



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

Published Manual Number/ECN: ME6PM1S1AE/2025266A

- Publishing System: TPAS2
- Access date: 06/27/2025
- Document ECNs: Latest

Schematic/Electrical Parts

SINGLE STAGE PRESS

**MP1540, MP1550, MP1601,
MP1602, MP1603, MP1604,
MP1650, MP1A50, and MP1A03**



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COMPONENT PARTS LIST

<u>COMPONENT NUMBER</u>	<u>FUNCTION OF THIS COMPONENT NUMBER</u>	<u>WHERE TO FIND THIS COMPONENT</u>	<u>MIL/NOR P/N</u>	<u>DESCRIPTION</u>	<u>LOCATION</u>
	>>>COMPONENT LOCATION DETAILS				
01	DETAIL-INPUTS AND OUTPUTS	W6PM1STG1	B2TAG98010	SINGLE STAGE PRESS IN/OUTPUTS	CONTROL BOX
02	DETAIL-AIR VALVES	W6PM1STG1	B2TAG98011	SINGLE STAGE PRESS AIR VALVES	VALVE BOX
03	DETAIL-PROCESSOR BOX	W6PM1STG1	B2TAG98002	SINGLE STAGE PRESS PROCESSOR	PROCESSOR BOX
04	DETAIL-CONTROL BOX	W6PM1STG2	B2TAG98001	SINGLE STAGE PRESS CONTROL TAG	CONTROL BOX
05	DETAIL-DOOR FAN/SOFT SQUEEZE CNTS	W6PM1STG2	B2T2016034	SINGLE STAGE PRESS DR FAN/SOFT SQ	CONTROL BOX
06	DETAIL-POWER DISTRIBUTION BOX	W6PM1STG2	B2T2023007	SINGLE STAGE PRESS PWR DISTRIBUT	CONTROL BOX
BA	>>>PRINTED CIRCUIT BOARDS				
BAD-1	BOARD- A TO D CONVERTER	W6PM1SBW	08BSADCT	BD:SERIAL A-D CONVERT->TEST	CONTROL BOX
BAD-1	BOARD- A TO D CONVERTER	W6PM1SBWA	08BSADCT	BD:SERIAL A-D CONVERT->TEST	CONTROL BOX
BAD-1	BOARD- A TO D CONVERTER	W6PM1SBWB	08BSADCT	BD:SERIAL A-D CONVERT->TEST	CONTROL BOX
BAD-1	BOARD- A TO D CONVERTER	W6PM1SBWC	08BSADCT	BD:SERIAL A-D CONVERT->TEST	CONTROL BOX
BAD-1	BOARD- A TO D CONVERTER	W6PM1SBWD	08BSADCT	BD:SERIAL A-D CONVERT->TEST	CONTROL BOX
BASD	BOARD-STEAM DISINFECT	W6PM1SSD	08B1BSDT	BOARD:M6 CBW STEAM DIS TEST	CONTROL BOX
BBB-1	BOARD-RAM BATTERY BACKUP	W6PM1SBW	08BSBB1T	BOARD: SER BATT BACKUP-TEST	PROCESSOR BX
BBB-1	BOARD-RAM BATTERY BACKUP	W6PM1SBWA	08BSBB1T	BOARD: SER BATT BACKUP-TEST	PROCESSOR BX
BBB-1	BOARD-RAM BATTERY BACKUP	W6PM1SBWB	08BSBB1T	BOARD: SER BATT BACKUP-TEST	PROCESSOR BX
BBB-1	BOARD-RAM BATTERY BACKUP	W6PM1SBWC	08BSBB1T	BOARD: SER BATT BACKUP-TEST	PROCESSOR BX
B-CMR	CAMERA CAMERA POWER SUPPLY	W6PM1SLB	08BAMVNC	NETWORK CAMERA - OUTDOOR - VAND#	INSIDE PRESS
BDA-1	BOARD-HI RES D TO A #1	W6PM1SBW	08BSDACHT	BD:HI-RES SERIAL D-A->TEST	CONTROL BOX
BDA-1	BOARD-HI RES D TO A #1	W6PM1SBWA	08BSDACHT	BD:HI-RES SERIAL D-A->TEST	CONTROL BOX
BDA-1	BOARD-HI RES D TO A #1	W6PM1SBWB	08BSDACHT	BD:HI-RES SERIAL D-A->TEST	CONTROL BOX
BDA-1	BOARD-HI RES D TO A #1	W6PM1SBWC	08BSDACHT	BD:HI-RES SERIAL D-A->TEST	CONTROL BOX
BDA-1	BOARD-HI RES D TO A #1	W6PM1SBWD	08BSDACHT	BD:HI-RES SERIAL D-A->TEST	CONTROL BOX
BDFP	DISPLAY-10.4 FLAT PANEL	W6PM1SEC	08EFD320C	DISPLAY 10.4FP/DCUL7/INVERTER	
BDVFD	DISPLAY-MICROPROCESSOR IF 8088 PROC.	W6PM1SD	08BSEVFD5U	SERIAL VFD 2LINE 9600B-TEST	SWITCH PANEL
BDVFD	DISPLAY-MICROPROCESSOR IF 186 PROC.	W6PM1SD	08BSEVFD5V	BD:SER VFD.2LINE-19200B-TEST	SWITCH PANEL
BFPC	BOARD-COLOR FLAT PANEL CONTROLLER	W6PM1SEC	08EFD320C	DISPLAY 10.4FP/DCUL7/INVERTER	SWITCH PANEL
BFPI	BOARD-COLOR FLAT PANEL INTERFACE	W6PM1SEC	08BSEDIFAT	BD:FP LCD DRV#INV INTERFACE>TEST	SWITCH PANEL
BIO-1	BOARD-8 OUTPUT/16INPUT #1	W6PM1SBW	08BS816CT	BD:SERIAL 8OUT-16INPUT-TEST	CONTROL BOX
BIO-1	BOARD-8 OUTPUT/16INPUT #1	W6PM1SBWA	08BS816CT	BD:SERIAL 8OUT-16INPUT-TEST	CONTROL BOX
BIO-1	BOARD-8 OUTPUT/16INPUT #1	W6PM1SBWB	08BS816CT	BD:SERIAL 8OUT-16INPUT-TEST	CONTROL BOX
BIO-1	BOARD-8 OUTPUT/16INPUT #1	W6PM1SBWC	08BS816CT	BD:SERIAL 8OUT-16INPUT-TEST	CONTROL BOX

COMPONENT PARTS LIST

BIO-1	BOARD-8 OUTPUT/16INPUT #1	W6PM1SBWD	08BS816CT	BD:SERIAL 8OUT-16INPUT-TEST	CONTROL BOX
BIO-2	BOARD-8 OUT/16IN #2 (DATA PASS)	W6PM1SBW	08BS816CT	BD:SERIAL 8OUT-16INPUT-TEST	CONTROL BOX
BIO-2	BOARD-8 OUT/16IN #2 (DATA PASS)	W6PM1SBWA	08BS816CT	BD:SERIAL 8OUT-16INPUT-TEST	CONTROL BOX
BIO-2	BOARD-8 OUT/16IN #2 (DATA PASS)	W6PM1SBWB	08BS816CT	BD:SERIAL 8OUT-16INPUT-TEST	CONTROL BOX
BIO-2	BOARD-8 OUT/16IN #2 (DATA PASS)	W6PM1SBWC	08BS816CT	BD:SERIAL 8OUT-16INPUT-TEST	CONTROL BOX
BIO-2	BOARD-8 OUT/16IN #2 (DATA PASS)	W6PM1SBWD	08BS816CT	BD:SERIAL 8OUT-16INPUT-TEST	CONTROL BOX
BIO-3	BOARD-8OUT/16IN #3 (DATA PASS)	W6PM1SBW	08BS816CT	BD:SERIAL 8OUT-16INPUT-TEST	CONTROL BOX
BIO-3	BOARD-8OUT/16IN #3 (DATA PASS)	W6PM1SBWA	08BS816CT	BD:SERIAL 8OUT-16INPUT-TEST	CONTROL BOX
BIO-3	BOARD-8OUT/16IN #3 (DATA PASS)	W6PM1SBWB	08BS816CT	BD:SERIAL 8OUT-16INPUT-TEST	CONTROL BOX
BIO-3	BOARD-8OUT/16IN #3 (DATA PASS)	W6PM1SBWC	08BS816CT	BD:SERIAL 8OUT-16INPUT-TEST	CONTROL BOX
BIO-3	BOARD-8OUT/16IN #3 (DATA PASS)	W6PM1SBWD	08BS816CT	BD:SERIAL 8OUT-16INPUT-TEST	CONTROL BOX
BIO-4	BOARD-8OUT/16IN #4 (DATA PASS)	W6PM1SBWA	08BS816CT	BD:SERIAL 8OUT-16INPUT-TEST	CONTROL BOX
BIO-4	BOARD-8OUT/16IN #4 (DATA PASS)	W6PM1SBWB	08BS816CT	BD:SERIAL 8OUT-16INPUT-TEST	CONTROL BOX
BIO-4	BOARD-8OUT/16IN #4 (DATA PASS)	W6PM1SBWC	08BS816CT	BD:SERIAL 8OUT-16INPUT-TEST	CONTROL BOX
BIO-4	BOARD-8OUT/16IN #4 (DATA PASS)	W6PM1SBWD	08BS816CT	BD:SERIAL 8OUT-16INPUT-TEST	CONTROL BOX
BIO-5	BOARD-8OUT/16IN #5 (BOOSTER PUMP)	W6PM1SBWD	08BS816CT	BD:SERIAL 8OUT-16INPUT-TEST	CONTROL BOX
BIO-5	BOARD-8OUT/16IN #5 (BOOSTER PUMP)	W6PM1SBWD	08BS816CT	BD:SERIAL 8OUT-16INPUT-TEST	CONTROL BOX
BMTH	BOARD-5 CARD MOTHER	W6PM1SBW	08BS5MTHAT	BD:SERIAL 5 CARD MOTHER-TEST	CONTROL BOX
BMTH	BOARD-8 CARD MOTHER	W6PM1SBWA	08BS8MTHAT	BD:SERIAL 8 CARD MOTHER-TEST	CONTROL BOX
BMTH	BOARD-8 CARD MOTHER	W6PM1SBWB	08BS8MTHAT	BD:SERIAL 8 CARD MOTHER-TEST	CONTROL BOX
BMTH	BOARD-8 CARD MOTHER	W6PM1SBWC	08BS8MTHAT	BD:SERIAL 8 CARD MOTHER-TEST	CONTROL BOX
BMTH	BOARD-8 CARD MOTHER	W6PM1SBWD	08BS8MTHAT	BD:SERIAL 8 CARD MOTHER-TEST	CONTROL BOX
BO24-1	BOARD-24 OUTPUT #1	W6PM1SBW	08BSO24AT	BD:SERIAL 24 OUTPUT->TEST	CONTROL BOX
BO24-1	BOARD-24 OUTPUT #1	W6PM1SBWA	08BSO24AT	BD:SERIAL 24 OUTPUT->TEST	CONTROL BOX
BO24-1	BOARD-24 OUTPUT #1	W6PM1SBWB	08BSO24AT	BD:SERIAL 24 OUTPUT->TEST	CONTROL BOX
BO24-1	BOARD-24 OUTPUT #1	W6PM1SBWC	08BSO24AT	BD:SERIAL 24 OUTPUT->TEST	CONTROL BOX
BO24-1	BOARD-24 OUTPUT #1	W6PM1SBWD	08BSO24AT	BD:SERIAL 24 OUTPUT->TEST	CONTROL BOX
BPB	BOARD-8088 PROCESSOR	W6PM1SBW	08BSPDT	8088 PROCESSOR ->TESTED	PROCESSOR BX
BPB	BOARD-186 PROCESSOR	W6PM1SBWA	08BSPE3T	PROC BD+FP->TEST	PROCESSOR BX
BPB	BOARD-186 PROCESSOR	W6PM1SBWB	08BSPE3T	PROC BD+FP->TEST	PROCESSOR BX
BPB	BOARD-Q7 PROCESSOR	W6PM1SBWC	08BHGQ7BS	Q7 PROCESSOR WITH 10.4 DISPLAY 1024 SWITCH PANEL	SWITCH PANEL
BPB	BOARD-IMX6 PROCESSOR	W6PM1SBWD	08BHM6LAT	ASSY:IMX6 PROC+10.4 DSP-TESTED	CONTROL BOX
BPC-1	BOARD-PROPORTIONAL VALVE CONTRL	W6PM1SBW	96RH708A3T	ELE AMPLIFIER CARD-PRESS+TAG	CONTROL BOX
BPC-1	BOARD-PROPORTIONAL VALVE CONTRL	W6PM1SBWA	96RH708A3T	ELE AMPLIFIER CARD-PRESS+TAG	CONTROL BOX
BPC-1	BOARD-PROPORTIONAL VALVE CONTRL	W6PM1SBWB	96RH708A3T	ELE AMPLIFIER CARD-PRESS+TAG	CONTROL BOX

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BWPS	BOARD:WATER SENSOR PROBES	W6PM1SI2	08BNWPSAT	WATER PROBE SENSOR-TESTED	CONTROL BOX
BWPS	BOARD:WATER SENSOR PROBES	W6PM1SI2A	08BNWPSAT	WATER PROBE SENSOR-TESTED	CONTROL BOX
BWPS	BOARD:WATER SENSOR PROBES	W6PM1SI2B	08BNWPSAT	WATER PROBE SENSOR-TESTED	CONTROL BOX
CB	>>>CIRCUIT BREAKERS				
CBFANI1	CIRCUIT BREAKER-DOOR FAN	W6PM1SMTR	09FTB010T	OVERLOAD PROTECTOR ADJ.6.3-10	CONTROL BOX
CBPRD	CIRCUIT BREAKER-PRESS RETURN PUMP	W6PM1SMTR	09FTB016T	OVERLOAD PROTECTOR ADJ. 10-16	CONTROL BOX
CD	>>RELAY-DELAYS				
CD1	DELAY-PIVOT COINC IN DISCHARGE POSITION	W6PM1SPC1	09CF002037	TDR F2S 2PDT 11PIN 120V60/50C	CONTROL BOX
CDCH	DELAY-PIVOTING COINC CLEARED	W6PM1SPC1	09CA0100A37	ADJ. TIME DELAY 10S OMRON 100-120V	CONTROL BOX
CDD	DELAY-PIVOTING COINC DISC EYE BLOCKED	W6PM1SPC1	09CF002037	TDR F2S 2PDT 11PIN 120V60/50C	CONTROL BOX
CL	>>>RELAY-LATCH				
CLDSDS	RELAY-LATCH <3/2025	W6PM1SSD	09CL2C-C37	RELAY-LATCH DPDT 120V 2-COIL	CONTROL BOX
CLDSDS	RELAY-LATCH >3/2025	W6PM1SSD	09CL2C-D37	RELAY-LATCH DPDT 120V 2-COIL ICECU	CONTROL BOX
CP	>>>PHOTOEYES				
CPCBL	PHOTOEYE-COINC IS LOADED	W6PM1SI2	09RPE011	PHOTOEYE VALU-BEAM 10-30DC	ON COINC
CPCBL	PHOTOEYE-COINC IS LOADED	W6PM1SI2A	09RPE011	PHOTOEYE VALU-BEAM 10-30DC	ON COINC
CPCBL	PHOTOEYE-COINC IS LOADED	W6PM1SI2B	09RPE011	PHOTOEYE VALU-BEAM 10-30DC	ON COINC
CPGCR	PHOTOEYE-GOODS AT END OF BELT	W6PM1SI1	09RPE010R	PHOTOEYE RECEIVER AC	AT BELT
CPGCR	PHOTOEYE-GOODS AT END OF BELT	W6PM1SI1A	09RPE010R	PHOTOEYE RECEIVER AC	AT BELT
CPGCR	PHOTOEYE-GOODS AT END OF BELT	W6PM1SI1B	09RPE010R	PHOTOEYE RECEIVER AC	AT BELT
CPGCS	PHOTOEYE-GOODS AT END OF BELT	W6PM1SI1	09RPE010E	P.E. EMITTER AC #SM303E W30'	ON BELT
CPGCS	PHOTOEYE-GOODS AT END OF BELT	W6PM1SI1A	09RPE010E	P.E. EMITTER AC #SM303E W30'	ON BELT
CPGCS	PHOTOEYE-GOODS AT END OF BELT	W6PM1SI1B	09RPE010E	P.E. EMITTER AC #SM303E W30'	ON BELT
CPLC	LIGHT CURTAIN EMITTER/RECEIVER	W6PM1SLC	09RPE018LBA	LITE BEAM EMITTER/RECEIVER 600MM B PRESS DISCHARGE	
CPLCC	LIGHT CURTAIN CONTROLLER	W6PM1SLC	09RPE018LBC	LITE BEAM MUTING RELAY MODULE	CONTROL BOX
CR	>>>RELAY-PILOT OR CONTROL				
CR100	RELAY-LOWEST RAM PRESSURE	W6PM1SSQ	09C024D37	4PDT "KH" 110/120V	SOFTSQUEEEZE BX
CR250	RELAY-SECOND LOWEST RAM PRESSURE	W6PM1SSQ	09C024D37	4PDT "KH" 110/120V	SOFTSQUEEEZE BX
CRBO	RELAY-HIGH CURTAIN NOT BLOCKED	W6PM1SLC	09C024D37	4PDT "KH" 110/120V	CONTROL BOX
CRCBL	RELAY-COINC LOADED	W6PM1SPC1	09C024D37	4PDT "KH" 110/120V	CONTROL BOX
CRD	RELAY-DISCHARGE END EYE BLOCKED	W6PM1SPC1	09C024D37	4PDT "KH" 110/120V	CONTROL BOX
CRDDU	RELAY-DISCHARGE DOOR UP	W6PM1SVS	09C024D37	4PDT "KH" 110/120V	CONTROL BOX
CRFLH	RELAY-PRESS RETURN TANK HIGH	W6PM1SPP1	09C024D24	RELAY 4PDT DIFGLD 14PIN 24V	CONTROL BOX
CRFL	RELAY-PRESS RETURN TANK LOW	W6PM1SPP1	09C024D24	RELAY 4PDT DIFGLD 14PIN 24V	CONTROL BOX
CRGC	RELAY-GOODS AT THE END OF THE BELT	W6PM1SI1	09C024D37	4PDT "KH" 110/120V	CONTROL BOX

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CRGC	RELAY-GOODS AT THE END OF THE BELT	W6PM1SI1A	09C024D37	4PDT "KH" 110/120V	CONTROL BOX
CRGC	RELAY-GOODS AT THE END OF THE BELT	W6PM1SI1B	09C024D37	4PDT "KH" 110/120V	CONTROL BOX
CRH	RELAY-COINC AT HOME POSITION	W6PM1SPC1	09C024D37	4PDT "KH" 110/120V	CONTROL BOX
CRN	RELAY-NORMAL RAM PRESSURE	W6PM1SSQ	09C024D37	4PDT "KH" 110/120V	SOFTSQUEEEZE BX
CRPRB	RELAY-RUN PIVOTING COINC BELT	W6PM1SPC1	09C024D37	4PDT "KH" 110/120V	CONTROL BOX
CRRB	RELAY-RUN PIVOTING COINC BELT	W6PM1SPC1	09C024D37	4PDT "KH" 110/120V	CONTROL BOX
CRS+	RELAY-START	W6PM1SS+	09C024D37	4PDT "KH" 110/120V	CONTROL BOX
CRSGG	RELAY-SIGNAL FLASHING LIGHT	W6PM1SS+	09C024D37	4PDT MINITURE RELAY PT W/LED	CONTROL BOX
CS	>>>CONTACTOR-MOTOR STARTER				
CSCRB	CONTACTOR-COINC BELT	W6PM1SPC1	09MC08B337	12A 3P MCS CONT NR 120V5/6	CONTROL BOX
CSCRB	CONTACTOR-COINC BELT	W6PM1SVS	09MC08B337	12A 3P MCS CONT NR 120V5/6	CONTROL BOX
CSFAN1	CONTACTOR-DOOR FAN	W6PM1SS+	09MC08B337	12A 3P MCS CONT NR 120V5/6	CONTROL BOX
CSFAN2	CONTACTOR-HOOD FAN	W6PM1SS+	09MC08B337	12A 3P MCS CONT NR 120V5/6	CONTROL BOX
CSFAN3	CONTACTOR-HOOD FAN	W6PM1SS+	09MC08B337	12A 3P MCS CONT NR 120V5/6	CONTROL BOX
CSHP(MP16xx-I	CONTACTOR-HYDRAULIC PUMP HIGH VOLT	W6PM1SS+	09MC08G337	37A 3P MCS CONT NR 120V5/6	CONTROL BOX
CSHP(MP16xx-I	CONTACTOR-HYDRAULIC PUMP LOW VOLT	W6PM1SS+	09MC08L337	60A 3P MCS CONT NR 120V5/6	CONTROL BOX
CSHP(MP16xx-I	CONTACTOR-HYDRAULIC PUMP HIGH VOLT	W6PM1SS+	09MC08L337	60A 3P MCS CONT NR 120V5/6	CONTROL BOX
CSHP(MP16xx-I	CONTACTOR-HYDRAULIC PUMP LOW VOLT	W6PM1SS+	09MC08U337	180A 3P MCS CONT NR 120V5/6	CONTROL BOX
CSPRP	CONTACTOR-PRESS RETURN PUMP	W6PM1SMTR	09MC08B337	12A 3P MCS CONT NR 120V5/6	CONTROL BOX
CSRBF	CONTACTOR-RUN BELT FORWARD	W6PM1SVS	09MC08B337	12A 3P MCS CONT NR 120V5/6	CONTROL BOX
CSRBR	CONTACTOR-RUN BELT REVERSE	W6PM1SVS	09MC08B337	12A 3P MCS CONT NR 120V5/6	CONTROL BOX
CSRC	CONTACTOR-RECIRC. AND COOLING FAN	W6PM1SS+	09MC08C337	16A 3P MCS CONT NR 120V5/6	CONTROL BOX
EB	>>>AUDIBLE SIGNALS				
EBSG	BUZZER-OPERATOR SIGNAL	W6PM1SS+	09H015	BUZZ/115V W6-32 CTR+6"LEADS	SWITCH PANEL
EC	>>>COUNTERS				
ECC	COUNTER-CYCLE	W6PM1SVS	38C201	NONRESETABLE COUNTER 115VAC	CONTROL BOX
ECH	METER-HOUR	W6PM1SS+	38C202	HOUR METER 120VAC	CONTROL BOX
EF	>>>FUSE OR FUSE HOLDER				
EF1	FUSE-CONTROL CIRCUIT PRIMARY-L1	W6PM1SHV	09FF005AWN	FUSE #KTK 5A600V-HPS HOLDER	CONTROL BOX
EF2	FUSE-CONTROL CIRCUIT PRIMARY-L2	W6PM1SHV	09FF005AWN	FUSE #KTK 5A600V-HPS HOLDER	CONTROL BOX
EF37	FUSE-CONTROL CIRCUIT SECONDARY	W6PM1SHV	09FF006AMA	FUSE BK/ABC 6 AMP 250V BUSS	CONTROL BOX
EFF1	FUSE-DOOR FAN L1	W6PM1SMTR	09FF002AWN	FUSE BUSS #KTK 2 1/2 AMP 600V	CONTROL BOX
EFF2	FUSE-DOOR FAN L2	W6PM1SMTR	09FF002AWN	FUSE BUSS #KTK 2 1/2 AMP 600V	CONTROL BOX
EL	>>>LIGHT-PILOT OR INDICATOR				
ELES	LIGHT-ILLUMINATED EMERGENCY STOP	W6PM1SS+	09N507E	ESTOP SWITCH HEAD RED CLEAR NEED SWITCH PANEL	

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ELES	LIGHT-ILLUMINATED EMERGENCY STOP	W6PM1SS+	09N507E	ESTOP SWITCH HEAD RED CLEAR NEED SWITCH PANEL	CONTROL BOX
ELES	LIGHT-ILLUMINATED EMERGENCY STOP	W6PM1SS+	09N507E	ESTOP SWITCH HEAD RED CLEAR NEED SWITCH PANEL	CONTROL BOX
ELES	LIGHT-ILLUMINATED EMERGENCY STOP	W6PM1SS+	09N507E	ESTOP SWITCH HEAD RED CLEAR NEED SWITCH PANEL	CONTROL BOX
ELLB	LIGHT-LED LIGHT BAR	W6PM1SLB	09J092A12	12VDC LED BAR WATERPROOF 60 LEDS INSIDE PRESS	CONTROL BOX
ELM	LIGHT-ROTATING BEACON	W6PM1SPC1	09H025V37	BEACON ROTARY 5.5"DIA AMBER	CONTROL BOX
ELPRP	LIGHT-PRESS RETURN PUMP RUNNING	W6PM1SPP	09J060A37	LAMP 1/2" AMB 250V IDI 1051QC3	CONTROL BOX
ELPRP	LIGHT-PRESS RETURN PUMP RUNNING	W6PM1SPP1	09J060A37	LAMP 1/2" AMB 250V IDI 1051QC3	CONTROL BOX
ELPTT	LIGHT-PRESS RETURN PUMP DID NOT RUN	W6PM1SPP	09J060A37	LAMP 1/2" AMB 250V IDI 1051QC3	CONTROL BOX
ELPTT	LIGHT-PRESS RETURN PUMP DID NOT RUN	W6PM1SPP1	09J060A24	LAMP 1/2" AMB IDI #1090QC3-28V	CONTROL BOX
ELSG	LIGHT-OPERATOR SIGNAL	W6PM1SS+	09J060WH37	LAMP 1/2" WHITE 120V TAB	CONTROL BOX
ELSGF	LIGHT-SIGNAL (FLASHING)	W6PM1SS+	09H025V37	BEACON ROTARY 5.5"DIA AMBER	CONTROL BOX
ES	>>>ELECTRONIC POWER SUPPLIES				
ES24	POWER SUPPLY-24VDC OUTPUT	W6PM1SBW	08PSL6B224	UNO-PS/1AC/24DC/240W 10 AMP	CONTROL BOX
ES24	POWER SUPPLY-24VDC OUTPUT	W6PM1SBWA	08PSL6B224	UNO-PS/1AC/24DC/240W 10 AMP	CONTROL BOX
ES24	POWER SUPPLY-24VDC OUTPUT	W6PM1SBWB	08PSL6B224	UNO-PS/1AC/24DC/240W 10 AMP	CONTROL BOX
ES24	POWER SUPPLY-24VDC OUTPUT	W6PM1SBWC	08PSL6B224	UNO-PS/1AC/24DC/240W 10 AMP	CONTROL BOX
ES24	POWER SUPPLY-SOFT SQUEEZE 24VDC	W6PM1SSQ	08PSL6B224	UNO-PS/1AC/24DC/240W 10 AMP	SOFTSQUEEZE BX
ES24	POWER SUPPLY-24VDC OUTPUT	W6PM1SBWD	08PSL6B224	UNO-PS/1AC/24DC/240W 10 AMP	CONTROL BOX
ESLB	POWER SUPPLY-LIGHT BAR	W6PM1SLB	08PSS3401T	40 WATT POWER SUPPLY TESTED	CONTROL BOX
ESLC	POWER SUPPLY-LIGHT CURTAIN	W6PM1SLC	09RPE018LBD	LITE BEAM 24VDC POWER SUPPLY	CONTROL BOX
ESPS	POWER SUPPLY-MICROPROCESSOR	W6PM1SBW	08PSS3401T	40 WATT POWER SUPPLY TESTED	CONTROL BOX
ESPS	POWER SUPPLY-MICROPROCESSOR	W6PM1SBWA	08PSS3401T	40 WATT POWER SUPPLY TESTED	CONTROL BOX
ESPS	POWER SUPPLY-MICROPROCESSOR	W6PM1SBWB	08PSS3401T	40 WATT POWER SUPPLY TESTED	CONTROL BOX
ESPS	POWER SUPPLY-CARD CAGE	W6PM1SBWC	08PSS3401T	40 WATT POWER SUPPLY TESTED	CONTROL BOX
ESPS	POWER SUPPLY-CARD CAGE	W6PM1SBWD	08PSS3401T	40 WATT POWER SUPPLY TESTED	CONTROL BOX
ESPS2	POWER SUPPLY-Q7 PROCESSOR	W6PM1SBWC	08PSS2401T	PRW SUPY 40WATT 120/240V TO 12V TE	CONTROL BOX
ESPS2	POWER SUPPLY-Q7 PROCESSOR	W6PM1SBWD	08PSS2402	POWER SUPPLY DIN RAIL 120/240VAC TC	CONTROL BOX
ET	>>>OVERLOADS				
ETCRB	OVERLOAD-COINC BELT	W6PM1SMTR	09FTD00037T	E1 PLUS OL RELAY 3.2-16A	CONTROL BOX
ETFAN1	OVERLOAD-DOOR FAN	W6PM1SMTR	09FTD0010T	E1 PLUS OL RELAY 1.0-5.0A	CONTROL BOX
ETFAN2	OVERLOAD-HOOD FAN	W6PM1SMTR	09FTD0010T	E1 PLUS OL RELAY 1.0-5.0A	CONTROL BOX
ETFAN3	OVERLOAD-HOOD FAN	W6PM1SMTR	09FTD0010T	E1 PLUS OL RELAY 1.0-5.0A	CONTROL BOX
ETHP(MP16xx-I	OVERLOAD-HYDRAULIC MOTOR HIGH VOLT	W6PM1SMTR	09FTD0121T	E1 PLUS OL RELAY 9-45A	CONTROL BOX
ETHP(MP16xx-L	OVERLOAD-HYDRAULIC MOTOR LOW VOLT	W6PM1SMTR	09FTD0230T	E1 PLUS OL RELAY 18-90A	CONTROL BOX
ETHP(MP1Axx-I	OVERLOAD-HYDRAULIC MOTOR HIGH VOLT	W6PM1SMTR	09FTD0230T	E1 PLUS OL RELAY 18-90A	CONTROL BOX

COMPONENT PARTS LIST

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ETHP(MP1Axx-I OVERLOAD-HYDRAULIC MOTOR LOW VOLT					
ETPRP	OVERLOAD-PRESS RETURN PUTM	W6PM1SMTR	09FTD0040T	OL RELAY 40-200A AB #193-EEJF	CONTROL BOX
ETRB	OVERLOAD-BELT MOTOR	W6PM1SMTR	09FTD0037T	E1 PLUS OL RELAY 3.2-16A	CONTROL BOX
ETRC	OVERLOAD-RECIRC AND COOLING FAN	W6PM1SMTR	09FTD0037T	E1 PLUS OL RELAY 3.2-16A	CONTROL BOX
EVFLV	TRANSFORMER350-208VAC-240VAC	W6PM1SMTR	09FTC0016T	OL RELAY 1.6-5.0A AB#193-A3E1	CONTROL BOX
EX	>>>TRANSFORMERS	W6PM1SMTR	09UA050A32	XFMR 500VA 120/240-16/32 OUT	CONTROL BOX
EX37	TRANSFORMER-200/240VAC-120VAC	W6PM1SHV	09UA050A37	XFMR 200-240PRI 120SEC 500VA	CONTROL BOX
EX37	TRANSFORMER-380/480VAC-120VAC	W6PM1SHV	09UA050AAB	XFMR MULTIVOLT 500VA(5PRI LDS)	CONTROL BOX
EX37	TRANSFORMER-600VAC-120VAC	W6PM1SHV	09UA050A98	XFMR 600V PRI 120SEC 500VA	CONTROL BOX
EXFHV	TRANSFORMER350-480VAC-240VAC	W6PM1SMTR	09UA050AAB	XFMR MULTIVOLT 500VA(5PRI LDS)	CONTROL BOX
EXFHV	TRANSFORMER350-600VAC-240VAC	W6PM1SMTR	09UA050B98	XFMR 600V PRI 240SEC 500VA	CONTROL BOX
KB	>>>KEYBOARDS				
KBMP	KEYPAD-MICROPROCESSOR	W6PM1SKP	08ND0206N	KEYPAD-DOME=2X5 MATRIX NUME.	SWITCH PANEL
KBMP	KEYPAD-MICROPROCESSOR	W6PM1SKPA	08ND5X6GC	KEYPAD-DOME=5X6 MATRIX GENERIC	SWITCH PANEL
MT	>>>MOTORS				
MTCRB	MOTOR-COINC BELT	W6PM1SMTR	MESSAGE SN	SEE SPECIFIC MACHINE + NAMEPLATE	ON COINC
MTDF	MOTOR-DOOR FAN	W6PM1SMTR	13AF210071	FAN 2100 CFM 240V 60HZ	ON DOOR
MTHF1	MOTOR-HOOD FAN 1	W6PM1SMTR	MESSAGE SN	SEE SPECIFIC MACHINE + NAMEPLATE	TOP OF PRESS
MTHF2	MOTOR-HOOD FAN 2	W6PM1SMTR	MESSAGE SN	SEE SPECIFIC MACHINE + NAMEPLATE	TOP OF PRESS
MTHP	MOTOR-HYDRAULIC PUMP	W6PM1SMTR	MESSAGE SN	SEE SPECIFIC MACHINE + NAMEPLATE	TOP OF PRESS
MTPRP	MOTOR-PRESS RETURN PUMP	W6PM1SMTR	MESSAGE SN	SEE SPECIFIC MACHINE + NAMEPLATE	TOP OF PRESS
MTRB	MOTOR BELT	W6PM1SMTR	MESSAGE SN	SEE SPECIFIC MACHINE + NAMEPLATE	TOP OF PRESS
MTRC	MOTOR-RECIRCULATION PUMP	W6PM1SMTR	MESSAGE SN	SEE SPECIFIC MACHINE + NAMEPLATE	TOP OF PRESS
PT1	PRESSURE TRANSDUCER-BOOSTER PUMP	W6PM1SBWA	09N700B	TRANSDUCER WIKA C-10 0-5000 PSI	HYDRAULIC UNIT
PT1	PRESSURE TRANSDUCER-BOOSTER PUMP	W6PM1SBWB	09N700B	TRANSDUCER WIKA C-10 0-5000 PSI	HYDRAULIC UNIT
PT1	PRESSURE TRANSDUCER-BOOSTER PUMP	W6PM1SBWC	09N700B	TRANSDUCER WIKA C-10 0-5000 PSI	HYDRAULIC UNIT
PT1	PRESSURE TRANSDUCER-BOOSTER PUMP	W6PM1SBWD	09N700B	TRANSDUCER WIKA C-10 0-5000 PSI	HYDRAULIC UNIT
PTB	PRESSURE TRANSDUCER-PRESSURE	W6PM1SBWA	09N700D	TRANSDUCER WIKA C-10 0-10000 PSI	HYDRAULIC UNIT
PTB	PRESSURE TRANSDUCER-PRESSURE	W6PM1SBWB	09N700D	TRANSDUCER WIKA C-10 0-10000 PSI	HYDRAULIC UNIT
PTB	PRESSURE TRANSDUCER-PRESSURE	W6PM1SBWB	09N700D	TRANSDUCER WIKA C-10 0-10000 PSI	HYDRAULIC UNIT
PX	>>>PRESSURE TRANSDUCER				
PX	>>>PROX SWITCHES				
PXCB1	PROX SW-CAN AT BOTTOM	W6PM1SI1	09RPS12ADS	PROXSW QD CONN 12M NO-DC SHLD	SIDE OF CAN
PXCB1	PROX SW-CAN AT BOTTOM	W6PM1SI1A	09RPS12ADS	PROXSW QD CONN 12M NO-DC SHLD	SIDE OF CAN
PXCB1	PROX SW-CAN AT BOTTOM	W6PM1SI1B	09RPS12ADS	PROXSW QD CONN 12M NO-DC SHLD	SIDE OF CAN

COMPONENT PARTS LIST

W6PM1SPL/2025132N

PXCB2	PROX SW-CAN AT BOTTOM	W6PM1SI1	09RPS12ADS	PROXSW QD CONN 12M NO-DC SHLD	SIDE OF CAN
PXCB2	PROX SW-CAN AT BOTTOM	W6PM1SI1A	09RPS12ADS	PROXSW QD CONN 12M NO-DC SHLD	SIDE OF CAN
PXCB2	PROX SW-CAN AT BOTTOM	W6PM1SI1B	09RPS12ADS	PROXSW QD CONN 12M NO-DC SHLD	SIDE OF CAN
PXCT	PROX SW-CAN AT TOP	W6PM1SI1	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	SIDE OF CAN
PXCT	PROX SW-CAN AT TOP	W6PM1SI1A	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	SIDE OF CAN
PXCT	PROX SW-CAN AT TOP	W6PM1SI1B	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	SIDE OF CAN
PXDDD	PROX SW-DISCHARGE DOOR FULL DOWN	W6PM1SI2	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	DISCHARGE DOOR
PXDDD	PROX SW-DISCHARGE DOOR FULL DOWN	W6PM1SI2A	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	DISCHARGE DOOR
PXDDD	PROX SW-DISCHARGE DOOR FULL DOWN	W6PM1SI2B	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	DISCHARGE DOOR
PXDDU	PROX SW-DISCHARGE DOOR FULL UP	W6PM1SI2	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	DISCHARGE DOOR
PXDDU	PROX SW-DISCHARGE DOOR FULL UP	W6PM1SI2A	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	DISCHARGE DOOR
PXDDU	PROX SW-DISCHARGE DOOR FULL UP	W6PM1SI2B	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	DISCHARGE DOOR
PXLCD	PROX SW-LOAD CHUTE FULL DOWN	W6PM1SI2	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	LOAD CHUTE
PXLCD	PROX SW-LOAD CHUTE FULL DOWN	W6PM1SI2A	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	LOAD CHUTE
PXLCD	PROX SW-LOAD CHUTE FULL DOWN	W6PM1SI2B	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	LOAD CHUTE
PXLCU	PROX SW-LOAD CHUTE FULL UP	W6PM1SI2	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	LOAD CHUTE
PXLCU	PROX SW-LOAD CHUTE FULL UP	W6PM1SI2A	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	LOAD CHUTE
PXLCU	PROX SW-LOAD CHUTE FULL UP	W6PM1SI2B	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	LOAD CHUTE
PXSB	PROX SW-RAM AT BOTTOM	W6PM1SI1	09RPS18ADS	PRXSW QK CONN 18M NO-DC SHLD	TOP OF RAM
PXSB	PROX SW-RAM AT BOTTOM	W6PM1SI1A	09RPS18ADS	PRXSW QK CONN 18M NO-DC SHLD	TOP OF RAM
PXSB	PROX SW-RAM AT BOTTOM	W6PM1SI1B	09RPS18ADS	PRXSW QK CONN 18M NO-DC SHLD	TOP OF RAM
PXSL	PROX SW-RAM AT LOW	W6PM1SI1A	09RPS18ADS	PRXSW QK CONN 18M NO-DC SHLD	TOP OF RAM
PXSL	PROX SW-RAM AT LOW	W6PM1SI1B	09RPS18ADS	PRXSW QK CONN 18M NO-DC SHLD	TOP OF RAM
PXSM	PROX SW-RAM AT MIDDLE	W6PM1SI1	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	TOP OF RAM
PXSM	PROX SW-RAM AT MIDDLE	W6PM1SI1A	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	TOP OF RAM
PXSM	PROX SW-RAM AT MIDDLE	W6PM1SI1B	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	TOP OF RAM
PXSS	PROX SW-RAM ABOVE SLOW	W6PM1SI1B	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	TOP OF RAM
PXST	PROX SW-RAM AT TOP	W6PM1SI1	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	TOP OF RAM
PXST	PROX SW-RAM AT TOP	W6PM1SI1A	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	TOP OF RAM
PXST	PROX SW-RAM AT TOP	W6PM1SI1B	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	TOP OF RAM
PXSU	PROX SW-RAM AT UNLOAD HEIGHT	W6PM1SI1	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	TOP OF RAM
PXSU	PROX SW-RAM AT UNLOAD HEIGHT	W6PM1SI1A	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	TOP OF RAM
PXSU	PROX SW-RAM AT UNLOAD HEIGHT	W6PM1SI1B	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	TOP OF RAM
RS	>>>RESISTORS				
RS01	RESISTOR-LIGHT BAR 12V LOADING	W6PM1SLB	ECEUMTRES	LOAD RESISTOR ASSY MILTOUCH EX	CONTROL BOX

