

A
POWER
UNIT #1A
MP1A 13 14

B
POWER
UNIT #1B
MP1B 13 14

C
POWER
UNIT #1C
MP1C 13 14

D
POWER
UNIT #2A
MP2A 13 14

E
POWER
UNIT #2B
MP2B 13 14

F
POWER
UNIT #2C
MP2C 13 14

SEE NOTES ON PAGE D-1

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION				
C-1	MOVE FAN TO RIGHT SIDE	01/28/13	PXEC_30	BFH	CHR
C-2	CHANGE TRANSDUCER TO PE000454AV	02/01/13	PXEC_33	BFH	CHR
D-1	BACNET CARD UPDATE ADD ISOLATION RELAYS	07/20/15	PXEC0110	AJL	KMD
E	ADDED FAN WIRING	9/06/18	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, WEBSRVR,	



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BFH CHR

10/18/12 10/23/12 10/23/12

PANEL TYPE

SCROLL DUPLEX MEDICAL
HMI, NFPA

DWG. TYPE WIRING

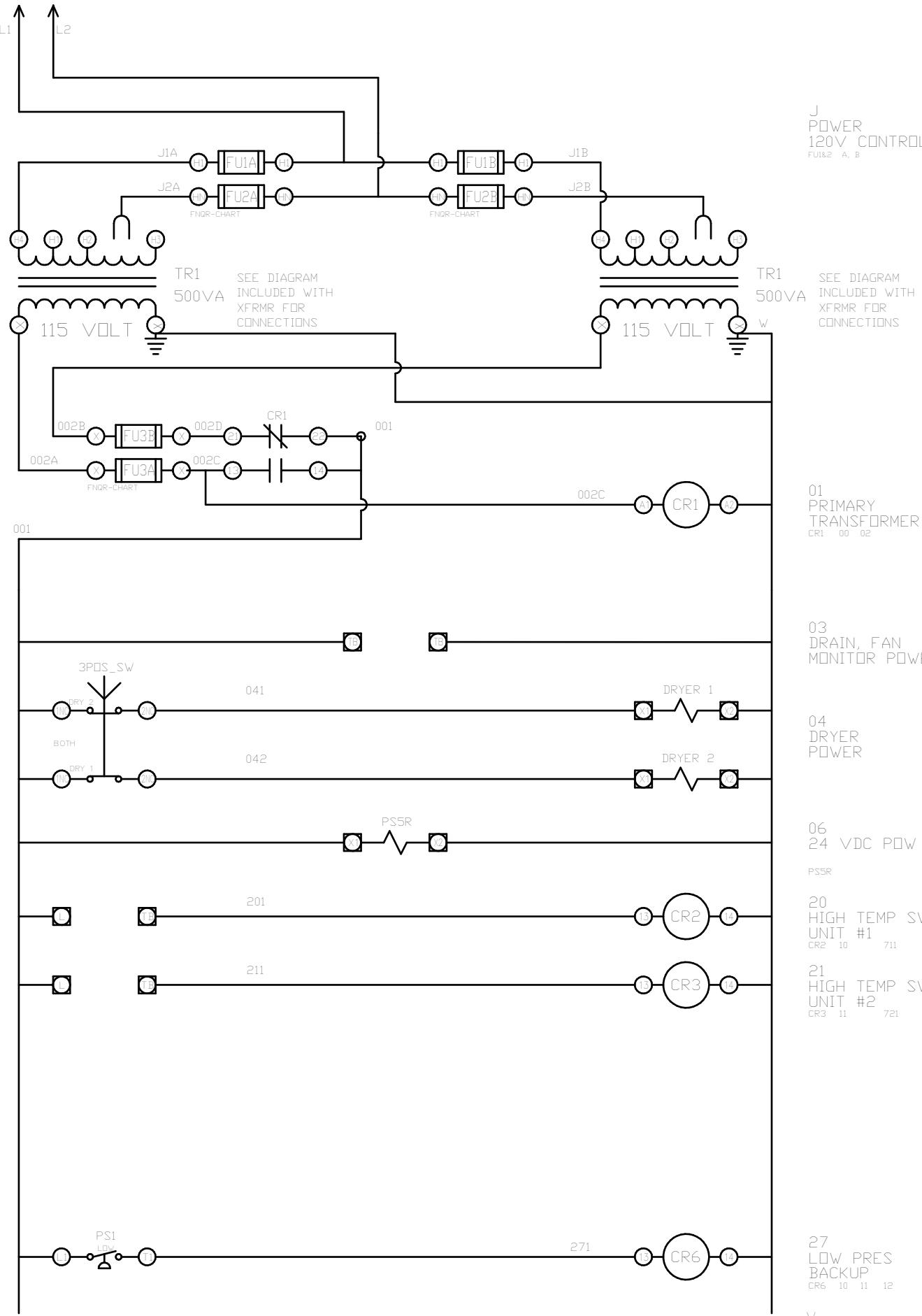
DWG. NO.

PXMI-S216F W

SHEET

W-1

SIZE
B



REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION				
C-1	MOVE FAN TO RIGHT SIDE	01/28/13	PXEC_30	BFH	CHR
C-2	CHANGE TRANSDUCER TO PE000454AV	02/01/13	PXEC_33	BFH	CHR
D-1	BACNET CARD UPDATE ADD ISOLATION RELAYS	07/20/15	PXEC0110	AJL	KMD
E	ADDED FAN WIRING	9/06/18	PXEC0229	JPG	AH

