Published Manual Number/ECN: ME6HFEL1AE/2016064A

- **Publishing System: TPAS2**
- **Access date: 02/04/2016**
- **Document ECNs: Latest**

Schematic/Electrical Parts

Front End Loader Controller

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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ME6HFEL1AE/16064A

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COMPONENT PARTS LIST

W6FELPL/2016064N

COMPONENT NUMBER	FUNCTION OF THIS COMPONENT	WHERE TO FIND THIS COMPONENT	MILNOR P/N	DESCRIPTION	LOCATION
BA	**>>PRINTED CIRCUIT BOARDS**				
BBB-1	BOARD-BATTERY BACKUP	W6FELBW	08BSBB1T	BOARD:SER BATT BACKUP-TEST	CONTROLLER BX
BDVFD	DISPLAY-MICROPROCESSOR	W6FELBWA	08BSEVFD5V	BD:SER VFD.2LINE-19200B-TEST	CONTROLLER BX
BIO-1	BOARD-8 OUTPUT/16 INPUT	W6FELA	08BS816BT	BD:SERIAL 8OUT 16 IN-TEST	CONTROLLER BX
BIO-2	BOARD-8 OUTPUT/16 INPUT	W6FELB	08BS816BT	BD:SERIAL 8OUT 16 IN-TEST	CONTROLLER BX
BIO-3	BOARD-8 OUTPUT/16 INPUT	W6FELC	08BS816BT	BD:SERIAL 8OUT 16 IN-TEST	CONTROLLER BX
BIO-4	BOARD-8 OUTPUT/16 INPUT	W6FELD	08BS816BT	BD:SERIAL 8OUT 16 IN-TEST	CONTROLLER BX
BIO-5	BOARD-8 OUTPUT/16 INPUT	W6FELE	08BS816BT	BD:SERIAL 8OUT 16 IN-TEST	CONTROLLER BX
BPB	BOARD-PROCESSOR	W6FELBW	08BSPDT	8088 PROCESSOR -> TESTED	CONTROLLER BX
BPB	BOARD-PROCESSOR	W6FELBWA	08BSPE2T	SERIAL 186 PROC BD+FP->TEST	CONTROLLER BX
CD	**>>RELAY-TIME DELAY**				
CDBM	DELAY-BELT MOVEMENT	W6FELFR0	09CA030037	ADJUSTABLE TIME DELAY 30S OMRON	LOADING BELT
CP	**>>PHOTOEYES**				
CPPEF	PHOTOEYE-FORWARD	W6FELFR0	09RPE011	PHOTOEYE VALU-BEAM 10-30DC	END OF BELT
CPPER	PHOTOEYE-REVERSE	W6FELFR0	09RPE011	PHOTOEYE VALU-BEAM 10-30DC	END OF BELT
CR	**>>RELAY-PILOT OR CONTROL**				
CRFP	RELAY-FOOT PEDAL	W6FELFRO	09C024D37	4PDT "KH" 110/120V	LOADING BELT
CRM	RELAY-MANUAL ENABLE	W6FELFR0	09C024D37	4PDT "KH" 110/120V	LOADING BELT
CRPEF	RELAY-PHOTOEYE FORWARD	W6FELFR0	09C024E24	RELAY 4PDT DIFGLD 14PIN 24DC	LOADING BELT
CRRBF	RELAY-RUN BELT FORWARD	W6FELFR0	09C024D37	4PDT "KH" 110/120V	LOADING BELT
CRRBR	RELAY-RUN BELT REVERSE	W6FELFR0	09C024D37	4PDT "KH" 110/120V	LOADING BELT
CRS+	RELAY-3-WIRE	W3FELFR0	09C024D37	4PDT "KH" 110/120V	LOADING BELT
CS	**>>CONTACTOR-MOTOR STARTER**				
CSRBF	CONTACTOR-RUN BELT FORWARD	W6FELFR0	09MR08B337	12A 3P REV+2N/C 120V5/6 IEC	LOADING BELT
CSRBR	CONTACTOR-RUN BELT REVERSE	W6FELFR0	09MR08B337	12A 3P REV+2N/C 120V5/6 IEC	LOADING BELT
EB	**>>BUZZER OR AUDIBLE SIGNAL**				
EBBM	HORN-MOVING	W6FELFR0	09H020	ALARM SONALERT 115V	LOADING BELT
ED	**>>DISPLAY-ELECTRONIC**				
EDM	DISPLAY-MICROPROCESSOR	W6FELKPD	08BSEVFD3T	VF DISPLAY BUF-LG BD->TEST	CONTROLLER BX
EF	**>>FUSE OR FUSE HOLDER**				
EFBMF	FUSE-FLASHER	W6FELFR0	08FL007537	FLASHER 120V 1AMP 75FL/MIN	LOADING BELT
EFDD	FUSE-FLASHING LIGHT	W6FELFR0	09H026V37	BEACON ROTARY 90MM AMBER CE ALLEN BRA	LOADING BELT
EFMB	FUSE-FLASHING LIGHT MOVING	W6FELFR0	09H026V37	BEACON ROTARY 90MM AMBER CE ALLEN BRA	LOADING BELT

COMPONENT PARTS LIST

W6FELPL/2016064N

COMPONENT NUMBER	FUNCTION OF THIS COMPONENT	WHERE TO FIND THIS COMPONENT	MILNOR P/N	DESCRIPTION	LOCATION
EK	**>>KEYPAD**				
EKP	KEYPAD-MICROPROCESSOR	W6FELKPD	08ND0206N	KEYPAD-DOME-2X6 MATRIX NUME	CONTROLLER BX
EKP	KEYPAD-MICROPROCESSOR	W6FELKPA	08ND0206N	KEYPAD-DOME-2X6 MATRIX NUME	CONTROLLER BX
EL	**>>LIGHT-PILOT OR INDICATOR**				
ELS+	LIGHT-3-WIRE	W6FELFR0	09J060G37	LAMP 1/2" GRN 125V IDI 1050QC5	LOADING BELT
ES	**>>POWER SUPPLY-ELECTRONIC**				
ESPS	POWER SUPPLY-MICROPROCESSOR	W6FELBW	08PSS3401T	40 WATT POWER SUPPLY TESTED	CONTROLLER BX
SH	**>>SWITCH-HAND OPERATED**				
SHFR	SWITCH-FORWARD/REVERSE	W6FELFR0	09N400CBNO	CONT.BLOCK 1-NO SQD#ZB2BE101	LOADING BELT
SHMD	SWITCH-MOTOR DISCONNECT	W6FELFR0	09N042204	DISCON SWITCH 40A 600V 2POS 4P	LOADING BELT
SHPE1	SWITCH-EMERGENCY PULL CORD	W6FELFR0	09R014A	MINI-SW SPDT STAKON #V-15G-1C26-K	LOADING BELT
SHPE2	SWITCH-EMERGENCY PULL CORD	W6FELFR0	09R014A	MINI-SW SPDT STAKON #V-15G-1C26-K	LOADING BELT
SHS+	SWITCH-START	W6FELFR0	09N405PG10	SWASS PBGN 1NO	LOADING BELT
SHSG	SWITCH-SIGNAL CANCEL	W6FELBW	09N405PY10	SWASS PB YELLOW 1NO	CONTROLLER BX
SHSMA	SWITCH-MASTER	W6FELBW	09N405M210	SWASS M2W 1NO	CONTROLLER BX
SHSO	SWITCH-STOP	W6FELFR0	09N405PR01	SWASS PBRD 1NC	LOADING BELT
SKPR	SWITCH-PROGRAM KEY	W6FELBW	09N127C	KEYSW SPST 7A120VAC SCREW TERM	CONTROLLER BX
SKSM	SWITCH-KEYSWITCH-MANUAL OPERATING	W6FELFR0	09N127C	KEYSW SPST 7A120VAC SCREW TERM	LOADING BELT

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PELLERIN MILNOR CORPORATION
LIMITED STANDARD WARRANTY

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

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

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

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

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

How to Get the Necessary Repair Components

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

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

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

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

To write to the Milnor factory:

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

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

— End of BIUUUD19 —

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

How to Use Milnor® Electrical Schematic Diagrams

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

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

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

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

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

1. Component Prefix Classifications and Descriptions

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

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

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

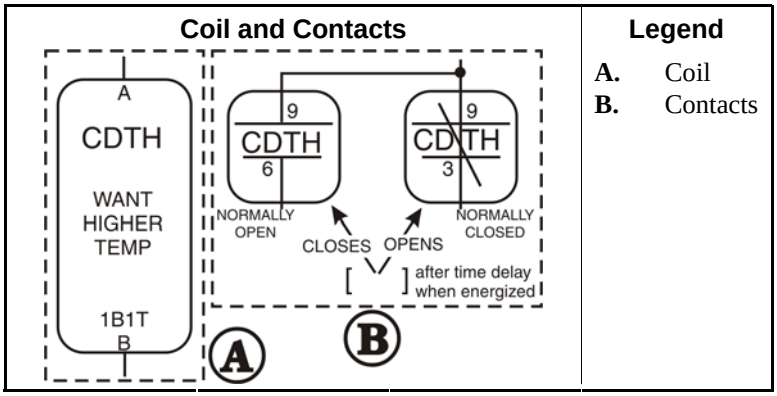
BA=Printed Circuit Board—Insulating substrate on which a thin pattern of copper conductors has been formed to connect discrete electronic components also mounted on the board.

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

Figure 1: Circuit Breaker (CB)

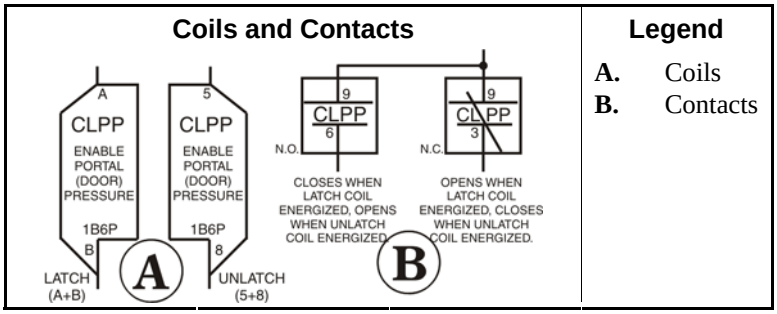
CD=Control, Time Delay Relay (Figure 2)—A relay whose contacts switch only after a fixed or adjustable delay, once voltage has been applied to its coil. The contacts switch back to normal (de-energized state) immediately when the voltage is removed.

Figure 2: Time Delay Relay (CD)



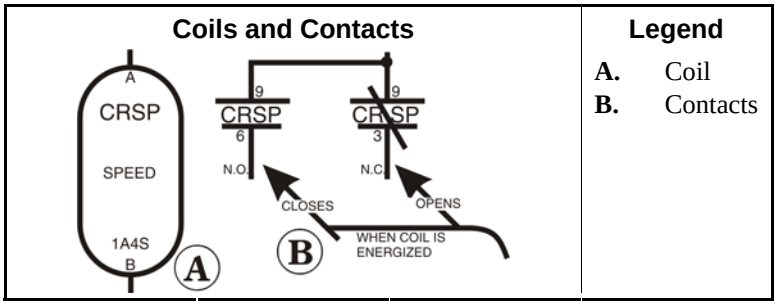
CL=Control, Latch Relay (Figure 3)—A relay which latches in an energized or set position when operated by one coil (the latch/set coil). The relay stays latched even though coil voltage is removed. The relay releases or unlatches when voltage is applied to a second coil (the unlatch/reset coil).

Figure 3: Latch Relay (CL)



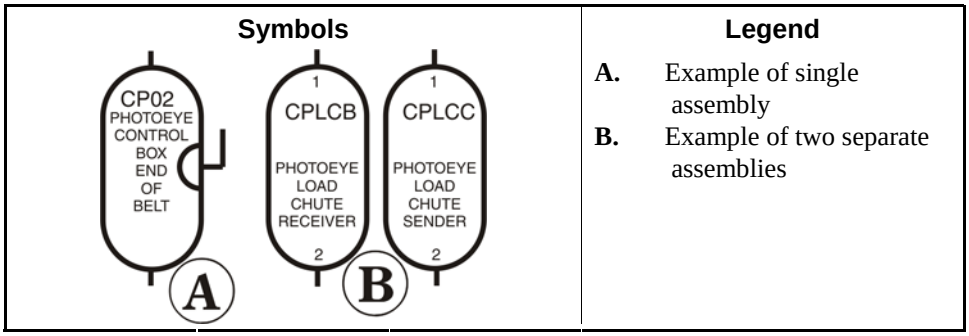
CR=Control, Relay (Figure 4)—A relay whose contacts switch immediately when voltage is applied to its coil and revert to normal when the voltage is removed.

