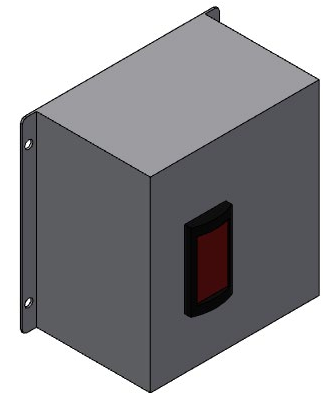
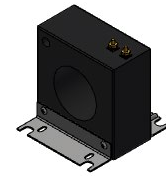
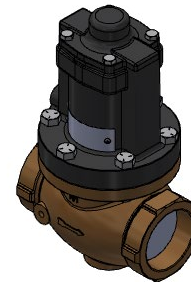
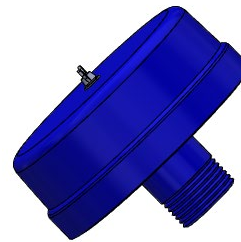




ELECTRONIC SURGE CONTROL (ESC)

INSTALLATION MANUAL

Page 2	Product Information
Page 3	Safety Instructions
Page 4-5	Installation
Page 6-8	Electrical Installation
Page 9	Initial Startup
Page 10-11	Bill of Materials



PRODUCT INFORMATION

Please take a moment to fill out the information below in order to aid us with any future sales or service inquiries. Model number and serial number information can be found on the serial tag located inside the control box and/or on the lower exterior of the can. Key number can be found on the tag that comes attached to the keys. There may be more than one key number depending on unit.

Please keep this information with your records.

MODEL#: _____

ORDER#: _____

VFD SERIAL#: _____

VALVE SERIAL#: _____

DATE PURCHASED: _____

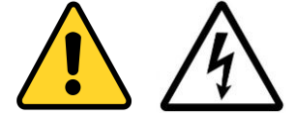
J.E. Adams Industries
1025 63rd Ave. S.W.
Cedar Rapids, IA 52404
1-800-553-8861
www.jeadams.com

IMPORTANT SAFETY INSTRUCTIONS

When using an electrical appliance, basic precautions should always be followed, including the following:

Read these instructions carefully, and look at the equipment to become familiar with the device before trying to install, operate, service, or maintain it.

WARNING – To reduce the risk of fire, electric shock, or injury:



- Use only as described in manual. Use only manufactures recommended attachments.
- Do not allow to be used as a toy. Close attention is necessary when used by or near children.
- Do not put any object into openings. Do not use with any opening blocked; keep free of dust, lint, hair and anything that may reduce air flow.
- Keep hair, loose clothing, fingers, and all parts of body away from openings and moving parts.

SAVE THESE INSTRUCTIONS

Installation Safety Instructions:

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by J.E. Adams for any consequences arising out of the use of this material.

