Certified ISO 9001

ADI 0025-24V-J

24V ALTOS 2™ System Monitor

INSTALLATION AND OPERATING INSTRUCTIONS

Carefully Read These Instructions Before Operating

Controls Corporation of America
1501 Harpers Road • Virginia Beach, VA 23454
Telephone 1-800-225-0473 or 757-422-8330 • Fax 757-422-3125
www.concoa.com

June 2024
Revision J

SAFETY

BASIC SAFETY PRECAUTIONS MUST BE FOLLOWED TO REDUCE THE RISK OF FIRE, ELECTRICAL SHOCK OR INJURY.

- While the 24V Altos 2™ is dust and moisture resistant, it is NOT water-proof or completely sealed. It should be installed where it will not be subjected to rain or high concentrations of dust. Never pour or spray liquids directly onto the product.
- Install the 24V Altos 2™ where the ambient temperature range is between 0°F and 140°F.
- THIS PRODUCT IS NOT INTENDED FOR USE IN EXPLOSIVE ENVIRONMENTS.
- DO NOT INSTALL THIS PRODUCT IN ANY HAZARDOUS ENVIRONMENT.
- If product appears damaged in any way, do not use and request service from CONCOA.

USER RESPONSIBILITY

Service to this product should only be performed by CONCOA or an authorized CONCOA agent. Requests for service may be made through CONCOA CUSTOMER SERVICE at 1-800-225-0473. Written requests may be made using CONCOA's FAX number at 1-757-422-3125 or CONCOA's E-MAIL at info@concoa.com

CONCOA accepts no responsibility for damage or injury if this product is modified in any way.

CONCOA assumes/accepts no liability or responsibility for damage to individuals or equipment that may occur when using this product

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DESCRIPTION OF PRODUCT

The CONCOA 24V Altos 2™ system monitor reports the status of up to 2 individual points of observation. Ideal for monitoring automatic switchovers and other fail-safe gas delivery installations with pressure switch or transducer pressure monitoring capability. The reading for 4-20mA input signals or contact closure status for pressure switches or dry contacts will be displayed locally on a 2.9" LCD screen for up to 2 channels. The statuses of all inputs are also displayed locally with high visibility multicolor LEDs that turn red when an input exits its normal condition. Additionally, status may be accessed through three dry contact relay outputs, one for each input channel and a master alarm.

POWER REQUIREMENTS

CONCOA Supplied Power:

CONCOA provides a universal 120/240 VAC 50/60Hz, 19W external power adapter.

Customer Supplied Power:

Internally, the Altos2 needs a 24 VDC, 19W power source via a cable with 3/16" Quick Connect Receptacle termination, "Ultra-Fast" style, fully insulated.

ALARM OUTPUT RELAY SPECIFICATIONS:

Contacts:	Normally Open/ Normally Closed Dry Contact
Contact Rating:	24 volts DC @ 1 amp Max.

UNDERSTANDING ALARM OPERATION

Figure 1

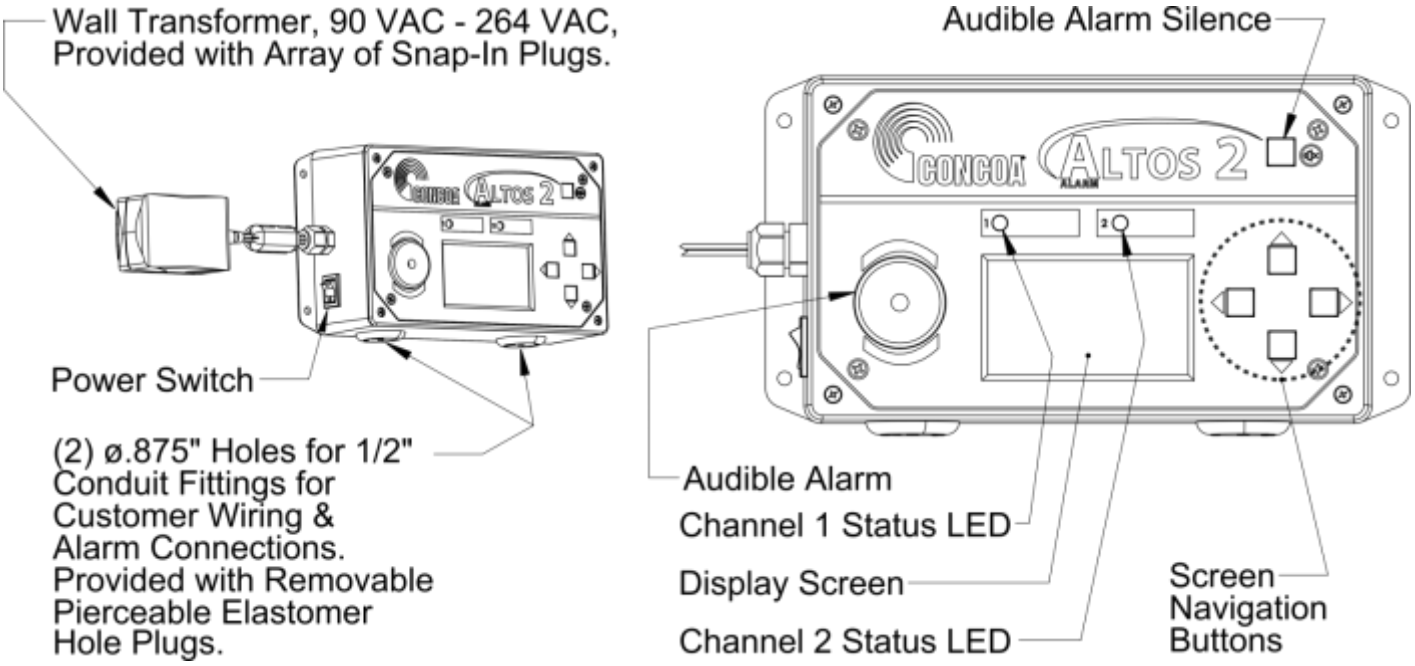


Figure 1 shows the location of the various inputs, outputs, and indicators for the 24V Altos 2™. The 24V Altos 2™ has a universal power supply.

Input signals coming from external devices are connected to the 24V Altos 2™ via individual wires through a 1/2" conduit connection in the bottom of the enclosure to a terminal strip.

The 24V Altos 2™ provides output relay signals to indicate the state of channel 1, 2, and the master alarm. The master alarm is engaged when either channel is in alarm with signals brought out through terminal connectors consisting of 3 terminal blocks. Each terminal block contains a common voltage input, a normally-closed contact, and a normally-open contact. Figure 1 shows a view of the front panel which is laid out with two status lights representing channels 1 and 2. The indicator lights are bi-colored LEDs so that the same light can be turned ON as either a green indicator or a red indicator. A green LED indicates a normal condition. A red LED indicates an alarm condition. If the option has been enabled, a blinking red LED indicates that both channels are in alarm.

On the left side of the front panel, a speaker is used to provide an audible indication of an alarm condition. The alarm silence button in the upper right portion of the front panel allows the operator to silence the audible alarm even while an alarm condition still exists.

In the center of the front panel is a 2.9" diagonal LCD screen used for displaying channel 1 and 2 status as well as system configuration menus. On the right side of the screen are four directional arrows used for navigating the configuration menu.

The 24V Altos 2™ allows for a 4-20mA input signal from any device (e.g., transducer, scale, etc.) or a contact closure input (typical pressure switch) for channel monitoring. The channel configuration is selectable via the system menu.

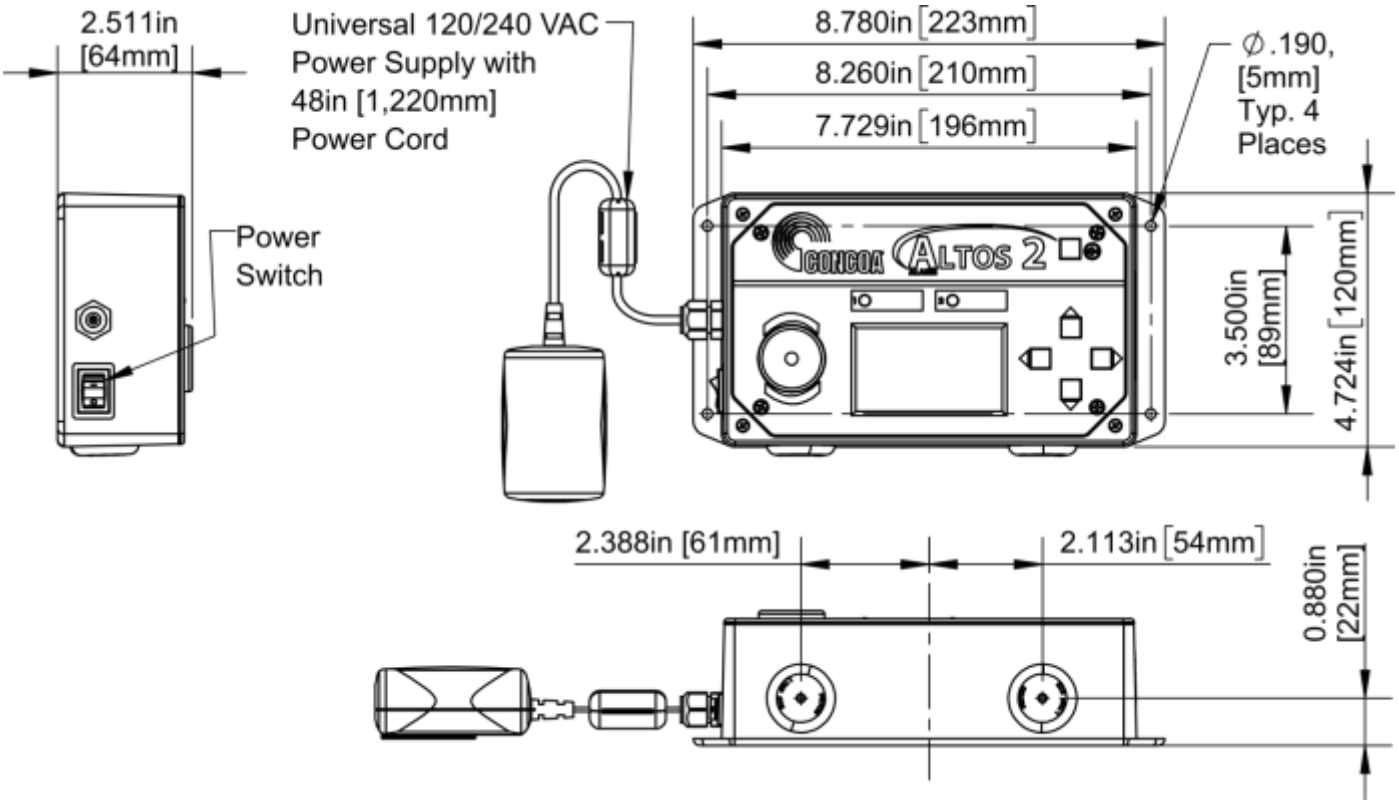
The 4-20mA inputs are accessed via a terminal block containing the +24vdc supply line and the signal return for each channel. The channel pressure is displayed on the LCD screen and, depending on the channel alarm configuration and set point, the channel LED with either be green (normal state) or red (alarm state).

The contact closure inputs are also accessed via a terminal block containing a +24vdc supply line and a signal return for each channel. The 24V Altos 2™ can use normally closed (N.C.) or normally open (N.O.) contact signals from the external inputs to determine the state of the alarms. The normal conditions of these alarms are customizable via the configuration menu.

If there are no alarm conditions, the 24V Altos 2™ will turn on the green indicator next to the status being monitored. When an alarm condition occurs, the color of the indicator next to its status changes from green to red. At the same time, the audible buzzer in the 24V Altos 2™, if enabled, will begin to sound. The LCD screen will display the current channel pressure or whether the contact is open or closed depending on the channel's configuration. The set of contacts representing this alarm condition will alarm in the relay output section of the 24V Altos 2™.

MOUNTING REQUIREMENTS

Figure 2



INSTALLATION INSTRUCTIONS

After mounting the 24V Altos 2™ to the wall, wire any monitored devices through the conduit connections and to the input terminal blocks (see Figures 3-17, Table 1). If using the relay output of the 24V Altos 2™ to connect to another alarm or system, attach wires to the relay output terminal blocks (see Figure 3, Table 1).

Turn 24V Altos 2™ on by plugging the unit directly into a wall outlet and turning the power switch on the left side of the unit to the on position. The system may be tested once it is connected to an external device by tripping the external alarm, causing the corresponding input LED to turn red.

CONNECTING EXTERNAL INPUT DEVICES TO THE 24V ALTOS 2™

The 24V Altos 2™ is designed to interface with up to 2 external 4-20 mA input signals (transducers by default) or any dry contact inputs depending on the channel configuration. The external device wires (+24Vdc out, signal in) are brought in through a conduit connector on the left side of the box and connected to terminal blocks on the left hand side of the circuit board. Figures 3-17 and Table 1 outline how to connect various CONCOA products to the 24V Altos 2™.

The recommended cable for this assembly is 18-26 AWG wire (Alpha # 1176C or equivalent). The length of each cable should be limited to 500 feet for pressure transducers and 1500 feet for dry contact inputs.

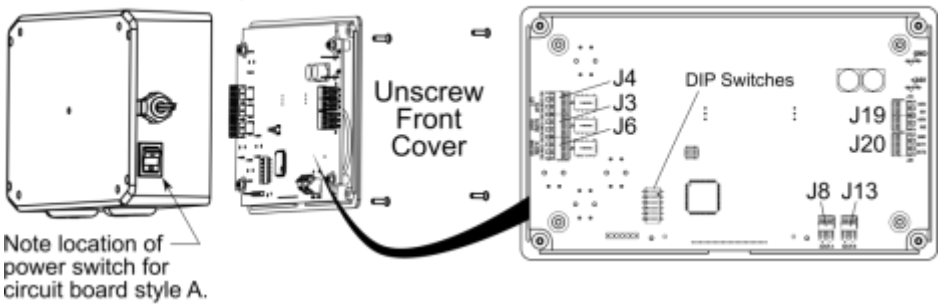
After cutting the cable to length, remove the outer jacket to expose approximately 3/4 inch of the internal conductors on both sides of the cable. Strip away 1/4-inch of the insulation on each of the conductors, unscrew the terminal block, insert wire, and tighten screw. Test to ensure the wire does not pull out of the connector.

