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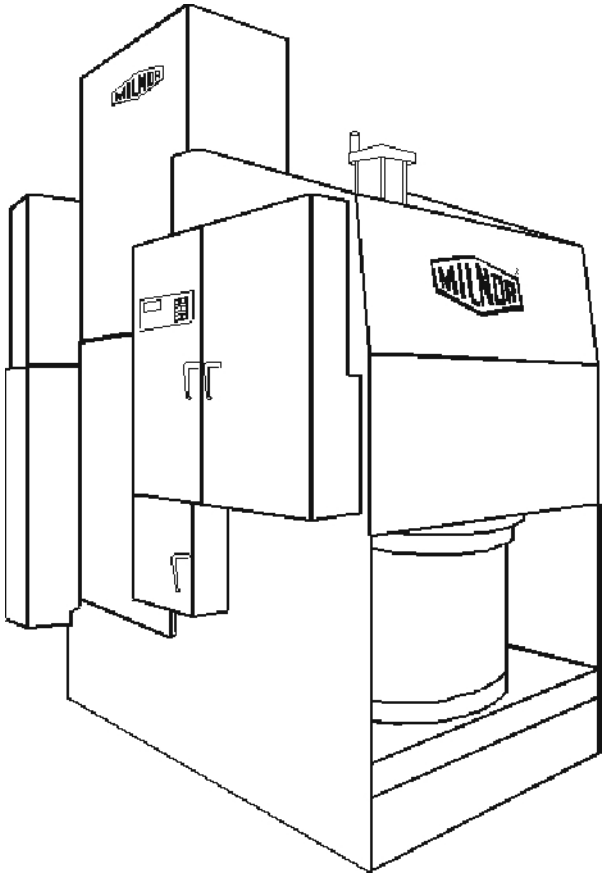
Schematic/Electrical Parts

2 STAGE MEMBRANE PRESS MARK VI CONTROLS



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

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

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COMPONENT PARTS LIST

W6PR6SPL/2019302N

COMPONENT NUMBER	FUNCTION OF THIS COMPONENT NUMBER	WHERE TO FIND THIS COMPONENT	MILNOR P/N	DESCRIPTION	LOCATION
	>>>CONTROL BOX DETAILS				
001	DETAIL-HIGH VOLTAGE CONTROL BOX	W6PR6STG1	B2TAG96026	PRESS HIGH VOLT CONTROL BOX	SEE FUNCTION
002	DETAIL-PRESS VALVE BOX	W6PR6STG1	B2TAG85089	MIC6 SYS.PRESS VALVESET	SEE FUNCTION
003	DETAIL-PRESS CONTROL BOARDS	W6PR5STG2	B2TAG96004	TAG-PRESS C-BOARDS I/O	SEE FUNCTION
004	DETAIL -PROCESSOR CONTROL BOX	W6PR5STG2	B2TAG91050	8088 PROCESSOR BD -PRESS	SEE FUNCTION
005	DETAIL -LOW VOLTAGE CONTROL BOX	W6RP5STG3	B2TAG96027	2 STAGE PRESS LOW VOLT C-BOX	SEE FUNCTION
BA	**>>>PRINTED CIRCUIT BOARDS**				
BAD	BOARD- A TO D CONVERTER	W6PR5SBW	08BSADCT	BD:SERIAL A-D CONVERT->TEST	LOW VOLT BOX
BBB-1	BOARD-RAM BATTERY BACKUP ENDED 10/18	W6PR5SBW	08BSBB1T	BOARD: SER BATT BACKUP-TEST	PROCESSOR BX
BDVFD	BOARD-DISPLAY SERIAL VFD	W6PR5SD	08BSEVFD5V	SERIAL VFD 2LINE 8088-TEST	LOW VOLT BOX
BIO-1	BOARD-8 OUTPUT/16INPUT #1	W6PR5SBW	08BS816CT	BD:SERIAL 8OUT-16INPUT-TEST	LOW VOLT BOX
BIO-2	BOARD-8 OUTPUT/16INPUT #2	W6PR5SBW	08BS816CT	BD:SERIAL 8OUT-16INPUT-TEST	LOW VOLT BOX
BIO-3	BOARD-8 OUTPUT/16INPUT #3	W6PR5SBW	08BS816CT	BD:SERIAL 8OUT-16INPUT-TEST	LOW VOLT BOX
BIO-3	BOARD-8OUT/16IN #3 (DATA PASS)	W6PR5SIDP3	08BS816CT	BD:SERIAL 8OUT-16INPUT-TEST	LOW VOLT BOX
BIO-4	BOARD-8OUTPUT/16INPUT #4	W6PR5SBW	08BS816CT	BD:SERIAL 8OUT-16INPUT-TEST	LOW VOLT BOX
BIO-4	BOARD-8OUT/16IN #4 (DATA PASS)	W6PR5SIDP2	08BS816CT	BD:SERIAL 8OUT-16INPUT-TEST	LOW VOLT BOX
BMTH	BOARD-8 CARD MOTHER	W6PR5SBW	08BS8MTHAT	BD:SERIAL 8 CARD MOTHER-TEST	LOW VOLT BOX
BO24-1	BOARD-24 OUTPUT #1	W6PR5SBW	08BSO24AT	BD:SERIAL 24 OUTPUT->TEST	LOW VOLT BOX
BO24-2	BOARD-24 OUTPUT #2	W6PR5SBW	08BSO24AT	BD:SERIAL 24 OUTPUT->TEST	LOW VOLT BOX
BO24-2	BOARD-24 OUTPUT #2	W6PR5SODP	08BSO24AT	BD:SERIAL 24 OUTPUT->TEST	LOW VOLT BOX
BPB	BOARD-186 PROCESSOR	W6PR5SBW	08BSPE3T	BD: SERIAL 186PROCESSOR SMD->TEST	PROCESSOR BX
BPB	BOARD-8088 PROCESSOR ENDED 10/18	W6PR5SBW	08BSPDT	8088 PROCESSOR -> TESTED	PROCESSOR BX
CB	**>>>CIRCUIT BREAKERS**				
CB1	CIRCUIT BRK-VOLUME PUMP MOTOR	W6PR5SMTR	MESSAGE SN	SEE SPECIFIC MACHINE +MAMEPLATE	HI VOLT BOX
CB2	CIRCUIT BRK-PRESSURE PUMP MOTOR	W6PR5SMTR	MESSAGE SN	SEE SPECIFIC MACHINE +MAMEPLATE	HI VOLT BOX
CB3	CIRCUIT BRK-BELT MOTOR	W6PR5SMTR	MESSAGE SN	SEE SPECIFIC MACHINE +MAMEPLATE	HI VOLT BOX
CD	**>>>RELAY-TIME DELAY**				
CDD	DELAY-DISCHARGE END BLOCKED	W6PR5SPCIR	09CF002037	TDR F2S 2PDT 11PIN 120V60/50C	PIVOTING COINC
CDL	DELAY-DISCHARGE EYE NOT BLOCKED	W6PR5SPCIR	09CF002037	TDR F2S 2PDT 11PIN 120V60/50C	PIVOTING COINC
CD1	DELAY-DISCHARGE EYE CLEAR	W6PR5SPC	09CF002037	TDR F2S 2PDT 11PIN 120V60/50C	LOW VOLT BOX
CD1	DELAY-COINC IN POSITION	W6PR5SPCIR	09CF002037	TDR F2S 2PDT 11PIN 120V60/50C	LOW VOLT BOX
CD2	DELAY-DISCHARGE EYE CLEAR	W6PR5SPC	09CF002037	TDR F2S 2PDT 11PIN 120V60/50C	LOW VOLT BOX
CD2	DELAY-COINC IN LOAD POSITION	W6PR5SPCIR	09CF002037	TDR F2S 2PDT 11PIN 120V60/50C	PIVOTING COINC

COMPONENT PARTS LIST

COMPONENT NUMBER	FUNCTION OF THIS COMPONENT NUMBER	WHERE TO FIND THIS COMPONENT	MILNOR P/N	DESCRIPTION	LOCATION
CL	**>>>RELAY-LATCH**				
CLD	LATCH-DISCHARGE EYE BLOCKED	W6PR5SPC	09CL2C-C37	RELAY-LATCH DPDT 120V 2-COIL	LOW VOLT BOX
CL1	LATCH-START BELT	W6PR5SPC	09CL2C-C37	RELAY-LATCH DPDT 120V 2-COIL	LOW VOLT BOX
CP	**>>>PHOTOEYES**				
CPCBL	PHOTOEYE-COINC BELT IS LOADED	W6PR6SIC	09RPE011	PHOTOEYE VALU-BEAM 10-30DC	COINC BELT
CPCBL	PHOTOEYE-COINC LOADED	W6PR5SPCI	09RPE011	PHOTOEYE VALU-BEAM 10-30DC	COINC BELT
CPD	PHOTOEYE-PIVIOTING COINC DISC	W6PR5SPC	09RPE011	PHOTOEYE VALU-BEAM 10-30DC	PIVOTING CONV.
CPD	PHOTOEYE-DISCHARGE END	W6PR5SPCIR	09RPE011	PHOTOEYE VALU-BEAM 10-30DC	PIVOTING COINC
CPGCE	PHOTOEYE-GOODS CLEAR OF MAIN PRESS	W6PRSCR	09RPE011	PHOTOEYE VALU-BEAM 10-30DC	PRESS BASE
CPGCE	PHOTOEYE-GOODS CLEAR OF MAIN PRESS	W6PR6SIC	09RPE011	PHOTOEYE VALU-BEAM 10-30DC	PRESS BASE
CPGNB	PHOTOEYE-GOODS	W6PR6SIC	09RPE011	PHOTOEYE VALU-BEAM 10-30DC	PRESS BASE
CPL	PHOTOEYE-PIVIOTING COINC LOADED	W6PR5SPC	09RPE011	PHOTOEYE VALU-BEAM 10-30DC	PIVIOTING CONV
CR	**>>>RELAY-PILOT OR CONTROL**				
CRCBL	RELAY-COINC LOADED	W6PR5SPCI	09C024D37	4PDT "KH" 110/120V	LOW VOLT BOX
CRD	RELAY-COINC AT DISCHARGE POSITION	W6PR5SPCI	09C024D37	4PDT "KH" 110/120V	LOW VOLT BOX
CRD	RELAY-DISCHARGE EYE BLOCKED	W6PR5SPCIR	09C024D37	4PDT "KH" 110/120V	LOW VOLT BOX
CRH	RELAY-COINC AT HOME POSITION	W6PR5SPCI	09C024D37	4PDT "KH" 110/120V	LOW VOLT BOX
CRPRB	RELAY-RUN PIVIOTING COINC BELT	W6PR5SPCIR	09C024D37	4PDT "KH" 110/120V	LOW VOLT BOX
CRS+	RELAY-START (3-WIRE) IS ON	W6PR5SS+	09C024D37	4PDT "KH" 110/120V	LOW VOLT BOX
CRSD	RELAY-SLIDING DOORS CLOSED	W6PR5SS+	09C024D37	4PDT "KH" 110/120V	LOW VOLT BOX
CRVP	RELAY-VOLUME PUMP VALVE TO MAIN PR	W6PR5STC	09C024D37	4PDT "KH" 110/120V	LOW VOLT BOX
CRWL	RELAY-WATER LEVEL IS OK	W6PR5SS+	09C024D37	4PDT "KH" 110/120V	LOW VOLT BOX
CS	**>>>CONTACTOR-MOTOR STARTER**				
CSA	CONTACTOR-RUN BELT 200-240V	W6PR5SPCIR	09MC08D337	23A 3P MCS CONT NR 120V5/6	PIVIOTING COINC
CSA	CONTACTOR-RUN BELT 346-600V	W6PR5SPCIR	09MC08C337	16A 3P MCS CONT NR 120V5/6	PIVIOTING COINC
CSF	CONTACTOR-BELT 200-240V	W6PR5SPC	09MC08D337	23A 3P MCS CONT NR 120V5/6	HIGH VOLT BOX
CSF	CONTACTOR-BELT 346-600V	W6PR5SPC	09MC08C337	16A 3P MCS CONT NR 120V5/6	HIGH VOLT BOX
CSFF	CONTACTOR-SEE CSRF FOR PART NO.	W6PR5SMC	MESSAGE EW	THESE PARTS RECORDED ELSEWHERE	HIGH VOLT BOX
CSFS	CONTACTOR-SEE CSRS FOR PART NO.	W6PR5SMC	MESSAGE EW	THESE PARTS RECORDED ELSEWHERE	HIGH VOLT BOX
CSPP	CONTACTOR-PRESSURE PUMP 200-240V	W6PR5SMC	09MC08L337	60A 3P MCS CONT NR 120V5/6	HIGH VOLT BOX
CSPP	CONTACTOR-PRESSURE PUMP 346-600V	W6PR5SMC	09MC08E337	30A 3P MCS CONT NR 120V5/6	HIGH VOLT BOX
CSPRP	CONTACTOR-RETURN PUMP 200-240V	W6PR5SPP	09MC08C337	16A 3P MCS CONT NR 120V5/6	HIGH VOLT BOX
CSPRP	CONTACTOR-RETURN PUMP 346-600V	W6PR5SPP	09MC08B337	12A 3P MCS CONT NR 120V5/6	HIGH VOLT BOX

COMPONENT PARTS LIST

COMPONENT NUMBER	FUNCTION OF THIS COMPONENT NUMBER	WHERE TO FIND THIS COMPONENT	MILNOR P/N	DESCRIPTION	LOCATION
CSRB	CONTACTOR-RUN COINC BELT 200-240V	W6PR5SMC	09MC08D337	23A 3P MCS CONT NR 120V5/6	HIGH VOLT BOX
CSRB	CONTACTOR-RUN COINC BELT 346-600V	W6PR5SMC	09MC08C337	16A 3P MCS CONT NR 120V5/6	HIGH VOLT BOX
CSRF	CONTACTOR-SLED FAST DRIVE	W6PR5SMC	09MR08D337	24A 3P REV+2N/C 120V5/6 IEC	HIGH VOLT BOX
CSRF-AUX	CONTACTOR-AUX CONT. FOR SLED FAST	W6PR5SMC	09MC08010D	AUX. SWITCH 2-NC	HIGH VOLT BOX
CSRS	CONTACTOR-SLED SLOW DRIVE	W6PR5SMC	09MR08D337	24A 3P REV+2N/C 120V5/6 IEC	HIGH VOLT BOX
CSRS-AUX	CONTACTOR-AUX CONT. FOR SLED SLOW	W6PR5SMC	09MC08010D	AUX. SWITCH 2-NC	HIGH VOLT BOX
CSVP	CONTACTOR-VOLUME PUMP 200-240V	W6PR5SMC	09MC08L337	60A 3P MCS CONT NR 120V5/6	HIGH VOLT BOX
CSVP	CONTACTOR-VOLUME PUMP 346-600V	W6PR5SMC	09MC08E337	30A 3P MCS CONT NR 120V5/6	HIGH VOLT BOX
EB	**>>>AUDIBLE SIGNALS**				
EB	BUZZER-COINC PIVIOTING	W6PR5SPCI	09H020	ALARM SONALERT 115V	PIVOTING COINC
EBSG	BUZZER-OPERATOR SIGNAL	W6PR5SMC	09H015	BUZZ.115V W6-32 CTR+6"LEADS	LOW VOLT BOX
EC	**>>>CLUTCH-ELECTRIC**				
ECBR	CLUTCH-SLED DRIVE BASE	W6PR5SMC	54H160A	CLUTCH 12VDC MA-7+3/8A-2G	MOTOR DRIVE
E	**>>>FLASHER-ELECTRIC**				
EF	FLASHER-COINC PIVIOTING	W6PR5SPCI	08FL007537	FLASHER 120V 1AMP 75FL/MIN	PIVIOTING COINC
EF	**>>>FUSE OR FUSE HOLDER**				
EFBR	FUSE-CLUTCH (BRAKE) CIRCUIT	W6PR5SMC	09FF004AHG	FUSE BK/MDX 4 AMP 125V BUSS	HIGH VOLT BOX
EF37	FUSE-120VOLT CONTROL CIRCUIT	W6PR5SHV	09FF004AHG	FUSE BK/MDX 4 AMP 125V BUSS	HIGH VOLT BOX
EL	**>>>LIGHT-PILOT OR INDICATOR**				
ELAL	LIGHT-AIR IS LOW	W6PR5SS+	09J060A37	LAMP 1/2" AMB 250V IDI 1051QC3	LOW VOLT BOX
ELD	LIGHT-DOOR IS OPEN	W6PR5SS+	09J060A37	LAMP 1/2" AMB 250V IDI 1051QC3	LOW VOLT BOX
ELPRP	LIGHT-PRESS PUMP IS RUNNING	W6PR5SPP	09J060A37	LAMP 1/2" AMB 250V IDI 1051QC3	HIGH VOLT BOX
ELPTT	LIGHT-PRESS PUMP DID NOT RUN	W6PR5SPP	09J060A37	LAMP 1/2" AMB 250V IDI 1051QC3	HIGH VOLT BOX
ELSG	LIGHT-OPERATOR SIGNAL (VISUAL)	W6PR5SS+	09J060A37	LAMP 1/2" AMB 250V IDI 1051QC3	LOW VOLT BOX
ELSGF	LIGHT-ROTATING SIGNAL	W6PR5SS+	09H025V37	BEACON ROTARY 5.5"DIA AMBER	TOP OF C-BOX
ELWL	LIGHT-WATER IS LOW	W6PR5SS+	09J060A37	LAMP 1/2" AMB 250V IDI 1051QC3	LOW VOLT BOX
ES	**>>>ELECTRONIC POWER SUPPLIES**				
ESPS	POWER SUPPLY-MICROPROCESSOR	W6PR5SBW	08PSS3401T	40 WATT POWER SUPPLY TESTED	PROCESSOR BX
ET	**>>>OVERLOADS**				
ETFST	OVERLOAD-SLED FAST DRIVE 200-240V	W6PR5SMTR	09FTD0037T	MCS OL RELAY ADJ.RANGE 3.7-12	HIGH VOLT BOX
ETFST	OVERLOAD-SLED FAST DRIVE 346-600V	W6PR5SMTR	09FTD0016T	MCS OL RELAY ADJ.RANGE 1.6-5	HIGH VOLT BOX
ETPP	OVERLOAD-PRESSURE PUMP 200-240V	W6PR5SMTR	09FTD0121T	MCS OL RELAY ADJ,RANGE 12-37	HIGH VOLT BOX
ETPP	OVERLOAD-PRESSURE PUMP 346-600V	W6PR5SMTR	09FTD0120T	MCS OL RELAY ADJ,RANGE 12-32	HIGH VOLT BOX

COMPONENT PARTS LIST

COMPONENT NUMBER	FUNCTION OF THIS COMPONENT NUMBER	WHERE TO FIND THIS COMPONENT	MILNOR P/N	DESCRIPTION	LOCATION
ETPRP	OVERLOAD-RETURN PUMP 200-240V	W6PR5SMTR	09FTD0016T	MCS OL RELAY ADJ.RANGE 1.6-5	HIGH VOLT BOX
ETPRP	OVERLOAD-RETURN PUMP 346-600V	W6PR5SMTR	09FTD0010T	MCS OL RELAY ADJ.RANGE 1.0-2.9	HIGH VOLT BOX
ETRB	OVERLOAD-COINC BELT 200-240V	W6PR5SMTR	09FTD0016T	MCS OL RELAY ADJ.RANGE 1.6-5	HIGH VOLT BOX
ETRB	OVERLOAD-COINC BELT 346-600V	W6PR5SMTR	09FTD0010T	MCS OL RELAY ADJ.RANGE 1.0-2.9	HIGH VOLT BOX
ETSLO	OVERLOAD-SLED SLOW DRIVE MOTOR	W6PR5SMTR	09FTD0016T	MCS OL RELAY ADJ.RANGE 1.6-5	HIGH VOLT BOX
ETVP	OVERLOAD-VOLUME PUMP 200-240V	W6PR5SMTR	09FTD0121T	MCS OL RELAY ADJ,RANGE 12-37	HIGH VOLT BOX
ETVP	OVERLOAD-VOLUME PUMP 346-600V	W6PR5SMTR	09FTD0120T	MCS OL RELAY ADJ,RANGE 12-32	HIGH VOLT BOX
EX	**>>>TRANSFORMERS**				
EXBR	TRANSFORMER-120V TO 16VAC BRAKE	W6PR5SMC	09UB100A16	XFMR 120/240 PRI EBR 12VDC 90	HIGH VOLT BOX
EX24A	TRANSFORMER-SLIDE DOOR PROX SW.	W6RP5SS+	09U002EBR	XFMR 120/240 PRI EBR 12VDC 90	HIGH VOLT BOX
EX37-1	TRANSFORMER-600VAC-120VAC	W6PR5SHV	09U251AA37	ZFMR 600VPRI/120VSEC/250VA	HIGH VOLT BOX
EX37-2	TRANSFORMER-380/480VAC-120VAC	W6PR5SHV	09U249AA37	ZFMR 200-240 PRI/120SEC 250VA	HIGH VOLT BOX
EX37-3	TRANSFORMER-200/240VAC-120VAC	W6PR5SHV	09U200AAB	ZFMR 380-480V/240-120V250VA	HIGH VOLT BOX
KB	**>>>KEYBOARDS**				
KBMP	KEYPAD-MICROPROCESSOR	W6PR5SKP	08ND0206N	KEYPAD-DOME=2X5 MATRIX NUME.	SWITCH PANEL
MR	**>>>MOTORS**				
MRFST	MOTOR-SLED FAST DRIVE	W6PR5SMTR	MESSAGE SO	SEE SPECIFIC COMPONENT+NAMEPLATE	SIDE OF MACH
MRPP	MOTOR-PRESSURE PUMP	W6PR5SMTR	MESSAGE SO	SEE SPECIFIC COMPONENT+NAMEPLATE	SIDE OF MACH
MRPRP	MOTOR-RETURN PUMP	W6PR5SMTR	MESSAGE SO	SEE SPECIFIC COMPONENT+NAMEPLATE	SIDE OF MACH
MRRB	MOTOR-COINC BELT	W6PR5SMTR	MESSAGE SO	SEE SPECIFIC COMPONENT+NAMEPLATE	COINC BELT
MRSLO	MOTOR-SLED SLOW DRIVE	W6PR5SMTR	MESSAGE SO	SEE SPECIFIC COMPONENT+NAMEPLATE	SIDE OF MACH
MRVP	MOTOR-VOLUME PUMP	W6PR5SMTR	MESSAGE SO	SEE SPECIFIC COMPONENT+NAMEPLATE	TOP OF PRESS
MV	**>>>POWER SUPPLY**				
PS24	POWER SUPPLY-24VDC OUTPUT	W6PR5SBW	08PSL2B224	PWR SUP 100-240VAC 24VDC 5AMP	LOW VOLT BOX
PX	**>>>PHOTOEYES**				
PXDCL	PROX SW-LEFT SLED DOOR CLOSED	W6PRSCR	09RPS30ADU	PROXSW.QK CONN.30M NO-DC UNSHL	LF SLED DOOR
PXDCL	PROX SW-LEFT SLED DOOR CLOSED	W6PR6SIB	09RPS30ADU	PROXSW.QK CONN.30M NO-DC UNSHL	LF SLED DOOR
PXDCR	PROX SW-RIGHT SLED DOOR CLOSED	W6PRSCR	09RPS30ADU	PROXSW.QK CONN.30M NO-DC UNSHL	RGHT SLED DOOR
PXDCR	PROX SW-RIGHT SLED DOOR CLOSED	W6PR6SIB	09RPS30ADU	PROXSW.QK CONN.30M NO-DC UNSHL	RGHT SLED DOOR
PXDFC	PROX SW-LOAD DOOR FULL DOWN	W6PR6SIB	09RPS30ADU	PROXSW.QK CONN.30M NO-DC UNSHL	AT LOAD DOOR
PXDFU	PROX SW-LOAD DOOR FULL UP	W6PR6SIB	09RPS30ADU	PROXSW.QK CONN.30M NO-DC UNSHL	AT LOAD DOOR
PXDOL	PROX SW-LEFT SLED DOOR OPEN	W6PRSCR	09RPS30ADU	PROXSW.QK CONN.30M NO-DC UNSHL	LF SLED DOOR
PXDOL	PROX SW-LEFT SLED DOOR OPEN	W6PR6SIB	09RPS30ADU	PROXSW.QK CONN.30M NO-DC UNSHL	LF SLED DOOR

COMPONENT PARTS LIST

COMPONENT NUMBER	FUNCTION OF THIS COMPONENT NUMBER	WHERE TO FIND THIS COMPONENT	MILNOR P/N	DESCRIPTION	LOCATION
PXDOR	PROX SW-RIGHT SLED DOOR OPEN	W6PRSCR	09RPS30ADU	PROXSW.QK CONN.30M NO-DC UNSHL	RGHT SLED DOOR
PXDOR	PROX SW-RIGHT SLED DOOR OPEN	W6PR6SIB	09RPS30ADU	PROXSW.QK CONN.30M NO-DC UNSHL	RGHT SLED DOOR
PXPPD	PROX SW-PRE-PRESS 2/3 DOWN	W6PRSCR	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	PRE-PRESS
PXPPD	PROX SW-PRE-PRESS 2/3 DOWN	W6PR6SIB	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	PRE-PRESS
PXSDL	PROX SW-CENTER DOOR CLOSED (UP)	W6PRSCR	09RPS30AAS	PRXSW QK CONN 30M NO-AC SHLD	RT SLIDING DOOR
PXSDM	PROX SW-CENTER DOOR CLOSED (DOWN)	W6PRSCR	09RPS18AAS	PRXSW QK CONN 18M NO-AC SHLD	LF SLIDING DOOR
PXSDR	PROX SW-RIGHT DOOR CLOSED (UP)	W6PRSCR	09RPS30AAS	PRXSW QK CONN 30M NO-AC SHLD	LF SLIDING DOOR
PXSDS	PROX SW-RIGHT DOOR CLOSED (DOWN)	W6PRSCR	09RPS18AAS	PRXSW QK CONN 18M NO-AC SHLD	RT SLIDING DOOR
PXSFF	PROX SW-SLED UNDER MAIN BELL	W6PR6SIB	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	PRESS BASE
PXSFS	PROX SW-SLED FORWARD SLOWLY	W6PRSCR	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	SLED RAIL
PXSRS	PROX SW-SLED REARWARD SLOWLY	W6PRSCR	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	SLED RAIL
PXSSB	PROX SW-SLED SLOW TO MAIN BELL	W6PR6SIC	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	PRESS BASE
PXSSF	PROX SW-SLED IS HOME-FORWARD	W6PRSCR	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	SLED RAIL
PXSSH	PROX SW-SLED SLOW TO HOME	W6PR6SIC	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	PRESS BASE
PXSSP	PROX SW-SLED IS HOME	W6PR6SIB	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	PRESS BASE
PXSSR	PROX SW-SLED IS HOME-REARWARD	W6PRSCR	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	SLED RAIL
PXULD	PROX SW-UNLOAD DOOR DOWN	W6PR6SIA	09RPS30ADS	PRXSW QK CONN 30M NO-DC SHLD	UNLOAD DOOR
PXULU	PROX SW-UNLOAD DOOR UP	W6PR6SIA	09RPS30ADS	PROXSW.QK CONN.30M NO-DC UNSHL	UNLOAD DOOR
SH	**>>>SWITCH-HAND OPERATED**				
SHCES	SWITCH-EMERGENCY STOP	W6PR5SS+	09N505	SW ASSY EMER STOP	PIVIOTING COINC
SHCPS	SWITCH-PULL CABLE STOP	W6PR5SS+	09R014A	MINI-SW SPDT STAKON #V15G1C26	COINC SIDE
SHES	SWITCH-EMERGENCY STOP	W6PR5SS+	09N505	SW ASSY EMER STOP	LOW VOLT BOX
SHES	SWITCH-EMERGENCY STOP	W6PR5SS+	09N505	SW ASSY EMER STOP	HIGH VOLT BOX
SHIS	SWITCH-PRESSURE IS 150#	W6PR6SIC	MESSAGE DN	THIS DEVICE NOT USED IN THIS W/D	MAIN PRS DOME
SHMD	SWITCH-3PH MOTOR DISCONECT	W6PR5SMTR	09N042204	ROTARY DISCON 10A 600V 2POS 4P	HIGH VOLT BOX
SHMD	SWITCH-3PH MOTOR DISCONECT	W6PR5SS+	09N042204	ROTARY DISCON 10A 600V 2POS 4P	SIDE OF BELT
SHPL	SWITCH-PRESS IS LOADED	W6PR6SIMT	MESSAGE EW	THIS PART IS RECORDED ELSEWHERE	REMOTE SWITCH
SHPRP	SWITCH-PRESS RETURN PUMP OFF-ON	W6PR5SPP	09N405M221	SWASS M2W 1NO+1NC	HIGH VOLT BOX
SHRB	SWITCH-RUN COINC BELT-MANUAL	W6PR5SMC	09N405PG10	SWASS PBGN 1NO	SWITCH PANEL
SHRES	SWITCH-EMERGENCY STOP REMOTE	W6PRSCR	09N505	SW ASSY EMER STOP	FAULT SWPNL
SHRES	SWITCH-EMERGENCY STOP REMOTE	W6PR5SS+	09N505	SW ASSY EMER STOP	FAULT SWPNL
SHRF	SWITCH-FAULT RECOVERY	W6PR6SIC	09N405PB01	SWASS PBBK 1NO	SWITCH PANEL
SHRFR	SWITCH-FAULT RECOVERY REMOTE	W6PRSCR	09N405PB01	SWASS PBBK 1NO	FAULT SWPNL

COMPONENT PARTS LIST

COMPONENT NUMBER	FUNCTION OF THIS COMPONENT NUMBER	WHERE TO FIND THIS COMPONENT	MILNOR P/N	DESCRIPTION	LOCATION
SHRFR	SWITCH-FAULT RECOVERY REMOTE	W6PR6SIC	09N405PB01	SWASS PBBK 1NO	FAULT SWPNL
SHS+	SWITCH START	W6PR5SS+	09N405PG10	SWASS PBGN 1NO	SWITCH PANEL
SHS+R	SWITCH-START REMOTE	W6PRSCR	09N405PG10	SWASS PBGN 1NO	FAULT SWPNL
SHS+R	SWITCH-START REMOTE	W6PR5SS+	09N405PG10	SWASS PBGN 1NO	FAULT SWPNL
SHSC	SWITCH-BRAKE SAFETY DESIRED	W6PR6SIC	09N405M211	SWASS M2W 1NO+1NC	SWITCH PANEL
SHSC	SWITCH-BRAKE SAFETY DESIRED	W6PR5SMC	09N405M211	SWASS M2W 1NO+1NC	SWITCH PANEL
SHSGC	SWITCH-SIGNAL CANCEL	W6PRS5SIC	09N405PY10	SWASS PB YELLOW 1NO	SWITCH PANEL
SHSMA	SWITCH-MASTER	W6PR5SS+	09N405M210	SWASS M2W 1NO	SWITCH PANEL
SHSO	SWITCH-STOP	W6PR5SS+	09N405PR01	SWASS PBRD 1NC	SWITCH PANEL
SHTL	SWITCH-TEST LAMP	W6PR5SS+	09N405PB11	SWASS PBBK 1NO/1NC	LOW VOLT BOX
SH1	SWITCH-MANUAL	W6PR5SPC	09N405M211	SWASS M2W 1NO+1NC	SWITCH PANEL
SH2	SWITCH-JOG BELT	W6PR5SPC	09N405PB01	SWASS PBBK 1NO	SWITCH PANEL
SH3	SWITCH-RESET DISCHARGE EYE BLOCKED	W6PR5SPC	09N405PB01	SWASS PBBK 1NO	SWITCH PANEL
SK	**>>>SWITCH-KEYLOCK**				
SKBSD	SWITCH-REMOTE DOOR BYPASS	W6PR5SS+	09N127C	KEYSW SPST 7A120VAC SCREW TERM	INSIDE CNT BOX
SKPRO	SWITCH-RUN/PROGRAM (KEY OP)	W6PR6SIA	09N127C	KEYSW SPST 7A120VAC SCREW TERM	SWITCH PANEL
SL	**>>>SWITCH-LEVEL**				
SLPPH	SWITCH-HIGH WATER IN BASE	W6PR5SPP	09R014A	MINI-SW SPDT STAKON #V15G1C26	PRESS BASE
SLPPL	SWITCH-LOW WATER IN BASE	W6PR5SPP	09R014A	MINI-SW SPDT STAKON #V15G1C26	PRESS BASE
SLTLH	SWITCH-HIGH WATER LEVEL IN TANK	W6PRSCR	09RL001	LIQUID LEVEL SW. SIDE MOUNT	RETURN TANK
SLTLH	SWITCH-HIGH WATER LEVEL IN TANK	W6PR6SIC	09RL001	LIQUID LEVEL SW. SIDE MOUNT	RETURN TANK
SLTLL	SWITCH-LOW WATER LEVEL IN TANK	W6PRSCR	09RL001	LIQUID LEVEL SW. SIDE MOUNT	RETURN TANK
SLTLL	SWITCH-LOW WATER LEVEL IN TANK	W6PR6SIC	09RL001	LIQUID LEVEL SW. SIDE MOUNT	RETURN TANK
SLTWL	SWITCH-TANK SAFETY WATER LEVEL	W6PRSCR	09RL001	LIQUID LEVEL SW. SIDE MOUNT	RETURN TANK
SLTWL	SWITCH-TANK SAFETY WATER LEVEL	W6PR6SIC	09RL001	LIQUID LEVEL SW. SIDE MOUNT	RETURN TANK
SM	**>>>SWITCH-MECHANICAL**				
SMD	SWITCH-COINC IS IN DISCHARGE POSITION	W6PR5SPCIR	09RM01412S	CAPSW 12' ROTARY ACTUATE SILVE	PIVIOTING COINC
SMDRL	SWITCH-MAIN PRESS DOWN LOCKS LEFT	W6PRSCR	09RM0121G	CAPSW 12FT 180DEG ROLLER GOLD	MAIN PRESS
SMDRL	SWITCH-MAIN PRESS DOWN LOCKS LEFT	W6PR6SIA	09RM0121G	CAPSW 12FT 180DEG ROLLER GOLD	MAIN PRESS
SMDRR	SWITCH-MAIN PRESS DOWN LOCKS RIGHT	W6PRSCR	09RM0121G	CAPSW 12FT 180DEG ROLLER GOLD	MAIN PRESS
SMDRR	SWITCH-MAIN PRESS DOWN LOCKS RIGHT	W6PR6SIA	09RM0121G	CAPSW 12FT 180DEG ROLLER GOLD	MAIN PRESS
SML	SWITCH-COINC IS IN LOAD POSITION	W6PR5SPCIR	09RM01412S	CAPSW 12' ROTARY ACTUATE SILVE	PIVIOTING COINC
SMMD	SWITCH-MAIN PRESS IS DOWN	W6PRSCR	09RM0121G	CAPSW 12FT 180DEG ROLLER GOLD	MAIN PRESS

