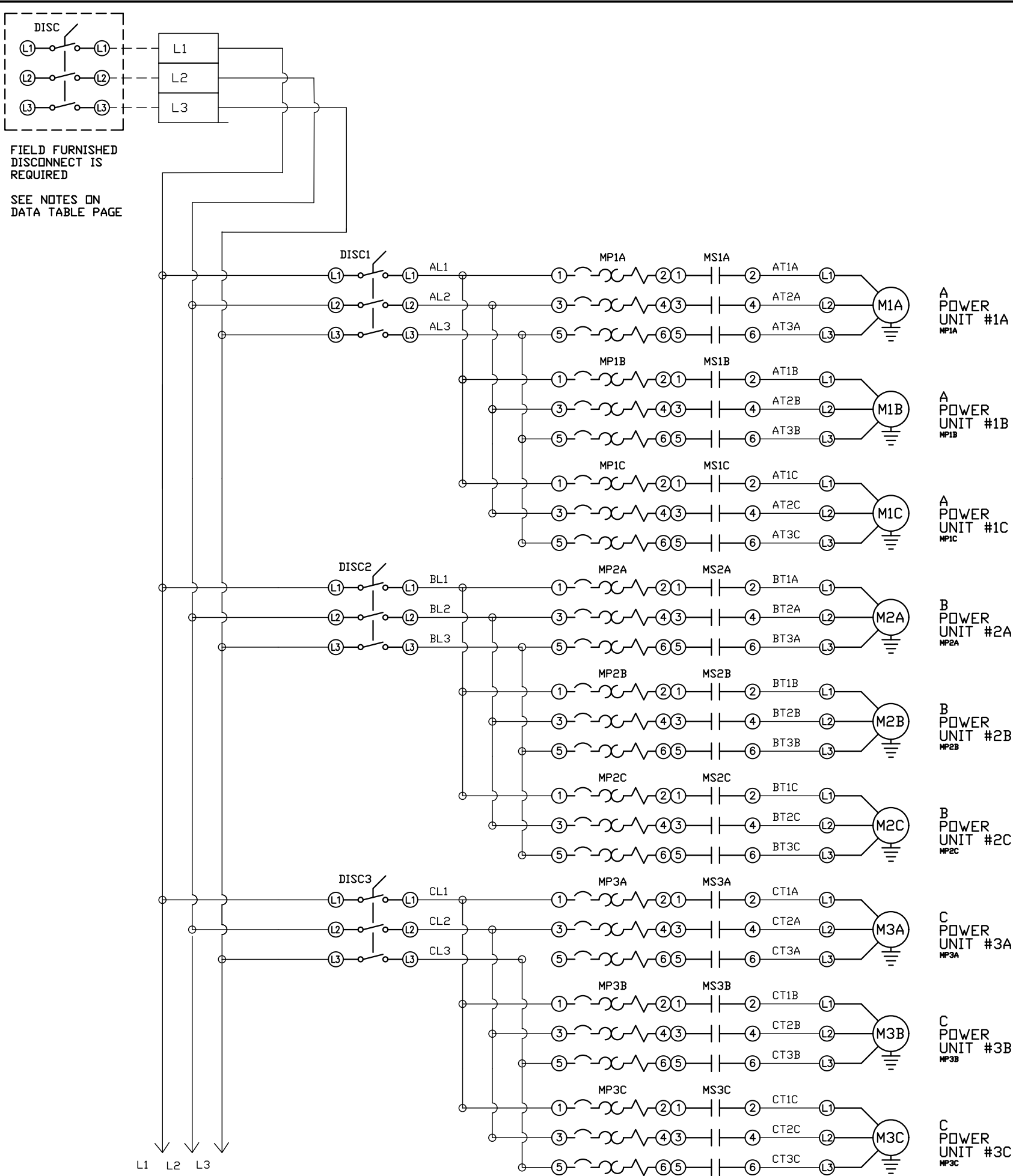




REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	05/05/14	PXEC0066	AJL	KMD
E-2	ADDED MORE TERMINAL BLOCKS	03/24/25	PXEC0628	JRD	STK
F-1	ADDED GROUND TERMINAL BLOCKS	05/06/25	PXEC0688	JRD	WMM
G-1	ADDED PLEX ISOLATION	07/28/25	PXEC0639	SEK	WMM

OPTIONAL:

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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
AJL	KMD	KMD
05/05/14	05/05/14	05/05/14

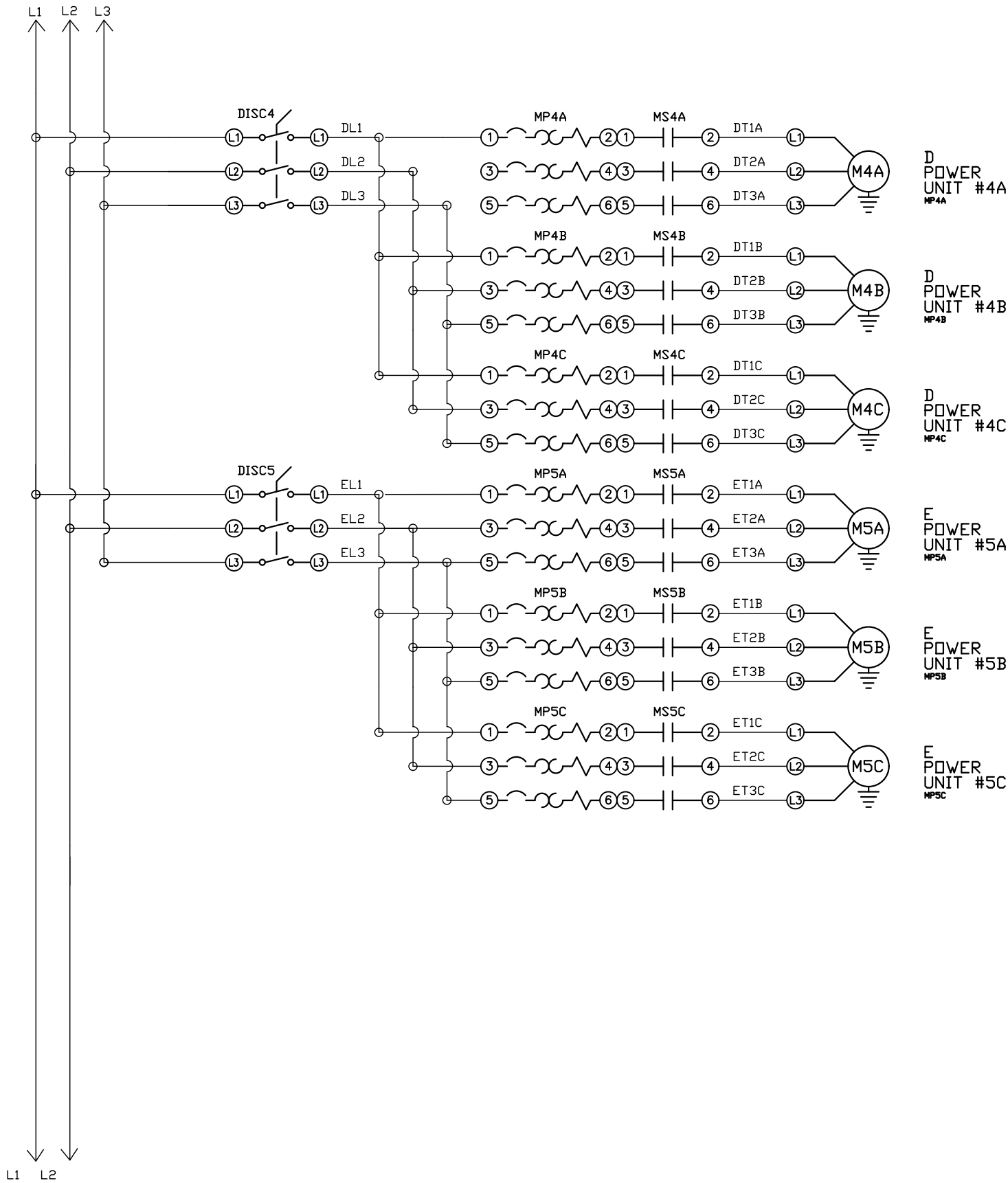
PANEL TYPE
PENTA LAB SCROLL COMP
HMI, NFPA

DWG. TYPE
WIRING

DWG. NO.
PXMI-LS516F W

SHEET W-1	SIZE B
--------------	-----------

PXMI-LS516F C1



REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	05/05/14	PXEC0066	AJL	KMD
E-2	ADDED MORE TERMINAL BLOCKS	03/24/25	PXEC0628	JRD	STK
F-1	ADDED GROUND TERMINAL BLOCKS	05/06/25	PXEC0688	JRD	WMM
G-1	ADDED PLEX ISOLATION	07/28/25	PXEC0639	SEK	WMM

OPTIONAL:

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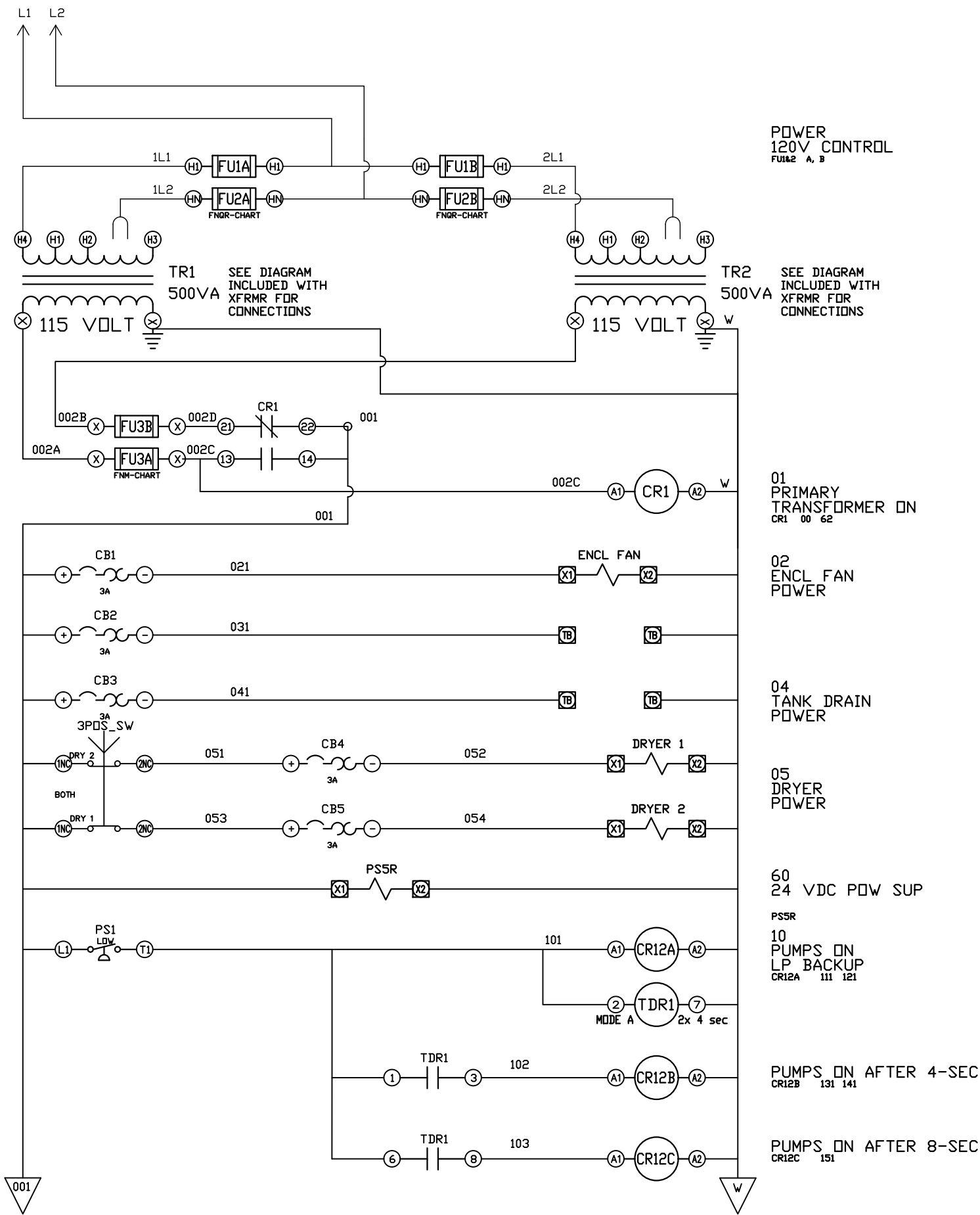
DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
AJL	KMD	KMD
05/05/14	05/05/14	05/05/14

PANEL TYPE
PENTA LAB SCROLL COMP
HMI, NFPA

DWG. TYPE
WIRING

DWG. NO.
PXMI-LS516F W

SHEET	SIZE
W-2	B



REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	05/05/14	PXEC0066	AJL	KMD
E-2	ADDED MORE TERMINAL BLOCKS	03/24/25	PXEC0628	JRD	STK
F-1	ADDED GROUND TERMINAL BLOCKS	05/06/25	PXEC0688	JRD	WMM
G-1	ADDED PLEX ISOLATION	07/28/25	PXEC0639	SEK	WMM

OPTIONAL:

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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
AJL	KMD	KMD
05/05/14	05/05/14	05/05/14

PANEL TYPE

PENTA LAB SCROLL COMP
HMI, NFPA

DWG. TYPE WIRING

DWG. NO.

PXMI-LS516F W

SHEET	SIZE
W-3	B

PXMI-LS516F C1

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	05/05/14	PXEC0066	AJL	KMD
E-2	ADDED MORE TERMINAL BLOCKS	03/24/25	PXEC0628	JRD	STK
F-1	ADDED GROUND TERMINAL BLOCKS	05/06/25	PXEC0688	JRD	WMM
G-1	ADDED PLEX ISOLATION	07/28/25	PXEC0639	SEK	WMM

OPTIONAL:

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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
AJL	KMD	KMD
05/05/14	05/05/14	05/05/14

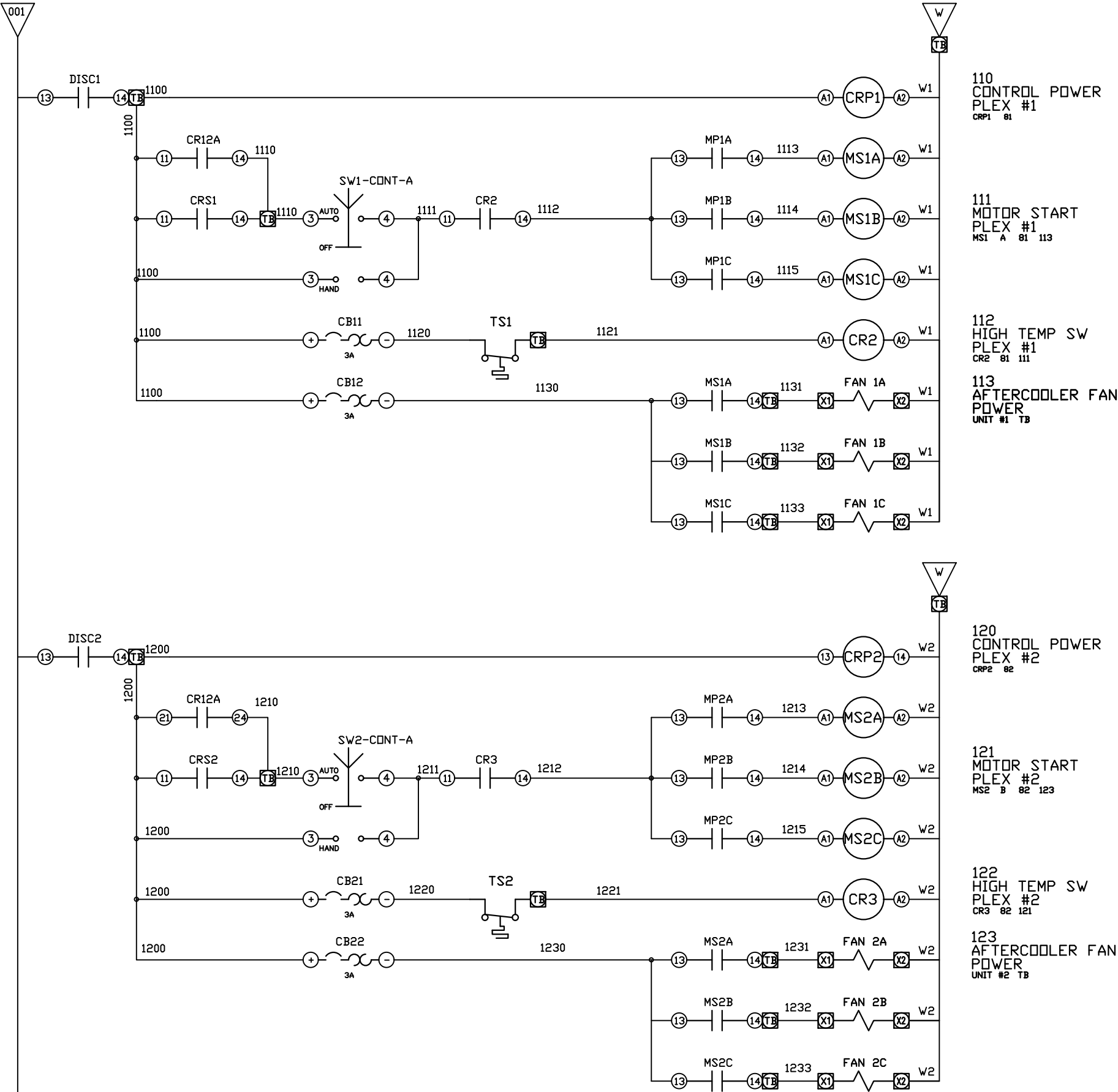
PANEL TYPE
PENTA LAB SCROLL COMP
HMI, NFPA

DWG. TYPE
WIRING

DWG. NO.
PXMI-LS516F W

SHEET	SIZE
W-4	B

PXMI-LS516F C1



REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	05/05/14	PXEC0066	AJL	KMD
E-2	ADDED MORE TERMINAL BLOCKS	03/24/25	PXEC0628	JRD	STK
F-1	ADDED GROUND TERMINAL BLOCKS	05/06/25	PXEC0688	JRD	WMM
G-1	ADDED PLEX ISOLATION	07/28/25	PXEC0639	SEK	WMM

