V) AND PIN 4 (GND). THE VOLTAGE RANGE SHOULD BE 5.01-5.12VDC. SEE FIGURE 1.
3. MEASURE THE VOLTAGE AT BPB ON CONNECTOR J4 BETWEEN PIN 1 (+12V) AND PIN 2 (GND). THE VOLTAGE RANGE SHOULD BE 12.2-12.4VDC. SEE FIGURE 2

TO ADJUST POWER SUPPLY VOLTAGES

1. +5V,+12V &-12V IS PROVIDED BY PART NUMBER 08PSS3401T LABELED ESPS. POWER SUPPLY PART NUMBER 08PSS2401T PROVIDES THE +12V FOR THE PROCESSOR BD LABELED ESPS2.
2. LOCATE THE VOLTAGE ADJUSTMENT POTENTIOMETER. THE POTENTIOMETER WILL BE A SMALL BLUE COMPONENT. IT IS SOLDERED ON EACH POWER SUPPLY'S PRINTED CIRCUIT BOARD. THERE MAY HAVE A SPOT OF SILICONE ON ADJUSTMENT SCREW. SEE FIGURE 3.
3. USING A SMALL (POCKET TYPE) SCREW DRIVER REMOVE THE SILICONE AND TURN THE POTENTIOMETER TURNING CLOCKWISE TO RAISE THE VOLTAGE AND COUNTER-CLOCKWISE TO LOWER.
4. RE-APPLY SPOT OF ELECTRONIC GRADE SILICONE ON ADJUSTMENT SCREW TO FIX IN PLACE. RE-TEST TO VERIFY +5VDC ON ESPS AND +12VDC ON ESPS2 ARE WITHIN CORRECT VOLTAGE RANGES.

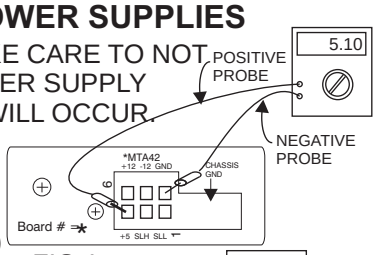


FIG 1.

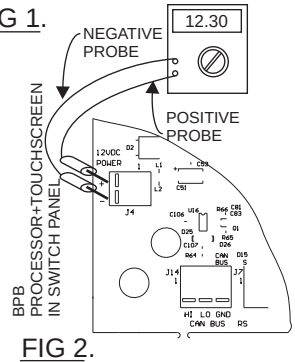


FIG 2.

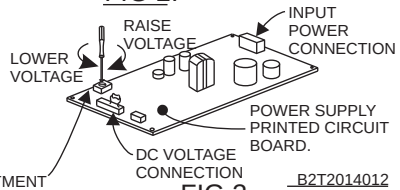


FIG 3.

B2T2014012
2014243A

W6H3NZTG2
MICRO 6 SYSTEMS
CONTROL BOX LAYOUTS
PELLERIN MILNOR CORPORATION

BIO-1	BO24-1	BIO-2	BO24-2(OPTIONAL) LIQUID SUPPLIES	BO24-3(OPTIONAL) 20 PROGRAMMABLE OUTPUTS
INPUTS 0 HI LEVEL REUSE TANK 1 DOOR CLOSED 2 INVERTER FAULT 3 NOT USED 4 WASH POSITION 5 LOAD POSITION 6 DON'T ALLOW CHEM 7 BASKET ROTATING 8 EXCURSION 9 NOT USED 10 BRAKE PAD WORN 11 BRAKE IS OFF 12 DOOR OPEN DESIRED 13 EXTRACT SPEED LIMIT 14 NOT USED 15 3-WIRE ON **OUTPUTS** 0 RECIRCULATE PUMP 1 COOLDOWN 2 CHEMICAL FLUSH 3 CHEMICAL #4 4 CHEMICAL #1 5 CHEMICAL #3 6 CHEMICAL #2 7 CHEMICAL #5	**OUTPUTS** 8 TANK TO MACHINE 9 ACCELERATE/DECELERATE 10 DOOR UNLOCK 11 CLOCKWISE WASH 12 COUNTER CLOCKWISE WASH 13 STEAM 14 SIGNAL 15 3-WIRE ENABLED 16 NOT USED 17 HOT WATER 18 COLD WATER 19 EXTRA WATER 20 DRAIN TO SEWER 21 DRAIN TO REUSE 22 MACHINE TO MACHINE 23 MACHINE TO TANK 24 NOT USED 25 NOT USED 26 NOT USED 27 NOT USED 28 NOT USED 29 NOT USED 30 NOT USED 31 NOT USED	**INPUTS** 16 NOT USED 17 NOT USED 18 NOT USED 19 NOT USED 20 NOT USED 21 BEARING SEAL DEFLATED 22 NOT USED 23 EXTERNAL FAULT 24 NOT USED 25 OK TO STEAM TANK 26 RECIRCULATION PUMP O/L 27 TANK PUMP O/L 28 SIGNAL CANCEL 29 FRESH METER 30 SEWER METER 31 TANK METER **OUTPUTS** 32 FRESH WATER TO MACH 33 TANK TO SEWER 34 FRESH TO TANK 35 FLOW STOP 36 DOOR LOCK 37 STEAM TANK 38 SPD RAMP HOLD 39 PULSE START	**OUTPUTS** 40 CHEM #14 41 CHEM #9 42 CHEM #13 43 FLUSH MANIFOLD 44 CHEM #15 45 CHEM #11 46 CHEM SAVE 47 DR UNLOCK (PULSE)/BASE BLK 48 CHEM #10 49 DOORLOCK PULSE(30022) 50 CHEM #6 51 CHEM #7 52 CHEM #8 53 CHEM #12 54 AUTO RECIRCULATION 55 NOT USED 56 NOT USED 57 NOT USED 58 DRAIN SAVER 59 MOVE TO LOAD POSITION 60 NOT USED 61 MOVING 62 NOT USED 63 MOVE TO WASH POSITION	**OUTPUTS** 64 OUTPUT 0 65 OUTPUT 1 66 OUTPUT 2 67 OUTPUT 3 68 OUTPUT 4 69 OUTPUT 5 70 OUTPUT 6 71 OUTPUT 7 72 OUTPUT 8 73 OUTPUT 9 74 OUTPUT 10 75 OUTPUT 11 76 OUTPUT 12 77 OUTPUT 13 78 OUTPUT 14 79 OUTPUT 15 80 OUTPUT 16 81 OUTPUT 17 82 OUTPUT 18 83 OUTPUT 19 84 NOT USED 85 NOT USED 86 NOT USED 87 NOT USED

MILTOUCH-EX ™ CONTROLS
WASHER EXTRACTOR
CONTROL BOARDS INPUTS/OUTPUTS

PELLERIN MILNOR CORPORATION

B2T2014013
2016345A

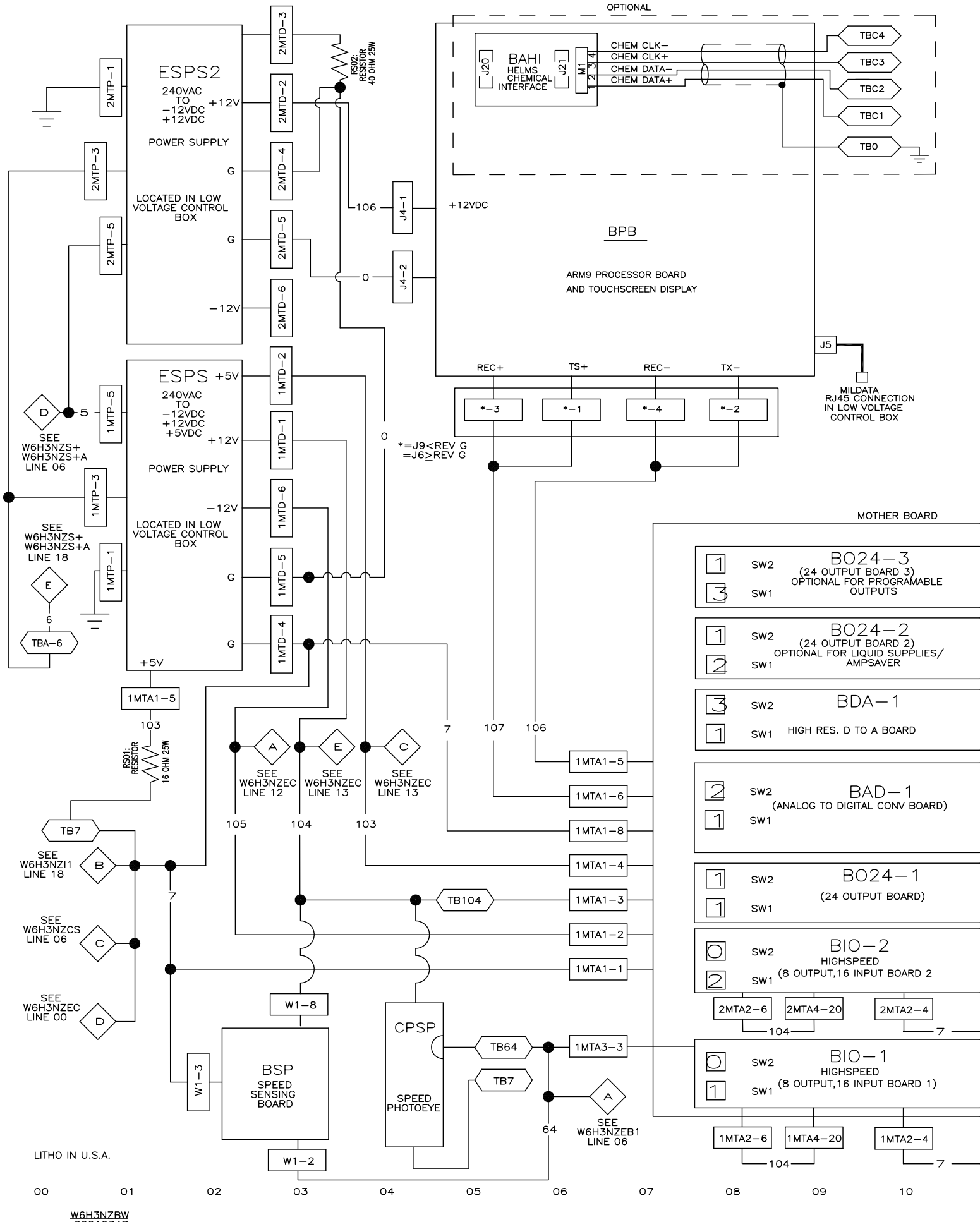
W6H3NZTG3

MICRO 6 SYSTEMS CONTROL BOX LAYOUTS

PELLERIN MILNOR CORPORATION

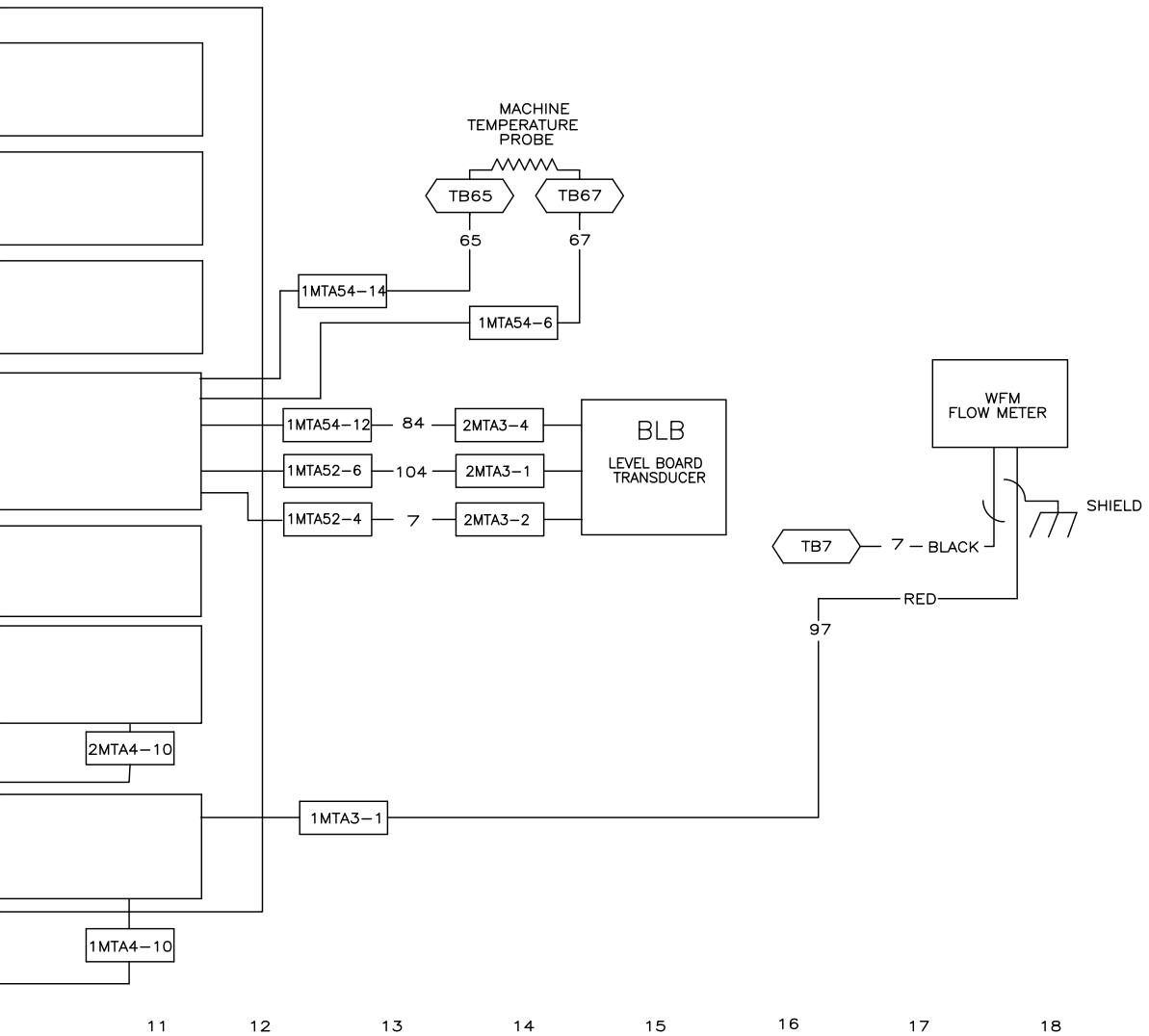
B2T2015003
20171146A

48040M7, 68036M5, 72046M5
PELLERIN MILNOR CORPORATION


OPTIONAL
BAHI
HELMS CHEMICAL INTERFACE
J20
J21
M1
CHEM CLK−
CHEM CLK+
CHEM DATA−
CHEM DATA+
TBC4
TBC3
TBC2
TBC1
TB0
ESPS2
240VAC TO −12VDC +12VDC
POWER SUPPLY
LOCATED IN LOW VOLTAGE CONTROL BOX
+12V
G
G
−12V
2MTP−1
2MTP−3
2MTP−5
2MTD−3
2MTD−2
2MTD−4
2MTD−5
2MTD−6
RS02: RESISTOR 40 OHM 25W
106
0
J4−1
J4−2
+12VDC
BPB
ARM9 PROCESSOR BOARD AND TOUCHSCREEN DISPLAY
J5
MILDATA RJ45 CONNECTION IN LOW VOLTAGE CONTROL BOX
REC+
TS+
REC−
TX−
*−3
*−1
*−4
*−2
*=J9<REV G
=J6≥REV G
ESPS +5V
240VAC TO −12VDC +12VDC +5VDC
+12V
POWER SUPPLY
−12V
LOCATED IN LOW VOLTAGE CONTROL BOX
G
G
+5V
1MTP−5
1MTP−3
1MTP−1
1MTD−2
1MTD−1
1MTD−6
1MTD−5
1MTD−4
D
5
SEE W6H3NZS+ W6H3NZS+A LINE 06
SEE W6H3NZS+ W6H3NZS+A LINE 18
E
6
TBA−6
1MTA1−5
103
RS01: RESISTOR 16 OHM 25W
A
SEE W6H3NZEC LINE 12
E
SEE W6H3NZEC LINE 13
C
SEE W6H3NZEC LINE 13
7
107
106
105
104
103
TB7
SEE W6H3NZI1 LINE 18
B
7
SEE W6H3NZCS LINE 06
C
SEE W6H3NZEC LINE 00
D
TB104
W1−8
W1−3
BSP
SPEED SENSING BOARD
W1−2
CPSP
SPEED PHOTOEYE
TB64
TB7
64
A
SEE W6H3NZEB1 LINE 06
1MTA1−5
1MTA1−6
1MTA1−8
1MTA1−4
1MTA1−3
1MTA1−2
1MTA1−1
1MTA3−3
MOTHER BOARD
BO24−3
(24 OUTPUT BOARD 3)
OPTIONAL FOR PROGRAMABLE OUTPUTS
SW2
SW1
BO24−2
(24 OUTPUT BOARD 2)
OPTIONAL FOR LIQUID SUPPLIES/ AMPSAVER
BDA−1
HIGH RES. D TO A BOARD
BAD−1
(ANALOG TO DIGITAL CONV BOARD)
BO24−1
(24 OUTPUT BOARD)
BIO−2
HIGHSPEED
(8 OUTPUT,16 INPUT BOARD 2
2MTA2−6
2MTA4−20
2MTA2−4
104
7
BIO−1
HIGHSPEED
(8 OUTPUT,16 INPUT BOARD 1)
1MTA2−6
1MTA4−20
1MTA2−4
104
7
LITHO IN U.S.A.
00
01
02
03
04
05
06
07
08
09
10
W6H3NZBW
2021034B

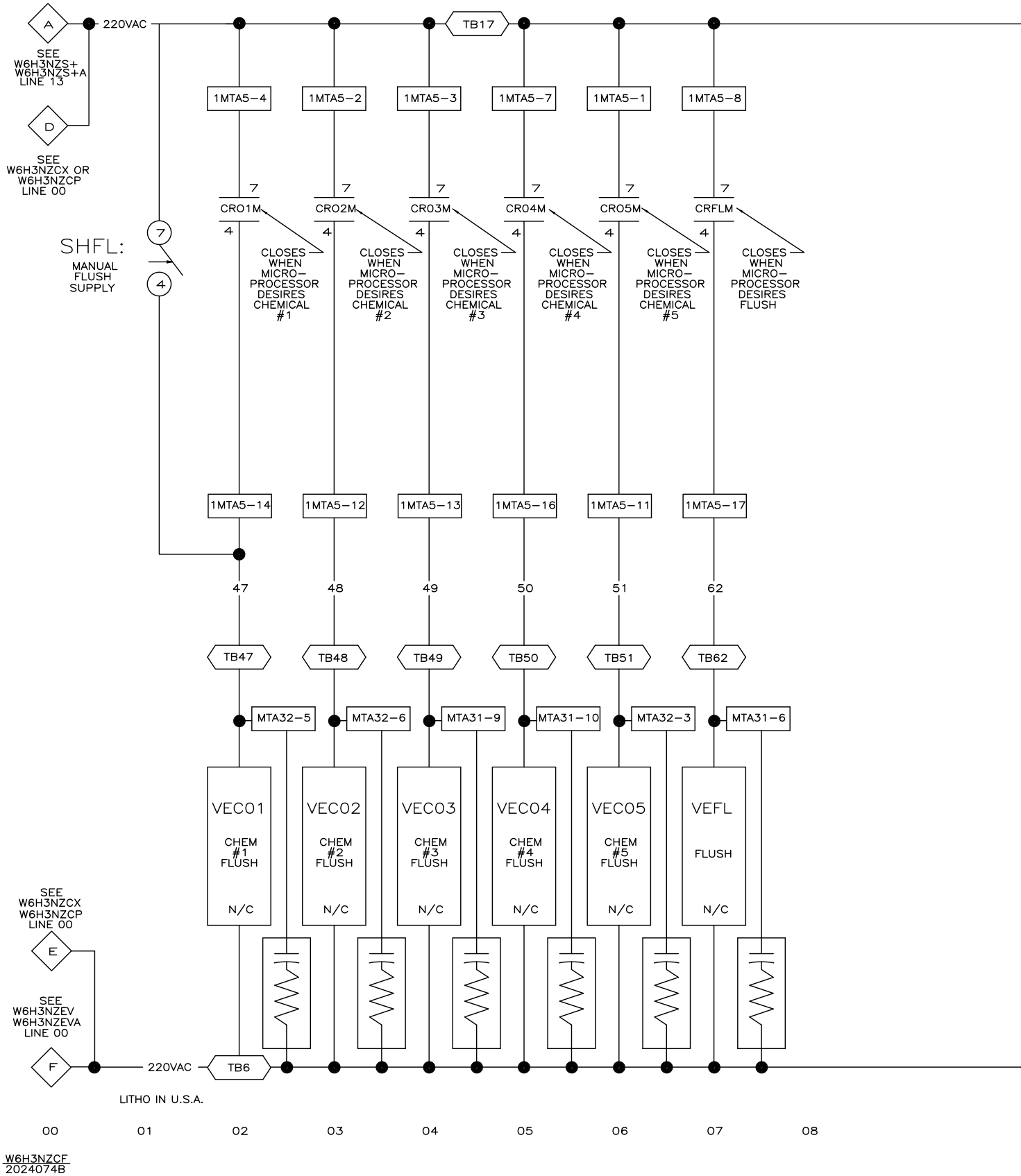
NOTES:

1. 1MTP, 1MTD ARE LOCATED ON ESPS (POWER SUPPLY).
2. 2MTP, 2MTD ARE LOCATED ON ESPS2 (POWER SUPPLY FOR PROCESSOR).
3. J4 AND J9 ARE LOCATED ON BPB (ARM 9 PROCESSOR BOARD)
4. 1MTA2, 1MTA3,AND 1MTA4 ARE LOCATED ON BIO−1(8 OUTPUT−16INPUT BOARD).
5. 2MTA2 AND 2MTA4 ARE LOCATED ON BIO−2(8 OUTPUT−16INPUT BOARD).
6. 1MTA1 IS LOCATED BMTH (MOTHER BOARD).
7. 1MTA54 IS LOCATED ON BAD−1 (ANALOG TO DIGITAL BOARD).
8. TBP IS LOCATED IN LOW VOLTAGE CONTROL BOX.
9. W1 IS LOCATED ON BSP (SPEED SENSING BOARD).



