

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	01/21/14	PXEC0065	KMD	AJL
C-1	BACNET CARD UPDATE ADD ISOLATION RELAYS	11/03/15	PXEC0110	AJL	KMD
D	ADDED FAN WIRING	08/31/18	PXEC0229	JPG	AH

OPTIONAL:

SINGLE CYLINDER PUMPS	<input type="checkbox"/>
DOUBLE-CYLINDER PUMPS	<input type="checkbox"/>
TRIPLE-CYLINDER PUMPS	<input type="checkbox"/>
SCROLL PUMPS	<input checked="" type="checkbox"/>

BACNET, WEBSVR,



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DRAWN BY	OR EXAMINATION CHECKED BY	ENGINEERING APPROVAL
KMD	AJL	DMS
01/21/14	01/21/14	01/21/14

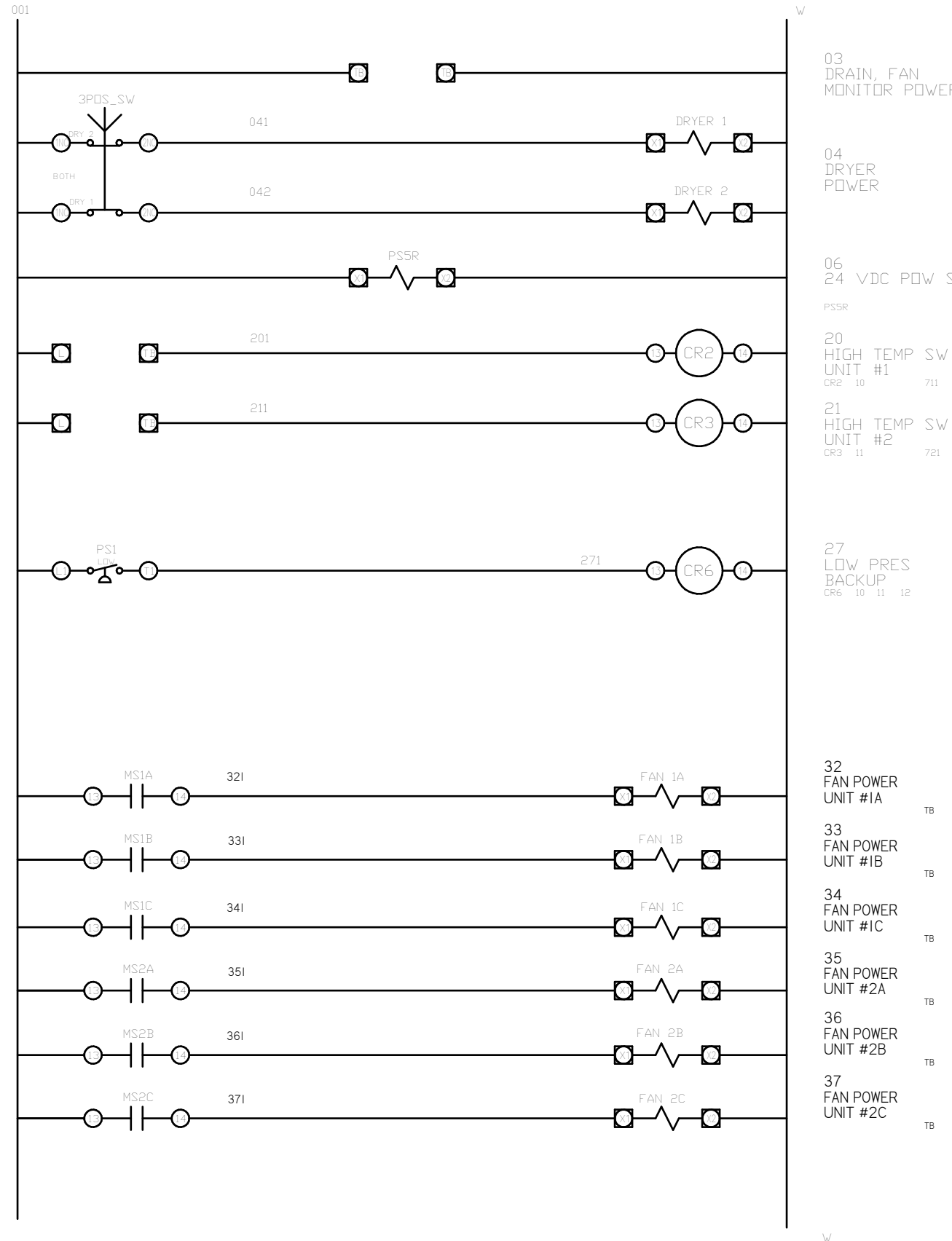
PANEL TYPE  
 DUPLEX LAB 15HP SCROLL HMI, NFPA

DWG. TYPE  
 WIRING

DWG. NO.  
 PXMI-LS216F W

SHEET	SIZE
W-1	B

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	01/21/14	PXEC0065	KMD	AJL
C-1	BACNET CARD UPDATE ADD ISOLATION RELAYS	11/03/15	PXEC0110	AJL	KMD
D	ADDED FAN WIRING	08/31/18	PXEC0229	JPG	AH



OPTIONAL:	SINGLE CYLINDER PUMPS	<input type="checkbox"/>
	DOUBLE-CYLINDER PUMPS	<input type="checkbox"/>
	TRIPLE-CYLINDER PUMPS	<input type="checkbox"/>
BACNET, WEBSRV, SCROLL PUMPS		<input checked="" type="checkbox"/>



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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
KMD	AJL	DMS
01/21/14	01/21/14	01/21/14