OPTIONAL:

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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
AJL	KMD	KMD
05/05/14	05/05/14	05/05/14

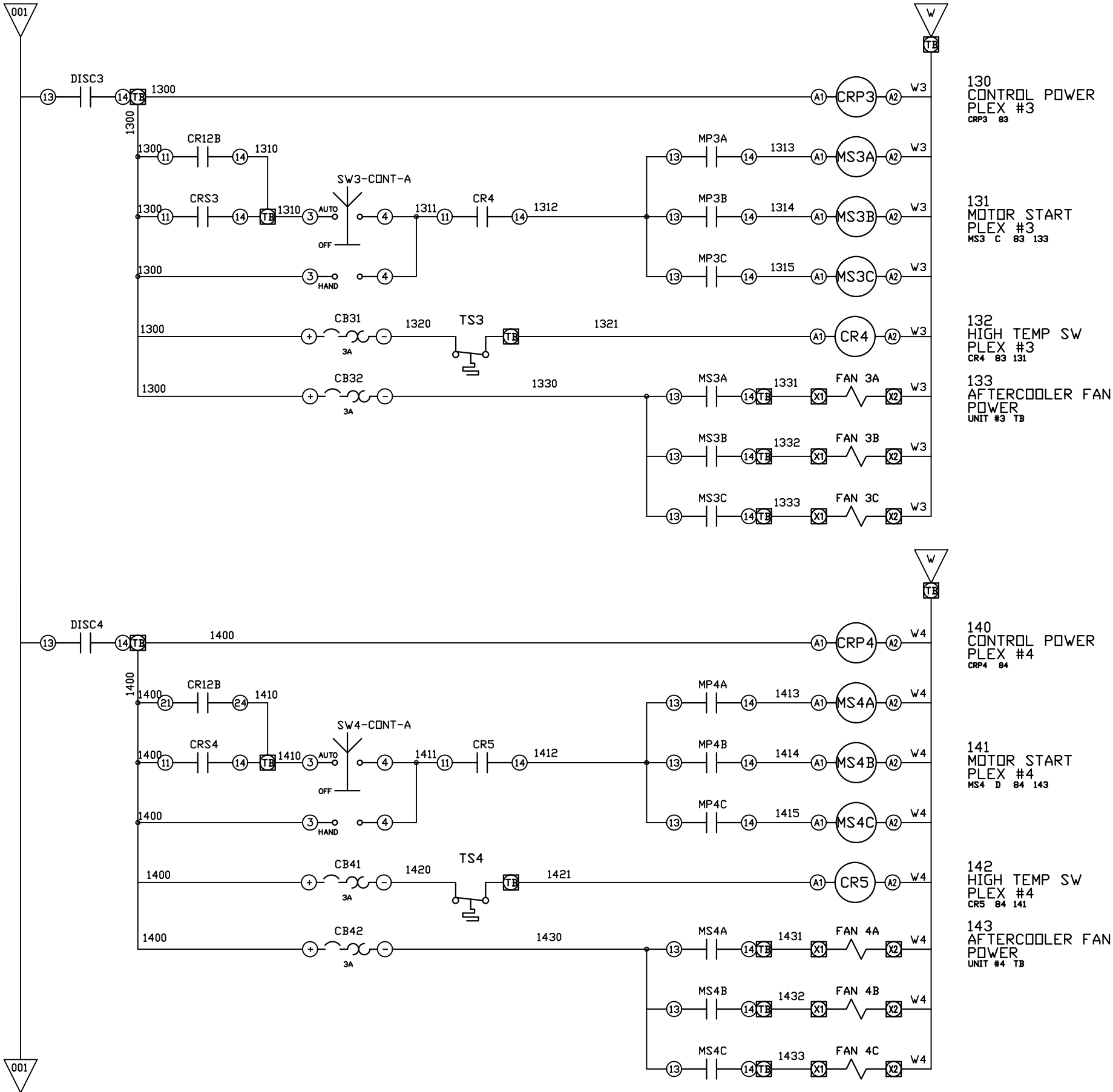
PANEL TYPE
PENTA LAB SCROLL COMP
HMI, NFPA

DWG. TYPE
WIRING

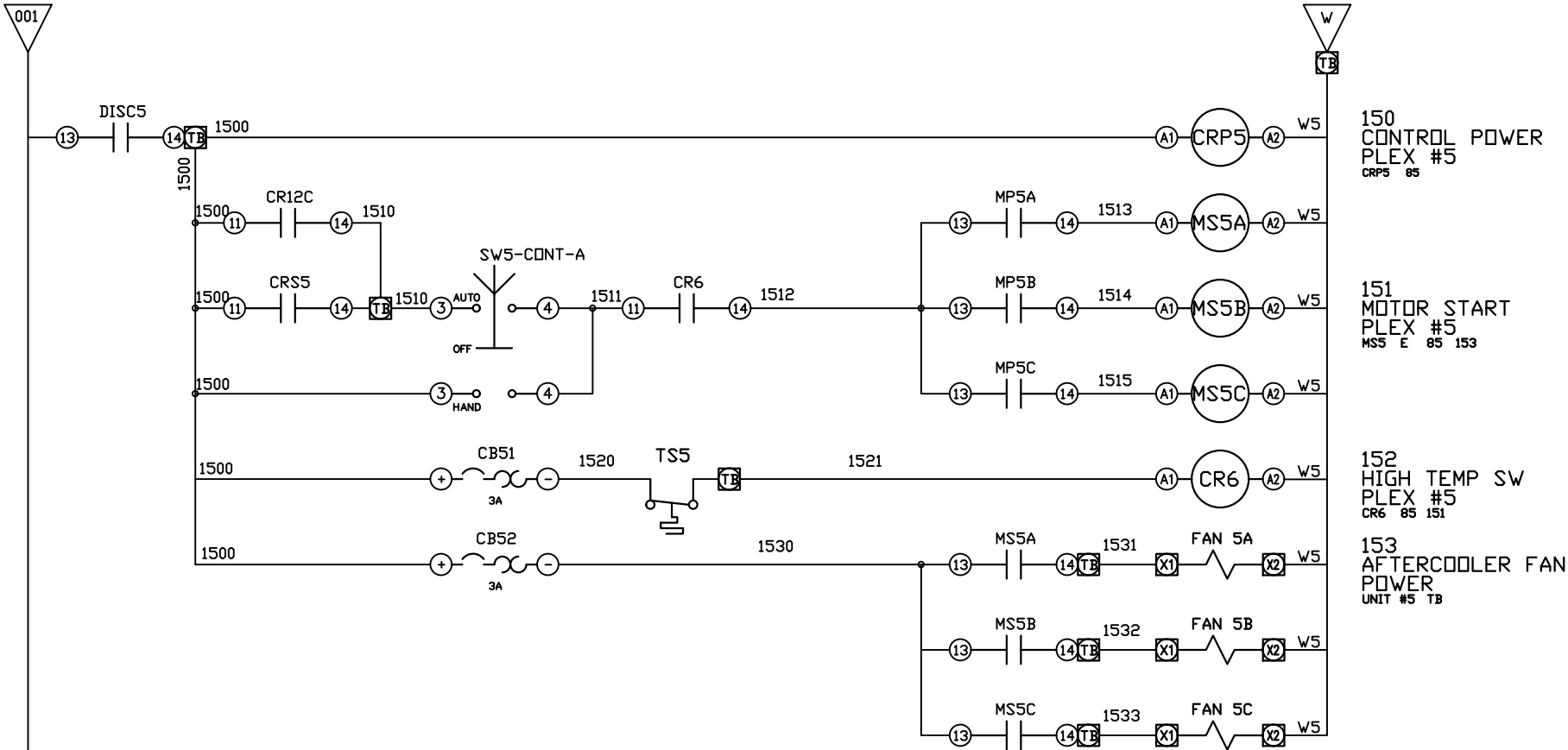
DWG. NO.
PXMI-LS516F W

SHEET	SIZE
W-5	B

PXMI-LS516F C1



REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	05/05/14	PXEC0066	AJL	KMD
E-2	ADDED MORE TERMINAL BLOCKS	03/24/25	PXEC0628	JRD	STK
F-1	ADDED GROUND TERMINAL BLOCKS	05/06/25	PXEC0688	JRD	WMM
G-1	ADDED PLEX ISOLATION	07/28/25	PXEC0639	SEK	WMM



OPTIONAL:

POWEREX™

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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
AJL	KMD	KMD
05/05/14	05/05/14	05/05/14