Figure 4: Standard Relay (CR)



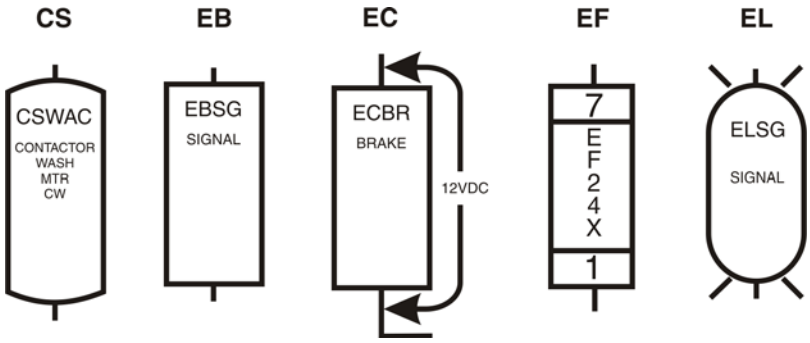
CP=Control, Photo-Eye (Figure 5)—Photo-eyes sense the presence of an object without direct physical contact. Photo-eyes consist of a transmitter, receiver, and output module. These components may be housed in one assembly with the transmitter bouncing light off of a reflector to the receiver, or these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

Figure 5: Photo-eye (CP)



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

Figure 6: Other Control Symbols



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

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

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

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

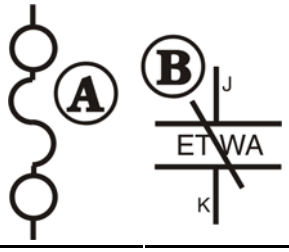
EL=Electric Light (Figure 6)—Indicator lights may be either incandescent or fluorescent.

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

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

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

Figure 7: Thermal Overload (ET)

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

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

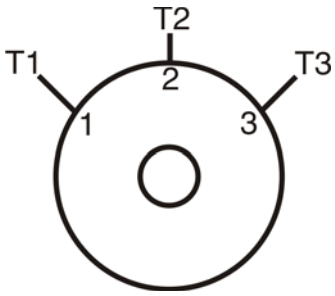
KB=Keyboard—Device similar to a typewriter for making entries to a computer.

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

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

Figure 8: Transformer (EX)

Figure 9: Electric Motor (MR)

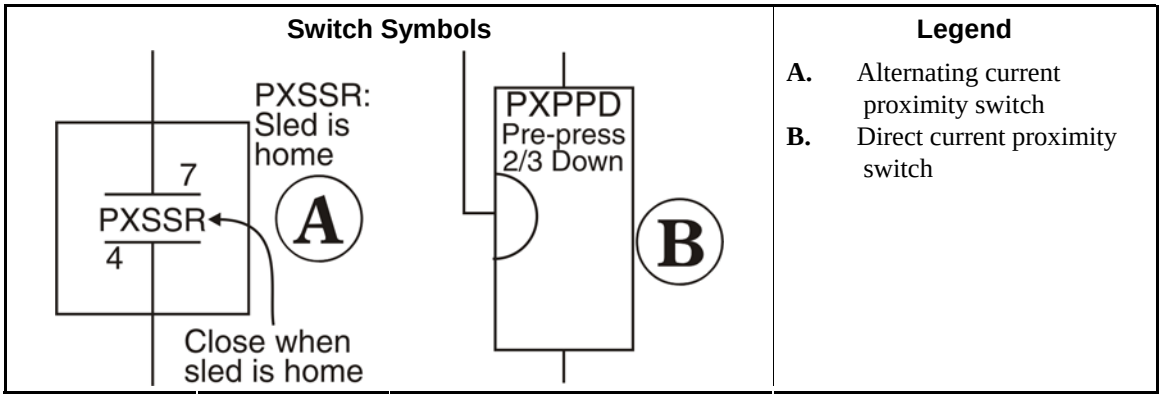


MV=Motor (Variable Speed) Inverter—To vary the speed of an AC motor, the volts to frequency ratio must be kept constant. The motor will overheat if this ratio is not maintained. The motor variable speed inverter converts three phase AC to DC. The inverter then uses this DC voltage to generate AC at the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

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

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

Figure 10: Proximity Switches (PX)



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

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

Figure 11: Cam Switch (SC)

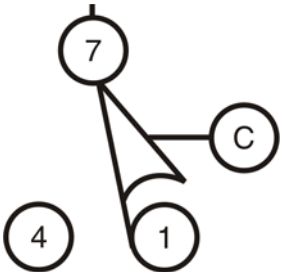
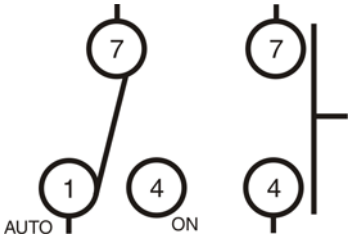


Figure 12: Hand Operated Switch (SH)



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

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

Figure 13: Key Switch (SK)

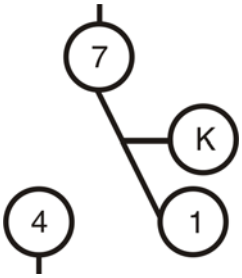
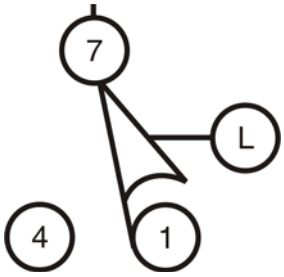


Figure 14: Level Switch (SL)



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

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

Figure 15: Mechanical Switch (SM)

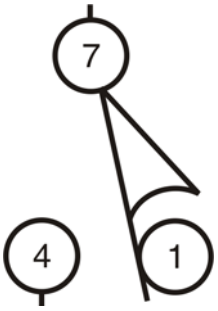
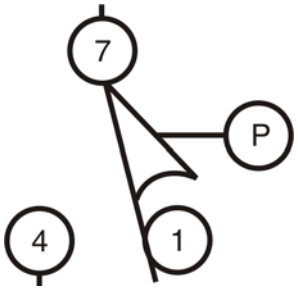


Figure 16: Pressure Switch (SP)



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

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

Figure 17: Temperature Switch (ST)

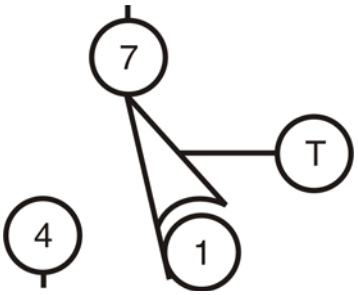
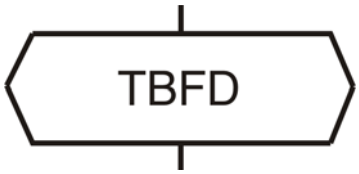


Figure 18: Terminal Board (TB)



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

Figure 19: Electrically Operated Valve (VE)

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

Figure 20: Bridge Rectifier (ZF)

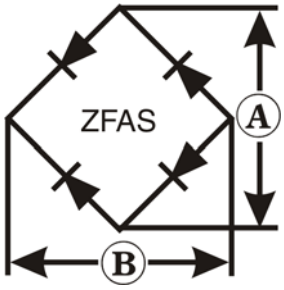
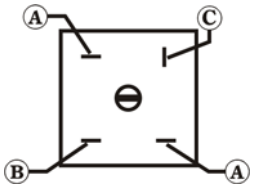
Component Symbol	Legend
	**A.** Alternating current input **B.** Direct current output

Figure 21: Bridge Rectifier

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

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

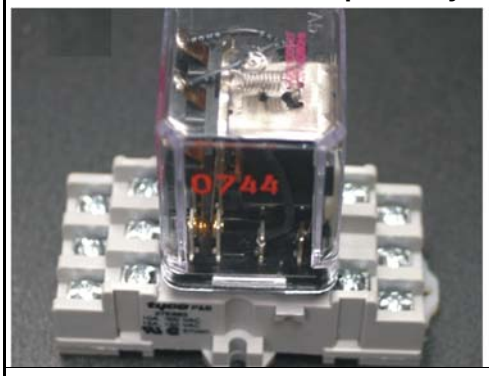
2. Component Terminal Numbering

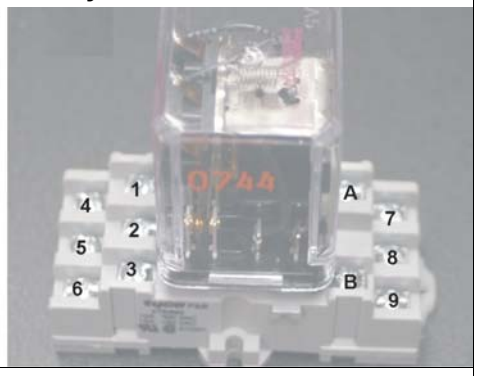
CAUTION 1: Risk of Mis-wiring—Due to electrical component manufacturing inconsistencies, the pin numbers imprinted on components such as connectors and relay bases used on Milnor machines often do not correspond to the pin numbers shown in the schematics.

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

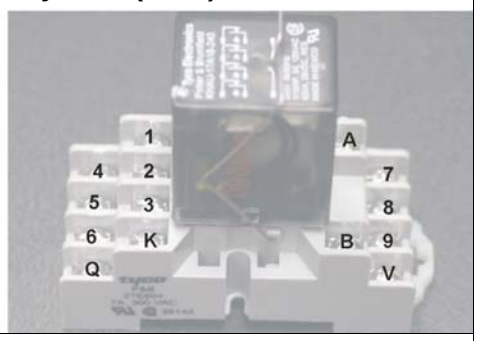
Figure 22: Plug-in Relays

11-pin Relay with Grey Base

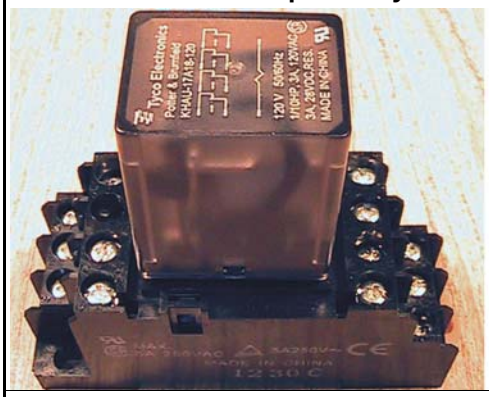


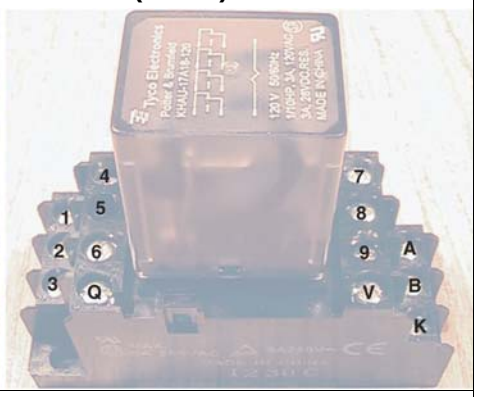


14-pin Relay with Grey Base (older)

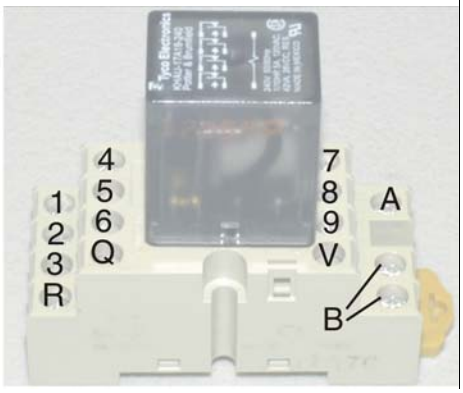


14-pin Relay with Black Base (newer)





14-pin Relay with Beige Base (rare)



