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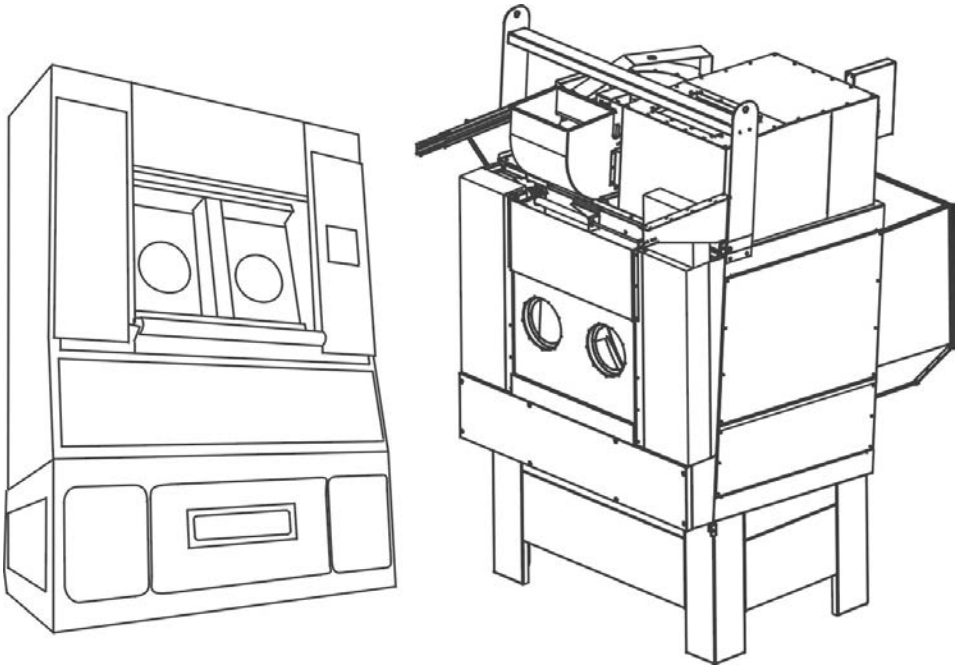
Schematic/Electrical Parts

50040, 58040,-58,-80, 64058,-64, 76076 Dryers - Steam, Hot Oil Heated, Shaker Mark V 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

W6DR3SPL/2025056N

COMPONENT NUMBER	FUNCTION OF THIS COMPONENT	WHERE TO FIND THIS COMPONENT	MILNOR P/N	DESCRIPTION	LOCATION
	>>CONTROL BOX LAYOUTS				
01	DETAIL-REMOTE DRYER CONTROLLER	W6DR3STG1	B2TAG97059	REMOTE DRYER CONTROLLER	SEE FUNCTION
02	DETAIL-AIR VALVE BOX	W6DR3STG1	B2TAG86042	M6 AIR VAL ASSY. DRYER/STM	SEE FUNCTION
03	DETAIL-CONTROL BOARDS	W6DR3STG1	B2TAG96016	TAG:STM DRYER CONTROL BDS	SEE FUNCTION
04	DETAIL-AIR VALVE BOX 64058TS1	W6DR3STG1	B2T2004009	AIR VALVE ASSEMBLY 64058TS1	SEE FUNCTION
05	DETAIL-5040 HIGH VOLT BOX	W6DR3STG2	B2TAG97003	HIGH VOLTAGE PANEL 5040 DRYR	SEE FUNCTION
06	DETAIL-5040 LOW VOLT BOX	W6DR3STG2	B2TAG97002	LOW VOLTAGE PANEL 5040 DRYER	SEE FUNCTION
07	DETAIL-58XX HIGH VOLT BOX	W6DR3STG3	B2TAG96029	STEAM DRYER HIGH VOLT BOX	SEE FUNCTION
08	DETAIL-58XX LOW VOLT BOX	W6DR3STG3	B2TAG96028	STEAM DRYER LOW VOLT PANEL	SEE FUNCTION
09	DETAIL-6458 HIGH VOLT BOX	W6DR3STG4	B2T2001009	6458TG1 HIGH VOLTAGE PANEL	SEE FUNCTION
10	DETAIL-6458 LOW VOLT BOX	W6DR3STG4	B2T2004010	6458TS1 LOW VOLTAGE PANEL	SEE FUNCTION
11	DETAIL-5040TS2L/R LOW VOLT BOX	W6DR3STG5	B2T2009014	LOW VOLTAGE PANEL 5040TS2L/R DRYR	SEE FUNCTION
12	DETAIL-5040TG2-TS2L/R HIGH VOLT BOX	W6DR3STG5	B2T2008013	HIGH VOLTAGE PANEL 5040TG-TS2L/R DRYER	SEE FUNCTION
BA	**>>PRINTED CIRCUIT BOARDS**				
BAD1	BOARD-ANALOG TO DIGITAL CONVERTER	W6DR3STC	08BSADCTT	BD:SER A-D+THERMOCOUP>TESTED	LOW VOLT BOX
BADR-1	BOARD-DEVICE ADDRESS SETTING	W6DR3SDC	08BSKPST	BD:KEYPAD SWITCH BOARD	PROCESSOR BX
BBB-1	BOARD-MEMORY BATTERY BACKUP	W6DR3STC	08BSBB1T	BOARD: SER BATT BACKUP-TEST	PROCESSOR BX
BDA1	BOARD-DIGITAL TO ANALOG CONVERTOR	W6DR3SBWA	08BSDACT	BD:SERIAL D-A CONVERT->TEST	LOW VOLT BOX
BIO-1	BOARD-8OUTPUT/16INPUT #1	W6DR3SBWA	08BS816CHT	BOARD:HIGH SPEED SERIAL 8OUT-16IN-TEST	LOW VOLT BOX
BIO-2	BOARD-8OUTPUT/16INPUT #2	W6DR3SBWA	08BS816CT	BOARD:SERIAL 8OUT-16IN-TEST	LOW VOLT BOX
BIO-3	BOARD-8OUTPUT/16INPUT #3	W6DR3SBWA	08BS816CT	BOARD:SERIAL 8OUT-16IN-TEST	LOW VOLT BOX
BMTH	BOARD-CARD CAGE MOTHER	W6DR3STC	08BS5MTHAT	BD:SERIAL 5 CARD MOTHER-TEST	LOW VOLT BOX
BO1	BOARD-24 OUTPUT #1	W6DR3SBWA	08BSO24AT	BD: SERIAL 24 OUTPUT->TEST	LOW VOLT BOX
BO2	BOARD-6 OUTPUT	W6DR3SDC	08BN6OAT	6 OUTPUT BOARD->TEST	PROCESSOR BX
BO2	BOARD-6 OUTPUT	W6DR3STR	08BN6OAT	6 OUTPUT BOARD->TEST	PROCESSOR BX
BPB	BOARD-MICROPROCESSOR	W6DR3SD	08BSPE1T	186 SER PROC-TEST	PROCESSOR BX
BPB	BOARD-MICROPROCESSOR	W6DR3SDC	08BSPET	186 SERIAL PROCESSOR->TEST	PROCESSOR BX
BPB	BOARD-MICROPROCESSOR	W6DR3STC	08BSPE1T	186 SER PROC-TEST	PROCESSOR BX
BPB	BOARD-MICROPROCESSOR	W6DR3STR	08BSPE1T	186 SER PROC-TEST	PROCESSOR BX
BRS1	BOARD-ROTATIONAL SAFETY	W6DR3SBWA	08BNDSRAT	BD:DRY SAFETY ROTATION->TEST	LOW VOLT BOX
CB	**>>>CIRCUIT BREAKERS**				
CB1	CIRCUIT BRKR-MAIN AIR MOTOR	W6DR3SMT	MESSAGE SN	SEE SPECIFIC MACHINE + NAMEPLATE	HIGH VOLT BX
CB2	CIRCUIT BRKR-BASKET MOTOR	W6DR3SMT	MESSAGE SN	SEE SPECIFIC MACHINE + NAMEPLATE	HIGH VOLT BX

COMPONENT PARTS LIST

COMPONENT NUMBER	FUNCTION OF THIS COMPONENT	WHERE TO FIND THIS COMPONENT	MILNOR P/N	DESCRIPTION	LOCATION
CD	**>>RELAY-TIME DELAY**				
CDEFN	DELAY-WATER FOR FIRE	W6DR3SLSA	09CF030037	TDR F30S 2PDT 11PIN 120V50/60C	LOW VOLT BOX
CDVS	DELAY-VARIABLE SPEED FAULT	W6DR3SS+B	09CF007537	TDR F7.5S 2PDT 11PIN 120V60C	HIGH VOLT BX
CDVS	DELAY-VARIABLE SPEED FAULT	W6DR3SVP	09CF007537	TDR F7.5S 2PDT 11PIN 120V60C	VARI SPEED BX
CL	**>>RELAY-LATCH**				
CLEFN <1 -2025	LATCH-WATER FOR FIRE	W6DR3SLSA	09CL2C-C37	RELAY-LATCH DPDT 120V 2-COIL	HIGH VOLT BX
CLEFN >1 -2025	LATCH-WATER FOR FIRE	W6DR3SLSA	09CL2C-D37	RELAY-LATCH DPDT 120V 2-COIL ICECUBE	HIGH VOLT BX
CP	**>>>PHOTOEYES**				
CPLDO	PHOTOEYE-LOAD DOOR OPEN	W6DR3SICB	09RPE011	PHOTOEYE VALU-BEAM 10-30DC	LD DOOR ASSY
CR	**>>RELAY-PILOT OR CONTROL**				
CR240	RELAY-OUTLET SAFETY 240 DEGREES	W6DR3SMCA	09C024D37	4PDT "KH" 110/120V	LOW VOLT BOX
CRABC	RELAY-CLOCKWISE ROTATION	W6DR3SS+B	09C024D37	4PDT "KH" 110/120V	HIGH VOLT BX
CRBAA	RELAY-COUNTERCLOCKWISE ROTATION	W6DR3SS+B	09C024D37	4PDT "KH" 110/120V	HIGH VOLT BX
CRBAC	RELAY-BASKET MOTOR CW	W6DR3SVP	09C024D37	4PDT "KH" 110/120V	VARI SPEED BX
CRBAW	RELAY-BASKET MOTOR CCW	W6DR3SVP	09C024D37	4PDT "KH" 110/120V	VARI SPEED BX
CRCDC	RELAY-COOLDOWN DAMPER CLOSED	W6DR3SS+B	09C024D37	4PDT "KH" 110/120V	LOW VOLT BOX
CRDD	RELAY-DISCHARGE DESIRED	W6DR3SS+A	09C024D37	4PDT "KH" 110/120V	LOW VOLT BOX
CRDDC	RELAY-DISCHARGE DOOR CLOSED	W6DR3SEVA	09C024D37	4PDT "KH" 110/120V	LOW VOLT BOX
CREFN	RELAY-WATER FOR FIRE	W6DR3SLSA	09C024D37	4PDT "KH" 110/120V	LOW VOLT BOX
CRS+	RELAY-3-WIRE	W6DR3SS+A	09C024D37	4PDT "KH" 110/120V	LOW VOLT BOX
CRS+	RELAY-3-WIRE	W6DR3SS+B	09C024D37	4PDT "KH" 110/120V	LOW VOLT BOX
CRV	RELAY-ENERGENICS OPERATE VACUUM	W6DR3SLSA	09C024D37	4PDT "KH" 110/120V	LOW VOLT BOX
CRV	RELAY-OPERATE VACUUM	W6DR3SLSB	09C024D37	4PDT "KH" 110/120V	HIGH VOLT BX
CS	**>>CONTACTOR-MOTOR STARTER**				
CSBA-1	CONTACTOR-5040HV BASKET	W6DR3SS+A	09MR04B337	12A 3P REV+2N/C 120V5/6 IEC	HIGH VOLT BX
CSBA-2	CONTACTOR-5840, 5858,&5880 HV BASKET	W6DR3SS+A	09MR08C337	18A 3P REV+2N/C 120V5/6 IEC	HIGH VOLT BX
CSBA-3	CONTACTOR-5840, 5858,&5880 LV BASKET	W6DR3SS+A	09MR08D337	24A 3P REV+2N/C 120V5/6 IEC	HIGH VOLT BX
CSBAC	CONTACTOR-CNTR-CLOCKWISE ROTATION	W6DR3SS+A	MESSAGE EW	SEE CSBA-1,-2,-3 FOR CONTACTOR	HIGH VOLT BX
CSBAW	CONTACTOR-CLOCKWISE ROTATION	W6DR3SS+A	MESSAGE EW	SEE CSBA-1,-2,-3 FOR CONTACTOR	HIGH VOLT BX
CSMA	CONTACTOR-MAIN AIR	W6DR3SS+A	MESSAGE EW	SEE CSMA-1,-2,-3 FOR CONTACTOR	HIGH VOLT BX
CSMA	CONTACTOR-MAIN AIR	W6DR3SS+B	MESSAGE EW	SEE CSMA-L FOR <380V; CSMA-H FOR >240V	HIGH VOLT BX
CSMA-1	CONTACTOR-5040,5840,5858 HV MAIN AIR	W6DR3SS+A	09MC08E337	30A 3P MCS CONT NR 120B5/6	HIGH VOLT BX
CSMA-2	CONTACTOR-5040,5858LV & 5880HV	W6DR3SS+A	09MC08L337	60A 3P MCS CONT NR 120V5/6	HIGH VOLT BX

COMPONENT PARTS LIST

COMPONENT NUMBER	FUNCTION OF THIS COMPONENT	WHERE TO FIND THIS COMPONENT	MILNOR P/N	DESCRIPTION	LOCATION
CSMA-3	CONTACTOR-5880LV MAIN AIR	W6DR3SS+A	09MC04N337	73A 3P CONT.NR 120V5/6 IEC	HIGH VOLT BX
CSMA-H	CONTACTOR-MAIN AIR HIGH VOLTAGE	W6DR3SS+B	09MC04T337	110A 3P CONT.NR 120V5/6 IEC	HIGH VOLT BX
CSMA-L	CONTACTOR-MAIN AIR LOW VOLTAGE	W6DR3SS+B	09MC04U337	180A 3P CONT.NR 120V5/6 IEC	HIGH VOLT BX
CSVS	CONTACTOR-VARIABLE SPEED	W6DR3SMT	MESSAGE EW	SEE CSVS-L <380V; CSVS-H >240V	HIGH VOLT BX
CSVS	CONTACTOR-VARIABLE SPEED	W6DR3SS+B	09MC04D337	25A 3P CONT.NR 120V5/6 IEC	HIGH VOLT BX
CSVS	CONTACTOR-VARIABLE SPEED	W6DR3SVP	09MC04D337	25A 3P CONT.NR 120V5/6 IEC	HIGH VOLT BX
CSVS-H	CONTACTOR-VARIABLE SPEED HIGH	W6DR3SMT	09MC08D337	23A 3P MCS CONT NR 120V5/6	HIGH VOLT BX
CSVS-L	CONTACTOR-VARIABLE SPEED LOW	W6DR3SMT	09MC08C337	16A 3P MCS CONT NR 120V5/6	HIGH VOLT BX
EB	**>>BUZZER OR AUDIBLE SIGNAL**				
EBSG	BUZZER-SIGNAL AUDIBLE	W6DR3SS+A	09H015	BUZZER 115V W/6-32 CRT+6" LEADS	PROCESSOR BX
EBSG	BUZZER-SIGNAL AUDIBLE	W6DR3SS+B	09H015	BUZZER 115V W/6-32 CRT+6" LEADS	PROCESSOR BX
ED	**>>DISPLAY-ELECTRONIC**				
EDM	DISPLAY-MICROPROCESSOR	W6DR3SD	08BSEVFD5V	BD:SER VFD 2LINE-19200B-TEST	PROCESSOR BX
EF	**>>FUSE OR FUSE HOLDER**				
EF37	FUSE-120V CONTROL CIRCUIT	W6DR3SHV	09FF004AHG	FUSE BK/MDX 4 AMP 125V BUSS	HIGH VOLT BX
EL	**>>LIGHT-PILOT OR INDICATOR**				
ELDDC	LIGHT-DISCHARGE DOOR CLOSED	W6DR3SEVA	09J060A37	LAMP 1/2" AMB 125V IDI 1050QC3	LOW VOLT BOX
ELDDF	LIGHT-DISCHARGE DESIRED FLASHING	W6DR3SMCA	09H025V37	REACON ROTARY 5.5"DIA AMBER	LOW VOLT BOX
ELDDF	LIGHT-DISCHARGE DESIRED FLASHING	W6DR3SMCB	09H025V37	REACON ROTARY 5.5"DIA AMBER	LOW VOLT BOX
ELLDC	LIGHT-LOAD DOOR CLOSED	W6DR3SEVA	09J060A37	LAMP 1/2" AMB 125V IDI 1050QC3	LOW VOLT BOX
ELLDO	LIGHT-LOAD DOOR OPEN	W6DR3SEVA	09J060A37	LAMP 1/2" AMB 125V IDI 1050QC3	LOW VOLT BOX
ELLL	LIGHT-LOAD DESIRED	W6DR3SIAB	09J060A37	LAMP 1/2" AMB 125V IDI 1050QC3	LOW VOLT BOX
ELSG	LIGHT-SIGNAL VISUAL	W6DR3SS+B	09J060A37	LAMP 1/2" AMB 125V IDI 1050QC3	LOW VOLT BOX
EM	**>>ELECTROMAGNET AND SOLENOID**				
EMCF	FAN-INVERTER COOLING	W6DR3SVP	13AF100A37	FAN 92CFM115V60 NEWARK #90F6921	VARI SPD BOX
EMS	**>>>EMERGENCY STOP SWITCHES**				
EMSK	SOLENOID-SPRINKLER	W6DR3SMCA	09K061D	SOLENOID 120V 60C #8940	SPRINKLER ASSY
EMSK	SOLENOID-SPRINKLER	W6DR3SMCB	09K061D	SOLENOID 120V 60C #8940	SPRINKLER ASSY
EMSL	SWITCH-EMERGENCY STOP LEFT	W6DR3SS+A	09N505	SW ASSY EMER STOP	SIDE OF MACH LF
EMSL	SWITCH-EMERGENCY STOP LEFT	W6DR3SS+B	09N505	SW ASSY EMER STOP	SIDE OF MACH LF
EMSR	SWITCH-EMERGENCY STOP RIGHT	W6DR3SS+A	09N505	SW ASSY EMER STOP	SIDE OF MACH RT
EMSR	SWITCH-EMERGENCY STOP RIGHT	W6DR3SS+B	09N505	SW ASSY EMER STOP	SIDE OF MACH RT
ES	**>>POWER SUPPLY-ELECTRONIC**				

COMPONENT PARTS LIST

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COMPONENT NUMBER	FUNCTION OF THIS COMPONENT	WHERE TO FIND THIS COMPONENT	MILNOR P/N	DESCRIPTION	LOCATION
ESPS1	POWER SUPPLY-PROCESSOR BOX	W6DR3STC	08PSS3401T	40 WATT POWER SUPPLY TESTED	PROCESSOR BX
ESPS2	POWER SUPPLY-MACHINE BOARDS	W6DR3STC	08PSS3401T	40 WATT POWER SUPPLY TESTED	LOW VOLT BOX
ET	**>>THERMAL OVERLOAD DEVICES**				
ETBA	OVERLOAD-BASKET MOTOR	W6DR3SMT	MESSAGE EW	SEE ETBA-1,-2,-3 FOR PARTS	HIGH VOLT BX
ETBA-1	OVERLOAD-5040 BASKET MOTOR	W6DR3SMT	09FTC0016T	OL RELAY 1.6-5.0A AB#193-A3E1	HIGH VOLT BX
ETBA-2	OVERLOAD-5840+5858 HV BASKET MOTOR	W6DR3SMT	09FTC0037T	OL RELAY 3.7-12A AB #193-A3F1	HIGH VOLT BX
ETBA-3	OVERLOAD-5858LV+5880 BASKET MOTOR	W6DR3SMT	09FTC0120T	OL RELAY 12-32A AB #193-A3H3	HIGH VOLT BX
ETDB	OVERLOAD DYNAMIC BRAKE	W6DR3SMT	09F024A	0L RELAY 1P SZ1 SQD #9065-CO1	HIGH VOLT BX
ETDB	OVERLOAD-DYNAMIC BRAKE	W6DR3SVP	09F024A	OL RELAY 1P SZ1 SQD #9065-C01	VARI SPEED BX
ETMA	OVERLOAD-MAIN AIR	W6DR3SMT	MESSAGE EW	SEE ETMA-1,-2,-3,-4 FOR PARTS	HIGH VOLT BX
ETMA-1	OVERLOAD-5040,5840&5858HV MAIN AIR	W6DR3SMT	09FTC0120T	OL RELAY 12-32A AB#193-A3E1	HIGH VOLT BX
ETMA-2	OVERLOAD-5050,5840&5858LV MAIN AIR	W6DR3SMT	09FTC0121T	OL RELAY12-38A AB #193-A3H2	HIGH VOLT BX
ETMA-3	OVERLOAD-58580 & 7272HV MAIN AIR	W6DR3SMT	09FTC0140T	OL RELAY14-45A AB #193-A3J2	HIGH VOLT BX
ETMA-4	OVERLOAD-5858 & 7272LV MAIN AIR	W6DR3SMT	09FTC0230T	OL RELAY23-75A AB #193-A3K3	HIGH VOLT BX
EX	**>>TRANSFORMERS**				
EX37	TRANSFORMER-INCOMING VOLT.120VAC	W6DR3SHV	MESSAGE EW	SEE EX37-1, -2, OR -3 FOR VOLTAGE	HIGH VOLT BX
EX37-1	TRANSFORMER-208/240>120VAC	W6DR3SHV	09U249AA37	XFMR 200-240V PRI/120VSEC/250VA	HIGH VOLT BX
EX37-2	TRANSFORMER-380/480>120VAC	W6DR3SHV	09U200AAB	XFMR 380-480V/240-120V-250VA	HIGH VOLT BX
EX37-3	TRANSFORMER-600->120VAC	W6DR3SHV	09U251AB37	XFMR 600VPRI/120VSC-250VA-3%REG	HIGH VOLT BX
IR	**>>INFRARED SENSOR**				
IR1	IR SENSOR	W6DR3STC	09X501	INFARED SENSOR SMART-MICROIRT/C.4 -12 - C	FRONT
IR1	IR SENSOR AIR JACKET	W6DR3STC	09X502	INFARED SENSOR APJ-1 AIR PURGE JACKET	FRONT
IR2	IR SENSOR	W6DR3STC	09X501	INFARED SENSOR SMART-MICROIRT/C.4 -12 - C	REAR
IR2	IR SENSOR AIR JACKET	W6DR3STC	09X502	INFARED SENSOR APJ-1 AIR PURGE JACKET	REAR
KB	**>>KEYBOARD-ELECTRONIC**				
KBM	KEYPAD-MICROPROCESSOR	W6DR3SKP	08ND5X6DR	KEYPAD:5X6MATRIX DRYER	PROCESSOR BX
MR	**>>MOTORS**				
MRBA	MOTOR-BASKET ROTATION	W6DR3SMT	MESSAGE SO	SEE SPECIFIC COMPONENT+NAMEPLATE	MACHINE BASE
MRBA	MOTOR-BASKET ROTATION	W6DR3SVP	MESSAGE SO	SEE SPECIFIC COMPONENT+NAMEPLATE	MACHINE BASE
MRMA	MOTOR-MAIN AIR	W6DR3SMT	MESSAGE SO	SEE SPECIFIC COMPONENT+NAMEPLATE	MACHINE TOP
MVBA	INVERTER BASKET MOTOR 50/64IL/R	W6DR3SMT	MESSAGE EW	SEE MVBA-L <380V; MVBA-H >240V	HIGH VOLT BX
MVBA-H	INVERTER-BSKT 50/64L/R HI V <9/2009	W6DR3SMT	09MV030F96	VARSPEED 3HP 4.8A 460V GPD315	HIGH VOLT BX
MVBA-H	INVERTER-BSKT 50/64L/R HI V >9/2009	W6DR3SMT	09MWB00596	V1000 INVERTER 5.5AMP 460V	HIGH VOLT BX

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COMPONENT PARTS LIST

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COMPONENT NUMBER	FUNCTION OF THIS COMPONENT	WHERE TO FIND THIS COMPONENT	MILNOR P/N	DESCRIPTION	LOCATION
MVBA-L	INVERTER-BSKT 50/64L/R LOW V <9/2009	W6DR3SMT	09MV030F74	VARSPEED 3HP 11A 230V GPD315	HIGH VOLT BX
MVBA-L	INVERTER-BSKT 50/64L/R LOW V >9/2009	W6DR3SMT	09MWB01174	V1000 INVERTER 11AMP 230V	HIGH VOLT BX
MVRT	INVERTER-INLINE REACTOR 64058	W6DR3SMT	MESSAGE EW	SEE MVRT-L <380V; MVRT-H >240V	HIGH VOLT BX
MVRT-H	INVERTER-INLINE REACTOR 6458 HIGH	W6DR3SMT	09MX030A96	REACTOR 3HP 460V 6A	HIGH VOLT BX
MVRT-L	INVERTER-INLINE REACTOR 6458 LOW	W6DR3SMT	09MX030A74	REACTOR 3HP 230V 12A	HIGH VOLT BX
PLLDC	PROX SW-LOAD DR CLSD (50&58 DRYERS)	W6DR3SIAB	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	LD DOOR ASSY
PLLDC	PROX SW-LOAD DR CLSD (64 DRYERS)	W6DR3SIAB	09RPS18ADS	PRXSW QK CONN 18M NO-DC SHLD	LD DOOR ASSY
PLLDC	PROX SW-LD DR CLSD (64 DRYR WIDE DR)	W6DR3SIAB	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	LD DOOR ASSY
PLLDO	PROX SWITCH-LOAD DOOR CLSD (ALL)	W6DR3SIAB	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	LD DOOR ASSY
PX	**>>PROXIMITY SWITCH**				
PXDOC	PROX SWITCH-DISC DR CLSD (6458 ONLY)	W6DR3SEVA	09RPS30CAS	PRXSW QK CONN 30MM NO-DC SHLD	DISC DOOR ASSY
PXRS	PROX SWITCH-ROTATIONAL SAFETY	W6DR3SBWA	09RPS18ADS	PRXSW QK CONN 18MM NO-DC SHLD	LEFT REAR
SH	**>>SWITCH-HAND OPERATED**				
SHAD	SWITCH-DISCHARGE ALLOWED	W6DR3SICB	MESSAGE EW	THESE PARTS SUPPLIED BY CUSTOMER	BY CUSTOMER
SHBC	SWITCH-NORMAL/LITTLE LOAD	W6DR3SIAB	09N405M210	SWASS M2W 1NO	ALLIED INF BX
SHDD	SWITCH-DISCHARGE DESIRED	W6DR3SICB	09N405S211	SWASS S2W 1NO+1NC	RT DISC SIDE
SHDH	SWITCH-DRYER IS LOADING	W6DR3SICB	09N405PB10	SWASS PBBK 1NO	RT LOAD SIDE
SHDL	SWITCH-DRYER IS LOADED	W6DR3SICB	09N405PB10	SWASS PBBK 1NO	RT LOAD SIDE
SHDT	SWITCH-DRYER ALLOWED TO LOAD	W6DR3SICB	09N405M211	SWASS M2W 1NO+1NC	PROCESSOR BX
SHFS	SWITCH-FORMULA SELECTOR	W6DR3SIAB	09N041N	ROTSW 5-POLE 8-POSIT 5A125V	ALLIED INF BX
SHLA	SWITCH-LOAD ALLOWED	W6DR3SICB	09N405M210	SWASS M2W 1NO	PROCESSOR BX
SHLDO	SWITCH-LOAD DOOR OPEN	W6DR3SICB	09N405M210	SWASS M2W 1NO	LF LOAD SIDE
SHM	SWITCH-MANUAL / AUTOMATIC	W6DR3SICB	09N405M211	SWASS M2W 1NO+1NC	RT DISC SIDE
SHMD	SWITCH-LOCAL / REMOTE (MILDATA)	W6DR3SICB	09N405M210	SWASS M2W 1NO	LOW VOLT BOX
SHNC	SWITCH-NEW CUSTOMER	W6DR3SIAB	09N405M210	SWASS M2W 1NO	ALLIED INF BX
SHS+	SWITCH-START 3-WIRE	W6DR3SS+A	09N405PG10	SWASS PBGN 1NO	PROCESSOR BX
SHS+	SWITCH-START 3-WIRE	W6DR3SS+B	09N405PG10	SWASS PBGN 1NO	PROCESSOR BX
SHSFR	SWITCH-RANGE SELECT	W6DR3SIAB	09N405M210	SWASS M2W 1NO	ALLIED INF BX
SHSG	SWITCH-SIGNAL CANCEL	W6DR3SICB	09N405PB10	SWASS PBBK 1NO	PROCESSOR BX
SHSK	SWITCH-SPRINKLER	W6DR3SS+A	09RM01209S	CAPSW 9FT 180DEG ROLLER SILVER	SPRINKLER ASSY
SHSK	SWITCH-SPRINKLER	W6DR3SS+B	09RM01209S	CAPSW 9FT 180DEG ROLLER SILVER	SPRINKLER ASSY
SHSMA	SWITCH-MASTER	W6DR3SS+A	09N405M210	SWASS M2W 1NO	PROCESSOR BX
SHSMA	SWITCH-MASTER	W6DR3SS+B	09N405M210	SWASS M2W 1NO	PROCESSOR BX

COMPONENT PARTS LIST

COMPONENT NUMBER	FUNCTION OF THIS COMPONENT	WHERE TO FIND THIS COMPONENT	MILNOR P/N	DESCRIPTION	LOCATION
SHSO	SWITCH-STOP	W6DR3SS+A	09N405PR01	SWASS PBRD 1NC	PROCESSOR BX
SHSO	SWITCH-STOP	W6DR3SS+B	09N405PR01	SWASS PBRD 1NC	PROCESSOR BX
SHWJ	SWITCH-JOG	W6DR3SICB	09N405S211	SWASS S2W 1NO+1NC	RT DISC SIDE
SK	**>>SWITCH-KEYLOCK**				
SKPR	SWITCH-RUN/PROGRAM (KEY OP)	W6DR3SICB	09N127C	KEYSW SPST 7A120VAC SCREW TERM	PROCESSOR BX
SM	**>>SWITCH-MECHANICAL OPERATED**				
SMDDC	SWITCH-DISCHARGE DOOR CLOSED	W6DR3SEVA	09R012	MICSW SPDT PAINTED BZE6-RN 01	PROCESSOR BX
SPHD	SWITCH:PRESSURE OUTLET DUCT HIGH	W6DR3SICB	09N19196B	GAS PRESS SW RANGE .2-2.4"WC	OUTLET DUCT
ST	**>>SWITCH-TEMPERATURE**				
ST240-1	SWITCH-DRYER TEMP SAFTEY PROBE	W6DR3SMCA	30R0240P	THERMOSW.FENWAL CLOSE @ 240F	ABOVE BASKET
ST225-1	SWITCH-DRYER TEMP SAFTEY THERMOSTAT	W6DR3SMCB	30RA225T	THERMOSTAT CLOSES AT 225-DEG F	ABOVE BASKET
ST240-2	SWITCH-DRYER TEMP SAFTEY PROBE	W6DR3SMCB	30R0240P	THERMOSW.FENWAL CLOSE @ 240F	ABOVE BASKET
STDB	SWITCH-DYNAMIC BRAKE THERMOSTAT	W5DR3SS+A	30RO175T	THERMOSTAT CLOSES AT 175-DEG F	HIGH VOLT BX
STDB	SWITCH-DYNAMIC BRAKE THERMOSTAT	W5DR3SS+B	30RO175T	THERMOSTAT CLOSES AT 175-DEG F	HIGH VOLT BX
VE	**>>VALVE-ELECTRIC OPERATED**				
VEAB	VALVE-AIR BLADE	W6DR3SLSB	96TCC3AA37	3/8" N/C 3WAY 120V50/60C VALVE	SIDE REAR
VECDC	VALVE-COOLDOWN DAMPER CLOSED	W6DR3SS+A	96R301A37	1/8" PILOT 3W-NC 110/50 120/60	AIR VALVE BX
VECDC	VALVE-COOLDOWN DAMPER CLOSED	W6DR3SS+B	96R301A37	1/8" PILOT 3W-NC 110/50 120/60	AIR VALVE BX
VECDO	VALVE-COOLDOWN DAMPER OPEN	W6DR3SS+A	96R301A37	1/8" PILOT 3W-NC 110/50 120/60	AIR VALVE BX
VECDO	VALVE-COOLDOWN DAMPER OPEN	W6DR3SS+B	96R301A37	1/8" PILOT 3W-NC 110/50 120/60	AIR VALVE BX
VED1	VALVE-DAMPER #1 SHORT STROKE	W6DR3SEVA	96R301A37	1/8" PILOT 3W-NC 110/50 120/60	AIR VALVE BX
VED2	VALVE-DAMPER #2 LONG STROKE	W6DR3SEVA	96R301A37	1/8" PILOT 3W-NC 110/50 120/60	AIR VALVE BX
VEDDO	VALVE-DISCHARGE DOOR CLOSED	W6DR3SEVA	96R301A37	1/8" PILOT 3W-NC 110/50 120/60	AIR VALVE BX
VEEBL	VALVE-FILTER BLOW DOWN	W6DR3SLSB	96TFC2AA37	1" N/C 2WAY 120V50/60C VALVE	SIDE REAR
VEEGU	VALVE-LINT GATE VALVE OPEN	W6DR3SLSB	96R302B37	1/8"AIRPILOT 3W NO 120V50/60	LINT AIR BOX
VEEGV	VALVE-LINT GATE VALVE CLOSE	W6DR3SLSB	96R301A37	1/8" PILOT 3W-NC 110/50 120/60	LINT AIR BOX
VEL1	VALVE-LINT REMOVAL FROM FAN	W6DR3SEVA	96TFC2AA37	1" N/C 2WAY 120V50/60C VALVE	REAR OF DRYER
VELDA	VALVE-LOWER DRYER HOME TARGET	W6DR3SEVA	96R301A37	1/8" PILOT 3W-NC 110/50 120/60	AIR VALVE BX
VELDC	VALVE-LOAD DOOR CLOSED	W6DR3SEVA	96R301A37	1/8" PILOT 3W-NC 110/50 120/60	AIR VALVE BX
VELDO	VALVE-LOAD DOOR OPEN	W6DR3SEVA	96R301A37	1/8" PILOT 3W-NC 110/50 120/60	AIR VALVE BX
VEMMS	VALVE-MODULATING STM VALV ACTUATOR	W6DR3SBWA	A75VS005B	MOD STEAM VALVE ASSY 5880-40	BLOWER HOUSG
VEMTR	VALVE-MODULATING THERMAL OIL	W6DR3STV	96S2001A	MOTOR 90DEG 30SEC 24V50/60	OIL PIPING
VENDD	VALVE-NO DRY DESTINATION	W6DR3SEVA	96R301A37	1/8" PILOT 3W-NC 110/50 120/60	AIR VALVE BX

COMPONENT PARTS LIST

W6DR3SPL/2025056N

COMPONENT NUMBER	FUNCTION OF THIS COMPONENT	WHERE TO FIND THIS COMPONENT	MILNOR P/N	DESCRIPTION	LOCATION
VER	VALVE-RECIRCULATION DAMPER	W6DR3SEVA	96R301A37	1/8" PILOT 3W-NC 110/50 120/60	AIR VALVE BX

7

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.

ANY SALE OR FURNISHING OF ANY EQUIPMENT BY MILNOR IS MADE ONLY UPON THE EXPRESS UNDERSTANDING THAT MILNOR MAKES NO EXPRESSED OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR USE OR PURPOSE OR ANY OTHER WARRANTY IMPLIED BY LAW INCLUDING BUT NOT LIMITED TO REDHIBITION. MILNOR WILL NOT BE RESPONSIBLE FOR ANY COSTS OR DAMAGES ACTUALLY INCURRED OR REQUIRED AS A RESULT OF: THE FAILURE OF ANY OTHER PERSON OR ENTITY TO PERFORM ITS RESPONSIBILITIES, FIRE OR OTHER HAZARD, ACCIDENT, IMPROPER STORAGE, MIS-USE, NEGLECT, POWER OR ENVIRONMENTAL CONTROL MALFUNCTIONS, DAMAGE FROM LIQUIDS, OR ANY OTHER CAUSE BEYOND THE NORMAL RANGE OF USE. REGARDLESS OF HOW CAUSED, IN NO EVENT SHALL MILNOR BE LIABLE FOR SPECIAL, INDIRECT, PUNITIVE, LIQUIDATED, OR CONSEQUENTIAL COSTS OR DAMAGES, OR ANY COSTS OR DAMAGES WHATSOEVER WHICH EXCEED THE PRICE PAID TO MILNOR FOR THE EQUIPMENT IT SELLS OR FURNISHES.

THE PROVISIONS ON THIS PAGE REPRESENT THE ONLY WARRANTY FROM MILNOR AND NO OTHER WARRANTY OR CONDITIONS, STATUTORY OR OTHERWISE, SHALL BE IMPLIED.

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).

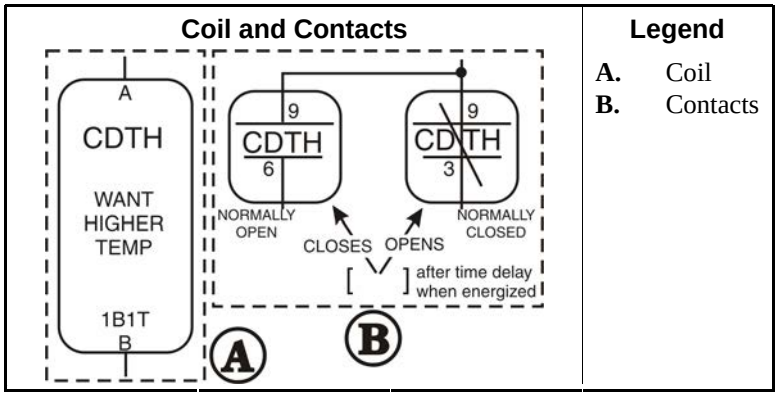
BA=Printed Circuit Board—Insulating substrate on which a thin pattern of copper conductors has been formed to connect discrete electronic components also mounted on the board.