01
PRIMARY
TRANSFORMER ON
CR1 00 02

03
DRAIN, FAN
MONITOR POWER

04
DRYER
POWER

06
24 VDC POW SUP

PS5R

20
HIGH TEMP SW
UNIT #1
CR2 10 711

21
HIGH TEMP SW
UNIT #2
CR3 11 721

27
LOW PRES
BACKUP
CR6 10 11 12
W

OPTIONAL:
SINGLE CYLINDER
PUMPS
DOUBLE-CYLINDER
PUMPS
TRIPLE-CYLINDER
PUMPS
SCROLL PUMPS



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DRAWN BY ON EXAMINATION CHECKED BY ENGINEERING APPROVAL

BFH CHR CHR

10/18/12 10/23/12 10/23/12

PANEL TYPE

SCROLL DUPLEX MEDICAL
HMI, NFPA

DWG. TYPE WIRING

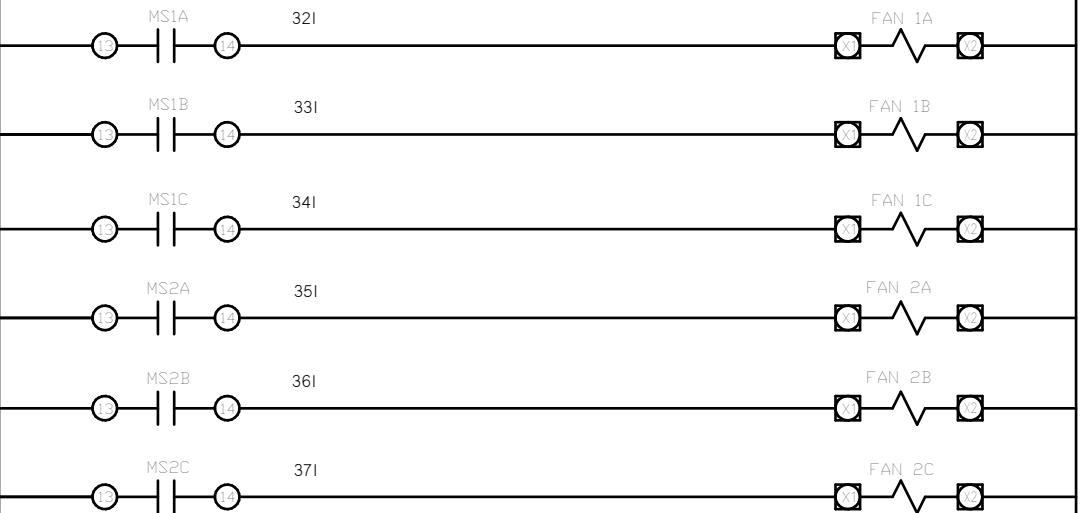
DWG. NO.

PXMI-S216F W

SHEET

W-2 SIZE B

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION				
C-1	MOVE FAN TO RIGHT SIDE	01/28/13	PXEC_30	BFH	CHR
C-2	CHANGE TRANSDUCER TO PE000454AV	02/01/13	PXEC_33	BFH	CHR
D-1	BACNET CARD UPDATE ADD ISOLATION RELAYS	07/20/15	PXEC0110	AJL	KMD
E	ADDED FAN WIRING	9/06/18	PXEC0229	JPG	AH



32
FAN POWER
UNIT #1A
TB

33
FAN POWER
UNIT #1B
TB

34
FAN POWER
UNIT #1C
TB

35
FAN POWER
UNIT #2A
TB

36
FAN POWER
UNIT #2B
TB

37
FAN POWER
UNIT #2C
TB

OPTIONAL:



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DRAWN BY or examination
BY CHECKED BY ENGINEERING APPROVAL

BFH CHR CHR

10/18/12 10/23/12 10/23/12

PANEL TYPE

SCROLL DUPLEX MEDICAL
HMI, NFPA

DWG. TYPE WIRING

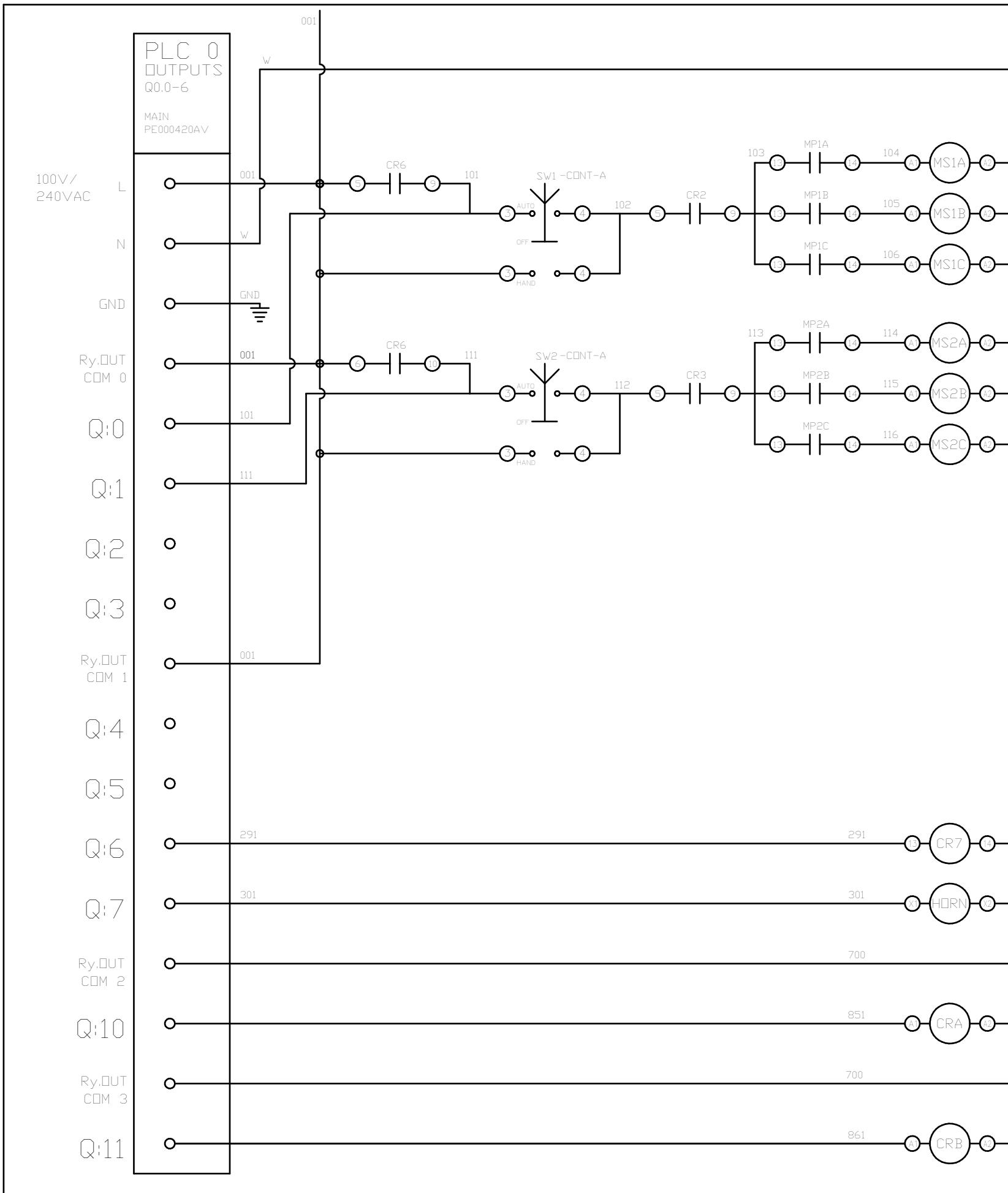
DWG. NO.

