

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	07/20/11	22722	CHR	ZMG
C-I	CHANGE TRANSDUCER AND FAN LOCATION	04/01/13	PXEC_33	BFH	CHR
D-I	ADDED TIME DELAY RELAY TO LP BACKUP SWITCH	04/01/15	PXEC0093	AJL	KMD
E-I	BACNET CARD UPDATE ADD ISOLATINO RELAYS	07/20/15	PXEC0110	AJL	KMD
F	ADDED FAN WIRING	8/28/18	PXEC0169	AKH	KMD

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



CONFIDENTIAL DISCLOSURE.

This drawing is the property of the CAMPBELL GROUP of the SCOTT FETZER COMPANY and subject to return on demand. Its contents are confidential and must not be copied or submitted to outside parties for use or

examination.

 DRAWN BY
 CHECKED BY
 ENGINEERING APPROVAL

 CHR
 DMS
 DMS

 07/20/11
 06/14/12
 06/14/12

PANEL TYPE

SCROLL QUAD MEDICAL HMI, NFPA

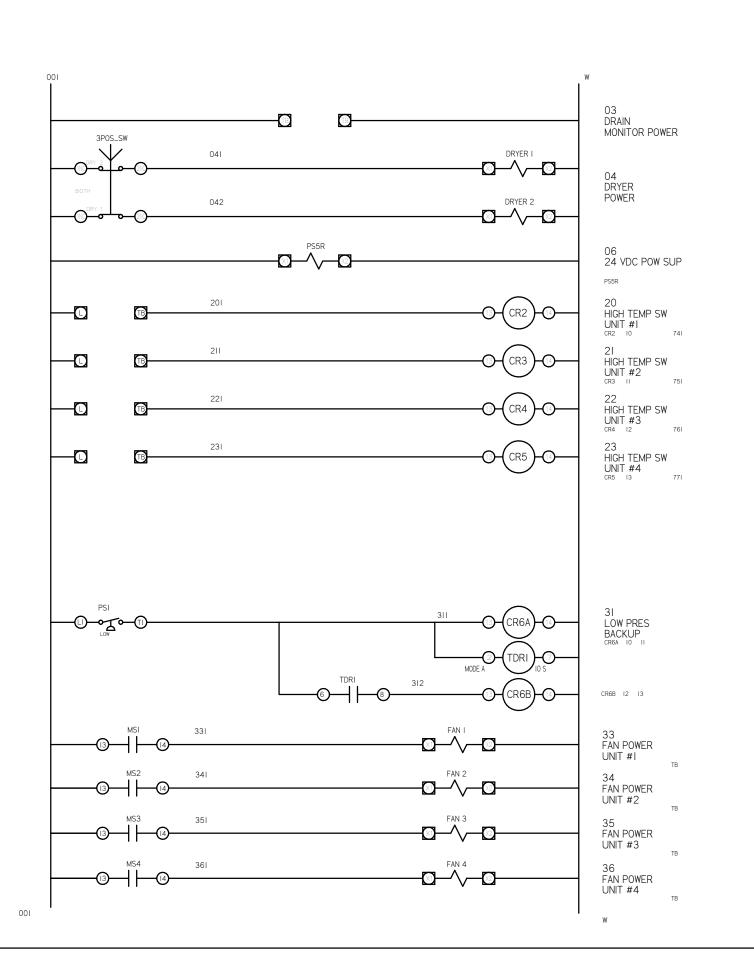
DWG. TYPE WIRING

DWG. NO.

SHEET

PXMI-A416 W

W - 1



REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	07/20/11	22722	CHR	ZMG
C-I	CHANGE TRANSDUCER AND FAN LOCATION	04/01/13	PXEC_33	BFH	CHR
D-I	ADDED TIME DELAY RELAY TO LP BACKUP SWITCH	04/01/15	PXEC0093	AJL	KMD
E-I	BACNET CARD UPDATE ADD ISOLATINO RELAYS	07/20/15	PXEC0110	AJL	KMD
F	ADDED FAN WIRING	8/28/18	PXEC0169	AKH	KMD

	DOUBLE-CYLINDER PUMPS	
BACNET, WEBSRVR,	TRIPLE-CYLINDER PUMPS	

CONFIDENTIAL DISCLOSURE:
This drawing is the property of the CAMPBELL GROUP of the SCOTT FETZER COMPANY and subject to return on demand. Its contents are confidential and must not be copied or submitted to outside parties for use or