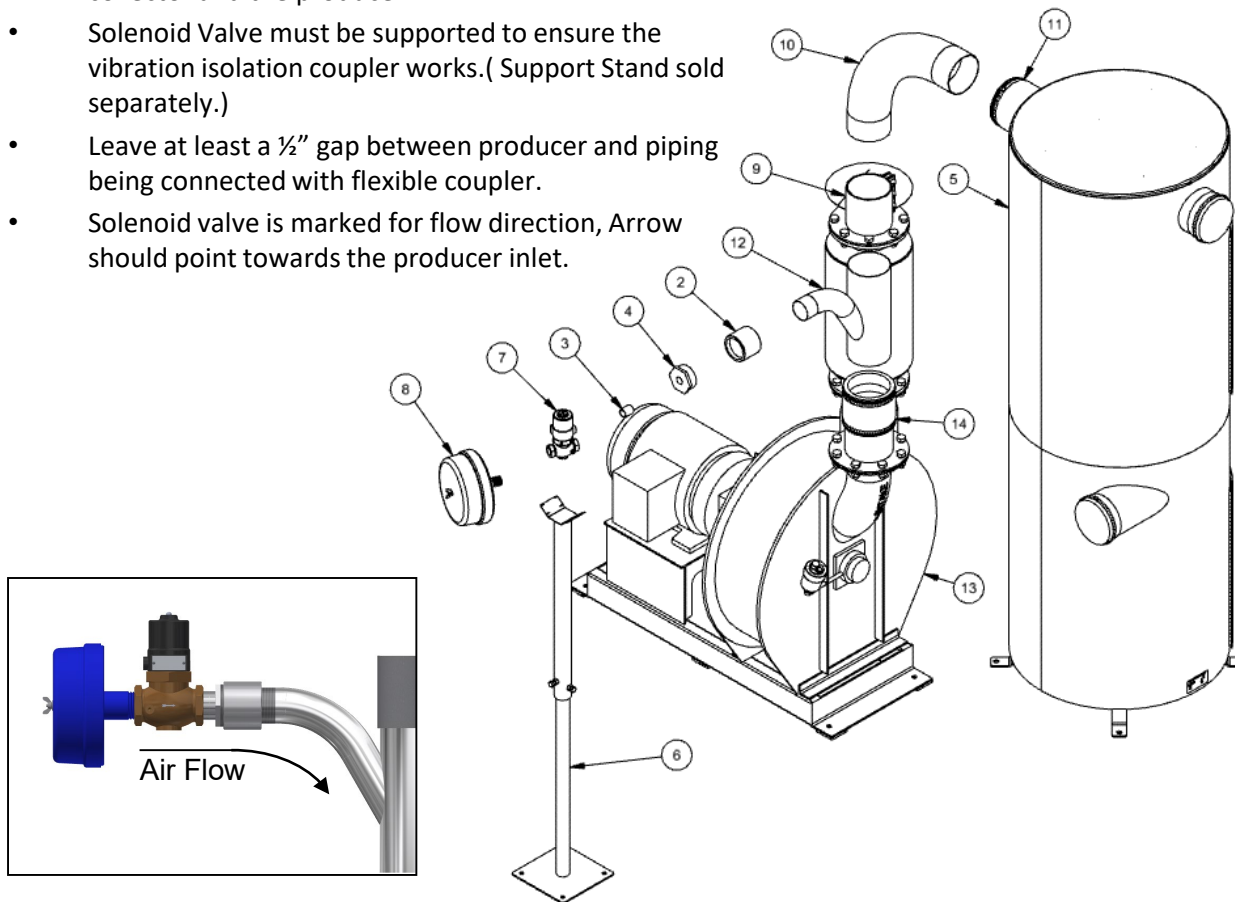
A qualified person is one who has skills and knowledge related to the construction and operation of electrical equipment and its installation, and has received safety training to recognize and avoid the hazards involved.

- Determine location to mount unit (**“DANGER” “THIS EQUIPMENT INCORPORATES PARTS SUCH AS SWITCHES, OR THE LIKE THAT TEND TO PRODUCE ARCS OR SPARKS THAT CAN CAUSE AN EXPLOSION. WHEN LOCATED IN GASOLINE-DISPENSING AND SERVICE STATIONS, INSTALL AND USE AT LEAST 20 FEET (6 M) HORIZONTALLY FROM THE EXTERIOR ENCLOSURE OF ANY DISPENSING PUMP AND AT LEAST 18 INCHES (450 MM) ABOVE A DRIVEWAY OR GROUND LEVEL.”**)
- Run electrical service to that location
- **Grounding Instructions:** This appliance must be connected to a grounded metal, permanent wiring system; or an equipment-grounding conductor must be run with the circuit conductors and connected to the equipment-grounding terminal or lead on the appliance.
- All local and national electric codes must be followed for installation and use.

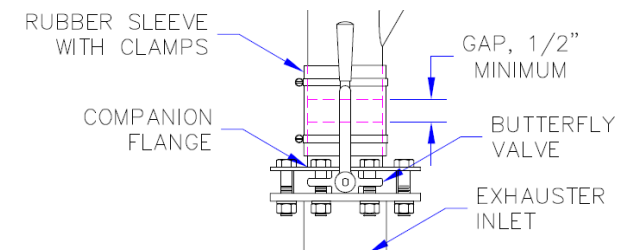
Installation

Solenoid Valve Installation Recommendations

- Seal threaded connections with thread sealant.
- Plumbing may be changed based on site configuration, it is recommended to install the valve between the main collector and the producer.
- Solenoid Valve must be supported to ensure the vibration isolation coupler works. (Support Stand sold separately.)
- Leave at least a 1/2" gap between producer and piping being connected with flexible coupler.
- Solenoid valve is marked for flow direction, Arrow should point towards the producer inlet.