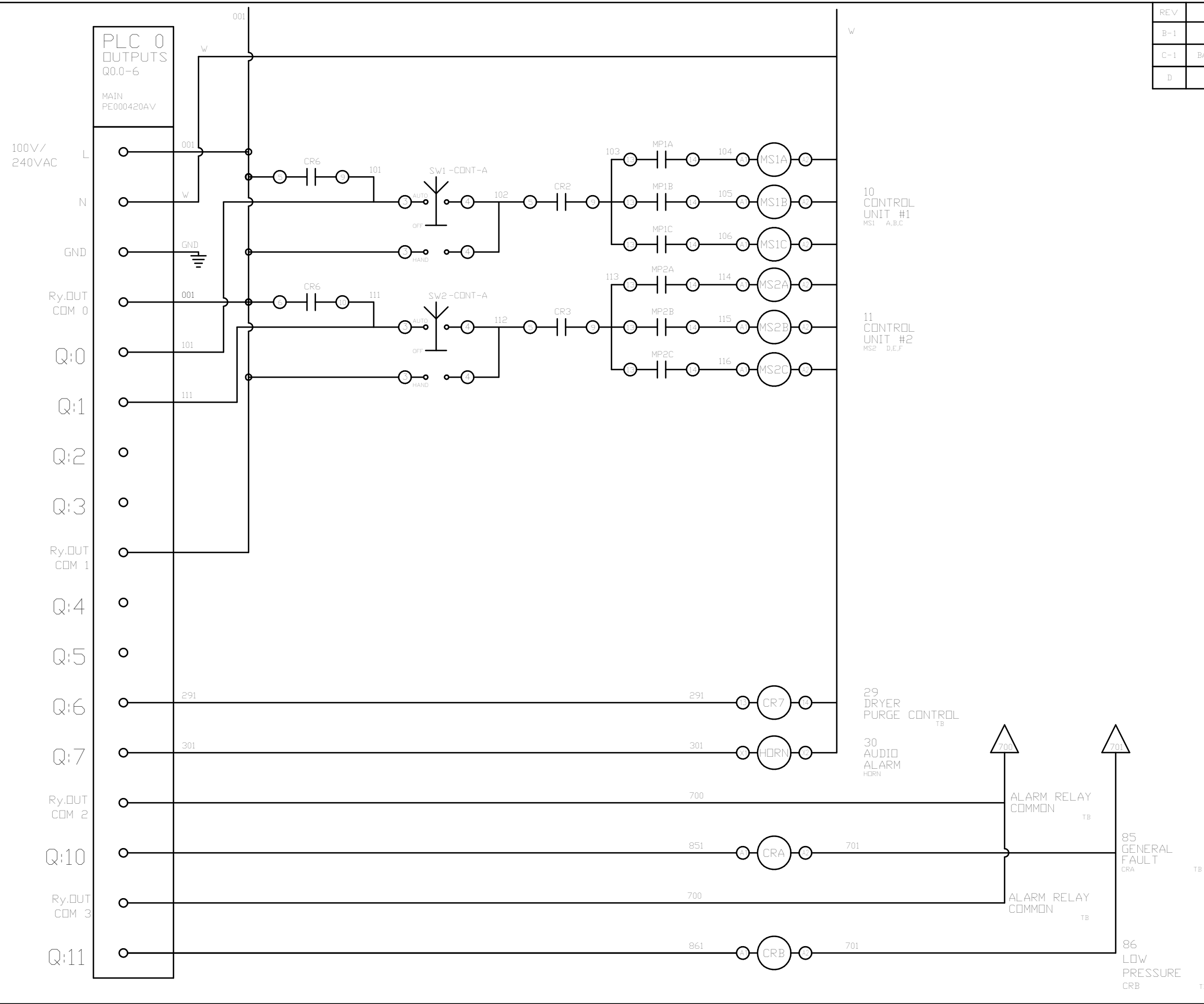
PANEL TYPE  
 DUPLEX LAB 15HP SCROLL HMI, NFPA

DWG. TYPE WIRING

DWG. NO.  
 PXMI-LS216F W

SHEET W-2	SIZE B
--------------	-----------

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	01/21/14	PXEC0065	KMD	AJL
C-1	BACNET CARD UPDATE ADD ISOLATION RELAYS	11/03/15	PXEC0110	AJL	KMD
D	ADDED FAN WIRING	08/31/18	PXEC0229	JPG	AH



OPTIONAL:

SINGLE CYLINDER PUMPS	<input type="checkbox"/>
DOUBLE-CYLINDER PUMPS	<input type="checkbox"/>
TRIPLE-CYLINDER PUMPS	<input type="checkbox"/>
SCROLL PUMPS	<input checked="" type="checkbox"/>

BACNET, WEBSVR,



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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
KMD	AJL	DMS
01/21/14	01/21/14	01/21/14

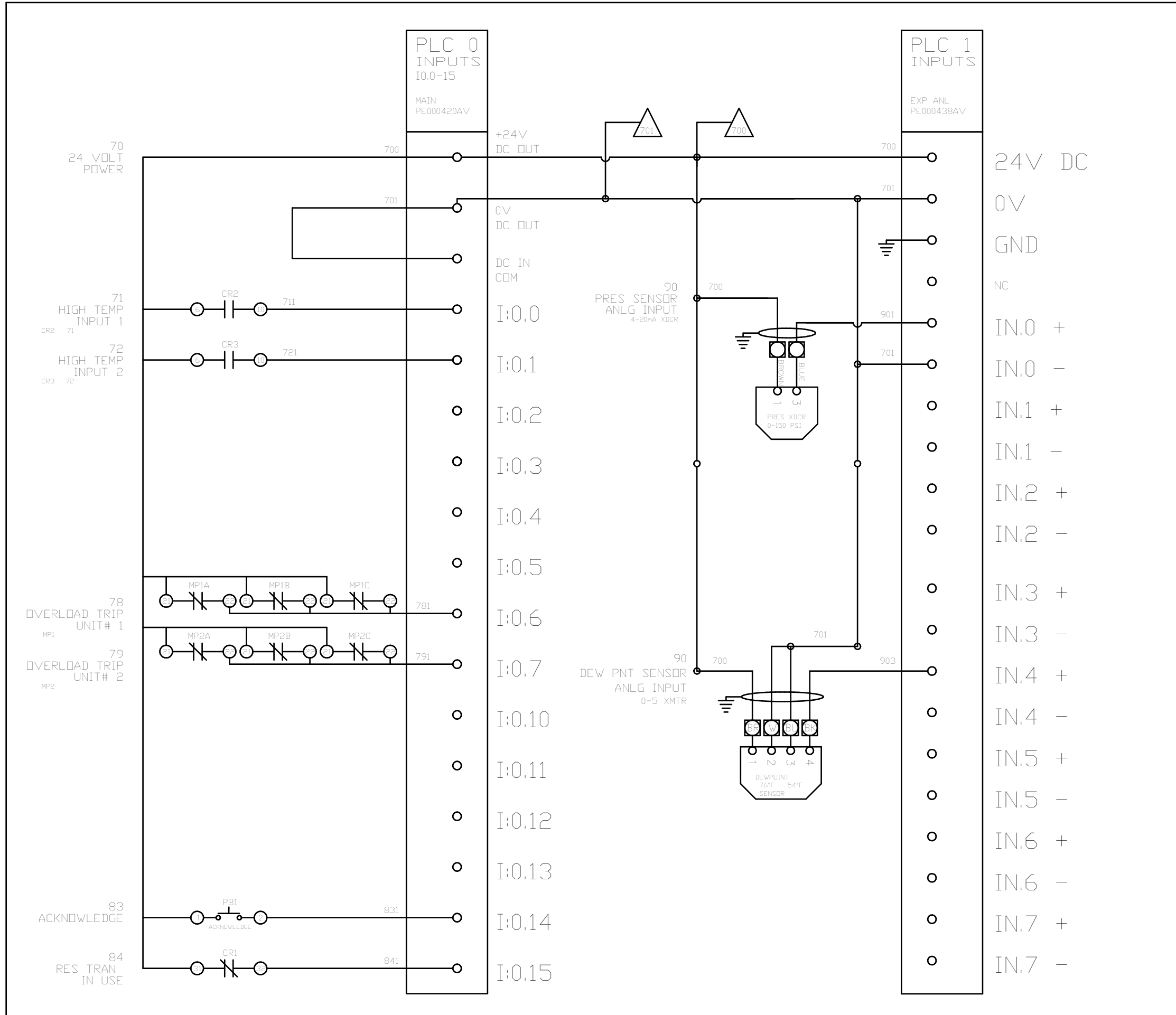
PANEL TYPE  
 DUPLEX LAB 15HP SCROLL HMI, NFPA