COMPONENT PARTS LIST

W6PM1SPL/2025132N

RS02	RESISTOR-POWER SUPPLY	W6PM1SWBC	ECEUMTRES	LOAD RESISTOR ASSY MILTOUCH EX	SWITCH PANEL
RS03	RESISTOR-POWER SUPPLY	W6PM1SBWC	ECEUV8R	LOAD RESISTOR ASSY MILTOUCH	LV CONTROL BOX
RS03	RESISTOR-POWER SUPPLY	W6PM1SBWC	ECEUV8R	LOAD RESISTOR ASSY MILTOUCH	LV CONTROL BOX
SH	>>>SWITCH-HAND OPERATED				
SHCMD	SWITCH-CONVEYOR MOTER DISCONNECT	W6PM1SMTR	09N042204	DISCON SWITCH 40A 600V 2POS 4P	CONV. C-BOX
SHCMD	SWITCH-CONVEYOR MOTER DISCONNECT	W6PM1SS+	09N042204	DISCON SWITCH 40A 600V 2POS 4P	CONV. C-BOX
SHDA	SWITCH-DISCHARGE ALLOWED	W6PM1SAIA	09N405M210	SWASS M2W 1NO	CUSTOMER MNTED
SHES	SWITCH-EMERGENCY STOP	W6PM1SS+	09N506	SW ASSY EMER STOP VERSION 2	SWITCH PANEL
SHES	SWITCH-EMERGENCY STOP	W6PM1SS+	09N507F	ESTOP CONTACT BLOCK WITH 120VAC L	SWITCH PANEL
SHES	SWITCH-EMERGENCY STOP	W6PM1SS+	09N507F	ESTOP CONTACT BLOCK WITH 120VAC L	SWITCH PANEL
SHES	SWITCH-EMERGENCY STOP	W6PM1SS+	09N507F	ESTOP CONTACT BLOCK WITH 120VAC L	SWITCH PANEL
SHES	SWITCH-EMERGENCY STOP	W6PM1SS+	09N507F	ESTOP CONTACT BLOCK WITH 120VAC L	SWITCH PANEL
SHESR	SWITCH-REMOTE EMERGENCY STOP	W6PM1SS+	09N506	SW ASSY EMER STOP VERSION 2	NON SWPNL SIDE
SHFR	SWITCH-FAULT RECOVERY	W6PM1SI2	09N405PB10	SWASS PBBK 1NO	SWITCH PANEL
SHFR	SWITCH-FAULT RECOVERY	W6PM1SI2A	09N405PB10	SWASS PBBK 1NO	SWITCH PANEL
SHFR	SWITCH-FAULT RECOVERY	W6PM1SI2B	09N405PB10	SWASS PBBK 1NO	SWITCH PANEL
SHL	SWITCH SECURITY DOOR LEFT	W6PM1SS+	09RS0001	SAFETY SW.N/C SCHMERSAL#AZ15ZV	PRESS DOOR LF
SHMD	SWITCH-MILDATA	W6PM1SI2A	09N405M210	SWASS M2W 1NO	SWITCH PANEL
SHMD	SWITCH-MILDATA	W6PM1SI2B	09N405M210	SWASS M2W 1NO	SWITCH PANEL
SHPE1	SWITCH-EMERGENCY PULL CORD	W6PM1SS+	09R014A	MINI-SW SPDT STAKON #V15G1C26K	DISC CONVEYOR
SHPE2	SWITCH-EMERGENCY PULL CORD	W6PM1SS+	09R014A	MINI-SW SPDT STAKON #V15G1C26K	DISC CONVEYOR
SHPL	SWITCH-PRESS LOADED	W6PM1SAI	MESSAGE EW	SWITCH BY OTHERS	REMOTE MNTED
SHPRP	SWITCH PRESS RETURN PUMP	W6PM1SPP	09N405M210	SWASS M2W 1NO	SWITCH PANEL
SHPRP	SWITCH PRESS RETURN PUMP	W6PM1SPP1	09N405M210	SWASS M2W 1NO	SWITCH PANEL
SHR	SWITCH-SECURITY DOOR RIGHT	W6PM1SS+	09RS0001	SAFETY SW.N/C SCHMERSAL#AZ15ZV	PRESS DOOR RT
SHRFR	SWITCH-REMOTE FAULT RECOVERY	W6PM1SI2	09N405PB10	SWASS PBBK 1NO	NON SWPNL SIDE
SHRFR	SWITCH-REMOTE FAULT RECOVERY	W6PM1SI2A	09N405PB10	SWASS PBBK 1NO	NON SWPNL SIDE
SHRFR	SWITCH-REMOTE FAULT RECOVERY	W6PM1SI2B	09N405PB10	SWASS PBBK 1NO	NON SWPNL SIDE
SHS+	SWITCH-START	W6PM1SS+	09N405PB10	SWASS PBBK 1NO	SWITCH PANEL
SHS+R	SWITCH-REMOTE START	W6PM1SS+	09N405PB10	SWASS PBBK 1NO	NON SWPNL SIDE
SHSC	SWITCH-SIGNAL CANCEL	W6PM1SI1	09N405PY10	SWASS PB YELLOW 1NO	SWITCH PANEL
SHSC	SWITCH-SIGNAL CANCEL	W6PM1SI1A	09N405PY10	SWASS PB YELLOW 1NO	SWITCH PANEL
SHSC	SWITCH-SIGNAL CANCEL	W6PM1SI1B	09N405PY10	SWASS PB YELLOW 1NO	SWITCH PANEL
SHSDL	SWITCH-KEY	W6PM1SSD	09N127C	KEYSW SPST 7A120VAC SCREW TERM	CONTROL BOX
SHSDT	SWITCH-STEAM DISINFECT TEST	W6PM1SSD	09N405S320	SWASS S3W 2NO	CONTROL BOX

COMPONENT PARTS LIST

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SHSMA	SWITCH-MASTER	W6PM1SS+	09N405M220	SWASS M2W 2NO	SWITCH PANEL
SHSO	SWITCH-STOP	W6PM1SS+	09N404PR01	SWASS PBRD 1NC	SWITCH PANEL
SK	>>>SWITCH-KEYLOCK				
SKI	SWITCH-REMOTE DOOR BYPASS	W6PM1SS+	09N127C	KEYSW SPST 7A120VAC SCREW TERM	INSIDE CNT BOX
SKPRO	SWITCH-RUN/PROGRAM (KEY OP)	W6PM1SI1	09N127C	KEYSW SPST 7A120VAC SCREW TERM	SWITCH PANEL
SKPRO	SWITCH-RUN/PROGRAM (KEY OP)	W6PM1SI1A	09N127C	KEYSW SPST 7A120VAC SCREW TERM	SWITCH PANEL
SKPRO	SWITCH-RUN/PROGRAM (KEY OP)	W6PM1SI1B	09N127C	KEYSW SPST 7A120VAC SCREW TERM	SWITCH PANEL
SL	>>>SWITCH-LEVEL				
SLPPH	SWITCH-PRESS RETURN TANK HIGH	W6PM1SPP	09R014A	MINI-SW SPDT STAKON #V15G1C26	PRESS RTN TNK
SLPPH	SWITCH-PRESS RETURN TANK HIGH	W6PM1SPP1	09R014A	MINI-SW SPDT STAKON #V15G1C26	PRESS RTN TNK
SLPPL	SWITCH-PRESS RETURN TANK LOW	W6PM1SPP	09R014A	MINI-SW SPDT STAKON #V15G1C26	PRESS RTN TNK
SLPPL	SWITCH-PRESS RETURN TANK LOW	W6PM1SPP1	09R014A	MINI-SW SPDT STAKON #V15G1C26	PRESS RTN TNK
SM	>>>SWITCH-MECHANICALLY OPERATED				
SMBTL	SWITCH-TAUT BELT LEFT	W6PM1SI1A	09RM01209S	CAPSW 9FT 180DEG ROLLER SILVER	LOAD END BELT
SMBTL	SWITCH-TAUT BELT LEFT	W6PM1SI1B	09RM01209S	CAPSW 9FT 180DEG ROLLER SILVER	LOAD END BELT
SMBTR	SWITCH-TAUT BELT RIGHT	W6PM1SI1A	09RM01209S	CAPSW 9FT 180DEG ROLLER SILVER	LOAD END BELT
SMBTR	SWITCH-TAUT BELT RIGHT	W6PM1SI1B	09RM01209S	CAPSW 9FT 180DEG ROLLER SILVER	LOAD END BELT
SP	>>>SWITCH-PRESSURE				
SPHT	SWITCH-PRESSURE-HYD TANK	W6PM1SI2B	27E7106C	EPS-1 - SWITCH=27E7106 STAUFF	GAS INLET
VE	>>>VALVE-ELECTRIC OPERATED				
VE100	VALVE-LOWEST RAM PRESSURE	W6PM1SSQ	96RH712A02	SUN CART&COIL#DAAAMHN211	AT BOOSTER PUMP
VE250	VALVE-SECOND LOWEST RAM PRESSURE	W6PM1SSQ	96RH712A02	SUN CART&COIL#DAAAMHN211	AT BOOSTER PUMP
VEBV	VALVE-BLEED DECOMPRESSION	W6PM1SVS	96R302B37	1/8" AIRPILOT 3W NO 120V50/60	AIR VALVE BOX
VECD	VALVE-LOAD CHUTE DOWN	W6PM1SVS	96R301B37	1/8" AIRPILOT 3W NC 120V50/60	AIR VALVE BOX
VECL	VALVE-CAN TO LOWER	W6PM1SVS	96RH709E37	DIRECT.VALVE CENTER OP 24VDC	HYDRAULIC UNIT
VECR	VALVE-CAN TO RAISE	W6PM1SVS	96RH709E37	DIRECT.VALVE CENTER OP 24VDC	HYDRAULIC UNIT
VECU	VALVE-LOAD CHUTE UP	W6PM1SVS	96R301B37	1/8" AIRPILOT 3W NC 120V50/60	AIR VALVE BOX
VEDDD	VALVE-DISCHARGE DOOR DOWN	W6PM1SVS	96R301B37	1/8" AIRPILOT 3W NC 120V50/60	AIR VALVE BOX
VEDDU	VALVE-DISCHARGE DOOR UP	W6PM1SVS	96R301B37	1/8" AIRPILOT 3W NC 120V50/60	AIR VALVE BOX
VEDFD	VALVE-DISCHARGE FLAG DOWN	W6PM1SVS	96R301B37	1/8" AIRPILOT 3W NC 120V50/60	AIR VALVE BOX
VEDSDF	VALVE-STEAM DISINFECT FLOW	W6PM1SSD	96R301B37	1/8" AIRPILOT 3W NC 120V50/60	VALVE BOX
VEDSDL	VALVE-WATER FILL HIGH LEVEL	W6PM1SSD	96R301B37	1/8" AIRPILOT 3W NC 120V50/60	VALVE BOX
VEHV	VALVE-PROPORTIONAL HYDRAULIC VALVE	W6PM1SBWB	96RH708E39	PROPORTIONAL VALVE SUN #RBAP-XW	HYDRAULIC UNIT
VEHV	VALVE-PROPORTIONAL HYDRAULIC VALVE	W6PM1SBWC	96RH708E39	PROPORTIONAL VALVE SUN #RBAP-XW	HYDRAULIC UNIT
VEHV	VALVE-PROPORTIONAL HYDRAULIC VALVE	W6PM1SBWD	96RH708E39	PROPORTIONAL VALVE SUN #RBAP-XW	HYDRAULIC UNIT

COMPONENT PARTS LIST

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VEIS	VALVE-ISOLATION	W6PM1SVS	96R302B37	1/8" AIRPILOT 3W NO 120V50/60	AIR VALVE BOX
VELFD	VALVE-LOAD FLAG DOWN	W6PM1SVS	96R301B37	1/8" AIRPILOT 3W NC 120V50/60	AIR VALVE BOX
VEPP1	VALVE-POPPET #1	W6PM1SVS	96DH452A01	POPPET=COIL + CARTRIDGE	HYDRAULIC UNIT
VEPP2	VALVE-POPPET #2	W6PM1SVS	96DH452A01	POPPET=COIL + CARTRIDGE	HYDRAULIC UNIT
VEPRP	VALVE-RETURN SEAL WATER	W6PM1SSP	96TCC2AA37	3/8" N/C 2WAY 120V50/60C	ON REUSE TANK
VERDB	VALVE-RAM DOWN BYPASS BEFORE 5/16/16	W6PM1SVS	96RH713R02	SUN COIL #760211(FOR96RH713A02) 120\	HYDRAULIC UNIT
VERDB	VALVE-RAM DWN BYPASS 5/16/16 TO 3/11/20	W6PM1SVS	12M324V9F	SOLENOID 24VDC SUN 760-224	HYDRAULIC UNIT
VERDB	VALVE-RAM DOWN BYPASS AFTER 3/11/20	W6PM1SVS	96RH713S01C1	COIL: CAP024D 24VDC	HYDRAULIC UNIT
VERL	VALVE-RAM TO LOWER	W6PM1SVS	96RH709E37	PROP. DIRECT. CONTROL VALVE	HYDRAULIC UNIT
VERR	VALVE-RAM TO RAISE	W6PM1SVS	96RH709E37	PROP. DIRECT. CONTROL VALVE	HYDRAULIC UNIT
VERS	VALVE-PREFILL	W6PM1SVS	96RH712E37	PREFILL VALVE REXROTH-ZSFW100	HYDRAULIC UNIT
VESR	VALVE-SPRAY RING	W6PM1SVS	96R301B37	1/8" AIRPILOT 3W NC 120V50/60	AIR VALVE BOX
VEW	VALVE-WATER COOL DOWN	W6PM1SS+	96TDC2AA37	1/2"N/C2WY120V50/60C VLV(DRYVC	TOP OF PRESS
VR	>>>VERISTOR				
VRC	VERISTOR-CAN UP/DOWN	W6PM1SVS	09ARC0055J	VARS .0055 MFD 30VDC	HYD JUNCTION BOX
VRR	VERISTOR-RAM UP/DOWN	W6PM1SVS	09ARC0055J	VARS .0055 MFD 30VDC	HYD JUNCTION BOX

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 altered in any way without MILNOR's written consent.

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

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

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

BMP720097/25142

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 —

Milnor® Allied Interface Specifications and Signals, Single Stage Press

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—Single Stage Press With Mark 5 Controls [Document BICALC14]

Table 1: Loading Interface Numeric Input Signals and Digit Order—Single Stage Press

Signal name on schematic (e.g., Drycode A, B, etc.)-->		Common Conn.	Dedicated Connections (Binary Data Signals)								Least Significant	
			K	J	H	G	F	E	D	C	B	A
16 Drycodes (00 - 15)	Multi-terminal	TBA							WC2	WC2	WC2	WC2
	Pin Number	7							7	16	18	17
	Wire Number	7							232	244	243	242
	Display/code	--							i2/C	i1/p	i1/o	i1/n
	Board/code	--							io2/6	io1/15	io1/14	io1/13
16 Destina- tion Codes (00-15)	Multi-terminal	TBA							WCI	WCI	WCI	WCI
	Pin Number	7							16	15	8	7
	Wire Number	7							341	342	331	332
	Display/code	--							Not available			
	Board/code	--							io3/15	io3/14	io3/7	io3/6
256 Custo- mer Codes (000-255)	Multi-terminal	TBA			WCI	WCI	WCI	WCI	WCI	WCI	WCI	WCI
	Pin Number	7			18	17	14	13	12	11	10	9
	Wire Number	7			396	391	343	344	347	348	349	340
	Display/code	--			i2/G	i2/F	Not available					
	Board/code	--			*	*	io3/13	io3/12	io3/11	io3/10	io3/9	io3/8
64 Goods Codes (00- 63)	Multi-terminal	TBA					WCI	WCI	WCI	WCI	WCI	WCI
	Pin Number	7					6	5	4	3	2	1
	Wire Number	7					333	334	337	338	339	330
	Display/code	--					Not available			i2/T	i2/S	i2/R
	Board/code	--					io3/5	io3/4	io3/3	io3/2	io3/1	io3/0
16 Extract (Press) Codes (00- 15)	Multi-terminal	TBA							WC2	WC2	WC2	WC2
	Pin Number	7							4	3	2	1
	Wire Number	7							237	238	239	230
	Display/code	--							i1/t	i1/s	i1/r	i1/q
	Board/code	--							io2/3	io2/2	io2/1	io2/0

* Customer codes G and H use direct inputs on the processor board, not inputs on the peripheral boards.

Table 2: Loading Interface non-Numeric Signals and Enabling Order—Single Stage Press

Signal Direction	Common Connection*			Dedicated Connection			Display / code	Board / code	Function Name / Signal Name
	Multi-terminal	Pin	Wire	Multi-terminal	Pin	Wire			
Output*	WCY	17	312*	WCY	16	132	o1/j	o1/1	load allowed / press free
Milnor will read in all batch data (previous table and next three signals) when it receives the "transfer complete / press loaded" signal.									
Input	WCY	22	7	WCY	10	411	i1/i	io1/8	new customer
Input	WCY	25	7	WCY	13	414	i1/l	io1/11	single cake
Input	WCY	26	7	WCY	14	415	i1/m	io1/12	empty load
Input	WCY	21	7	WCY	20	386	i2/P	**	transfer complete / press loaded
* 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 processor board, not an input on a peripheral board.									

Table 3: Discharge Interface Numeric Output Signals and Digit Order—Single Stage Press

Signal name on schematic (e.g., Drycode A, B, etc.)-->		Common Conn.*	Most Significant	Dedicated Connections (Binary Data Signals)								Least Significant
				K	J	H	G	F	E	D	C	
16 Drycodes (00 - 15)	Multi-terminal	n/a							WCZ	WCZ	WCZ	WCZ
	Pin Number	n/a							15 • 16	13 • 14	11 • 12	9 • 10
	Wire Number	n/a							268 • 269	266 • 267	264 • 265	261 • 262
	Display/code	--							o2/T	o2/S	o2/R	o2/Q
	Board/code	--							io2/7	io2/6	io2/5	io2/4
16 Destina- tion Codes (00-15)	Multi-terminal	n/a							WCZ	WCZ	WCZ	WCZ
	Pin Number	n/a							7 • 8	5 • 6	3 • 4	1 • 2
	Wire Number	n/a							252 • 260	254 • 253	256 • 255	259 • 258
	Display/code	--							o2/P	o2/O	o2/N	o2/M
	Board/code	--							io2/3	io2/2	io2/1	io2/0
256 Customer Codes (000- 255)	Multi-terminal	n/a			WCY	WCY	WCY	WCY	WCY	WCY	WCY	WCY
	Pin Number	n/a			1 • 9**	1 • 8**	1 • 7**	1 • 6**	1 • 5**	1 • 4**	1 • 3**	1 • 2**
	Wire Number	n/a			134 • 321	134 • 320	134 • 319	134 • 318	134 • 317	134 • 316	134 • 315	134 • 314
	Display/code	--			o2/L	o2/K	o2/J	o2/I	o2/H	o2/G	o2/F	o2/E
	Board/code	--			o1/23	o1/22	o1/21	o1/20	o1/19	o1/18	o1/17	o1/16
256 Goods Codes (000- 255)	Multi-terminal	n/a			WCX	WCX	WCX	WCX	WCX	WCX	WCX	WCX
	Pin Number	n/a			15 • 16	13 • 14	11 • 12	9 • 10	7 • 8	5 • 6	3 • 4	1 • 2
	Wire Number	n/a			368 • 369	366 • 367	364 • 365	361 • 362	352 • 360	354 • 353	356 • 355	359 • 358
	Display/code	--			Not available							
	Board/code	--			io3/7	io3/6	io3/5	io3/4	io3/3	io3/2	io3/1	io3/0
* 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. In this table these are listed together in the same cell, with a dot between (e.g., C • D)												
**To provide eight customer code signals with limited available terminals, Customer codes A through H had to share pin 1.												

Table 4: Discharge Interface non-Numeric Signals and Enabling Order—Single Stage Press

Signal Direction	Common Connection*			Dedicated Connection			Display / code	Board / code	Function Name / Signal Name
	Multi-terminal	Pin	Wire	Multi-terminal	Pin	Wire			
Milnor will set all batch data (previous table) before it enables the "discharge desired / desires to unload" signal.									
Output*	WCY	19	313*	WCY	18	133	o1/k	o1/2	discharge desired / desires to unload
Input	WCY	23	7	WCY	11	412	i1/j	io1/9	load allowed / start discharge
* 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.									

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 1 and Note 2). 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 3). When the LED is illuminated, the circuit is made.

Note 1: 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 2: 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 3: 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 4). 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 4: 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

		Decimal Value of Group	Binary Data Signals									Least Significant
Signal name on schematic (e.g., Drycode A, B, etc.)-->			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
The number of data signals required for typical ranges of batch codes are as follows: Code Range Signals Required		0							0	0	0	0
		1							0	0	0	1
		2							0	0	1	0
		3		For brevity, this table shows only the binary numbers for decimals 0 - 15 (e.g., decimal 7 = binary 0111).					0	0	1	1
		4							0	1	0	0
		5							0	1	0	1
		6							0	1	1	0
	00-15	A-D	7	Use the "Decimal Value of Signal" values above, to convert between decimal and binary, for any decimal number between 16 and 1023.					0	1	1	1
	00-31	A-E	8						1	0	0	0
	00-63	A-F	9						1	0	0	1
	000-127	A-G	10						1	0	1	0
	000-255	A-H	11						1	0	1	1
	000-511	A-I or J	12	See explanations of decimal / binary conversion herein.					1	1	0	0
	0000-1023	A-J or K	13						1	1	0	1
			14						1	1	1	0
			15						1	1	1	1

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 5: 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 —

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.

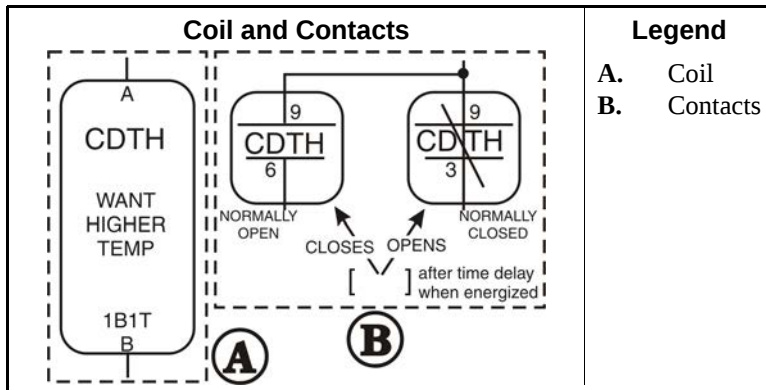
CB=Circuit Breaker (Figure 1)—Automatic switch that opens an electric circuit in abnormal current conditions (e.g., an overload).

Figure 1: Circuit Breaker (CB)



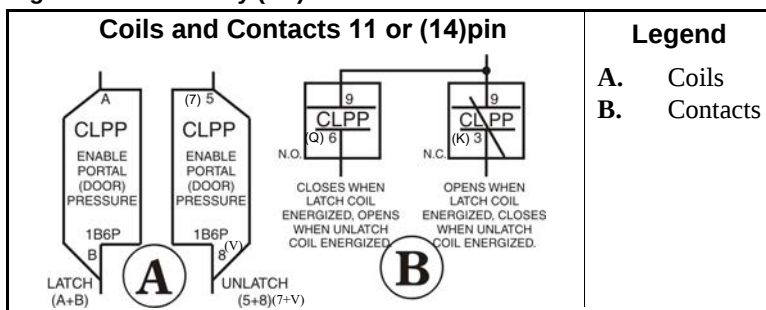
CD=Control, Time Delay Relay (Figure 2)—A relay whose contacts switch only after a fixed or adjustable delay, once voltage has been applied to its coil. The contacts switch back to normal (de-energized state) immediately when the voltage is removed.

Figure 2: Time Delay Relay (CD)



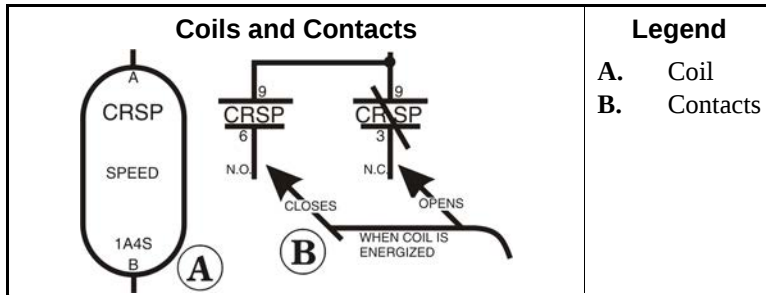
CL=Control, Latch Relay (Figure 3)—A relay which latches in an energized or set position when operated by one coil (the latch/set coil). The relay stays latched even though coil voltage is removed. The relay releases or unlatches when voltage is applied to a second coil (the unlatch/reset coil).

Figure 3: Latch Relay (CL)



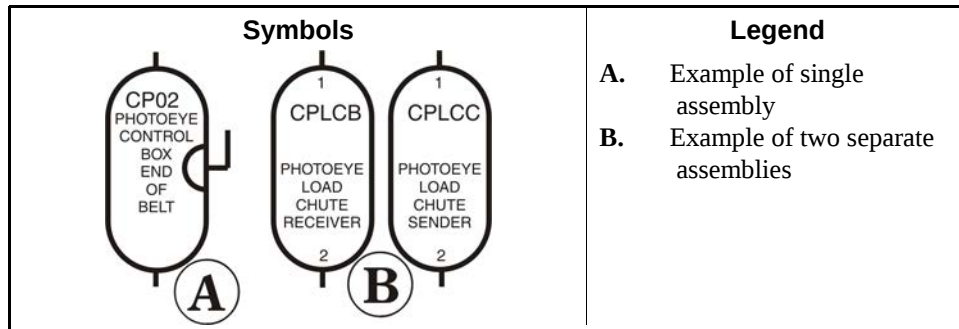
CR=Control, Relay (Figure 4)—A relay whose contacts switch immediately when voltage is applied to its coil and revert to normal when the voltage is removed.

Figure 4: Standard Relay (CR)



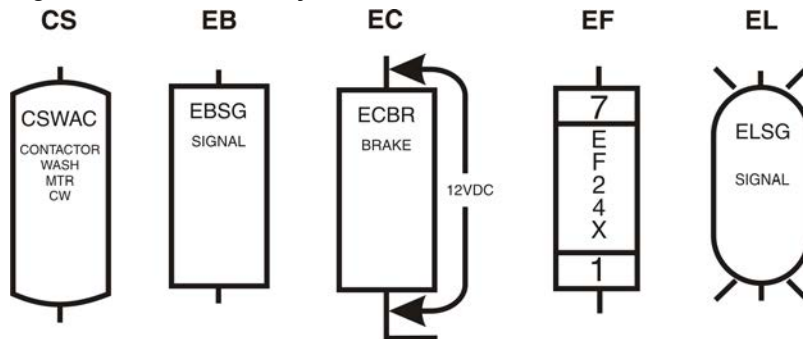
CP=Control, Photo-Eye (Figure 5)—Photo-eyes sense the presence of an object without direct physical contact. Photo-eyes consist of a transmitter, receiver, and output module. These components may be housed in one assembly with the transmitter bouncing light off of a reflector to the receiver, or these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

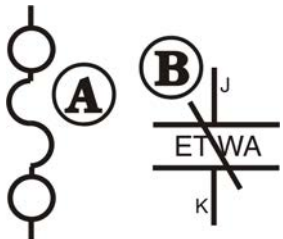
EL=Electric Light (Figure 6)—Indicator lights may be either incandescent or fluorescent.

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.

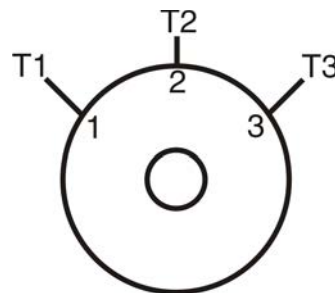
MN=Electronic Monitor (CRT)—A cathode ray tube used for visual presentation of data.

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

Figure 8: Transformer (EX)



Figure 9: Electric Motor (MR)

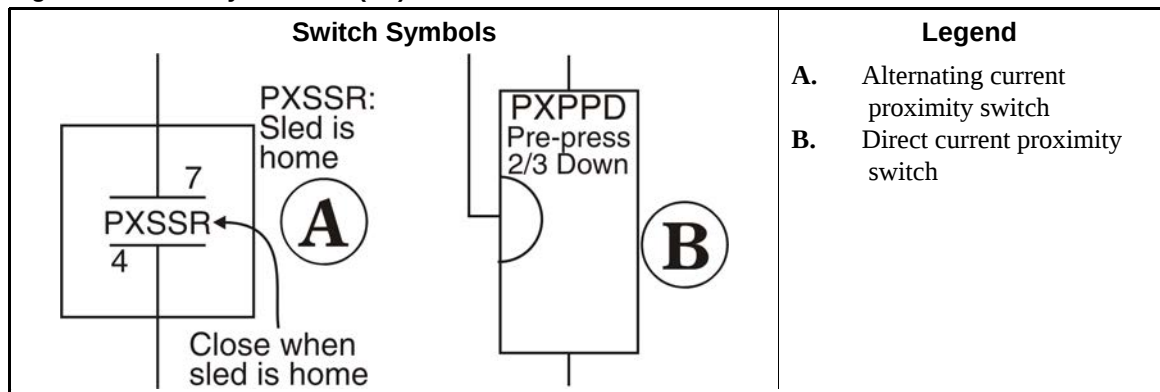


MV=Motor (Variable Speed) Inverter—To vary the speed of an AC motor, the volts to frequency ratio must be kept constant. The motor will overheat if this ratio is not maintained. The motor variable speed inverter converts three phase AC to DC. The inverter then uses this DC voltage to generate AC at the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

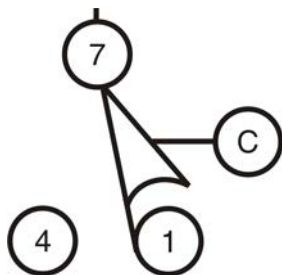
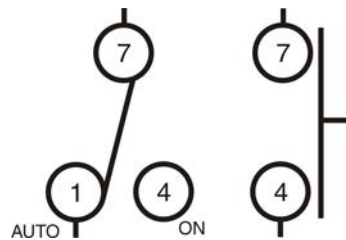


Figure 12: Hand Operated Switch (SH)



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)

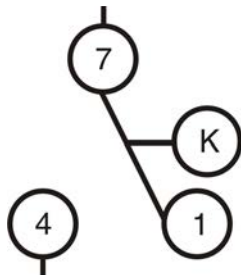
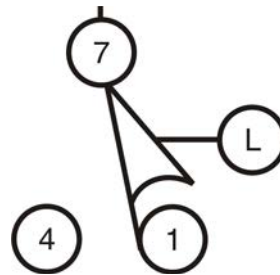


Figure 14: Level Switch (SL)



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)

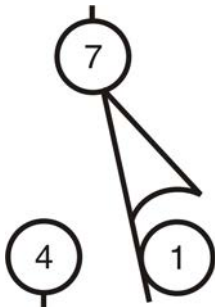
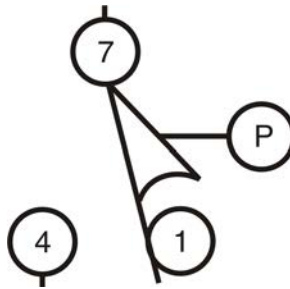


Figure 16: Pressure Switch (SP)



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)

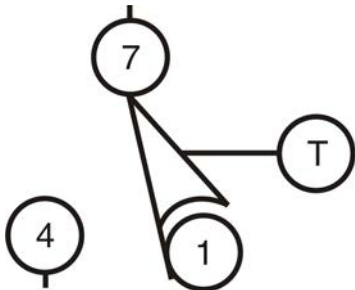
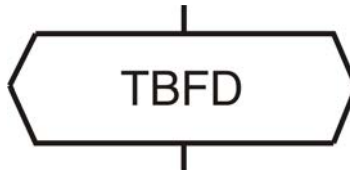


Figure 18: Terminal Board (TB)



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)

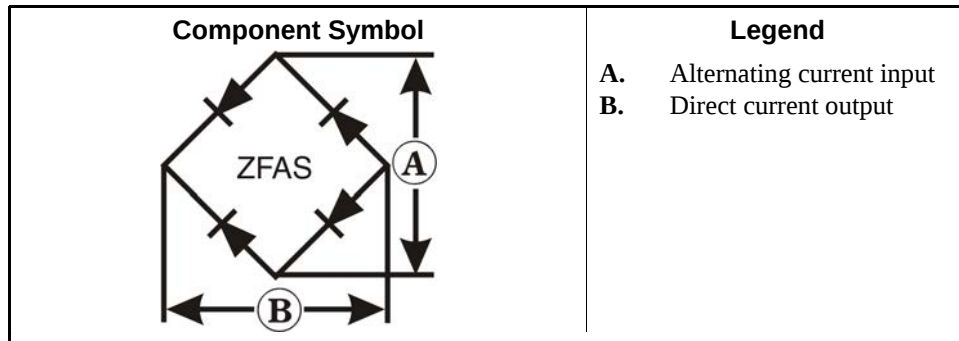
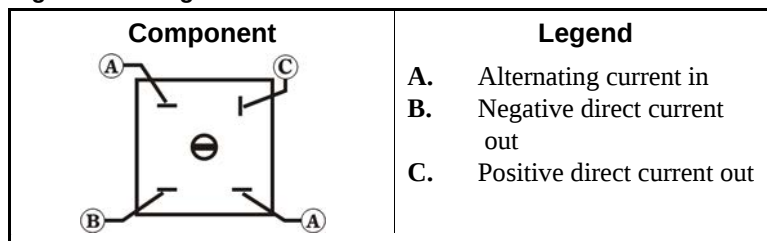


Figure 21: Bridge Rectifier



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.