PXMI-S216F W

SHEET

W-3

B



REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION				
C-1	MOVE FAN TO RIGHT SIDE	01/28/13	PXEC_30	BFH	CHR
C-2	CHANGE TRANSDUCER TO PE000454AV	02/01/13	PXEC_33	BFH	CHR
D-1	BACNET CARD UPDATE ADD ISOLATION RELAYS	07/20/15	PXEC0110	AJL	KMD
E	ADDED FAN WIRING	9/06/18	PXEC0229	JPG	AH

10 CONTROL UNIT #1 MS1 A,B,C

11 CONTROL UNIT #2 MS2 A,B,C

OPTIONAL:
SINGLE CYLINDER PUMPS
DOUBLE-CYLINDER PUMPS
TRIPLE-CYLINDER PUMPS
SCROLL PUMPS

BACNET, WEBSRVR,

POWEREX

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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
BFH	CHR	CHR
10/18/12	10/23/12	10/23/12

PANEL TYPE
SCROLL DUPLEX MEDICAL HMI, NFPA

DWG. TYPE
WIRING

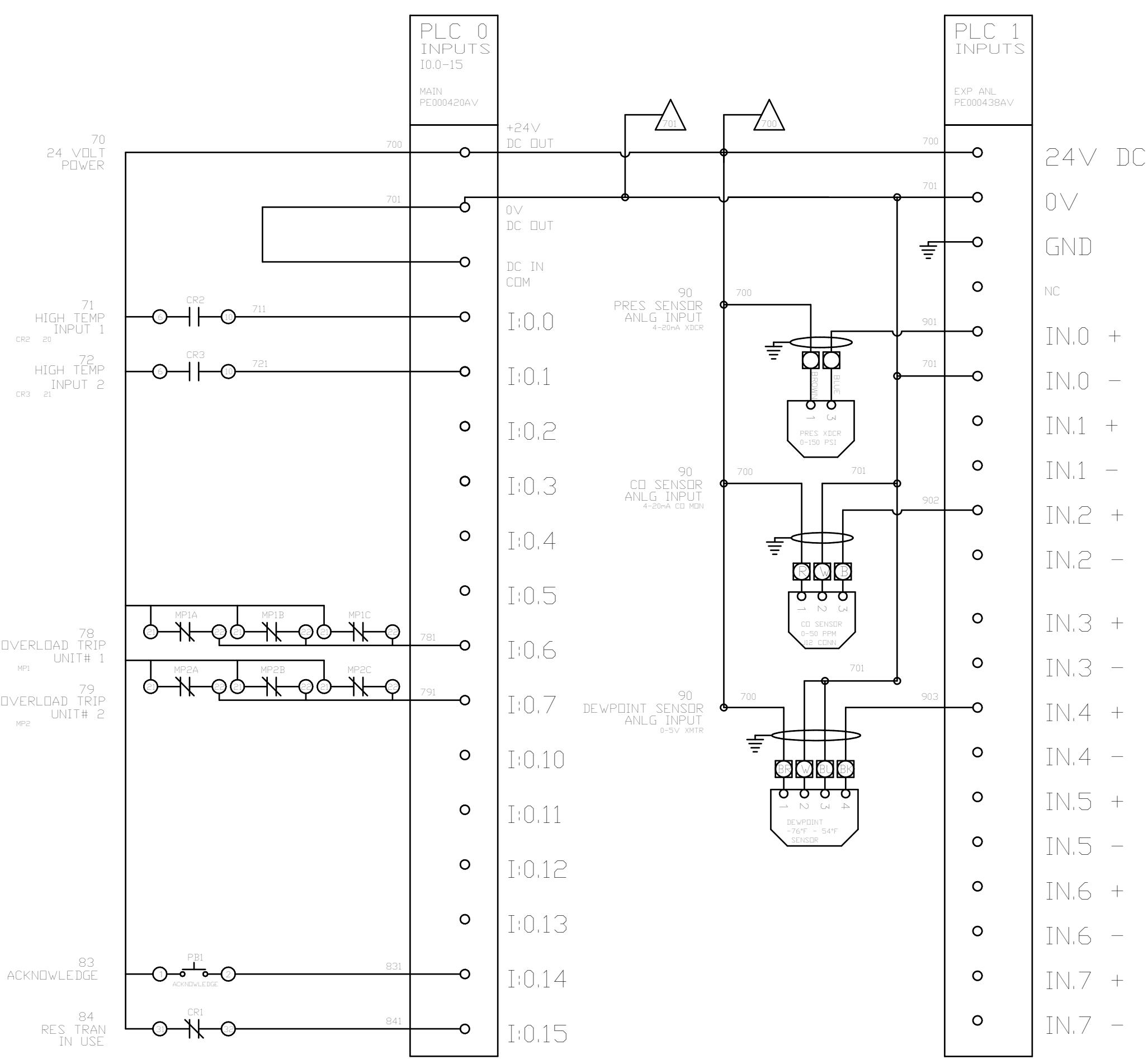
DWG. NO.
PXMI-S216F W

SHEET
W-4

SIZE
B

PXMI-S216F B1

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION				
C-1	MOVE FAN TO RIGHT SIDE	01/28/13	PXEC_30	BFH	CHR
C-2	CHANGE TRANSDUCER TO PE000454AV	02/01/13	PXEC_33	BFH	CHR
D-1	BACNET CARD UPDATE ADD ISOLATION RELAYS	07/20/15	PXEC0110	AJL	KMD
E	ADDED FAN WIRING	9/06/18	PXEC0229	JPG	AH



24V DC
0V
GND
NC
IN.0 +
IN.0 -
IN.1 +
IN.1 -
IN.2 +
IN.2 -
IN.3 +
IN.3 -
IN.4 +
IN.4 -
IN.5 +
IN.5 -
IN.6 +
IN.6 -
IN.7 +
IN.7 -

OPTIONAL:
SINGLE CYLINDER PUMPS
DOUBLE-CYLINDER PUMPS
TRIPLE-CYLINDER PUMPS
SCROLL PUMPS



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DRAWN BY	checked	ENGINEERING APPROVAL
BFH	CHR	CHR
10/18/12	10/23/12	10/23/12