W6H3NZBW
MILTOUCH−EXTM CONTROLS
SCHEMATIC: BOARD TO BOARD WIRING

PELLERIN MILNOR CORPORATION


A
220VAC
SEE W6H3NZS+ W6H3NZS+A LINE 13
D
SEE W6H3NZCX OR W6H3NZCP LINE 00
TB17
1MTA5–4
1MTA5–2
1MTA5–3
1MTA5–7
1MTA5–1
1MTA5–8
7
CRO1M
CRO2M
CRO3M
CRO4M
CRO5M
CRFLM
4
SHFL:
MANUAL FLUSH SUPPLY
CLOSES WHEN MICRO–PROCESSOR DESIRES CHEMICAL #1
CLOSES WHEN MICRO–PROCESSOR DESIRES CHEMICAL #2
CLOSES WHEN MICRO–PROCESSOR DESIRES CHEMICAL #3
CLOSES WHEN MICRO–PROCESSOR DESIRES CHEMICAL #4
CLOSES WHEN MICRO–PROCESSOR DESIRES CHEMICAL #5
CLOSES WHEN MICRO–PROCESSOR DESIRES FLUSH
1MTA5–14
1MTA5–12
1MTA5–13
1MTA5–16
1MTA5–11
1MTA5–17
47
48
49
50
51
62
TB47
TB48
TB49
TB50
TB51
TB62
MTA32–5
MTA32–6
MTA31–9
MTA31–10
MTA32–3
MTA31–6
VEC01
CHEM #1 FLUSH
N/C
VEC02
CHEM #2 FLUSH
VEC03
CHEM #3 FLUSH
VEC04
CHEM #4 FLUSH
VEC05
CHEM #5 FLUSH
VEFL
FLUSH
SEE W6H3NZCX W6H3NZCP LINE 00
E
SEE W6H3NZEV W6H3NZEVA LINE 00
F
220VAC
TB6
LITHO IN U.S.A.
00
01
02
03
04
05
06
07
08
W6H3NZCF
2024074B

NOTES:

1. 1MTA5, 1MTA6 ARE LOCATED ON BIO–1 (8 OUTPUT–16 INPUT)

7

4

SHMF:
MANUAL FLUSH SOAP CHUTE

63

TB63

VECFL
FLUSH SOAP SHUTE
N/C

MTA32–8 — MTA32–9 — MTA32–10

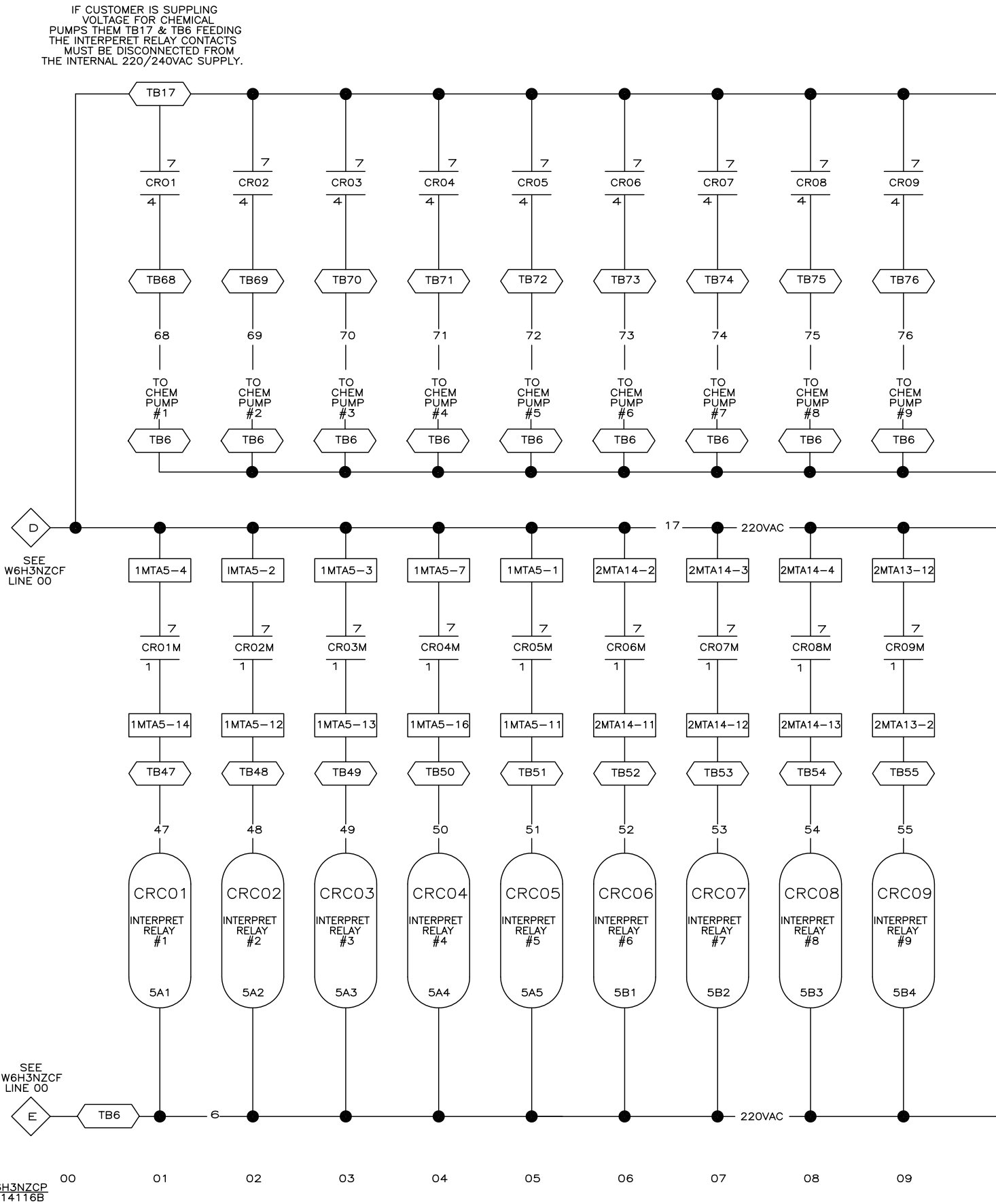
W6H3NZCF

MILTOUCH–EX™ CONTROLS

SCHEMATIC: FLUSHING SUPPLIES

220V1P50HZ/240V1P60HZ

PELLERIN MILNOR CORPORATION


IF CUSTOMER IS SUPPLING VOLTAGE FOR CHEMICAL PUMPS THEM TB17 & TB6 FEEDING THE INTERPERET RELAY CONTACTS MUST BE DISCONNECTED FROM THE INTERNAL 220/240VAC SUPPLY.
TB17
CR01
CR02
CR03
CR04
CR05
CR06
CR07
CR08
CR09
TB68
TB69
TB70
TB71
TB72
TB73
TB74
TB75
TB76
68
69
70
71
72
73
74
75
76
TO CHEM PUMP #1
TO CHEM PUMP #2
TO CHEM PUMP #3
TO CHEM PUMP #4
TO CHEM PUMP #5
TO CHEM PUMP #6
TO CHEM PUMP #7
TO CHEM PUMP #8
TO CHEM PUMP #9
TB6
D
SEE W6H3NZCF LINE 00
17
220VAC
1MTA5-4
IMTA5-2
1MTA5-3
1MTA5-7
1MTA5-1
2MTA14-2
2MTA14-3
2MTA14-4
2MTA13-12
CR01M
CR02M
CR03M
CR04M
CR05M
CR06M
CR07M
CR08M
CR09M
1MTA5-14
1MTA5-12
1MTA5-13
1MTA5-16
1MTA5-11
2MTA14-11
2MTA14-12
2MTA14-13
2MTA13-2
TB47
TB48
TB49
TB50
TB51
TB52
TB53
TB54
TB55
47
48
49
50
51
52
53
54
55
CRC01 INTERPRET RELAY #1 5A1
CRC02 INTERPRET RELAY #2 5A2
CRC03 INTERPRET RELAY #3 5A3
CRC04 INTERPRET RELAY #4 5A4
CRC05 INTERPRET RELAY #5 5A5
CRC06 INTERPRET RELAY #6 5B1
CRC07 INTERPRET RELAY #7 5B2
CRC08 INTERPRET RELAY #8 5B3
CRC09 INTERPRET RELAY #9 5B4
SEE W6H3NZCF LINE 00
E
TB6
6
220VAC
00
01
02
03
04
05
06
07
08
09
W6H3NZCP
2014116B

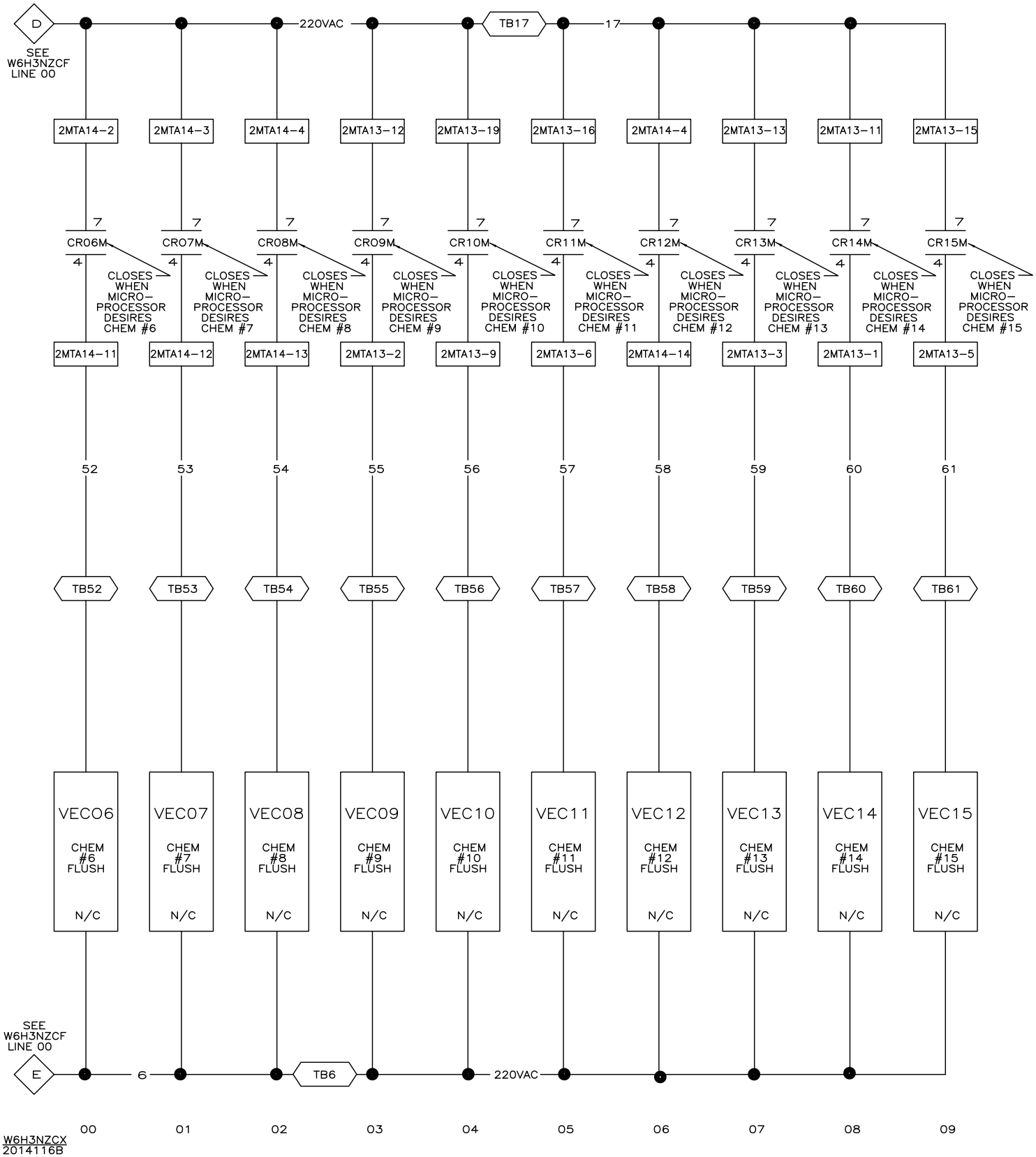
W6H3NZCP

MILTOUCH–EX™ CONTROLS

SCHEMATIC: LIQUID SUPPLY–INTERPRET RELAYS

220V1P50HZ/240V1P60HZ

PELLERIN MILNOR CORPORATION


D
SEE W6H3NZCF LINE 00
220VAC
TB17
17
2MTA14–2
2MTA14–3
2MTA14–4
2MTA13–12
2MTA13–19
2MTA13–16
2MTA14–4
2MTA13–13
2MTA13–11
2MTA13–15
7
4
CR06M
CR07M
CR08M
CR09M
CR10M
CR11M
CR12M
CR13M
CR14M
CR15M
CLOSES WHEN MICRO–PROCESSOR DESIRES CHEM #6
CLOSES WHEN MICRO–PROCESSOR DESIRES CHEM #7
CLOSES WHEN MICRO–PROCESSOR DESIRES CHEM #8
CLOSES WHEN MICRO–PROCESSOR DESIRES CHEM #9
CLOSES WHEN MICRO–PROCESSOR DESIRES CHEM #10
CLOSES WHEN MICRO–PROCESSOR DESIRES CHEM #11
CLOSES WHEN MICRO–PROCESSOR DESIRES CHEM #12
CLOSES WHEN MICRO–PROCESSOR DESIRES CHEM #13
CLOSES WHEN MICRO–PROCESSOR DESIRES CHEM #14
CLOSES WHEN MICRO–PROCESSOR DESIRES CHEM #15
2MTA14–11
2MTA14–12
2MTA14–13
2MTA13–2
2MTA13–9
2MTA13–6
2MTA14–14
2MTA13–3
2MTA13–1
2MTA13–5
52
53
54
55
56
57
58
59
60
61
TB52
TB53
TB54
TB55
TB56
TB57
TB58
TB59
TB60
TB61
VEC06 CHEM #6 FLUSH N/C
VEC07 CHEM #7 FLUSH N/C
VEC08 CHEM #8 FLUSH N/C
VEC09 CHEM #9 FLUSH N/C
VEC10 CHEM #10 FLUSH N/C
VEC11 CHEM #11 FLUSH N/C
VEC12 CHEM #12 FLUSH N/C
VEC13 CHEM #13 FLUSH N/C
VEC14 CHEM #14 FLUSH N/C
VEC15 CHEM #15 FLUSH N/C
SEE W6H3NZCF LINE 00
E
6
TB6
220VAC
00
01
02
03
04
05
06
07
08
09
W6H3NZCX
2014116B

W6H3NZCX

MILTOUCH-EX™ CONTROLS

SCHEMATIC: CENTRAL LIQUID SUPPLY FLUSH 6 THRU 15

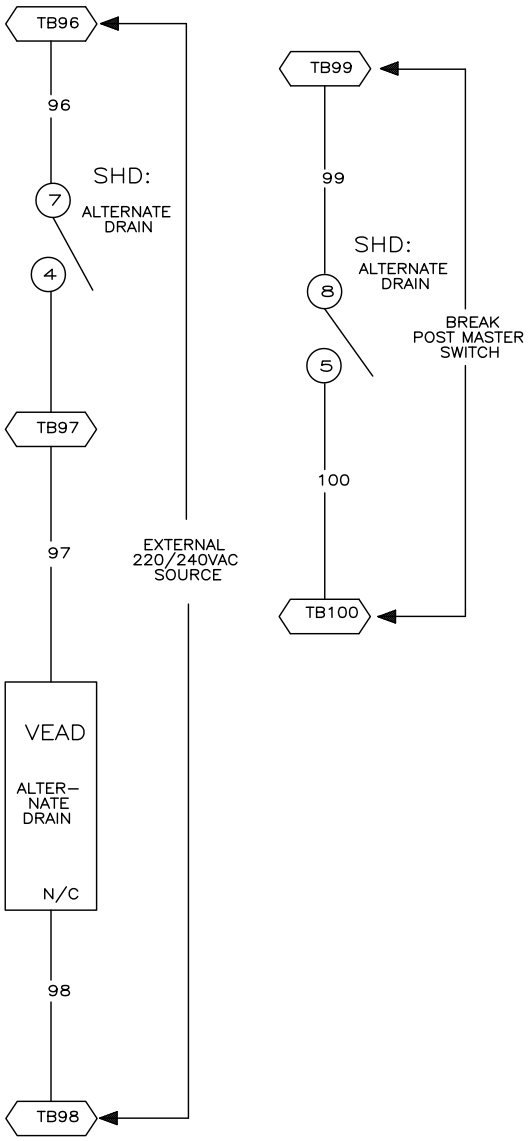
PELLERIN MILNOR CORPORATION

W6H3NZCX
2014116B

10 11 12 13

W6H3NZSCX
2014116B

EV05 EV05
EV05 EV05



00 01 02 03 04 05 06 07

W6H3NZDR
2014116B

W6H3NZDR

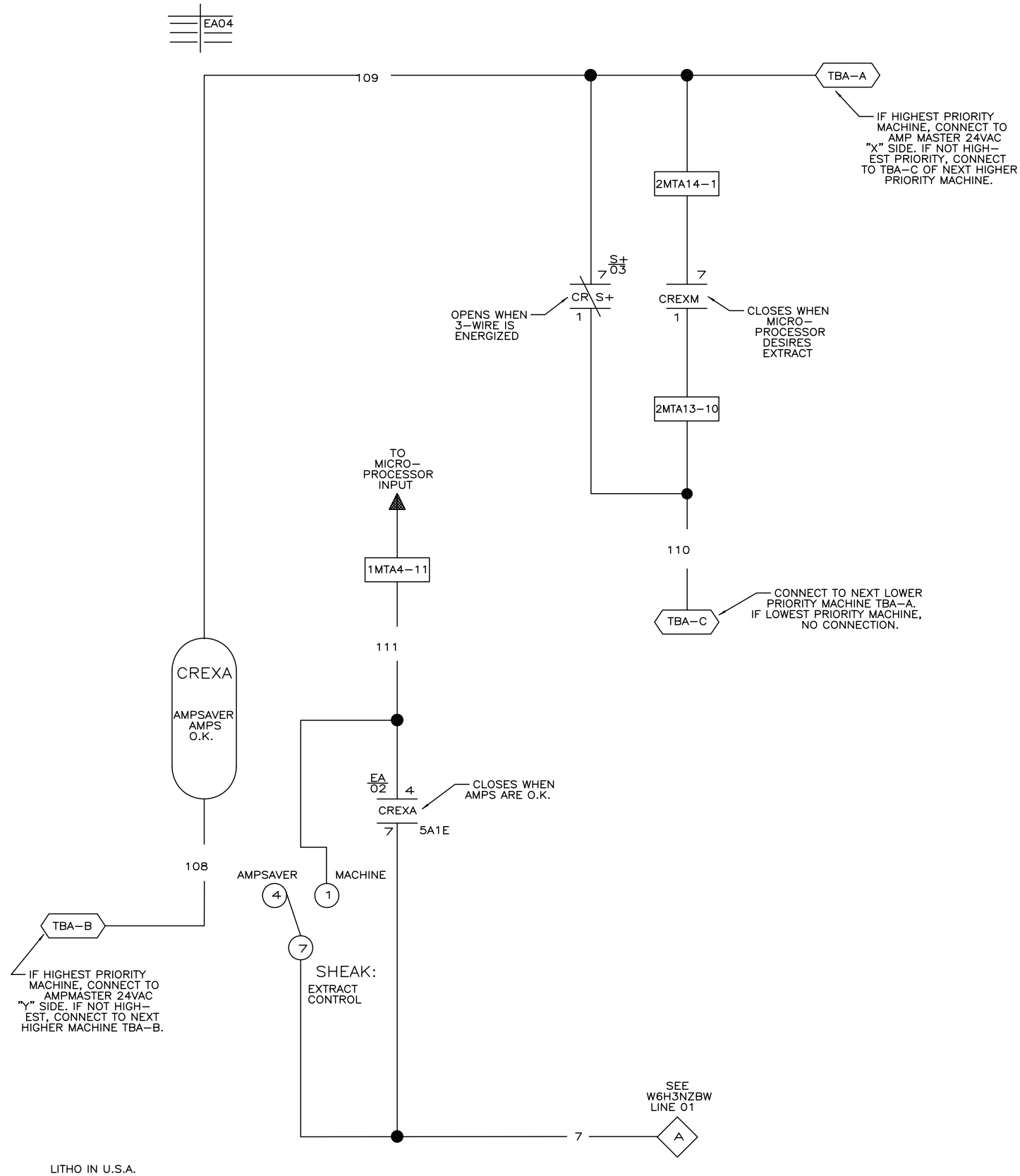
MILTOUCH–EX™ CONTROLS
SCHEMATIC: ALTERNATE DRAIN VALVE
FOR AIR OPERATED DRAINS ONLY

