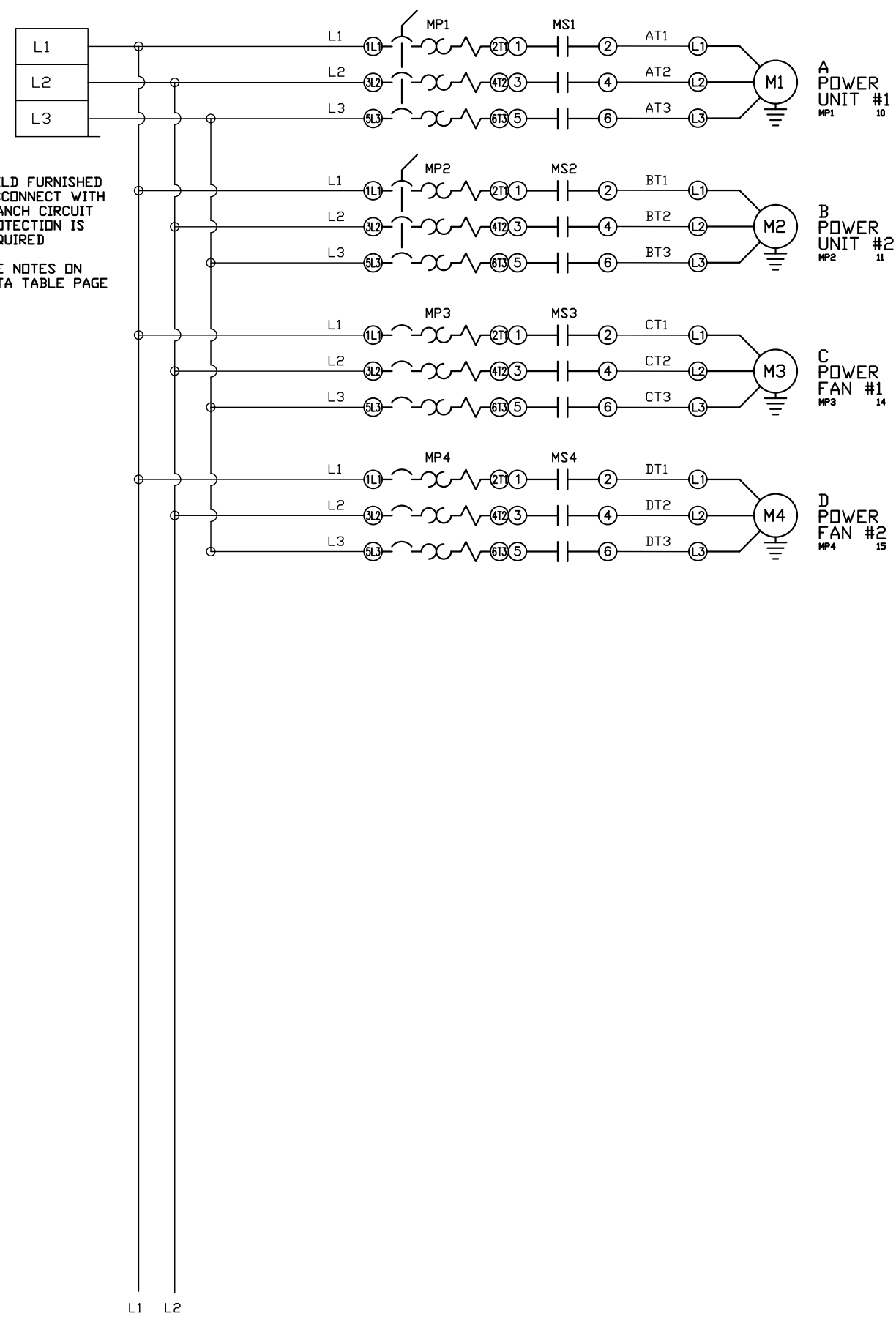


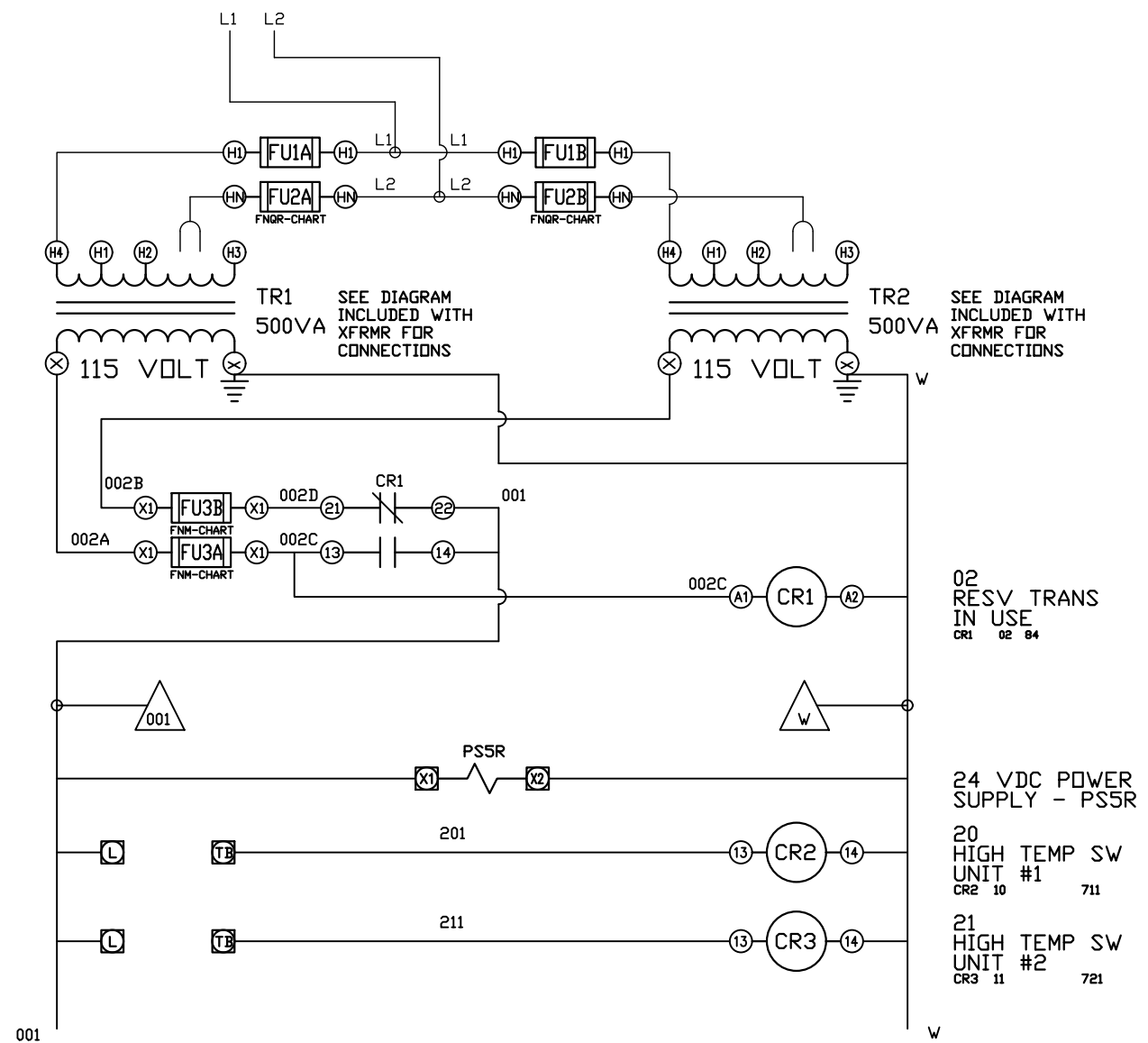
REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	01/25/17	PXEC0099	AKH	KMD
C-1	ADDED LUBRICATED VANE LAYOUT AND DATASHEET	10/08/18	PXEC0229	JLM	AJL