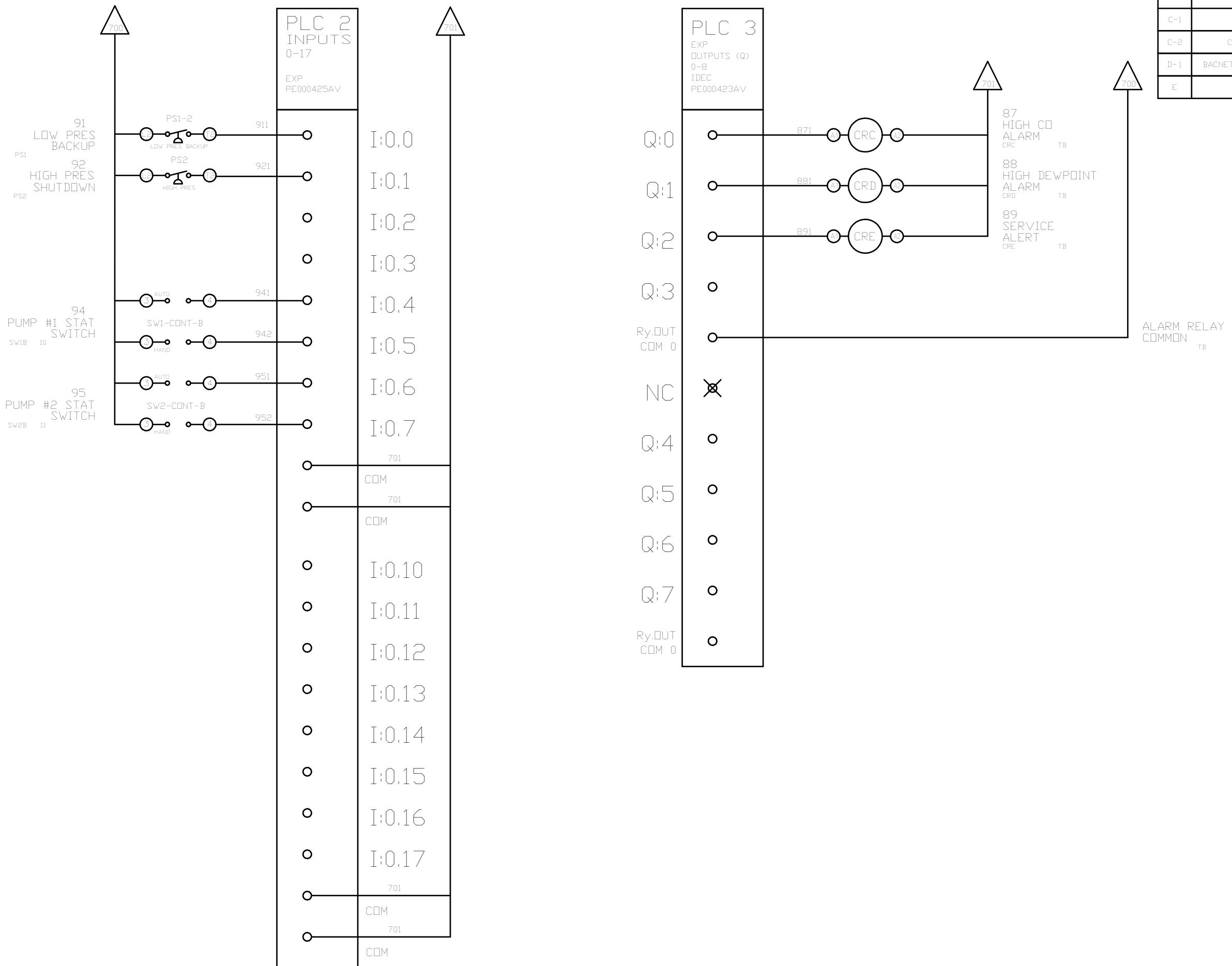
PANEL TYPE
SCROLL DUPLEX MEDICAL
HMI, NFPA