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)

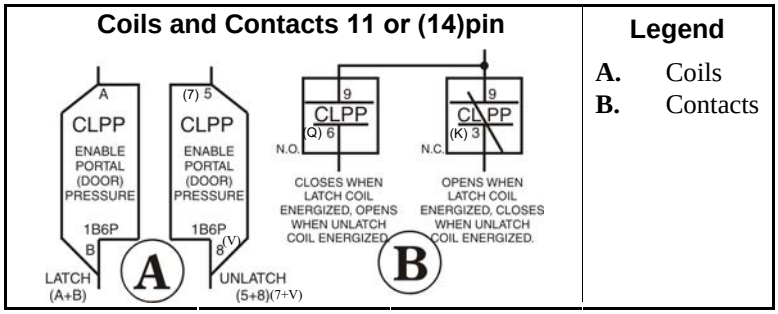
CD=Control, Time Delay Relay (Figure 2)—A relay whose contacts switch only after a fixed or adjustable delay, once voltage has been applied to its coil. The contacts switch back to normal (de-energized state) immediately when the voltage is removed.

Figure 2: Time Delay Relay (CD)



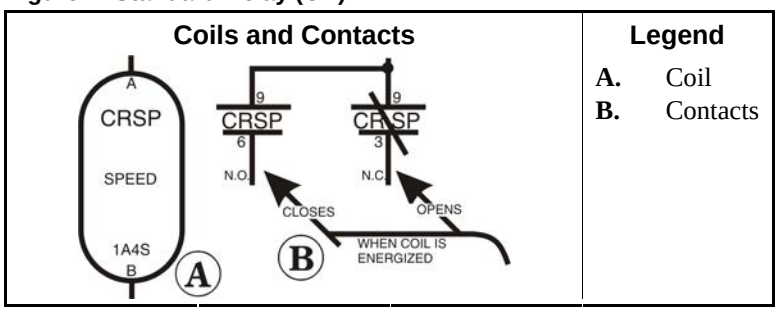
CL=Control, Latch Relay (Figure 3)—A relay which latches in an energized or set position when operated by one coil (the latch/set coil). The relay stays latched even though coil voltage is removed. The relay releases or unlatches when voltage is applied to a second coil (the unlatch/reset coil).

Figure 3: Latch Relay (CL)



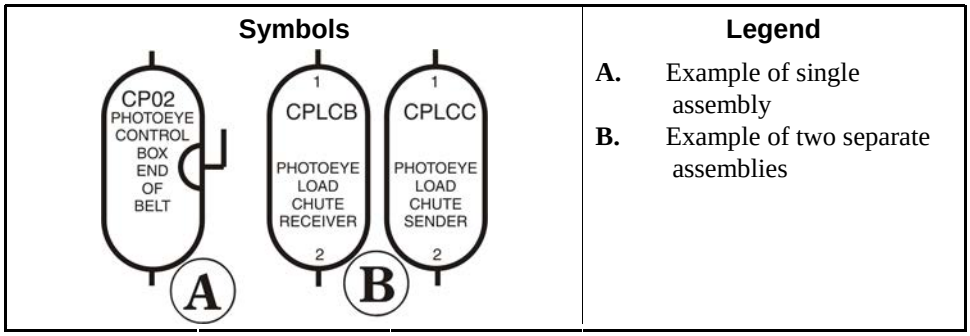
CR=Control, Relay (Figure 4)—A relay whose contacts switch immediately when voltage is applied to its coil and revert to normal when the voltage is removed.

Figure 4: Standard Relay (CR)



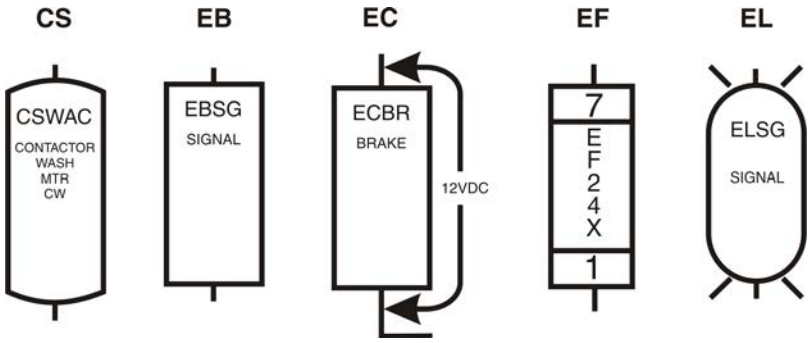
CP=Control, Photo-Eye (Figure 5)—Photo-eyes sense the presence of an object without direct physical contact. Photo-eyes consist of a transmitter, receiver, and output module. These components may be housed in one assembly with the transmitter bouncing light off of a reflector to the receiver, or these 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.

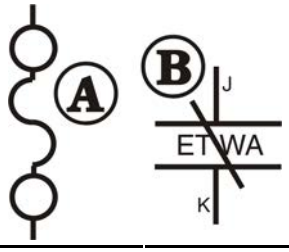
EL=Electric Light (Figure 6)—Indicator lights may be either incandescent or fluorescent.

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.

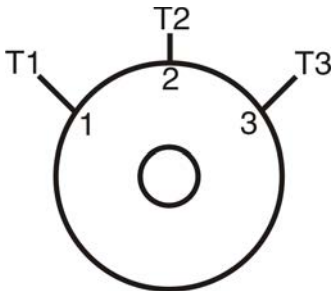
KB=Keyboard—Device similar to a typewriter for making entries to a computer.

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)

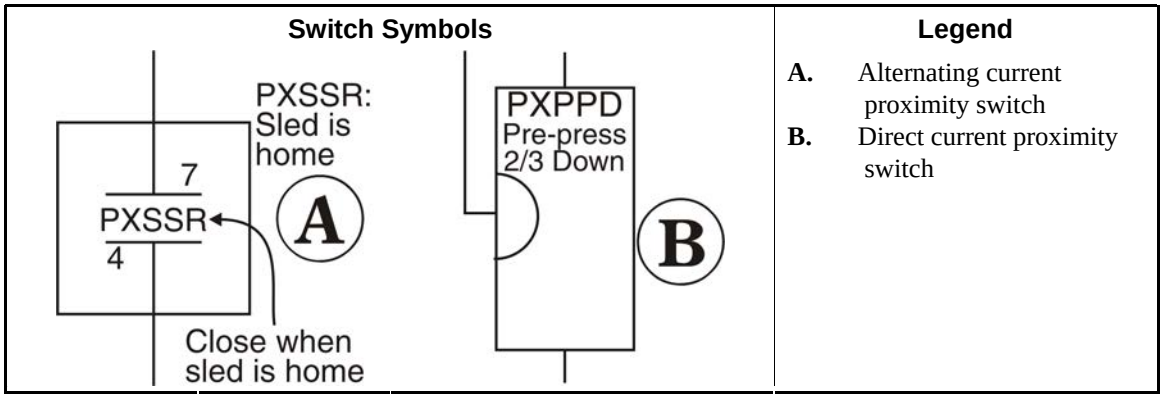


MV=Motor (Variable Speed) Inverter—To vary the speed of an AC motor, the volts to frequency ratio must be kept constant. The motor will overheat if this ratio is not maintained. The motor variable speed inverter converts three phase AC to DC. The inverter then uses this DC voltage to generate AC at the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

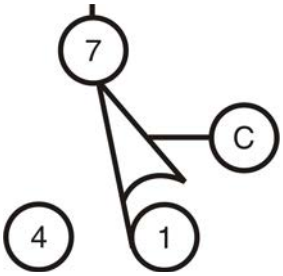
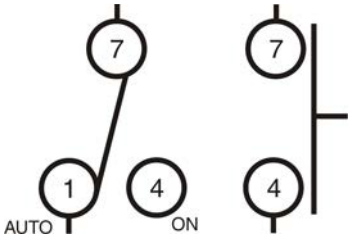


Figure 12: Hand Operated Switch (SH)



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)

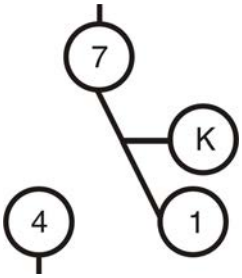
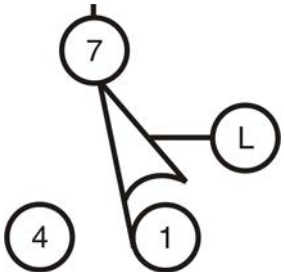


Figure 14: Level Switch (SL)



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)

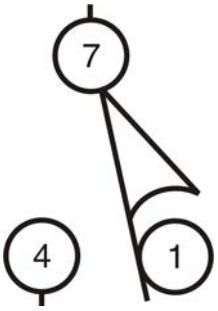
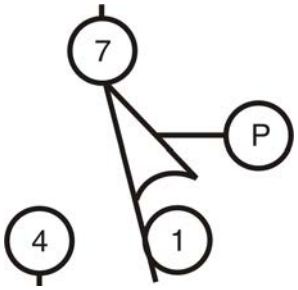


Figure 16: Pressure Switch (SP)



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)

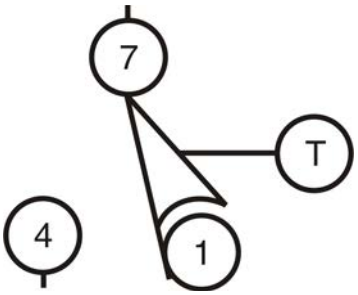
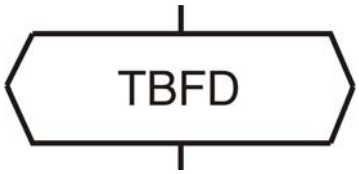


Figure 18: Terminal Board (TB)



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)

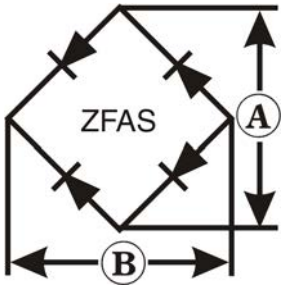
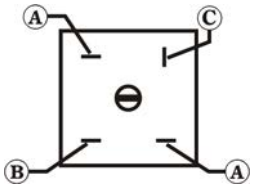
Component Symbol	Legend
	**A.** Alternating current input **B.** Direct current output

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.

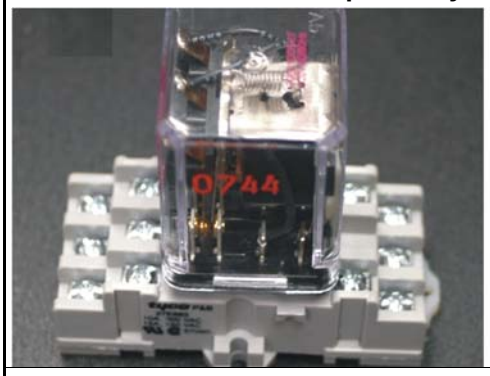
2. Component Terminal Numbering

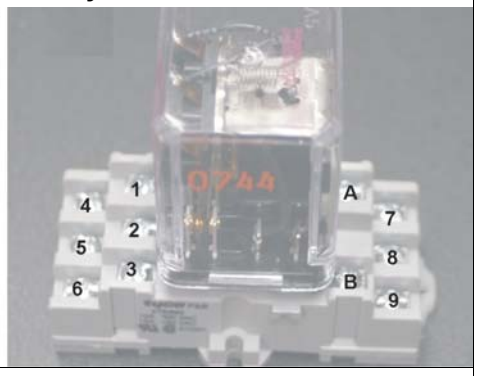
CAUTION 1: Risk of Mis-wiring—Due to electrical component manufacturing inconsistencies, the pin numbers imprinted on components such as connectors and relay bases used on Milnor machines often do not correspond to the pin numbers shown in the schematics.

- 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.

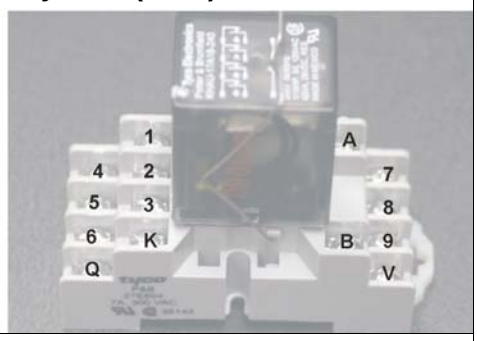
Figure 22: Plug-in Relays

11-pin Relay with Grey Base

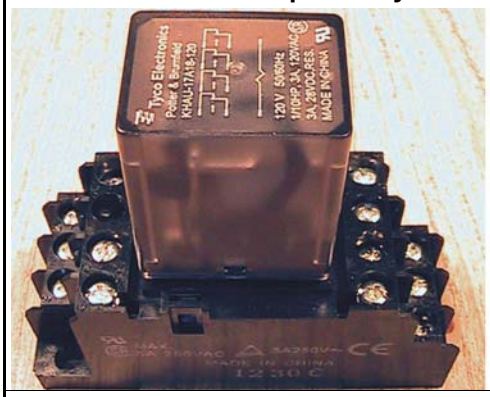


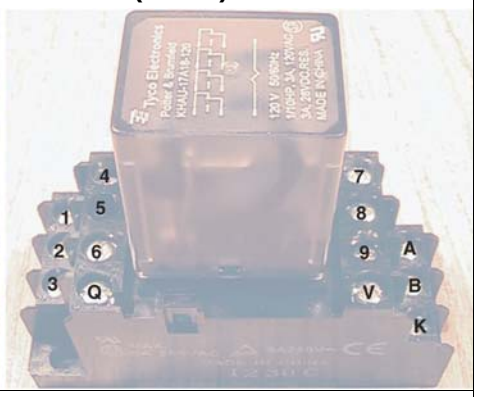


14-pin Relay with Grey Base (older)

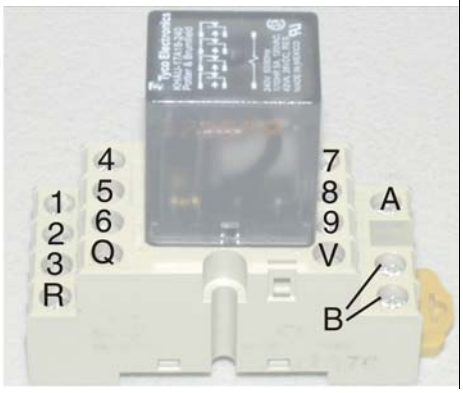


14-pin Relay with Black Base (newer)





14-pin Relay with Beige Base (rare)



Legend

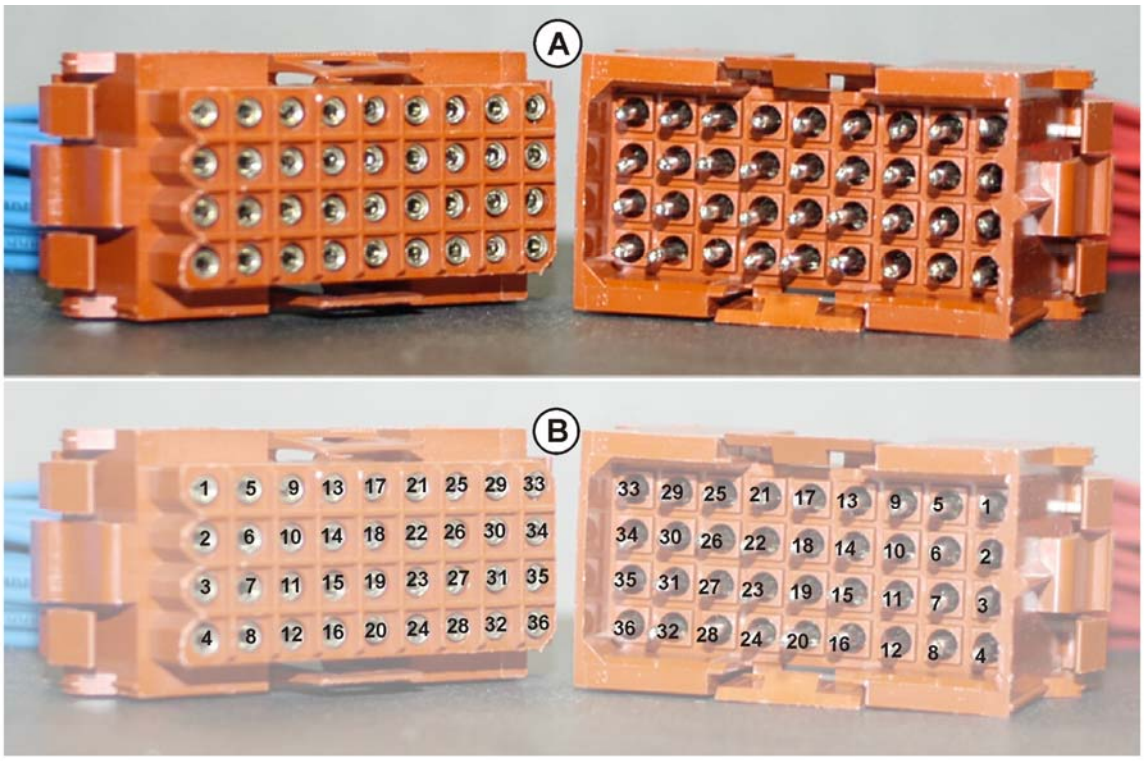
Left. View of relay and base

Right. Same view, showing pin numbers

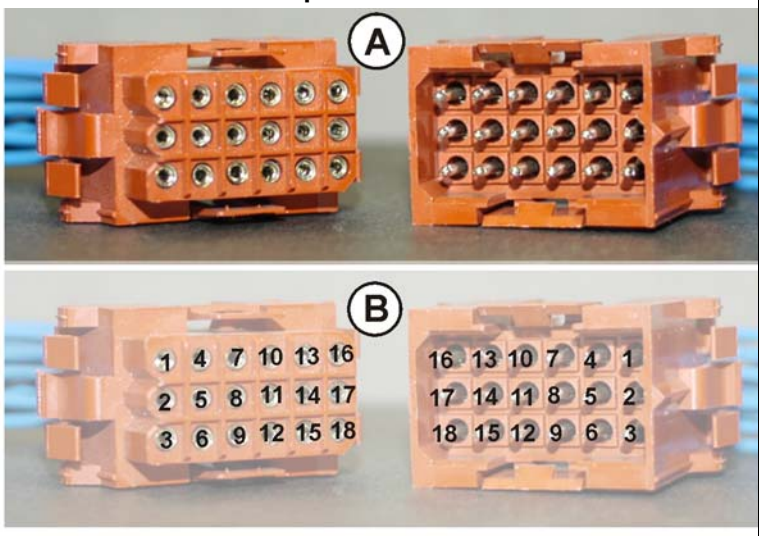
Note 3: Relay functional names ending with the letter "M" (e.g., CRxxM) are not discrete components but are a component of a printed circuit board. They are usually not individually replaceable.

Figure 23: AMP Connector Pin Locations

36-pin Connector



18-pin Connector

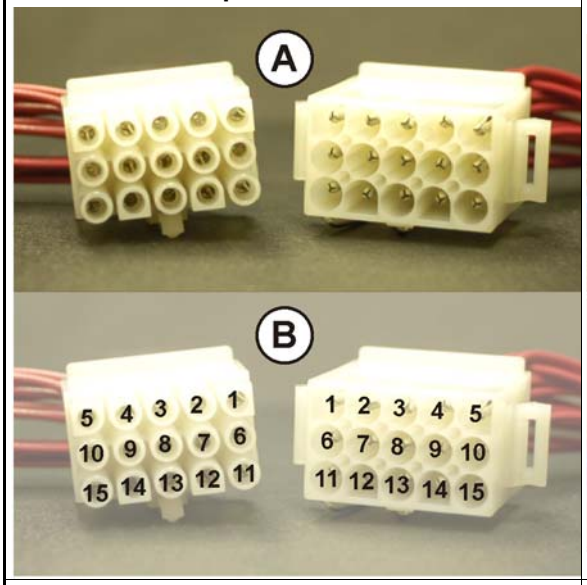


Legend

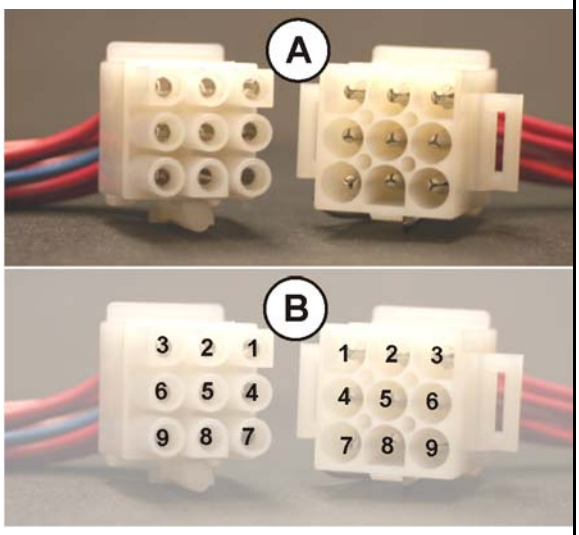
A. View of mating halves of connector
B. Same view, showing assigned pin numbers

Figure 24: Molex Connector Pin Locations

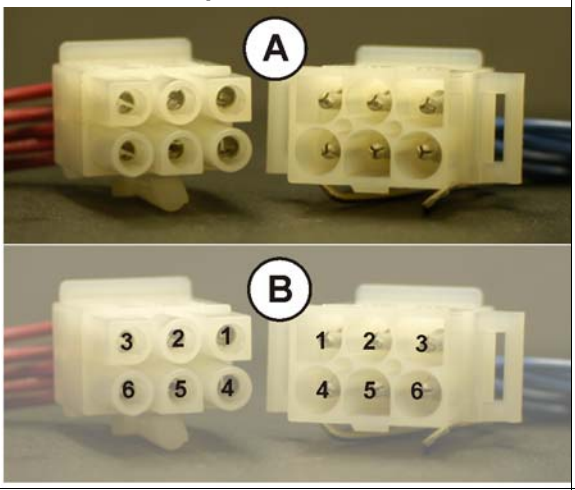
15-pin Connector



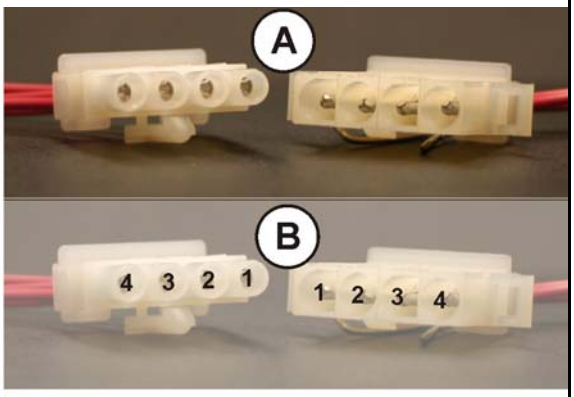
9-pin Connector



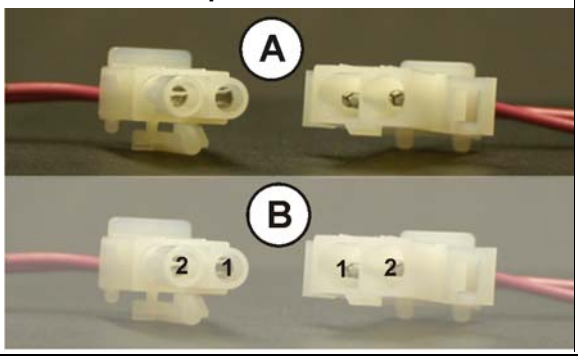
6-pin Connector



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

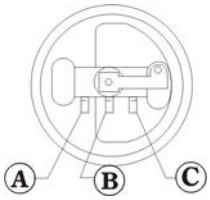
Component	Legend
	**A.** Contact 1—Normally open **B.** Contact 2—Normally closed **C.** Contact 3—Common

Figure 26: Toggle Switch

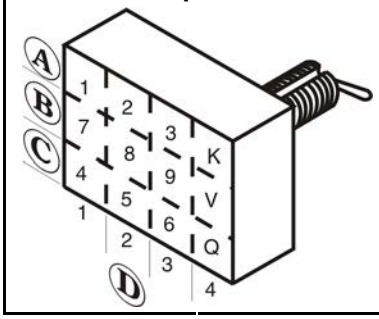
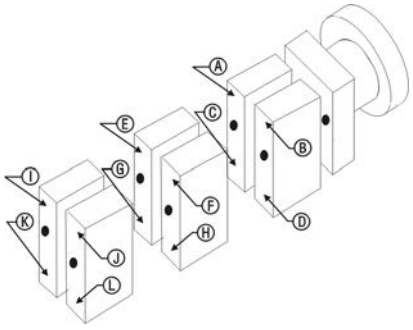
Component	Legend
	**A.** Normally closed contacts **B.** Common contacts **C.** Normally open contacts **D.** Pole

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

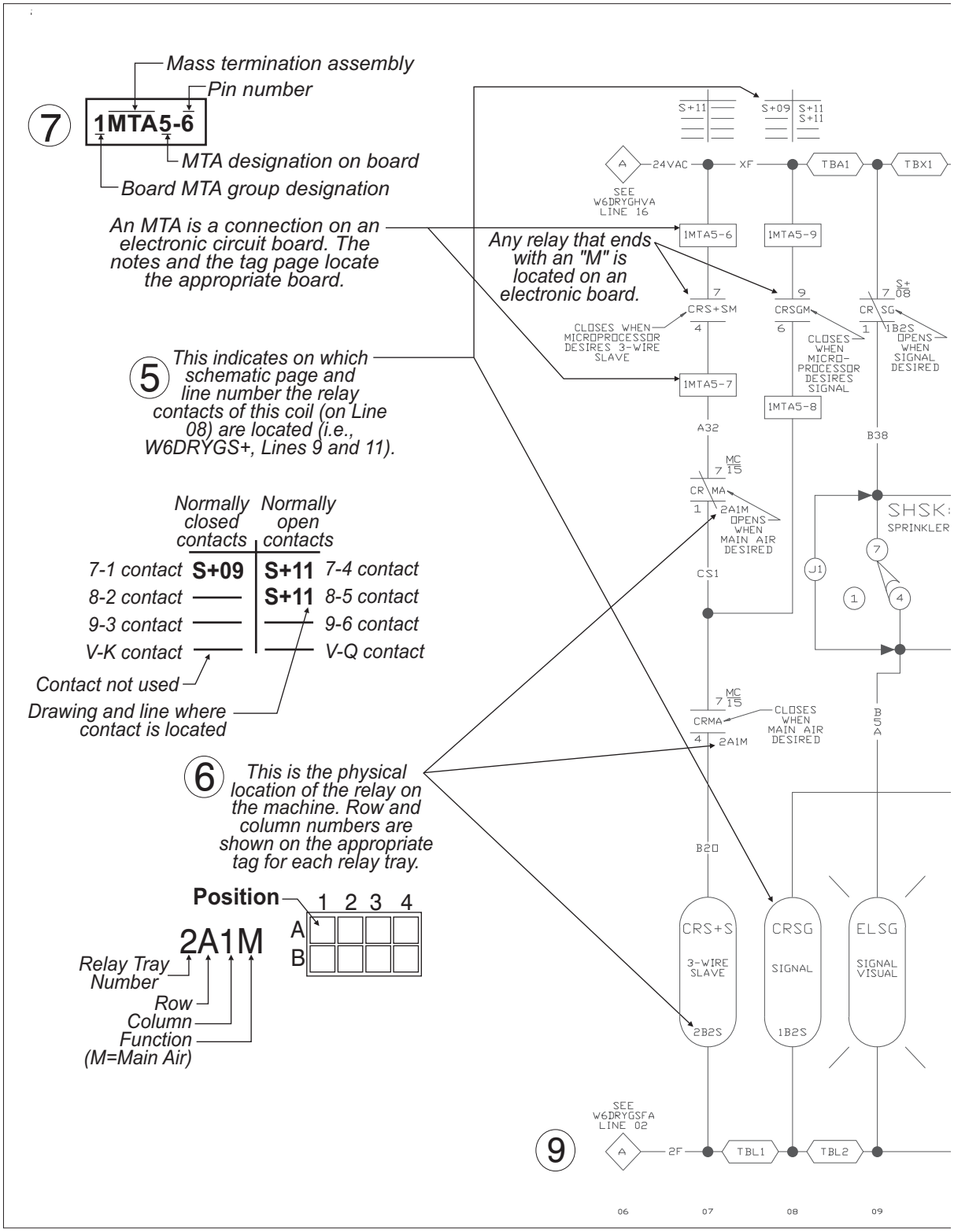
circuitry (S+=three-wire circuit) and establish the order in which the schematic occurs in the manual (schematics are arranged in alpha-numeric order in the manual).

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).

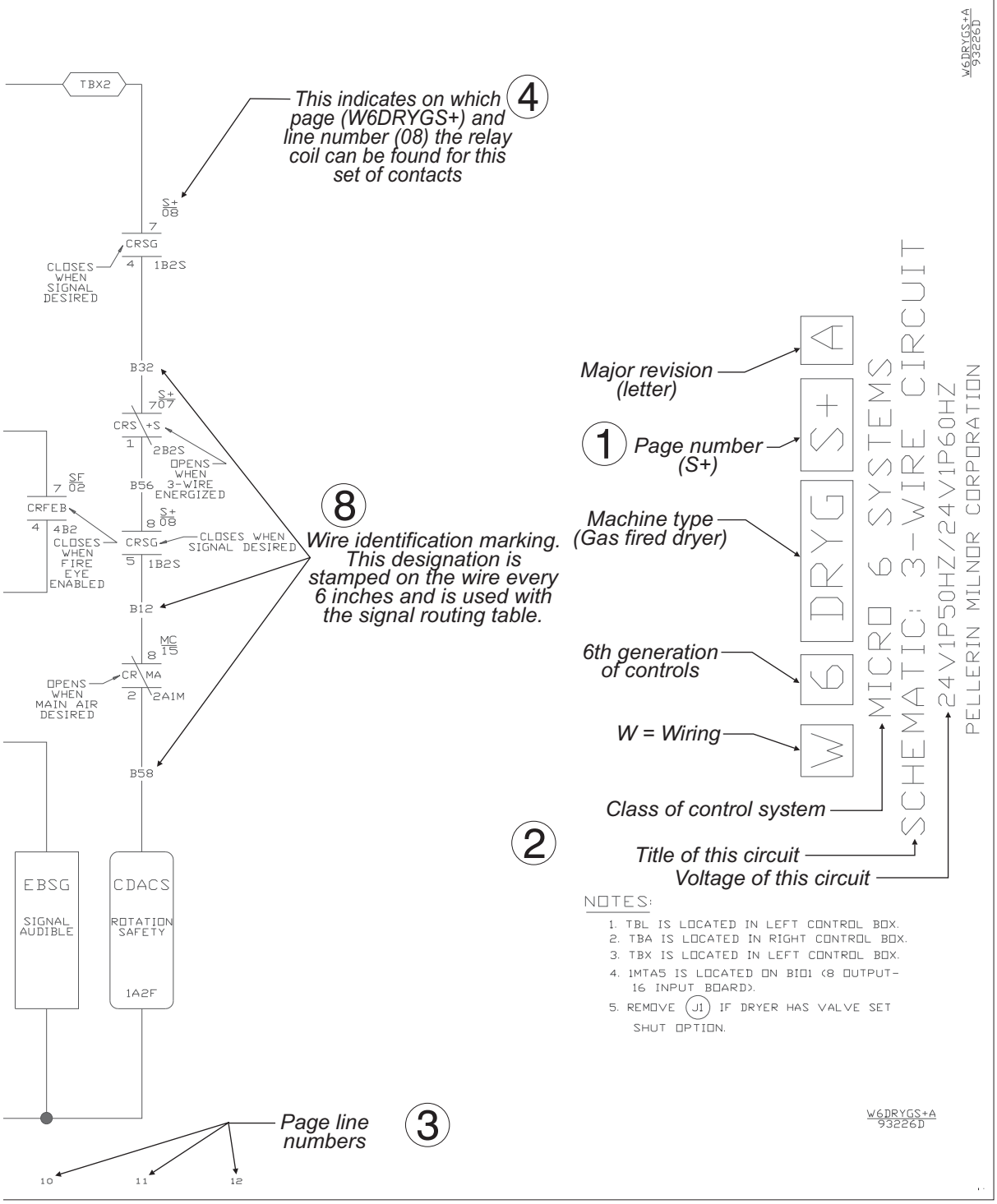
2. Included in the drawing title are the class of control system, the title of this circuit, and the circuit voltage.
3. Line numbers are provided along the bottom edge of the drawing. These permit service personnel in the field and at the Milnor® factory to quickly relate circuit locations when discussing 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 —



BMP010012 (left) / 2018343



BMP010012 (right) / 2018343

On-Site Control Connections for Dryers With Mark 5 Controls

The types of on-site connections required vary with the type of system the dryer is in. These are summarized in Table 1.

Table 1: Summary of Dryer On-Site Control Connections

Type of System	Dryer-to-Operator Controls		Other Connections If Applicable
	Always	If Applicable	
Stand-alone dryer (operator controls in dedicated controller box)	• 120VAC connections for face plate controls • Internal serial link	--	• Mildata serial link (daisy chain connection in control box) • Dryvac (Autolint) connections between dryer and Dryvac unit
Miltrac system with a central controls mounting panel (belt box)	• 120VAC connections for face plate controls • Internal serial link	120VAC connections and dryer input signal for Dryvac	Connections between dryer and "no-dry" station via belt box (see "How a Dryer-controlled No-dry Works") *, **
* Because the dryer processor boards are in the belt box, the dryer-to-dryer daisy chain connections for the Miltrac and Mildata serial links are within the belt box and normally wired at the factory. However, continuation of the Mildata serial link (to other devices and to the Mildata computer) must be wired on site. ** Because the Dryvac sequencer is in the belt box, the dryer controller-to-Dryvac sequencer connections are normally wired at the Milnor factory. However, the sequencer-to-Dryvac connections must be wired on site.			
Drynet or MultiTrac system (operator controls in Drynet or MultiTrac cabinet)	• 120VAC connections for face plate controls • Miltrac, Drynet, and Mildata serial links	--	• Connections between dryer and "no-dry" station via Drynet or MultiTrac (see "How a Dryer-controlled No-dry Works") • Dryvac (Autolint) connections between dryer and Dryvac unit

Supplement 1

How a Dryer-controlled No-dry Works

If the installation includes a dryer-controlled no-dry station, every dryer that is configured to control a no-dry station must know if the no-dry station is available to receive the batch. This is accomplished via a Discharge Allowed switch at the no-dry station that makes an input on **all** dryers that are so-configured. It is convenient to run the dryer-to-Discharge Allowed switch conductors via the the belt box, Drynet cabinet, or MultiTrac cabinet. This permits bundling these conductors with other control conductors that run between the dryer and the central control cabinet and running a single cable between the cabinet and the Discharge Allowed switch.

1. On-Site Control Connections for a Stand-alone Dryer

In this configuration, Milnor will normally provide a length of flexible conduit suitable for locating the dedicated dryer controller box near the dryer. Typically, some connections will be made at the factory and some will need to be made on site. For example, if a dedicated Milnor elevating shuttle (for loading the dryer) is to be supplied with the dryer, the dryer controller box is usually mounted to the shuttle frame at the factory. The factory will also provide the flexible conduit already attached to the control box and the wiring already connected on this end. The other end of the conduit will have pre-wired mating connectors. On site, the conduit need only be

secured to the dryer and the connectors plugged together. The dryer-to-operator controls connections are the same as described in Section 2 "On-Site Control Connections for Dryers in a Miltrac™ System With a Central Controls Mounting Panel (Belt Box)". If the dryers use a Milnor Dryvac (Autolint) system, see the related section in document BICDUI04.

2. On-Site Control Connections for Dryers in a Miltrac™ System With a Central Controls Mounting Panel (Belt Box) [Document BICDUI02]

In this configuration, a remote dryer controller (one for each dryer in the system), which contains the dryer processor board, is located in the belt box. This supports the keypad, display and other operator controls (e.g., Master switch) also mounted on the belt box. The dryer connections that must be made on site are listed in Table 2. The connection points may be on terminal blocks or mating connectors. The mating connector and pins to be wired are normally provided in a bag located in the control box or cabinet.

Table 2: Dryer On-Site Control Connections in Systems with a Belt Box

Purpose	Cable Specification	Connection Point			
		On Dryer		On Dryer Controller in Belt Box	
		Connector	Pin	Connector	Pin
Required Connections Between Dryer and Operator Controls in Belt Box					
Earth ground	One conductor: 14AWG (2.5mm²) with 600VAC insulation	TBA (ground terminal)	6	TBA (ground terminal)	6
120VAC face plate controls -- All except 6458TG1x models	Multi-conductor cable: 18AWG (1.0mm²) with 300VAC color coded insulation. Ground unused wires on one end only.	TBA	13	WCM	1
		TBA	11	WCM	2
		TBA	14	WCM	4
		TBA	12	WCM	5
		TBA	5	WCM	6
		TBA	6	WCM	7
		TBA	4	WCM	9
120VAC face plate controls -- 6458TG1x models	Multi-conductor cable: 18AWG (1.0mm²) with 300VAC color coded insulation. Ground unused wires on one end only.	WCM	1	WCM	1
		WCM	2	WCM	2
		WCM	4	WCM	4
		WCM	5	WCM	5
		WCM	6	WCM	6
		WCM	7	WCM	7
		WCM	9	WCM	9
Internal (board-to-board) serial link*	Two-conductor shielded cable: 18AWG (1.0mm²) twisted pair with 300VAC color coded insulation and 85% braided shield. Ground shield one end only.	TBA	106	1MTA33 (serial link #2 low)	1 or 2
		TBA	107	1MTA33 (serial link #2 high)	3 or 4
Additional Connections, If Applicable					
Processor input/ground for "no-dry"	Two-conductor shielded cable. Run all cables via the belt box. In belt box, "common" the corresponding wires from all dryers together and ground shields.	On Dryer		At No-dry Station	
		TBA	140	"Discharge Allowed" switch	N/O
		TBA	7		C
Miltrac and Mildata serial links	See document BICCUC01 "On-Site Installation and Troubleshooting of Permanent Serial Communication Cables" for a complete explanation.				
Dryvac Controls	See document BICDUI04 "Dryer-To-Dryvac (Autolint) Connections" for a complete explanation.				