220V1P50HZ/240V1P60HZ

PELLERIN MILNOR CORPORATION

W6H3NZDR
2014116B

W6H3NZDR
2014116B



W6H3NZEA
2014116B

W6H3NZEA

MILTOUCH—EX™ CONTROLS

SCHEMATIC: EXTRACT COMMANDS SATISFIED

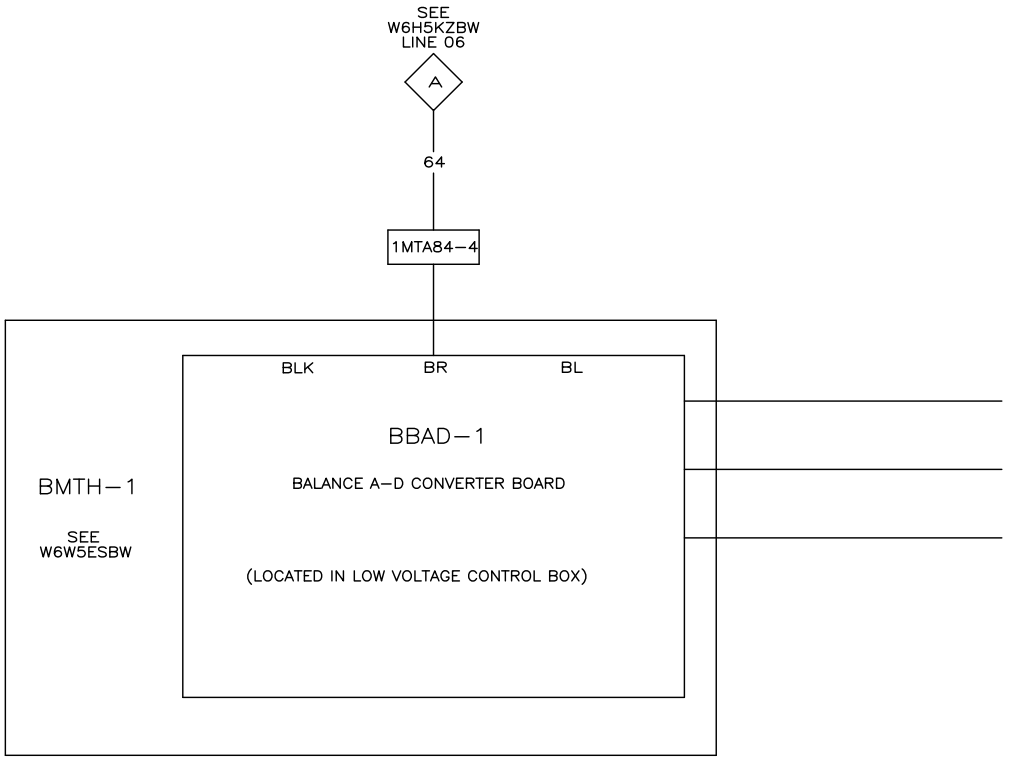
24V1P50HZ/24V1P60HZ

PELLERIN MILNOR CORPORATION

W6H3NZEA
2014116B

11 12

W6H3NZEA
2014116B



00 01 02 03 04 05 06 07 08 09 10

W6H3NZEB1
2015225B

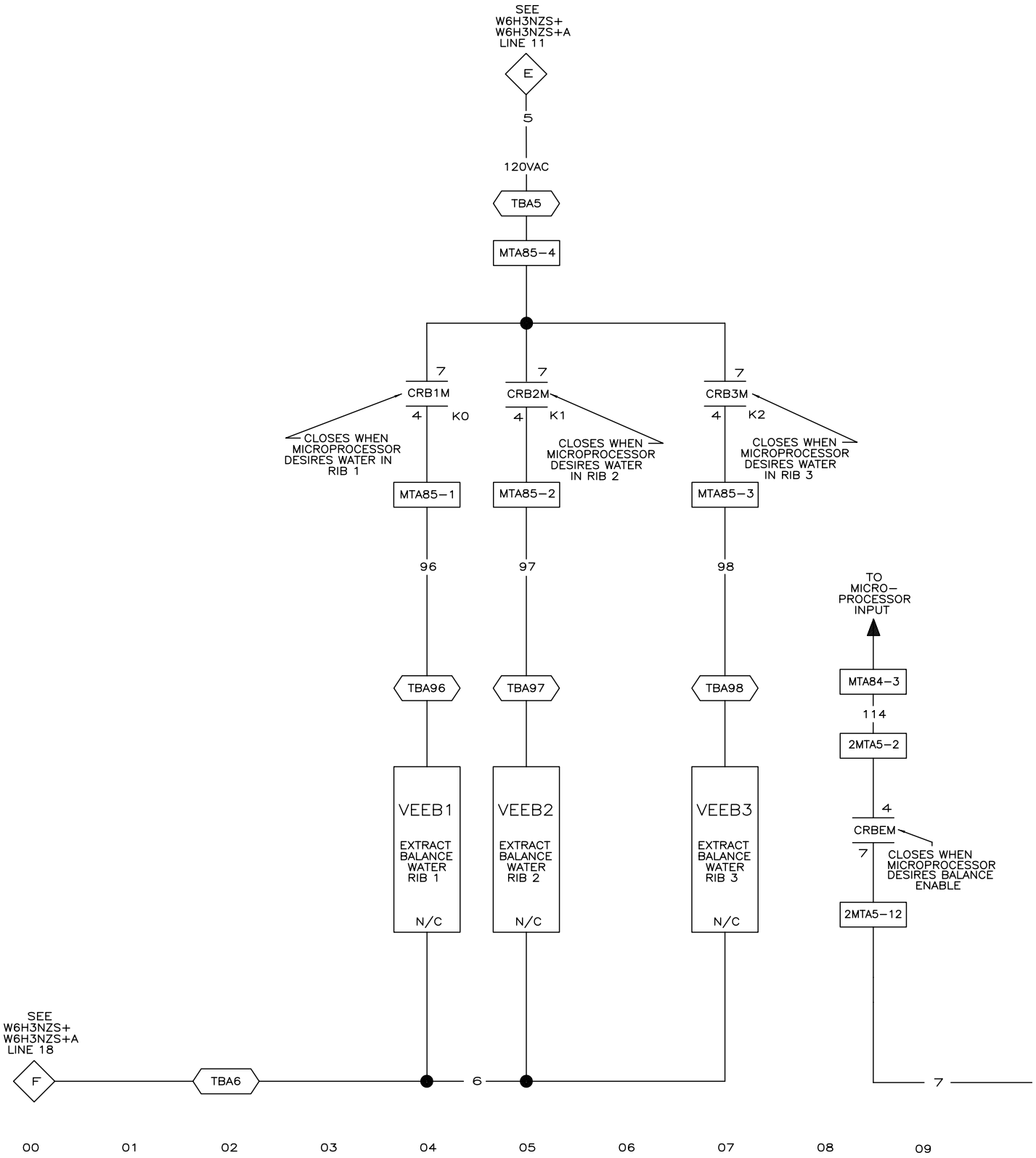
W6H3NZEB1
MICRO 6 SYSTEMS
MARK V
SCHEMATIC: ELECTRONIC BALANCE
PELLERIN MILNOR CORPORATION

WIRING	VOLTAGE	WIRE COLOR
103	+5VDC	BLUE
104	+12VDC	BLUE/ORANGE
105	−12VDC	BLUE/BLACK
7	GROUND	BLUE/WHITE
107	SERIAL HIGH	BLUE/RED
106	SERIAL LOW	BLUE/BLACK
INPUTS	—	BLUE/BLACK
—	24VAC	BLUE/RED
1	120VAC	RED
6	CONTROL GROUND	RED/WHITE

NOTES:

1. WIRE 2H IS AN ANALOG GROUND WHICH CONNECTS DIRECTLY TO COPPER BUSS BAR.
2. TB3 IS LOCATED IN THE LOW VOLTAGE CONTROL BOX.
3. WCA IS LOCATED AT THE ACCELEROMETER.

11 12 13 14



W6H3NZEB2
2024074B

W6H3NZEB2

MICRO 6 SYSTEMS
MARK V

SCHEMATIC: BALANCING VALVES
MODIFIED FOR ELECTRONIC BALANCE

220V1P50HZ/240V1P60HZ

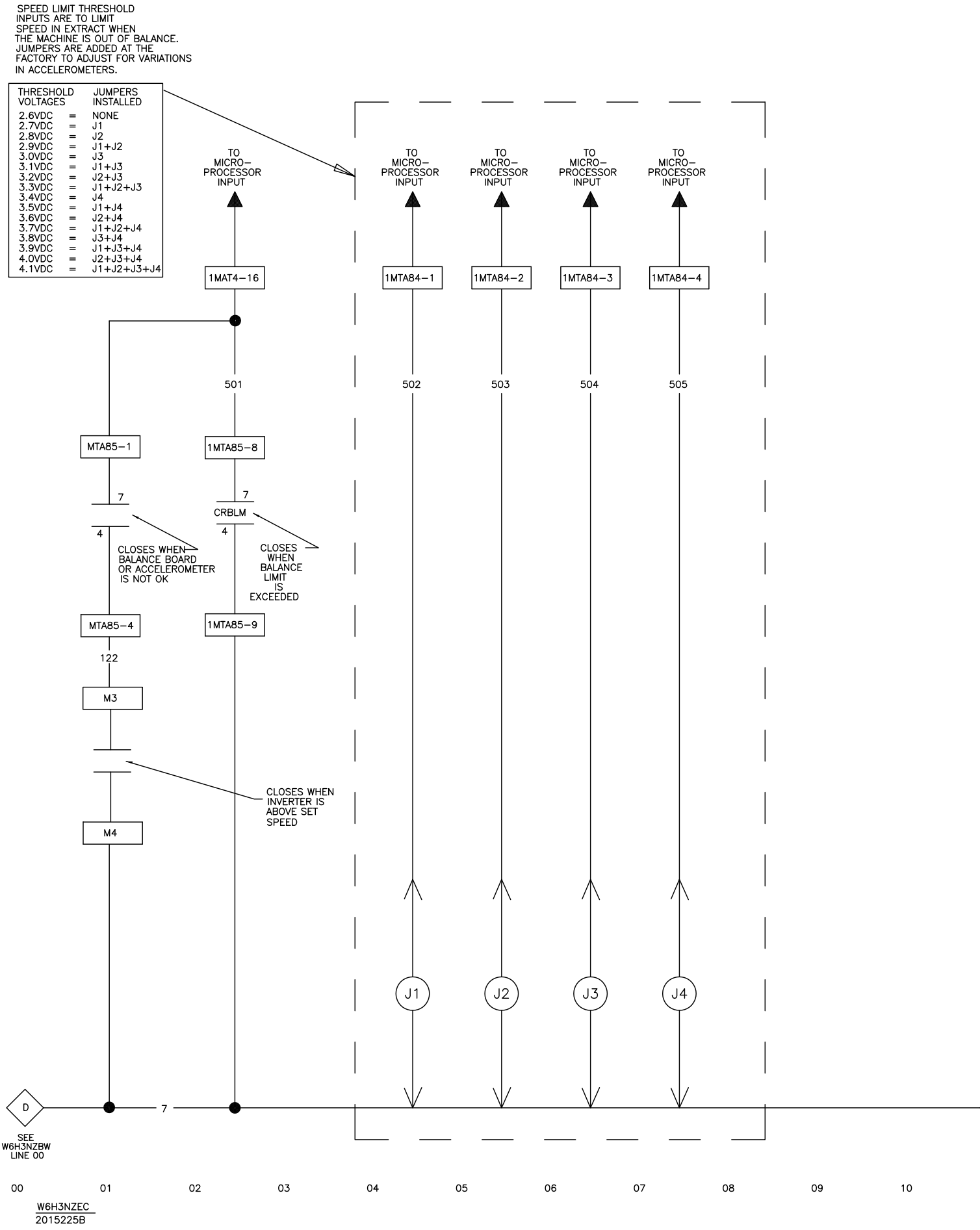
PELLERIN MILNOR CORPORATION

W6H3NZEB2
2024074B

SEE
W6H3NZI1
LINE 18
D

10 11 12

W6H3NZEB2
2024074B


SPEED LIMIT THRESHOLD INPUTS ARE TO LIMIT SPEED IN EXTRACT WHEN THE MACHINE IS OUT OF BALANCE. JUMPERS ARE ADDED AT THE FACTORY TO ADJUST FOR VARIATIONS IN ACCELEROMETERS.
THRESHOLD VOLTAGES
JUMPERS INSTALLED
2.6VDC = NONE
2.7VDC = J1
2.8VDC = J2
2.9VDC = J1+J2
3.0VDC = J3
3.1VDC = J1+J3
3.2VDC = J2+J3
3.3VDC = J1+J2+J3
3.4VDC = J4
3.5VDC = J1+J4
3.6VDC = J2+J4
3.7VDC = J1+J2+J4
3.8VDC = J3+J4
3.9VDC = J1+J3+J4
4.0VDC = J2+J3+J4
4.1VDC = J1+J2+J3+J4
TO MICRO–PROCESSOR INPUT
1MAT4–16
501
MTA85–1
1MTA85–8
7
4
CRBLM
CLOSES WHEN BALANCE BOARD OR ACCELEROMETER IS NOT OK
CLOSES WHEN BALANCE LIMIT IS EXCEEDED
MTA85–4
1MTA85–9
122
M3
M4
CLOSES WHEN INVERTER IS ABOVE SET SPEED
1MTA84–1
1MTA84–2
1MTA84–3
1MTA84–4
502
503
504
505
J1
J2
J3
J4
D
SEE W6H3NZBW LINE 00
00
01
02
03
04
05
06
07
08
09
10
W6H3NZEC
2015225B

