INSTALLATION INSTRUCTIONS
PEHCMIL Series Power Exhaust for York Commercial 25, 30 & 40 Ton Units

Before Starting Installation

Warning

Severe injury can result from incorrect servicing. Only qualified HVAC service personnel should install, trouble-shoot, repair or service HVAC and related HVAC equipment.

Always disconnect power before servicing. Please note some installation configurations may have more than one disconnect.

Important

Always follow all local building electrical codes.

Standard Output Power Exhaust

Voltage	ProVent P/N	External Static Pressure (Inch W.G.)				FLA	Hp
		0.1	0.25	0.375	0.50		
208/230V/3Ph	PEHCMIL323425C PEHCMIL323425M	10,400 cfm	10,000 cfm	9,500cfm	8,600 cfm	11.2	4 Hp Total (Qty. 2, 2 Hp)
460V/3Ph	PEHCMIL323446C PEHCMIL323446M					5.6	

Auxillary High Output Power Exhaust Module

Voltage	ProVent P/N	External Static Pressure (Inch W.G.)				FLA	Hp
		0.1	0.25	0.375	0.50		
208/230V/3Ph	PEHCMIL323425CHO PEHCMIL323425MHO	5,200 cfm	5,000 cfm	4,750cfm	4,300 cfm	5.6	2 Hp Total
460V/3Ph	PEHCMIL323446CHO PEHCMIL323446MHO					2.8	

Standard Output & Auxillary High Output Power Exhaust Module

Voltage	ProVent P/N	External Static Pressure (Inch W.G.)				FLA	Hp
		0.1	0.25	0.375	0.50		
208/230V/3Ph	PEHCMIL323425C PEHCMIL323425CHO	15,600 cfm	15,000 cfm	14,250cfm	12,900 cfm	16.8	6 Hp Total (Qty. 3, 2 Hp)
	PEHCMIL323425M PEHCMIL323425MHO						
460V/3Ph	PEHCMIL323446C PEHCMIL323446CHO					8.4	
	PEHCMIL323446M PEHCMIL323446MHO						

PARTS INCLUDED	STANDARD OUTPUT QTY.	HIGH OUTPUT QTY.
#12 x 3/4 Sheet Metal Screw	40	68
Adjustable Unit Supports	2	4
3/16" Dia x 25' Pressure Tubing (w/Modulating Option Only)	1	1
Pressure Connection Port (w/Modulating Option Only)	1	1
VFD Instruction CD (w/Modulating Option Only)	1	-

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Installation Instructions

1. Mount the power exhaust unit on the side of the return air duct. Install adjustable unit supports and attach to duct using #12 screws provided. (ILL. 1)