DWG. TYPE  
 WIRING

DWG. NO.  
 PXMI-LS216F W

SHEET	SIZE
W-3	B

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	01/21/14	PXEC0065	KMD	AJL
C-1	BACNET CARD UPDATE ADD ISOLATION RELAYS	11/03/15	PXEC0110	AJL	KMD
D	ADDED FAN WIRING	08/31/18	PXEC0229	JPG	AH



OPTIONAL:	SINGLE CYLINDER PUMPS	<input type="checkbox"/>
	DOUBLE-CYLINDER PUMPS	<input type="checkbox"/>
	TRIPLE-CYLINDER PUMPS	<input type="checkbox"/>
BACNET, WEBSRVR,	SCROLL PUMPS	<input checked="" type="checkbox"/>



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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
KMD	AJL	DMS
01/21/14	01/21/14	01/21/14

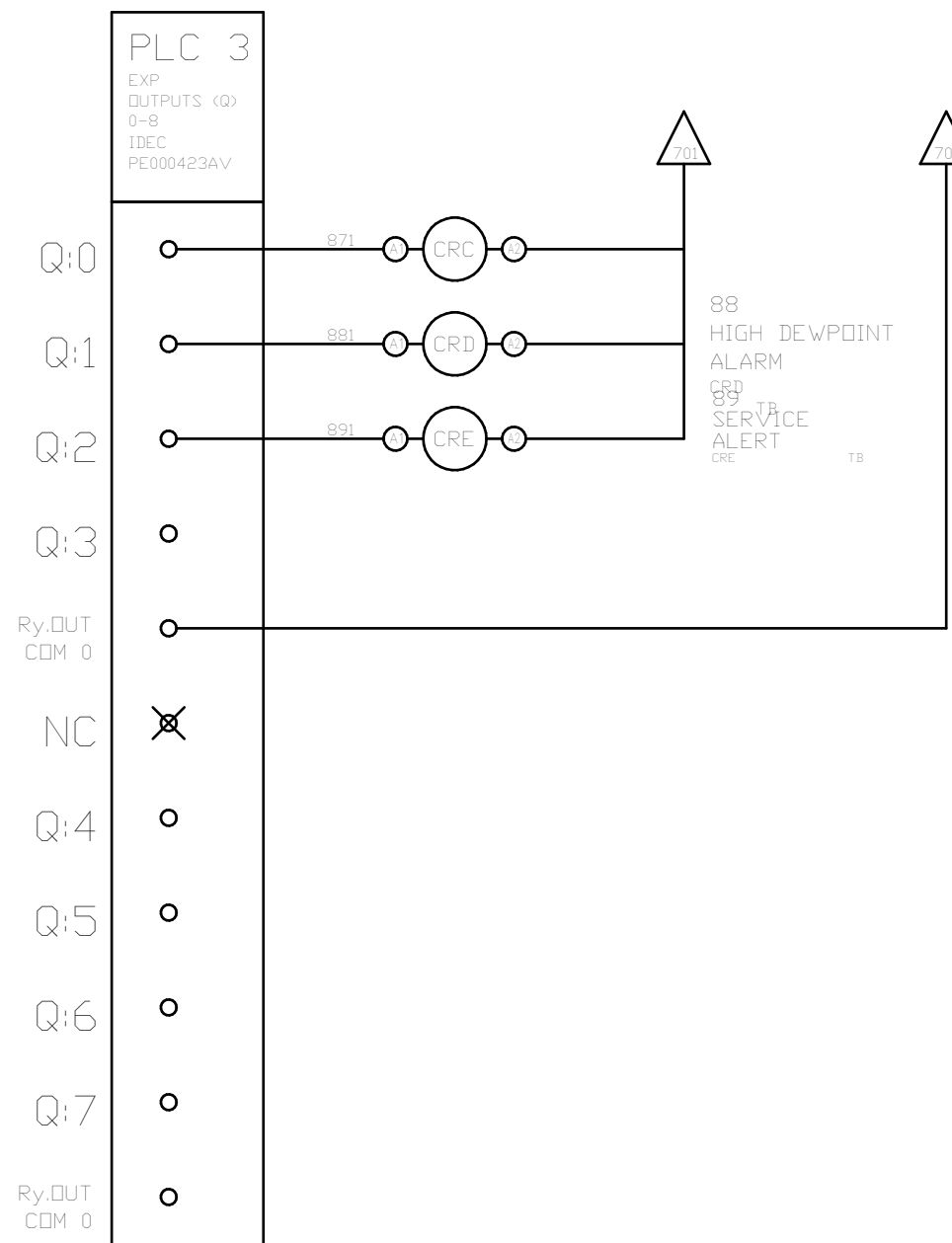
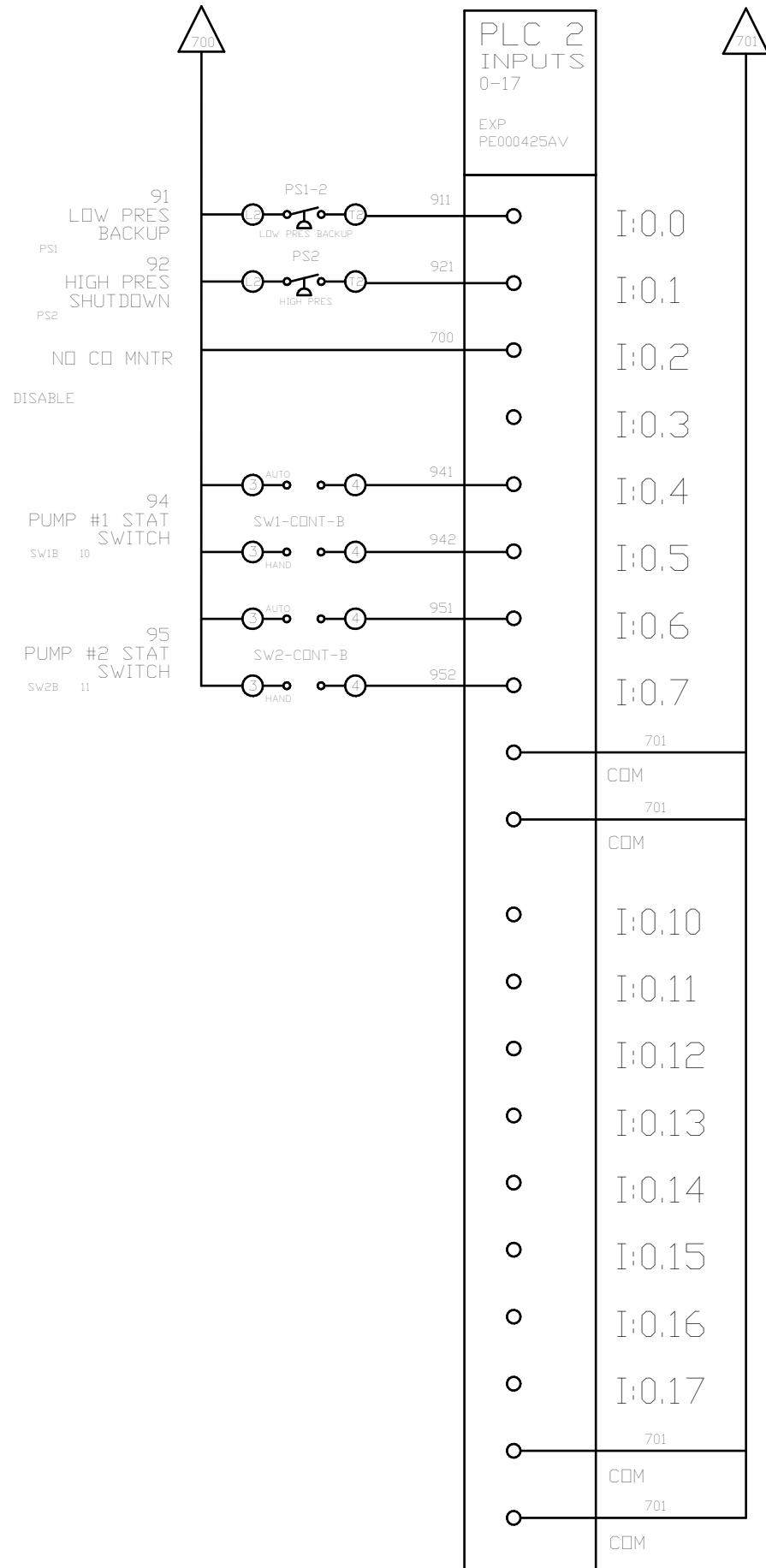
PANEL TYPE  
DUPLEX LAB 15HP SCROLL HMI, NFPA