Table 2 shows common wire part numbers that are available to connect to various CONCOA devices. Contact CONCOA for details.

CIRCUIT BOARD STYLES

Your 24V Altos 2™ will have one of the following two styles of circuit board. The style will be indicated by “CV1” or “CE” printed on the product nameplate and box label:

Circuit Board Style A - CV1 Models:



Circuit Board Style B - CE Approved Models::

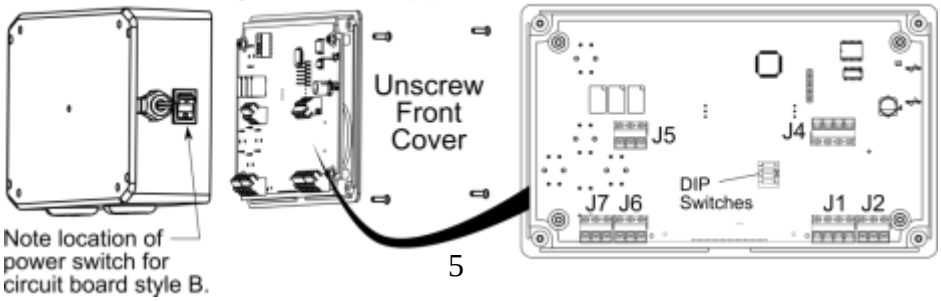
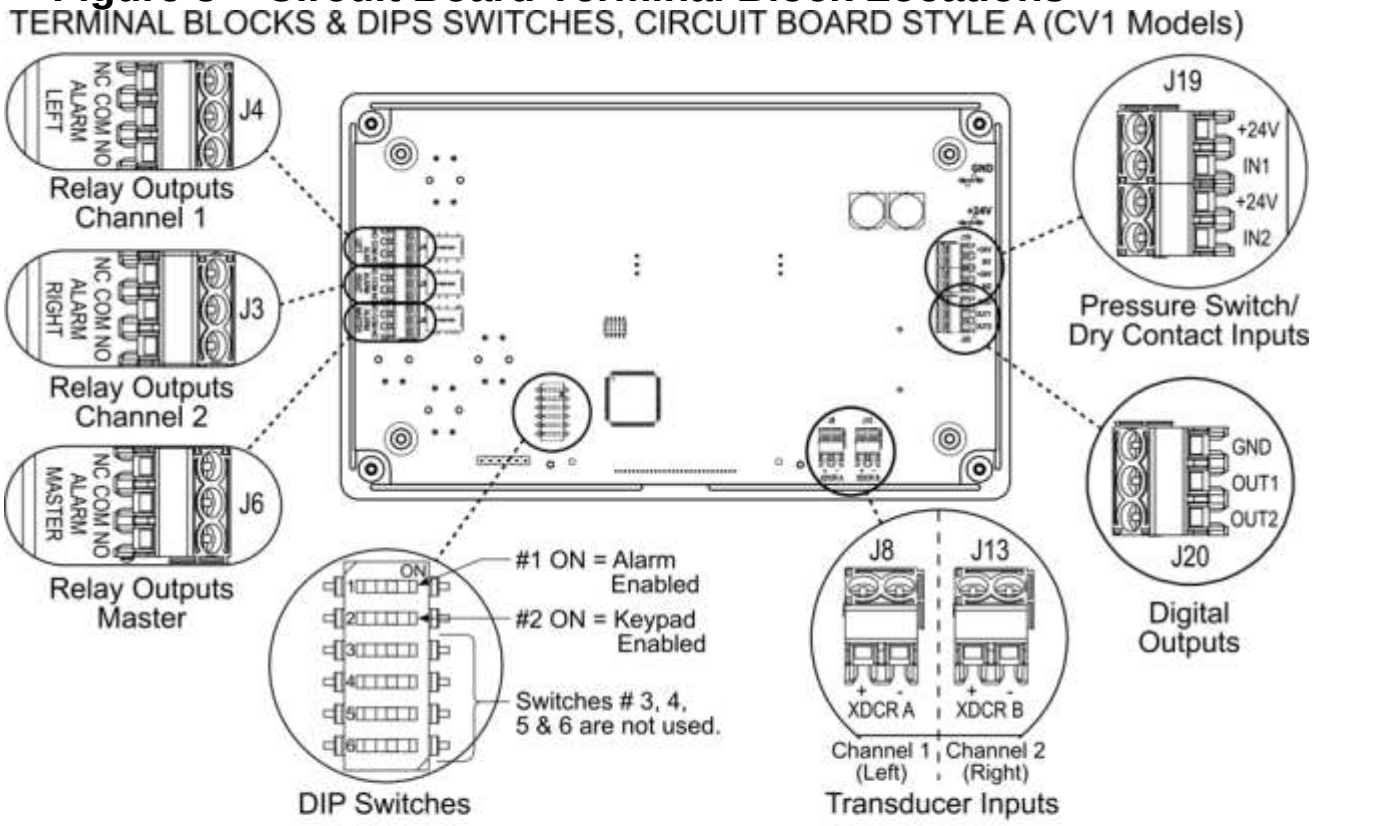


Figure 3 – Circuit Board Terminal Block Locations



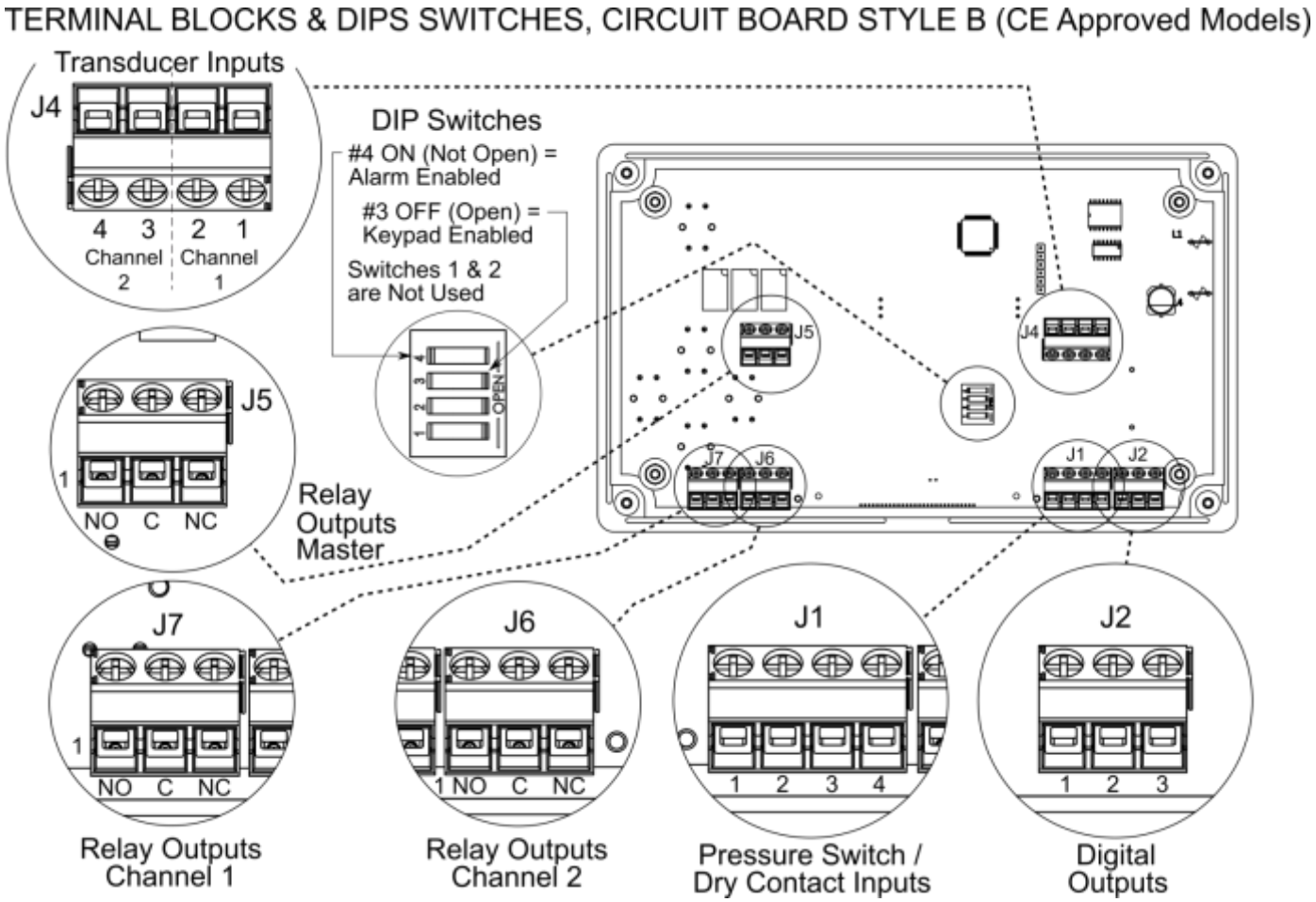


Table 1 – Terminal Block & Switch Descriptions

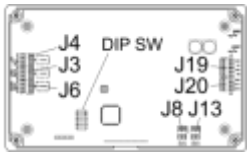
CIRCUIT BOARD STYLE A - CV1 MODELS	
Inputs, Digital	
Terminal	Function
J19 "IN1"	Channel 1 Pressure Switch Signal Return
J19 "+24V" Top	Channel 1 Pressure Switch +24V Supply
J19 "IN2"	Channel 2 Pressure Switch Signal Return
J19 "+24V" Bottom	Channel 1 Pressure Switch +24V Supply
Inputs, Analog	
Terminal	Function
J8 "XDCR A -"	Channel 1 Transducer Signal Return (Normally Left Side)
J8 "XDCR A +"	Channel 1 Transducer +24V Supply (Normally Left Side)
J13 "XDCR B -"	Channel 2 Transducer Signal Return (Normally Right Side)
J13 "XDCR B +"	Channel 2 Transducer +24V Supply (Normally Right Side)
Outputs, Digital	
J20 "GND"	System Ground
J20 "OUT 1"	Channel 1 Digital Output
J20 "OUT 2"	Channel 2 Digital Output
Outputs, Channel 1	
Terminal	Function
J4 "NC"	Channel 1 Normally Closed Relay Output
J4 "COM"	Channel 1 Relay Common
J4 "NO"	Channel 1 Normally Open Relay Output
Outputs, Channel 2	
Terminal	Function
J3 "NC"	Channel 2 Normally Closed Relay Output
J3 "COM"	Channel 2 Relay Common
J3 "NO"	Channel 2 Normally Open Relay Output
Outputs, Master	
Terminal	Function
J6 "NC"	Master Normally Closed Relay Output
J6 "COM"	Master Relay Common
J6 "NO"	Master Normally Open Relay Output
DIP Switches	
Switch	Function
SW5-1	ON to Enable Audible Alarm
SW5-2	ON to Enable Keypad
SW5-3	Reserved
SW5-4	Reserved
SW5-5	Reserved
SW5-6	Reserved

CIRCUIT BOARD STYLE B - CE APPROVED MODELS	
Inputs, Digital	
Terminal	Function
J1-1	Channel 1 Pressure Switch Signal Return
J1-2	Channel 1 Pressure Switch +24V Supply
J1-3	Channel 2 Pressure Switch Signal Return
J1-4	Channel 1 Pressure Switch +24V Supply
Inputs, Analog	
Terminal	Function
J4-1	Channel 1 Transducer Signal Return (Normally Left Side)
J4-2	Channel 1 Transducer +24V Supply (Normally Left Side)
J4-3	Channel 2 Transducer Signal Return (Normally Right Side)
J4-4	Channel 2 Transducer +24V Supply (Normally Right Side)
Outputs, Digital	
J2-1	Channel 1 Digital Output
J2-2	Channel 2 Digital Output
J2-3	System Ground
Outputs, Channel 1	
Terminal	Function
J7-1	Channel 1 Normally Closed Relay Output
J7-2	Channel 1 Relay Common
J7-3	Channel 1 Normally Open Relay Output
Outputs, Channel 2	
Terminal	Function
J6-1	Channel 2 Normally Closed Relay Output
J6-2	Channel 2 Relay Common
J6-3	Channel 2 Normally Open Relay Output
Outputs, Master	
Terminal	Function
J5-1	Master Normally Closed Relay Output
J5-2	Master Relay Common
J5-3	Master Normally Open Relay Output
DIP Switches	
Switch	Function
SW1-4	ON to Enable Audible Alarm
SW1-3	OFF to Enable Keypad
SW1-2	Reserved
SW1-1	Reserved

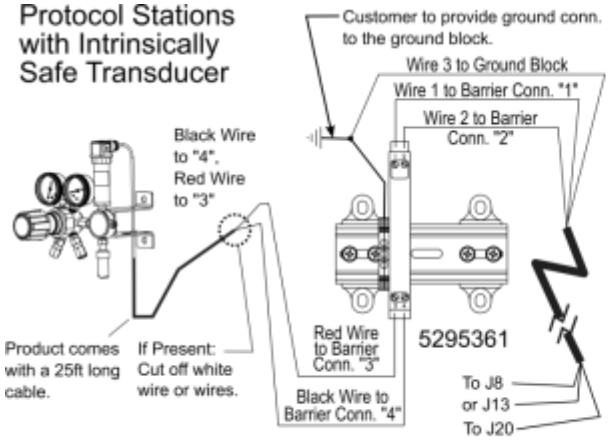
Wiring Instructions for Specific CONCOA Products

Figures 4, 5 & 6 for Circuit Board Style A ("CV1")

Circuit Board Style A (CV1)

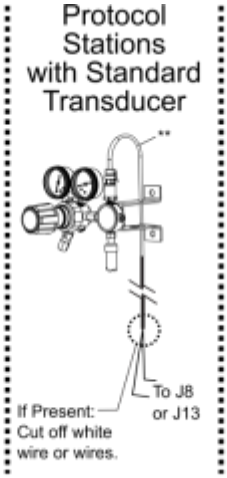


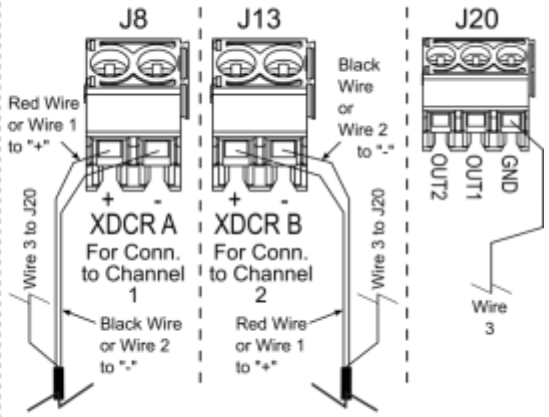
Protocol Stations with Intrinsically Safe Transducer



See Table 2 for cable information.