DWG. TYPE WIRING

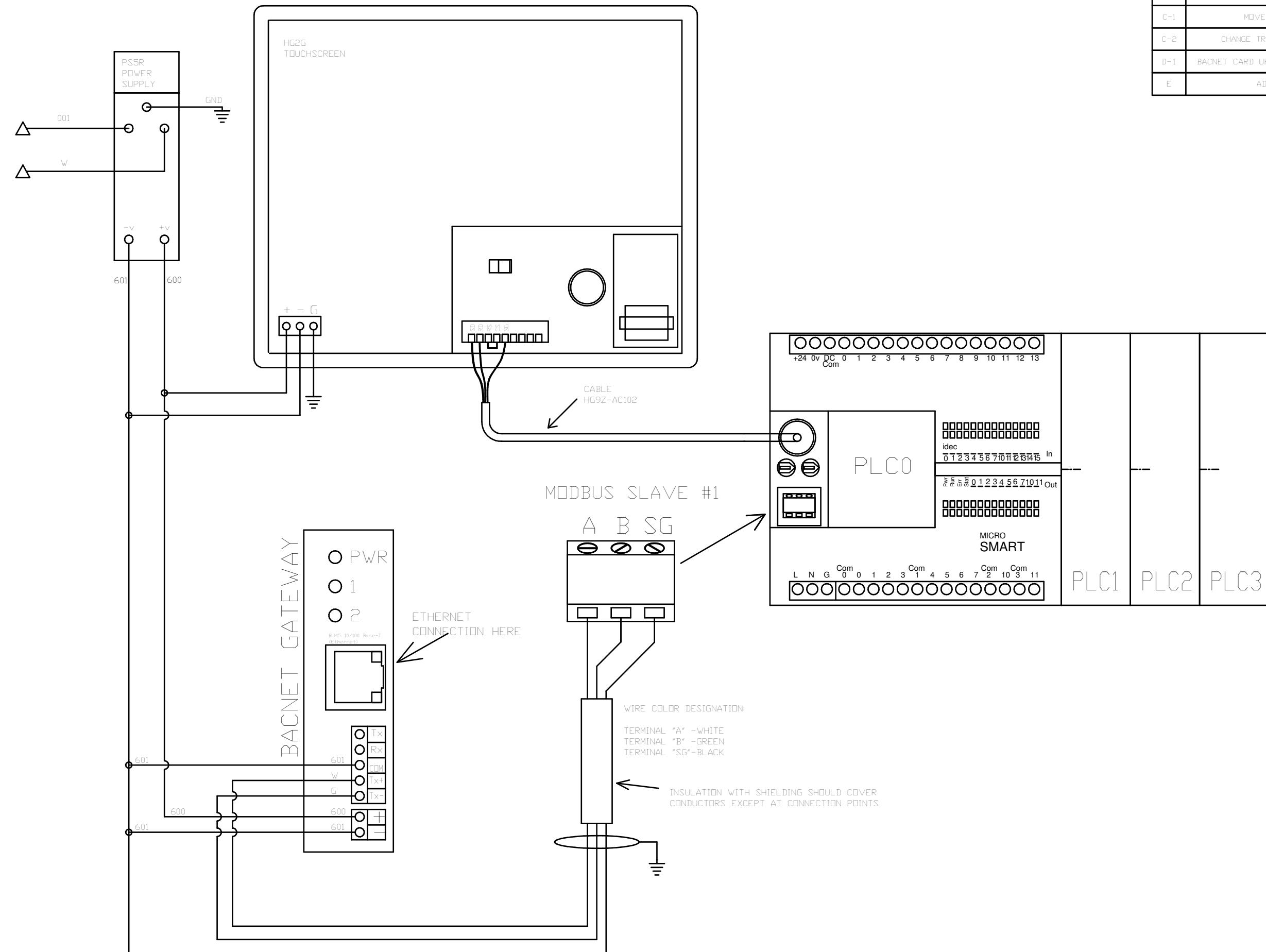
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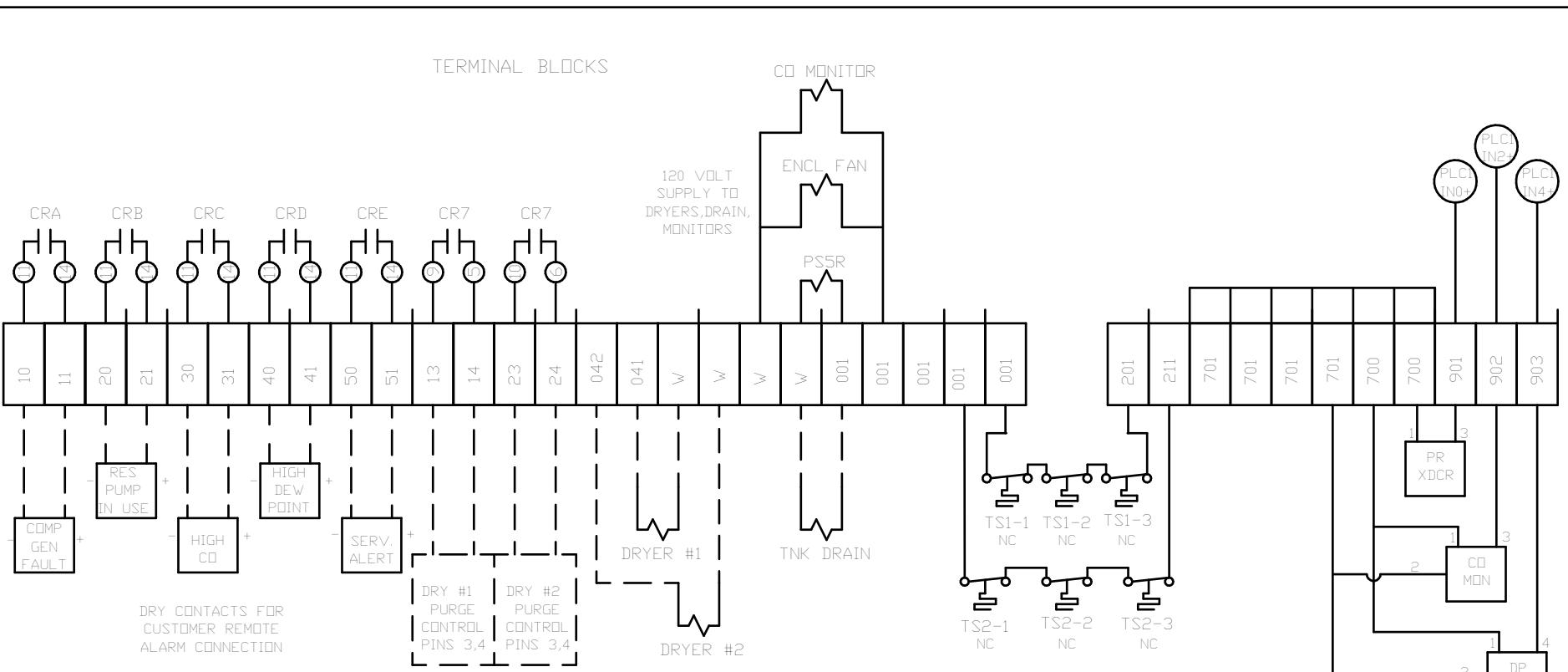
SHEET	SIZE
W-5	B

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION				
C-1	MOVE FAN TO RIGHT SIDE	01/28/13	PXEC_30	BFH	CHR
C-2	CHANGE TRANSDUCER TO PE000454AV	02/01/13	PXEC_33	BFH	CHR
D-1	BACNET CARD UPDATE ADD ISOLATION RELAYS	07/20/15	PXEC0110	AJL	KMD
E	ADDED FAN WIRING	9/06/18	PXEC0229	JPG	AH



REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION				
C-1	MOVE FAN TO RIGHT SIDE	01/28/13	PXEC_30	BFH	CHR
C-2	CHANGE TRANSDUCER TO PE000454AV	02/01/13	PXEC_33	BFH	CHR
D-1	BACNET CARD UPDATE ADD ISOLATION RELAYS	07/20/15	PXEC0110	AJL	KMD
E	ADDED FAN WIRING	9/06/18	PXEC0229	JPG	AH