FIELD FURNISHED DISCONNECT WITH BRANCH CIRCUIT PROTECTION IS REQUIRED
SEE NOTES ON DATA TABLE PAGE

OPTIONAL:		
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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
AKH	KMD	AKH
01/25/17	01/25/17	01/25/17
PANEL TYPE		
DUPLEX LAB VAC ENCLOSURE NFPA, SUB		
DWG. TYPE WIRING		
DWG. NO.		
PXMI-VELS269		
SHEET	SIZE	
W-1	B	

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	01/25/17	PXEC0099	AKH	KMD
C-1	ADDED LUBRICATED VANE LAYOUT AND DATASHEET	10/08/18	PXEC0229	JLM	AJL



OPTIONAL:

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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
AKH	KMD	AKH
01/25/17	01/25/17	01/25/17

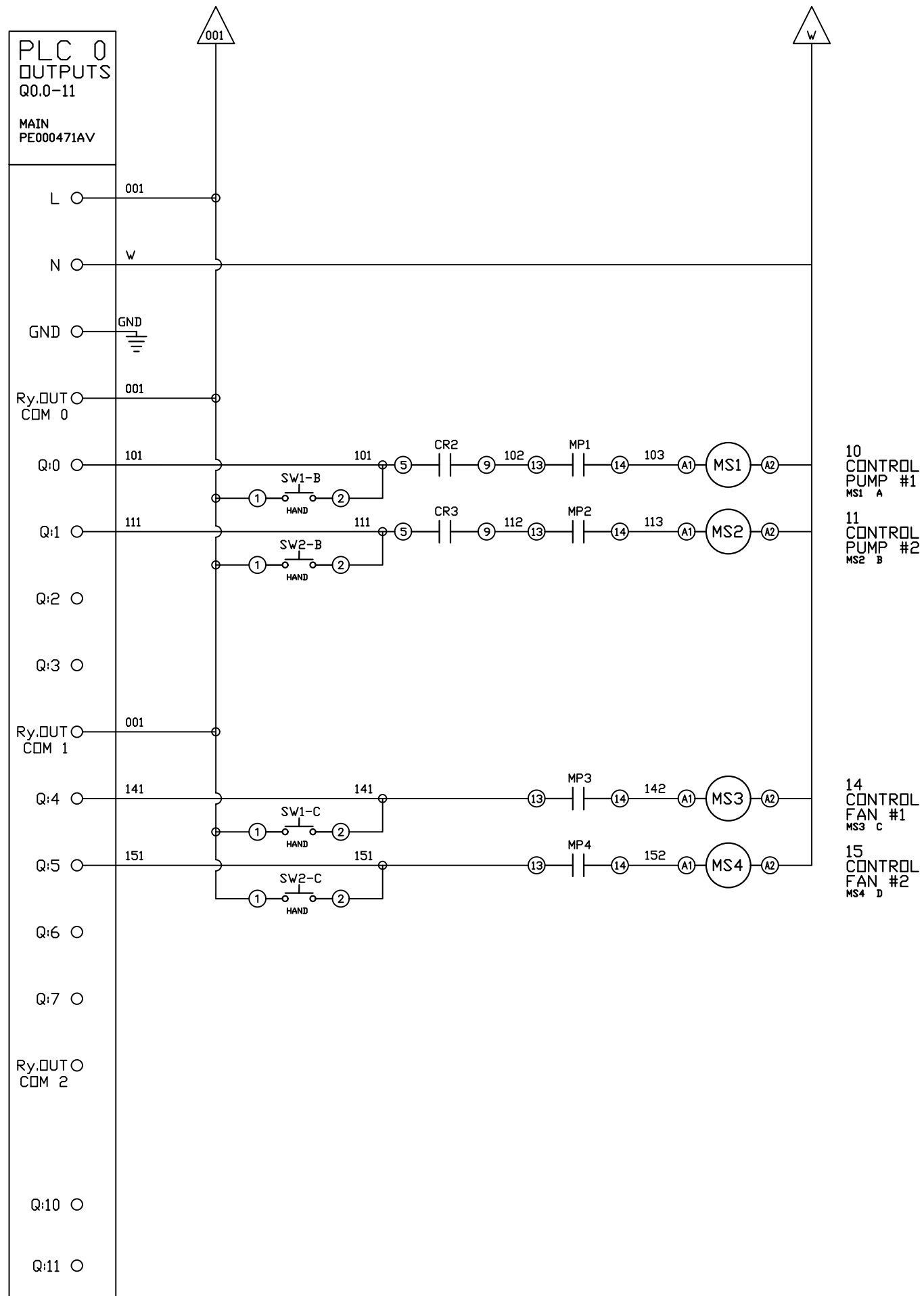
PANEL TYPE
DUPLEX LAB VAC ENCLOSURE
NFPA, SUB