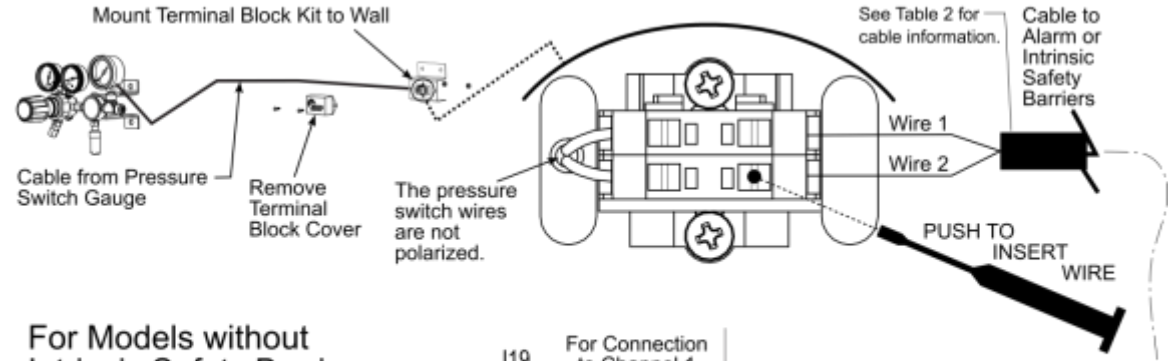
Protocol Stations with Standard Transducer



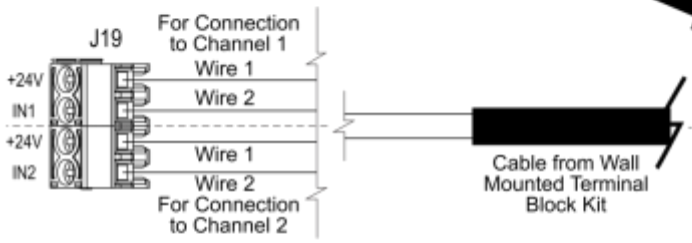


** Product comes with a 6ft long detachable transducer cable.

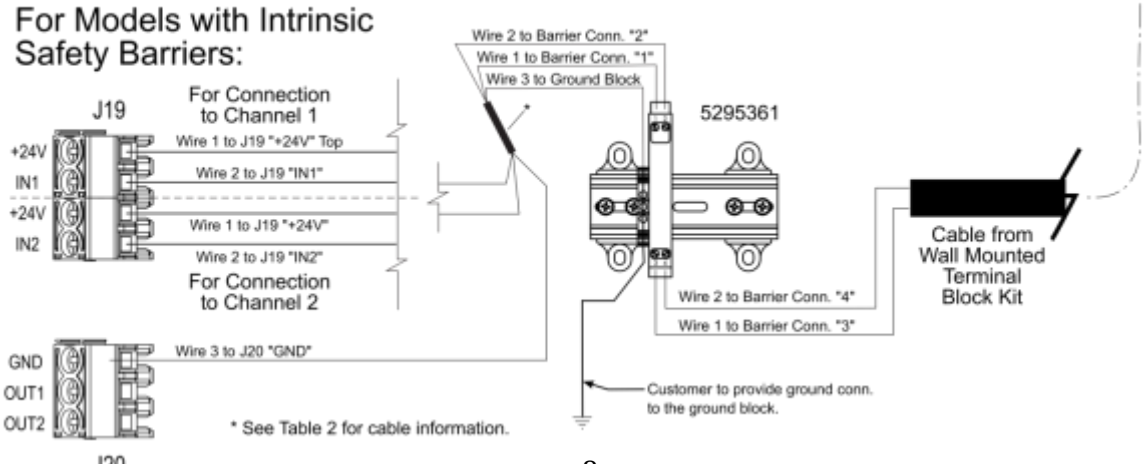
Protocol Stations with Pressure Switch Gauge



For Models without Intrinsic Safety Barriers:

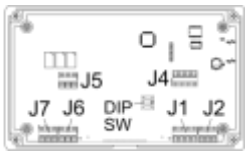


For Models with Intrinsic Safety Barriers:

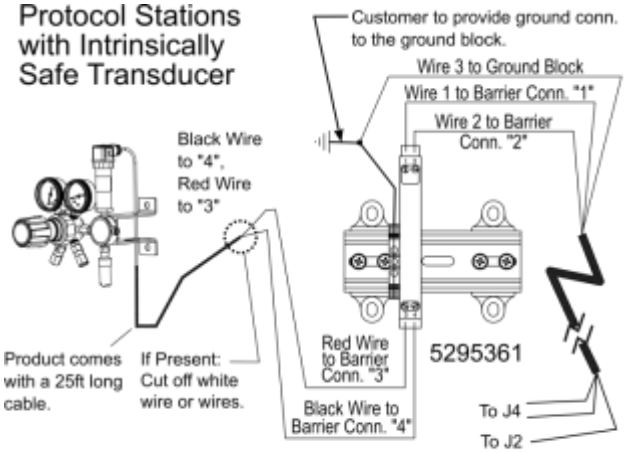


Figures 4, 5 & 6 for Circuit Board Style B (“CE”)

Circuit Board Style B ("CE")

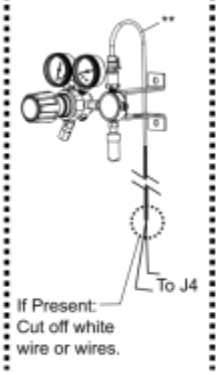


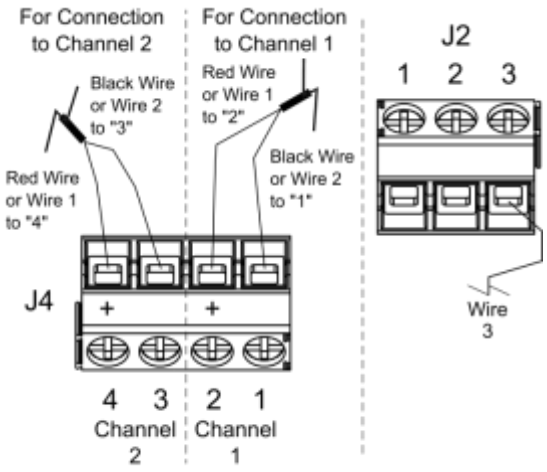
Protocol Stations with Intrinsically Safe Transducer



See Table 2 for cable information.

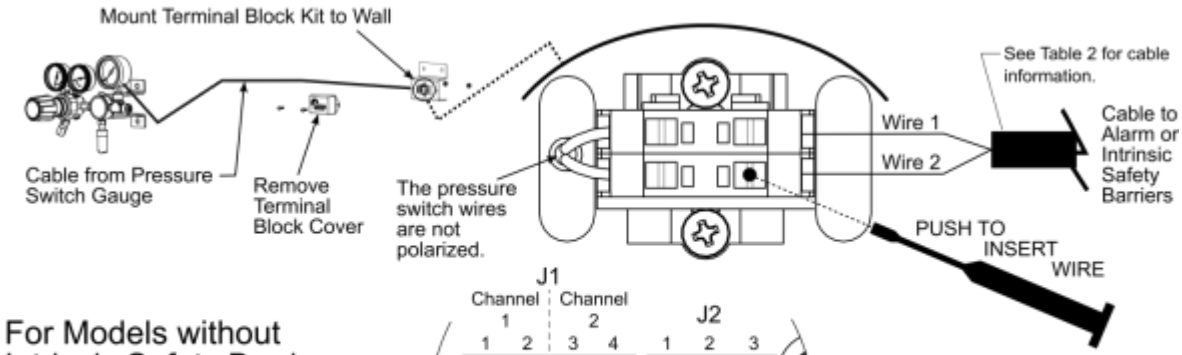
Protocol Stations with Standard Transducer



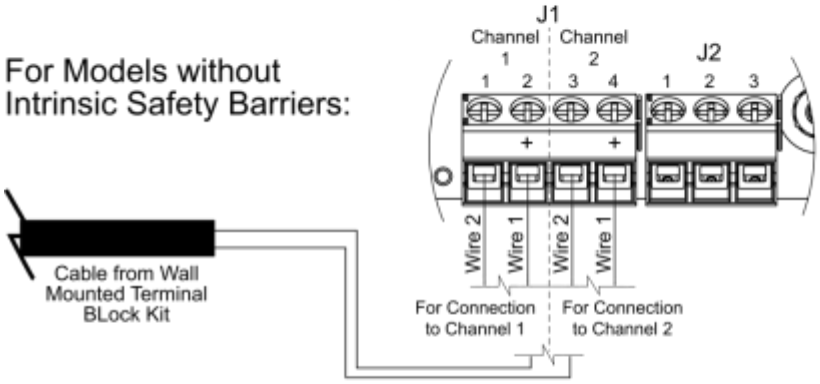


** Product comes with a 6ft long detachable transducer cable.

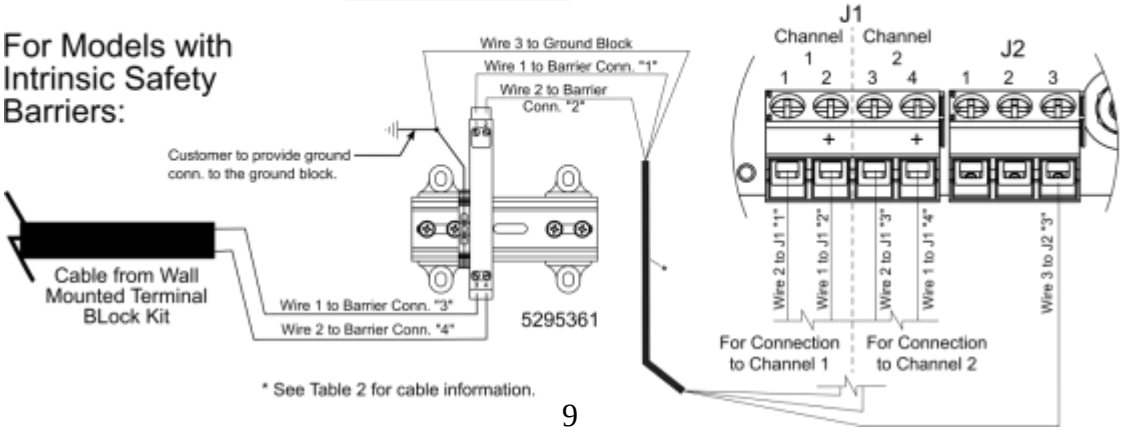
Protocol Stations with Pressure Switch Gauge



For Models without Intrinsic Safety Barriers:

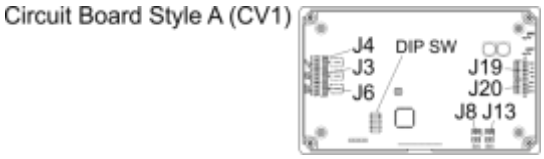


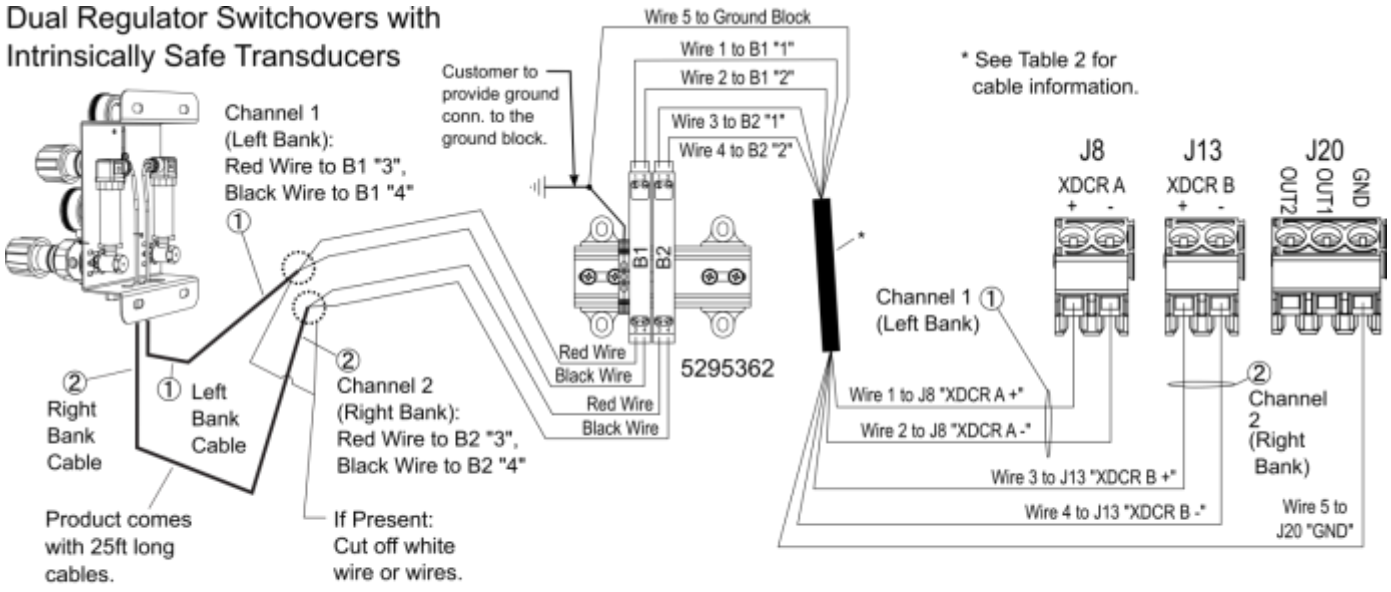
For Models with Intrinsic Safety Barriers:



* See Table 2 for cable information.

