

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	07/20/11	22545	CHR	ZMG
C-I	ADDED LAYOUT D-I	04/13/12	22723	BFH	CHR
D-I	CHANGE TRANSDUCER & FAN LOCATION	02/01/13	PXEC33	BFH	CHR
E-I	CHANGED DATA TBLS, ADDED TIME DELAY RELAY CHANGED NAME FROM S316A TO S316X	03/31/15	PXEC0093	AJL	KMD
F-1	BACNET CARD UPDATE AND ISOLATION RELAYS	07/20/15	PXEC0110	AJL	KMD
G-1	ADDED 200V DATA SHEET	3/27/18	PXEC0229	JPG	KMD
Н	ADDED FAN WIRING	09/10/18	PXEC0169	AKH	KMD

PTIONAL:	SINGLE CYLINDER PUMPS DOUBLE-CYLINDER PUMPS	
	TRIPLE-CYLINDER PUMPS	
	SCROLL PUMPS	\boxtimes
-		



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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL		
CHR	DMS	DMS		
07/20/11	08/01/11	08/01/11		

PANEL TYPE

TRI MED 2xSCROLL PER PLEX HMI, NFPA

DWG. TYPE WIRING DWG. NO.

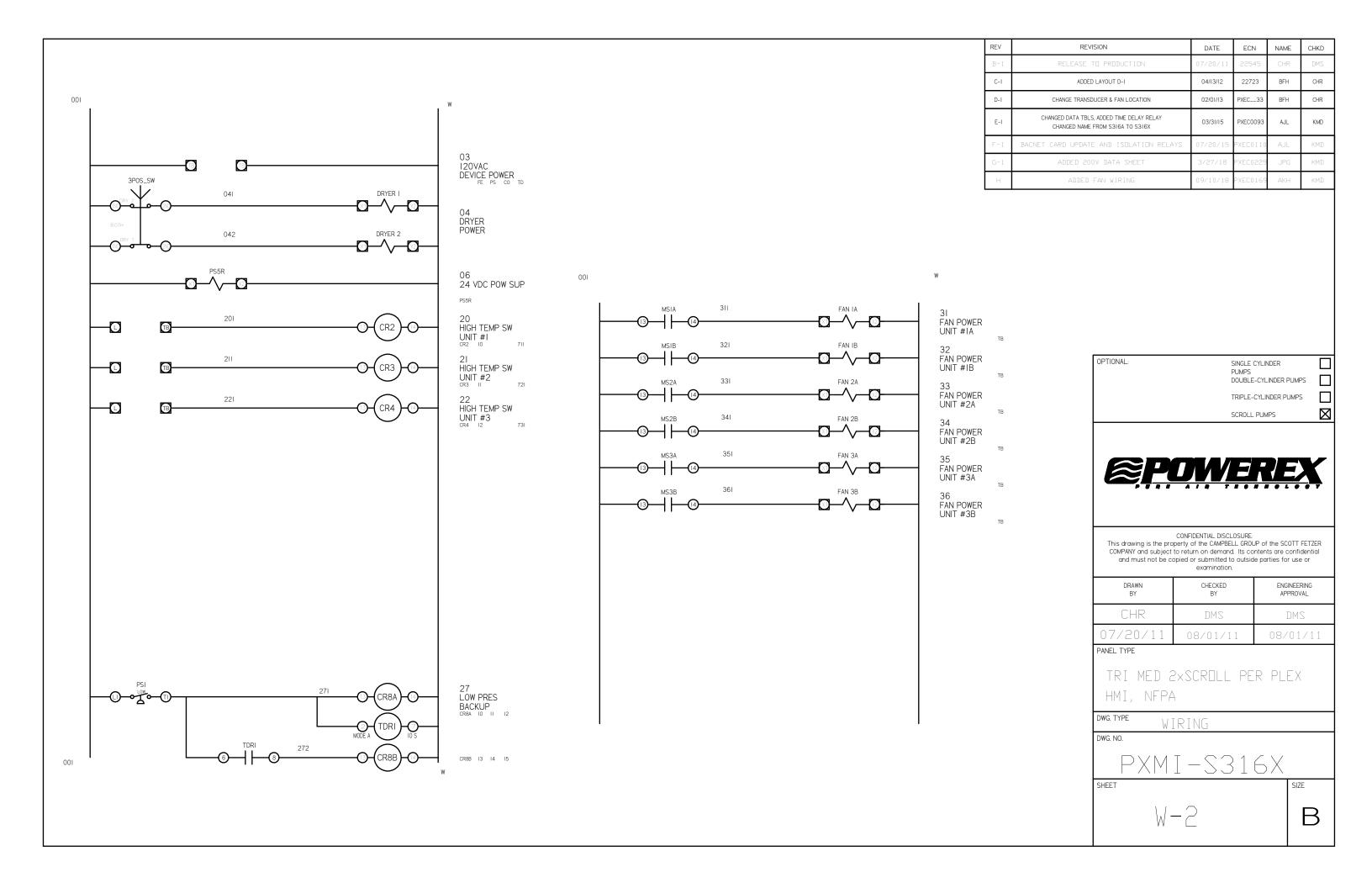
PXMI-S316X

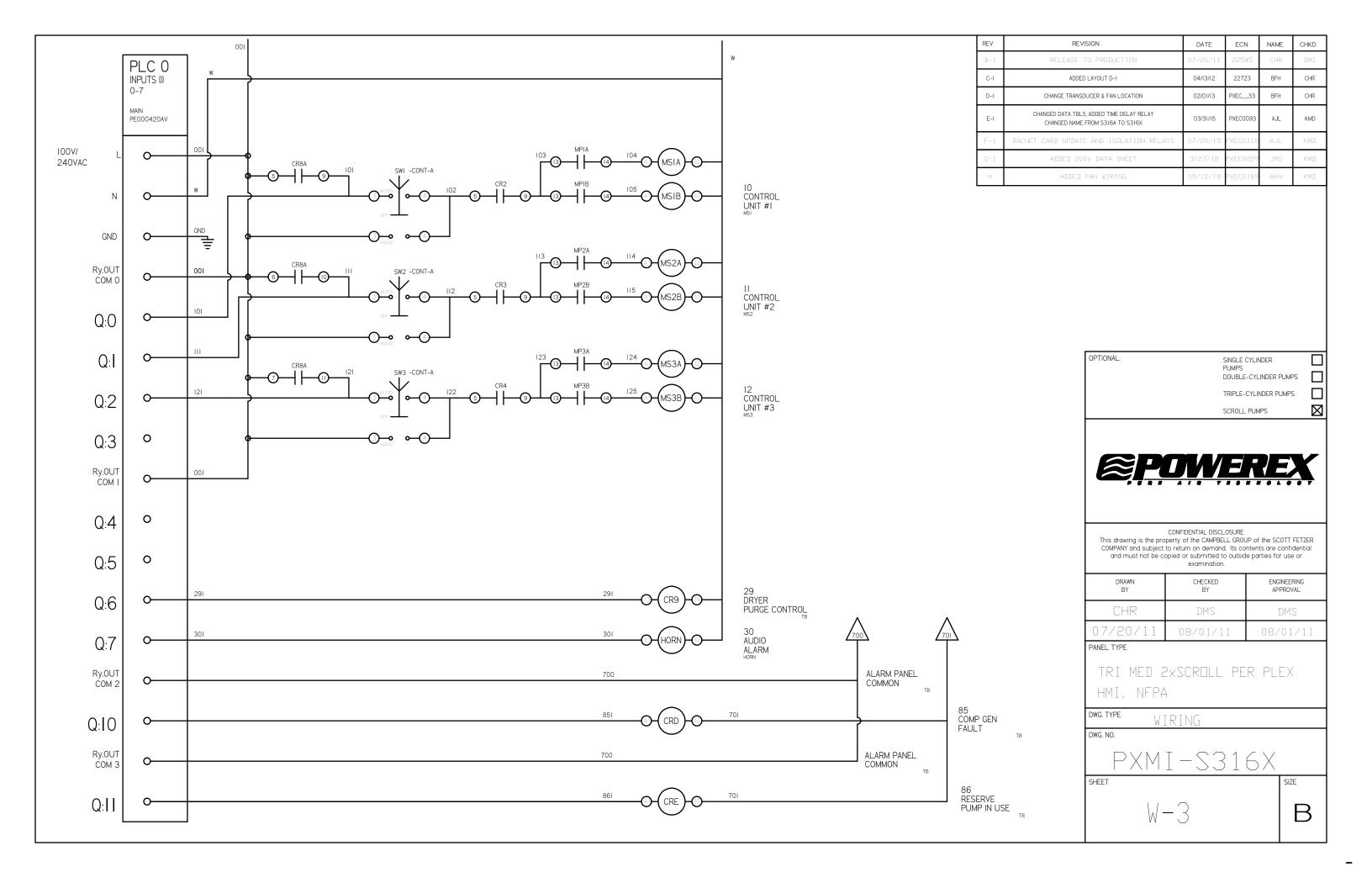
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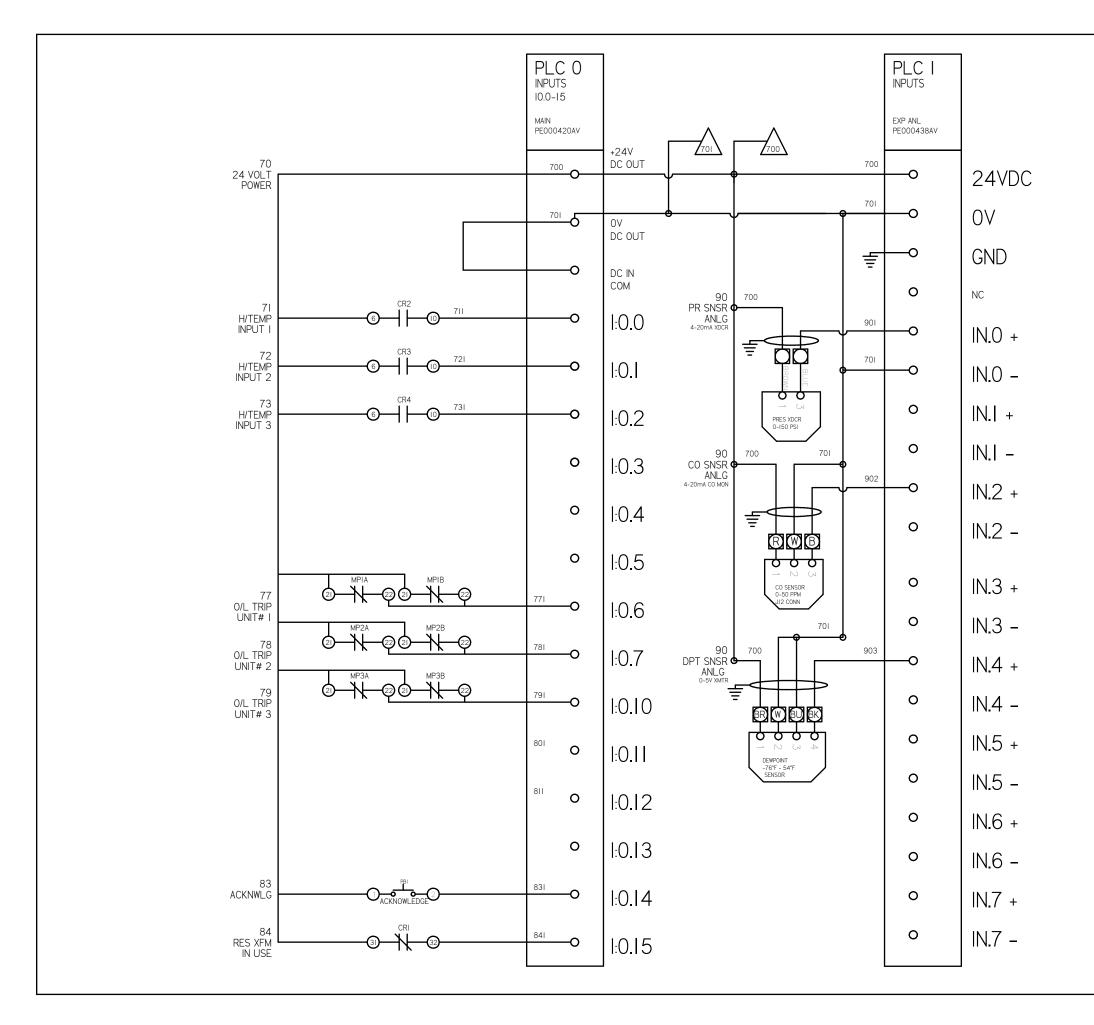
W-1