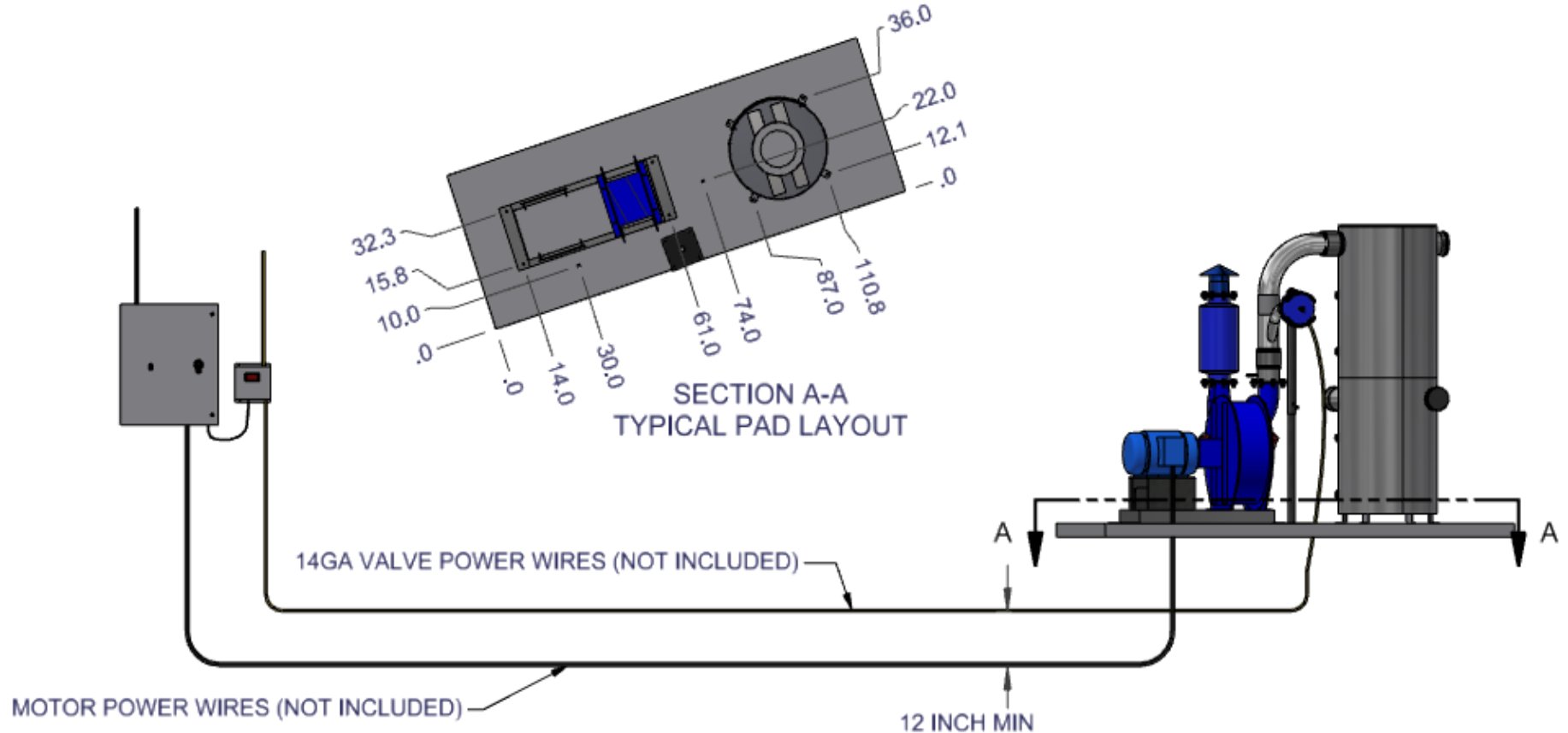
BILL OF MATERIALS			
ITEM	PART NUMBER	DESCRIPTION	QTY
2	5807D6	COUPLING, 3.0 NPT, FULL, STAINLESS	1
3	5809D19	NIPPLE, #.8" NPT X #.8", SS	1
4	5814D9	BUSHING, 3 M X # F, STAINLESS	1
5	35000-3A	CENTRAL VAC COLLECTOR/SEPARATOR 6"	1
6	35000-31A-2	CV PIPE SUPT ASY, 60-86IN	1
7	CV-ESC-_-2	SOLENOID VALVE, # IN	1
8	CV-ESC-_-3	AIR FILTER, # IN	1
9	CVP-60003B10Z	COMP COUPLER, GALV, 6.0, 6.0 L	1
10	CVP-EL-602AS	ALUMINUM EL 6x6 STR ENDS	1
11	CVP-FCO-1002-56	FLEXIBLE COUPLER 6" PVC TO 6" TUBE	2
12	CVP-TY-607-A-SP	ALUMINUM TY 6x3, 3 MNPT	1
13	M30B-_-	PRODUCER, _ STAGE, _ IN INLET/OUTLET	1
14	M30-KIT	VACUUM PRODUCER ACCESSORY KIT	1