Figure 7 for Circuit Board Style A (“CV1”)





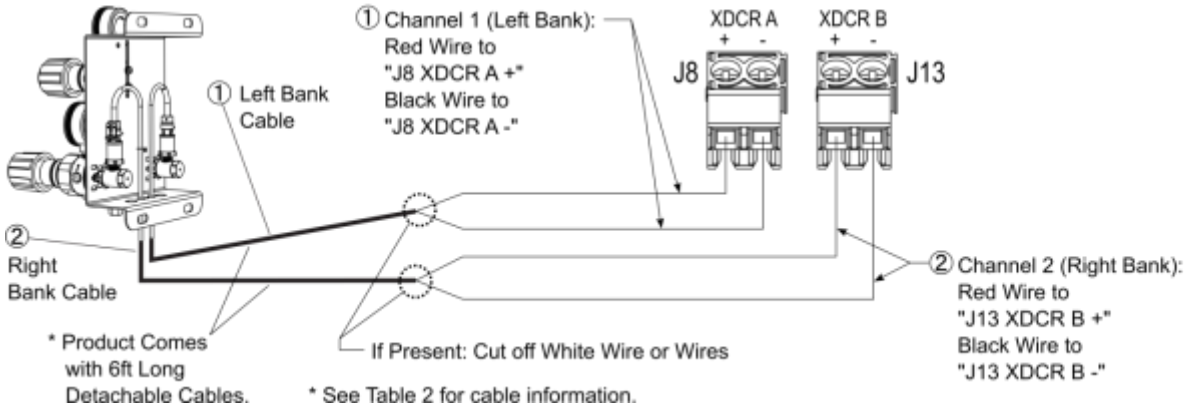
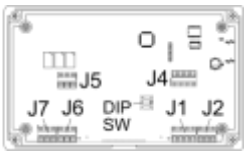
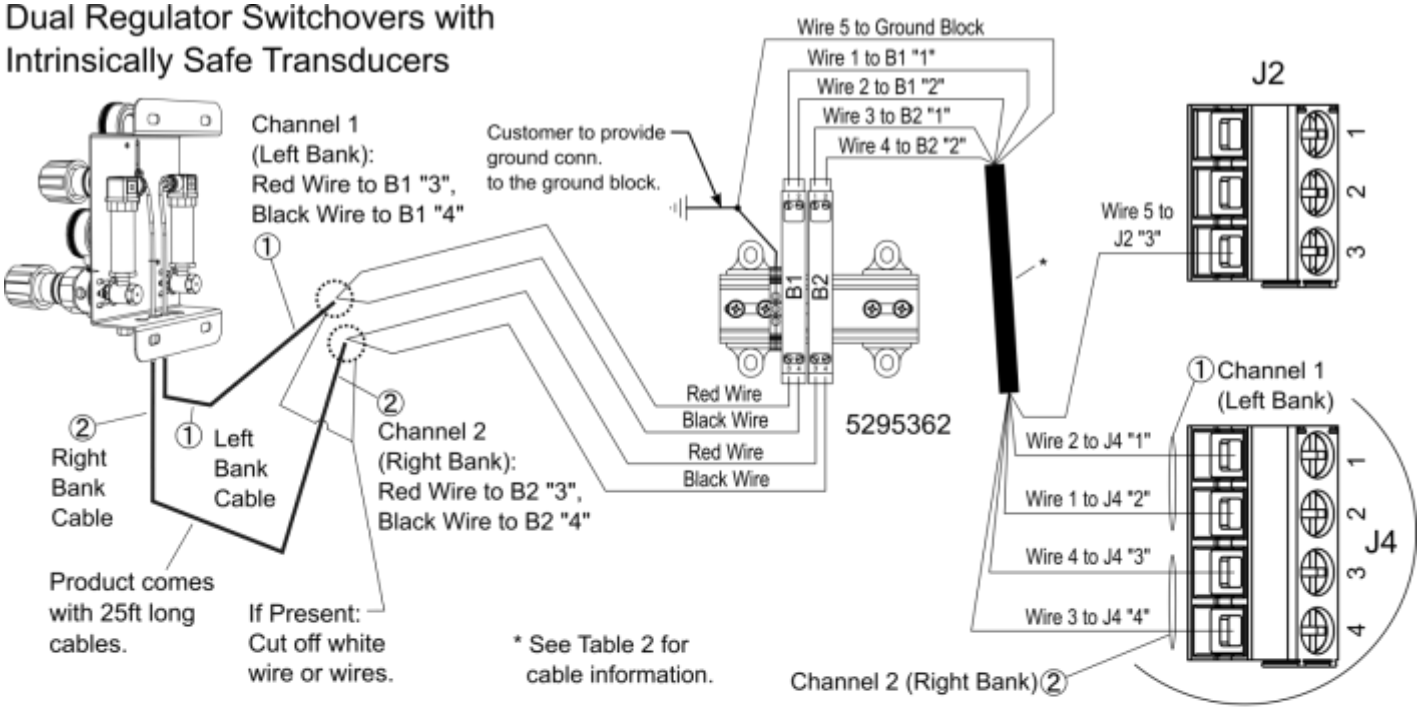


Figure 7 for Circuit Board Style B (“CE”)

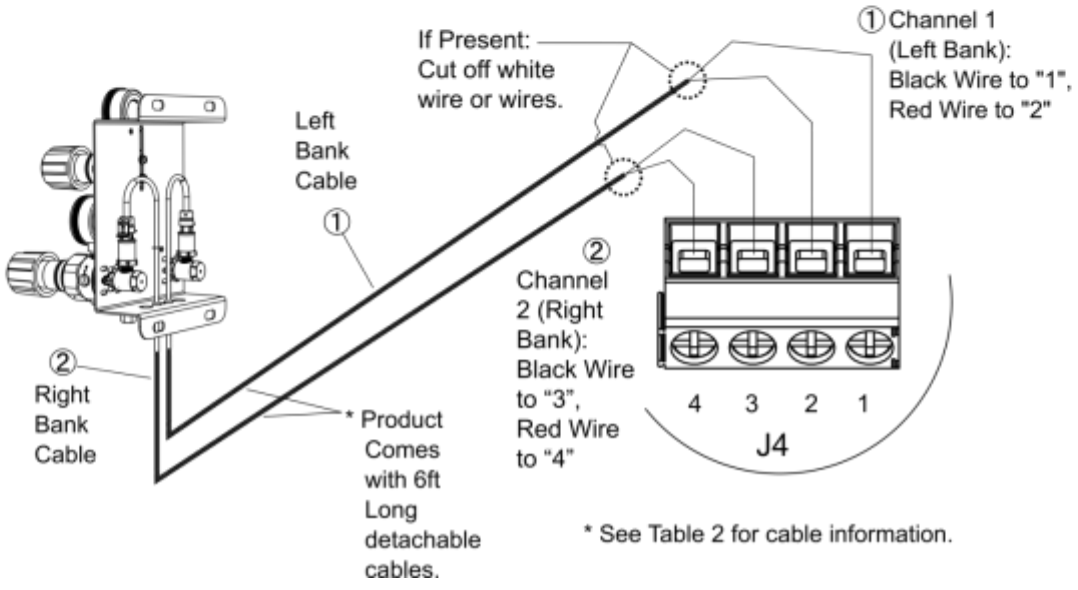
Circuit Board Style B ("CE")



Dual Regulator Switchovers with Intrinsically Safe Transducers

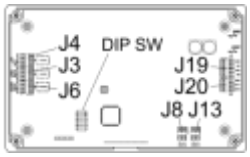


Dual Regulator Switchovers with Standard Transducers

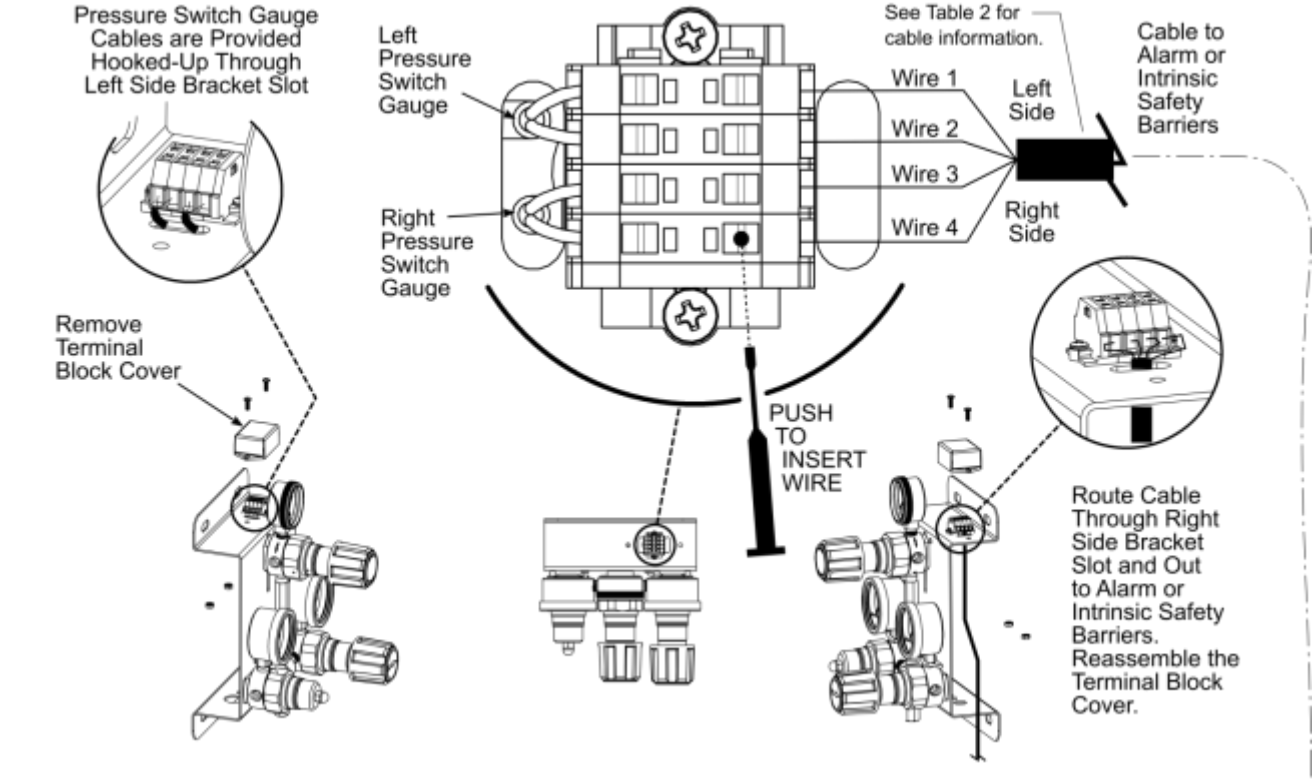


Figures 8 & 9 for Circuit Board Style A ("CV1")

Circuit Board Style A (CV1)

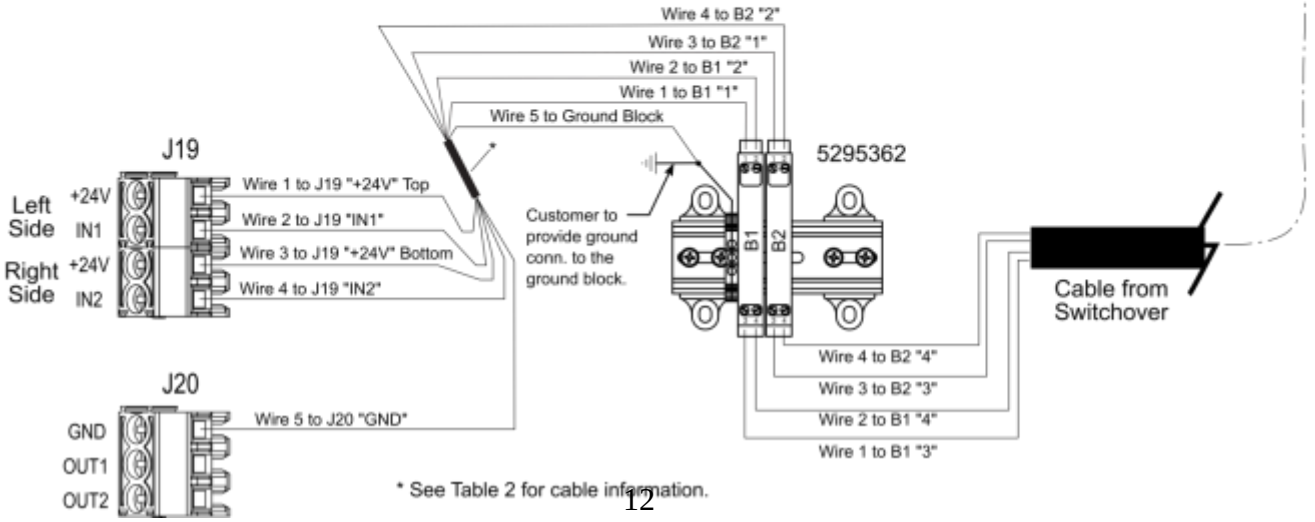


Dual Regulator Switchovers with Pressure Switch Gauges



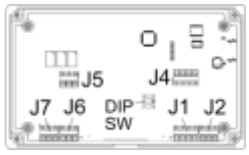
For Models without Intrinsic Safety Barriers:

For Models with Intrinsic Safety Barriers:

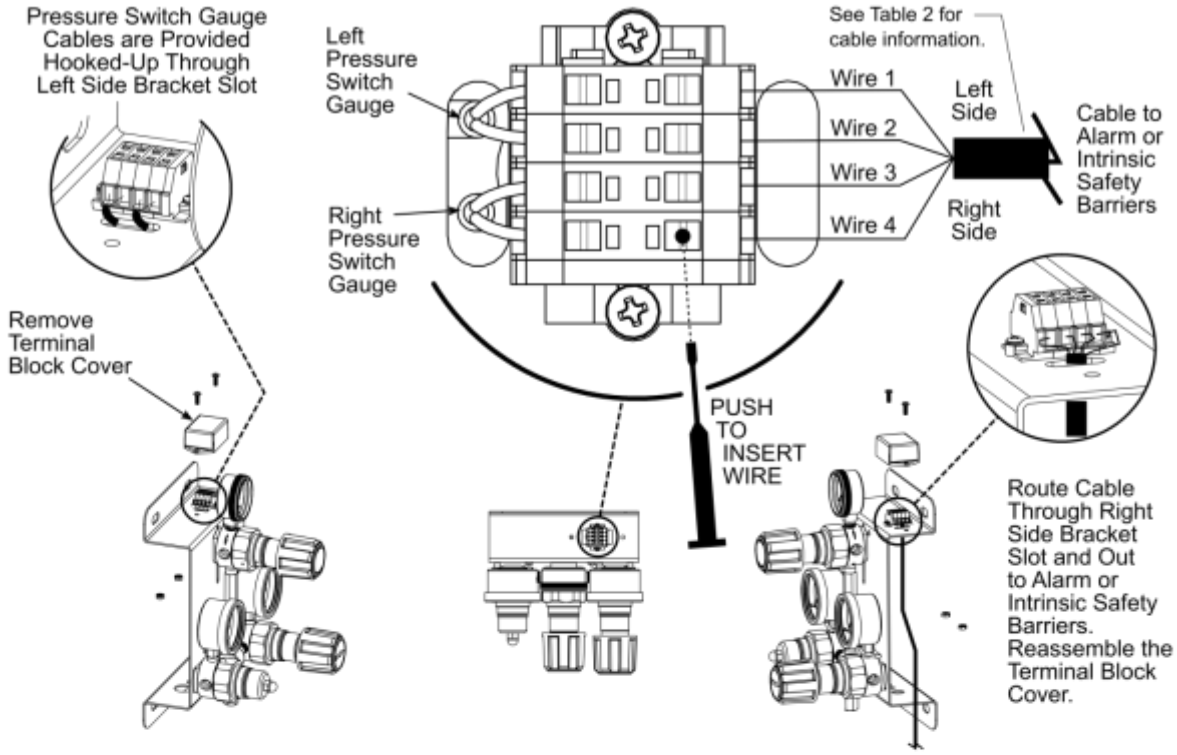


Figures 8 & 9 for Circuit Board Style B (“CE”)

Circuit Board Style B ("CE")



Dual Regulator Switchovers with Pressure Switch Gauges



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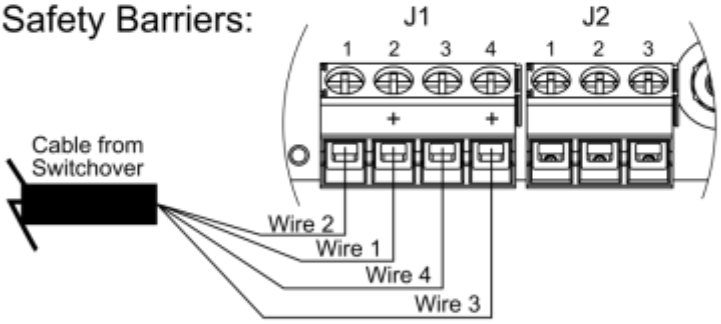


For Models with Intrinsic Safety Barriers:

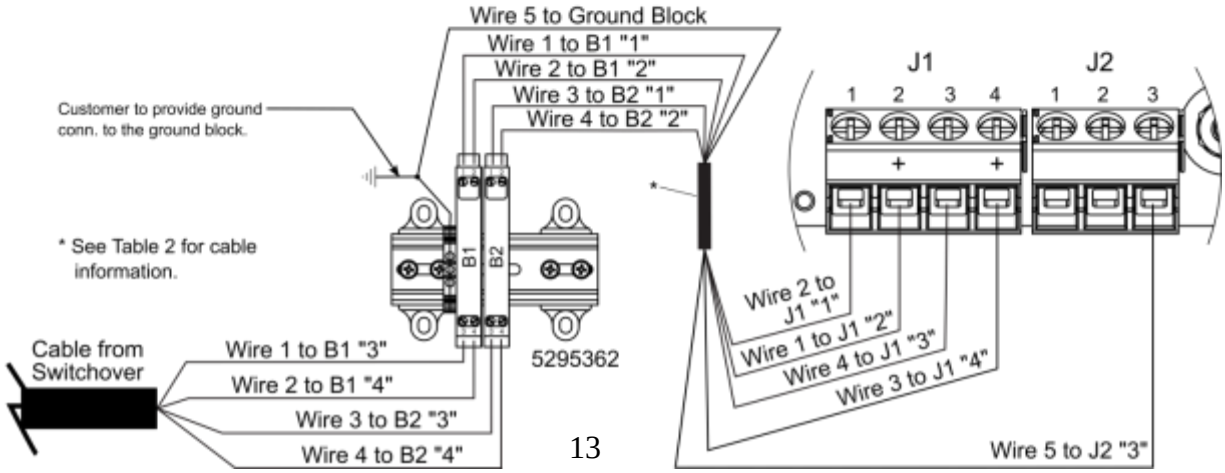
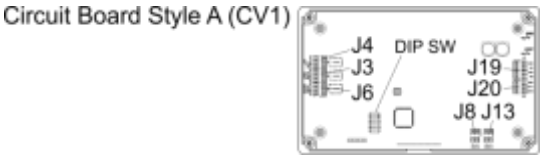
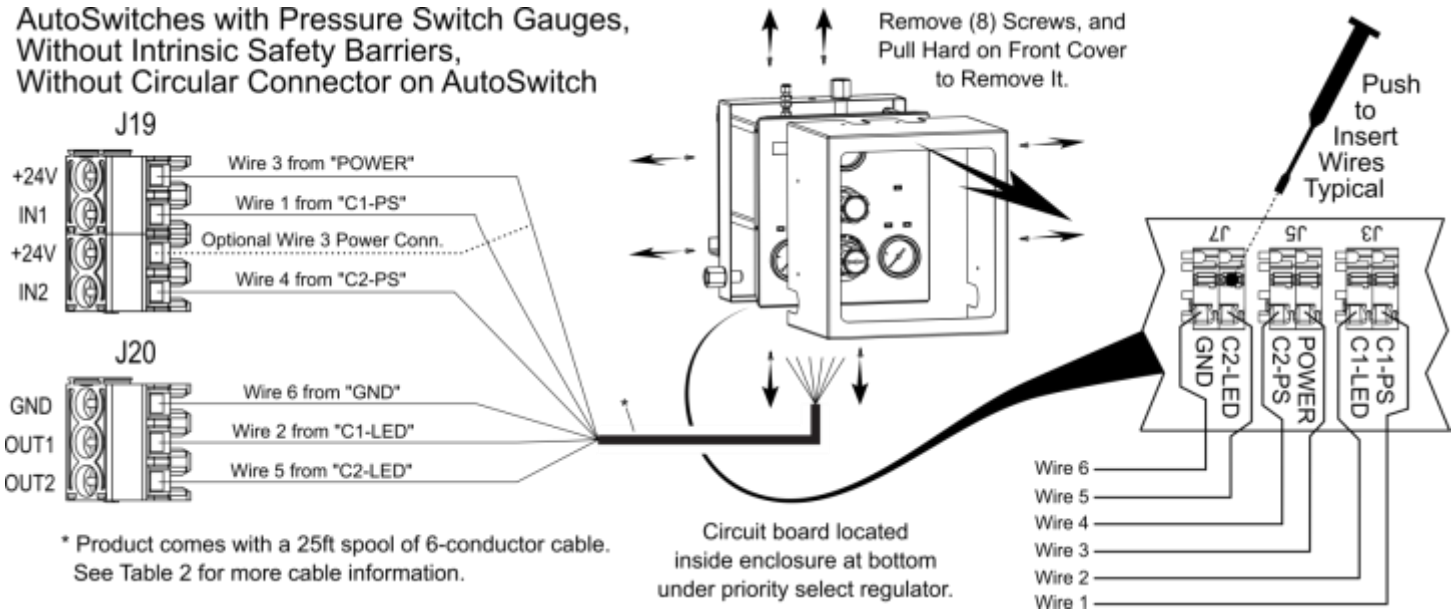
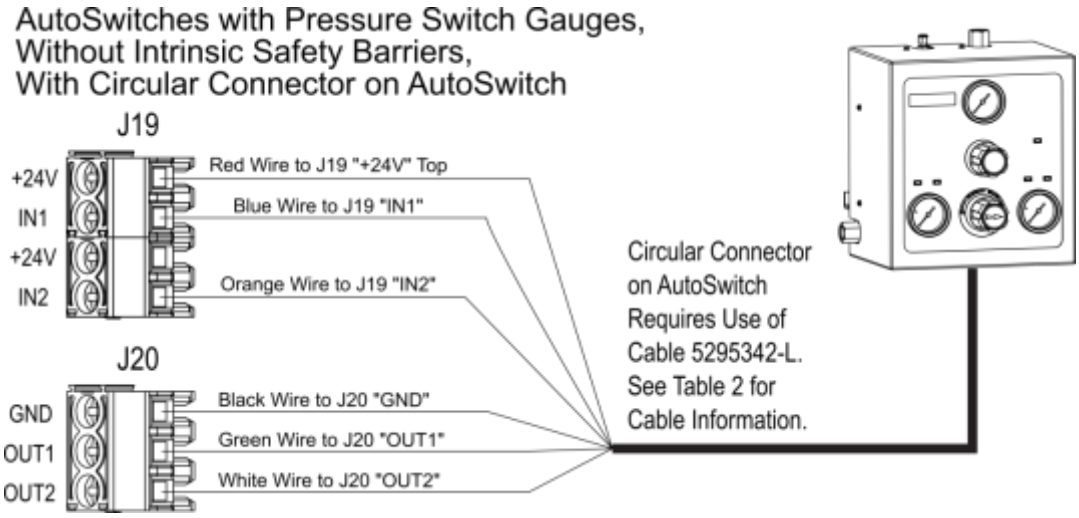


Figure 10 for Circuit Board Style A ("CV1")







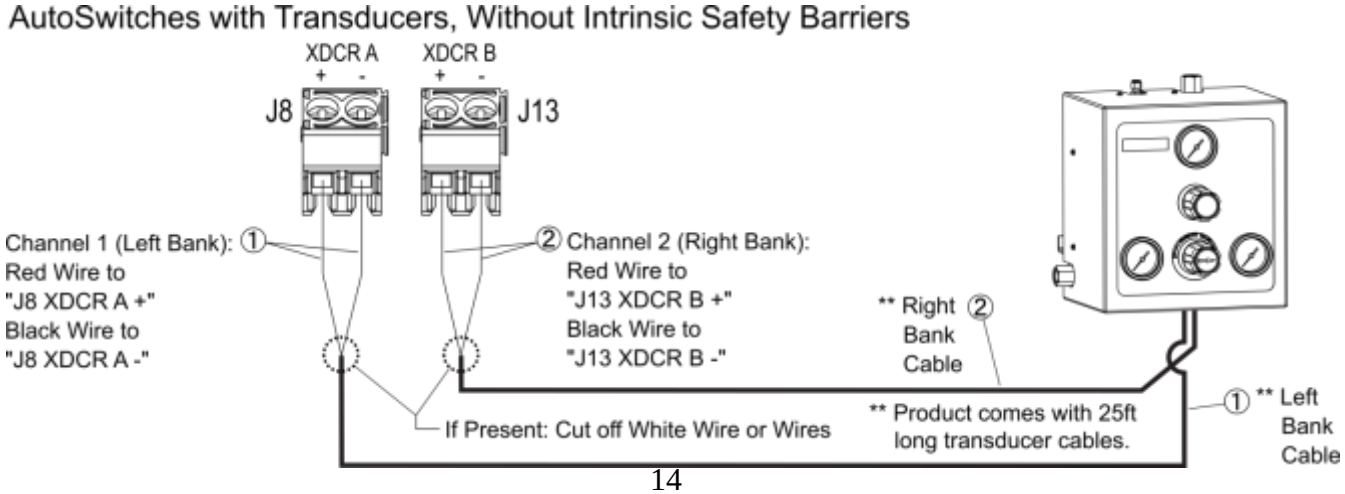
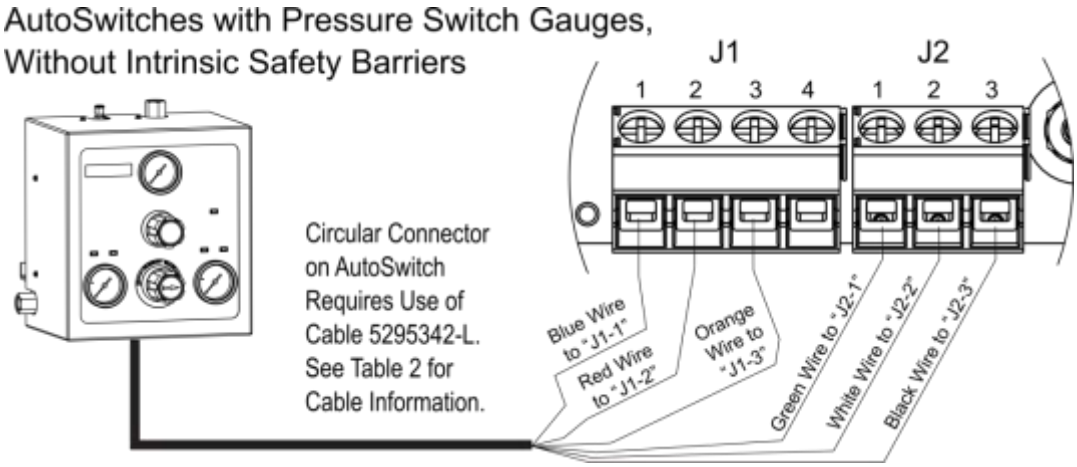