DWG. TYPE WIRING

DWG. NO.
PXMI-VELS269

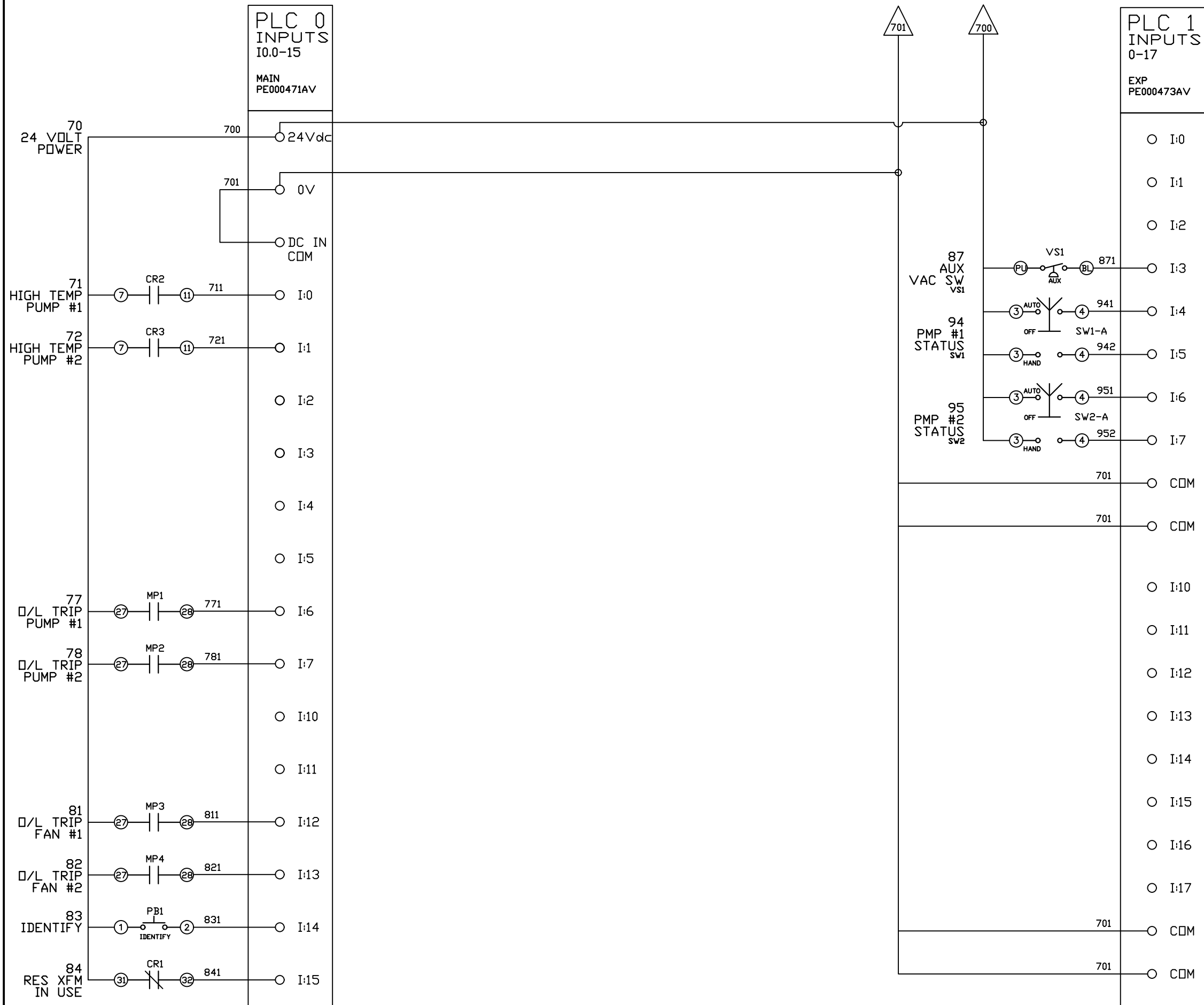
SHEET	SIZE
W-2	B

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	01/25/17	PXEC0099	AKH	KMD
C-1	ADDED LUBRICATED VANE LAYOUT AND DATASHEET	10/08/18	PXEC0229	JLM	AJL



OPTIONAL:		
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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
AKH	KMD	AKH
01/25/17	01/25/17	01/25/17
PANEL TYPE		
DUPLEX LAB VAC ENCLOSURE NFWA, SUB		
DWG. TYPE WIRING		
DWG. NO.		
PXMI-VELS269		
SHEET		SIZE
W-3		B

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	01/25/17	PXEC0099	AKH	KMD
C-1	ADDED LUBRICATED VANE LAYOUT AND DATASHEET	10/08/18	PXEC0229	JLM	AJL



OPTIONAL:

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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
AKH	KMD	AKH
01/25/15	01/25/17	01/25/17