DWG. TYPE  
WIRING

DWG. NO.  
PXMI-LS216F W

SHEET W-4	SIZE B
--------------	-----------

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	01/21/14	PXEC0065	KMD	AJL
C-1	BACNET CARD UPDATE ADD ISOLATION RELAYS	11/03/15	PXEC0110	AJL	KMD
D	ADDED FAN WIRING	08/31/18	PXEC0229	JPG	AH



OPTIONAL:	SINGLE CYLINDER PUMPS	<input type="checkbox"/>
	DOUBLE-CYLINDER PUMPS	<input type="checkbox"/>
	TRIPLE-CYLINDER PUMPS	<input type="checkbox"/>
BACNET, WEBSRVR,	SCROLL PUMPS	<input checked="" type="checkbox"/>



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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
KMD	AJL	DMS
01/21/14	01/21/14	01/21/14

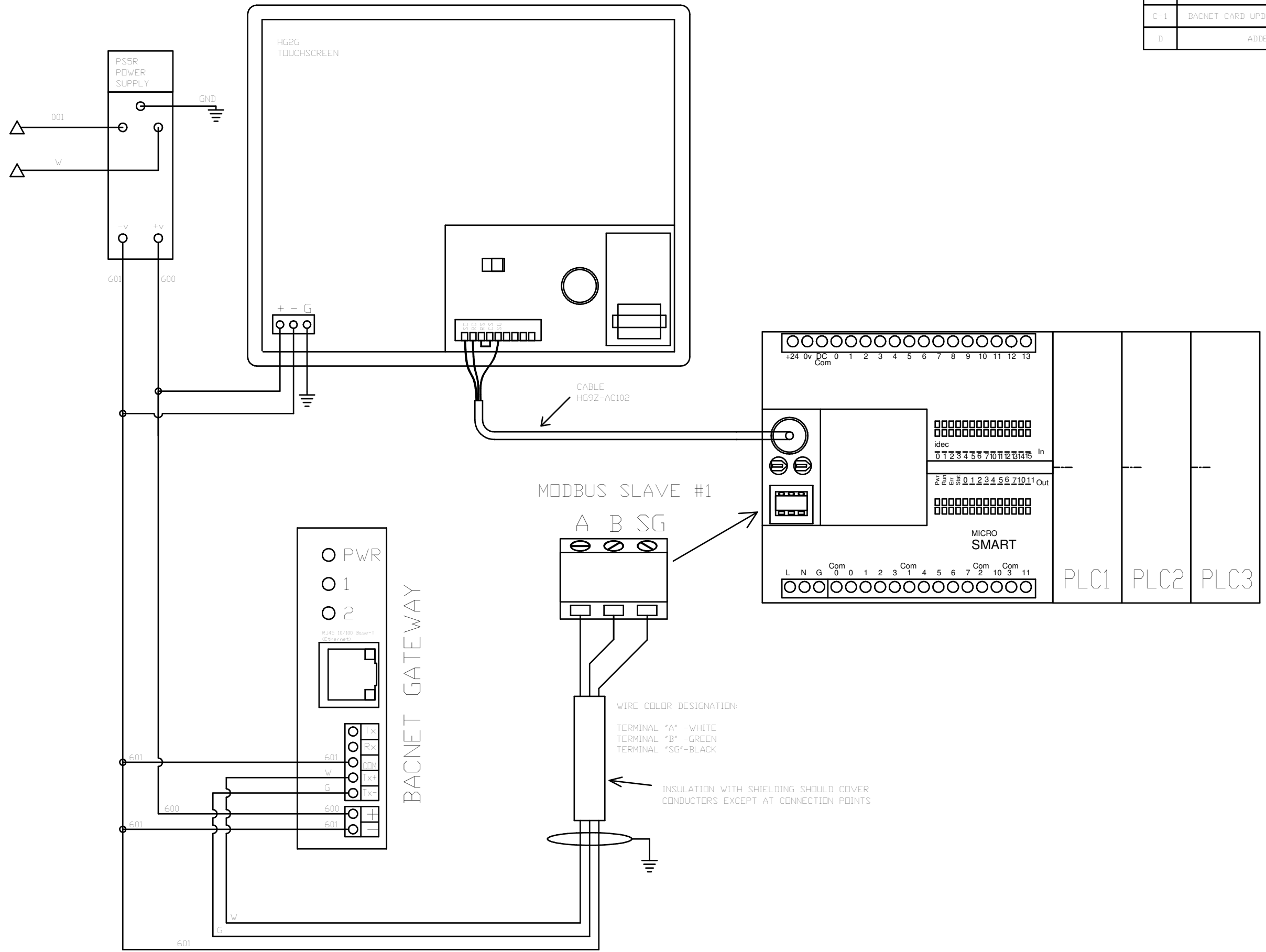
PANEL TYPE  
DUPLEX LAB 15HP SCROLL HMI, NFPA