DRAWN BY		
CHR	DMS	DMS
07/20/11	06/14/12	06/14/12

PANEL TYPE

SCROLL QUAD MEDICAL HMI, NFPA

WIRING

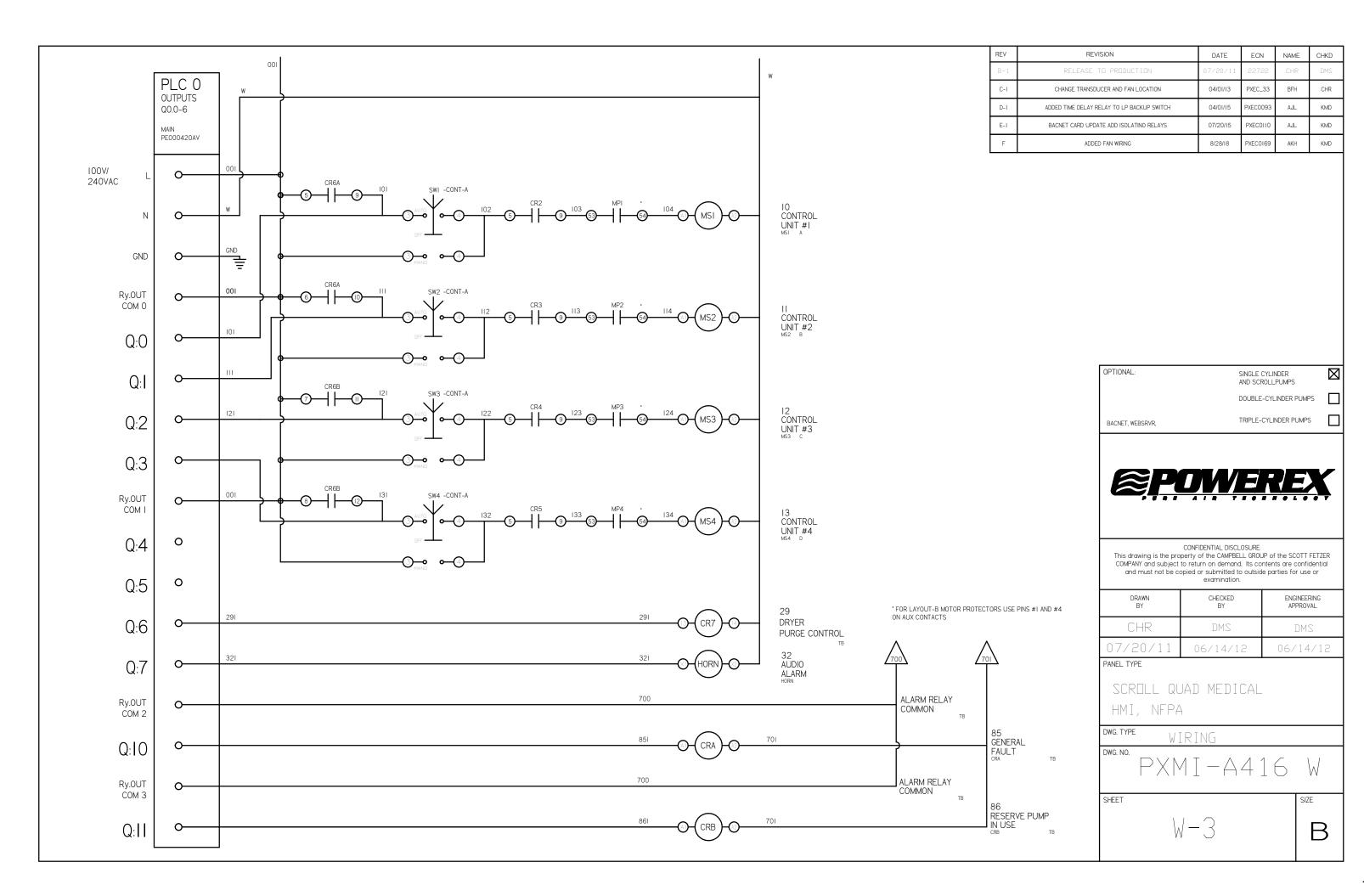
DWG. NO.