COMPONENT PARTS LIST

COMPONENT NUMBER	FUNCTION OF THIS COMPONENT NUMBER	WHERE TO FIND THIS COMPONENT	MILNOR P/N	DESCRIPTION	LOCATION
SMMD	SWITCH-MAIN PRESS IS DOWN	W6PR6SIA	09RM0121G	CAPSW 12FT 180DEG ROLLER GOLD	MAIN PRESS
SMMLD	SWITCH-MAIN PRESS IS LOCKED DOWN	W6PRSCR	09RM0121G	CAPSW 12FT 180DEG ROLLER GOLD	MAIN PRESS
SMMLD	SWITCH-MAIN PRESS IS LOCKED DOWN	W6PR6SIA	09RM0121G	CAPSW 12FT 180DEG ROLLER GOLD	MAIN PRESS
SMMU	SWITCH-MAIN PRESS IS UP	W6PRSCR	09RM0121G	CAPSW 12FT 180DEG ROLLER GOLD	MAIN PRESS
SMMU	SWITCH-MAIN PRESS IS UP	W6PR6SIA	09RM0121G	CAPSW 12FT 180DEG ROLLER GOLD	MAIN PRESS
SMMUL	SWITCH-MAIN PRESS IS LOCKED UP	W6PRSCR	09RM0121G	CAPSW 12FT 180DEG ROLLER GOLD	MAIN PRESS
SMMUL	SWITCH-MAIN PRESS IS LOCKED UP	W6PR6SIA	09RM0121G	CAPSW 12FT 180DEG ROLLER GOLD	MAIN PRESS
SMPPU	SWITCH-PRE-PRESS IS UP	W6PRSCR	09RM0121G	CAPSW 12FT 180DEG ROLLER GOLD	PRE-PRESS
SMPPU	SWITCH-PRE-PRESS IS UP	W6PR6SIB	09RM0121G	CAPSW 12FT 180DEG ROLLER GOLD	PRE-PRESS
SMTA	SWITCH-SLED TORQUE SAFETY	W6PRSCR	09R008A	MICSW SPDT BZE6-2RN183	SLED DRIVE
SMTA	SWITCH-SLED TORQUE SAFETY	W6PR5SS+	09R008A	MICSW SPDT BZE6-2RN183	SLED DRIVE
SMULR	SWITCH-MAIN PRESS UP LOCKS RELEASED	W6PRSCR	09RM0121G	CAPSW 12FT 180DEG ROLLER GOLD	MAIN PRESS
SMULR	SWITCH-MAIN PRESS UP LOCKS RELEASED	W6PR6SIA	09RM0121G	CAPSW 12FT 180DEG ROLLER GOLD	MAIN PRESS
SP	**>>>SWITCH-PRESSURE OPERATED**				
SPAL	SWITCH-AIR LOW	W6PR5SS+	09N082A	PRESSW NASON CLOSE @ 62 LB.	LOW VOLT BOX
VE	**>>>VALVE-ELECTRIC OPERATED**				
VECD	VALVE-COINC MOVE TO DISCH POSITION	W6PR5SPCI	96R301A37	1/8" AIRPILOT 3W NC 120V50/60	PIVIOTING COINC
VECD	VALVE-COINC MOVE TO DISCH POSITION	W6PR5SPCIR	96R301A37	1/8" AIRPILOT 3W NC 120V50/60	PIVIOTING COINC
WECH	VALVE-COINC MOVE HOME POSITION	W6PR5SPCI	96R301A37	1/8" AIRPILOT 3W NC 120V50/60	PIVIOTING COINC
VECL	VALVE-MOVE TO LOAD POSITION	W6PR5SPCIR	96R301A37	1/8" AIRPILOT 3W NC 120V50/60	PIVIOTING COINC
VELDC	VALVE-LOAD DOOR CLOSED	W6PR5SVS	96R301A37	1/8" AIRPILOT 3W NC 120V50/60	AIR VALVE BOX
VELDD	VALVE-UNLOAD DOOR DOWN	W6PR5STC	96R301A37	1/8" AIRPILOT 3W NC 120V50/60	AIR VALVE BOX
VELDO	VALVE-LOAD DOOR OPEN	W6PR5SVS	96R301A37	1/8" AIRPILOT 3W NC 120V50/60	AIR VALVE BOX
VELDU	VALVE-UNLOAD DOOR UP	W6PR5STC	96R301A37	1/8" AIRPILOT 3W NC 120V50/60	AIR VALVE BOX
VEMD	VALVE-MOVE MAIN PRESS DOWN	W6PR5SVS	96R301A37	1/8" AIRPILOT 3W NC 120V50/60	AIR VALVE BOX
VEMDL	VALVE-EXTEND MAIN PRESS DWN LOCKS	W6PR5SVS	96R301A37	1/8" AIRPILOT 3W NC 120V50/60	AIR VALVE BOX
VEMDR	VALVE-RELEASE MAIN PRS DOWN LOCKS	W6PR5SVS	96R301A37	1/8" AIRPILOT 3W NC 120V50/60	AIR VALVE BOX
VEMPD	VALVE-PRESSURE TO MAIN PRESS DOME	W6PR5SVS	96R301A37	1/8" AIRPILOT 3W NC 120V50/60	AIR VALVE BOX
VEMPH	VALVE-HI PRESSURE BY-PASS	W6PR5SVS	96R301A37	1/8" AIRPILOT 3W NC 120V50/60	AIR VALVE BOX
VEMP3	VALVE-3RD PRESSURE BY-PASS	W6PR5SVS	96R301A37	1/8" AIRPILOT 3W NC 120V50/60	AIR VALVE BOX
VEMU	VALVE-MOVE MAIN PRESS UP	W6PR5SVS	96R301A37	1/8" AIRPILOT 3W NC 120V50/60	AIR VALVE BOX
VEMUR	VALVE-RELEASE MAIN PRESS UP LOCKS	W6PR5SVS	96R301A37	1/8" AIRPILOT 3W NC 120V50/60	AIR VALVE BOX
VEPDC	VALVE-CLOSE SLED DOORS	W6PR5SVS	96R301A37	1/8" AIRPILOT 3W NC 120V50/60	AIR VALVE BOX

COMPONENT PARTS LIST

COMPONENT NUMBER	FUNCTION OF THIS COMPONENT NUMBER	WHERE TO FIND THIS COMPONENT	MILNOR P/N	DESCRIPTION	LOCATION
VEPDO	VALVE-OPEN SLED DOORS	W6PR5SVS	96R301A37	1/8" AIRPILOT 3W NC 120V50/60	AIR VALVE BOX
VEPPB	VALVE-PRE-PRESSS REGULATOR BY-PASS	W6PR5SVS	96R301A37	1/8" AIRPILOT 3W NC 120V50/60	AIR VALVE BOX
VEPPD	VALVE-MOVE PRE-PRESS DOWN	W6PR5SVS	96R301A37	1/8" AIRPILOT 3W NC 120V50/60	AIR VALVE BOX
VEPPE	VALVE-MOVE PRE-PRESS UP	W6PR5SVS	96R301A37	1/8" AIRPILOT 3W NC 120V50/60	AIR VALVE BOX
VEPPT	VALVE-ENABLE PRE-PRESS EXHAUST	W6PR5SVS	96R301A37	1/8" AIRPILOT 3W NC 120V50/60	AIR VALVE BOX
VESMO	VALVE-SUCTION	W6PR5SVS	96R301A37	1/8" AIRPILOT 3W NC 120V50/60	AIR VALVE BOX
VETG	VALVE-DROP TARGET	W6PR5STC	96R301A37	1/8" AIRPILOT 3W NC 120V50/60	RAIL C-BOX
VETWF	VALVE-FILL REUSE WATER TANK	W6PRSCR	96TDC2AA37	1/2" N/C 2WAY 120V50/60C VALVE	REUSE TANK
VETWF	VALVE-FILL REUSE WATER TANK	W6PR5STC	96TDC2AA37	1/2" N/C 2WAY 120V50/60C VALVE	REUSE TANK
VEVDO	VALVE-VOLUME PUMP TO DOME	W6PR5SVS	96R301A37	1/8" AIRPILOT 3W NC 120V50/60	AIR VALVE BOX
VEVTO	VALVE-VOLUME PUMP TO JET (VENTURE)	W6PR5SVS	96R301A37	1/8" AIRPILOT 3W NC 120V50/60	AIR VALVE BOX
ZF	**>>>RECTIFIER**				
ZFBR	RECTIFIER-16VAC TO 12VDC BRAKE	W6PR5SMC	09A020EBR	RECTIFIER (EBR) 15A/600PIV	HIGH VOLT 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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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, Two 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—Two-Stage Press With Mark 5 Controls [Document BICALC04]

Table 1: Loading Interface Numeric Input Signals and Digit Order—Two-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	B	A
16 Drycodes (00 - 15)	Multi-terminal	TBA							TBA	TBA	TBA	TBA
	Pin Number	7							92	91	90	89
	Wire Number	7							92	91	90	89
	Display/code	--							i2/H	i2/G	i2/F	i2/E
	Board/code	--							io2/11	io2/10	io2/7	io2/8
16 Destination 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 Customer Codes (000-255)	Multi-terminal	TBA			WCI	WCI	WCI	WCI	WCI	WCI	WCI	WCI
	Pin Number	7			20	19	14	13	12	11	10	9
	Wire Number	7			396	391	343	344	347	348	349	340
	Display/code	--			i2/S	i2/R	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					
	Board/code	--					io3/5	io3/4	io3/3	io3/2	io3/1	io3/0
16 Formula Codes (00-15)	Multi-terminal	TBA							WC2	WC2	WC2	WC2
	Pin Number	7							4	3	2	1
	Wire Number	7							437	438	439	430
	Display/code	--							Not available			
	Board/code	--							io4/3	io4/2	io4/1	io4/0
Weight (0 to 409.5 lbs.*)	Multi-terminal	TBA	WC2	WC2	WC2	WC2	WC2	WC2	WC2	WC2	WC2	WC2
	Pin Number	7	14	13	12	11	10	9	8	7	6	5
	Wire Number	7	443	444	447	448	449	440	431	432	433	434
	Display/code	--	Not available									
	Board/code	--	io4/13	io4/12	io4/11	io4/10	io4/9	io4/8	io4/7	io4/6	io4/5	io4/4

* A range of load weight from 0 to 409.5 lbs (in tenths of a pound) can be passed. This requires twelve signals—the ten shown in the table plus L and M. Data for L are: connector WC2, pin 15, wire 442, Board/code io4/14. Data for M are: connector WC2, pin 16, wire 441, Board/code io4/15.

** 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—Two-Stage Press

Signal Direc-tion	Common Connection*			Dedicated Connection			Display / code	Board / code	Function name / Signal Name
	Multi-terminal	Pin	Wire	Multi-terminal	Pin	Wire			
Output*	TBA	101	101	TBA	86	86	o1/d	io1/3	load allowed / press free
Milnor will read in all batch data (previous table and next six signals) when it receives the "transfer complete / press loaded" signal.									
Input	TBA	7	7	TBA	96	96	i1/d	io1/3	low pressure
Input	TBA	7	7	TBA	95	95	i2/T	**	third pressure
Input	TBA	7	7	TBA	88	88	i2/D	io2/7	no pressure
Input	TBA	7	7	TBA	94	94	i2/L	io2/15	empty pocket
Input	TBA	7	7	TBA	99	99	i2/J	io2/13	new customer
Input	TBA	7	7	TBA	93	93	i2/P	**	single cake
Input	TBA	7	7	TBA	97	97	i1/h	io1/7	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—Two-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	B	A
16 Drycodes (00 - 15)	Multi-terminal	n/a							WCD	WCD	WCD	WCD
	Pin Number	n/a							17 • 20**	19 • 20**	21 • 24**	23 • 24**
	Wire Number	n/a							162 • 164	163 • 164	166 • 167	168 • 167
	Display/code	--							Not available			
	Board/code	--							o2/15	o2/14	o2/13	o2/12
256 Destination Codes (000-255)	Multi-terminal	n/a			WCZ	WCZ	WCZ	WCZ	WCZ	WCZ	WCZ	WCZ
	Pin Number	n/a			15 • 16	13 • 14	11 • 12	9 • 10	7 • 8	5 • 6	3 • 4	1 • 2
	Wire Number	n/a			468 • 469	466 • 467	464 • 465	461 • 462	452 • 460	454 • 453	456 • 455	459 • 458
	Display/code	--			Not available							
	Board/code	--			io4/7	io4/6	io4/5	io4/4	io4/3	io4/2	io4/1	io4/0
256 Customer Codes (000-255)	Multi-terminal	n/a			WCD	WCD	WCD	WCD	WCD	WCD	WCD	WCD
	Pin Number	n/a			15 • 16	13 • 14	11 • 12	9 • 10	7 • 8	5 • 6	3 • 4	1 • 2
	Wire Number	n/a			142 • 141	144 • 143	146 • 145	148 • 147	131 • 132	133 • 134	136 • 135	139 • 138
	Display/code	--			Not available							
	Board/code	--			o2/7	o2/6	o2/5	o2/4	o2/3	o2/2	o2/1	o2/0
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	--			o2/T	o2/S	o2/R	o2/Q	o2/P	o2/O	o2/N	o2/M
	Board/code	--			io3/7	io3/6	io3/5	io3/4	io3/3	io3/2	io3/1	io3/0
16 Formula Codes (00-15)	Multi-terminal	n/a							WCD	WCD	WCD	WCD
	Pin Number	n/a							25 • 26	27 • 28	29 • 30	31 • 32
	Wire Number	n/a							152 • 151	154 • 153	155 • 156	157 • 158
	Display/code	--							Not available			
	Board/code	--							o2/11	o2/10	o2/9	o2/8

* 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 four drycode signals with limited available terminals, Drycodes A and B had to share pin 24 and Drycodes C and D had to share pin 20.

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

Signal Direc-tion	Common Connection*			Dedicated Connection			Display / code	Board / code	Function Name / Signal Name
	Multi-terminal	Pin	Wire	Multi-terminal	Pin	Wire			
Milnor sets all batch data (previous table and next signal) before it enables the "discharge desired / desires to unload" signal.									
Output **	2MTA14	10	none	2MTA14	6	none	--	o2/16	new customer
Output*	TBA	100	100	TBA	85	85	o1/r	o1/9	discharge desired / desires to unload
Input	TBA	7	7	TBA	87	87	i1/a	io1/0	load allowed / allied device can receive load
Output*	TBA	129	none	TBA	130	none	o2/H	o1/19	transfer complete / discharge complete
* 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. ** Although this output is available at the board, multi-terminal pins are not currently assigned or wired. Hence, the board-level MTA connector information is provided instead.									

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

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

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

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

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

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

See explanations of decimal / binary conversion herein.

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

Note 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).

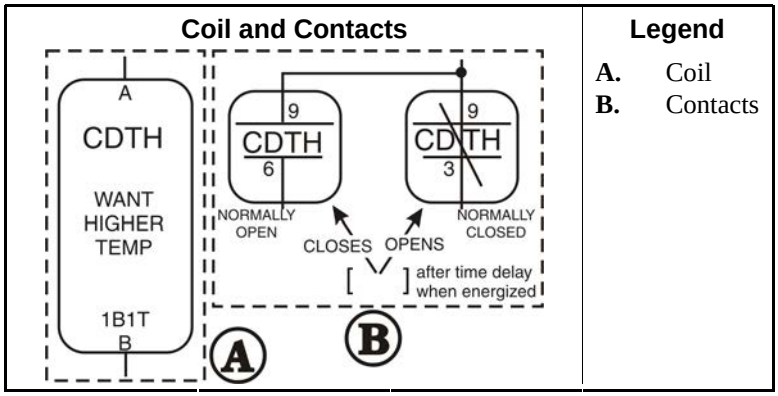
BA=Printed Circuit Board—Insulating substrate on which a thin pattern of copper conductors has been formed to connect discrete electronic components also mounted on the board.

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)

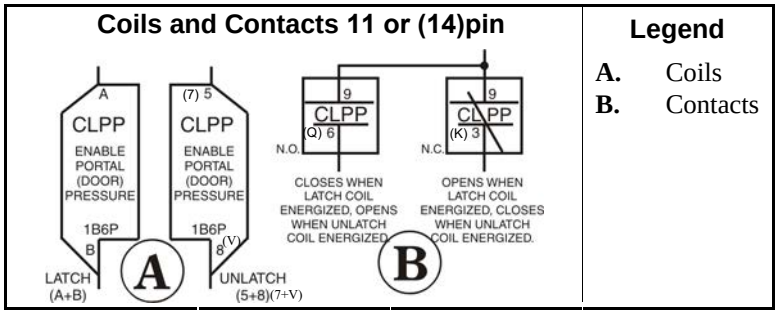
CD=Control, Time Delay Relay (Figure 2)—A relay whose contacts switch only after a fixed or adjustable delay, once voltage has been applied to its coil. The contacts switch back to normal (de-energized state) immediately when the voltage is removed.

Figure 2: Time Delay Relay (CD)



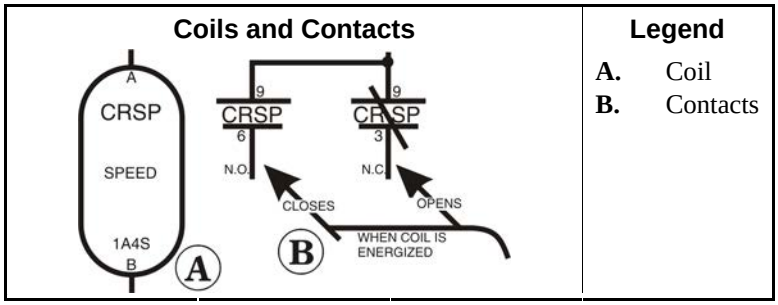
CL=Control, Latch Relay (Figure 3)—A relay which latches in an energized or set position when operated by one coil (the latch/set coil). The relay stays latched even though coil voltage is removed. The relay releases or unlatches when voltage is applied to a second coil (the unlatch/reset coil).

Figure 3: Latch Relay (CL)



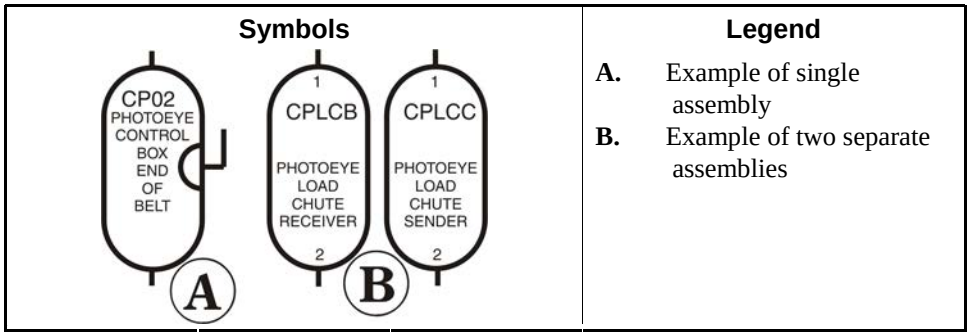
CR=Control, Relay (Figure 4)—A relay whose contacts switch immediately when voltage is applied to its coil and revert to normal when the voltage is removed.

Figure 4: Standard Relay (CR)



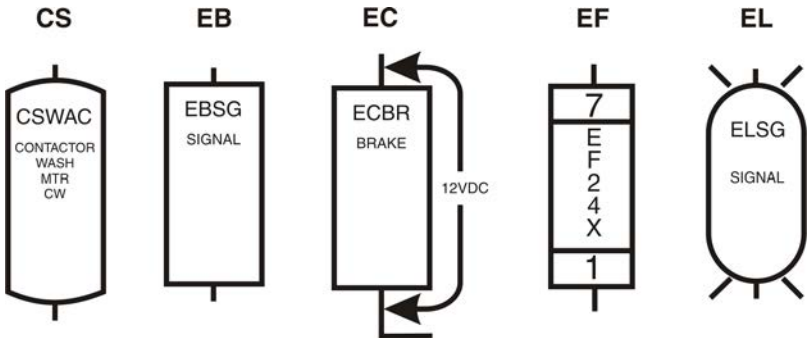
CP=Control, Photo-Eye (Figure 5)—Photo-eyes sense the presence of an object without direct physical contact. Photo-eyes consist of a transmitter, receiver, and output module. These components may be housed in one assembly with the transmitter bouncing light off of a reflector to the receiver, or these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

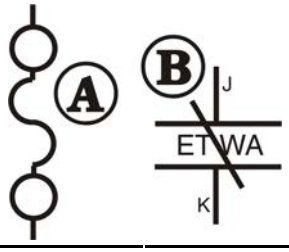
EL=Electric Light (Figure 6)—Indicator lights may be either incandescent or fluorescent.

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.

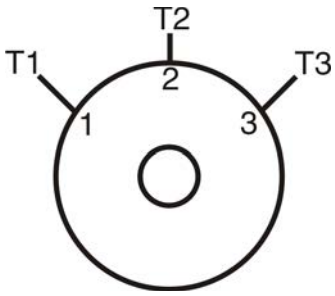
KB=Keyboard—Device similar to a typewriter for making entries to a computer.

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)

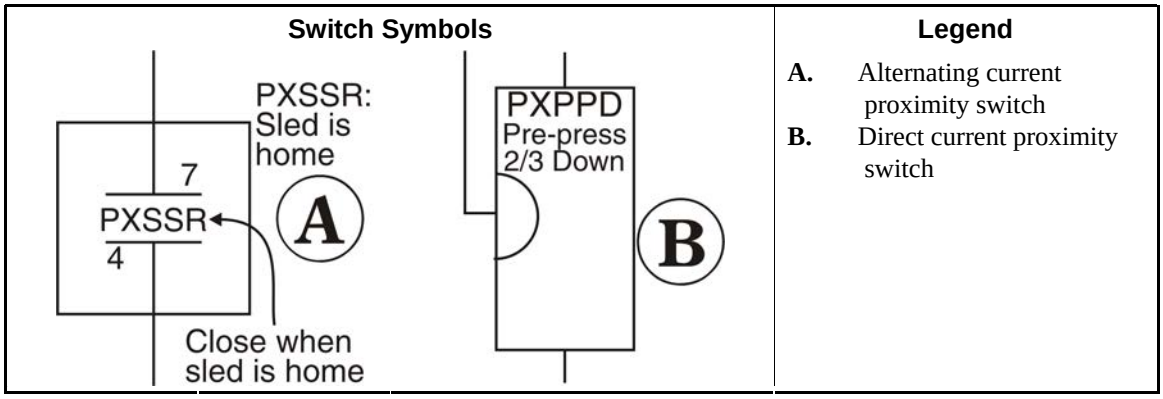


MV=Motor (Variable Speed) Inverter—To vary the speed of an AC motor, the volts to frequency ratio must be kept constant. The motor will overheat if this ratio is not maintained. The motor variable speed inverter converts three phase AC to DC. The inverter then uses this DC voltage to generate AC at the 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 an target without physical contact or connection. The actuator or target causes a change in the inductance of the proximity switch which causes the switch to operate. Proximity switches can be two-wire (AC) or three-wire (DC) devices.

Figure 10: Proximity Switches (PX)



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

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

Figure 11: Cam Switch (SC)

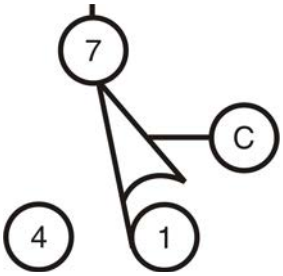
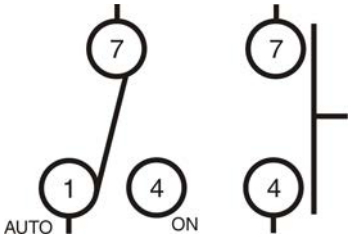


Figure 12: Hand Operated Switch (SH)



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

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

Figure 13: Key Switch (SK)

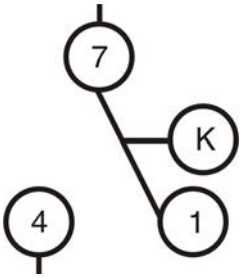
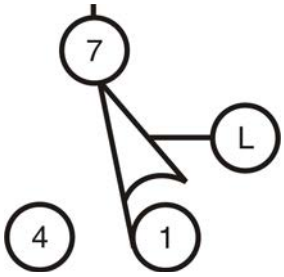


Figure 14: Level Switch (SL)



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

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

Figure 15: Mechanical Switch (SM)

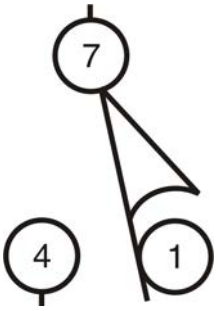
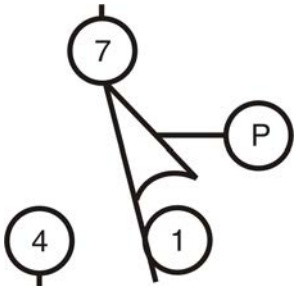


Figure 16: Pressure Switch (SP)



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

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

Figure 17: Temperature Switch (ST)

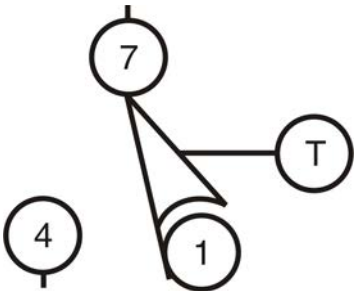
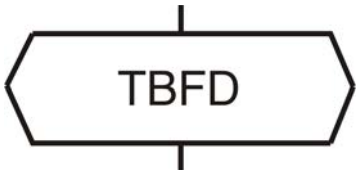


Figure 18: Terminal Board (TB)



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

Figure 19: Electrically Operated Valve (VE)

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

Figure 20: Bridge Rectifier (ZF)

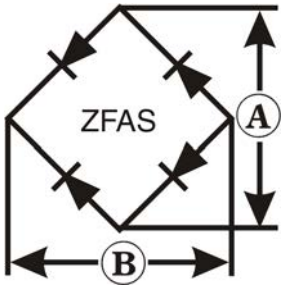
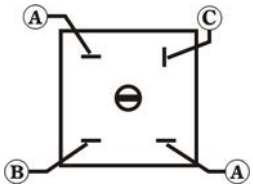
Component Symbol	Legend
	**A.** Alternating current input **B.** Direct current output

Figure 21: Bridge Rectifier

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

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

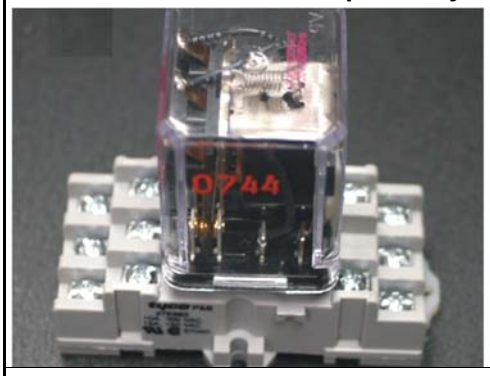
2. Component Terminal Numbering

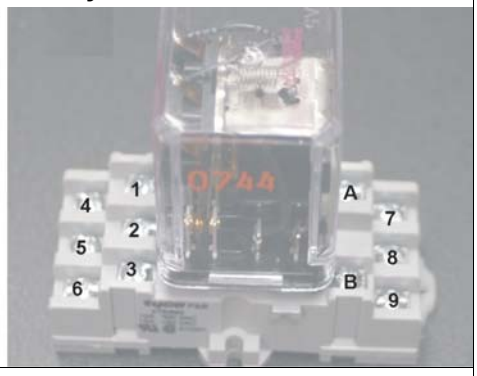
CAUTION 1: Risk of Mis-wiring—Due to electrical component manufacturing inconsistencies, the pin numbers imprinted on components such as connectors and relay bases used on Milnor machines often do not correspond to the pin numbers shown in the schematics.

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

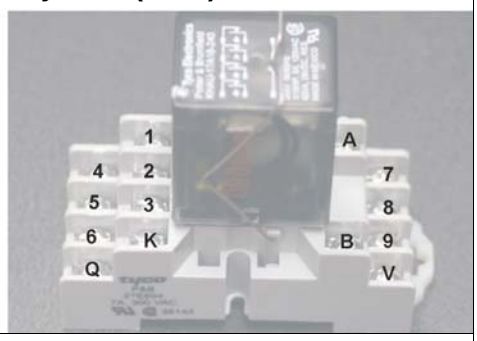
Figure 22: Plug-in Relays

11-pin Relay with Grey Base

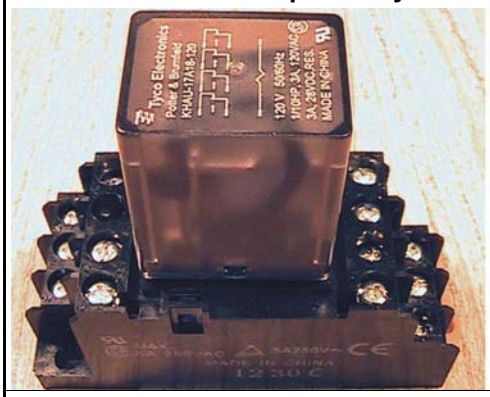


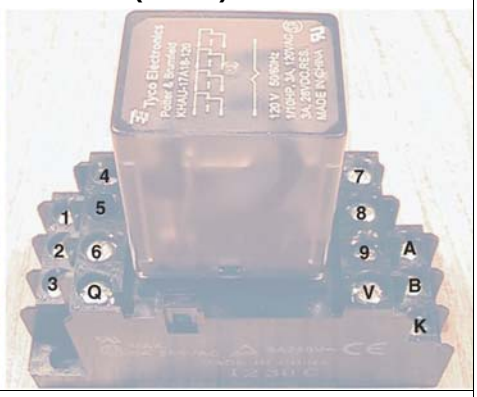


14-pin Relay with Grey Base (older)

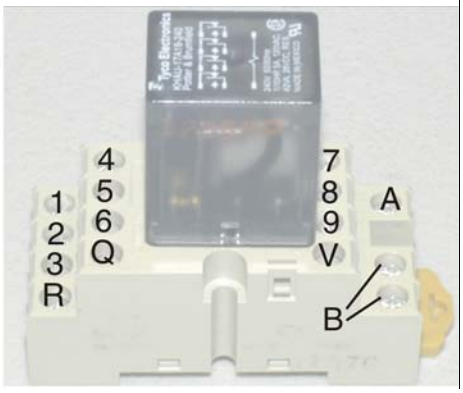


14-pin Relay with Black Base (newer)





14-pin Relay with Beige Base (rare)



Legend

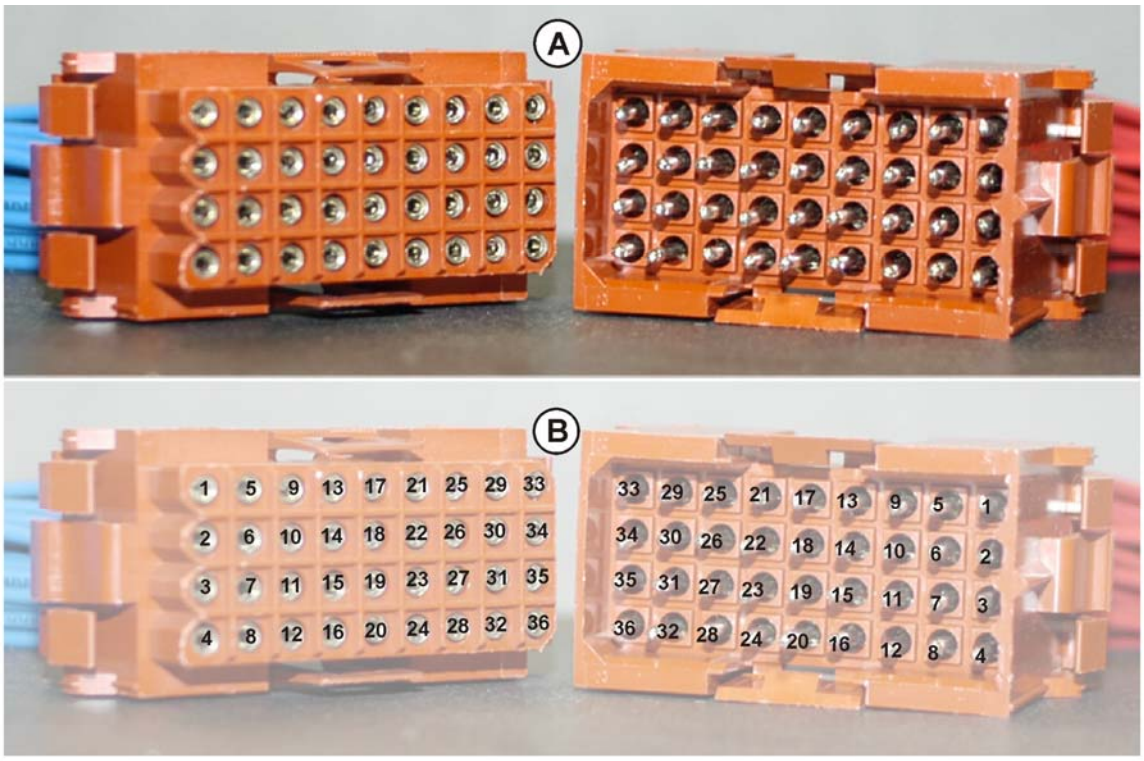
Left. View of relay and base

Right. Same view, showing pin numbers

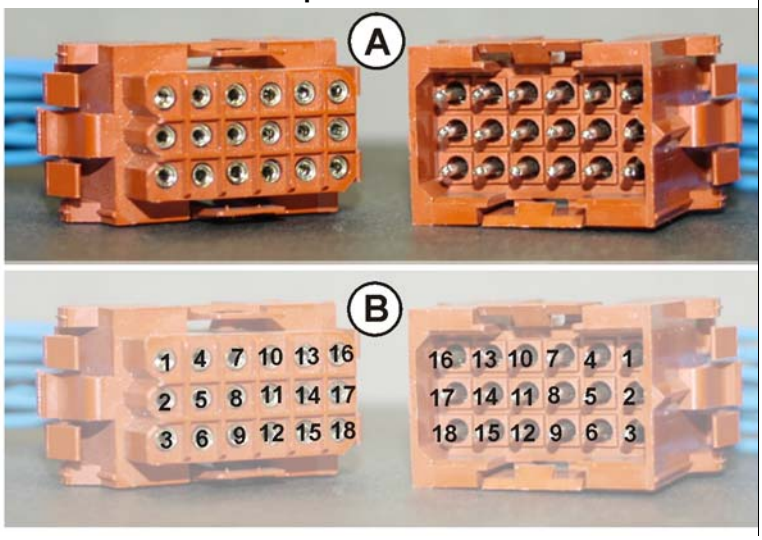
Note 3: Relay functional names ending with the letter "M" (e.g., CRxxM) are not discrete components but are a component of a printed circuit board. They are usually not individually replaceable.