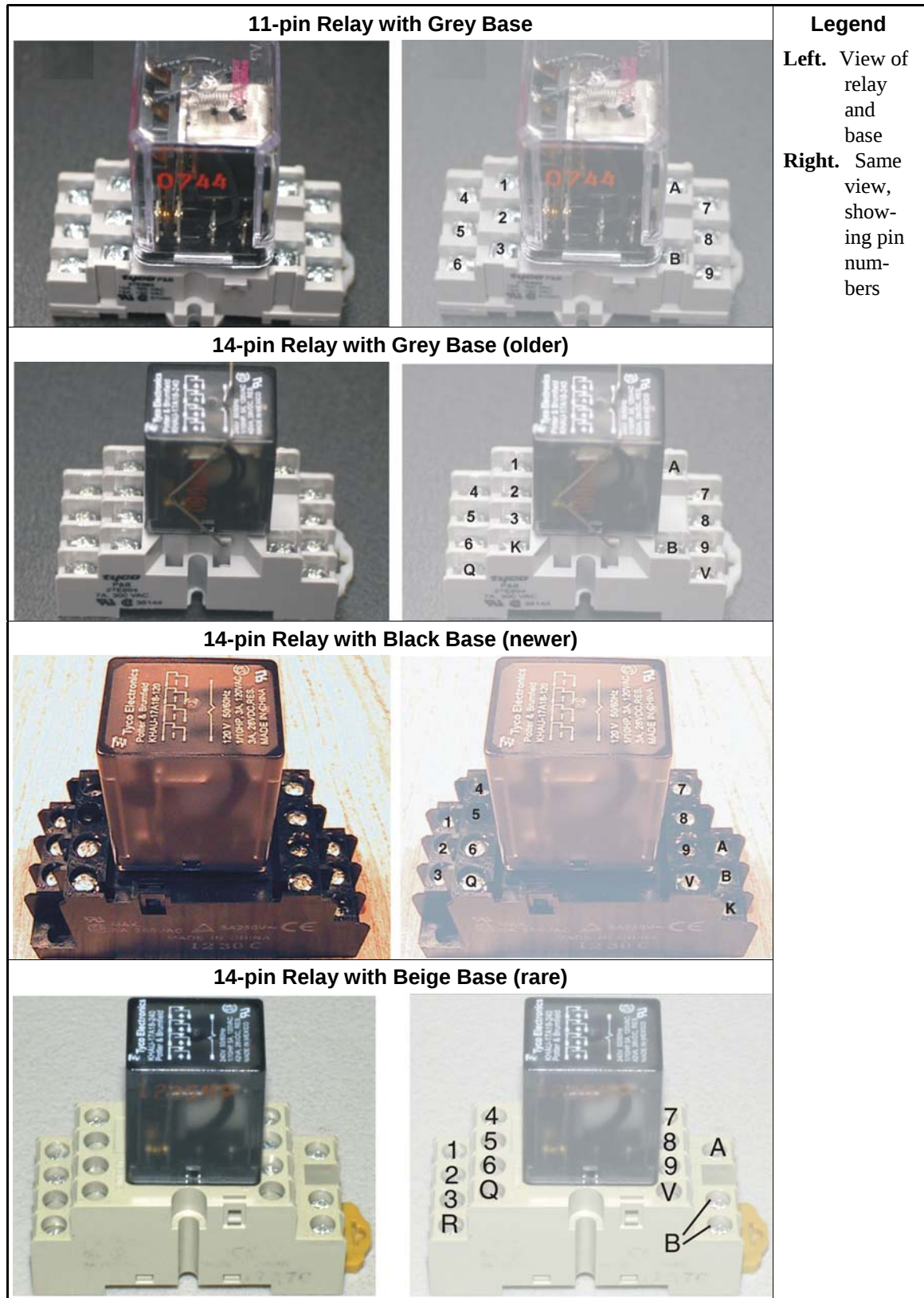
2. Component Terminal Numbering



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



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

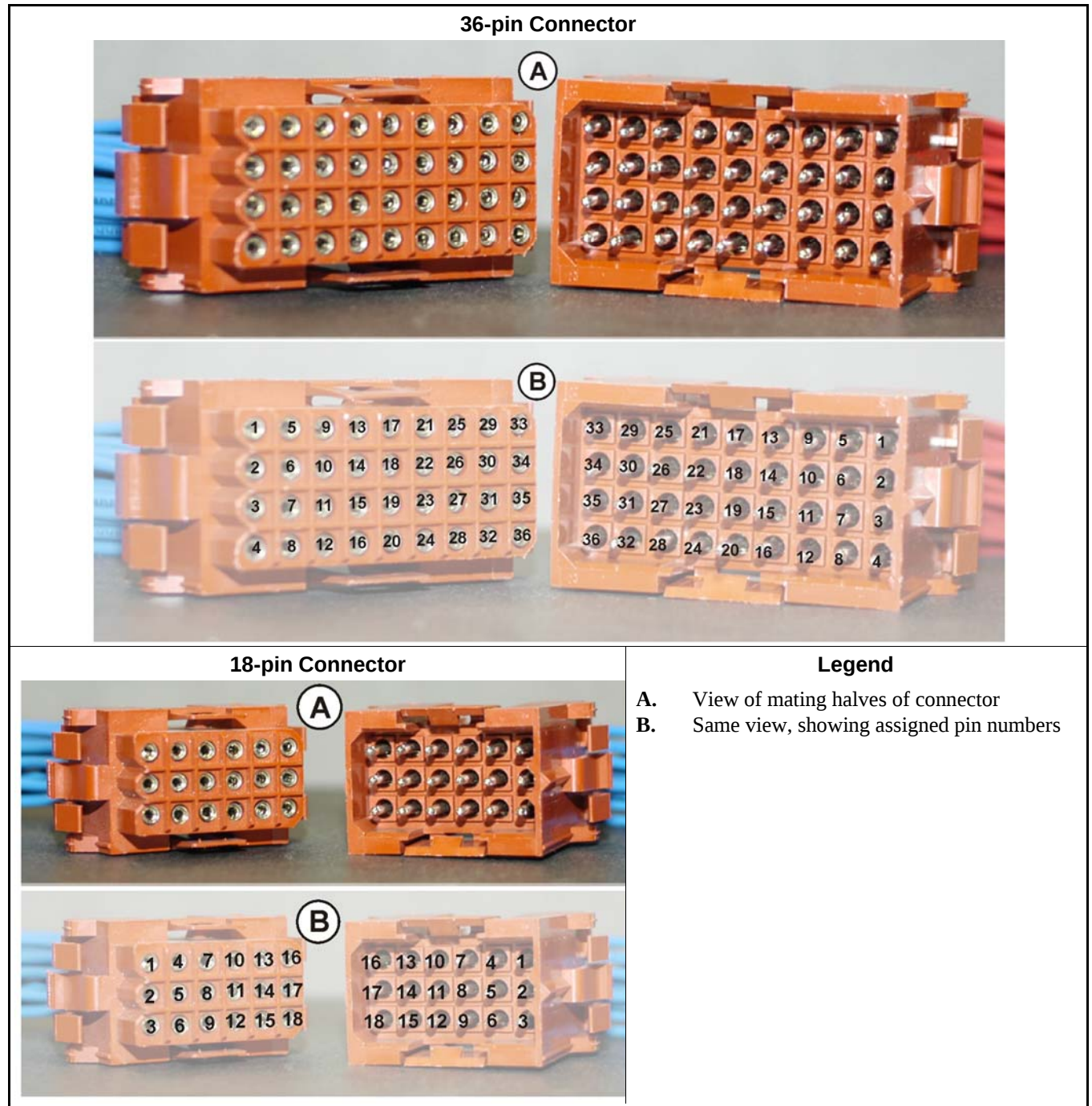


Figure 24: Molex Connector Pin Locations

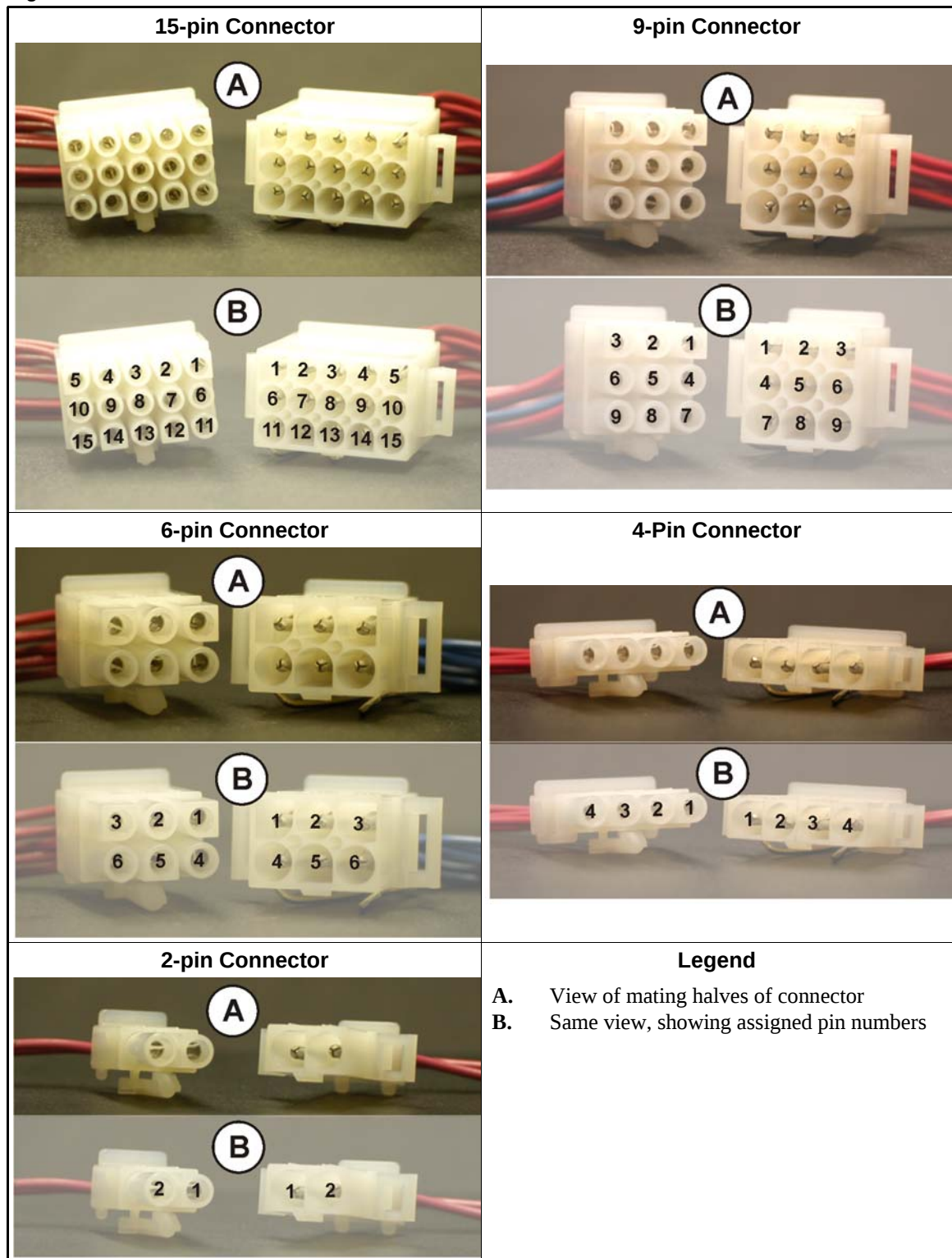


Figure 25: Pressure Switch

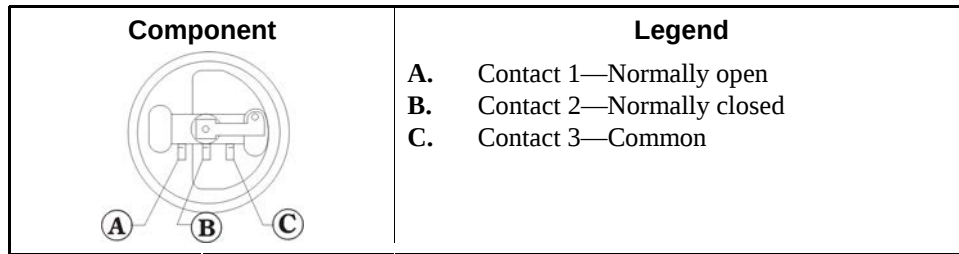


Figure 26: Toggle Switch

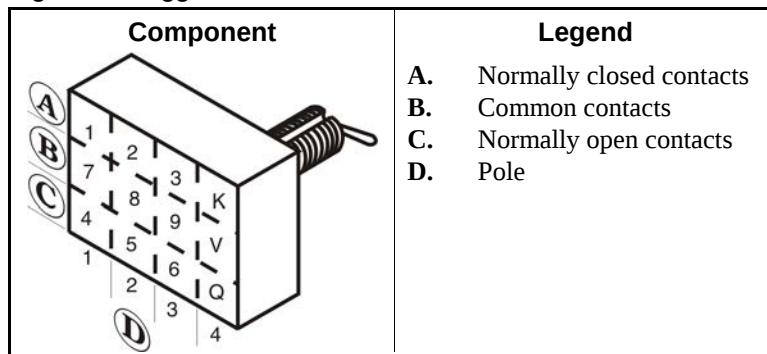
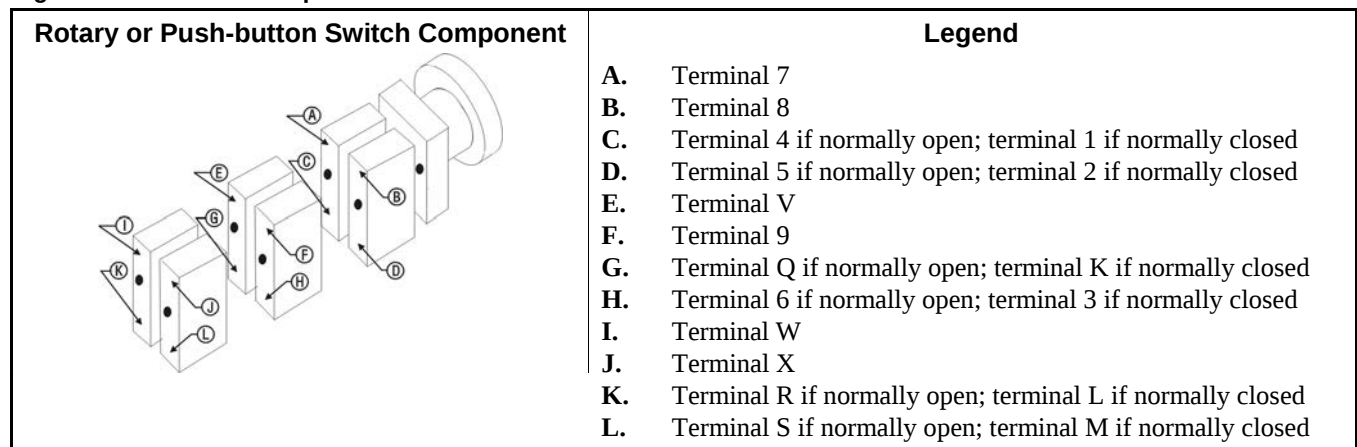


Figure 27: Switch with Replaceable Contact Blocks



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).

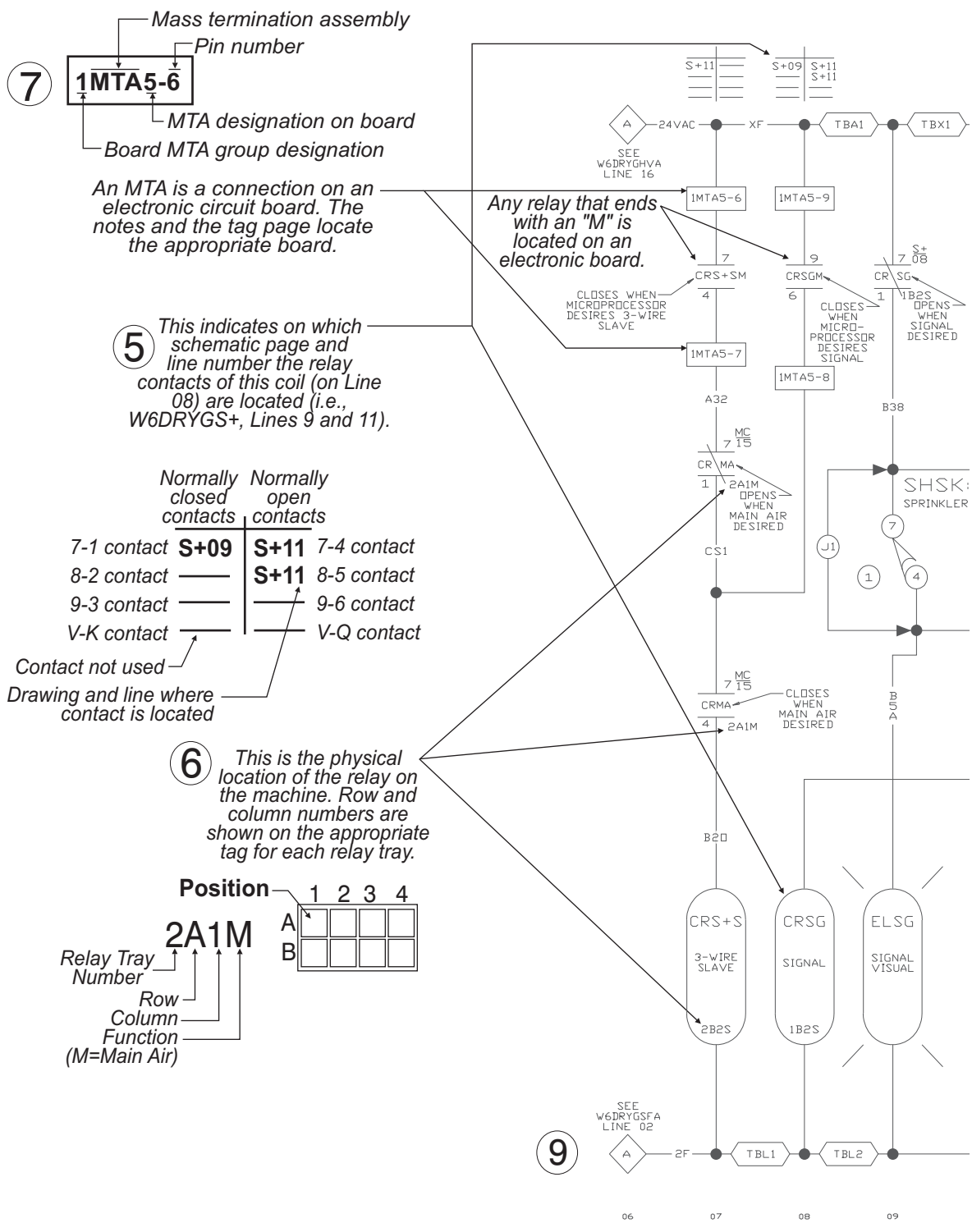
Whenever circuitry changes are significant enough to warrant publishing a new schematic drawing, the new drawing number will be the same as the old except for the major revision letter (A in the example).

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

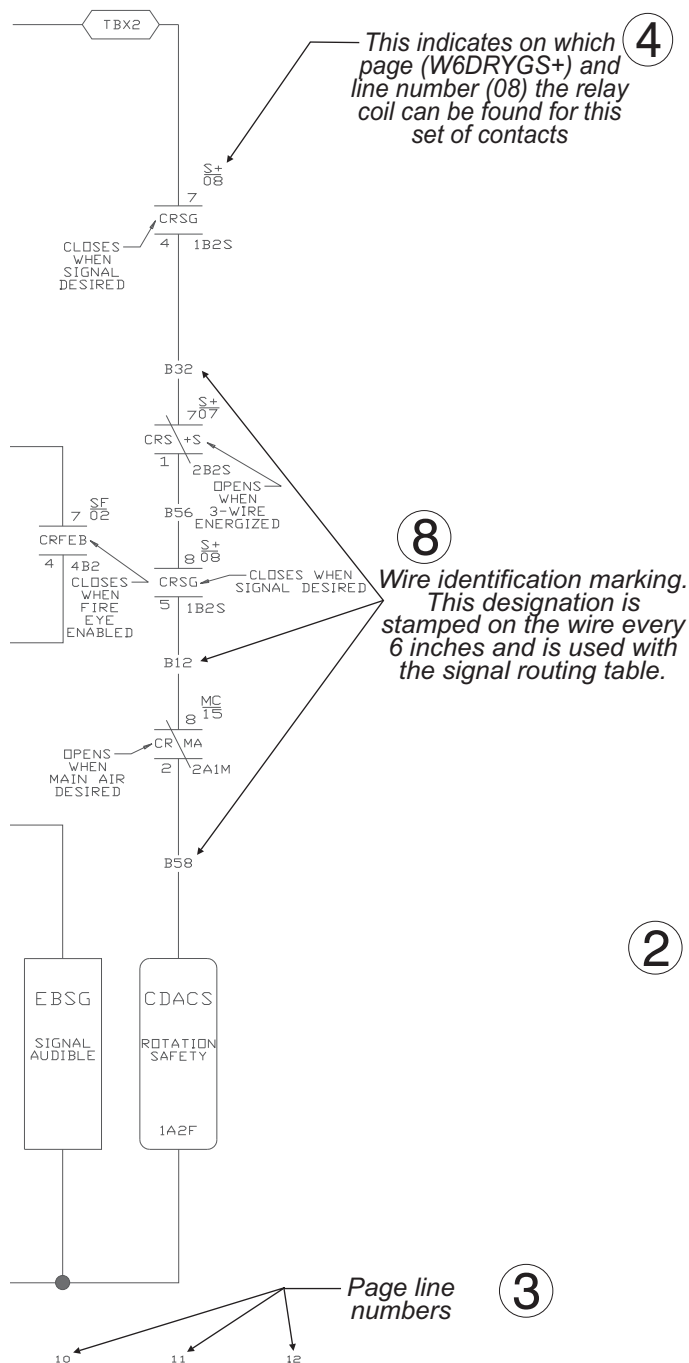
The complete listing of the boards utilized in a given control system can be found in the component list for that system.

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



Major revision (letter)

① Page number (S+)

Machine type (Gas fired dryer)

6th generation of controls

W = Wiring

Class of control system

Title of this circuit
Voltage of this circuit

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. 1MTA5 IS LOCATED ON BID1 (8 OUTPUT-16 INPUT BOARD).
5. REMOVE (J1) IF DRYER HAS VALVE SET SHUT OPTION.

Wiring Safety Fence Gate Interlocks on Milnor® Shuttles, Presses and Centrifugal Extractors

This document is to be used in conjunction with Milnor document W6SYSSG “Micro 6 Systems Schematic: Customer-Provided Safety Fence Gate Interlock”. Together, these documents describe how to connect a customer-provided gate switch or series of switches to any Milnor shuttle, press, or centrifugal extractor. Another Milnor document—BISUUI01 “Proximity Safeguarding for Automatic Shuttle Conveyors”—discusses the general hazards that safety fencing addresses.

1. Precautions



WARNING 1: Electrocution and Electrical Burn Hazards—Contact with electric power can kill or seriously injure you. Electric power is present inside the cabinetry unless the main machine power disconnect is off.

- Do not service the machine unless qualified and authorized. You must clearly understand the hazards and how to avoid them.
- Perform all work with machine power locked out/tagged out.



WARNING 2: Strike and Crush Hazards—A traveling machine such as a shuttle can strike, crush, or entrap you if you ride on it or enter its path. Traveling machines or their components can move automatically in any direction. Placing a system machine on line by energizing the machine control may immediately summon a shuttle or other traveling machine.

- Lock out and tag out power to the traveling machine at the main machine disconnect if you must work in the path of the traveling machine.

2. Wiring Guidelines

As explained in BISUUI01, a gate interlock switch must have one pole per machine to be interlocked. Each pole on the switch must be electrically isolated from any other poles on that switch. The gate interlock circuit for a given machine is a series circuit that includes one pole per switch (per gate). This circuit is wired into, and becomes part of the machine's three-wire circuit (see definition below).

three-wire circuit—a circuit that provides control power for all machine functions. Any of several safety devices in the three-wire circuit will open the circuit and stop machine operation if a malfunction is detected. Once open, the three-wire circuit can only be closed by manual intervention and then only if the condition that opened the circuit is rectified.

W6SYSSG depicts schematically, various circuit segments the technician may encounter, depending on the type and age of the machine. Only one depiction will match a given machine. It may be helpful to refer to the electrical schematics for your machine; however, you should be able to identify the pertinent electrical components by referring to the tags inside the electric box doors on your machine. You will use one of two wiring methods depending on which circuit segment on W6SYSSG corresponds to your machine:

1. **Jumpered terminals**—Remove the jumper and connect the two incoming conductors to the terminals (pins) where the jumpers were removed. A tag was tied to the jumper at the factory to identify this as the gate interlock switch connection point.
2. **Circuitry that must be split**—Locate convenient connection points (e.g., a pin on a switch) at which to split the circuit and connect the incoming conductors. You may need to splice wires to complete the connection.

3. Testing

Once wiring is completed, it is vital to test the system to ensure that:

1. all gate interlocks function properly, and
2. all components that were part of the machine's three-wire circuit before the gate interlocks were added continue to function properly. The objective is to ensure that the added wiring did not inadvertently bypass existing components.

3.1. Testing Gate Interlocks

1. Close all gates.
2. Restore power to all interlocked machines.
3. **For each gate:**
 - a. Start all interlocked machines (①) and place in *Manual* mode (all machines idling in manual).
 - b. Open the gate and verify that all interlocked machines shut down (as indicated by their individual operator alarms).
 - c. Close the gate so the next gate can be tested.

3.2. Testing Three-wire Circuit Components on Each Interlocked Machine—

Typically, these include the components listed in [Table 1](#).

Table 1: Typical Three-wire Circuit Components

Component	Found On		
	Shuttle	Press	Centrifugal Extractor
Stop (⓪) push button on control panel	✓	✓	✓
Emergency Stop switch(es) (locking push button)	✓	✓	✓
Manually lifted access door (typically two per machine)		✓	
Manually removed access panel (typically two per machine)			✓
Pull cord (certain shuttles)	✓		
Kick plate (typically two per machine)	✓		

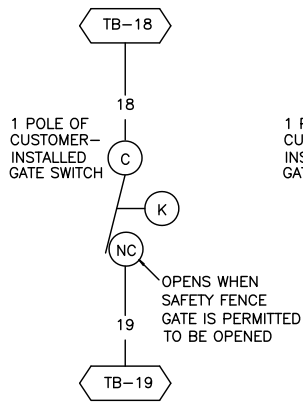
Test each interlocked machine as follows:

1. Start the machine and place in *Manual* mode (machine idling in manual).
2. For each three-wire circuit component on the machine:
 - a. Actuate the component (e.g., press the Stop button) and verify that the machine shuts down (as indicated by the operator alarm).
 - b. If needed, de-actuate the component. For example, release an Emergency Stop switch or close an access door, so the next component can be tested.

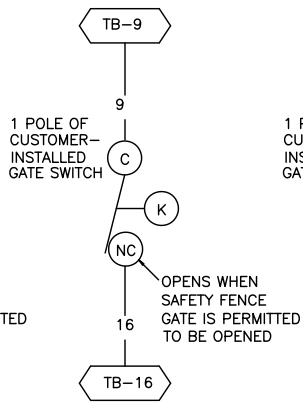
— End of BISUUI02 —

SAFETY FENCE GATE WIRING FOR

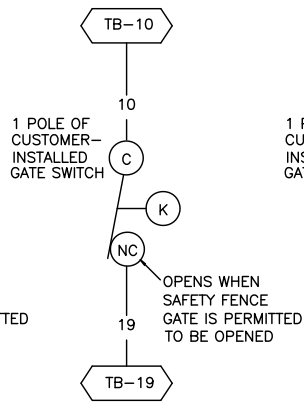
SHUTTLES
SEE SCHEMATIC W6SH5SS+, W6CD5SS+



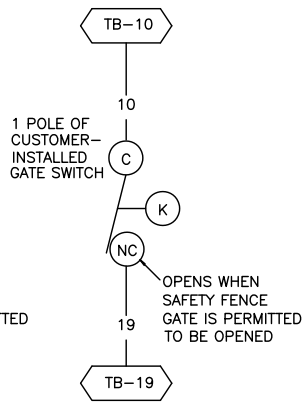
2 STAGE PRESS
SEE SCHEMATIC W6PR5SS+



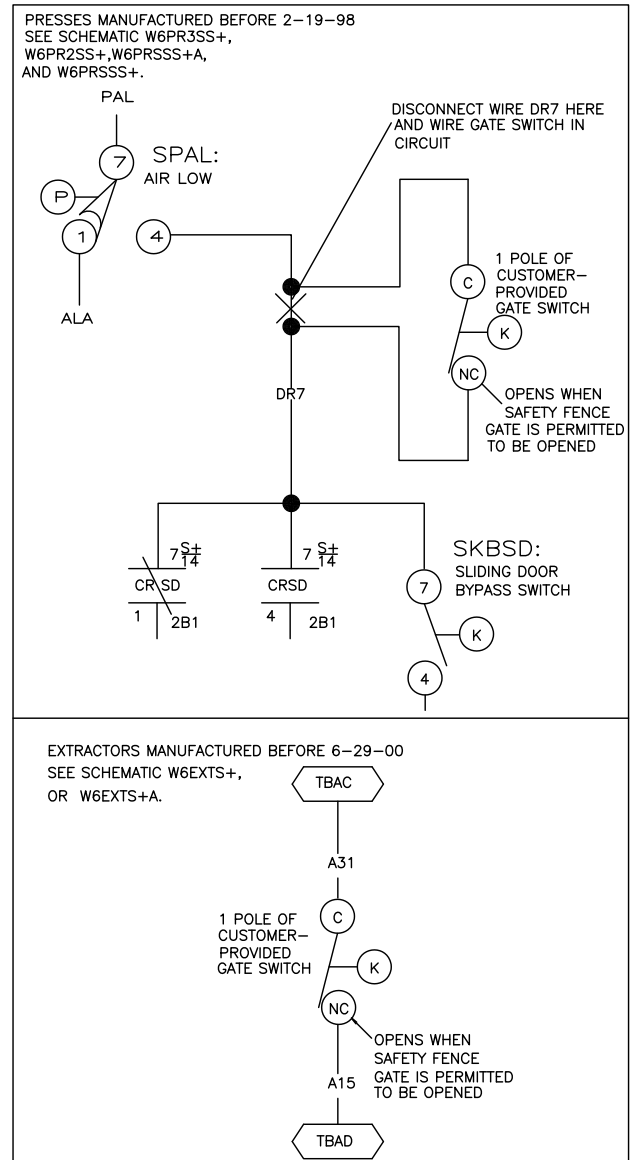
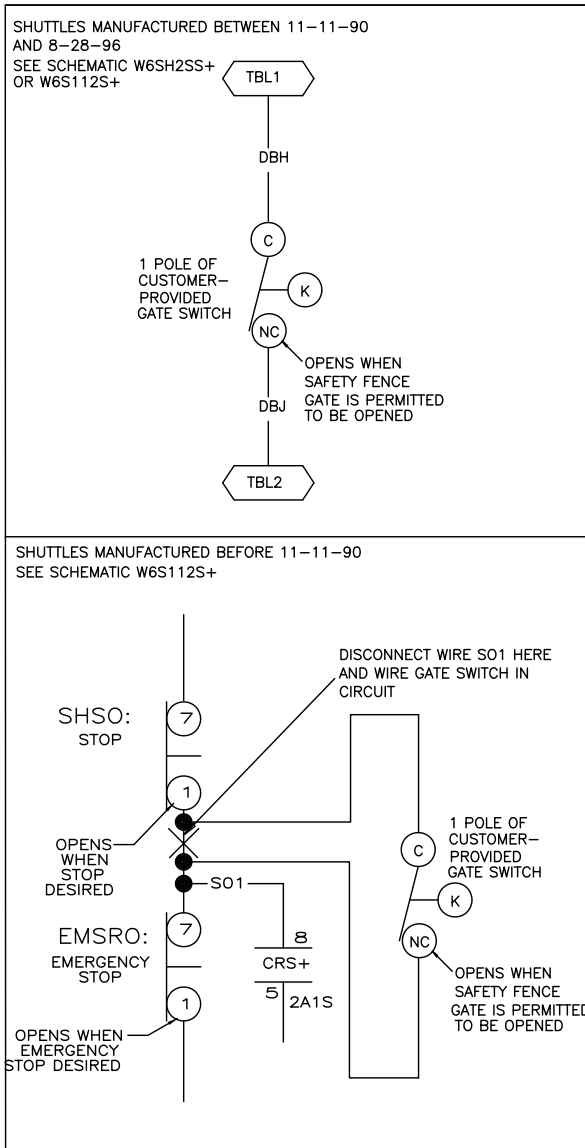
SINGLE STAGE PRESS
SEE SCHEMATIC W6PM1SS+



CENTRIFUGAL EXTRACTORS
SEE SCHEMATIC W6EX5S+

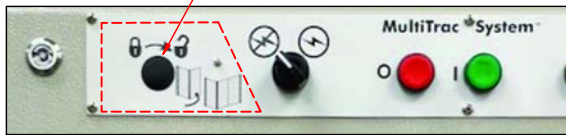


CONNECTION POINTS ON EARLIER MACHINES

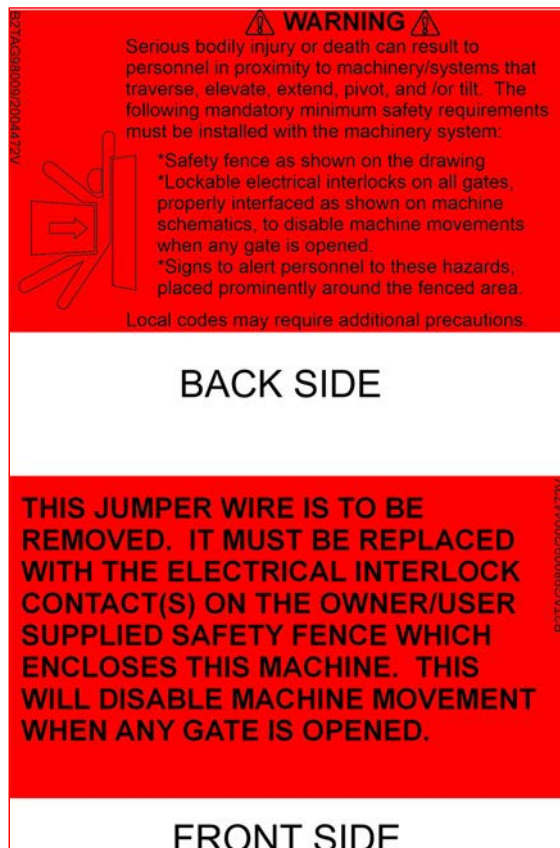


IMPORTANT: EACH MOVING MACHINE MUST BE ENCLOSED IN A RESTRICTED ACCESS FENCED AREA AS SHOWN LAUNDRY LAYOUT DRAWINGS.

THE CUSTOMER IS RESPONSIBLE TO MOUNT THE ELECTRONIC PASS KEY IN THE HOLE PROVIDED ON THE MULTITRAC SWITCH PANEL. THE INSTALLER MUST WIRE EACH MACHINE'S 3-WIRE CIRCUIT CONTACTS IDENTIFIED BY THE FOLLOWING RED TAG. THE JUMPER MUST BE REMOVED AND THE CONTACTS MUST BE WIRED TO A SEPERATE POLE ON THE ELECTRONIC PASS KEY SWITCH.



MULTITRAC SWITCH PANEL



TAG ON JUMPER

OPERATION:

TO START THE PROCESS OF ENTERING THE RESTRICTED AREA THE OPERATOR MUST TURN THE PASS KEY TO THE UNLOCKED POSITION. AT THAT POINT ALL OF THE MACHINES ARE DISABLED AND THE OPERATOR CAN THEN REMOVE THE PASS KEY AND GO TO THE FENCE GATE DOUBLE MECHANICAL LOCK AND UNLOCK THE GATE. HE/SHE CAN THEN REMOVE THE SECOND KEY TO PREVENT SOMEONE FROM RELOCKING THE GATE WHILE THEY ARE IN THE RESTRICTED AREA. THEY CAN THEN ENTER THE RESTRICTED AREA FOR MAINTENANCE. WHEN FINISHED THEY MUST RETURN THE KEY TO THE GATE LOCK, LOCK THE GATE AND RELEASE THE PASS KEY. THE PASS KEY IS THEN BROUGHT BACK TO THE MULTITRAC ELECTRONIC CYLINDER AND TURNED BACK TO LOCKED POSITION. THE SYSTEM CAN NOW BE RESTARTED

SEE MILNOR DOCUMENTS BISUUI01 AND BISUUI02 "PROXIMITY SAFEGUARDING FOR AUTOMATIC SHUTTLE CONVEYORS" FOR MORE INFORMATION.

09 10 11 12 13

W6SYSSG

MICRO 6 SYSTEMS

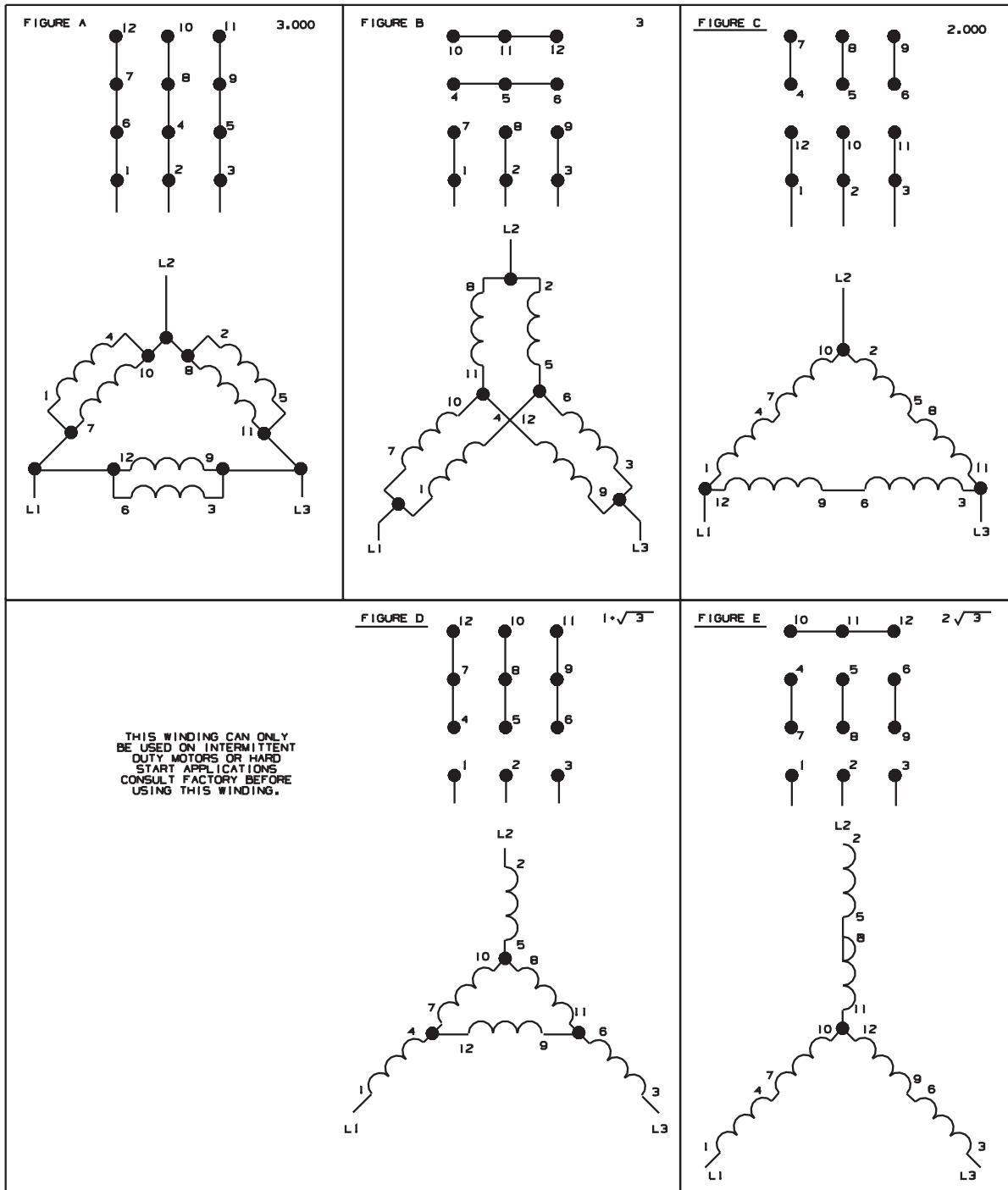
SCHEMATIC: CUSTOMER INSTALLED SAFETY FENCE GATE INTERLOCK

PELLERIN MILNOR CORPORATION

W6SYSSG
2025256B

W6SYSSG
2025256B

FIGURE	ELECTRICAL VALUES	SUFFIXES							
		B		H		M		T	
		50HZ	60HZ	50HZ	60HZ	50HZ	60HZ	50HZ	60HZ
A	1,000	208	230			200	220	220	240
B	$\sqrt{3}$			208	240	346	380	380	
C	2,000	416	460	220	240	400	440	440	480
D	$1 + \sqrt{3}$						600		
E	$2\sqrt{3}$			380					



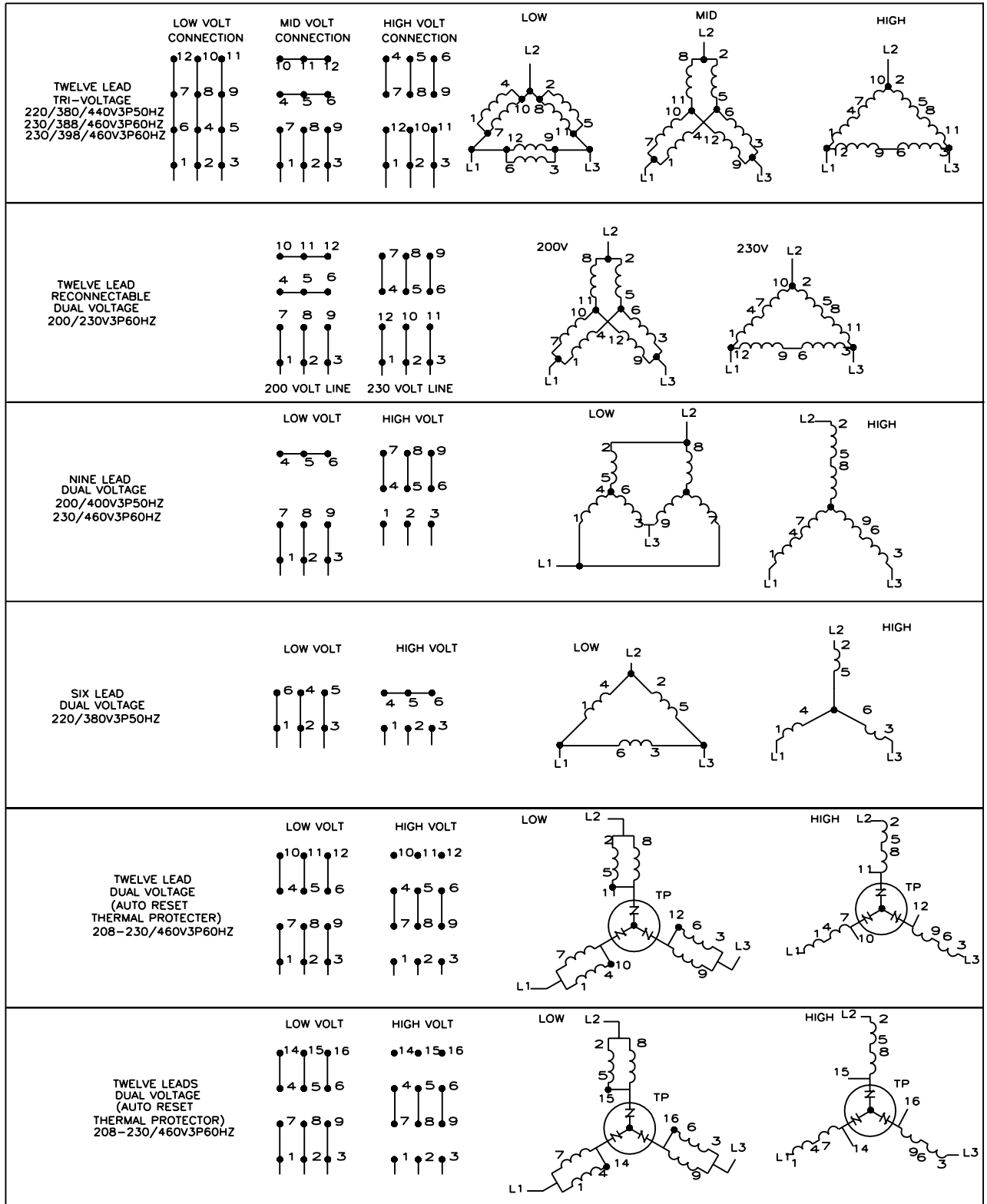
06 07 08 09 10 11 12 13 14 15 16 17

BMP850029

MOTOR CONNECTION DIAGRAMS

THREE PHASE SINGLE SPEED MOTORS WITH MULTIPLE VOLTAGE RATINGS
(ONLY FOR MOTOR SUFFIXES LISTED)