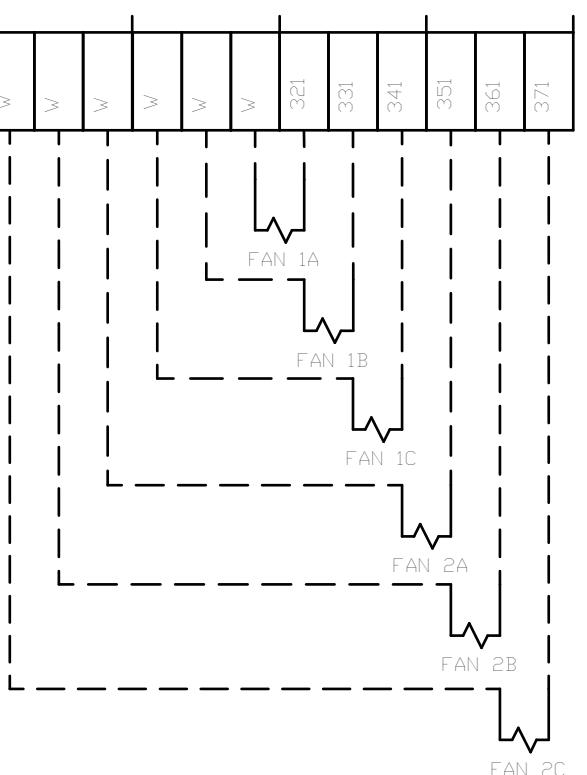




FIELD WIRING NOTES:

- FIELD WIRING NOTES:

 1. PANEL GROUND MUST BE CONNECTED TO EARTH GROUND.
 2. TRANSFORMER IS SIZED FOR LOADS SHOWN ON DRAWING ONLY.
 3. FIELD WIRING INDICATED BY -----. WIRE TO BE COPPER RATED AT 75° C.
 4. ALL ALARM DRY CONTACTS ARE CLOSED FOR NORMAL OPERATION AND OPEN IN ALARM.
 5. DRY CONTACT RATING: 30V DC/2A (resistive load, inductive load L/R = 7 ms)
 6. 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				
C-1	MOVE FAN TO RIGHT SIDE	01/28/13	PXEC_30	BFH	CHR
C-2	CHANGE TRANSDUCER TO PE000454AV	02/01/13	PXEC_33	BFH	CHR
D-1	BACNET CARD UPDATE ADD ISOLATION RELAYS	07/20/15	PXEC0110	AJL	KMD
E	ADDED FAN WIRING	9/06/18	PXEC0229	JPG	AH

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 <input type="checkbox"/>
	PUMPS <input type="checkbox"/>
	DOUBLE-CYLINDER <input type="checkbox"/>
	PUMPS <input type="checkbox"/>
	TRIPLE-CYLINDER <input type="checkbox"/>
	PUMPS <input type="checkbox"/>
	SCROLL PUMPS <input checked="" type="checkbox"/>
BACNET, WEBSRVR, ETHERNET, RS-485 <input type="checkbox"/>	



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BFH	CHR	CHR
10/18/12	10/23/12	10/23/12