Installation

Control Panel Wiring

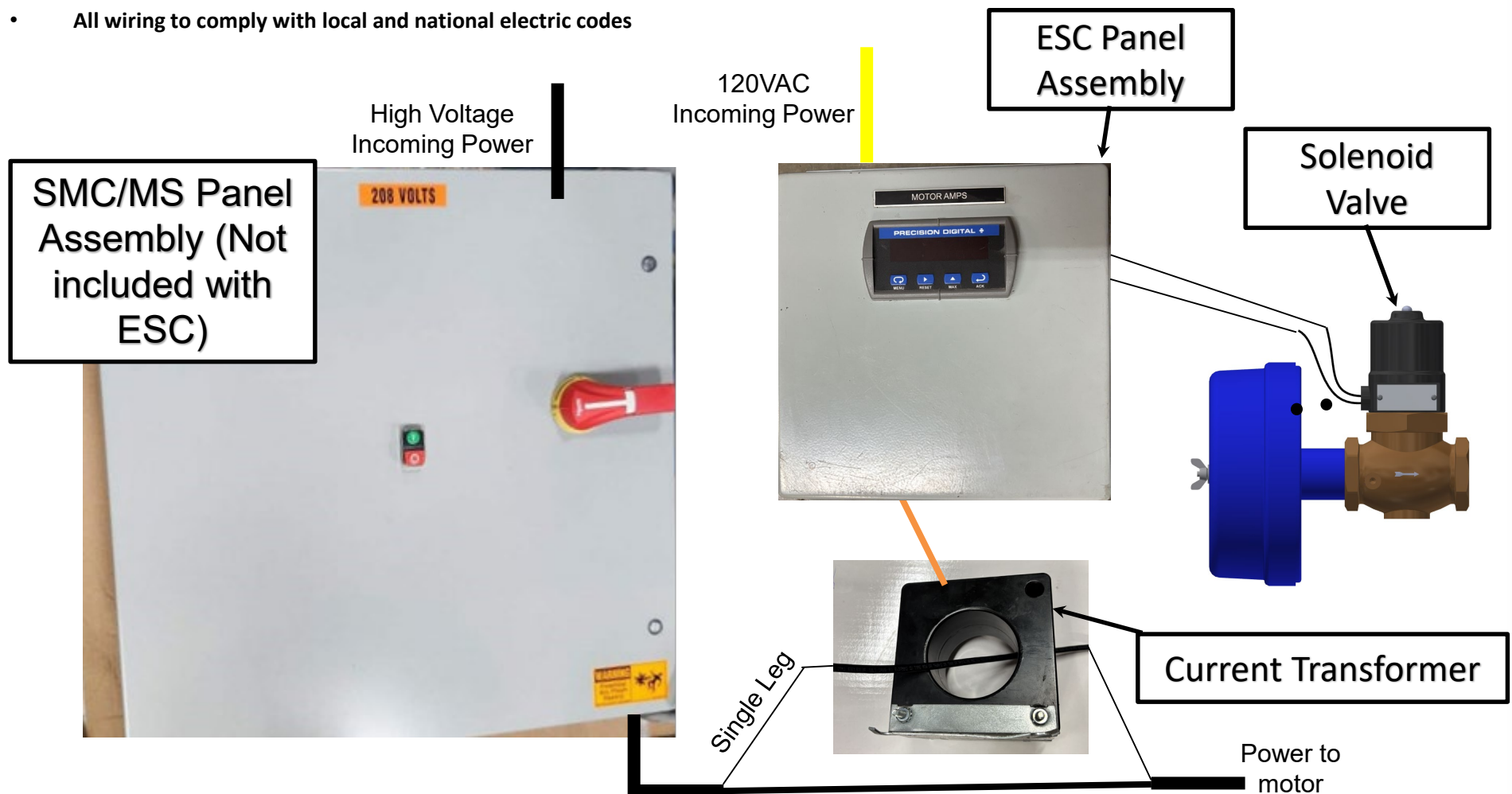
- All connections to be made with power OFF.
- Solenoid Cables to be ran in separate conduit.
- Motor Power to be ran in dedicated conduit.
- Be sure to follow all applicable local and national electrical codes when wiring system.