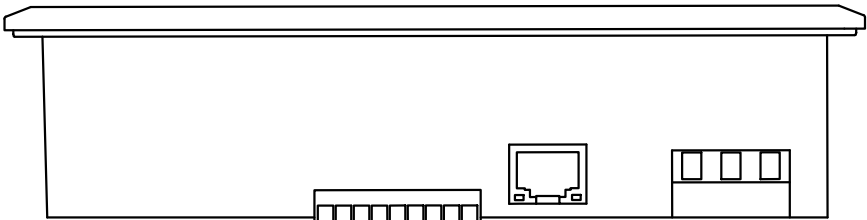
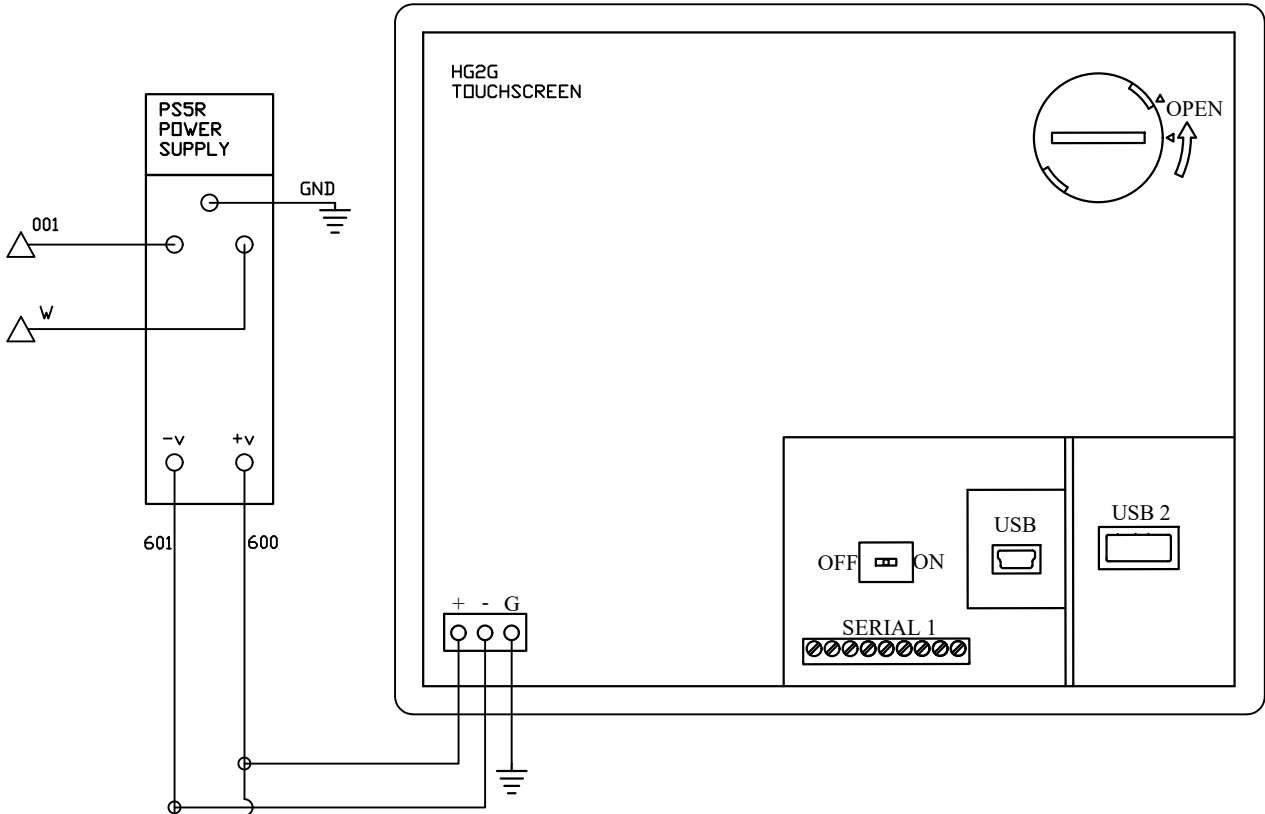
PANEL TYPE
PENTA LAB SCROLL COMP
HMI, NFPA

DWG. TYPE WIRING

DWG. NO.
PXMI-LS516F W

SHEET	SIZE
W-6	B

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	05/05/14	PXEC0066	AJL	KMD
E-2	ADDED MORE TERMINAL BLOCKS	03/24/25	PXEC0628	JRD	STK
F-1	ADDED GROUND TERMINAL BLOCKS	05/06/25	PXEC0688	JRD	WMM
G-1	ADDED PLEX ISOLATION	07/28/25	PXEC0639	SEK	WMM

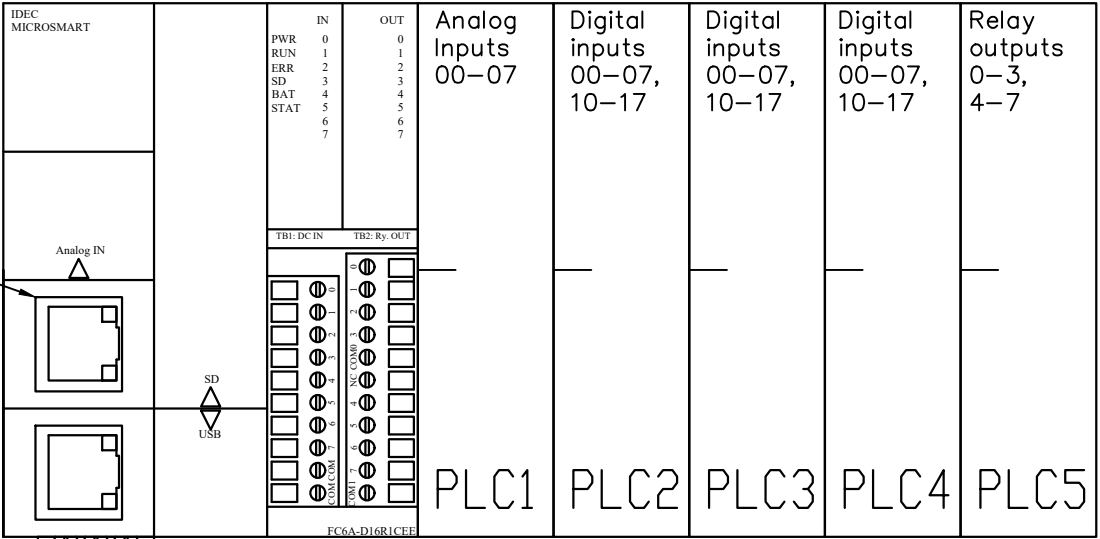


CONNECT TO
ETHERNET PORT OF
HMI

ETHERNET CONNECTION HERE FOR RACNET

CONNECT TO BOTTOM
ETHERNET PORT OF
PLC

P/N PE000479AV



IN	OUT	Analog Inputs	Digital inputs	Digital inputs	Digital inputs	Relay outputs
0	0	00-07	00-07,	00-07,	00-07,	0-3,
1	1		10-17	10-17	10-17	4-7
2	2					
3	3					
4	4					
5	5					
6	6					
7	7					
TB1: DC IN		TB2: Ry. OUT				
PWR		PLC1				
RUN		PLC2				
ERR		PLC3				
SD		PLC4				
BAT		PLC5				
STAT						
7						
FC6A-D16R1CEE						

OPTIONAL:

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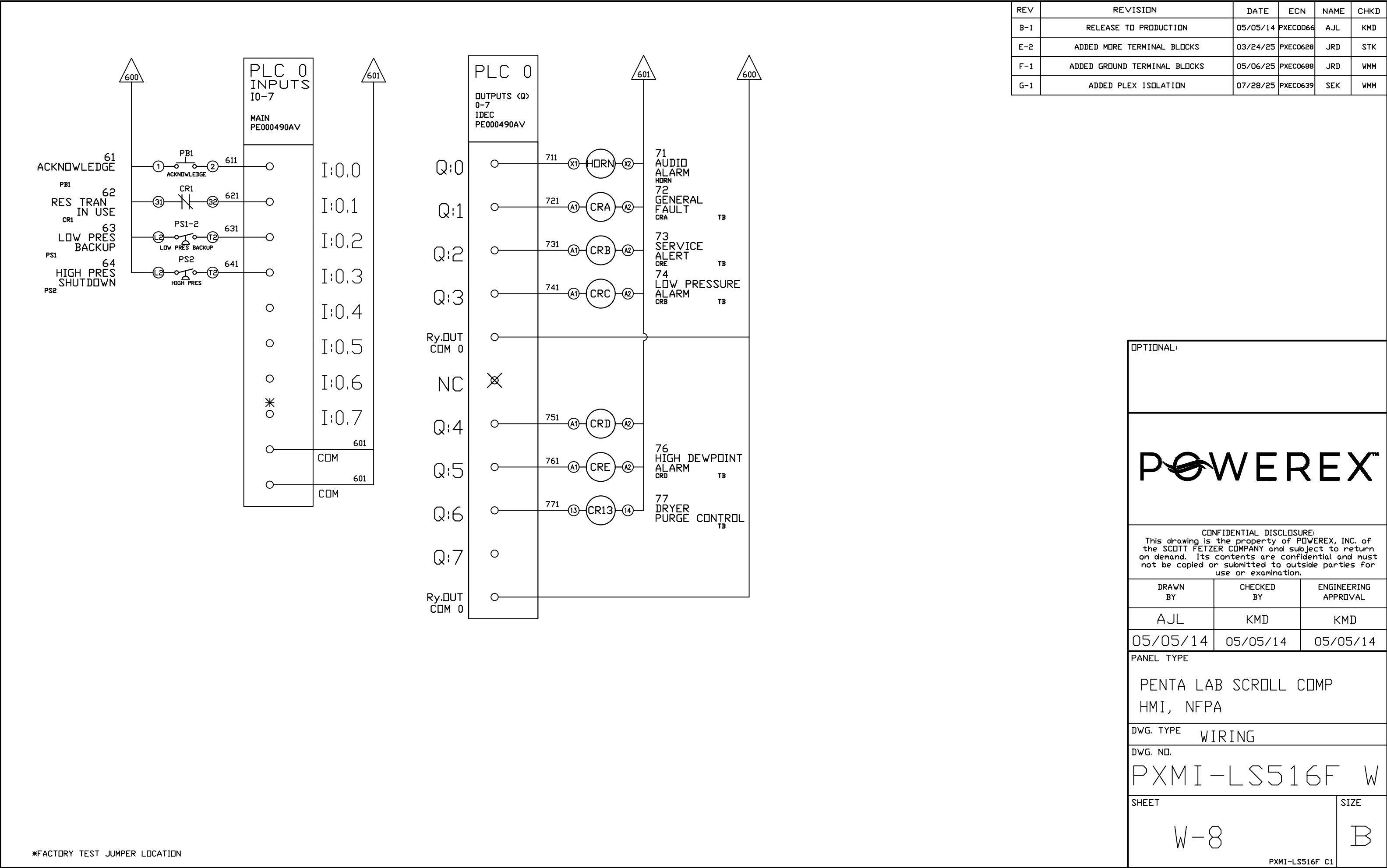
DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
AJL	KMD	KMD
05/05/14	05/05/14	05/05/14