3. On-Site Control Connections for Dryers in a Drynet (dryer/shuttle controller) or MultiTrac™ System [Document BICDUI03]

In this configuration, each dryer processor board is located on its respective dryer and a control box containing the Master switch (⊗/⊖), Stop button (⓪), and Start button (①) for each dryer is mounted on the Drynet or MultiTrac cabinet. The dryer connections that must be made on-site are listed in Table 3. The connection points may be on terminal blocks or mating connectors. The mating connector and pins to be wired are normally provided in a bag located in the control box or cabinet.

Table 3: Dryer On-Site Control Connections In Drynet and MultiTrac Systems

Purpose	Cable Specification	Connection Point			
		On Dryer		On Drynet or MultiTrac	
		Connector	Pin	Connector	Pin
Required Connections Between Dryer and Drynet or MultiTrac Cabinet					
Earth ground	One conductor: 14AWG (2.5mm²) with 600VAC insulation	TBA (ground terminal)	6	TBA (ground terminal)	6
120VAC face plate controls -- All except 6458TG1x models	Multi-conductor cable: 18AWG (1.0mm²) with 300VAC color coded insulation. Ground unused wires on one end only.	TBA	4	TBC	4
		TBA	5	TBC	5
		TBA	11	TBC	11
		TBA	12	TBC	12
		TBA	13	TBC	13
120VAC face plate controls -- 6458TG1x models	Multi-conductor cable: 18AWG (1.0mm²) with 300VAC color coded insulation. Ground unused wires on one end only.	WCM	9	TBC	4
		WCM	6	TBC	5
		WCM	2	TBC	11
		WCM	5	TBC	12
		WCM	1	TBC	13
Miltrac serial link	See document BICCUC01 "On-Site Installation and Troubleshooting of Permanent Serial Communication Cables" for a complete explanation.	1MTA32	1 or 2	Miltrac SRL	
		1MTA32	3 or 4	Miltrac SRH	
Drynet serial link		1MTA29	1 or 2	Drynet SRL	
		1MTA29	3 or 4	Drynet SRH	
Mildata serial link		1MTA34	1 or 2	Mildata SRL	
		1MTA34	3 or 4	Mildata SRH	
Additional Connections, If Applicable					
Processor input/ground for "no-dry"		On Dryer		At No-dry Station	
	Two-conductor shielded cable. Run all cables via the Drynet or MultiTrac cabinet. In cabinet, "common" the corresponding wires from all dryers together and ground shields.	TBA	140	"Discharge Allowed" switch	N/O
		TBA	7		C
Dryvac controls	See document BICDUI04 "Dryer-To-Dryvac (Autolint) Connections" for a complete explanation.				

— End of BICDUI01 —

Milnor® Allied Interface Specifications and Signals, Dryer

An allied device that interfaces with the Milnor system machine equipped with Mark 5 or later microprocessor controls must meet the electrical specifications and functional requirements given in Section 1 "Electrical and Functional Specifications".

The "Signals..." section(s) herein identify the allied interface signals and provide related information (see Section 2 "How the Signals Tables Are Organized").

This document also provides useful information for troubleshooting allied interfaces:

- The **Display/code** and **Board/code** values in the signals tables, are cross-references to the output and input displays and to the output and input numbers on the I/O boards respectively. Section 4 "Monitoring Allied Interface Outputs and Inputs", explains how to use these cross-references.
- As an aid in working with **numeric signals**, Section 5 "Decimal / Binary Conversion and How It Applies to Allied Interfaces" explains how to determine, for any batch code, which value (off or on) each signal in a group should pass.

1. Electrical and Functional Specifications

WARNING 1: Electrocution and Electrical Burn Hazards—Contact with high voltage will electrocute or burn you. Power switches on the machine and the control box do not eliminate these hazards. High voltage is present at the machine unless the main machine power disconnect is off.

- Do not service machine unless qualified and authorized.
- Lock out and tag out power at the main machine disconnect before opening electric boxes and accessing electrical components.

For inputs from Milnor (Milnor outputs), the allied device must limit circuit load to that specified in Section 1.1, below. For outputs to Milnor (Milnor inputs), the allied device must supply circuitry that meets the specifications in Section 1.2, below. The functional requirements stated in Section 1.3 must be met for proper coordination and data exchange between the devices.

1.1. Permissible Load for Milnor Outputs

—For signals from Milnor to allied (Milnor outputs/allied inputs), Milnor supplies potential-free contacts located on board-mounted relays. The signals are conducted by traces on the board having the following capacity:

- Maximum voltage: 240V
- Maximum current: 0.5 amps
- Maximum VA: 3

CAUTION 2: Risk of Damage/Malfunction—Traces on control boards may burn out, requiring board replacement, if called upon to handle heavy currents. High voltages can cause arcing across traces.

- Do not apply loads exceeding the specified capacity.
- Do not use allied interface outputs to operate motors or for any other unintended purpose. These may, however, be used to operate relays that do not exceed the specified capacity.

1.2. Component Requirements for Milnor Inputs

—For signals from allied to Milnor (allied outputs/Milnor inputs–which connect directly to control boards and are used to ground Milnor control inputs), Milnor applies a low energy signal as follows:

- Voltage: 5VDC or 12VDC
- Minimum current: 5 milliamps

The potential-free contacts supplied by allied and the circuit wiring must be capable of faithfully carrying these low energy signals.

CAUTION 3: Risk of Bad Data—Resistance due to wire length or deteriorated contacts can mask signals. Inadequate shielding against electrical noise can trigger false signals.

- Keep wire runs as short as possible.
- Use a digital signal ground connection (wire number 2G on the CBW; wire number 7 on other Milnor devices), not merely chassis ground.
- Ground any spare wires.
- Pass all wires through a ferrite bead.
- Replace relays that have worn or corroded contacts.
- Do not run input wiring adjacent to, or in the same conduit with, any wires carrying AC. For example, do not run input and output wiring in the same conduit if AC is used to power Milnor output/allied input signals.

1.3. Functional Requirements

1. For numeric signals (batch codes) from allied to Milnor (allied loading interface), all signals must be properly set when the operational signal indicating this data is valid occurs. Signals must remain set for the longer of 5 seconds or through any subsequent operational signal requiring this data (see “Loading Interface non-Numeric Signals...”). Milnor will read all numeric signals during this time.
2. For numeric signals from Milnor to allied (allied discharge interface), allied must not read signals until the data valid, or other operational signal indicating data is valid occurs (see “Discharge Interface non-Numeric Signals...”).
3. Although not all the operational signals listed in the tables are necessarily required, (the signals used will vary with specific machine models and with variations in the operating cycle), those signals used, must occur in the order listed.
4. When connecting numeric signals between devices, ensure that signals are properly matched up with respect to significance (least significant-to-least significant, next least significant-to-next least significant, etc.).

2. How the Signals Tables Are Organized

For an allied device that loads the Milnor machine, Milnor provides an allied **loading interface**. For an allied device that receives goods from (discharges) the Milnor machine, Milnor provides an allied **discharge interface**. In both cases, some signals are used in groups to pass **numeric** values in binary and some signals are used individually to pass **non-numeric** (on/off) values. The receiving device can read the groups of numeric signals in any order as long as it reads this data during the window of time within which it is valid. However, because each signal within a group of numeric signals represents a specific digit of the binary number, the order of significance of the signals (**digit order**) must be understood and must match on sending and receiving devices. Most non-numeric signals provide operational information which must be exchanged according to a predetermined “handshaking” scheme. Hence, the sequence in which operational signals occur (**enabling order**) is critical. Accordingly, the signal information is presented in four tables:

1. **Loading interface numeric *input* signals and digit order**—In this table, signals are depicted in digit order, that is, the way they would be read as a binary number. The rightmost **column** represents the signal that carries the least significant digit. Each adjacent **column** to

the left is the signal representing the digit of next higher significance. The table is divided into **row** groups—one row group for each batch code provided. Each row group provides pertinent information for the signals used with that batch code. In an allied loading interface, all numeric signals pass from allied to Milnor and are therefore, **inputs** to Milnor.

2. **Loading interface non-numeric signals and enabling order**—In this table, each **row** represents a signal and each **column** provides pertinent information for that signal. Generally, these signals must be exchanged by the interfaced devices in the order listed. The labels given to operational signals in the schematics can vary from device to device. However, the document "Summary of Milnor Allied Interface Capability" provides generic names for these. The right-hand column of this table provides both the generic (function) name and the signal name as shown in the schematic, except where these are the same.
3. **Discharge interface numeric *output* signals and digit order**—This table is arranged the same as the "loading interface numeric..." table. However, in an allied discharge interface, all numeric signals pass from Milnor to allied and are therefore, **outputs** from Milnor.
4. **Discharge interface non-numeric signals and enabling order**—This table is arranged the same as the "loading interface non-numeric..." table. As with a loading interface, the devices need to exchange these signals in the order shown.

3. Signals—Dryers With Mark 5 Controls [Document BICALC08]

Table 1: Loading Interface Numeric Input Signals and Digit Order—Dryer

Signal name on schematic (e.g., Drycode A, B, etc.)-->		Common Conn.	Most Significant	Dedicated Connections (Binary Data Signals)							Least Significant
			J	I	H	G	F	E	D	C	B	A
16 Drycodes (00 - 15)	Multi-terminal	TBX							TBX	TBX	TBX	TBX
	Pin Number	7							4	3	2	1
	Wire Number	7							171	170	169	168
	Display/code	--							i1/L	i1/J	i1/F	i1/E
	Board/code	--							*	*	*	*
* This signal uses a direct input on the microprocessor board, not an input on the peripherial board.												

Table 2: Loading Interface non-Numeric Signals and Enabling Order—Dryer

Signal Direction	Common Connection*			Dedicated Connection			Display / code	Board / code	Function Name / Signal Name
	Multi-terminal	Pin	Wire	Multi-terminal	Pin	Wire			
Output*	TBA	159	159	TBA	162	162	o1/d	io1/3	load desired
Although Milnor reads all batch data (previous table and next two signals) when it receives the "transfer complete / dryer is loaded" signal, all batch data should be set before the "loading mode / dryer is loading" signal is enabled.									
Input	TBX	7	7	TBX	5	167	i1/K	**	single cake / little load
Input	TBX	7	7	TBX	6	166	i1/I	**	new customer / new customer ***
Input	TBA	7	7	TBA	143	143	i2/G	io1/6	loading mode / dryer is loading ****
Output*	TBA	92	92	TBA	93	93	o1/g	o1/12	load allowed / load door open *****
Input	TBA	7	7	TBA	141	141	i2/I	io1/8	transfer complete / dryer is loaded
Output*	TBA	93	93	TBA	94	94	o2/d	io2/2	(no function name) / load door closed ******

* For outputs from Milnor, Milnor does not normally assign either pin of the potential-free contact as the common. Hence, both pins have unique pin and wire numbers.

** This signal uses a direct input on the microprocessor board, not an input on the peripherial board.

*** The "new customer" input is used when it is not necessary to track batch codes electronically, but merely to ensure that different customers' goods are kept segregated. If the Milnor controller sees this input made at the appropriate time during the cycle, it will increment the customer codes by one (e.g., from 07 to 08) to signal downstream devices not to combine these batches.

**** If the Dryer is loaded by a dedicated loading device, this input may be jumpered to set it permanently on.

***** When a single freestanding Dryer is loaded with pressed cakes via an allied loading conveyor or shuttle capable of automatic operation, it is recommended to connect the following Milnor outputs in series: "Loading allowed / load door open" (TBA92/TBA93) and "Transfer complete / discharge door closed" (TBA164/TBA165 - in discharge interface). This confirms that the discharge door is fully closed before loading starts.

****** This output was implemented for use with the Milnor COELD dedicated elevating loading conveyor. It may be used to release the shuttle; however, it remains on for the duration of the cycle.

Table 3: Discharge Interface Numeric Output Signals and Digit Order—Dryer (see Note 1)

Signal name on schematic (e.g., Drycode A, B, etc.)-->		Common Conn.	Most Significant	Dedicated Connections (Binary Data Signals)							Least Significant
			J	I	H	G	F	E	D	C	B	A
16 Destination Codes (00 - 15)	Multi-terminal	n/a							3MTA5*			
	Pin Number	n/a							4 • 14	7 • 16	8 • 17	9 • 18
	Wire Number	n/a							none	none	none	none
	Display/code	--							not available			
	Board/code	--							io3/4	io3/3	io3/2	io3/1
* A standard multi-terminal pin assignment is not currently established for these outputs. Hence, the board level (MTA) connector and pins are shown in this case.												

Note 1: The destination code output signals shown are only available if optional I/O board #3 is supplied. This remotely mounted board also provides two operational signals: "discharge desired" on 3MTA5, pins 1 and 11, and "data valid" on 3MTA5, pins 2 and 12.

Table 4: Discharge Interface non-Numeric Signals and Enabling Order—Dryer (see Note 1)

Signal Direc-tion	Common Connection*			Dedicated Connection			Display / code	Board / code	Function Name / Signal Name
	Multi-terminal	Pin	Wire	Multi-terminal	Pin	Wire			
Output*	TBA	158	158	TBA	161	161	--	io2/0	discharge desired
Input	TBA	7	7	TBA	140	140	i2/H	io1/7	discharge allowed
Milnor will set all batch data (previous table and next signal) before it enables the "transfer complete / discharge door closed" signal.									
Output*	TBA	160	160	TBA	163	163	o1/e	io1/4	new customer
Output*	TBA	164	164	TBA	165	165	o2/g	io2/2	transfer complete / discharge door closed **
* For outputs from Milnor, Milnor does not normally assign either pin of the potential-free contact as the common. Hence, both pins have unique pin and wire numbers. ** This output remains on for the duration of the cycle.									

4. Monitoring Allied Interface Outputs and Inputs

The status of outputs and inputs can be monitored on the machine display while the machine is in operation, as explained in the machine reference manual (see Note 2 and Note 3). Beginning with Mark 4 controls (Mark 9 on the CBW), output and input status can also be monitored on the I/O boards. These boards contain LED's—one green LED for each input and one red LED for each output (see Note 4). When the LED is illuminated, the circuit is made.

Note 2: It is also possible to actuate certain outputs for testing, as explained in the reference manual. However, the “Display/code” values in the tables herein, refer only to the displays used to view outputs/inputs.

Note 3: The outputs and inputs available for viewing on the display include some (but not all) allied interface signals as well as signals for many other functions. See the reference manual for a listing of all outputs and inputs that can be monitored during operation.

Note 4: Almost all allied interface outputs and inputs are passed via the I/O boards (peripheral boards) and are therefore, represented by LED's on the boards. A few, however, are passed directly via the processor board (direct outputs/inputs). The processor board does not contain LED's.

4.1. Identifying Outputs and Inputs on the Display Pages —On CBW's, some allied inputs are available for viewing on the Mentor *Direct and Standard Inputs* page (as indicated in the signals tables). It is fairly easy to identify signals on the Mentor because the signal names are displayed.

The single stage press, two stage press, centrifugal extractor, shuttle, COBUC, and dryer use a two or four line by 20 character LCD display (see Note 5). On these devices, each output or input is represented by a character (lower or upper case letter) on the top line and a plus (+) or minus (-) sign under the character indicating the on/off status of the signal. The outputs and inputs span several display pages. Each page is accessed via the keypad and the procedures for doing so are explained in the reference manual. The “Display/code” values listed in the tables herein tell you which display page and character represent the indicated signal, as shown in the following example:

i2/H

Where:

i = **input** display page (o = **output** display page)

2 = the second in a series of input display pages. See the reference manual for the keystrokes used to access each display page in the series. Note that in some software such as the centrifugal extractor, page numbering begins with 0 (zero); that is, the first page is page #0. Hence, on software such as the extractor, i2 = inputs page #1 (the second inputs page).

H = This input is represented by the character “H” on the display.

Note 5: When the Milnor Dryer/Shuttle Controller is provided for a new installation, the LCD displays are omitted from the controllers for any shuttle(s) and dryer(s) also provided. In this case, inputs and outputs may be viewed on the monitor supplied with the shuttle/dryer controller. As with the CBW Mentor controller, it is easy to identify signals because the signal names are displayed.

4.2. Identifying Output and Input LED's On the I/O Boards (all except 76032 CBW)

—Two types of output/input peripheral boards are used in conjunction with the allied interfaces covered herein. Their designations and capacities are:

1. **BO24-x**—contains 24 outputs (and no inputs). x is “1”, “2”, etc. indicating the first, second, etc. such board in this machine.
2. **BIO-x**—contains 16 inputs and 8 outputs. x is “1”, “2”, etc. indicating the first, second, etc. such board in this machine.

For all except the CBW, the peripheral boards are located in the low voltage electric box. The arrangement and combination of these boards within the card cage varies with the machine type and optional equipment provided. For the G3 CBW (Mark 9), the boards that support the explicit allied interface signals are located in the card cage in the left (Standard Output) section of the main control box.

A tag located in the electric box identifies the boards that may be provided and shows the position of each board in the card cage. Each 24 output board has a set of red LED's (numbered 0 through 23). Each 16/8 I/O board has two sets of LED's—a red set for the outputs (numbered 0 through 7) and a green set for the inputs (numbered 0 through 15). The “Board/code” values listed in the tables herein tell you which board and output or input number represent the indicated signal, as in the following example:

io2/5

Where:

io2 = the 16/8 I/O board designated “BIO-2”. (Other examples: io1=BIO-1, o1=BO24-1, o2=BO24-2)

5 = input #5, if this signal is an input or output #5 if this signal is an output.

5. Decimal / Binary Conversion and How It Applies to Allied Interfaces

Batch codes (decimal numbers) are converted to binary by the sending controller, then passed via the numeric signals to the receiving controller, where they must be converted back to decimal numbers. For example, if an interface provides for passing 16 drycodes, then to pass drycode 14

(binary 1110), drycode signals D, C, B, and A (from most to least significant) must be on, on, on, and off respectively, during the "data valid" window.

Table 5 "Numeric Signal Decimal and Binary Values" shows, for the first 16 decimal numbers (e.g., drycodes 00 through 15), the corresponding binary numbers and which numeric signal carries each binary digit. This table's columns correspond to, and align with the columns in each table of numeric signals herein. For higher numbers, use the "Decimal Value of Signal" values in this table to convert between decimal and binary as explained herein.

Table 5: Numeric Signal Decimal and Binary Values

Signal name on schematic (e.g., Drycode A, B, etc.)-->		Decimal Value of Group	Most Significant		Binary Data Signals						Least Significant
			J or K or 9	I or J or 8	H or 7	G or 6	F or 5	E or 4	D or 3	C or 2	B or 1	A or 0
Decimal Value of Signal-->			**512**	**256**	**128**	**64**	**32**	**16**	**8**	**4**	**2**	**1**
		0							0	0	0	0
		1							0	0	0	1
		2							0	0	1	0
		3							0	0	1	1
		4							0	1	0	0
		5							0	1	0	1
		6							0	1	1	0
		7							0	1	1	1
		8							1	0	0	0
		9							1	0	0	1
		10							1	0	1	0
		11							1	0	1	1
		12							1	1	0	0
		13							1	1	0	1
		14							1	1	1	0
		15							1	1	1	1

The number of data signals required for typical ranges of batch codes are as follows:

Code Range	Signals Required
00-15	A-D
00-31	A-E
00-63	A-F
000-127	A-G
000-255	A-H
000-511	A-I or J
0000-1023	A-J or K

For brevity, this table shows only the binary numbers for decimals 0 - 15 (e.g., decimal 7 = binary 0111).

Use the "Decimal Value of Signal" values above, to convert between decimal and binary, for any decimal number between 16 and 1023.

See explanations of decimal / binary conversion herein.

For convenience, an example and explanations of converting between decimal and binary follow. Many other examples and explanations can be found in mathematics texts, on the Internet, etc. Also, some pocket calculators and many computer programs are available for converting between decimal and binary.

Note 6: In Table 6, which follows, the "Decimal value of binary 1 in this position" is the same as "Decimal Value of Signal" in Table 5.

Table 6: Decimal Values for Binary Digit 1 In the First Ten Positions

Significance of digit	**most**									**least**	
Position of digit	**10**	**9**	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	
Decimal value of binary 1 in this position	**512**	**256**	**128**	**64**	**32**	**16**	**8**	**4**	**2**	**1**	
Example binary number	1	0	0	1	0	1	1	0	1	0	
Decimal value carried down for this example	512	0	0	64	0	16	8	0	2	0	= 602

5.1. Converting Decimal to Binary—Referring to Table 6, if you want to convert decimal number 602 to binary, use the "Decimal value of binary 1 in this position" values, as follows:

512 = highest value not exceeding 602.
602 – 512 = 90
64 = highest value not exceeding 90.
90 – 64 = 26
16 = highest value not exceeding 26.
26 – 16 = 10
8 = highest value not exceeding 10.
10 – 8 = 2
2 = highest value not exceeding 2.
2 – 2 = 0

In the above arithmetic, you used the decimal values 512, 64, 16, 8, and 2. You did not use 256, 128, 32, 4, and 1. Placing a 1 in the position for each decimal value used and a 0 (zero) in each position not used, yields 1001011010. Hence, decimal 602 = binary 1001011010.

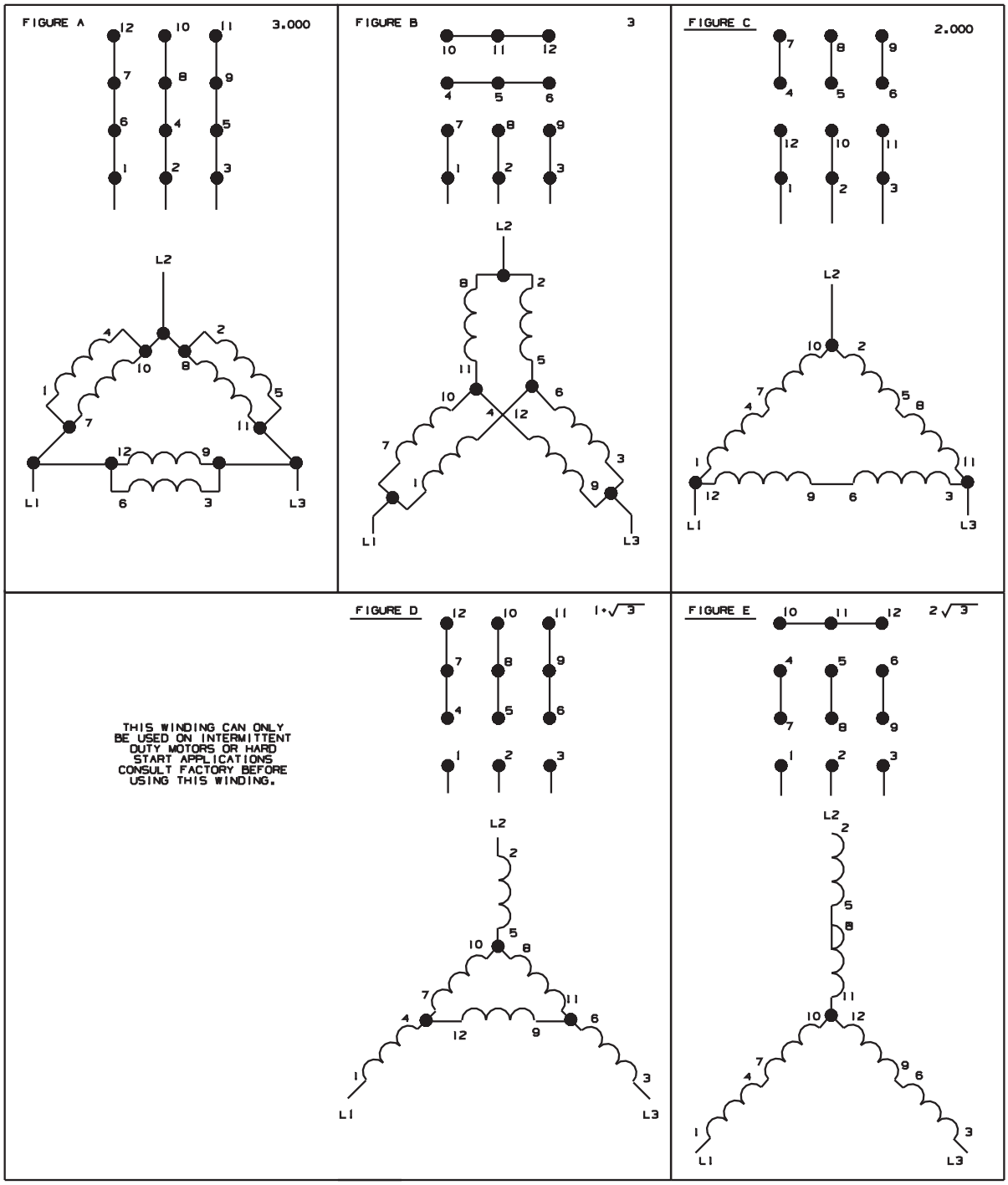
5.2. Converting Binary to Decimal—Referring to Table 6, if you want to convert binary to decimal, simply sum the decimal values corresponding to the 1's in each position of the binary number. Keep in mind that while a 1 in any position has a certain positive decimal value, a 0 (zero) in any position has the decimal value 0 (zero). The conversion for binary 1001011010 looks like this:

512 + 0 + 0 + 64 + 0 + 16 + 8 + 0 + 2 + 0 = 602

Hence, binary 1001011010 = decimal 602.

— End of BICALC02 —

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	$1 \cdot \sqrt{3}$						600				600
E	$2\sqrt{3}$			380							



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

BMP850029

MOTOR CONNECTION DIAGRAMS

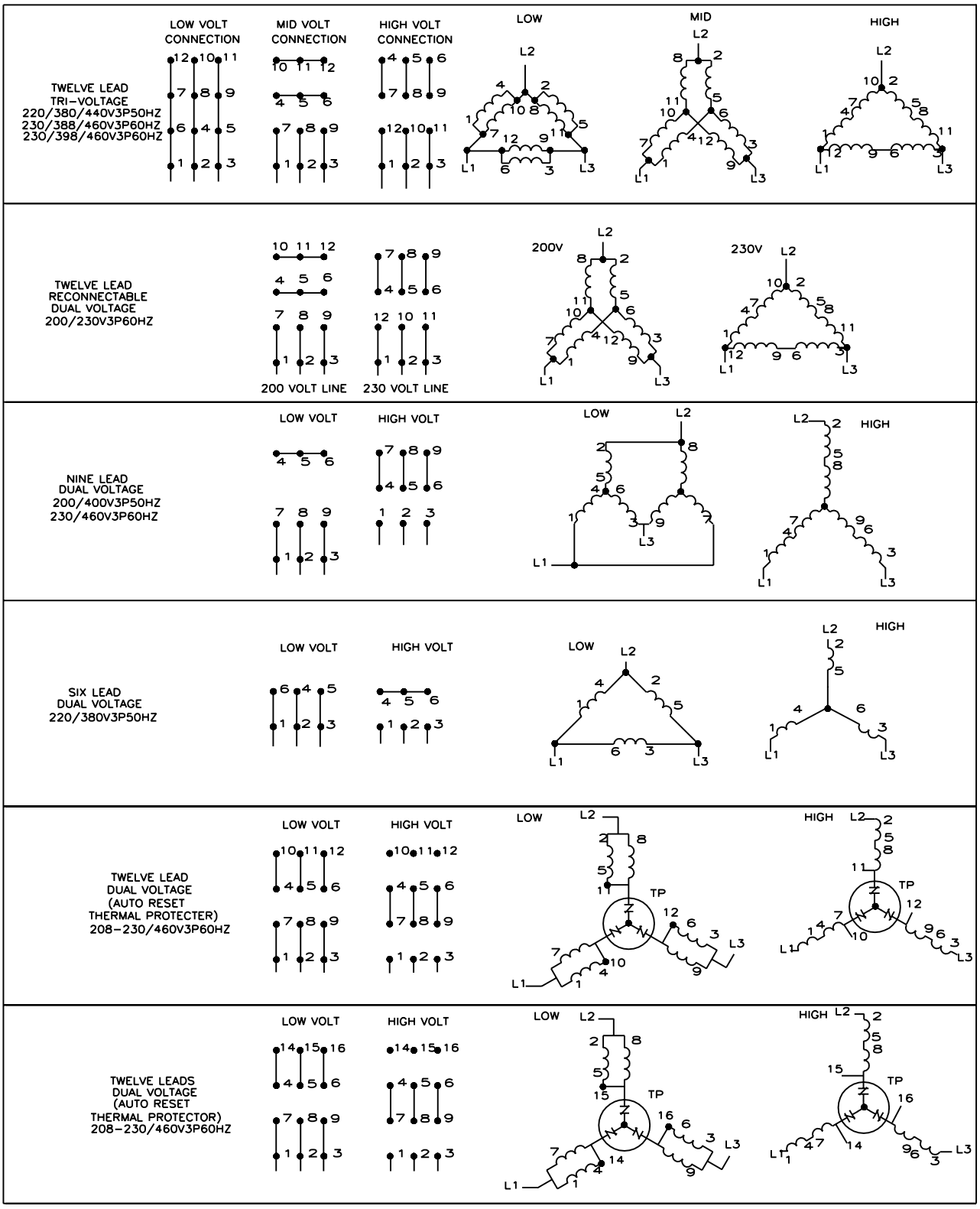
THREE PHASE SINGLE SPEED MOTORS WITH MULTIPLE VOLTAGE RATINGS

(ONLY FOR MOTOR SUFFIXES LISTED)

PELLERIN MILNOR CORPORATION

BMP850029
993628

BMP850029
993628



W80008

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

PELLERIN MILNOR CORPORATION

W80008
2001253A

BO24-1

OUTPUTS

0 COUNTER CLOCKWISE ROTATION
1 COOLDOWN DAMPER
2 DESIRES MAIN AIR
3 SIGNAL LIGHT
4 NOT USED
5 DAMPER VALVE 2 ACTUATED
6 DAMPER VALVE 1 ACTUATED
7 NOT USED
8 COOLDOWN DAMPER CLOSED
9 LINT REMOVAL FROM FAN
10 NO DRY TARGET LOWERED
11 LOAD DOOR CLOSED
12 LOAD DOOR OPEN
13 DISCHARGE DOOR OPEN
14 DISCHARGE DOOR CLOSED
15 NOT USED
16 LOAD DOOR NOT CLOSED
17 DESIRES NORMAL START
18 LOAD DOOR IS CLOSED
19 LOAD DOOR IS OPEN
20 NOT USED
21 NOT USED
22 NOT USED
23 NOT USED

BIO-1

INPUTS

0 3-WIRE HAS POWER
1 LOAD DOOR CLOSED
2 DISCHARGE DOOR CLOSED
3 NOT USED
4 DISCHARE DOOR OPEN
5 ROTATION SAFETY
6 FREE TO LOAD DRYER
7 FREE TO UNLOAD DRYER
8 DRYER LOADED
9 MANUAL JOG CCW
10 MANUAL AUTO
11 NOT USED
12 MANUAL JOG CW
13 DRYER ALLOWED TO LOAD
14 MANUAL LOAD DOOR OPEN
15 NO DRY READY

OUTPUTS

0 DESIRES HARD START
1 DISCHARGE BEACON
2 DOOR CLOSED (PROX SWITCH)
3 DESIRES LOAD
4 DESIRES NEW CUSTOMERS
5 NOT USED
6 DRYER TARGET LOWERED
7 DESIRES SPRINKLER

BIO-2

INPUTS

0 CANNOT DO AUTO LINT
1 NOT USED
3 NOT USED
4 NOT USED
5 BACK PRESSURE HIGH
6 NOT USED
7 NOT USED
8 NOT USED
9 NOT USED
10 NOT USED
11 NOT USED
12 NOT USED
13 NOT USED
14 NOT USED
15 NOT USED

OUTPUTS

0 DRYER DISCHARGE DESIRED
1 NOT USED
2 NOT USED
3 NOT USED
4 LINT SCREEN STRIPPER
5 LINT WING EXTENDED
6 LINT BLOWER
7 AUTO LINT IN DRYER

BIO-3

INPUTS

0 SEQ ALLOWED TO DISCHARGE
1 NOT USED
3 NOT USED
4 NOT USED
5 NOT USED
6 NOT USED
7 NOT USED
8 NOT USED
9 NOT USED
10 NOT USED
11 NOT USED
12 NOT USED
13 NOT USED
14 NOT USED
15 NOT USED

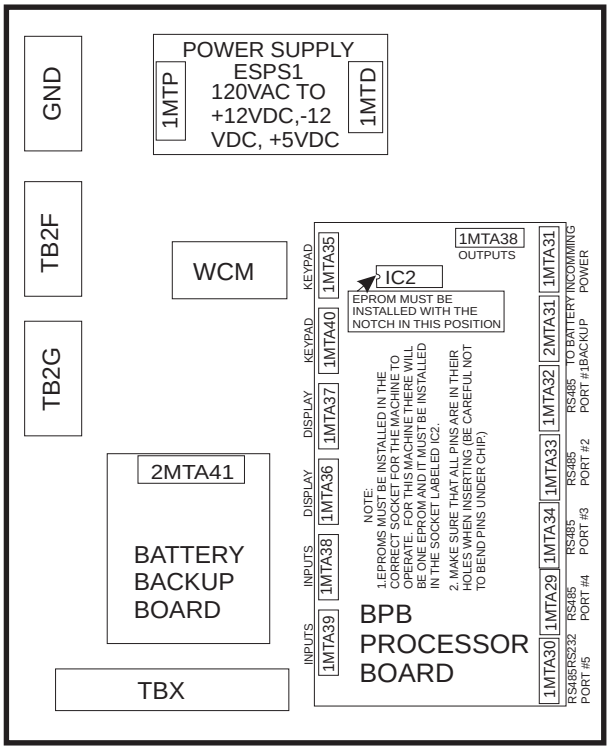
OUTPUTS

0 SEQ FINISHED DISCHARGING
1 DESTINATION 0
2 DESTINATION 1
3 DESTINATION 2
4 DESTINATION 3
5 ALLIED DISCH DESIRED
6 DATA VALID
7 SEQ DISCHARGE DESIRED