DWG. TYPE  
WIRING

DWG. NO.  
PXMI-LS216F W

SHEET W-5	SIZE B
--------------	-----------

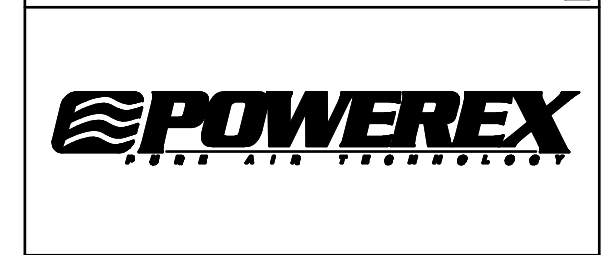
REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	01/21/14	PXEC0065	KMD	AJL
C-1	BACNET CARD UPDATE ADD ISOLATION RELAYS	11/03/15	PXEC0110	AJL	KMD
D	ADDED FAN WIRING	08/31/18	PXEC0229	JPG	AH



OPTIONAL:

SINGLE CYLINDER PUMPS	<input type="checkbox"/>
DOUBLE-CYLINDER PUMPS	<input type="checkbox"/>
TRIPLE-CYLINDER PUMPS	<input type="checkbox"/>
SCROLL PUMPS	<input checked="" type="checkbox"/>

BACNET, WEBSVR.



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DRAWN BY	OR EXAMINATION CHECKED BY	ENGINEERING APPROVAL
KMD	AJL	DMS
01/21/14	01/21/14	01/21/14

PANEL TYPE  
 DUPLEX LAB 15HP SCROLL  
 HMI, NFPA

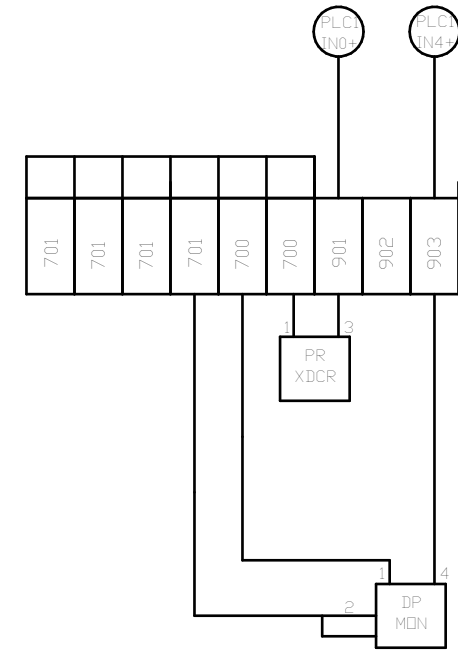
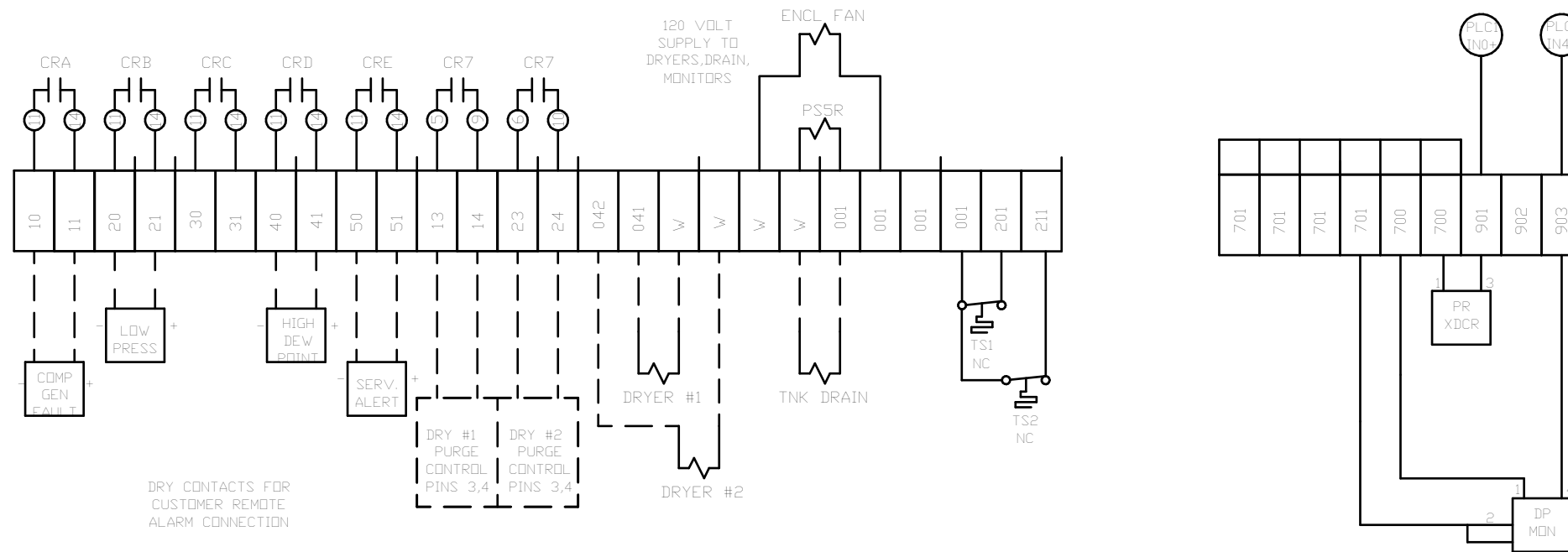
DWG. TYPE WIRING