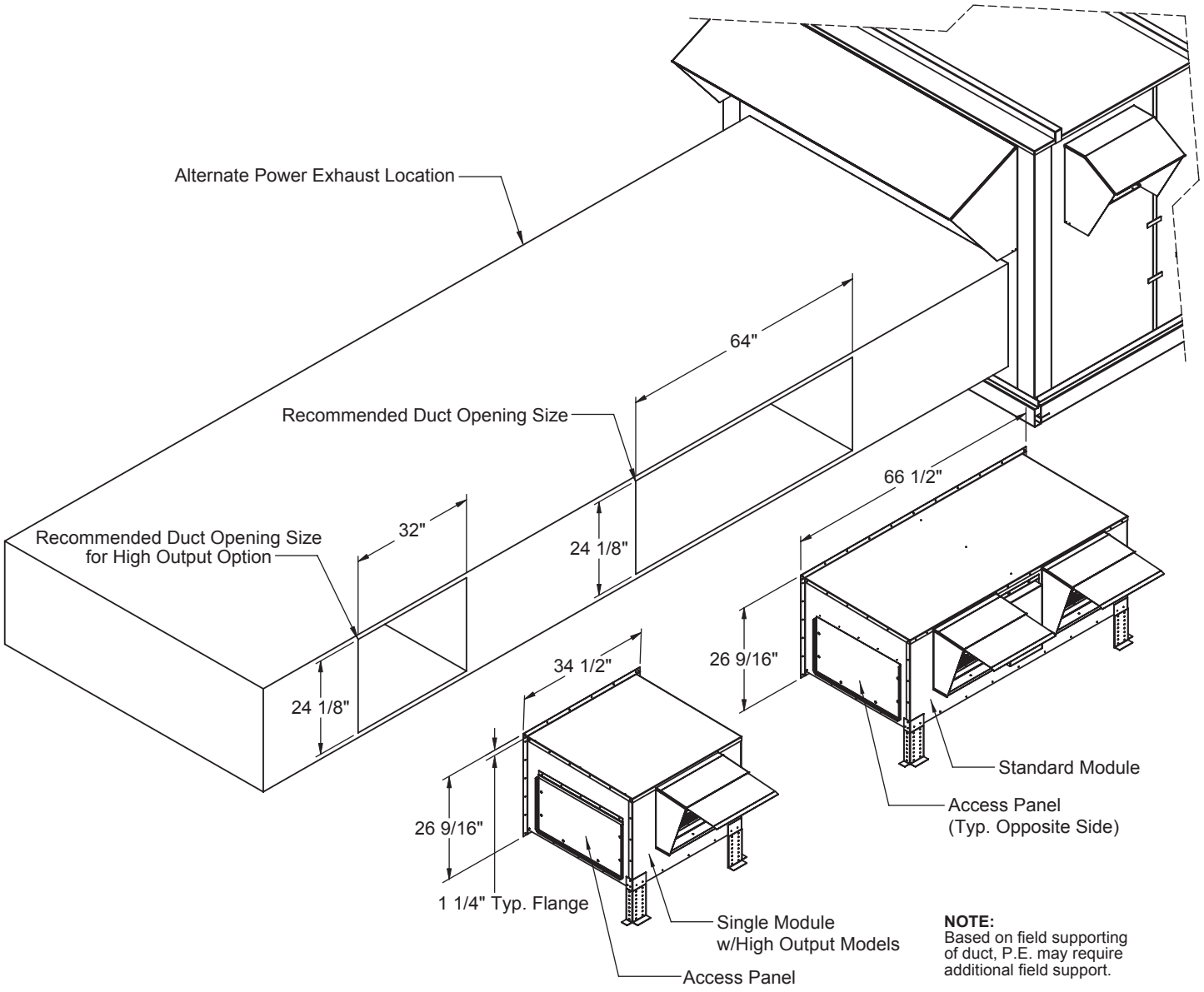
   On high output models, the single module can be positioned next to or on the opposite side of the duct. Install adjustable unit supports and attach to duct using #12 screws provided. (ILL. 1)

2. The line voltage can be access from the access panel. See wiring diagram notes and follow all electrical codes for connection. (ILL. 2, 3 & 4)