PELLERIN MILNOR CORPORATION



W80008

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

W80008
2001253A

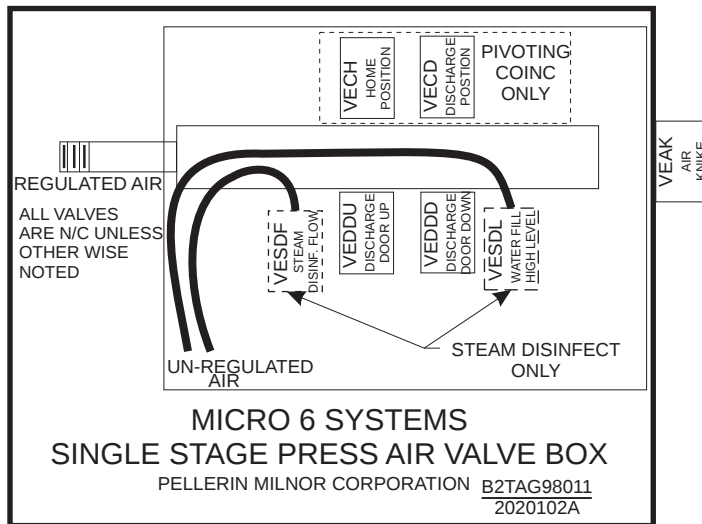
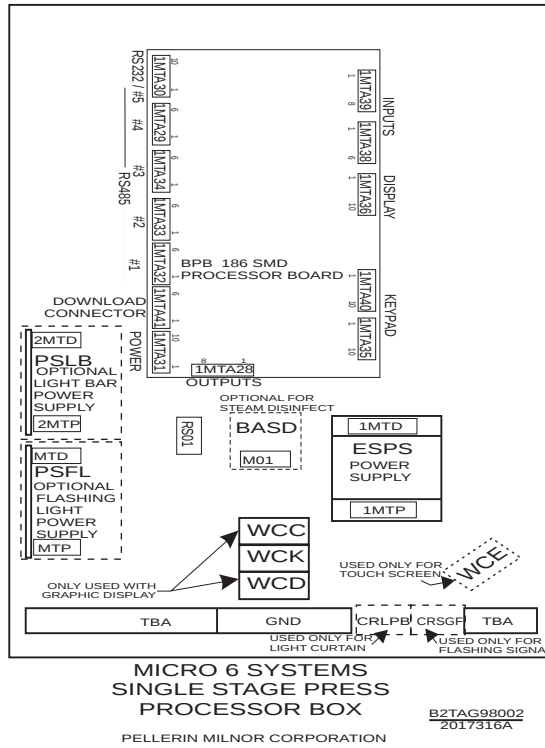
BIO-1 (STANDARD) INPUTS 0 THREE WIRE ON 1 RAM HALF UP 2 RAM FULL DOWN 3 CAN FULL UP 4 CAN FULL DOWN 1 5 BELT PHOTOEYE BLOCKED 6 DISCHARGE DOOR UP 7 DISCHARGE DOOR DOWN 8 NEW CUSTOMER 9 START DISCHARGE 10 DON'T PRESS GOODS 11 SINGLE CAKE 12 PASS EMPTY 13 DRY CODE 0 14 DRY CODE 1 15 DRY CODE 2	BIO-2 (STANDARD) INPUTS 0 EXTRACT CODE 0 1 EXTRACT CODE 1 2 EXTRACT CODE 2 3 EXTRACT CODE 3 4 RAM AT UNLOAD 5 CAN FULL DOWN 2 6 DRY CODE 3 7 COINC LOADED 8 REUSE HIGH LEVEL 9 REUSE LOW LEVEL 10 GOODS UNDER CAN 11 RAM AT LOW 12 DIRTY FILTER 13 OIL TOO HOT 14 OIL LEVEL LOW 15 NOT USED OUTPUTS 0 DESTINATION OUT 0 1 DESTINATION OUT 1 2 DESTINATION OUT 2 3 SMALL DECOMPRESSION VALVE 4 DRY CODE OUT 0 5 DRY CODE OUT 1 6 DRY CODE OUT 2 7 DRY CODE OUT 3	BO24-1 (STANDARD) OUTPUTS 0 SIGNAL 1 PRESS FREE 2 DESIRES TO UNLOAD 3 MOVE LOAD CHUTE UP 4 MOVE LOAD CHUTE DOWN 5 FLAG DOWN DISCHARGE 6 FLAG DOWN LOAD 7 RUN COINC 8 REUSE PUMP 9 POPPET VALVE 2 10 MOVE DISCHARGE DOOR UP 11 MOVE DISCHARGE DOOR DOWN 12 HOLD SHUTTLE 13 RAM DOWN BYPASS 14 NOT USED 15 NOT USED 16 CUSTOMER OUT 0 17 CUSTOMER OUT 1 18 CUSTOMER OUT 2 19 CUSTOMER OUT 3 20 CUSTOMER OUT 4 21 CUSTOMER OUT 5 22 CUSTOMER OUT 6 23 CUSTOMER OUT 7	BIO-3 (OPTIONAL) DATA PASS INPUTS 0 GOODS CODE 0 1 GOODS CODE 1 2 GOODS CODE 2 3 GOODS CODE 3 4 GOODS CODE 4 5 GOODS CODE 5 6 DESTINATION 0 7 DESTINATION 1 8 CUSTOMER CODE 0 9 CUSTOMER CODE 1 10 CUSTOMER CODE 2 11 CUSTOMER CODE 3 12 CUSTOMER CODE 4 13 CUSTOMER CODE 5 14 DESTINATION 2 15 DESTINATION 3 OUTPUTS 0 GOODS OUT 0 1 GOODS OUT 1 2 GOODS OUT 2 3 GOODS OUT 3 4 GOODS OUT 4 5 GOODS OUT 5 6 GOODS OUT 6 7 GOODS OUT 7	BIO-4 (OPTIONAL) DATA PASS INPUTS 0 WEIGHT 0 1 WEIGHT 1 2 WEIGHT 2 3 WEIGHT 3 4 WEIGHT 4 5 WEIGHT 5 6 WEIGHT 6 7 WEIGHT 7 8 WEIGHT 8 9 WEIGHT 9 10 WEIGHT 10 11 WEIGHT 11 12 GOODS CODE 6 13 GOODS CODE 7 14 NOT USED 15 NOT USED OUTPUTS 0 NOT USED 1 NOT USED 2 NOT USED 3 NOT USED 4 NOT USED 5 NOT USED 6 NOT USED 7 NOT USED	BIO-5 BOOSTER PMP INPUTS 0 NOT USED 1 NOT USED 2 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 BOOSTER PUMP 1 BLEED VALVE 2 ISOLATION VALVE 3 PSI 100 4 PSI 250 5 FLOW CONTROL 6 REUSE TANK STM 7 REUSE TANL FILL
MICRO 6 SYSTEMS MARK V CONTROLS SINGLE STAGE PRESS INPUT/OUTPUT BOARDS PELLERIN MILNOR CORPORATION B2TAG98010 2025142A					

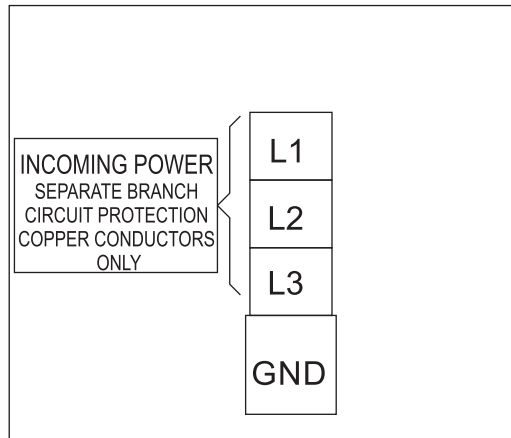
W6PM1STG1

MICRO 6 SYSTEMS

CONTROL BOX LAYOUTS

PELLERIN MILNOR CORPORATION





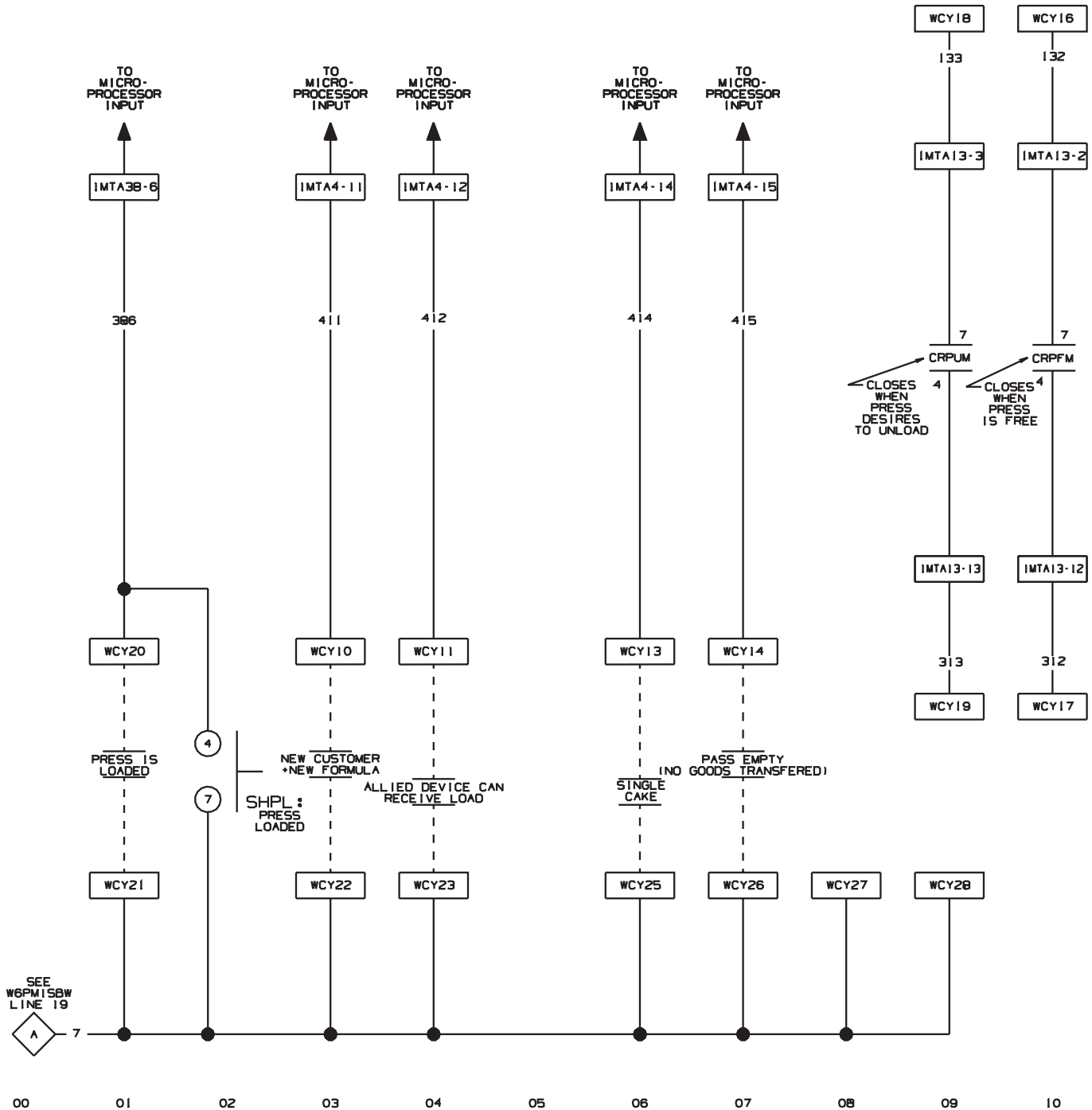
MICRO 6 SYSTEMS
SINGLE STAGE PRESS
POWER DISTRIBUTION BOX
PELLERIN MILNOR CORPORATION

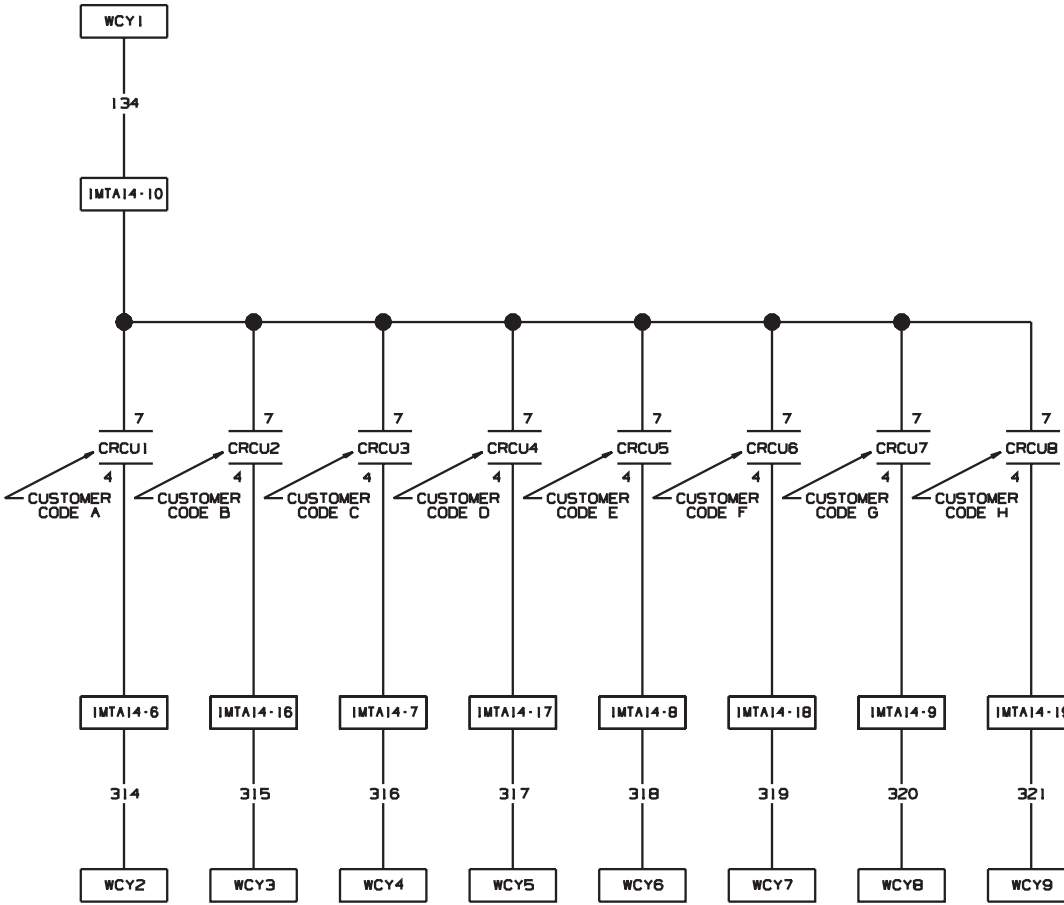
B2T2023007
2024024A

W6PM1STG2

MICRO 6 SYSTEMS CONTROL BOX LAYOUTS

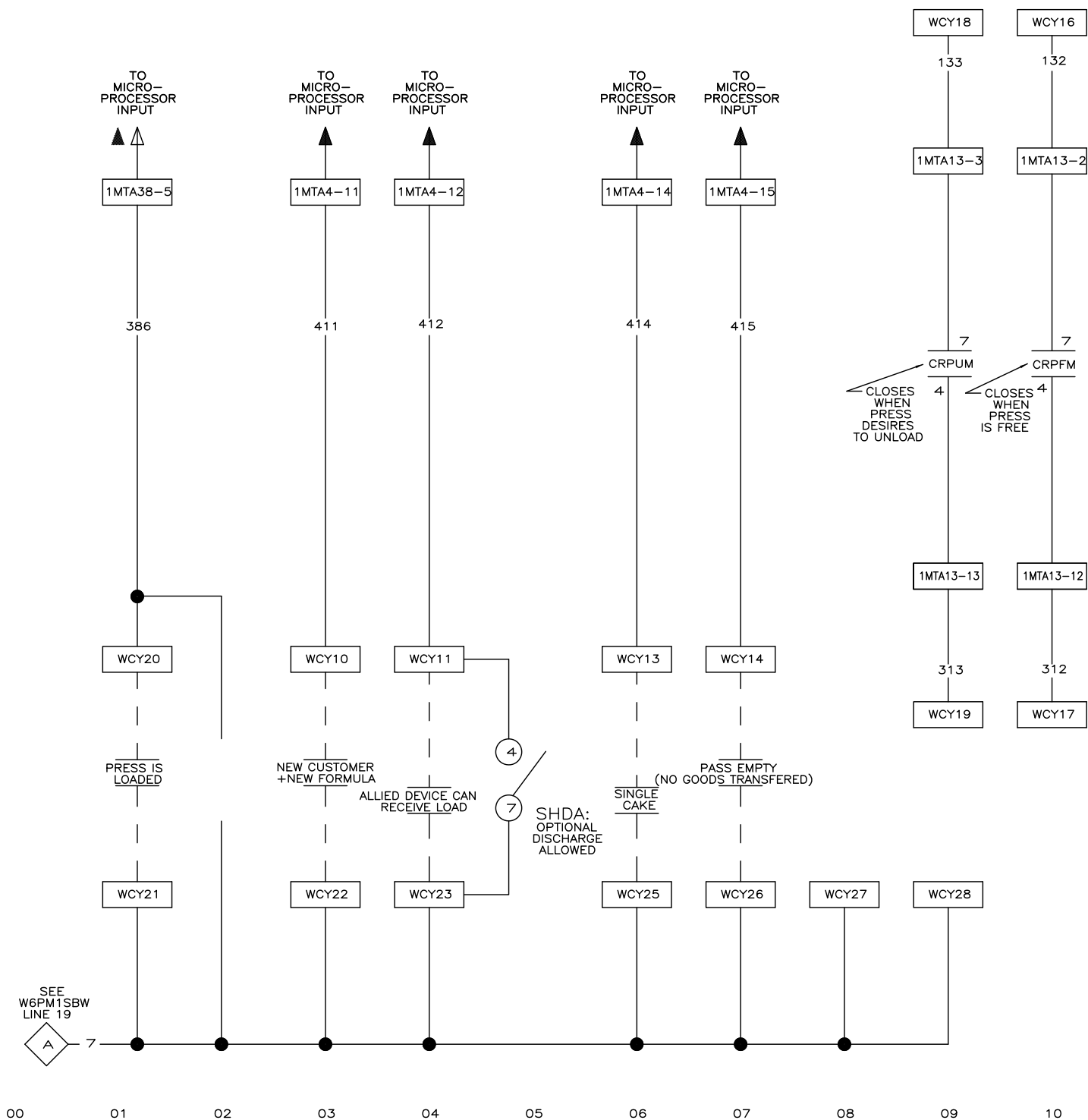
PELLERIN MILNOR CORPORATION

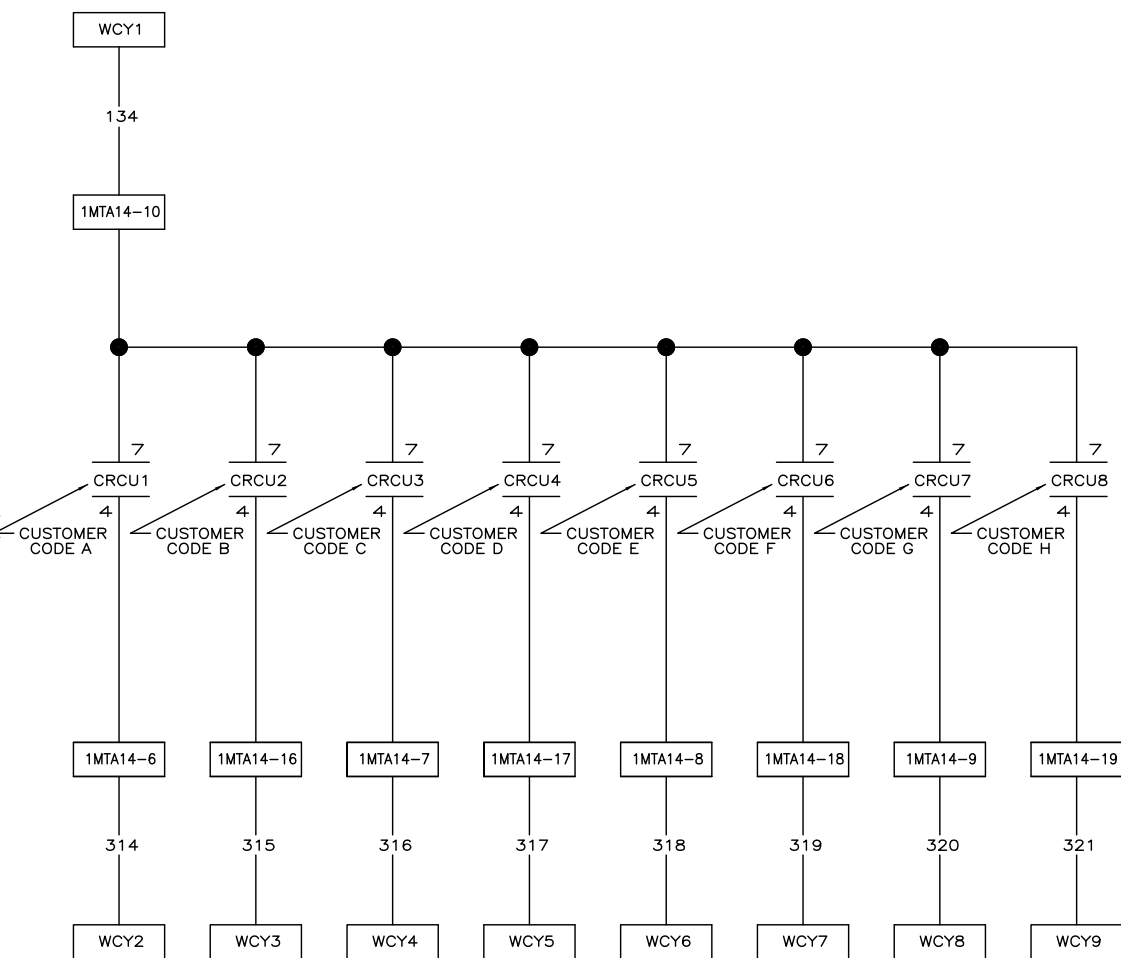




W6PM1SAI
 MICRO 6 SYSTEMS
 MARK V
 SCHEMATIC: ALLIED INTERFACE
 PELLERIN MILNOR CORPORATION

11 12 13 14 15 16 17 18 19





W6PM1SAIA

MICRO 6 SYSTEMS

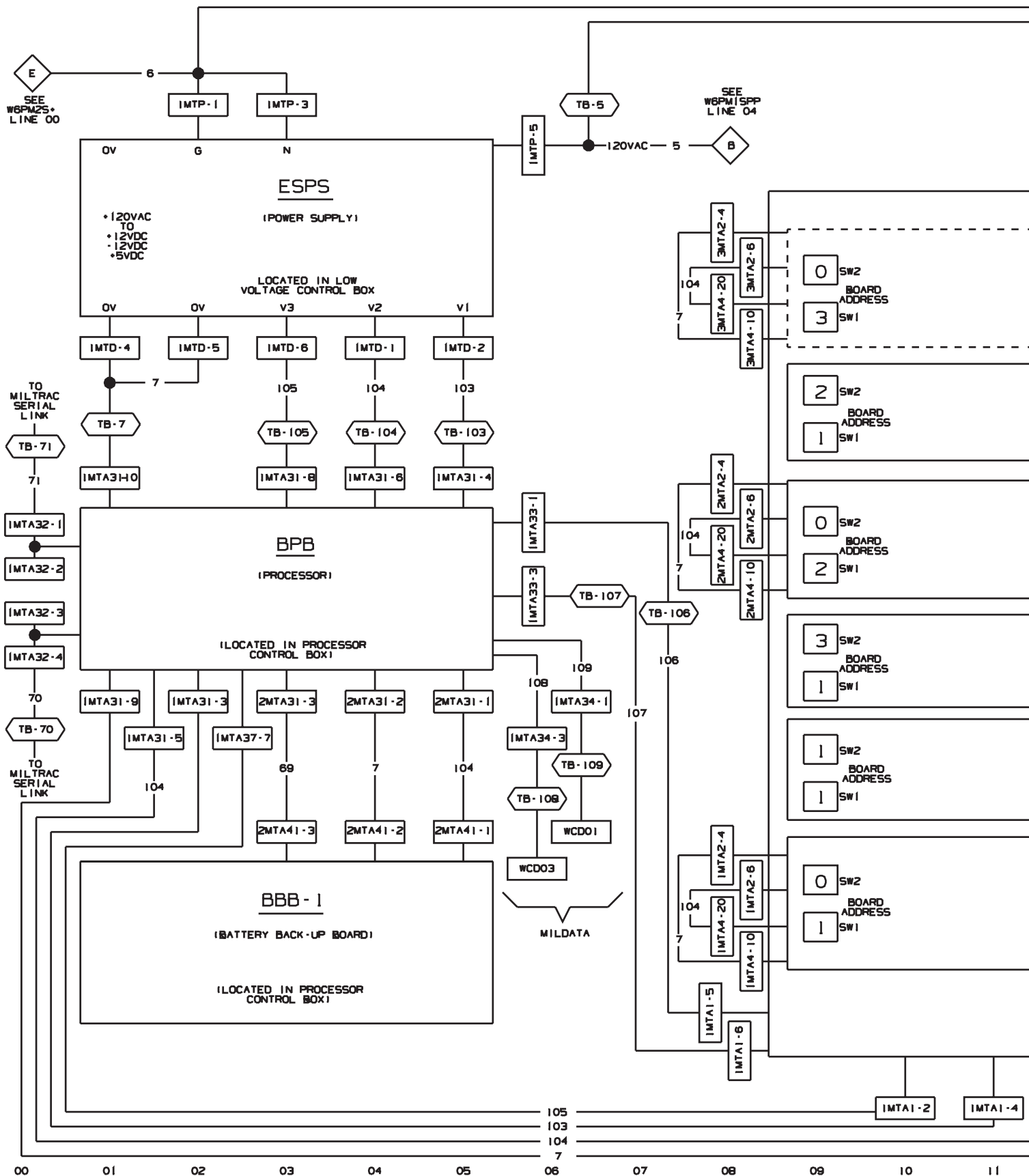
MARK V

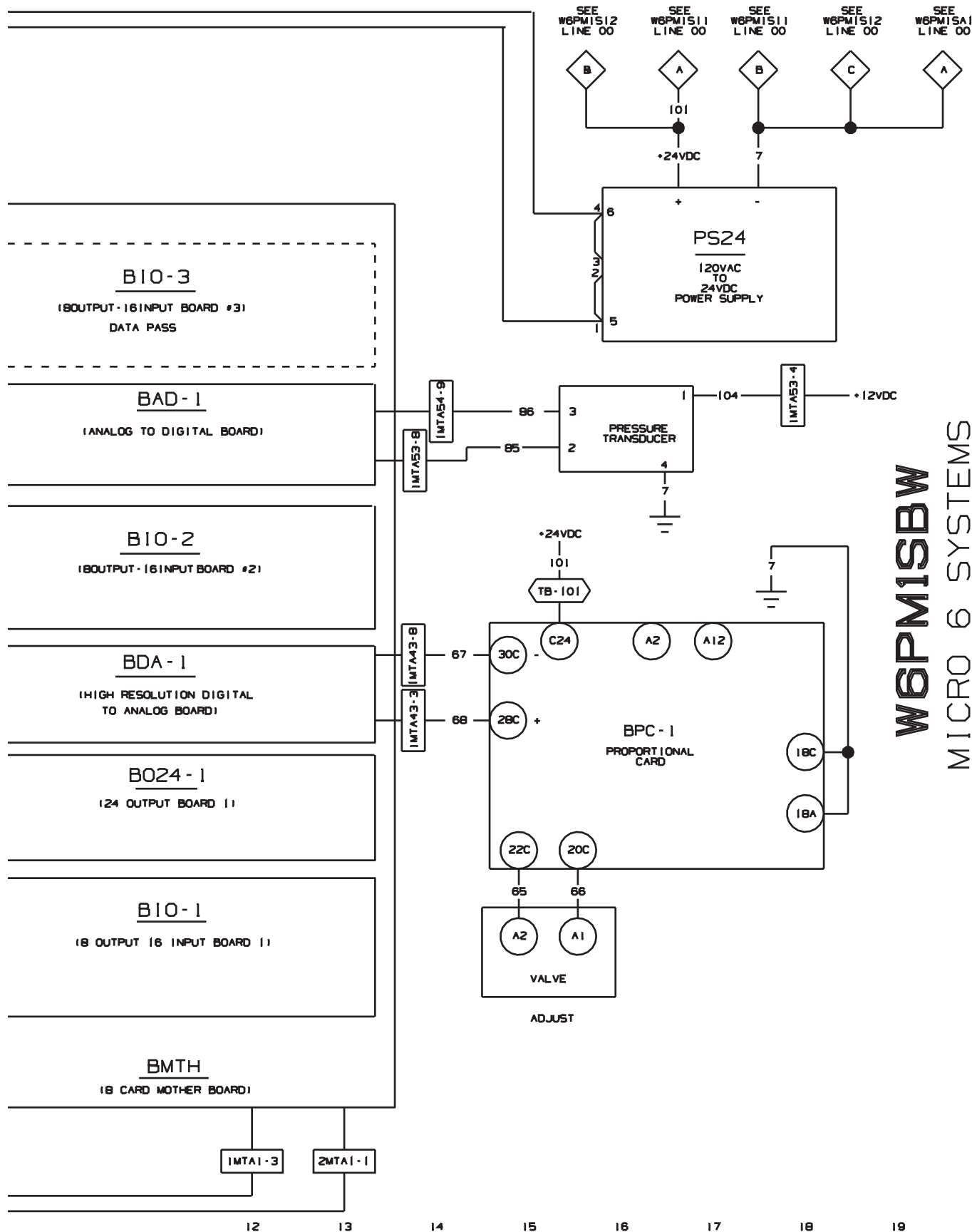
SCHEMATIC: ALLIED INTERFACE

FOR 186 PROCESSOR

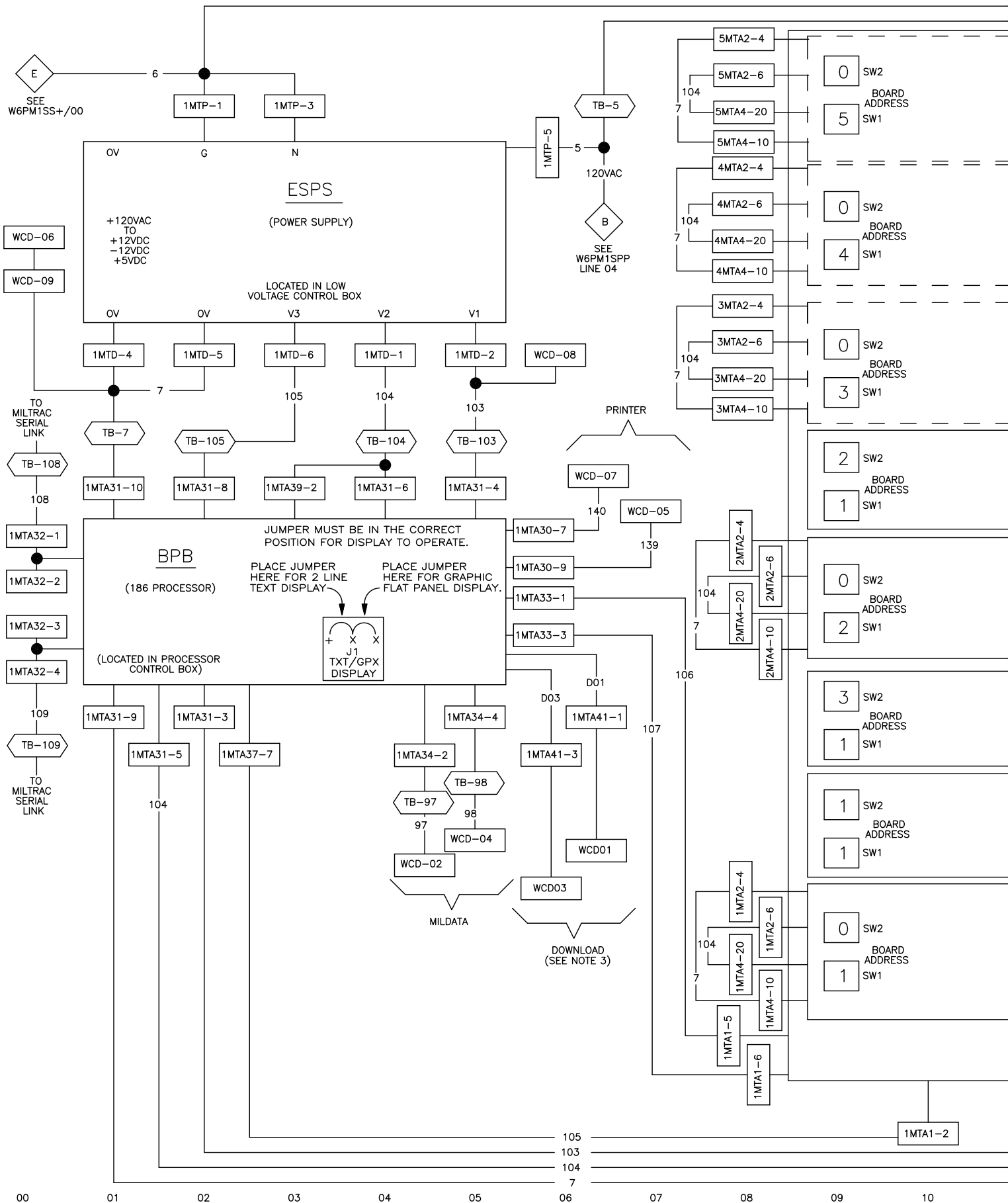
PELLERIN MILNOR CORPORATION

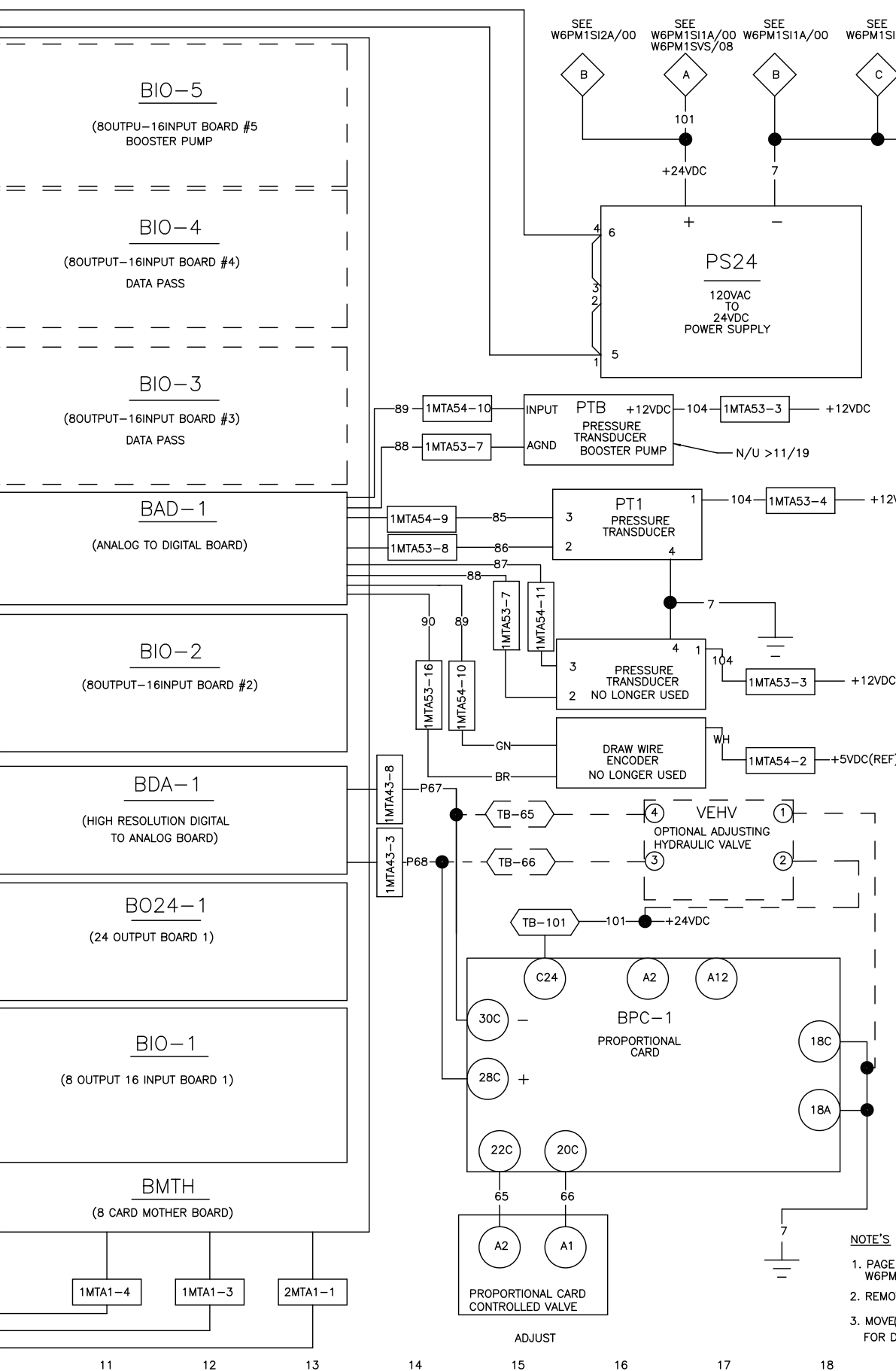
W6PM1SAIA
2019206B





W6PM1SBW
MICRO 6 SYSTEMS
MARK V
SCHEMATIC: BOARD TO BOARD WIRING
110V1P50HZ/120V1P60HZ
PELLERIN MILNOR CORPORATION

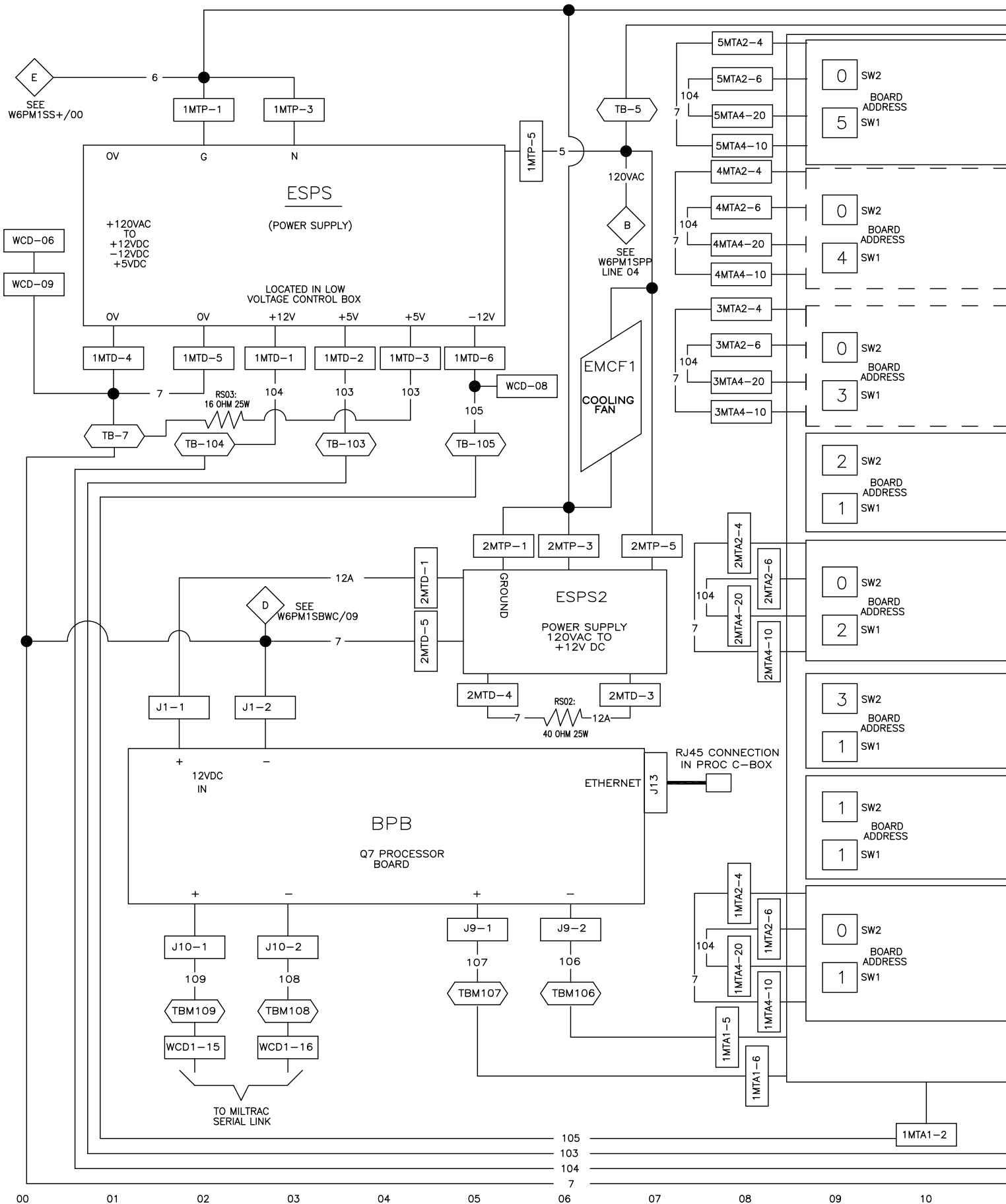


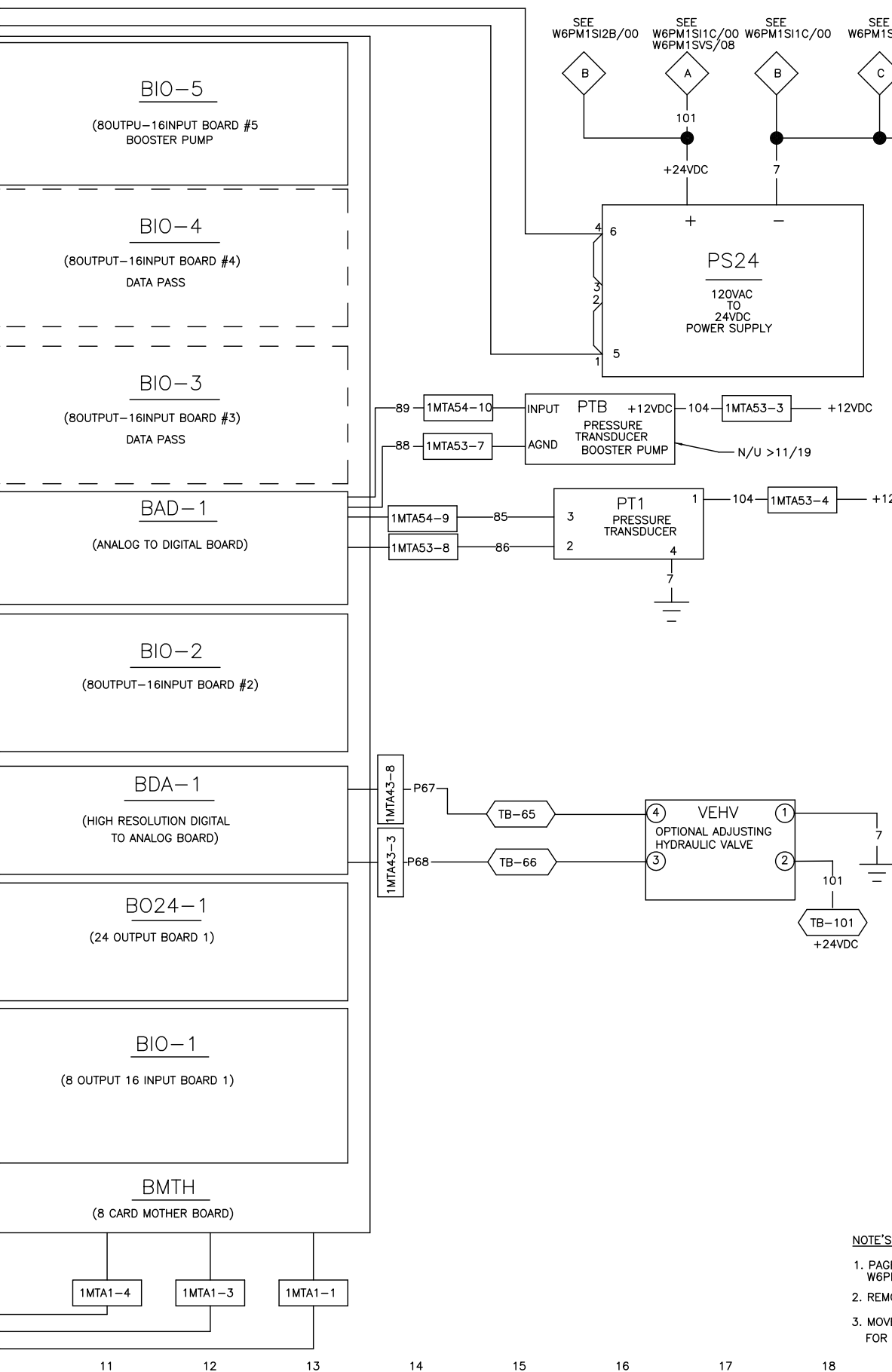


W6PM1SBWB
 MICRO 6 SYSTEMS
 MARK VI
 SCHEMATIC:BOARD TO BOARD WIRING FOR 08BSPE3T
 MODIFIED FOR 186 PROCESSOR
 110V1P50HZ/120V1P60HZ
 PELLERIN MILNOR CORPORATION

NOTE'S

- PAGE W6PM1SBWA REPLACES W6PM1SBW ON 04/22/03.
- REMOVE (J1) ON BAD-1 FOR CHANNEL 1.
- MOVE (Q2) ON BPB TO "DOWNLOAD BOX" POSITION FOR DOWNLOAD.