W6H3NZEC
2015225B

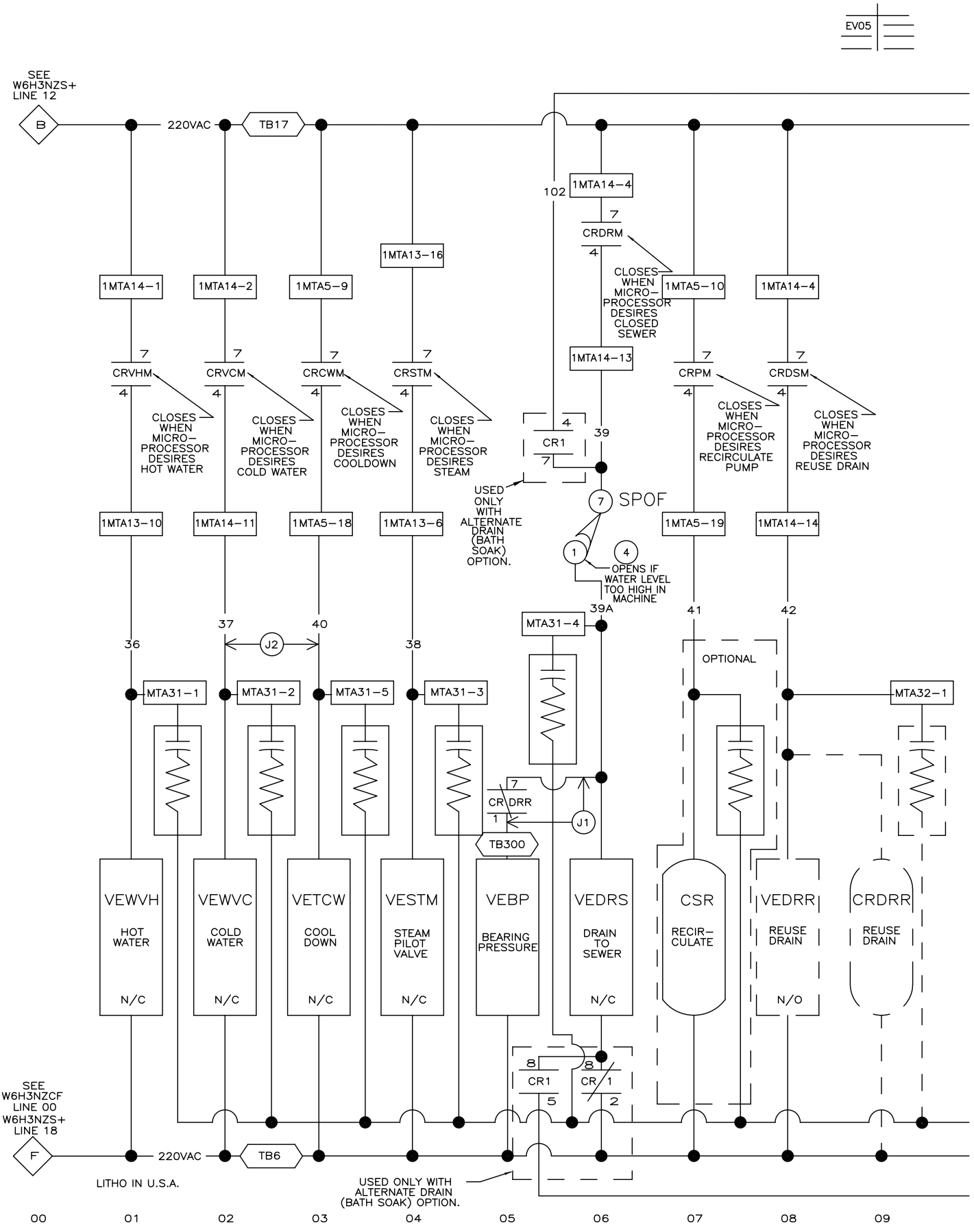
W6H3NZEC

MILTOUCH–EX™ DRYELL

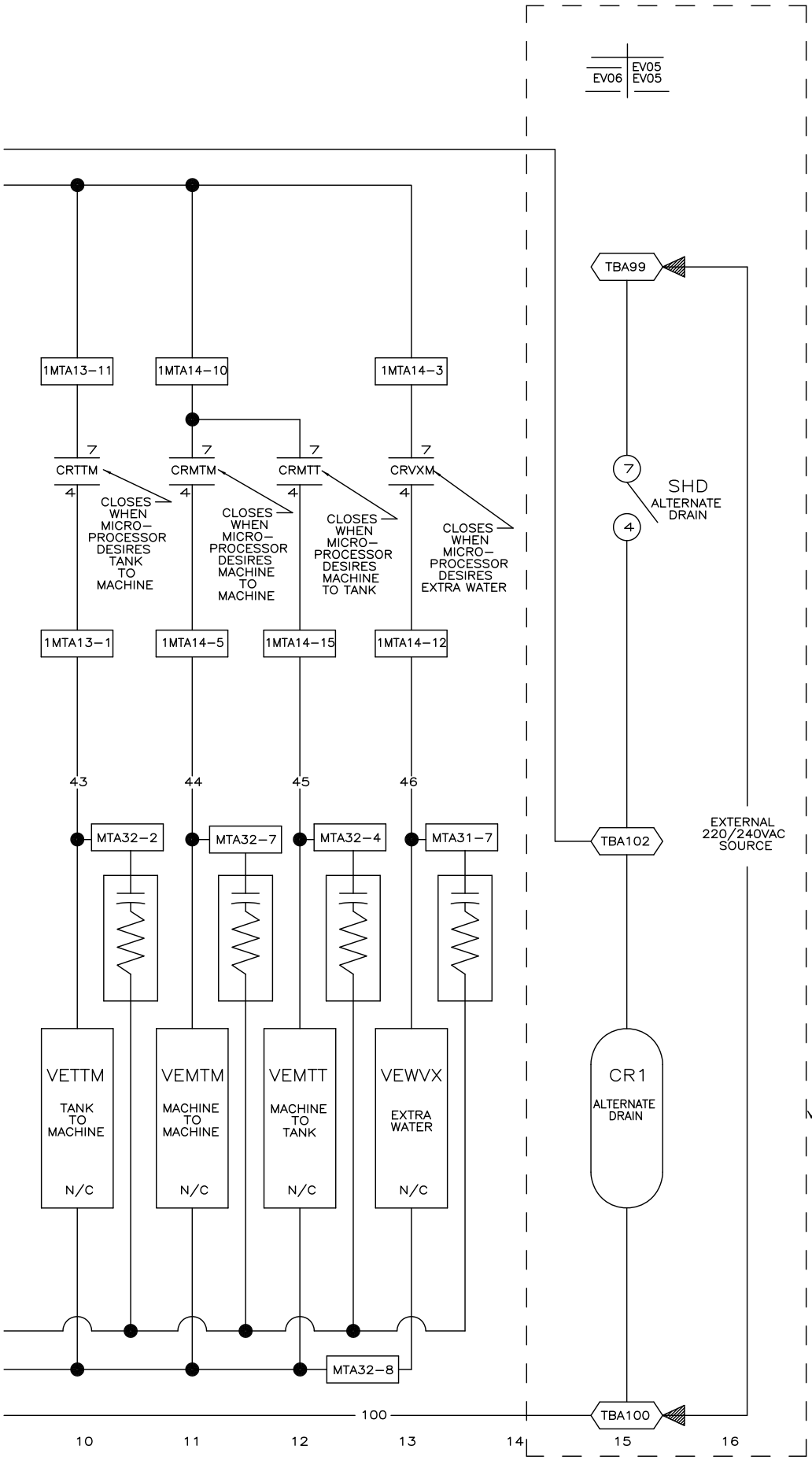
SCHEMATIC: EXTRACT SPEED LIMIT CONTROL

PELLERIN MILNOR CORPORATION

W6H3NZEC
2015225B



W6H3NZEV
2024074B



USED ONLY ON MACHINES WITH ALTERNATE DRAIN (BATH SOAK) OPTION. IF MACHINE IS EQUIPPED WITH AIR OPERATED VALVES SEE W6H3NZDR.

NOTE: SEE W6H3NZEVA FOR 48040F7K TILTING W/E.

NOTE:
REMOVE (J1) FOR DRAIN TO REUSE OPTION.

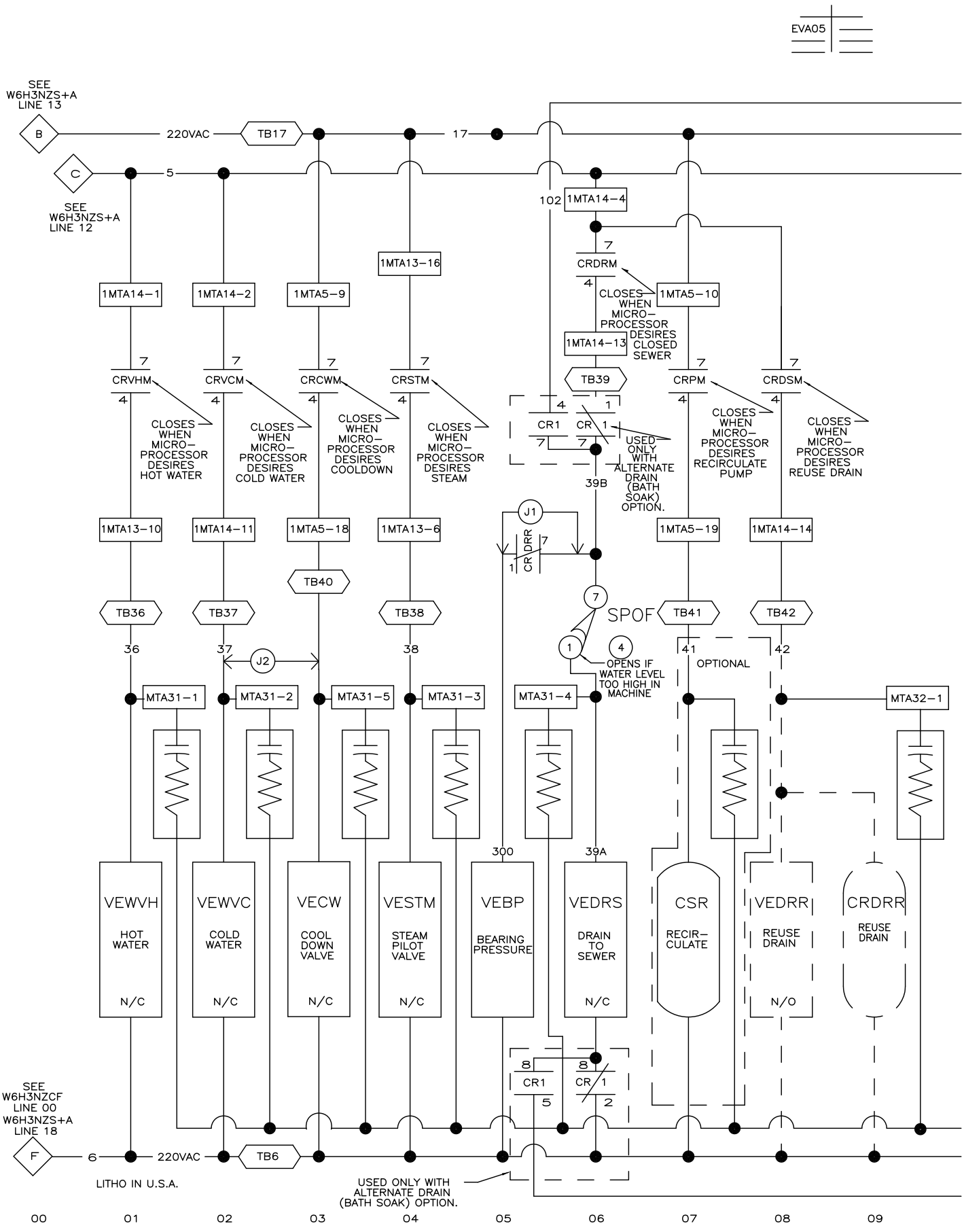
NOTE:
REMOVE (J2) IF MACHINE IS EQUIPPED WITH SEPARATE COOLDOWN WATER VALVE.

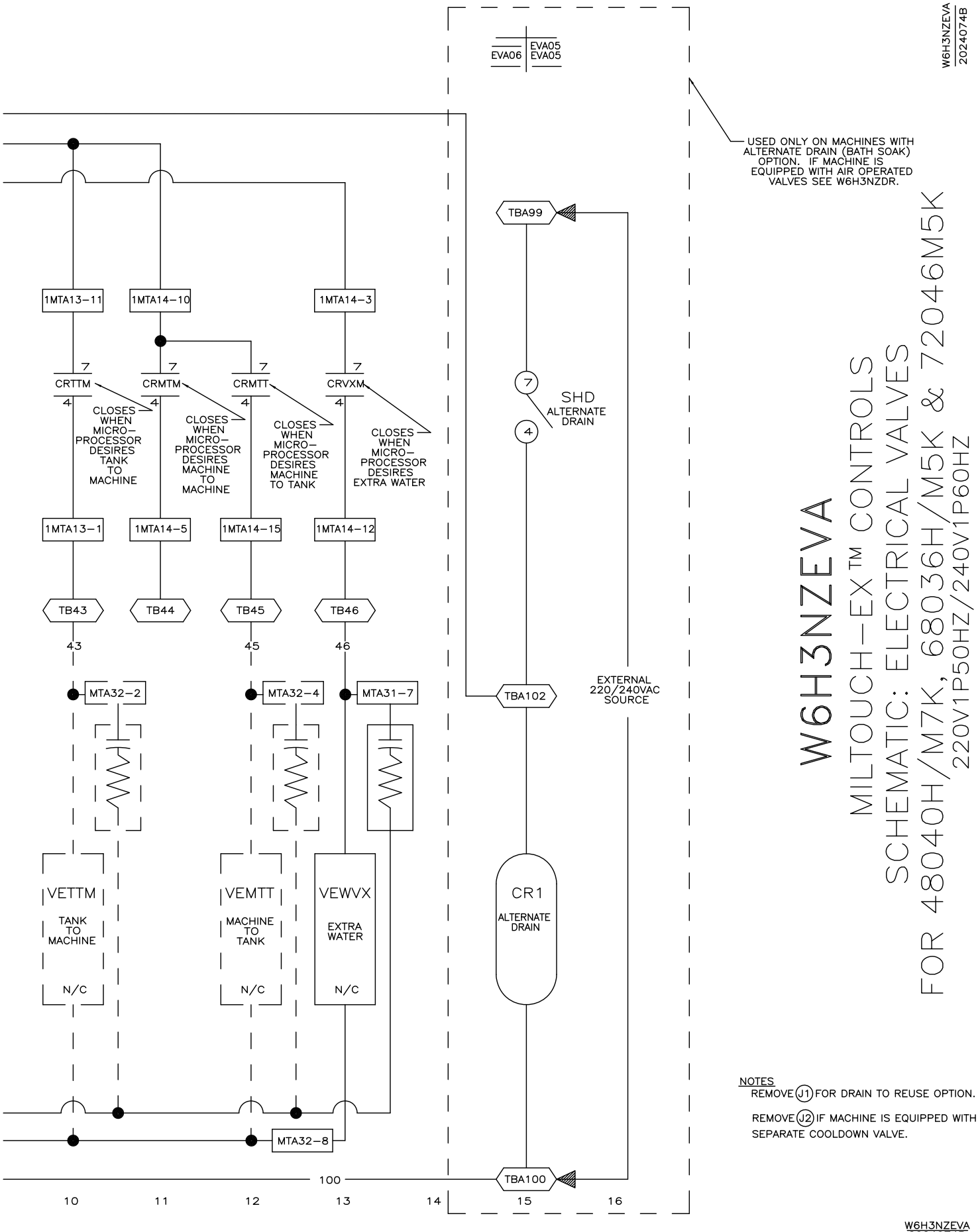
W6H3NZEV
MILTOUCH–EX™ CONTROLS
SCHEMATIC: ELECTRICAL VALVES 48040H7R
220V1P50HZ/240V1P60HZ

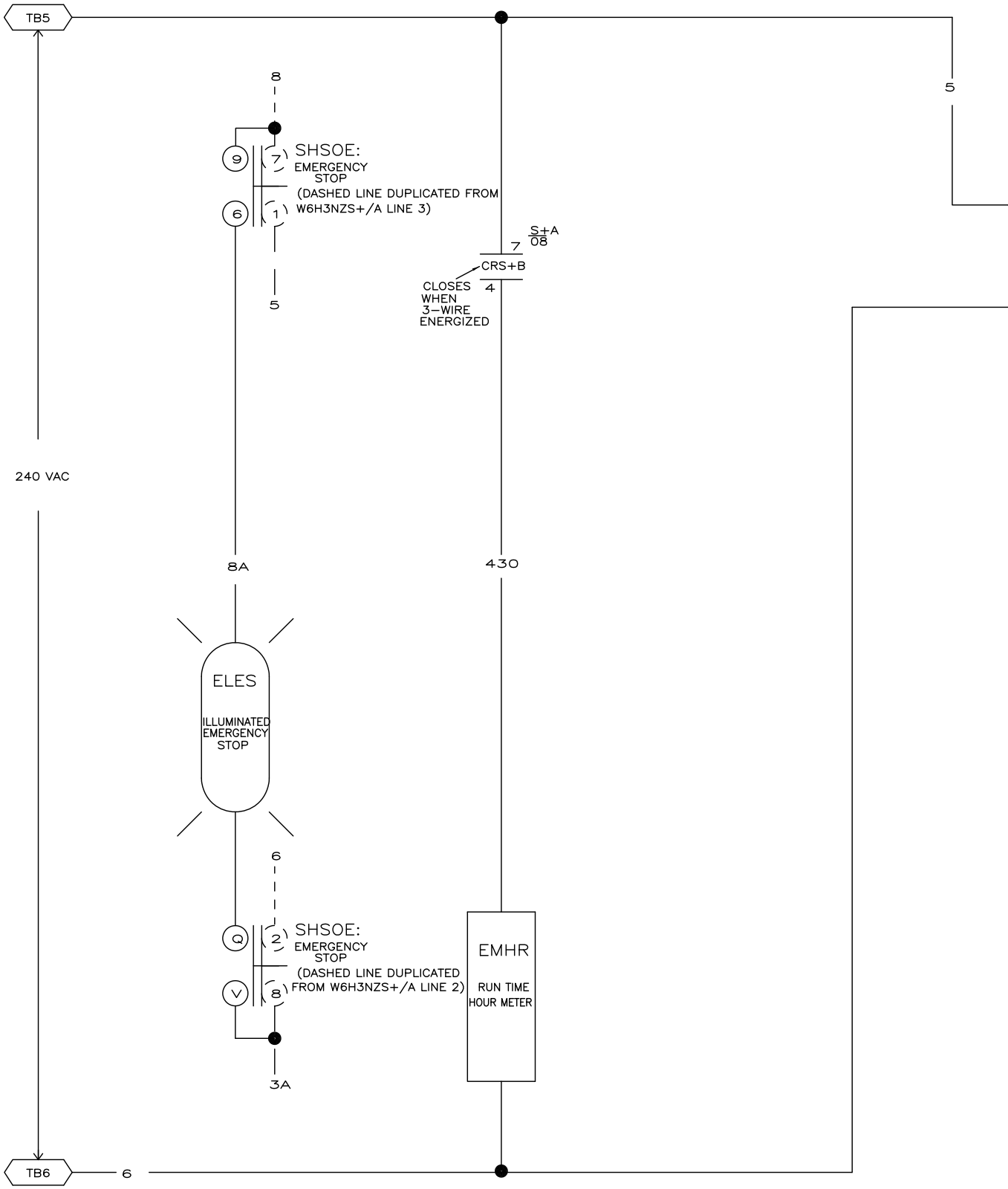
PELLERIN MILNOR CORPORATION

W6H3NZEV
2024074B

W6H3NZEV
2024074B


EVA05
SEE W6H3NZS+A LINE 13
B
220VAC
TB17
17
C
5
SEE W6H3NZS+A LINE 12
102
1MTA14-4
7
CRDRM
4
CLOSES WHEN MICRO-PROCESSOR DESIRES CLOSED SEWER
1MTA5-10
1MTA13-16
1MTA14-1
1MTA14-2
1MTA5-9
1MTA14-13
TB39
7
CRVHM
4
CLOSES WHEN MICRO-PROCESSOR DESIRES HOT WATER
CRVCM
CLOSES WHEN MICRO-PROCESSOR DESIRES COLD WATER
CRCWM
CLOSES WHEN MICRO-PROCESSOR DESIRES COOLDOWN
CRSTM
CLOSES WHEN MICRO-PROCESSOR DESIRES STEAM
CRPM
CLOSES WHEN MICRO-PROCESSOR DESIRES RECIRCULATE PUMP
CRDSM
CLOSES WHEN MICRO-PROCESSOR DESIRES REUSE DRAIN
CR1
CR
1
USED ONLY WITH ALTERNATE DRAIN (BATH SOAK) OPTION.
39B
J1
CRDRR
1MTA13-10
1MTA14-11
1MTA5-18
1MTA13-6
1MTA5-19
1MTA14-14
TB40
TB36
TB37
TB38
SPOF
TB41
TB42
36
37
J2
38
OPENS IF WATER LEVEL TOO HIGH IN MACHINE
41
OPTIONAL
42
MTA31-1
MTA31-2
MTA31-5
MTA31-3
MTA31-4
MTA32-1
300
39A
VEWVH
HOT WATER
N/C
VEWVC
COLD WATER
VECW
COOL DOWN VALVE
VESTM
STEAM PILOT VALVE
VEBP
BEARING PRESSURE
VEDRS
DRAIN TO SEWER
CSR
RECIR-CULATE
VEDRR
REUSE DRAIN
N/O
CRDRR
REUSE DRAIN
SEE W6H3NZCF LINE 00
W6H3NZS+A LINE 18
F
6
220VAC
TB6
LITHO IN U.S.A.
USED ONLY WITH ALTERNATE DRAIN (BATH SOAK) OPTION.
00
01
02
03
04
05
06
07
08
09
W6H3NZEVA
2024074B


W6H3NZEVA
2024074B
EVA06 EVA05
EVA05
USED ONLY ON MACHINES WITH ALTERNATE DRAIN (BATH SOAK) OPTION. IF MACHINE IS EQUIPPED WITH AIR OPERATED VALVES SEE W6H3NZDR.
TBA99
1MTA13–11
1MTA14–10
1MTA14–3
7
4
CRTTM
CRMTM
CRMTT
CRVXM
CLOSES WHEN MICRO–PROCESSOR DESIRES TANK TO MACHINE
CLOSES WHEN MICRO–PROCESSOR DESIRES MACHINE TO MACHINE
CLOSES WHEN MICRO–PROCESSOR DESIRES MACHINE TO TANK
CLOSES WHEN MICRO–PROCESSOR DESIRES EXTRA WATER
SHD
ALTERNATE DRAIN
1MTA13–1
1MTA14–5
1MTA14–15
1MTA14–12
TB43
TB44
TB45
TB46
43
45
46
MTA32–2
MTA32–4
MTA31–7
TBA102
EXTERNAL 220/240VAC SOURCE
VETTM
TANK TO MACHINE
N/C
VEMTT
MACHINE TO TANK
N/C
VEWVX
EXTRA WATER
N/C
CR1
ALTERNATE DRAIN
MTA32–8
100
TBA100
10
11
12
13
14
15
16
W6H3NZEVA
MILTOUCH–EX™ CONTROLS
SCHEMATIC: ELECTRICAL VALVES
FOR 48040H/M7K, 68036H/M5K & 72046M5K
220V1P50HZ/240V1P60HZ
PELLERIN MILNOR CORPORATION
NOTES
REMOVE J1 FOR DRAIN TO REUSE OPTION.
REMOVE J2 IF MACHINE IS EQUIPPED WITH SEPARATE COOLDOWN VALVE.
W6H3NZEVA
2024074B