Figure 10 for Circuit Board Style B (“CE”)



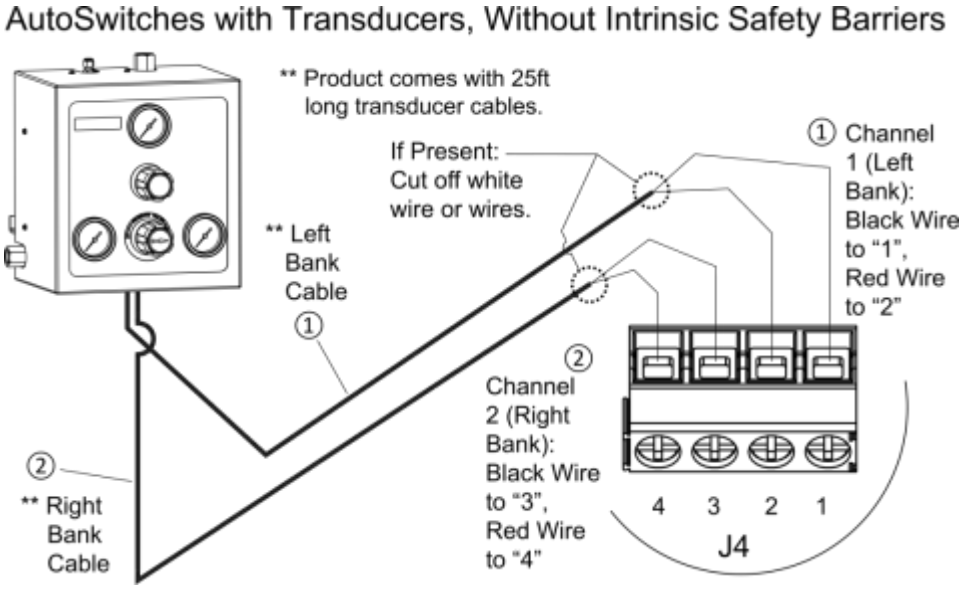
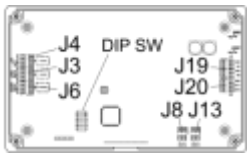


Figure 11 for Circuit Board Style A (“CV1”)

Circuit Board Style A (CV1)



DO NOT USE ALTOS 2 ALARM WITH INTRINSIC SAFETY BARRIERS ON AUTOSWITCHES THAT HAVE PRESSURE SWITCH GAUGES. Intrinsic Safety Barriers Require Use of AutoSwitch Models with Transducers.

AutoSwitches with Transducers, With Intrinsic Safety Barriers

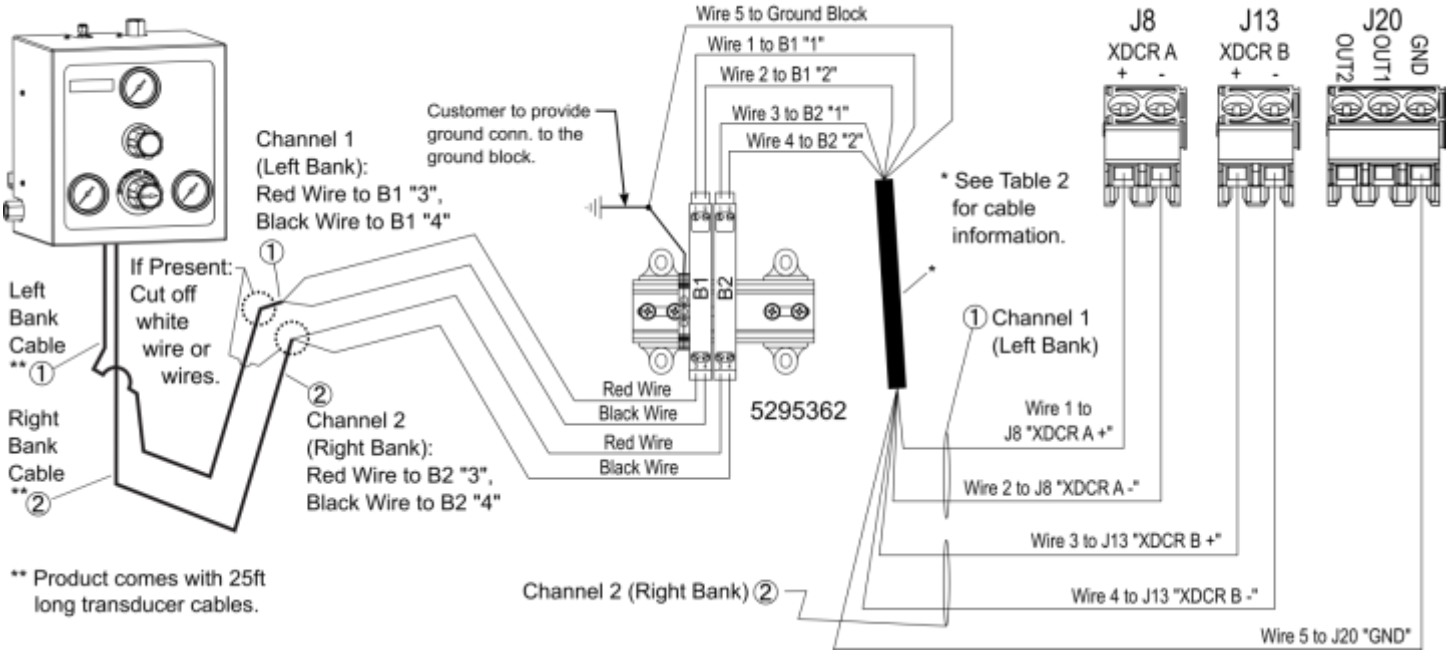
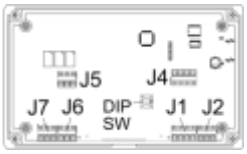


Figure 11 for Circuit Board Style B (“CE”)

Circuit Board Style B ("CE")



DO NOT USE ALTOS 2 ALARM WITH INTRINSIC SAFETY BARRIERS ON AUTOSWITCHES THAT HAVE PRESSURE SWITCH GAUGES. Intrinsic Safety Barriers Require Use of AutoSwitch Models with Transducers.

AutoSwitches with Transducers, With Intrinsic Safety Barriers

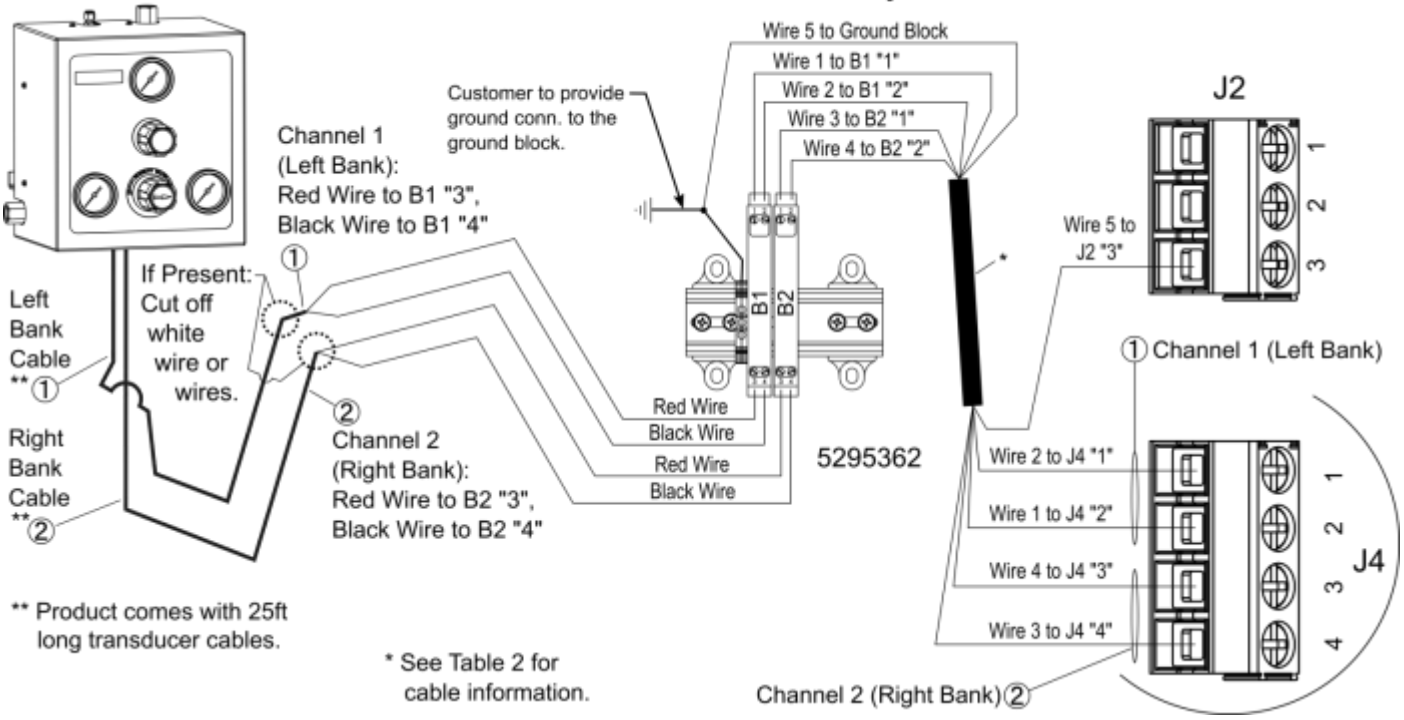
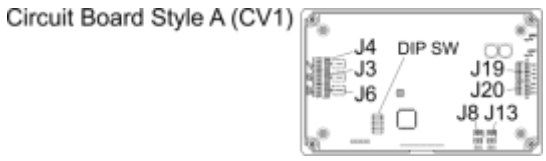


Figure 12 for Circuit Board Style A (“CV1”)



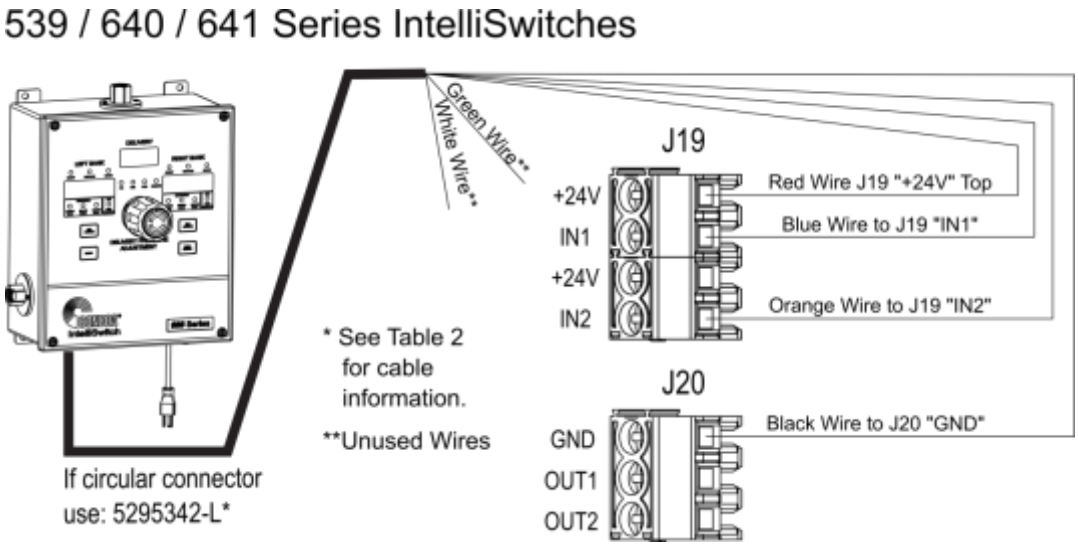


Figure 12 for Circuit Board Style B (“CE”)

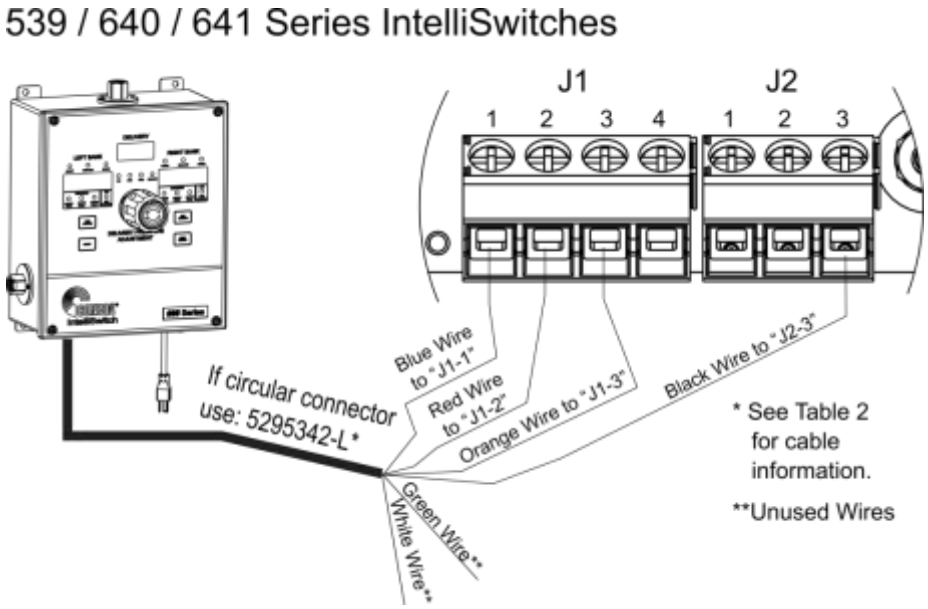
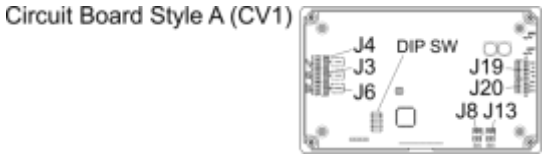


