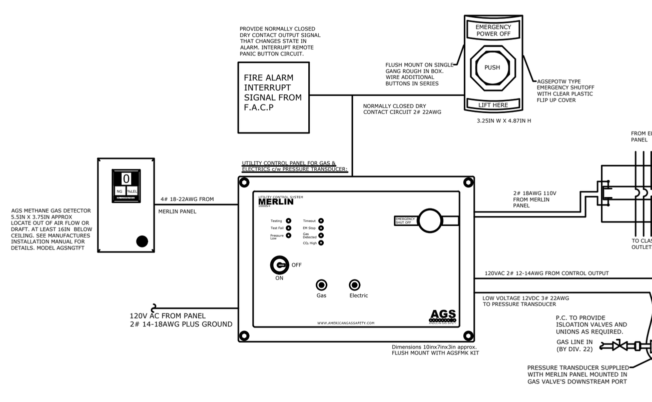
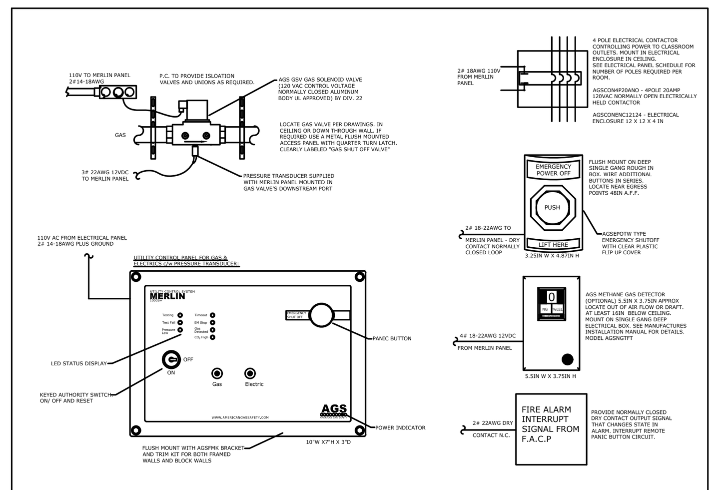
GAS AND ELECTRIC



② DETAIL - SCIENCE CLASSROOM GAS CONTROL DIAGRAM
N.T.S.

NOTES:

1. TYPICAL SEQUENCE OF OPERATION. KEY LOCK AUTHORITY REQUIRED TO SELECT GAS OR ELECTRICAL SERVICE. CONTROL PANEL TO PERFORM PRESSURE DROP TEST ON GAS LINE BEFORE ALLOWING GAS INTO CLASSROOM. IN EMERGENCY PANIC BUTTON WILL CLOSE ALL CIRCUITS.
2. VERIFY LOCATIONS OF CONTROLLER, REMOTE SHUT-OFF BUTTONS, SOLENOID AND ELECTRICAL CONTACTORS WITH DRAWINGS AND OWNER IN FIELD.
3. UNLESS NOTED OTHERWISE, P.C. TO SUPPLY CONTROLLER, REMOTE SHUT-OFF BUTTONS, GAS DETECTOR, SOLENOID AND CONTACTORS AS A WHOLE SYSTEM. P.C. TO COORORDINATE WITH E.C.
4. UNLESS NOTED OTHERWISE, WIRING, ELECTRICAL CONNECTIONS AND TESTING BY DIV. 26. COORDINATE GAS SOLENOID VALVE LOCATION AND FIELD WIRING WITH DIV. 22.
5. PRESSURE TRANSDUCER SUPPLIED WITH CONTROL PANEL, INSTALLED IN DOWNSTREAM PORT OF GAS SOLENOID SUPPLIED BY P.C. SEE MANUFACTURER'S DETAILS.
6. 120V AC SUPPLY TO CONTROLLER. 120V AC SUPPLY FROM CONTROLLER TO SOLENOID. 120V AC SUPPLY FROM CONTROLLER TO CONTACTORS. LOW VOLTAGE SUPPLY SIGNAL TO PRESSURE TRANSDUCER. 12V DC SUPPLY FROM CONTROLLER TO GAS DETECTOR.
7. FIRE ALARM CONTROL MODULE OUTPUT INTERRUPTS EMERGENCY SHUTOFF (EPO) BUTTON CIRCUIT.
8. BASIS OF DESIGN AGS MERLIN 1000S+ UTILITY CONTROL SYSTEM. CONTACT AMERICAN GAS SAFETY FOR INFORMATION. WWW.AMERICANGASSAFETY.COM TEL: (727) 608-4375