Electrical Installation

Example of Electrical Hook ups

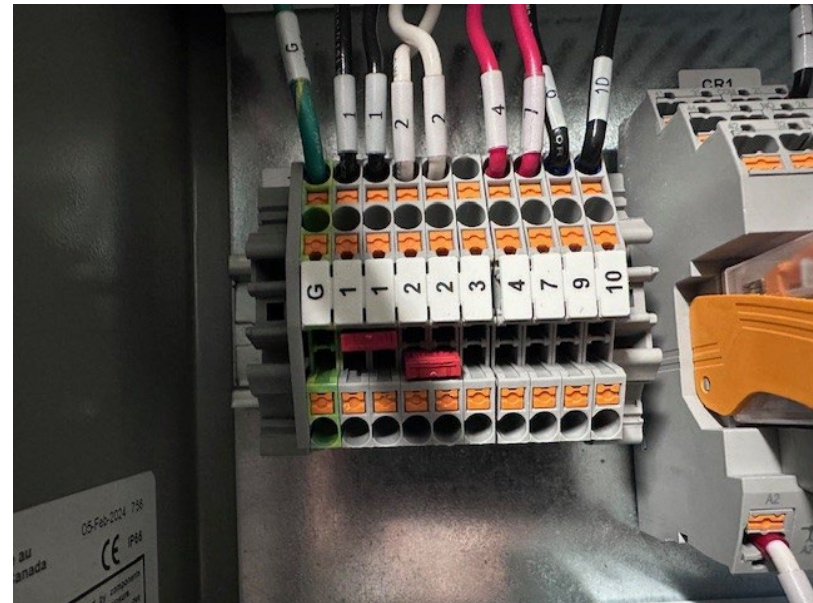
- The Electronic Surge Control system works with either a Soft Motor Control(SMC) or a Motor Starter(MS).
 - Size and exact locations will vary based on system.
 - High voltage wiring, disconnect, and motor controls not provided with ESC.
- All wiring to comply with local and national electric codes



Electrical Installation

ESC Panel Assembly Connection Example

ID	Hook Up
G	Ground
1	120 VAC HOT
2	120 VAC COM
2	Bleed Solenoid COM
7	Bleed Solenoid 120VAC HOT
9	Current Transformer
10	Current Transformer