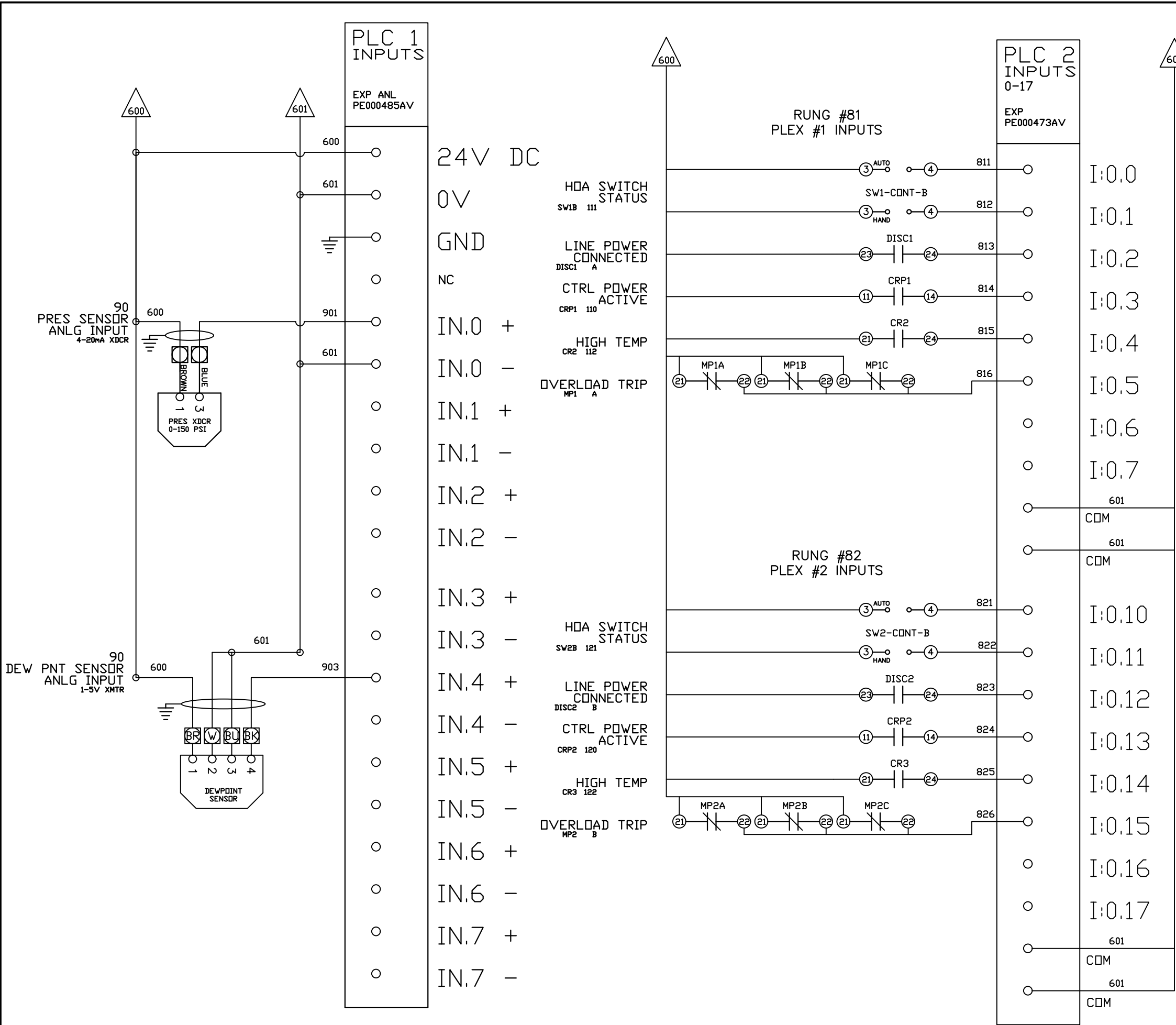
PANEL TYPE
PENTA LAB SCROLL COMP
HMI, NFPA

DWG. TYPE WIRING

DWG. NO.
PXMI-LS516F W

SHEET	SIZE
W-7	B





REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	05/05/14	PXEC0066	AJL	KMD
E-2	ADDED MORE TERMINAL BLOCKS	03/24/25	PXEC0628	JRD	STK
F-1	ADDED GROUND TERMINAL BLOCKS	05/06/25	PXEC0688	JRD	WMM
G-1	ADDED PLEX ISOLATION	07/28/25	PXEC0639	SEK	WMM

OPTIONAL:

POWEREX™

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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
AJL	KMD	KMD
05/05/14	05/05/14	05/05/14

PANEL TYPE

PENTA LAB SCROLL COMP
HMI, NFPA

DWG. TYPE WIRING

DWG. NO.