PXMI-A416

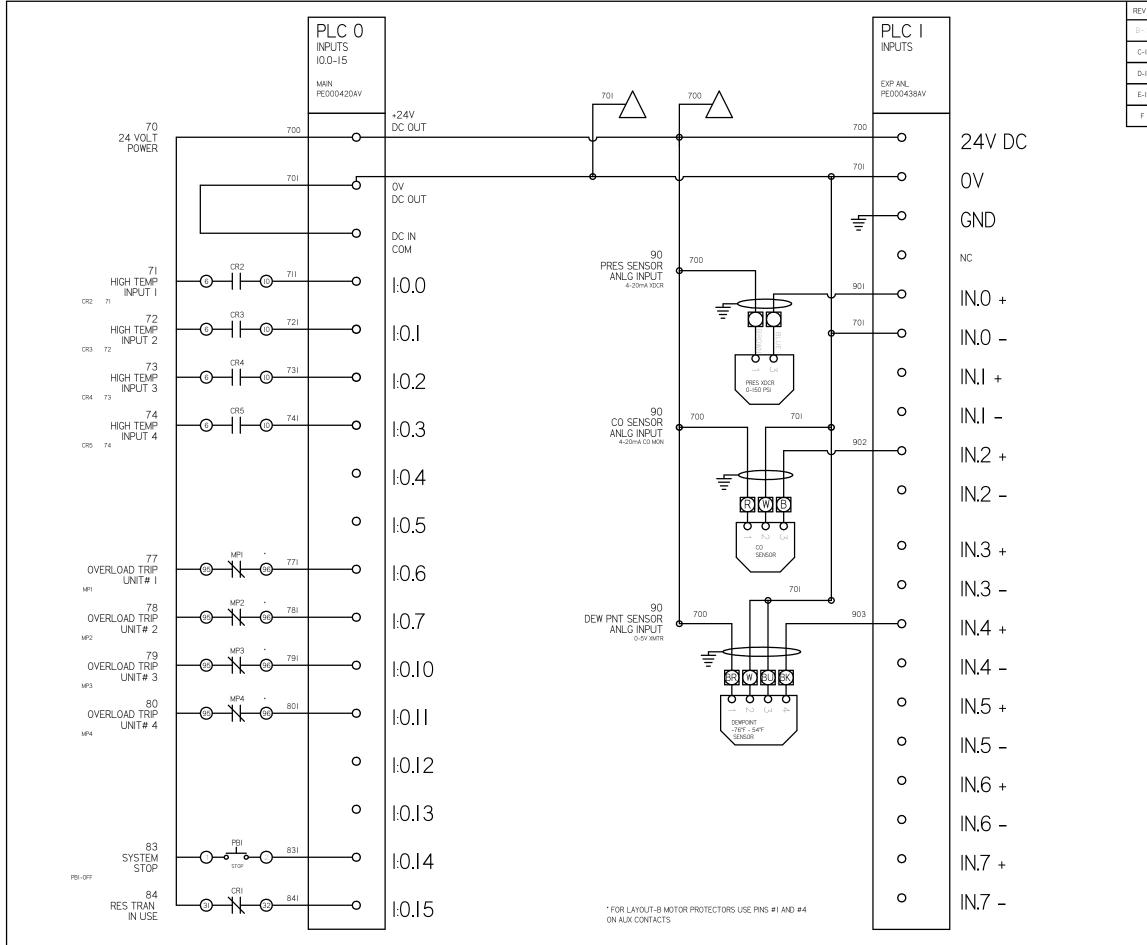
SHEET

SIZE

W-2



_



REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION		22722	CHR	ZMG
C-I	CHANGE TRANSDUCER AND FAN LOCATION	04/01/13	PXEC_33	BFH	CHR
D-I	ADDED TIME DELAY RELAY TO LP BACKUP SWITCH	04/01/15	PXEC0093	AJL	KMD
E-I	BACNET CARD UPDATE ADD ISOLATINO RELAYS	07/20/15	PXEC0110	AJL	KMD
F	ADDED FAN WIRING	8/28/18	PXEC0169	AKH	KMD

OPTIONAL: \boxtimes SINGLE CYLINDER AND SCROLLPUMPS DOUBLE-CYLINDER PUMPS

TRIPLE-CYLINDER PUMPS BACNET, WEBSRVR,



CONFIDENTIAL DISCLOSURE:
This drawing is the property of the CAMPBELL GROUP of the SCOTT FETZER COMPANY and subject to return on demand. Its contents are confidential and must not be copied or submitted to outside parties for use or examination.