Figure 23: AMP Connector Pin Locations

36-pin Connector



18-pin Connector

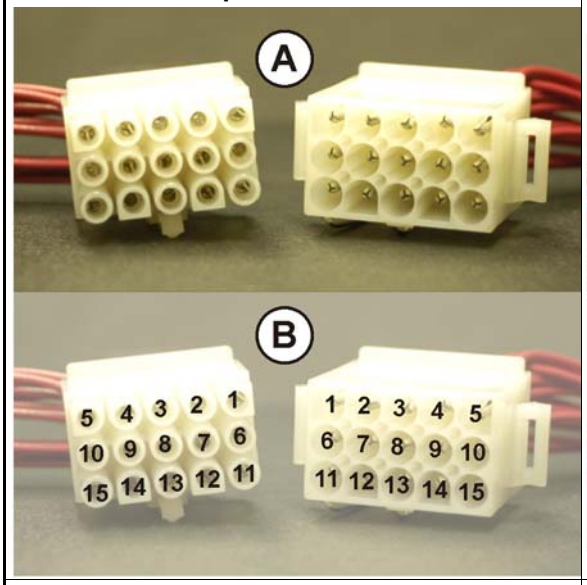


Legend

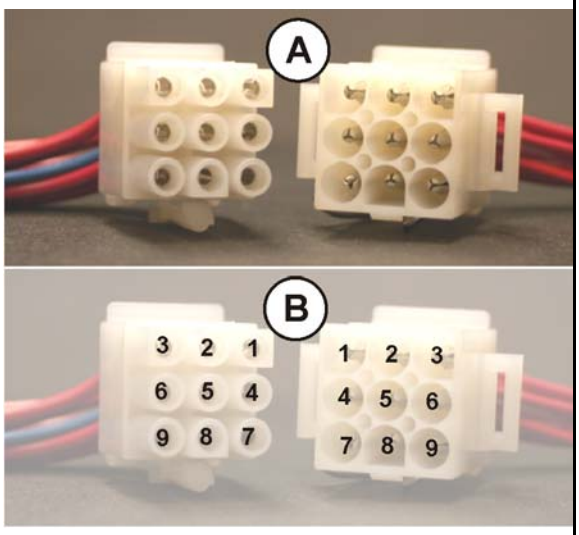
A. View of mating halves of connector
B. Same view, showing assigned pin numbers

Figure 24: Molex Connector Pin Locations

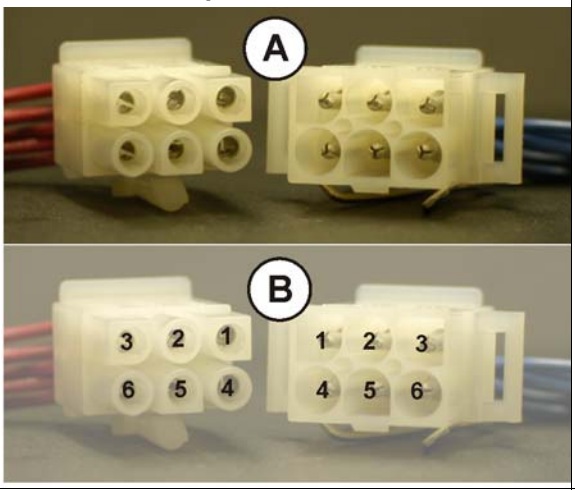
15-pin Connector



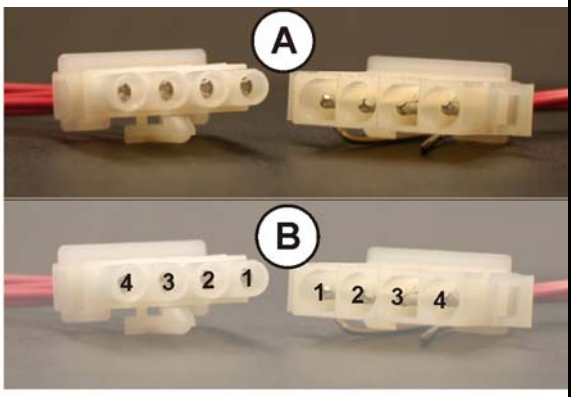
9-pin Connector



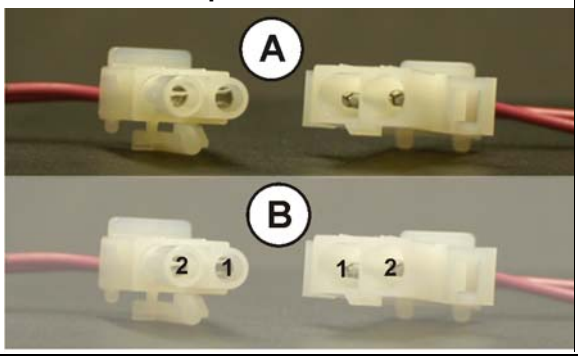
6-pin Connector



4-Pin Connector



2-pin Connector



Legend

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

Figure 25: Pressure Switch

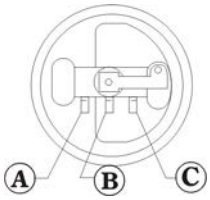
Component	Legend
	**A.** Contact 1—Normally open **B.** Contact 2—Normally closed **C.** Contact 3—Common

Figure 26: Toggle Switch

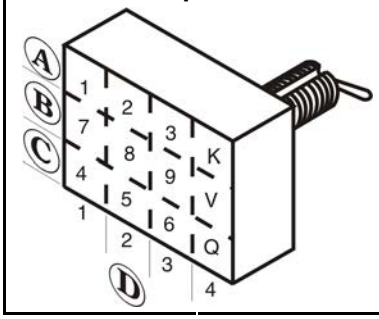
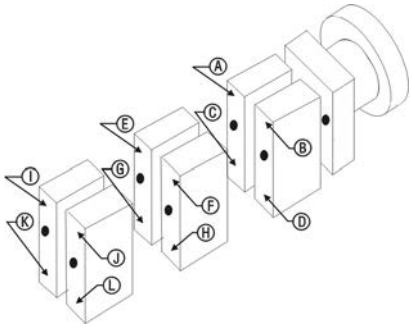
Component	Legend
	**A.** Normally closed contacts **B.** Common contacts **C.** Normally open contacts **D.** Pole

Figure 27: Switch with Replaceable Contact Blocks

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

3. Features of Milnor® Electrical Schematic Diagrams

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

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

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

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

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

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

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

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

— End of BIUUUK01 —

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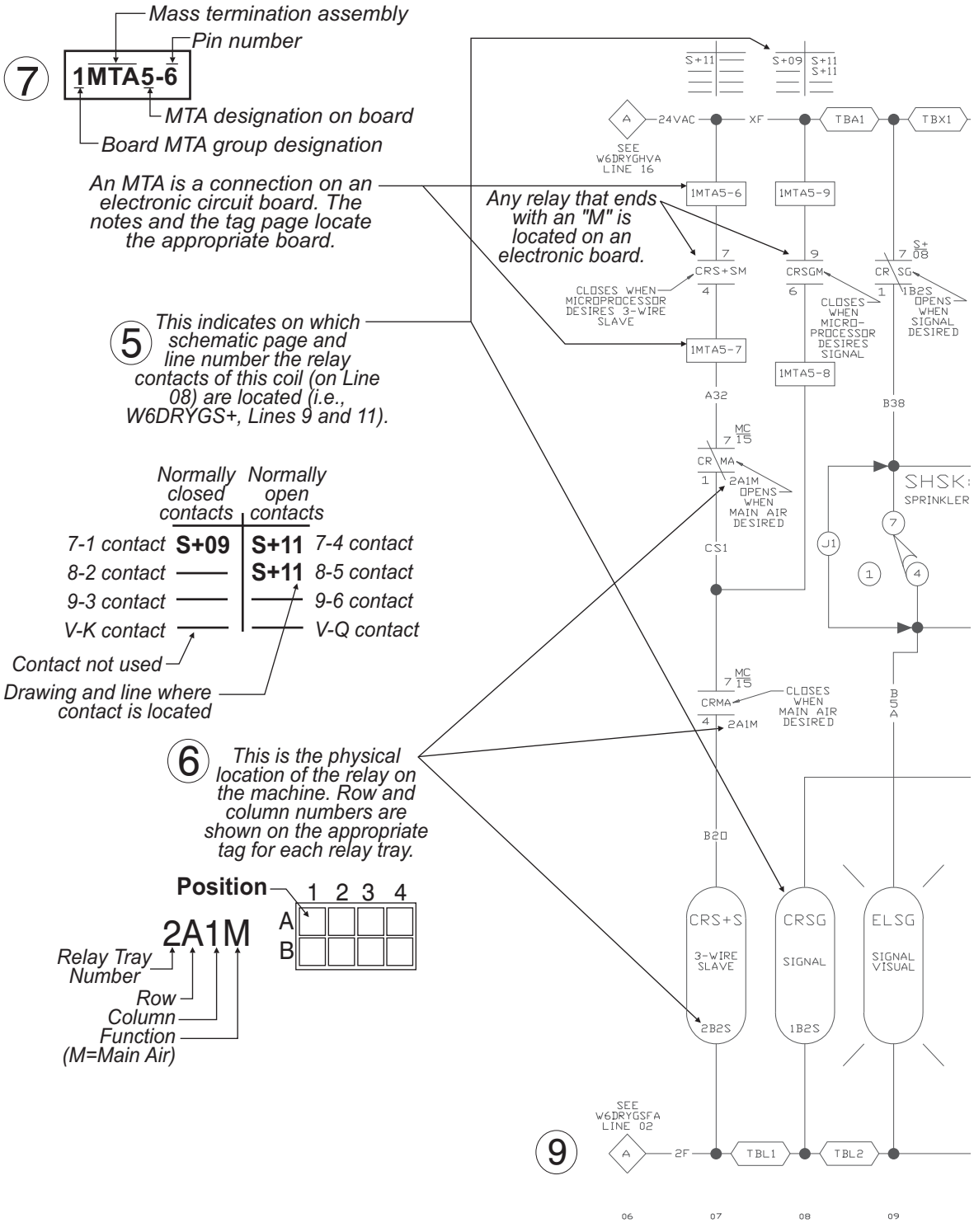
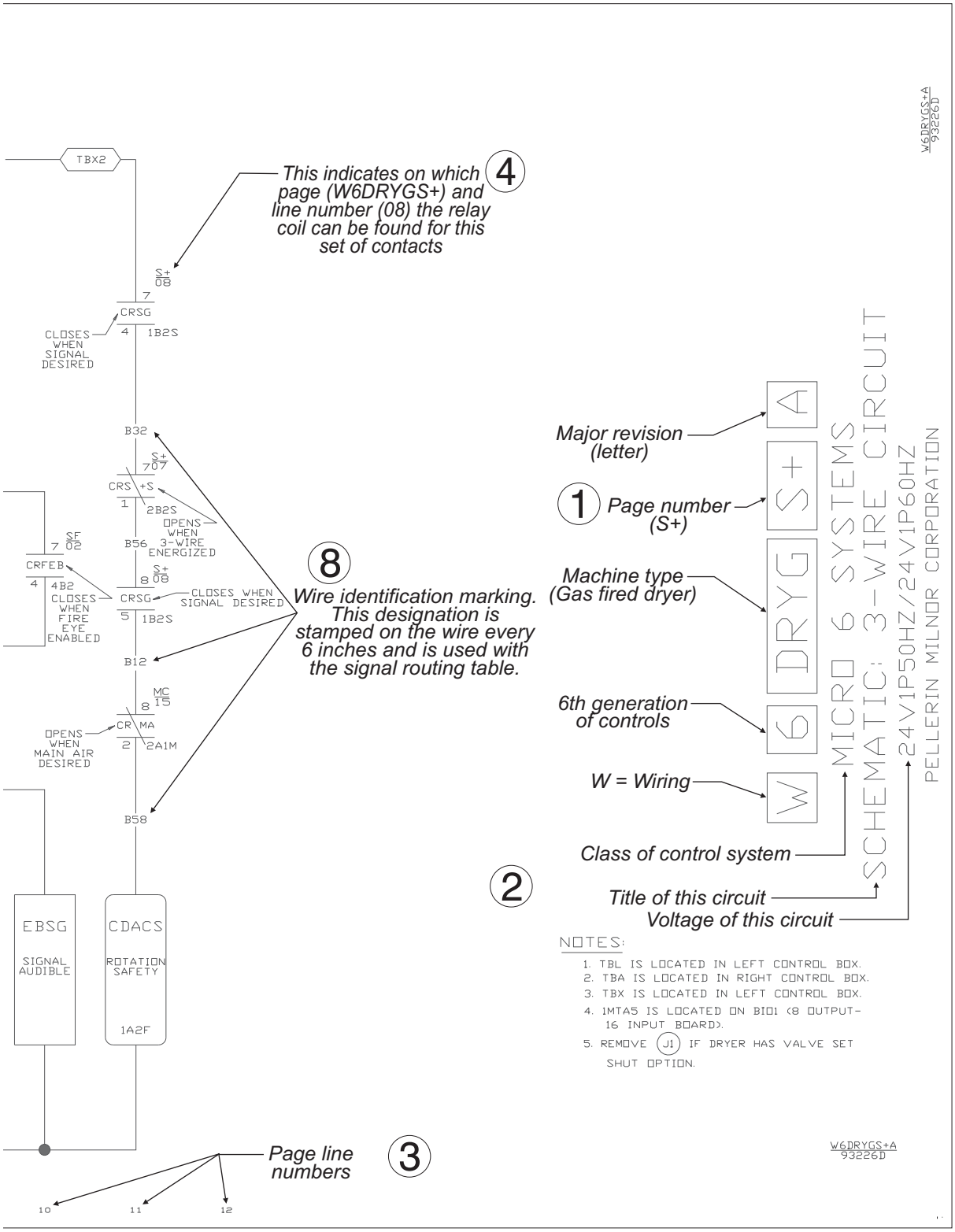


BMP010012 (left) / 2018343



BMP010012 (right) / 2018343

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

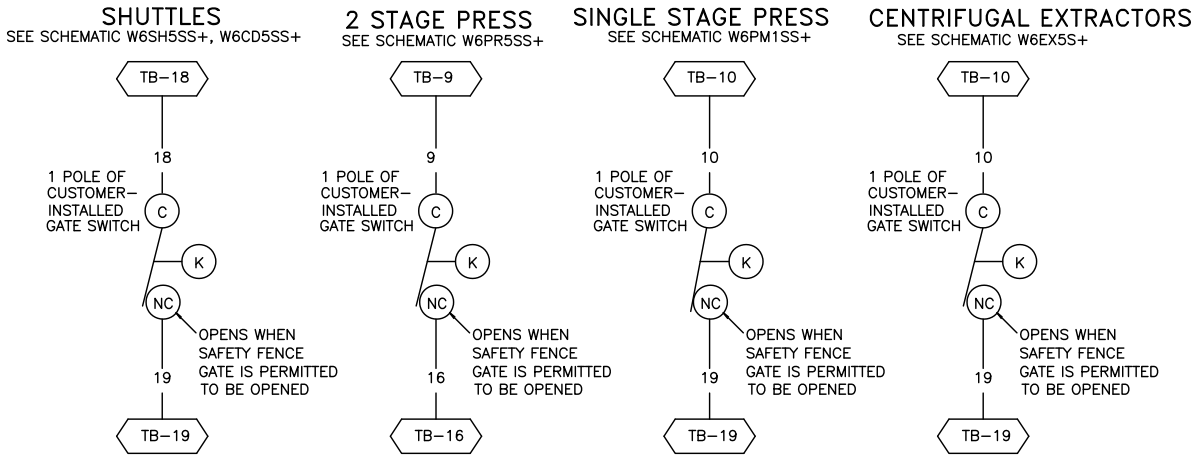
Component	Found On		
	Shuttle	**Press**	**Centrifugal Extractor**
Stop (⓪) push button on control panel	✓	✓	✓
Emergency Stop switch(es) (locking push button)	✓	✓	✓
Manually lifted access door (typically two per machine)		✓	
Manually removed access panel (typically two per machine)			✓
Pull cord (certain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

Test each interlocked machine as follows:

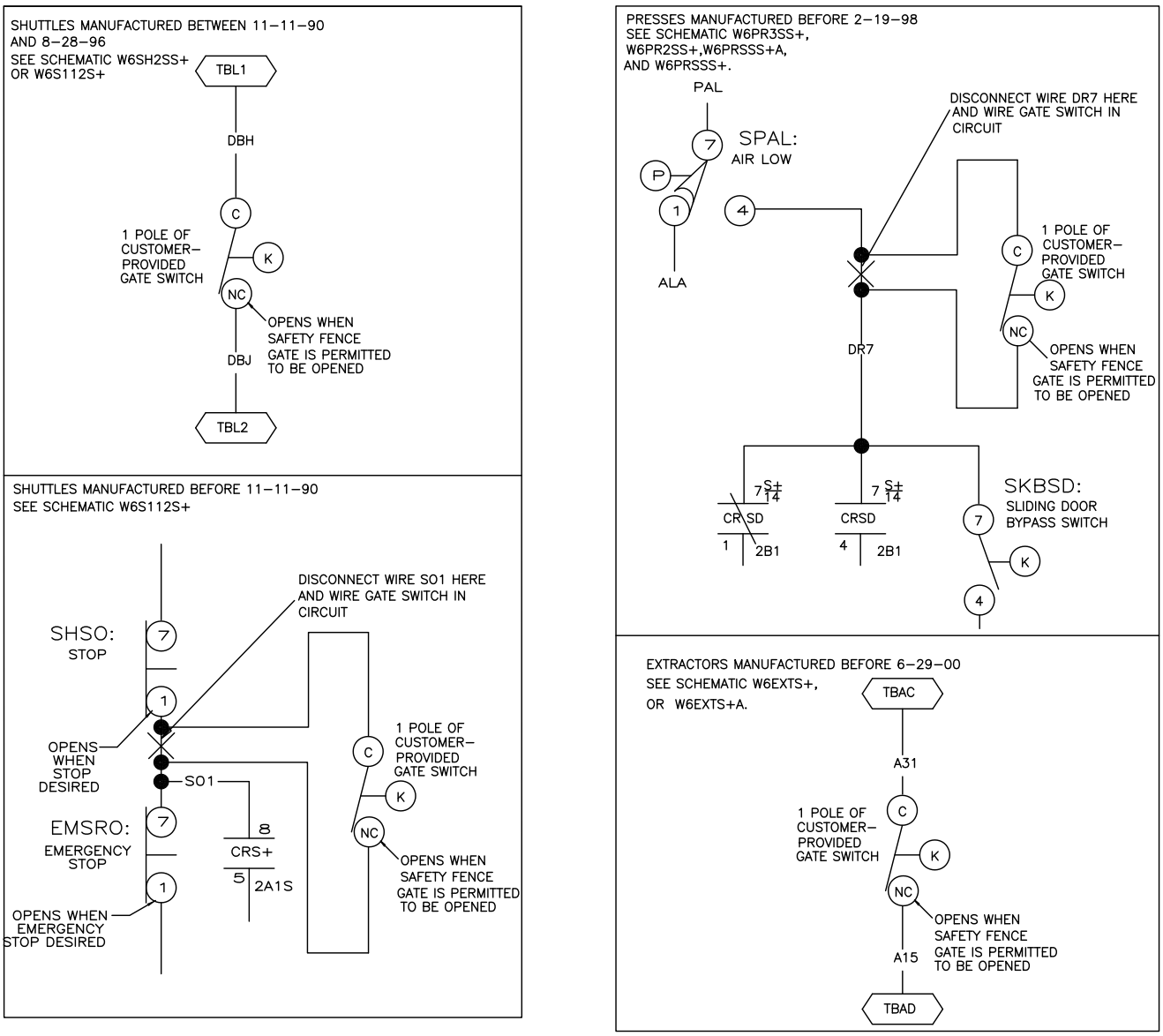
1. Start the machine and place in *Manual* mode (machine idling in manual).
2. For each three-wire circuit component on the machine:
   a. Actuate the component (e.g., press the Stop button) and verify that the machine shuts down (as indicated by the operator alarm).
   b. If needed, de-actuate the component. 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



CONNECTION POINTS ON EARLIER MACHINES



W6SYSSG
2025256B

SCHEMATIC: CUSTOMER INSTALLED SAFETY FENCE GATE INTERLOCK

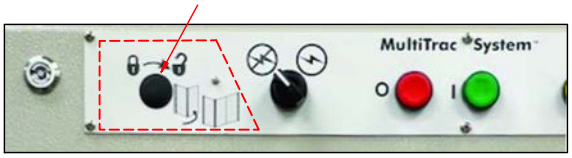
W6SYSSG

MICRO 6 SYSTEMS

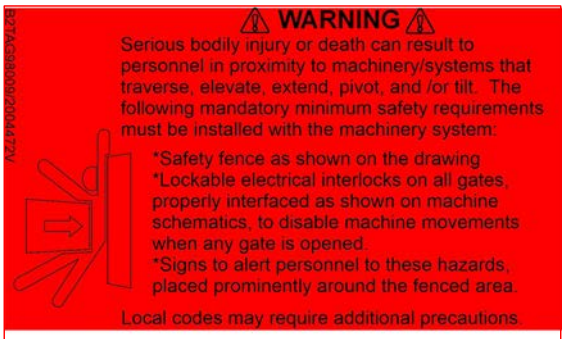
PELLERIN MILNOR CORPORATION

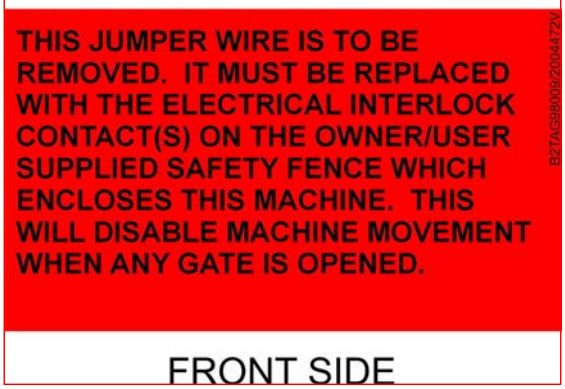
IMPORTANT: EACH MOVING MACHINE MUST BE ENCLOSED IN A RESTRICTED ACCESS FENCED AREA AS SHOWN LAUNDRY LAYOUT DRAWINGS.

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

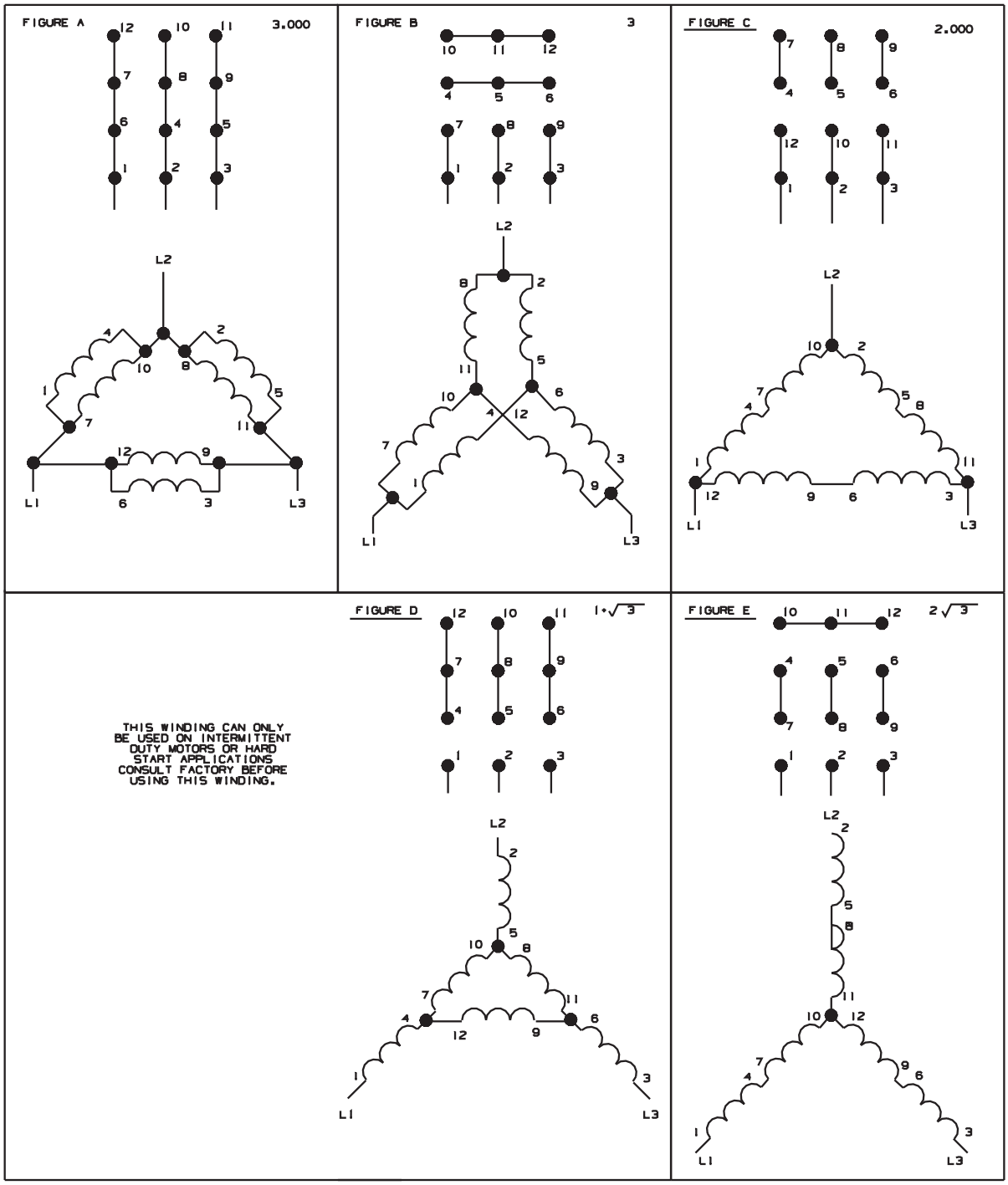
OPERATION:

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

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



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

BMP850029

MOTOR CONNECTION DIAGRAMS

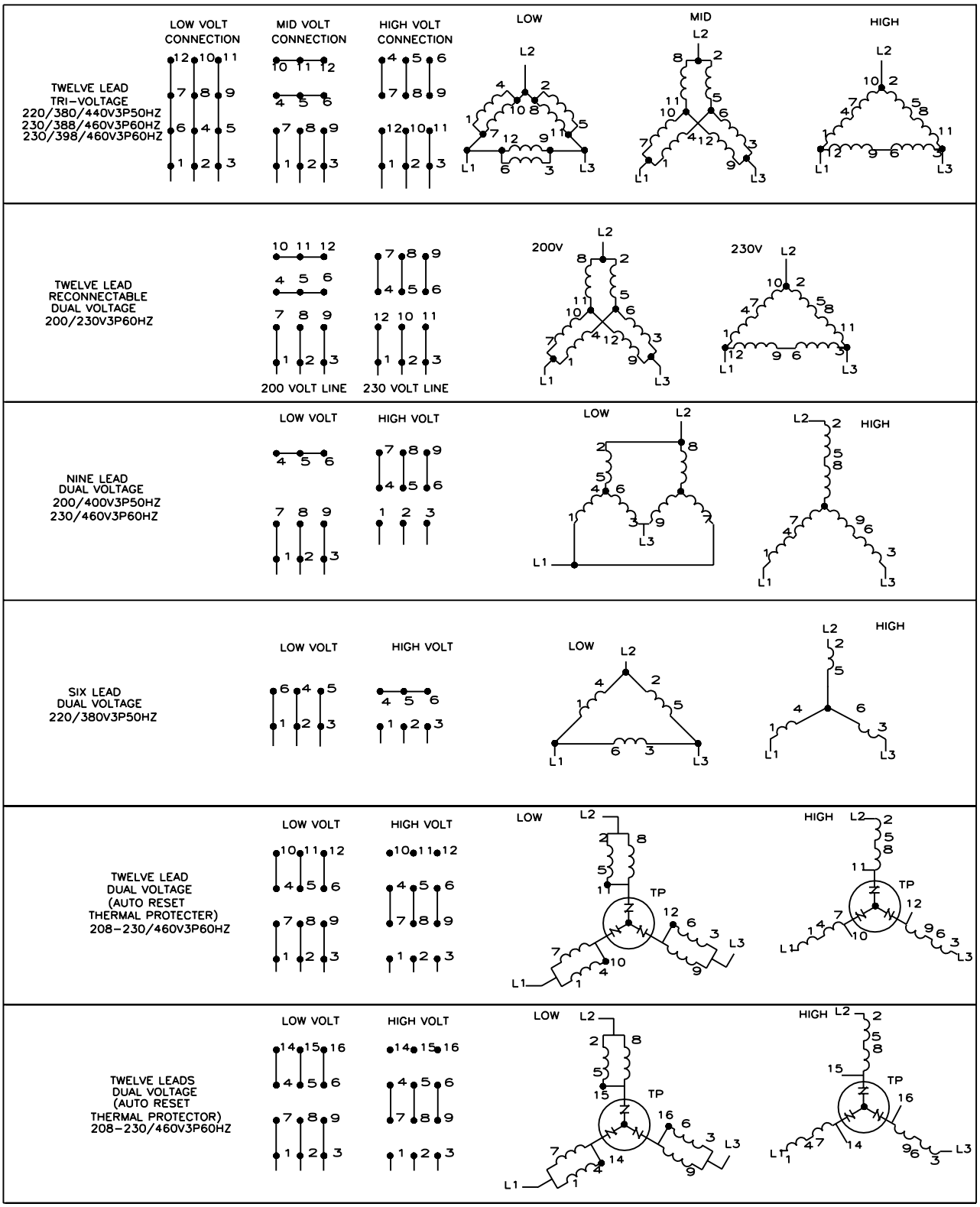
THREE PHASE SINGLE SPEED MOTORS WITH MULTIPLE VOLTAGE RATINGS

(ONLY FOR MOTOR SUFFIXES LISTED)

PELLERIN MILNOR CORPORATION

BMP850029
993628

BMP850029
993628



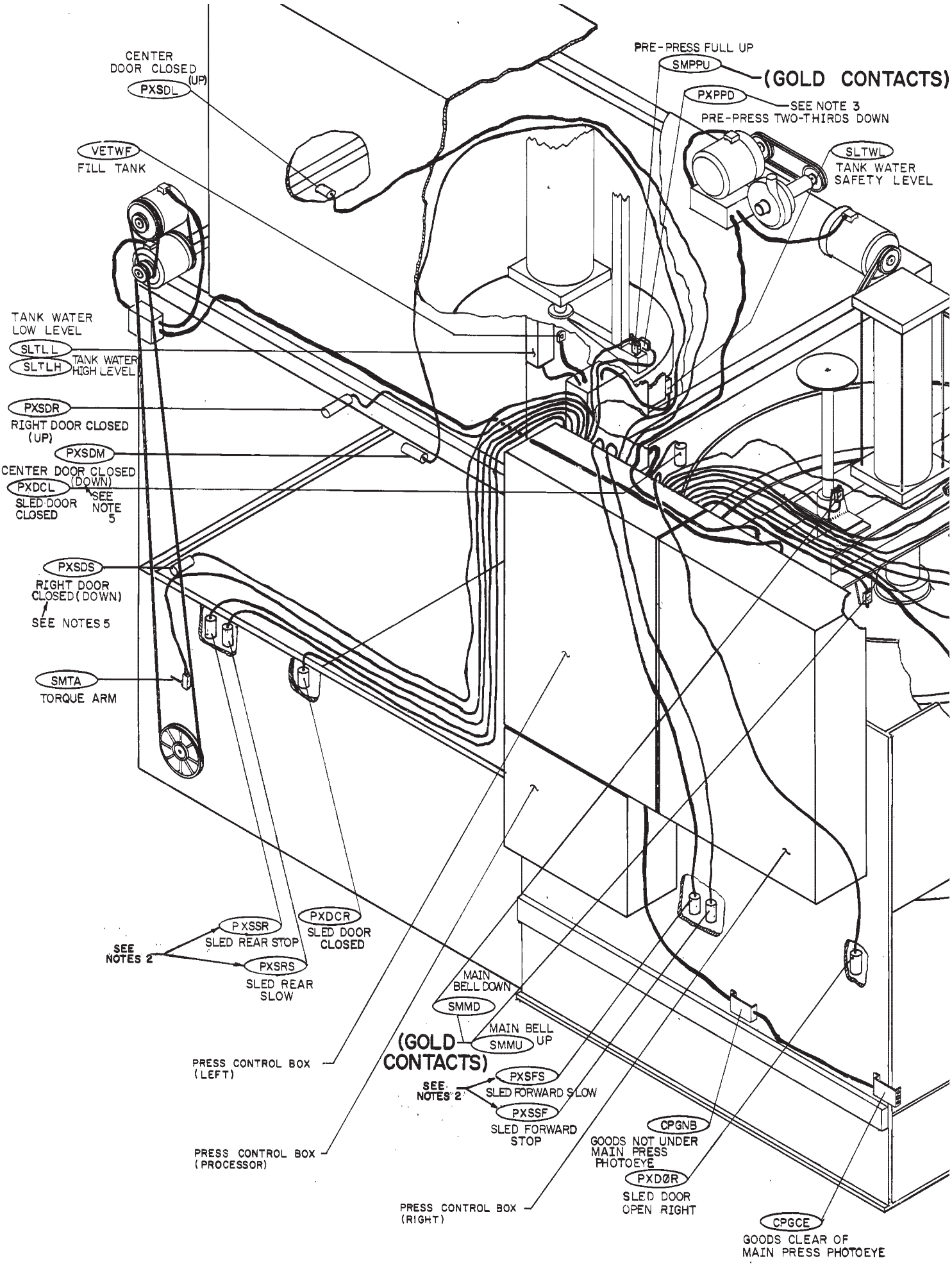
W80008

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

PELLERIN MILNOR CORPORATION

W80008
2001253A

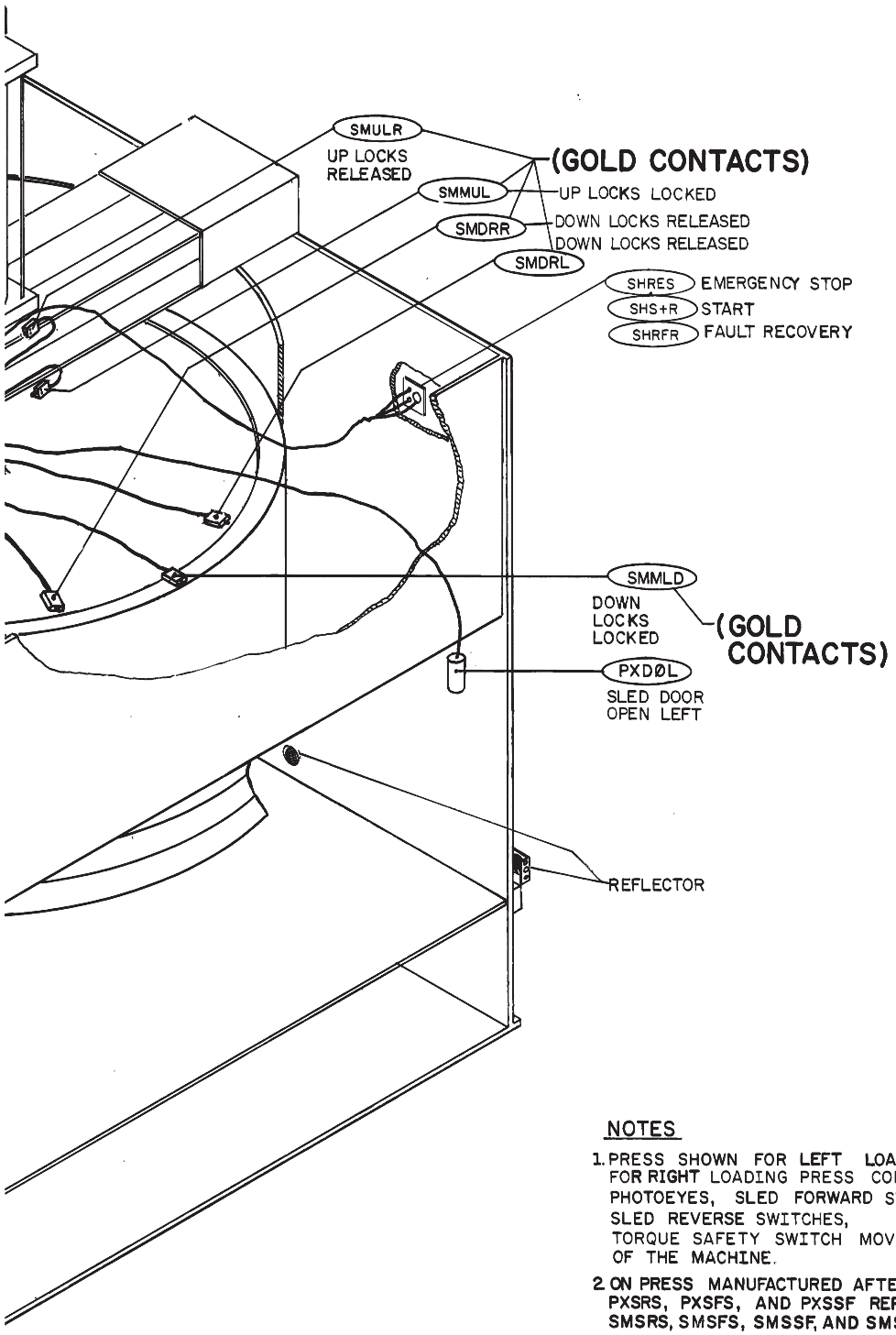
W80008
2001253A



W6PRSCR
94057D

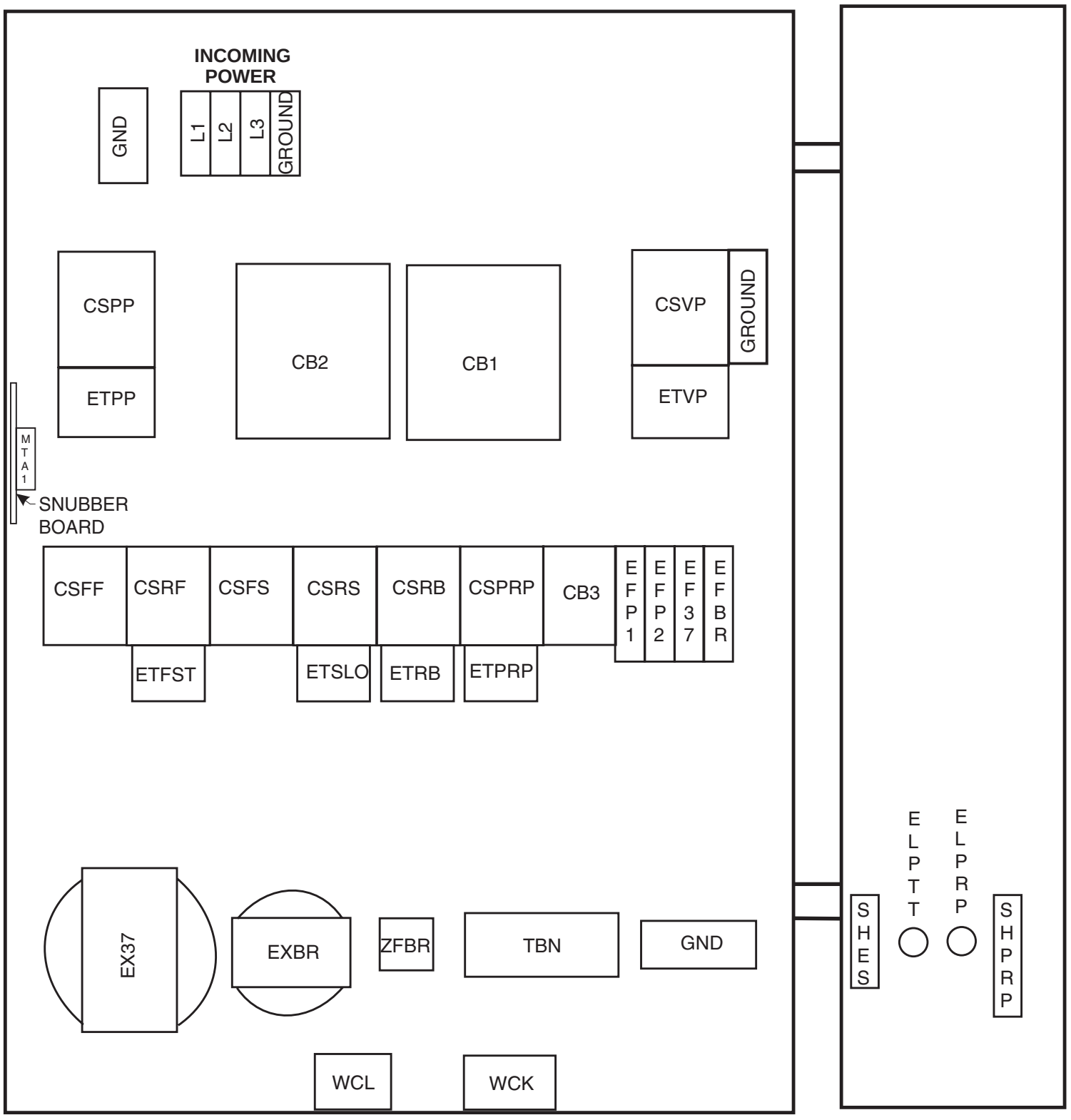
W6PRSCR
MICRO 6 SYSTEMS
SCHEMATIC: CABLE ROUTING