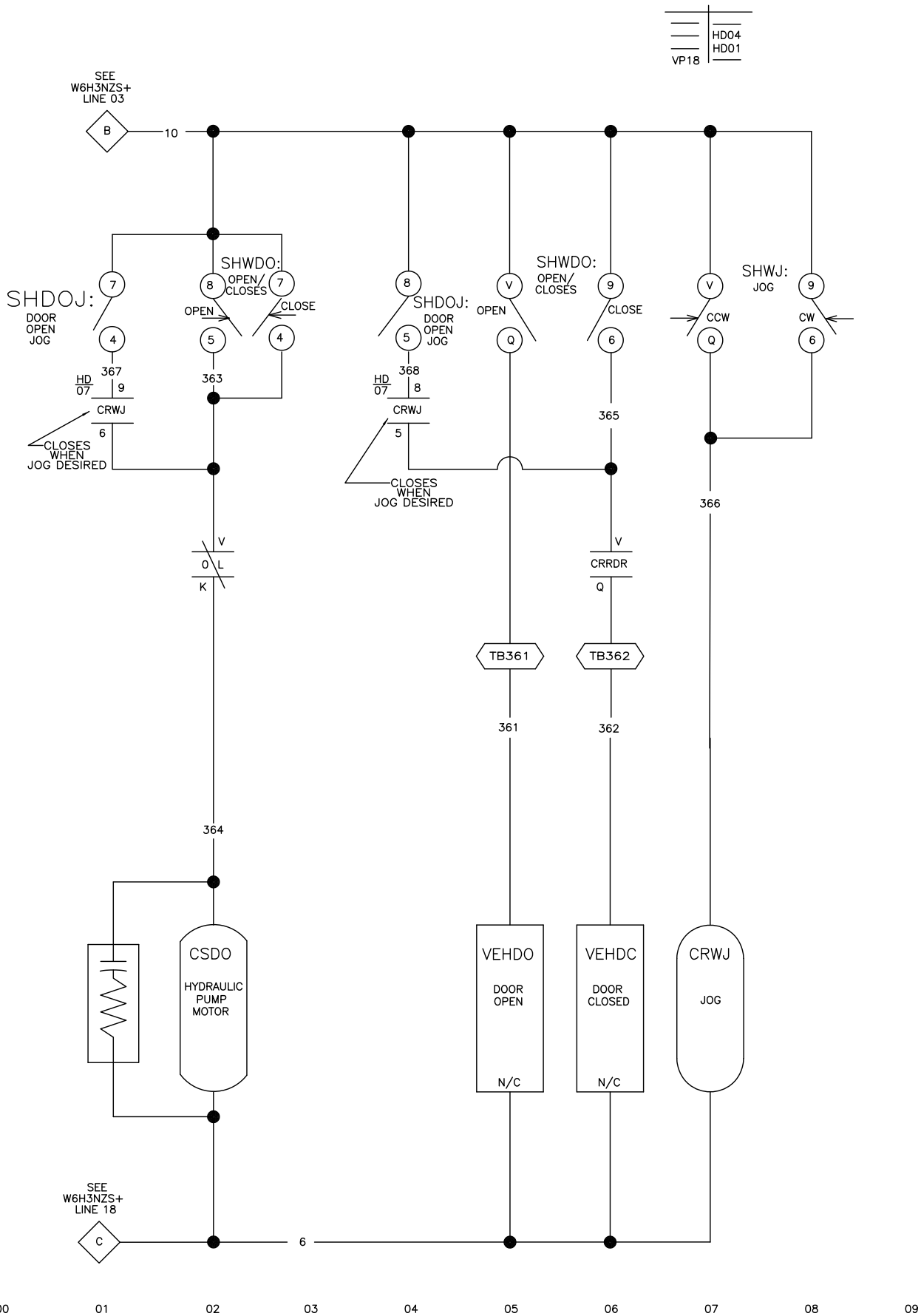
W6H3NZFS
2021162B

W6H3NZFS

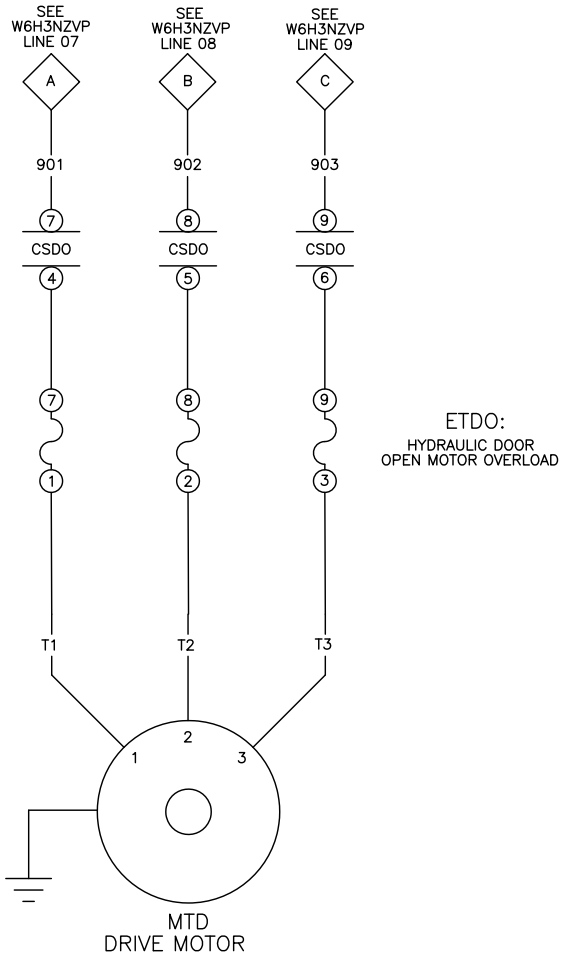
SCHEMATIC: OPTIONAL LED SIGNAL LIGHTS

ILLUMINATED EMERGENCY STOP, HOUR METER

PELLERIN MILNOR CORPORATION



W6H3NZHD
2024074B



ETDO:
HYDRAULIC DOOR
OPEN MOTOR OVERLOAD

W6H3NZHD

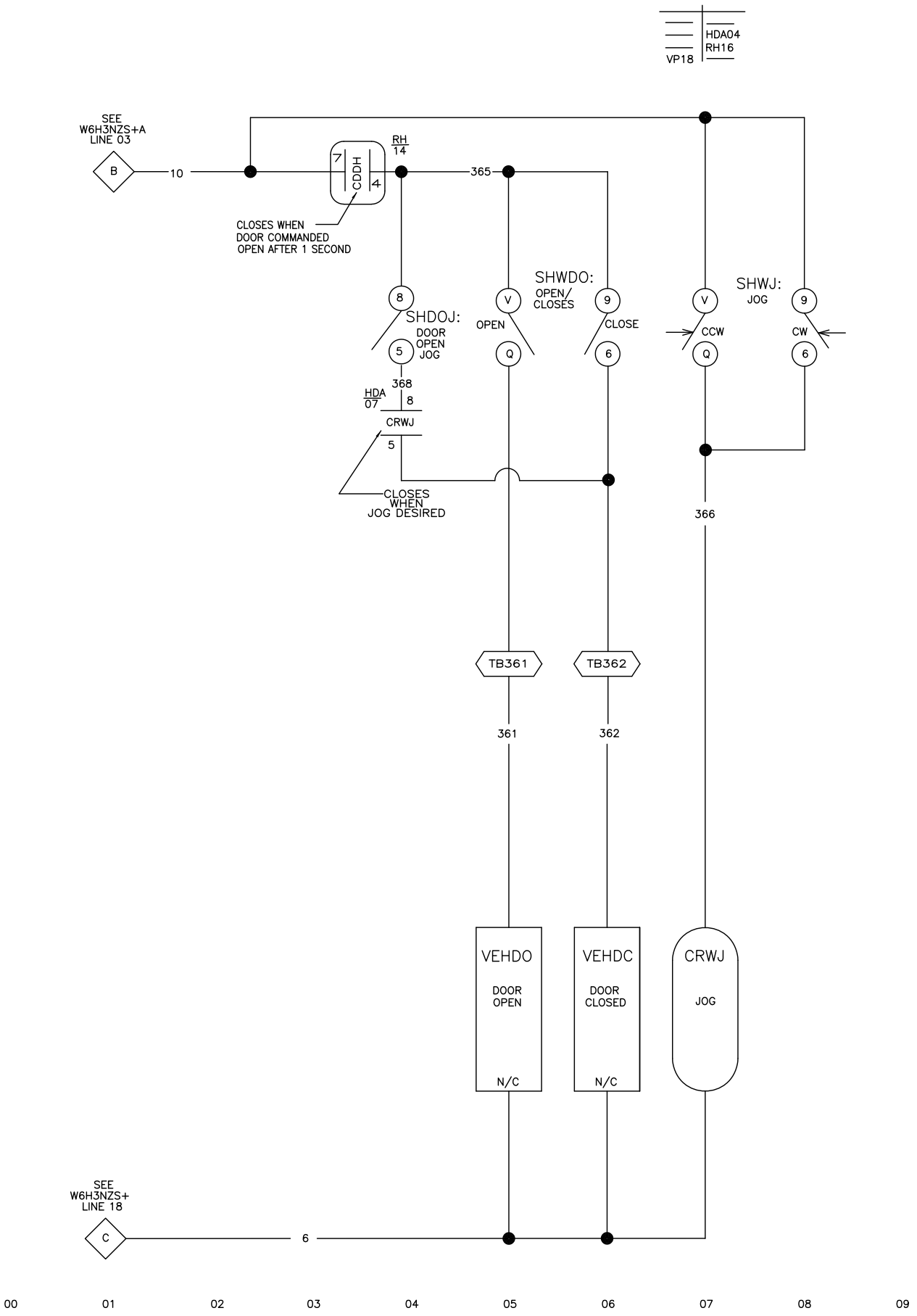
MILTOUCH-EX™ CONTROLS

SCHEMATIC; OPTIONAL HYDRAULIC DOOR FOR 48040H7R NON TILTING

220V1P50HZ/240V1P60HZ

PELLERIN MILNOR CORPORATION

10 11 12 13 14 15 16



W6H3NZHDA
2024074B

W6H3NZHDA

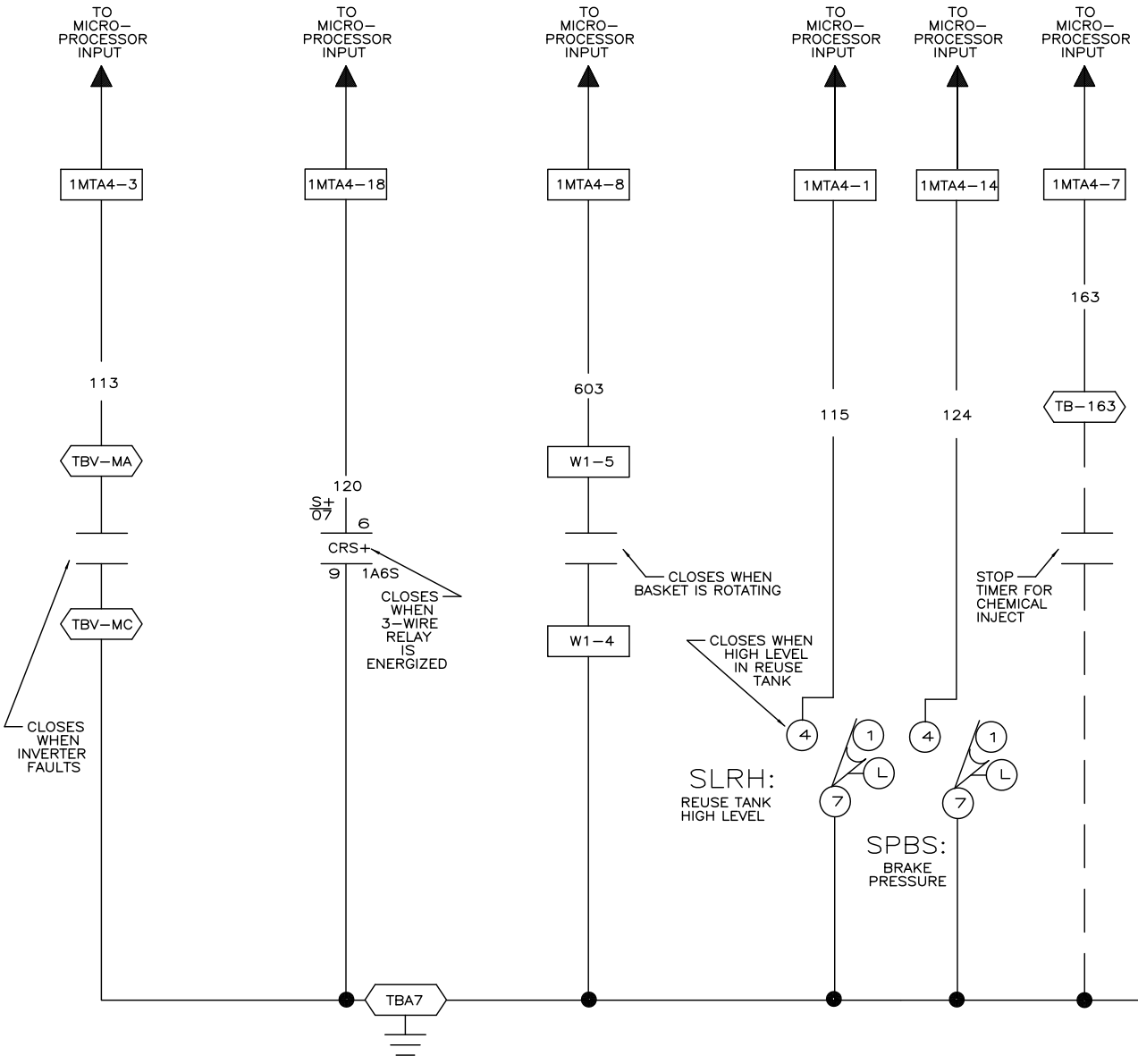
MILTOUCH—EX ™ CONTROLS

SCHEMATIC: HYDRAULIC DOOR

FOR 48040H7K/68036H5K TILTING

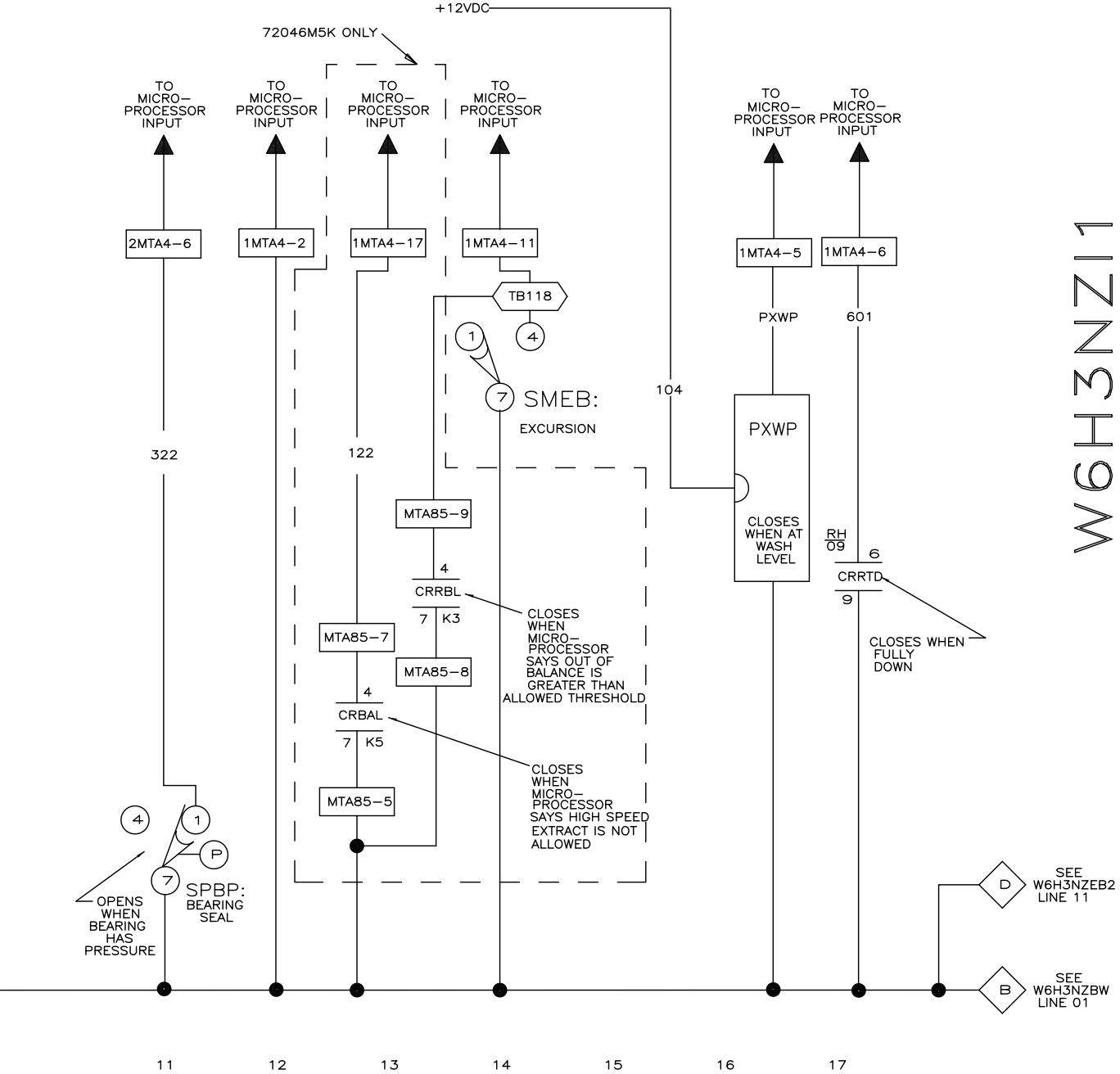
220V1P50HZ/240V1P60HZ

PELLERIN MILNOR CORPORATION



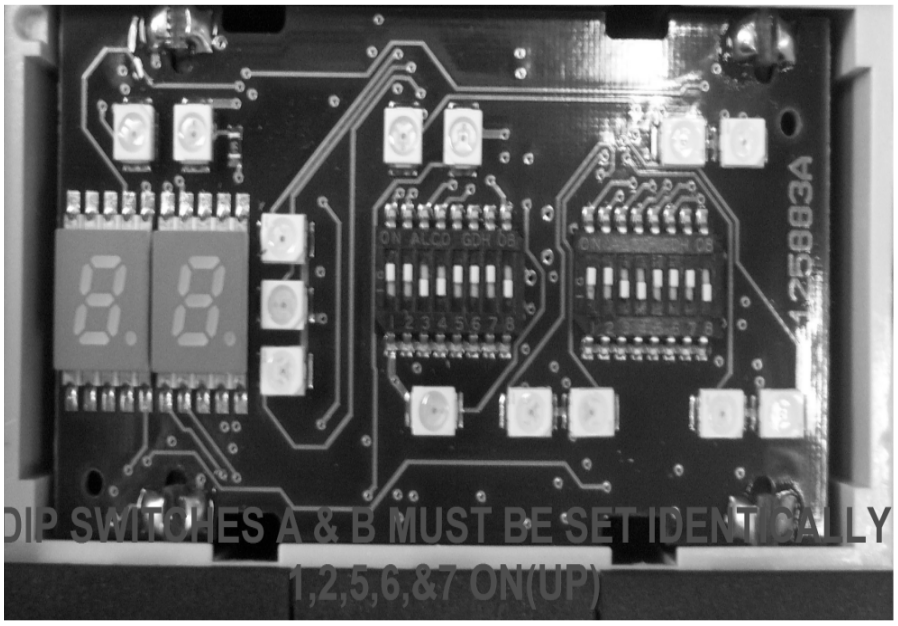
W6H3NZI1
2016492B

1. 1MTA3 AND 1MTA4 ARE LOCATED ON BI0–1 (8 OUTPUT–16 INPUT BOARD).
2. TBR, TBP, AND TB3 (COPPER BUS BAR) ARE LOCATED IN LOW VOLTAGE CONTROL BOX.
3. W1 IS LOCATED ON THE BSP (SPEED SENSING BOARD).
4. MTA85 IS ON BBAD–1 (BALANCE BOARD.)