DRAWN BY	CHECKED BY	ENGINEERING APPROVAL	
CHR	DMS	DMS	
07/20/11	06/14/12	06/14/12	

PANEL TYPE

SCROLL QUAD MEDICAL

HMI, NFPA

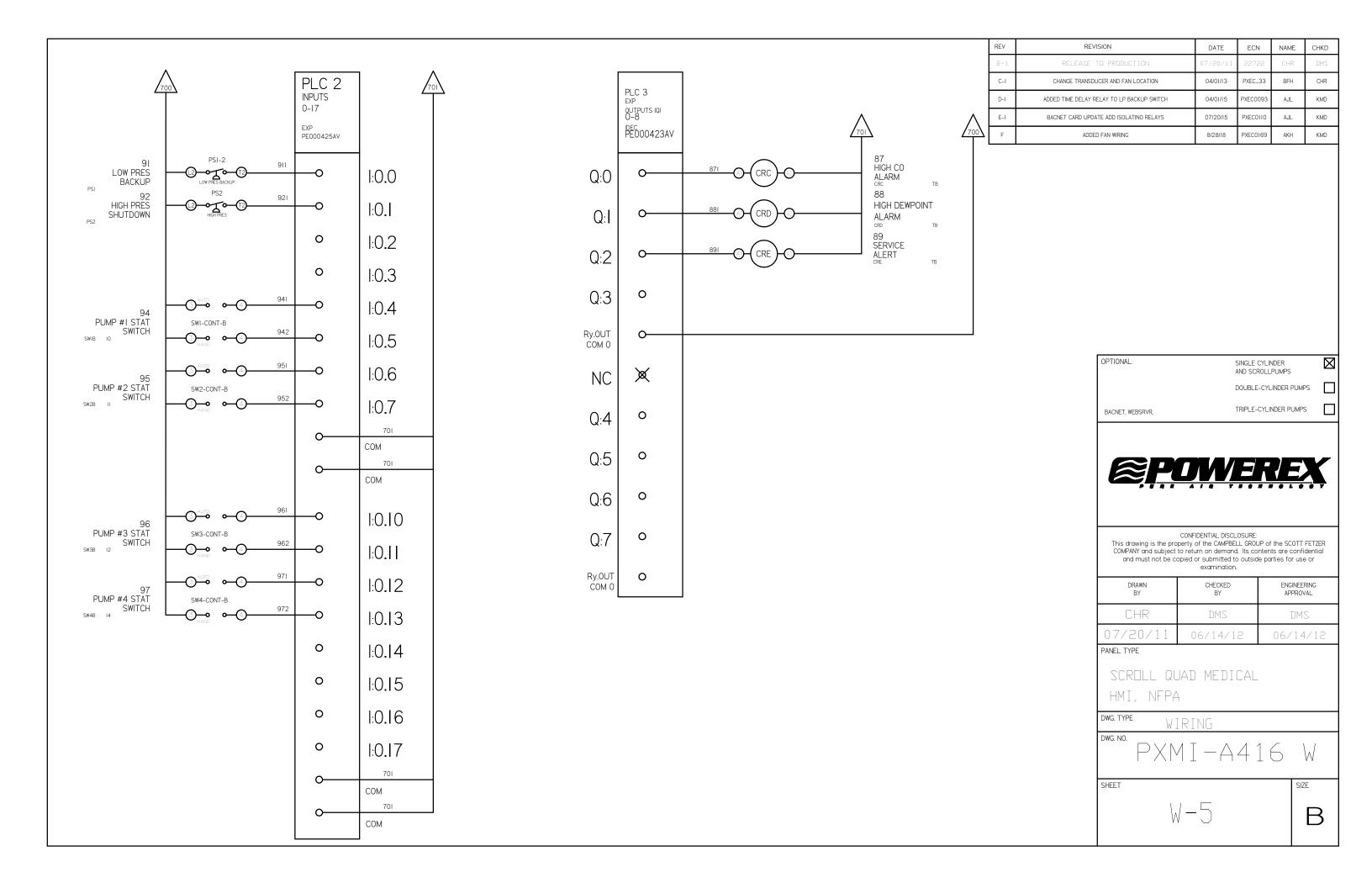
DWG. TYPE WIRING

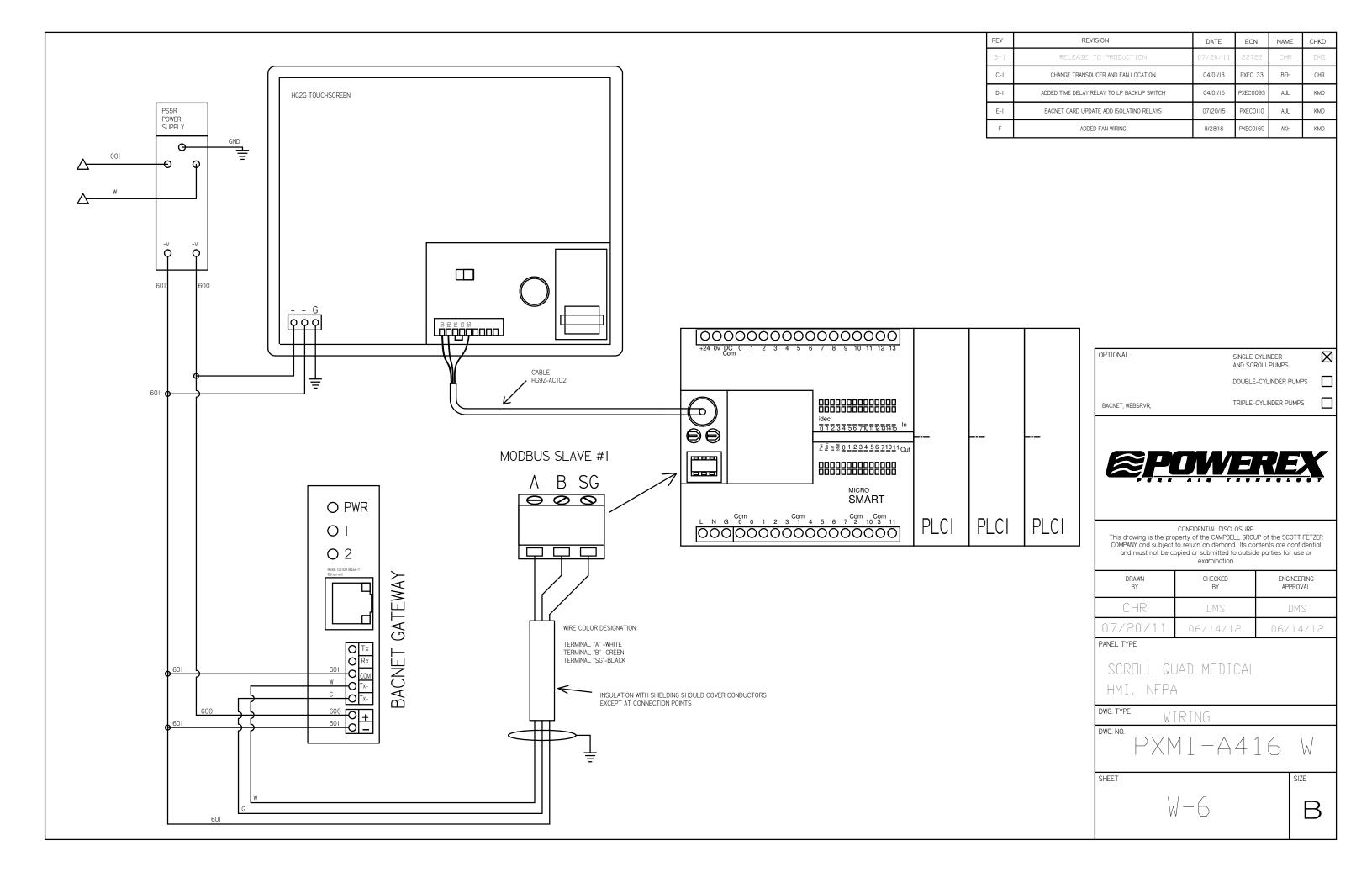
DWG. NO.