PELLERIN MILNOR CORPORATION



NOTES

1. PRESS SHOWN FOR LEFT LOADING. FOR RIGHT LOADING PRESS CONTROL BOXES, PHOTOEYES, SLED FORWARD SWITCHES, SLED REVERSE SWITCHES, TORQUE SAFETY SWITCH MOVE TO OPPOSITE SIDE OF THE MACHINE.
2. ON PRESS MANUFACTURED AFTER 90381 PXSSR, PXSRS, PXSFS, AND PXSSF REPLACES SMSSR, SMSRS, SMSFS, SMSSF, AND SMSSL.
3. ON PRESS MANUFACTURED AFTER 91171 PXPPD REPLACED SMPPD FOR PRE-PRESS 2/3 DOWN.
4. ON PRESS MANUFACTURED AFTER 92192 PXDCL, PXDØL, PXDØR, AND PXDCR REPLACES SMDCL, SMDØL, SMDØR, AND SMDCR.
5. ON PRESS MANUFACTURED AFTER 94051 PXSDS AND PXSDM ADDED. PXSDR AND PXSDL REPLACES SMSDL AND SMSDR.



MICRO 6 SYSTEMS
MARK V
PRESS HIGH VOLTAGE CONTROL BOX

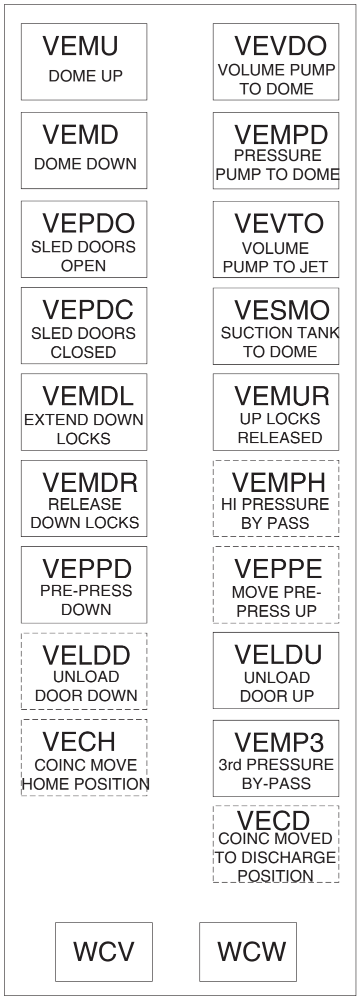
PELLERIN MILNOR CORPORATION

B2TAG96026
97163G

W6PR5STG1
2004164B

W6PR5STG1

MICRO 6 SYSTEMS
CONTROL BOX LAYOUTS
PELLERIN MILNOR CORPORATION



MICRO 6 SYSTEMS
PRESS VALVE BOX
PELLERIN MILNOR CORPORATION

B2TAG85089
98031G

BIO-2 (STANDARD)

INPUTS
0 GOODS CLEAR MAIN PRESS
1 MAIN PRESS LOCKED UP
2 MAIN PRESS UP
3 MAIN PRESS DOWN
4 MAIN PRESS UP LOCKS RELEASED
5 MAIN PRESS DOWN LOCKS RELEASED
7 DON'T MAIN PRESS GOODS
8 DRY CODE A
7 DRY CODE B
10 DRYCODE C
11 DRYCODE D
12 TANK WATER HIGH LEVEL
13 NEW CUSTOMER+NEW FORMULA
14 TANK WATER LOW LEVEL
15 PASS EMPTY

OUTPUT
0 LOAD DOOR OPEN
1 LOAD DOOR CLOSED
2 DROP TARGET FOR DISCHARGE
3 NOT USED
4 HIGH PRESS BYPASS 3rd WATER
5 PRESS PUMP VLV TO MAIN PRESS
6 MOVE PRE-PRESS DOWN
7 SIGNAL

BIO-1 (STANDARD)

INPUTS
0 ALLIED DEVICE CAN RECIEVE LOAD
1 3-WIRE
2 SLED SLOW TO HOME
3 LOW PRESSURE
4 SLED SLOW TO MAIN BELL
5 MAIN PRESS LOCKED DOWN
6 UNLOAD DOOR UP
7 PRESS LOADED
8 PRE-PRESS 2/3 DOWN
9 PRE-PRESS IS UP
10 FAULT RECOVERY
11 COINC LOADED
12 SLED DOORS CLOSED
13 SLED IS HOME
14 SLED UNDER MAIN BELL
15 SLED DOOR OPEN

OUTPUTS
0 MOVE MAIN PRESS UP
1 FILL TANK
2 SLED HOME OR UNDER BELL
3 PRESS IS FREE
4 SLED REARWARD COMMANDED
5 SLED FORWARD COMMANDED
6 SLED SLOW REARWARD DESIRED
7 SLED SLOW FORWARD DESIRED

BO24-1 (STANDARD)

OUTPUTS
0 MOVE SLED NOT COMMANDED
1 RUN VOLUME PUMP
2 CLOSE SLED DOORS
3 RUN PRESSURE PUMP
4 HIGH PRESSURE BYPASS FOR LOW PRESSURE
5 RUN COINC BELT
6 PRE-PRESS BYPASS
7 PRE-PRESS UP
8 EXTEND MAIN PRESS DOWN LOCKS
9 DESIRES TO UNLOAD
10 VOLUME PUMP VALVE TO MAIN PRESS
11 MOVE MAIN PRESS DOWN
12 RELEASE MAIN PRESS DOWN LOCKS
13 SUCTION DESIRED
14 RELEASE MAIN PRESS UP LOCKS
15 OPEN SLED DOORS
16 MOVE UNLOAD DOOR UP
17 MOVE UNLOAD DOOR DOWN
18 NOT USED
19 NOT USED
20 NOT USED
21 NOT USED
22 NOT USED
23 NOT USED

BO24-2 (OPTIONAL FOR DATA PASS)

OUTPUTS
0 CUSTOMER A
1 CUSTOMER B
2 CUSTOMER C
3 CUSTOMER D
4 CUSTOMER E
5 CUSTOMER F
6 CUSTOMER G
7 CUSTOMER H
8 FORMULA A
9 FORMULA B
10 FORMULA C
11 FORMULA D
12 DRY CODE A
13 DRY CODE B
14 DRY CODE C
15 DRY CODE D
16 NOT USED
17 NOT USED
18 NOT USED
19 NOT USED
20 NOT USED
21 NOT USED
22 NOT USED
23 NOT USED

BIO-4 (OPTIONAL FOR DATA PASS)

INPUTS
0 FORMULA A
1 FORMULA B
2 FORMULA C
3 FORMULA D
4 WEIGHT A
5 WEIGHT B
6 WEIGHT C
7 WEIGHT D
8 WEIGHT E
7 WEIGHT F
10 WEIGHT G
11 WEIGHT H
12 WEIGHT J
13 WEIGHT K
14 WEIGHT L
15 WEIGHT M

OUTPUTS
0 DESTINATION A
1 DESTINATION B
2 DESTINATION C
3 DESTINATION D
4 DESTINATION E
5 DESTINATION F
6 DESTINATION G
7 DESTINATION H

BIO-3 (OPTIONAL FOR DATA PASS)

INPUTS
0 GOODS A
1 GOODS B
2 GOODS C
3 GOODS D
4 GOODS E
5 GOODS F
6 DESTINATION A
7 DESTINATION B
8 CUSTOMER A
9 CUSTOMER B
10 CUSTOMER C
11 CUSTOMER D
12 CUSTOMER E
13 CUSTOMER F
14 DESTINATION C
15 DESTINATION D

OUTPUTS
0 GOODS CODE A
1 GOODS CODE B
2 GOODS CODE C
3 GOODS CODE D
4 GOODS CODE E
5 GOODS CODE F
6 GOODS CODE G
7 GOODS CODE H

MICRO 6 SYSTEMS
PRESS CONTROL BOARDS

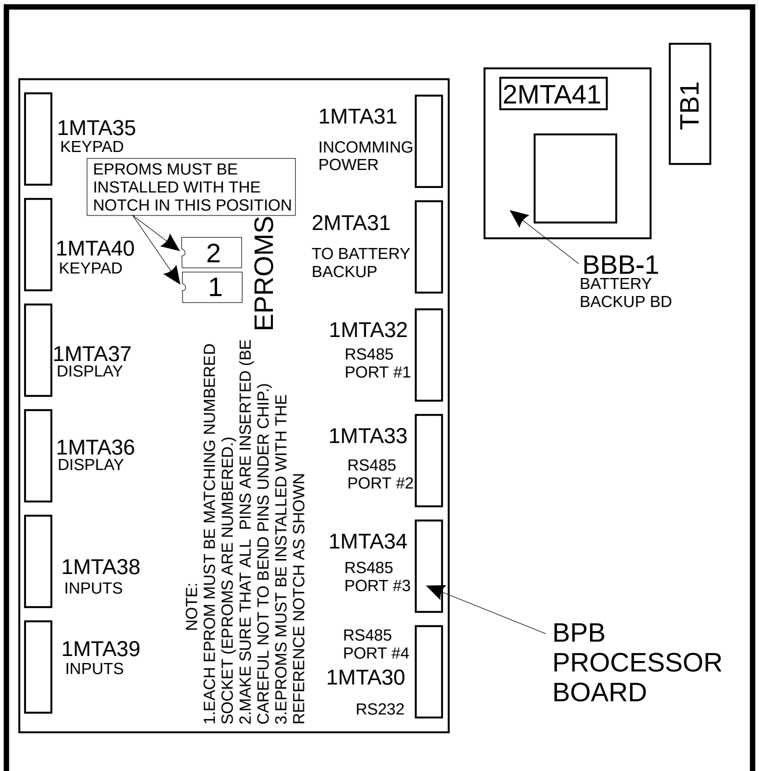
PELLERIN MILNOR CORPORATION

B2TAG96004
99292G

W6PR5STG2
99292B

W6PR5STG2

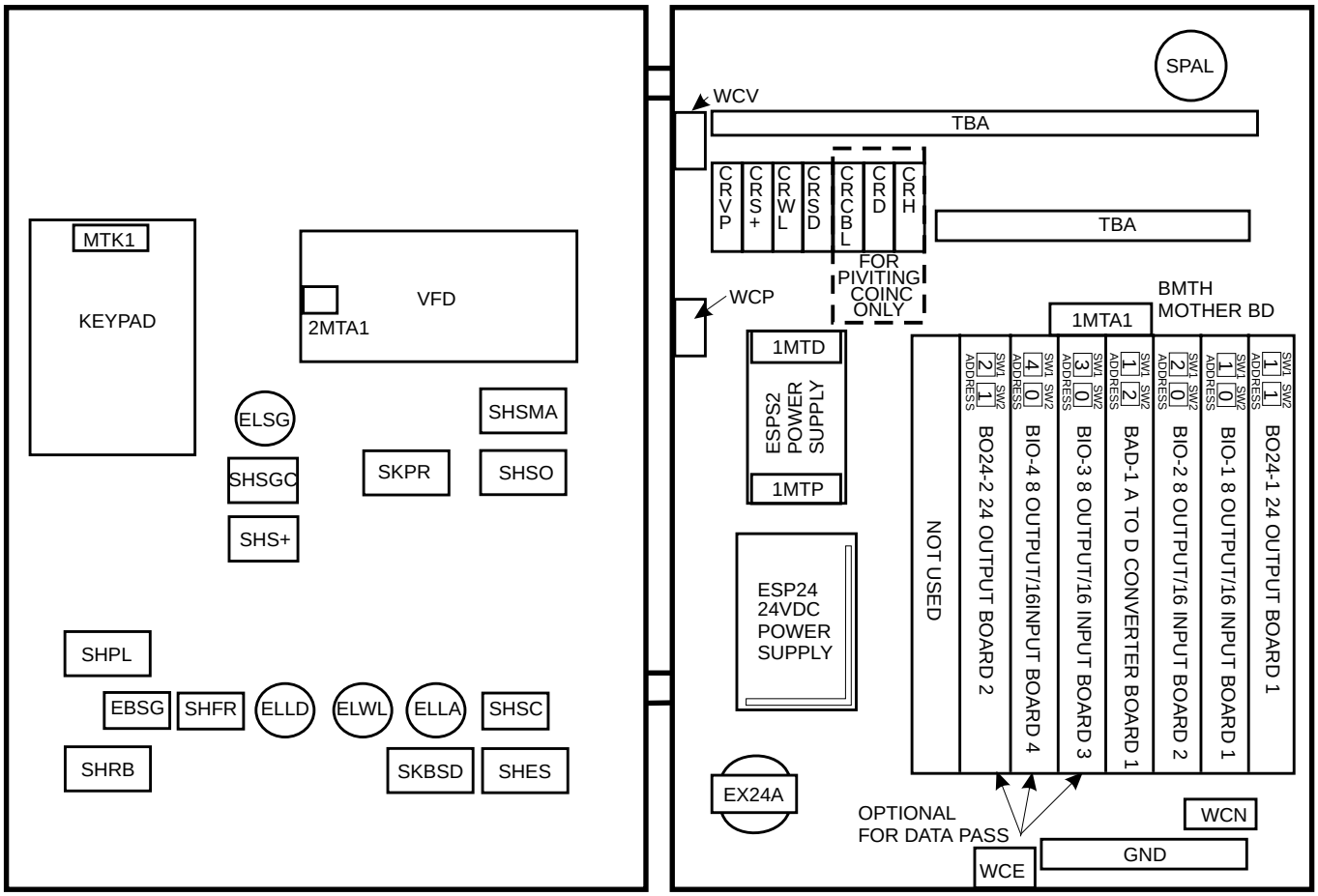
MICRO 6 SYSTEMS
CONTROL BOX LAYOUTS
PELLERIN MILNOR CORPORATION



MICRO 6 SYSTEMS
PRESS PROCESSOR CONTROL BOX

PELLERIN MILNOR CORPORATION

B2TAG91050
96287G



MICRO 6 SYSTEMS
MARK V 2 STAGE PRESS
LOW VOLTAGE CONTROL BOX
PELLERIN MILNOR CORPORATION

B2TAG96027
2000093G

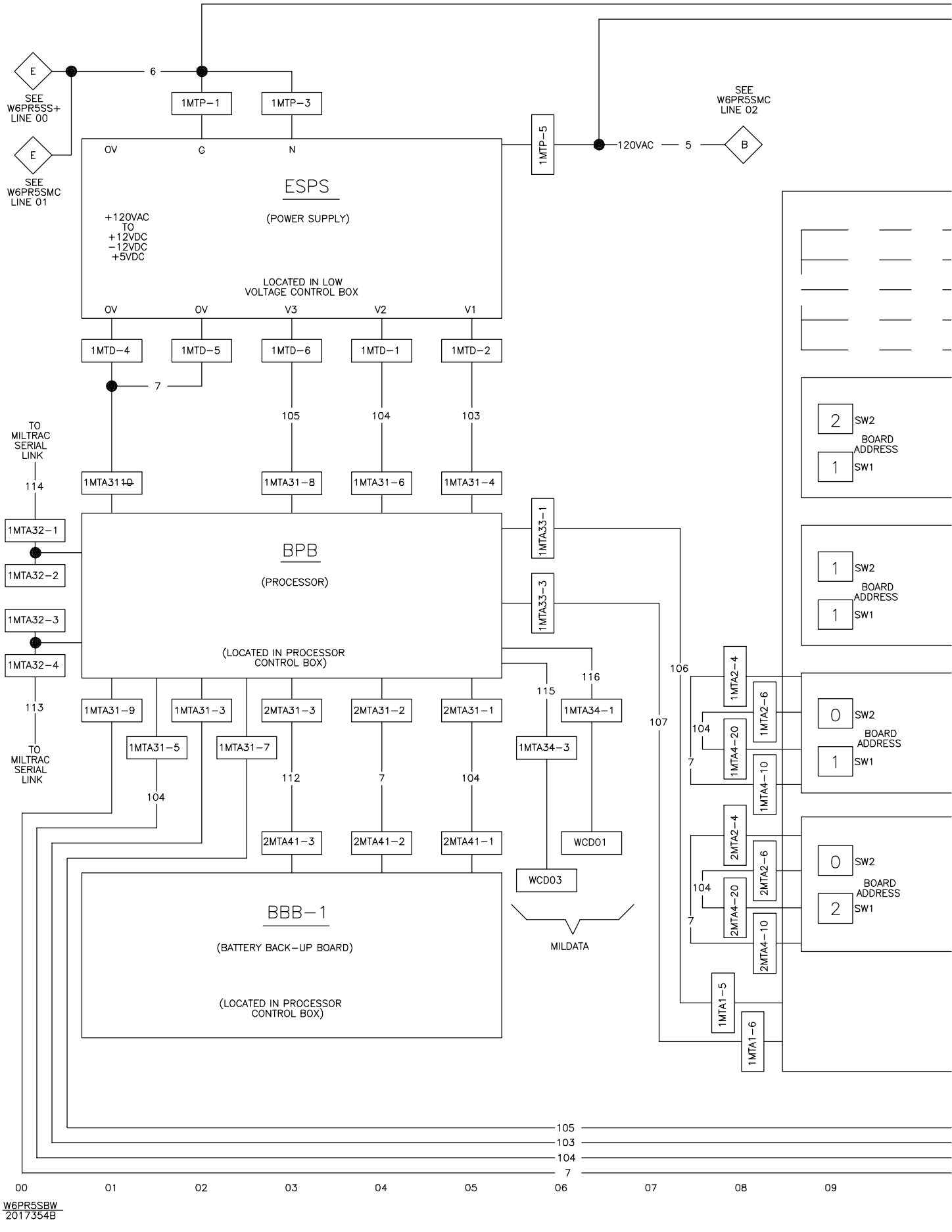
W6PR5STG3
2000093B

W6PR5STG3

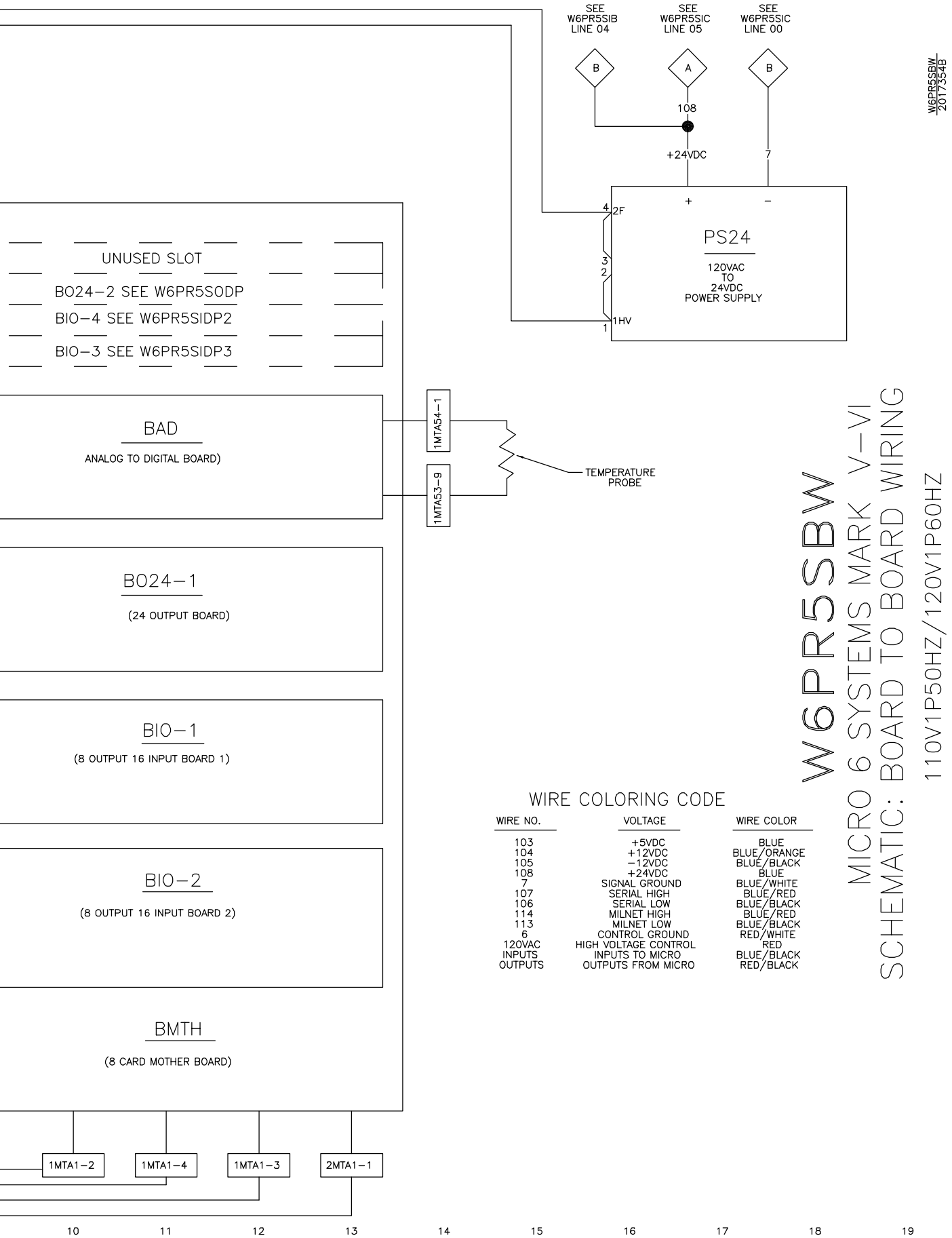
MICRO 6 SYSTEMS
CONTROL BOX LAYOUTS

PELLERIN MILNOR CORPORATION

W6PR5STG3
2000093B



W6PR5SBW
2017354B



W6PR5SBW

MICRO 6 SYSTEMS MARK V–VI

SCHEMATIC: BOARD TO BOARD WIRING

110V1P50HZ/120V1P60HZ

PELLERIN MILNOR CORPORATION

WIRE COLORING CODE

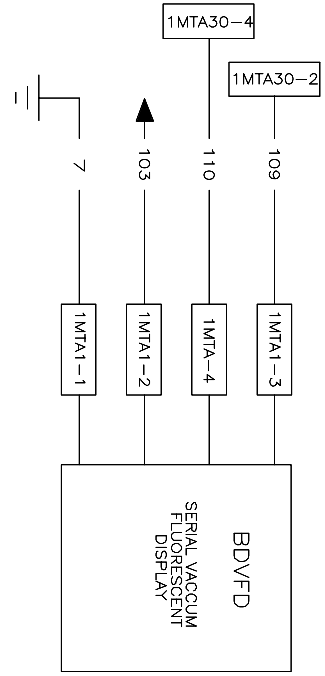
WIRE NO.	VOLTAGE	WIRE COLOR
103	+5VDC	BLUE
104	+12VDC	BLUE/ORANGE
105	–12VDC	BLUE/BLACK
108	+24VDC	BLUE
7	SIGNAL GROUND	BLUE/WHITE
107	SERIAL HIGH	BLUE/RED
106	SERIAL LOW	BLUE/BLACK
114	MILNET HIGH	BLUE/RED
113	MILNET LOW	BLUE/BLACK
6	CONTROL GROUND	RED/WHITE
120VAC	HIGH VOLTAGE CONTROL	RED
INPUTS	INPUTS TO MICRO	BLUE/BLACK
OUTPUTS	OUTPUTS FROM MICRO	RED/BLACK

NOTES

1. 1MTA30 IS LOCATED ON THE BPB (PROCESSOR BOARD).
2. 2MTA1 IS LOCATED ON THE DISPLAY BOARD.

00	01	02	03	04	05	06	07

W6PR5SD
2017354B



08 09 10 11 12 13 14 15 16

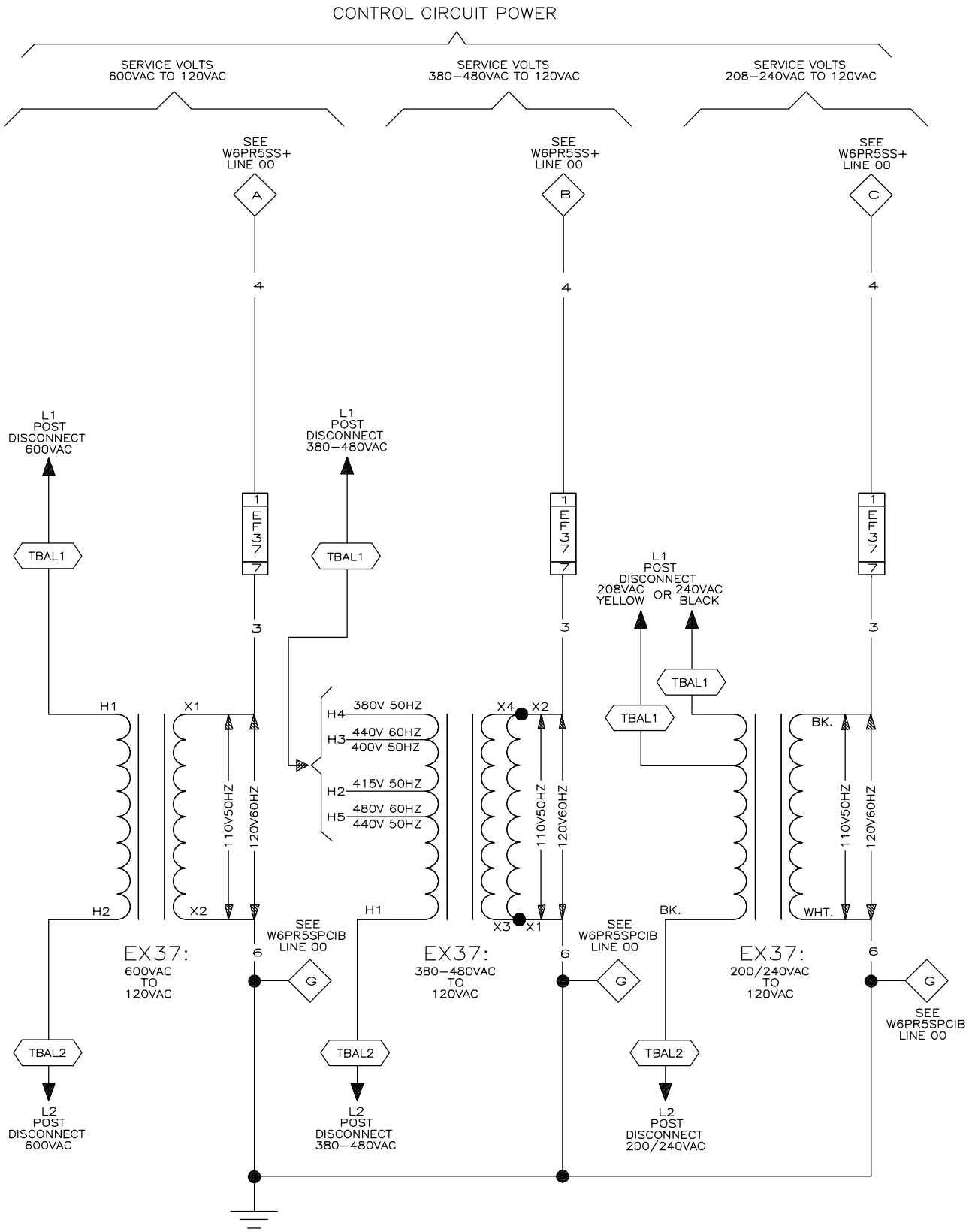
W6PR5SD

MICRO 6 SYSTEMS SERIAL CONTROLS
MARK V—VI
SCHEMATIC: VFD DISPLAY

PELLERIN MILNOR CORPORATION

W6PR5SD
2017354B

W6PR5SD
2017354B



00 01 02 03 04 05 06 07 08 09 10

W6PR5SHV
2017354B

W6PR5SHV
2017354B

W6PR5SHV

MICRO 6 SYSTEMS MARK V—VI

SCHEMATIC: 110V1P50HZ/120V1P60HZ

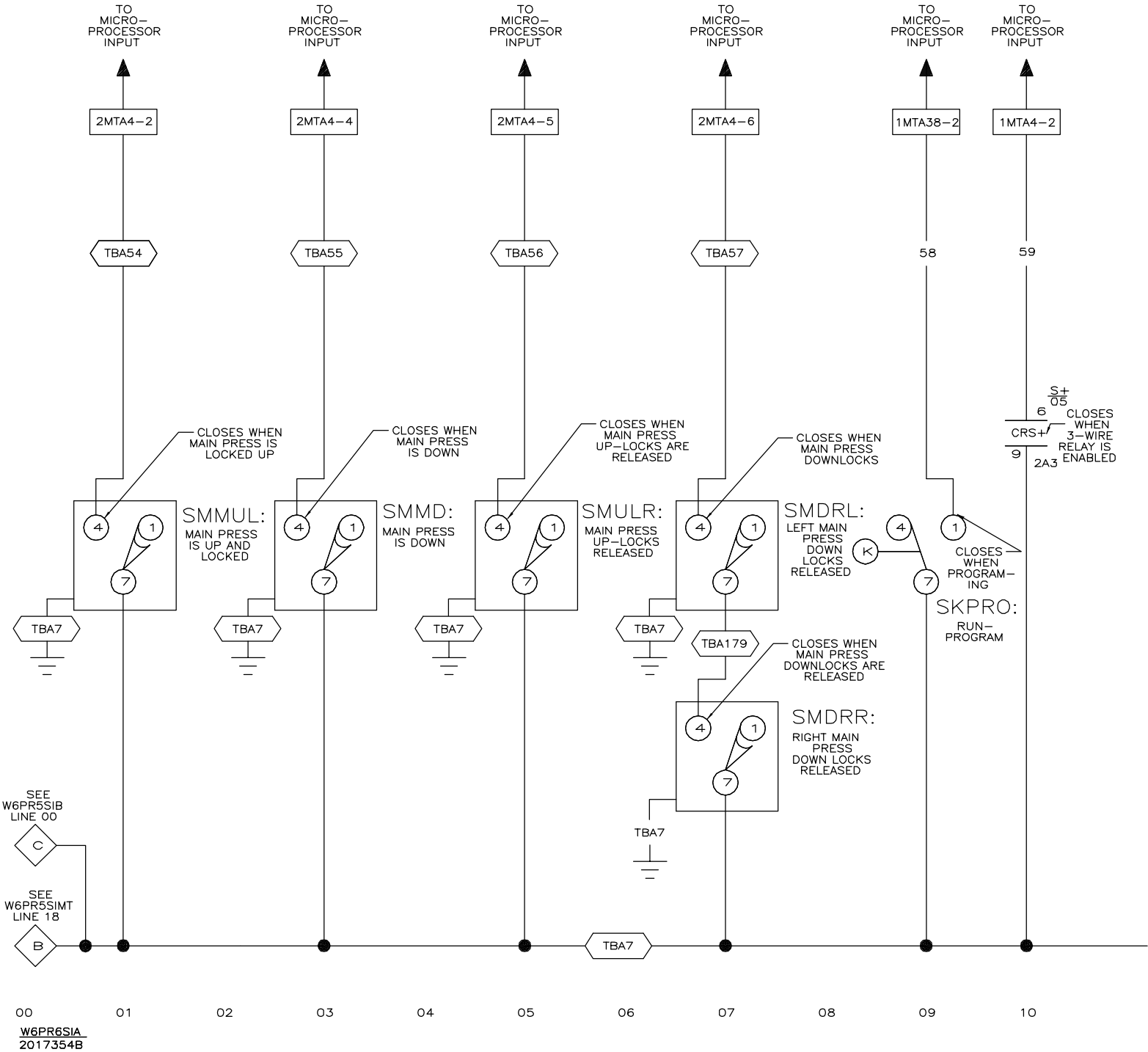
CONTROL CIRCUIT POWER

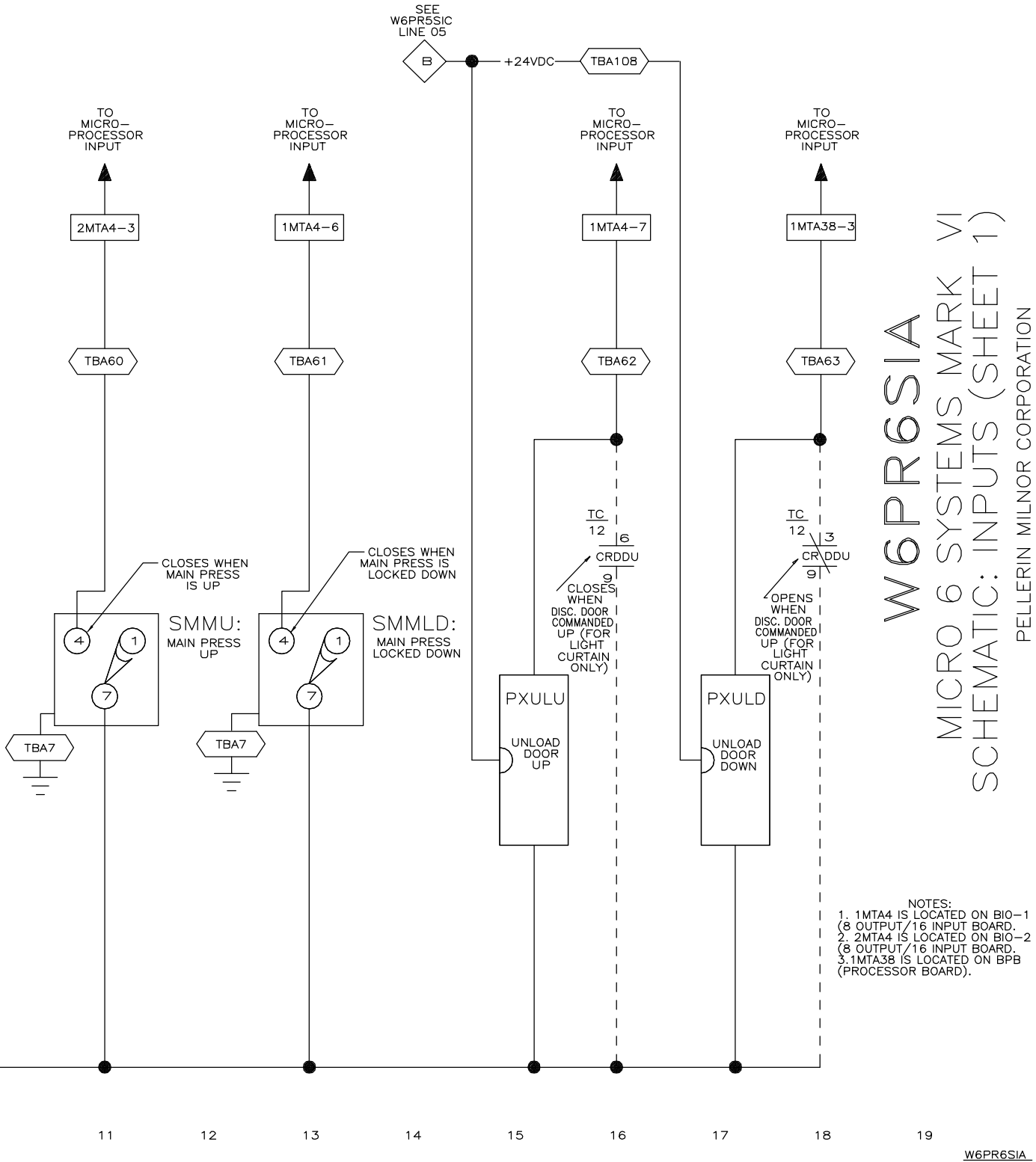
PELLERIN MILNOR CORPORATION

NOTES:

1. TBN IS LOCATED IN HIGH VOLTAGE CONTROL BOX.
2. TBY IS LOCATED IN THE LOW VOLTAGE CONTROL BOX.

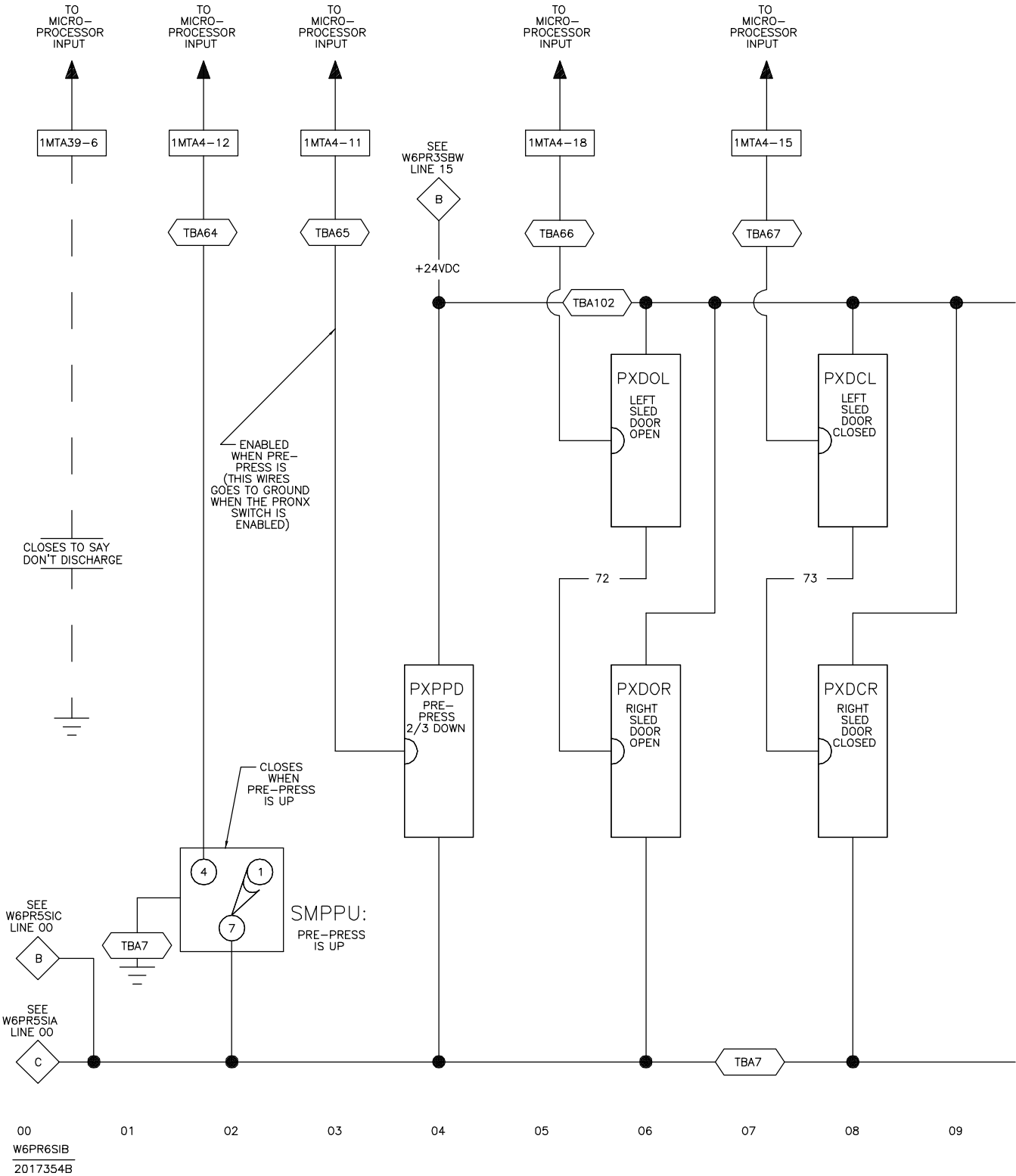
11 12 13 14 15

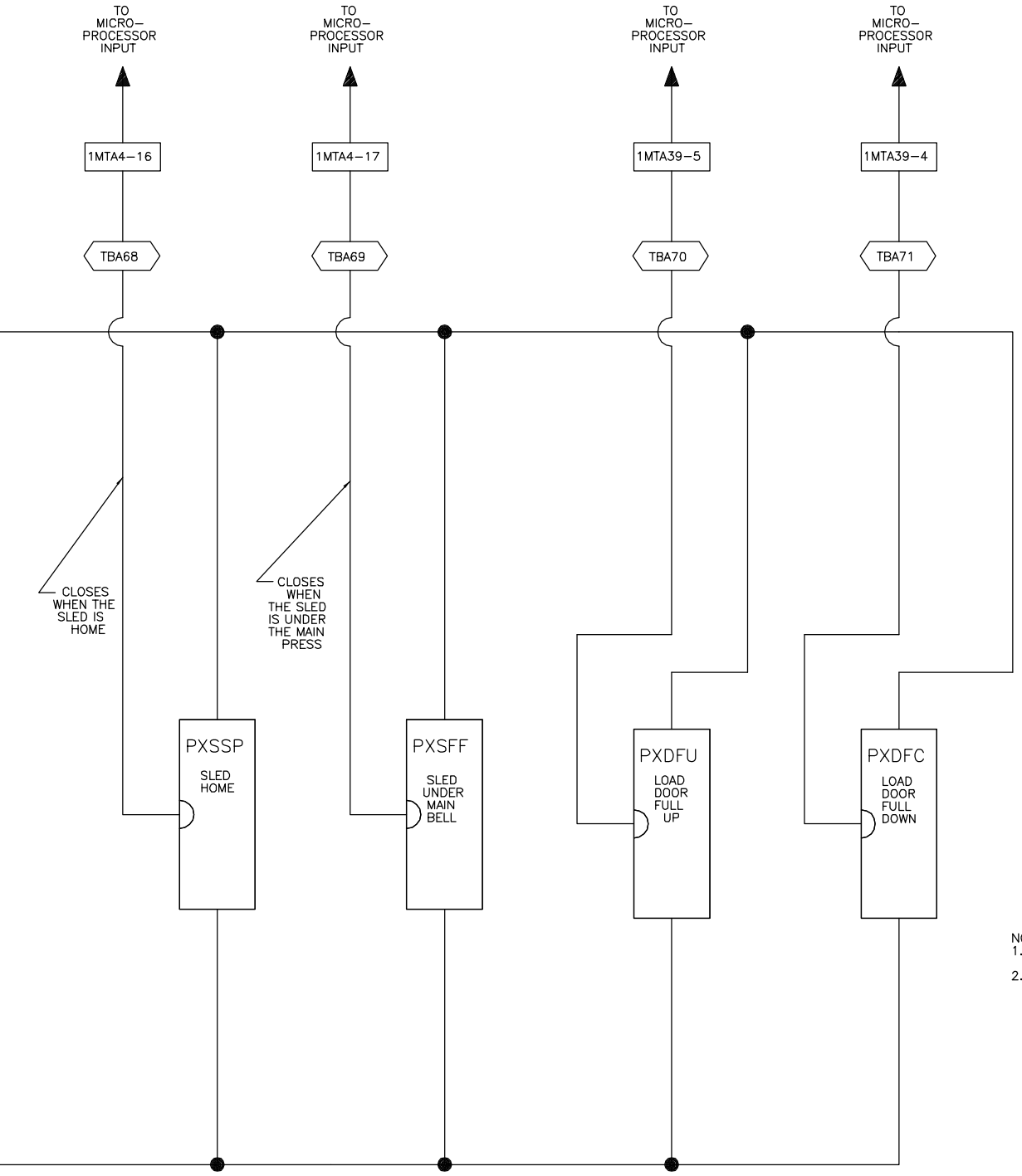

TO MICRO– PROCESSOR INPUT
2MTA4–2
2MTA4–4
2MTA4–5
2MTA4–6
1MTA38–2
1MTA4–2
TBA54
TBA55
TBA56
TBA57
58
59
CLOSES WHEN MAIN PRESS IS LOCKED UP
CLOSES WHEN MAIN PRESS IS DOWN
CLOSES WHEN MAIN PRESS UP–LOCKS ARE RELEASED
CLOSES WHEN MAIN PRESS DOWNLOCKS
S+ 05
6
CRS+
9
2A3
CLOSES WHEN 3–WIRE RELAY IS ENABLED
SMMUL:
MAIN PRESS IS UP AND LOCKED
SMMD:
MAIN PRESS IS DOWN
SMULR:
MAIN PRESS UP–LOCKS RELEASED
SMDRL:
LEFT MAIN PRESS DOWN LOCKS RELEASED
K
CLOSES WHEN PROGRAM–ING
SKPRO:
RUN–PROGRAM
TBA7
TBA179
CLOSES WHEN MAIN PRESS DOWNLOCKS ARE RELEASED
SMDRR:
RIGHT MAIN PRESS DOWN LOCKS RELEASED
SEE W6PR5SIB LINE 00
C
SEE W6PR5SIMT LINE 18
B
00
01
02
03
04
05
06
07
08
09
10
W6PR6SIA
2017354B



W6PR6SIA
MICRO 6 SYSTEMS MARK VI
SCHEMATIC: INPUTS (SHEET 1)
PELLERIN MILNOR CORPORATION

NOTES:
1. 1MTA4 IS LOCATED ON BIO–1 (8 OUTPUT/16 INPUT BOARD.
2. 2MTA4 IS LOCATED ON BIO–2 (8 OUTPUT/16 INPUT BOARD.
3.1MTA38 IS LOCATED ON BPB (PROCESSOR BOARD).


TO MICRO– PROCESSOR INPUT
TO MICRO– PROCESSOR INPUT
TO MICRO– PROCESSOR INPUT
TO MICRO– PROCESSOR INPUT
TO MICRO– PROCESSOR INPUT
1MTA39–6
1MTA4–12
1MTA4–11
1MTA4–18
1MTA4–15
SEE W6PR3SBW LINE 15
B
TBA64
TBA65
TBA66
TBA67
+24VDC
TBA102
PXDOL
LEFT SLED DOOR OPEN
PXDCL
LEFT SLED DOOR CLOSED
ENABLED WHEN PRE– PRESS IS (THIS WIRES GOES TO GROUND WHEN THE PRONX SWITCH IS ENABLED)
CLOSES TO SAY DON'T DISCHARGE
72
73
PXPPD
PRE– PRESS 2/3 DOWN
PXDOR
RIGHT SLED DOOR OPEN
PXDCR
RIGHT SLED DOOR CLOSED
CLOSES WHEN PRE–PRESS IS UP
4
1
7
SMPPU:
PRE–PRESS IS UP
SEE W6PR5SIC LINE 00
B
TBA7
SEE W6PR5SIA LINE 00
C
TBA7
00
01
02
03
04
05
06
07
08
09
W6PR6SIB
2017354B

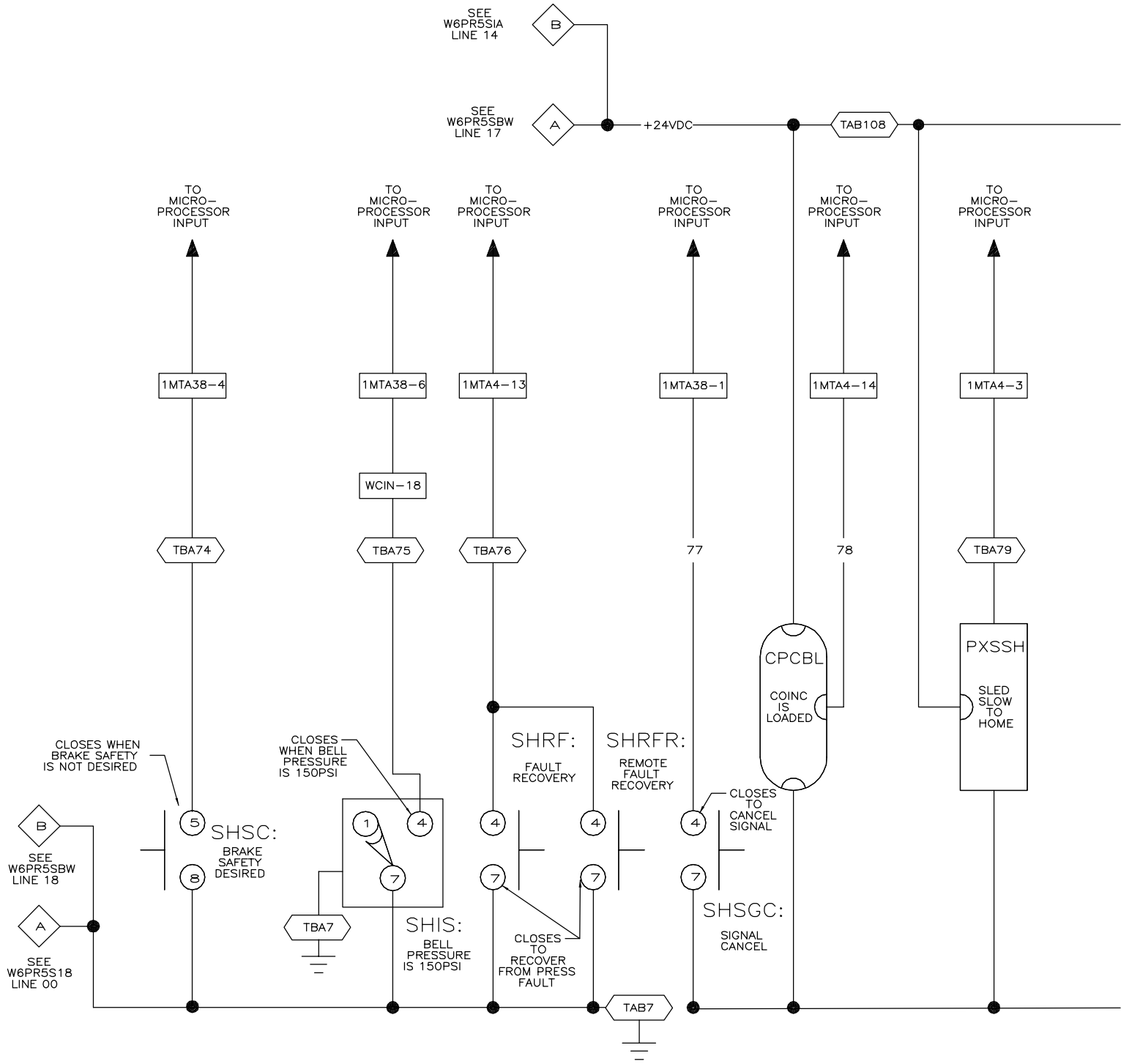


W6PR6SIB
MICRO 6 SYSTEMS MARK VI
SCHEMATIC: INPUTS (SHEETS 2)

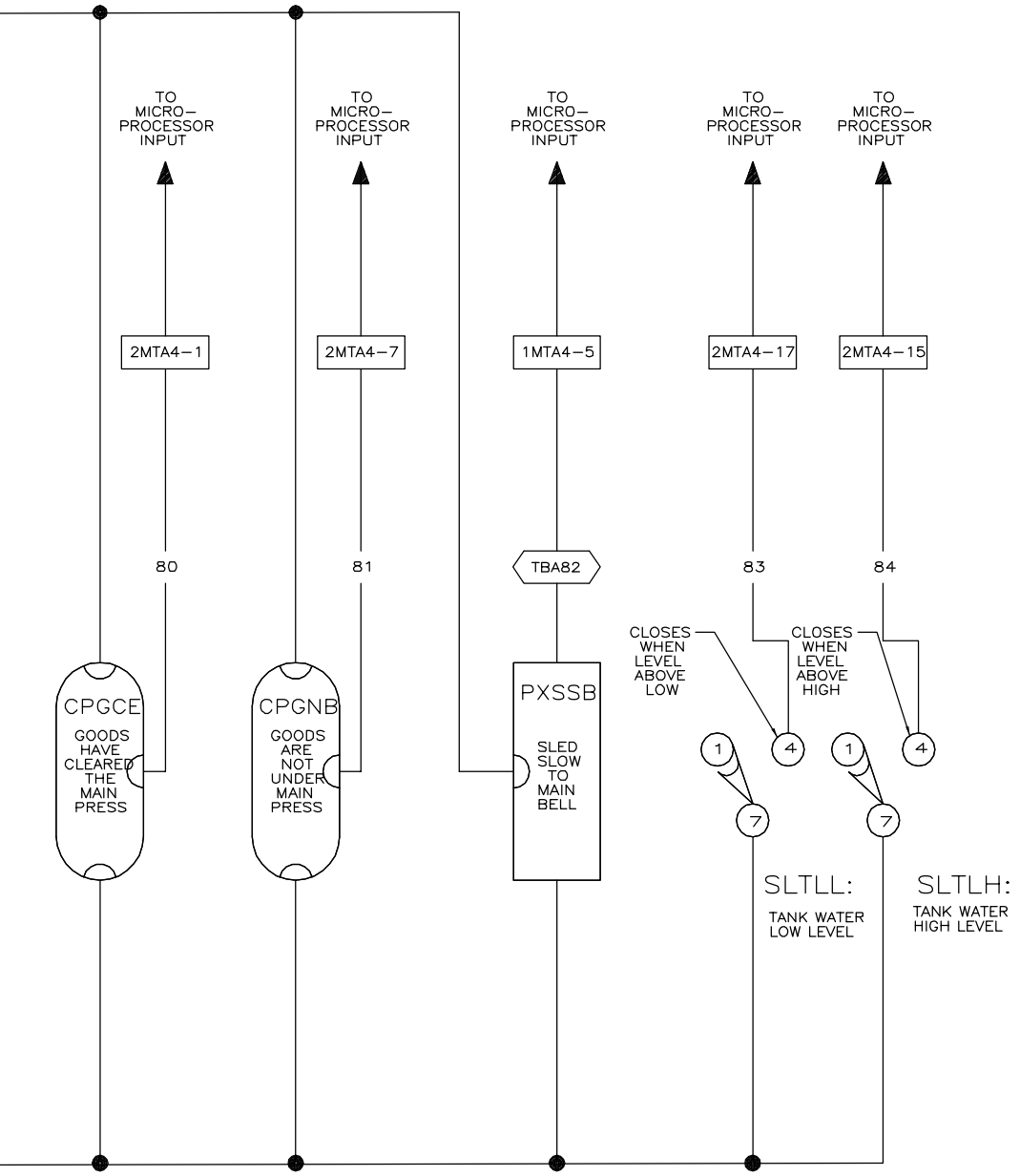
PELLERIN MILNOR CORPORATION

NOTES:
1. 1MTA4 IS LOCATED ON BIO–1 (8 OUTPUT/16 INPUT BOARD)
2. 1MTA39 IS LOCATED ON BPB (PROCESSOR BOARD)

10 11 12 13 14 15 16 17 18 19



W6PR6SIC
2017354B



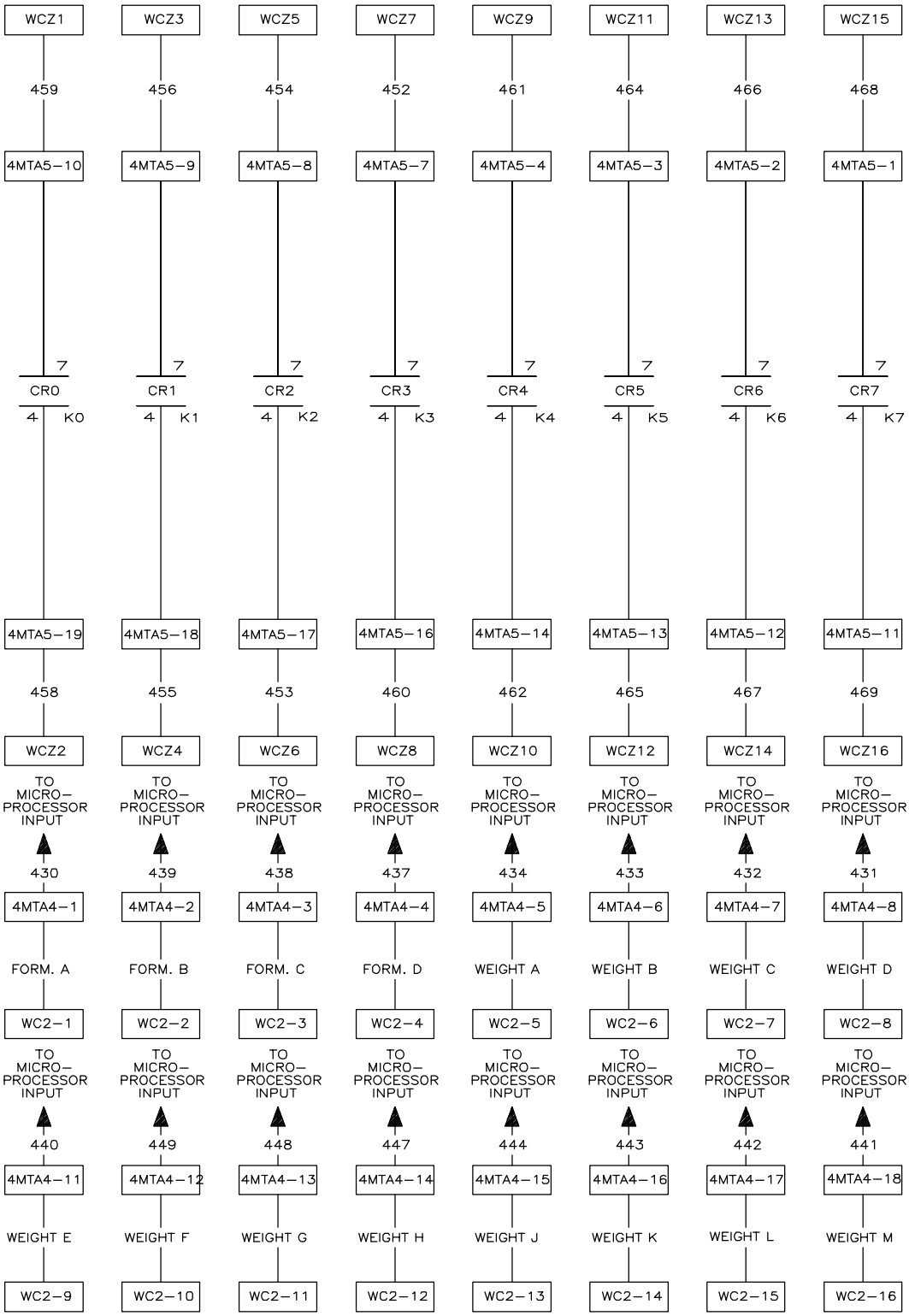
W6PR6SIC
MICRO 6 SYSTEMS MARK VI
SCHEMATICS: INPUTS (SHEET 3)

PELLERIN MILNOR CORPORATION

NOTES:

1. TBX AND TB4 LOCATED IN THE LOW VOLTAGE CONTROL BOX.
2. 1MTA4 IS LOCATED ON BIO–1 (8 OUTPUT/16 INPUT BOARD)
3. 2MTA4 IS LOCATED ON BIO–2 (8 OUTPUT/16 INPUT BOARD)
4. 1MTA38 IS LOCATED ON BPB (PROCESSOR BOARD)

10 11 12 13 14 15 16 17 18

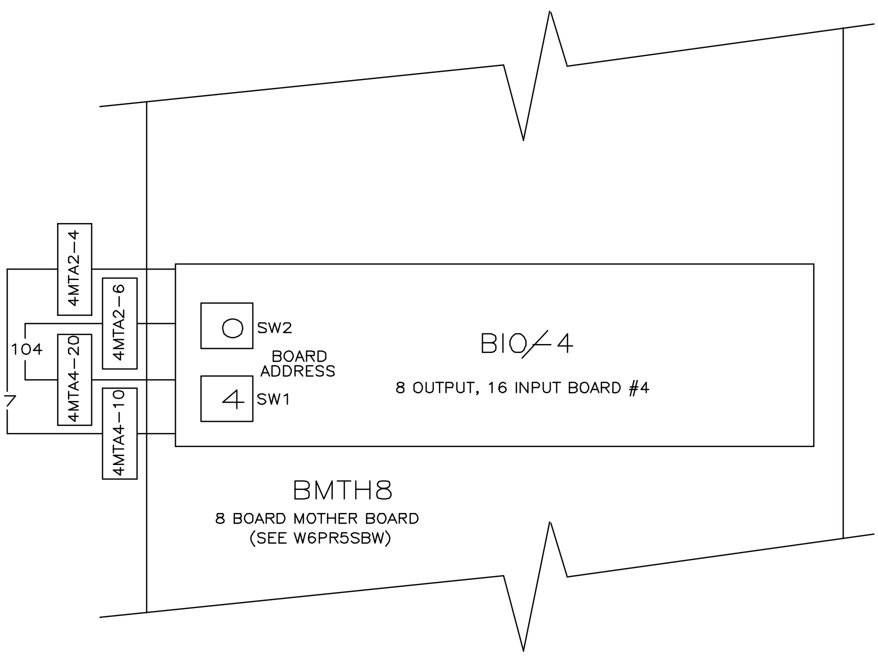


W6PR5SIDP2
2017354B

NOTES:

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

W6PR5SIDP2
2017354B



W6PR5SIDP2

MICRO 6 SYSTEMS MARK V-VI
SCHEMATIC: PRESS DRY CONTACT DATA PASS
(8 OUTPUT 16 INPUT BOARD#4)

PELLERIN MILNOR CORPORATION

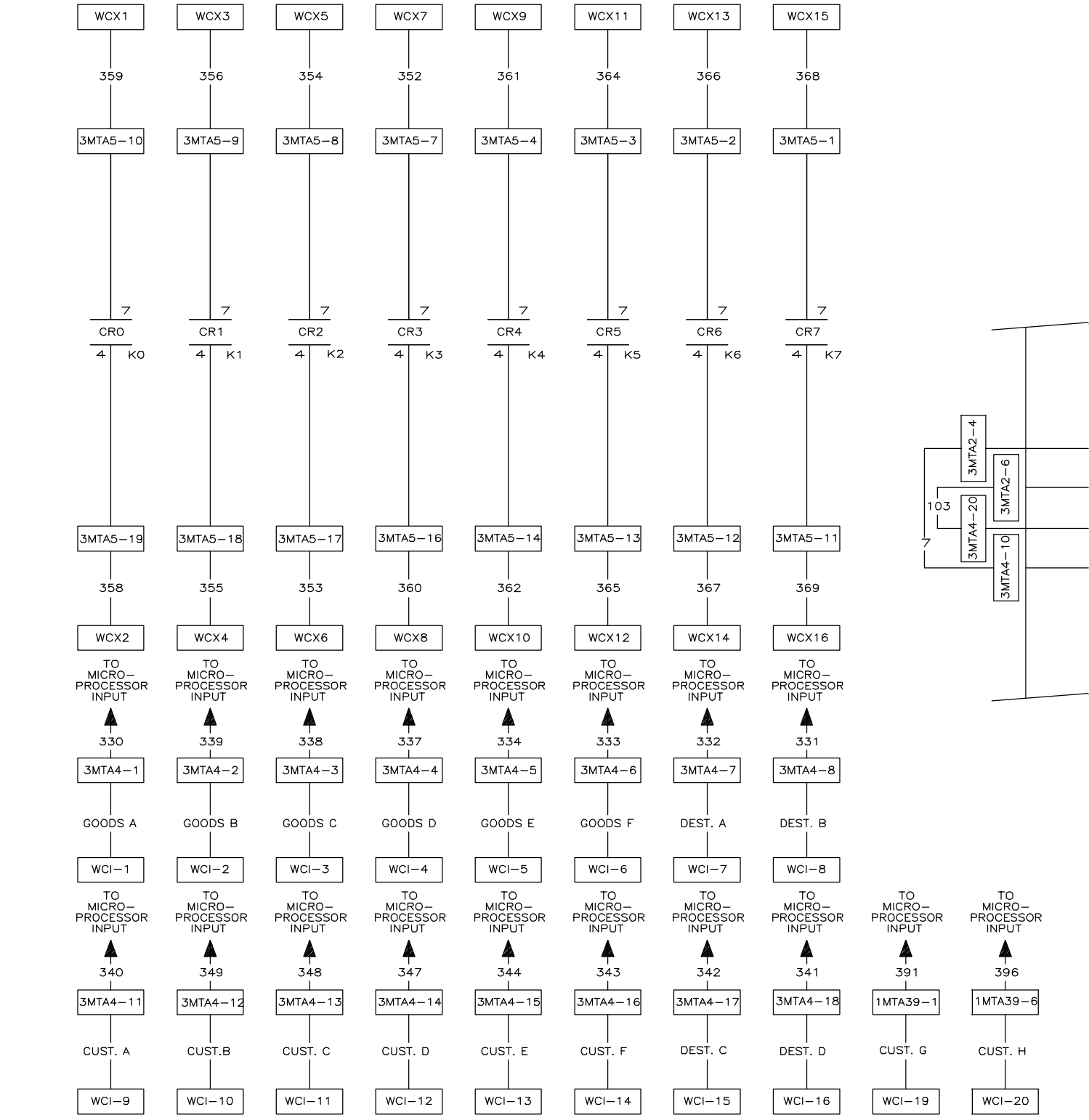
WIRE COLORING CODE

WIRE NO.	VOLTAGE	WIRE COLOR
103	+5VDC	BLUE
104	+12VDC	BLUE/ORANGE
105	-12VDC	BLUE/BLACK
7	SIGNAL GROUND	BLUE/WHITE
106	SERIAL HIGH	BLUE/RED
107	SERIAL LOW	BLUE/BLACK
6	CONTROL GROUND	RED/WHITE
102	LOW VOLTAGE CONTROL	RED/BLUE
120VAC	HIGH VOLTAGE CONTROL	RED
INPUTS	INPUTS TO MICRO	BLUE/BLACK
OUTPUTS	OUTPUTS FROM MACRO	RED/BLACK

NOTES:

1. WCZ AND WC2 ARE LOCATED IN THE LOW VOLTAGE CONTROL BOX.

09 10 11 12 13 14 15 16



W6PR5SIDP3
2017354B

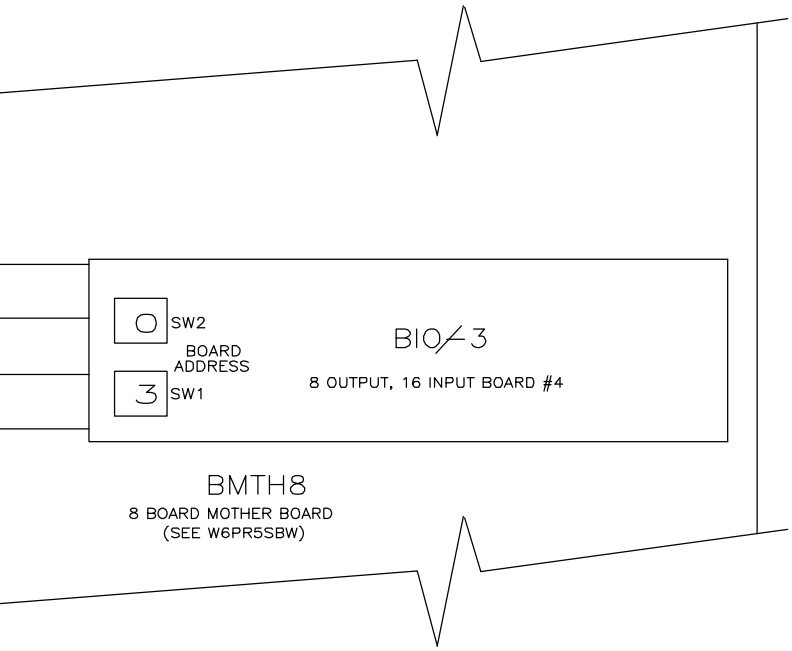
W6PR5SIDP3

MICRO 6 SYSTEMS MARK V–VI
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



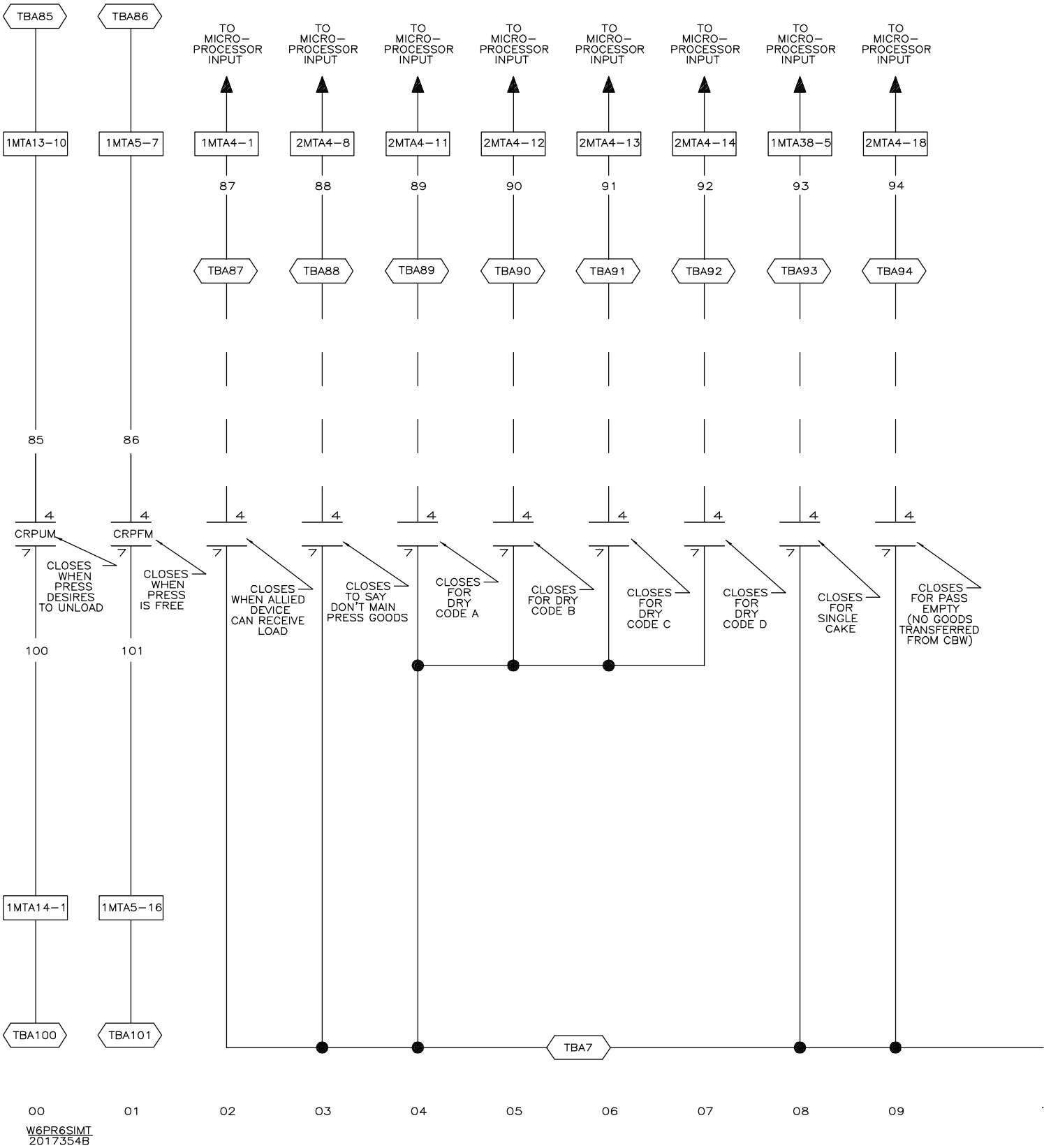
WIRE COLORING CODE

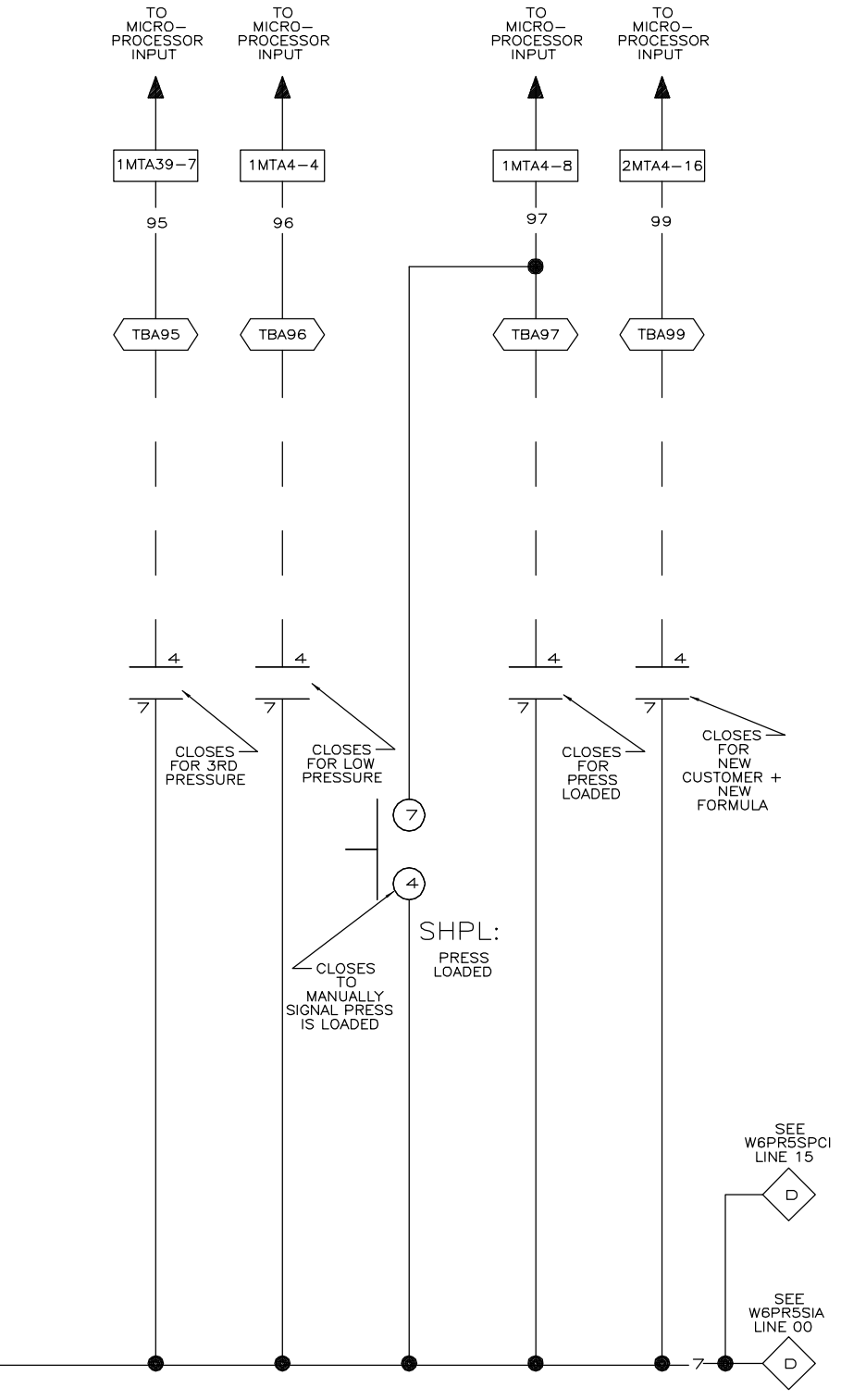
WIRE NO.	VOLTAGE	WIRE COLOR
103	+5VDC	BLUE
104	+12VDC	BLUE/ORANGE
105	−12VDC	BLUE/BLACK
7	SIGNAL GROUND	BLUE/WHITE
107	SERIAL HIGH	BLUE/RED
106	SERIAL LOW	BLUE/BLACK
6	CONTROL GROUND	RED/WHITE
102	LOW VOLTAGE CONTROL	RED/BLUE
120VAC	HIGH VOLTAGE CONTROL	RED
INPUTS	INPUTS TO MICRO	BLUE/BLACK
OUTPUTS	OUTPUTS FROM MACRO	RED/BLACK

NOTES:

1. WCZ AND WC2 ARE LOCATED IN THE LOW VOLTAGE CONTROL BOX.

11 12 13 14 15 16

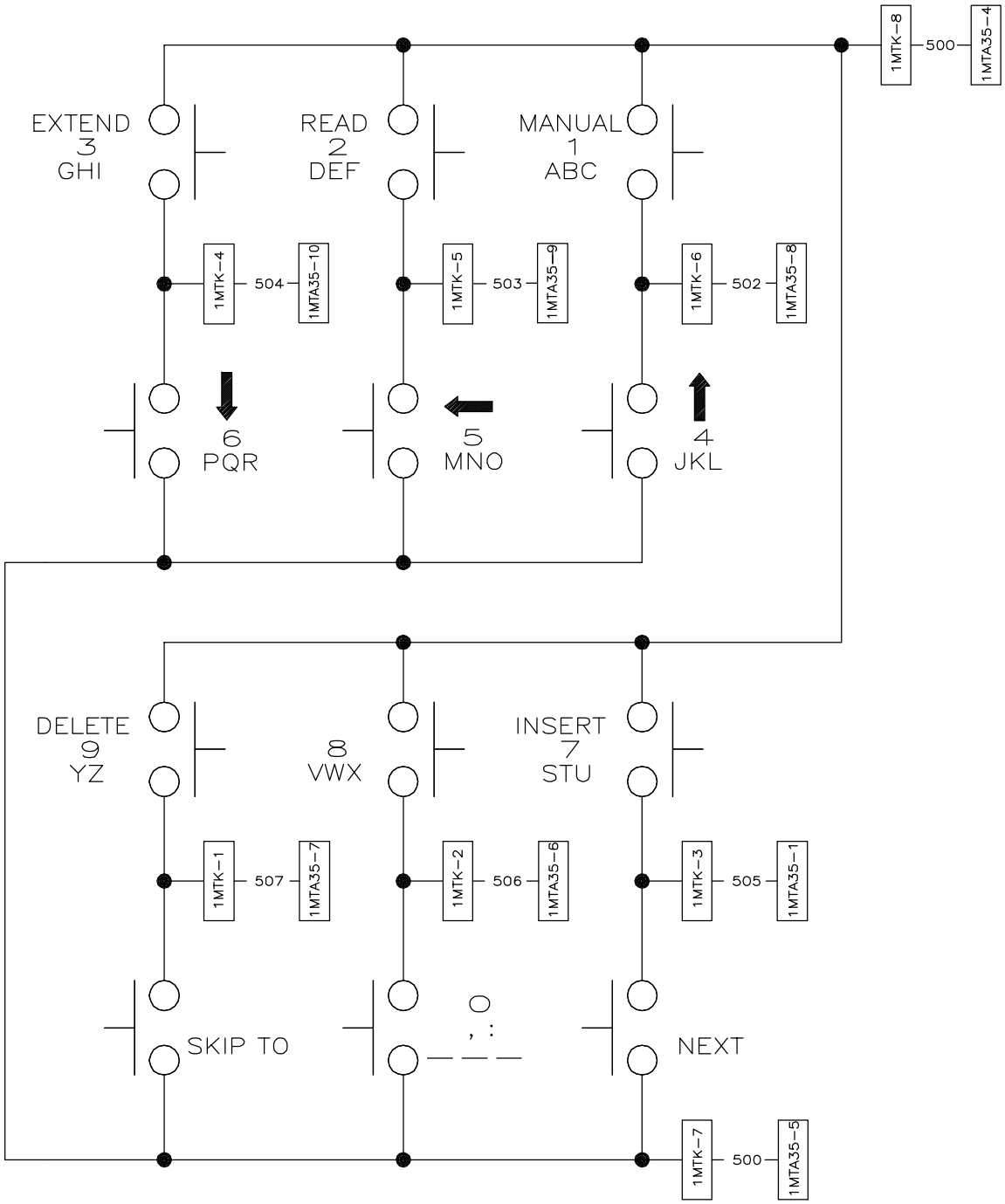

TBA85
TBA86
TO MICRO–PROCESSOR INPUT
1MTA13–10
1MTA5–7
1MTA4–1
2MTA4–8
2MTA4–11
2MTA4–12
2MTA4–13
2MTA4–14
1MTA38–5
2MTA4–18
87
88
89
90
91
92
93
94
TBA87
TBA88
TBA89
TBA90
TBA91
TBA92
TBA93
TBA94
85
86
4
CRPUM
CRPFM
7
CLOSES WHEN PRESS DESIRES TO UNLOAD
CLOSES WHEN PRESS IS FREE
CLOSES WHEN ALLIED DEVICE CAN RECEIVE LOAD
CLOSES TO SAY DON'T MAIN PRESS GOODS
CLOSES FOR DRY CODE A
CLOSES FOR DRY CODE B
CLOSES FOR DRY CODE C
CLOSES FOR DRY CODE D
CLOSES FOR SINGLE CAKE
CLOSES FOR PASS EMPTY (NO GOODS TRANSFERRED FROM CBW)
100
101
1MTA14–1
1MTA5–16
TBA100
TBA101
TBA7
00
01
02
03
04
05
06
07
08
09
W6PR6SIMT
2017354B



W6PR6SIMT
MICRO 6 SYSTEMS MARK VI
SCHEMATIC: TUNNEL INFORMATION
PELLERIN MILNOR CORPORATION

NOTES:

1. TBA IS LOCATED IN THE LOW VOLTAGE CONTROL BOX.
2. SEE TAG IN LOW VOLTAGE CONTROL BOX FOR ADDITIONAL INFORMATION.



00 01 02 03 04 05 06 07 08 09 10

W6PR5SKP
2017354B

W6PR5SKP

MICRO 6 SYSTEMS MARK V—VI
SCHEMATIC:KEYPAD

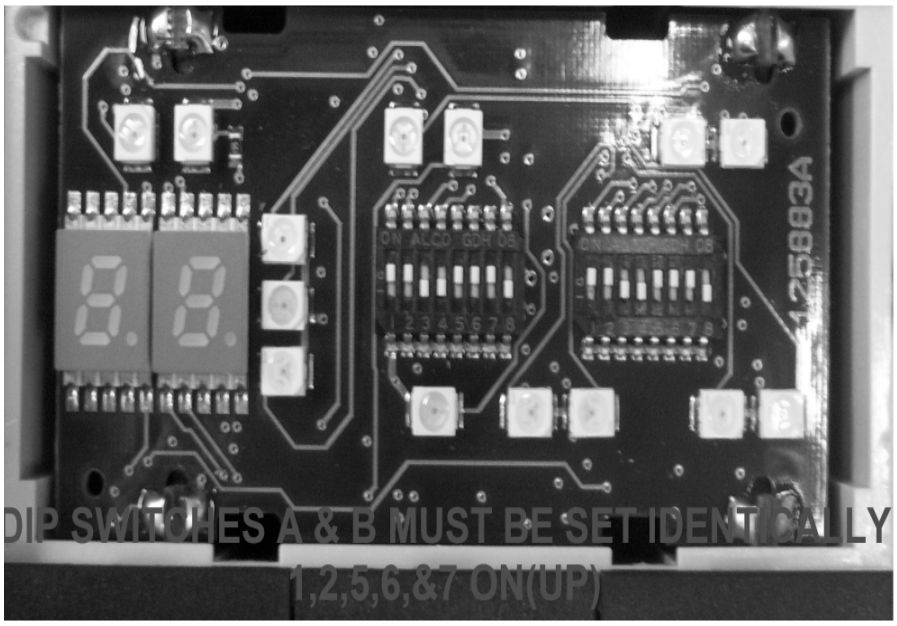
PELLERIN MILNOR CORPORATION

NOTES:

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

11 12 13 14 15 16 17 18 19

Banner Model MMD-TA-11B DIP SWITCH SETTINGS



LEAVE RECEIVER IN FACTORY DEFAULT SETTINGS (BELOW)

EMITTER(NOT SHOWN) FACTORY DEFAULT Scan Code 1

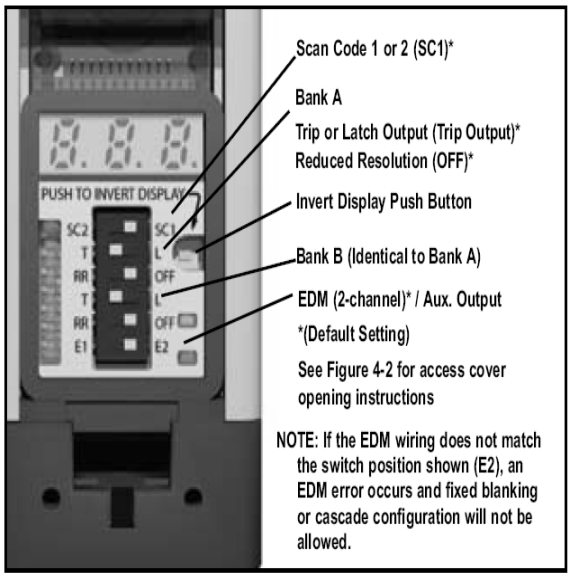
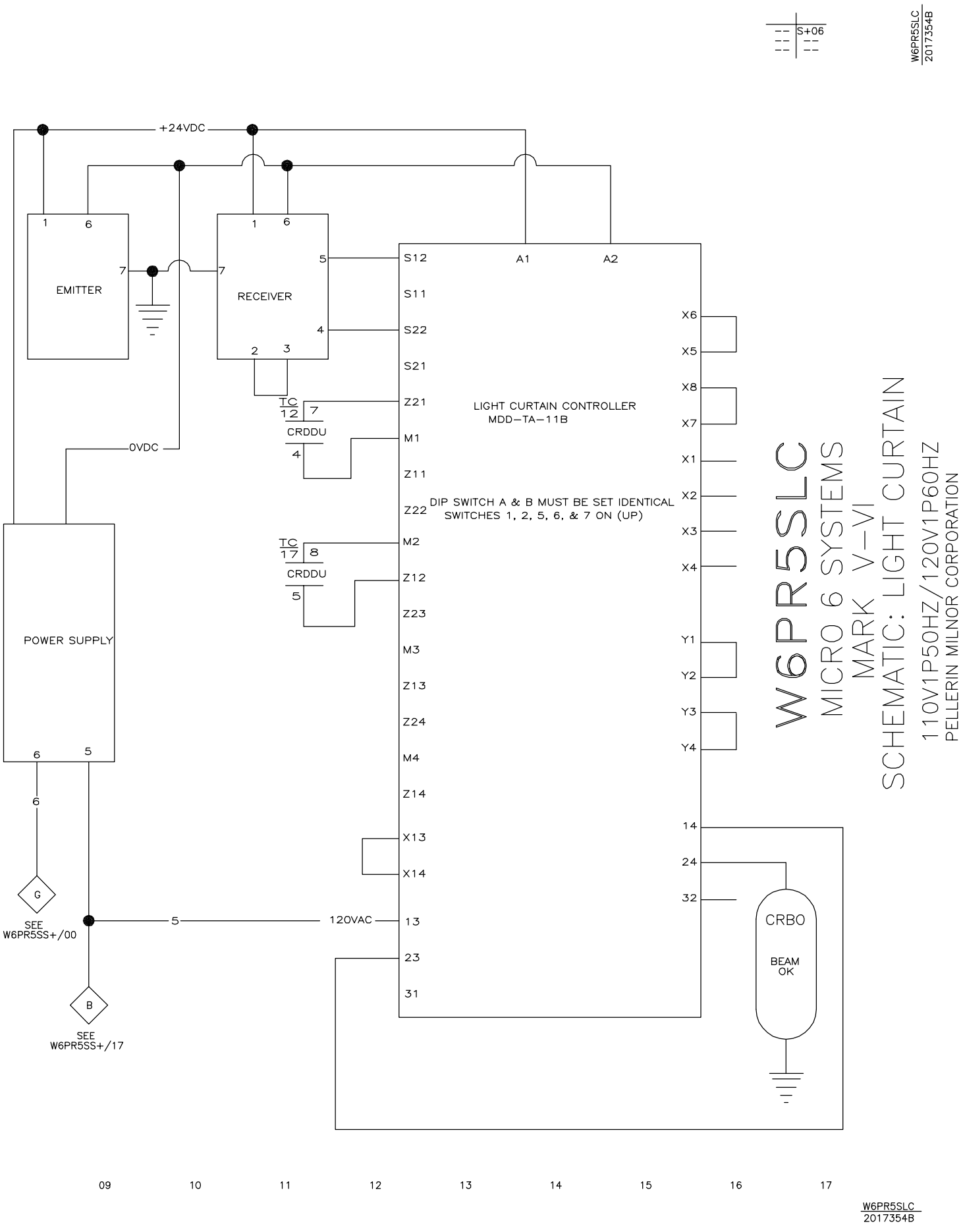


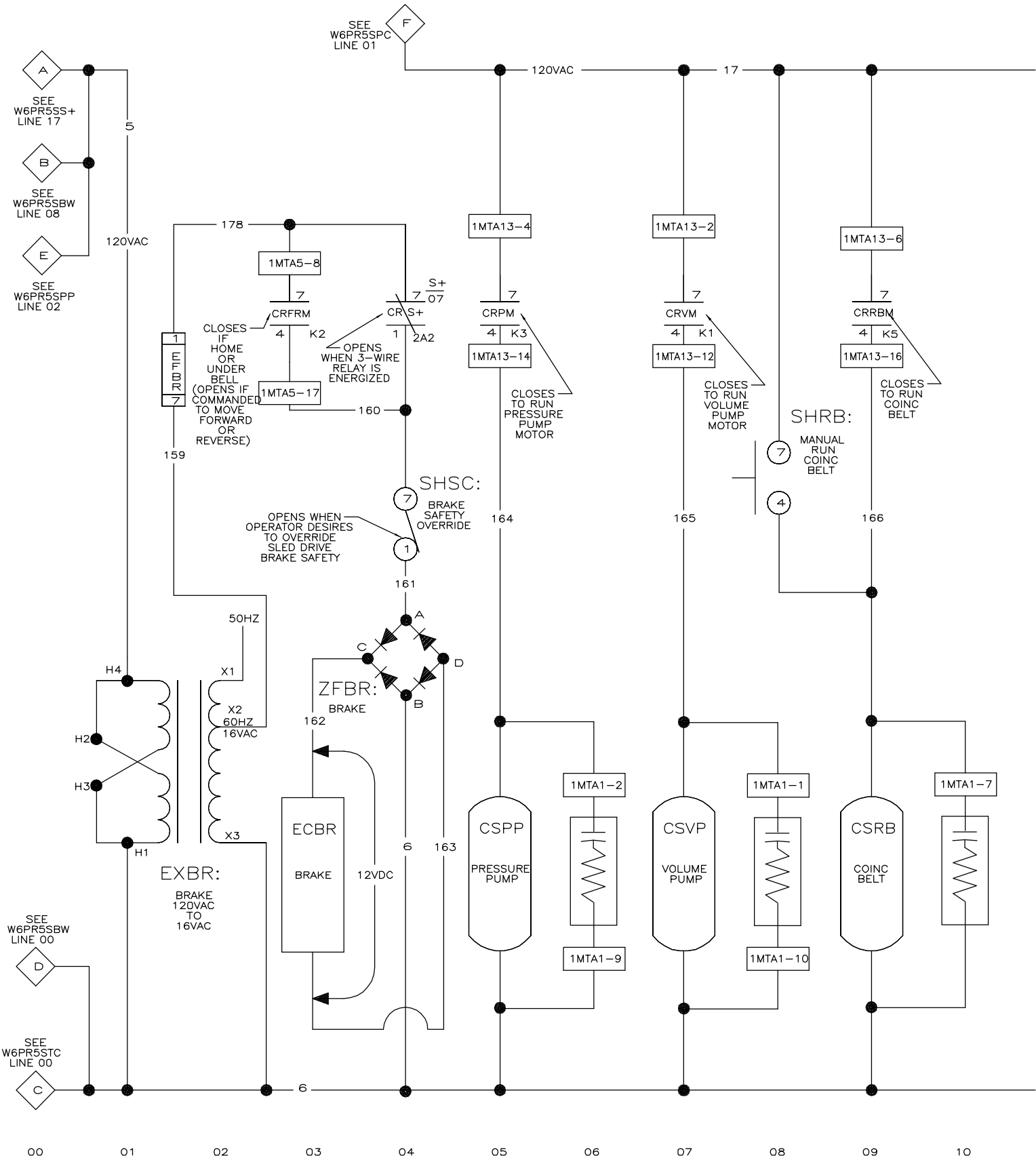
Figure 4-1. EZ-SCREEN configuration switches (receiver shown)

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

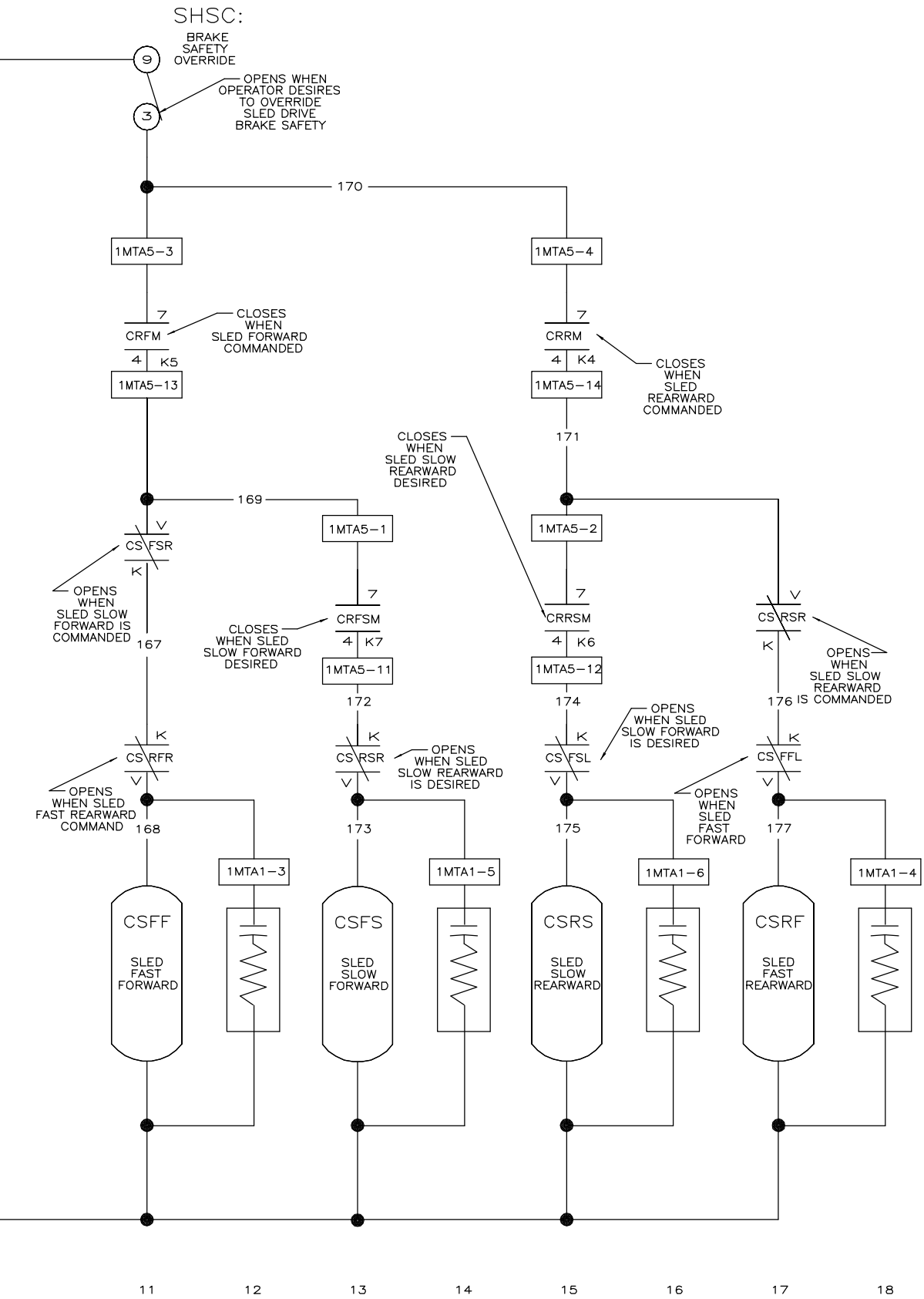
00 01 02 03 04 05 06 07 08

W6PR5SLC
2017354B


W6PR5SLC
2017354B
S+06
+24VDC
0VDC
EMITTER
RECEIVER
LIGHT CURTAIN CONTROLLER
MDD–TA–11B
DIP SWITCH A & B MUST BE SET IDENTICAL
SWITCHES 1, 2, 5, 6, & 7 ON (UP)
CRDDU
POWER SUPPLY
CRBO
BEAM
OK
120VAC
SEE
W6PR5SS+/00
SEE
W6PR5SS+/17
W6PR5SLC
MICRO 6 SYSTEMS
MARK V–VI
SCHEMATIC: LIGHT CURTAIN
110V1P50HZ/120V1P60HZ
PELLERIN MILNOR CORPORATION
09
10
11
12
13
14
15
16
17
W6PR5SLC
2017354B