Legend

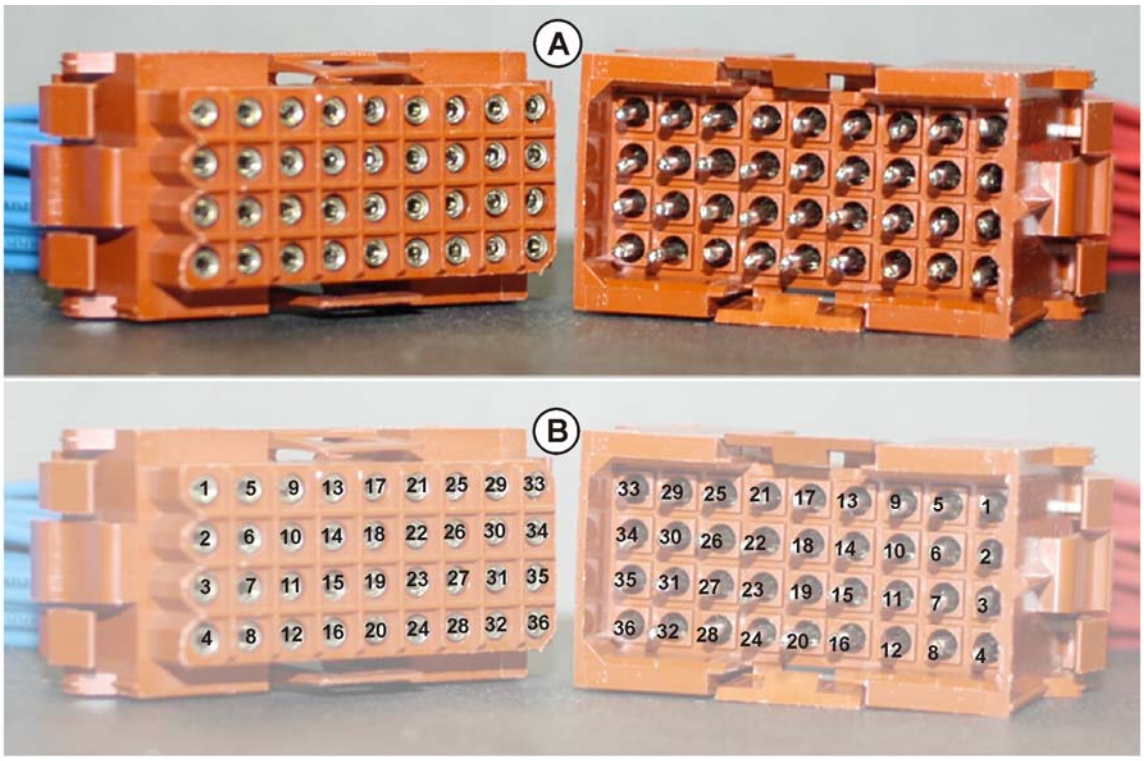
Left. View of relay and base

Right. Same view, showing pin numbers

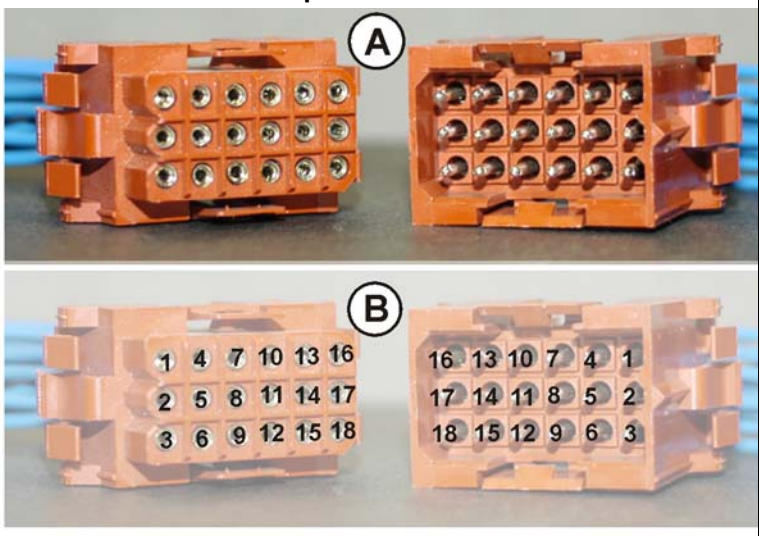
Note 3: Relay functional names ending with the letter "M" (e.g., CRxxM) are not discrete components but are a component of a printed circuit board. They are usually not individually replaceable.

Figure 23: AMP Connector Pin Locations

36-pin Connector



18-pin Connector

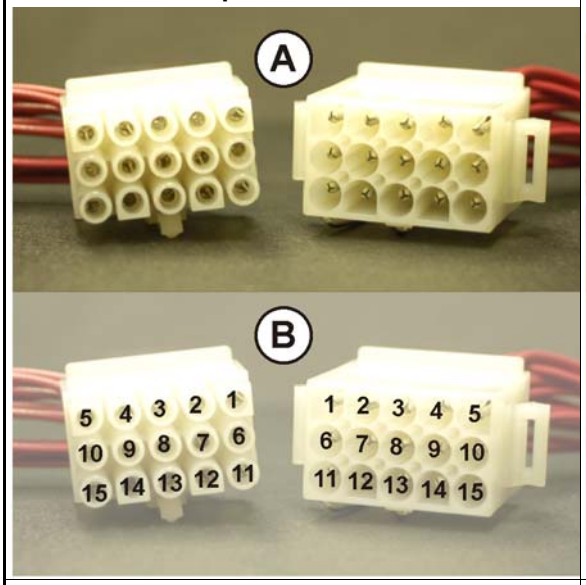


Legend

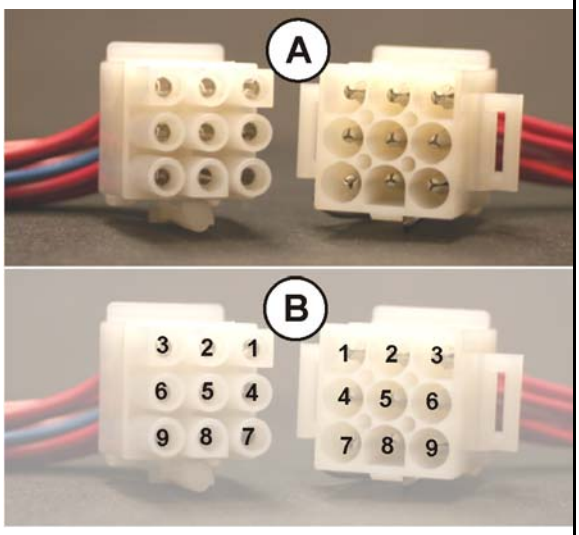
A. View of mating halves of connector
B. Same view, showing assigned pin numbers

Figure 24: Molex Connector Pin Locations

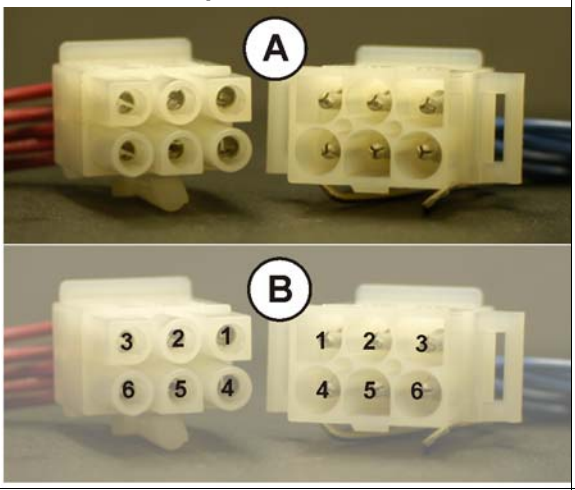
15-pin Connector



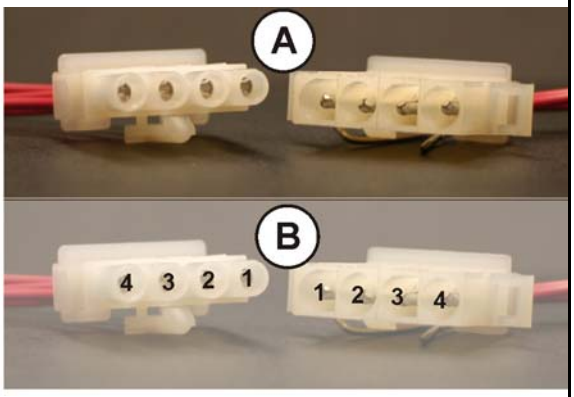
9-pin Connector



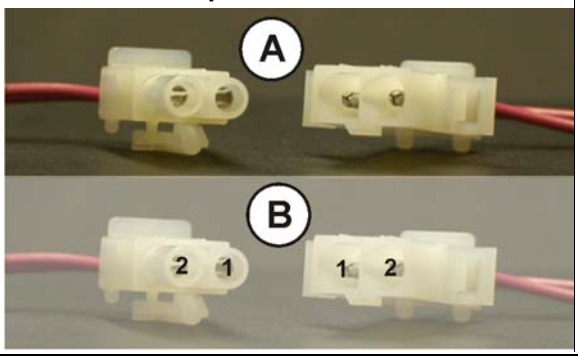
6-pin Connector



4-Pin Connector



2-pin Connector



Legend

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

Figure 25: Pressure Switch

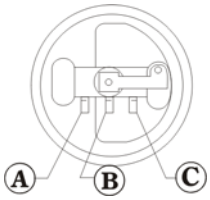
Component	Legend
	**A.** Contact 1—Normally open **B.** Contact 2—Normally closed **C.** Contact 3—Common

Figure 26: Toggle Switch

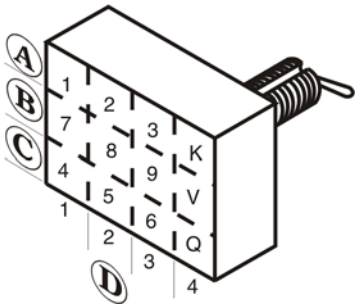
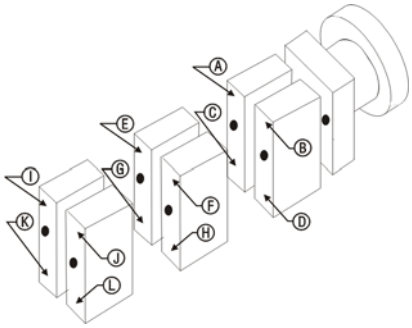
Component	Legend
	**A.** Normally closed contacts **B.** Common contacts **C.** Normally open contacts **D.** Pole