SHEET SIZE

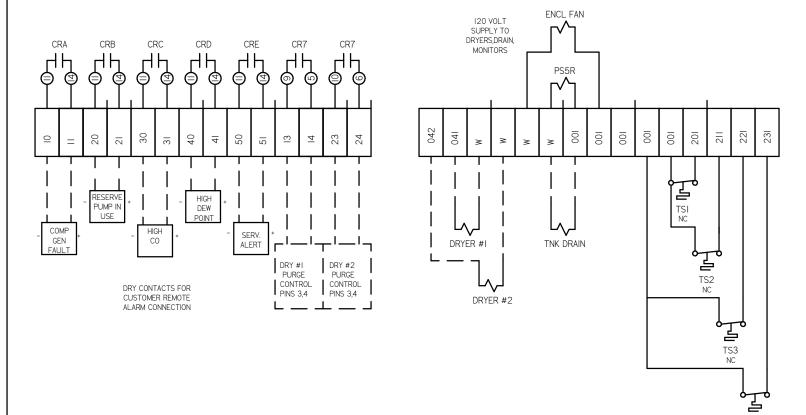
W-4

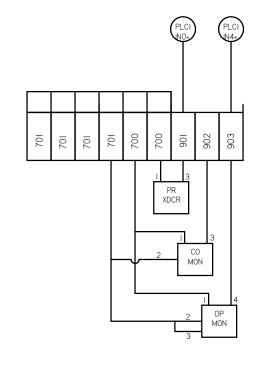
В





TERMINAL BLOCKS





REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	07/20/11	22722	CHR	ZMG
C-I	CHANGE TRANSDUCER AND FAN LOCATION	04/01/13	PXEC_33	BFH	CHR
D-I	ADDED TIME DELAY RELAY TO LP BACKUP SWITCH	04/01/15	PXEC0093	AJL	KMD
E-I	BACNET CARD UPDATE ADD ISOLATINO RELAYS	07/20/15	PXEC0110	AJL	KMD
F	ADDED FAN WIRING	8/28/18	PXEC0169	AKH	KMD

OPTIONAL: SINGLE CYLINDER AND SCROLLPUMPS

DOUBLE-CYLINDER PUMPS

TRIPLE-CYLINDER PUMPS

 \boxtimes

POWEREX

CONFIDENTIAL DISCLOSURE:
This drawing is the property of the CAMPBELL GROUP of the SCOTT FETZER
COMPANY and subject to return on demand. Its contents are confidential
and must not be copied or submitted to outside parties for use or
examination.

DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
CHR	DMS	DMS
07/20/11	06/14/12	06/14/12

PANEL TYPE

BACNET, WEBSRVR,

SCROLL QUAD MEDICAL HMI, NFPA

W-7

DWG. TYPE WIRING

DWG. NO.

PXMI-A416

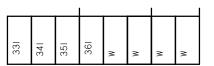
SHEET

SIZE

В

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



FAN WIRING SEE RUNGS 33-36 FOR DETAILS

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)	72AJ	19.2	59.6	100	80	90
208V (3Ø)	A2AJ	26.5	81.5	150	110	125
230V (3Ø)	73AJ	17.3	53.9	90	70	90
2307 (39)	A3AJ	24	74	125	100	125
460V (3Ø)	74AJ	8.67	28.01	50	35	45
460V (3Ø)	A4AJ	12	38	70	50	60
380V (3Ø)	78AJ	10.7	34.1	60	45	60
50HZ	A8AJ	14.5	45.5	80	60	70

	WIRE TY	PE TABLE	
VOLTAGE	WIRE NUMBERS	GAUGE	COLOR
I20 VAC	01-699	16-18 AWG	RED/BLK
OVAC	W	16-18 AWG	WHT/BLK
24VDC	700-799	16-18 AWG	PURPLE
0VDC	701	16-18 AWG	PURPLE
GND	-	VARIES	GREEN
CUSTOME R SUPPLY	01-99	16 AWG	YELLOW

	TUBLE O CONTROL CIDOLUT PROTECTION							
TABLE 2 - CONTROL CIRCUIT PROTECTION								
FUSE TYPE		208 VOLT	230 VOLT	460 VOLT	575 VOLT			
FUI,2A FUI,2B	FNQR	6A	5A	5A	4A			
FU3A,B	FNM	7A	7A	7A	7A			

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-1	RELEASE TO PRODUCTION	07/20/11	22722	CHR	2MG
C-I	CHANGE TRANSDUCER AND FAN LOCATION	04/01/13	PXEC_33	BFH	CHR
D-I	ADDED TIME DELAY RELAY TO LP BACKUP SWITCH	04/01/15	PXEC0093	AJL	KMD
E-I	BACNET CARD UPDATE ADD ISOLATINO RELAYS	07/20/15	PXEC0110	AJL	KMD
F	ADDED FAN WIRING	8/28/18	PXEC0169	AKH	KMD

REVISION

DATE ECN NAME CHKD

POWEREX

CONFIDENTIAL DISCLOSURE:
This drawing is the property of the CAMPBELL GROUP of the SCOTT FETZER
COMPANY and subject to return on demand. Its contents are confidential
and must not be copied or submitted to outside parties for use or
examination.