В

SIZE







REV	REVISION	DATE	ECN	NAME	CHKD
B-1			22545	CHR	ZMG
C-I			22723	BFH	CHR
D-I	CHANGE TRANSDUCER & FAN LOCATION	02/01/13	PXEC33	BFH	CHR
E-I	CHANGED DATA TBLS, ADDED TIME DELAY RELAY CHANGED NAME FROM S316A TO S316X	03/31/15	PXEC0093	AJL	KMD
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OPTIONAL:	SINGLE CYLINDER PUMPS DOUBLE-CYLINDER PUMPS	
	TRIPLE-CYLINDER PUMPS	
	SCROLL PUMPS	M



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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
CHR	DMS	DMS
07/20/11	08/01/11	08/01/11

PANEL TYPE

TRI MED 2×SCROLL PER PLEX HMI, NFPA

DWG. TYPE WIRING

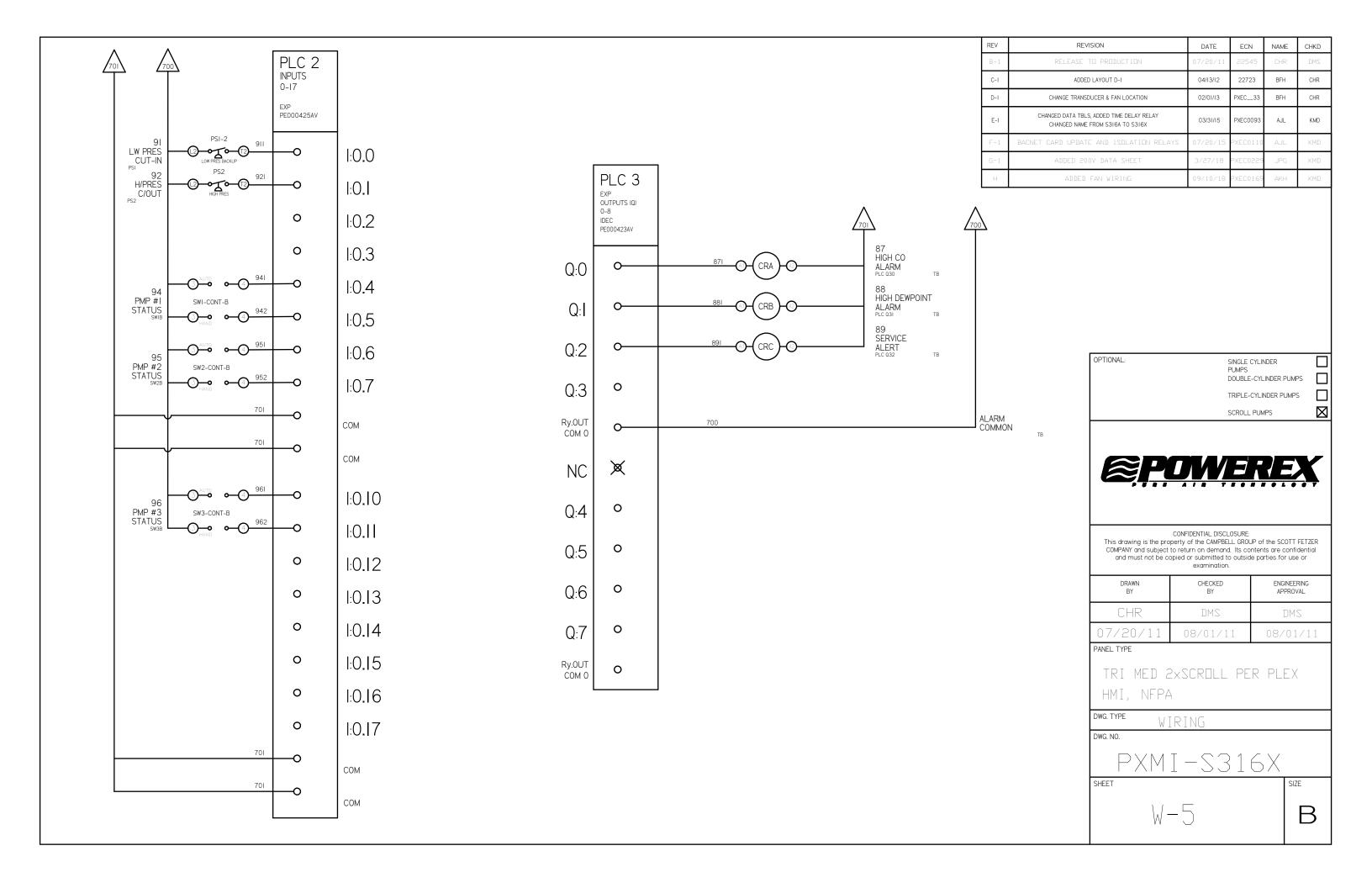
DWG. NO.