Figure 27: Switch with Replaceable Contact Blocks

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

3. Features of Milnor® Electrical Schematic Diagrams

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

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

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

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

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

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

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

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

— End of BIUUUK01 —

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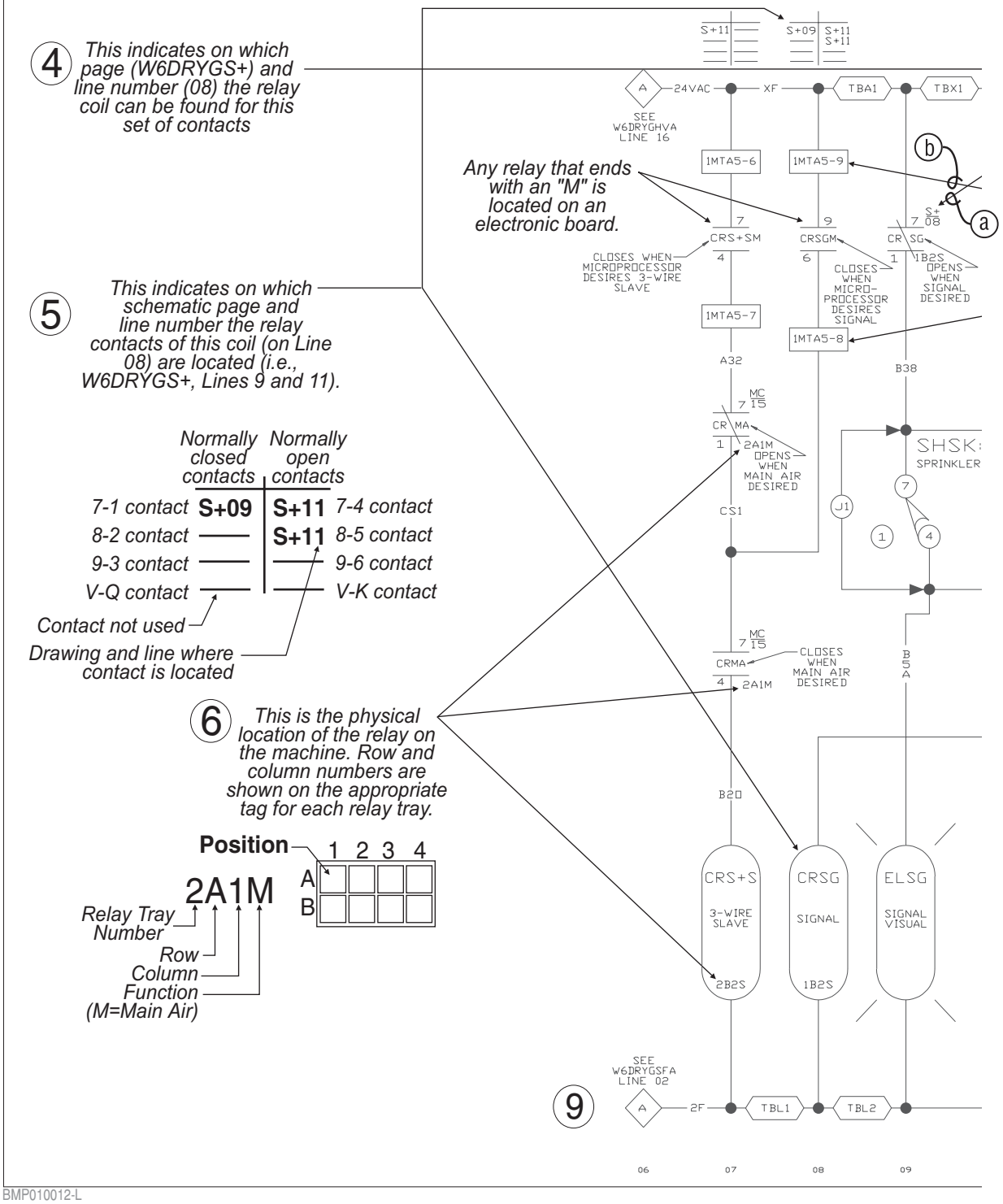
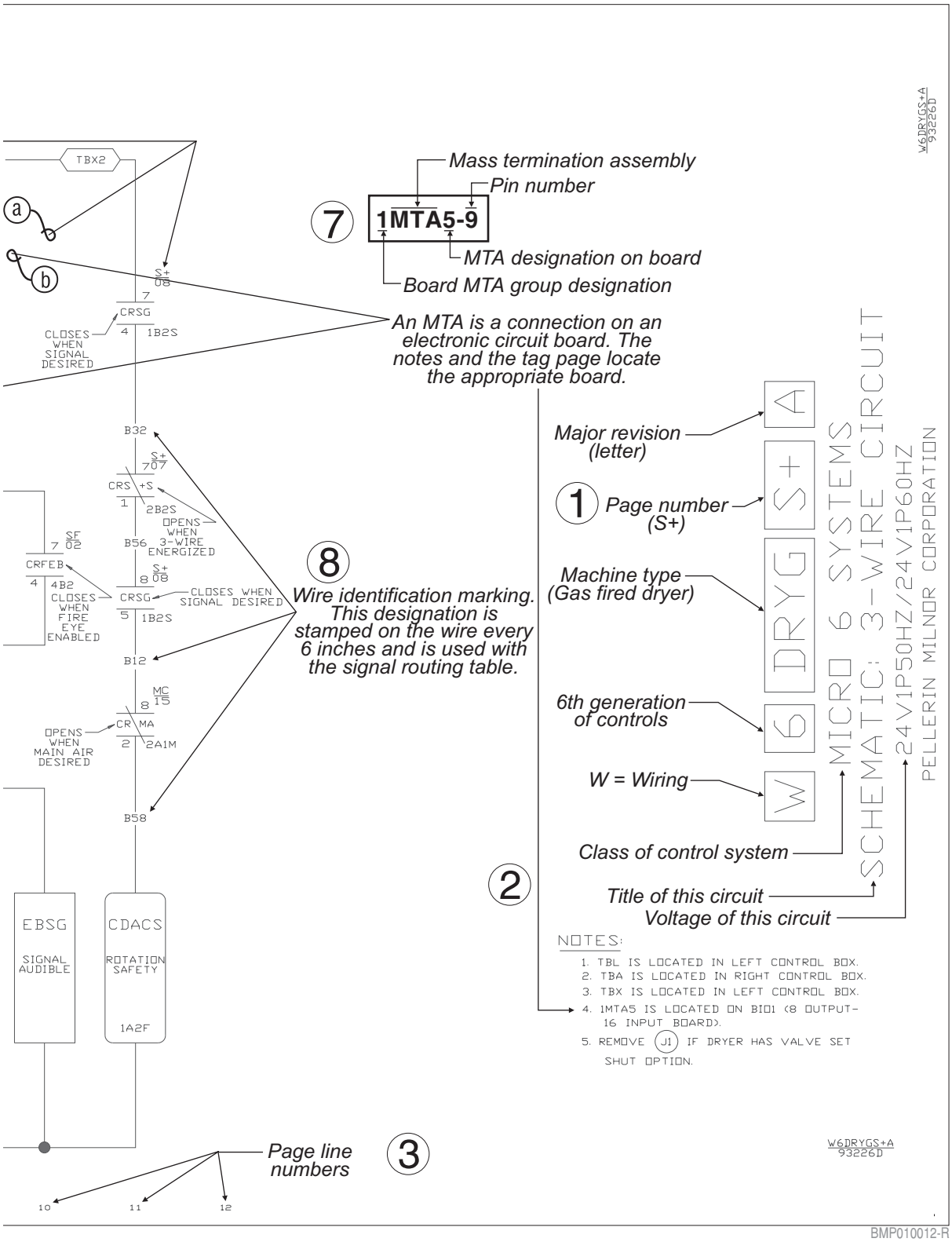
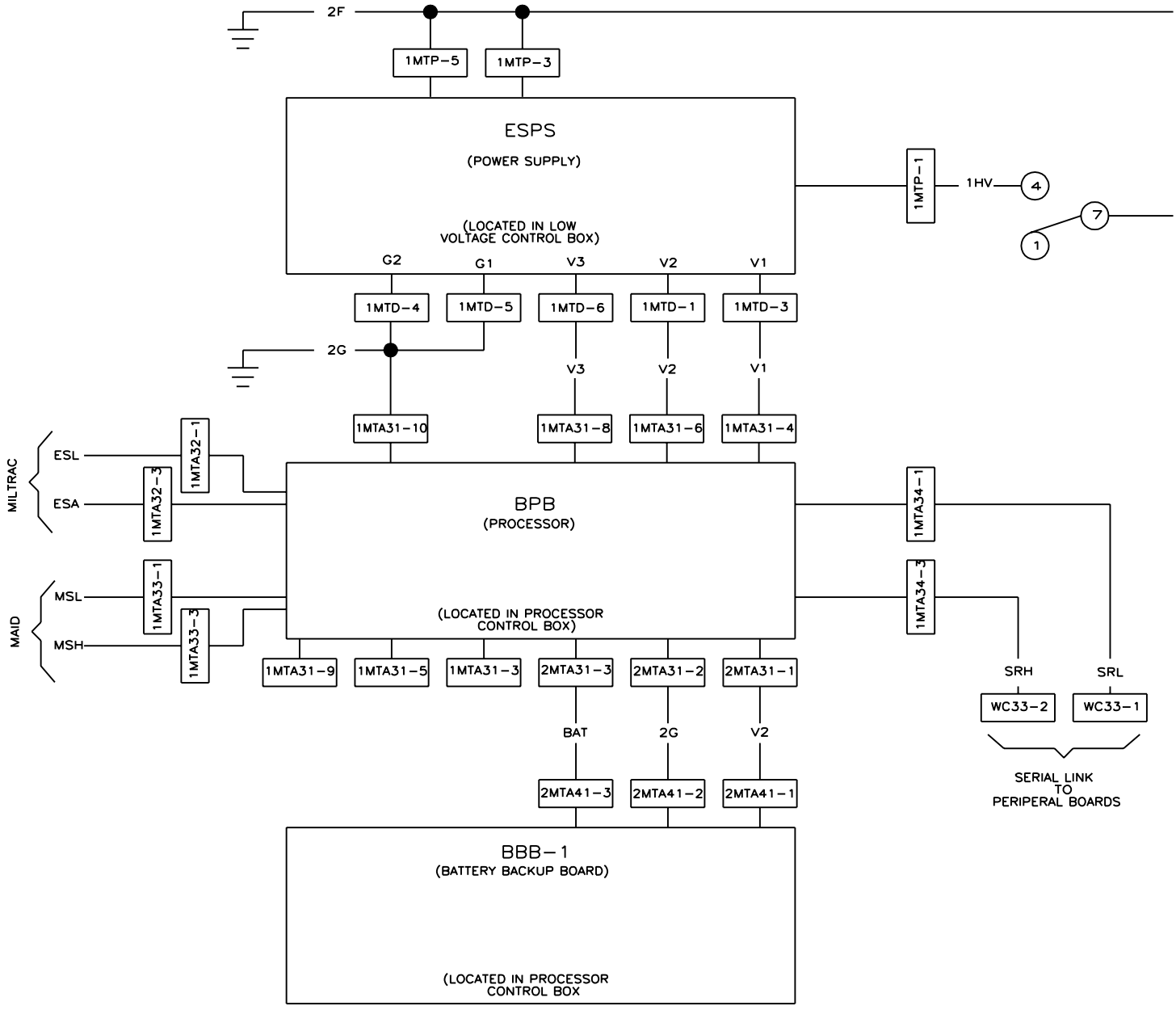

4
This indicates on which page (W6DRYGS+) and line number (08) the relay coil can be found for this set of contacts
5
This indicates on which schematic page and line number the relay contacts of this coil (on Line 08) are located (i.e., W6DRYGS+, Lines 9 and 11).
Normally closed contacts
Normally open contacts
7-1 contact S+09 S+11 7-4 contact
8-2 contact S+11 8-5 contact
9-3 contact 9-6 contact
V-Q contact V-K contact
Contact not used
Drawing and line where contact is located
6
This is the physical location of the relay on the machine. Row and column numbers are shown on the appropriate tag for each relay tray.
Position 1 2 3 4
A
B
2A1M
Relay Tray Number
Row
Column
Function (M=Main Air)
Any relay that ends with an "M" is located on an electronic board.
S+11
S+09 S+11 S+11
A
24VAC
XF
TBA1
TBX1
SEE W6DRYGHVA LINE 16
1MTA5-6
1MTA5-9
b
a
S+08
CRS+SM
CRSGM
CR SG
CLOSES WHEN MICROPROCESSOR DESIRES 3-WIRE SLAVE
CLOSES WHEN MICRO-PROCESSOR DESIRES SIGNAL
1B2S OPENS WHEN SIGNAL DESIRED
1MTA5-7
1MTA5-8
A32
B38
MC 15
CR MA
2A1M OPENS WHEN MAIN AIR DESIRED
SHSK
SPRINKLER
CS1
J1
CRMA
CLOSES WHEN MAIN AIR DESIRED
2A1M
B5A
B20
CRS+S
3-WIRE SLAVE
2B2S
CRSG
SIGNAL
1B2S
ELSG
SIGNAL VISUAL
SEE W6DRYGSFA LINE 02
9
A
2F
TBL1
TBL2
06
07
08
09

BMP010012-L

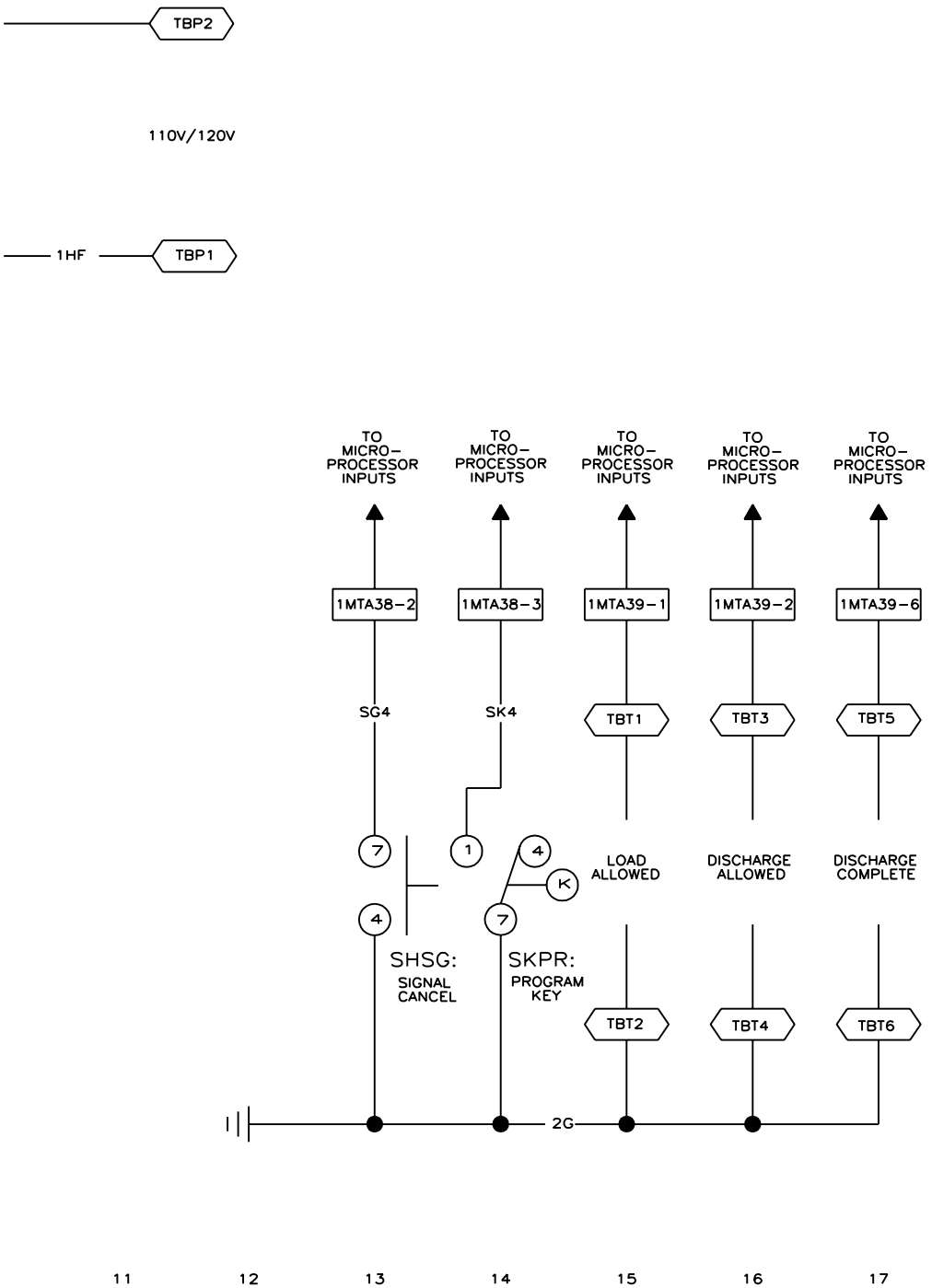

W6DRYGS+A
93226D
TBX2
a
b
7
S+
08
CRSG
4
1B2S
CLOSES WHEN SIGNAL DESIRED
Mass termination assembly
Pin number
7
1MTA5-9
MTA designation on board
Board MTA group designation
An MTA is a connection on an electronic circuit board. The notes and the tag page locate the appropriate board.
B32
S+
707
CRS
1
+S
2B2S
OPENS WHEN 3-WIRE ENERGIZED
SF
7 02
B56
CRFEB
4
4B2
CLOSES WHEN FIRE EYE ENABLED
S+
8 08
CRSG
5
1B2S
CLOSES WHEN SIGNAL DESIRED
8
Wire identification marking. This designation is stamped on the wire every 6 inches and is used with the signal routing table.
B12
MC
8 15
CR
2
MA
2A1M
OPENS WHEN MAIN AIR DESIRED
B58
EBSG
SIGNAL AUDIBLE
CDACS
ROTATION SAFETY
1A2F
Page line numbers
3
10
11
12
Major revision (letter)
1
Page number (S+)
Machine type (Gas fired dryer)
6th generation of controls
W = Wiring
Class of control system
2
Title of this circuit
Voltage of this circuit
W 6 DRYG S+ A
MICRO 6 SYSTEMS
SCHEMATIC: 3-WIRE CIRCUIT
24V1P50HZ/24V1P60HZ
PELLERIN MILNOR CORPORATION
NOTES:
1. TBL IS LOCATED IN LEFT CONTROL BOX.
2. TBA IS LOCATED IN RIGHT CONTROL BOX.
3. TBX IS LOCATED IN LEFT CONTROL BOX.
4. 1MTA5 IS LOCATED ON BIO1 (8 OUTPUT-16 INPUT BOARD).
5. REMOVE J1 IF DRYER HAS VALVE SET SHUT OPTION.
W6DRYGS+A
93226D