DWG. NO.  
 PXMI-LS216F W

SHEET	SIZE
W-6	B

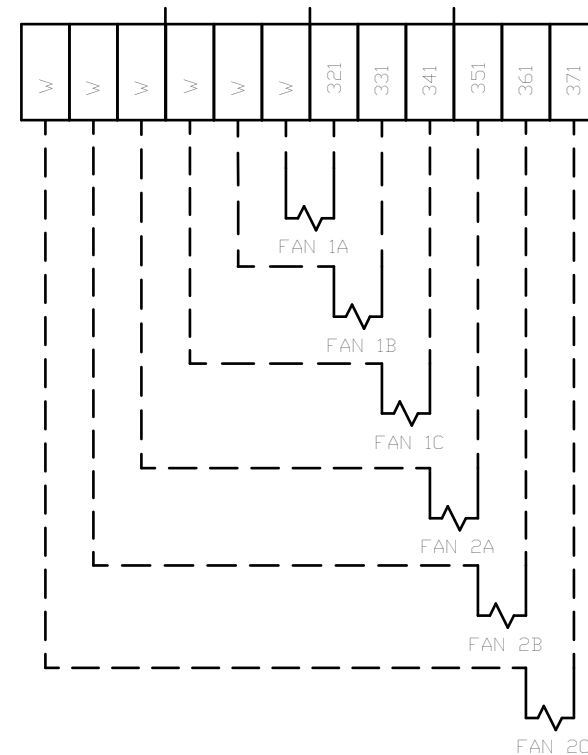
REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	01/21/14	PXEC0065	KMD	AJL
C-1	BACNET CARD UPDATE ADD ISOLATION RELAYS	11/03/15	PXEC0110	AJL	KMD
D	ADDED FAN WIRING	08/31/18	PXEC0225	JPG	AH

TERMINAL BLOCKS



ASSEMBLY NOTE:

USE SHIELDED CABLE BETWEEN TERMINAL BLOCKS AND PLC. CONNECT GROUND LOOPS TO GROUND BLOCK. CABLE IS NOT TO BE ROUTED IN PROXIMITY (2") OR ROUTED IN WIRE TRAY OF ANY 3-PHASE POWER CONDUCTORS.



OPTIONAL:	SINGLE CYLINDER PUMPS	<input type="checkbox"/>
	DOUBLE-CYLINDER PUMPS	<input type="checkbox"/>
	TRIPLE-CYLINDER PUMPS	<input type="checkbox"/>
BACNET, WEBSVR,	SCROLL PUMPS	<input checked="" type="checkbox"/>



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DRAWN BY	or Examination CHECKED BY	ENGINEERING APPROVAL
KMD	AJL	DMS
01/21/14	01/21/14	01/21/14