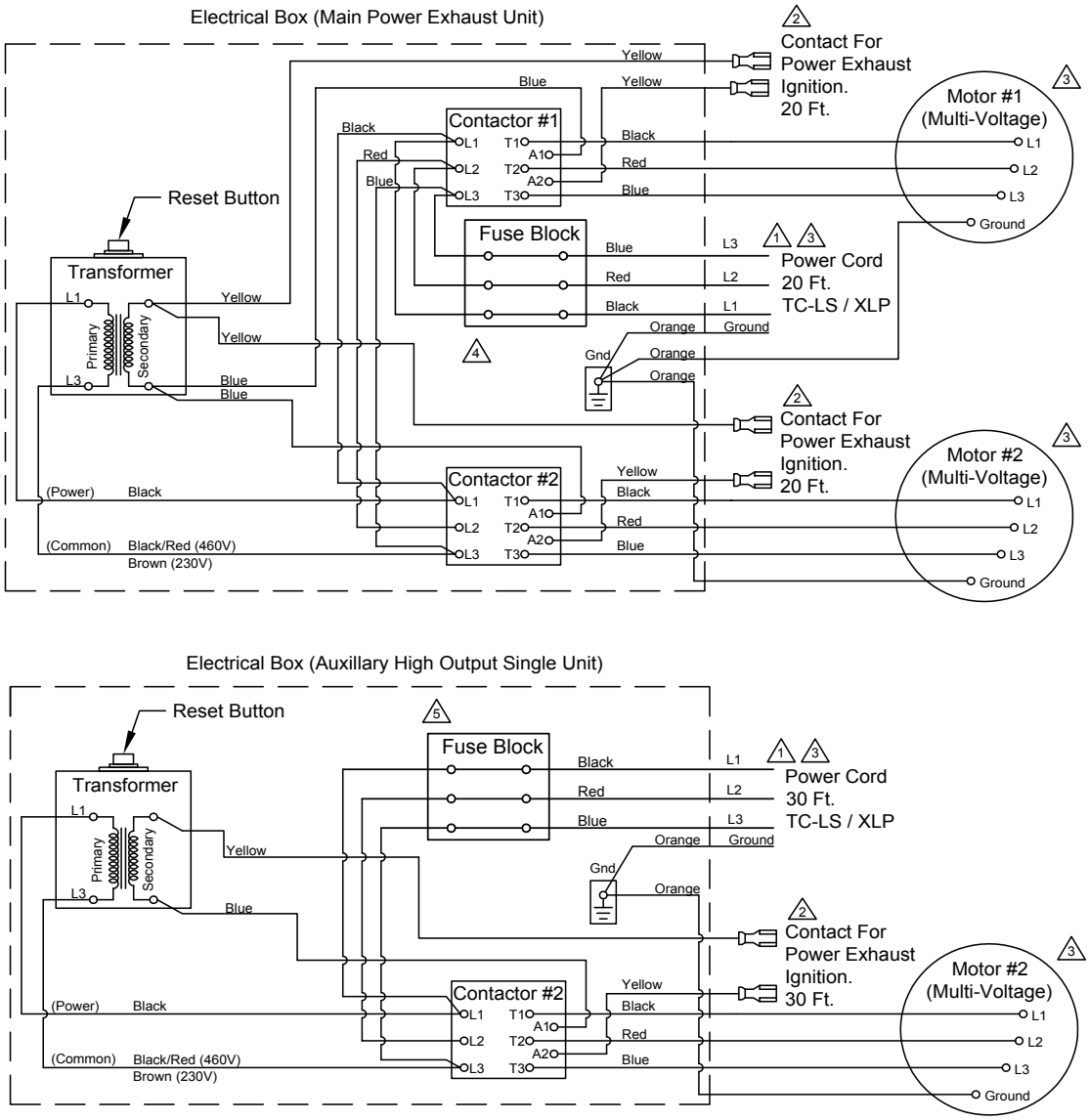
3. For modulating option, feed the pressure tubing located in the power exhaust cabinet to the conditioned space in the building. For lengths longer than 25 feet, larger diameter tubing is required and field provided. (Not required for constant volume models.) (ILL. 1)

4. Connect the pairs of 24V wires (yellow-yellow) to the field provided contacts for power exhaust ignition and and set accordingly. (ILL. 2, 3 & 4)

ILL. 1



ILL. 2 - Constant Volume Power Exhaust Wiring



1 Power Supply. Provide disconnect means and circuit protection as required. See power exhaust name plate for electrical ratings. If local codes allow connecting to the HVAC unit power, make sure the disconnect and incoming wiring are sized to handle the load of both the HVAC unit and the power exhaust.