W6H3NZI1
MILTOUCH–EXTM CONTROLS
SCHEMATIC: MICROPROCESSOR INPUTS
PELLERIN MILNOR CORPORATION

Banner Model MMD-TA-11B DIP SWITCH SETTINGS



LEAVE RECEIVER IN FACTORY DEFAULT SETTINGS (BELOW)

EMITTER(NOT SHOWN) FACTORY DEFAULT Scan Code 1

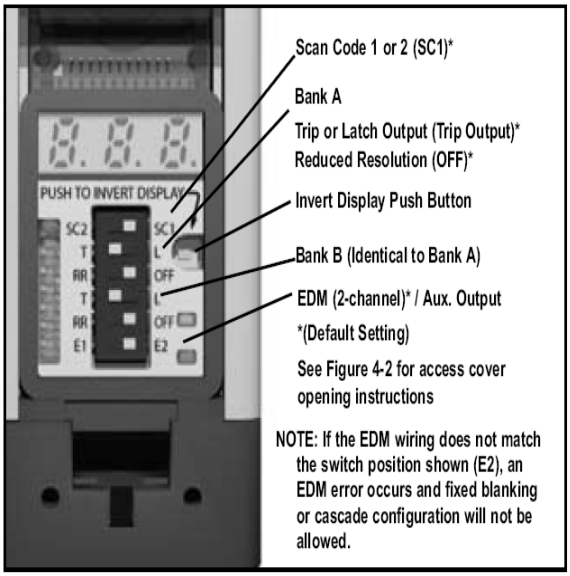
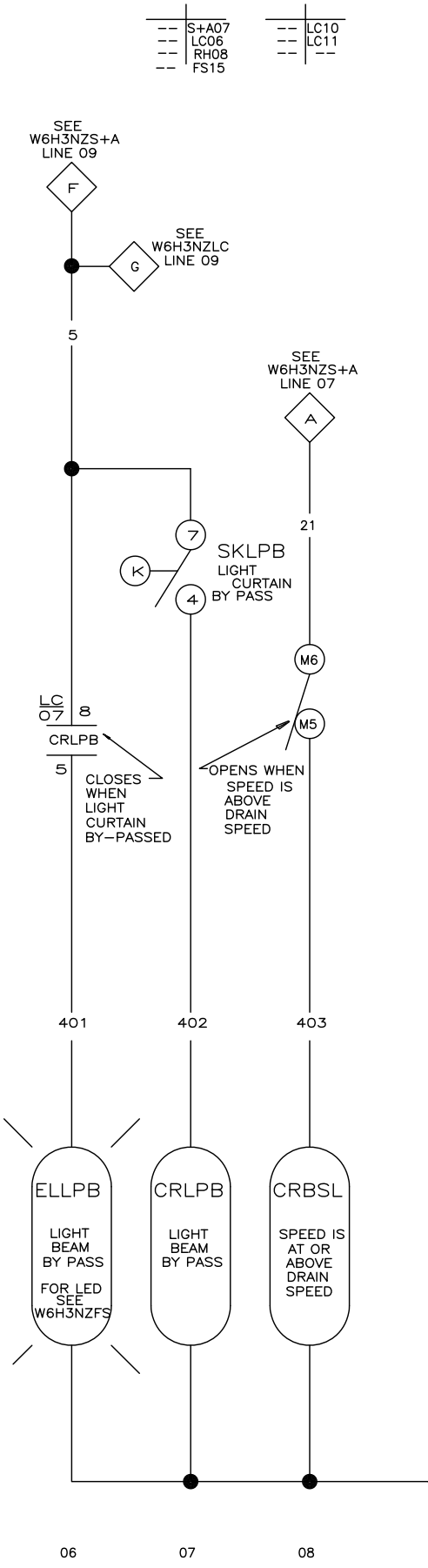
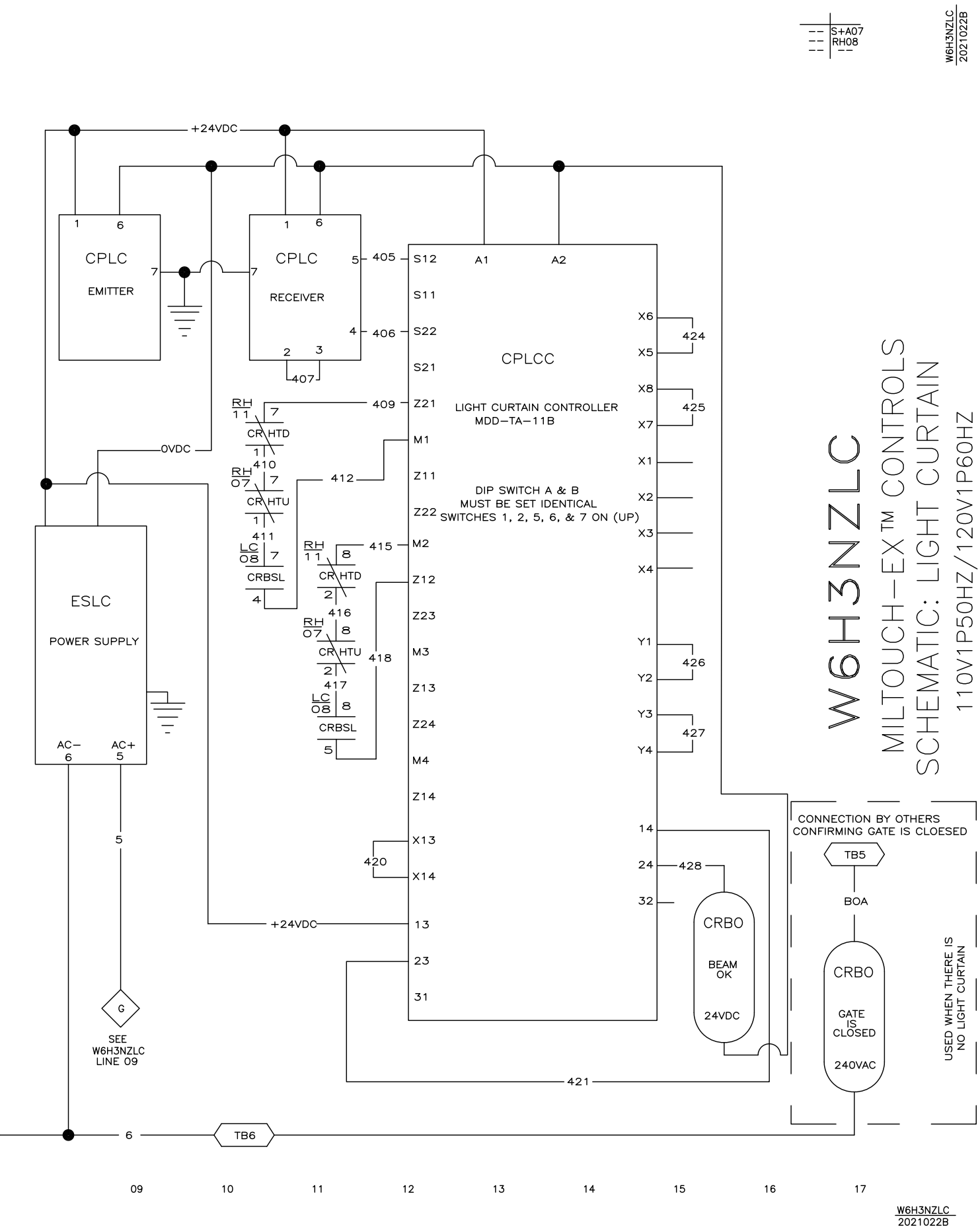


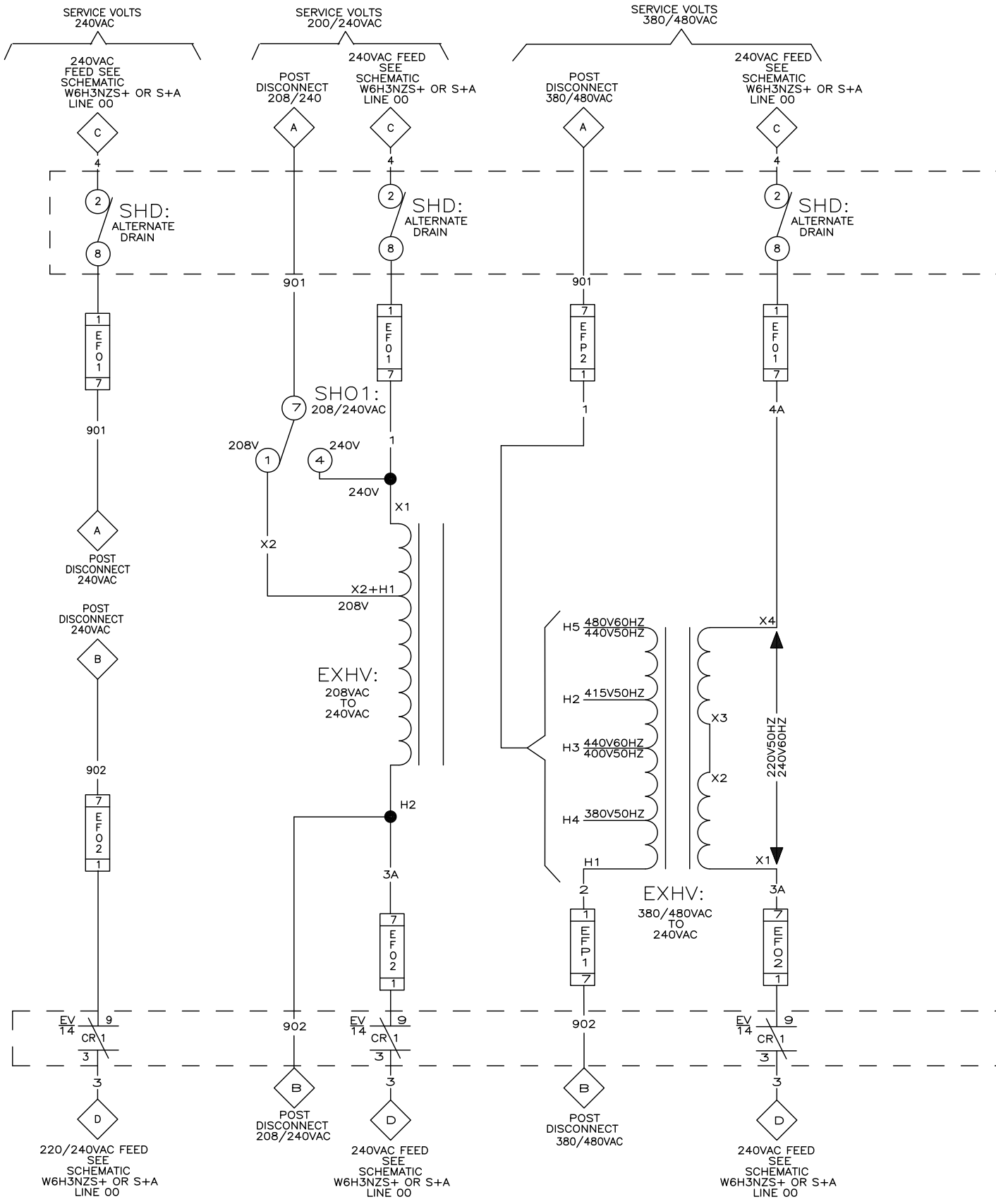
Figure 4-1. EZ-SCREEN configuration switches (receiver shown)

Banner Cable Pinout/Color Code		
Pin	Color	Function
1	Bn	+24V dc
2	Or/Bk	EDM #2 (Aux)
3	Or	EDM #1
4	Wh	OSSD #2
5	Bk	OSSD #1
6	Bu	0V dc
7	Gn/Ye	Gnd/Chassis
8	Vi	Reset



W6H3NZLC
2021022B


S+A07
RH08
W6H3NZLC
2021022B
+24VDC
CPLC
EMITTER
CPLC
RECEIVER
CPLCC
LIGHT CURTAIN CONTROLLER
MDD–TA–11B
DIP SWITCH A & B
MUST BE SET IDENTICAL
SWITCHES 1, 2, 5, 6, & 7 ON (UP)
0VDC
ESLC
POWER SUPPLY
AC–
AC+
CR HTD
CR HTU
CRBSL
CONNECTION BY OTHERS
CONFIRMING GATE IS CLOESED
TB5
BOA
CRBO
BEAM
OK
24VDC
CRBO
GATE
IS
CLOSED
240VAC
USED WHEN THERE IS
NO LIGHT CURTAIN
SEE
W6H3NZLC
LINE 09
TB6
W6H3NZLC
MILTOUCH–EX™ CONTROLS
SCHEMATIC: LIGHT CURTAIN
110V1P50HZ/120V1P60HZ
PELLERIN MILNOR CORPORATION
W6H3NZLC
2021022B



W6H3NZLV
2024074B

W6H3NZLV

MILTOUCH–EX™ CONTROLS

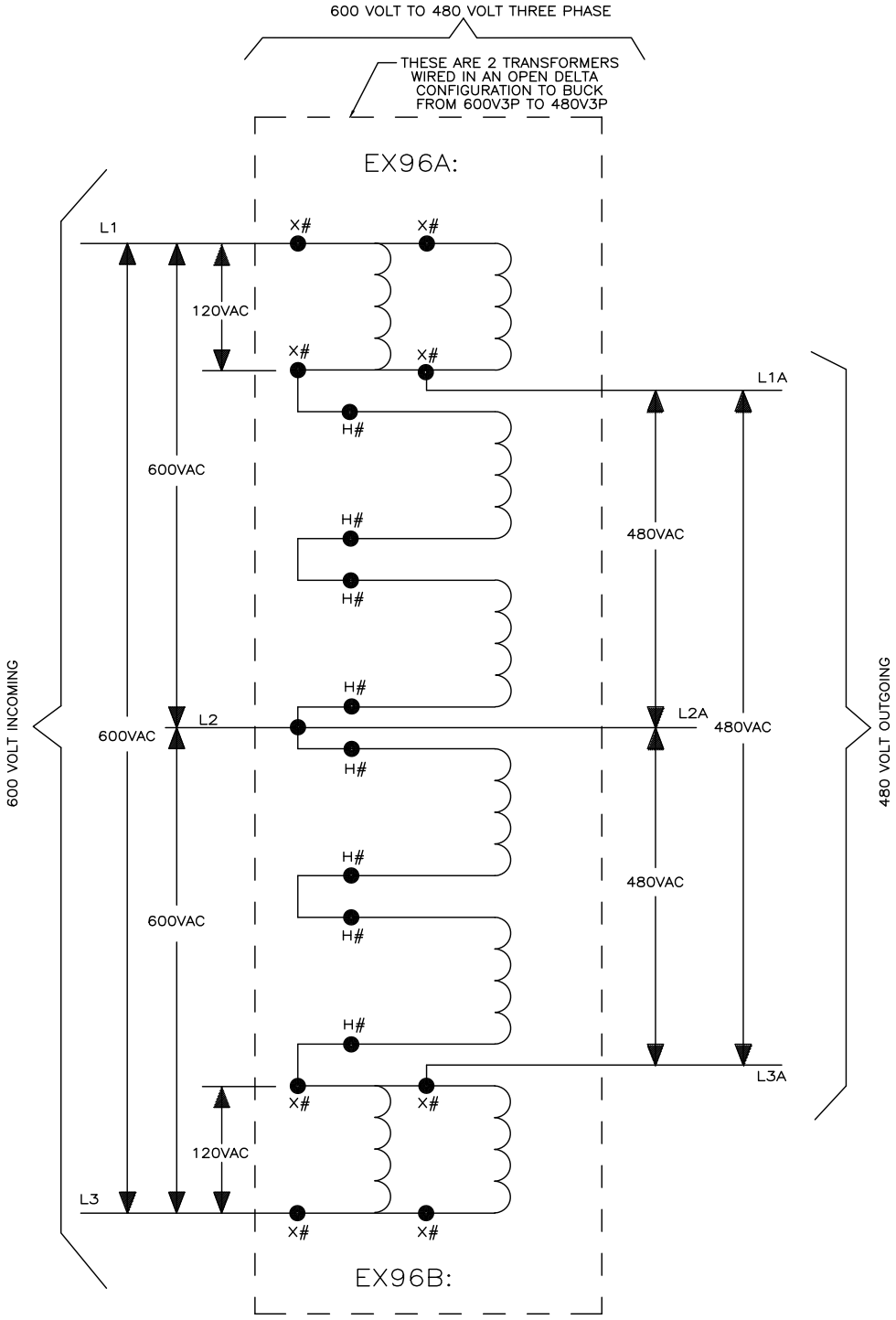
SCHEMATIC:CONTROL CIRCUIT TRANSFORMER

220V1P50HZ/240V1P60HZ

PELLERIN MILNOR CORPORATION

USED ONLY ON MACHINES WITH ALTERNATE DRAIN (BATH SOAK) OPTION.

09 10 11 12 13



REFER TO TRANSFORMER WIRING DIAGRAM FOR APPROPIATE WIRE NUMBERS.

THE PRIMARY OF EACH TRANSFORMER NOTED BY H# MUST BE WIRED FOR 480 VOLTS. THE SECONDARY OF EACH TRANSFORMER NOTED BY X# MUST BE WIRED FOR 120 VOLTS.

00 01 02 03 04 05 06 07 08 09 10

W6H3NZMT6
2019472B

INPUT (SUPPLY SYSTEM)	DESIRED OUTPUT CONNECTION	
DELTA 3 WIRE	WYE 3 OR 4 WIRE	DO NOT USE
OPEN DELTA 3 WIRE	WYE 3 OR 4 WIRE	DO NOT USE
WYE 3 OR 4 WIRE	CLOSED DELTA 3 WIRE	DO NOT USE
WYE 4 WIRE	WYE 3 OR 4 WIRE	OK
WYE 3 OR 4 WIRE	OPEN DELTA 3 WIRE	OK
CLOSED DELTA 3 WIRE	OPEN DELTA 3 WIRE	OK