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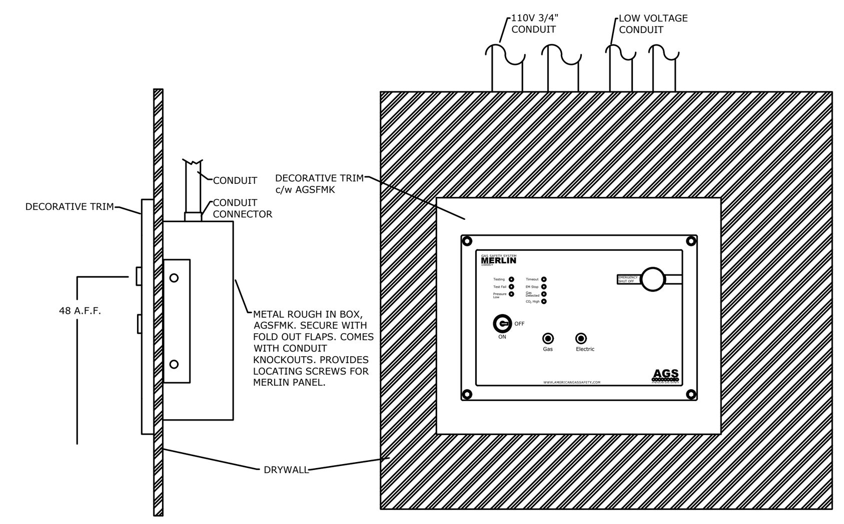
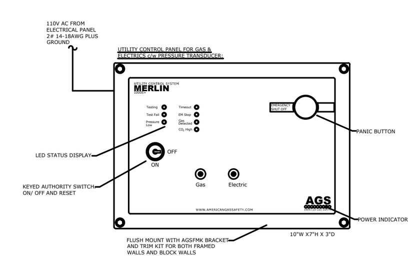
5. PRESSURE TRANSDUCER SUPPLIED WITH CONTROL PANEL, INSTALLED IN DOWNSTREAM PORT OF GAS SOLENOID SUPPLIED BY P.C. SEE MANUFACTURER'S DETAILS.
6. 120V AC SUPPLY TO CONTROLLER. 120V AC SUPPLY FROM CONTROLLER TO SOLENOID. 120V AC SUPPLY FROM CONTROLLER TO CONTACTORS. LOW VOLTAGE SUPPLY SIGNAL TO PRESSURE TRANSDUCER. 12V DC SUPPLY FROM CONTROLLER TO GAS DETECTOR.
7. FIRE ALARM CONTROL MODULE OUTPUT INTERRUPTS EMERGENCY SHUTOFF (EPO) BUTTON CIRCUIT.
8. BASIS OF DESIGN AGS MERLIN 1000S+ UTILITY CONTROL SYSTEM. CONTACT AMERICAN GAS SAFETY FOR INFORMATION. WWW.AMERICANGASSAFETY.COM TEL: (727) 608-4375

SEQUENCE OF OPERATION:

1. KEYED AUTHORITY REQUIRED TO MAKE UTILITY SELECTION AND RE-SET PANEL AFTER AN ALARM. KEY IS NOT REQUIRED TO REMAIN IN THE PANEL AFTER THE INITIAL SELECTION HAS BEEN MADE. UTILITY SELECTION IS PROHIBITED AFTER INITIAL 10SECS WITHOUT THE AUTHORITY KEY.
2. GAS SERVICE ONLY SUPPLIED AFTER A 30SEC PRESSURE DROP TEST ENSURES ALL GAS TURRETS ARE CLOSED AND ALL GAS PIPE IS SOUND AND IN TACK.
3. ACTIVATION OF PANIC BUTTON, REMOTE PANIC BUTTON, FIRE ALARM INPUT, GAS DETECTOR AND TIME-OUT FUNCTION SHALL DEACTIVATE ALL UTILITIES.
4. LOW GAS PRESSURE BELOW 4.8INCH/WC THAT EXISTS FOR >10SEC SHALL CAUSE THE GAS TO BE SHUT DOWN.