SCROLL DUPLEX MEDICAL
HMT NEPA

5. TYPE WIRING

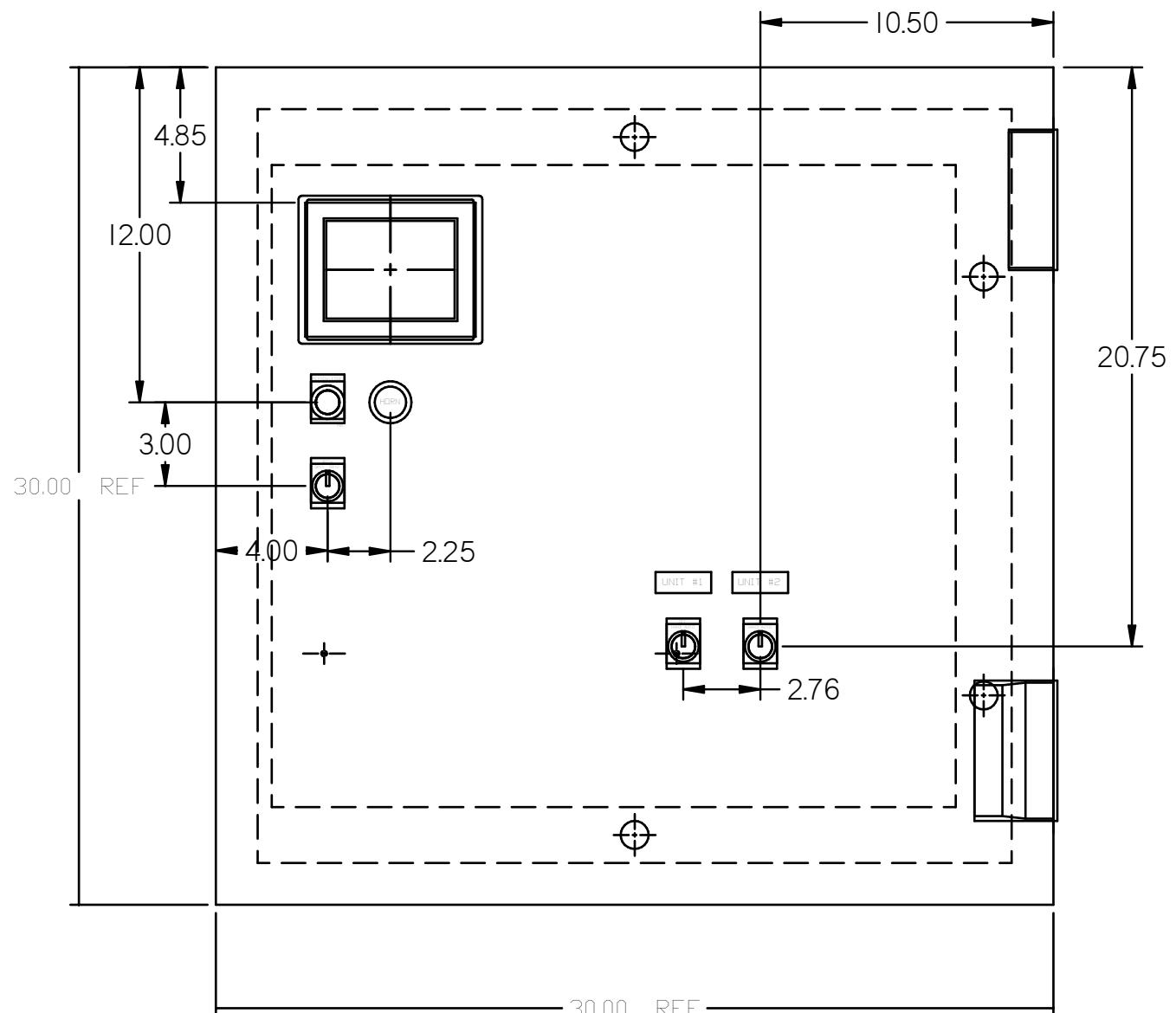
PXMT-~~S216F~~ W

ET

$$W =$$

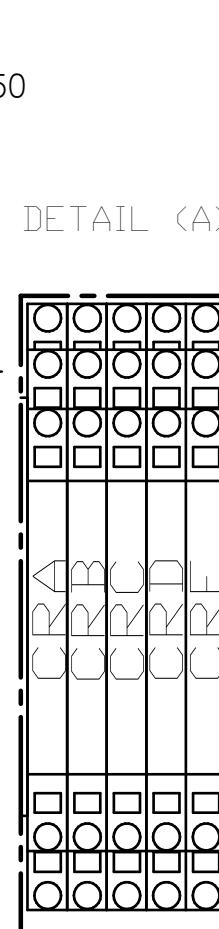
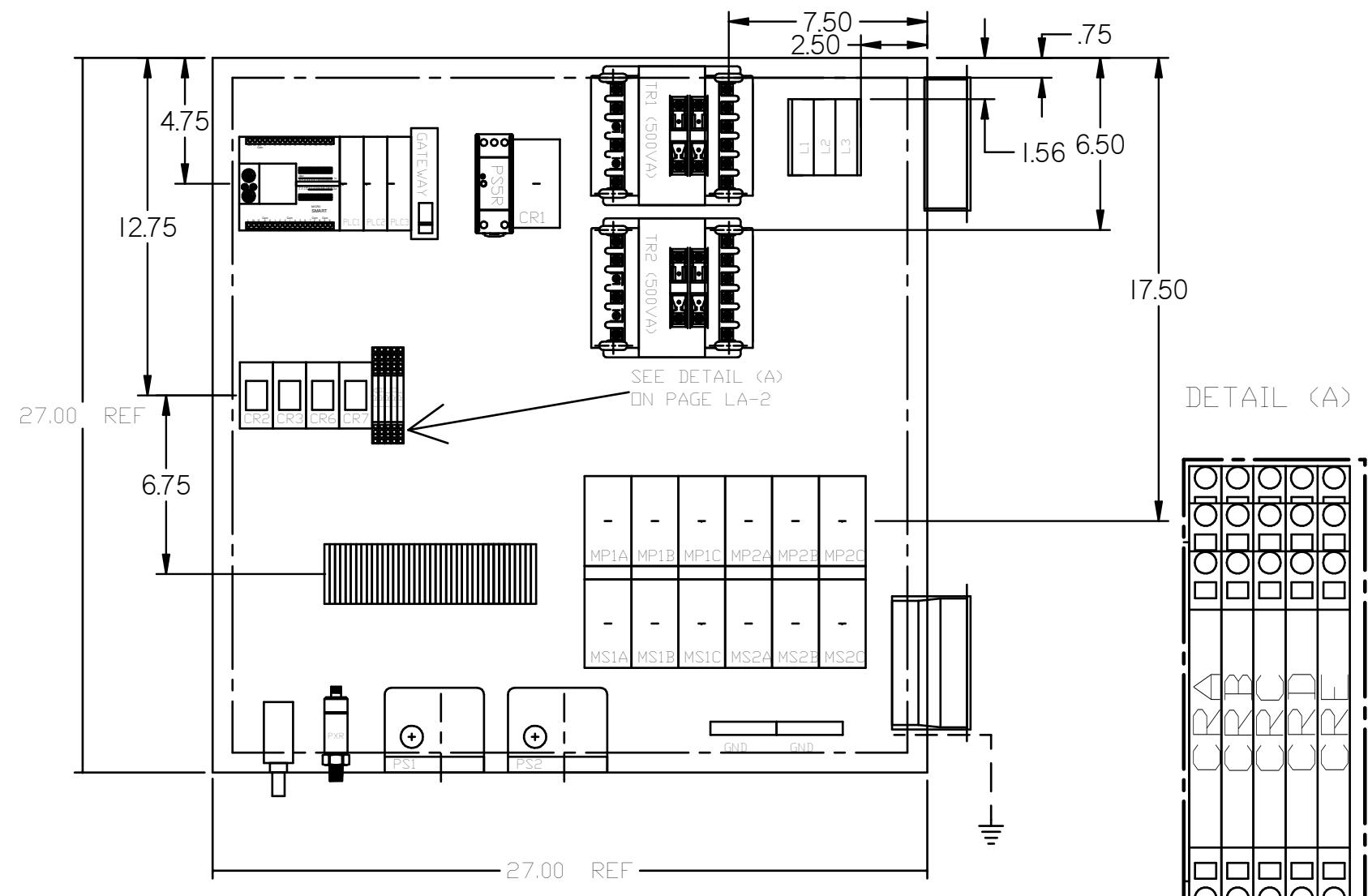
SIZE
B

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION				
C-1	MOVE FAN TO RIGHT SIDE	01/28/13	PXEC_30	BFH	CHR
C-2	CHANGE TRANSDUCER TO PE000454AV	02/01/13	PXEC_33	BFH	CHR
D-1	BACNET CARD UPDATE ADD ISOLATION RELAYS	07/20/15	PXEC0110	AJL	KMD
E	ADDED FAN WIRING	9/06/18	PXEC0225	JPG	AH



OPTIONAL:		SINGLE CYLINDER PUMPS DOUBLE-CYLINDER PUMPS TRIPLE-CYLINDER PUMPS SCROLL PUMPS
POWEREX POWER AIR TECHNOLOGY		
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DRAWN BY	or examination CHECKED BY	ENGINEERING APPROVAL
BFH	CHR	CHR
10/18/12	10/23/12	10/23/12
PANEL TYPE		
SCROLL DUPLEX MEDICAL HMI, NFPA		
DWG. TYPE LAYOUT		
DWG. NO. PXMI-S216F W		
SHEET L-1		SIZE B
PXMI-S216F B1		

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION				
C-1	MOVE FAN TO RIGHT SIDE	01/28/13	PXEC_30	BFH	CHR
C-2	CHANGE TRANSDUCER TO PE000454AV	02/01/13	PXEC_33	BFH	CHR
D-1	BACNET CARD UPDATE ADD ISOLATION RELAYS	07/20/15	PXEC0110	AJL	KMD
E	ADDED FAN WIRING	9/06/18	PXEC0229	JPG	AH



OPTIONAL:
 SINGLE CYLINDER PUMPS
 DOUBLE-CYLINDER PUMPS
 TRIPLE-CYLINDER PUMPS
 SCROLL PUMPS

POWEREX
POWER AIR TECHNOLOGY

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DRAWN BY	or examination CHECKED BY	ENGINEERING APPROVAL
BFH	CHR	CHR
10/18/12	10/23/12	10/23/18

PANEL TYPE

SCROLL DUPLEX MEDICAL
HMI, NFPA

DWG. TYPE LAYOUT

DWG. NO.

