

	RE∨	REVISION	DATE	ECN	NAME	CHKD
	B-1	RELEASE TO PRODUCTION	11/06/12	22722	CHR	ZMG
	C-1	CHANGE TRANSDUCER & FAN LOCATION	02/01/13	PXEC_33	BFH	CHR
	D-1	BACNET CARD UPDATE ADD ISOLATION RELAYS	07/20/15	PXEC0110	AJL	KMD
l	E	ADDED FAN WIRING	9/07/18	PXEC0229	JPG	АН

PTIONAL:	SINGLE CYLINDER AND SCROLLPUMPS	$\boxtimes$
	DOUBLE-CYLINDER PUMPS	
ACNET, WEBSRVR,	TRIPLE-CYLINDER PUMPS	



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DRAWN BY	or examination. CHECKED BY	ENGINEERING APPROVAL		
CHR	DMS	DMS		
06/04/12	11/09/12	11/09/12		

PANEL TYPE

QUAD MEDICAL COMP HMI, NFPA

DWG. TYPE WIRING

DWG. NO.

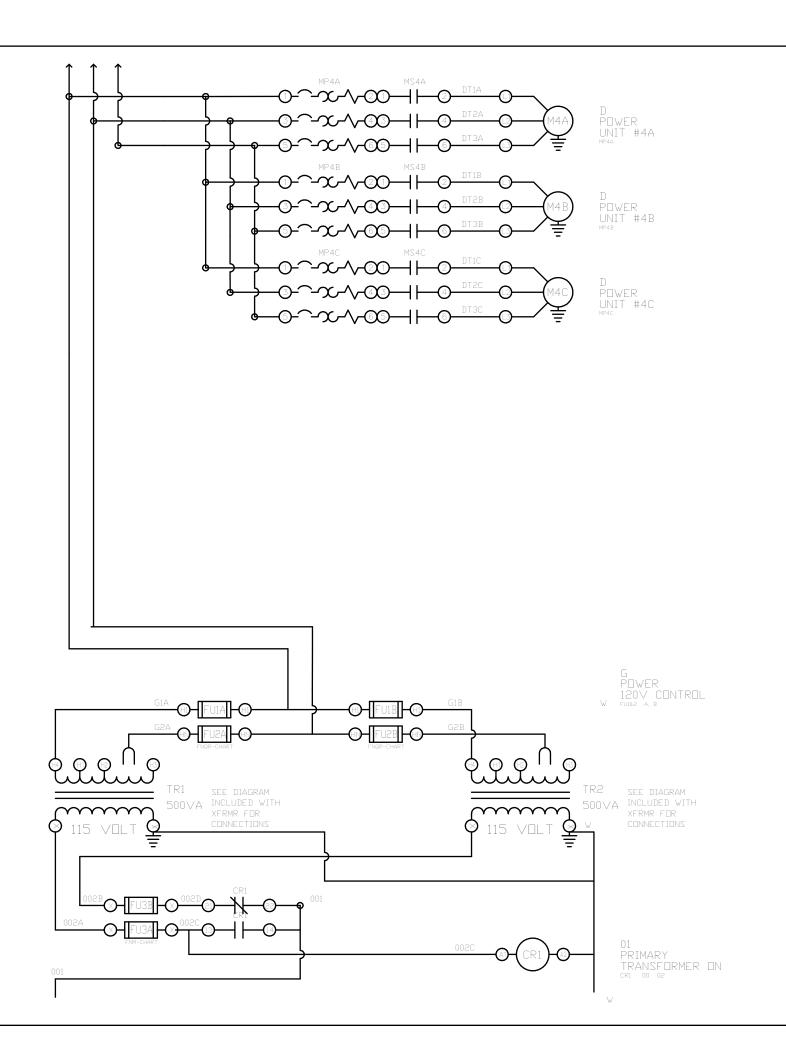
PXMI-S416F W

SHEET

W - 1

DVMI CALCE DI

B



REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	11/06/12	22722	CHR	DMS
C-1	CHANGE TRANSDUCER & FAN LOCATION	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	9/07/18	PXEC0229	JPG	АН

OPTIONAL:

SINGLE CYLINDER
AND SCROLLPUMPS

DOUBLE-CYLINDER
PUMPS

BACNET, WEBSRVR,

TRIPLE-CYLINDER



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DRAWN BY	or examination. CHECKED BY	ENGINEERING APPROVAL		
CHR	DMS	DMS		
06/04/12	11/09/12	11/09/12		