Figure 13 for Circuit Board Style A (“CV1”)



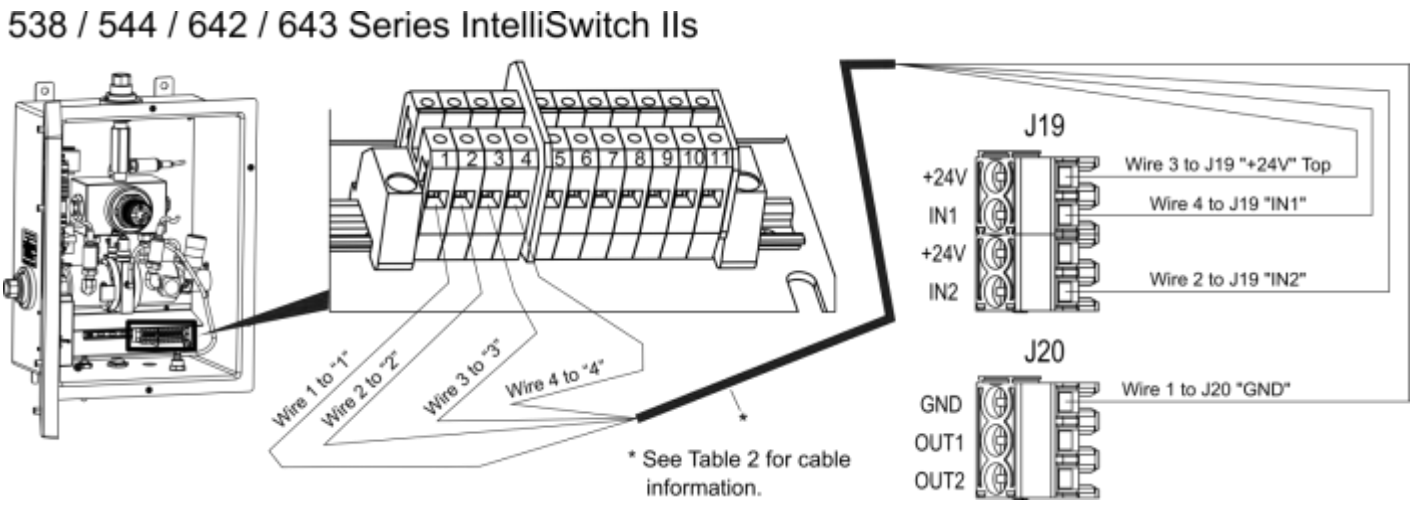


Figure 13 for Circuit Board Style B (“CE”)

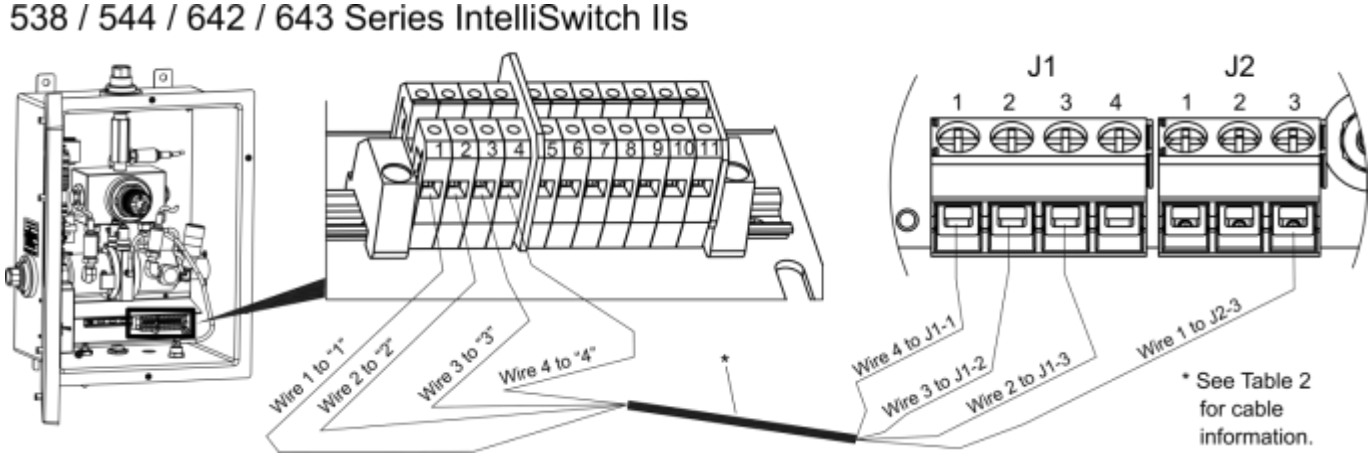
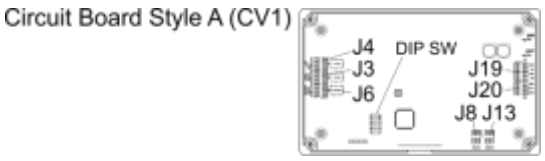


Figure 14 for Circuit Board Style A (“CV1”)



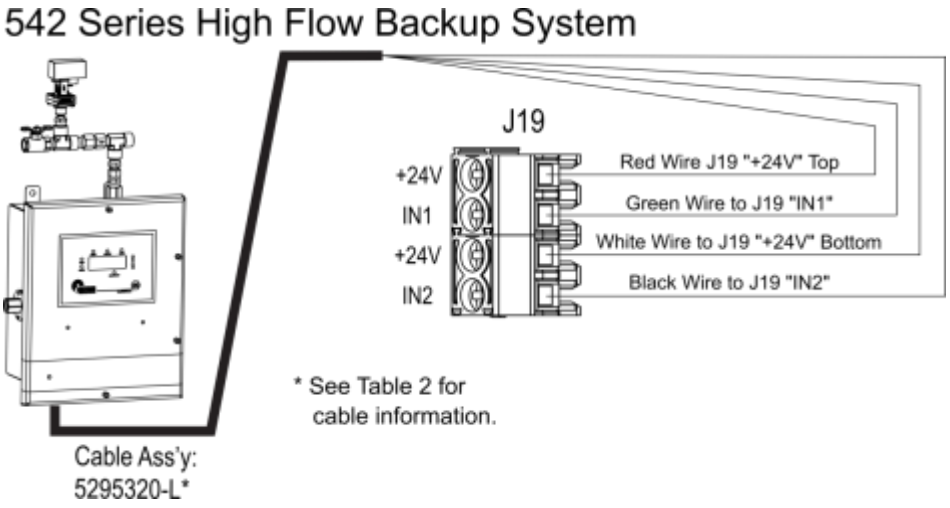


Figure 14 for Circuit Board Style B (“CE”)

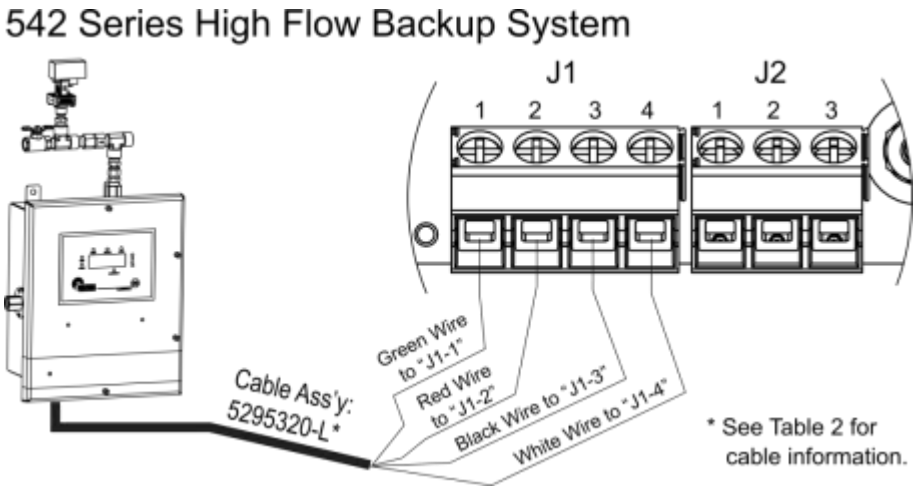


Figure 15 for Circuit Board Style A (“CV1”)

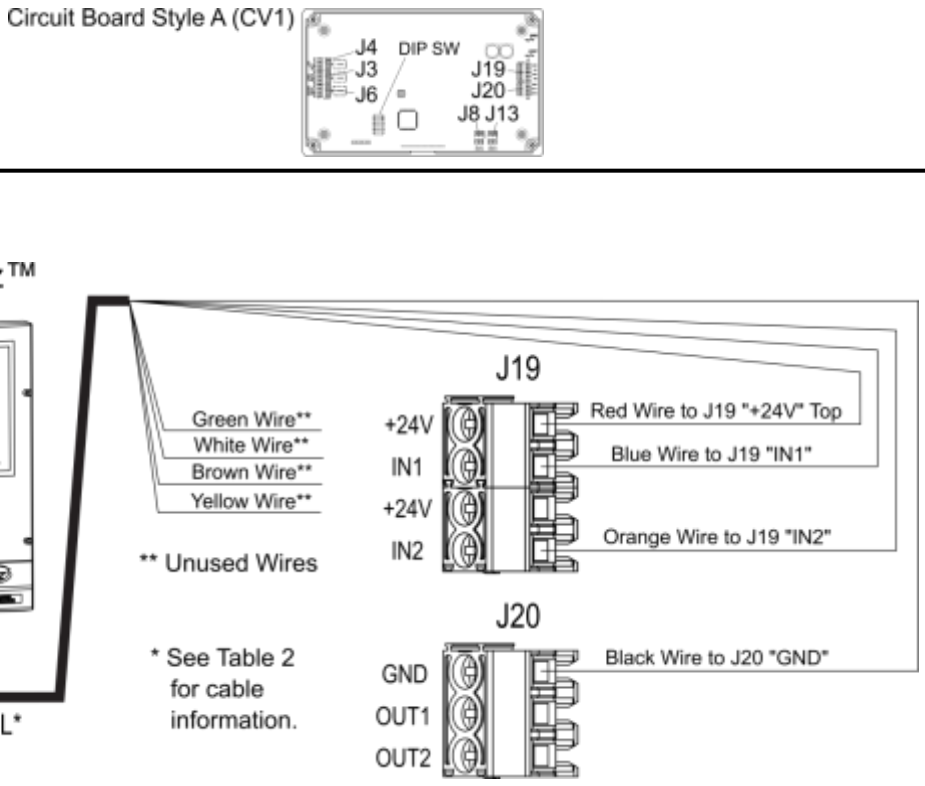
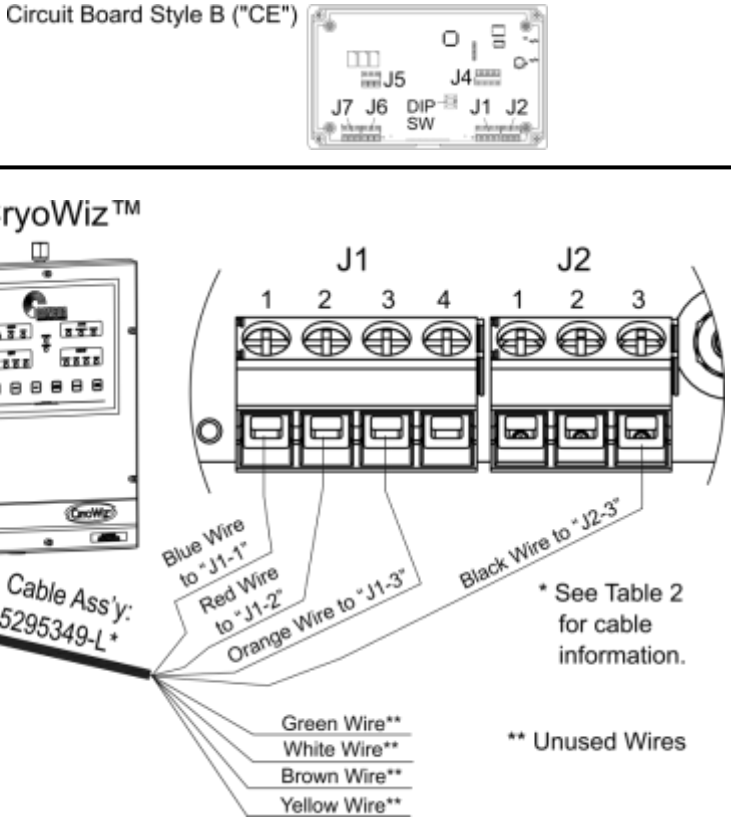
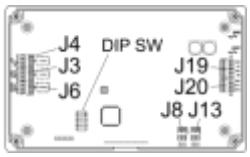


Figure 15 for Circuit Board Style B (“CE”)