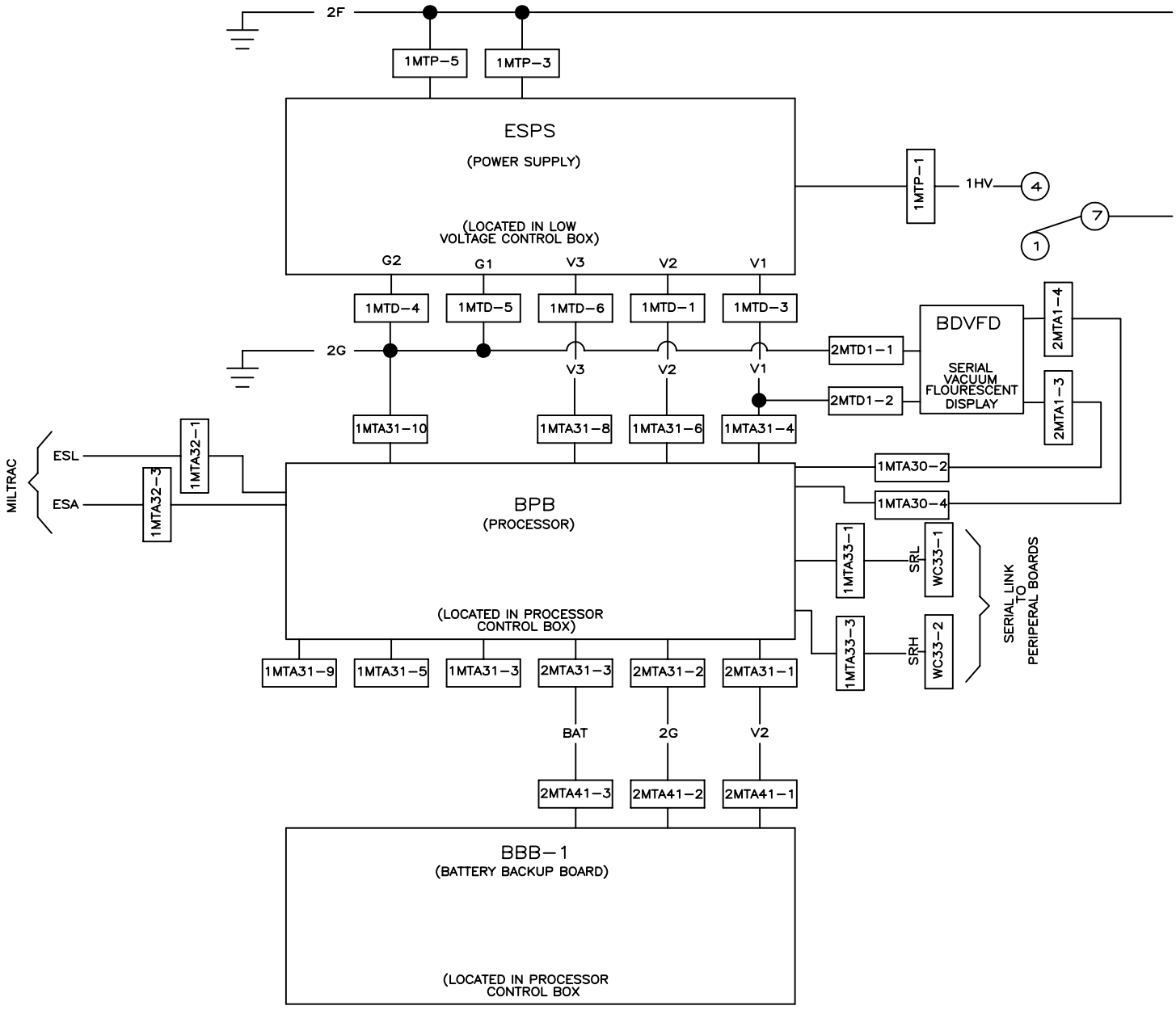
BMP010012-R



W6FELBW
2001394B

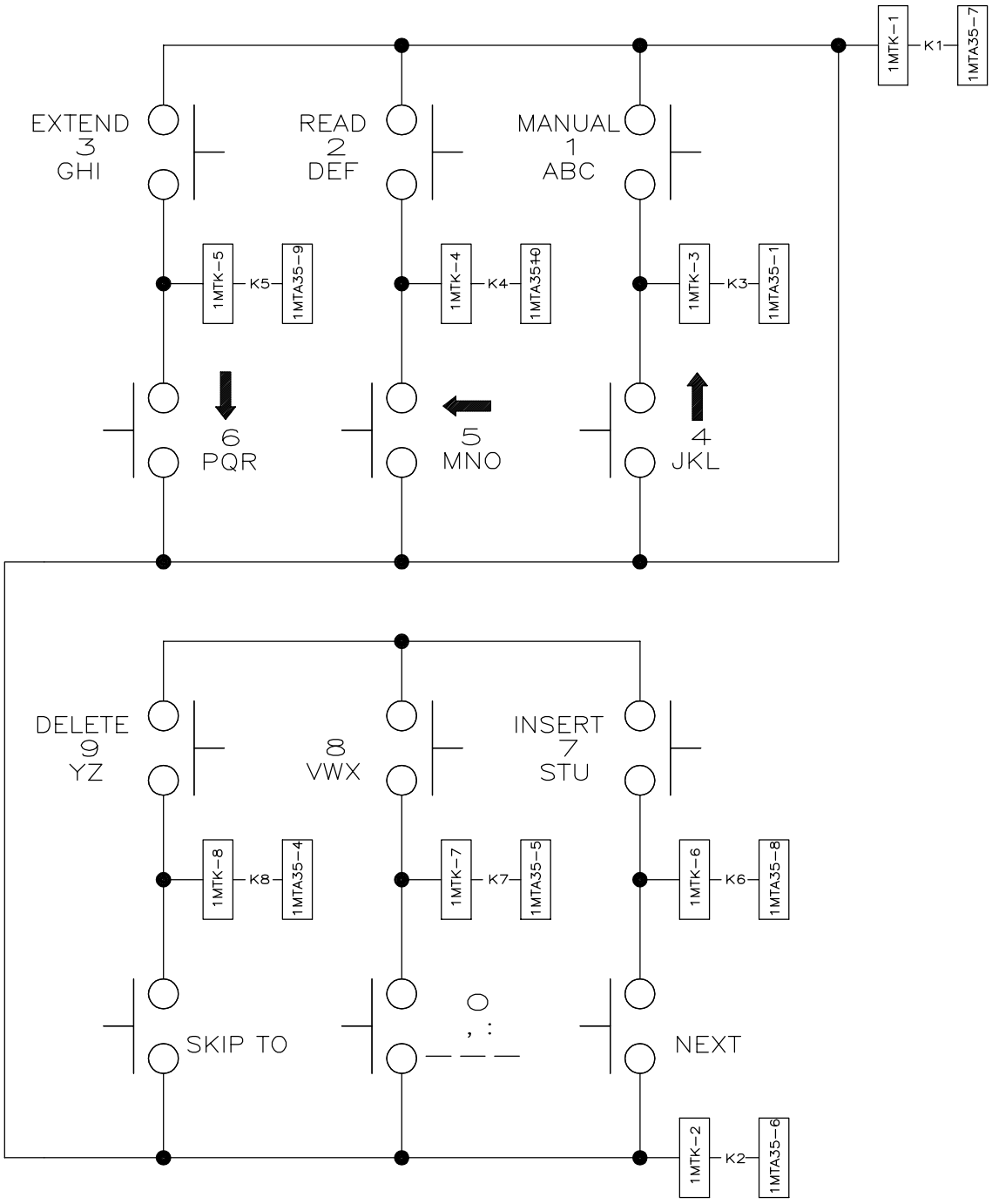
W6FELBW
SCHEMATIC;BOARD TO BOARD WIRING
PELLERIN MILNOR CORPORATION





W6FELBWA
2011535B

W6FELBWA
SCHEMATIC;BOARD TO BOARD WIRING
MODIFIED FOR 186 PROCESSOR
PELLERIN MILNOR CORPORATION



00 01 02 03 04 05 06 07 08 09

W6FELKPA
2007192B

W6FELKPA

MICRO 6 SYSTEMS MARK III

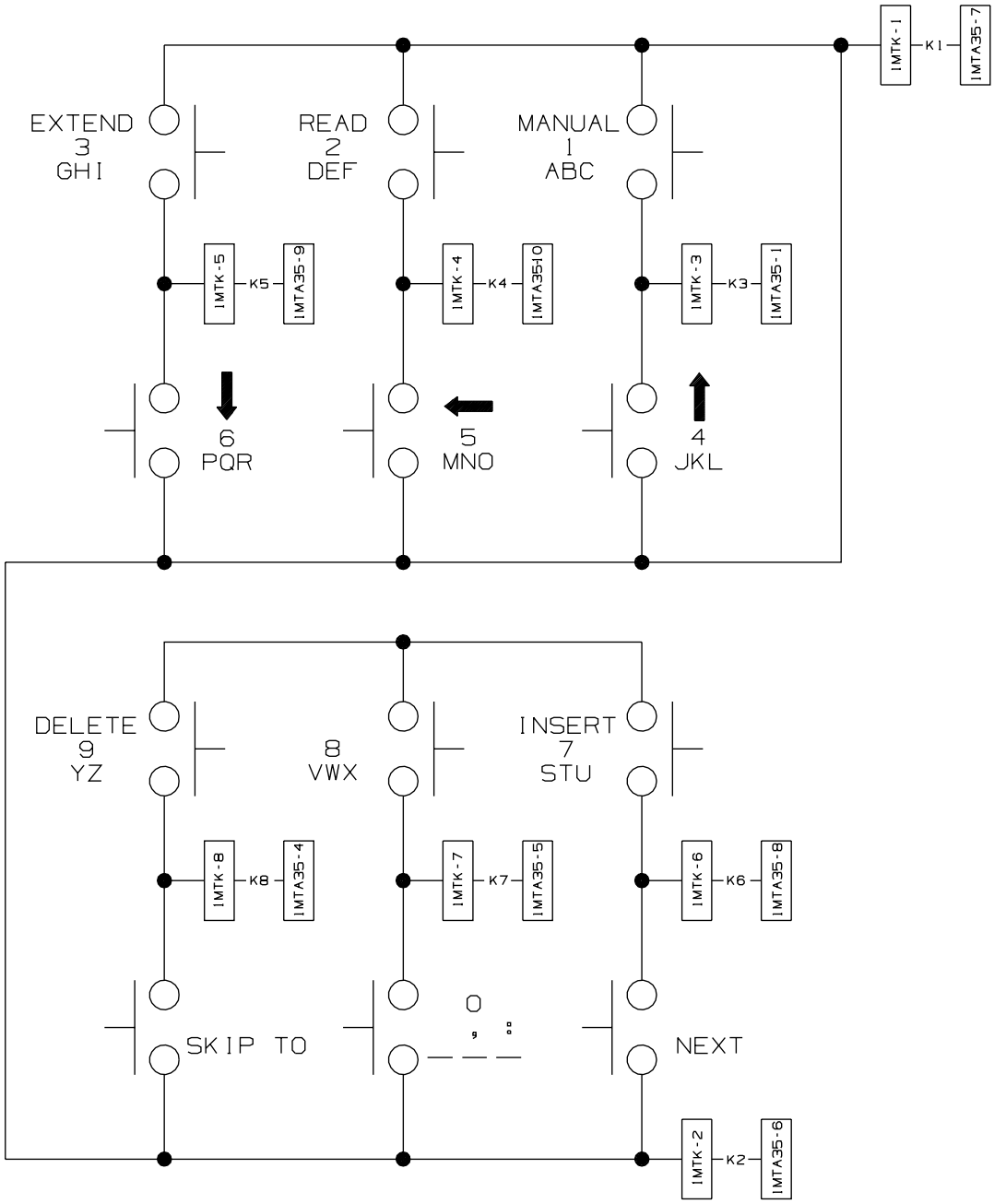
SCHEMATIC:KEYPAD

PELLERIN MILNOR CORPORATION

W6FELKPA
2007192B

10 11 12 13 14 15 16 17 18 19

W6FELKPA
2007192B



00 01 02 03 04 05 06 07 08 09

W6FELKPD

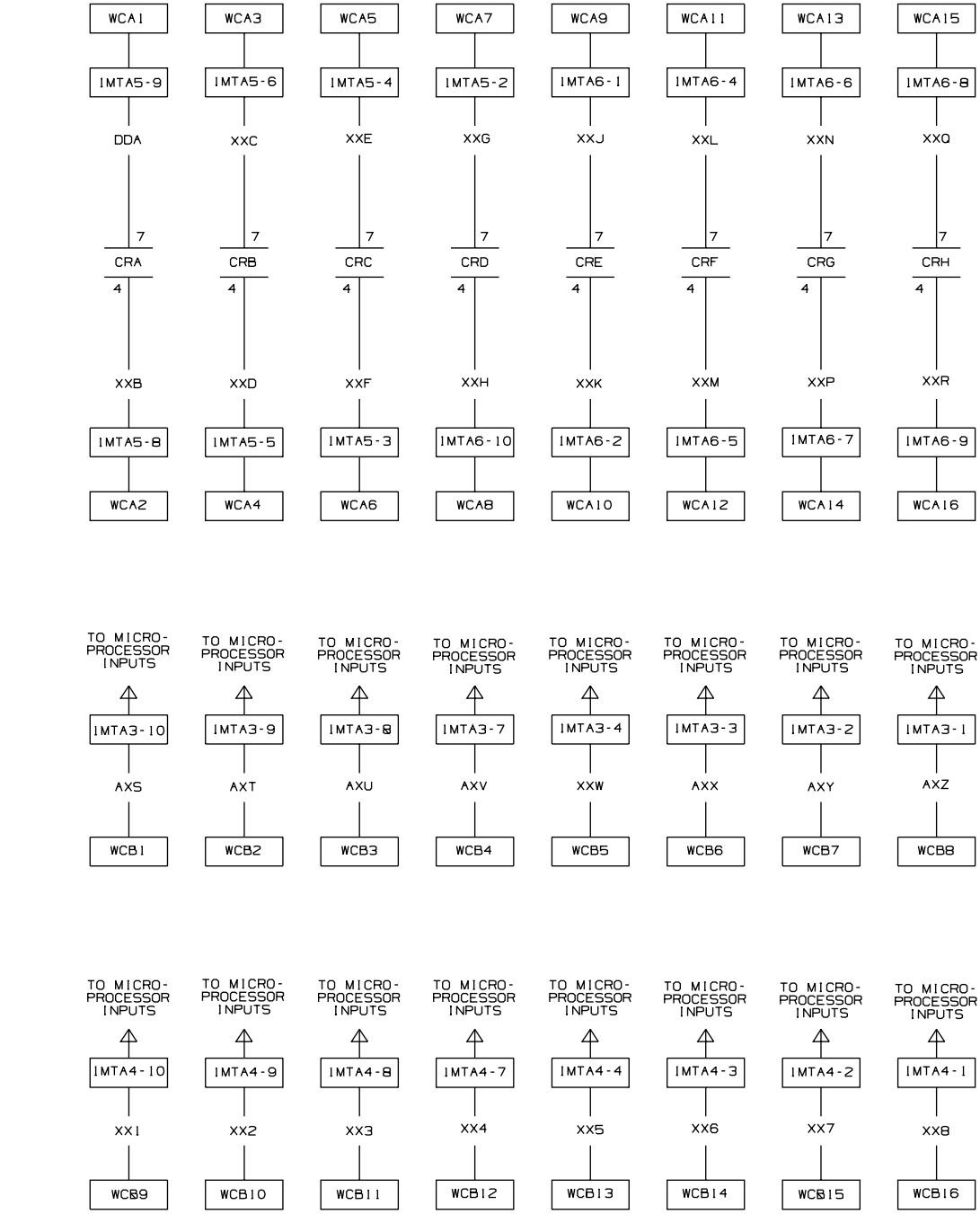
MICRO 6 SYSTEMS MARK III

SCHEMATIC: KEYPAD

PELLERIN MILNOR CORPORATION

NOTES:

1. 1MTA36, 1MTA37 ARE LOCATED ON BPB (PROCESSOR BOARD).
2. 2MTA36, 2MTA 37 ARE LOCATED ON DISPLAY BOARD.


WCA1
WCA3
WCA5
WCA7
WCA9
WCA11
WCA13
WCA15
IMTA5-9
IMTA5-6
IMTA5-4
IMTA5-2
IMTA6-1
IMTA6-4
IMTA6-6
IMTA6-8
DDA
XXC
XXE
XXG
XXJ
XXL
XXN
XXQ
7
CRA
CRB
CRC
CRD
CRE
CRF
CRG
CRH
4
XXB
XXD
XXF
XXH
XXK
XXM
XXP
XXR
IMTA5-8
IMTA5-5
IMTA5-3
IMTA6-10
IMTA6-2
IMTA6-5
IMTA6-7
IMTA6-9
WCA2
WCA4
WCA6
WCA8
WCA10
WCA12
WCA14
WCA16
TO MICRO-PROCESSOR INPUTS
IMTA3-10
IMTA3-9
IMTA3-8
IMTA3-7
IMTA3-4
IMTA3-3
IMTA3-2
IMTA3-1
AXS
AXT
AXU
AXV
XXW
AXX
AXY
AXZ
WCB1
WCB2
WCB3
WCB4
WCB5
WCB6
WCB7
WCB8
IMTA4-10
IMTA4-9
IMTA4-8
IMTA4-7
IMTA4-4
IMTA4-3
IMTA4-2
IMTA4-1
XX1
XX2
XX3
XX4
XX5
XX6
XX7
XX8
WCB9
WCB10
WCB11
WCB12
WCB13
WCB14
WCB15
WCB16