DRAWN BY		
CHR	DMS	DMS
07/20/11	06/14/12	06/14/12

PANEL TYPE

OPTIONAL:

SCROLL QUAD MEDICAL HMI, NFPA

WG. TYPE

WIRING

DWG. NO. PXMI-A416

SHEET

D-1

В

NOTES:

- 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
- INSTALLER TO PROVIDE MAIN DISCONNECTING DEVICE WITH SHORT CIRCUIT PROTECTION FOR THIS ELECTRICAL ASSEMBLY. SEE MOTOR DATA TABLE.
- 4. ALL WIRES MUST BE LABELED ON BOTH ENDS
- 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-7.

* - USE LAYOUT B

TABLE 1	P/N	MOTOR FULL LOAD AMPS	TOTAL FULL LOAD AMPS	NON-TIME DELAY FUSE	TIME DELAY FUSE
	02AJ	4.1	18.4	30	25
	12AJ	4.5	20	30	25
	22AJ	6	26	40	35
2001 (201)	32AJ	8.5	36	60	45
208V (3Ø)	52AJ	14	58	90	70
	72AJ	20.5	84	125	100
	A2AJ *	27.4	111.6	175	150
	F2AJ *	41.1	166.4	250	200
	03AJ	3.6	16.4	25	20
	13AJ	4.4	19.6	30	25
	23AJ	5.8	25.2	40	30
2201/25	33AJ	7.7	32.8	50	40
230V (3Ø)	53AJ	12.7	52.8	80	70
	73AJ	18.5	76	125	90
	A3AJ	24.8	101.2	175	125
	F3AJ *	37.2	150.8	250	200
	04AJ	1.8	9.2	15	15
	14AJ	2.2	10.8	20	15
	24AJ	2.9	13.6	20	20
4601 (20)	34AJ	3.9	17.6	30	25
460V (3Ø)	54AJ	6.3	27.2	40	35
	74AJ	9.3	39.2	60	50
	A4AJ	12.4	51.6	80	70
	F4AJ	18.6	76.4	125	100
	08AJ				
	18AJ				
	28AJ	3.4	15.6	25	20
380V (3Ø)	38AJ	4.6	20.4	30	25
50HZ	58AJ	7.7	32.8	50	40
	78AJ	11.1	46.4	70	60
	A8AJ	14.9	61.6	100	80
	F8AJ	22.1	90.4	150	125
	07AJ	1.1	6.4	10	10
	17AJ				
	27AJ	2.3	11.2	20	15
575V (3Ø)	37AJ	3.1	14.4	25	20
3/3V (3W)	57AJ	5.1	22.4	35	30
	77AJ	6.9	29.6	45	35
	A7AJ	9.9	41.6	70	50
	F7AJ	14.9	61.6	100	80

NOTES:

- RECOMMENDED TIGHTENING TORQUES FOR WIRE TERMINALS: 208-575 VOLT POWER 35 POUND INCHES 120 VOLT POWER AND CONTROL 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 MOTOR DATA TABLE.
- ALL WIRES MUST BE LABELED ON BOTH ENDS
- 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-7.

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	07/20/11	22722	CHR	ZMG
C-I	CHANGE TRANSDUCER AND FAN LOCATION	04/01/13	PXEC_33	BFH	CHR
D-I	ADDED TIME DELAY RELAY TO LP BACKUP SWITCH	04/01/15	PXEC0093	AJL	KMD
E-I	BACNET CARD UPDATE ADD ISOLATINO RELAYS	07/20/15	PXEC0110	AJL	KMD
F	ADDED FAN WIRING	8/28/18	PXEC0169	AKH	KMD

	WIRE TYPE TABLE				
VOLTAGE	WIRE NUMBERS	GAUGE	COLOR		
I20 VAC	01-699	16-18 AWG	RED/BLK		
OVAC	W	16-18 AWG	WHT/BLK		
24VDC	700-799	16-18 AWG	PURPLE		
0VDC	701	16-18 AWG	PURPLE		
GND	-	VARIES	GREEN		
CUSTOME R SUPPLY	01-99	16 AWG	YELLOW		

	TABLE 2 - CONTROL CIRCUIT PROTECTION					
FUSE TYPE		208 VOLT	230 VOLT	460 VOLT	575 VOLT	
FUI,2A FUI,2B	FNQR	6A	5A	5A	4A	
FU3A,B	FNM	7A	7A	7A	7A	