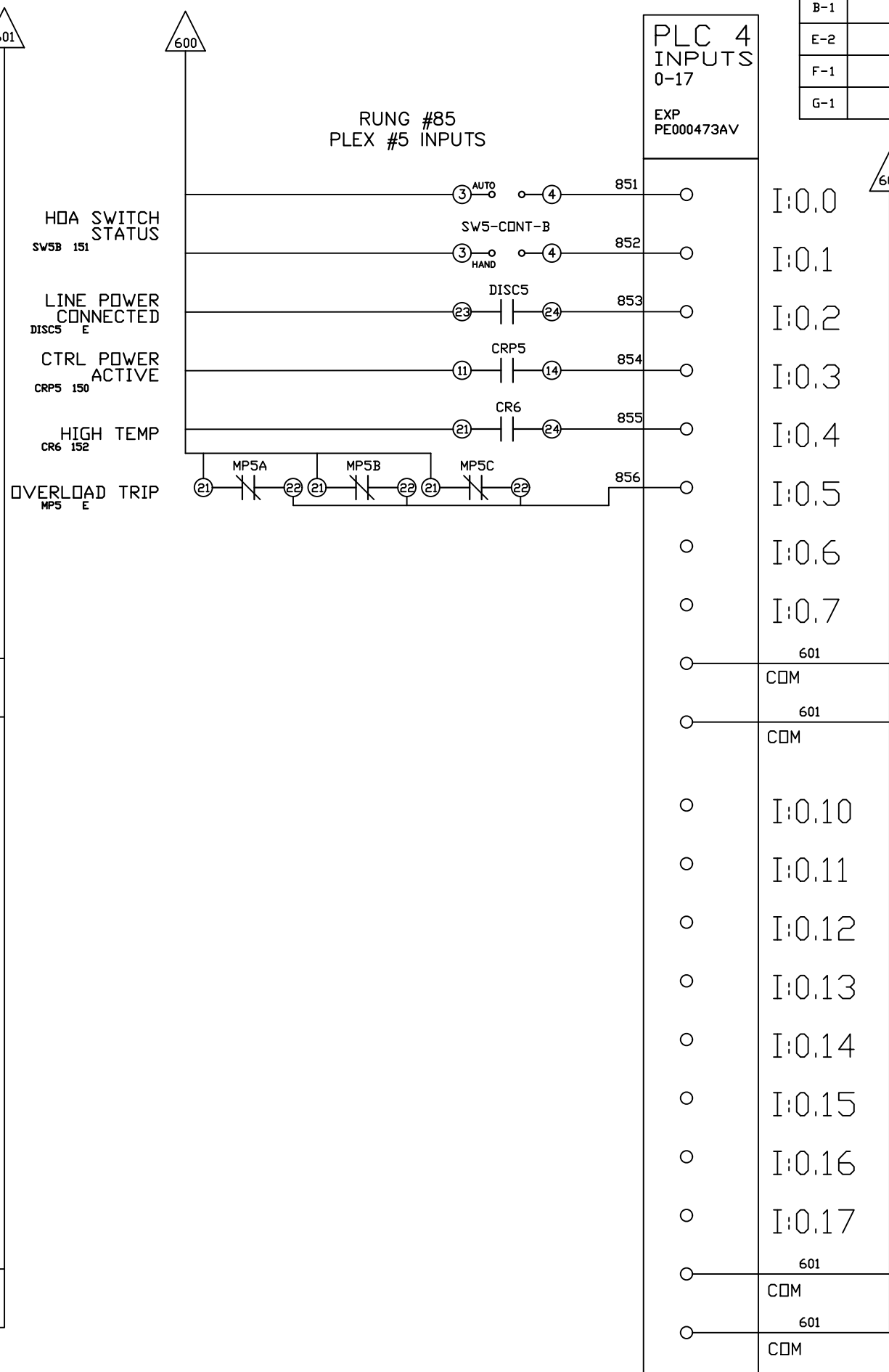
PXMI-LS516F W

SHEET

W-9

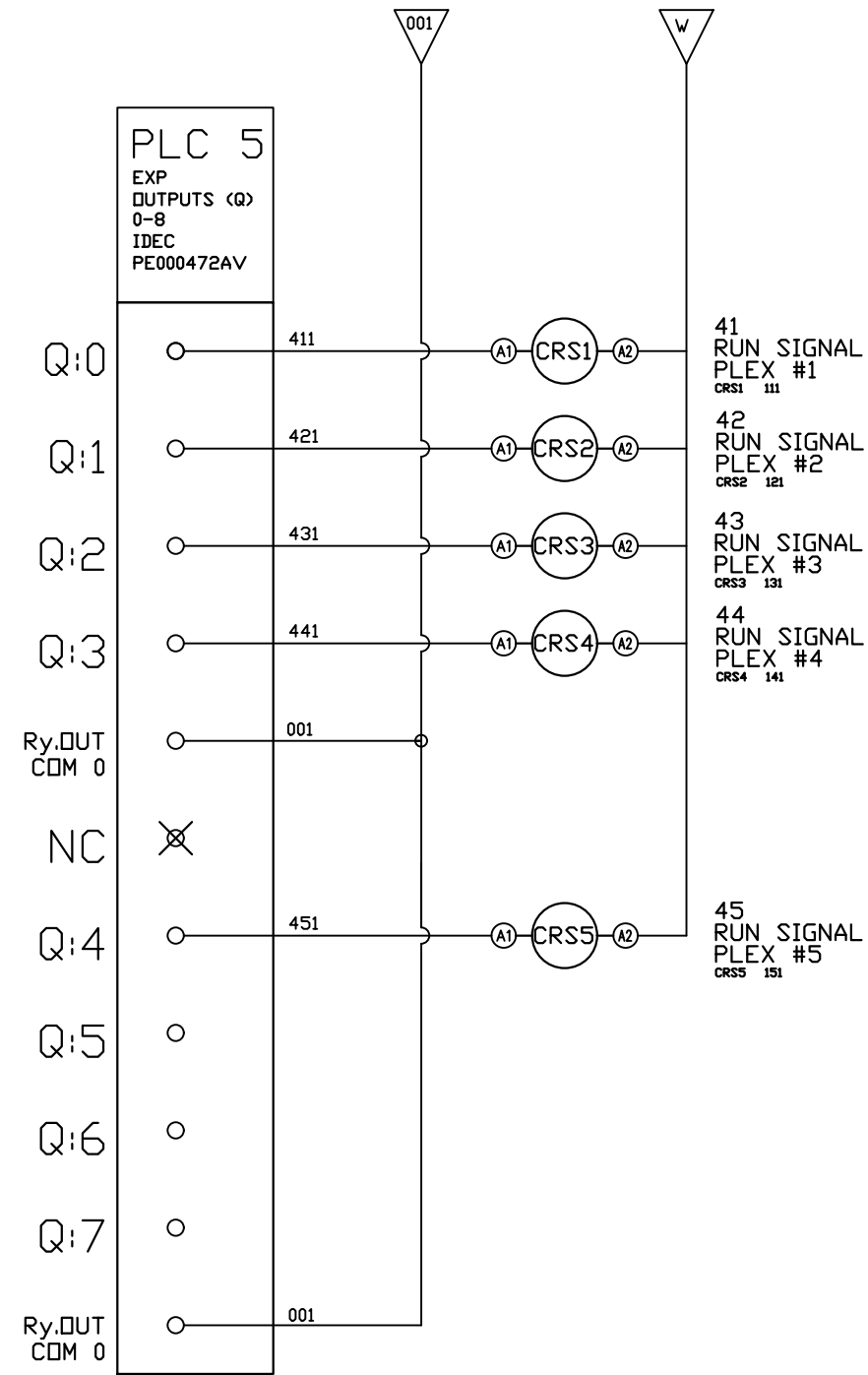
SIZE

B



SHEET	SIZE
W-10	B
PXMI-L S516F C1	

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	05/05/14	PXEC0066	AJL	KMD
E-2	ADDED MORE TERMINAL BLOCKS	03/24/25	PXEC0628	JRD	STK
F-1	ADDED GROUND TERMINAL BLOCKS	05/06/25	PXEC0688	JRD	WMM
G-1	ADDED PLEX ISOLATION	07/28/25	PXEC0639	SEK	WMM



OPTIONAL:

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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
AJL	KMD	KMD
05/05/14	05/05/14	05/05/14

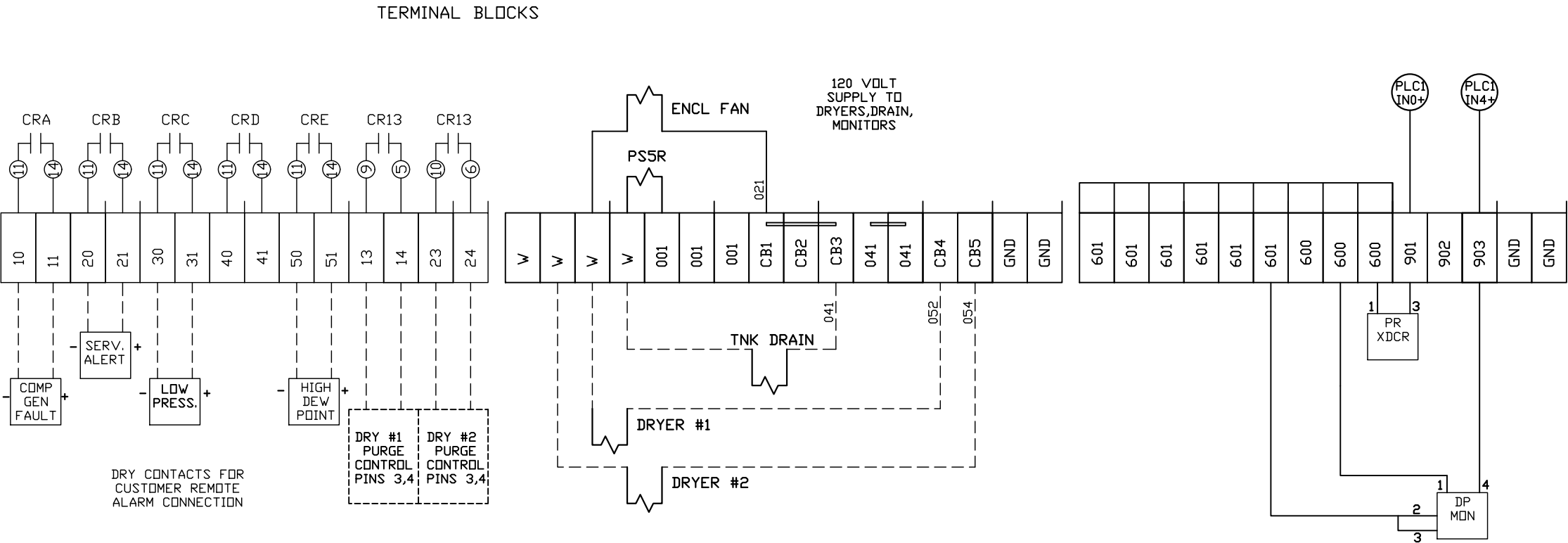
PANEL TYPE
PENTA LAB 15HP SCROLL
HMI, NFPA