PANEL TYPE
DUPLEX LAB VAC ENCLOSURE
NFPA, SUB

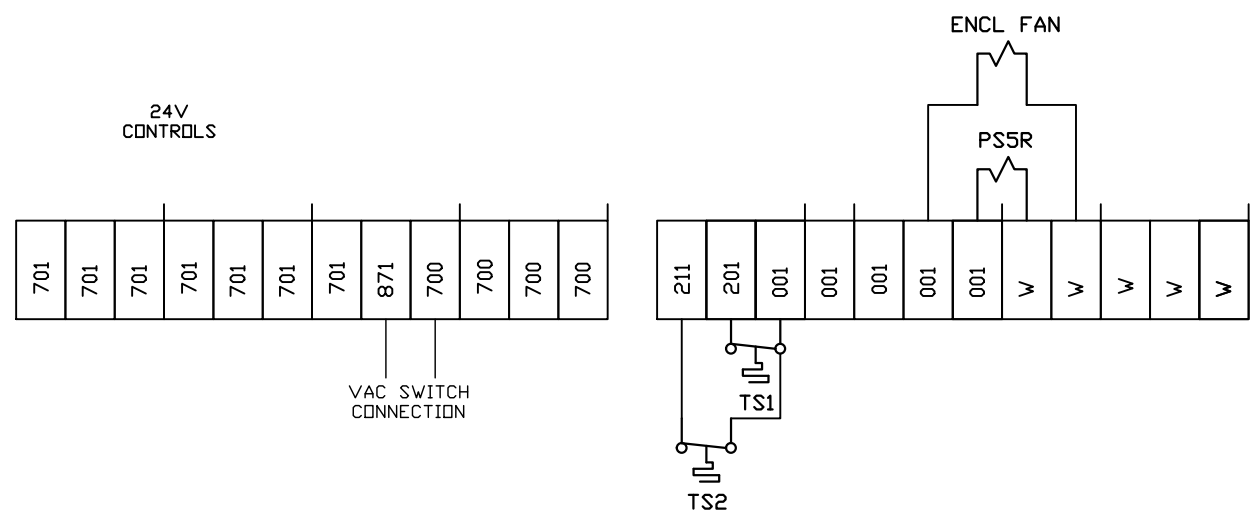
DWG. TYPE WIRING

DWG. NO.
PXMI-VELS269

SHEET W-4 SIZE B

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	01/25/17	PXEC0099	AKH	KMD
C-1	ADDED LUBRICATED VANE LAYOUT AND DATASHEET	10/08/18	PXEC0229	JLM	AJL


TERMINAL BLOCKS



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

OPTIONAL:



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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
AKH	KMD	AKH
01/25/17	01/25/17	01/25/17

PANEL TYPE
DUPLEX LAB VAC ENCLOSURE
NFPA, SUB

DWG. TYPE WIRING

DWG. NO.
PXMI-VELS269

SHEET	SIZE
W-5	B

TABLE 1

PANEL DATA 3 ϕ - 50/60 Hz 500VA CONTROL CIRCUIT						(B) BRANCH CIRCUIT PROTECTION - PROVIDED BY INSTALLER		
PANEL PART NUMBER	MOTOR SIZE EACH	POWER (V/PH)	PUMP MOTOR LOAD EACH (FLA)	FAN MOTOR LOAD EACH (FLA)	PANEL LOAD TOTAL (FLA)	NONTIME DELAY FUSE	TIME-DELAY FUSE	INVERSE-TIME CIRCUIT BREAKER
PBMIVELS26952CR	5	208V/3 ϕ	13.0	1.2	30.4	60A	45A	60A
PBMIVELS26972CR	7.5	208V/3 ϕ	19.0	1.2	42.4	90A	60A	80A
PBMIVELS269A2CR	10	208V/3 ϕ	25.0	1.2	54.4	110A	80A	100A
PBMIVELS269F2CR	15	208V/3 ϕ	37.5	1.2	79.4	175A	110A	150A
PBMIVELS26953CR	5	230V/3 ϕ	12.0	1.4	28.8	60A	40A	50A
PBMIVELS26973CR	7.5	230V/3 ϕ	18.0	1.4	40.8	80A	60A	70A
PBMIVELS269A3CR	10	230V/3 ϕ	23.0	1.4	50.8	100A	70A	90A
PBMIVELS269F3CR	15	230V/3 ϕ	35.0	1.4	74.8	150A	110A	150A
PBMIVELS26954CR	5	460V/3 ϕ	6.0	0.7	15.4	30A	25A	30A
PBMIVELS26974CR	7.5	460V/3 ϕ	9.0	0.7	21.4	45A	30A	40A
PBMIVELS269A4CR	10	460V/3 ϕ	11.5	0.7	26.4	60A	40A	45A
PBMIVELS269F4CR	15	460V/3 ϕ	17.5	0.7	38.4	80A	60A	70A

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

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	01/25/17	PXEC0099	AKH	KMD
C-1	ADDED LUBRICATED VANE LAYOUT AND DATASHEET	10/08/18	PXEC0229	JLM	AJL

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

SEE XFRMR FOR CONNECTIONS

WIRE TYPE TABLE			
VOLTAGE	WIRE NUMBERS	GAUGE	COLOR
120VAC	001-599	16-18AWG	RED/BLK
0VAC	W	16-18AWG	WHT/BLK
24VDC	600-999	16-18AWG	PURPLE
0VDC	701	16-18AWG	PURPLE
GND	-	VARIES	GREEN
CUSTOMER SUPPLY	01-99	16-18AWG	YELLOW

OPTIONAL:



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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
AKH	KMD	AKH
01/25/17	01/25/17	01/25/17

PANEL TYPE
RIETSCHLE CLAW VAC
3PH SIMPLEX PANEL DATA

DWG. TYPE DATA

DWG. NO. PXMI-VELS269

SHEET D-1 SIZE B

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-B/R ON DATA TABLE PAGE 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
- Δ -INDICATES A DRAWING WIRE CONNECTION TO ANOTHER PAGE. FIELD WIRING NOTES ON PAGE W-6

SEQUENCE OF OPERATIONS

During normal operation the PBMI controller will signal the Lead pump to run when vacuum drops to lead cut-in set-point and run for a 10-minute minimum period before stopping when the vacuum reaches the lead cut-out set-point. Lead alternation to the next pump, will occur every 24 Hours. 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. 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.

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.