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.**

	WIRE IT	'E TADLE	
AGE	WIRE NUMBERS	GAUGE	COLOR
/AC	01-699	16-18 AWG	RED/BLK
;	W	16-18 AWG	WHT/BLK
C	700-799	16-18 AWG	PURPLE
;	701	16-18 AWG	PURPLE
	-	VARIES	GREEN
OME	01-99	16 AWG	YELLOW

	Pa	EK	EX
4		 	

CONFIDENTIAL DISCLOSURE This drawing is the property of the CAMPBELL GROUP of the SCOTT FETZER $\,$ COMPANY and subject to return on demand. Its contents are confidential and must not be copied or submitted to outside parties for use or

DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
CHR	DMS	DMS
07/20/11	06/14/12	06/14/12

PANEL TYPE

OPTIONAL:

SCROLL QUAD MEDICAL HMI, NFPA

DWG. TYPE

SHEET

TABLE 1	
PANEL DATA 30 - 60 Hz 500VA CONTROL CIRCUIT	
(A) LOAD SPECIFICATIONS	(B) BRANCH CIRCUIT PROTECTION - PROVIDED BY INSTALLER
PBMIA416A4AJ 10 460V/3PH 11.6 48.4	80A 60A 70A
NOTE— ADJUST OVERCURRENT PROTECTION DEVICE N 115% OF MOTOR NAMEPLATE FLA VALUE	OT TO EXCEED

NOT	ES:
-----	-----

- I. 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
- INSTALLER TO PROVIDE MAIN DISCONNECTING DEVICE WITH SHORT CIRCUIT PROTECTION FOR THIS ELECTRICAL ASSEMBLY. SEE MOTOR DATA TABLE.
- 4. ALL WIRES MUST BE LABELED ON BOTH ENDS
- 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-7.

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	07/20/11	22722	CHR	ZMG
C-I	CHANGE TRANSDUCER AND FAN LOCATION	04/01/13	PXEC_33	BFH	CHR
D-I	ADDED TIME DELAY RELAY TO LP BACKUP SWITCH	04/01/15	PXEC0093	AJL	KMD
E-I	BACNET CARD UPDATE ADD ISOLATINO RELAYS	07/20/15	PXEC0110	AJL	KMD
F	ADDED FAN WIRING	8/28/18	PXEC0169	AKH	KMD

WIRE TYPE TABLE			
VOLTAGE	WIRE NUMBERS	GAUGE	COLOR
120 VAC	01-699	16-18 AWG	RED/BLK
OVAC	W	16-18 AWG	WHT/BLK
24VDC	700-799	16-18 AWG	PURPLE
OVDC	701	16-18 AWG	PURPLE
GND	-	VARIES	GREEN
CUSTOME R SUPPLY	01-99	16 AWG	YELLOW

TABLE 2 - CONTROL CIRCUIT PROTECTION					
FUSE TYPE		208 VOLT	230 VOLT	460 VOLT	575 VOLT
FUI,2A FUI,2B	FNQR	6A	5A	5A	4A
FU3A,B	FNM	7A	7A	7A	7A

	AND SCROLLPUMPS	
	DOUBLE-CYLINDER PUMPS	
BACNET, WEBSRVR,	TRIPLE-CYLINDER PUMPS	

CINICI E CVI INDED



CONFIDENTIAL DISCLOSURE:
This drawing is the property of the CAMPBELL GROUP of the SCOTT FETZER
COMPANY and subject to return on demand. Its contents are confidential
and must not be copied or submitted to outside parties for use or
examination.

DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
CHR	DMS	DMS
07/20/11	06/14/12	06/14/12

PANEL TYPE

OPTIONAL:

SCROLL QUAD MEDICAL HMI, NFPA

DWG. TYPE WIRING

PXMI-A416

SHEET

D-1

В

 ∇

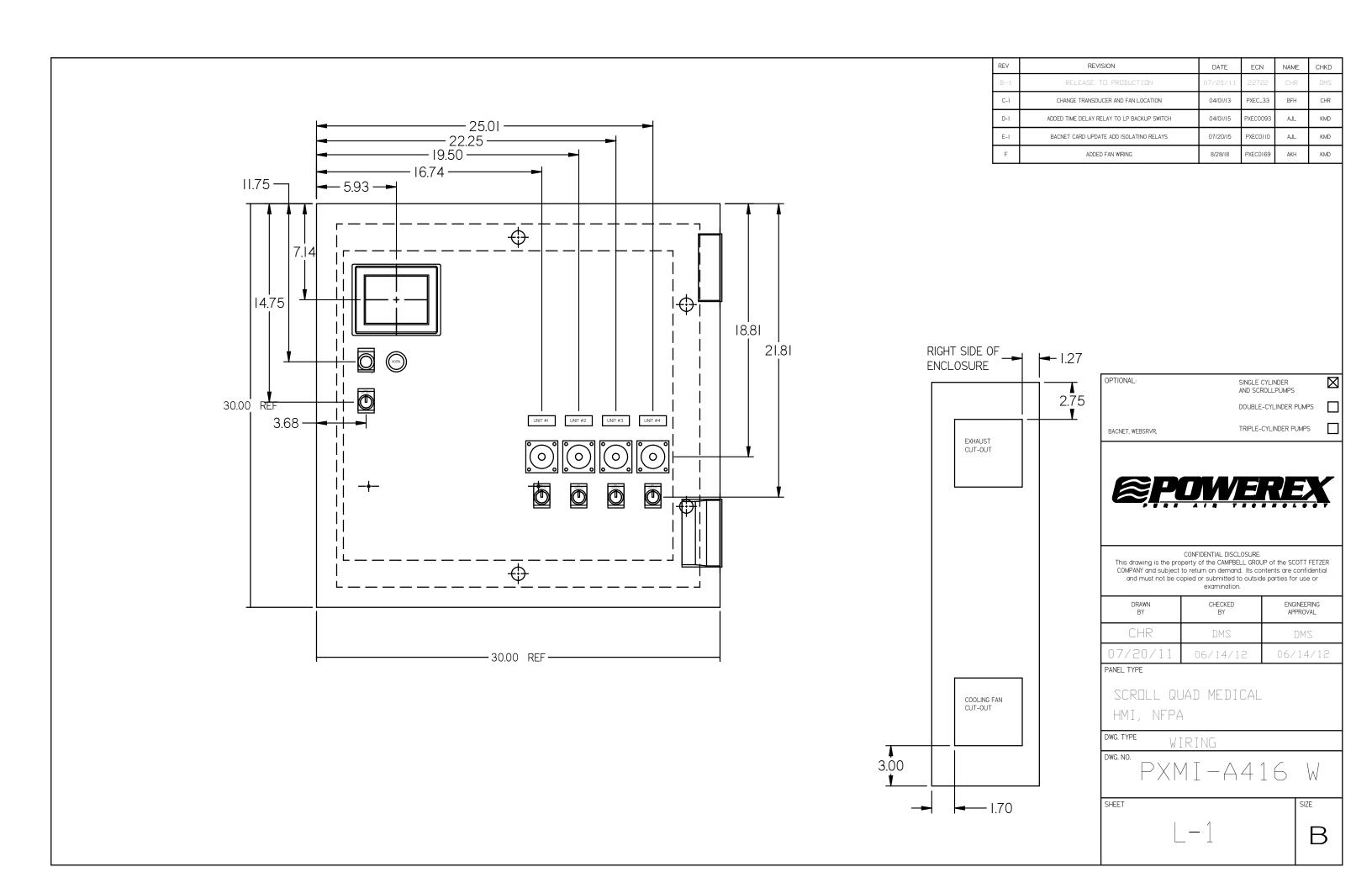
SEQUENCE OF OPERATIONS

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.

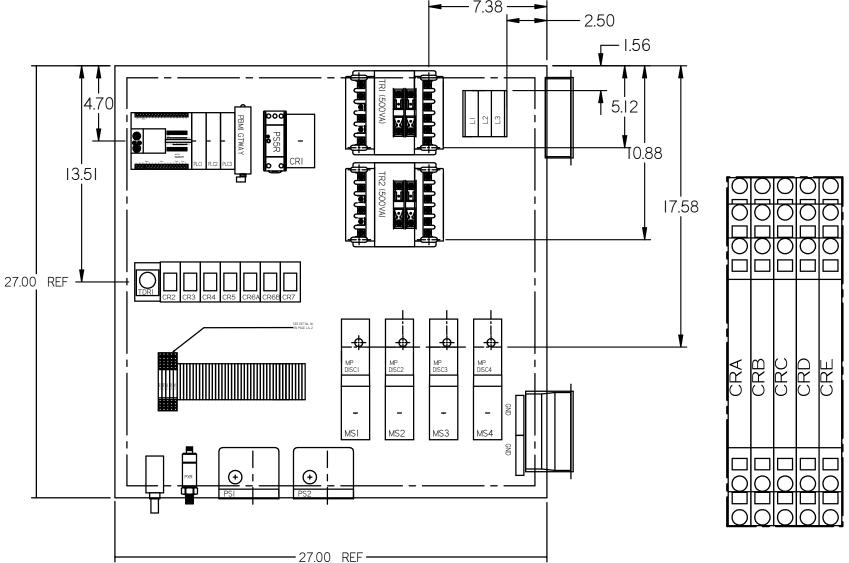
All plex configurations include a hardwired Back-up pressure switch circuit should a control failure occur. This circuit will call all pumps on and off based on the reserve pressure switch set-points.

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:

SINGLE CYLINDER
AND SCROLLPUMPS

DOUBLE-CYLINDER PUMPS

BACNET, WEBSRVR

TRIPLE-CYLINDER PUMPS



CONFIDENTIAL DISCLOSURE:

This drawing is the property of the CAMPBELL GROUP of the SCOTT FETZER COMPANY and subject to return on demand. Its contents are confidential and must not be copied or submitted to outside parties for use or examination.

DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
CHR	DMS	DMS
07/20/11	06/14/12	06/14/12

PANEL TYPE

SCROLL QUAD MEDICAL HMI, NFPA

DWG. TYPE WIRING

DWG. NO.

PXMI-A416 \

SHEET

SIZE

L-2