DWG. TYPE WIRING

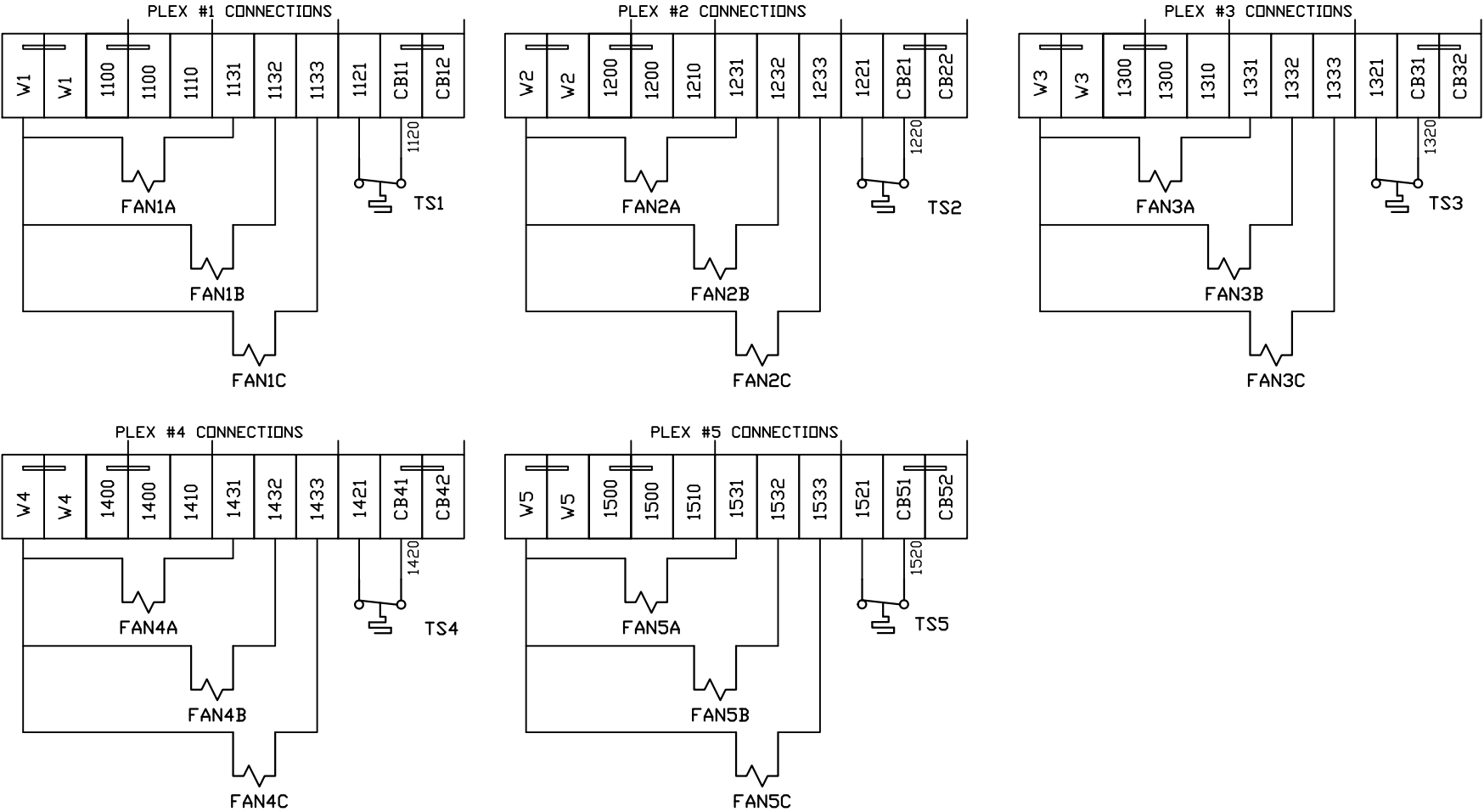
DWG. NO.
PXMI-LS516F W

SHEET W-11	SIZE B
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PXMI-LS516F C1



REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	05/05/14	PXEC0066	AJL	KMD
E-2	ADDED MORE TERMINAL BLOCKS	03/24/25	PXEC0628	JRD	STK
F-1	ADDED GROUND TERMINAL BLOCKS	05/06/25	PXEC0688	JRD	WMM
G-1	ADDED PLEX ISOLATION	07/28/25	PXEC0639	SEK	WMM



FIELD WIRING NOTES:

- PANEL GROUND MUST BE CONNECTED TO EARTH GROUND
- TRANSFORMER IS SIZED FOR LOADS SHOWN ON DRAWING ONLY.
- FIELD WIRING INDICATED BY -----, WIRE TO BE COPPER RATED AT 75° C.
- ALL ALARM DRY CONTACTS ARE CLOSED FOR NORMAL OPERATION AND OPEN IN ALARM.
- DRY CONTACT RATING: 30V DC/2A (resistive load, inductive load L/R = 7 ms)
- USE CAT-5 CABLE W/RJ45 CONNECTOR FOR ETHERNET CONNECTION TO COMMUNICATION NETWORK OR BAS SYSTEM

OPTIONAL:

POWEREX™

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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
AJL	KMD	KMD
05/05/14	05/05/14	05/05/14

PANEL TYPE
PENTA LAB 15HP SCROLL HMI, NFPA

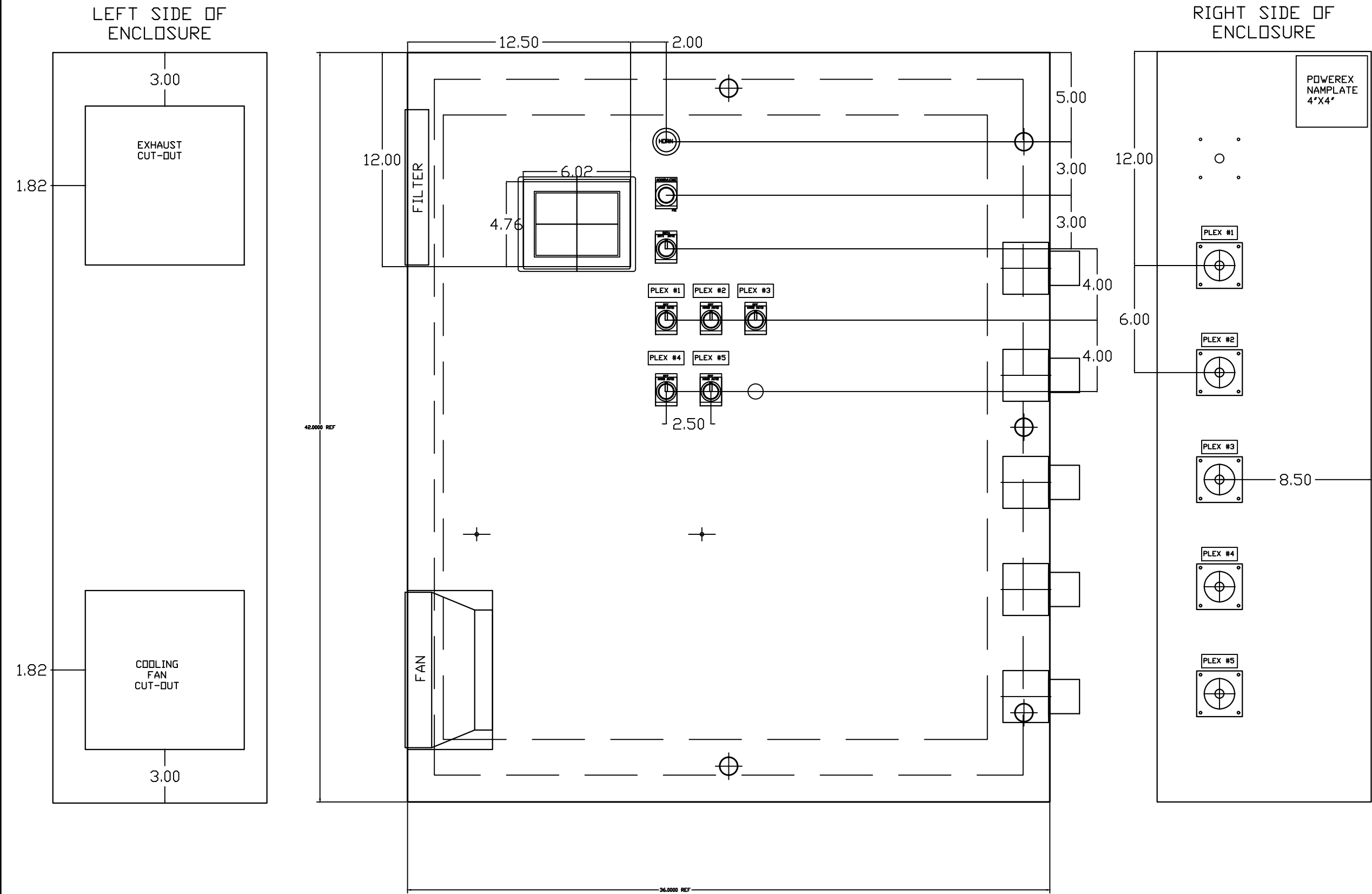
DWG. TYPE
WIRING

DWG. NO.
PXMI-LS516F W

SHEET
W-12

SIZE
B

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	05/05/14	PXEC0066	AJL	KMD
E-2	ADDED MORE TERMINAL BLOCKS	03/24/25	PXEC0628	JRD	STK
F-1	ADDED GROUND TERMINAL BLOCKS	05/06/25	PXEC0688	JRD	WMM
G-1	ADDED PLEX ISOLATION	07/28/25	PXEC0639	SEK	WMM



OPTIONAL:

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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
AJL	KMD	KMD
05/05/14	05/05/14	05/04/14