To determine MCA with power exhaust: New MCA = MCA of Unit Only + MCA of Power Exhaust

2 Field required.

3 For voltage, refer to label on exterior of power exhaust cabinet.

4 9 amp KTK fuses (460V). 15 amp KTK fuses (230V)

5 6 amp KTK fuses (460V). 10 amp KTK fuses (230V)

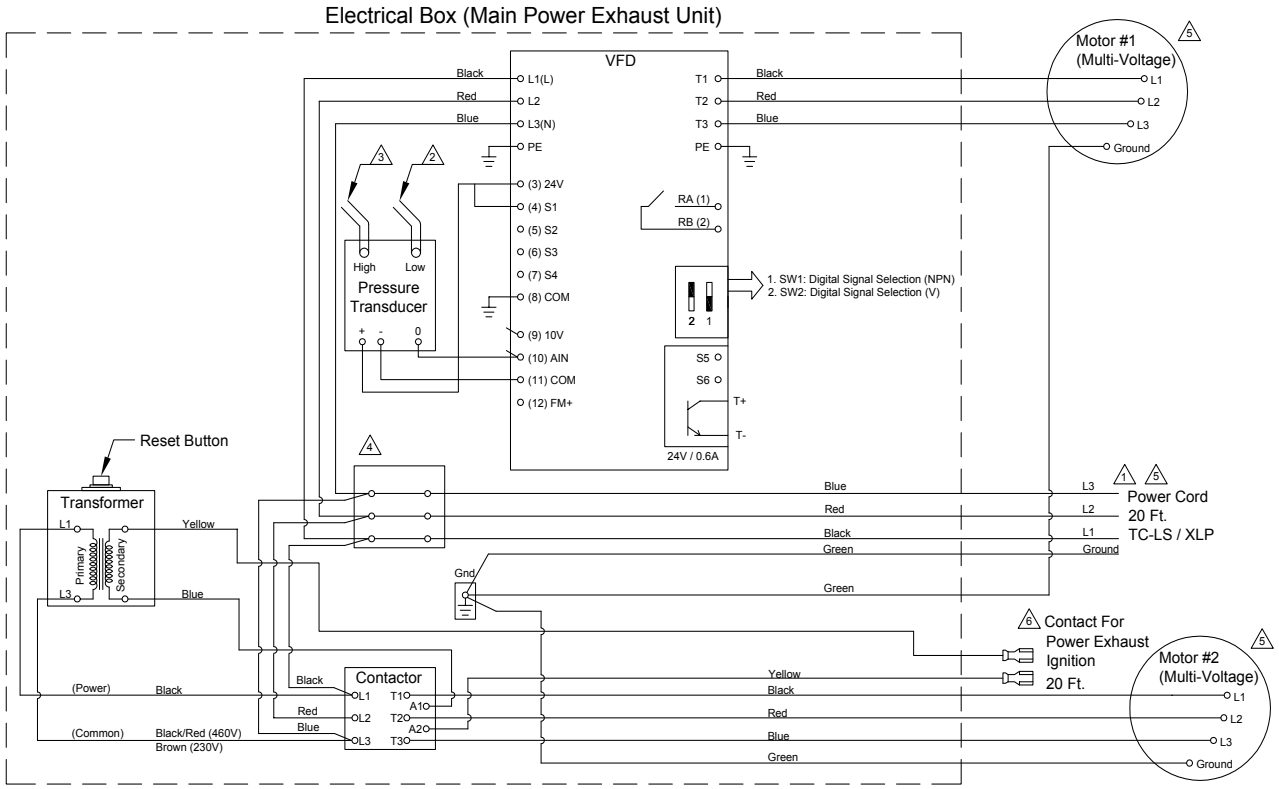
Example: With a unit that has MCA=22.5 amps and MOCP=30 amps,

New MCA = 22.5 amps + 3 amps (example for power exhaust) = 25.5 amps

If New MCA is less than MOCP for the HVAC unit, you can tie the power wire to the HVAC contactor terminal strip, if local code allows. Make sure tap off terminal block is capable for handling more than one unit.