TABLE 1

PANEL DATA 3 ϕ - 50/60 Hz 500VA CONTROL CIRCUIT						(B) BRANCH CIRCUIT PROTECTION - PROVIDED BY INSTALLER			
PANEL PART NUMBER	MOTOR SIZE EACH	POWER (V/PH)	PUMP MOTOR LOAD		FAN MOTOR LOAD EACH (FLA)	PANEL LOAD TOTAL (FLA)	NON-TIME DELAY FUSE	TIME-DELAY FUSE	INVERSE-TIME CIRCUIT BREAKER
			EACH (FLA)	1.2					
PBMIVELS26942AJ	4	208V/3 ϕ	15.2	1.2	34.8	70A	50A	60A	
PBMIVELS26952AJ	5	208V/3 ϕ	15.2	1.2	34.8	70A	50A	60A	
PBMIVELS26972AJ	7.5	208V/3 ϕ	22.2	1.2	48.8	100A	70A	90A	
PBMIVELS269A2AJ	10	208V/3 ϕ	29.5	1.2	63.4	125A	90A	110A	
PBMIVELS26943AJ	4	230V/3 ϕ	13.0	1.4	30.8	60A	45A	55A	
PBMIVELS26953AJ	5	230V/3 ϕ	13.0	1.4	30.8	60A	45A	55A	
PBMIVELS26973AJ	7.5	230V/3 ϕ	20.0	1.4	44.8	90A	65A	80A	
PBMIVELS269A3AJ	10	230V/3 ϕ	26.0	1.4	56.8	125A	80A	110A	
PBMIVELS26944AJ	4	460V/3 ϕ	7.2	0.7	16.4	35A	25A	30A	
PBMIVELS26954AJ	5	460V/3 ϕ	7.2	0.7	16.4	35A	25A	30A	
PBMIVELS26974AJ	7.5	460V/3 ϕ	10.0	0.7	23.4	45A	35A	40A	
PBMIVELS269A4AJ	10	460V/3 ϕ	13.0	0.7	29.4	60A	40A	50A	

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

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-B/R ON DATA TABLE PAGE 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
- Δ -INDICATES A DRAWING WIRE CONNECTION TO ANOTHER PAGE.
FIELD WIRING NOTES ON PAGE W-6

SEQUENCE OF OPERATIONS

During normal operation the PBMI controller will signal the Lead pump to run when vacuum drops to lead cut-in set-point and run for a 10-minute minimum period before stopping when the vacuum reaches the lead cut-out set-point. Lead alternation to the next pump, will occur every 24 Hours. 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. 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.

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.

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REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	01/25/17	PXEC0099	AKH	KMD
C-1	ADDED LUBRICATED VANE LAYOUT AND DATASHEET	10/08/18	PXEC0229	JLM	AJL

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

SEE XFRMR FOR CONNECTIONS

WIRE TYPE TABLE			
VOLTAGE	WIRE NUMBERS	GAUGE	COLOR
120VAC	001-599	16-18AWG	RED/BLK
0VAC	W	16-18AWG	WHT/BLK
24VDC	600-999	16-18AWG	PURPLE
0VDC	701	16-18AWG	PURPLE
GND	-	VARIES	GREEN
CUSTOMER SUPPLY	01-99	16-18AWG	YELLOW

OPTIONAL:



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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
AKH	KMD	AKH
01/25/17	01/25/17	01/25/17