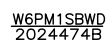


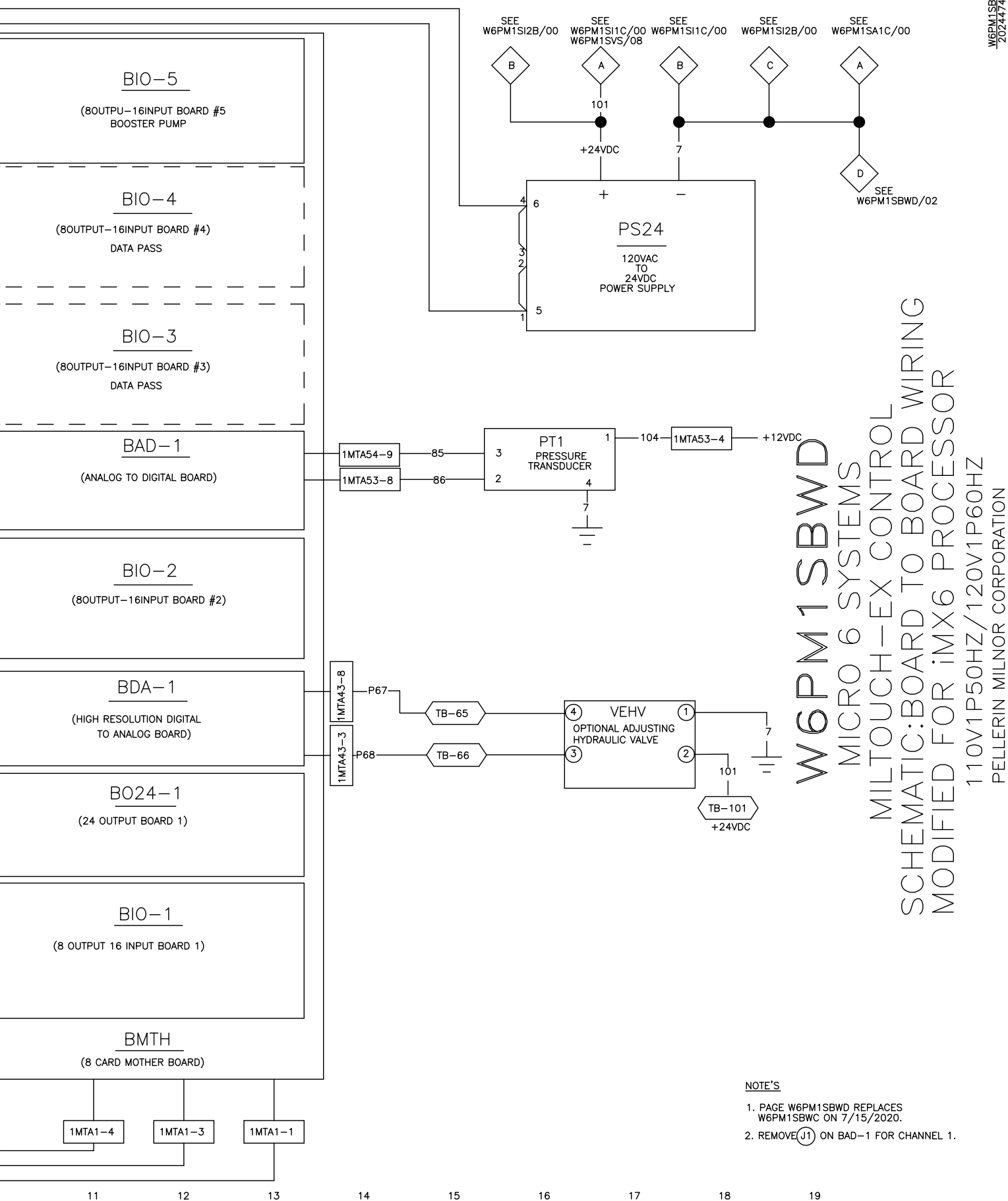


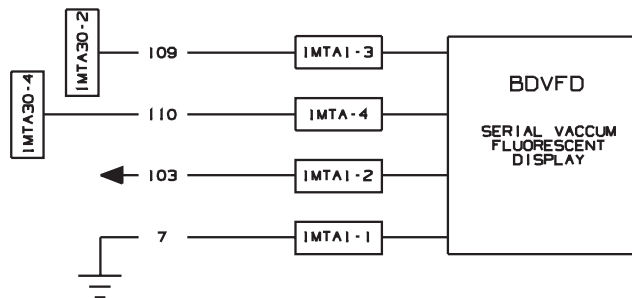
W6PM1SBWC
MICRO 6 SYSTEMS
MILTOUCH-EX CONTROL
SCHEMATIC:BOARD TO BOARD WIRING
MODIFIED FOR Q7 PROCESSOR
110V1P50HZ/120V1P60HZ
PELLERIN MILNOR CORPORATION

NOTE'S

1. PAGE W6PM1SBWA REPLACES W6PM1SBW ON 04/22/03.
2. REMOVE (J1) ON BAD-1 FOR CHANNEL 1.
3. MOVE (Q2) ON BPB TO "DOWNLOAD BOX" POSITION FOR DOWNLOAD.







00 01 02 03 04 05 06 07 08 09 10

11

12

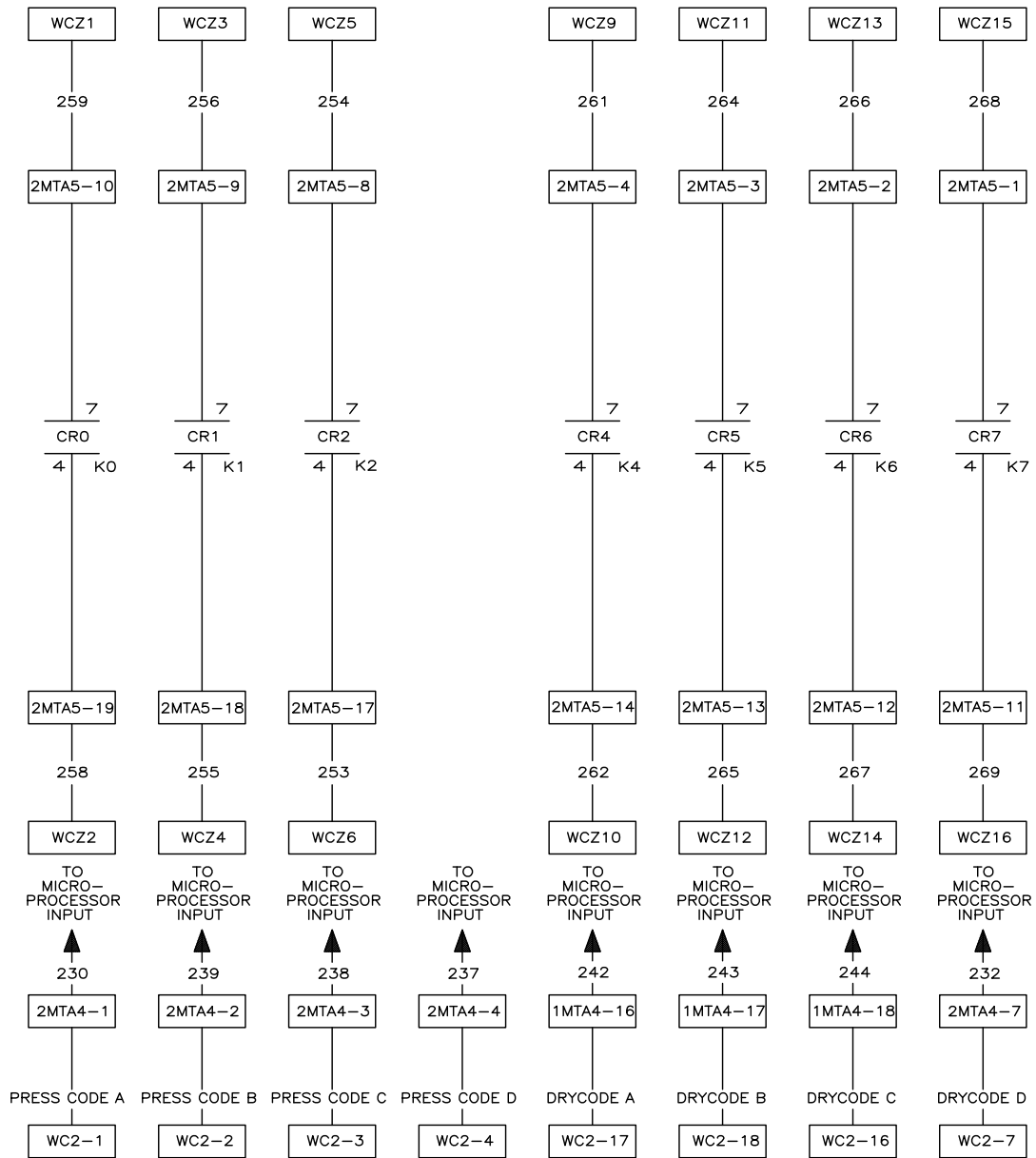
13

14

15

16

W6PM1SD
MICRO 6 SYSTEMS
MARK V
SCHEMATIC: SERIAL DISPLAY
PELLERIN MILNOR CORPORATION



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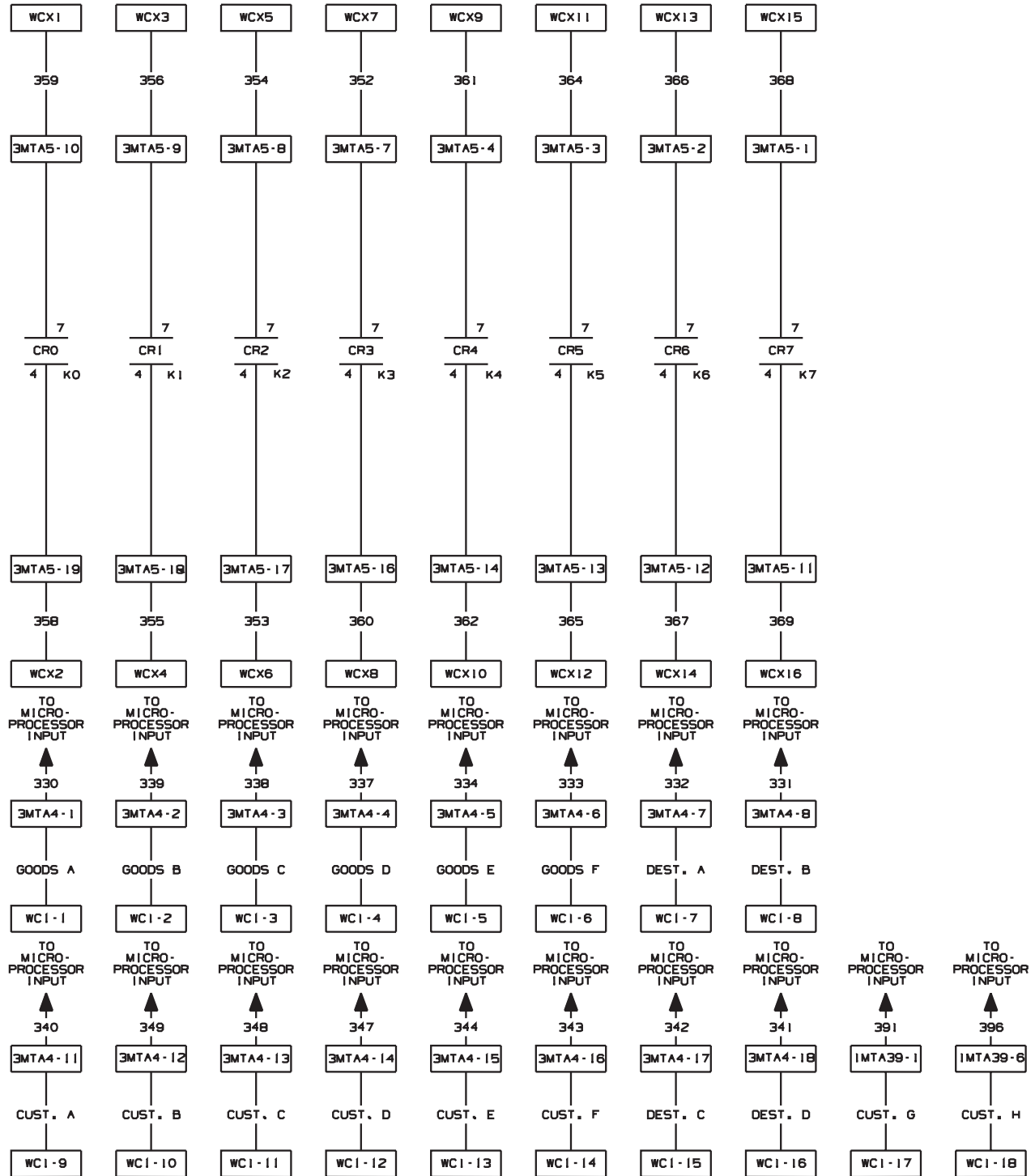
10

NOTES:

CR0 = DESTINATION A
CR1 = DESTINATION B
CR2 = DESTINATION C
CR4 = DRYCOND A
CR5 = DRYCODE B
CR6 = DRYCODE C
CR7 = DRYCODE D

W6PM1SDP2
2023196B

W6PM1SDP2
MICRO 6 SYSTEMS
SCHEMATIC: PRESS DRY CONTACT DATA PASS
(8 OUTPUT 16 INPUT BOARD#2)
PELLERIN MILNOR CORPORATION



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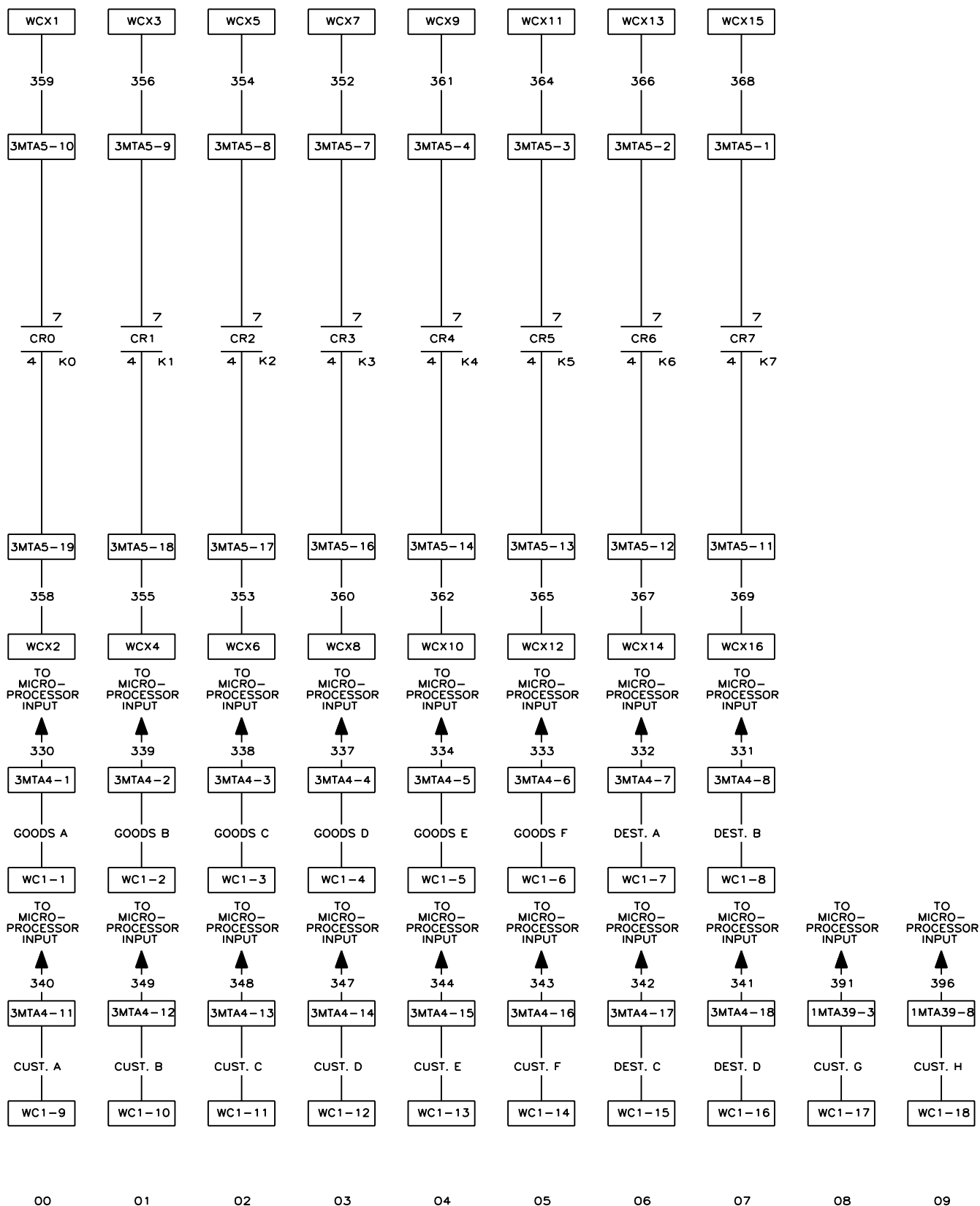
09

10

NOTES:

CR0 : GOODS CODE A
CR1 : GOODS CODE B
CR2 : GOODS CODE C
CR3 : GOODS CODE D
CR4 : GOODS CODE E
CR5 : GOODS CODE F
CR6 : GOODS CODE G
CR7 : GOODS CODE H

W6PM1SDP3
MICRO 6 SYSTEMS
SCHEMATIC: PRESS DRY CONTACT DATA PASS
(8 OUTPUT 16 INPUT BOARD#3)
PELLERIN MILNOR CORPORATION

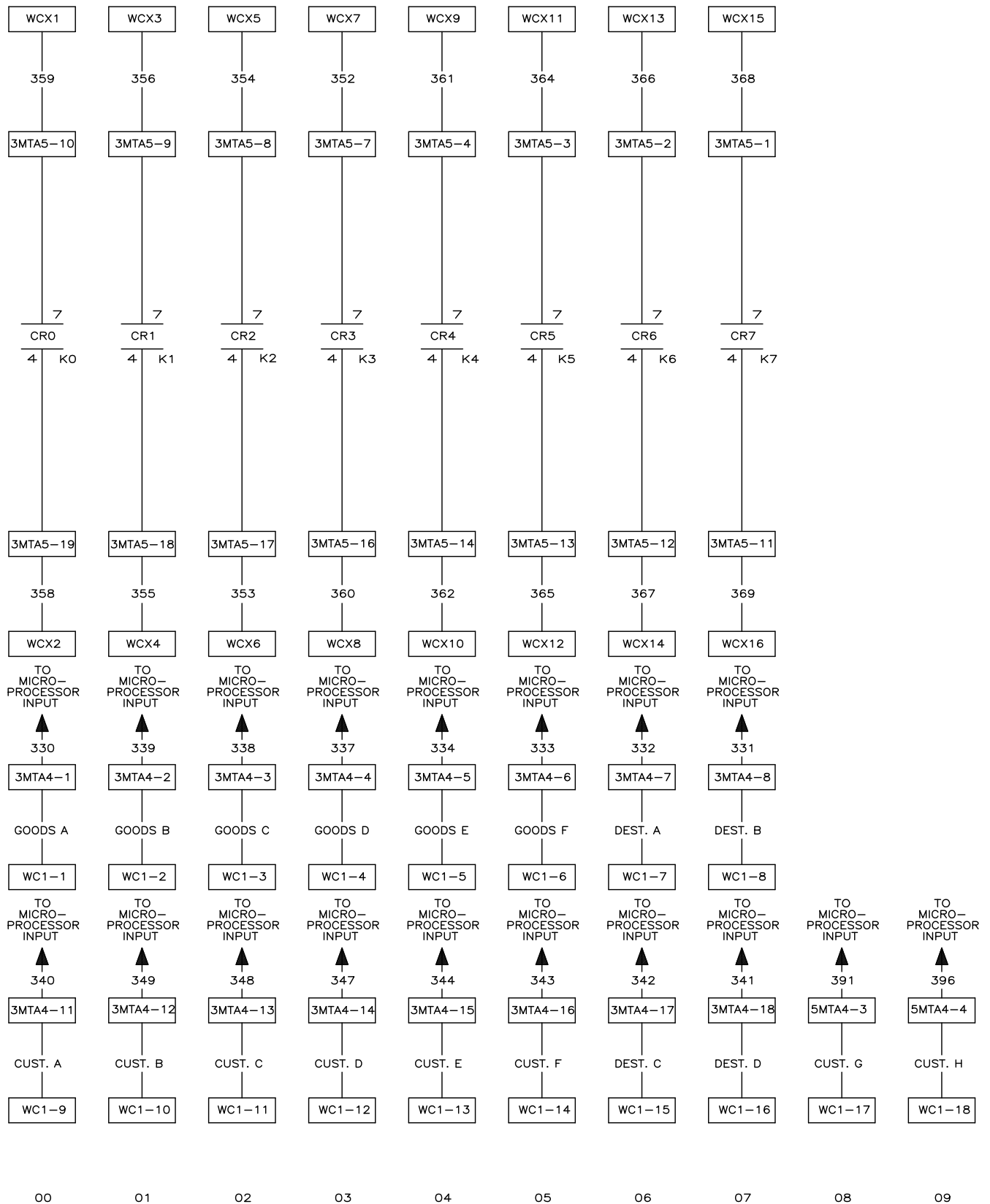


NOTES:

- CR0 = GOODS CODE A
- CR1 = GOODS CODE B
- CR2 = GOODS CODE C
- CR3 = GOODS CODE D
- CR4 = GOODS CODE E
- CR5 = GOODS CODE F
- CR6 = GOODS CODE G
- CR7 = GOODS CODE H

W6PM1SDP3A
MICRO 6 SYSTEMS
SCHEMATIC: PRESS DRY CONTACT DATA PASS
(8 OUTPUT 16 INPUT BOARD#3)
FOR 186 PROCESSOR
PELLERIN MILNOR CORPORATION

W6PM1SDP3A
2003174B



NOTES:

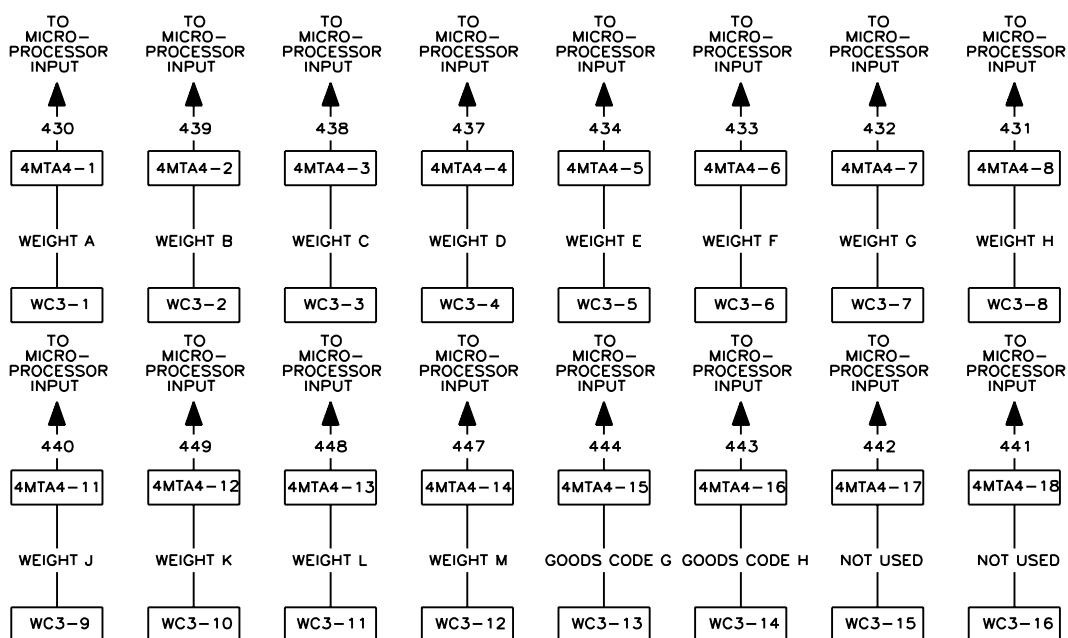
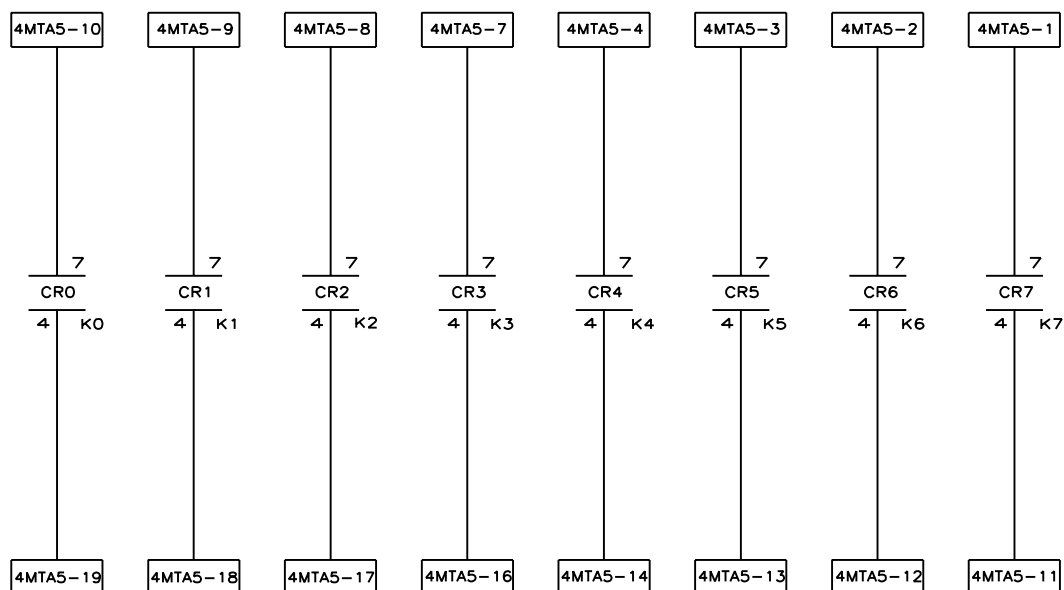
CR0 = GOODS CODE A
CR1 = GOODS CODE B
CR2 = GOODS CODE C
CR3 = GOODS CODE D
CR4 = GOODS CODE E
CR5 = GOODS CODE F
CR6 = GOODS CODE G
CR7 = GOODS CODE H

W6PM1SDP3B
MICRO 6 SYSTEMS
SCHEMATIC: PRESS DRY CONTACT DATA PASS
(8 OUTPUT 16 INPUT BOARD#3)
FOR Q7 PROCESSOR
PELLERIN MILNOR CORPORATION

W6PM1SDP3B
2018512B

10 11 12 13 14 15 16

W6PM1SDP3B
2018512B



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01

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08

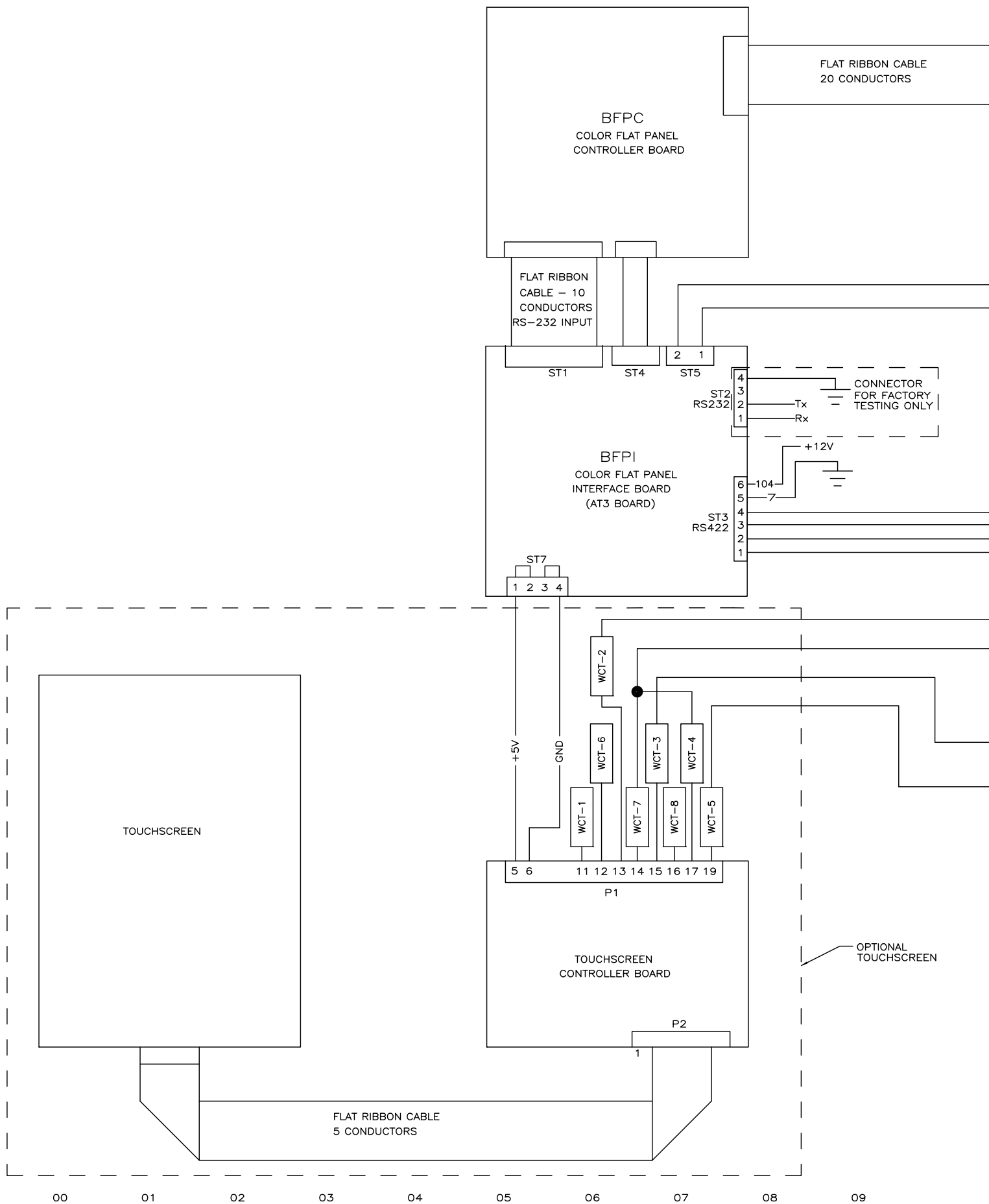
09

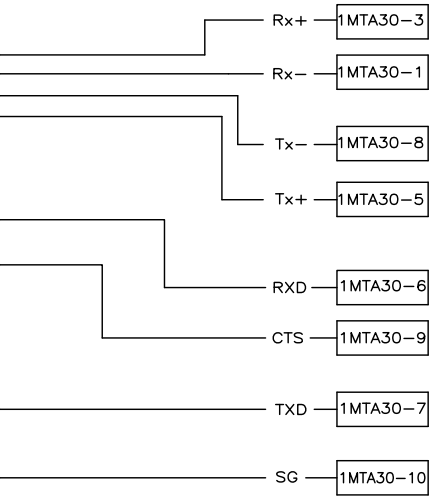
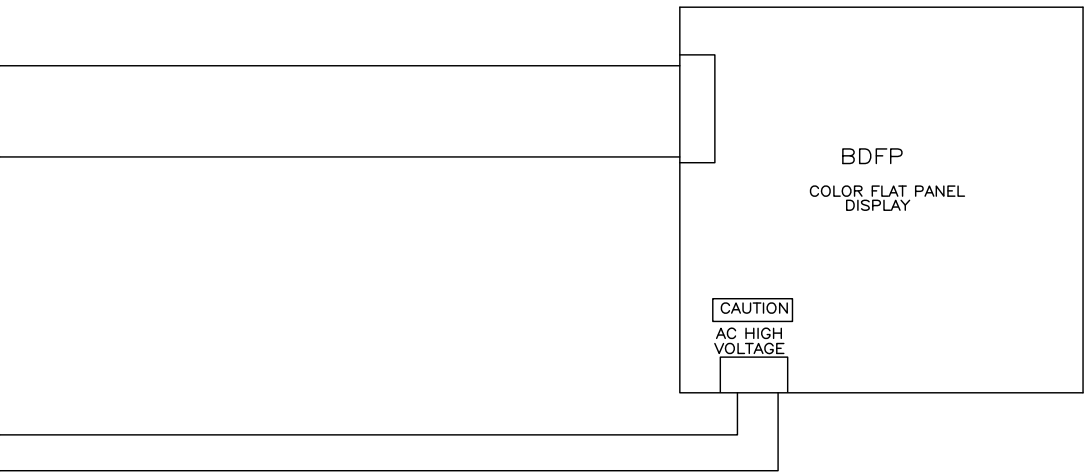
NOTES:

CR0 = NOT USED
CR1 = NOT USED
CR2 = NOT USED
CR3 = NOT USED
CR4 = NOT USED
CR5 = NOT USED
CR6 = NOT USED
CR7 = NOT USED

INPUTS	BIT	VALUE
WEIGHT A	0	0.1
WEIGHT B	1	0.2
WEIGHT C	2	0.4
WEIGHT D	3	0.8
WEIGHT E	4	1.6
WEIGHT F	5	3.2
WEIGHT G	6	6.4
WEIGHT H	7	12.8
WEIGHT J	8	25.6
WEIGHT K	9	51.2
WEIGHT L	10	102.4
WEIGHT M	11	204.8

W6PM1SDP4
MICRO 6 SYSTEMS
SCHEMATIC: PRESS DRY CONTACT DATA PASS
(8 OUTPUT 16 INPUT BOARD#4)
FOR 186 PROCESSOR
PELLERIN MILNOR CORPORATION



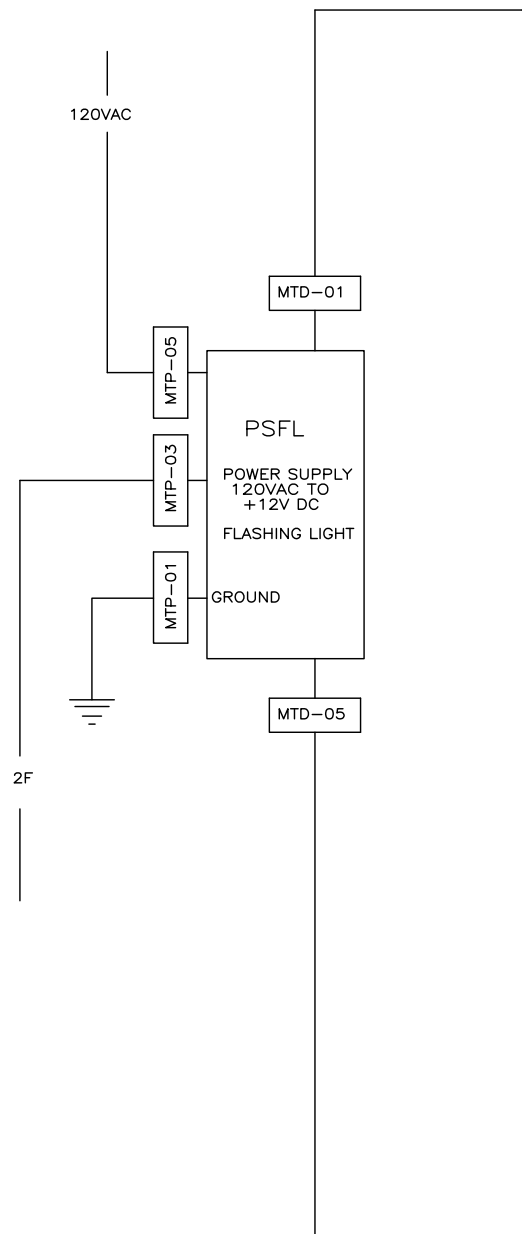


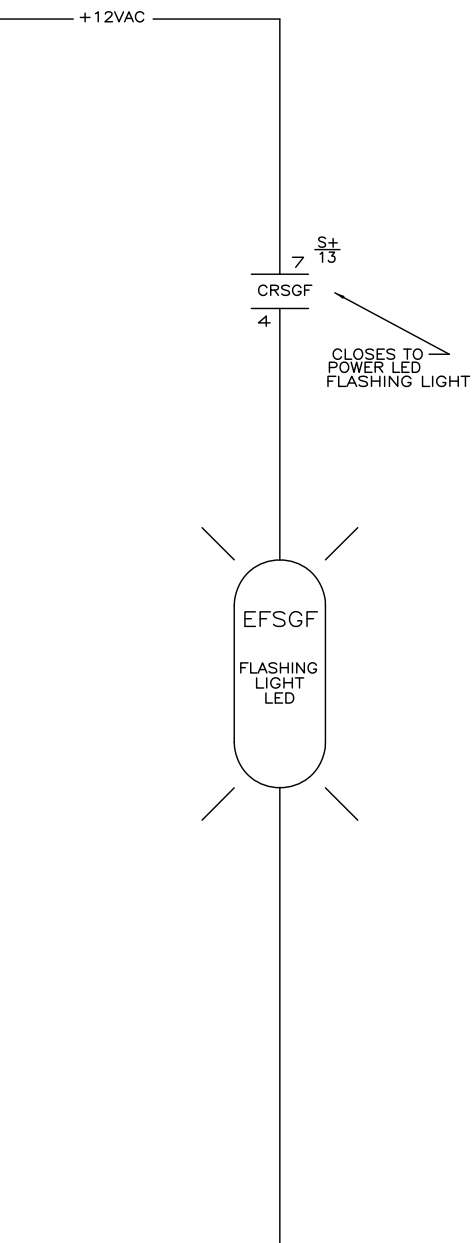
NOTES

1. 1MTA30 IS LOCATED ON BPB (PROCESSOR BOARD).
2. ST1 THROUGH ST5 IS LOCATED ON BFPI COLOR FLAT PANEL INTERFACE BOARD.
3. TXD AND CTS REPLACE PRINTER CONNECTION AT 1MTA30-07 AND 1MTA30-09.