W6H3NZMT6

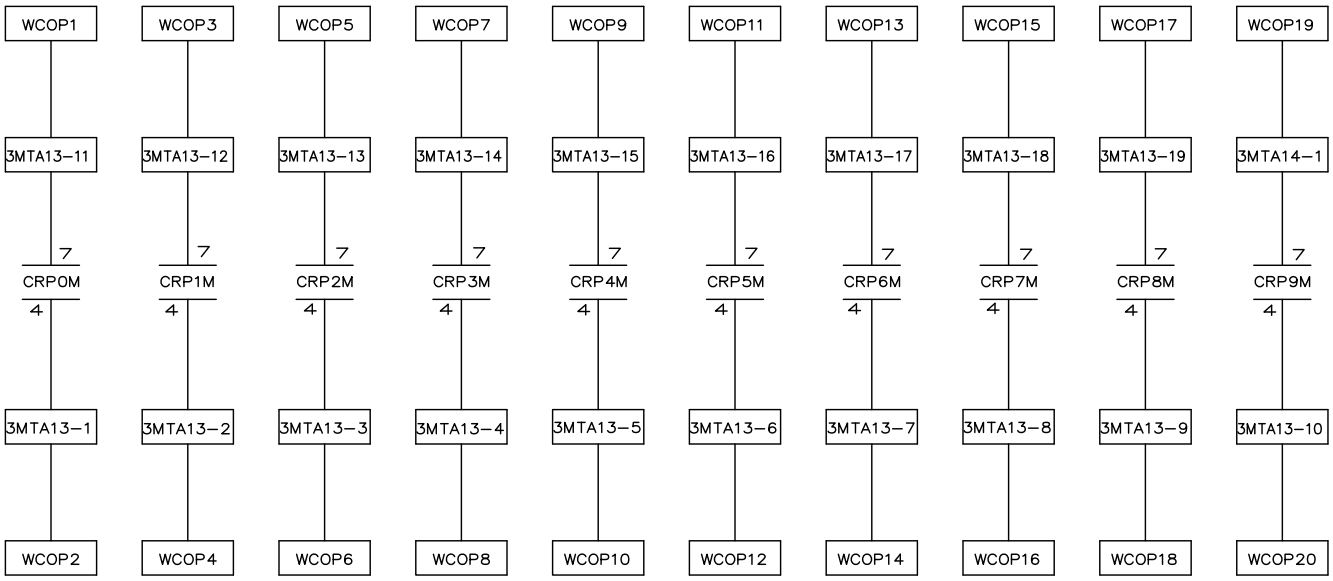
MILTOUCH—EX™ CONTROLS

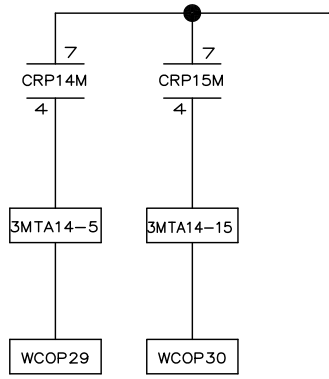
SCHEMATIC: 600V MACHINES

600V TO 480 VOLT STEP DOWN

PELLERIN MILNOR CORPORATION

11 12 13 14 15 16 17





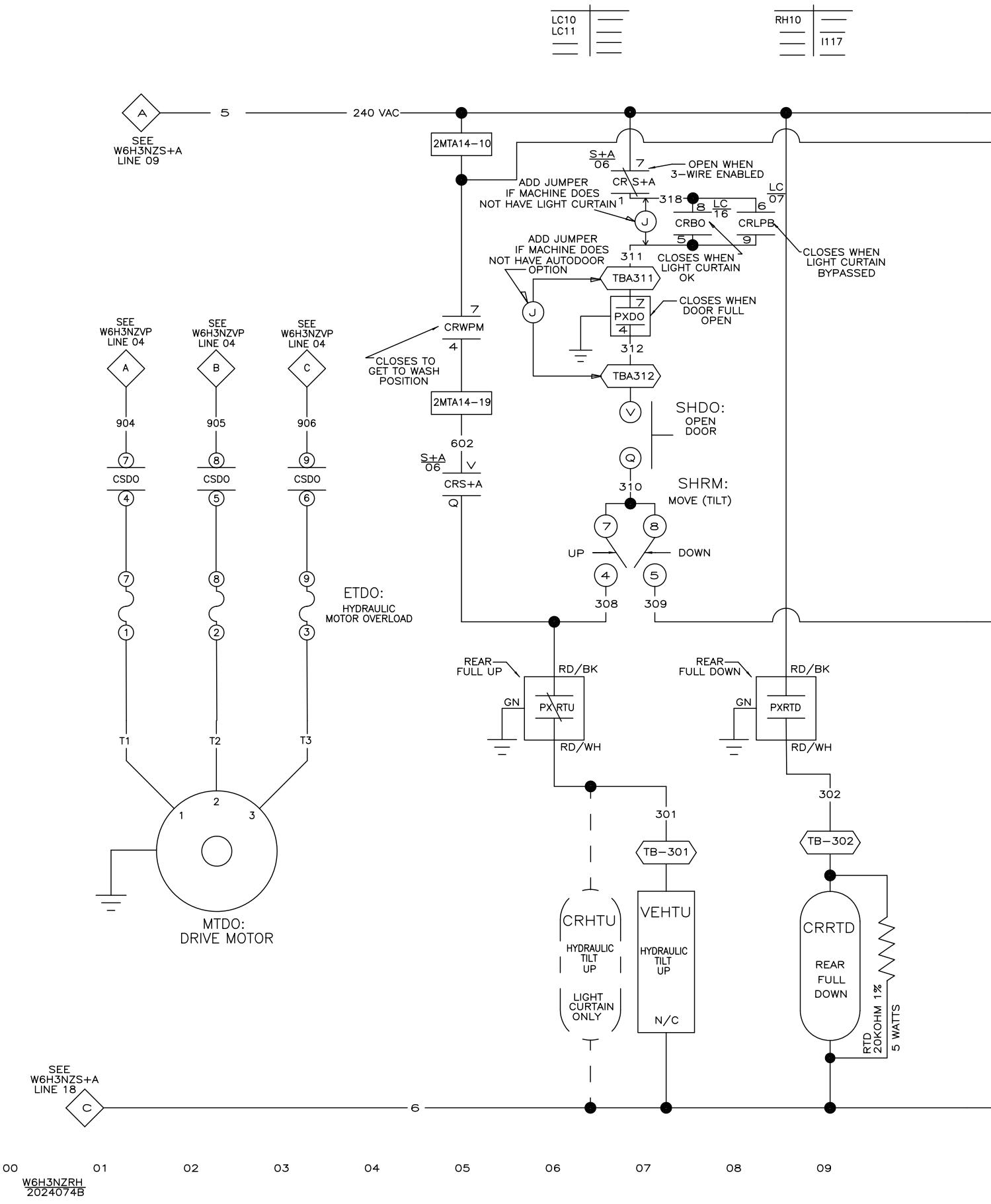
00 01 02 03 04 05 06 07 08 09 10

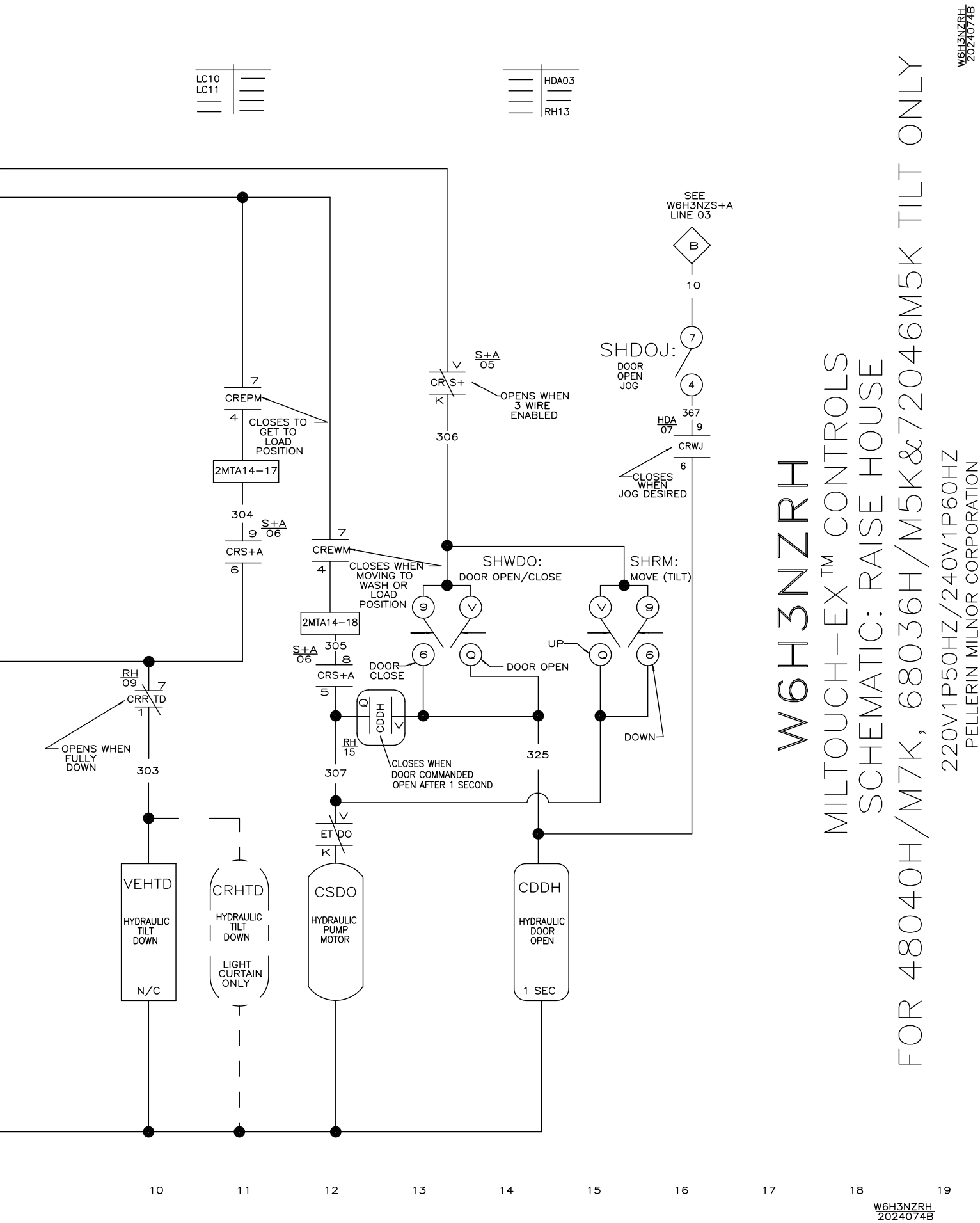
W6H3NZOP
2014116B

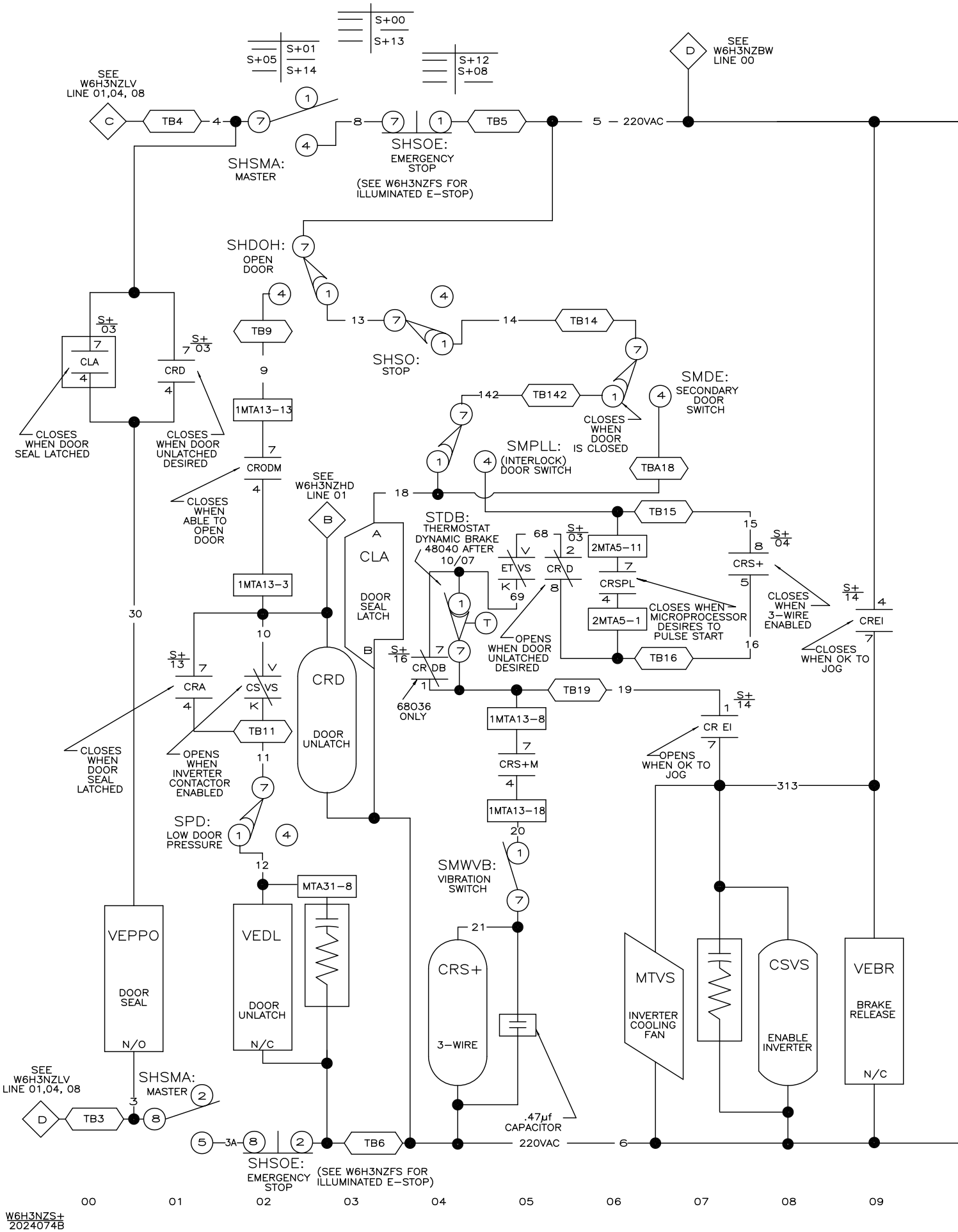
W6H3NZOP
MILTOUCH–EX™ CONTROLS
SCHEMATIC: 20 OPTIONAL PROGRAMABLE OUTPUTS

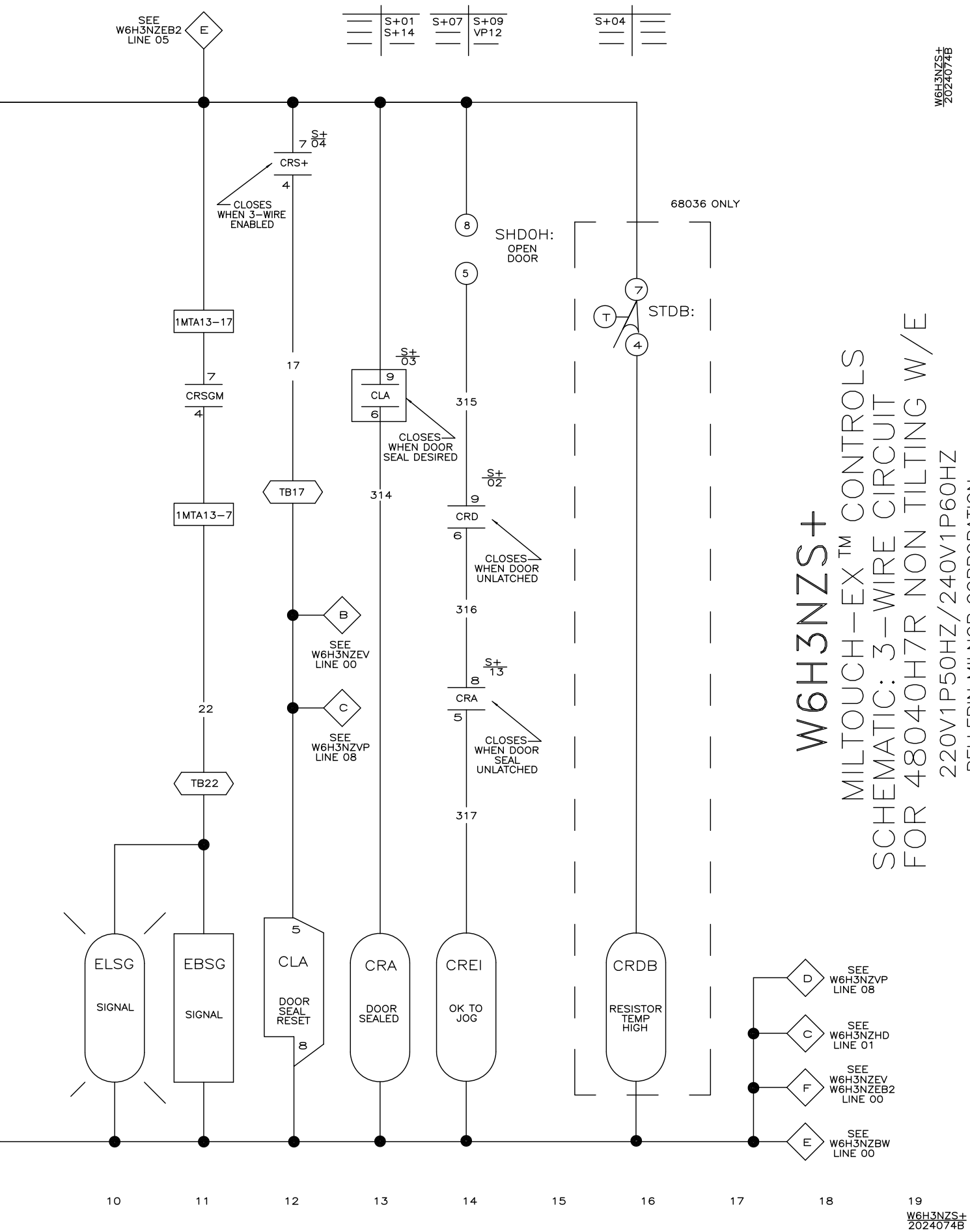
PELLERIN MILNOR CORPORATION

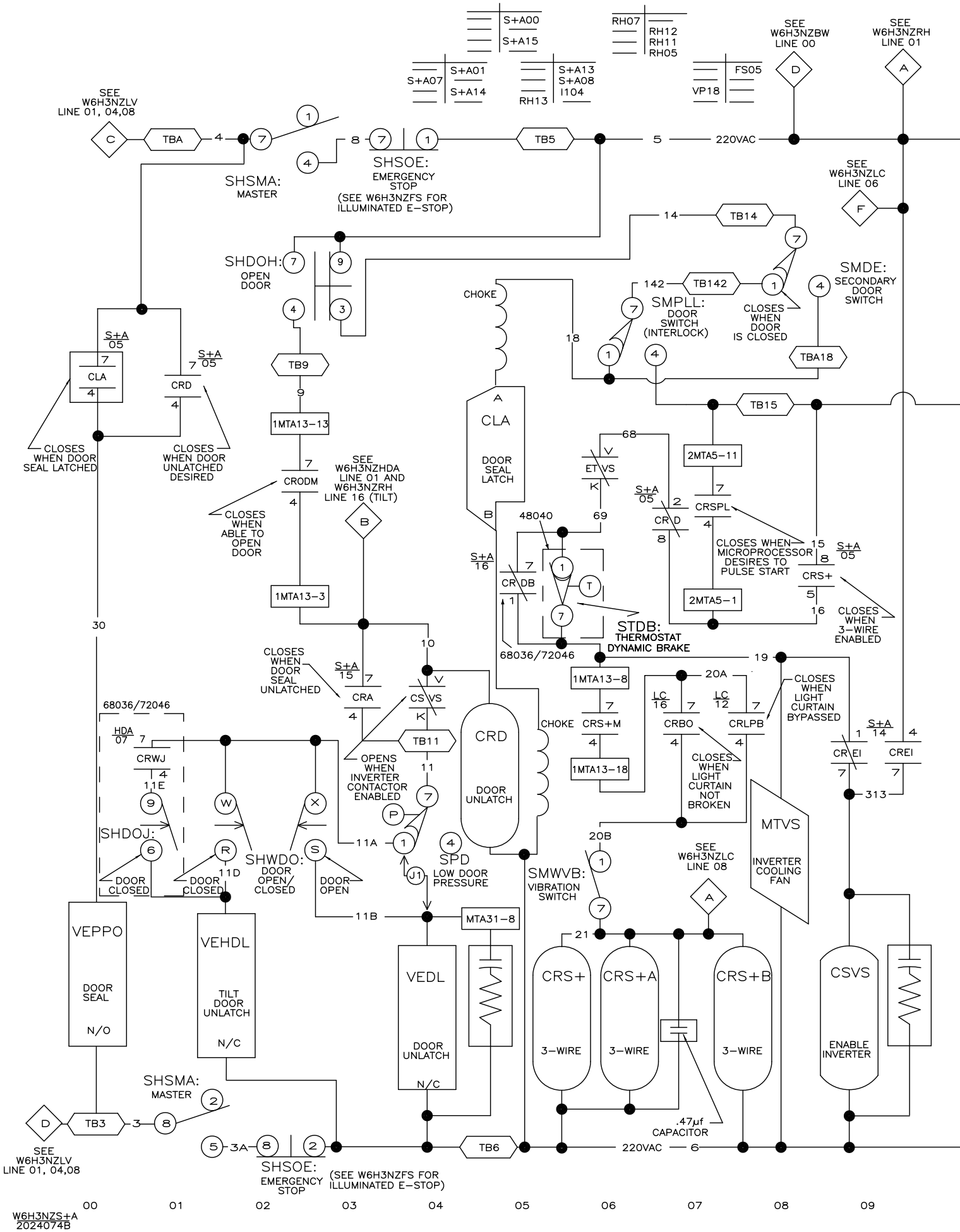
11 12 13 14 15 16 17

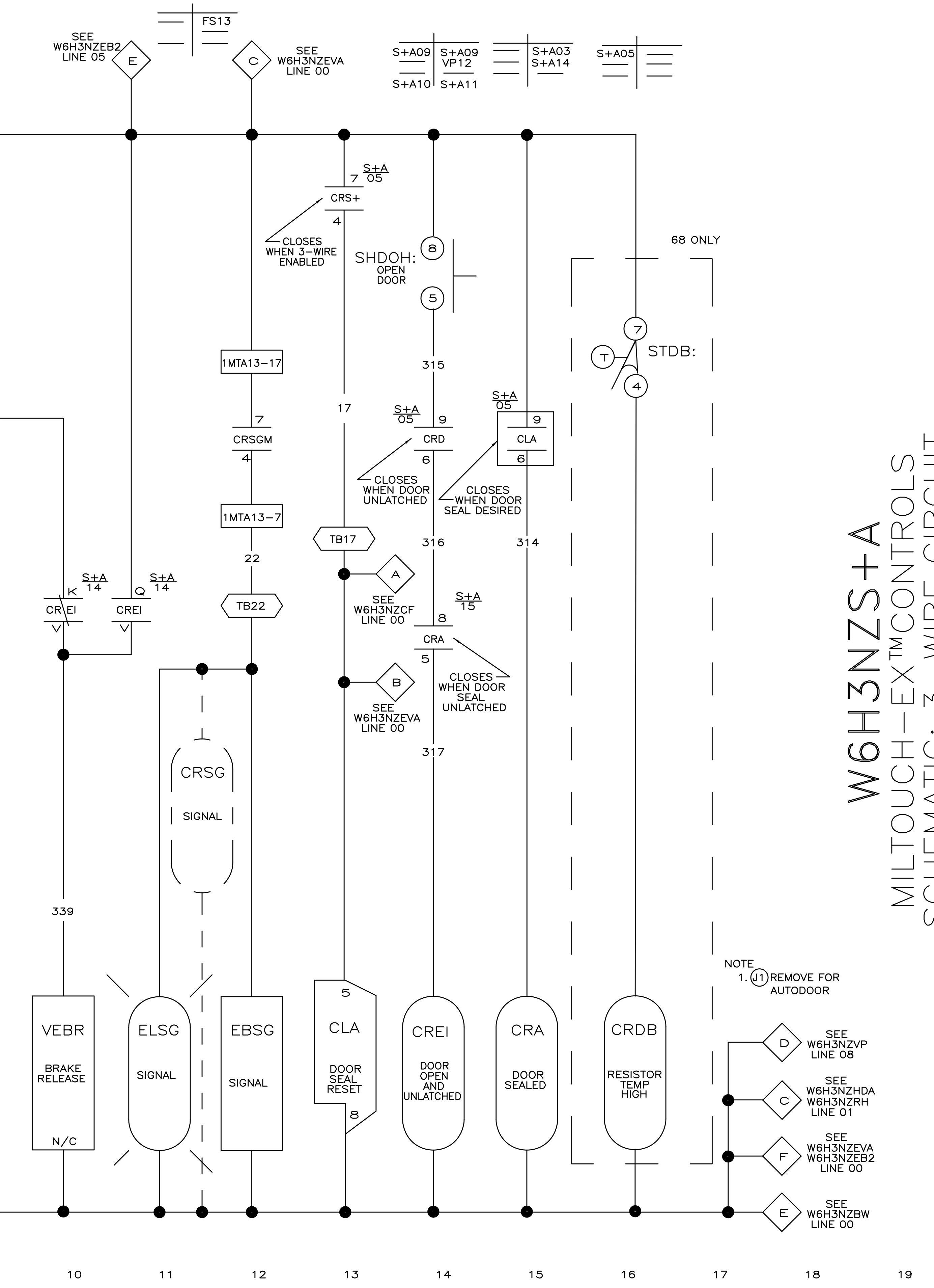

LC10
LC11
RH10
I117
A
5
240 VAC
SEE W6H3NZS+A LINE 09
2MTA14–10
S+A 06
7
CR S+A
OPEN WHEN 3–WIRE ENABLED
ADD JUMPER IF MACHINE DOES NOT HAVE LIGHT CURTAIN
1
318
LC 07
8 LC 16
6
J
CRBO
CRLPB
5
9
CLOSES WHEN LIGHT CURTAIN BYPASSED
ADD JUMPER IF MACHINE DOES NOT HAVE AUTODOOR OPTION
311
CLOSES WHEN LIGHT CURTAIN OK
TBA311
PXDO
CLOSES WHEN DOOR FULL OPEN
4
312
TBA312
SEE W6H3NZVP LINE 04
A
B
C
CRWPM
CLOSES TO GET TO WASH POSITION
2MTA14–19
602
S+A 06
CRS+A
Q
V
SHDO:
OPEN DOOR
SHRM:
MOVE (TILT)
310
UP
DOWN
904
905
906
CSDO
308
309
ETDO:
HYDRAULIC MOTOR OVERLOAD
T1
T2
T3
MTDO:
DRIVE MOTOR
REAR FULL UP
RD/BK
GN
PX RTU
RD/WH
REAR FULL DOWN
PXRTD
301
302
TB–301
TB–302
CRHTU
HYDRAULIC TILT UP
LIGHT CURTAIN ONLY
VEHTU
HYDRAULIC TILT UP
N/C
CRRTD
REAR FULL DOWN
RTD 20KOHM 1%
5 WATTS
SEE W6H3NZS+A LINE 18
C
6
00
01
02
03
04
05
06
07
08
09
W6H3NZRH
2024074B


W6H3NZRH
MILTOUCH-EX™ CONTROLS
SCHEMATIC: RAISE HOUSE
FOR 48040H/M7K, 68036H/M5K&72046M5K TILT ONLY
220V1P50HZ/240V1P60HZ
PELLERIN MILNOR CORPORATION
W6H3NZRH
20240748
LC10
LC11
HDA03
RH13
SEE W6H3NZS+A LINE 03
B
10
SHDOJ:
DOOR OPEN JOG
7
4
367
HDA 07
9
CRWJ
6
CLOSES WHEN JOG DESIRED
V
S+A 05
CR S+
K
OPENS WHEN 3 WIRE ENABLED
306
7
CREPM
4
CLOSES TO GET TO LOAD POSITION
2MTA14-17
304
9
S+A 06
CRS+A
6
7
CREWM
4
CLOSES WHEN MOVING TO WASH OR LOAD POSITION
2MTA14-18
S+A 06
305
8
CRS+A
5
SHWDO:
DOOR OPEN/CLOSE
SHRM:
MOVE (TILT)
9
V
6
Q
DOOR CLOSE
DOOR OPEN
UP
DOWN
RH 09
7
CRR TD
1
OPENS WHEN FULLY DOWN
303
Q
CDDH
V
RH 15
CLOSES WHEN DOOR COMMANDED OPEN AFTER 1 SECOND
307
325
V
ET DO
K
VEHTD
HYDRAULIC TILT DOWN
N/C
CRHTD
HYDRAULIC TILT DOWN
LIGHT CURTAIN ONLY
CSDO
HYDRAULIC PUMP MOTOR
CDDH
HYDRAULIC DOOR OPEN
1 SEC
10
11
12
13
14
15
16
17
18
19
W6H3NZRH
2024074B


S+00
S+13
S+01
S+05
S+14
S+12
S+08
SEE W6H3NZBW LINE 00
SEE W6H3NZLV LINE 01,04, 08
TB4
TB5
220VAC
SHSMA: MASTER
SHSOE: EMERGENCY STOP
(SEE W6H3NZFS FOR ILLUMINATED E–STOP)
SHDOH: OPEN DOOR
SHSO: STOP
TB9
TB14
TB142
SMDE: SECONDARY DOOR SWITCH
CLOSES WHEN DOOR IS CLOSED
SMPLL: (INTERLOCK) DOOR SWITCH
TBA18
CLA
CRD
CLOSES WHEN DOOR SEAL LATCHED
CLOSES WHEN DOOR UNLATCHED DESIRED
1MTA13–13
CRODM
CLOSES WHEN ABLE TO OPEN DOOR
SEE W6H3NZHD LINE 01
1MTA13–3
TB15
STDB: THERMOSTAT DYNAMIC BRAKE 48040 AFTER 10/07
2MTA5–11
2MTA5–1
CRSPL
CRS+
CREI
CLOSES WHEN MICROPROCESSOR DESIRES TO PULSE START
CLOSES WHEN 3–WIRE ENABLED
CLOSES WHEN OK TO JOG
OPENS WHEN DOOR UNLATCHED DESIRED
TB16
CR DB
68036 ONLY
TB19
1MTA13–8