PANEL TYPE
RIETSCHLE LUBE VANE VAC
3PH SIMPLEX PANEL DATA

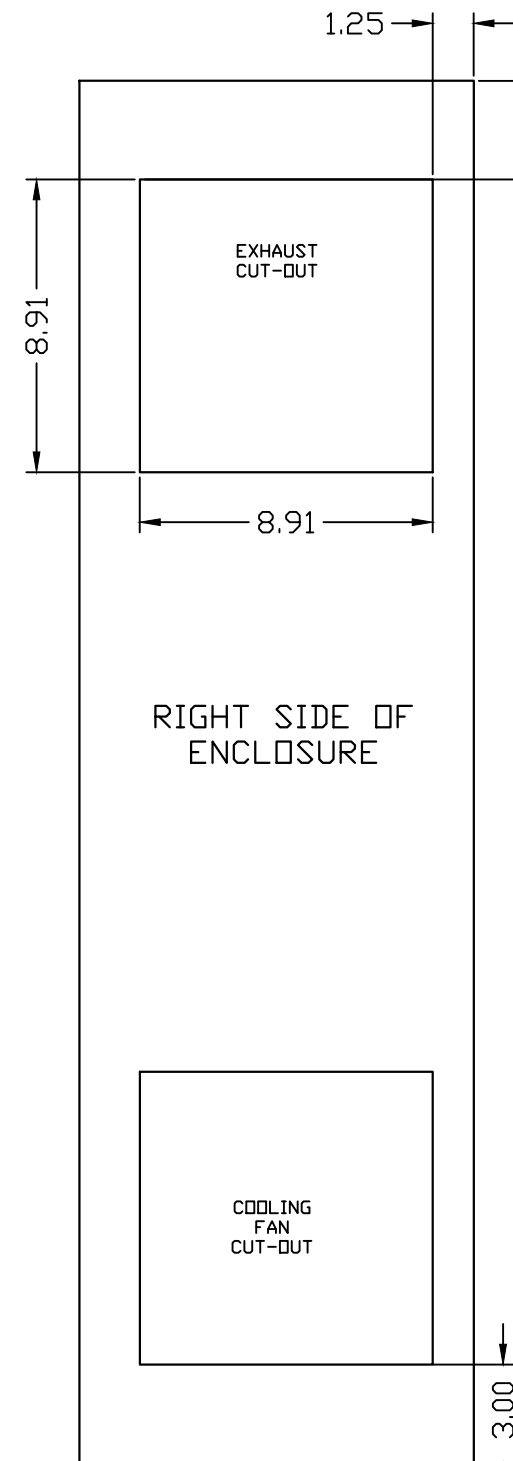
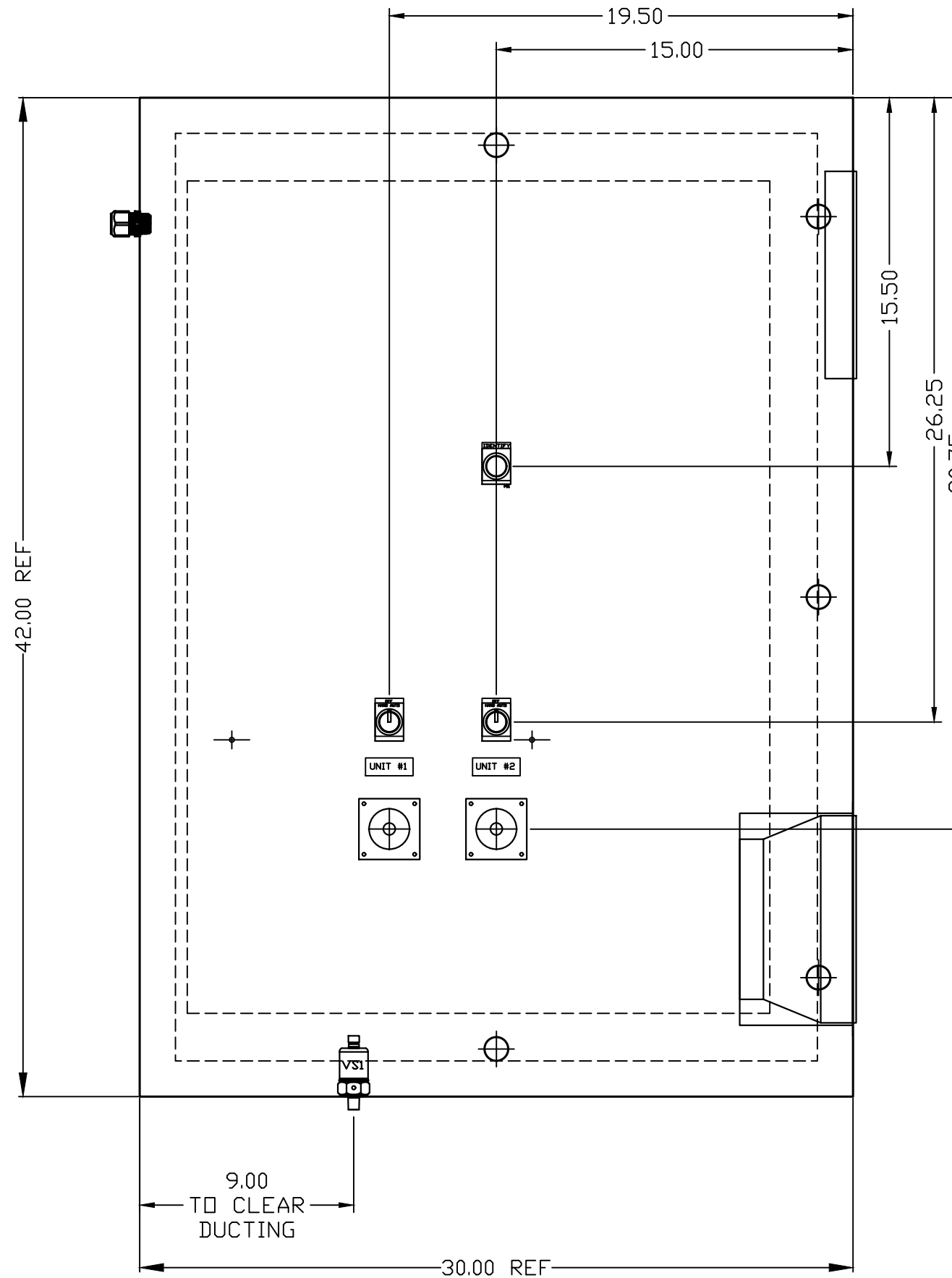
DWG. TYPE DATA

DWG. NO. PXMI-VELS269

SHEET	SIZE
D-1	B

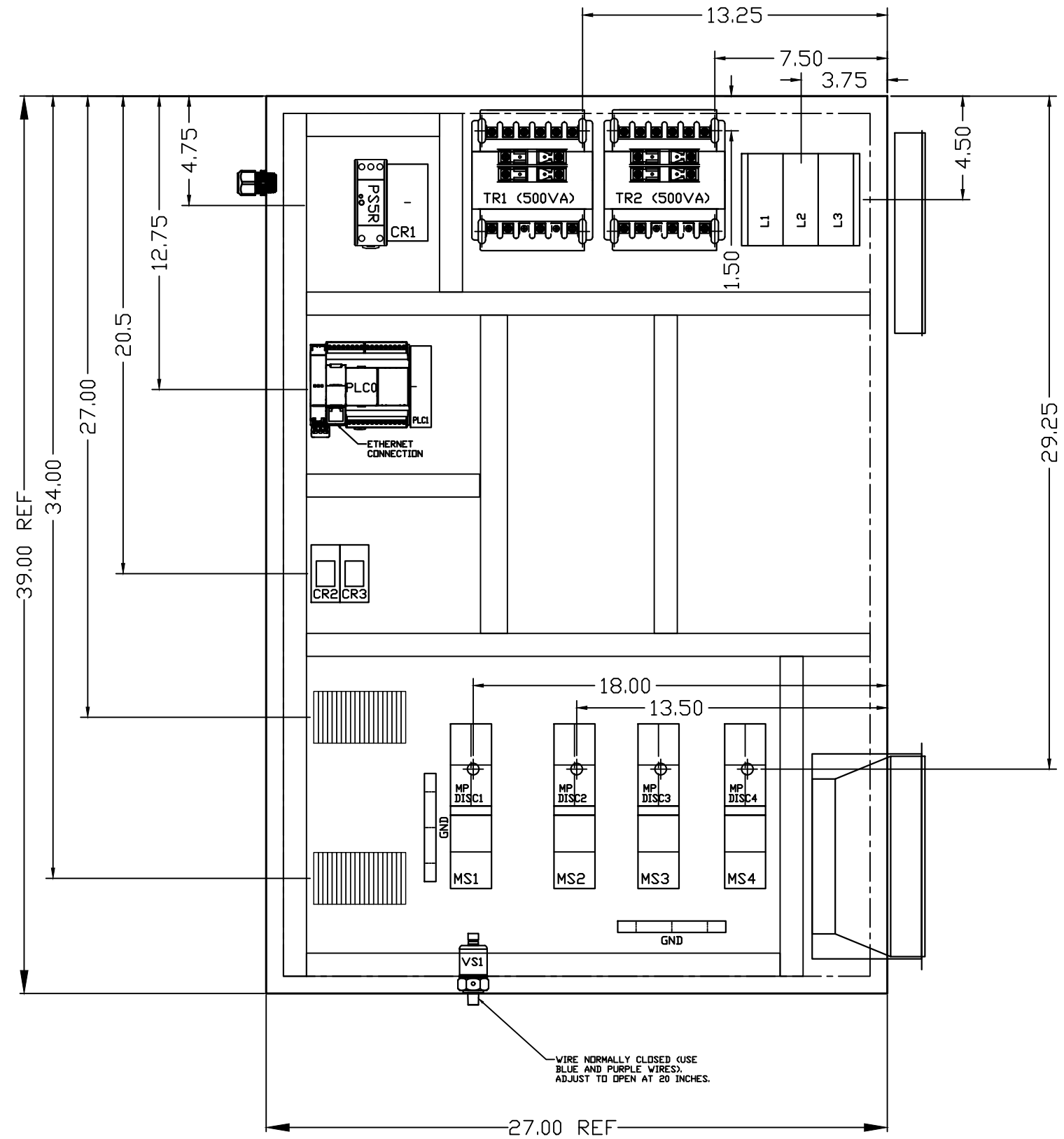
REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	01/25/17	PXEC0099	AKH	KMD
C-1	ADDED LUBRICATED VANE LAYOUT AND DATASHEET	10/08/18	PXEC0229	JLM	AJL