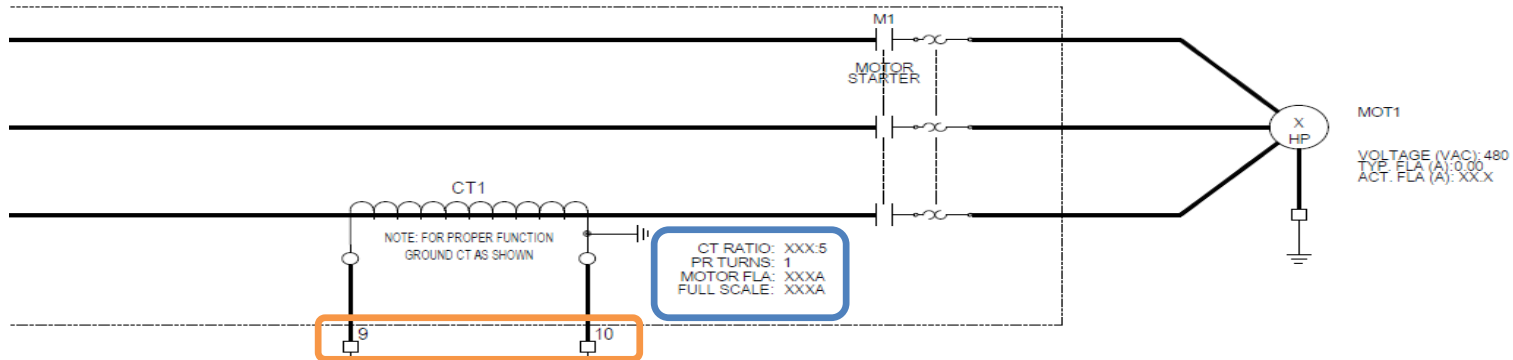


- NOTE: Utilize provided schematic to determine final hook up to ID configuration. JE Adams is not responsible for damage caused by incorrect wiring of system.

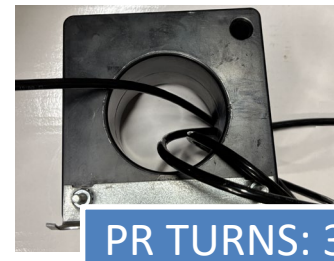
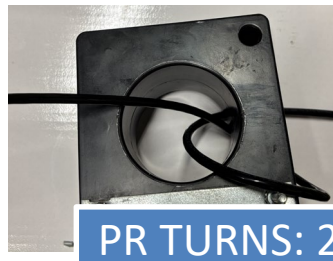
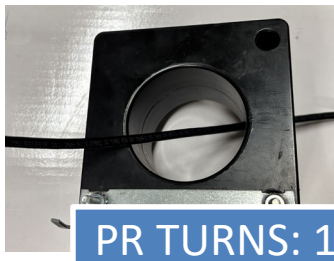
Electrical Installation

Current Transformer Hook Up Examples

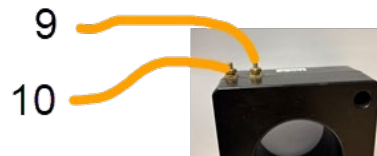
- Current transformer shall be installed per schematic provided in ESC Panel Assembly. Example of schematic shown below



- NOTE: Verify CT Ratio matches Current Transformer being installed.
- PR TURNS on the included schematic determines number of loops of the single branch to run thru current transformer.



- Current transformer hooks to terminals 9 and 10 in the ESC Panel Assembly. NOTE: Check provided schematic to ensure correct terminals.



NOTE: Current transformer may be installed inside the SMC/MS panel assembly.