00
01
02
03
04
05
06
07
08
09

W6FELA

MICRO 6 SYSTEMS

SCHEMATIC: FRONT END LOAD INPUT/OUTPUT BOARD #1

(8 OUTPUT 16 INPUT)

110V50HZ/120V60HZ

PELLERIN MILNOR CORPORATION

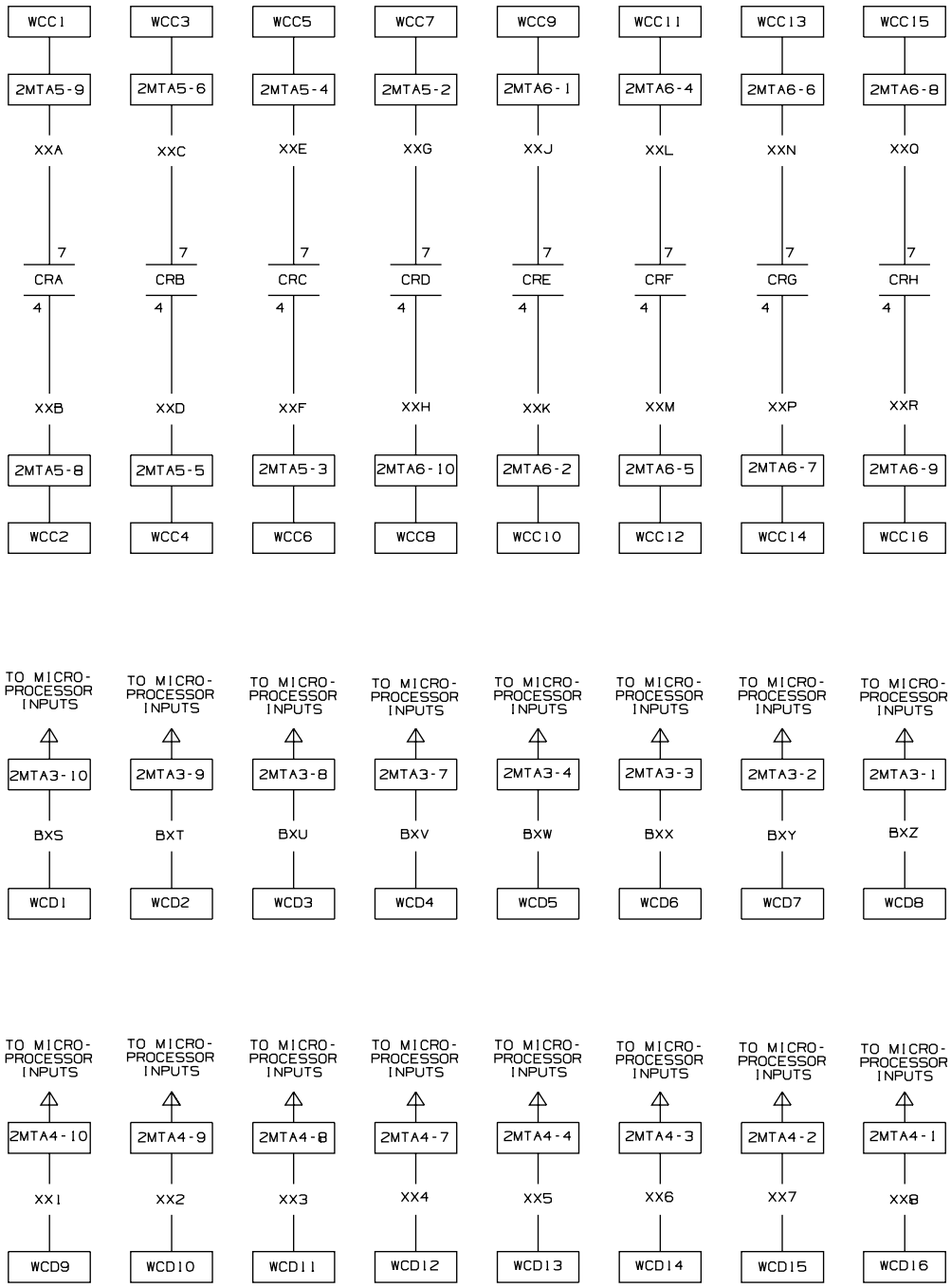
OUTPUTS

AXS : LOADED
AXT : NOT USED
AXU : NOT USED
AXV : NOT USED
AXW : NOT USED
AXX : NOT USED
AXY : NOT USED
AXZ : NOT USED
AX1 : NOT USED
AX2 : NOT USED
AX3 : NOT USED
AX4 : NOT USED
AX5 : NOT USED
AX6 : NOT USED
AX7 : NOT USED
AX8 : NOT USED

INPUTS

CRA : LOAD DESIRED
CRB : FLAG DOWN LOAD
CRC : LOAD ALLOWED
CRD : DISCHARGE DESIRED
CRE : FLAG DOWN DISCHARGE
CRF : NOT USED
CRG : NOT USED
CRH : NOT USED

10 11 12 13 14 15 16 17 18 19


WCC1
WCC3
WCC5
WCC7
WCC9
WCC11
WCC13
WCC15
2MTA5-9
2MTA5-6
2MTA5-4
2MTA5-2
2MTA6-1
2MTA6-4
2MTA6-6
2MTA6-8
XXA
XXC
XXE
XXG
XXJ
XXL
XXN
XXQ
7
7
7
7
7
7
7
7
CRA
CRB
CRC
CRD
CRE
CRF
CRG
CRH
4
4
4
4
4
4
4
4
XXB
XXD
XXF
XXH
XXK
XXM
XXP
XXR
2MTA5-8
2MTA5-5
2MTA5-3
2MTA6-10
2MTA6-2
2MTA6-5
2MTA6-7
2MTA6-9
WCC2
WCC4
WCC6
WCC8
WCC10
WCC12
WCC14
WCC16
TO MICRO-PROCESSOR INPUTS
2MTA3-10
2MTA3-9
2MTA3-8
2MTA3-7
2MTA3-4
2MTA3-3
2MTA3-2
2MTA3-1
BXS
BXT
BXU
BXV
BXW
BXX
BXY
BXZ
WCD1
WCD2
WCD3
WCD4
WCD5
WCD6
WCD7
WCD8
2MTA4-10
2MTA4-9
2MTA4-8
2MTA4-7
2MTA4-4
2MTA4-3
2MTA4-2
2MTA4-1
XX1
XX2
XX3
XX4
XX5
XX6
XX7
XX8
WCD9
WCD10
WCD11
WCD12
WCD13
WCD14
WCD15
WCD16
00
01
02
03
04
05
06
07
08
09

W6FELB

MICRO 6 SYSTEMS

SCHEMATIC: FRONT END LOAD CODES INPUTS/OUTPUTS BOARD #2 (8 OUTPUTS 16 INPUTS)