W6PM1SEC
MICRO 6 SYSTEMS
MARK VI
SCHEMATIC: COLOR FLAT PANEL DISPLAY
PELLERIN MILNOR CORPORATION

W6PM1SEC
2016133B





10

11

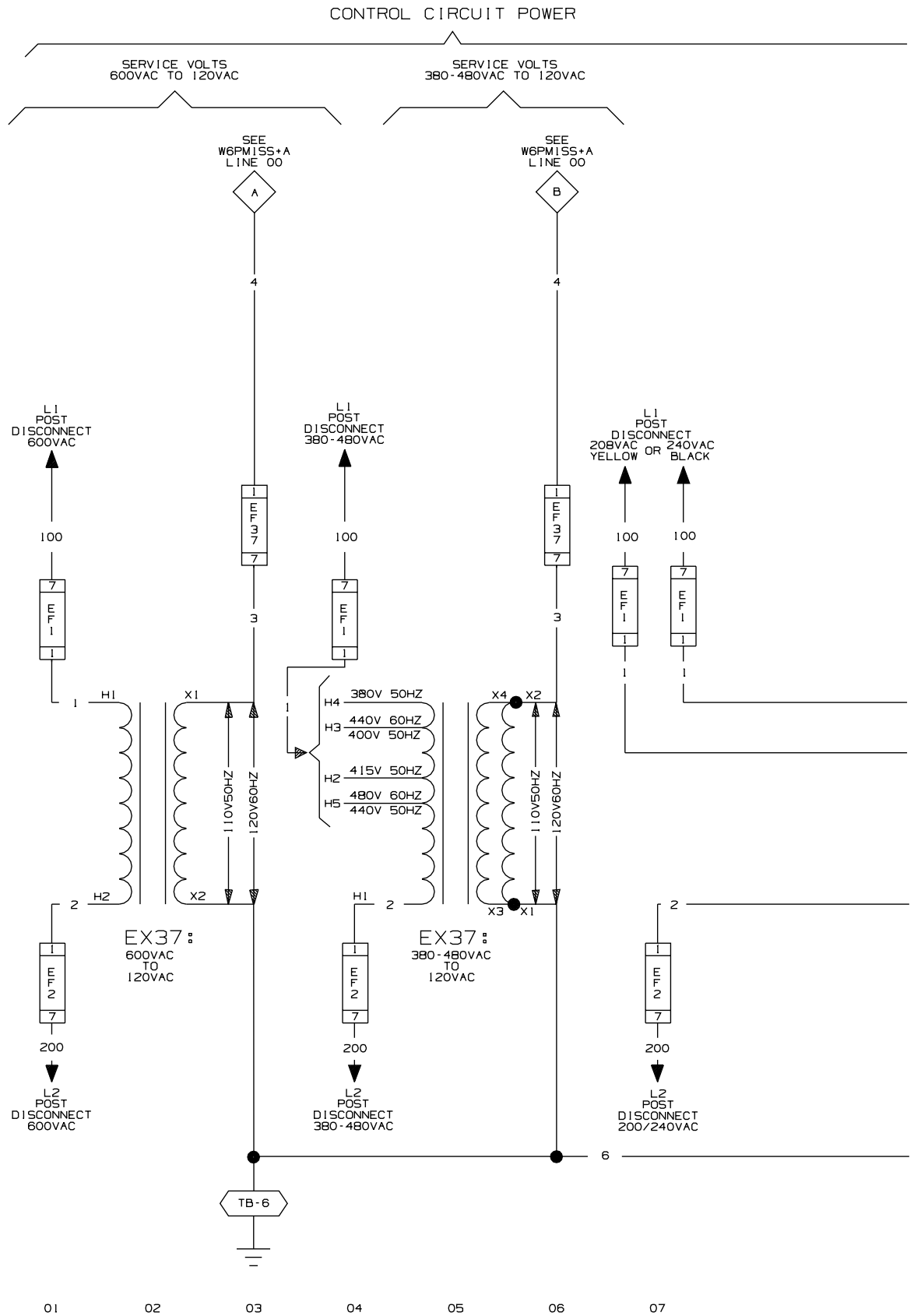
W6PM1SFS

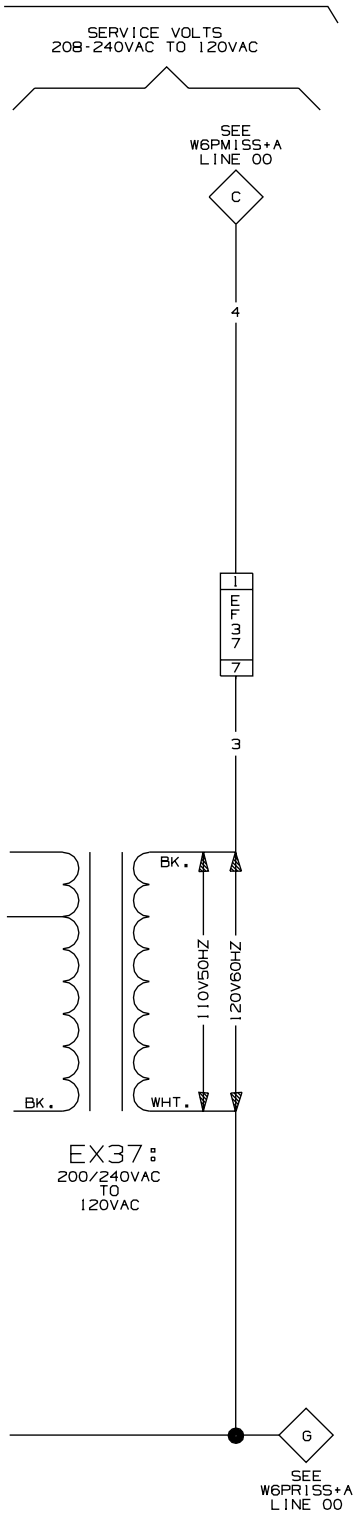
SCHEMATIC: OPTIONAL FLASHING LED SIGNAL LIGHT

PELLERIN MILNOR CORPORATION

W6PM1SFS
2016525B

W6PM1SFS
2016525B





W6PM1SHV

MICRO 6 SYSTEMS MARK V
SCHEMATIC: 110V1P50HZ/120V1P60HZ
CONTROL CIRCUIT POWER
PELLERIN MILNOR CORPORATION

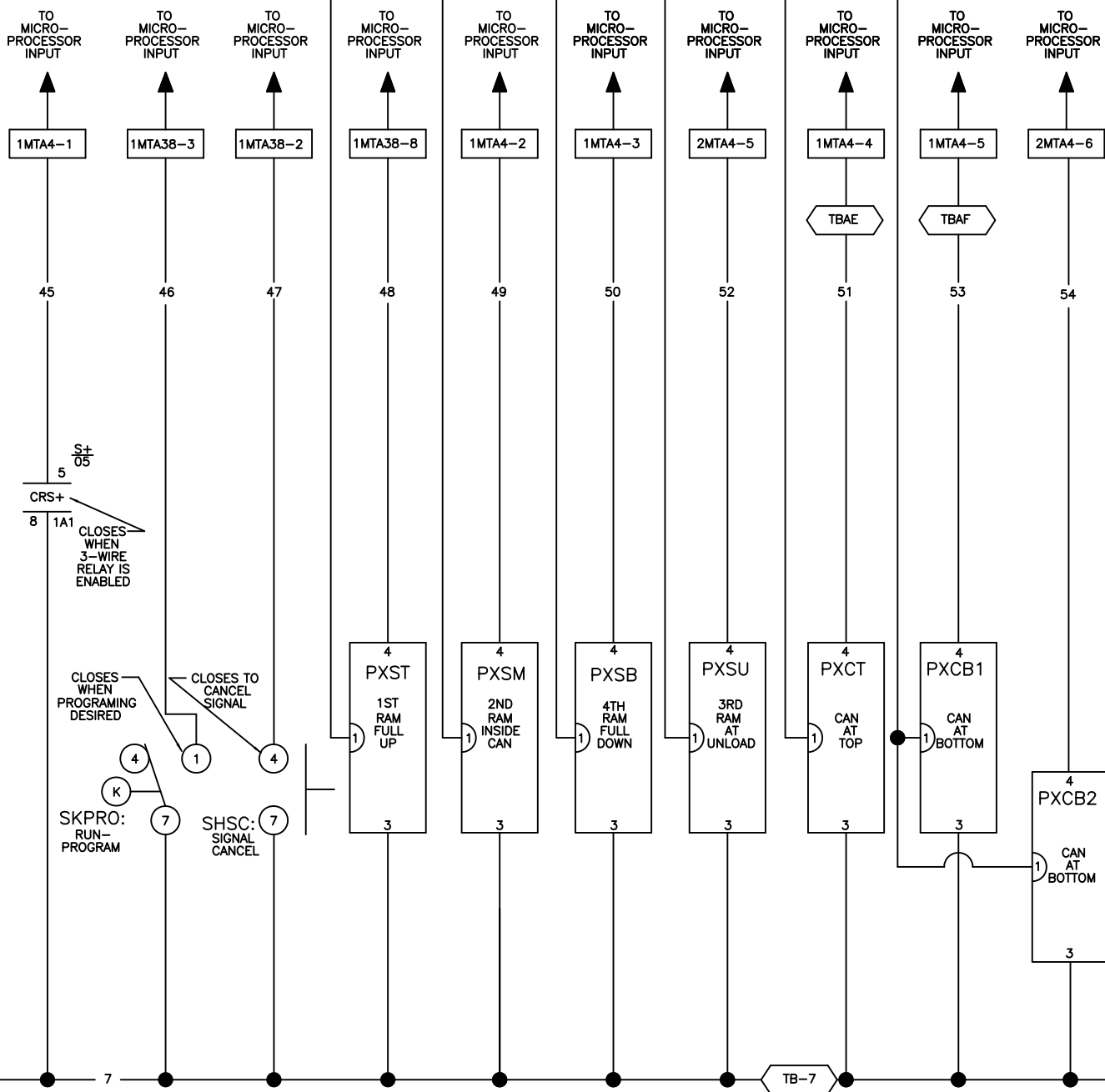
SEE
W6PM1SBW
LINE 16



101

24VDC+

TB-101



SEE
W6PM1SBW
LINE 17



7

00

01

02

03

04

05

06

07

08

09

10



SEE
W6PM1SBWA
LINE 16



101

+24VDC

TB-101

TO
MICRO-
PROCESSOR
INPUT

1MTA4-1

45

TO
MICRO-
PROCESSOR
INPUT

1MTA38-2

46

TO
MICRO-
PROCESSOR
INPUT

1MTA38-1

47

TO
MICRO-
PROCESSOR
INPUT

2MTA4-13

58

TO
MICRO-
PROCESSOR
INPUT

1MTA38-3

48

TO
MICRO-
PROCESSOR
INPUT

1MTA4-2

49

TO
MICRO-
PROCESSOR
INPUT

1MTA4-3

50

TO
MICRO-
PROCESSOR
INPUT

2MTA4-5

52

TO
MICRO-
PROCESSOR
INPUT

1MTA4-13

59

S+
5
CRS+
8
1A1
CLOSING WHEN
3-WIRE
RELAY IS
ENABLED

CLOSING WHEN
PROGRAMMING
DESIRE

CLOSING TO
CANCEL
SIGNAL

SMBTL:
TAUT BELT
LEFT

SHSC:
SIGNAL
CANCEL

SMBTR:
TAUT BELT
RIGHT

4
PXST
1ST
RAM
FULL
UP
1
3

4
PXSM
2ND
RAM
INSIDE
CAN
1
3

4
PXSB
4TH
RAM
FULL
DOWN
1
3

4
PXSU
3RD
RAM
AT
UNLOAD
1
3

4
PXSS
RAM
ABOVE
SLOW
(SOFT
SQUEEZE)
1
3

SEE
W6PM1SBWA
LINE 17



7

TB-7

00

01

02

03

04

05

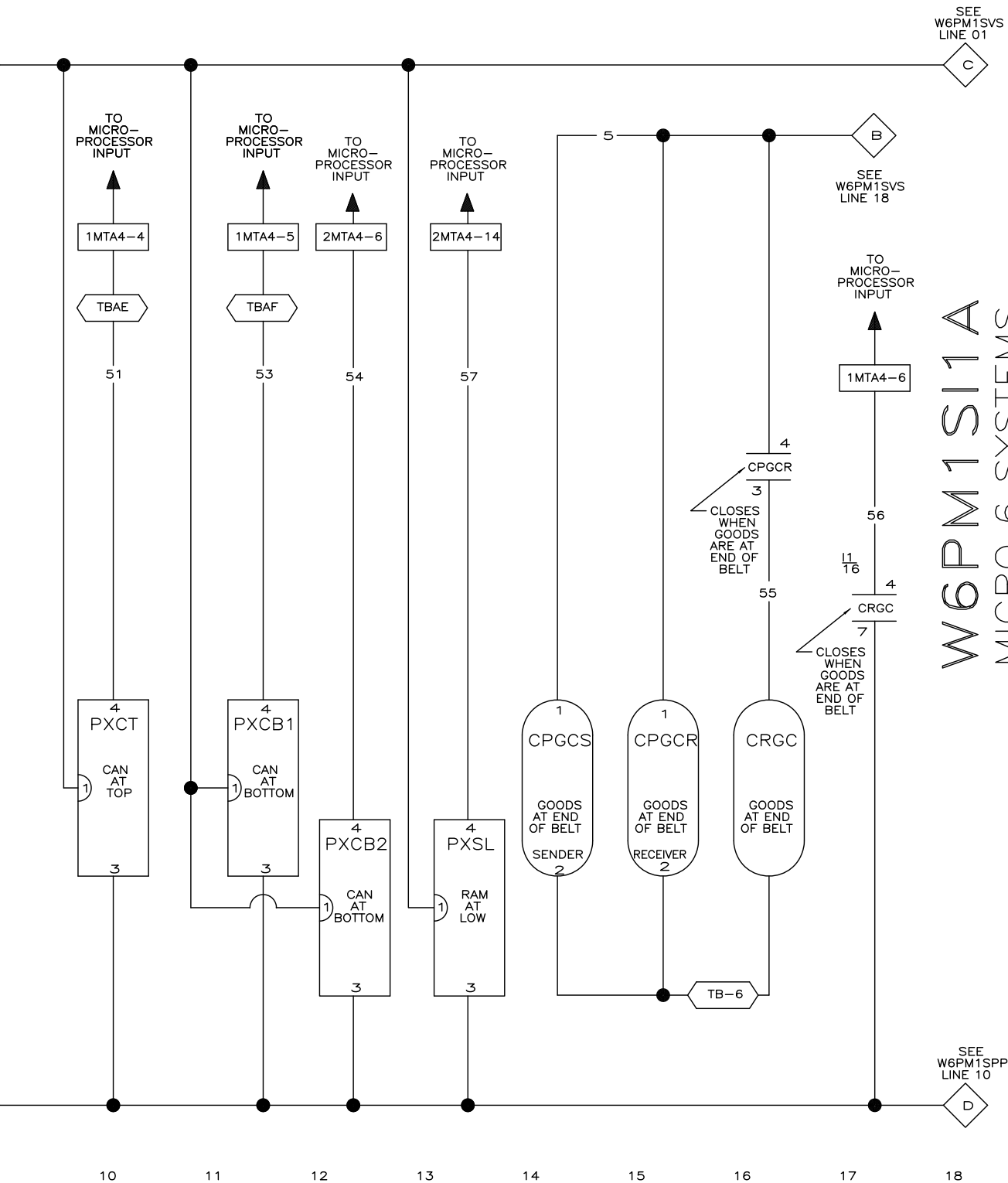
06

07

08

09

NOTE
PAGE W6PM1SI1A REPLACES
W6PM1SI1 ON 04/22/03.



W6PM1S11A
MICRO 6 SYSTEMS
MARK V
SCHEMATIC: INPUTS (SHEET 1)
MODIFIED FOR 186 PROCESSOR
PELLERIN MILNOR CORPORATION

SEE
W6PM1SBWC
LINE 16



101

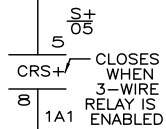
+24VDC

TB-101

TO
MICRO-
PROCESSOR
INPUT

1MTA4-1

45



TO
MICRO-
PROCESSOR
INPUT

5MTA4-13

47

TO
MICRO-
PROCESSOR
INPUT

2MTA4-13

58

TO
MICRO-
PROCESSOR
INPUT

5MTA4-11

48

TO
MICRO-
PROCESSOR
INPUT

1MTA4-2

49

TO
MICRO-
PROCESSOR
INPUT

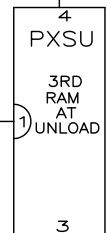
1MTA4-3

50

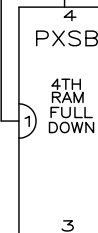
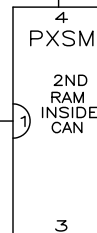
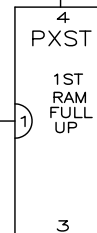
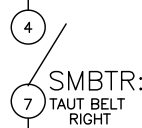
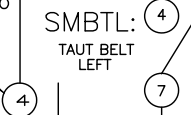
TO
MICRO-
PROCESSOR
INPUT

2MTA4-5

52



CLOSES TO
CANCEL
SIGNAL



SEE
W6PM1SBWC
LINE 17



7

TB-7

00

01

02

03

04

05

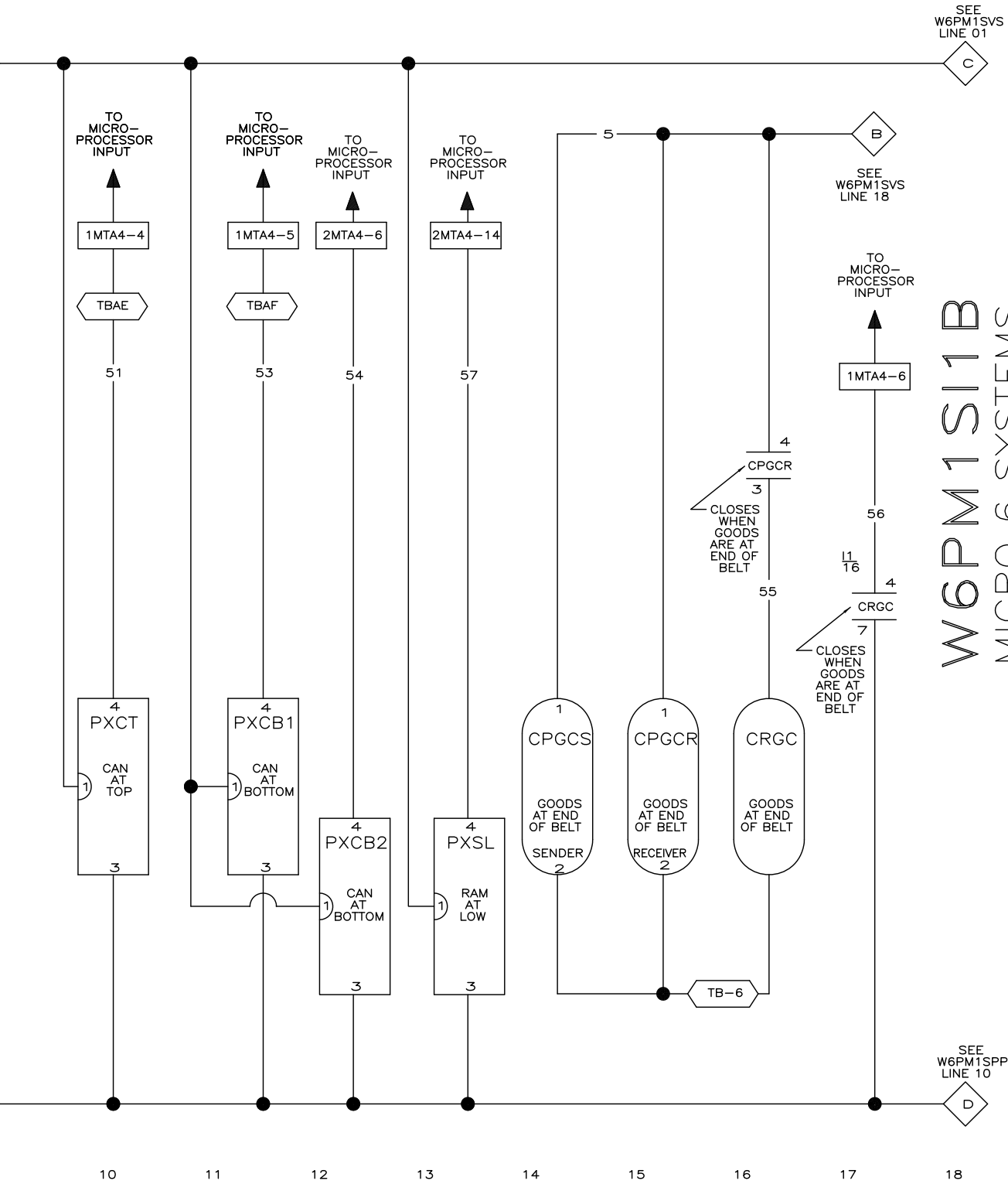
06

07

08

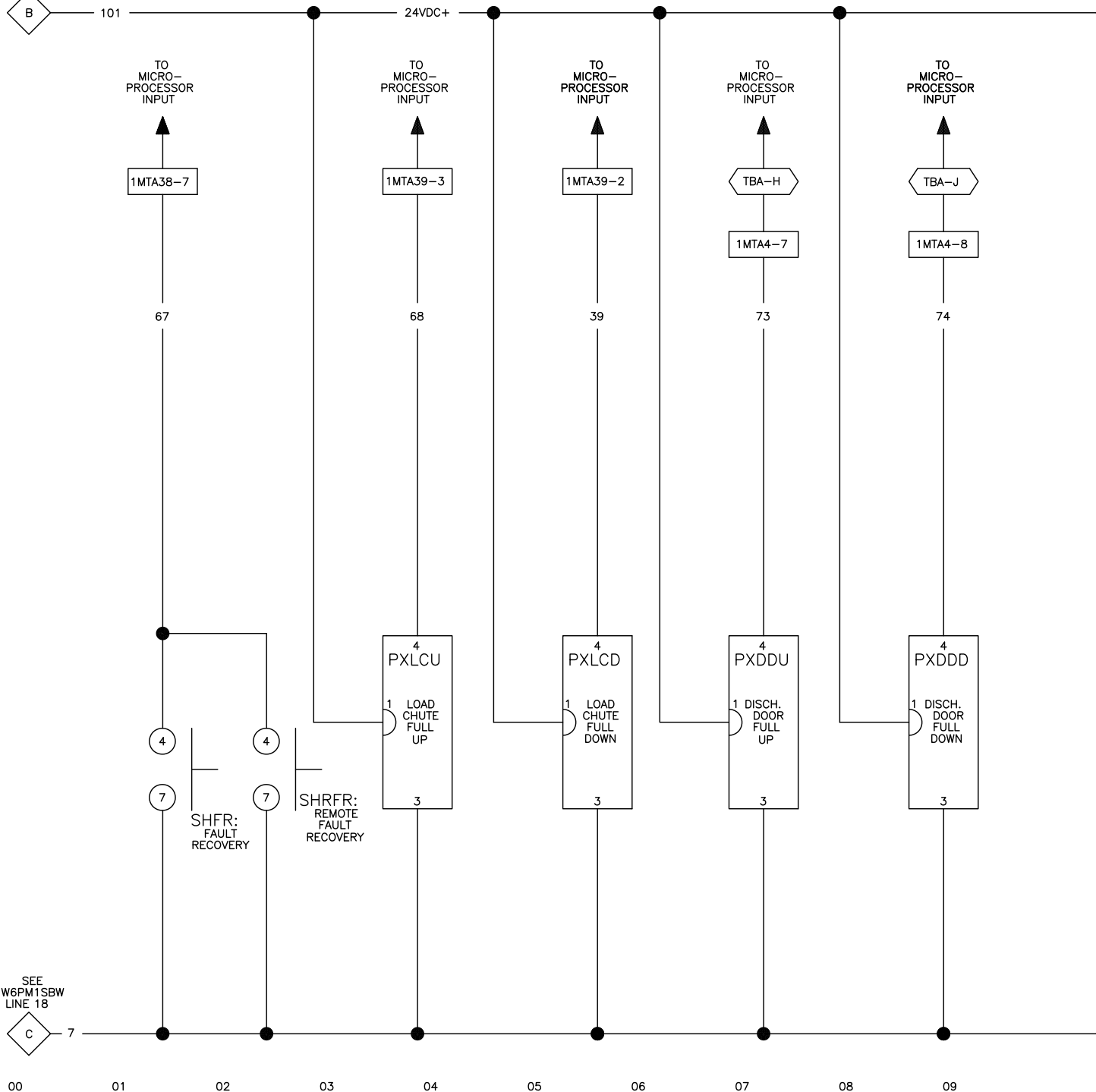
09

NOTE
PAGE W6PM1SI1B REPLACES
W6PM1SI1A FOR Q7 PROCESSOR



W6PM1SI1B
MICRO 6 SYSTEMS
MILTOUCH-EX SYSTEM
SCHEMATIC: INPUTS (SHEET 1)
MODIFIED FOR Q7 PROCESSOR
PELLERIN MILNOR CORPORATION

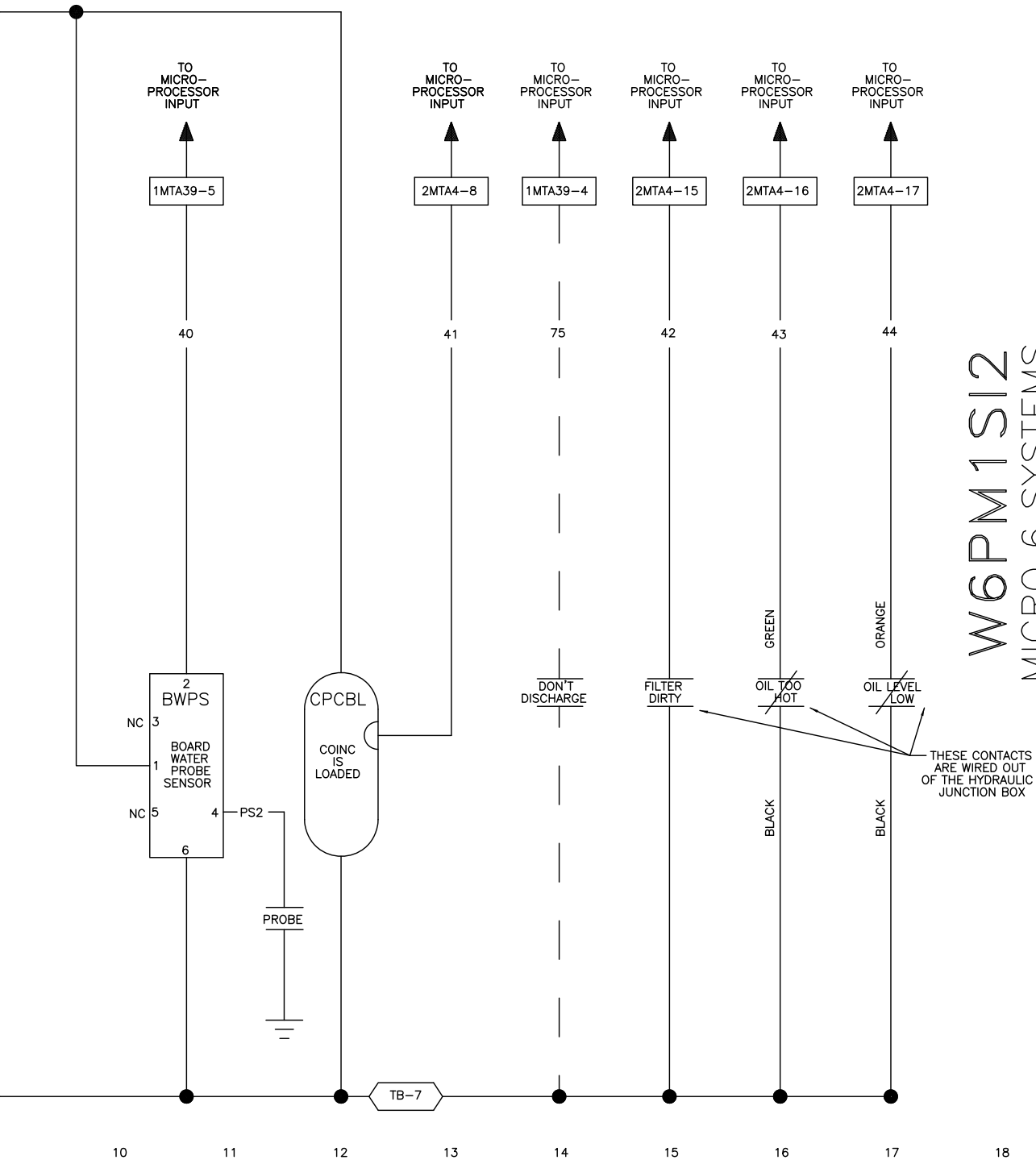
SEE
W6PM1SBW
LINE 15



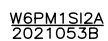
SEE
W6PM1SBW
LINE 18



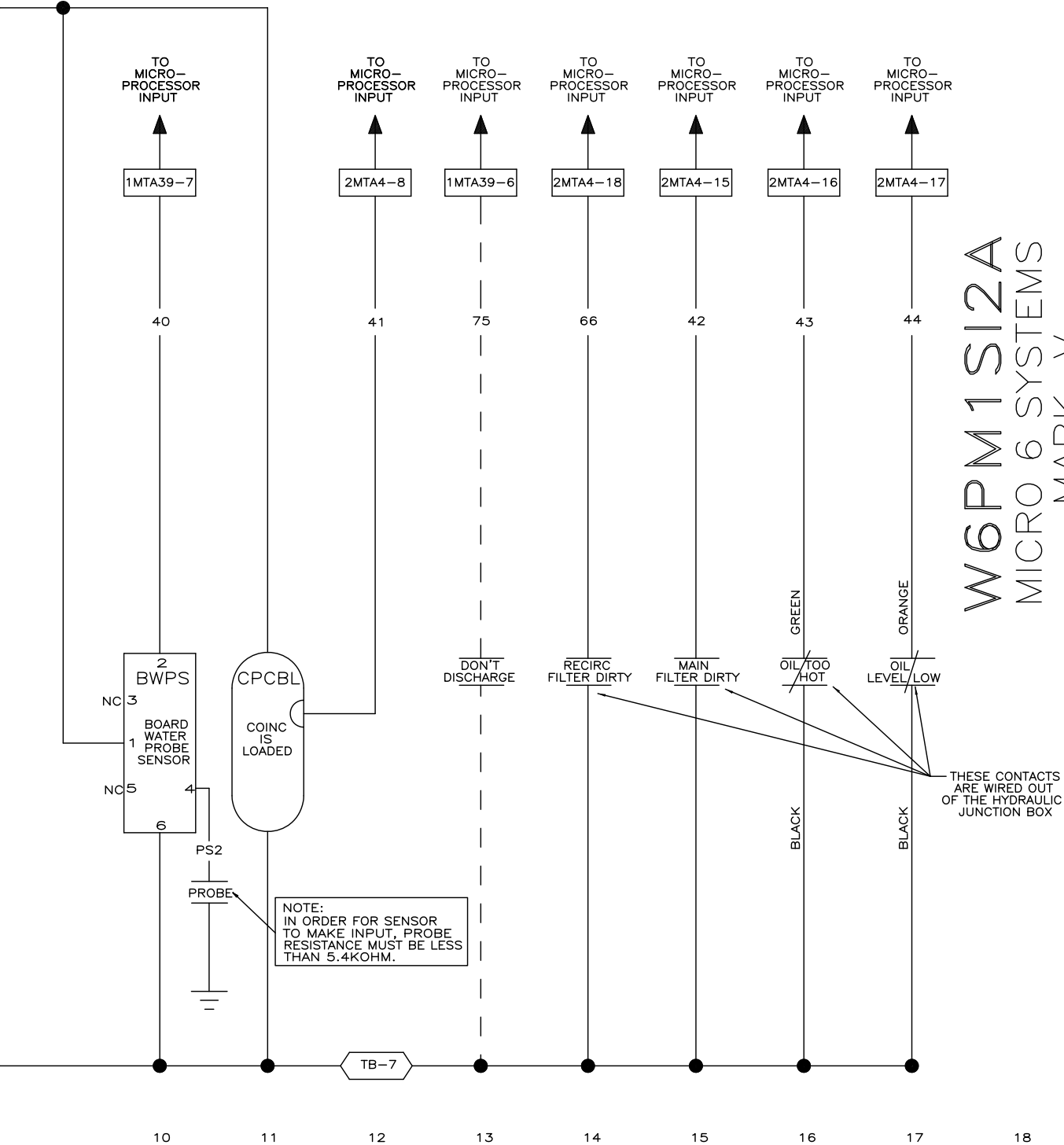
W6PM1S/2
2021053B



W6PM1S12
MICRO 6 SYSTEMS
MARK V
SCHEMATIC: INPUTS (SHEET 2)
PELLERIN MILNOR CORPORATION



NOTE
PAGE W6PM1SI2A REPLACES
W6PM1SI2 ON 04/22/03.



W6PM1SI2A
MICRO 6 SYSTEMS
MARK V
SCHEMATIC: INPUTS (SHEET 2)
MODIFIED FOR 186 PROCESSOR
PELLERIN MILNOR CORPORATION

SEE
W6PM1SBWC
LINE 15



101

24VDC+

TO MICRO-
PROCESSOR
INPUT

1MTA4-13

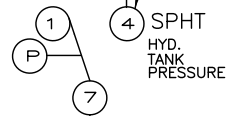
77

TO MICRO-
PROCESSOR
INPUT

5MTA4-16

67

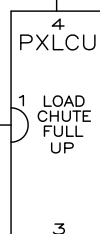
CLOSES WHEN
HYDRAULIC TANK
HAS HIGH
PRESSURE



TO MICRO-
PROCESSOR
INPUT

5MTA4-1

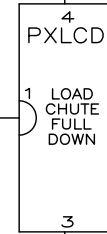
68



TO MICRO-
PROCESSOR
INPUT

5MTA4-2

39

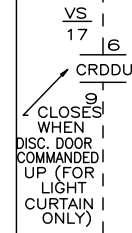


TO MICRO-
PROCESSOR
INPUT

TBA-H

1MTA4-7

73

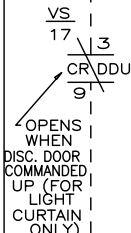


TO MICRO-
PROCESSOR
INPUT

TBA-J

1MTA4-8

74



SEE
W6PM1SBWC
LINE 18



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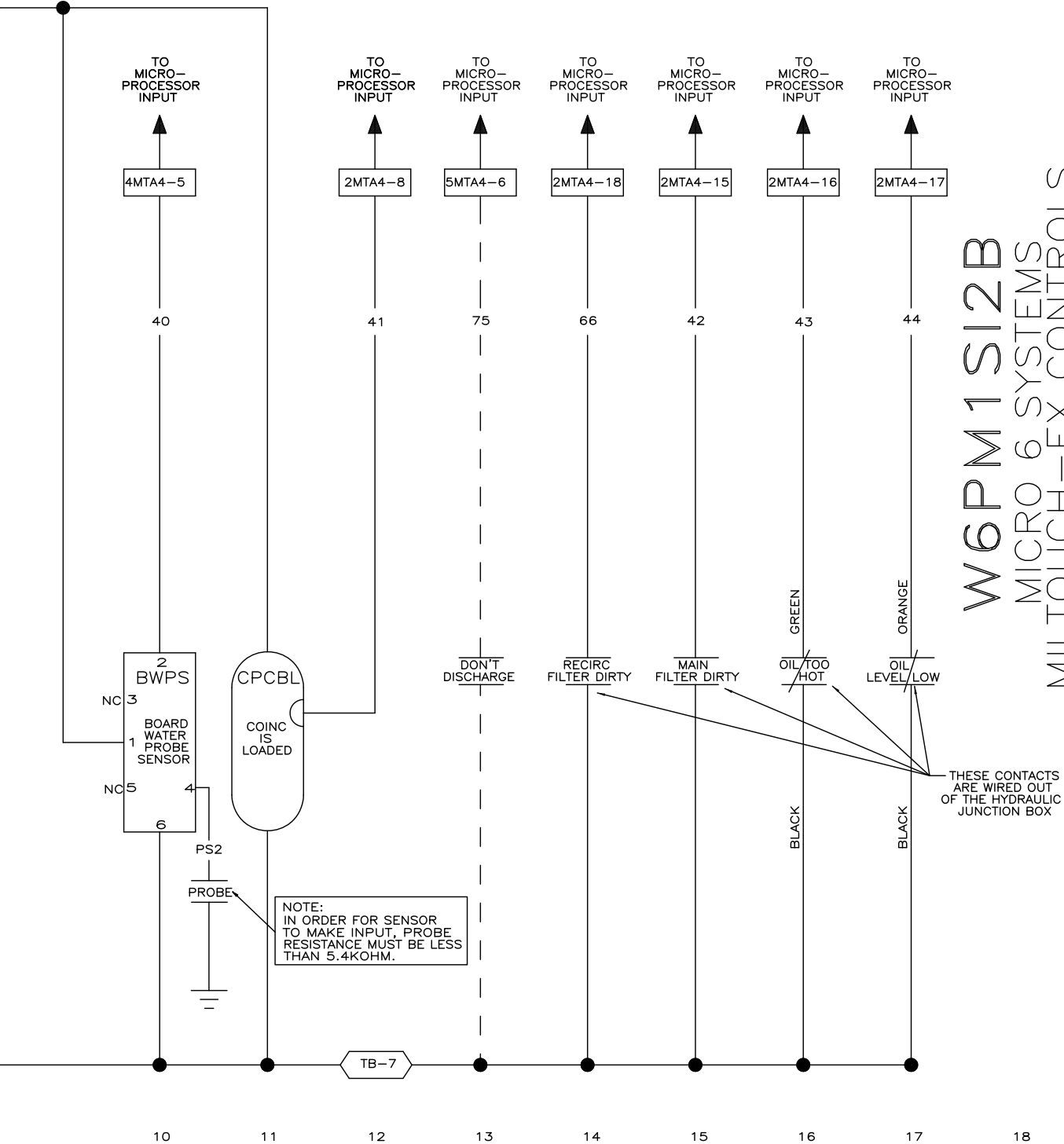
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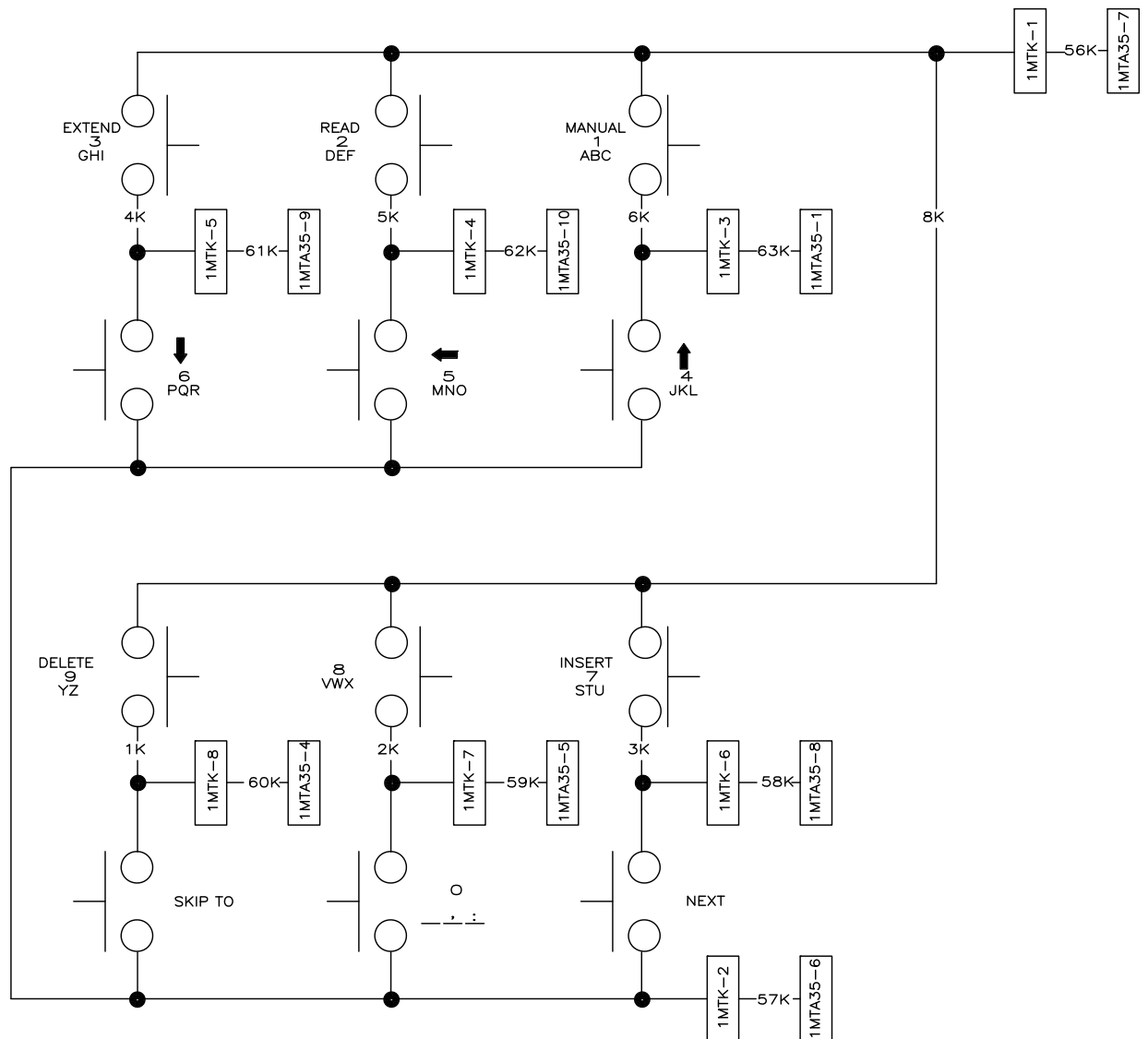
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NOTE
PAGE W6PM1SI2B REPLACES
W6PM1SI2A FOR Q7 PROCESSOR.