PANEL TYPE

QUAD MEDICAL COMP HMI, NFPA

DWG. TYPE

WIRING

DWG. NE

PXMI-S416F W

2UEE I

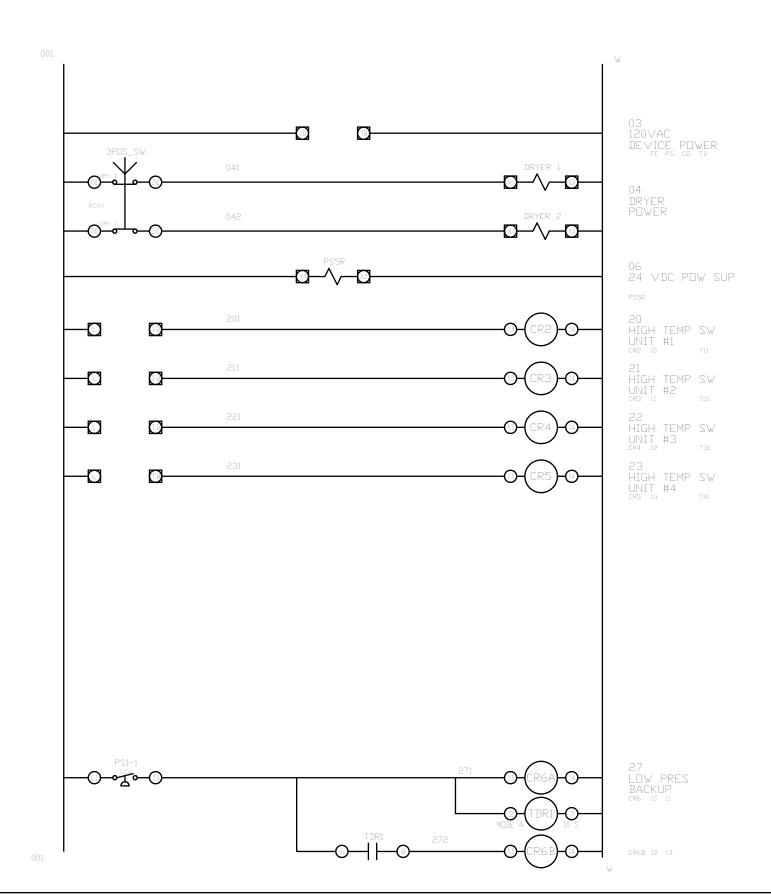
SIZE

 $\boxtimes$ 

W-2

XMI-S416F B1

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	11/06/12	22722	CHR	ZMG
C-1	CHANGE TRANSDUCER & FAN LOCATION	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	9/07/18	PXEC0229	JPG	АН



OPTIONAL:	SINGLE CYLINDER AND SCROLLPUMPS	$\boxtimes$
	DOUBLE-CYLINDER PUMPS	
BACNET, WEBSRVR,	TRIPLE-CYLINDER PUMPS	



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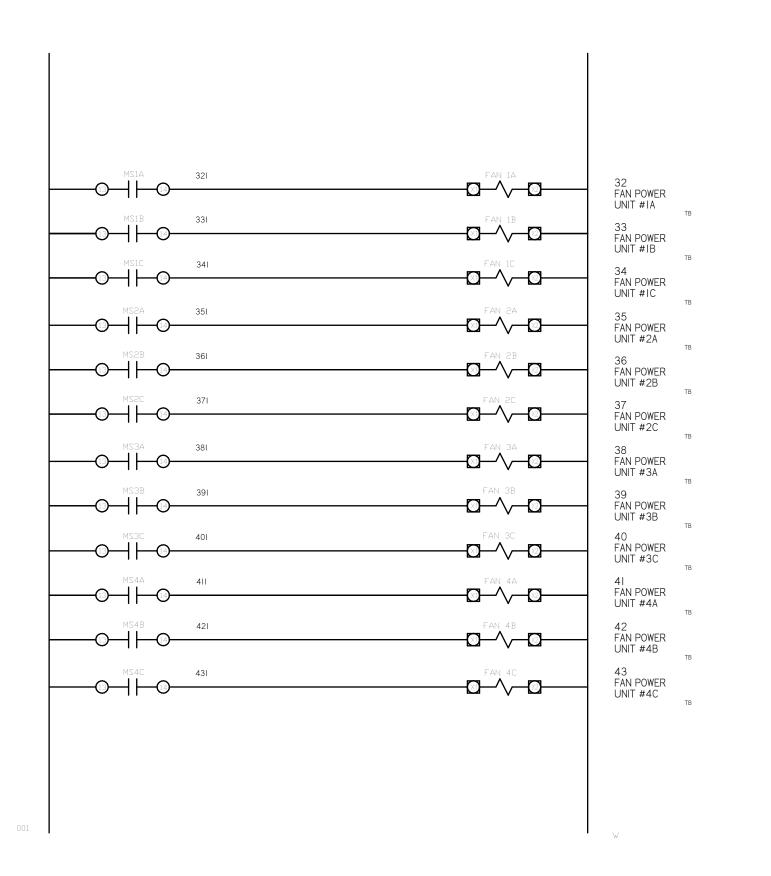
	' '		
	DRAWN BY	or examination. CHECKED BY	ENGINEERING APPROVAL
	CHR	DMS	DMS
	06/04/12	11/09/12	11/09/12

QUAD MEDICAL COMP HMI, NFPA

DWG. TYPE WIRING

PXMI-S416F W

W-3



REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	11/06/12	22722	CHR	ZMG
C-1	CHANGE TRANSDUCER & FAN LOCATION	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	9/07/18	PXEC0229	JPG	АН