110V50HZ/120V60HZ

PELLERIN MILNOR CORPORATION

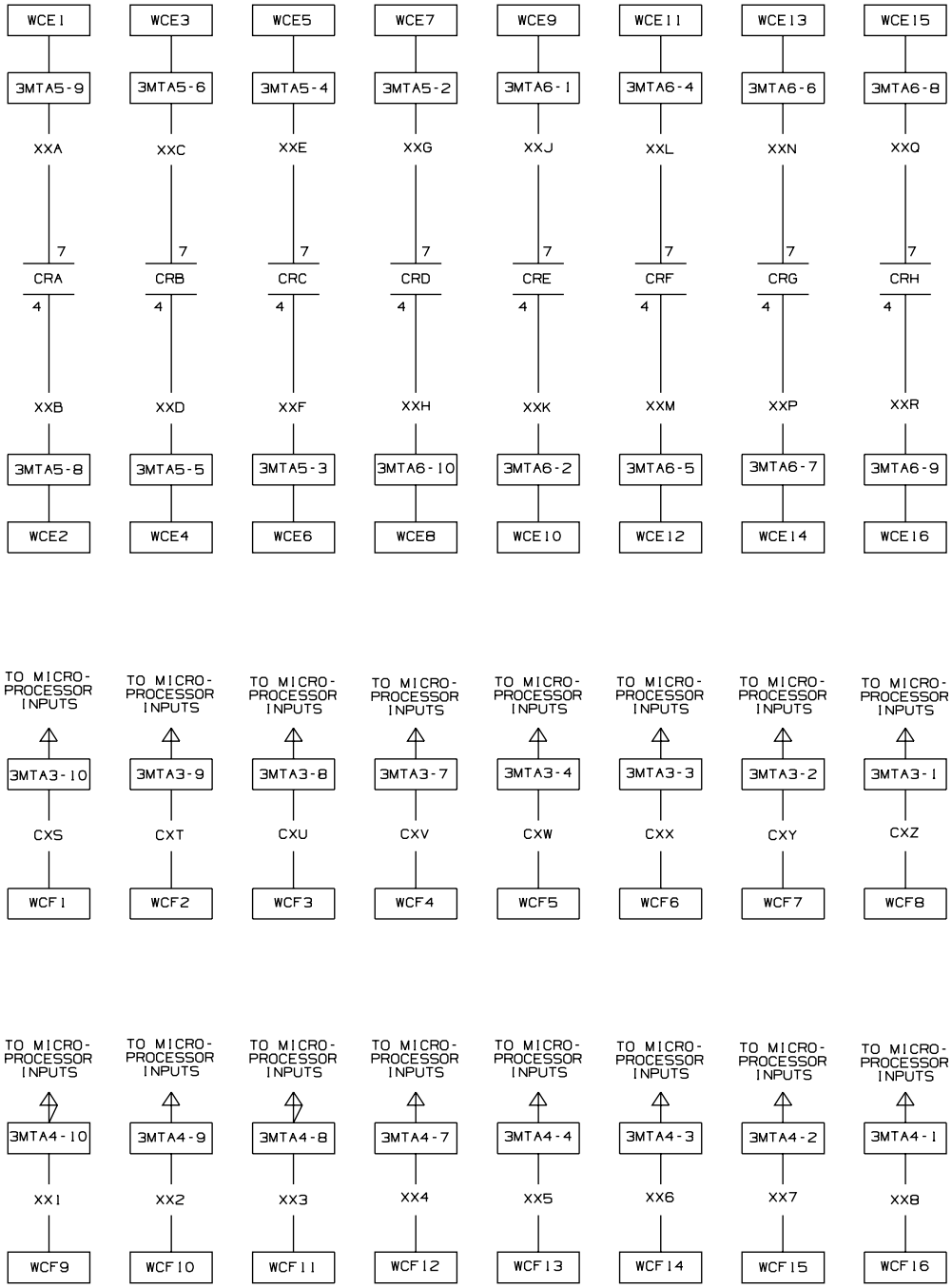
OUTPUTS

BXS = DRY CODE A
BXT = DRY CODE B
BXU = DRY CODE C
BXV = DRY CODE D
BXW = DESTINATION A
BXX = DESTINATION B
BXY = DESTINATION C
BXZ = DESTINATION D
BX1 = GOODS CODE A
BX2 = GOODS CODE B
BX3 = GOODS CODE C
BX4 = GOODS CODE D
BX5 = GOODS CODE E
BX6 = GOODS CODE F
BX7 = GOODS CODE G
BX8 = GOODS CODE H

INPUTS

CRA = NOT USED
CRB = NOT USED
CRC = NOT USED
CRD = NOT USED
CRE = NOT USED
CRF = NOT USED
CRG = NOT USED
CRH = NOT USED

10 11 12 13 14 15 16 17 18 19


WCE1
WCE3
WCE5
WCE7
WCE9
WCE11
WCE13
WCE15
3MTA5-9
3MTA5-6
3MTA5-4
3MTA5-2
3MTA6-1
3MTA6-4
3MTA6-6
3MTA6-8
XXA
XXC
XXE
XXG
XXJ
XXL
XXN
XXQ
7
7
7
7
7
7
7
7
CRA
CRB
CRC
CRD
CRE
CRF
CRG
CRH
4
4
4
4
4
4
4
4
XXB
XXD
XXF
XXH
XXK
XXM
XXP
XXR
3MTA5-8
3MTA5-5
3MTA5-3
3MTA6-10
3MTA6-2
3MTA6-5
3MTA6-7
3MTA6-9
WCE2
WCE4
WCE6
WCE8
WCE10
WCE12
WCE14
WCE16
TO MICRO-PROCESSOR INPUTS
3MTA3-10
3MTA3-9
3MTA3-8
3MTA3-7
3MTA3-4
3MTA3-3
3MTA3-2
3MTA3-1
CXS
CXT
CXU
CXV
CXW
CXX
CXY
CXZ
WCF1
WCF2
WCF3
WCF4
WCF5
WCF6
WCF7
WCF8
TO MICRO-PROCESSOR INPUTS
3MTA4-10
3MTA4-9
3MTA4-8
3MTA4-7
3MTA4-4
3MTA4-3
3MTA4-2
3MTA4-1
XX1
XX2
XX3
XX4
XX5
XX6
XX7
XX8
WCF9
WCF10
WCF11
WCF12
WCF13
WCF14
WCF15
WCF16
00
01
02
03
04
05
06
07
08
09

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MICRO 6 SYSTEMS

SCHEMATIC: FRONT END LOAD CODES INPUTS/OUTPUTS

BOARD #3 (8 OUTPUTS 16 INPUTS)

110V50HZ/120V60HZ

PELLERIN MILNOR CORPORATION

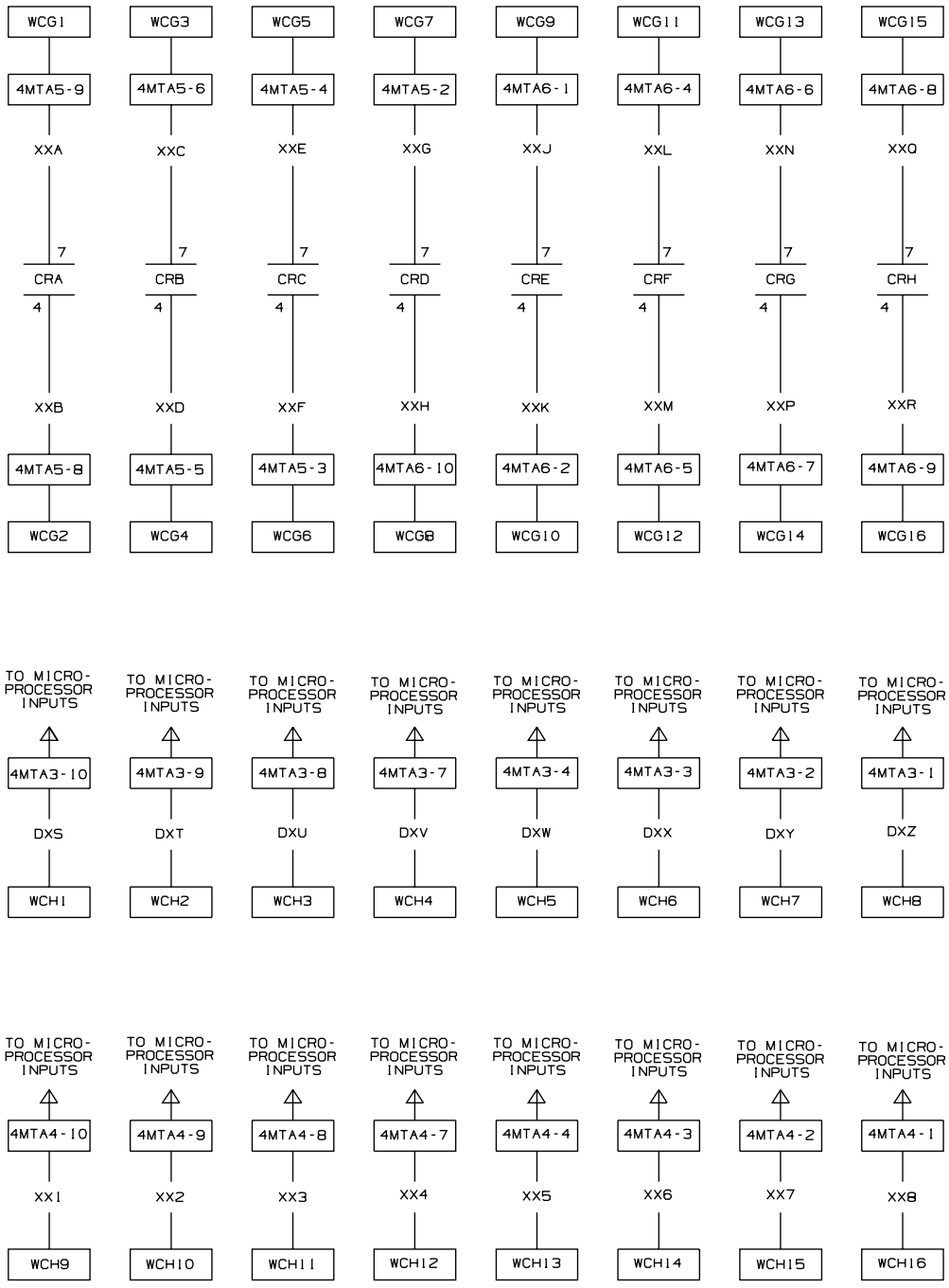
OUTPUTS

CXS = CUSTOMER CODE A
CXT = CUSTOMER CODE B
CXU = CUSTOMER CODE C
CXV = CUSTOMER CODE D
CXW = CUSTOMER CODE E
CXX = CUSTOMER CODE F
CXY = CUSTOMER CODE G
CXZ = CUSTOMER CODE H
CX1 = CUSTOMER CODE I
CX2 = CUSTOMER CODE J
CX3 = FORMULA A
CX4 = FORMULA B
CX5 = FORMULA C
CX6 = FORMULA D
CX7 = FORMULA E
CX8 = FORMULA F

INPUTS

CRA = NOT USED
CRB = NOT USED
CRC = NOT USED
CRD = NOT USED
CRE = NOT USED
CRF = NOT USED
CRG = NOT USED
CRH = NOT USED

10 11 12 13 14 15 16 17 18 19


WCG1
WCG3
WCG5
WCG7
WCG9
WCG11
WCG13
WCG15
4MTA5-9
4MTA5-6
4MTA5-4
4MTA5-2
4MTA6-1
4MTA6-4
4MTA6-6
4MTA6-8
XXA
XXC
XXE
XXG
XXJ
XXL
XXN
XXQ
7
CRA
CRB
CRC
CRD
CRE
CRF
CRG
CRH
4
XXB
XXD
XXF
XXH
XXK
XXM
XXP
XXR
4MTA5-8
4MTA5-5
4MTA5-3
4MTA6-10
4MTA6-2
4MTA6-5
4MTA6-7
4MTA6-9
WCG2
WCG4
WCG6
WCG8
WCG10
WCG12
WCG14
WCG16
TO MICRO-PROCESSOR INPUTS
4MTA3-10
4MTA3-9
4MTA3-8
4MTA3-7
4MTA3-4
4MTA3-3
4MTA3-2
4MTA3-1
DXS
DXT
DXU
DXV
DXW
DXX
DXY
DXZ
WCH1
WCH2
WCH3
WCH4
WCH5
WCH6
WCH7
WCH8
4MTA4-10
4MTA4-9
4MTA4-8
4MTA4-7
4MTA4-4
4MTA4-3
4MTA4-2
4MTA4-1
XX1
XX2
XX3
XX4
XX5
XX6
XX7
XX8
WCH9
WCH10
WCH11
WCH12
WCH13
WCH14
WCH15
WCH16
00
01
02
03
04
05
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07
08
09

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MICRO 6 SYSTEMS

SCHEMATIC: FRONT END LOAD CODES INPUTS/OUTPUTS

BOARD #4 (8 OUTPUTS 16 INPUTS)