ETHERNET PASSTHROUGH CONNECTION. CONNECT TO ETHERNET RJ45 PORT ON PLC. DO NOT CONNECT TO SERIAL PORT.



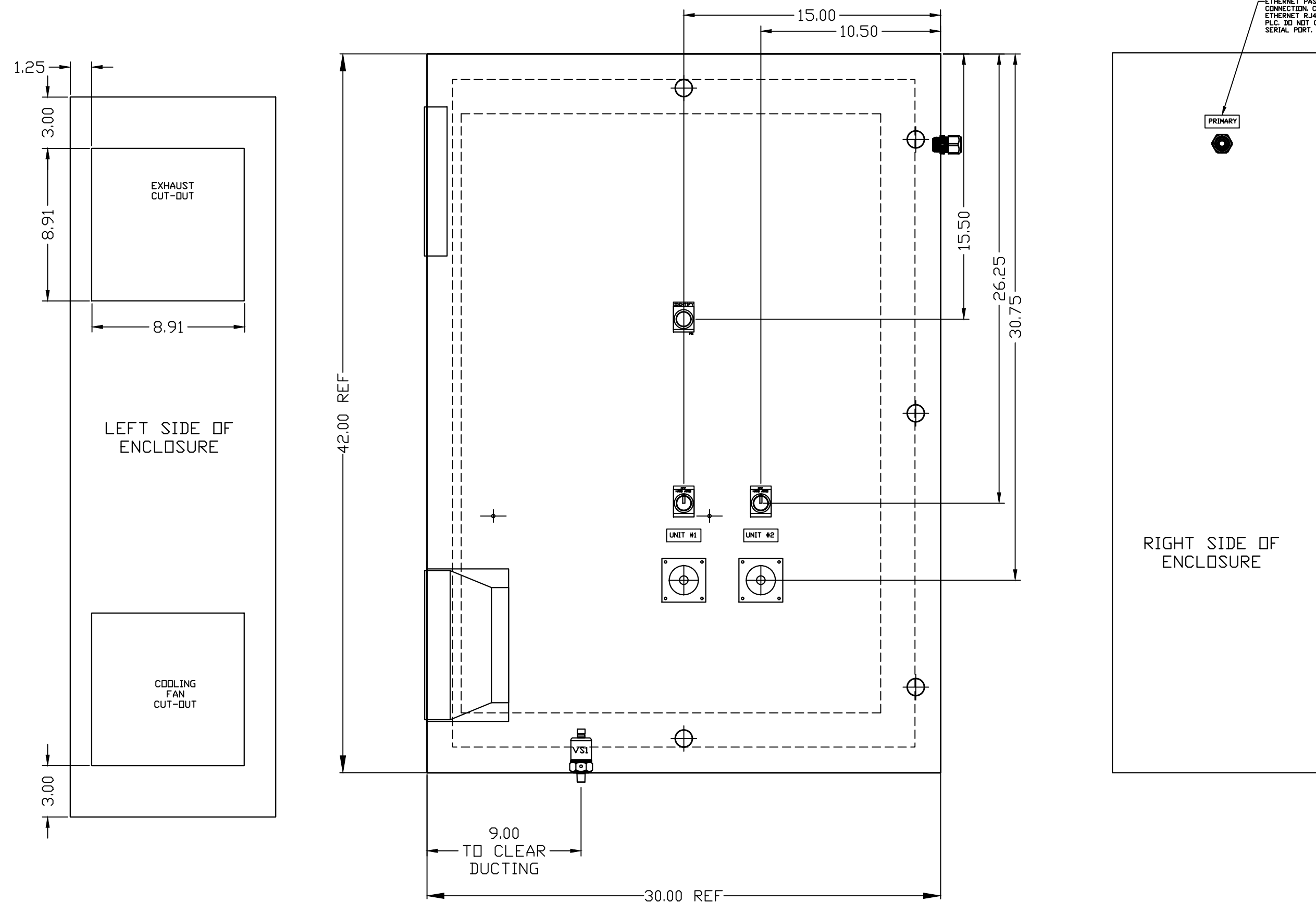
OPTIONAL:		
POWEREX PURE AIR TECHNOLOGY		
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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
AKH	KMD	AKH
01/25/17	01/25/17	01/25/17
PANEL TYPE		
DUPLEX LAB VAC ENCLOSURE NFPA, SUB		
DWG. TYPE LAYOUT		
DWG. NO.		
PXMI-VELS269		
SHEET		SIZE
L-1		B