PXMI-S216F W

SHEET	SIZE
L-2	B

TABLE 1

PANEL DATA 30 - 60 Hz 500VA CONTROL CIRCUIT		(A) LOAD SPECIFICATIONS						(B) BRANCH CIRCUIT PROTECTION - PROVIDED BY INSTALLER	
PANEL PART NUMBER	MOTOR SIZE EACH	(A) POWER (V/PH)	(A) MOTOR LOAD (FLA)	PANEL LOAD (FLA)	NOTIME DELAY FUSE	TIME-DELAY FUSE	VOLTAGE	INVERSE-TIME CIRCUIT BREAKER	
PBMIS216F2AJ (5HPx3)x2	208V/30	14.0	88	125A	100A	110A			
PBMIS216F3AJ (5HPx3)x2	230V/30	12.7	81	110A	90A	100A			
PBMIS216F4AJ (5HPx3)x2	460V/30	6.33	42	60A	50A	60A			

NOTE - ADJUST OVERCURRENT PROTECTION DEVICE NOT TO EXCEED 115% OF MOTOR NAMEPLATE FLA VALUE

NOTES:

1. RECOMMENDED TIGHTENING TORQUES FOR WIRE TERMINALS:
208-575 VOLT POWER 35 POUND INCHES
120 VOLT POWER AND CONTROL
VOLTAGE 15 POUND INCHES
2. PANEL GROUND MUST BE CONNECTED TO EARTH GROUND
3. INSTALLER TO PROVIDE MAIN DISCONNECTING DEVICE WITH SHORT CIRCUIT PROTECTION FOR THIS ELECTRICAL ASSEMBLY. SEE TABLE 1 FOR REQUIREMENTS.
4. ALL WIRES MUST BE LABELED ON BOTH ENDS
5. TRANSFORMER IS SIZED FOR LOADS SHOWN ON DRAWING ONLY. DO NOT CONNECT ANY OTHER DEVICES
6. INDICATES A DRAWING WIRE CONNECTION TO ANOTHER PAGE.

FIELD WIRING NOTES ON PAGE W-7.

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, WEBSRVR,



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DRAWN BY	or examination CHECKED BY	ENGINEERING APPROVAL
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BFH	CHR	CHR
-----	-----	-----

10/18/12	10/23/12	10/23/12
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PANEL TYPE

SCROLL DUPLEX MEDICAL
HMI, NFPA

DWG. TYPE DATA

DWG. NO.

PXMI-S216F W

SHEET

D-1

SIZE
B

CONTROL TRANSFORMERS - 500VA

FUSE TYPE		208 VOLT	230 VOLT	460 VOLT	380 VOLT	575 VOLT
FU1,2A	FNQR	6A	5A	5A	4A	
FU1,2B						

WIRE TYPE TABLE

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

CUSTOMER SUPPLY

SEE XFRMR FOR CONNECTIONS

PXMI-S216F B1

TABLE 1

PANEL DATA 30 - 60 Hz 500VA CONTROL CIRCUIT	
(A) LOAD SPECIFICATIONS	(B) BRANCH CIRCUIT PROTECTION - PROVIDED BY INSTALLER
PANEL PART NUMBER MOTOR SIZE EACH (A) POWER EACH (V/PH) (A) MOTOR LOAD TOTAL (FLA)	VOLTAGE NONTIME DELAY FUSE TIME-DELAY FUSE INVERSE-TIME CIRCUIT BREAKER TOTAL LOAD (FLA)

PBMIS216F8AJ (5HPx3)x2 380V/3Ø 7.60 47.6 70A 60A 60A

NOTE- ADJUST OVERCURRENT PROTECTION DEVICE NOT TO EXCEED 115% OF MOTOR NAMEPLATE FLA VALUE

NOTES:

1. RECOMMENDED TIGHTENING TORQUES FOR WIRE TERMINALS:
208-575 VOLT POWER 35 POUND INCHES
120 VOLT POWER AND CONTROL
VOLTAGE 15 POUND INCHES
2. PANEL GROUND MUST BE CONNECTED TO EARTH GROUND
3. INSTALLER TO PROVIDE MAIN DISCONNECTING DEVICE WITH SHORT CIRCUIT PROTECTION FOR THIS ELECTRICAL ASSEMBLY. SEE TABLE 1 FOR REQUIREMENTS.
4. ALL WIRES MUST BE LABELED ON BOTH ENDS
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6. INDICATES A DRAWING WIRE CONNECTION TO ANOTHER PAGE.

FIELD WIRING NOTES ON PAGE W-7.

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

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION				
C-1	MOVE FAN TO RIGHT SIDE	01/28/13	PXEC_30	BFH	CHR
C-2	CHANGE TRANSDUCER TO PE000454AV	02/01/13	PXEC_33	BFH	CHR
D-1	BACNET CARD UPDATE ADD ISOLATION RELAYS	07/20/15	PXEC0110	AJL	KMD
E	ADDED FAN WIRING	9/06/18	PXEC0229	JPG	AH

OPTIONAL:

BACNET, WEBSRVR,



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DRAWN BY	on examination CHECKED BY	ENGINEERING APPROVAL
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BFH	CHR	CHR
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10/18/12	10/23/12	10/23/12
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PANEL TYPE

SCROLL DUPLEX MEDICAL
HMI, NFPA

DWG. TYPE DATA

DWG. NO.

PXMI-S216F W

SHEET

D-1	SIZE B
-----	--------

PXMI-S216F B1

CONTROL TRANSFORMERS - 500VA

FUSE TYPE		208 VOLT	230 VOLT	460 VOLT	380 VOLT	575 VOLT
FU1.2A	FNQR	6A	5A	5A	4A	
FU1.2B						

WIRE TYPE TABLE			
VOLTAGE	WIRE NUMBERS	GAUGE	COLOR
120VAC	001-699	16-18AWG	RED/BLK
24VDC	W	16-18AWG	WHT/BLK
700-999	701	16-18AWG	PURPLE
701	-	16-18AWG	PURPLE
GND	CUSTOMER SUPPLY	VARIES	GREEN
7A	16AWG	16AWG	YELLOW
7A	01-99		
7A			
7A			

SEE XFRMR FOR CONNECTIONS