INSTALL EXAMPLE





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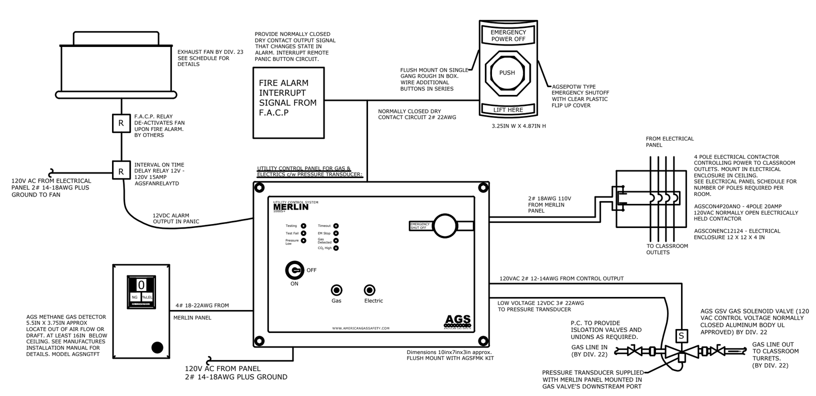
1. TYPICAL SEQUENCE OF OPERATION. KEY LOCK AUTHORITY REQUIRED TO SELECT GAS OR ELECTRICAL SERVICE. CONTROL PANEL TO PERFORM PRESSURE DROP TEST ON GAS LINE BEFORE ALLOWING GAS INTO CLASSROOM. IN EMERGENCY PANIC BUTTON WILL CLOSE ALL CIRCUITS.
2. VERIFY LOCATIONS OF CONTROLLER, REMOTE SHUT-OFF BUTTONS, SOLENOID AND ELECTRICAL CONTACTORS WITH DRAWINGS AND OWNER IN FIELD.
3. UNLESS NOTED OTHERWISE, P.C. TO SUPPLY CONTROLLER, REMOTE SHUT-OFF BUTTONS, GAS DETECTOR, SOLENOID AND CONTACTORS AS A WHOLE SYSTEM. P.C. TO COORORDINATE WITH E.C.
4. UNLESS NOTED OTHERWISE, WIRING, ELECTRICAL CONNECTIONS AND TESTING BY DIV. 26. COORDINATE GAS SOLENOID VALVE LOCATION AND FIELD WIRING WITH DIV. 22.
5. PRESSURE TRANSDUCER SUPPLIED WITH CONTROL PANEL, INSTALLED IN DOWNSTREAM PORT OF GAS SOLENOID SUPPLIED BY P.C. SEE MANUFACTURER'S DETAILS.
6. 120V AC SUPPLY TO CONTROLLER. 120V AC SUPPLY FROM CONTROLLER TO SOLENOID. 120V AC SUPPLY FROM CONTROLLER TO CONTACTORS. LOW VOLTAGE SUPPLY SIGNAL TO PRESSURE TRANSDUCER. 12V DC SUPPLY FROM CONTROLLER TO GAS DETECTOR.
7. FIRE ALARM CONTROL MODULE OUTPUT INTERRUPTS EMERGENCY SHUTOFF (EPO) BUTTON CIRCUIT.
8. BASIS OF DESIGN AGS MERLIN 1000S+ UTILITY CONTROL SYSTEM. CONTACT AMERICAN GAS SAFETY FOR INFORMATION. WWW.AMERICANGASSAFETY.COM TEL: (727) 608-4375

SEQUENCE OF OPERATION:

1. KEYED AUTHORITY REQUIRED TO MAKE UTILITY SELECTION AND RE-SET PANEL AFTER AN ALARM. KEY IS NOT REQUIRED TO REMAIN IN THE PANEL AFTER THE INITIAL SELECTION HAS BEEN MADE. UTILITY SELECTION IS PROHIBITED AFTER INITIAL 10SECS WITHOUT THE AUTHORITY KEY.
2. GAS SERVICE ONLY SUPPLIED AFTER A 30SEC PRESSURE DROP TEST ENSURES ALL GAS TURRETS ARE CLOSED AND ALL GAS PIPE IS SOUND AND IN TACK.
3. ACTIVATION OF PANIC BUTTON, REMOTE PANIC BUTTON, FIRE ALARM INPUT, GAS DETECTOR AND TIME-OUT FUNCTION SHALL DEACTIVATE ALL UTILITIES.
4. LOW GAS PRESSURE BELOW 4.8INCH/WC THAT EXISTS FOR >10SEC SHALL CAUSE THE GAS TO BE SHUT DOWN.

GAS WITH EXHAUST FAN IN PANIC



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2. TIMED PURGE INTERRUPTED BY F.A.C.P. RELAY TO SHUT DOWN FAN IN A FIRE ALARM CONDITION.
3. VERIFY LOCATIONS OF CONTROLLER, REMOTE SHUT-OFF BUTTONS, SOLENOID, ELECTRICAL CONTACTORS AND RELAYS WITH DRAWINGS AND OWNER IN FIELD.
4. UNLESS NOTED OTHERWISE, P.C. TO SUPPLY CONTROLLER, REMOTE SHUT-OFF BUTTONS, GAS DETECTOR, SOLENOID, ELECTRICAL CONTACTORS AND RELAYS AS A WHOLE SYSTEM. P.C. TO COORORDINATE WITH E.C.
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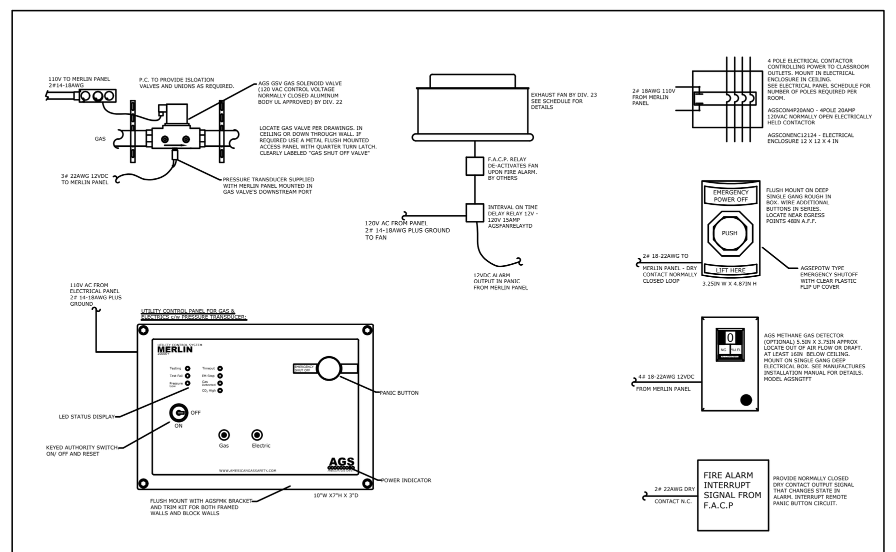