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	01/25/17	PXEC0099	AKH	KMD
C-1	ADDED LUBRICATED VANE LAYOUT AND DATASHEET	10/08/18	PXEC0229	JLM	AJL



OPTIONAL:		
POWEREX PURE AIR TECHNOLOGY		
<p>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.</p>		
DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
AKH	KMD	AKH
01/25/17	01/25/17	01/25/17
PANEL TYPE		
DUPLEX LAB VAC ENCLOSURE NFWA, SUB		
DWG. TYPE LAYOUT		
DWG. NO.		
PXMI-VELS269		
SHEET		SIZE
L-2		B

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	01/25/17	PXEC0099	AKH	KMD
C-1	ADDED LUBRICATED VANE LAYOUT AND DATASHEET	10/08/18	PXEC0229	JLM	AJL



ETHERNET PASSTHROUGH CONNECTION. CONNECT TO ETHERNET RJ45 PORT ON PLC. DO NOT CONNECT TO SERIAL PORT.

OPTIONAL:



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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
AKH	KMD	AKH
01/25/17	01/25/17	01/25/17

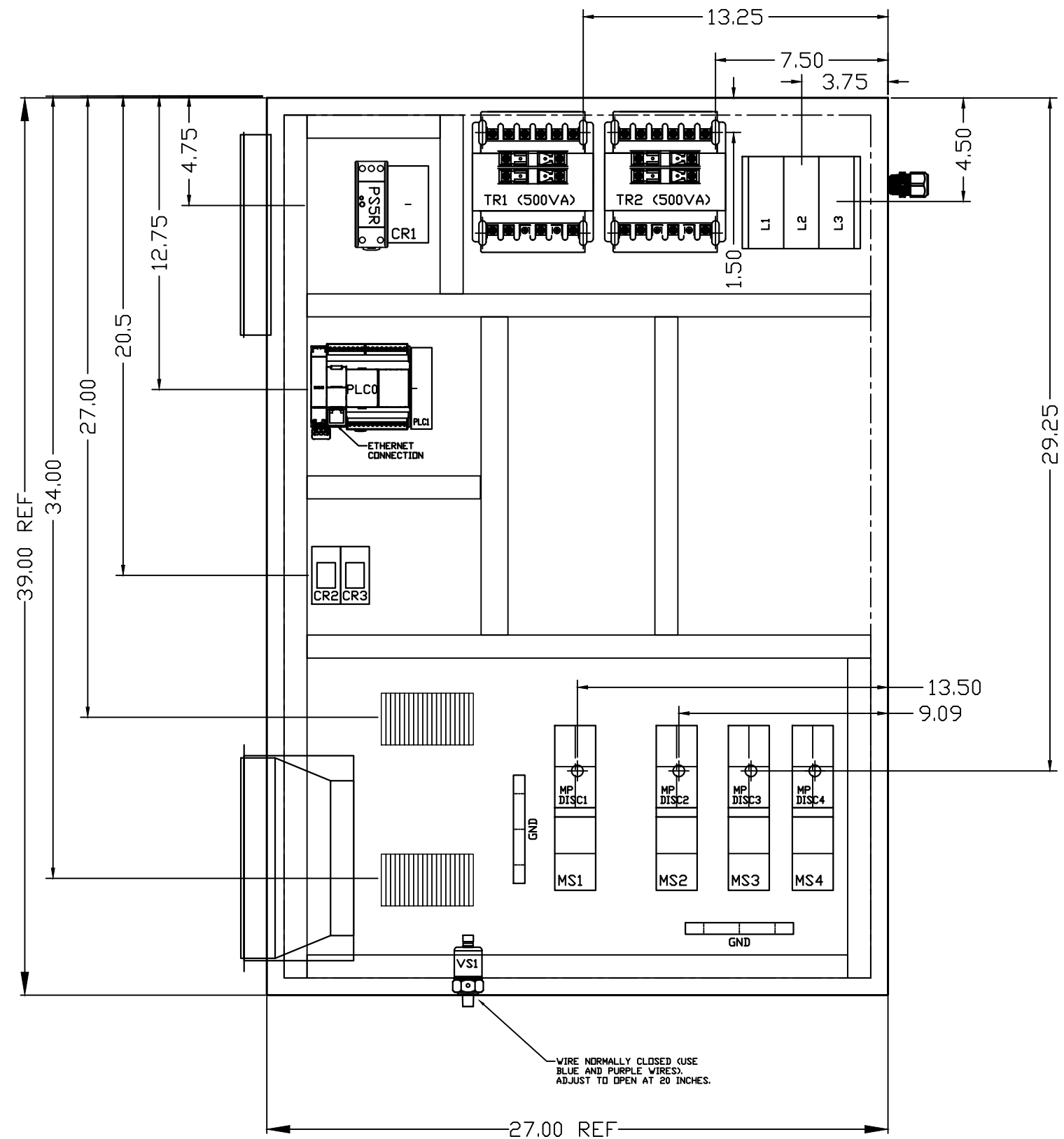
PANEL TYPE
 DUPLEX LAB VAC ENCLOSURE
 NFPA, SUB

DWG. TYPE LAYOUT


DWG. NO.
 PXMI-VELS269

SHEET	SIZE
L-1	B

REV	REVISION	DATE	ECN	NAME	CHKD
B-1	RELEASE TO PRODUCTION	01/25/17	PXEC0099	AKH	KMD
C-1	ADDED LUBRICATED VANE LAYOUT AND DATASHEET	10/08/18	PXEC0229	JLM	AJL



OPTIONAL:



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DRAWN BY	CHECKED BY	ENGINEERING APPROVAL
AKH	KMD	AKH
01/25/17	01/25/17	01/25/17

PANEL TYPE
DUPLEX LAB VAC ENCLOSURE
NFPA, SUB

DWG. TYPE LAYOUT

DWG. NO.
PXMI-VELS269

SHEET	SIZE
L-2	B