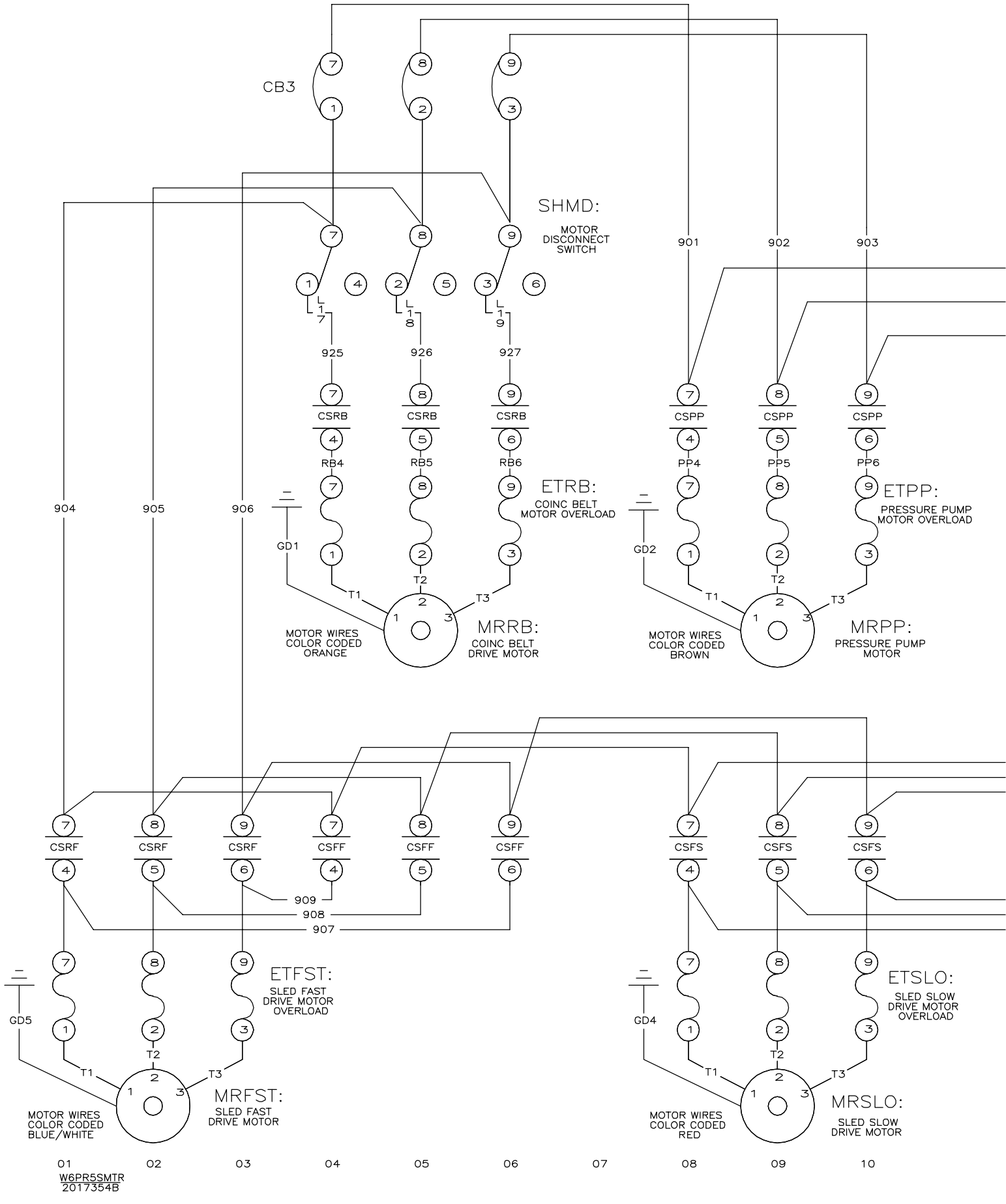
W6PR5SMC
2017354B

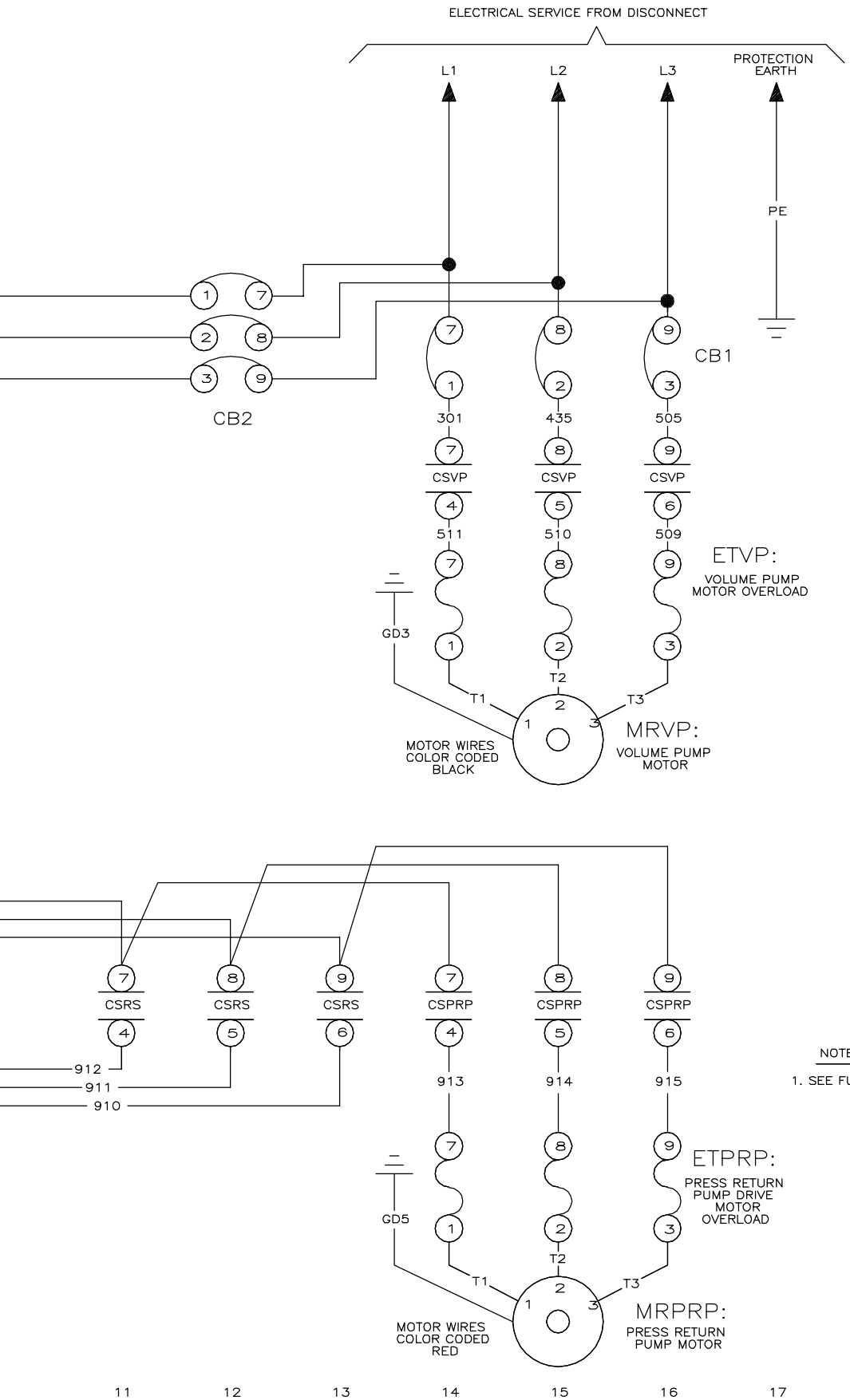


W6PR5SMC

MICRO 6 SYSTEMS MARK V–VI
SCHEMATIC: MOTOR CONNECTIONS
MODIFIED FOR 12 POLE SLED MOTOR
110V1P50HZ/120V1P60HZ

PELLERIN MILNOR CORPORATION


CB3
SHMD:
MOTOR DISCONNECT SWITCH
901
902
903
925
926
927
CSRB
CSPP
RB4
RB5
RB6
PP4
PP5
PP6
ETRB:
COINC BELT MOTOR OVERLOAD
ETPP:
PRESSURE PUMP MOTOR OVERLOAD
904
905
906
GD1
GD2
T1
T2
T3
MOTOR WIRES COLOR CODED ORANGE
MRRB:
COINC BELT DRIVE MOTOR
MOTOR WIRES COLOR CODED BROWN
MRPP:
PRESSURE PUMP MOTOR
CSRF
CSFF
CSFS
909
908
907
GD5
GD4
ETFST:
SLED FAST DRIVE MOTOR OVERLOAD
ETSLO:
SLED SLOW DRIVE MOTOR OVERLOAD
MOTOR WIRES COLOR CODED BLUE/WHITE
MRFST:
SLED FAST DRIVE MOTOR
MOTOR WIRES COLOR CODED RED
MRSLO:
SLED SLOW DRIVE MOTOR
01
02
03
04
05
06
07
08
09
10
W6PR5SMTR
2017354B



NOTES:

1. SEE FUSING ON MACHINE

W6PR5SMTR
MICRO 6 SYSTEMS MARK V–VI
SCHEMATIC: MOTORS + INCOMING VOLTAGES

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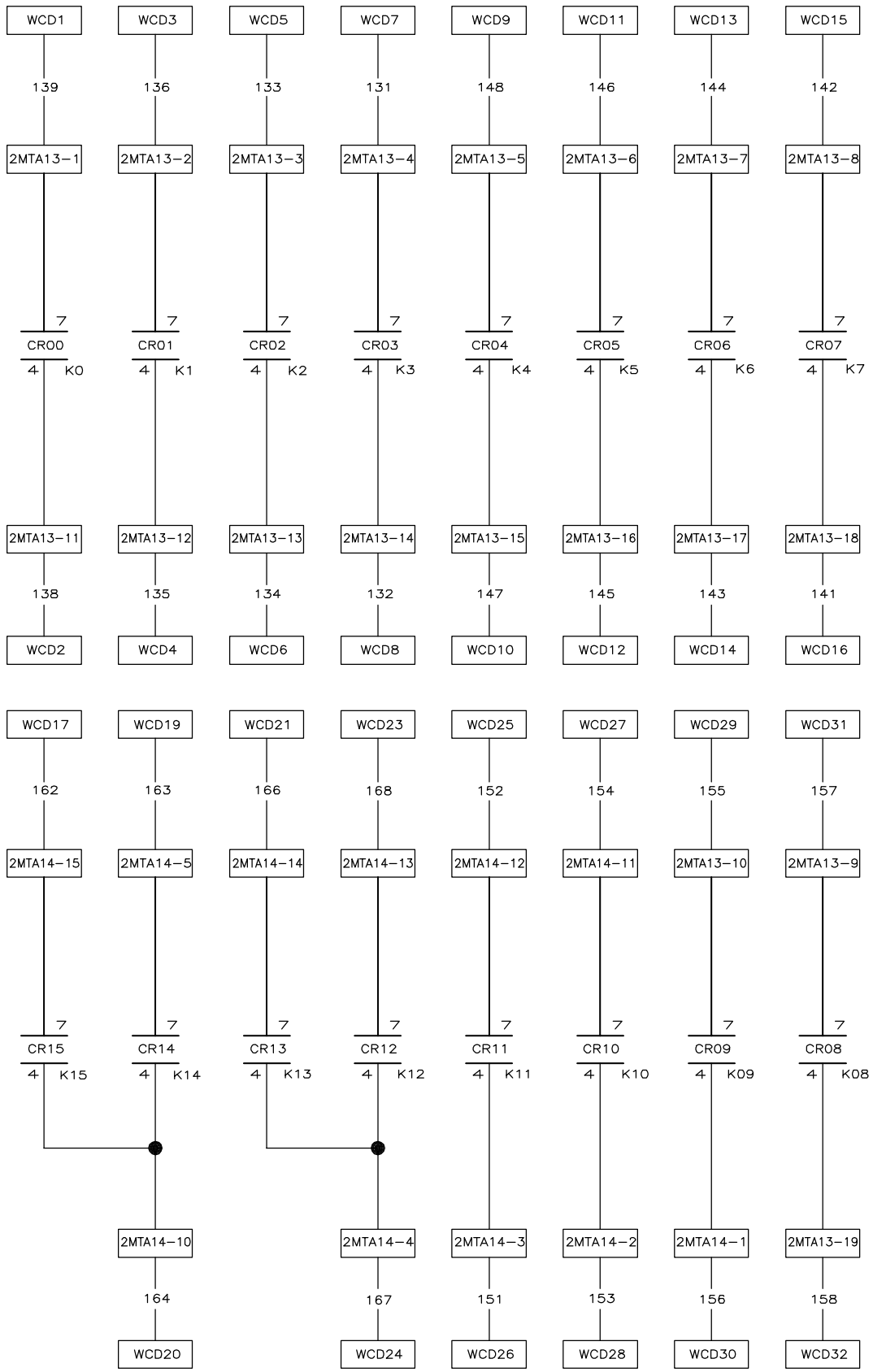

W6PR5SØDP
2017354B

W6PR5SØDP

MICRO 6 SYSTEMS MARK V–VI

SCHEMATIC: EXTRACTOR DRY CONTACT DATA PASS (24 OUTPUT BOARD #2)

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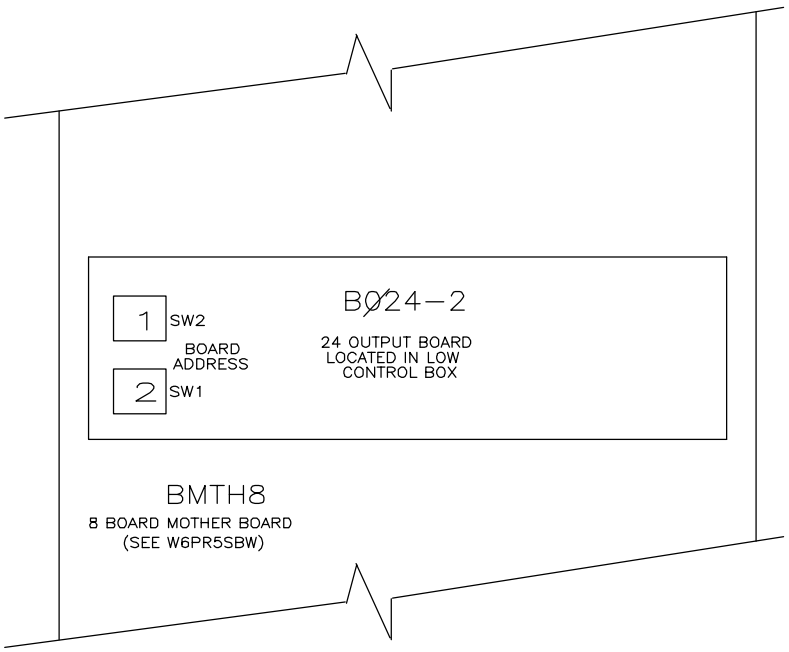
W6PR5SØDP
2017354B

NOTES:

CR00 = CUSTOMER A
CR01 = CUSTOMER B
CR02 = CUSTOMER C
CR03 = CUSTOMER D
CR04 = CUSTOMER E
CR05 = CUSTOMER F
CR06 = CUSTOMER G
CR07 = CUSTOMER H
CR08 = FORMULA A
CR09 = FORMULA B
CR10 = FORMULA C
CR11 = FORMULA D
CR12 = DRY CODES A
CR13 = DRY CODES B
CR14 = DRY CODES C
CR15 = DRY CODES D



WIRE COLORING CODE

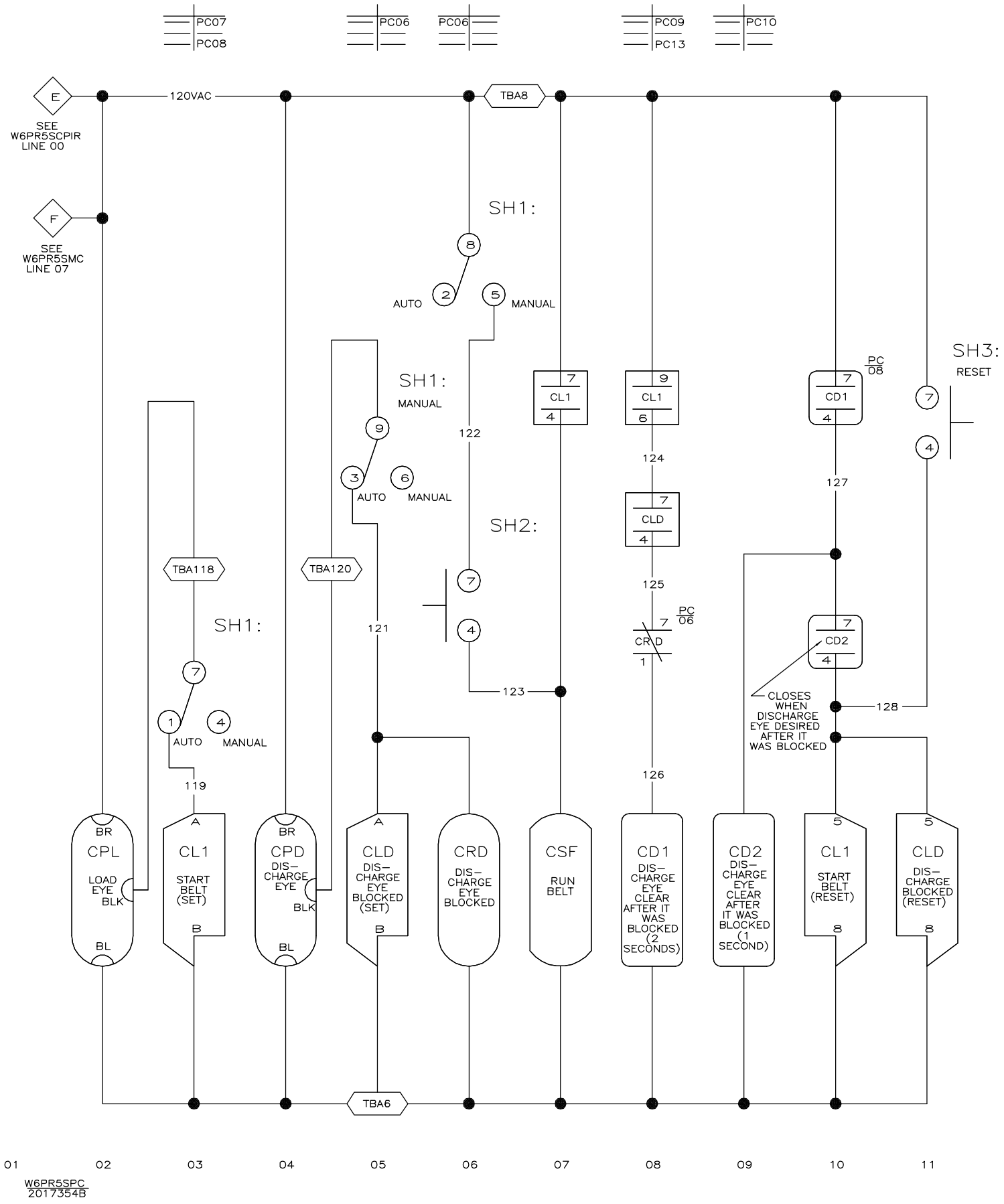
WIRE NO.	VOLTAGE	WIRE COLOR
103	+5VDC	BLUE
104	+12VDC	BLUE/ORANGE
105	–12VDC	BLUE/BLACK
7	SIGNAL GROUND	BLUE/WHITE
107	SERIAL HIGH	BLUE/RED
106	SERIAL LOW	BLUE/BLACK
6	CONTROL GROUND	RED/WHITE
24VAC	LOW VOLTAGE CONTROL	RED/BLUE
120VAC	HIGH VOLTAGE CONTROL	RED
INPUTS	INPUTS TO MICRO	BLUE/BLACK
OUTPUTS	OUTPUTS FROM MICRO	RED/BLACK

NOTES:

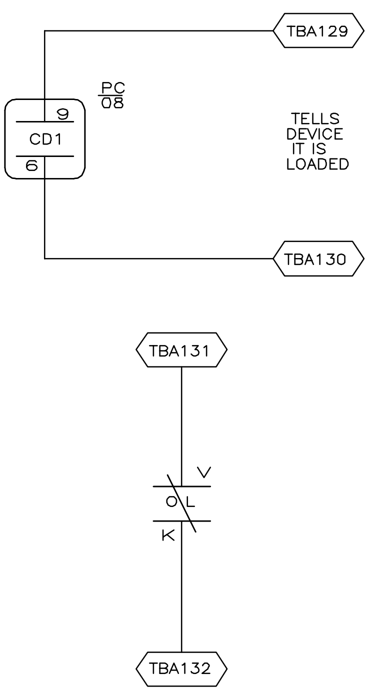
1. WCD IS LOCATED IN THE LOW VOLTAGE CONTROL BOX.

10 11 12 13 14 15 16

W6PR5SØDP
2017354B



W6PR5SPC
2017354B



OPERATION:

1. LOAD END EYE IS BLOCKED WHICH STARTS BELT RUNNING.
2. DISCHARGE END EYE IS BLOCKED.
3. WHEN DISCHARGE CLEARS FOR 2 SECONDS BELT RESETS.

W6PR5SPC

MICRO 6 SYSTEMS MARK V—VI

SCHEMATIC: INTERFACE BELT BETWEEN DEVICES

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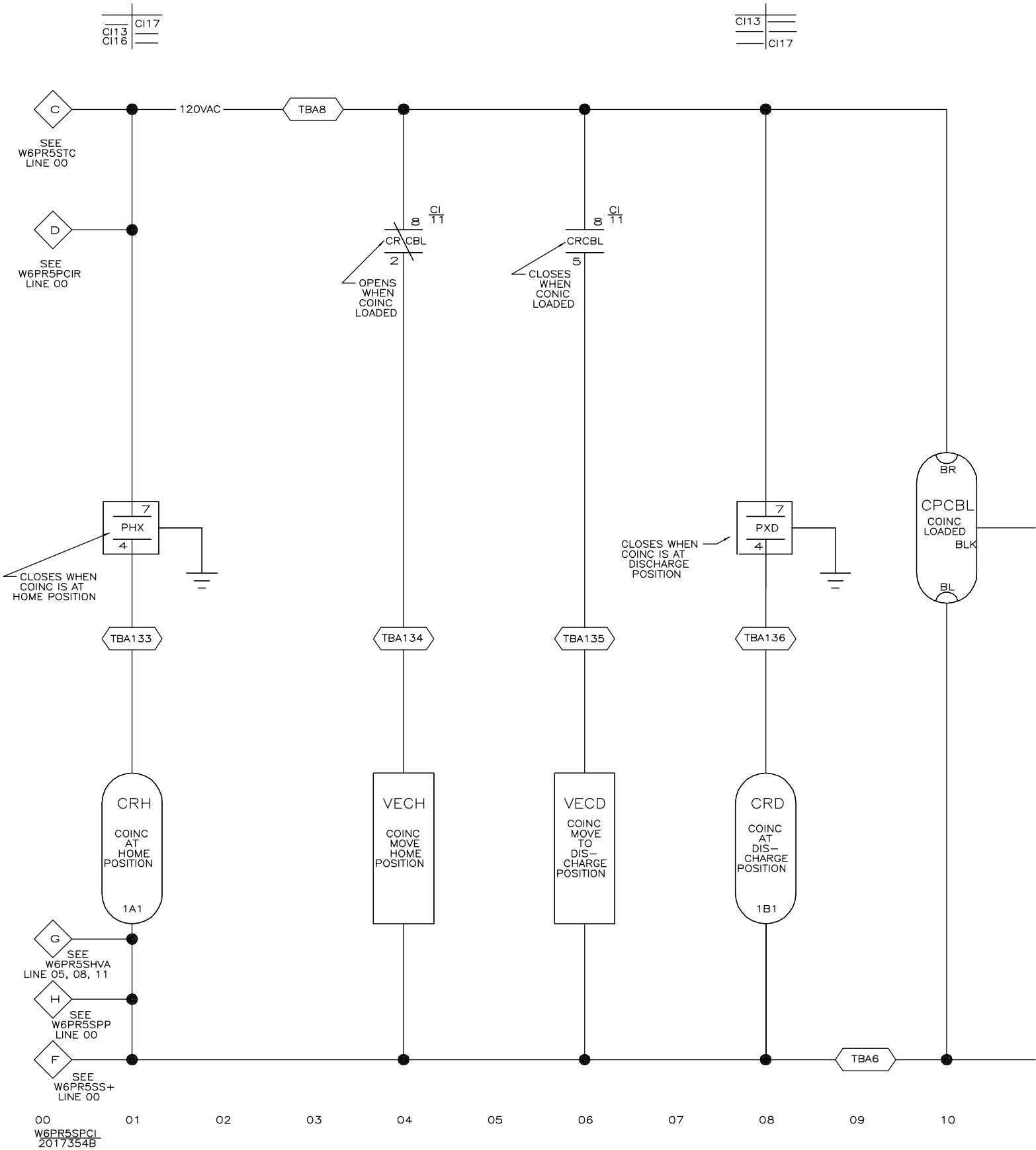
W6PR5SPC
2017354B

12 13 14 15 16 17 18 19


CI13
CI16
CI17
CI13
CI17
C
120VAC
TBA8
SEE
W6PR5STC
LINE 00
D
SEE
W6PR5PCIR
LINE 00
8
CI
11
CR
CBL
2
OPENS
WHEN
COINC
LOADED
8
CI
11
CRCBL
5
CLOSES
WHEN
CONIC
LOADED
BR
CPCBL
COINC
LOADED
BLK
BL
7
PHX
4
CLOSES WHEN
COINC IS AT
HOME POSITION
7
PXD
4
CLOSES WHEN
COINC IS AT
DISCHARGE
POSITION
TBA133
TBA134
TBA135
TBA136
CRH
COINC
AT
HOME
POSITION
1A1
VECH
COINC
MOVE
HOME
POSITION
VECD
COINC
MOVE
TO
DIS-
CHARGE
POSITION
CRD
COINC
AT
DIS-
CHARGE
POSITION
1B1
G
SEE
W6PR5SHVA
LINE 05, 08, 11
H
SEE
W6PR5SPP
LINE 00
F
SEE
W6PR5SS+
LINE 00
TBA6
00
01
02
03
04
05
06
07
08
09
10
W6PR5SPCI
2017354B

CI04 CI16 | CI06

SEE W6PR5SPD LINE 03

F

5

120VAC

CI 01
8
CR H
2

OPENS WHEN COINC IS AT HOME POSITION

138 CI 08
7
CR D
1

OPENS WHEN COINC IS AT DISCHARGE POSITION

TBA139

EB
BUZZER COINC PIVOTING

140

EF
FLASHING COINC PIVOTING

TBA137

CRCBL
COINC LOADED
1A2

CONNECTS TO 1MTA4–14

141

CI 01
3
CR H
9

CLOSES WHEN COINC IS AT HOME POSITION

REMOVE WIRE IN 1MTA13–6 AND CONNECT HERE

142

CI 01
7
CRH
4

CLOSES WHEN COINC IS AT HOME POSITION

CI 08
9
CRD
6

CLOSES WHEN COINC IS AT DIS–CHARGE POSITION

143

CI 11
9
CR CBL
3

OPENS WHEN COINC PHOTO–EYE IS BLOCKED

144

CONNECT WIRE INTO 1MTA13–6

SEE W6PR5SIMT LINE 16

D

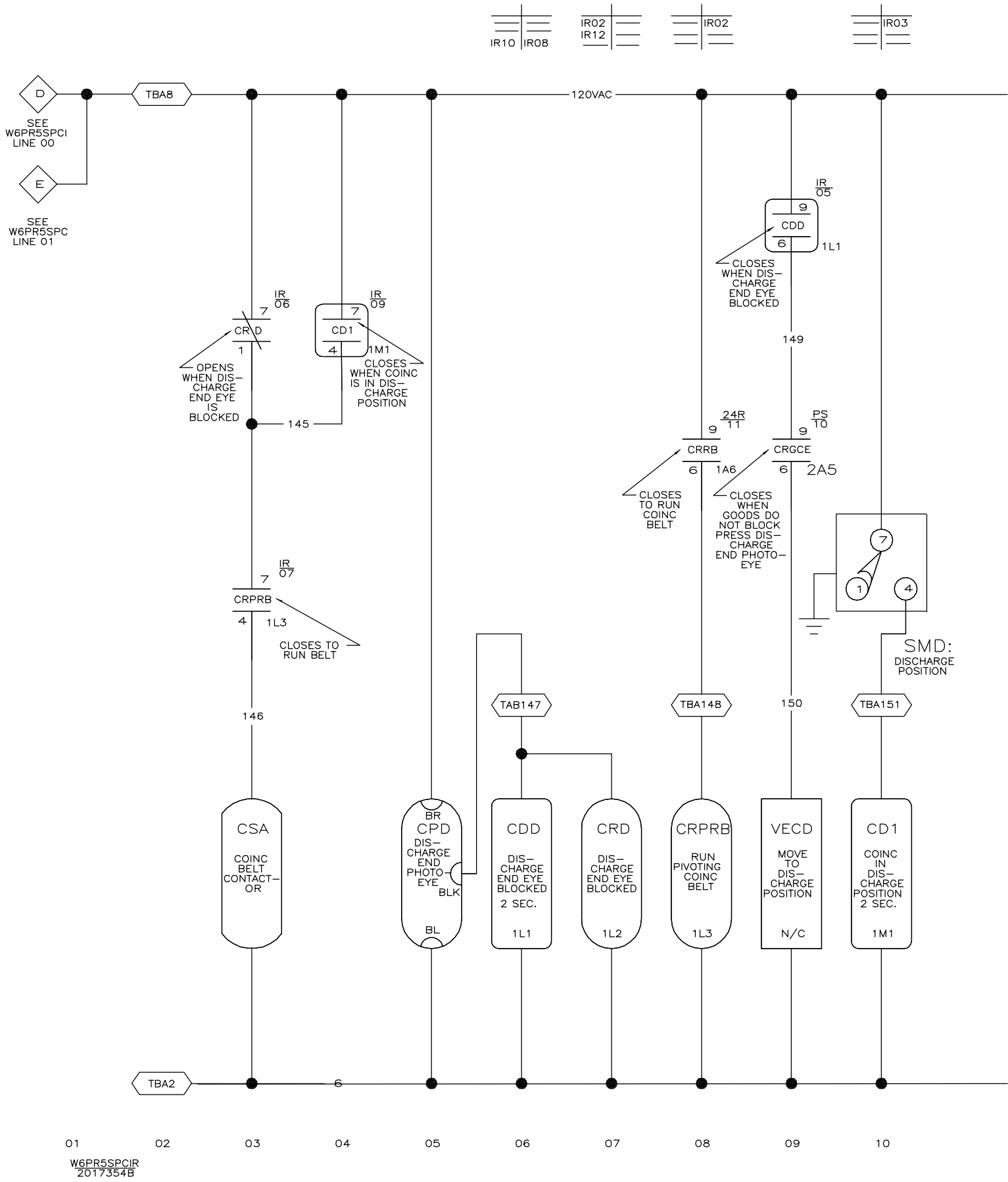
7

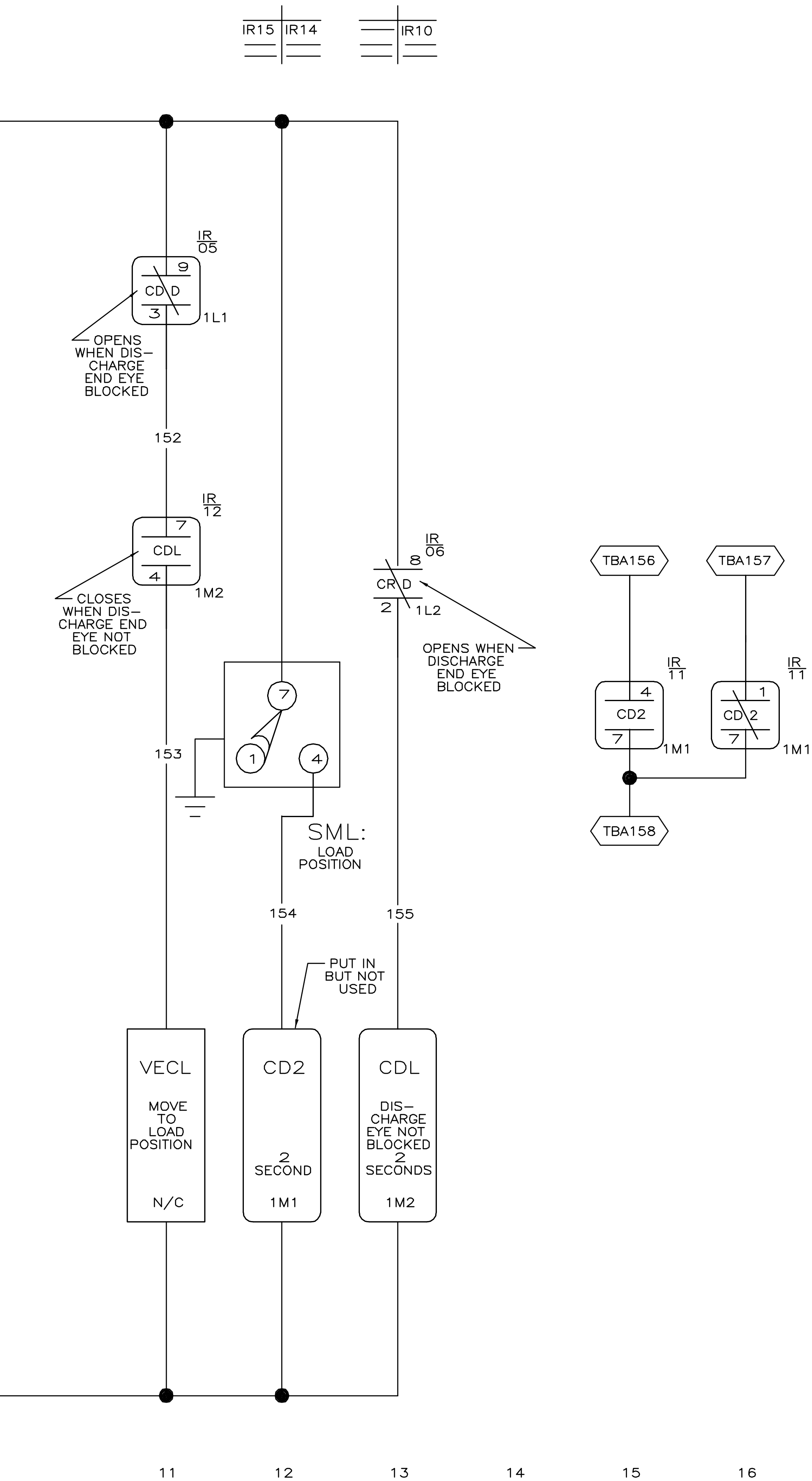
11 12 13 14 15 16 17

W6PR5SPCI
MICRO 6 SYSTEMS MARK V–VI
SCHEMATIC: PIVOTING COINC
PELLERIN MILNOR CORPORATION

NOTES:

1.) D.C. PHOTOEYE CPCBL IS REPLACED WITH A.C. CPCBL


IR10 IR08
IR02 IR12
IR02
IR03
D
SEE W6PR5SPCI LINE 00
E
SEE W6PR5SPC LINE 01
TBA8
120VAC
IR 06
7
CR D
1
OPENS WHEN DIS-CHARGE END EYE IS BLOCKED
IR 09
7
CD1
4
1M1
CLOSES WHEN COINC IS IN DIS-CHARGE POSITION
145
IR 05
9
CDD
6
1L1
CLOSES WHEN DIS-CHARGE END EYE BLOCKED
149
24R 11
9
CRRB
6
1A6
CLOSES TO RUN COINC BELT
PS 10
9
CRGCE
6
2A5
CLOSES WHEN GOODS DO NOT BLOCK PRESS DIS-CHARGE END PHOTO-EYE
7
1
4
SMD: DISCHARGE POSITION
IR 07
7
CRPRB
4
1L3
CLOSES TO RUN BELT
146
TAB147
TBA148
150
TBA151
CSA
COINC BELT CONTACT-OR
BR
CPD
DIS-CHARGE END PHOTO-EYE
BLK
BL
CDD
DIS-CHARGE END EYE BLOCKED
2 SEC.
1L1
CRD
DIS-CHARGE END EYE BLOCKED
1L2
CRPRB
RUN PIVOTING COINC BELT
1L3
VECD
MOVE TO DIS-CHARGE POSITION
N/C
CD1
COINC IN DIS-CHARGE POSITION
2 SEC.
1M1
TBA2
6
01
02
03
04
05
06
07
08
09
10
W6PR5SPCIR
2017354B



W6PR5SPCIR
2017354B

W6PR5SPCIR

MICRO 6 SYSTEMS MARK V—VI

SHCEMATIC: RELAY LOGIC PIVOTING COINC

(GOES BETWEEN A PRESS AND A COINC)

110V1P50HZ/120V60HZ

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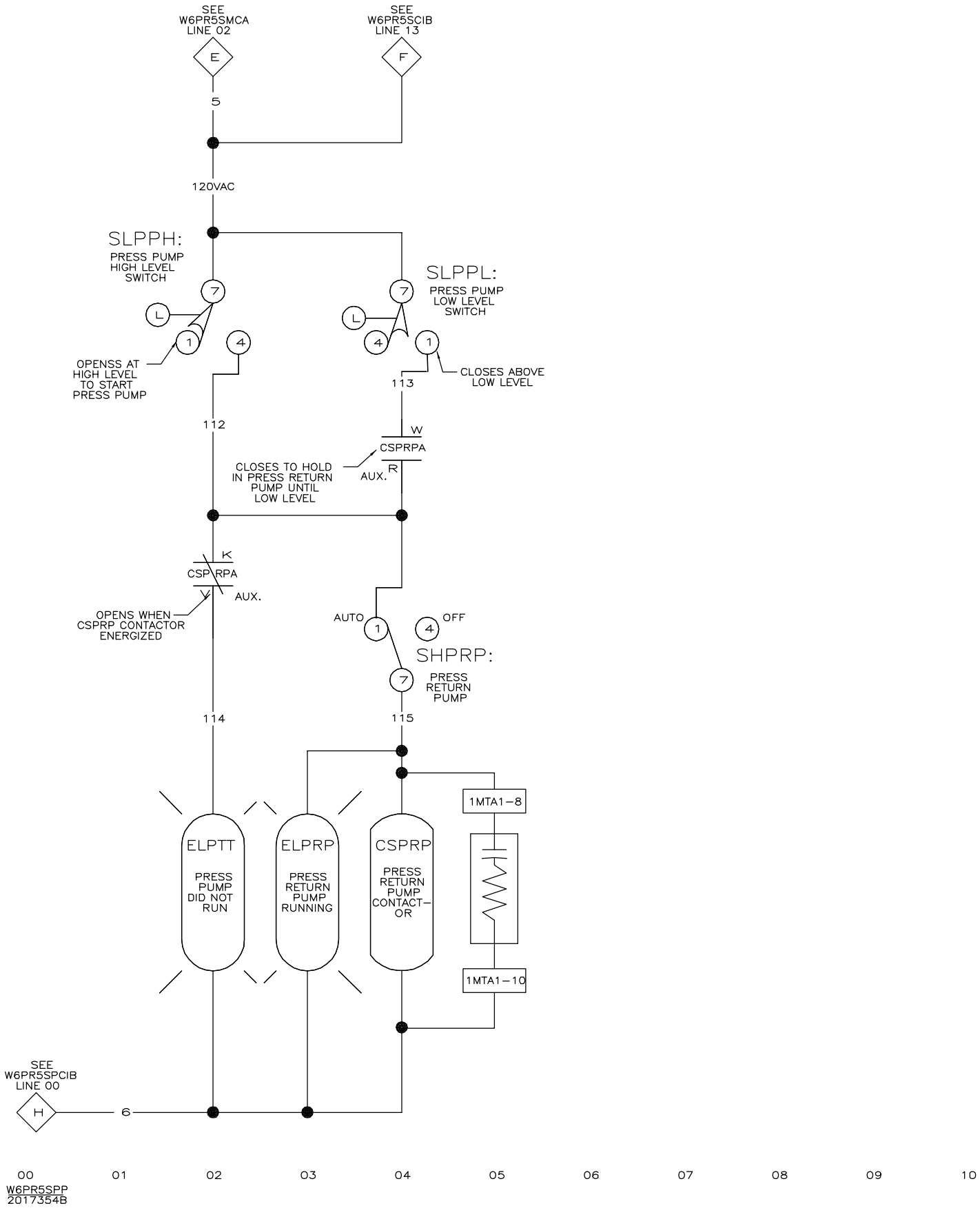
W6PR5SPCIR
2017354B