If new MCA is greater than MOCP or local code requires, you must run power wire for the power exhaust to an external disconnect. Make sure the disconnect is sized properly for the power from the power exhaust as well as the HVAC unit.

ILL. 3 - Modulating Power Exhaust Option Wiring



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To determine MCA with power exhaust: New MCA = MCA of Unit Only + MCA of Power Exhaust

2 Factory mounted 3/16" low pressure tubing.

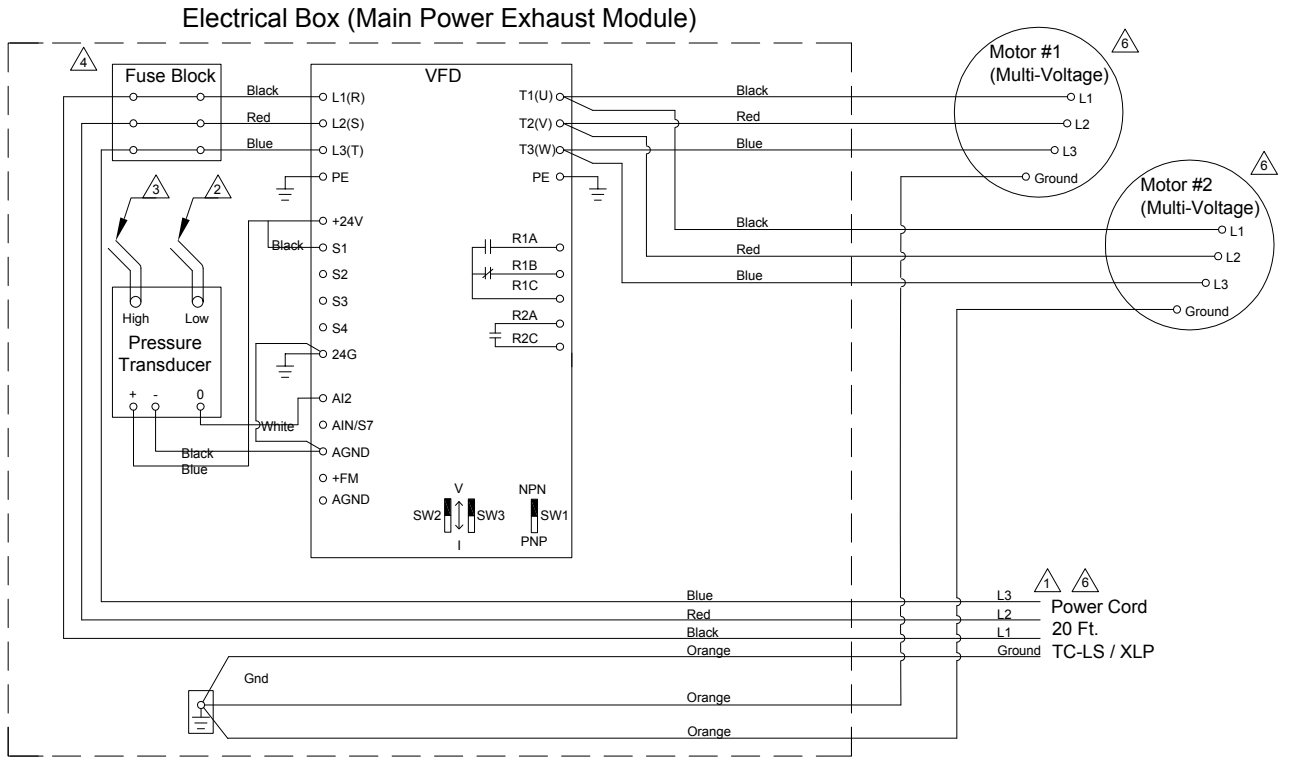
3 25 feet of 3/16" high pressure tubing and connection port provided for field mounting in conditioned space. Architectural finishing field provided. (Follow local codes.)