PANEL TYPE  
DUPLX LAB 15HP SCROLL HMI, NFPA

DWG. TYPE WIRING

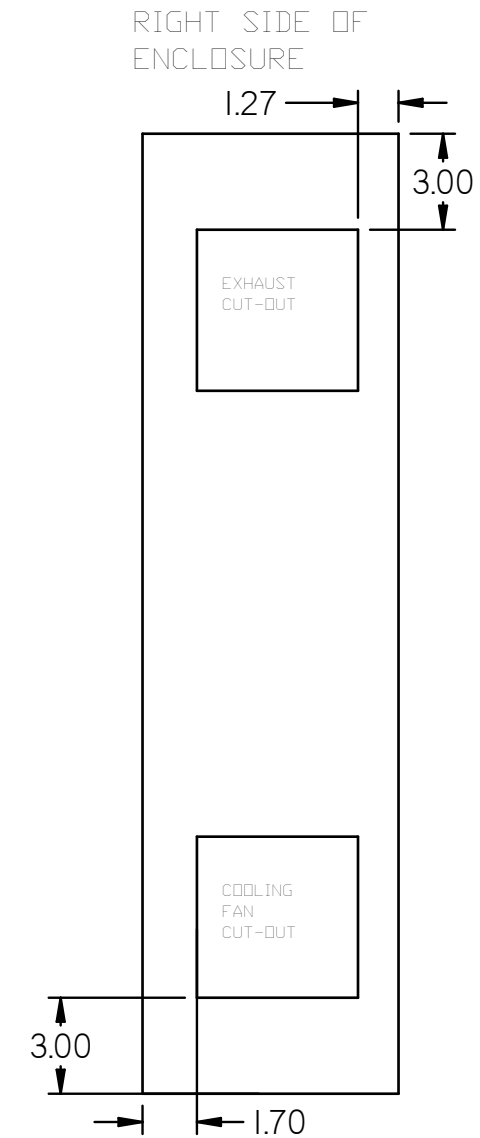
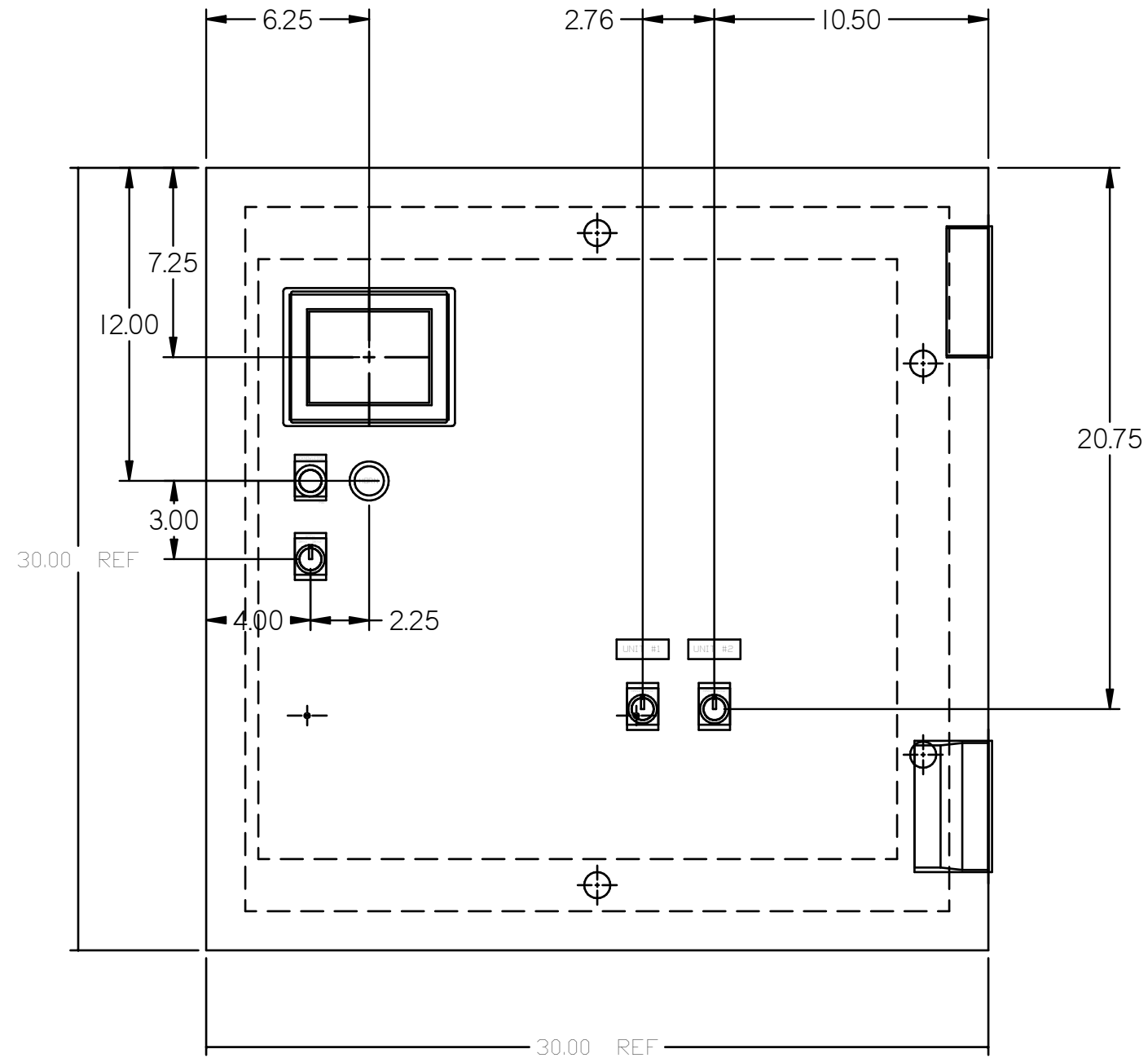
DWG. NO. PXMI-LS216F W

SHEET	SIZE
W-7	B

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

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	01/21/14	PXEC0065	KMD	AJL
C-1	BACNET CARD UPDATE ADD ISOLATION RELAYS	11/03/15	PXEC0110	AJL	KMD
D	ADDED FAN WIRING	08/31/18	PXEC0225	JPG	AH



OPTIONAL:	SINGLE CYLINDER PUMPS	<input type="checkbox"/>
	DOUBLE-CYLINDER PUMPS	<input type="checkbox"/>
	TRIPLE-CYLINDER PUMPS	<input type="checkbox"/>
BACNET, WEBSVR.	SCROLL PUMPS	<input checked="" type="checkbox"/>



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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
KMD	AJL	DMS
01/21/14	01/21/14	01/21/14