MICRO 6 SYSTEMS
STEAM DRYER CONTROL BOARDS

PELLERIN MILNOR CORPORATION

W6DR3STG1
2012315B

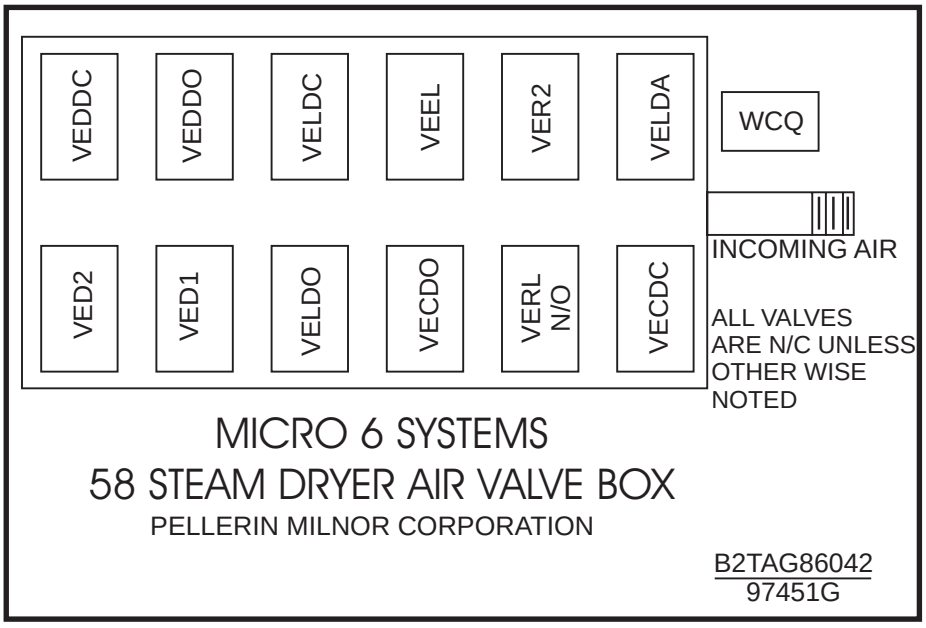


MICRO 6 SYSTEMS
186 PROCESSOR
REMOTE DRYER CONTROLLER

PELLERIN MILNOR CORPORATION

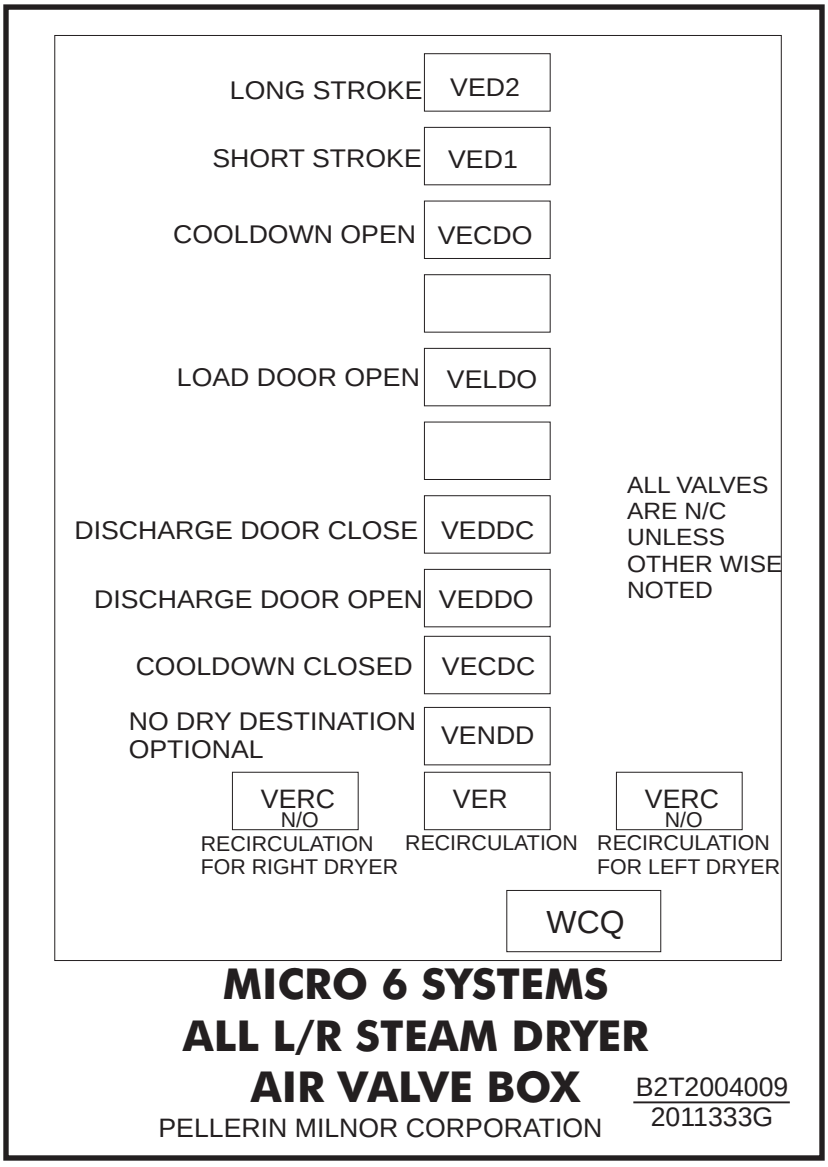
B2TAG97059
98452G

B2TAG96016
2008293G



MICRO 6 SYSTEMS
58 STEAM DRYER AIR VALVE BOX
PELLERIN MILNOR CORPORATION

B2TAG86042
97451G



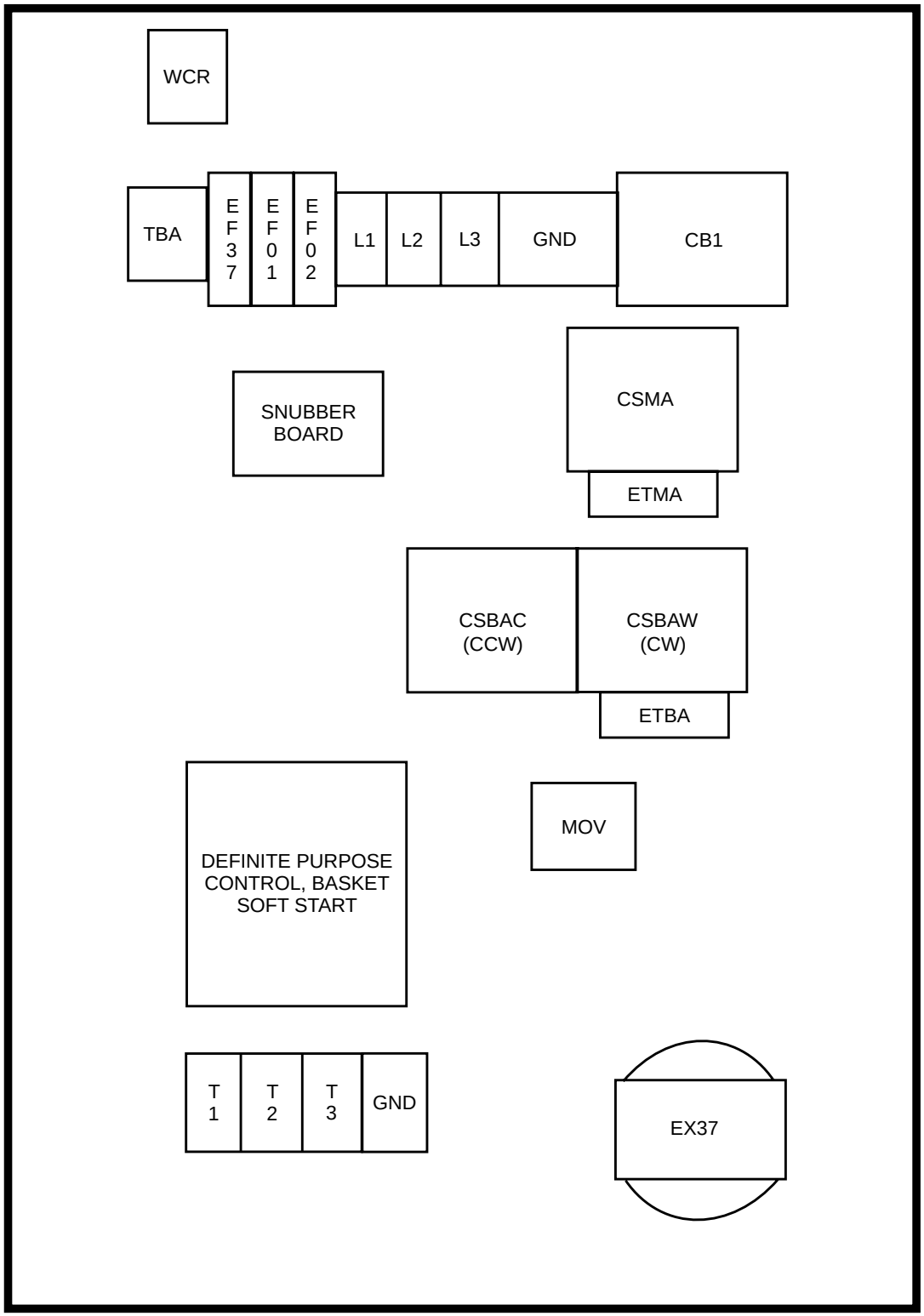
MICRO 6 SYSTEMS
ALL L/R STEAM DRYER
AIR VALVE BOX
PELLERIN MILNOR CORPORATION

B2T2004009
2011333G

W6DR3STG1

STEAM DRYER MACHINE TAGS

PELLERIN MILNOR CORPORATION

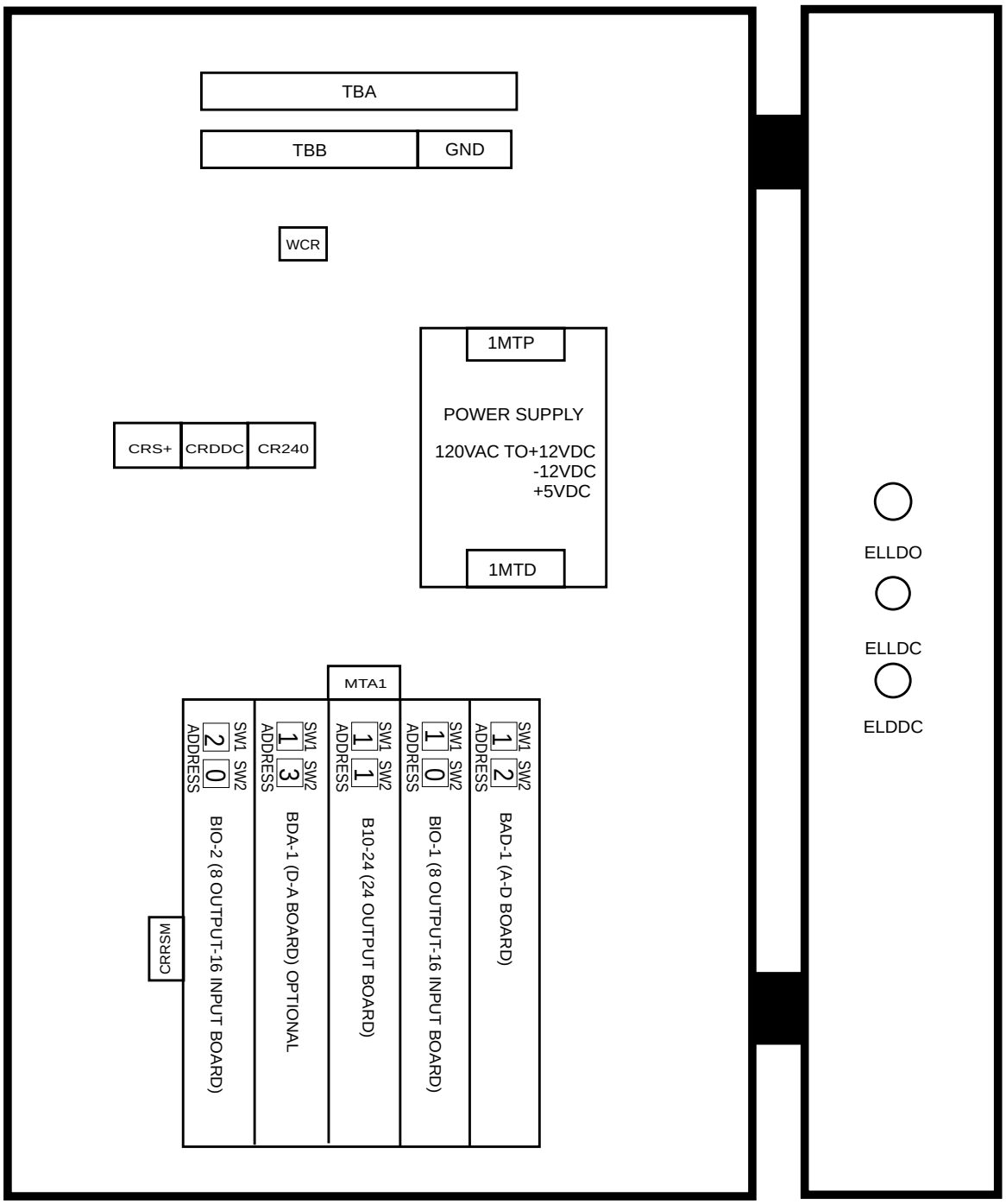


MICRO 6 SYSTEMS
DRYER HIGH VOLTAGE

B2TAG97003
97467G

PELLERIN MILNOR CORPORATION

W6DR3STG2
2004086B



W6DR3STG2

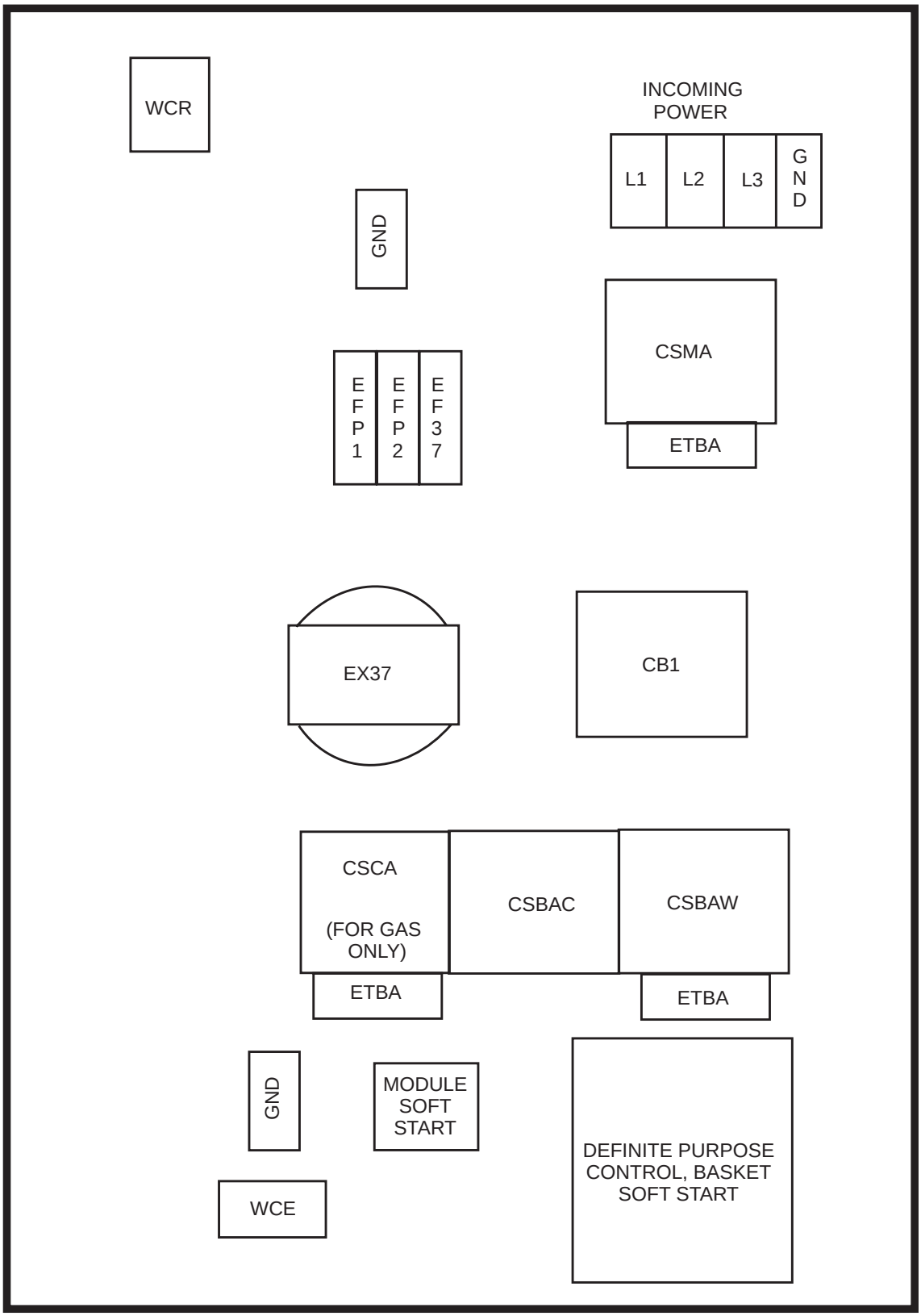
50040 STEAM DRYER MACHINE TAGS

PELLERIN MILNOR CORPORATION

MICRO 6 SYSTEMS
STEAM DRYER LOW VOLTAGE PANEL

PELLERIN MILNOR CORPORATION

B2TAG97002
97286G

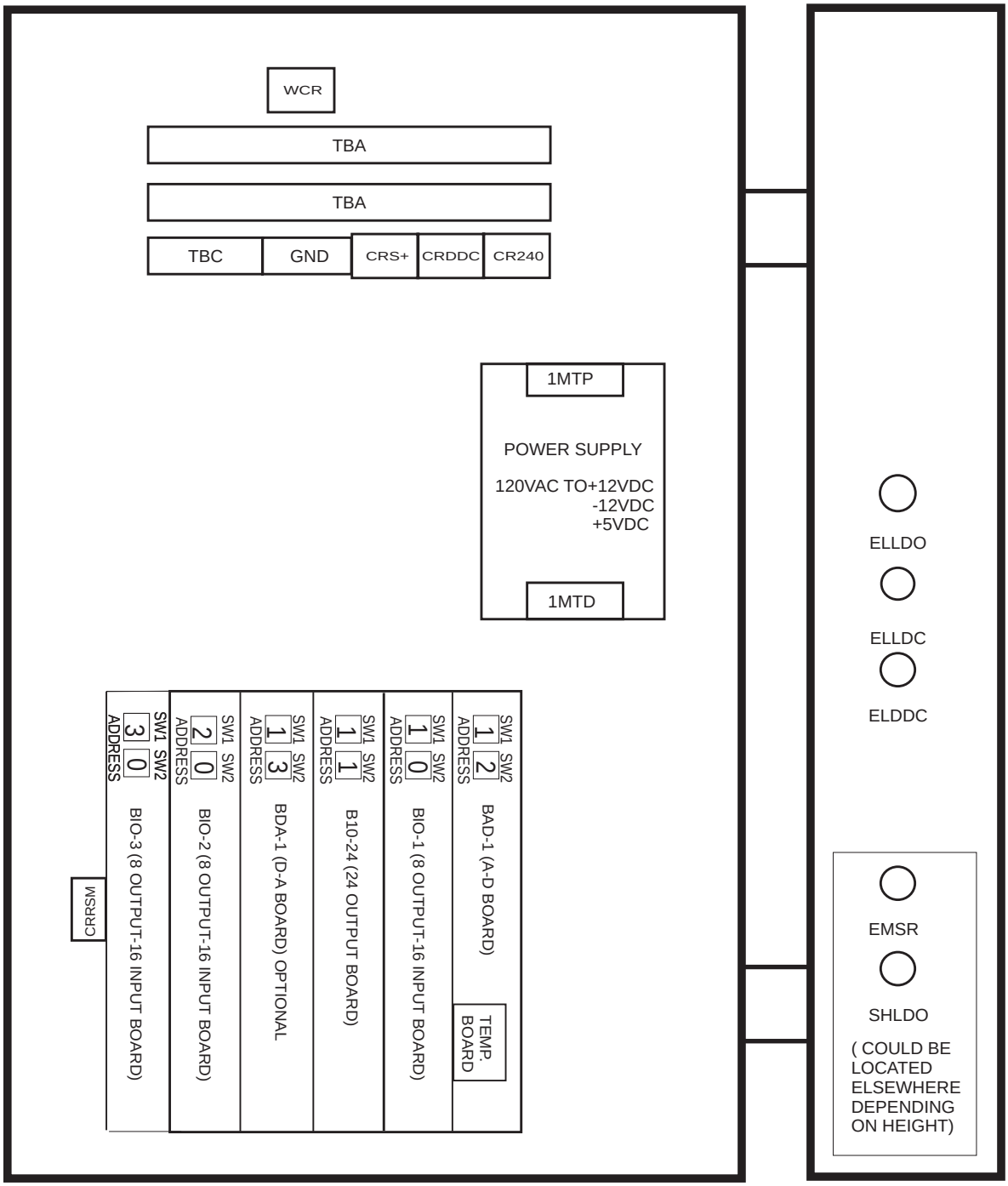


MICRO 6 SYSTEMS
DRYER HIGH VOLTAGE PANEL

PELLERIN MILNOR CORPORATION

B2TAG96029
96437G

W6DR3STG3
2012315B



W6DR3STG3

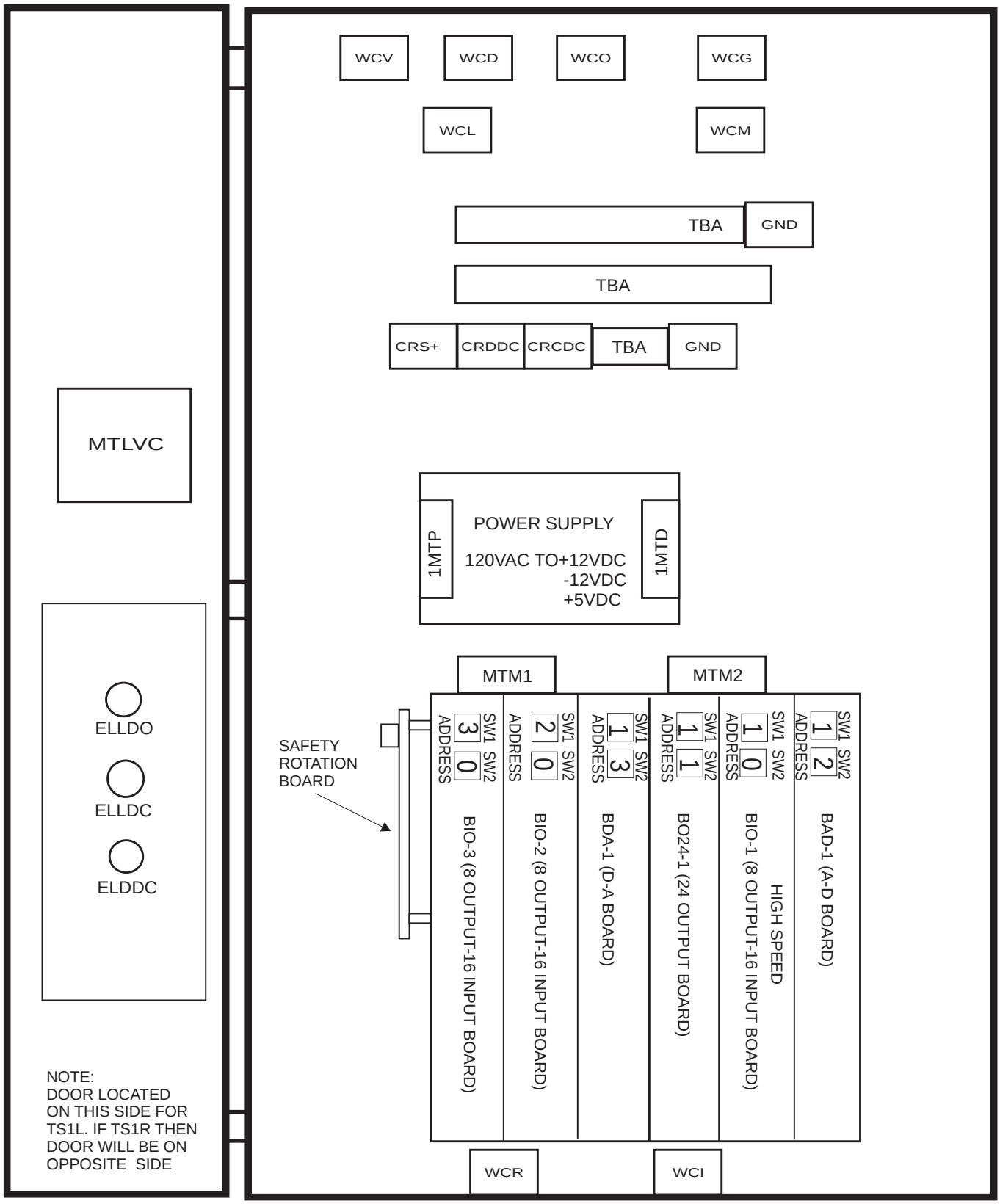
58" STEAM DRYER MACHINE TAGS

PELLERIN MILNOR CORPORATION

MICRO 6 SYSTEMS
STEAM DRYER LOW VOLTAGE PANEL

PELLERIN MILNOR CORPORATION

B2TAG96028
2008293G

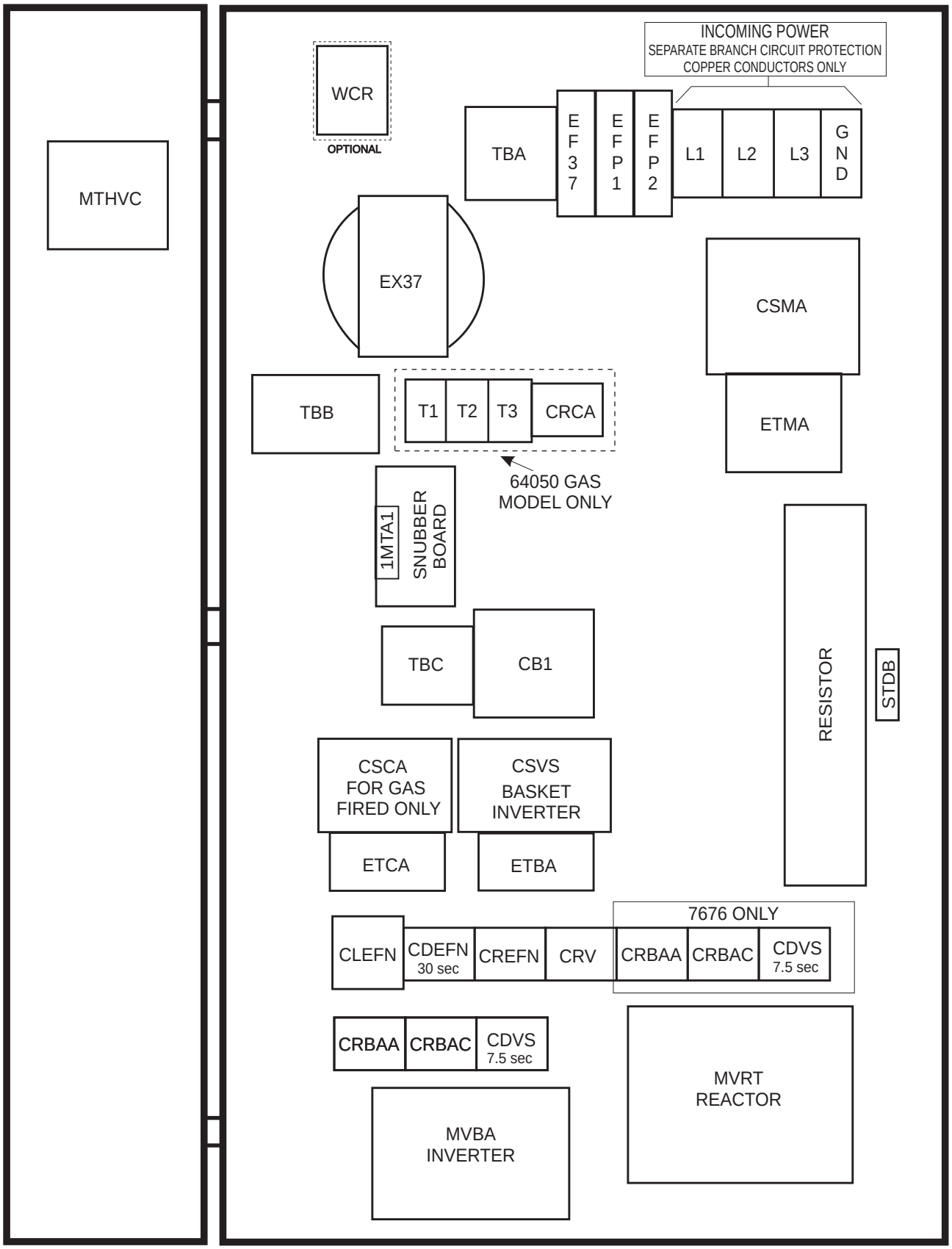


MICRO 6 SYSTEMS MARK V CONTROLS 64058/64064TS1 DRYER LOW VOLTAGE PANEL

PELLERIN MILNOR CORPORATION

B2T2004010
2025032A

W6DR3STG4
2025046B



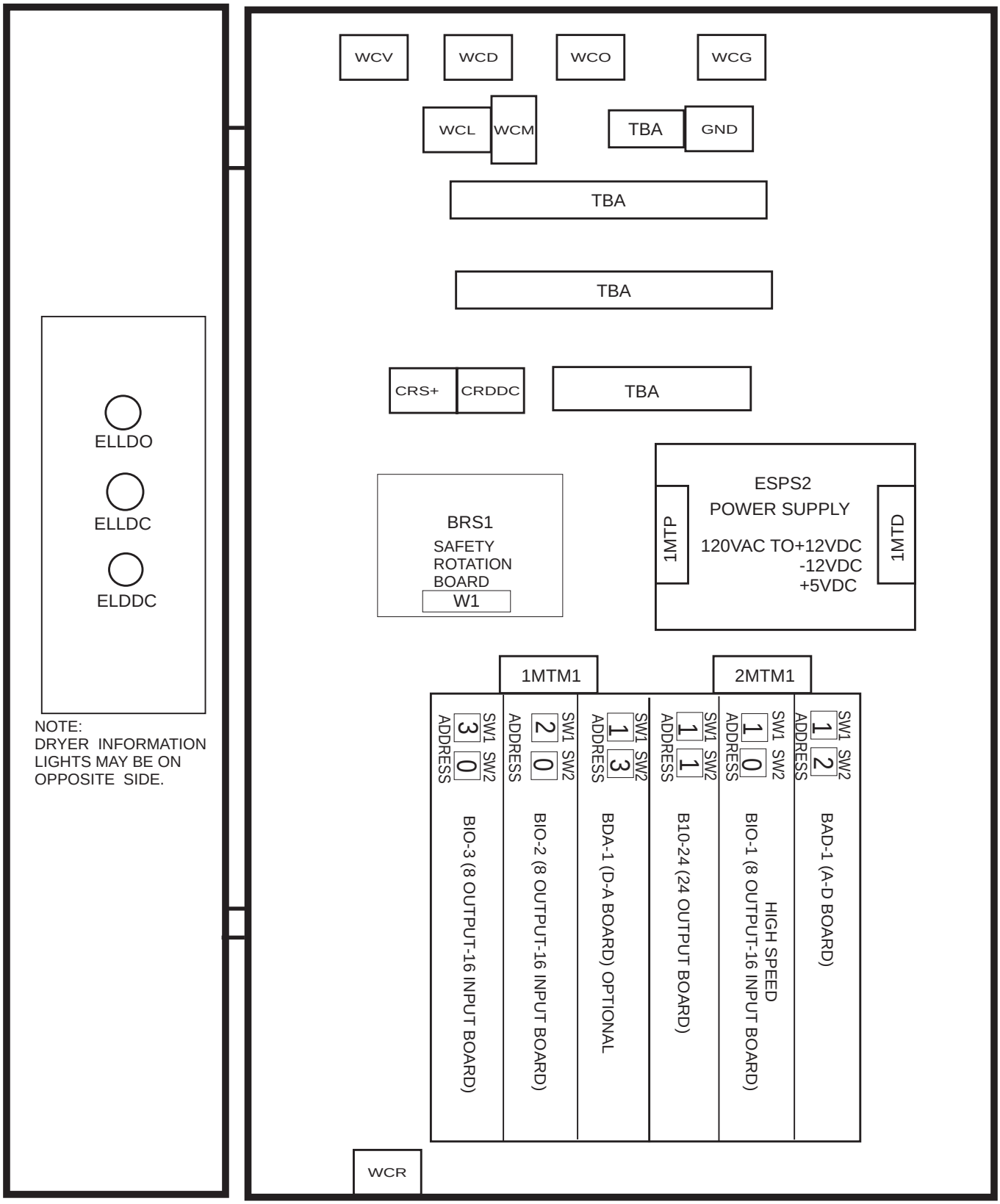
W6DR3STG4

64, 72, 76, 82 STEAM DRYER MACHINE TAGS

PELLERIN MILNOR CORPORATION

MICRO 6 SYSTEM MARK V CONTROLS ALL 64, 72, 76 & 82 LEFT/RIGHT DRYERS

B2T2001009
2025032A



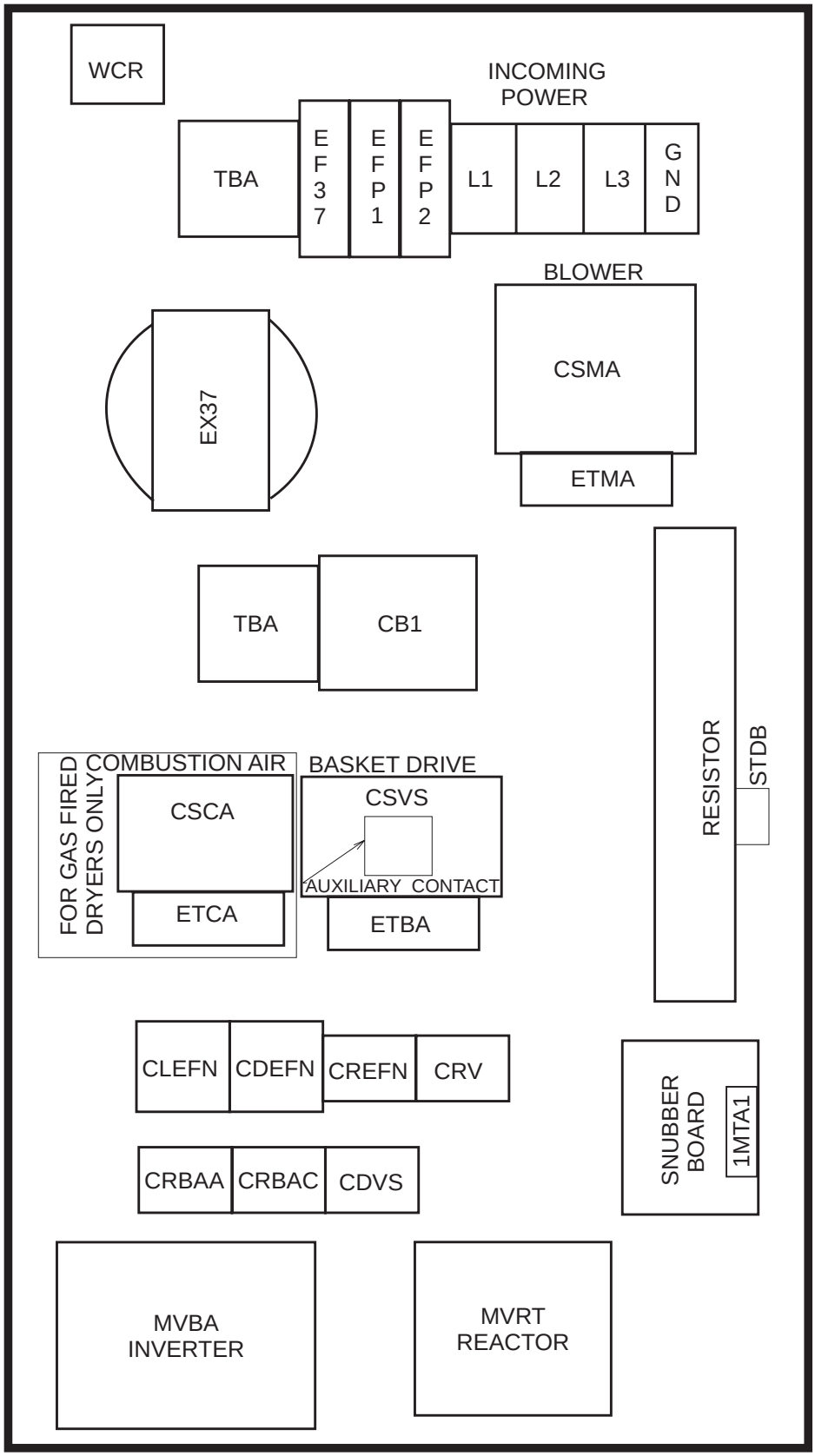
NOTE:
DRYER INFORMATION LIGHTS MAY BE ON OPPOSITE SIDE.