OPTIONAL:	SINGLE CYLINDER AND SCROLLPUMPS	$\boxtimes$
	DOUBLE-CYLINDER PUMPS	
BACNET, WEBSRVR,	TRIPLE-CYLINDER	



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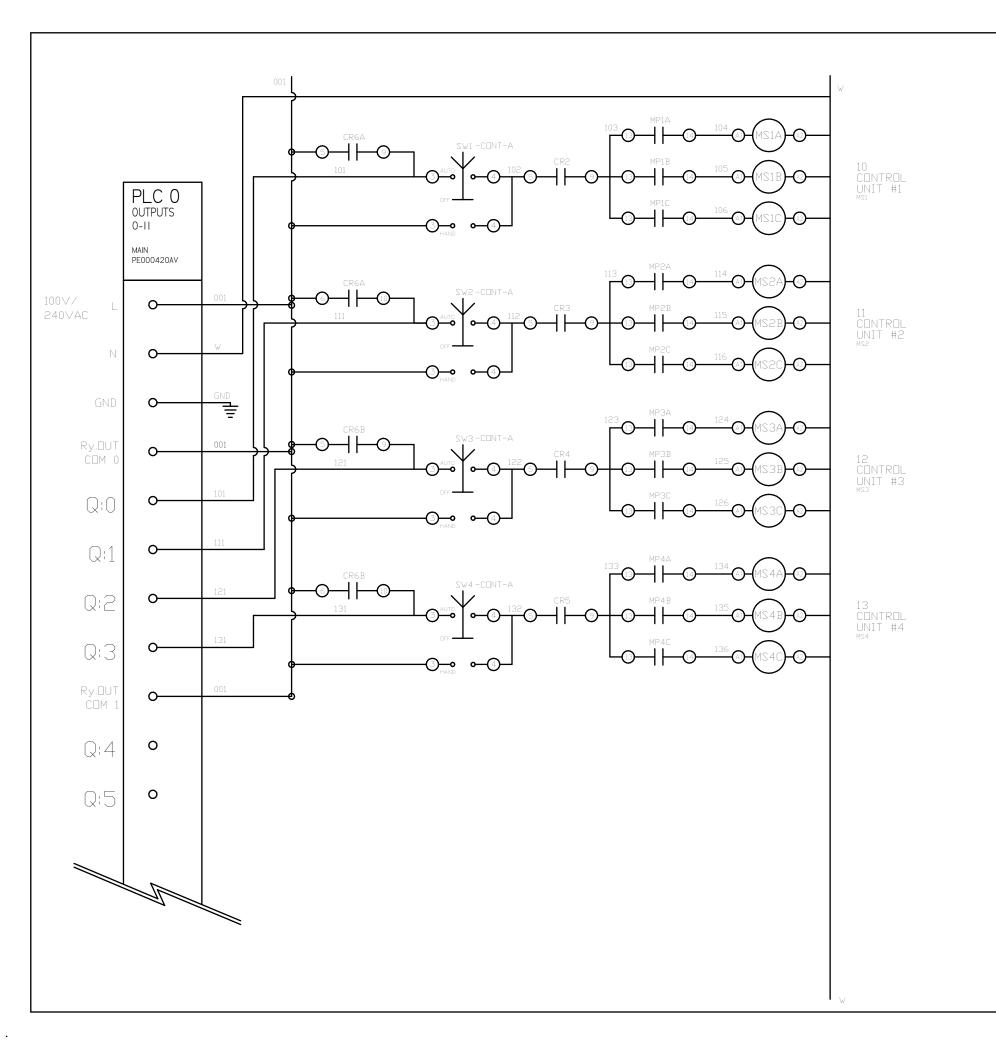
DRAWN BY	CHECKED  BY	ENGINEERING APPROVAL
CHR	DMS	DMS
06/04/12	11/09/12	11/09/12

QUAD MEDICAL COMP HMI, NFPA

WIRING

PXMI-S416F

W-4



REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	11/06/12	22722	CHR	DMS
C-1	CHANGE TRANSDUCER & FAN LOCATION	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	9/07/18	PXEC0229	JPG	АН

OPTIONAL:	SINGLE CYLINDER AND SCROLLPUMPS	$\boxtimes$
	DOUBLE-CYLINDER PUMPS	
BACNET, WEBSRVR,	TRIPLE-CYLINDER PUMPS	



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DRAWN BY	or examination. CHECKED BY	ENGINEERING APPROVAL
CHR	DMS	DMS
06/04/12	11/09/12	11/09/12