SEE W6PR5SMCA LINE 02
E
SEE W6PR5SCIB LINE 13
F
5
120VAC
SLPPH:
PRESS PUMP HIGH LEVEL SWITCH
7
L
1
4
OPENSS AT HIGH LEVEL TO START PRESS PUMP
SLPPL:
PRESS PUMP LOW LEVEL SWITCH
7
L
4
1
CLOSES ABOVE LOW LEVEL
113
112
W
CSPRPA
R
AUX.
CLOSES TO HOLD IN PRESS RETURN PUMP UNTIL LOW LEVEL
K
CSPRPA
AUX.
OPENS WHEN CSPRP CONTACTOR ENERGIZED
AUTO
1
4
OFF
SHPRP:
7
PRESS RETURN PUMP
114
115
1MTA1–8
ELPTT
PRESS PUMP DID NOT RUN
ELPRP
PRESS RETURN PUMP RUNNING
CSPRP
PRESS RETURN PUMP CONTACT–OR
1MTA1–10
SEE W6PR5SPCIB LINE 00
H
6
00
01
02
03
04
05
06
07
08
09
10
W6PR5SPP
2017354B

11 12 13 14

W6PR5SPP

MICRO 6 SYSTEM MARK V—VI

SCHEMATIC: PRESS RETURN PUMP INTERFACE

110V50HZ/120V60HZ—24V50HZ/24V60HZ

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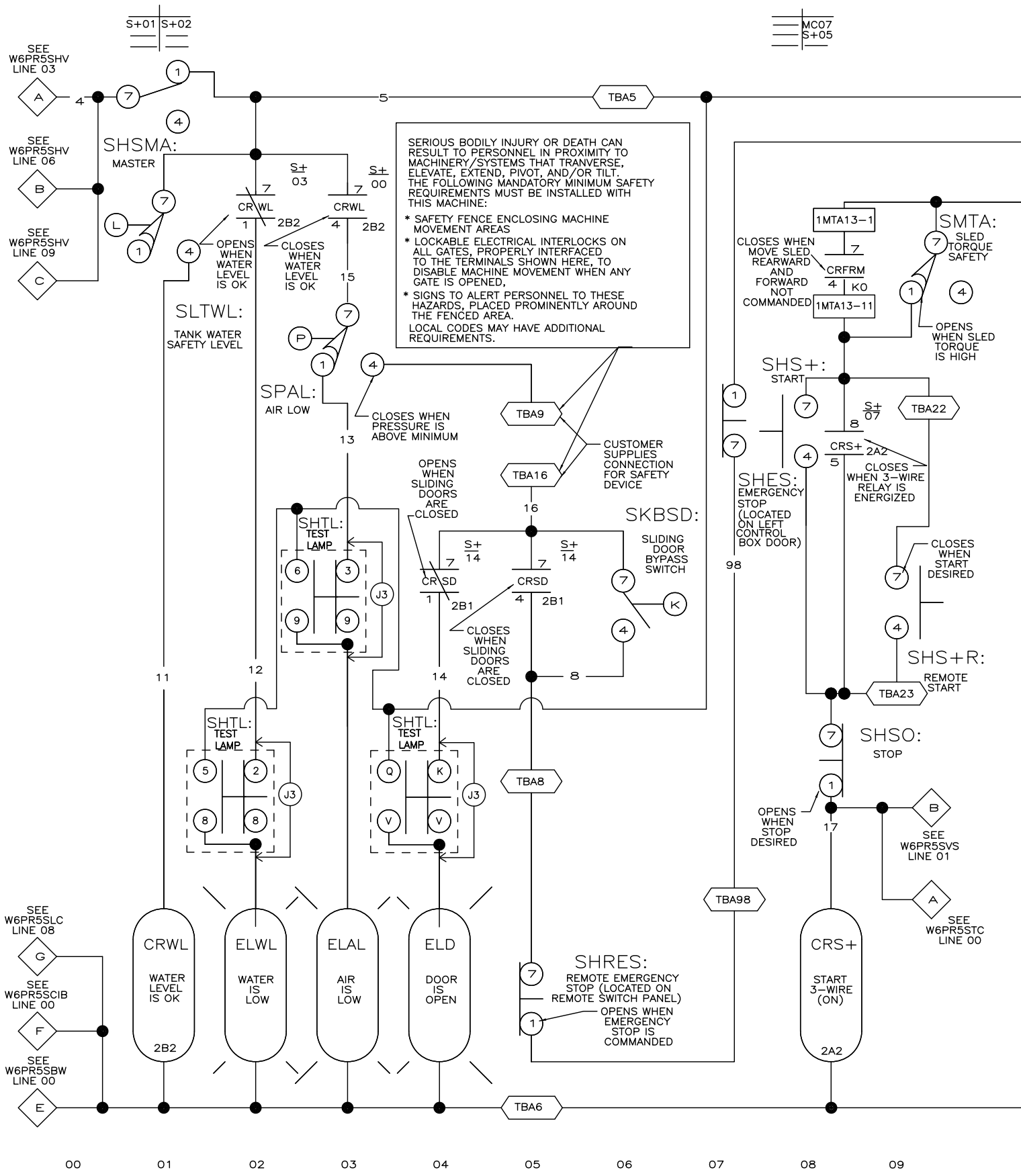
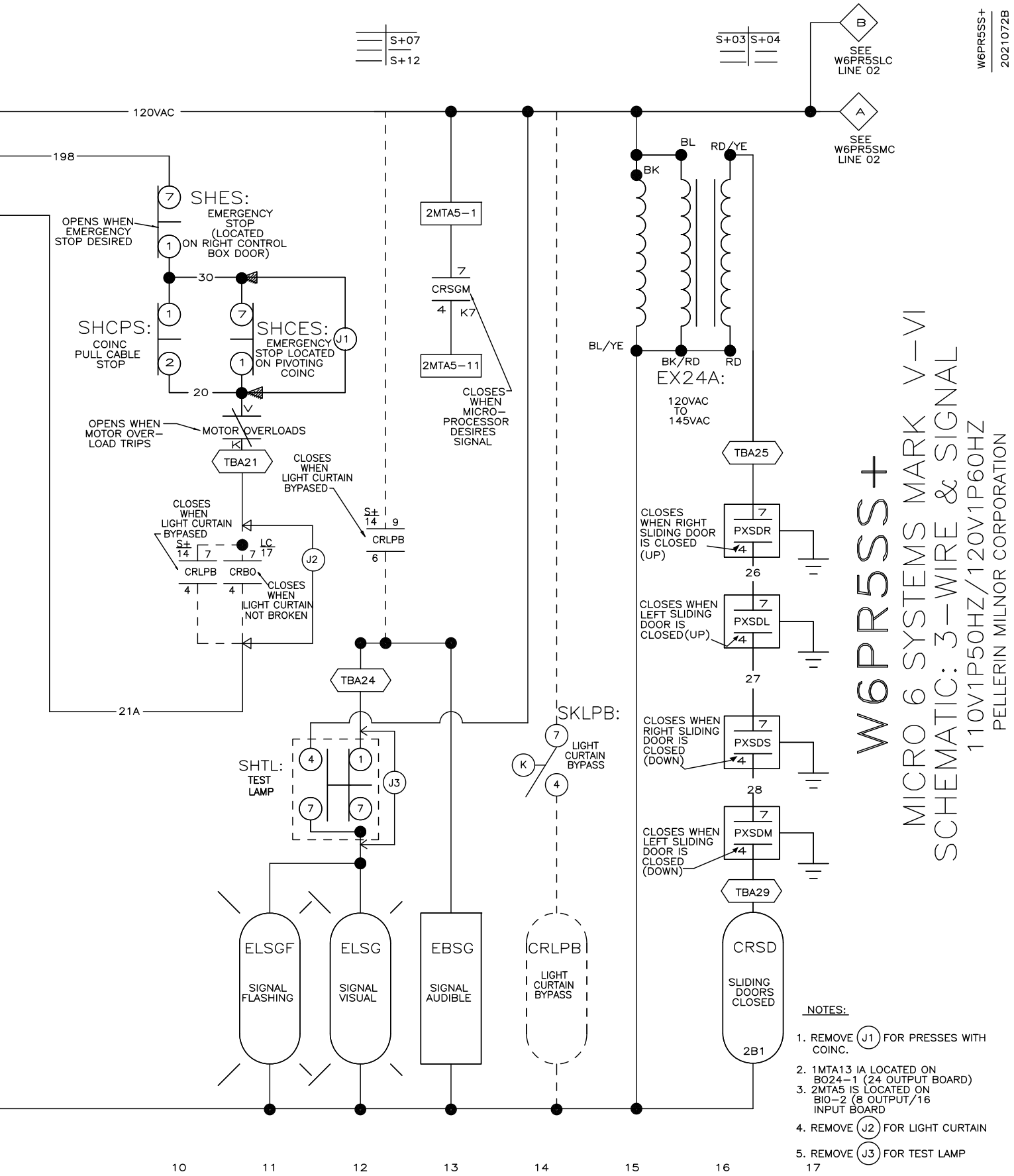
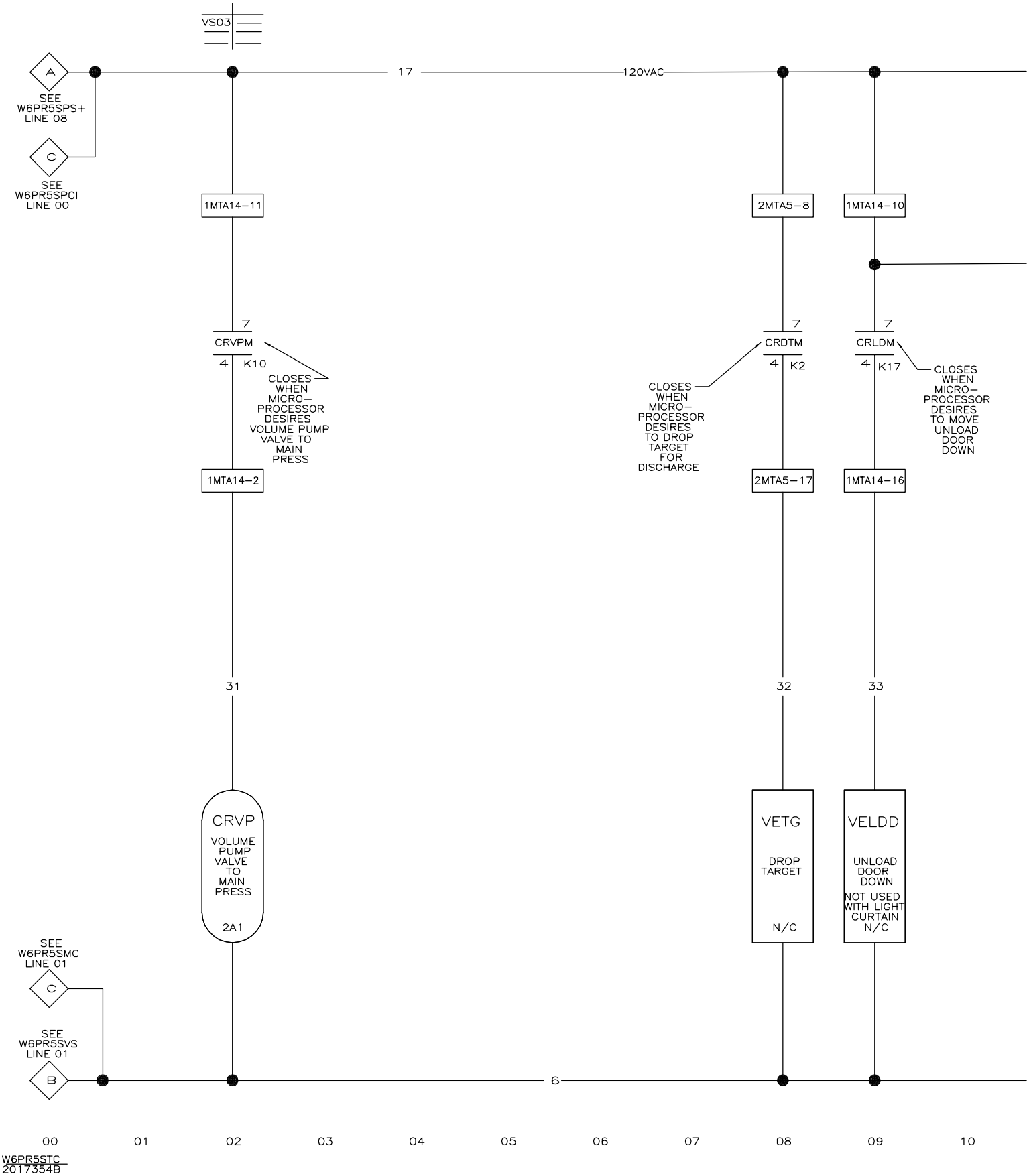
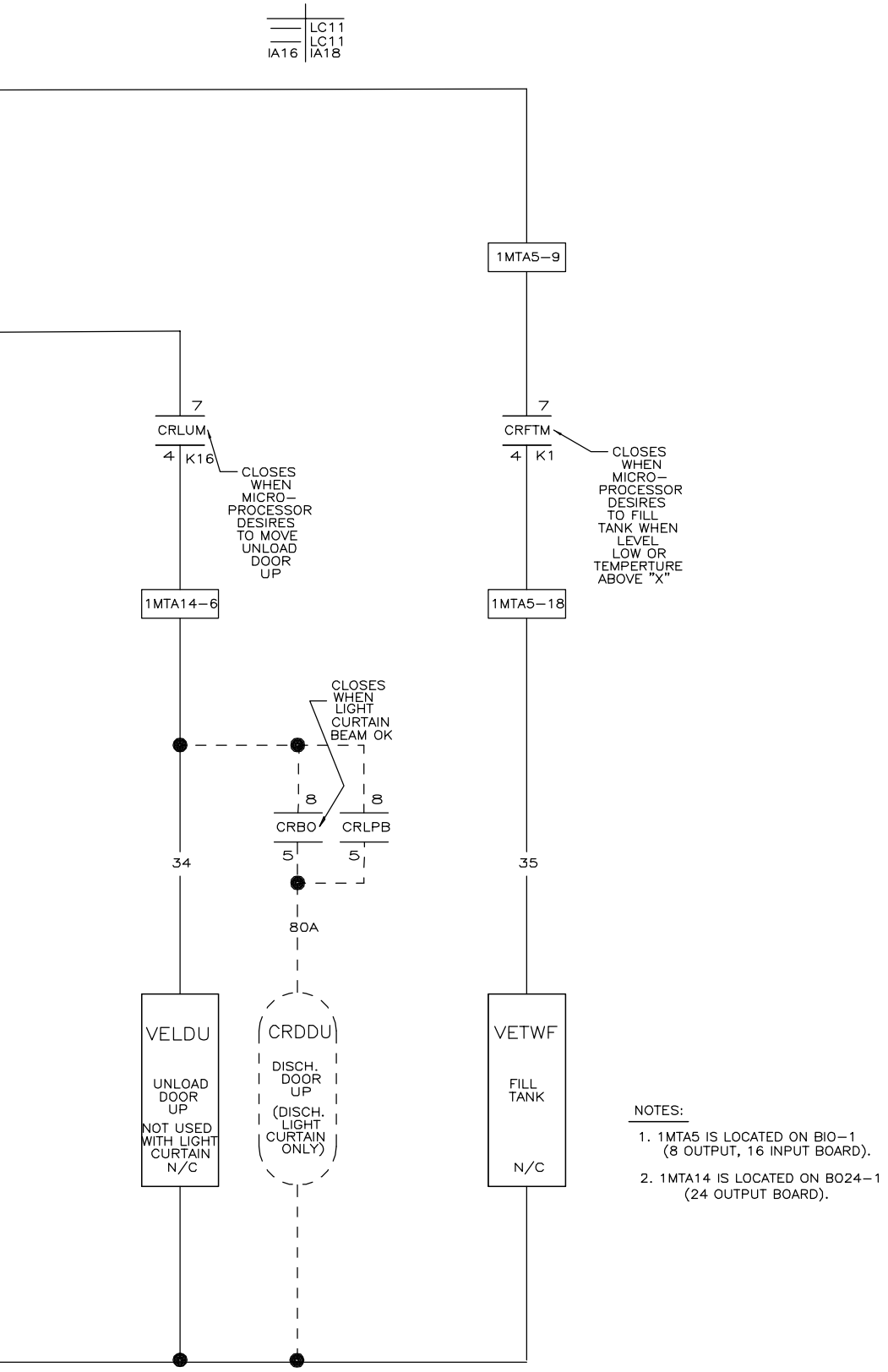
W6PR5SPP
2017354B

W6PR5SPP
2017354B


S+01 S+02
MC07 S+05
SEE W6PR5SHV LINE 03
SEE W6PR5SHV LINE 06
SEE W6PR5SHV LINE 09
TBA5
SHSMA:
MASTER
SERIOUS BODILY INJURY OR DEATH CAN RESULT TO PERSONNEL IN PROXIMITY TO MACHINERY/SYSTEMS THAT TRANVERSE, ELEVATE, EXTEND, PIVOT, AND/OR TILT. THE FOLLOWING MANDATORY MINIMUM SAFETY REQUIREMENTS MUST BE INSTALLED WITH THIS MACHINE:
* SAFETY FENCE ENCLOSING MACHINE MOVEMENT AREAS
* LOCKABLE ELECTRICAL INTERLOCKS ON ALL GATES, PROPERLY INTERFACED TO THE TERMINALS SHOWN HERE, TO DISABLE MACHINE MOVEMENT WHEN ANY GATE IS OPENED,
* SIGNS TO ALERT PERSONNEL TO THESE HAZARDS, PLACED PROMINENTLY AROUND THE FENCED AREA.
LOCAL CODES MAY HAVE ADDITIONAL REQUIREMENTS.
S+ 03
S+ 00
CRWL
OPENS WHEN WATER LEVEL IS OK
CLOSES WHEN WATER LEVEL IS OK
SLTWL:
TANK WATER SAFETY LEVEL
SPAL:
AIR LOW
CLOSES WHEN PRESSURE IS ABOVE MINIMUM
TBA9
TBA16
CUSTOMER SUPPLIES CONNECTION FOR SAFETY DEVICE
OPENS WHEN SLIDING DOORS ARE CLOSED
SHTL:
TEST LAMP
SKBSD:
SLIDING DOOR BYPASS SWITCH
CRSD
CLOSES WHEN SLIDING DOORS ARE CLOSED
1MTA13-1
1MTA13-11
CRFRM
KO
CLOSES WHEN MOVE SLED REARWARD AND FORWARD NOT COMMANDED
SMTA:
SLED TORQUE SAFETY
OPENS WHEN SLED TORQUE IS HIGH
SHS+:
START
S+ 07
TBA22
CRS+
CLOSES WHEN 3-WIRE RELAY IS ENERGIZED
SHES:
EMERGENCY STOP (LOCATED ON LEFT CONTROL BOX DOOR)
CLOSES WHEN START DESIRED
SHS+R:
REMOTE START
TBA23
SHSO:
STOP
OPENS WHEN STOP DESIRED
SEE W6PR5SVS LINE 01
SEE W6PR5STC LINE 00
TBA98
TBA8
SHRES:
REMOTE EMERGENCY STOP (LOCATED ON REMOTE SWITCH PANEL)
OPENS WHEN EMERGENCY STOP IS COMMANDED
SEE W6PR5SLC LINE 08
SEE W6PR5SCIB LINE 00
SEE W6PR5SBW LINE 00
CRWL
WATER LEVEL IS OK
2B2
ELWL
WATER IS LOW
ELAL
AIR IS LOW
ELD
DOOR IS OPEN
CRS+
START 3-WIRE (ON)
2A2
TBA6
00 01 02 03 04 05 06 07 08 09
W6PR5SS+
2021072B


W6PR5SS+
2021072B
S+07
S+12
S+03 S+04
B
SEE W6PR5SLC LINE 02
A
SEE W6PR5SMC LINE 02
120VAC
198
SHES:
EMERGENCY STOP (LOCATED ON RIGHT CONTROL BOX DOOR)
OPENS WHEN EMERGENCY STOP DESIRED
30
SHCPS:
COINC PULL CABLE STOP
SHCES:
EMERGENCY STOP LOCATED ON PIVOTING COINC
J1
20
OPENS WHEN MOTOR OVER-LOAD TRIPS
MOTOR OVERLOADS
TBA21
CLOSES WHEN LIGHT CURTAIN BYPASED
CLOSES WHEN LIGHT CURTAIN BYPASED
CRLPB
CRBO
J2
CLOSES WHEN LIGHT CURTAIN NOT BROKEN
TBA24
21A
2MTA5-1
CRSGM
K7
2MTA5-11
CLOSES WHEN MICRO-PROCESSOR DESIRES SIGNAL
BL
RD/YE
BK
BL/YE
BK/RD
RD
EX24A:
120VAC TO 145VAC
TBA25
CLOSES WHEN RIGHT SLIDING DOOR IS CLOSED (UP)
PXSDR
26
CLOSES WHEN LEFT SLIDING DOOR IS CLOSED(UP)
PXSDL
27
CLOSES WHEN RIGHT SLIDING DOOR IS CLOSED (DOWN)
PXSDS
28
CLOSES WHEN LEFT SLIDING DOOR IS CLOSED (DOWN)
PXSDM
TBA29
SKLPB:
LIGHT CURTAIN BYPASS
SHTL:
TEST LAMP
J3
ELSGF
SIGNAL FLASHING
ELSG
SIGNAL VISUAL
EBSG
SIGNAL AUDIBLE
CRLPB
LIGHT CURTAIN BYPASS
CRSD
SLIDING DOORS CLOSED
2B1
10
11
12
13
14
15
16
17
W6PR5SS+
MICRO 6 SYSTEMS MARK V-VI
SCHEMATIC: 3-WIRE & SIGNAL
110V1P50HZ/120V1P60HZ
PELLERIN MILNOR CORPORATION
NOTES:
1. REMOVE J1 FOR PRESSES WITH COINC.
2. 1MTA13 IA LOCATED ON BO24-1 (24 OUTPUT BOARD)
3. 2MTA5 IS LOCATED ON BI0-2 (8 OUTPUT/16 INPUT BOARD
4. REMOVE J2 FOR LIGHT CURTAIN
5. REMOVE J3 FOR TEST LAMP
W6PR5SS+
2021072B


VS03
A
SEE W6PR5SPS+ LINE 08
C
SEE W6PR5SPCI LINE 00
17
120VAC
1MTA14–11
2MTA5–8
1MTA14–10
7
CRVPM
4
K10
CLOSES WHEN MICRO–PROCESSOR DESIRES VOLUME PUMP VALVE TO MAIN PRESS
7
CRDTM
4
K2
CLOSES WHEN MICRO–PROCESSOR DESIRES TO DROP TARGET FOR DISCHARGE
7
CRLDM
4
K17
CLOSES WHEN MICRO–PROCESSOR DESIRES TO MOVE UNLOAD DOOR DOWN
1MTA14–2
2MTA5–17
1MTA14–16
31
32
33
CRVP
VOLUME PUMP VALVE TO MAIN PRESS
2A1
VETG
DROP TARGET
N/C
VELDD
UNLOAD DOOR DOWN
NOT USED WITH LIGHT CURTAIN
N/C
SEE W6PR5SMC LINE 01
C
SEE W6PR5SVS LINE 01
B
6
00
01
02
03
04
05
06
07
08
09
10
W6PR5STC
2017354B

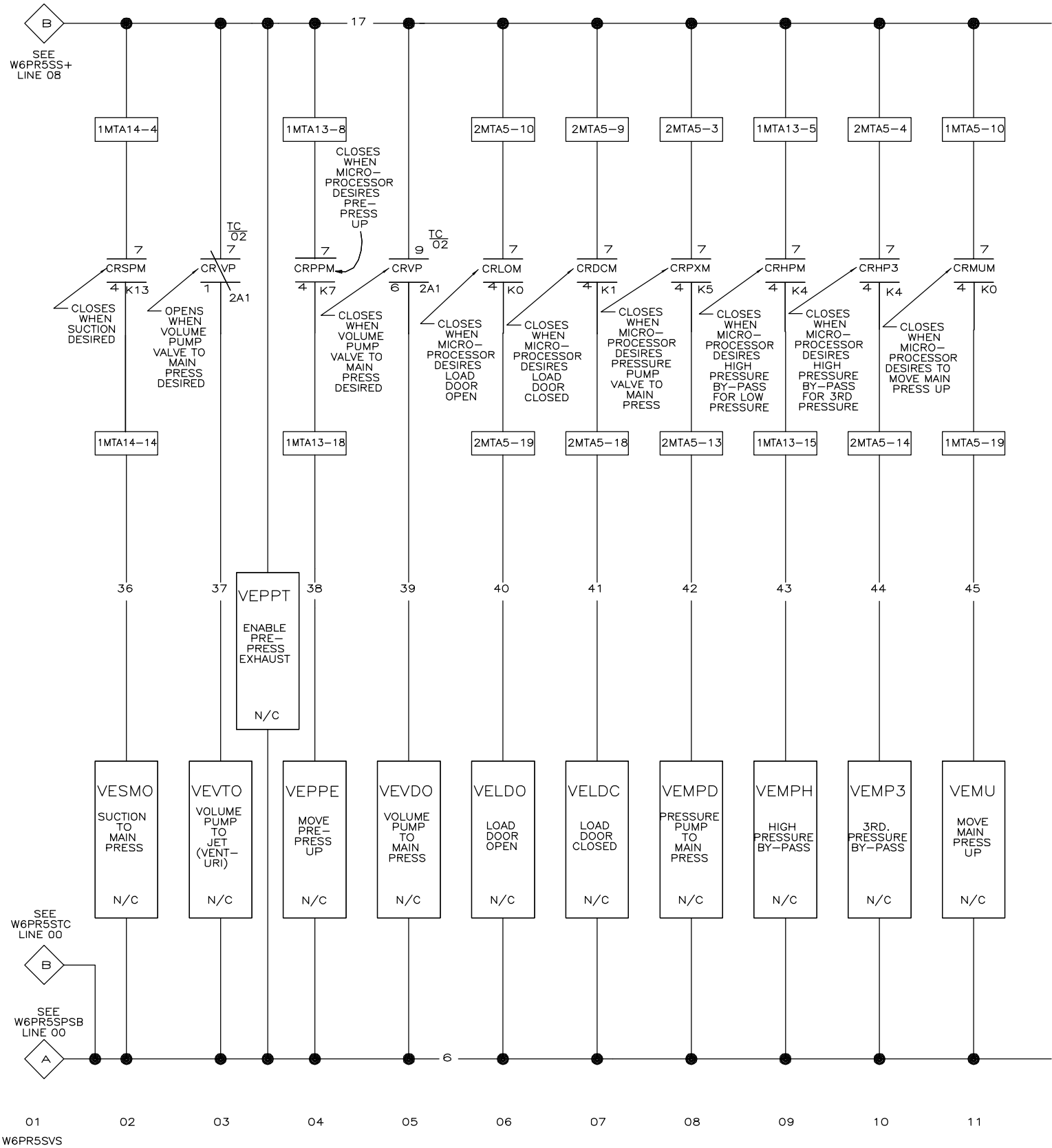


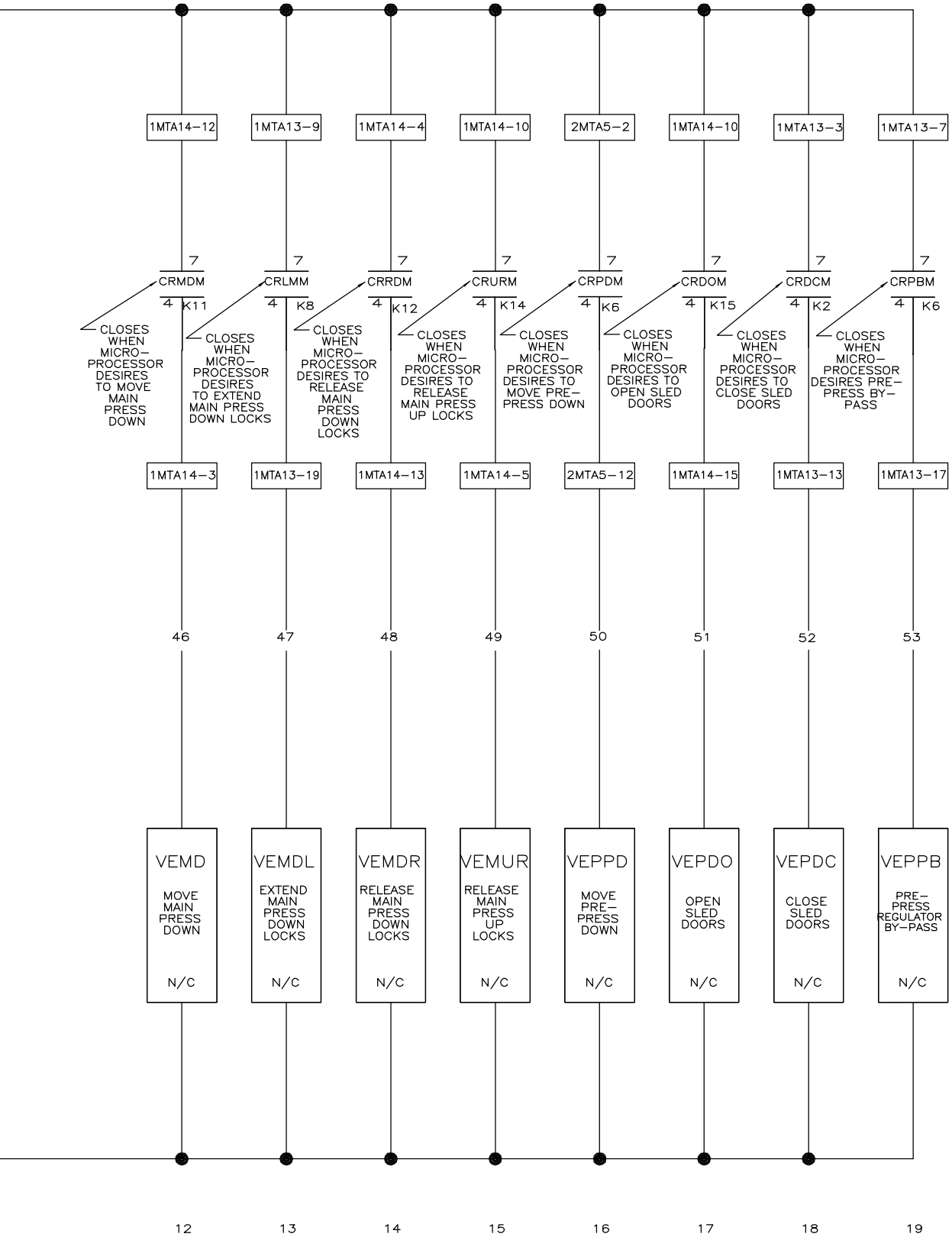
NOTES:

1. 1MTA5 IS LOCATED ON BIO–1 (8 OUTPUT, 16 INPUT BOARD).
2. 1MTA14 IS LOCATED ON BO24–1 (24 OUTPUT BOARD).

W6PR5STC
MICRO 6 SYSTEMS MARK V–VI
SCHEMATIC: CONTROL RELAYS
FILL TANK OPERATIONS
110VIP50HZ/120VIP60HZ
PELLERIN MILNOR CORPORATION

W6PR5STC
2017354B


B
SEE W6PR5SS+ LINE 08
17
1MTA14–4
1MTA13–8
2MTA5–10
2MTA5–9
2MTA5–3
1MTA13–5
2MTA5–4
1MTA5–10
CLOSES WHEN MICRO–PROCESSOR DESIRES PRE–PRESS UP
TC 02
7
CRSPM
4 K13
CLOSES WHEN SUCTION DESIRED
CRVP
1 2A1
OPENS WHEN VOLUME PUMP VALVE TO MAIN PRESS DESIRED
CRPPM
4 K7
CLOSES WHEN VOLUME PUMP VALVE TO MAIN PRESS DESIRED
9
6 2A1
CLOSES WHEN MICRO–PROCESSOR DESIRES LOAD DOOR OPEN
CRLOM
4 K0
CLOSES WHEN MICRO–PROCESSOR DESIRES LOAD DOOR CLOSED
CRDCM
4 K1
CLOSES WHEN MICRO–PROCESSOR DESIRES PRESSURE PUMP VALVE TO MAIN PRESS
CRPXM
4 K5
CLOSES WHEN MICRO–PROCESSOR DESIRES HIGH PRESSURE BY–PASS FOR LOW PRESSURE
CRHPM
4 K4
CLOSES WHEN MICRO–PROCESSOR DESIRES HIGH PRESSURE BY–PASS FOR 3RD PRESSURE
CRHP3
4 K4
CLOSES WHEN MICRO–PROCESSOR DESIRES TO MOVE MAIN PRESS UP
CRMUM
4 K0
1MTA14–14
1MTA13–18
2MTA5–19
2MTA5–18
2MTA5–13
1MTA13–15
2MTA5–14
1MTA5–19
36
37
38
39
40
41
42
43
44
45
VEPPT
ENABLE PRE–PRESS EXHAUST
N/C
VESMO
SUCTION TO MAIN PRESS
N/C
VEVTO
VOLUME PUMP TO JET (VENT–URI)
N/C
VEPPE
MOVE PRE–PRESS UP
N/C
VEVDO
VOLUME PUMP TO MAIN PRESS
N/C
VELDO
LOAD DOOR OPEN
N/C
VELDC
LOAD DOOR CLOSED
N/C
VEMPD
PRESSURE PUMP TO MAIN PRESS
N/C
VEMPH
HIGH PRESSURE BY–PASS
N/C
VEMP3
3RD. PRESSURE BY–PASS
N/C
VEMU
MOVE MAIN PRESS UP
N/C
SEE W6PR5STC LINE 00
B
SEE W6PR5SPSB LINE 00
A
6
01 02 03 04 05 06 07 08 09 10 11
W6PR5SVS
2017354B



W6PR5SVS
MICRO 6 SYSTEMS MARK V–VI
SCHEMATIC: ELECTRICAL VALVES
110V1P50HZ/120V1P60HZ
PELLERIN MILNOR CORPORATION

NOTES:

2. 1MTA5 IS LOCATED ON BIO–1 (8 OUTPUT/16INPUT BOARD)
3. 2MTA5 IS LOCATED ON BIO–2 (8 OUTPUT/16 INPUT BOARD)