110V50HZ/120V60HZ

PELLERIN MILNOR CORPORATION

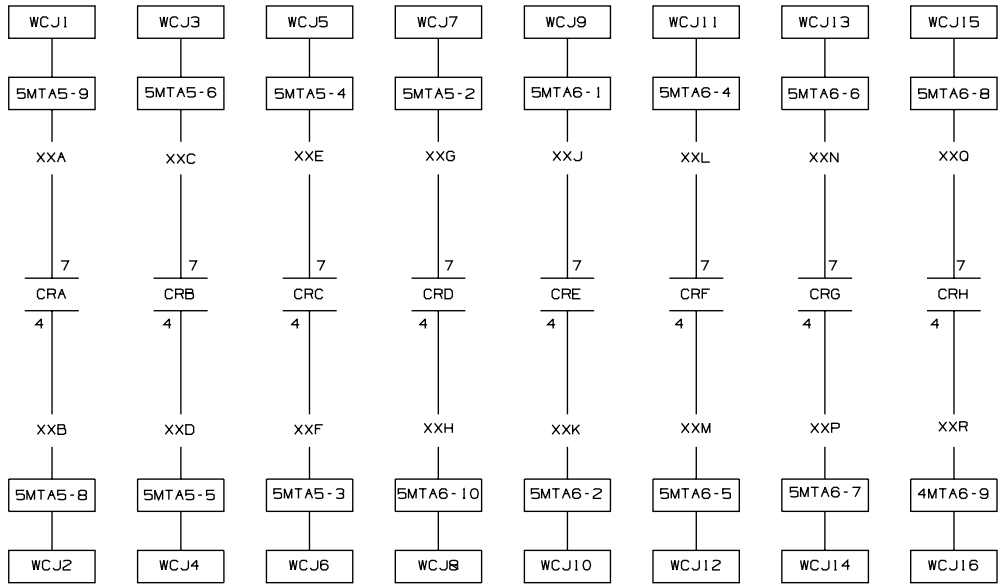
OUTPUTS

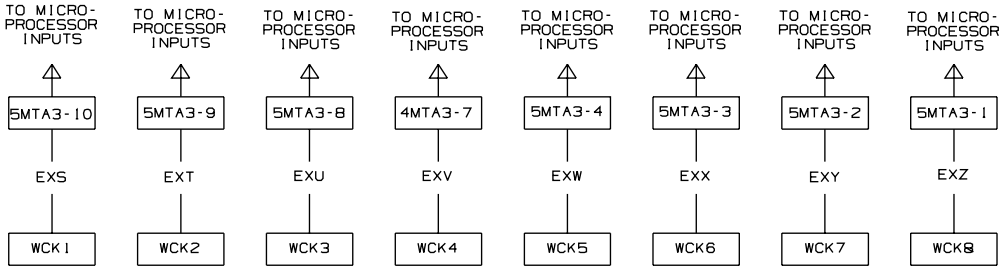
DXS = TRANSLATOR A
DXT = TRANSLATOR B
DXU = TRANSLATOR C
DXV = TRANSLATOR D
DXW = TRANSLATOR E
DXX = TRANSLATOR F
DXY = TRANSLATOR G
DXZ = TRANSLATOR H
DX1 = TRANSLATOR I
DX2 = TRANSLATOR J
DX3 = TRANSLATOR K
DX4 = TRANSLATOR L
DX5 = TRANSLATOR M
DX6 = TRANSLATOR N
DX7 = TRANSLATOR O
DX8 = TRANSLATOR P

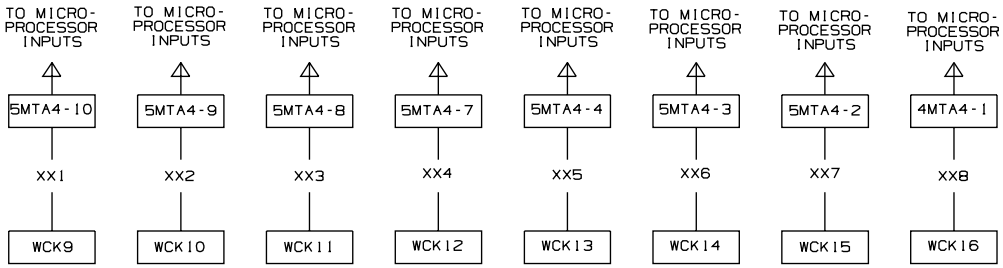
INPUTS

CRA = NOT USED
CRB = NOT USED
CRC = NOT USED
CRD = NOT USED
CRE = NOT USED
CRF = NOT USED
CRG = NOT USED
CRH = NOT USED

10 11 12 13 14 15 16 17 18 19







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MICRO 6 SYSTEMS

SCHEMATIC: FRONT END LOAD CODES INPUTS/OUTPUTS

BOARD #5 (8 OUTPUTS 16 INPUTS)

110V50HZ/120V60HZ

PELLERIN MILNOR CORPORATION

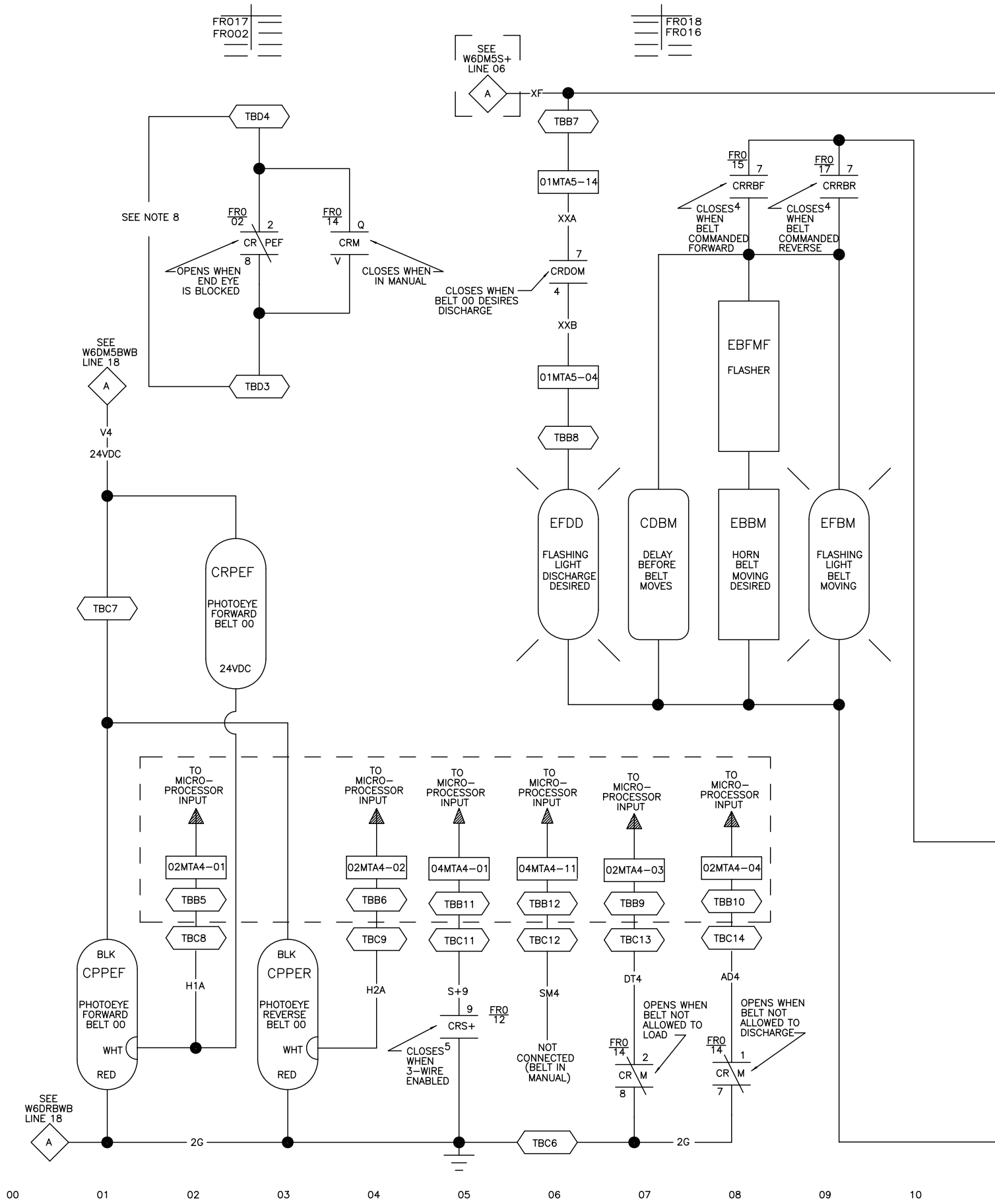
OUTPUTS

EXS = TRANSLATOR Q
EXT = TRANSLATOR R
EXU = TRANSLATOR S
EXV = TRANSLATOR T
EXW = EXTRACT CODE A
EXX = EXTRACT CODE B
EXY = EXTRACT CODE C
EXZ = EXTRACT CODE D
EX1 = NOT USED
EX2 = NOT USED
EX3 = NOT USED
EX4 = NOT USED
EX5 = NOT USED
EX6 = NOT USED
EX7 = NOT USED
EX8 = NOT USED

INPUTS

CRA = NOT USED
CRB = NOT USED
CRC = NOT USED
CRD = NOT USED
CRE = NOT USED
CRF = NOT USED
CRG = NOT USED
CRH = NOT USED

10 11 12 13 14 15 16 17 18 19



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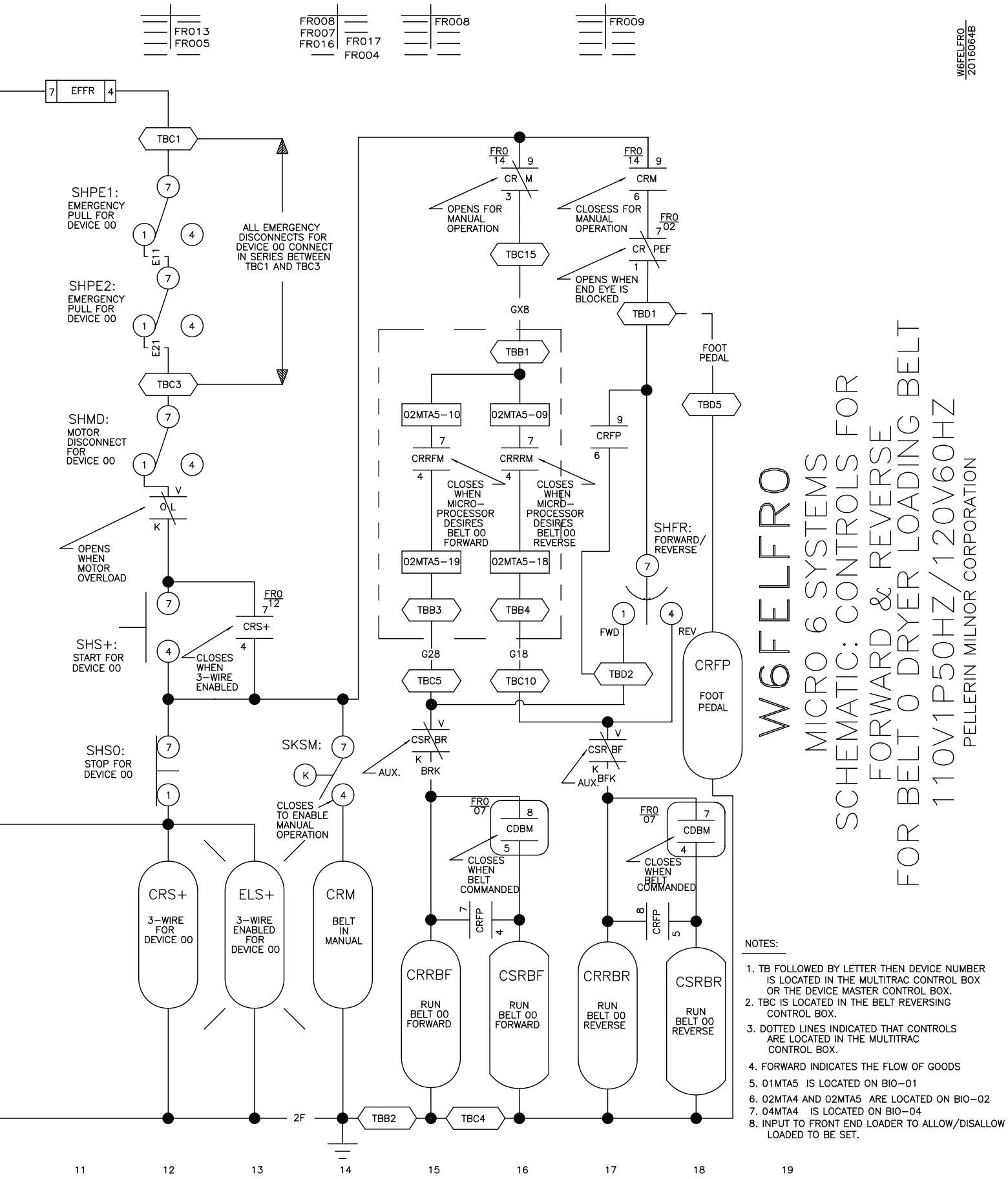

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MICRO 6 SYSTEMS
SCHEMATIC: CONTROLS FOR
FORWARD & REVERSE
FOR BELT O DRYER LOADING BELT
110V1P50HZ/120V60HZ
PELLERIN MILNOR CORPORATION

NOTES:

1. TB FOLLOWED BY LETTER THEN DEVICE NUMBER IS LOCATED IN THE MULTITRAC CONTROL BOX OR THE DEVICE MASTER CONTROL BOX.
2. TBC IS LOCATED IN THE BELT REVERSING CONTROL BOX.
3. DOTTED LINES INDICATED THAT CONTROLS ARE LOCATED IN THE MULTITRAC CONTROL BOX.
4. FORWARD INDICATES THE FLOW OF GOODS
5. 01MTA5 IS LOCATED ON BIO-01
6. 02MTA4 AND 02MTA5 ARE LOCATED ON BIO-02
7. 04MTA4 IS LOCATED ON BIO-04
8. INPUT TO FRONT END LOADER TO ALLOW/DISALLOW LOADED TO BE SET.

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