Initial Startup

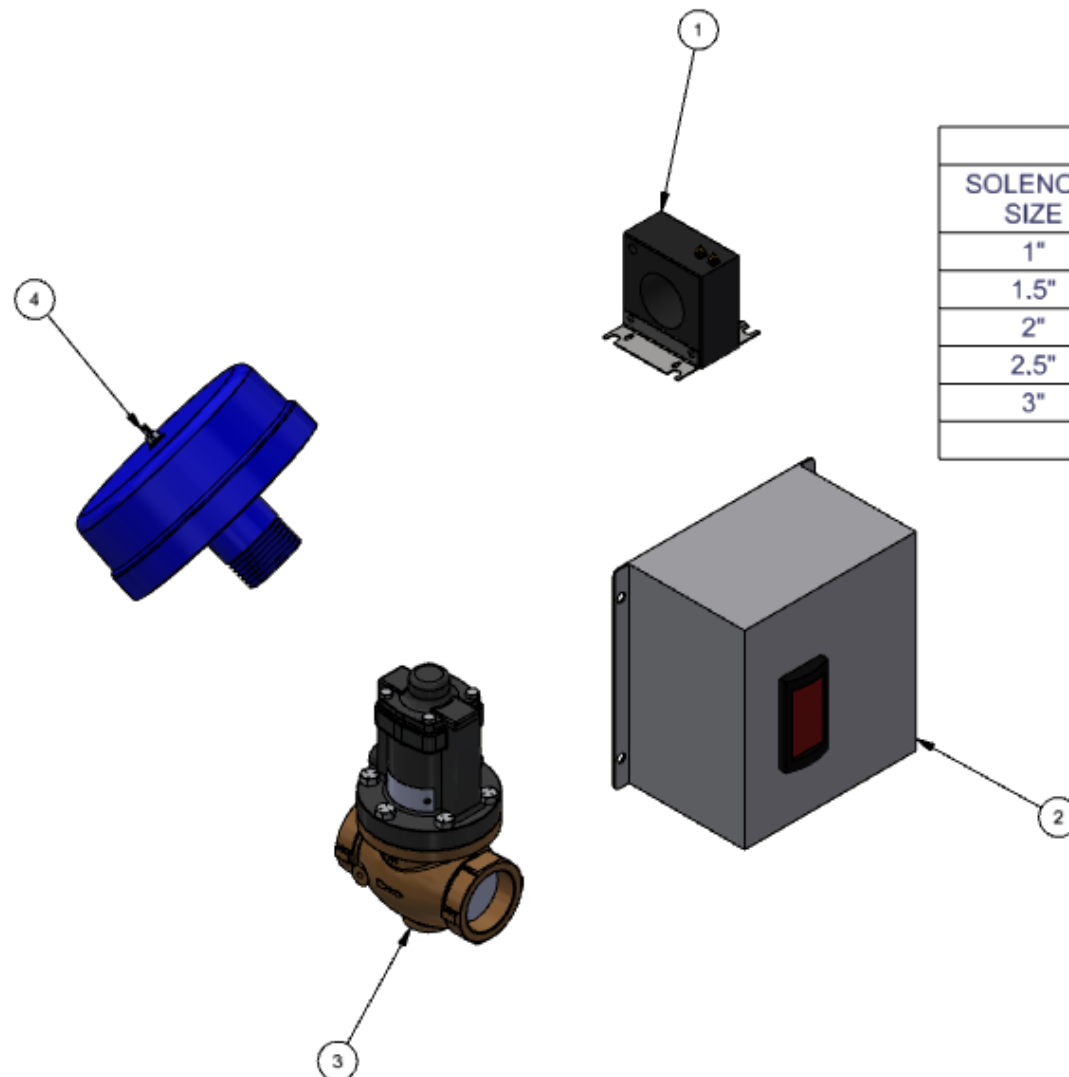
The Electronic Surge Control panel comes pre-programmed from the factor. Any changes to the programming without prior authorization will void your warranty.

After completing the installation of you motor starter/controls and completing the “Setting Butterfly Intake Valve” per the *M24B & M30B Vacuum Producer Manual* do the following.

1. With all hoses removed from their holders start producer and ensure ESC system is displaying an AMP reading on the screen.
2. Start hanging hoses, for the M30B series when 3-5 hoses (1-2 hoses with the M24B series) are still open the surge control system should engage.
3. IF system starts to surge, wait 30 seconds for system to stabilize.
 1. If it does not stabilize shut system down then
 1. Verify installation of Current Transformer per schematic in ESC panel assembly.
 2. Verify installation direction of Solenoid Valve.
 3. Call J.E. Adams for Technical Support.
4. Once all hoses have been hung up and system does not surge, ESC installation is complete.

BILL OF MATERIALS		
ITEM	DESCRIPTION	QTY
1	ESC, CURRENT TRANSFORMER	1
2	ELECTRONIC SURGE CONTROL PANEL	1
3	SOLENOID VALVE, #.# IN	1
4	AIR FILTER, #.# IN	1

ELECTRONIC SURGE CONTROL OPTIONS			
SOLENOID SIZE	208 VAC	240 VAC	480 VAC
1"	CV-ESC-10-208	CV-ESC-10-240	CV-ESC-10-480
1.5"	CV-ESC-15-208	CV-ESC-15-240	CV-ESC-15-480
2"	CV-ESC-20-208	CV-ESC-20-240	CV-ESC-20-480
2.5"	CV-ESC-25-208	CV-ESC-25-240	CV-ESC-25-480
3"	CV-ESC-30-208	CV-ESC-30-240	CV-ESC-30-480