W6PM1SI2B
MICRO 6 SYSTEMS
MILTTOUCH-EX CONTROLS
SCHEMATIC: INPUTS (SHEET 2)
MODIFIED FOR Q7 PROCESSOR
PELLERIN MILNOR CORPORATION



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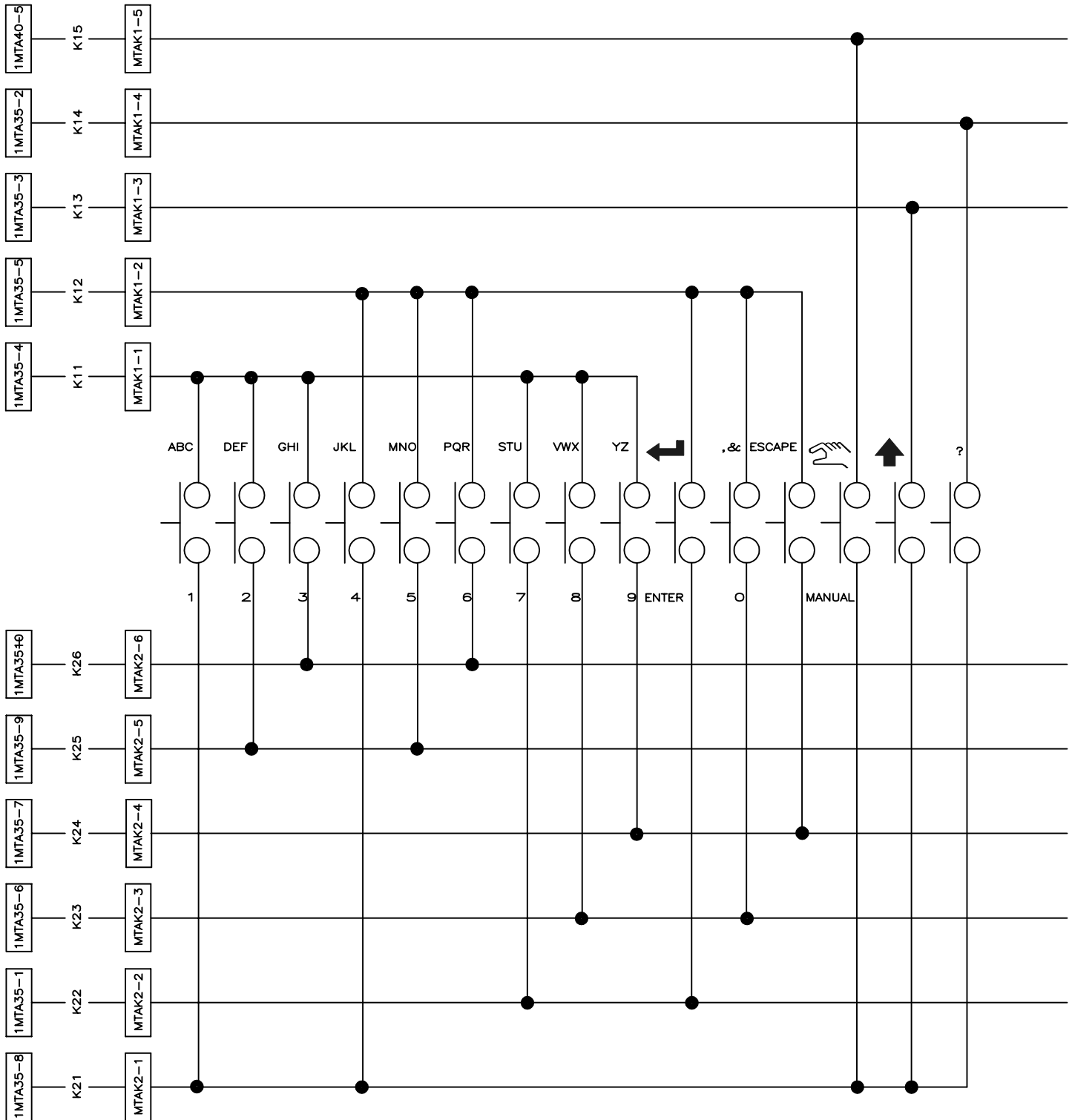
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W6PM1SKP
MICRO 6 SYSTEMS
MARK V
SCHEMATIC: KEYPAD
PELLERIN MILNOR CORPORATION

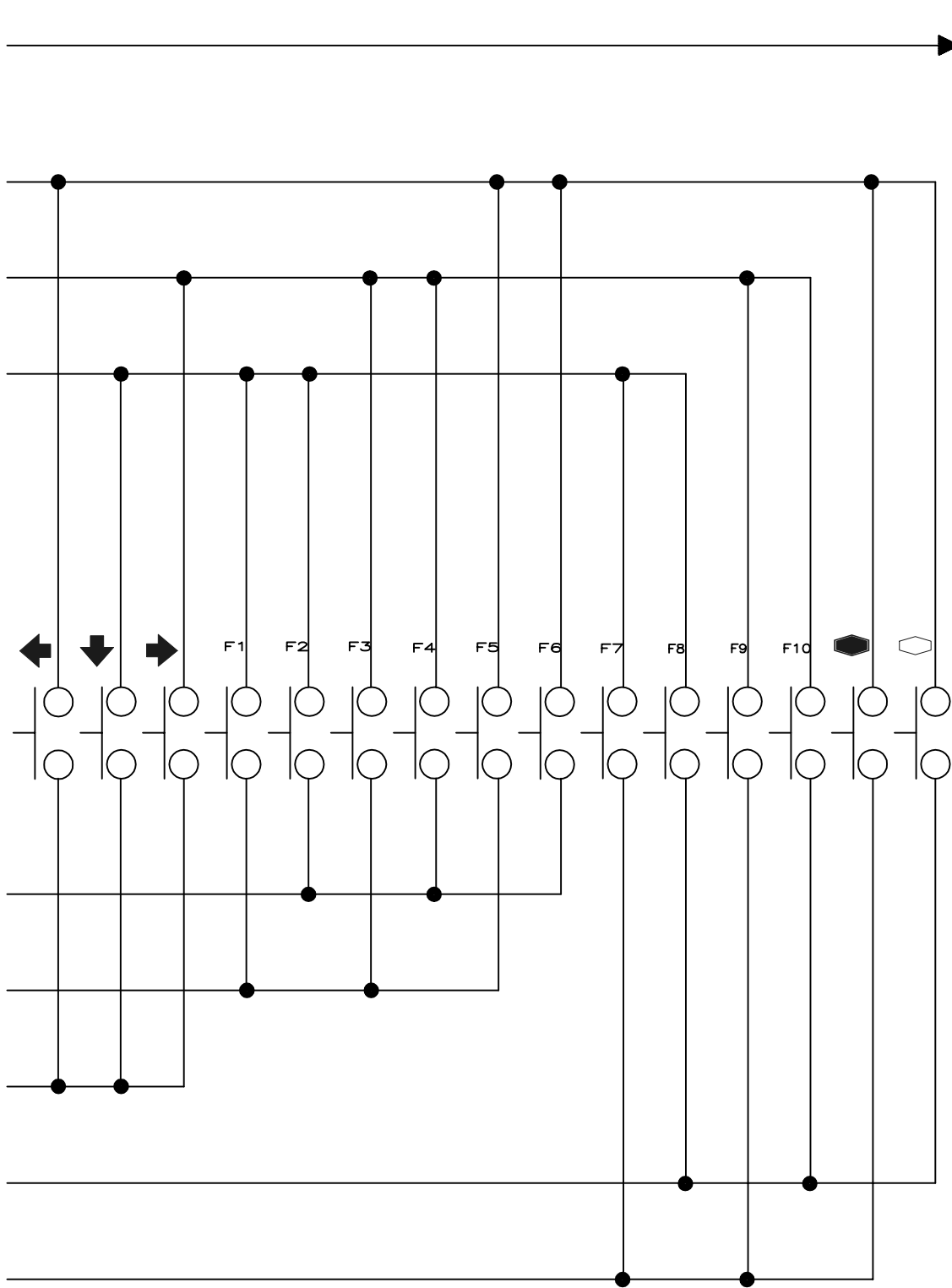
NOTES

1. 1MTA35 IS LOCATED ON
BPB (PROCESSOR BOARD)
2. 1MTK IS LOCATED ON THE KEYPAD.



LITHO IN U.S.A.

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NOTES:

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

W6PM1SKPA
 MICRO 6 SYSTEMS
 MARK VI
 SCHEMATIC: KEYPAD (SERIAL CONTROLS)
 PELLERIN MILNOR CORPORATION

W6PM1SKPA
2007285B

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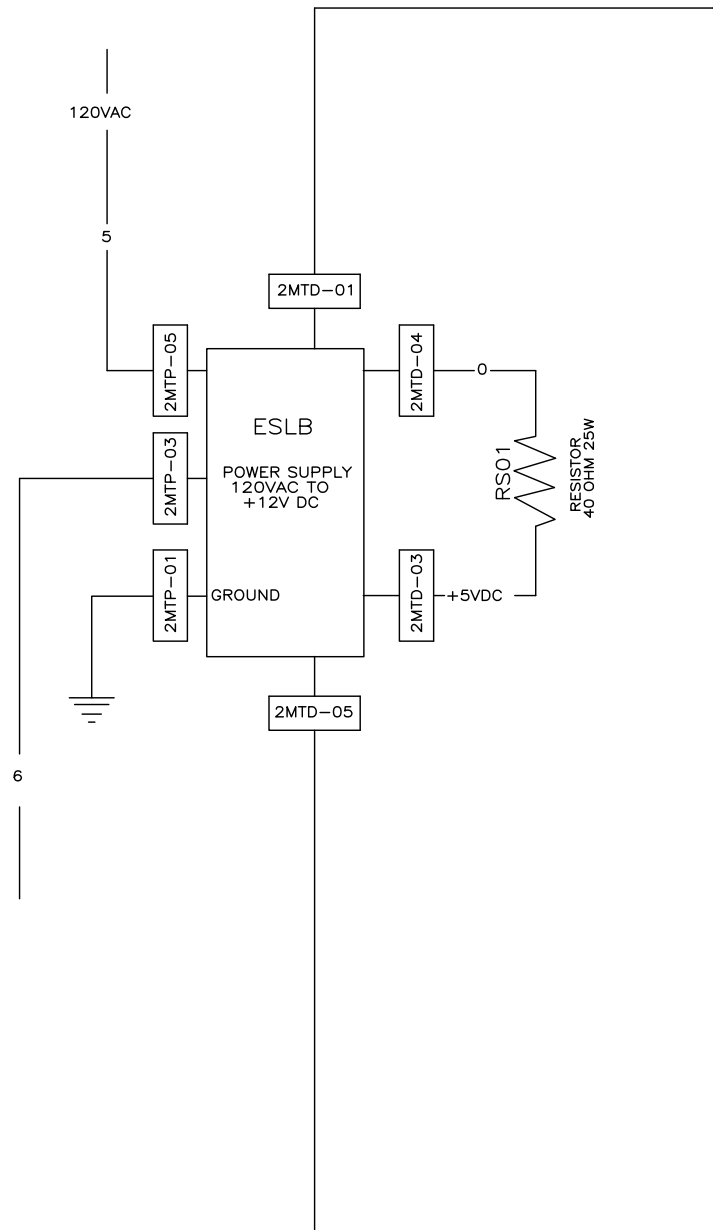
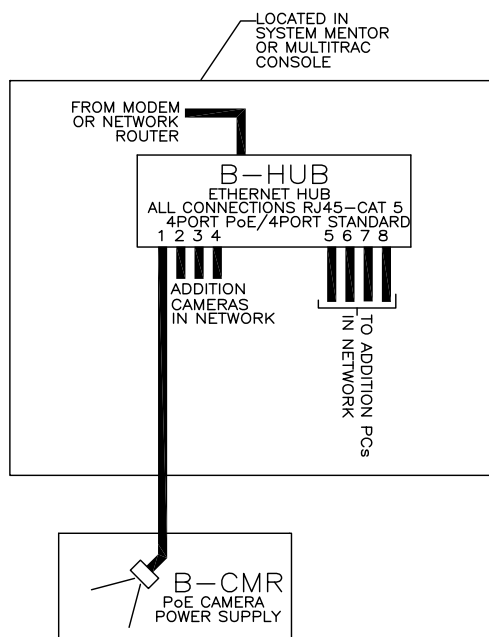
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W6PM1SKPA
2007285B



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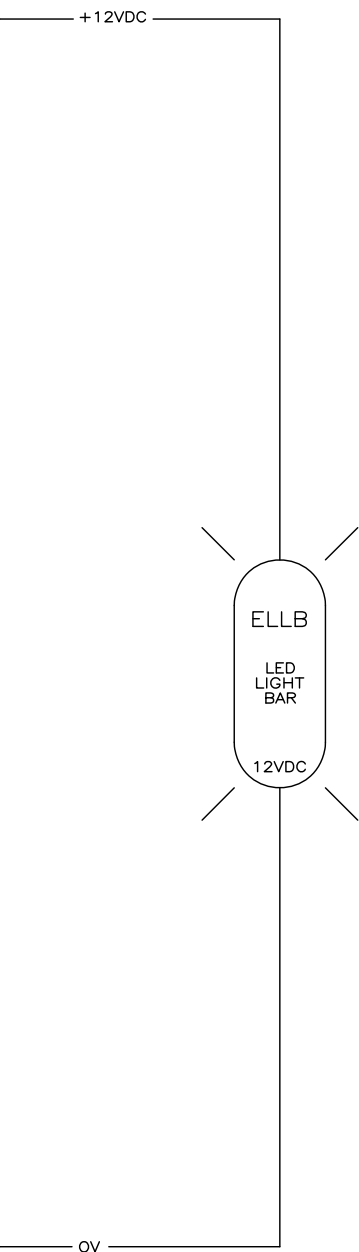
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W6PM1SLB

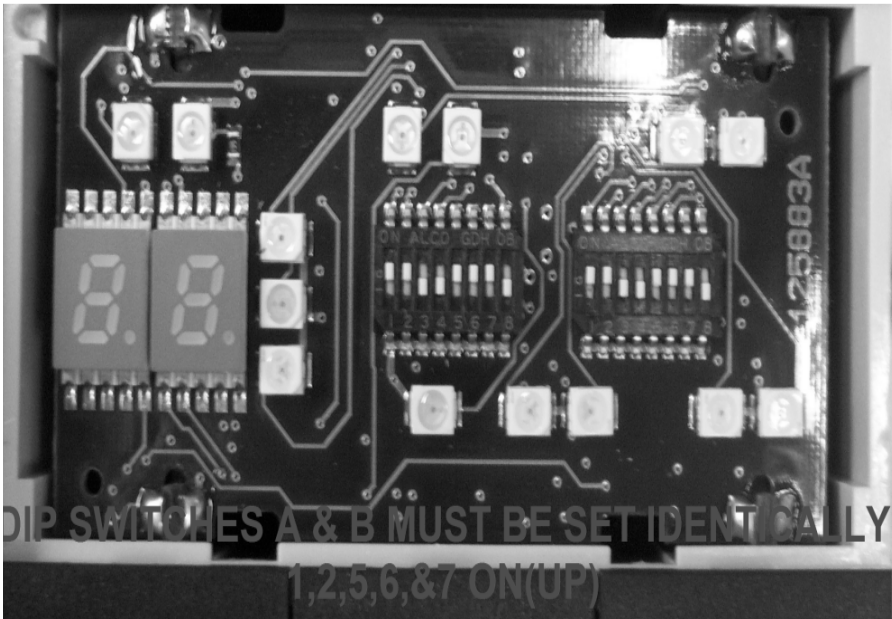
SCHEMATIC: LIGHT BAR

PELLERIN MILNOR CORPORATION

W6PM1SLB
2023112B

W6PM1SLB
2023112B

Banner Model MMD-TA-11B DIP SWITCH SETTINGS



LEAVE RECEIVER IN FACTORY DEFAULT
SETTINGS (BELOW)

EMITTER(NOT SHOWN)
FACTORY DEFAULT Scan Code 1

Scan Code 1 or 2 (SC1)*

Bank A

Trip or Latch Output (Trip Output)*
Reduced Resolution (OFF)*

Invert Display Push Button

Bank B (Identical to Bank A)

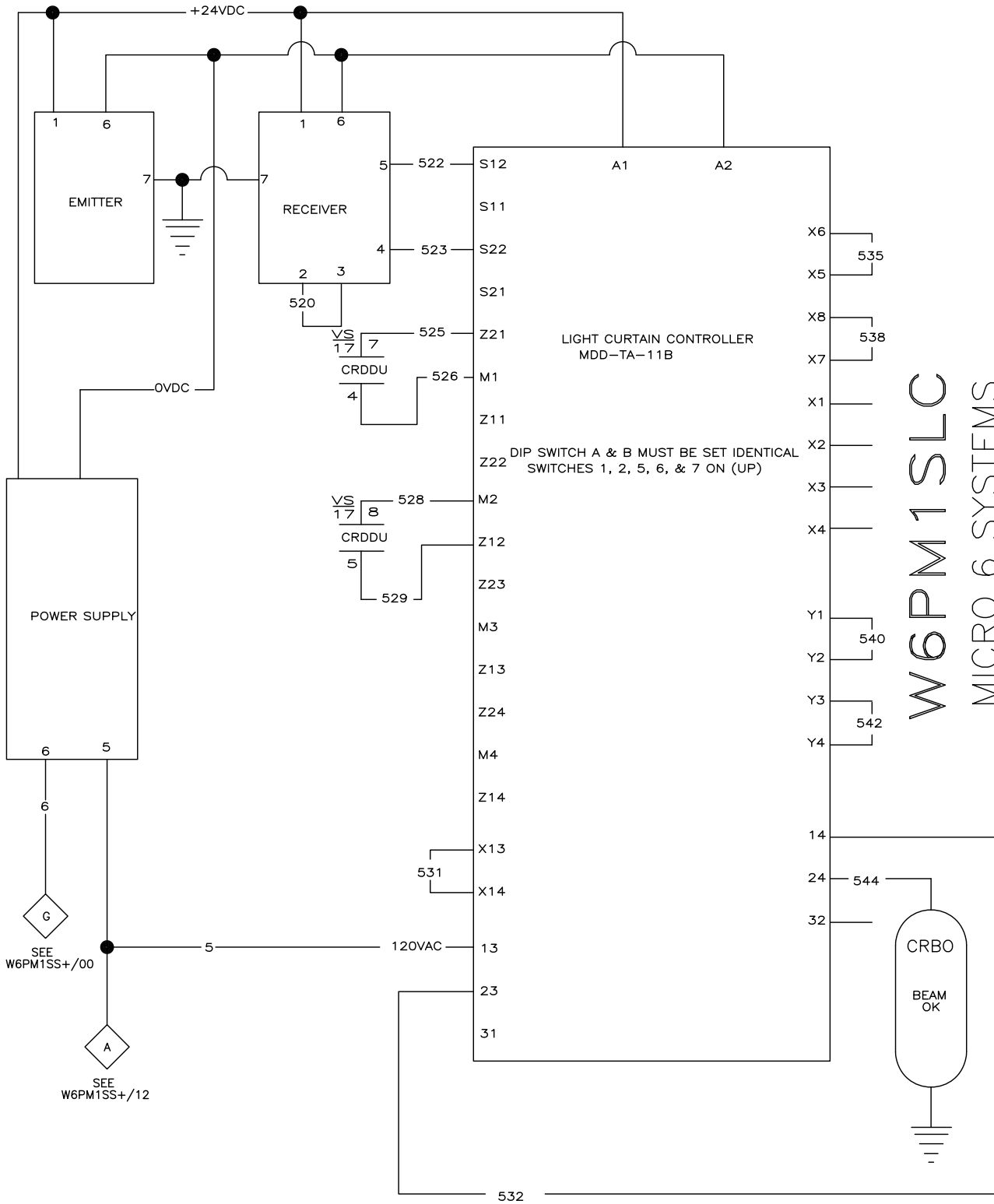
EDM (2-channel)* / Aux. Output
*(Default Setting)

See Figure 4-2 for access cover
opening instructions

NOTE: If the EDM wiring does not match
the switch position shown (E2), an
EDM error occurs and fixed blanking
or cascade configuration will not be
allowed.

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

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



W6PM1SLC

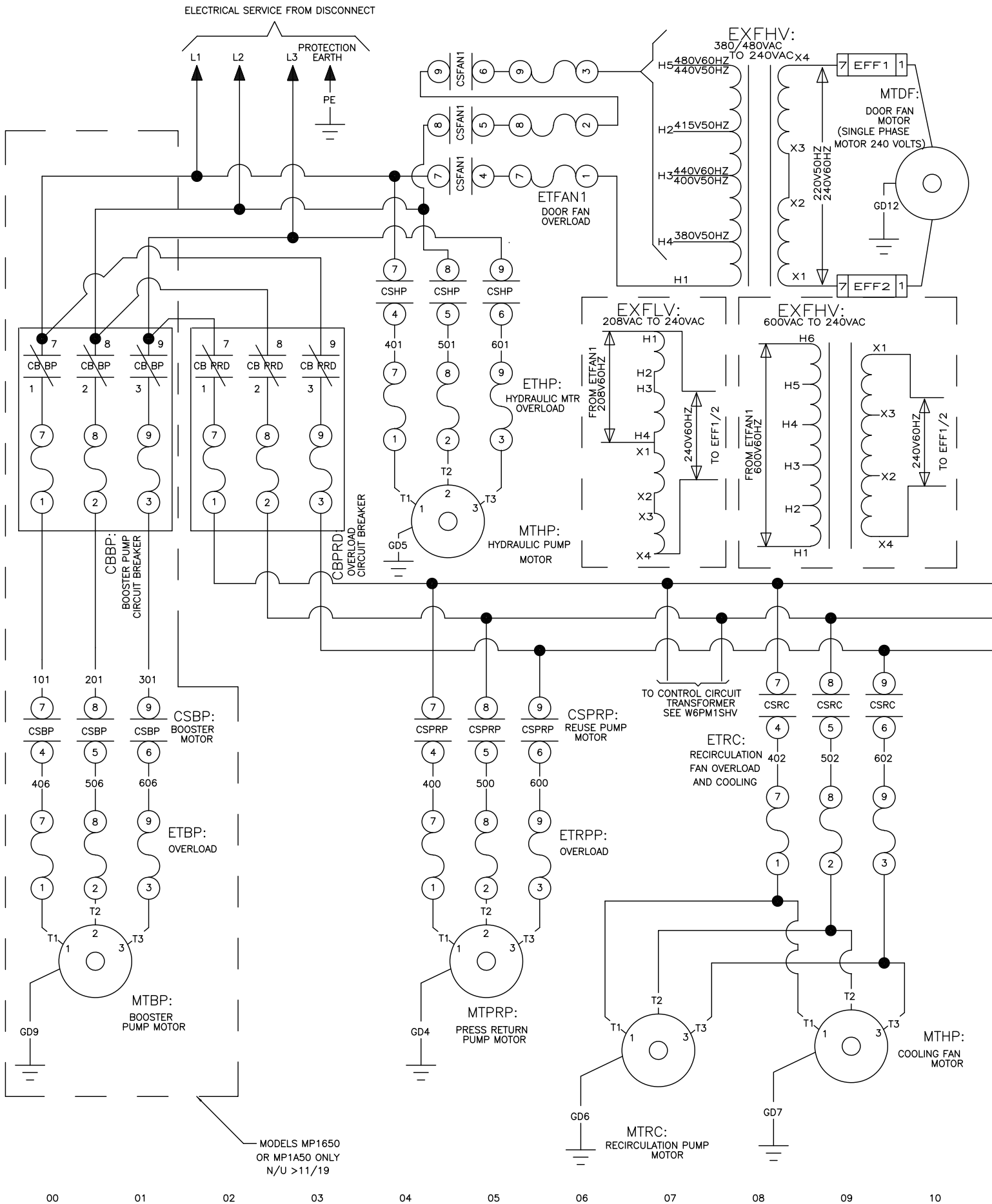
MICRO 6 SYSTEMS

MARK V

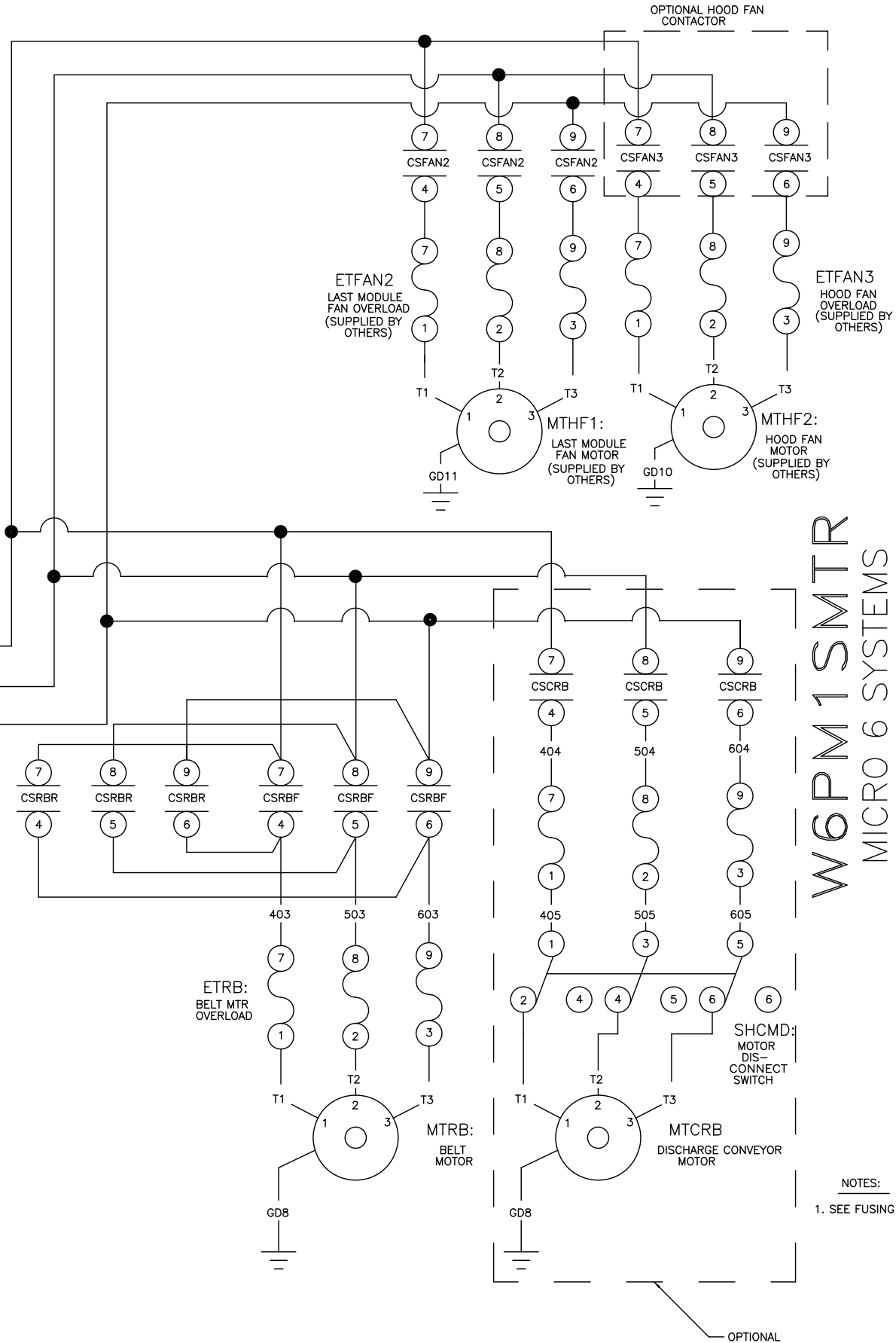
SCHEMATIC: LIGHT CURTAIN

110V1P50HZ/120V1P60HZ

PELLERIN MILNOR CORPORATION



W6PM1SMTR
2024334B



W6PM1 SMTR

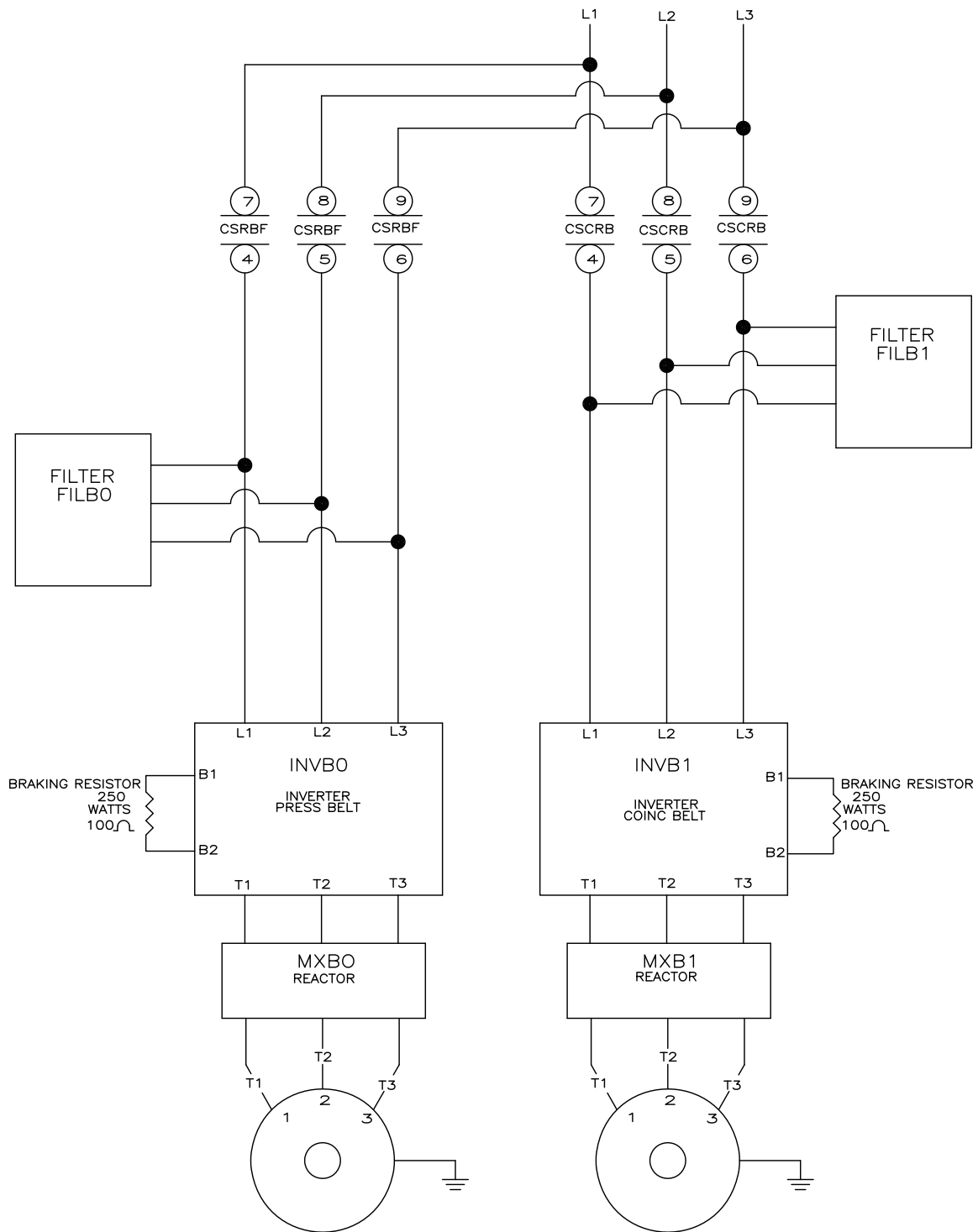
MICRO 6 SYSTEMS

MARK V

SCHEMATIC: MOTORS & INCOMING POWER

PELLERIN MILNOR CORPORATION

NOTES:
1. SEE FUSING ON MACHINE



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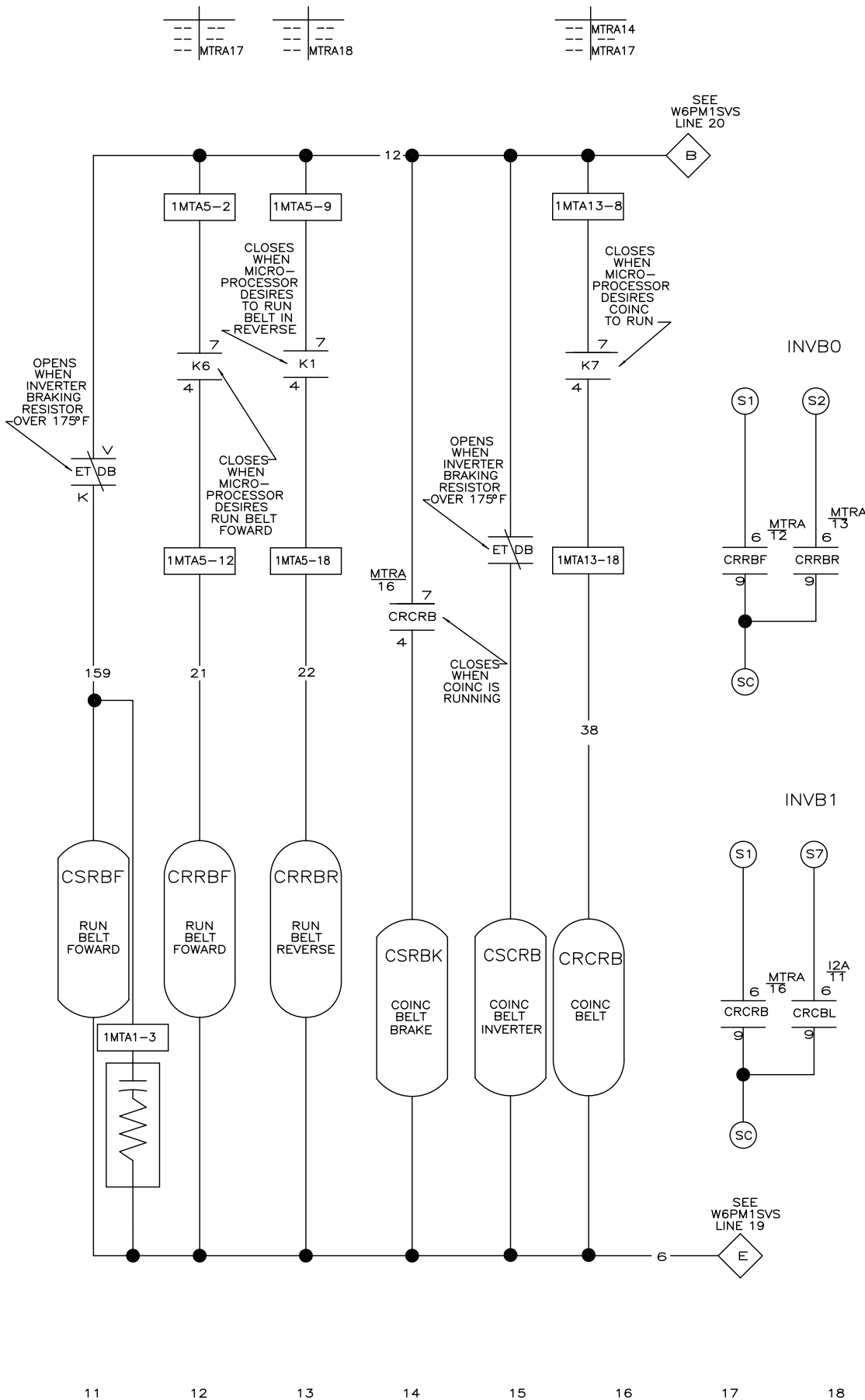
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W6PM1SMTRA
2021053B



W6PM1SMTRA

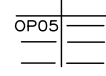
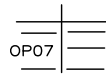
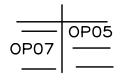
MICRO 6 SYSTEMS MARK VI

SCHEMATIC: INVERTER DRIVEN BELTS

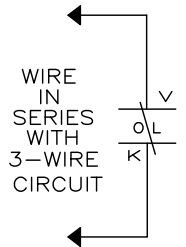
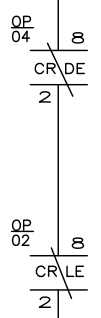
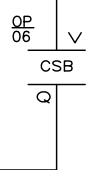
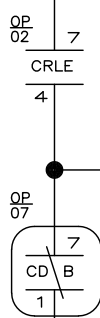
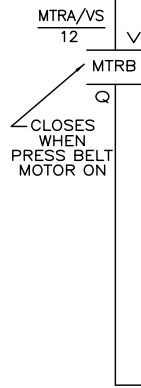
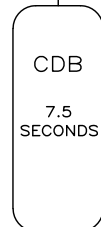
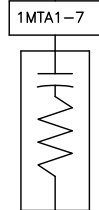
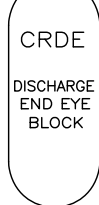
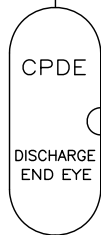
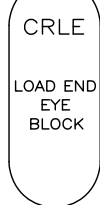
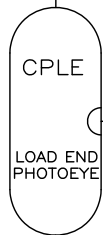
110V1P50HZ/120V1P60HZ