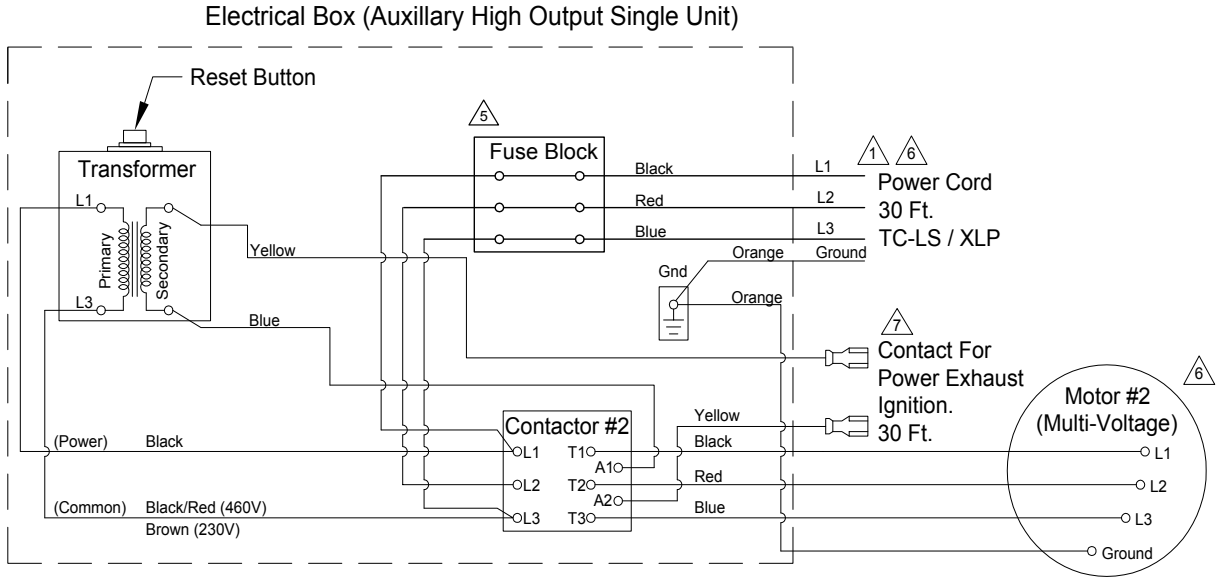
4 9 amp KTK fuses (460V). 15 amp KTK fuses (230V)

5 For voltage, refer to label on exterior of power exhaust cabinet.

6 Field required.

ILL. 4 - Modulating Power Exhaust Option Wiring





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6. For voltage, refer to label on exterior of power exhaust cabinet.

7. Field required.

The two blower modulating power exhaust has one motor/blower that will turn on at field determined O/A. This is achieved by wiring to the economizer logic auxiliary switch and setting the potentiometer. The other motor/blower is connected to a motor controller (VFD) that varies the speed to maintain an acceptable conditioned space pressure. The power exhaust system includes a low pressure transducer that compares room pressure to atmospheric. This transducer sends a signal to the motor controller (VFD) which varies the motor frequency in order to provide pressure relief.

1. Install 3/16" pressure tubing as per wiring diagram making sure it is not located near any S/A or R/A diffuser or door.

2. The VFD is factory pre programmed to accept the 0 to 10 VDC signal through the pressure transducer.

Pressure vs. VFD Frequency

Transducer Output Signal (VDC)	Conditioned Space Pressure (Inch W.G.)	VFD Setting (Hz)
0	0	0
1	0.01	6
2	0.02	12
3	0.03	18
4	0.04	24
5	0.05	30
6	0.06	36
7	0.07	42
8	0.08	48
9	0.09	54
10	0.10	60
VFD is factory set at 0.03 inches w.g. To change setting, move arrows up/down to set desired frequency that determines pressure requirement.		