PANEL TYP

QUAD MEDICAL COMP HMI, NFPA

DWG. TYPE WIRING

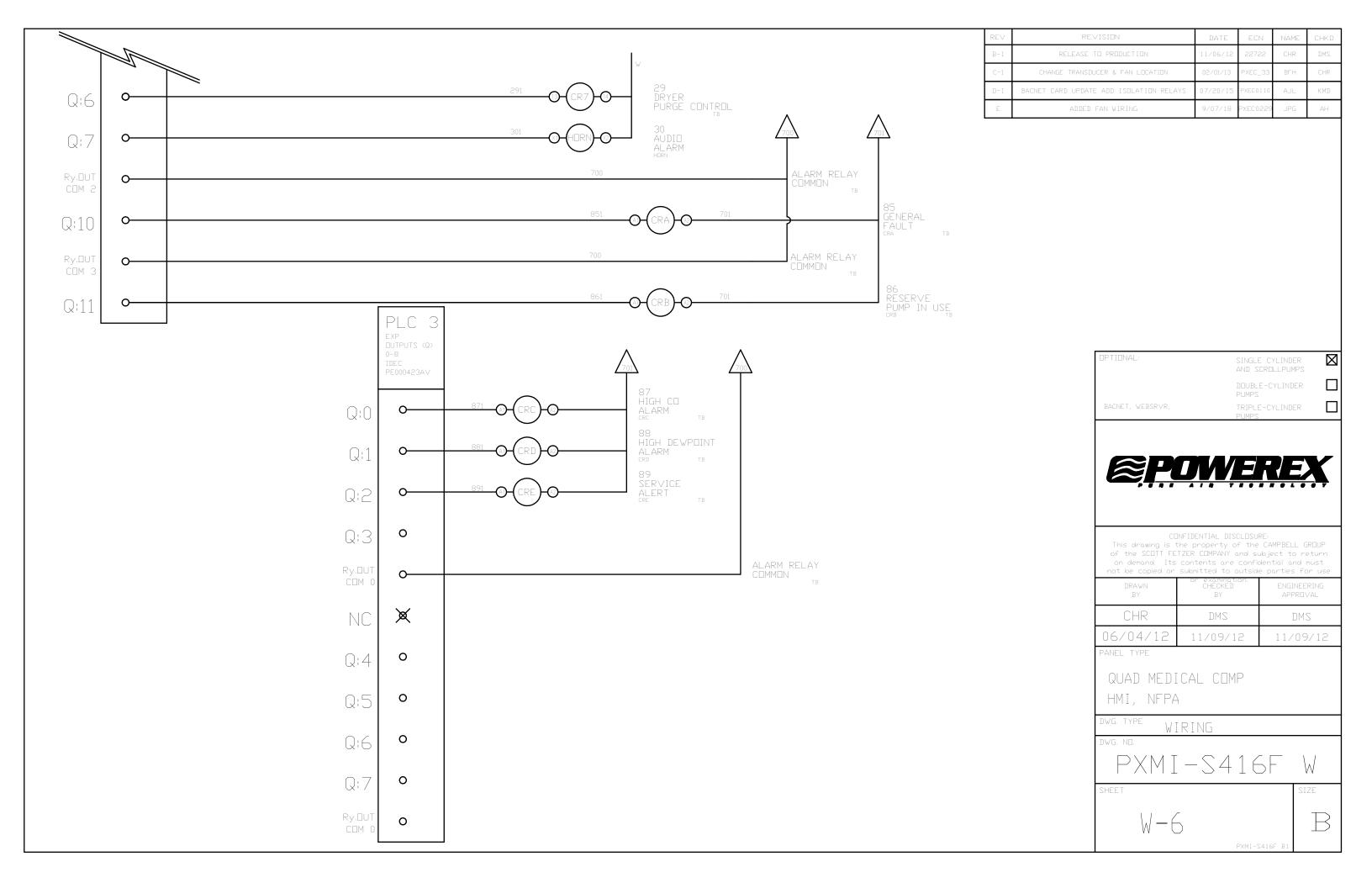
DWG. N

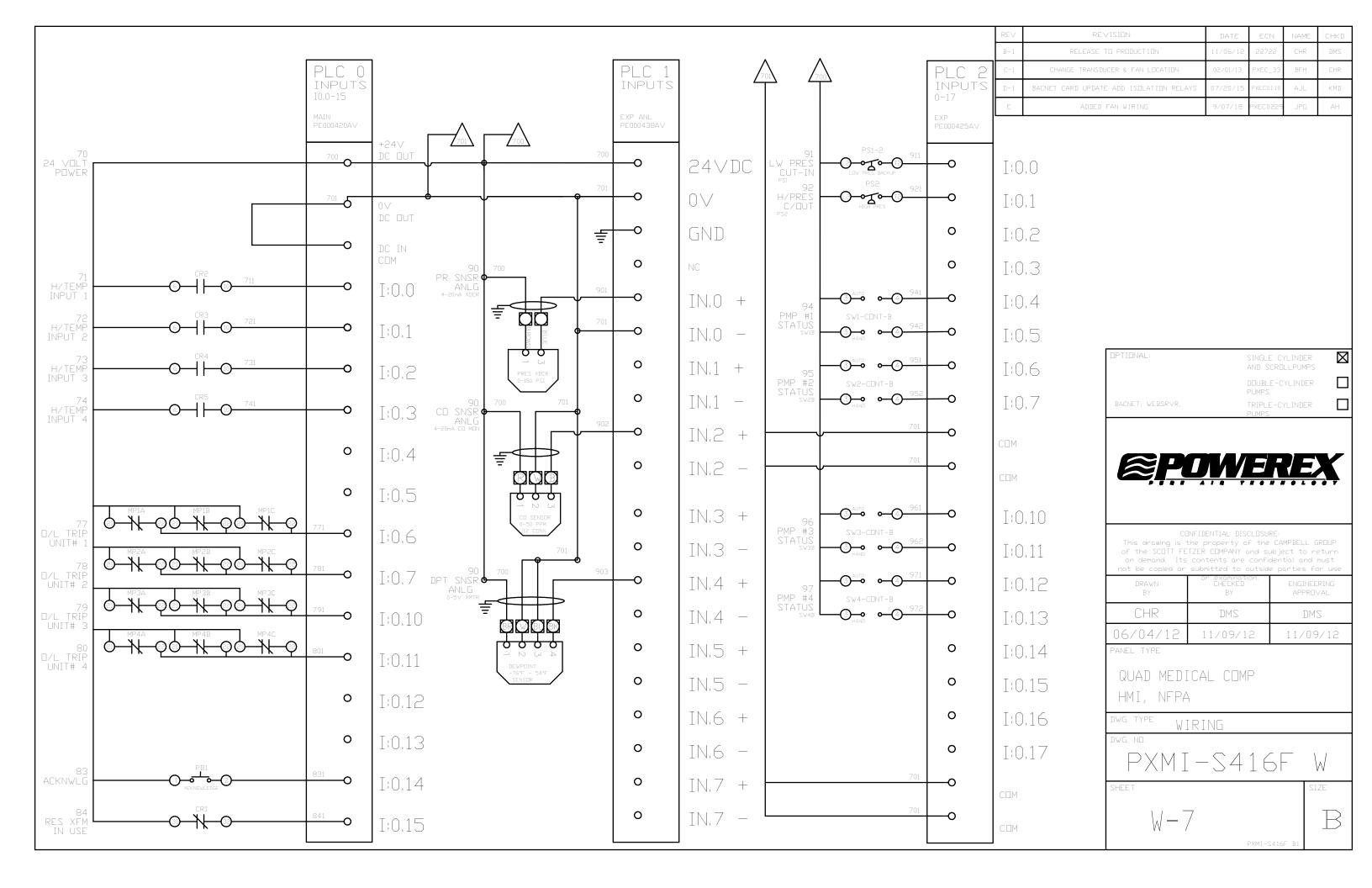
PXMI-S416F W

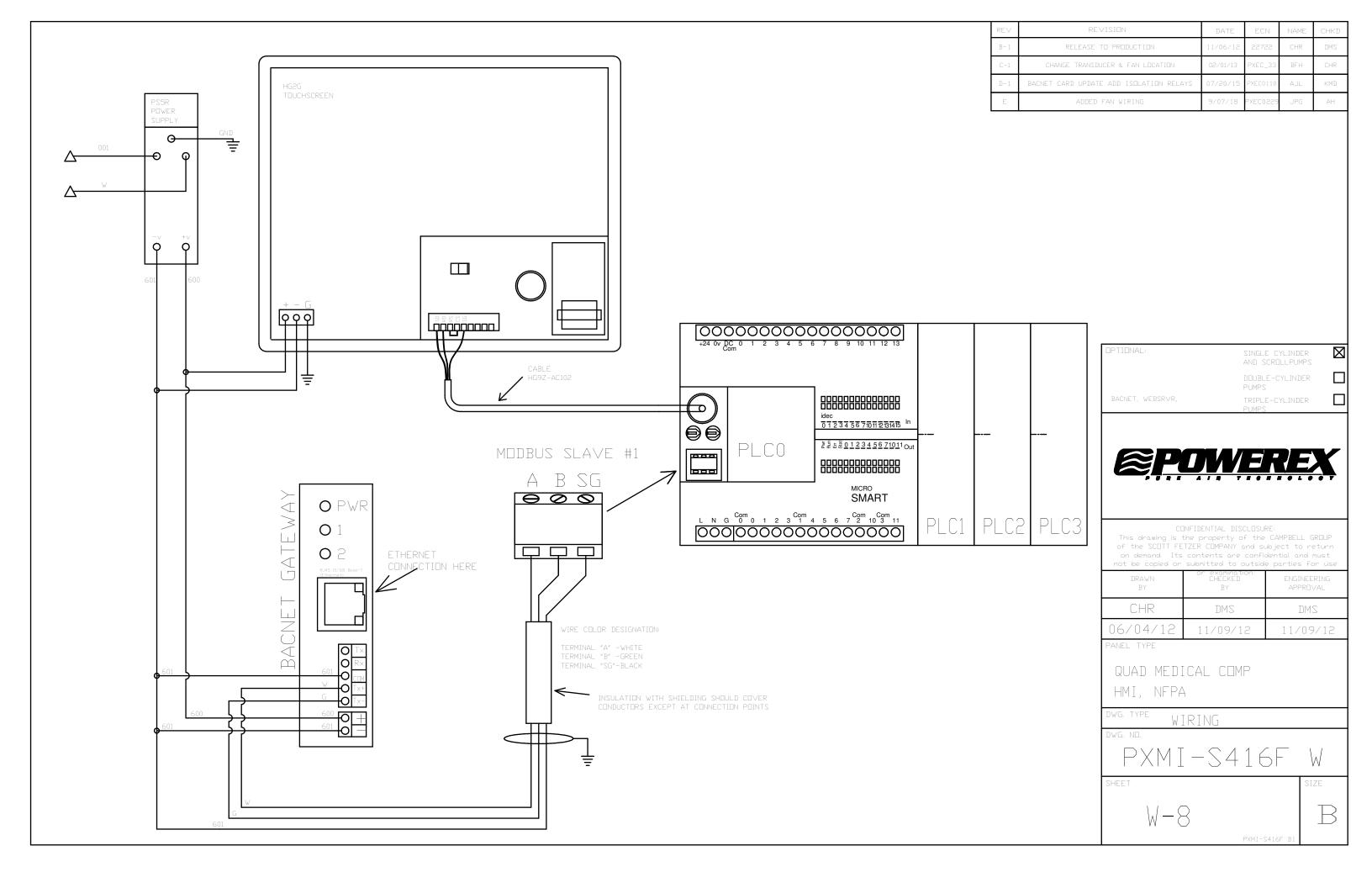
SHEET SIZE

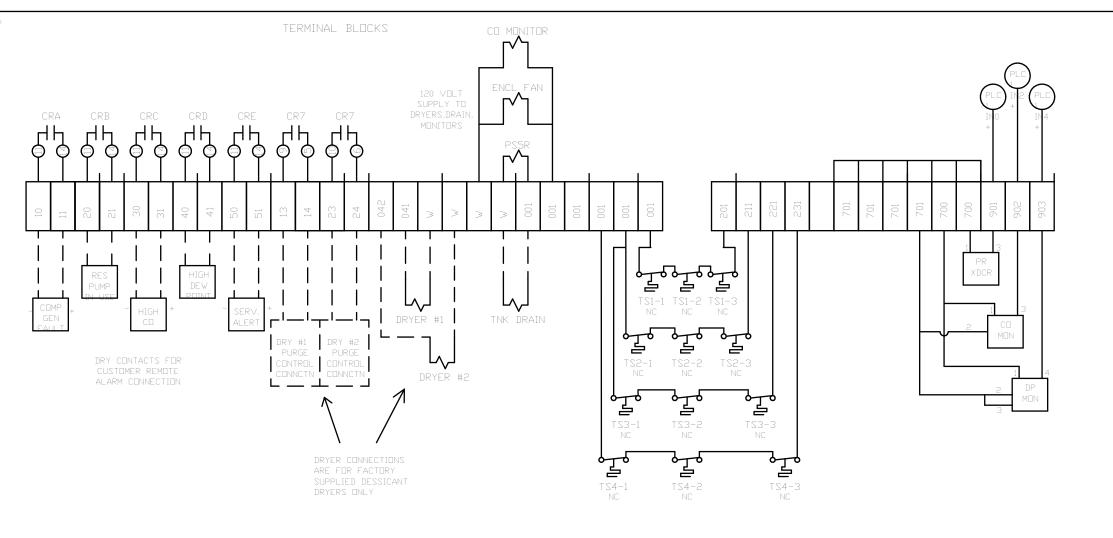
W-5

XMI-S416F B1









REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	11/06/12	22722	CHR	ZMG
C-1	CHANGE TRANSDUCER & FAN LOCATION	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	9/07/18	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 WITHIN A PROXIMITY OF 2" OF ANY 3-PHASE POWER CONDUCTORS.

JPTIONAL

DOUBLE-CYLINDER PUMPS
BACNET, WEBSRVR, TRIPLE-CYLINDER



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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL		
CHR	DMS	DMS		
06/04/12	11/09/12	11/09/12		

PANEL TYPE

QUAD MEDICAL COMP HMI, NFPA

DWG. TYPE WIRING

DWG. NO.