MICRO 6 SYSTEMS MARK V CONTROLS
50040TS2L/R, 50050TS1L/R
DRYER LOW VOLTAGE PANEL

PELLERIN MILNOR CORPORATION

B2T2009014
2012182A

W6DR3STG5
2012315B



MICRO 6 SYSTEM MARK V CONTROLS
50040TG2L/R, 50050TG1L/R
50040TS2L/R, 50050TS1L/R
HIGH VOLTAGE PANEL

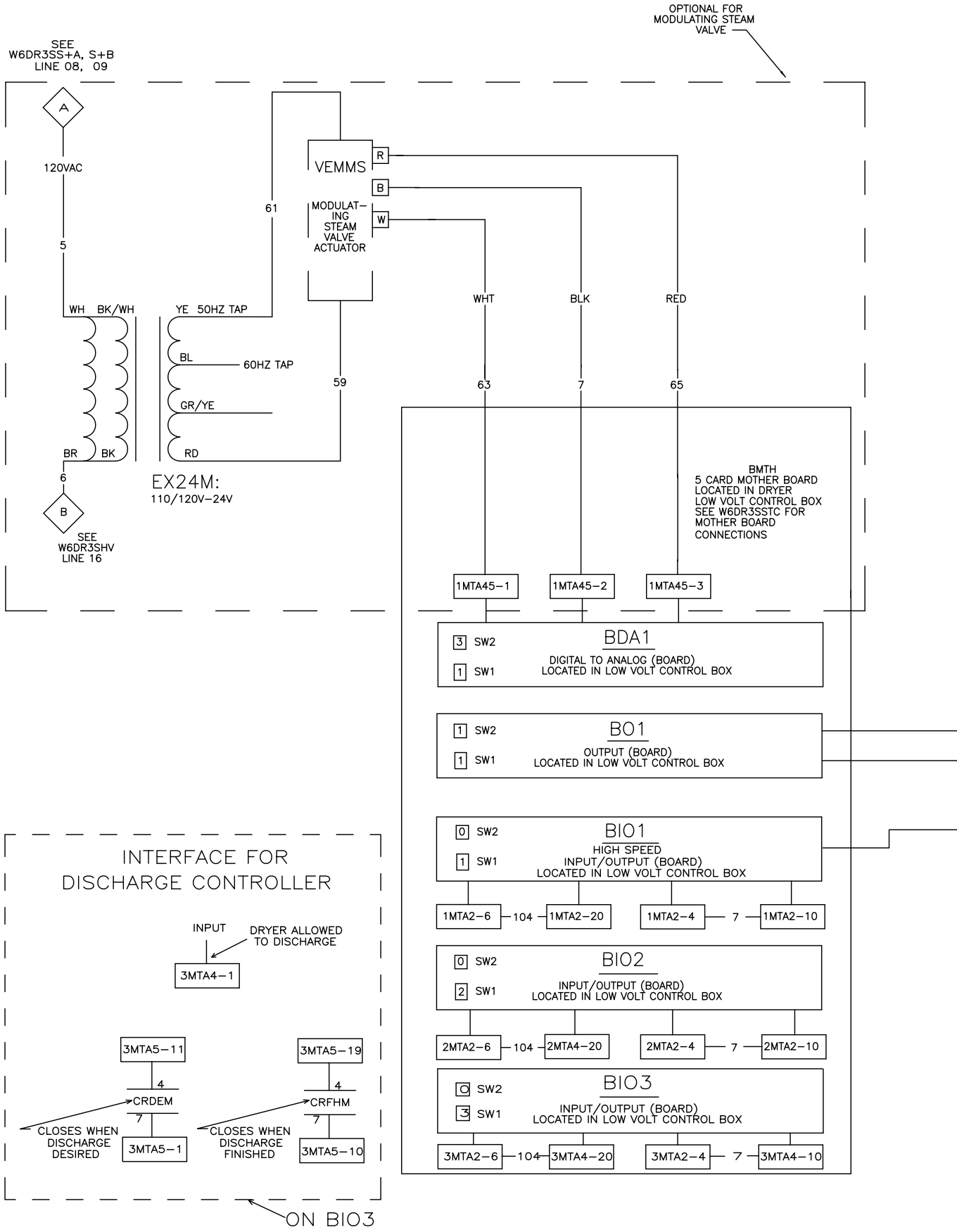
PELLERIN MILNOR CORPORATION

B2T2008013
2012182A

W6DR3STG5

64058 STEAM DRYER MACHINE TAGS

PELLERIN MILNOR CORPORATION



W6DR3SBWA
2023452B

(OLDER)

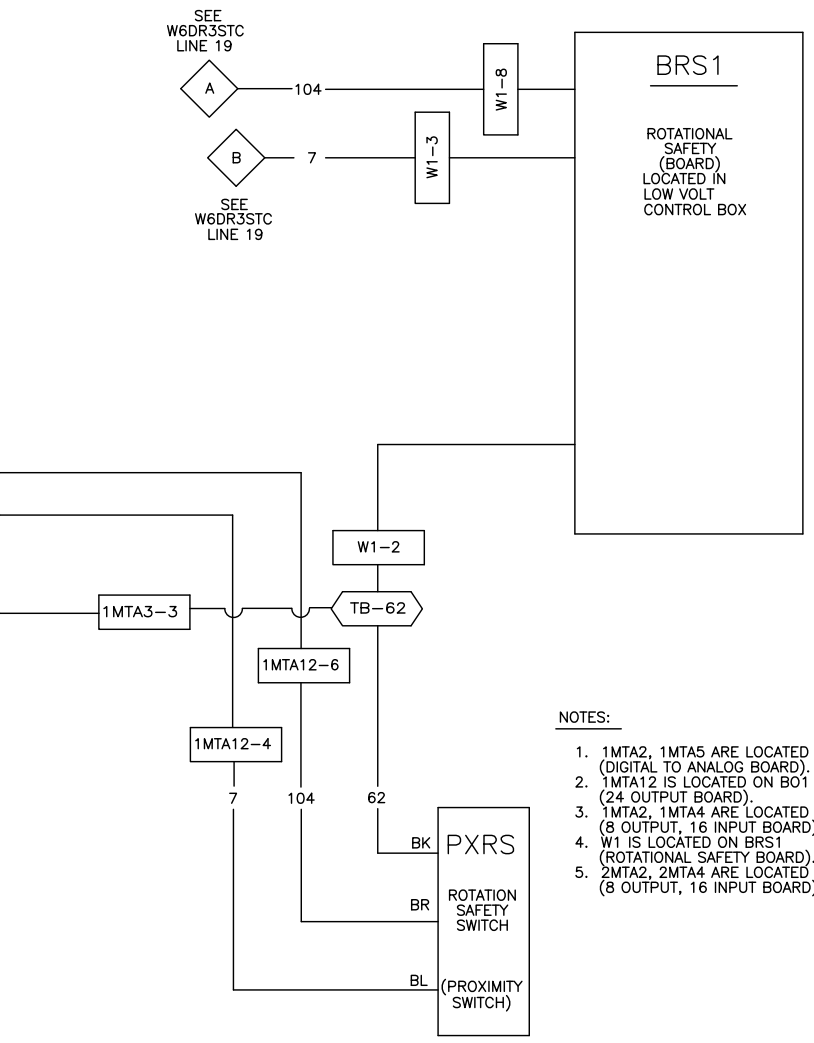
WIRE COLORING CODE

WIRE NO.	VOLTAGE	WIRE COLOR
103	+5V	BLUE
104	+12V	BLUE/ORANGE
105	−12V	BLUE/BLACK
7	GND	BLUE/WHITE
107	SERIAL HIGH	BLUE/RED
106	SERIAL LOW	BLUE/BLACK
130	MILNET HIGH	BLUE/RED
124	MILNET LOW	BLUE/BLACK
–	24 VAC	BLUE/RED
–	120 VAC	RED
6	CONTROL GROUND	RED/WHITE

(CURRENT)

WIRE COLORING CODE

WIRE NO.	VOLTAGE	WIRE COLOR
103	+5V	BLUE
104	+12V	BLUE
105	−12V	BLUE
7	GND	BLUE
107	SERIAL HIGH	BLUE
106	SERIAL LOW	BLUE
130	MILNET HIGH	BLUE
124	MILNET LOW	BLUE
–	24 VAC	RED
–	120 VAC	RED
6	CONTROL GROUND	RED



NOTES:

1. 1MTA2, 1MTA5 ARE LOCATED ON BDA1 (DIGITAL TO ANALOG BOARD).
2. 1MTA12 IS LOCATED ON BO1 (24 OUTPUT BOARD).
3. 1MTA2, 1MTA4 ARE LOCATED ON BIO1 (8 OUTPUT, 16 INPUT BOARD).
4. W1 IS LOCATED ON BRS1 (ROTATIONAL SAFETY BOARD).
5. 2MTA2, 2MTA4 ARE LOCATED ON BIO2 (8 OUTPUT, 16 INPUT BOARD).

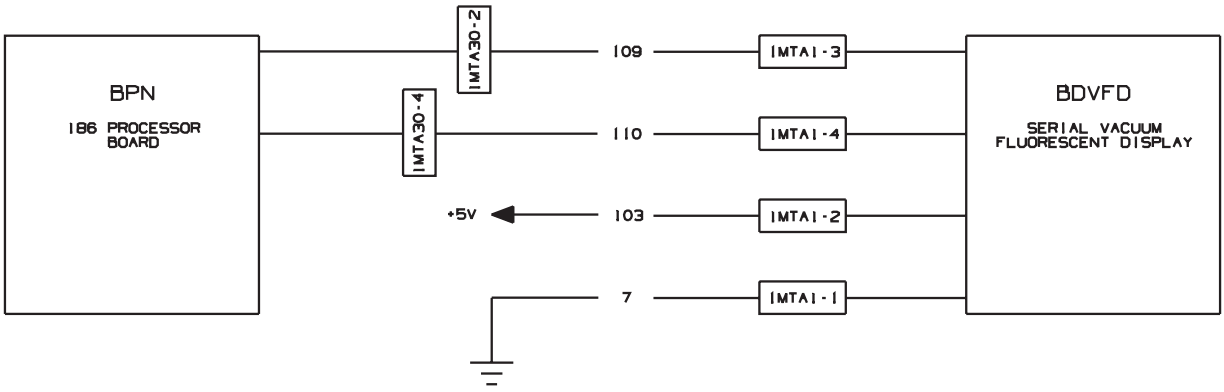
W6DR3SBWA

DRYER – STEAM
MICRO 6 SYSTEMS
SCHEMATIC: BOARD TO BOARD WIRING

110V50HZ/120V60HZ

PELLERIN MILNOR CORPORATION

09 10 11 12 13 14 15



00 01 02 03 04 05 06 07 08 09

W6DR35D
972518

W6DR3SD

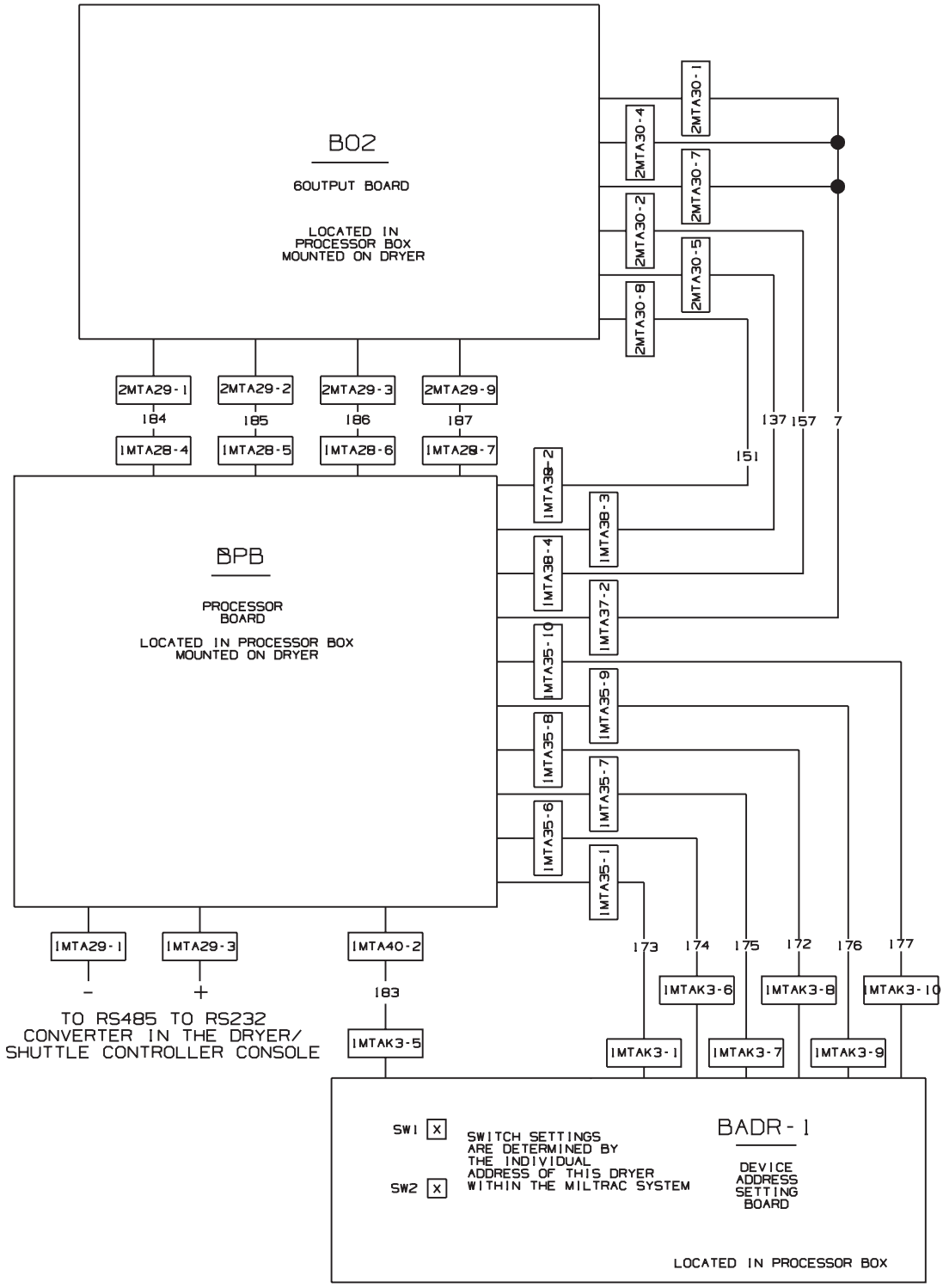
MICRO 6 SYSTEMS SERIAL CONTROLS
MARK V
SCHEMATIC: DISPLAY

PELLERIN MILNOR CORPORATION

10 11 12 13 14 15 16 17 18 19

W6DR3SD
97251B

W6DR3SD
97251B



W6DR3SDC
991178

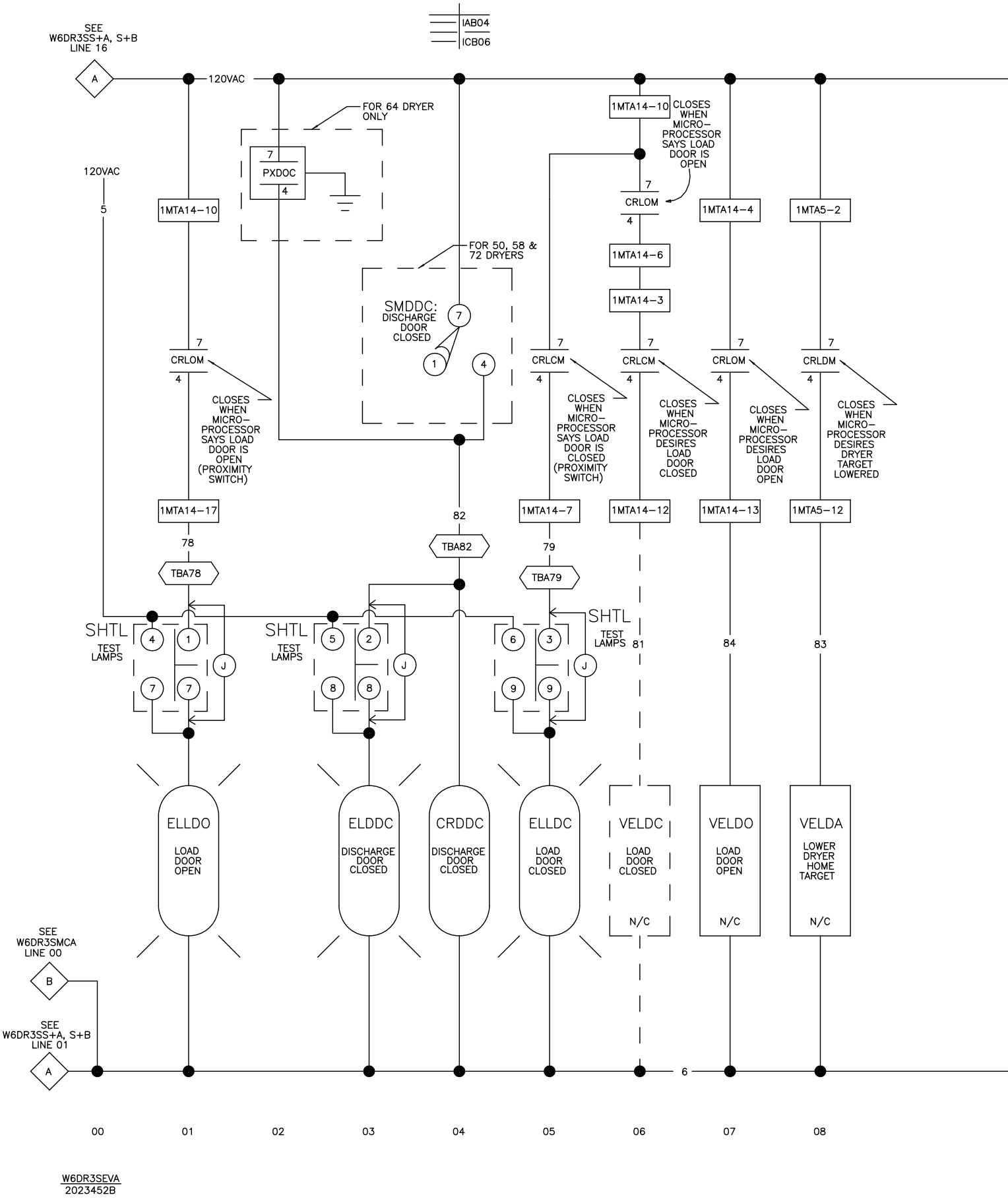
NOTE:
WHEN A DRYER IS CONTROLLED BY A DRYER/SHUTTLE CONTROLLER RATHER THAN AN INDIVIDUAL DRYER CONTROLLER, THIS SCHEMATIC REPLACES W6DR3SD, W6DR3SKP AND THE DIRECT INPUTS FOR LOAD ALLOWED, MILDATA, AND PROGRAM KEY AS SHOWN ON W6DR3SICB

W6DR3SDC

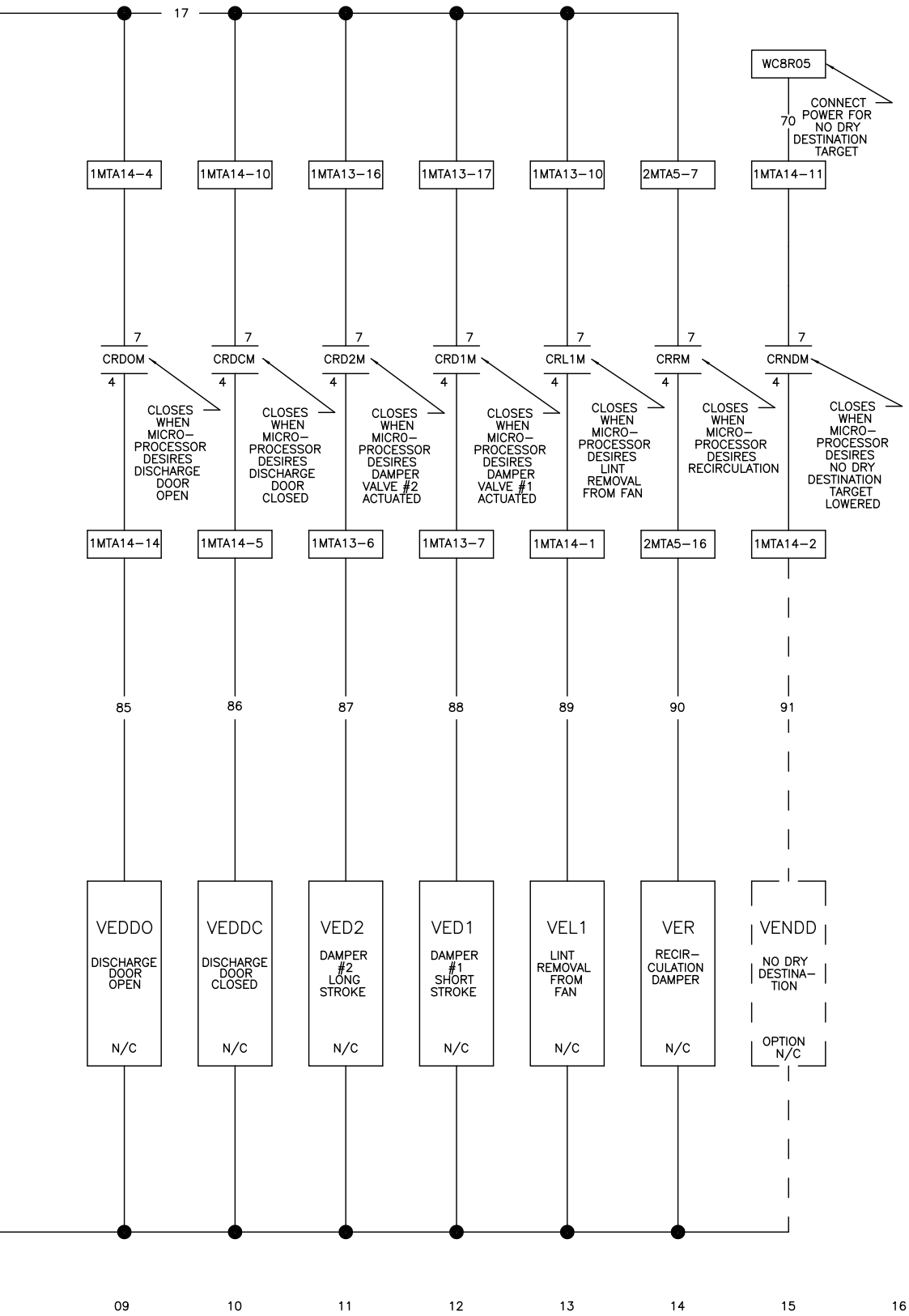
DRYER - STEAM
MICRO 6 SYSTEMS
SCHEMATIC; BOARD WIRING FOR INTERFACE WITH DRYER/SHUTTLE CONTROLLER

PELLERIN MILNOR CORPORATION

10 11 12 13 14 15 16 17 18 19



W6DR3SEVA
2023452B



W6DR3SEVA

DRYER–STEAM MICRO 6 SYSTEMS

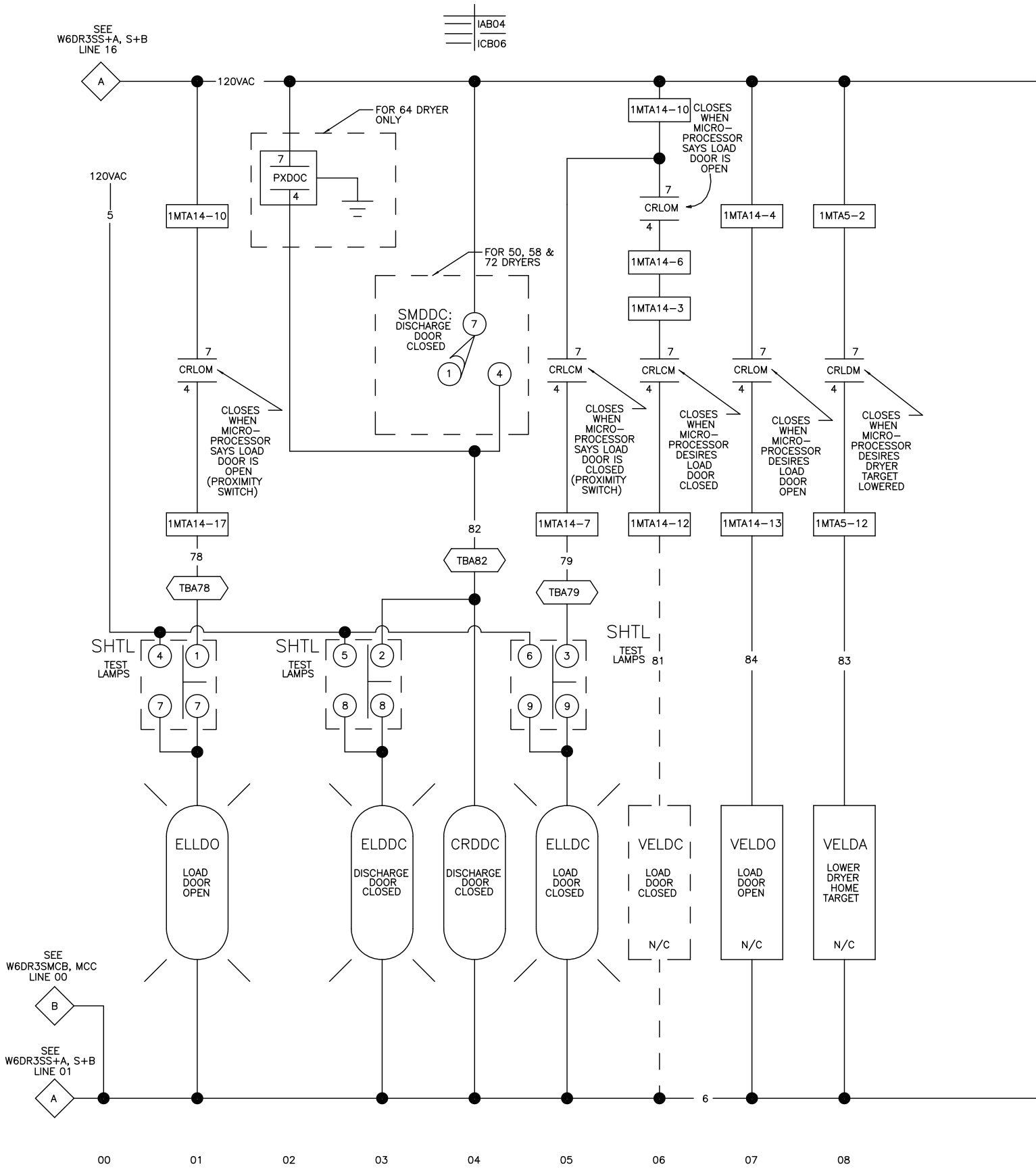
SCHEMATIC: ELECTRICAL VALVES & DOORS

110V1P50HZ/120V1P60HZ

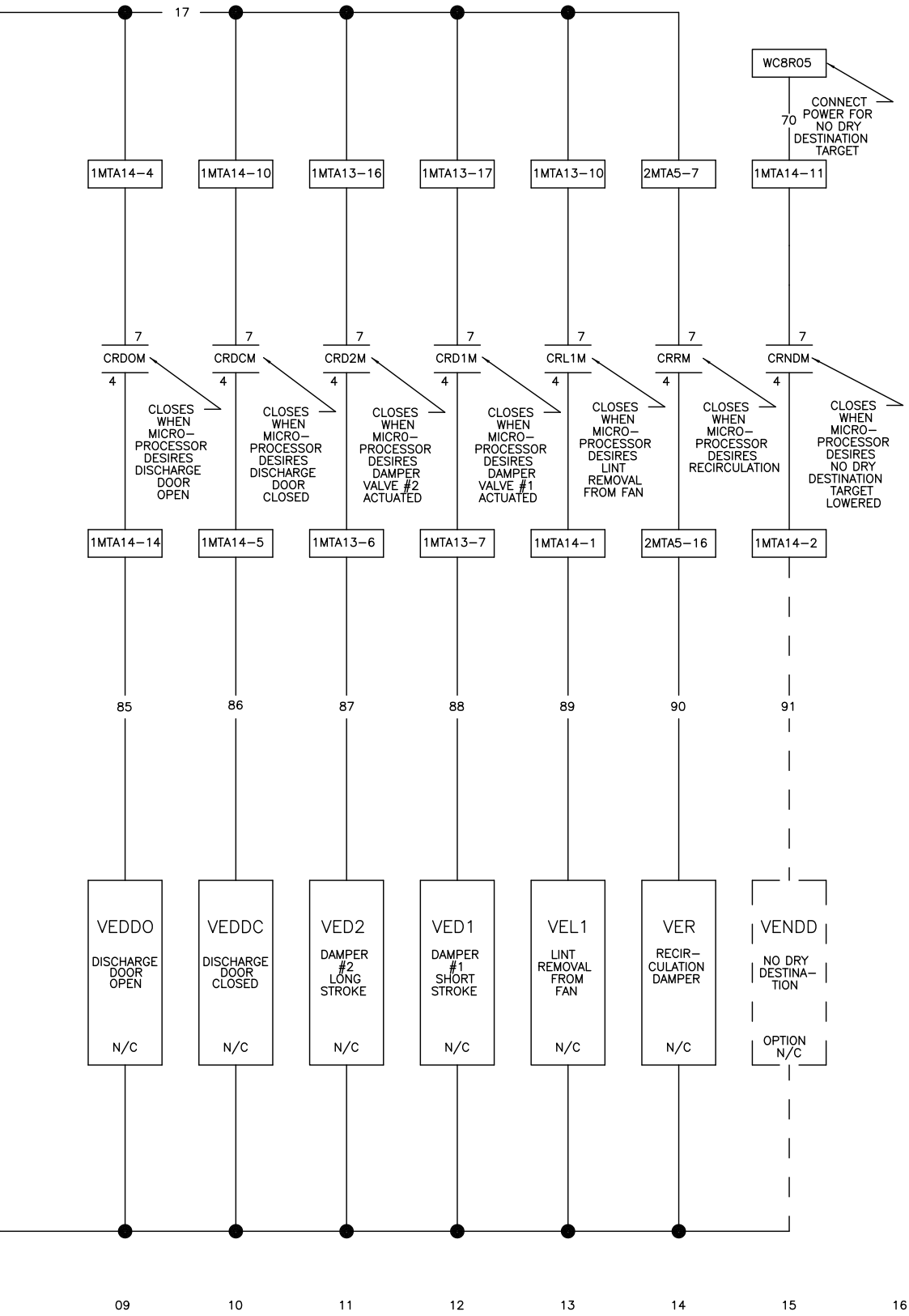
PELLERIN MILNOR CORPORATION

NOTES:

1. 1MTA14 IS LOCATED ON BO1 (24 OUPUT BOARD).
2. 1MTA5 IS LOCATED ON BIO1 (8 OUTPUT, 16 INPUT BOARD).
3. TBA IS LOCATED IN THE LOW VOLTAGE CONTROL BOX.
4. REMOVE J FOR LAMP TEST OPTION.



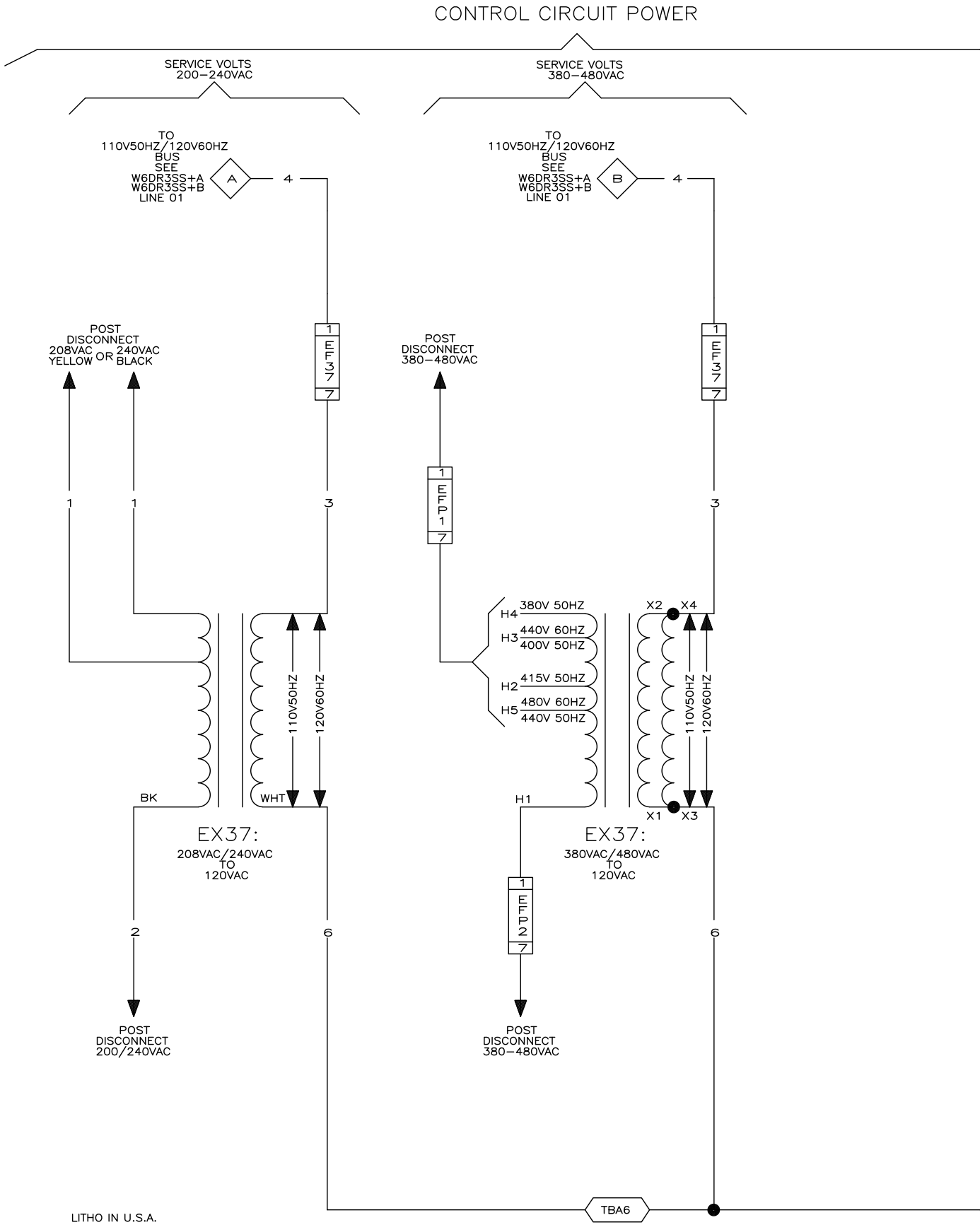
W6DR3SEVB
2023452B



W6DR3SEVB
DRYER–STEAM
MICRO 6 SYSTEMS
SCHEMATIC: ELECTRICAL VALVES & DOORS W/LAMP TEST
110V1P50HZ/120V1P60HZ
PELLERIN MILNOR CORPORATION

NOTES:

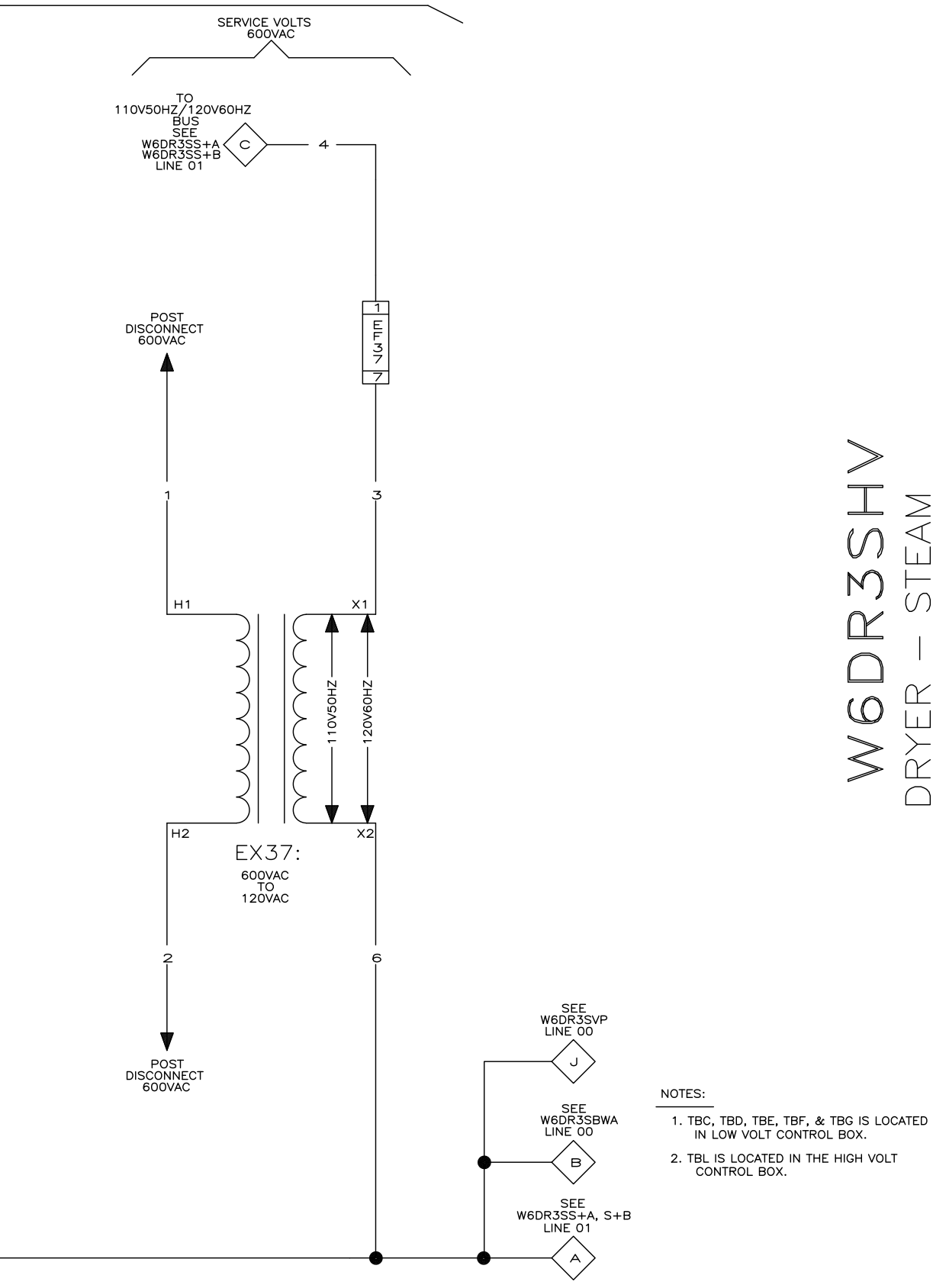
1. 1TMA14 IS LOCATED ON BOI (16 OUPUT BOARD).
2. 1TMA5 IS LOCATED ON BIO1 (8 OUTPUT, 16 INPUT BOARD).
3. TBA IS LOCATED IN THE LOW VOLTAGE CONTROL BOX.



W6DR3SHV
2023452B

LITHO IN U.S.A.