PANEL TYPE  
 DUPLEX LAB 15HP SCROLL  
 HMI, NFPA

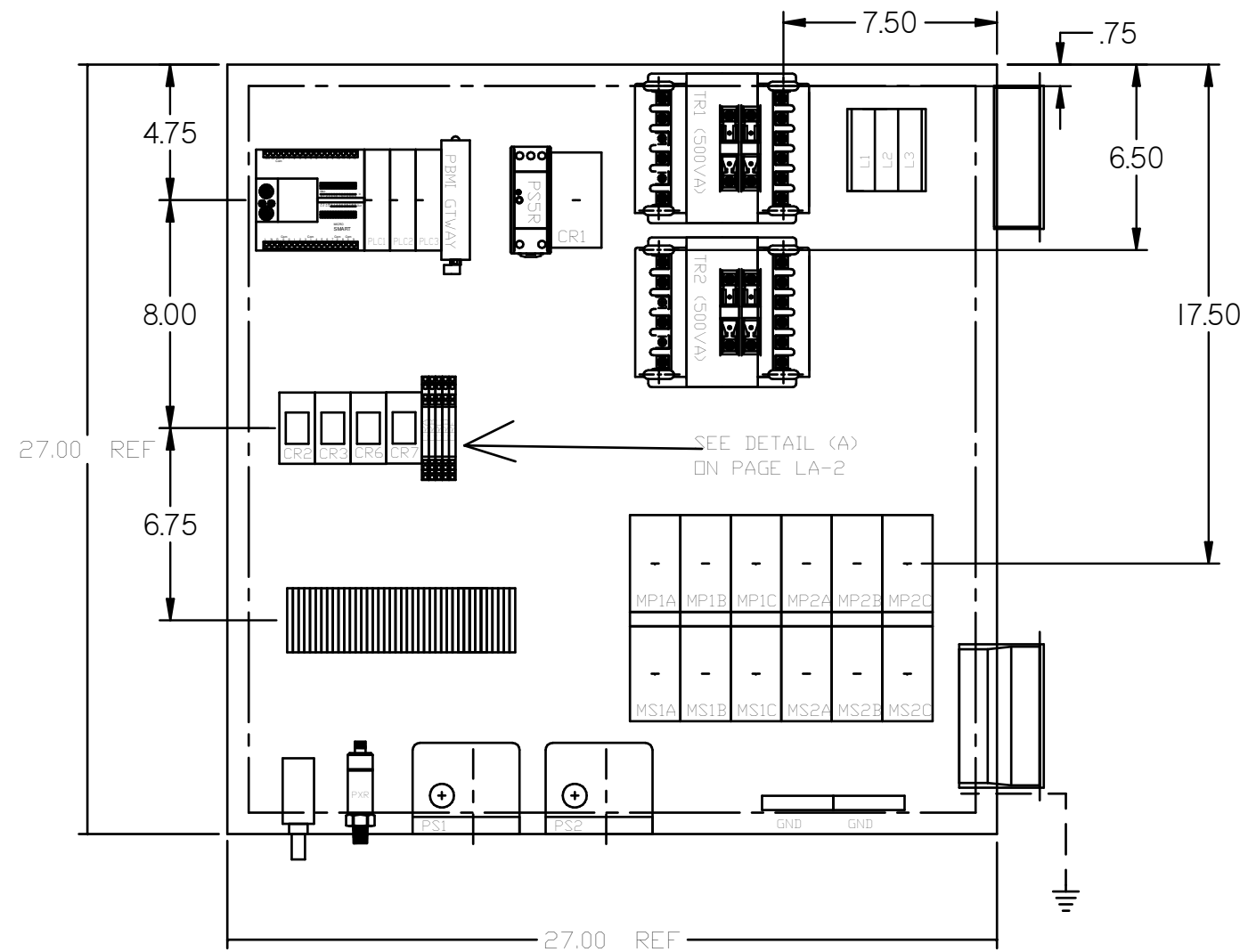
DWG. TYPE LAYOUT

DWG. NO.  
 PXMI-LS216F W

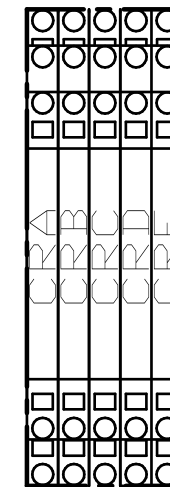
SHEET	SIZE
L-1	B



REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	01/21/14	PXEC0065	KMD	AJL
C-1	BACNET CARD UPDATE ADD ISOLATION RELAYS	11/03/15	PXEC0110	AJL	KMD
D	ADDED FAN WIRING	08/31/18	PXEC0229	JPG	AH



DETAIL (A)



OPTIONAL:	SINGLE CYLINDER PUMPS	<input type="checkbox"/>
	DOUBLE-CYLINDER PUMPS	<input type="checkbox"/>
	TRIPLE-CYLINDER PUMPS	<input type="checkbox"/>
BACNET, WEBSRVR,	SCROLL PUMPS	<input checked="" type="checkbox"/>



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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
KMD	AJL	DMS
01/21/14	01/21/14	01/21/14

PANEL TYPE  
 DUPLEX LAB 15HP SCROLL  
 HMI, NFPA

DWG. TYPE LAYOUT

DWG. NO.  
 PXMI-LS216F W

SHEET	SIZE
L-2	B

Table 1	P/N	MOTOR FULL LOAD AMPS	TOTAL FULL LOAD AMPS	NON-TIME DELAY FUSE	TIME DELAY FUSE	INVERSE-TIME CIRCUIT BREAKER
208V (3Ø)	02AJ	4.1	10.2	20	15	20
	12AJ	4.5	11	20	15	20
	22AJ	6	14	30	20	25
	32AJ	8.5	19	40	30	35
	52AJ	14	30	60	45	60
	72AJ	20.5	43	90	60	80
	A2AJ *	27.4	56.8	125	80	100
F2AJ *	41.1	84.2	175	125	150	
230V (3Ø)	03AJ	3.6	9.2	20	15	20
	13AJ	4.4	10.8	20	15	20
	23AJ	5.8	13.6	30	20	25
	33AJ	7.7	17.4	35	25	30
	53AJ	12.7	27.4	60	40	50
	73AJ	18.5	39	80	60	70
	A3AJ	24.8	51.6	110	70	90
F3AJ *	37.2	76.4	175	125	150	
460V (3Ø)	04AJ	1.8	5.6	10	10	10
	14AJ	2.2	6.4	15	10	15
	24AJ	2.9	7.8	15	10	15
	34AJ	3.9	9.8	20	15	20
	54AJ	6.3	14.6	30	20	25
	74AJ	9.3	20.6	40	30	40
	A4AJ	12.4	26.8	60	40	50
F4AJ	18.6	39.2	80	60	70	
380V (3Ø) 50HZ	08AJ					
	18AJ					
	28AJ	3.4	8.8	20	15	15
	38AJ	4.6	11.2	25	15	20
	58AJ	7.7	17.4	35	25	30
	78AJ	11.1	24.2	50	35	45
	A8AJ	14.9	31.8	70	45	60
F8AJ	22.1	46.2	100	70	80	
575V (3Ø)	07AJ	1.1	4.2	10	10	10
	17AJ	1.76	5.5	10	10	10
	27AJ	2.3	6.6	15	10	15
	37AJ	3.1	8.2	15	15	15
	57AJ	5.1	12.2	25	20	25
	77AJ	6.9	15.8	30	25	30

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 WITH SHORT CIRCUIT PROTECTION FOR THIS ELECTRICAL ASSEMBLY. SEE TABLE 1 FOR REQUIREMENTS.
  - 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.
- FIELD WIRING NOTES ON PAGE W-7.

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	01/21/14	PXEC0065	KMD	AJL
C-1	BACNET CARD UPDATE ADD ISOLATION RELAYS	11/03/15	PXEC0110	AJL	KMD
D	ADDED FAN WIRING	08/31/18	PXEC0225	JPG	AH

### 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.

OPTIONAL:  
BACNET, WEBSRV, etc.



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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
KMD	AJL	DMS
01/21/14	01/21/14	01/21/14

PANEL TYPE  
 DUPLEX LAB 15HP SCROLL  
 HMI, NFPA  
 DWG. TYPE DATA  
 DWG. NO. PXMI-LS216F W

CONTROL TRANSFORMERS - 500VA					
FUSE		208	230	460	575
TYPE		VOLT	VOLT	380 VOLT	VOLT
FU1,2A	FNQR	6A	5A	5A	4A
FU1,2B					
FU3A,B	FNM	7A	7A	7A	7A
SEE XFMR FOR CONNECTIONS					

WIRE TYPE TABLE			
VOLTAGE	WIRE NUMBERS	GAUGE	COLOR
120VAC	001-699	16-18AWG	RED/BLK
0VAC	W	16-18AWG	HT/BLK
24VDC	700-999	16-18AWG	PURPLE
0VDC	701	16-18AWG	PURPLE
GND	-	VARIES	GREEN
CUSTOMER SUPPLY	01-99	16AWG	YELLOW

SHEET  
 D-1  
 SIZE  
 B