PXMI-S416F W

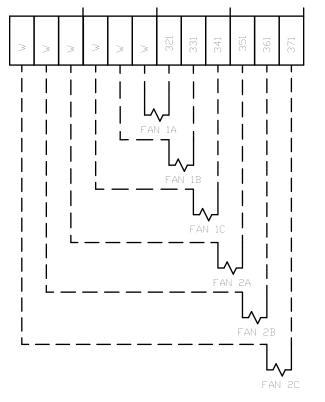
ZHFFI

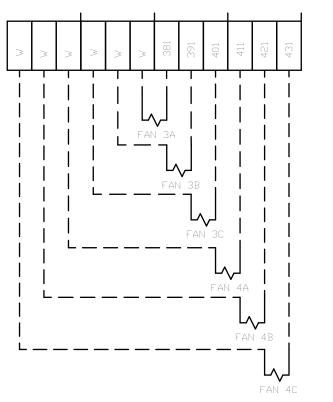
W-9

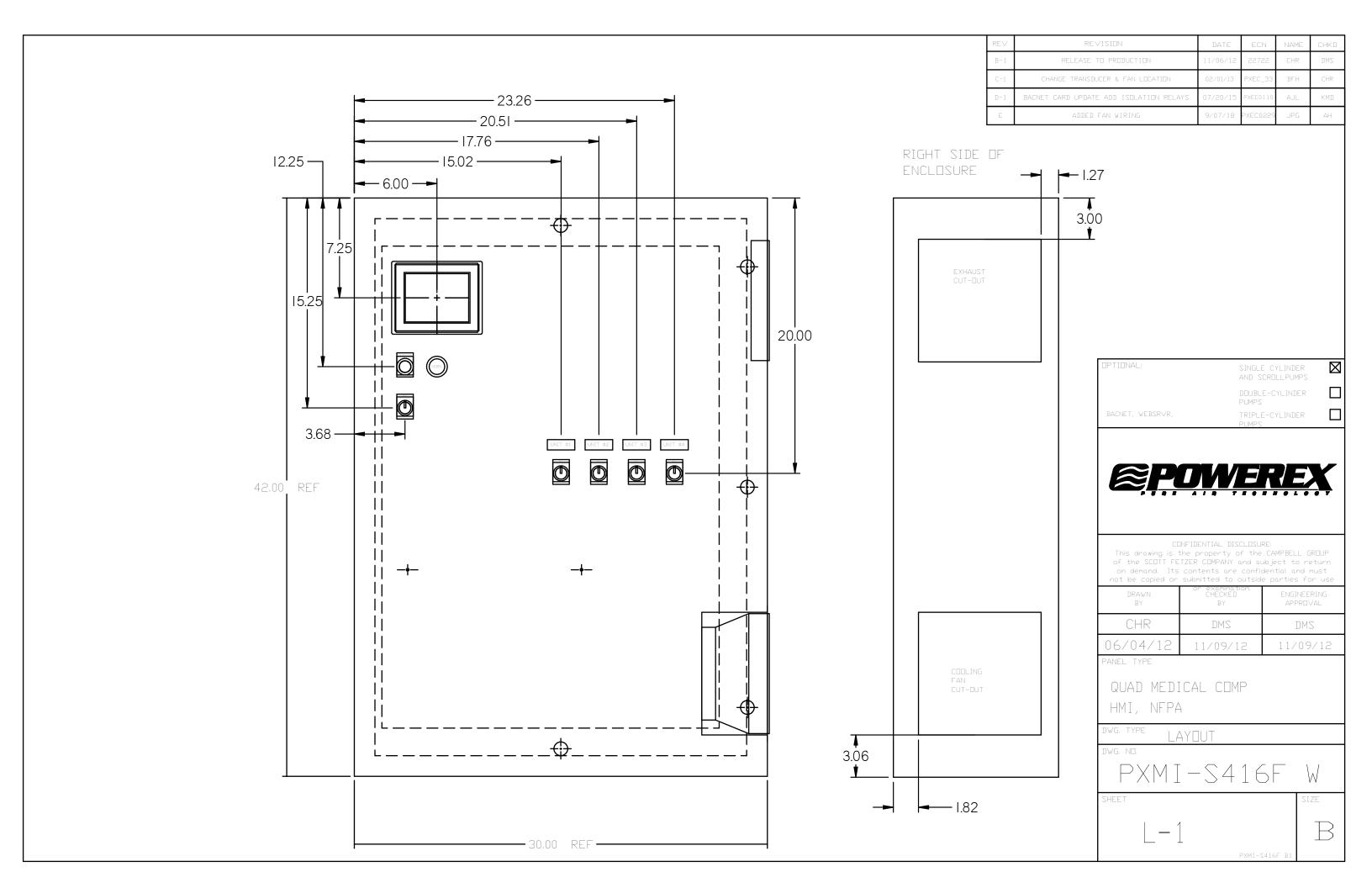
PXMI-S416F B1

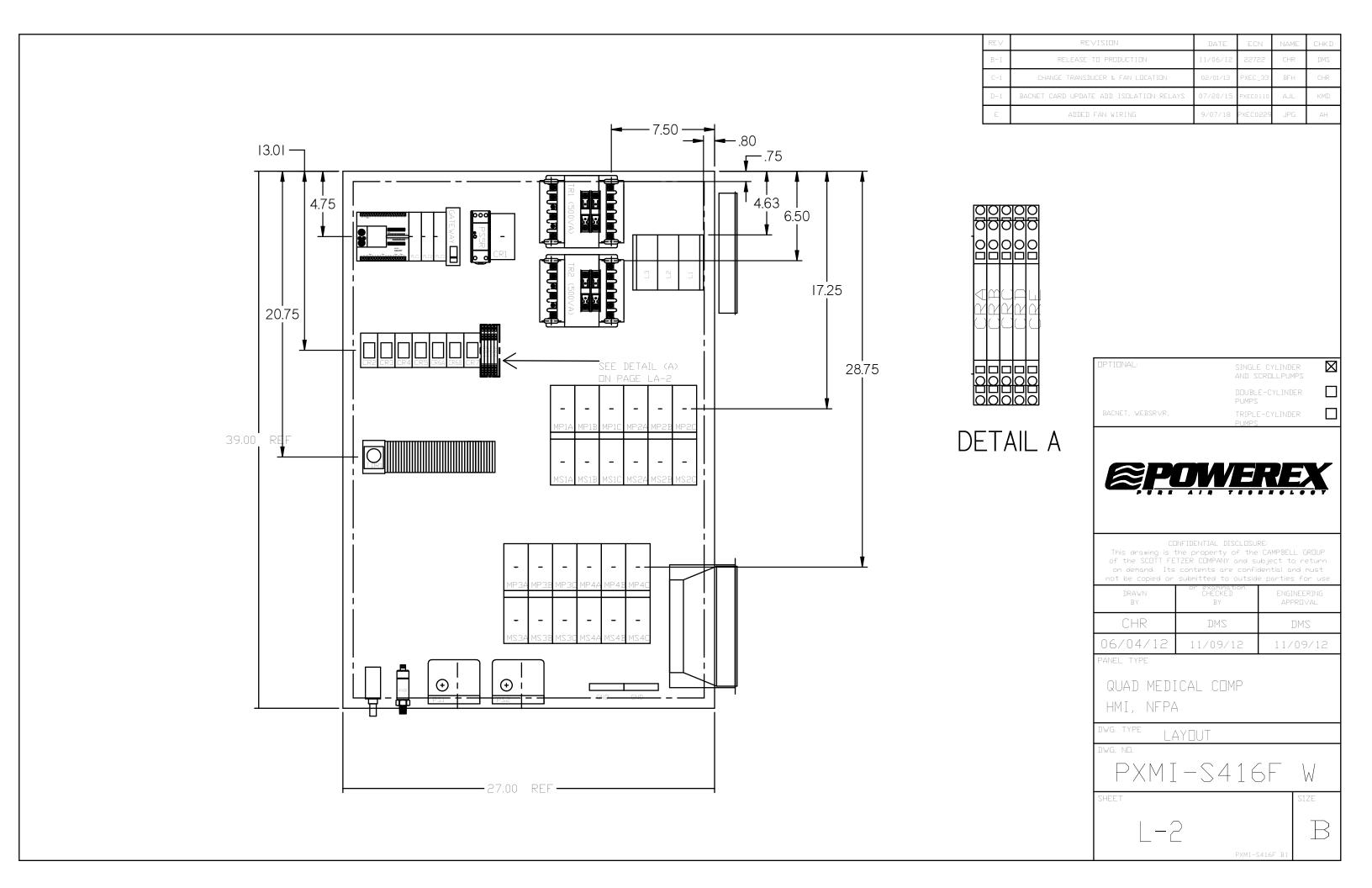
### FIELD WIRING NOTES:

- I. 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









#### TABLE 1

15% OF MOTOR NAMEPLATE FLA VALUE

17 \L			
PANEL DATA 500VA CONTRO	3Ø – 50 Hz DL CIRCUIT		
(A) LOAD SPECIFIC		30, (2) 40, (3) 40, (4	(B) BRANCH CIRCUIT PROTECTION – PROVIDED BY INSTALLER
PXMIS416FUAJ	5(X3) 440V/3Ø	7.58 93	110A 100A 110A

VOTES:

- 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.
- 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.  $\Delta$ -Indicates a drawing wire connection to another page.

FIELD WIRING NOTES ON PAGE W-8.

	REV	REVISION	DATE	ECN	NAME	CHKD
	B-1	RELEASE TO PRODUCTION	11/06/12	22722	CHR	ZMG
ſ	C-1	CHANGE TRANSDUCER & FAN LOCATION	02/01/13	PXEC_33	BFH	CHR
ſ	D-1	BACNET CARD UPDATE ADD ISOLATION RELAYS	07/20/15	PXEC0110	AJL	KMD
ſ	Е	ADDED FAN WIRING	9/07/18	PXEC0229	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.

<b>≋D</b> ſ	<b>5</b>	

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 or examination. CHECKED BY
 ENGINEERING APPROVAL

 CHR
 DMS
 DMS

 06/04/12
 11/09/12
 11/09/12

PANEL TYPE

QUAD MEDICAL COMP HMI, NFPA

DWG. TYPE 50HZ DATA

DWG. N

PXMI-S416F W

SIZ TO 4

PXMI-S416F I

CONTROL	. TRANS	FORMER	25 - 28	IOVA						D
FUSE		208	230 VDLT	460 380	575	WIRE TY	PE TABLE			
TYPE		VOLT	VULI	VOLT	VOLT	VOLTAGE	WIRE NUMBERS	GAUGE	COLOR	IL
FU1,2A FU1,2B	FNQR	6A	5A	5A	4A	120VAC 0VAC	001-699 W 700-1200	16-18AWG 16-18AWG	RED/BLK WHT/BLK PURPLE	S
FU3A,B	FNM	7A	7A	7A	7A	24VDC OVDC	700-1200	16-18AWG	PURPLE	
SEE XFR	RMR FOR	CONNE	CTIONS			GND CUSTOMER SUPPLY	01-99	VARIES 16AWG	GREEN YELLOW	

#### TABLE 1

115% OF MOTOR NAMEPLATE FLA VALUE

17.12	7 LL 1						
PANEL DATA 500VA CONTRO							
(A) LOAD SPECIFIC					D BY INST	UIT PROTECTIO ALLER	N -
PXMIS416F2AJ	5(X3) 208V,	/3Ø 14.0	173	225A	200A	200A	
PXMIS416F3AJ	5(X3) 230V,	/3Ø 12.7	157	200A	175A	200A	
PXMIS416F4AJ	5(X3) 460V,	/3Ø 6.33	80	100A	90A	90A	
NOTE - ADJUST	OVERCLIRRENT	PROTECTION	DEVICE NO	OT TO EXC	SEED.		

NOTES:

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- 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.
- 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.  $\triangle$  -Indicates a drawing wire connection to another page.

FIELD WIRING NOTES ON PAGE W-8.

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	11/06/12	22722	CHR	ZMG
C-1	CHANGE TRANSDUCER & FAN LOCATION	02/01/13	PXEC_33	BFH	CHR
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E	ADDED FAN WIRING	9/07/18	PXEC0229	JPG	АН

# **SEQUENCE OF OPERATIONS**

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<b>EPOWEREX</b>	

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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
CHR	DMS	DMS
06/04/12	11/09/12	11/09/12

ANEL TYPE

QUAD MEDICAL COMP HMI, NFPA

wg. type – kni

60HZ DATA

DWG. NO

PXMI-S416F W

SHEET