00 01 02 03 04 05 06 07 08 09 10



NOTES:

1. TBC, TBD, TBE, TBF, & TBG IS LOCATED IN LOW VOLT CONTROL BOX.
2. TBL IS LOCATED IN THE HIGH VOLT CONTROL BOX.

W6DR3SHV

DRYER – STEAM
MICRO 6 SYSTEMS
SCHEMATIC: SOURCE 110V50HZ/120V60HZ

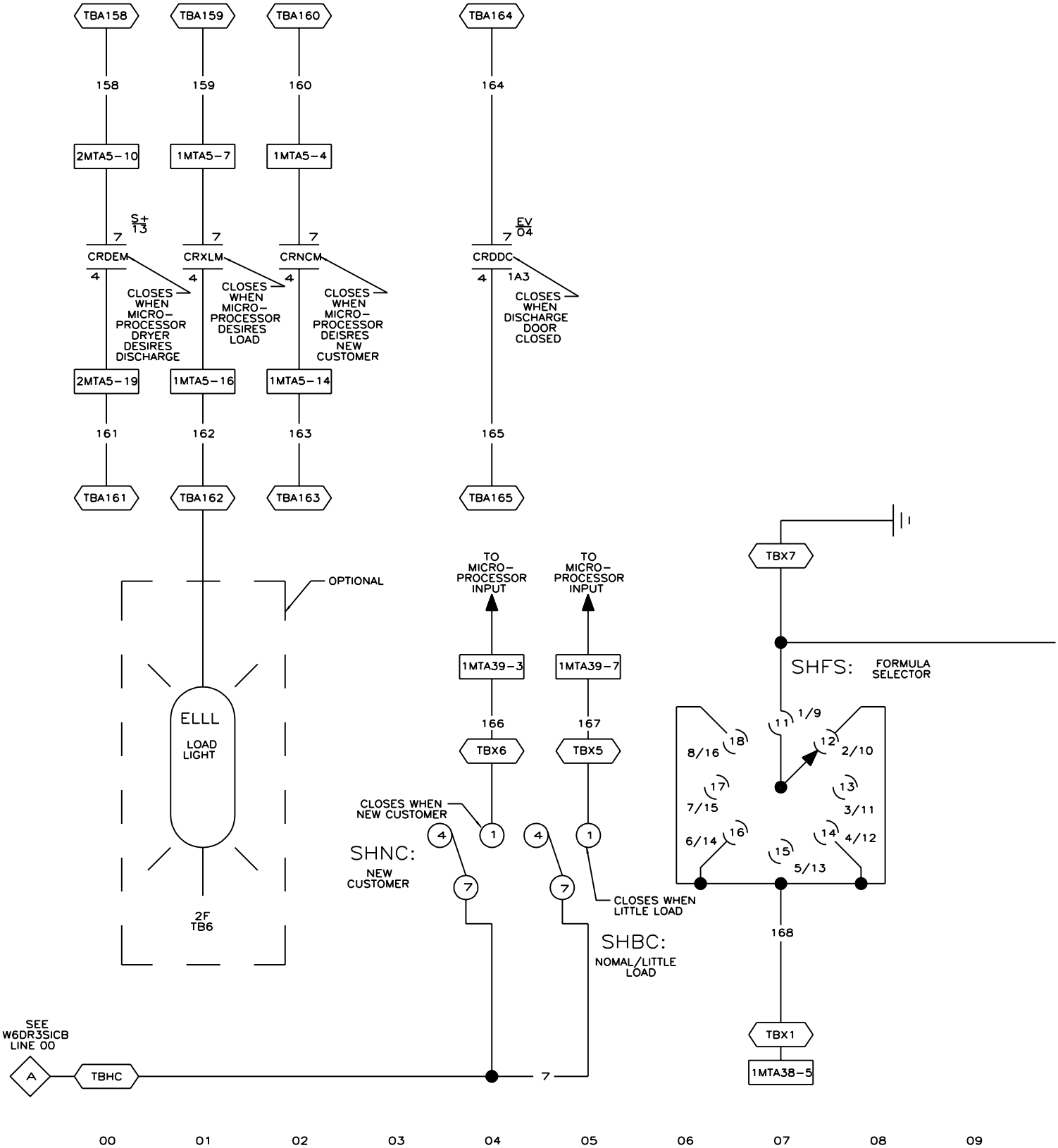
CONTROL CIRCUIT POWER

PELLERIN MILNOR CORPORATION

W6DR3SHV
2023452B

W6DR3SHV
2023452B

11 12 13 14 15 16 17 18 19



W6DR3SIAB
2002196B

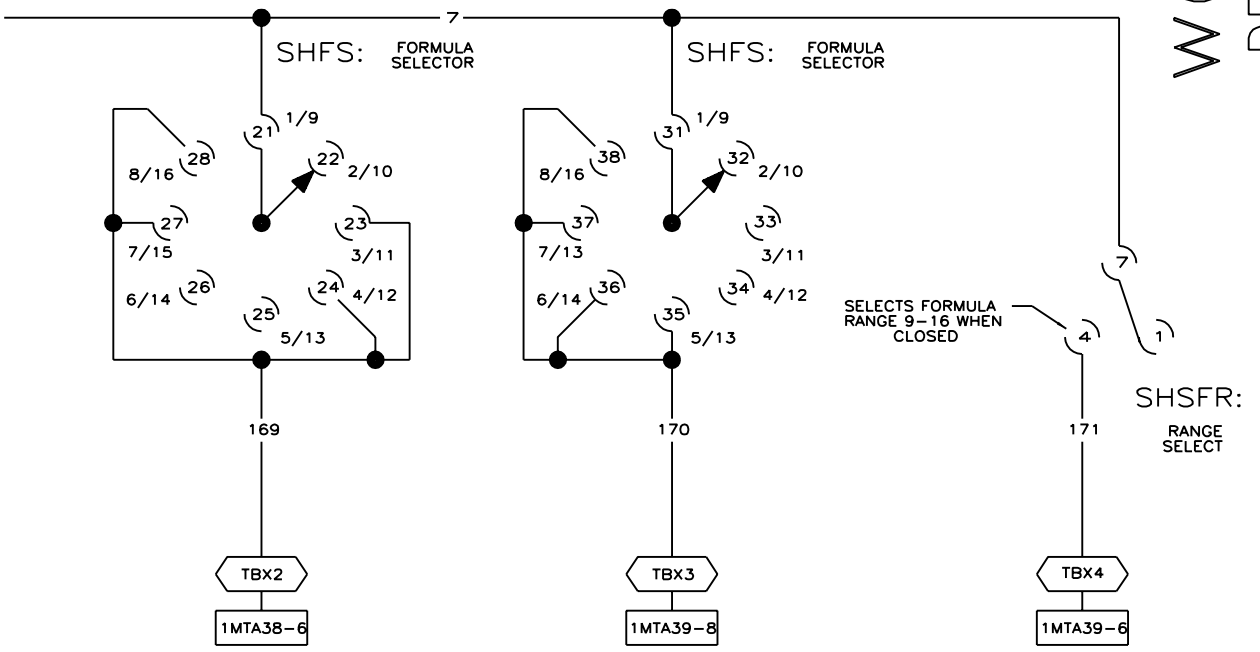
W6DR3SIAB

DRYER – STEAM
MICRO 6 SYSTEMS
SCHEMATIC: ALLIED INTERFACE
MOSIFIED FOR 186 PROCESSOR

PELLERIN MILNOR CORPORATION

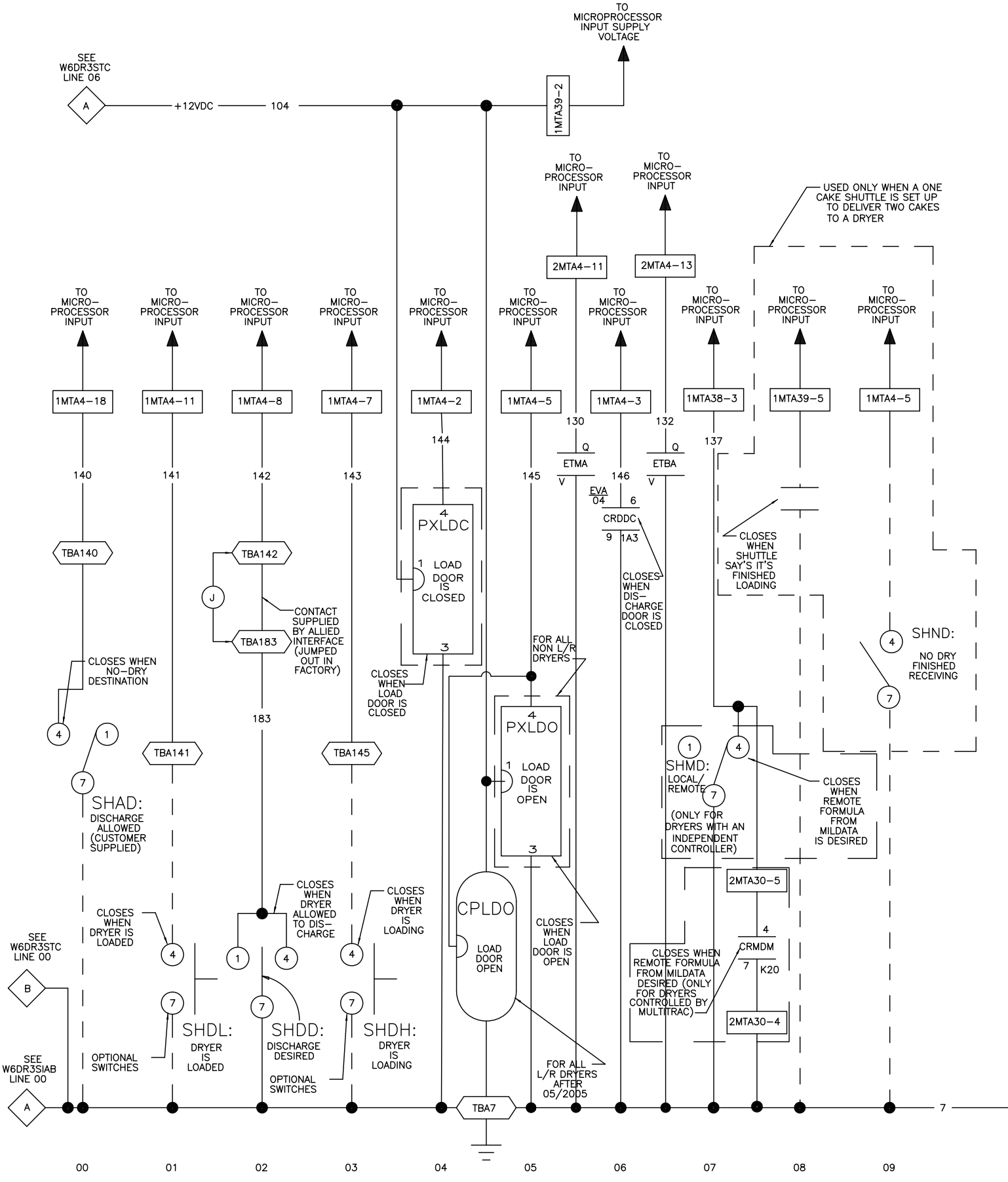
NOTES:

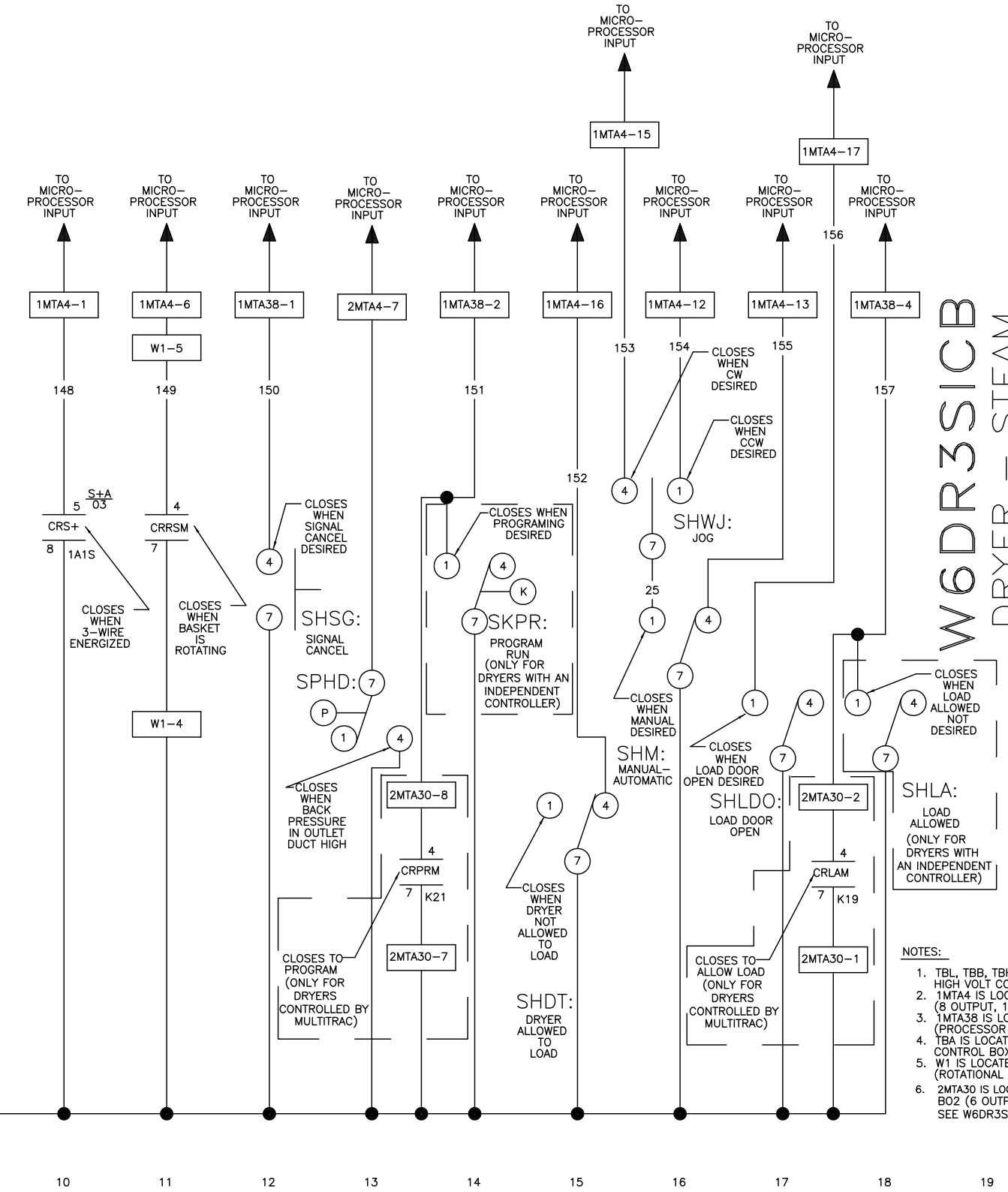
1. TBX IS LOCATED IN DRYER PROCESSOR CONTROL BOX.
2. TBA IS LOCATED IN THE DRYER LEFT CONTROL BOX



REMOTE FORMULA SELECTOR STATION OPTION

10 11 12 13 14 15 16 17


TO MICROPROCESSOR INPUT SUPPLY VOLTAGE
SEE W6DR3STC LINE 06
A
+12VDC
104
1MTA39-2
TO MICRO-PROCESSOR INPUT
2MTA4-11
2MTA4-13
USED ONLY WHEN A ONE CAKE SHUTTLE IS SET UP TO DELIVER TWO CAKES TO A DRYER
1MTA4-18
1MTA4-11
1MTA4-8
1MTA4-7
1MTA4-2
1MTA4-5
1MTA4-3
1MTA38-3
1MTA39-5
1MTA4-5
140
141
142
143
144
145
146
130
132
137
ETMA
ETBA
EVA
04
CRDDC
9 1A3
TBA140
TBA142
TBA183
TBA141
TBA145
TBA7
CONTACT SUPPLIED BY ALLIED INTERFACE (JUMPED OUT IN FACTORY)
CLOSES WHEN NO-DRY DESTINATION
PXLDC
LOAD DOOR IS CLOSED
CLOSES WHEN LOAD DOOR IS CLOSED
FOR ALL NON L/R DRYERS
PXLDO
LOAD DOOR IS OPEN
CPLDO
LOAD DOOR OPEN
CLOSES WHEN LOAD DOOR IS OPEN
CLOSES WHEN DISCHARGE DOOR IS CLOSED
CLOSES WHEN SHUTTLE SAY'S IT'S FINISHED LOADING
SHND:
NO DRY FINISHED RECEIVING
SHMD:
LOCAL/ REMOTE
(ONLY FOR DRYERS WITH AN INDEPENDENT CONTROLLER)
CLOSES WHEN REMOTE FORMULA FROM MILDATA IS DESIRED
2MTA30-5
2MTA30-4
CRMDM
K20
CLOSES WHEN REMOTE FORMULA FROM MILDATA DESIRED (ONLY FOR DRYERS CONTROLLED BY MULTITRAC)
SHAD:
DISCHARGE ALLOWED (CUSTOMER SUPPLIED)
CLOSES WHEN DRYER IS LOADED
SHDL:
DRYER IS LOADED
OPTIONAL SWITCHES
CLOSES WHEN DRYER ALLOWED TO DIS-CHARGE
SHDD:
DISCHARGE DESIRED
OPTIONAL SWITCHES
CLOSES WHEN DRYER IS LOADING
SHDH:
DRYER IS LOADING
FOR ALL L/R DRYERS AFTER 05/2005
SEE W6DR3STC LINE 00
B
SEE W6DR3SIAB LINE 00
A
00
01
02
03
04
05
06
07
08
09
W6DR3SICB
2023452B

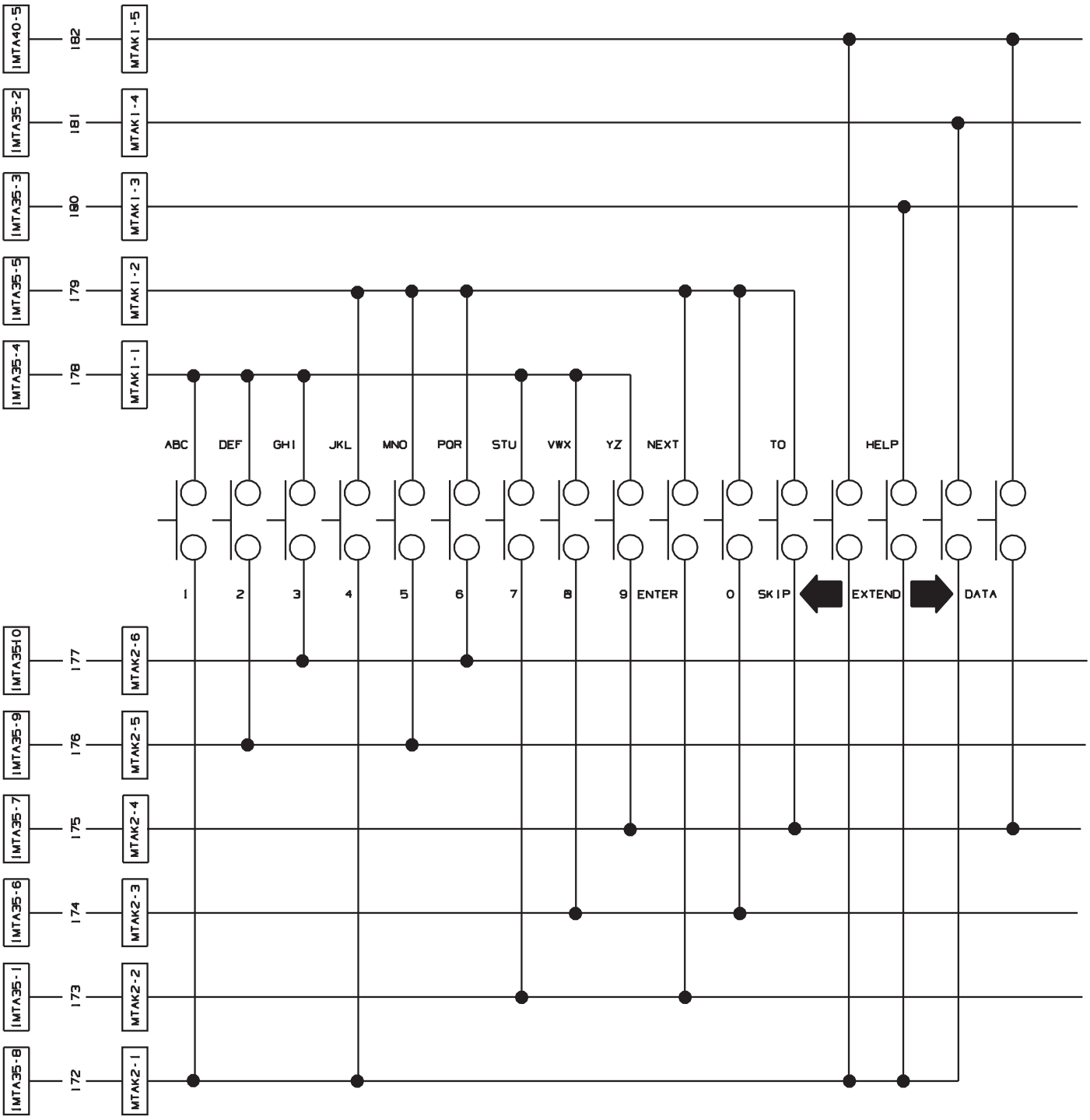


W6DR3SICB
DRYER – STEAM
MICRO 6 SYSTEMS
SCHEMATIC: INPUTS
MODIFIED FOR 186 PROCESSOR

PELLERIN MILNOR CORPORATION

NOTES:

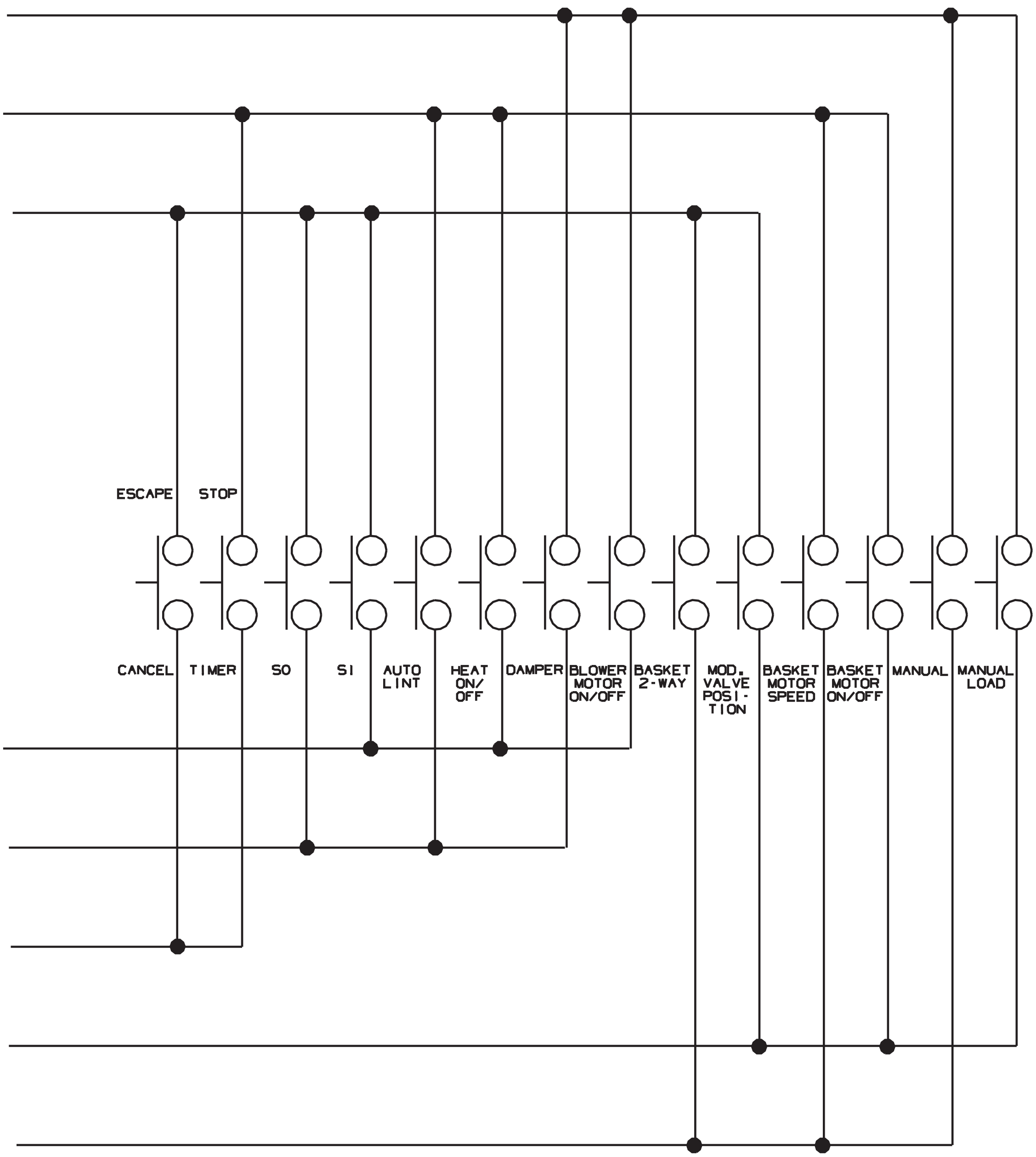
1. TBL, TBB, TBH ARE LOCATED IN HIGH VOLT CONTROL BOX.
2. 1MTA4 IS LOCATED ON BIO1 (8 OUTPUT, 16 INPUT BOARD).
3. 1MTA38 IS LOCATED ON BPB (PROCESSOR BOARD).
4. TBA IS LOCATED IN THE LOW VOLT CONTROL BOX.
5. W1 IS LOCATED ON BRS1 (ROTATIONAL SAFETY BOARD).
6. 2MTA30 IS LOCATED ON BO2 (6 OUTPUT BOARD) SEE W6DR3STR



LITHO IN U.S.A.

00 01 02 03 04 05 06 07 08 09 10

W6DR3SKP
97241B



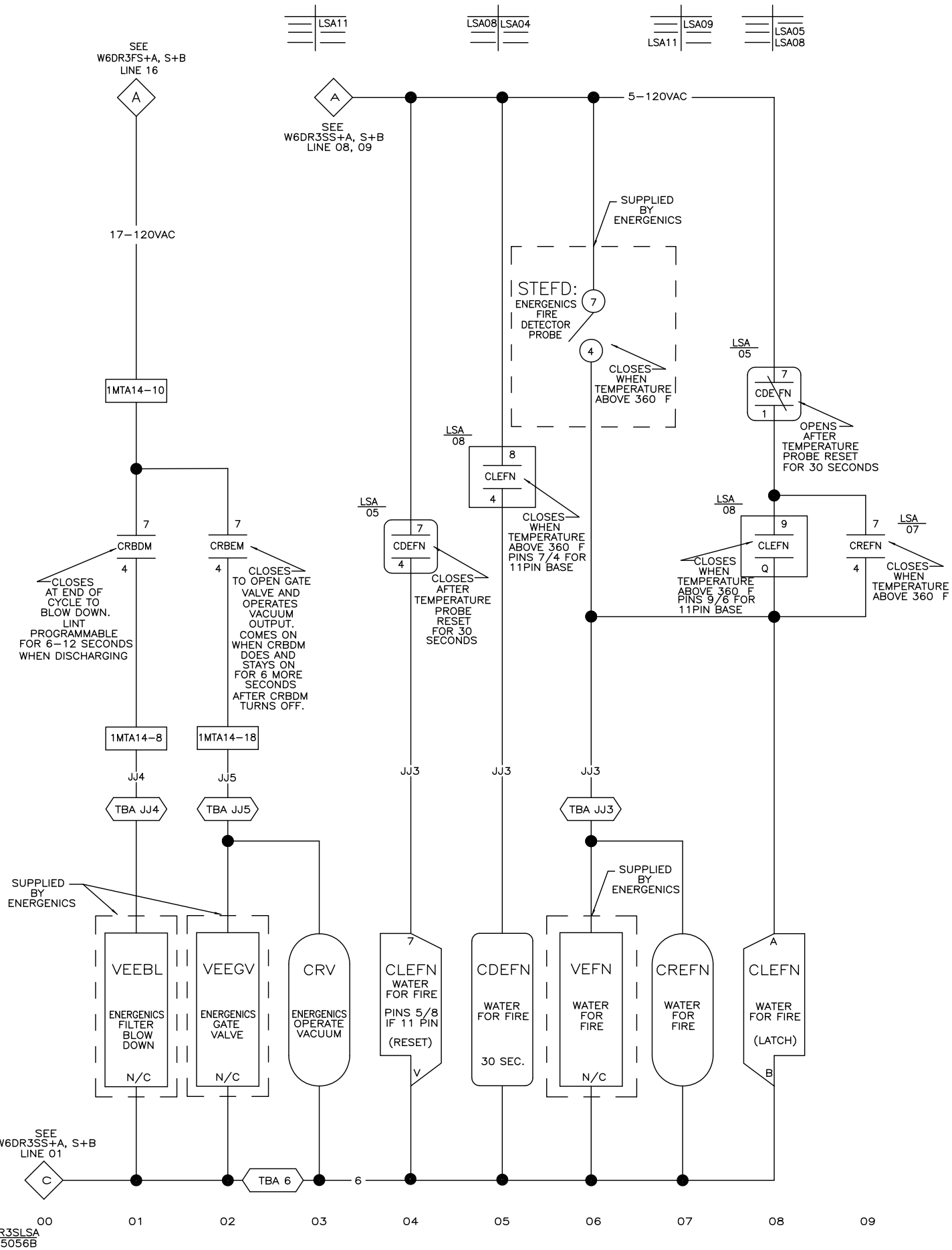
W6DR3SKP

MICRO 6 SYSTEMS
MARK V
SCHEMATIC: KEYPAD (SERIAL CONTROLS)

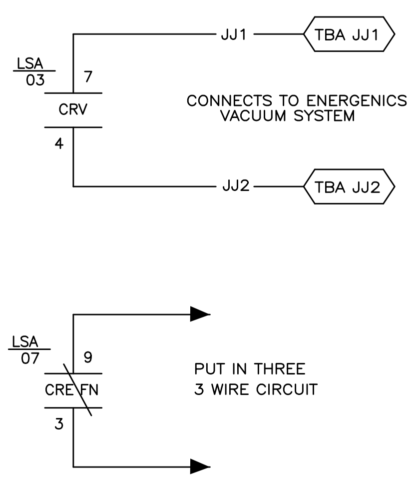
PELLERIN MILNOR CORPORATION

NOTES:
1. MTAK1 & MTAK2 ARE LOCATED ON KEYPAD.
2. 1MTA35 & 1MTA40 ARE LOCATED ON BPB (PROCESSOR BOARD).

11 12 13 14 15 16 17 18 19


LSA11
LSA08 LSA04
LSA11 LSA09
LSA05 LSA08
SEE W6DR3FS+A, S+B LINE 16
A
17–120VAC
1MTA14–10
SEE W6DR3SS+A, S+B LINE 08, 09
5–120VAC
SUPPLIED BY ENERGENICS
STEFD: ENERGENICS FIRE DETECTOR PROBE
7
4
CLOSES WHEN TEMPERATURE ABOVE 360 F
LSA 05
7
CDEFN
1
OPENS AFTER TEMPERATURE PROBE RESET FOR 30 SECONDS
LSA 08
8
CLEFN
4
CLOSES WHEN TEMPERATURE ABOVE 360 F PINS 7/4 FOR 11PIN BASE
LSA 05
7
CDEFN
4
CLOSES AFTER TEMPERATURE PROBE RESET FOR 30 SECONDS
LSA 08
9
CLEFN
Q
CLOSES WHEN TEMPERATURE ABOVE 360 F PINS 9/6 FOR 11PIN BASE
7
CREFN
4
LSA 07
CLOSES WHEN TEMPERATURE ABOVE 360 F
7
CRBDM
4
CLOSES AT END OF CYCLE TO BLOW DOWN. LINT PROGRAMMABLE FOR 6–12 SECONDS WHEN DISCHARGING
7
CRBEM
4
CLOSES TO OPEN GATE VALVE AND OPERATES VACUUM OUTPUT. COMES ON WHEN CRBDM DOES AND STAYS ON FOR 6 MORE SECONDS AFTER CRBDM TURNS OFF.
1MTA14–8
1MTA14–18
JJ4
JJ5
JJ3
JJ3
JJ3
TBA JJ4
TBA JJ5
TBA JJ3
SUPPLIED BY ENERGENICS
SUPPLIED BY ENERGENICS
VEEBL
ENERGENICS FILTER BLOW DOWN
N/C
VEEGV
ENERGENICS GATE VALVE
N/C
CRV
ENERGENICS OPERATE VACUUM
7
CLEFN
WATER FOR FIRE
PINS 5/8 IF 11 PIN
(RESET)
V
CDEFN
WATER FOR FIRE
30 SEC.
VEFN
WATER FOR FIRE
N/C
CREFN
WATER FOR FIRE
A
CLEFN
WATER FOR FIRE
(LATCH)
B
SEE W6DR3SS+A, S+B LINE 01
C
TBA 6
6
00
01
02
03
04
05
06
07
08
09
W6DR3SLSA
2025056B

W6DR3SLSA
2025056B



W6DR3SLSA

MICRO 6 SYSTEMS MARK V

SCHEMATIC: ENERGENICS LINT FILTER

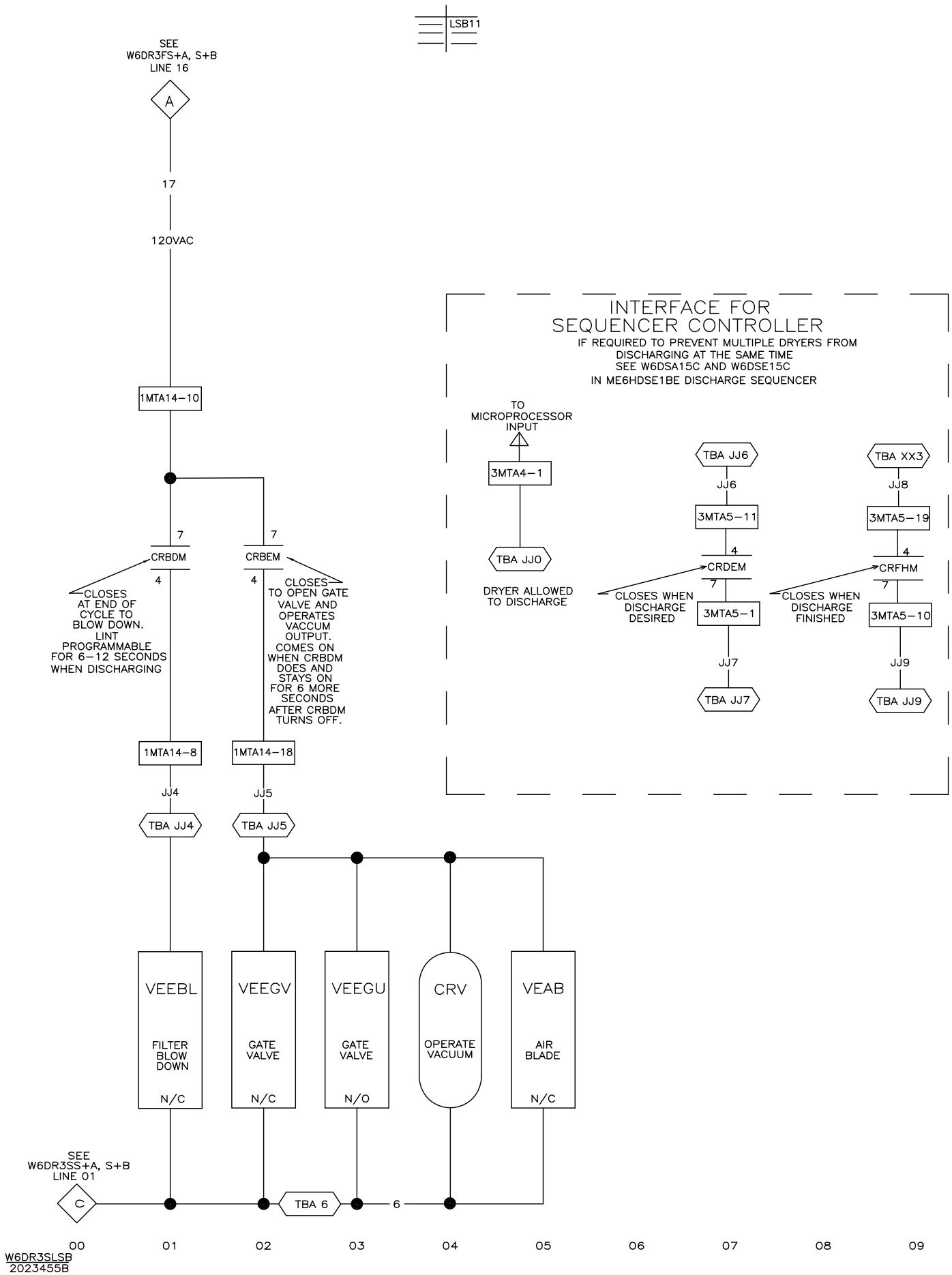
CLOSE COUPLED

110V1P50HZ/120V1P60HZ

PELLERIN MILNOR CORPORATION

10 11 12 13 14 15 16 17 18 19

W6DR3SLSA
2025056B


LSB11
SEE W6DR3FS+A, S+B LINE 16
A
17
120VAC
1MTA14–10
7
CRBDM
4
CLOSES AT END OF CYCLE TO BLOW DOWN. LINT PROGRAMMABLE FOR 6–12 SECONDS WHEN DISCHARGING
7
CRBEM
4
CLOSES TO OPEN GATE VALVE AND OPERATES VACCUM OUTPUT. COMES ON WHEN CRBDM DOES AND STAYS ON FOR 6 MORE SECONDS AFTER CRBDM TURNS OFF.
1MTA14–8
1MTA14–18
JJ4
JJ5
TBA JJ4
TBA JJ5
INTERFACE FOR SEQUENCER CONTROLLER
IF REQUIRED TO PREVENT MULTIPLE DRYERS FROM DISCHARGING AT THE SAME TIME SEE W6DSA15C AND W6DSE15C IN ME6HDSE1BE DISCHARGE SEQUENCER
TO MICROPROCESSOR INPUT
3MTA4–1
TBA JJ0
DRYER ALLOWED TO DISCHARGE
TBA JJ6
JJ6
3MTA5–11
4
CRDEM
7
CLOSES WHEN DISCHARGE DESIRED
3MTA5–1
JJ7
TBA JJ7
TBA XX3
JJ8
3MTA5–19
4
CRFHM
7
CLOSES WHEN DISCHARGE FINISHED
3MTA5–10
JJ9
TBA JJ9
VEEBL
FILTER BLOW DOWN
N/C
VEEGV
GATE VALVE
N/C
VEEGU
GATE VALVE
N/O
CRV
OPERATE VACUUM
VEAB
AIR BLADE
N/C
SEE W6DR3SS+A, S+B LINE 01
C
TBA 6
6
00
01
02
03
04
05
06
07
08
09
W6DR3SLSB
2023455B