PANEL TYPE

PENTA LAB SCROLL COMP
HMI, NFPA

DWG. TYPE WIRING

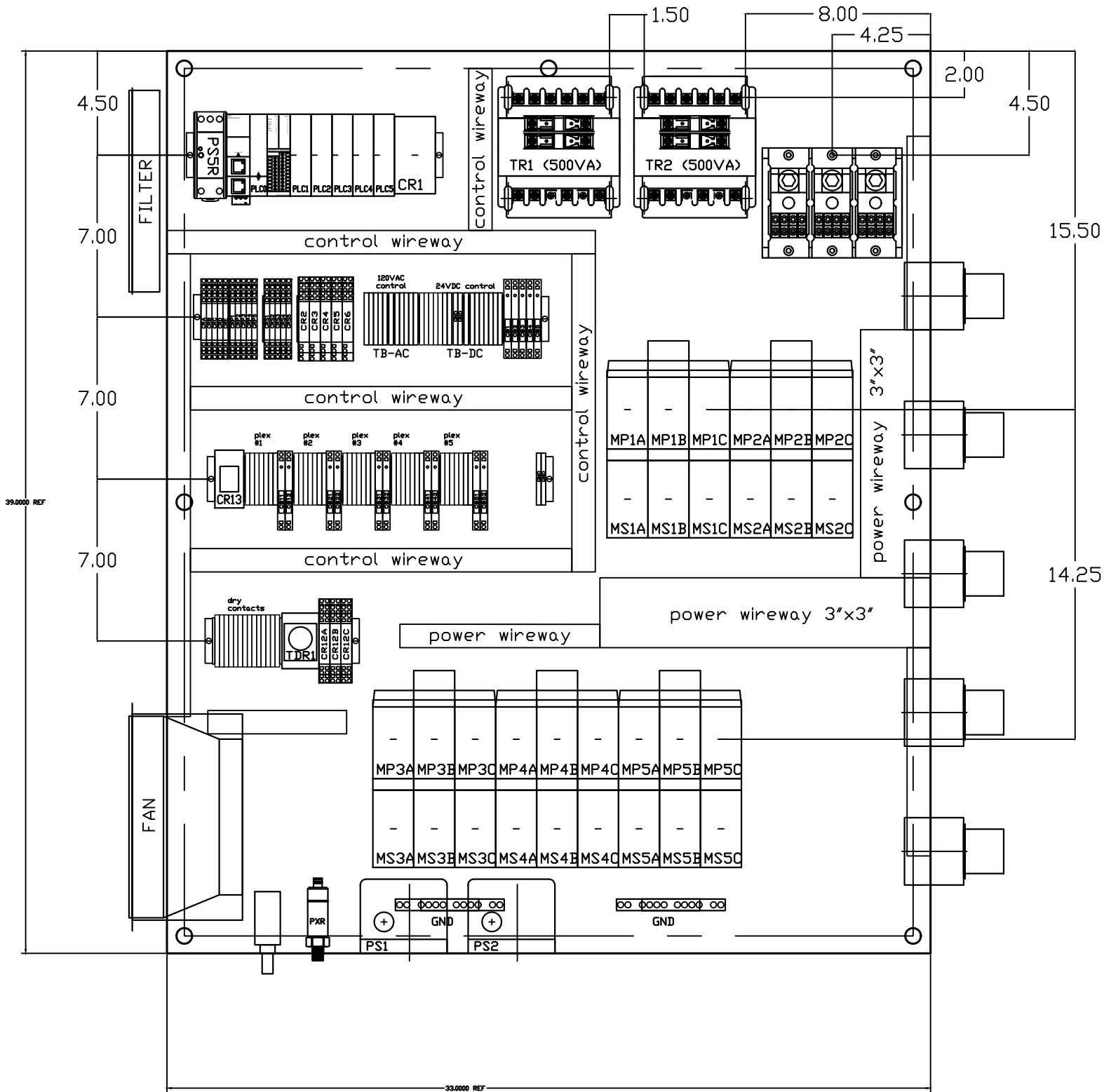
DWG. NO.

PXMI-LS516F W

SHEET	SIZE
L-1	B

PXMI-LS516F C1

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	05/05/14	PXEC0066	AJL	KMD
E-2	ADDED MORE TERMINAL BLOCKS	03/24/25	PXEC0628	JRD	STK
F-1	ADDED GROUND TERMINAL BLOCKS	05/06/25	PXEC0688	JRD	WMM
G-1	ADDED PLEX ISOLATION	07/28/25	PXEC0639	SEK	WMM



OPTIONAL:

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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
AJL	KMD	KMD
05/05/14	05/05/14	05/05/14

PANEL TYPE

PENTA LAB SCROLL COMP
HMI, NFPA

DWG. TYPE WIRING

DWG. NO.

PXMI-LS516F W

SHEET	SIZE
L-2	B

PXMI-LS516F C1

TABLE 1								
PANEL DATA 3ø – 60 Hz 500VA CONTROL CIRCUIT								
(A) LOAD SPECIFICATIONS					(B) BRANCH CIRCUIT PROTECTION – PROVIDED BY INSTALLER			
PANEL PART NUMBER	MOTOR SIZE EACH (HP)	(A) POWER (V/PH)	(A) MOTOR LOAD EACH (FLA)	PANEL LOAD TOTAL (FLA)	NONTIME DELAY FUSE	TIME-DELAY FUSE	INVERSE-TIME CIRCUIT BREAKER	
PBMILS516F2AJ	5(X3)	208V/3ø	14.6	221.4	350A	300A	300A	
PBMILS516F3AJ	5(X3)	230V/3ø	12.7	192.7	300A	225A	250A	
PBMILS516F4AJ	5(X3)	460V/3ø	6.33	96.0	150A	125A	125A	
NOTE– ADJUST OVERCURRENT PROTECTION DEVICE NOT TO EXCEED 115% OF MOTOR NAMEPLATE FLA VALUE								

- NOTES:
- RECOMMENDED TIGHTENING TORQUES FOR WIRE TERMINALS:
208-575 VOLT POWER 35 POUND INCHES
120 VOLT POWER AND CONTROL VOLTAGE 15 POUND INCHES
 - PANEL GROUND MUST BE CONNECTED TO EARTH GROUND
 - INSTALLER TO PROVIDE MAIN DISCONNECTING DEVICE FOR THIS ELECTRICAL ASSEMBLY. SHORT CIRCUIT PROTECTION IS RECOMMENDED. SEE TABLE 1. IF PROVIDING PANEL SHORT CIRCUIT PROTECTION USING TIME DELAY (CLASS J) FUSES, PANEL SCCR IS 65KA. OTHERWISE, PANEL SCCR IS 5KA.
 - ALL WIRES MUST BE LABELED ON BOTH ENDS
 - TRANSFORMER IS SIZED FOR LOADS SHOWN ON DRAWING ONLY. DO NOT CONNECT ANY OTHER DEVICES
 - △ -INDICATES A DRAWING WIRE CONNECTION TO ANOTHER PAGE.
 - SERVICE DISCONNECT USAGE - turn HOA switch to OFF position. Turn disconnect OF SAME UNIT to OFF position. Associated PLEX will be isolated for maintenance purposes. After completing maintenance, turn disconnect to ON position and return HOA switch to AUTO. This will return PLEX to normal operation.

SEQUENCE OF OPERATIONS

During normal operation the PBMI controller will signal the Lead compressor to run when pressure drops below lead cut-in set-point and stop when the pressure reaches the lead cut-out set-point. Lead alternation to the next pump, will occur with each lead run signal or every 10-minutes (which ever happens first). If demand cannot be satisfied by the lead pump, the lag pump(s) will start and stop based upon the lag cut-in and cut-out set-points. When more than one pump is running, lead alternation will occur when the lowest cut-out set-point is satisfied, or after 10-minutes (which ever happens first). The HOA switch’s place the pump in the following modes: Hand-turns pump on to run continuous. Off-disables pump from running. Auto-places pump in the “ready mode” and will start and stop based on sequence described above.

All plex configurations include a hardwired Back-up pressure switch circuit should a control failure occur. This circuit will call all pumps on and off based on the reserve pressure switch set-points.

Expandable systems include all control devices, operators, and programming for the maximum number of pumps (or plex) required. To expand the system: navigate to the “service screen” and enter the number of pumps.

Additional information and descriptions can be accessed through the HMI “service info” screen by pressing Sequence of Operations button.

CONTROL TRANSFORMERS - 500VA								
REPLACEMENT		208	230	460	575			
FUSE TYPE		VOLT	VOLT	380 VOLT	VOLT	WIRE TYPE TABLE		
FU1,2A	FNQR	6A	5A	5A	4A	VOLTAGE	WIRE NUMBERS	GAUGE
FU1,2B						120VAC	001-599,1100+	16-18AWG
						0VAC	W	16-18AWG
						24VDC	600-1099	16-18AWG
FU3A,B	FNM	7A	7A	7A	7A	0VDC	601	16-18AWG
						GND	-	VARIES
						CUSTOMER SUPPLY	01-99	16-18AWG
SEE XFRMR FOR CONNECTIONS								COLOR
								RED/BLK
								WHT/BLK
								PURPLE
								PURPLE
								GREEN
								YELLOW

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	05/05/14	PXEC0066	AJL	KMD
E-2	ADDED MORE TERMINAL BLOCKS	03/24/25	PXEC0628	JRD	STK
F-1	ADDED GROUND TERMINAL BLOCKS	05/06/25	PXEC0688	JRD	WMM
G-1	ADDED PLEX ISOLATION	07/28/25	PXEC0639	SEK	WMM

OPTIONAL:



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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
AJL	KMD	KMD
05/05/14	05/05/14	05/05/14

PANEL TYPE

PENTA LAB 15HP SCROLL HMI, NFPA

DWG. TYPE DATA

DWG. NO.

PXMI-LS516F W

SHEET	SIZE
D-1	B

PXMI-LS516F C1