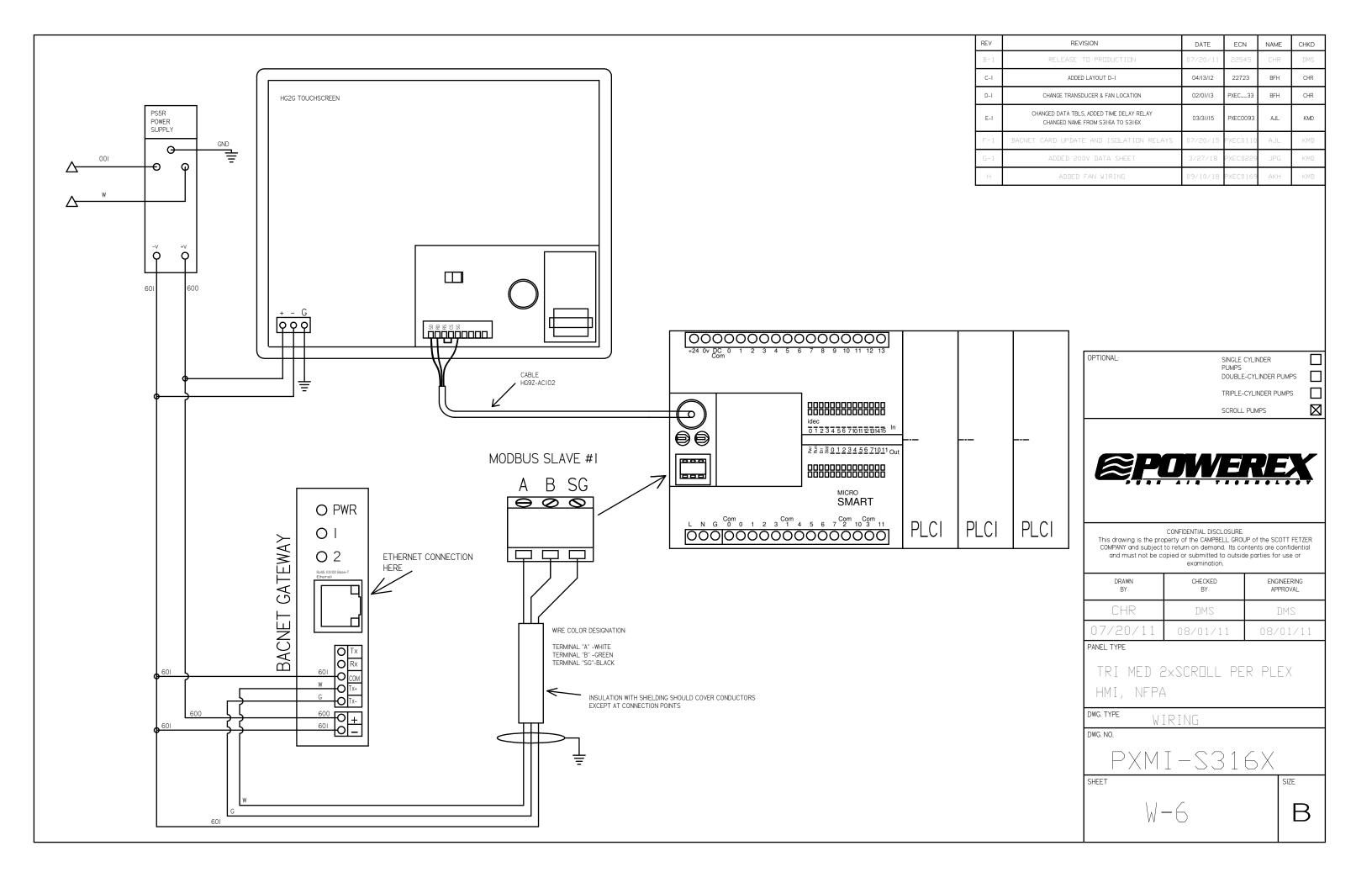
SHEET

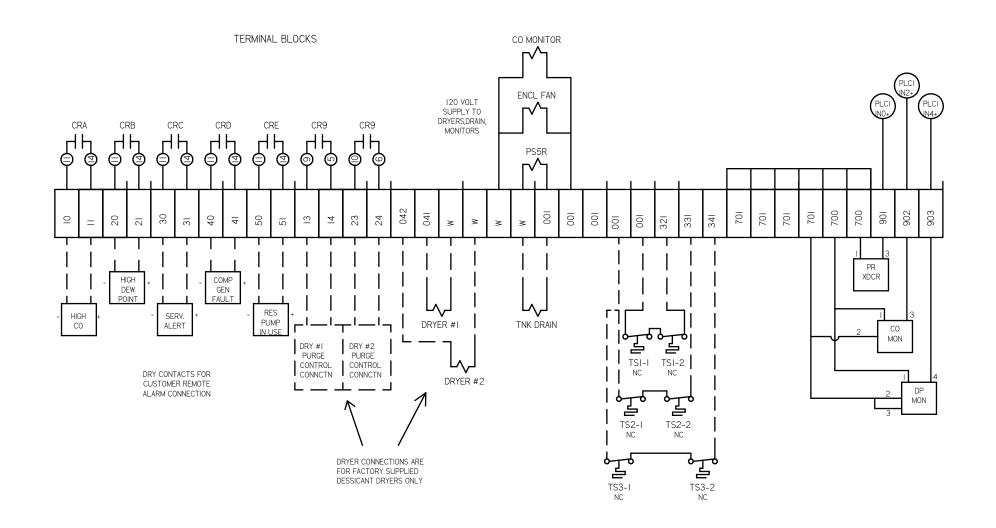
SIZE

W-4

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 31-36 FOR DETAILS

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	07/20/11	22545	CHR	ZMG
C-I	ADDED LAYOUT D-I	04/13/12	22723	BFH	CHR
D-I	CHANGED DATA TRI S. ADDED TIME DELAY RELAY		PXEC33	BFH	CHR
E-I			PXEC0093	AJL	KMD
F-1	BACNET CARD UPDATE AND ISOLATION RELAYS	07/20/15	PXEC0110	AJL	KMD
G-1	ADDED 200V DATA SHEET	3/27/18	PXEC0229	JPG	KMD
Н	ADDED FAN WIRING	09/10/18	PXEC0169	AKH	KMD

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 DOUBLE-CYLINDER PUMPS	
ı		TRIPLE-CYLINDER PUMPS	
l		SCROLL PUMPS	\boxtimes



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 DRAWN BY
 CHECKED BY
 ENGINEERING APPROVAL

 CHR
 DMS
 DMS

 07/20/11
 08/01/11
 08/01/11

PANEL TYPE

TRI MED 2×SCROLL PER PLEX HMI, NFPA

DWG. TYPE

WIRING

DWG. NO.

PXMI-S316X

SHEET

В

SIZE

W-7

TABLE 1

PANEL DATA 500VA CONTRO						
(A) LOAD SPECIFIC	ATIONS	\$ 5 K S. W.	1974 (24) 1974 (24) 1985 (24)	(B) BRA PROVIDED		IT PROTECTION -