CR EI
OPENS WHEN OK TO JOG
CRS+M
1MTA13–18
CRA
CSVS
TB11
OPENS WHEN INVERTER CONTACTOR ENABLED
CLOSES WHEN DOOR SEAL LATCHED
SPD: LOW DOOR PRESSURE
MTA31–8
SMWVB: VIBRATION SWITCH
CRD
DOOR UNLATCH
CLA
DOOR SEAL LATCH
VEPPO
DOOR SEAL
N/O
VEDL
DOOR UNLATCH
N/C
CRS+
3–WIRE
.47µf CAPACITOR
MTVS
INVERTER COOLING FAN
CSVS
ENABLE INVERTER
VEBR
BRAKE RELEASE
N/C
SEE W6H3NZLV LINE 01,04, 08
TB3
SHSMA: MASTER
SHSOE: EMERGENCY STOP
(SEE W6H3NZFS FOR ILLUMINATED E–STOP)
TB6
220VAC
00
01
02
03
04
05
06
07
08
09
W6H3NZS+
2024074B


W6H3NZS+
MILTOUCH-EX™ CONTROLS
SCHEMATIC: 3-WIRE CIRCUIT
FOR 48040H7R NON TILTING W/E
220V1P50HZ/240V1P60HZ
PELLERIN MILNOR CORPORATION
W6H3NZS+
2024074B
SEE W6H3NZEB2 LINE 05
S+01 S+14
S+07 S+09 VP12
S+04
CRS+
CLOSES WHEN 3-WIRE ENABLED
68036 ONLY
SHDOH: OPEN DOOR
STDB:
1MTA13-17
CRSGM
1MTA13-7
CLA
CLOSES WHEN DOOR SEAL DESIRED
TB17
CRD
CLOSES WHEN DOOR UNLATCHED
SEE W6H3NZEV LINE 00
CRA
CLOSES WHEN DOOR SEAL UNLATCHED
SEE W6H3NZVP LINE 08
TB22
17
22
314
315
316
317
ELSG
SIGNAL
EBSG
SIGNAL
CLA
DOOR SEAL RESET
CRA
DOOR SEALED
CREI
OK TO JOG
CRDB
RESISTOR TEMP HIGH
SEE W6H3NZVP LINE 08
SEE W6H3NZHD LINE 01
SEE W6H3NZEV W6H3NZEB2 LINE 00
SEE W6H3NZBW LINE 00
10
11
12
13
14
15
16
17
18
19
W6H3NZS+
2024074B


S+A00
S+A15
S+A01
S+A07
S+A14
S+A13
S+A08
I104
RH13
RH07
RH12
RH11
RH05
FS05
VP18
SEE W6H3NZBW LINE 00
SEE W6H3NZRH LINE 01
SEE W6H3NZLV LINE 01, 04,08
TBA
TB5
220VAC
SHSMA: MASTER
SHSOE: EMERGENCY STOP (SEE W6H3NZFS FOR ILLUMINATED E-STOP)
SEE W6H3NZLC LINE 06
TB14
SHDOH: OPEN DOOR
CHOKE
TB142
SMPLL: DOOR SWITCH (INTERLOCK)
CLOSES WHEN DOOR IS CLOSED
SMDE: SECONDARY DOOR SWITCH
TBA18
TB15
TB9
1MTA13-13
CLA
DOOR SEAL LATCH
CRD
CLOSES WHEN DOOR SEAL LATCHED
CLOSES WHEN DOOR UNLATCHED DESIRED
CRODM
SEE W6H3NZHDA LINE 01 AND W6H3NZRH LINE 16 (TILT)
CLOSES WHEN ABLE TO OPEN DOOR
1MTA13-3
ETVS
2MTA5-11
CRSPL
CRDB
48040
CLOSES WHEN MICROPROCESSOR DESIRES TO PULSE START
CRS+
2MTA5-1
CLOSES WHEN 3-WIRE ENABLED
STDB: THERMOSTAT DYNAMIC BRAKE
68036/72046
CLOSES WHEN DOOR SEAL UNLATCHED
CRA
CSVS
TB11
OPENS WHEN INVERTER CONTACTOR ENABLED
1MTA13-8
CRS+M
1MTA13-18
CRBO
CRLPB
CLOSES WHEN LIGHT CURTAIN BYPASSED
CLOSES WHEN LIGHT CURTAIN NOT BROKEN
CREI
CRLEI
MTVS
INVERTER COOLING FAN
HDA
CRWJ
SHDOJ:
SHWDO: DOOR OPEN/ CLOSED
DOOR CLOSED
DOOR CLOSED
DOOR OPEN
SPD LOW DOOR PRESSURE
SMWVB: VIBRATION SWITCH
SEE W6H3NZLC LINE 08
VEPPO
DOOR SEAL
N/O
VEHDL
TILT DOOR UNLATCH
N/C
VEDL
DOOR UNLATCH
N/C
MTA31-8
CRS+
CRS+A
CRS+B
3-WIRE
.47µf CAPACITOR
CSVS
ENABLE INVERTER
SHSMA: MASTER
TB3
SEE W6H3NZLV LINE 01, 04,08
SHSOE: EMERGENCY STOP
(SEE W6H3NZFS FOR ILLUMINATED E-STOP)
TB6
220VAC
00
01
02
03
04
05
06
07
08
09
W6H3NZS+A
2024074B



W6H3NZS+A

MILTOUCH-EX™CONTROLS

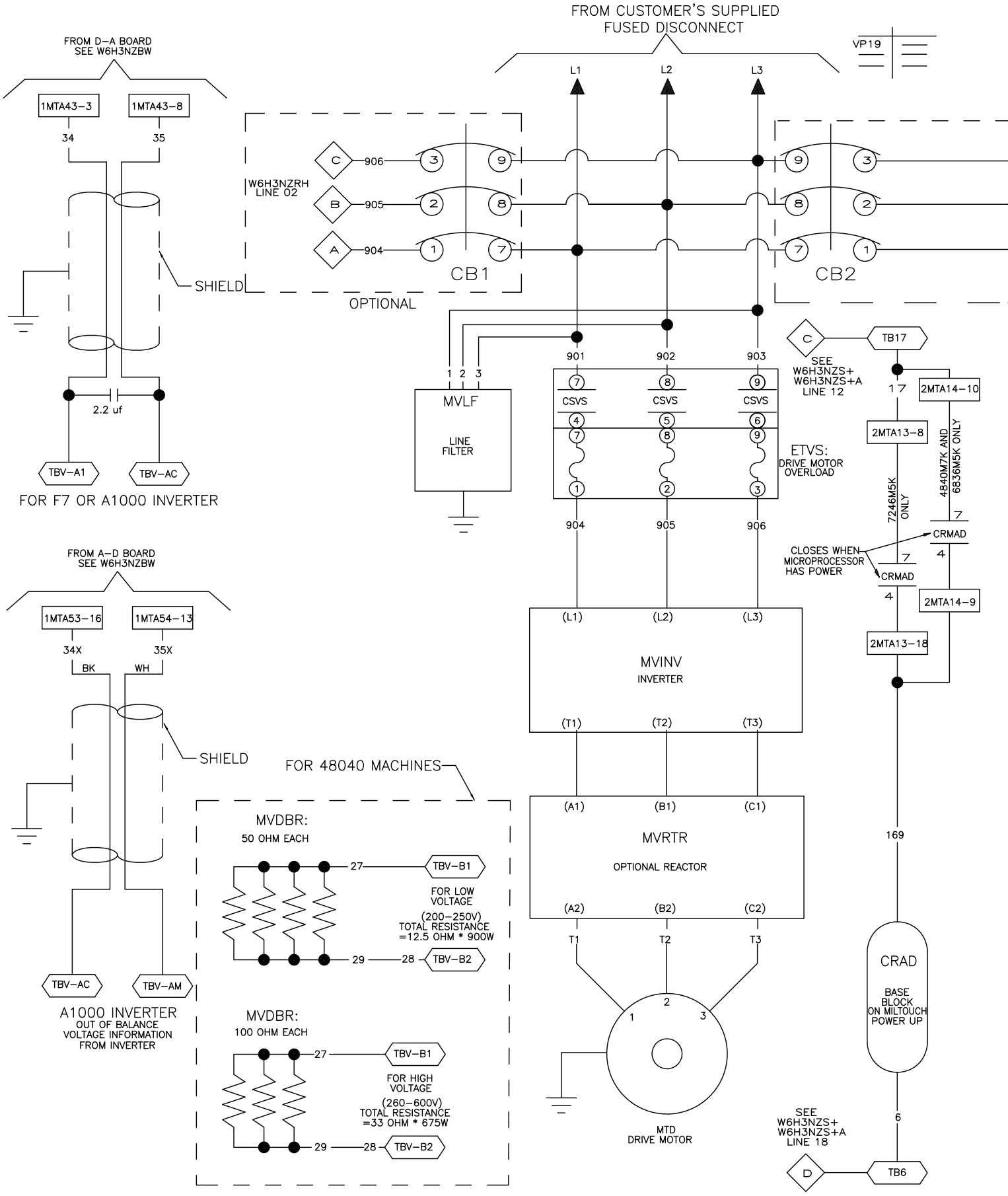
SCHEMATIC: 3-WIRE CIRCUIT

FOR 48040H/M7K, 68036H/M5K, 72046M5K

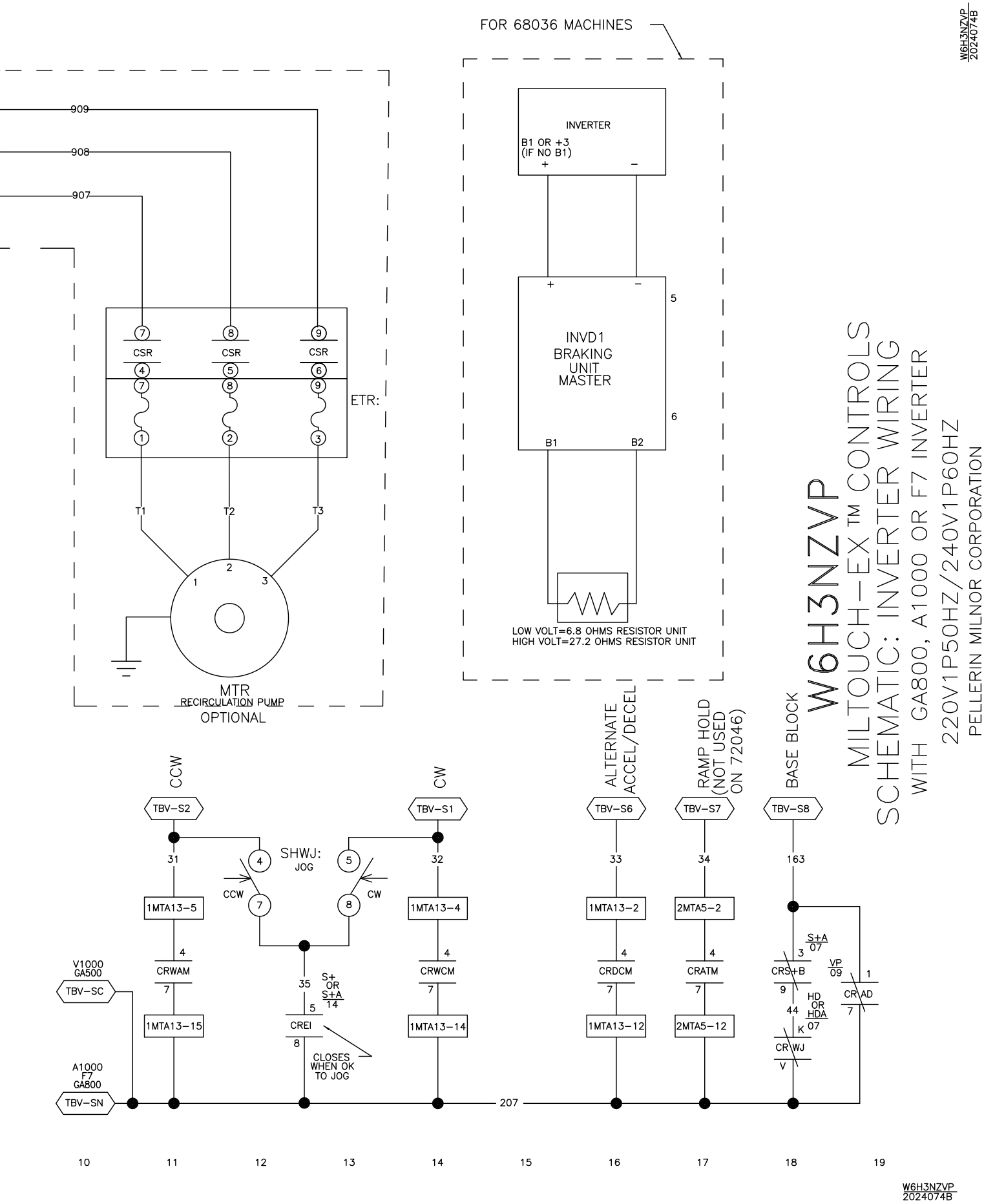
220V1P50HZ/240V1P60HZ

PELLERIN MILNOR CORPORATION

W6H3NZS+A
2024074B



W6H3NZVP
2024074B



W6H3NZVP
MILTOUCH–EX™ CONTROLS
SCHEMATIC: INVERTER WIRING
WITH GA800, A1000 OR F7 INVERTER
220V1P50HZ/240V1P60HZ
PELLERIN MILNOR CORPORATION