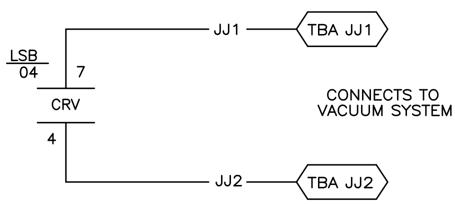
W6DR3SLSB

MICRO 6 SYSTEMS MARK V

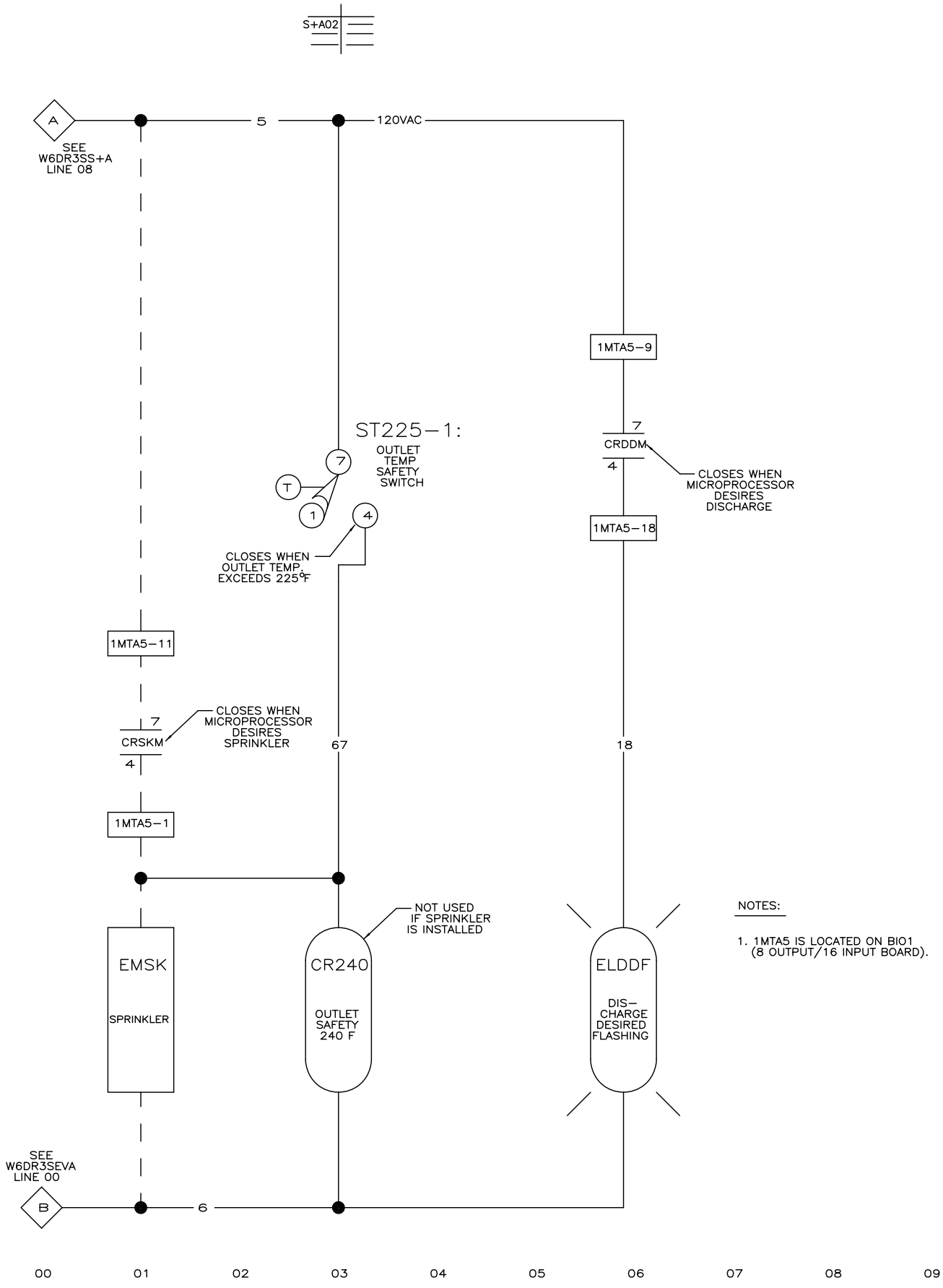
SCHEMATIC: INTERNAL LINT SCREEN

110V1P50HZ/120V1P60HZ

PELLERIN MILNOR CORPORATION



10 11 12 13 14 15 16 17 18 19



W6DR3SMCA
2023452B

W6DR3SMCA

DRYER–STEAM

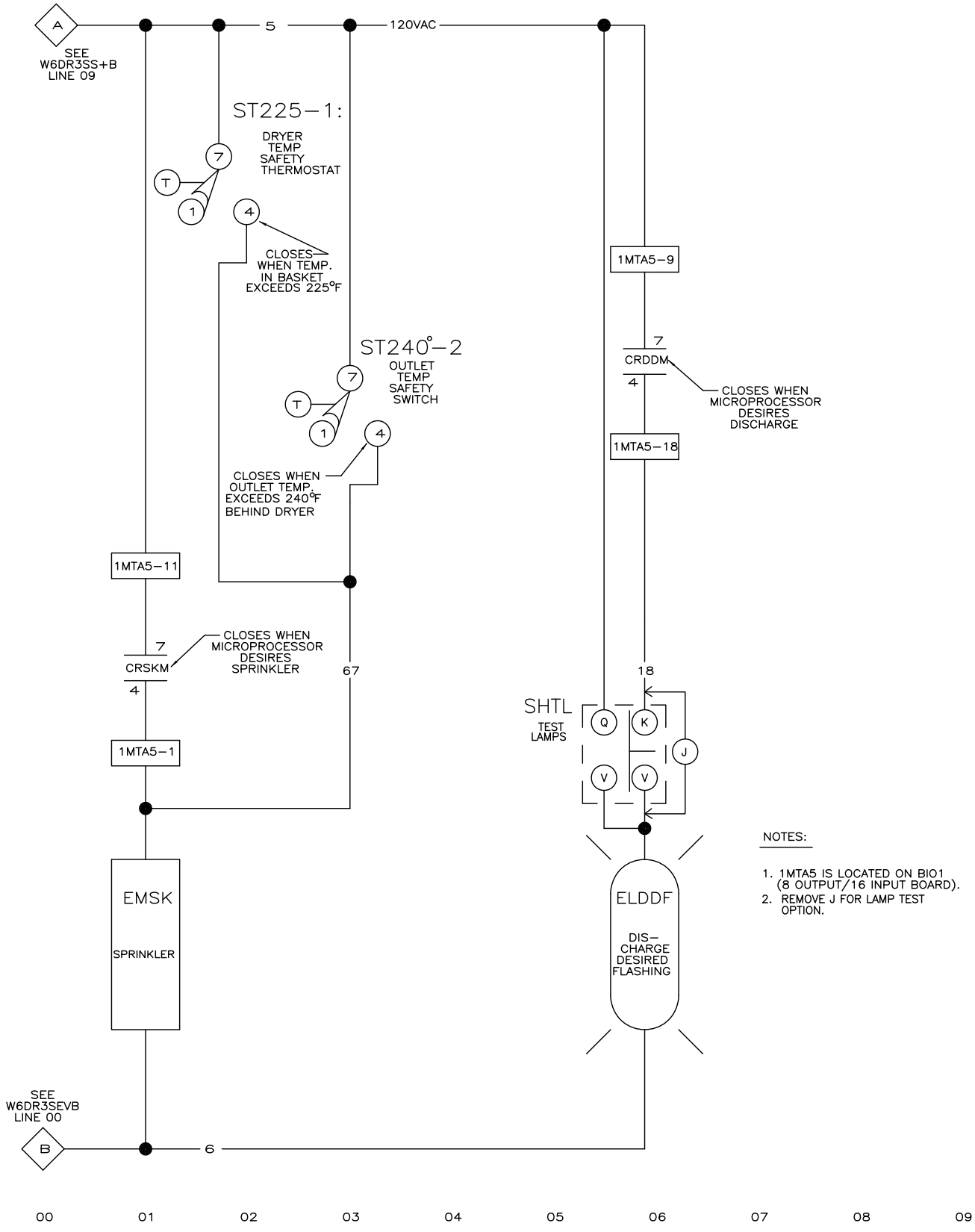
MICRO 6 SYSTEMS

SCHEMATIC: MOTOR CONTACTS 5040TG1 / ALL 58 DRYERS

110V1P50HZ/120V1P60HZ

PELLERIN MILNOR CORPORATION

W6DR3SMCA
2023452B



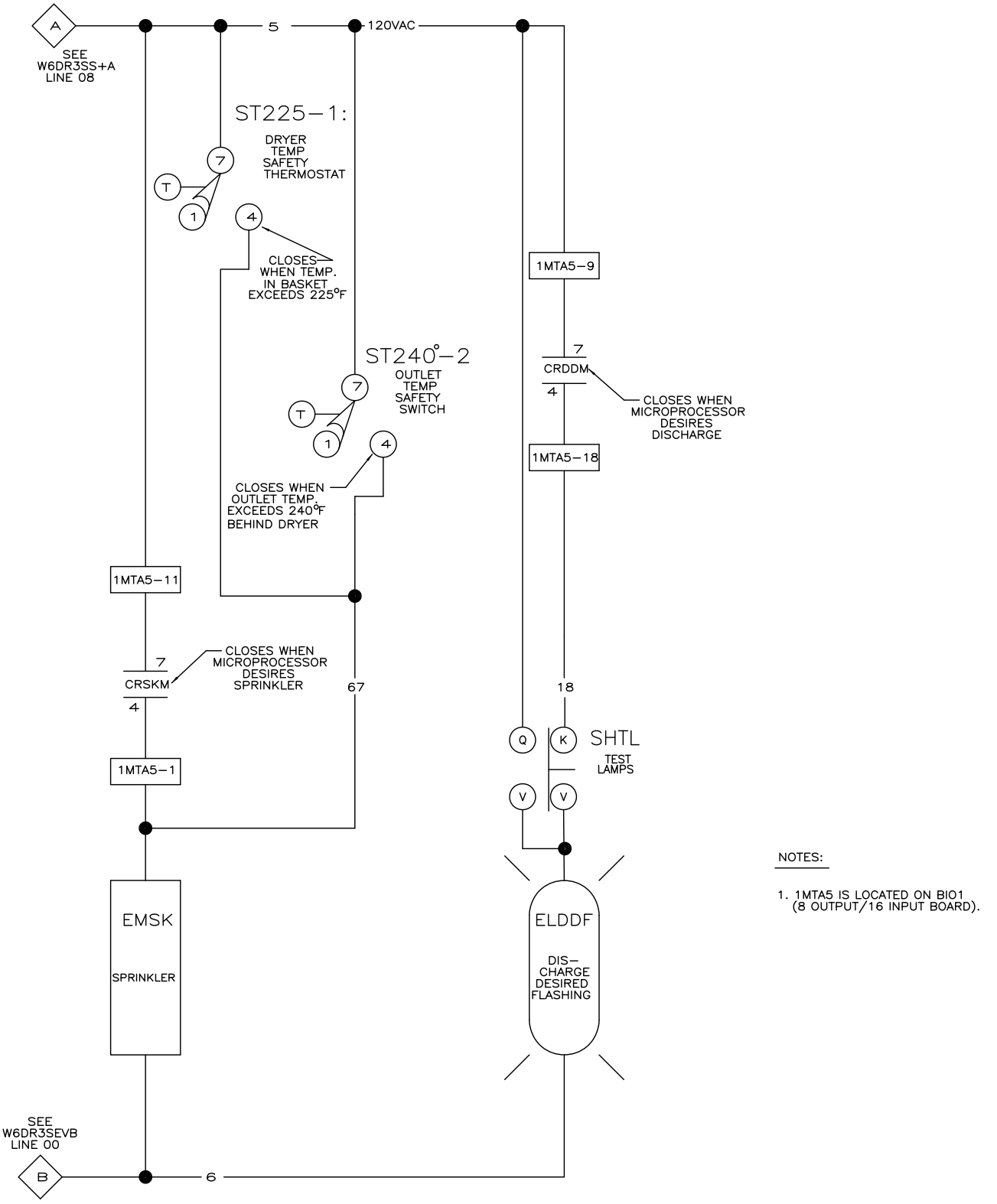
W6DR3SMCB
2023452B

W6DR3SMCB

DRYER–STEAM
MICRO 6 SYSTEMS
SCHEMATIC: MOTOR CONTACTS
FOR ALL LEFT/RIGHT DRYERS
110V1P50HZ/120V1P60HZ

PELLERIN MILNOR CORPORATION

W6DR3SMCB
2023452B



NOTES:

1. 1MTA5 IS LOCATED ON BIO1 (8 OUTPUT/16 INPUT BOARD).

W6DR3SMCC
2023452B

W6DR3SMCC

DRYER–STEAM

MICRO 6 SYSTEMS

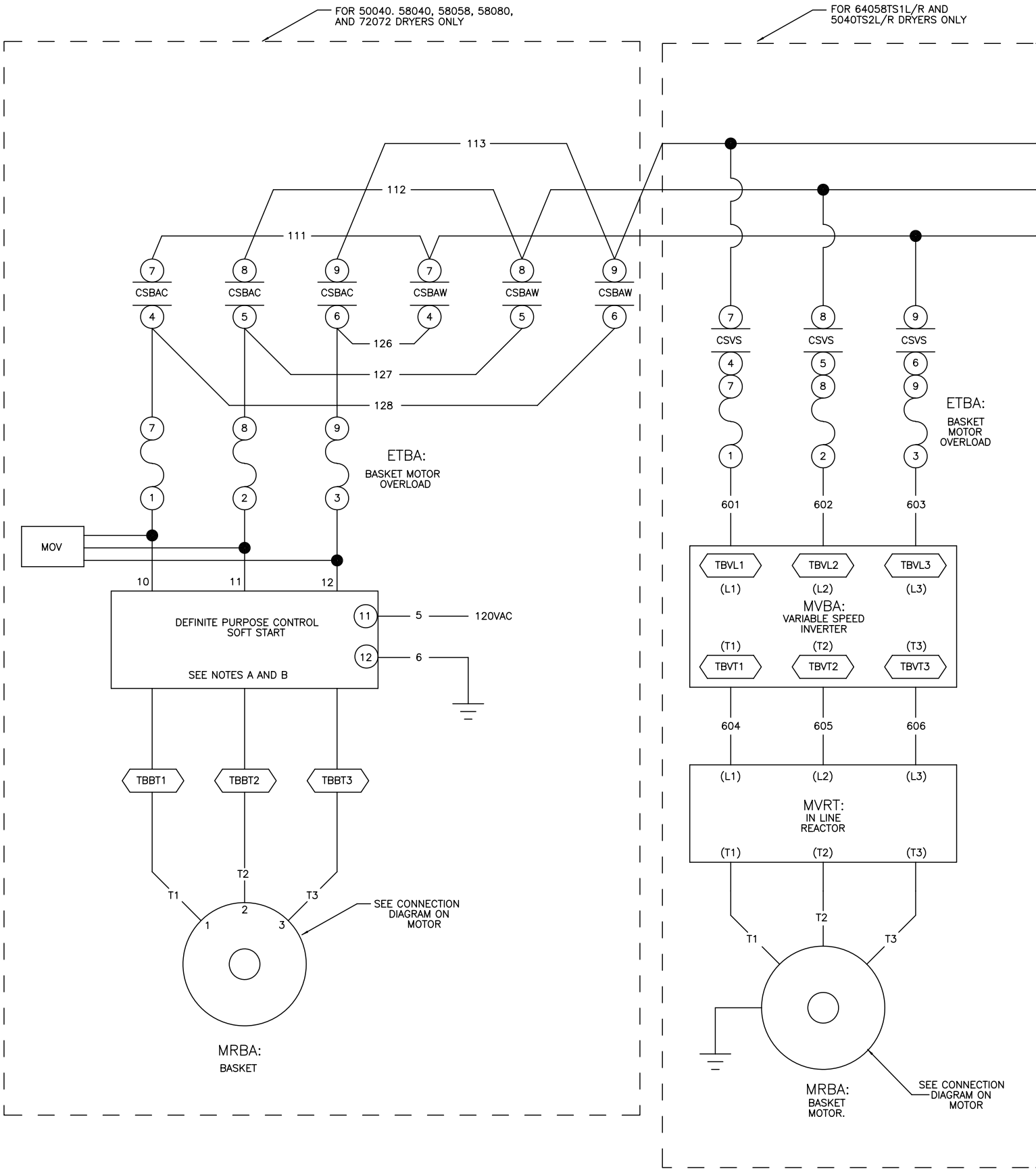
SCHEMATIC: MOTOR CONTACTS W/LAMP TEST

110V1P50HZ/120V1P60HZ

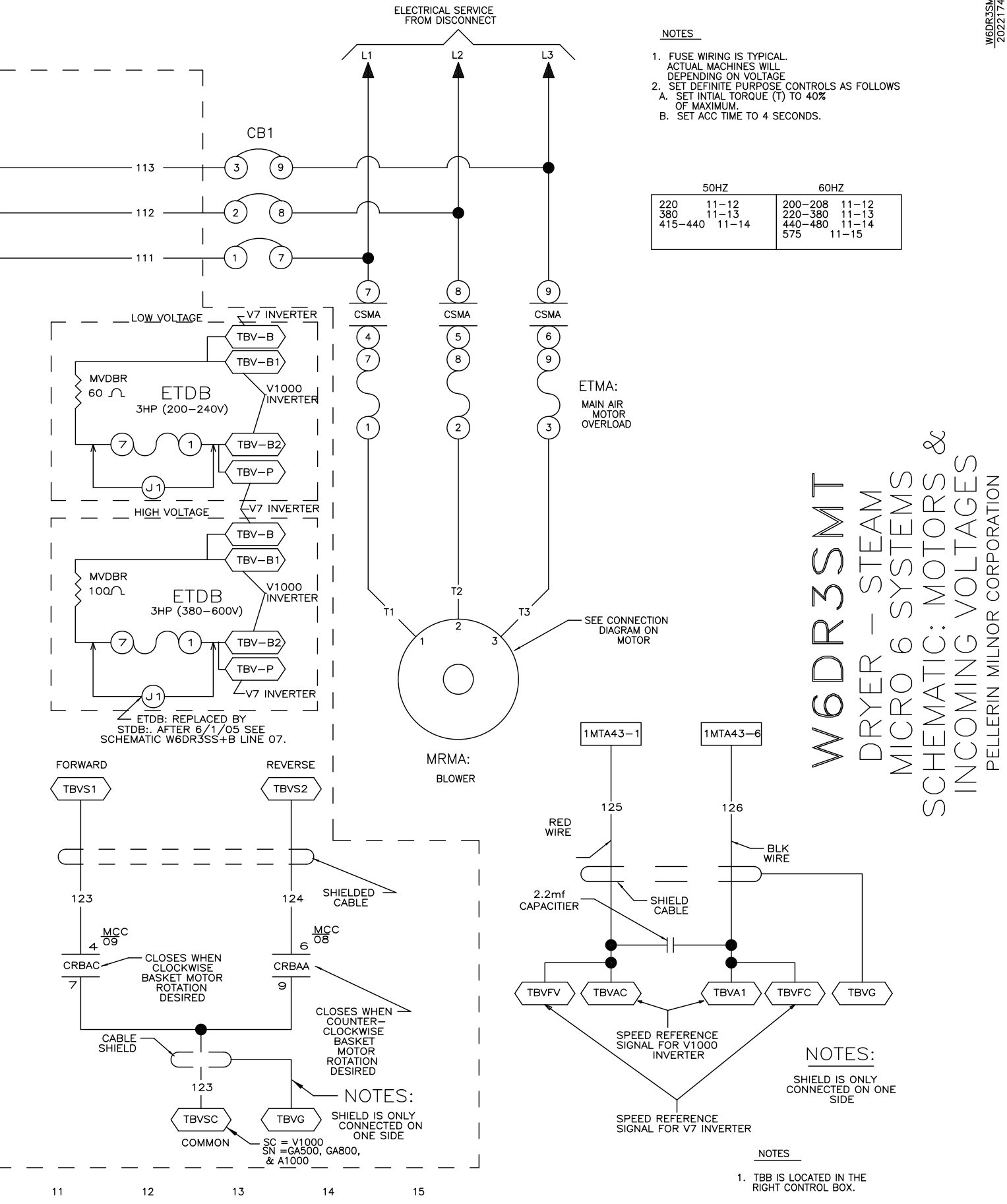
PELLERIN MILNOR CORPORATION

W6DR3SMCC
2023452B

W6DR3SMCC
2023452B



W6DR3SMT
2022174B



NOTES

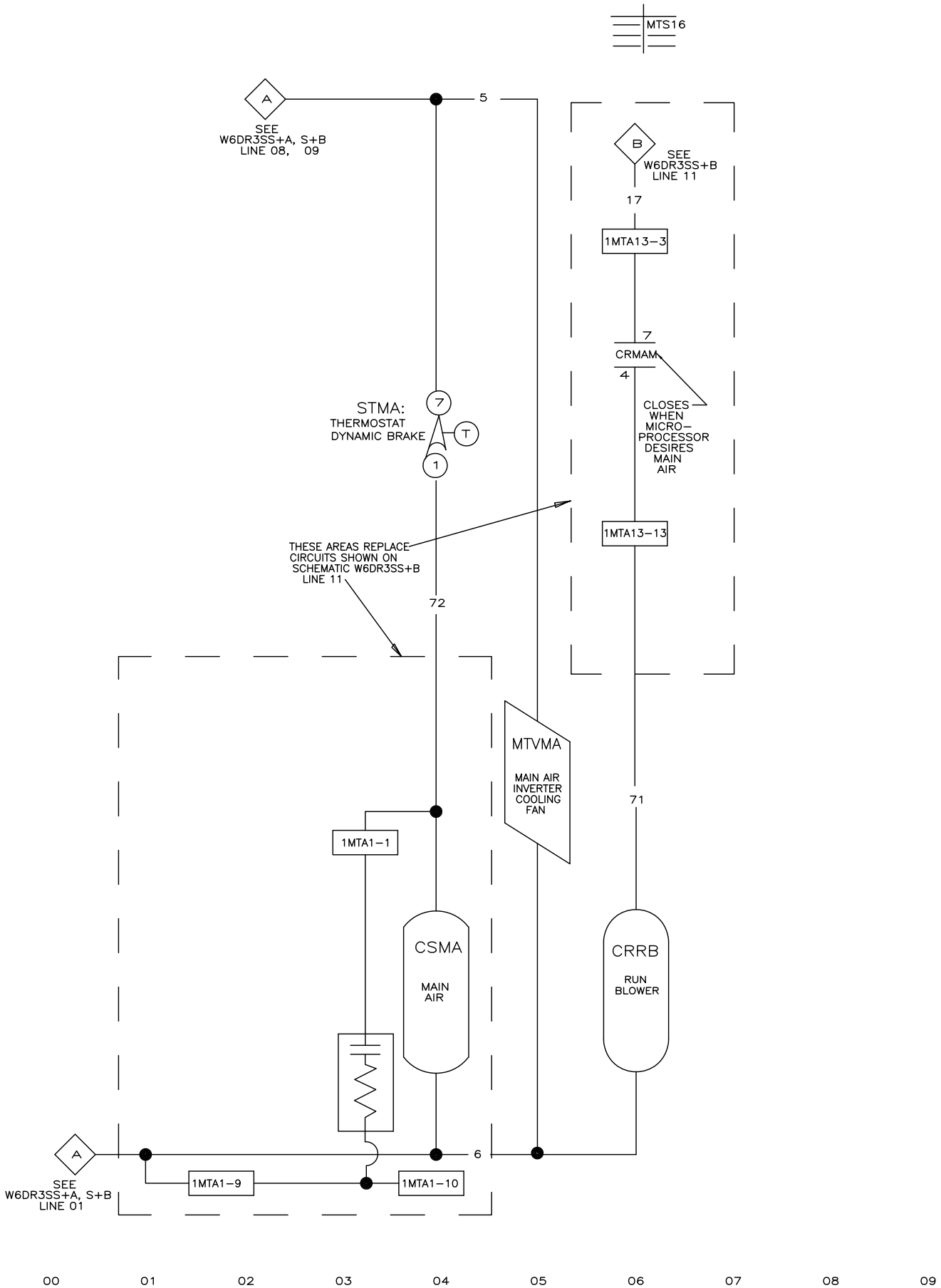
1. FUSE WIRING IS TYPICAL. ACTUAL MACHINES WILL DEPENDING ON VOLTAGE
2. SET DEFINITE PURPOSE CONTROLS AS FOLLOWS
   A. SET INTIAL TORQUE (T) TO 40% OF MAXIMUM.
   B. SET ACC TIME TO 4 SECONDS.

50HZ	60HZ
220 11–12 380 11–13 415–440 11–14	200–208 11–12 220–380 11–13 440–480 11–14 575 11–15

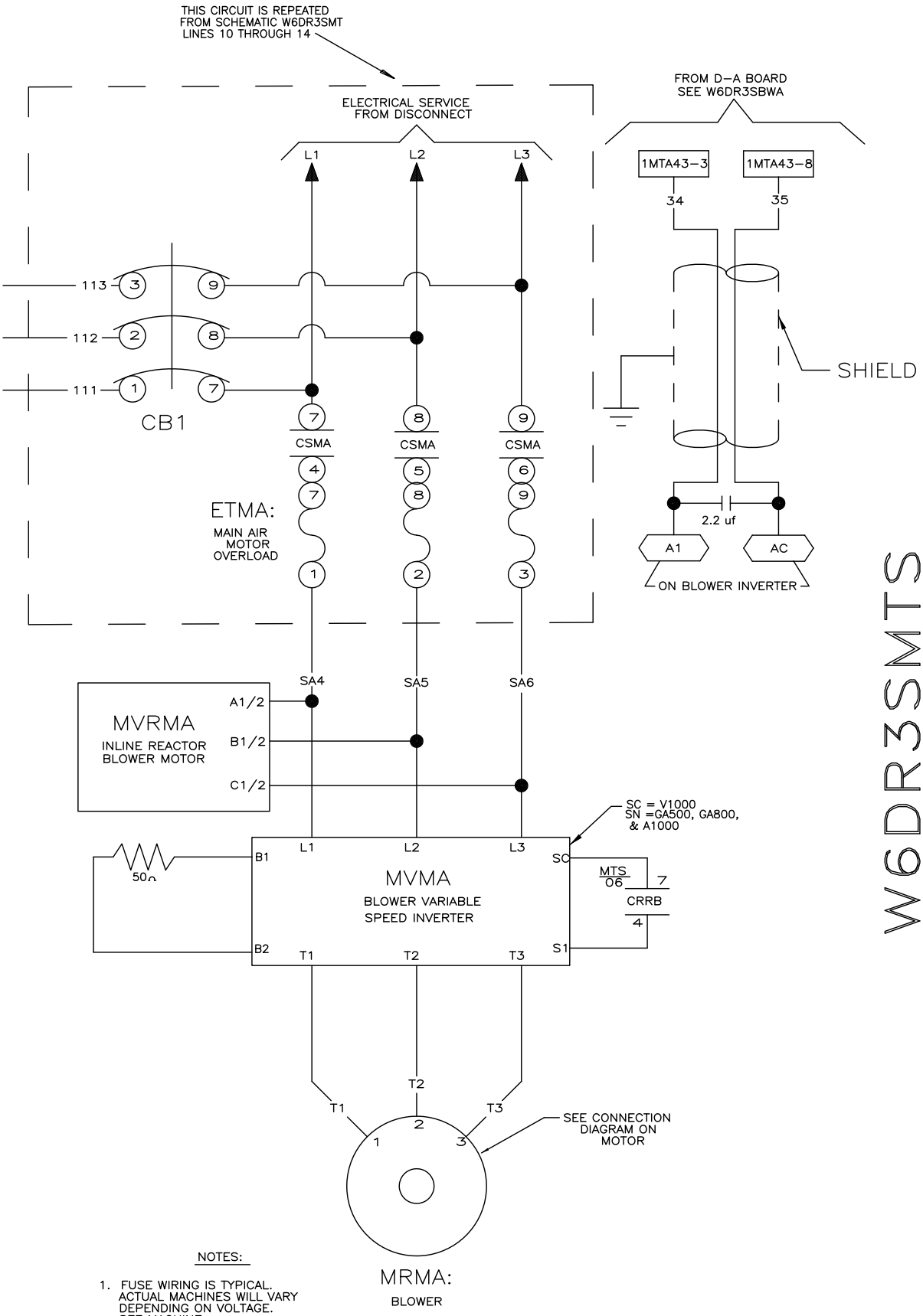
NOTES

1. TBB IS LOCATED IN THE RIGHT CONTROL BOX.

W6DR3SMT
DRYER – STEAM
MICRO 6 SYSTEMS
SCHEMATIC: MOTORS & INCOMING VOLTAGES
PELLERIN MILNOR CORPORATION



W6DR3SMTS
2023452B



NOTES:

1. FUSE WIRING IS TYPICAL. ACTUAL MACHINES WILL VARY DEPENDING ON VOLTAGE. SEE MACHINE.

W6DR3SMTS

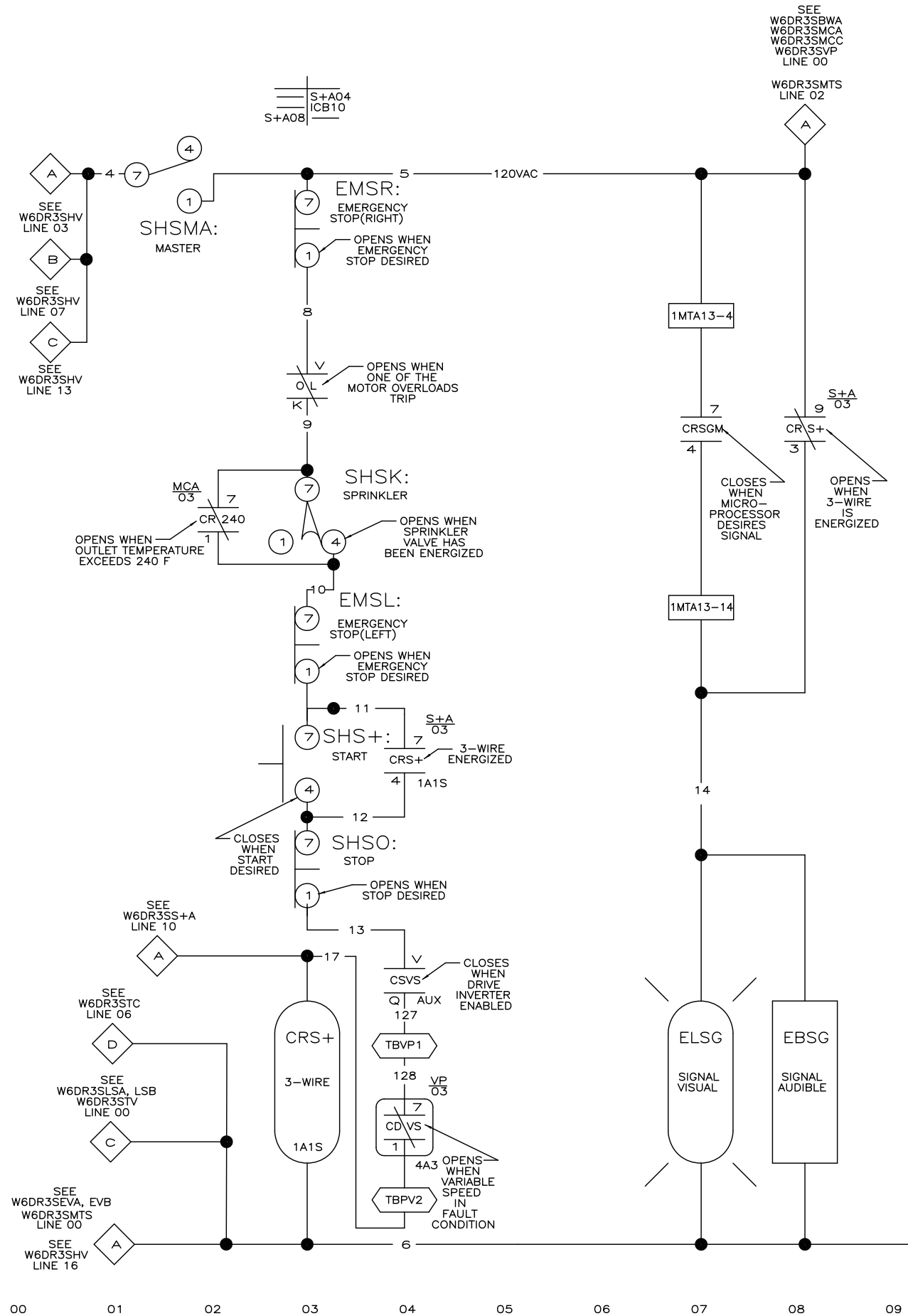
DRYER-STEAM
MICRO 6 SYSTEMS MARK V
SCHEMATIC: OPTIONAL BLOWER INVERTER DRIVE

PELLERIN MILNOR CORPORATION

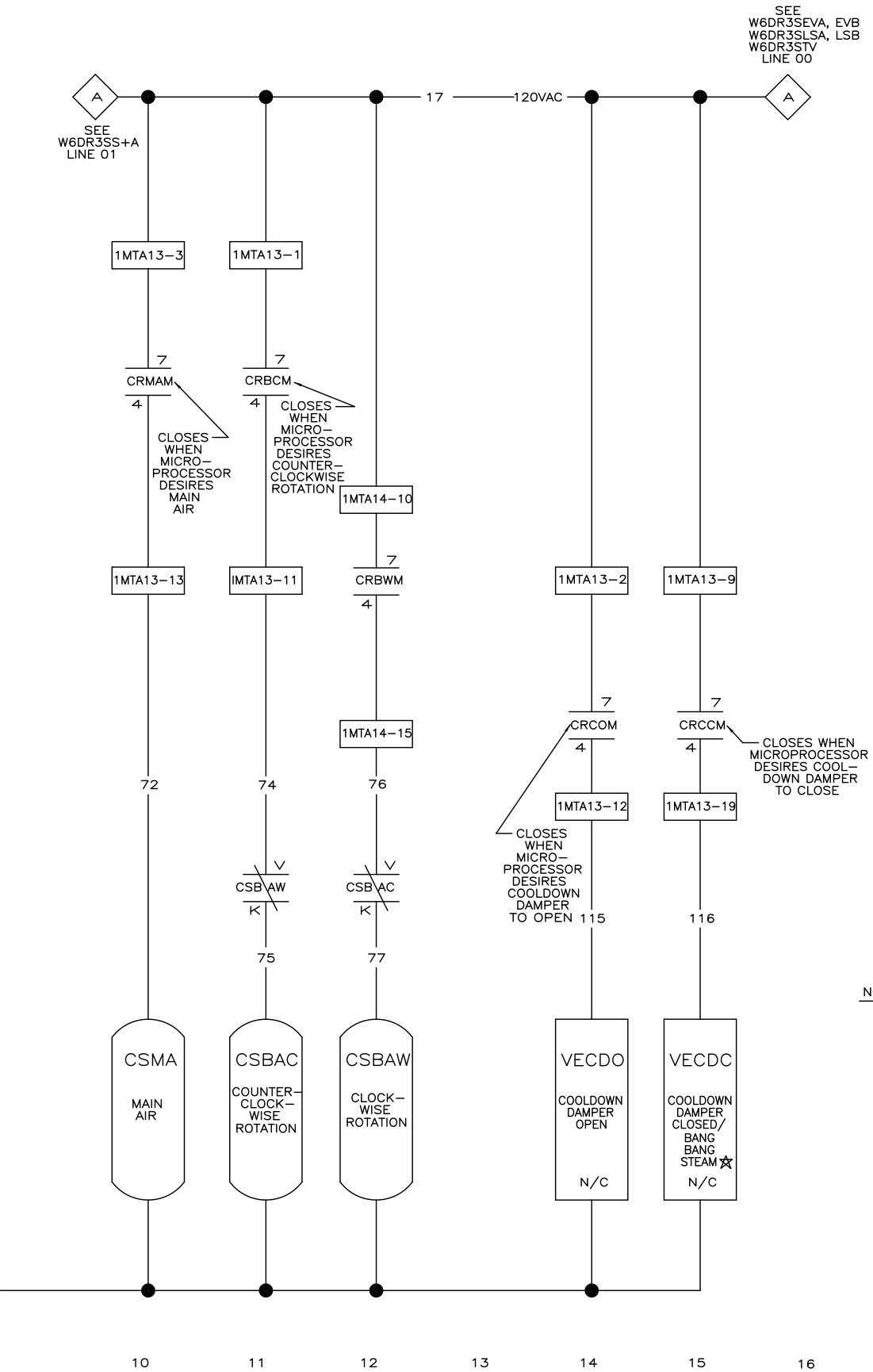
W6DR3SMTS
2023452B

10 11 12 13 14 15 16

W6DR3SMTS
2023452B



W6DR3SS+A
2023452B

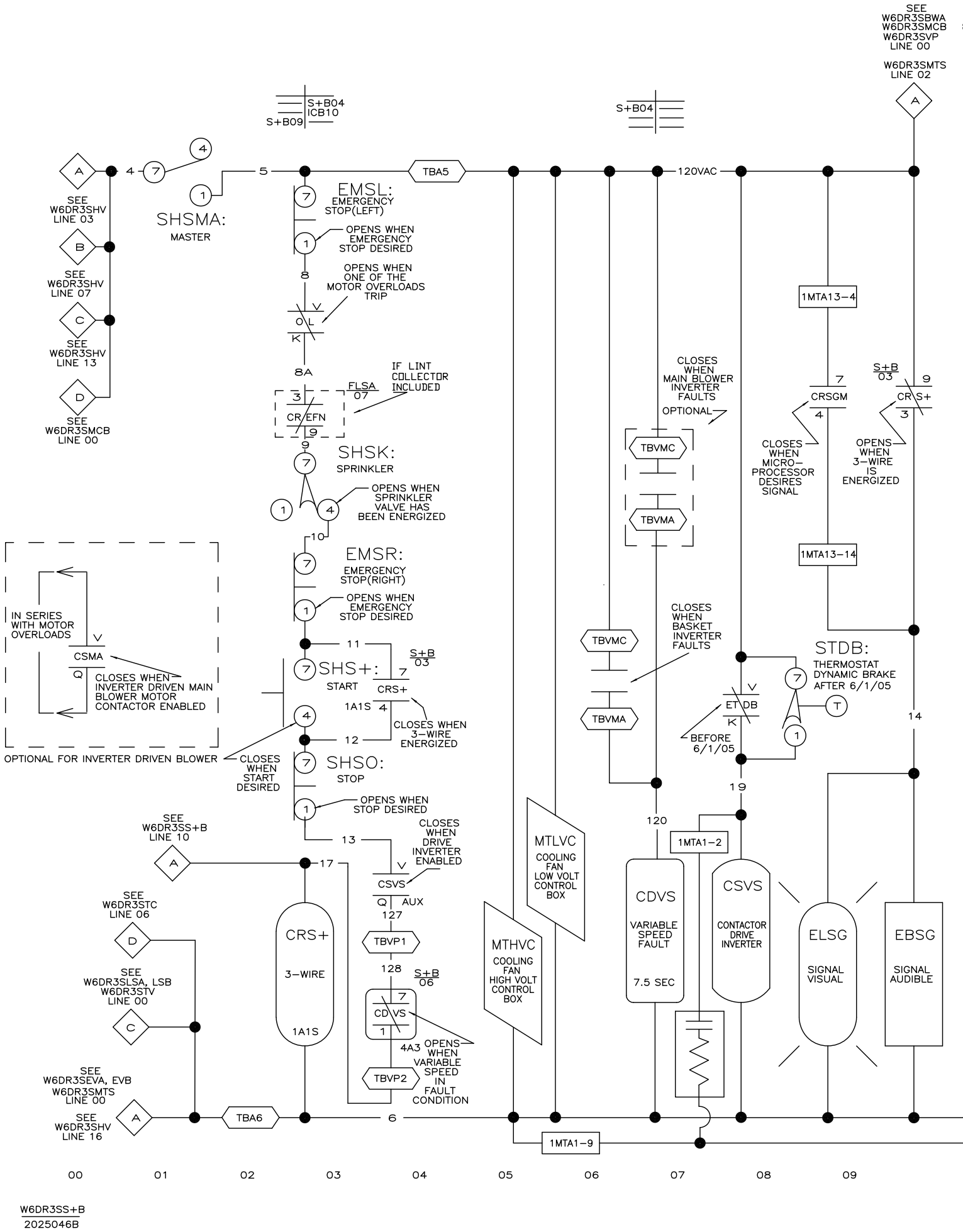


W6DR3SS+A
MICRO 6 SYSTEMS
SCHEMATIC: 3–WIRE CIRCUIT
110V1P50HZ/120V1P60HZ
PELLERIN MILNOR CORPORATION

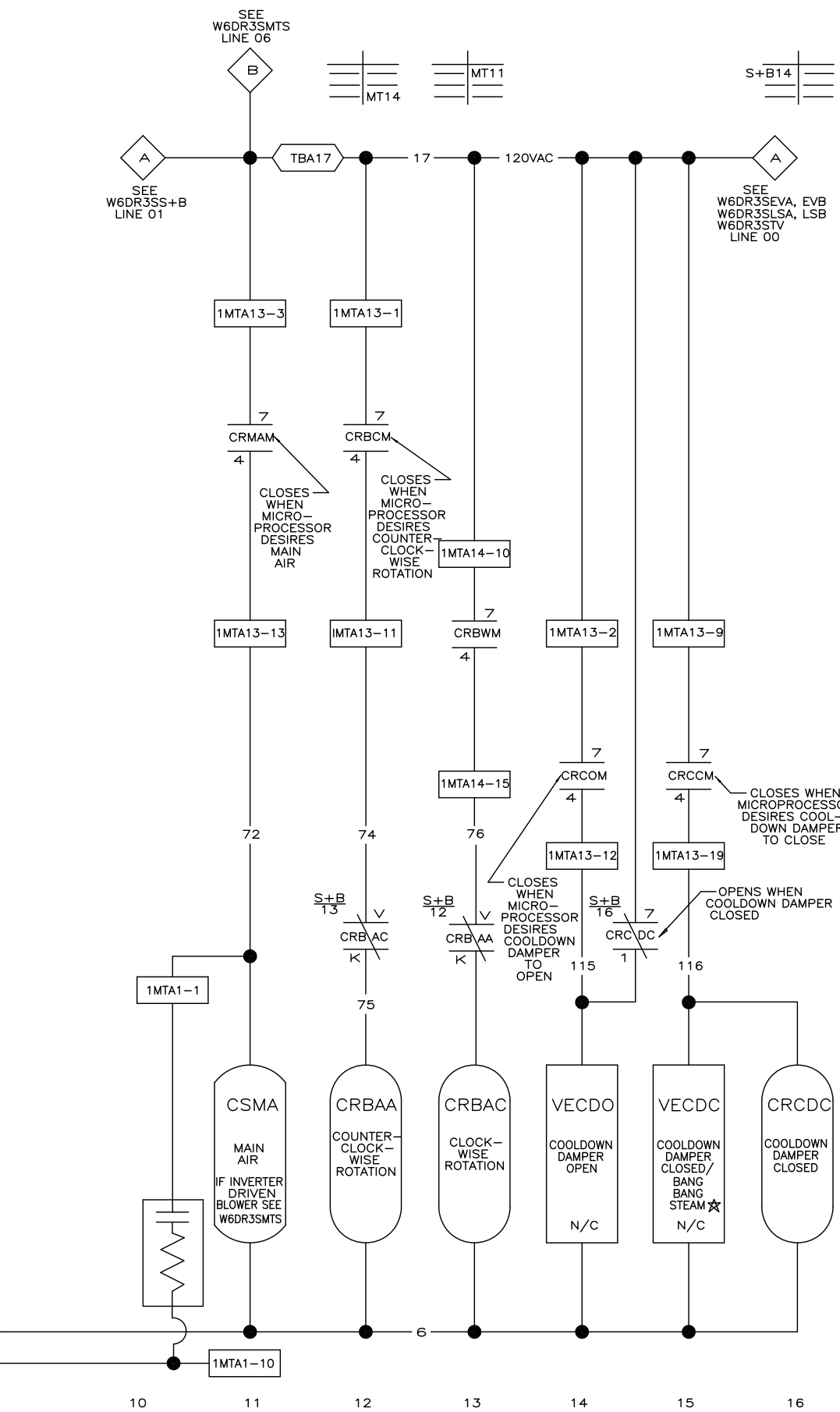
NOTES:

1. TBL IS LOCATED IN LEFT CONTROL BOX.
2. TBA IS LOCATED IN RIGHT CONTROL BOX.
3. TBX IS LOCATED IN LEFT CONTROL BOX.
4. 1MTA13, 1MTA15, 1MTA16 ARE LOCATED ON BO1 (16 OUTPUT BOARD).
5. 1MTA5 IS LOCATED ON BIO1 (8 OUTPUT–16 INPUT BOARD).