PXMIS316A2AJ PXMIS316A3AJ PXMIS316A4AJ	5(X2) 208V/3Ø 5(X2) 230V/3Ø 5(X2) 460V/3Ø	12.7	78.2	125A 110A 60A	100A 90A 45A	110A 100A 50A
PXMIS316E2AJ PXMIS316E3AJ PXMIS316E4AJ	7.5(X2) 208V/3Ø 7.5(X2) 230V/3Ø 7.5(X2) 460V/3Ø	17.3	106		150A 125A 70A	150A 150A 70A
PXMIS316G2AJ PXMIS316G3AJ PXMIS316G4AJ	10(X2) 230V/3Ø	24.0	161 146 74	225A 200A 100A	200A 175A 90A	225A 200A 100A
	OVERCURRENT PROTE R NAMEPLATE FLA VA		DEVICE NOT	TO EXC	EED	

NOTES:

- 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 TABLE I FOR REQUIRMENTS.
- 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	22545	CHR	2MG
C-I	ADDED LAYOUT D-I	04/13/12	22723	BFH	CHR
D-I	CHANGE TRANSDUCER & FAN LOCATION	02/01/13	PXEC33	BFH	CHR
E-I	CHANGED DATA TBLS, ADDED TIME DELAY RELAY CHANGED NAME FROM S316A TO S316X	03/31/15	PXEC0093	AJL	KMD
F-1	BACNET CARD UPDATE AND ISOLATION RELAYS	07/20/15	PXEC0110	AJL	KMD
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Н	ADDED FAN WIRING	09/10/18	PXEC0169	AKH	KMD

	WIRE TYPE TABLE				
VOLTAGE	WIRE NUMBERS	GAUGE	COLOR		
120 VAC	001-699	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						1
	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.