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2. VERIFY LOCATIONS OF CONTROLLER, REMOTE SHUT-OFF BUTTONS, RELAYS AND SOLENOID WITH DRAWINGS AND OWNER IN FIELD.
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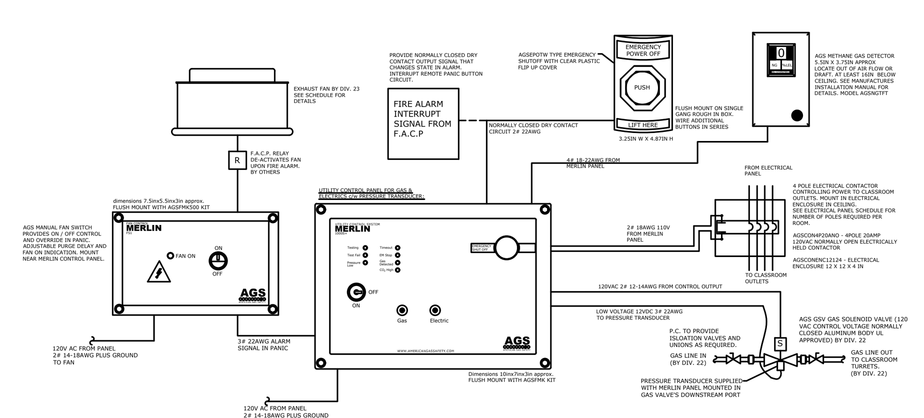
2. GAS SERVICE ONLY SUPPLIED AFTER A 30SEC PRESSURE DROP TEST ENSURES ALL GAS TURRETS ARE CLOSED AND ALL GAS PIPE IS SOUND AND IN TACK.
3. ACTIVATION OF PANIC BUTTON, REMOTE PANIC BUTTON, FIRE ALARM INPUT, GAS DETECTOR AND TIME-OUT FUNCTION SHALL DEACTIVATE ALL UTILITIES.
4. ALARM CONDITION SHALL INITIATE EXHAUST FAN. FAN SHALL RUN FOR ALLOTTED TIME OR WHILST MERLIN PANEL IS IN ALARM. F.A.C.P. RELAY SHALL INTERRUPT FAN POWER IN A FIRE ALARM CONDITION.
5. LOW GAS PRESSURE BELOW 4.8INCH/WC THAT EXISTS FOR >10SEC SHALL CAUSE THE GAS TO BE SHUT DOWN.

GAS WITH MANUAL EXHAUST FAN AND IN PANIC



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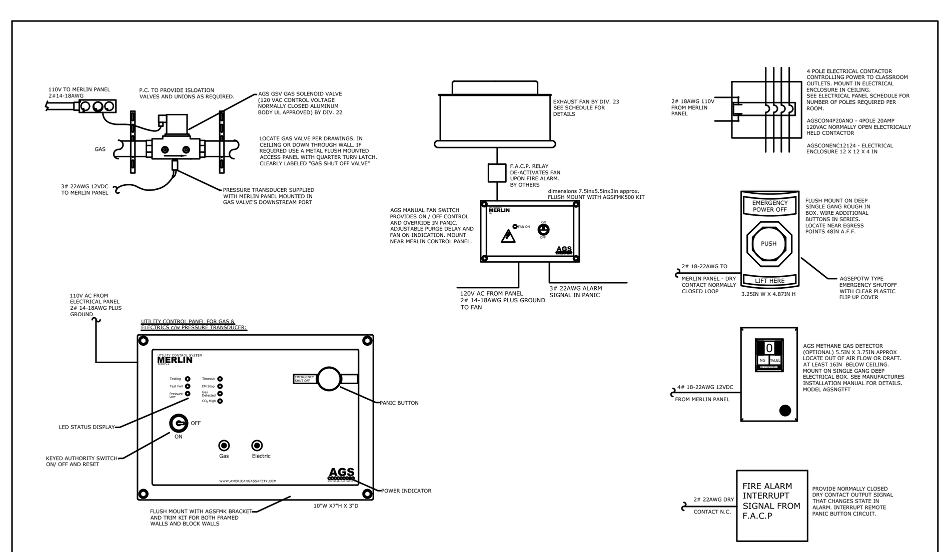

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3. ACTIVATION OF PANIC BUTTON, REMOTE PANIC BUTTON, FIRE ALARM INPUT, GAS DETECTOR AND TIME-OUT FUNCTION SHALL DEACTIVATE ALL UTILITIES.
4. MANUAL FAN ON / OFF VIA AGS FS1 FAN CONTROL.
5. ALARM CONDITION SHALL OVERRIDE FS1 CONTROL AND TURN ON FAN FOR ALLOTTED PURGE TIME ADJUSTABLE VIA INTERNAL DIP SWITCHES.
6. LOW GAS PRESSURE BELOW 4.8INCH/WC THAT EXISTS FOR >10SEC SHALL CAUSE THE GAS TO BE SHUT DOWN.