☆ WHEN BANG BANG STEAM, THE VALVE IS TUBED OFF OF VECDC. WHEN THE STEAM VALVE IS COMMANDED ON, VECDC IN ENERGIZED. WHEN THE STEAM VALVE IS COMMANDED OFF, THEN VEDC IS DEENGERIZED, BUT VECDO IS NOT COMMANDED ON.



W6DR3SS+B
2025046B



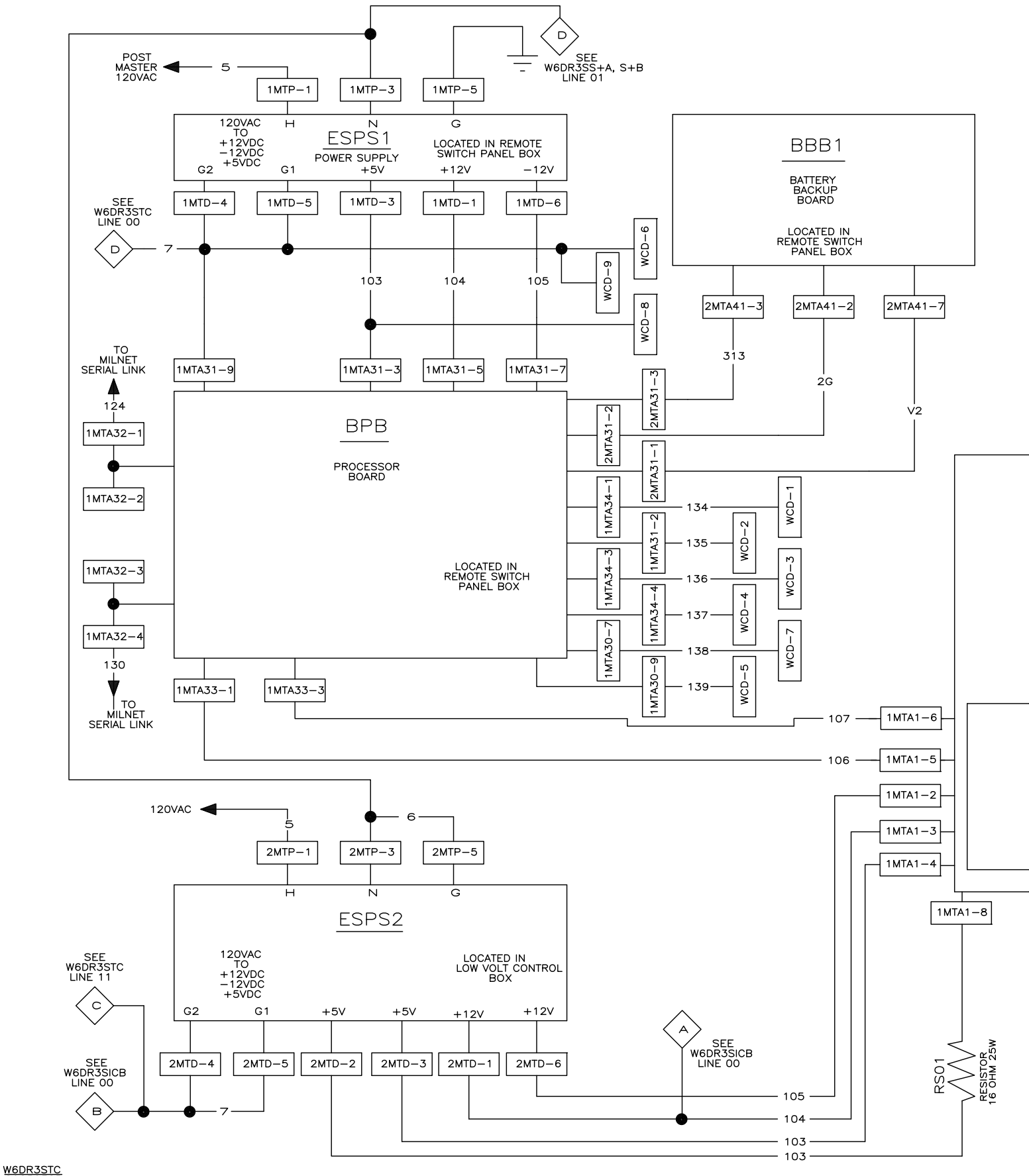
W6DR3SS+B
MICRO 6 SYSTEMS
SCHEMATIC: 3–WIRE CIRCUIT
(FOR LEFT/RIGHT DRYERS ONLY)
110V1P50HZ/120V1P60HZ
PELLERIN MILNOR CORPORATION

NOTES:

1. TBL IS LOCATED IN HIGH VOLT CONTROL BOX.
2. TBA IS LOCATED IN LOW VOLT CONTROL BOX.
3. TBX IS LOCATED IN PROCESSOR CONTROL BOX.
4. 1MTA13, 1MTA15, 1MTA16 ARE LOCATED ON BO1 (24 OUTPUT BOARD).
5. 1MTA5 IS LOCATED ON BIO1 (8 OUTPUT–16 INPUT BOARD).

☆ WHEN BANG BANG STEAM, THE STEAM VALVE IS TUBED OFF OF VECDC. WHEN THE STEAM VALVE IS COMMANDED ON, VECDC IS ENERGIZED. WHEN THE STEAM VALVE IS COMMANDED OFF, THEN VECDC IS DE–ENERGIZED, BUT VECDO IS NOT COMMANDED ON.

REPLACES W6DR3SS+A FOR 64058TS1.


POST MASTER 120VAC
5
1MTP-1
1MTP-3
1MTP-5
D
SEE W6DR3SS+A, S+B LINE 01
ESPS1
POWER SUPPLY
120VAC TO +12VDC −12VDC +5VDC
LOCATED IN REMOTE SWITCH PANEL BOX
H
N
G
G2
G1
+5V
+12V
−12V
1MTD-4
1MTD-5
1MTD-3
1MTD-1
1MTD-6
SEE W6DR3STC LINE 00
D
7
103
104
105
WCD-6
WCD-9
WCD-8
BBB1
BATTERY BACKUP BOARD
LOCATED IN REMOTE SWITCH PANEL BOX
2MTA41-3
2MTA41-2
2MTA41-7
313
2G
V2
TO MILNET SERIAL LINK
124
1MTA32-1
1MTA32-2
1MTA32-3
1MTA32-4
130
TO MILNET SERIAL LINK
1MTA31-9
1MTA31-3
1MTA31-5
1MTA31-7
BPB
PROCESSOR BOARD
LOCATED IN REMOTE SWITCH PANEL BOX
2MTA31-3
2MTA31-2
2MTA31-1
1MTA34-1
1MTA31-2
1MTA34-3
1MTA34-4
1MTA30-7
1MTA30-9
134
135
136
137
138
139
WCD-1
WCD-2
WCD-3
WCD-4
WCD-7
WCD-5
1MTA33-1
1MTA33-3
107
106
1MTA1-6
1MTA1-5
1MTA1-2
1MTA1-3
1MTA1-4
1MTA1-8
120VAC
5
6
2MTP-1
2MTP-3
2MTP-5
H
N
G
ESPS2
120VAC TO +12VDC −12VDC +5VDC
LOCATED IN LOW VOLT CONTROL BOX
SEE W6DR3STC LINE 11
C
SEE W6DR3SICB LINE 00
B
G2
G1
+5V
+5V
+12V
+12V
2MTD-4
2MTD-5
2MTD-2
2MTD-3
2MTD-1
2MTD-6
7
A
SEE W6DR3SICB LINE 00
105
104
103
103
RSO1
RESISTOR 16 OHM 25W
W6DR3STC
2025032B
00
01
02
03
04
05
06
07
08
09
10

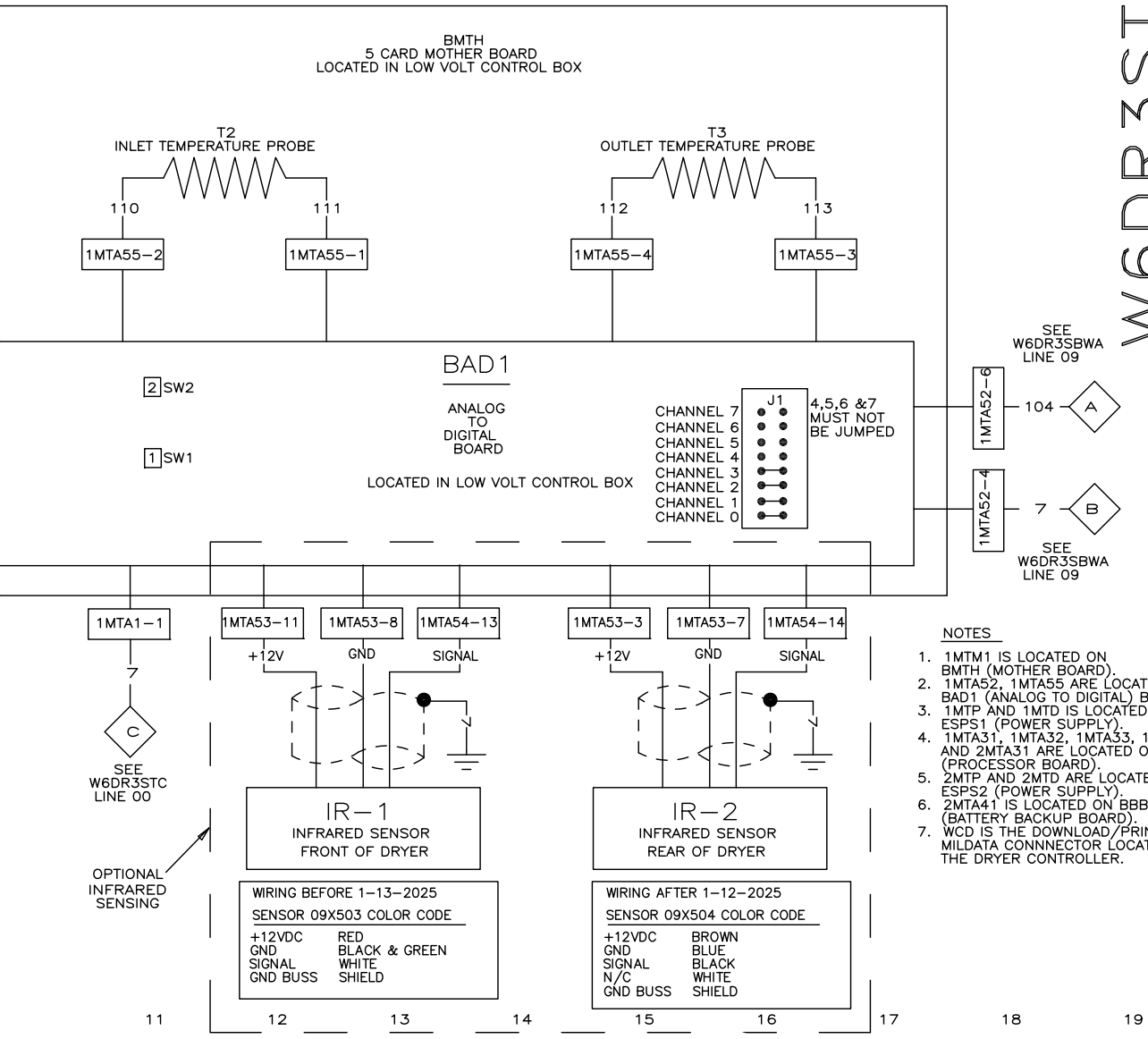
SCHEMATIC: THERMOCOUPLES + 186 PROCESSOR

W6DR3STC

DRYER – STEAM
MICRO 6 SYSTEMS
PELLERIN MILNOR CORPORATION

W6DR3STC
2025032B

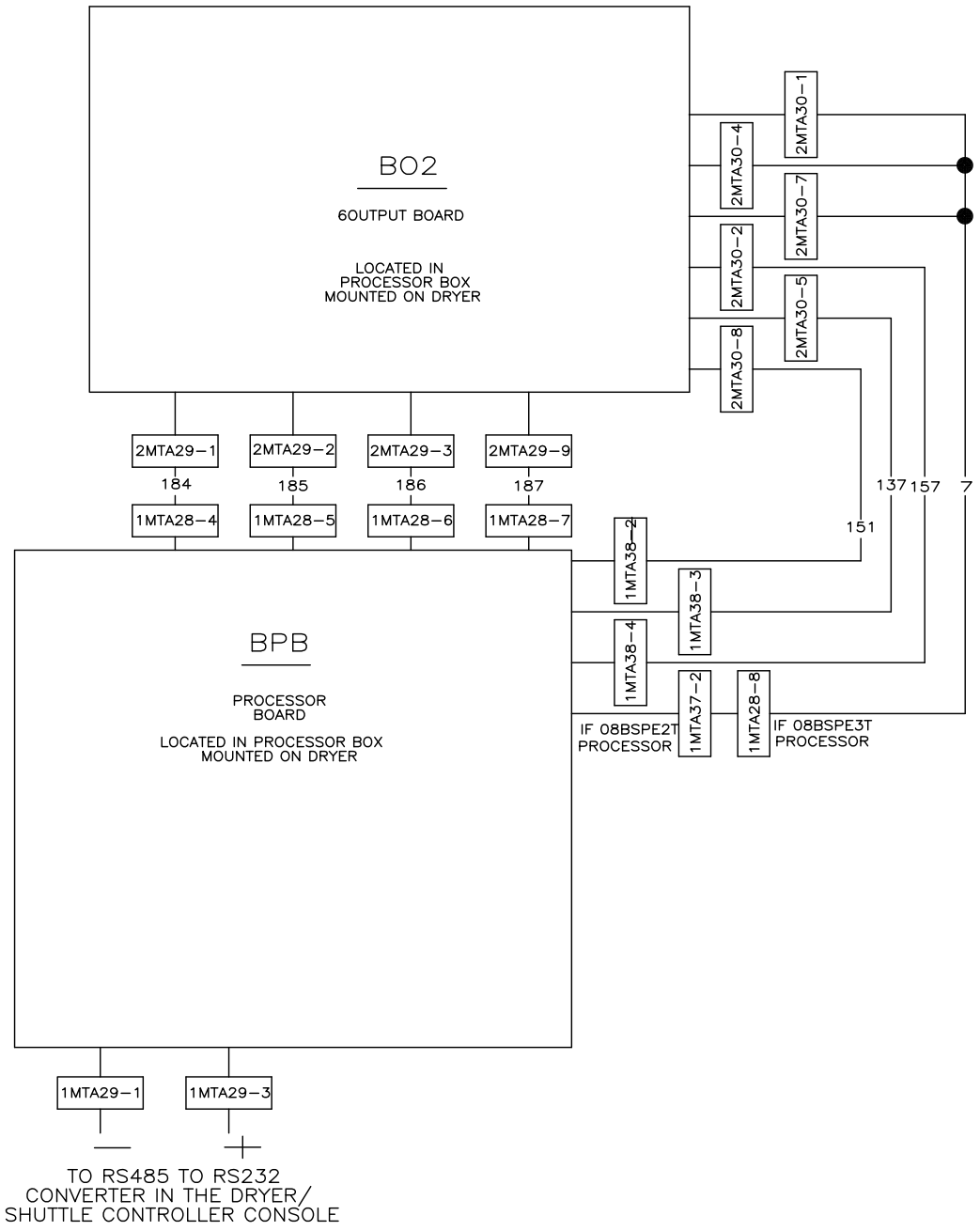
OLDER			CURRENT		
WIRE COLOR CODE			WIRE COLOR CODE		
WIRE NO.	VOLTAGE	WIRE COLOR	WIRE NO.	VOLTAGE	WIRE COLOR
103	+5V	BLUE/RED	103	+5V	BLUE
104	+12V	BLUE/ORANGE	104	+12V	BLUE
105	−12V	BLUE/BLACK	105	−12V	BLUE
7	GND	BLUE/WHITE	7	GND	BLUE
107	SERIAL HIGH	BLUE/RED	107	SERIAL HIGH	BLUE
106	SERIAL LOW	BLUE/BLACK	106	SERIAL LOW	BLUE
130	MILNET HIGH	BLUE/RED	130	MILNET HIGH	BLUE
124	MILNET LOW	BLUE/BLACK	124	MILNET LOW	BLUE
—	24VAC	BLUE/RED	—	24VAC	RED
—	120VAC	RED	—	120VAC	RED
6	CONTROL GROUND	RED/WHITE	6	CONTROL GROUND	RED
—	INPUTS	BLUE/BLACK	—	INPUTS	BLUE
—	OUTPUTS	RED BLACK	—	OUTPUTS	RED



NOTES

1. 1MTM1 IS LOCATED ON BMTH (MOTHER BOARD).
2. 1MTA52, 1MTA55 ARE LOCATED ON BAD1 (ANALOG TO DIGITAL) BOARD.
3. 1MTP AND 1MTD IS LOCATED ON ESPS1 (POWER SUPPLY).
4. 1MTA31, 1MTA32, 1MTA33, 1MTA34 AND 2MTA31 ARE LOCATED ON BPB (PROCESSOR BOARD).
5. 2MTP AND 2MTD ARE LOCATED ON ESPS2 (POWER SUPPLY).
6. 2MTA41 IS LOCATED ON BBB–1 (BATTERY BACKUP BOARD).
7. WCD IS THE DOWNLOAD/PRINTER MILDATA CONNNECTOR LOCATED ON THE DRYER CONTROLLER.

W6DR3STC
2025032B



00 01 02 03 04 05 06 07 08 09 10

W6DR3STR
2018326B

W6DR3STR
2018326B

NOTE:

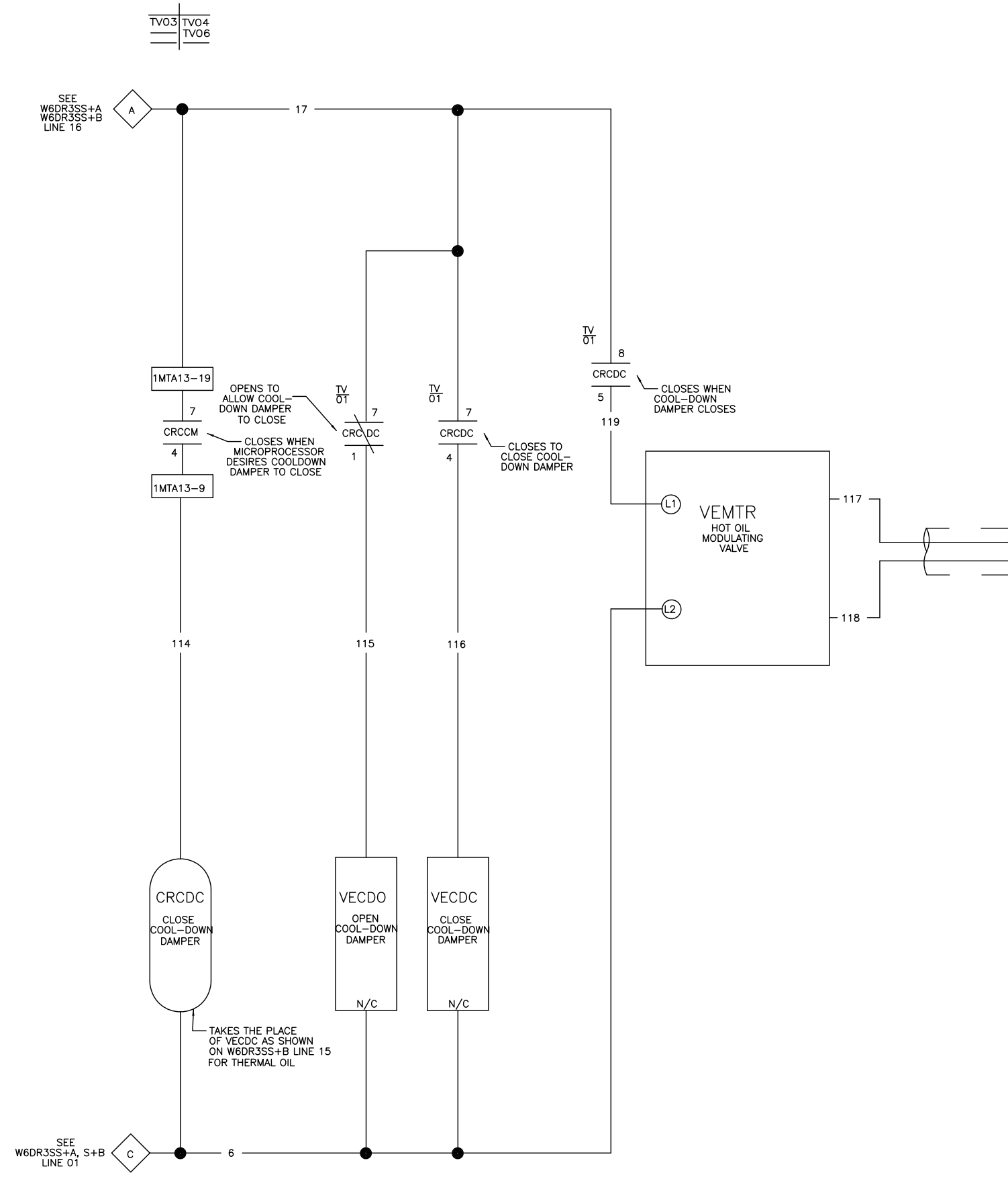
WHEN A DRYER IS CONTROLLED BY A MULTITRAC CONTROLLER RATER THAN AN INDIVIDUAL DRYER CONTROLLER, THIS SCHEMATIC REPLACES W6DR3SD, W6DR3SKP AND THE DIRECT INPUTS FOR LOAD ALLOWED, MILDATA, AND PROGRAM KEY AS SHOWN ON W6DR3SICB

W6DR3STR

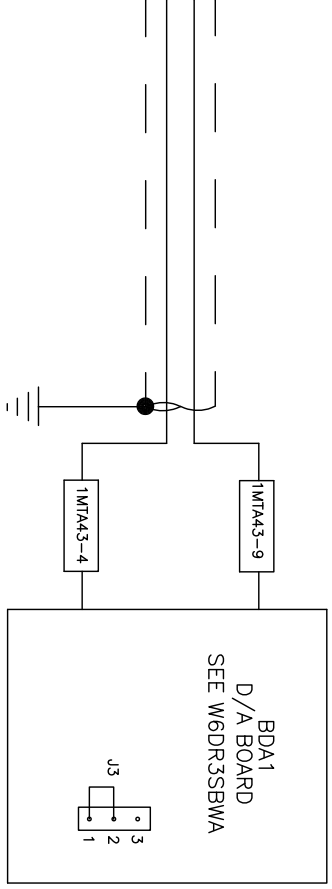
DRYER — STEAM
MICRO 6 SYSTEMS
SCHEMATIC; BOARD WIRING FOR INTERFACE WITH MULTITRAC CONTROLLER

PELLERIN MILNOR CORPORATION

11 12 13 14 15 16 17 18 19



W6DR3STV
2023452B

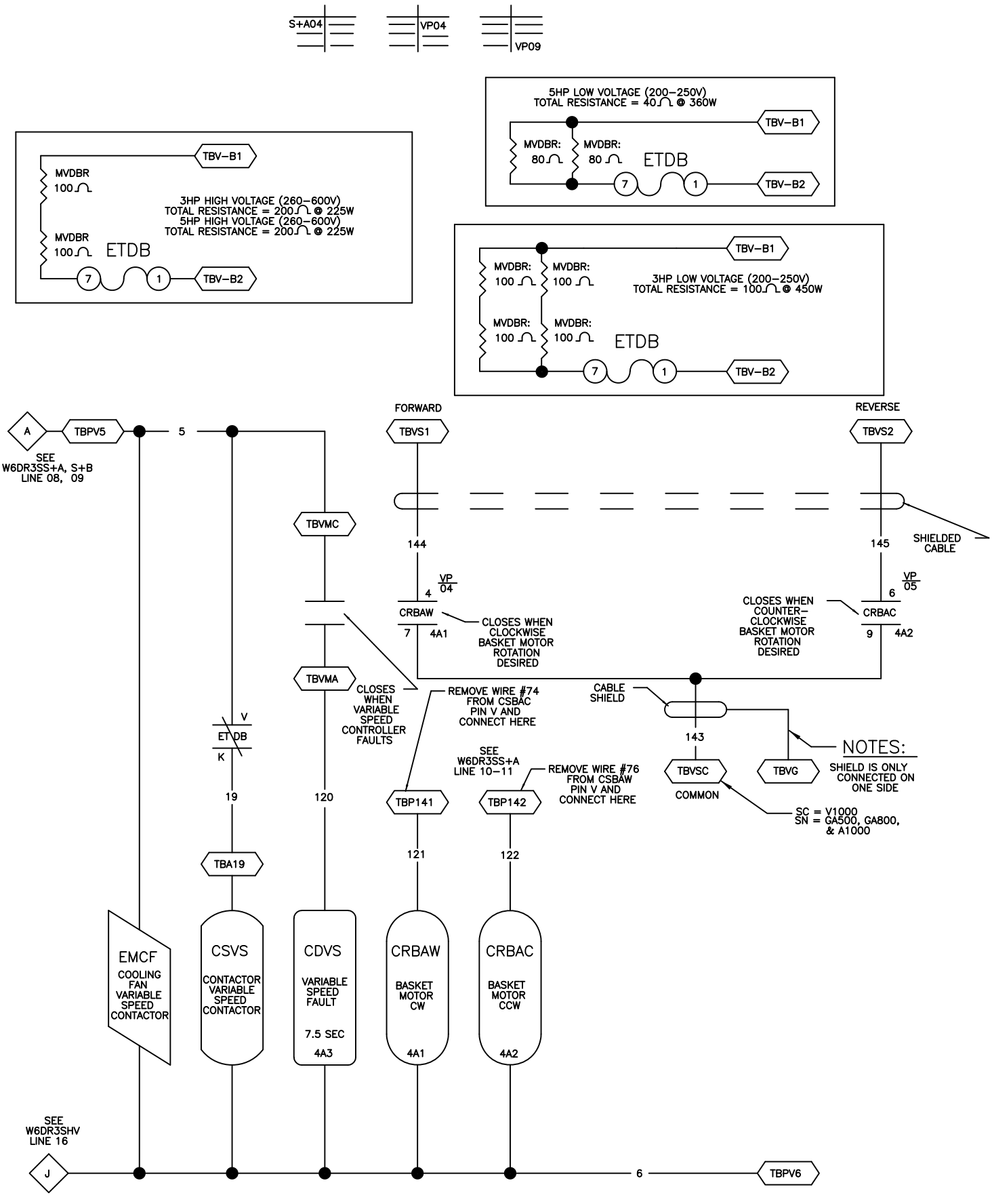


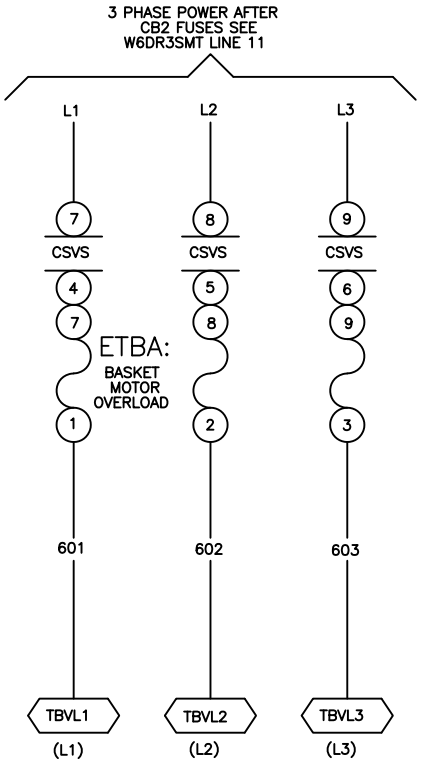
W6DR3STV

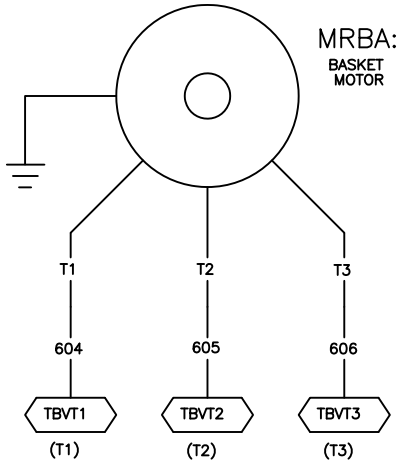
DRYER–HOT OIL
MICRO 6 SYSTEMS MARK V
SCHEMATIC: THERMAL OIL MODULATING VALVE

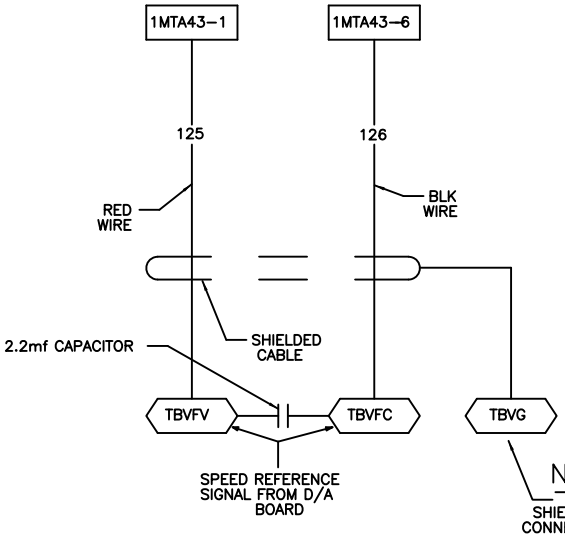
PELLERIN MILNOR CORPORATION

W6DR3STV
2023452B


S+A04
VP04
VP09
5HP LOW VOLTAGE (200–250V)
TOTAL RESISTANCE = 40Ω @ 360W
TBV–B1
MVDBR:
80Ω
MVDBR:
80Ω
ETDB
7
1
TBV–B2
TBV–B1
MVDBR
100Ω
3HP HIGH VOLTAGE (260–600V)
TOTAL RESISTANCE = 200Ω @ 225W
5HP HIGH VOLTAGE (260–600V)
TOTAL RESISTANCE = 200Ω @ 225W
MVDBR
100Ω
ETDB
7
1
TBV–B2
TBV–B1
MVDBR:
100Ω
MVDBR:
100Ω
3HP LOW VOLTAGE (200–250V)
TOTAL RESISTANCE = 100Ω @ 450W
MVDBR:
100Ω
MVDBR:
100Ω
ETDB
7
1
TBV–B2
A
TBPV5
5
SEE
W6DR3SS+A, S+B
LINE 08, 09
FORWARD
TBVS1
REVERSE
TBVS2
TBVMC
144
145
SHIELDED
CABLE
4
VP
04
6
VP
05
CRBAW
7
4A1
CLOSES WHEN
CLOCKWISE
BASKET MOTOR
ROTATION
DESIRED
CLOSES WHEN
COUNTER–
CLOCKWISE
BASKET MOTOR
ROTATION
DESIRED
CRBAC
9
4A2
TBVMA
CLOSES
WHEN
VARIABLE
SPEED
CONTROLLER
FAULTS
REMOVE WIRE #74
FROM CSBAC
PIN V AND
CONNECT HERE
CABLE
SHIELD
V
ET DB
K
143
NOTES:
SHIELD IS ONLY
CONNECTED ON
ONE SIDE
SEE
W6DR3SS+A
LINE 10–11
REMOVE WIRE #76
FROM CSBAW
PIN V AND
CONNECT HERE
TBVSC
COMMON
TBVG
SC = V1000
SN = GA500, GA800,
& A1000
19
120
TBP141
TBP142
121
122
TBA19
EMCF
COOLING
FAN
VARIABLE
SPEED
CONTACTOR
CSVS
CONTACTOR
VARIABLE
SPEED
CONTACTOR
CDVS
VARIABLE
SPEED
FAULT
7.5 SEC
4A3
CRBAW
BASKET
MOTOR
CW
4A1
CRBAC
BASKET
MOTOR
CCW
4A2
SEE
W6DR3SHV
LINE 16
J
6
TBPV6
00
01
02
03
04
05
06
07
08
09
10







W6DR3SVP

DRYER – STEAM

MARK V

SCHEMATIC: OPTIONAL VARIABLE SPEED FOR 50 & 58 DRYERS CONTROLLER

PELLERIN MILNOR CORPORATION

NOTES:

1. TBV IS LOCATED IN VARIABLE SPEED CONTROLLER BOX.
2. 1MTA43 IS LOCATED ON BDA–1 (DIGITAL TO ANALOG BOARD).

11 12 13 14 15 16 17 18 19