<i>©POWER</i>	EX

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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
CHR	DMS	DMS
07/20/11	08/01/11	08/01/11

PANEL TYPE

OPTIONAL:

TRI MED 2×SCROLL PER PLEX HMI, NFPA

G. TYPE WIRING

DWG. NO.

PXMI-S316X

SHEET

)-1

В

TARIF 1

TABLE I	
PANEL DATA 60 Hz 500VA CONTROL CIRCUIT	DISC1
	301 - 100 301 -
PBMIS316EEAJ 7.5(X2) 200V/3Ø 20.0 122.0	175 150 175

NOTE— LOAD VALUES ABOVE MAY NOT REFLECT MOTOR NAMEPLATE VALUES. ADJUST OVERCURRENT PROTECTION DEVICE NOT TO EXCEED 115% OF MOTOR NAMEPLATE FLA VALUE.

NOTES:

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FIELD WIRING NOTES ON PAGE W-7.

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GND	-	VARIES	GREEN	
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\approx	DA		DF	Y

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DRAWN
BY
CHECKED
BY
ENGINEERING
APPROVAL

CHR

DMS

DMS

PANEL TYPE

OPTIONAL:

TRI MED 2×SCROLL PER PLEX HMI, NFPA

08/01/13

DWG. TYPE

WIRING

DWG. NO.