PELLERIN MILNOR CORPORATION

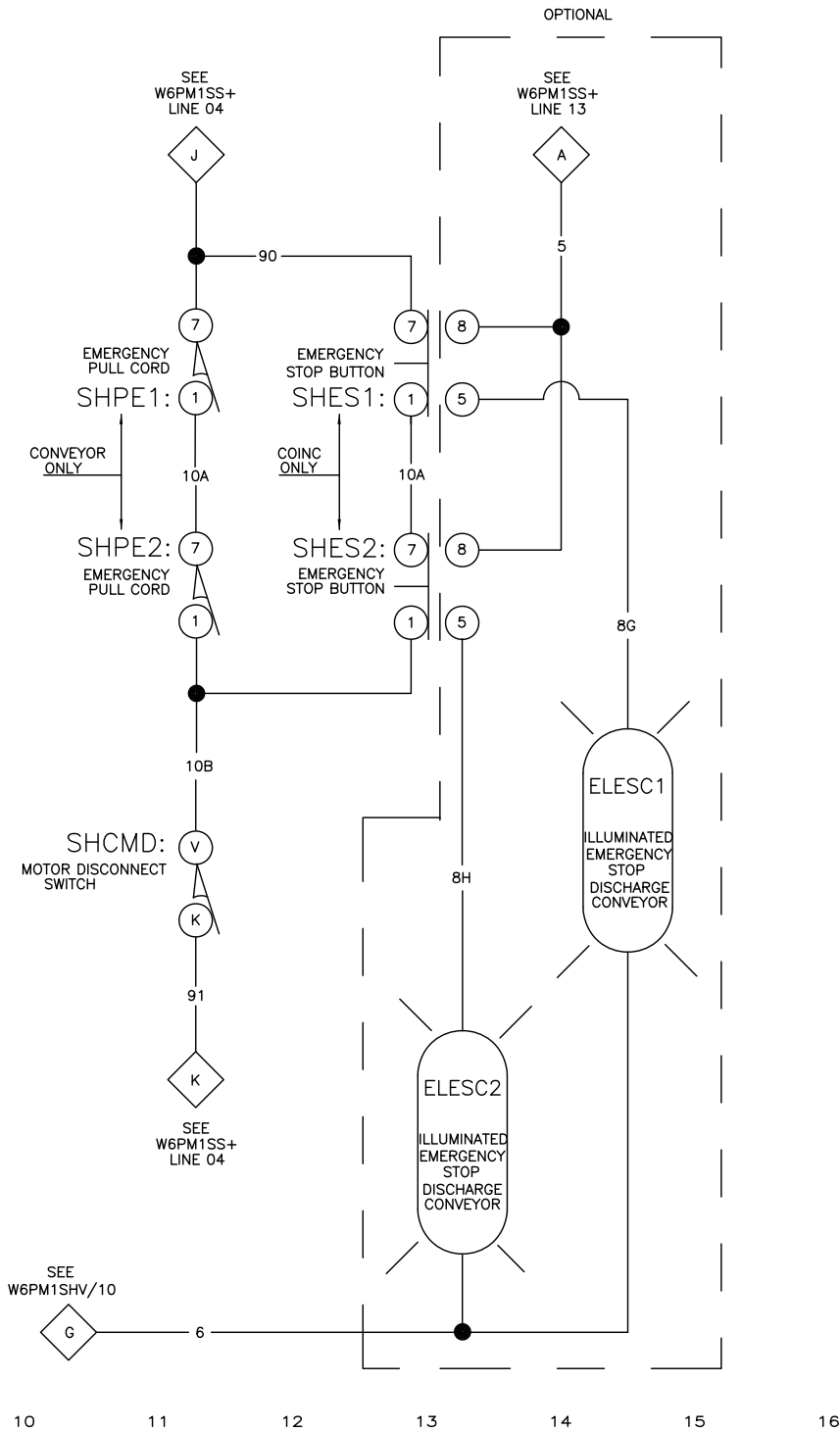
SEE
W6PM1SS+/11

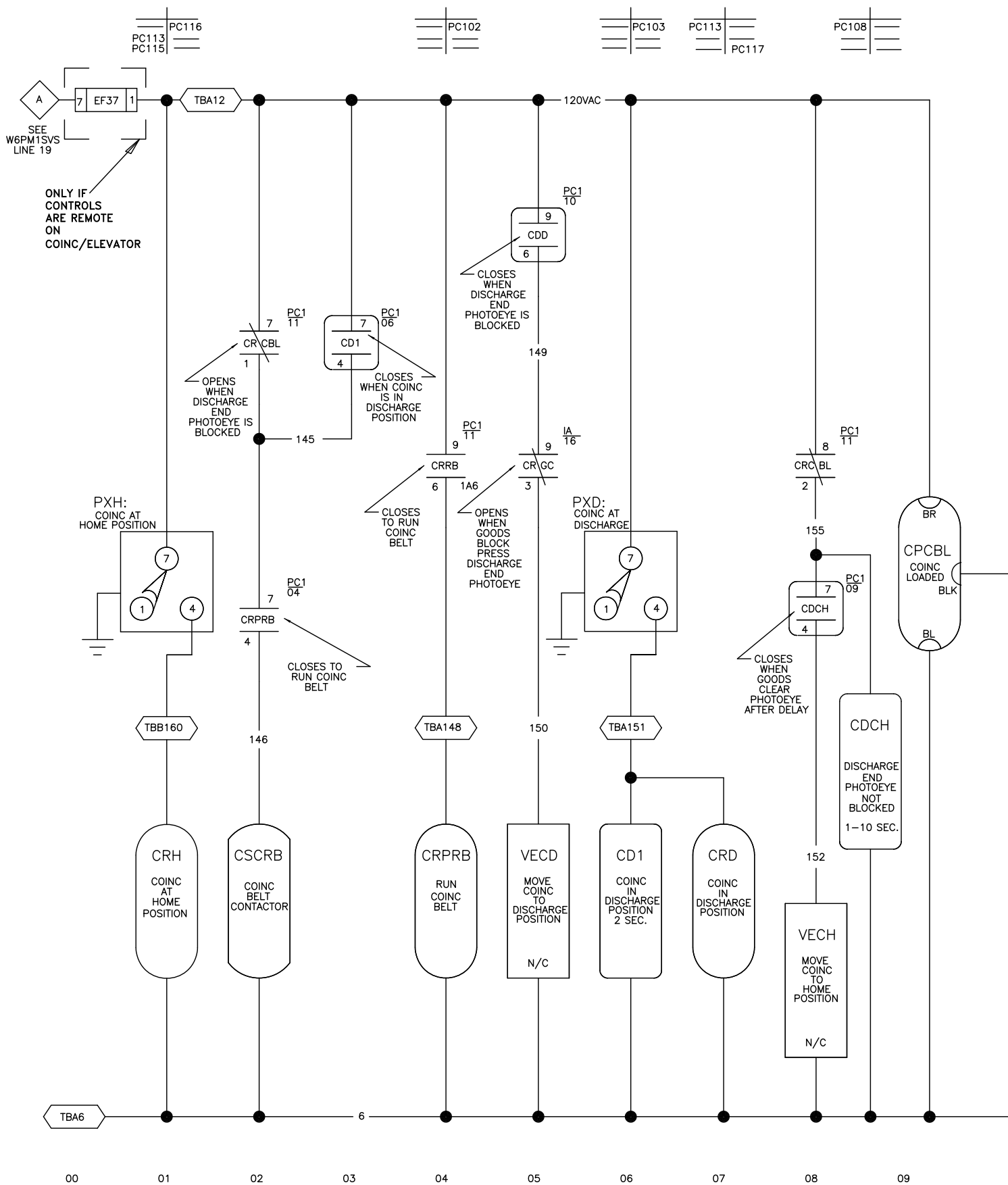


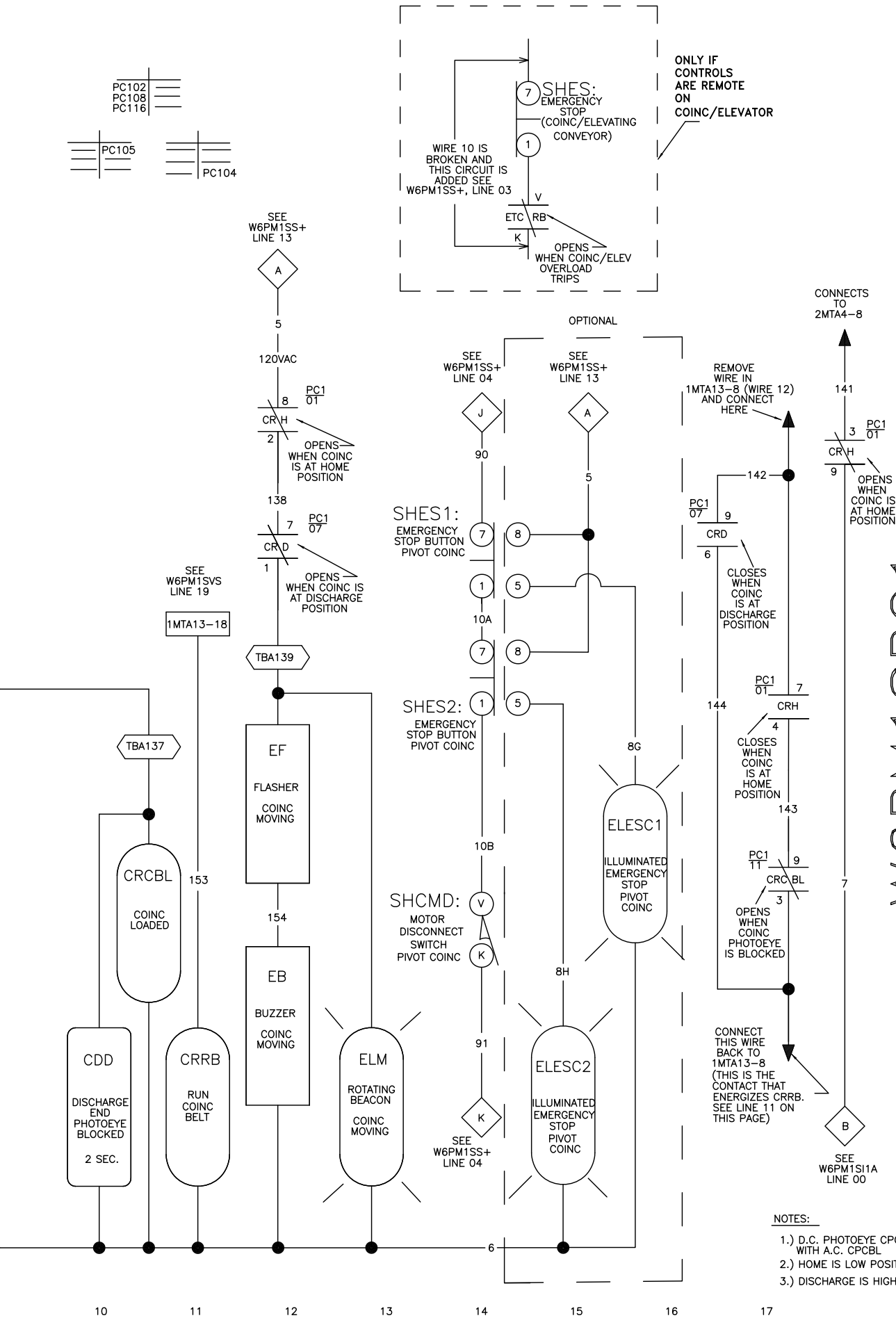
SEE
W6PM1SHV/10



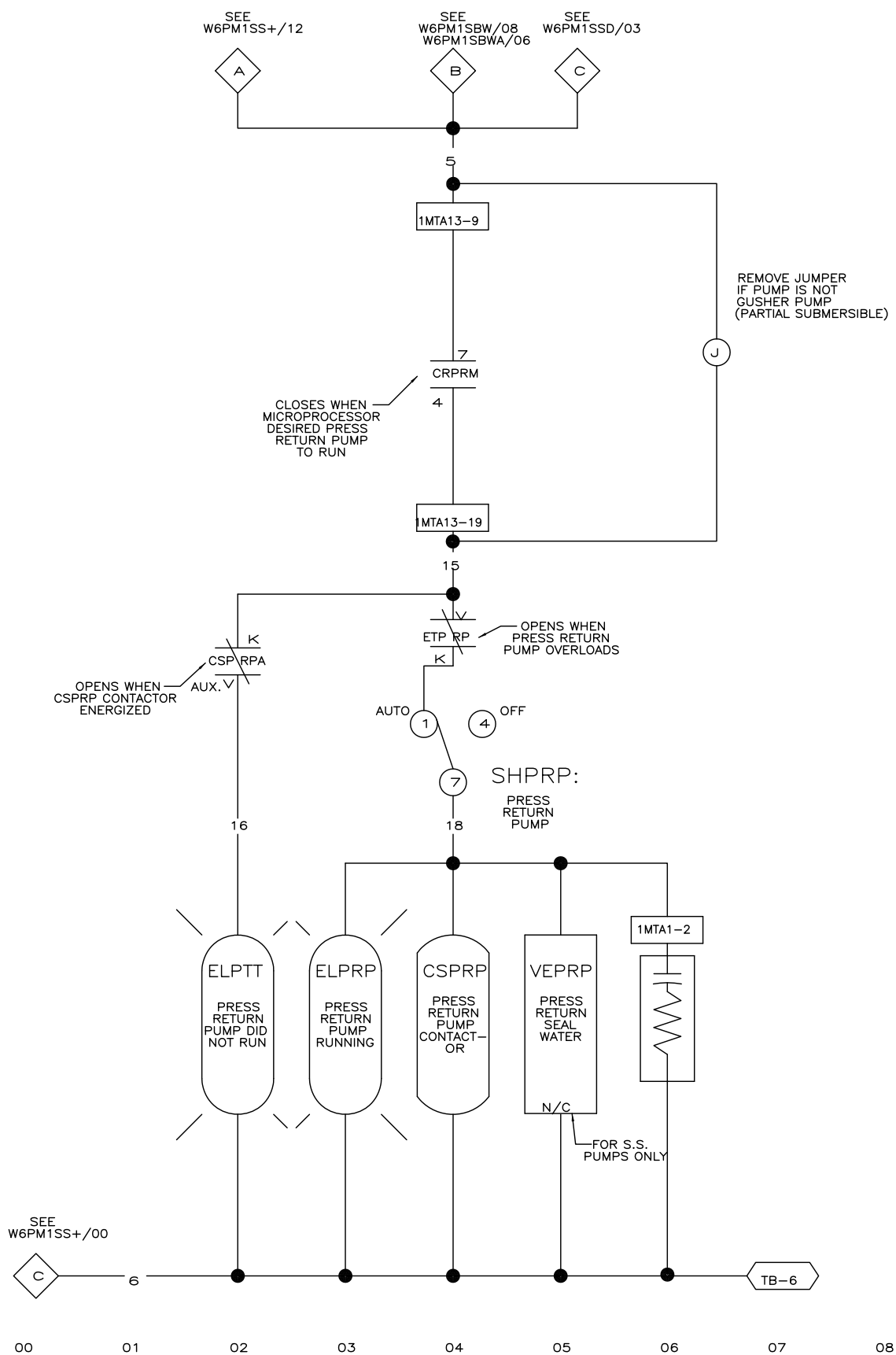
W6PM1SOP
NON STORAGE BELT BEHIND
SINGLE STAGE PRESS
ALL POWER COMES FROM SINGLE STAGE PRESS
PELLERIN MILNOR CORPORATION

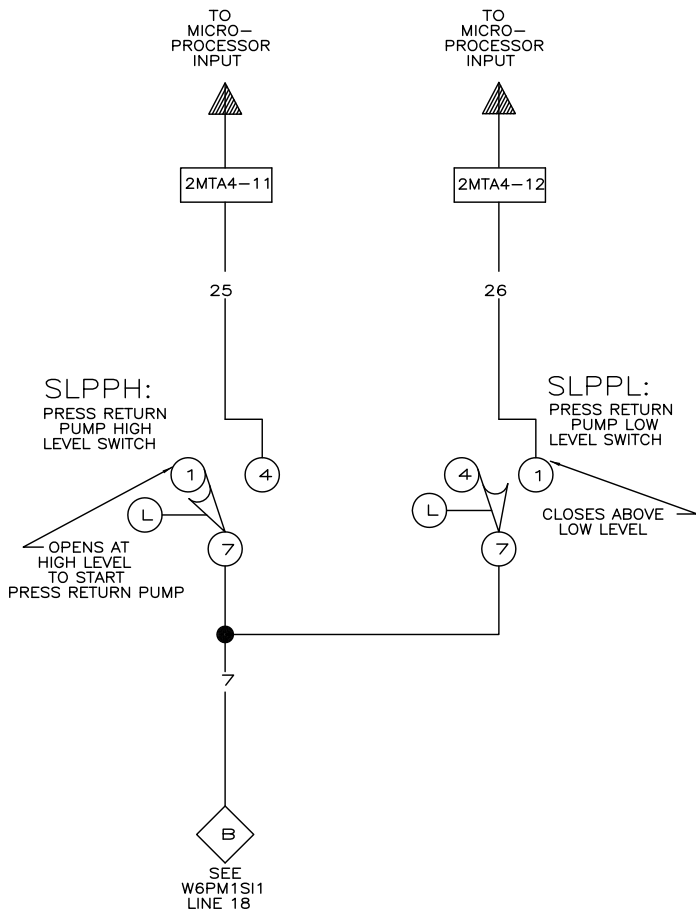






W6PM1SPC1
MICRO 6 SYSTEMS MARK V
SCHEMATIC:PIVOTING/ELEVATING CONVEYOR
PELLERIN MILNOR CORPORATION





W6PM1SPP

MICRO 6 SYSTEMS

MARK V

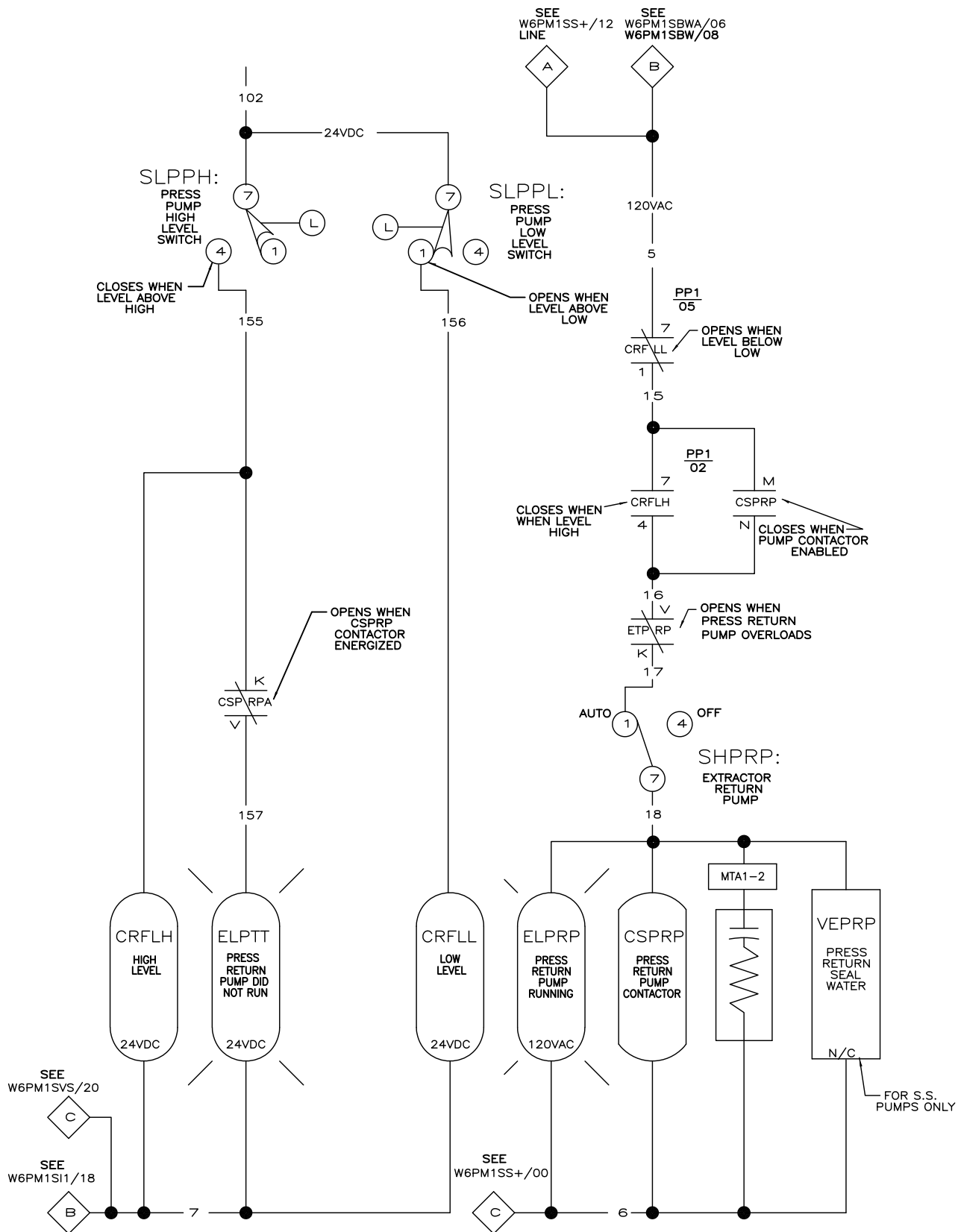
SCHEMATIC: PRESS RETURN PUMP INTERFACE

110V50HZ/120V60HZ

PELLERIN MILNOR CORPORATION

W6PM1SPP
2017245B

W6PM1SPP
2017245B



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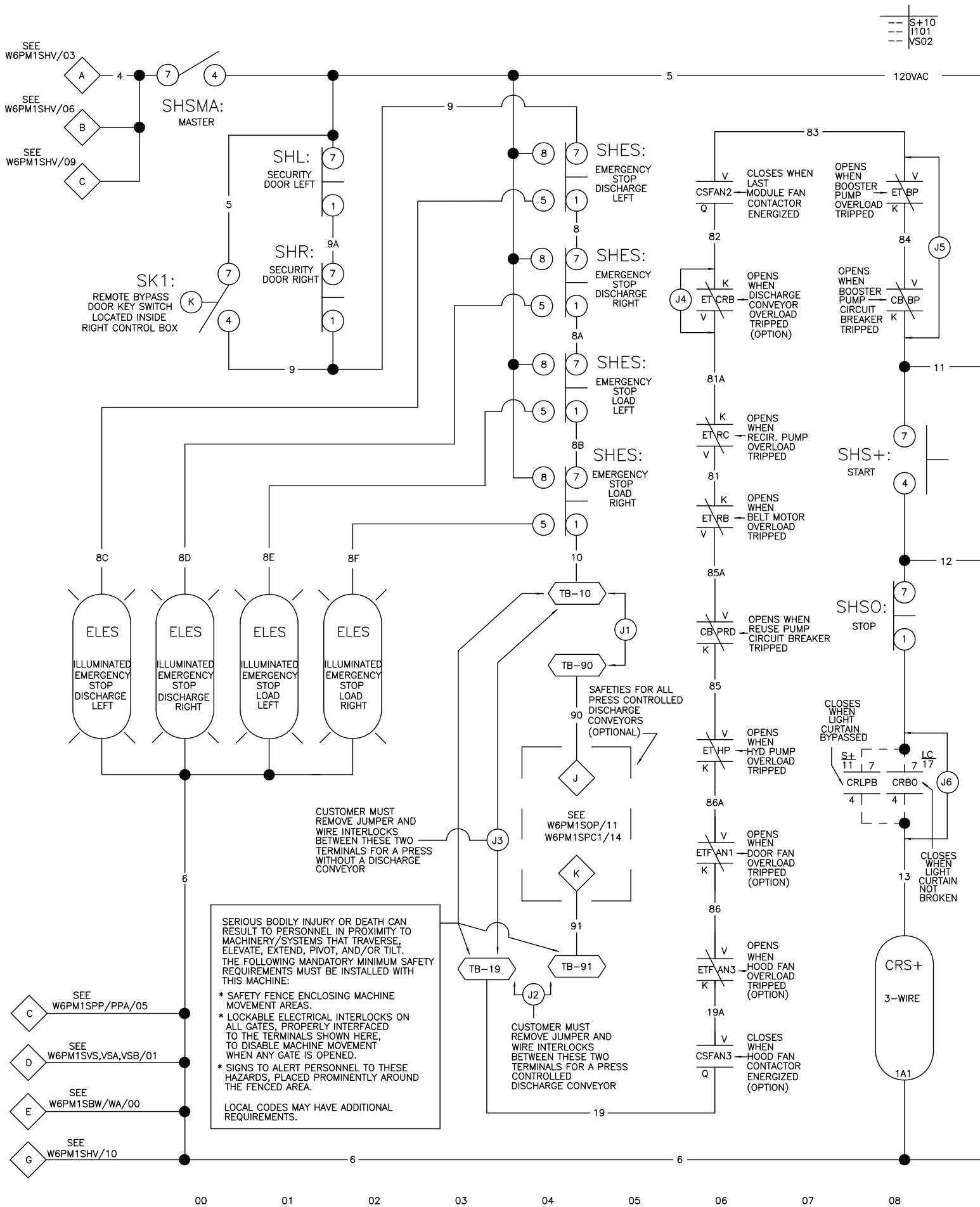
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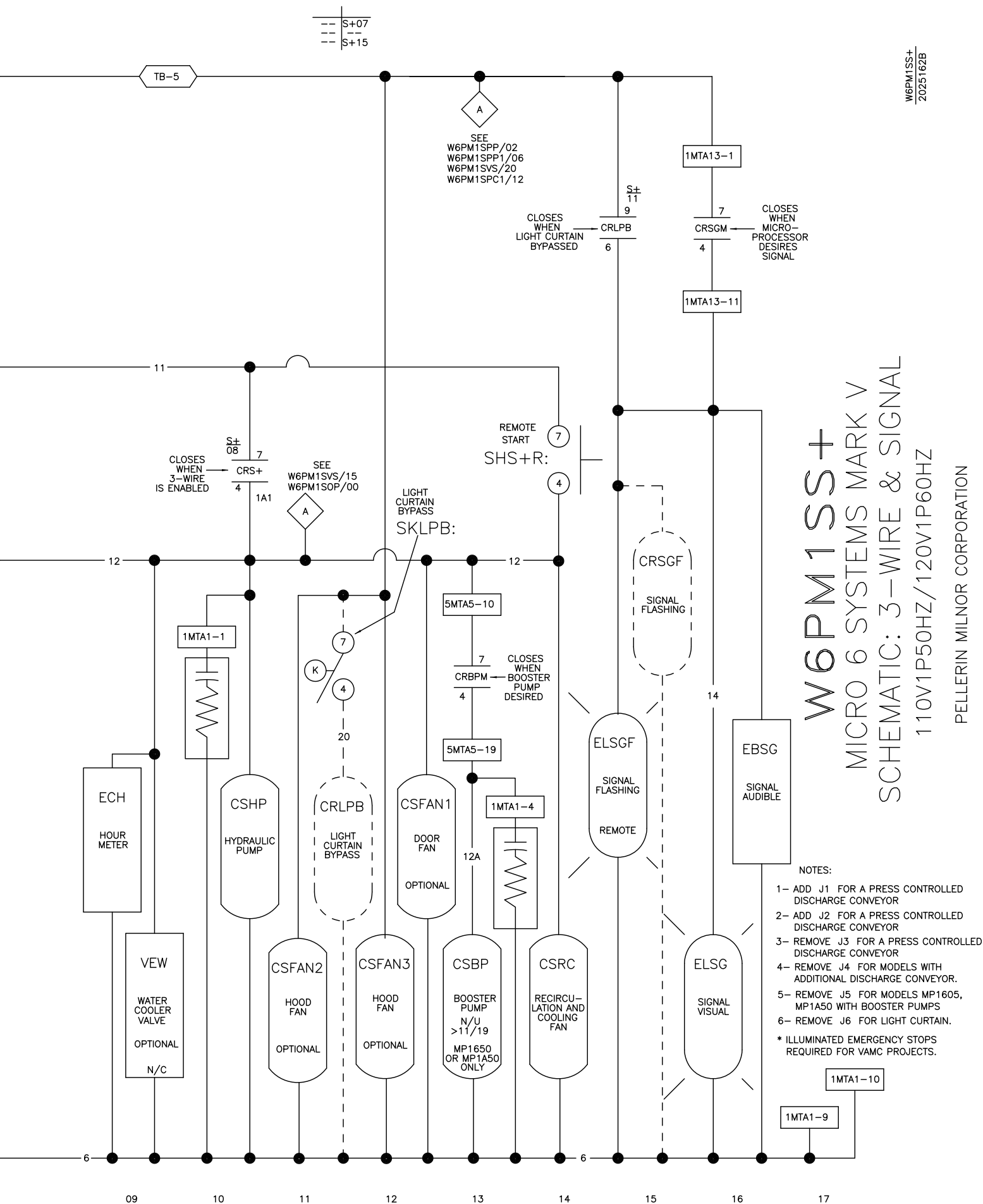
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2024053B

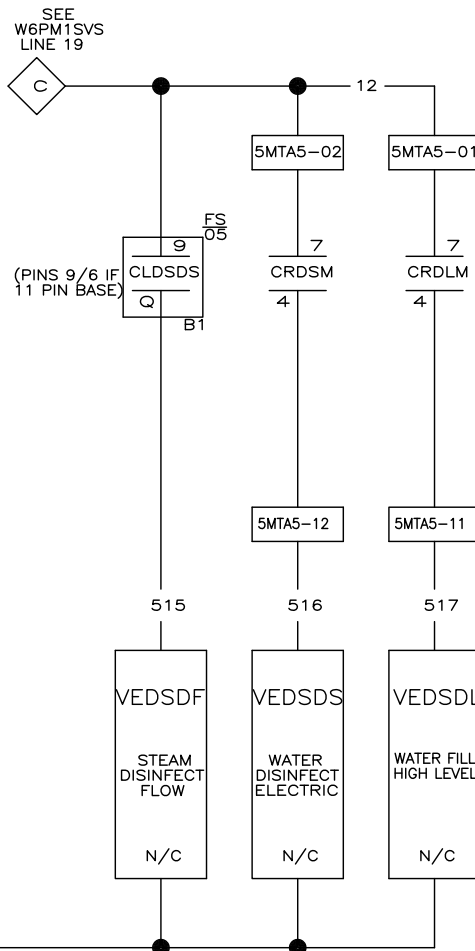
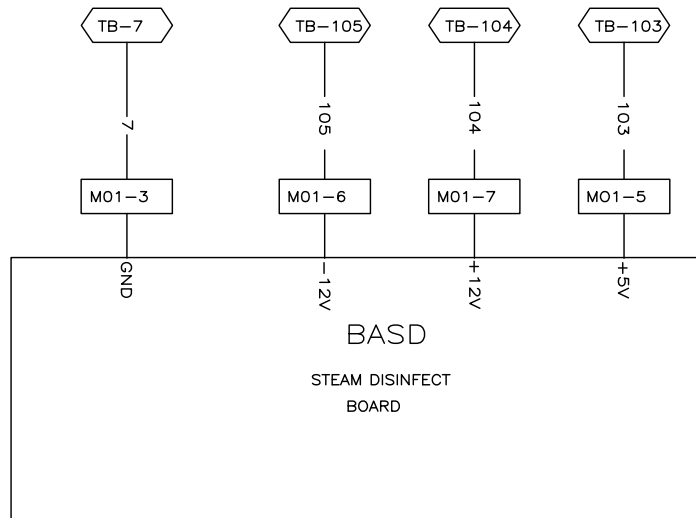
W6PM1SPP1
MICRO 6 SYSTEMS
MARK V CONTRROLS
SCHEMATIC: PRESS RETURN PUMP
WITH CONDUCTIVITY PROBES
PELLERIN MILNOR CORPORATION

W6PM1SPP1
2024053B

W6PM1SPP1
2024053B

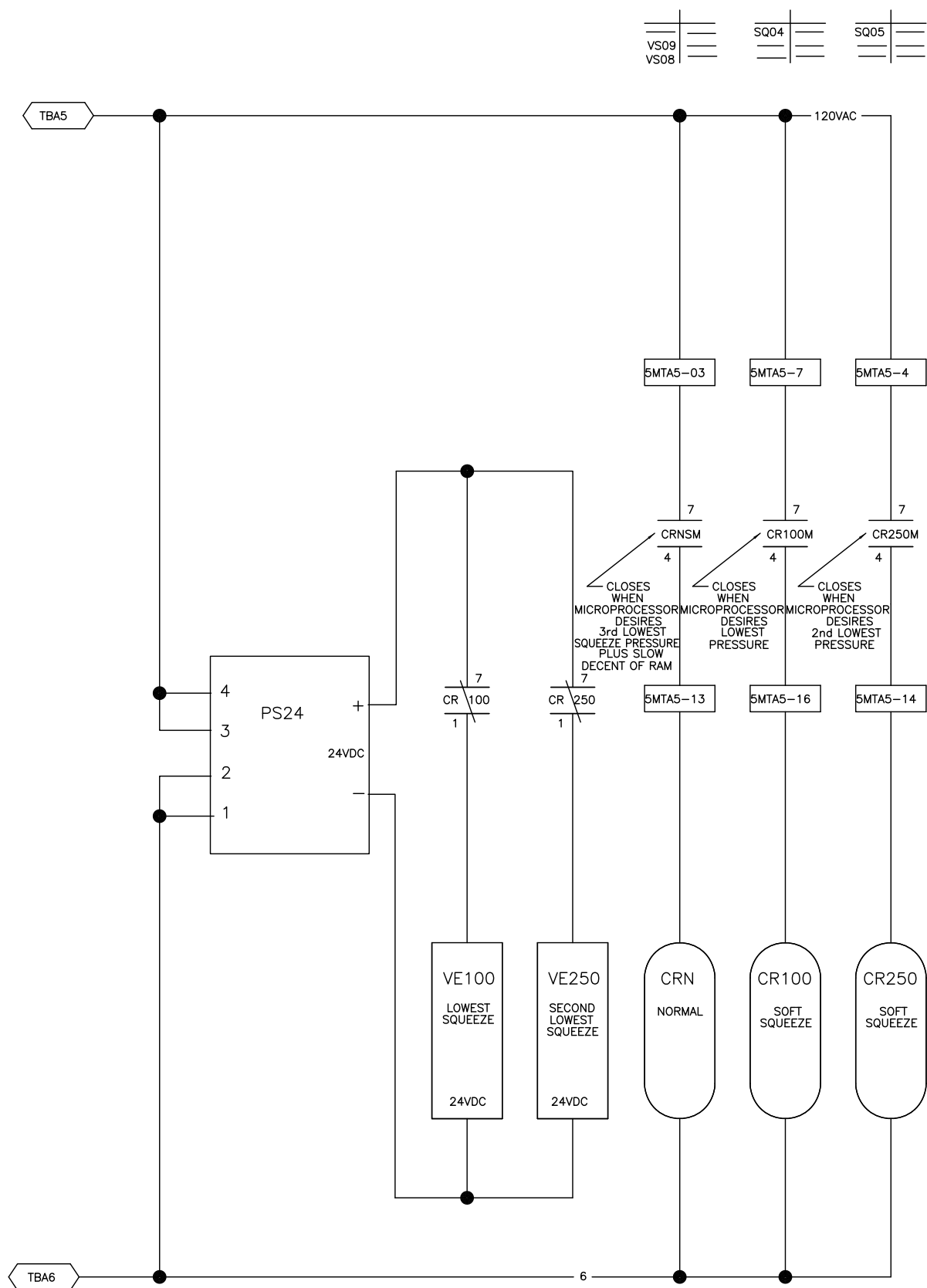






W6PM1SSD

MICRO 6 SYSTEMS
SCHEMATIC: STEAM DISINFECT
110V1P50HZ/120V1PH60HZ
PELLERIN MILNOR CORPORATION



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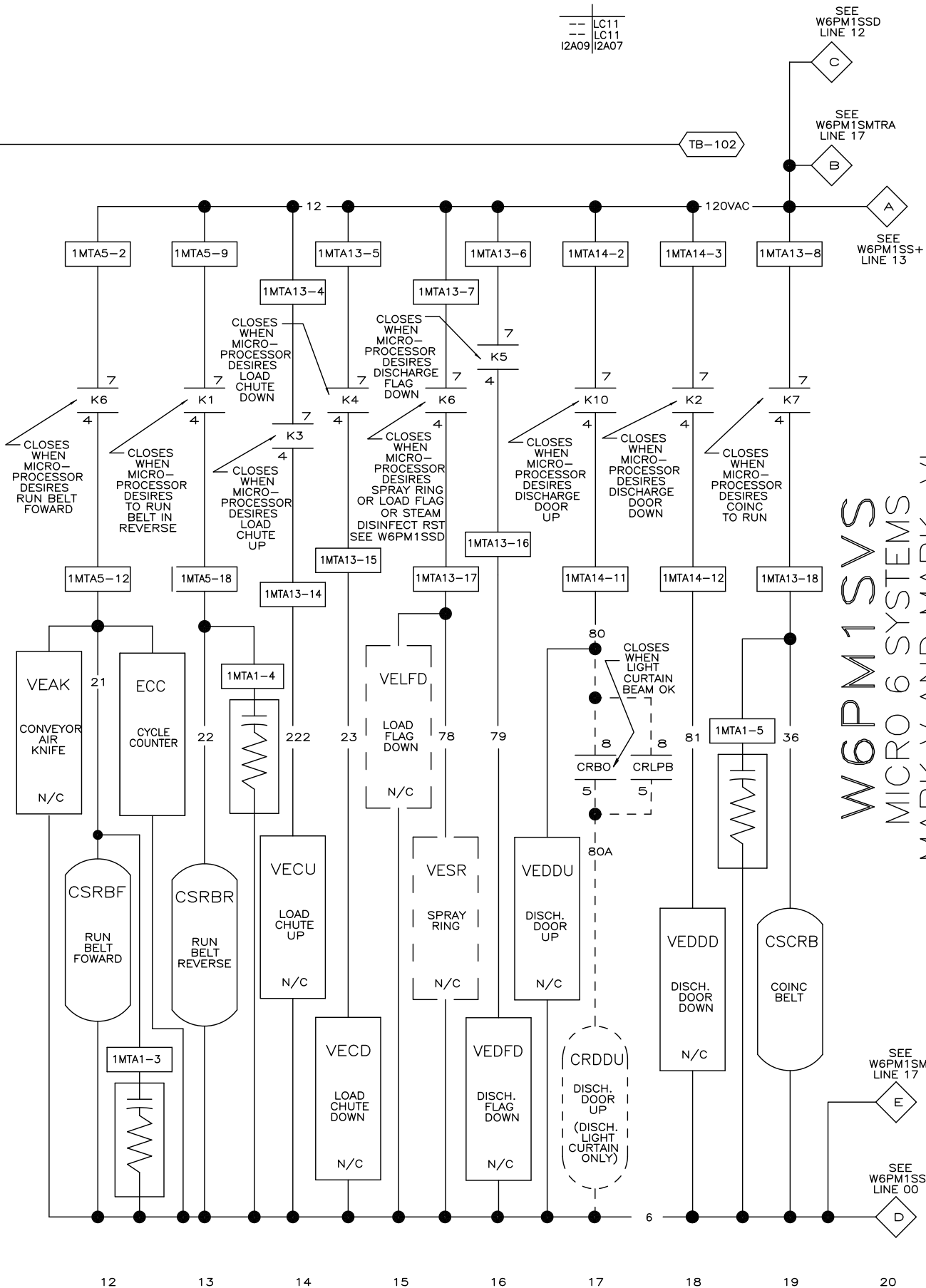
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W6PM1SSQ
MICRO 6 SYSTEMS MARK VI
SCHEMATIC: SOFT SQUEEZE
PELLERIN MILNOR CORPORATION



W6PM1SVS
MICRO 6 SYSTEMS
MARK V AND MARK VI
SCHEMATIC: ELECTRICAL VALVES
24VDC + 110V1P50HZ/120V1PH60HZ
PELLERIN MILNOR CORPORATION