CV-ESC-_-_-

SOLENOID SIZE (1.5" = 15)

MOTOR SUPPLY VOLTAGE

A	9247	EXPANDED PART NUMBER TO INCLUDE VOLTAGE	11/13/24	BJL
REV	NO.	DESCRIPTION	DATE	BY

ELECTRONIC SURGE CONTROL, # IN,### VOLTS			
UNSPECIFIED TOLERANCES	DATE	BY	REV.
1 PL ± .030	9/15/2023	B. LEMKE	
2 PL ± .020			
3 PL ± .003			
ANGLE ± 1°	SCALE	SHEET	PART NO.
	0.13	1 / 1	CV-ESC-_-_-

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CV-ESC-_P_

NOTE:

1. SEE SHEET 2 FOR CONFIGURATION TABLE
2. PARTS WILL SHIP LOOSE, ASSEMBLY REQUIRED ON SITE

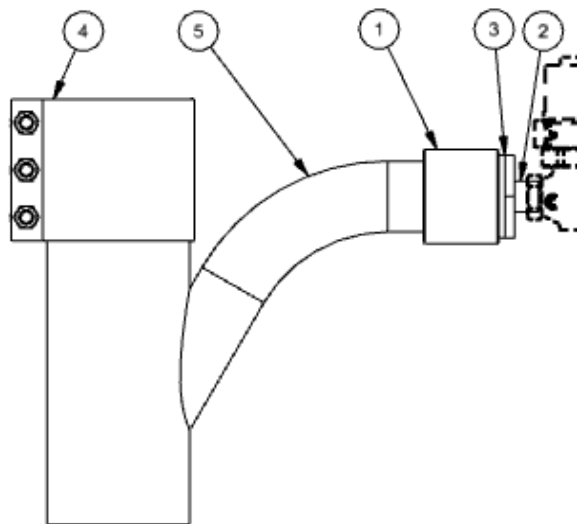
BILL OF MATERIALS

ITEM	PART NUMBER	DESCRIPTION	QTY
1	5807D6	COUPLING, 3.0 NPT, FULL, STAINLESS	1
2	5809D_	NIPPLE, 1.0" NPT X 1.5", SS	1
3	5814D_	BUSHING, 3 M X _ F, _	1
4	CVP-60003B10Z	COMP COUPLER, GALV, 6.0, 6.0 L	1
5	CVP-TY-607_-SP	TY 6X6x3, 3 MNPT	1

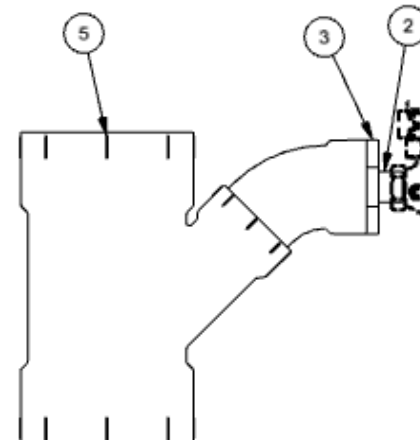
CV-ESC-_P_ -> CENTRAL VACUUM ELECTRONIC SURGE
CONTROL PLUMBING QUOTE

ESC SIZE
1 = 1 INCH
1-5 = 1.5 INCH
2 = 2 INCH
2-5 = 2.5 INCH
3 = 3 INCH

MATERIAL TYPE
A = ALUMINUM
Z = GALVANIZED
S = STAINLESS STEEL
P = PVC



METAL PLUMBING



PVC PLUMBING

A		ADDED CV-ESC-4P_ VERSIONS	8/20/24	BJL
-	9073	RELEASED	10/16/23	BJL
REV	NO.	DESCRIPTION	DATE	BY

CV, ESC-_ PLMB, _				
UNSPECIFIED TOLERANCES		MATERIAL		
1 PL	± .030	DRAWN BY B. LEMKE		
2 PL	± .020	DATE 9/25/2023		
3 PL	± .003	SCALE 1/8		
ANGLE	± 1°	SHEET 1/2		
CV-ESC-_P_				REV. A

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REV -/-/-