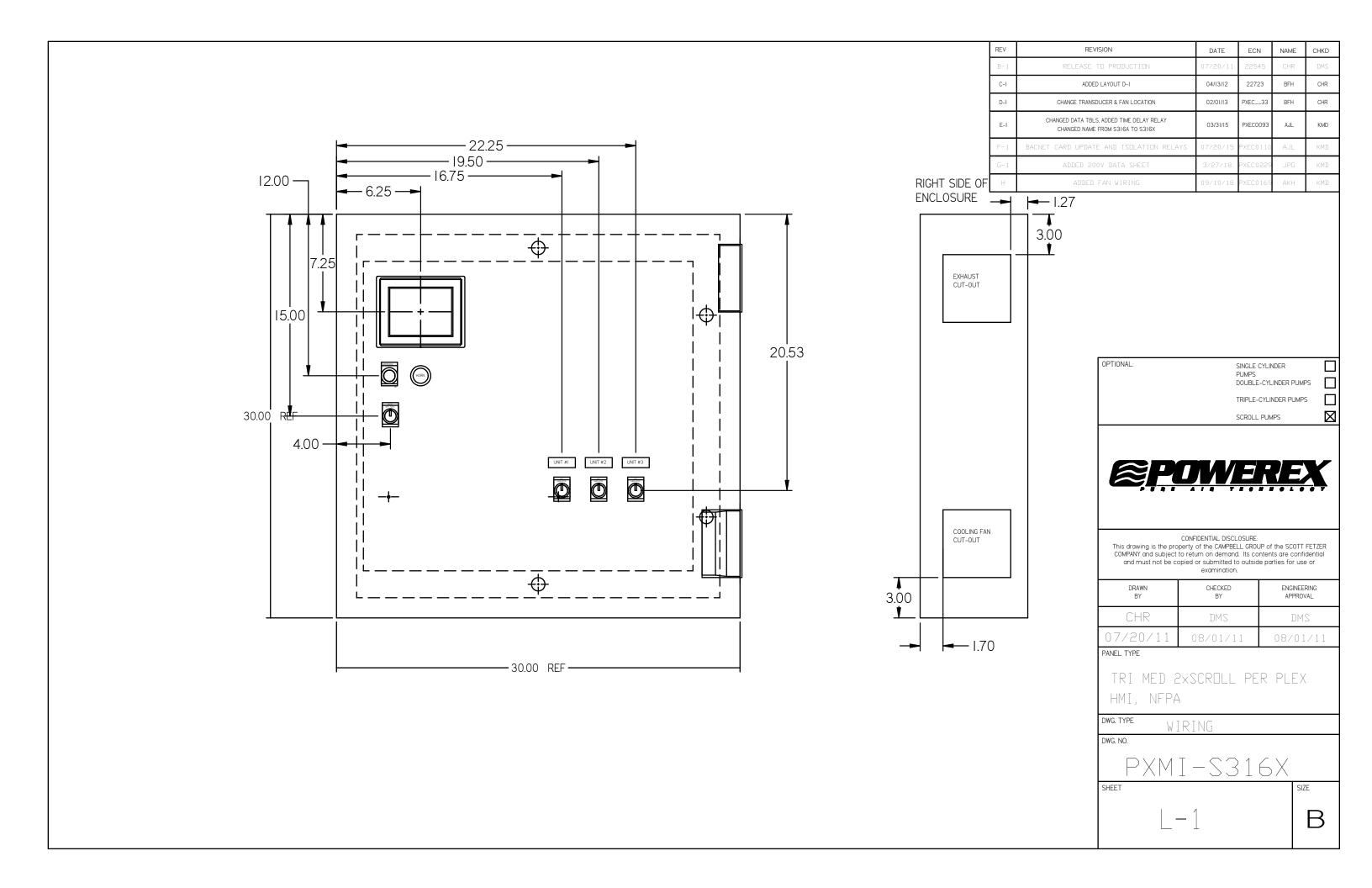
PXMI-S316X

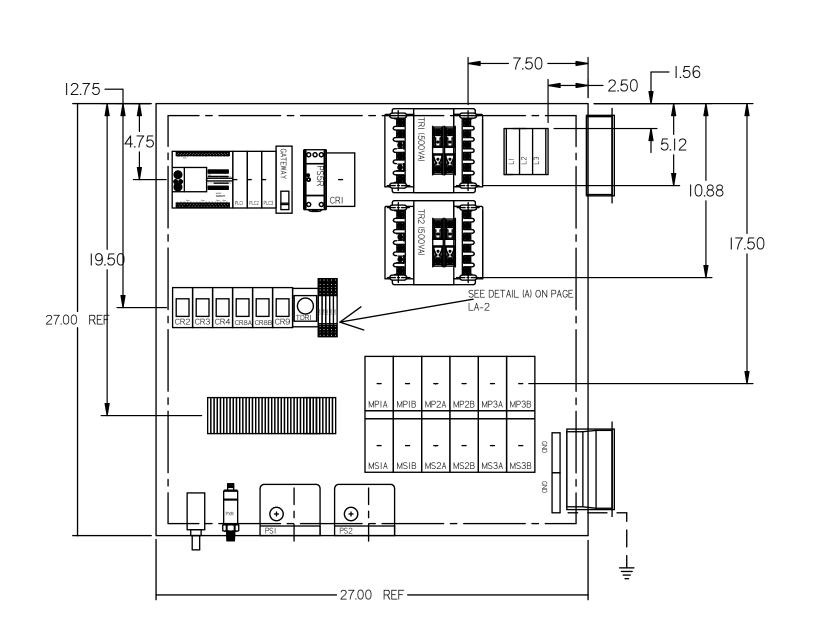
SHEET

)-2

В

08/01/1





REV	/	REVISION	DATE	ECN	NAME	CHKD
В-	1	RELEASE TO PRODUCTION	07/20/11	22545	CHR	ZMG
C-	-	ADDED LAYOUT D-I	04/13/12	22723	BFH	CHR
D-	-	CHANGE TRANSDUCER & FAN LOCATION	02/01/13	PXEC33	BFH	CHR
E-	-I	CHANGED DATA TBLS, ADDED TIME DELAY RELAY CHANGED NAME FROM S316A TO S316X	03/31/15	PXEC0093	AJL	KMD
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SINGLE CYLINDER PUMPS DOUBLE-CYLINDER PUMPS TRIPLE-CYLINDER PUMPS \boxtimes SCROLL PUMPS



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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
CHR	DMS	DMS
07/20/11	08/01/11	08/01/11

PANEL TYPE

DETAIL (A)

OPTIONAL:

TRI MED 2×SCROLL PER PLEX HMI, NFPA

DWG. TYPE WIRING DWG. NO. PXMI-S316X SHEET SIZE

L-2

В