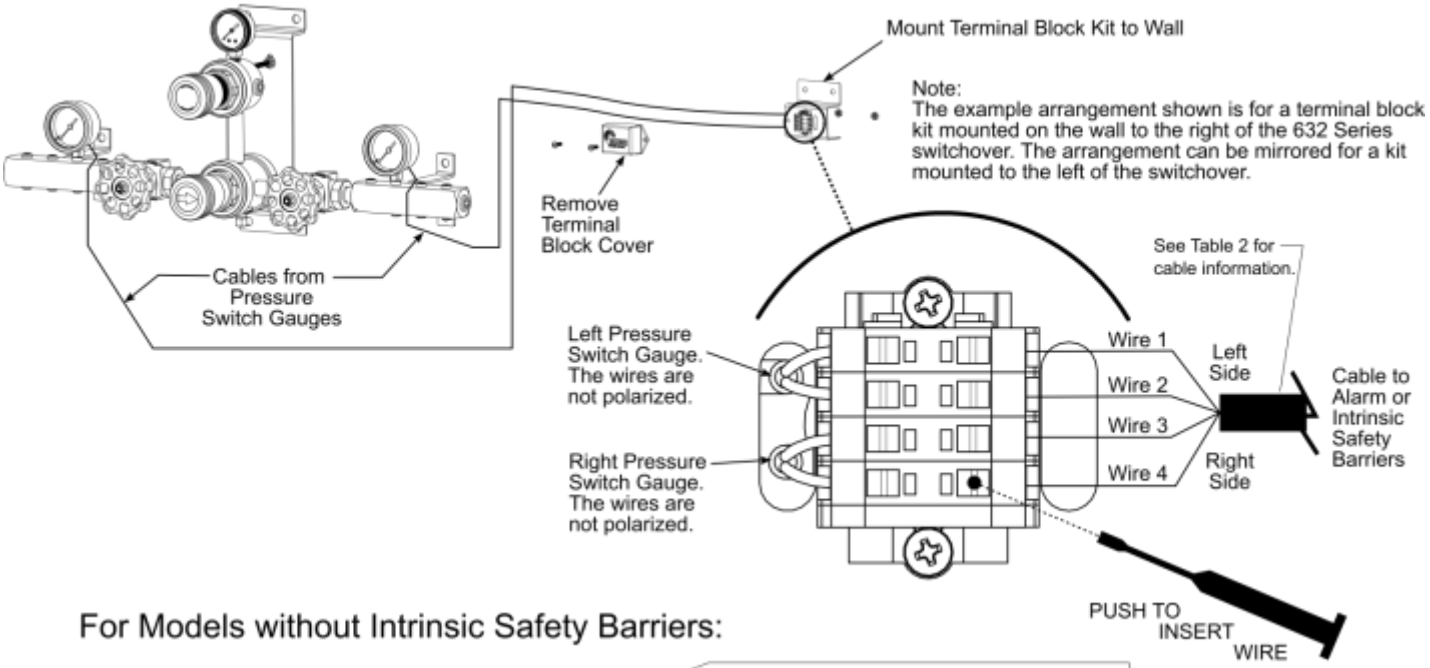


Figures 16 & 17 for Circuit Board Style A ("CV1")

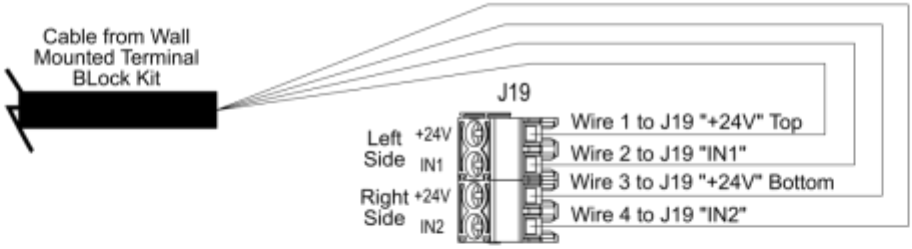
Circuit Board Style A (CV1)



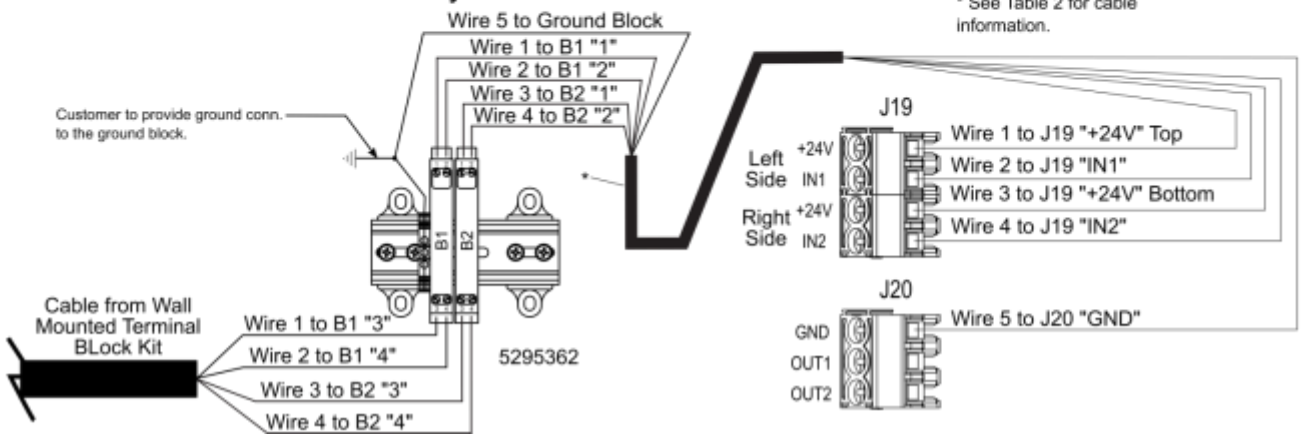
632 Series Switchovers with Pressure Switch Gauges



For Models without Intrinsic Safety Barriers:

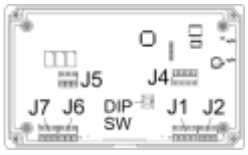


For Models with Intrinsic Safety Barriers:

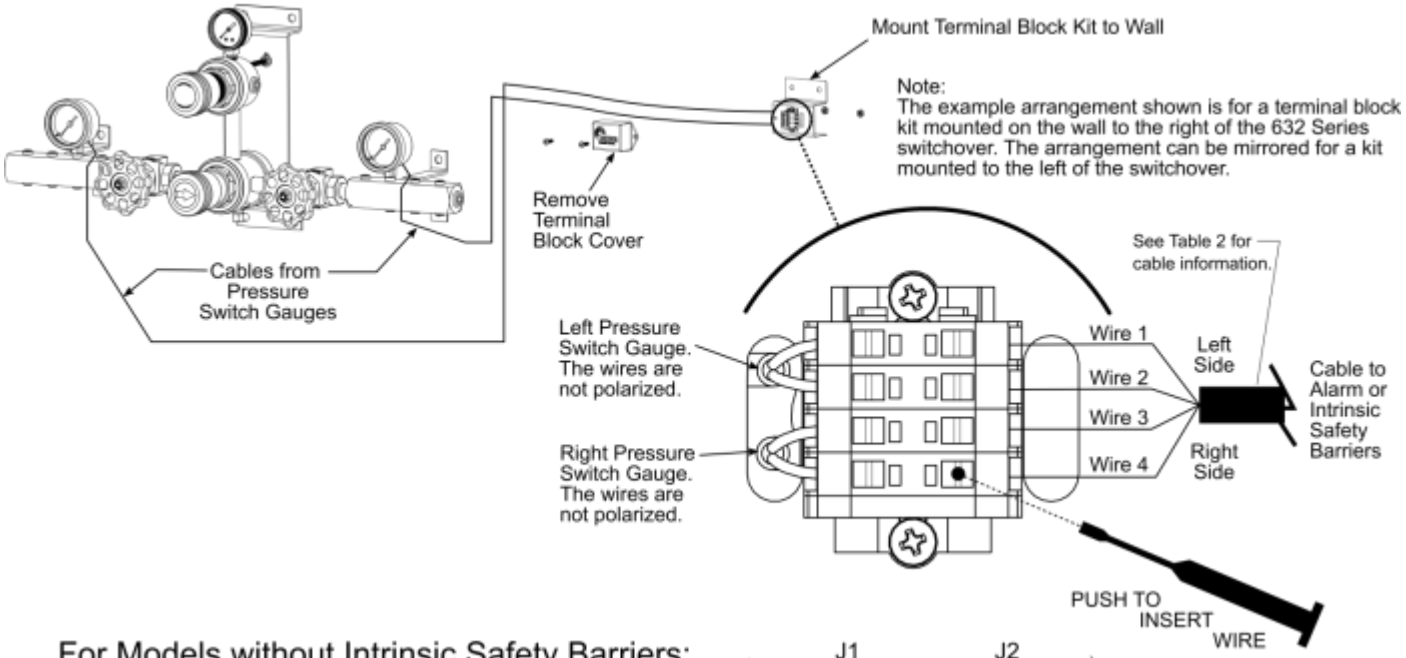


Figures 16 & 17 for Circuit Board Style B (“CE”)

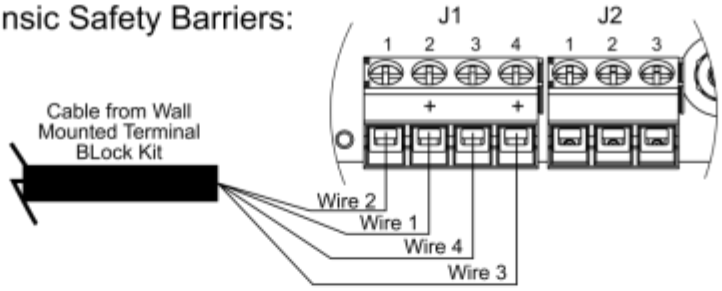
Circuit Board Style B ("CE")



632 Series Switchovers with Pressure Switch Gauges



For Models without Intrinsic Safety Barriers:



For Models with Intrinsic Safety Barriers:

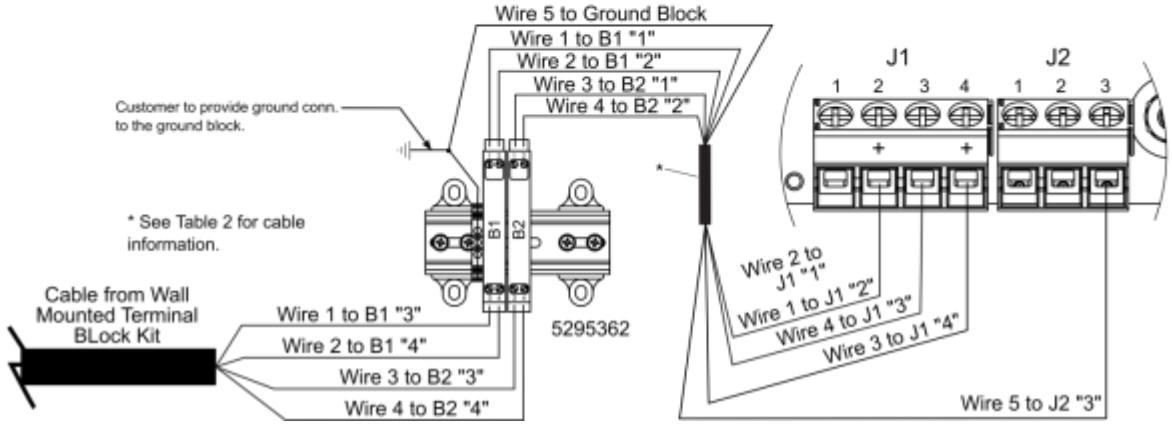


Table 2 – Cable Information

CABLES	
CONCOA Cable Ass'y Part No.	Usage
5295320-L ("L"= length - contact CONCOA for options) 4-Pin Circular Connector x 4 Bare Wires (Red, Green, White, Black)	542 Series High Flow Backup System
5295342-L ("L"= length - contact CONCOA for options) 6-Pin Circular Connector x 6 Bare Wires (Blue, Green, Red, Orange, White, Black)	IntelliSwitch 1
5295349-L ("L"= length - contact CONCOA for options) 8-Pin Circular Connector x 7 Bare Wires (Blue, Red, Orange, Black, White, Green, Brown)	577 Series CryoWiz™
5295360-01-L ("L"= length - contact CONCOA for options) Packard Connector x 2 Bare Wires (Black, Red)	All CONCOA Products with Standard Transducer(s) (Not Applicable for Products with Intrinsically Safe Transducer(s))

The following products will be provided with a 25ft long cable appropriate for your application (customer to cut and strip wires and select usage for wire colors):

- Products with a pressure switch gauge/gauges and a terminal block wiring arrangement.
- Products with intrinsic safety barriers - cable to hook up barriers to remote alarm.
- Products such as the IntelliSwitch II that have only a terminal block for alarm hookup.

Available Cables:

5296002-25-001 = 25ft Long 2 wire cable (wire colors: black, red)
5296002-100-001 = 100ft Long 2 wire cable (wire colors: black, red)

5296003-25-001 = 25ft Long 3 wire cable (wire colors: black, red, white)
5296003-100-001 = 100ft Long 3 wire cable (wire colors: black, red, white)

5296004-25-001 = 25ft Long 4 wire cable (wire colors: black, red, white, green)
5296004-100-001 = 100ft Long 4 wire cable (wire colors: black, red, white, green)

5296006-25-001 = 25ft Long 6 wire cable (wire colors: black, red, white, green, brown, blue)
5296006-100-001 = 100ft Long 6 wire cable (wire colors: black, red, white, green, brown, blue)

5296008-25-001 = 25ft Long 8 wire cable (wire colors: black, red, white, green, brown, blue, orange, yellow)
5296008-100-001 = 100ft Long 8 wirecable (wire colors: black, red, white, green, brown, blue, orange, yellow)

CONNECTING ALARM OUTPUTS

The 24V Altos 2™ provides output signals corresponding to the alarm conditions that it senses, presented through relay contacts, and brought out to terminal connectors on the right hand side of the circuit board connector at the bottom of the alarm.. Route the output relay signals from the 24V Altos 2™ terminal strip via individual wires through the 1/2" conduit opening on the bottom of the enclosure. A total of three relay output terminal strips are on the circuit board; one for each channel and a master alarm signal. Each terminal strip contains the independent common input signal, a normally closed output, and a normally open output. (See Figure 3 for terminal strip locations.)

If using the recommended Normally Open side of the contact then an alarm or a loss of power or an accidently cut alarm wire will result in an open circuit and all three conditions will look the same to a downstream device.

The recommended cable for making an output cable assembly is 18-26 AWG. The length of each cable should be limited to 1500 feet.

After cutting the cable to length, remove the outer jacket to expose approximately 3/4 inch of the internal conductors on both sides of the cable. Strip away 1/4-inch of the insulation on each of the conductors, unscrew the terminal block, insert wire, and tighten screw. Test to ensure the wire does not pull out of the connector.

MUTING AUDIBLE ALARM

It is sometimes desirable to silence the audible alarm on the 24V Altos 2™. This can be accomplished in one of two ways.

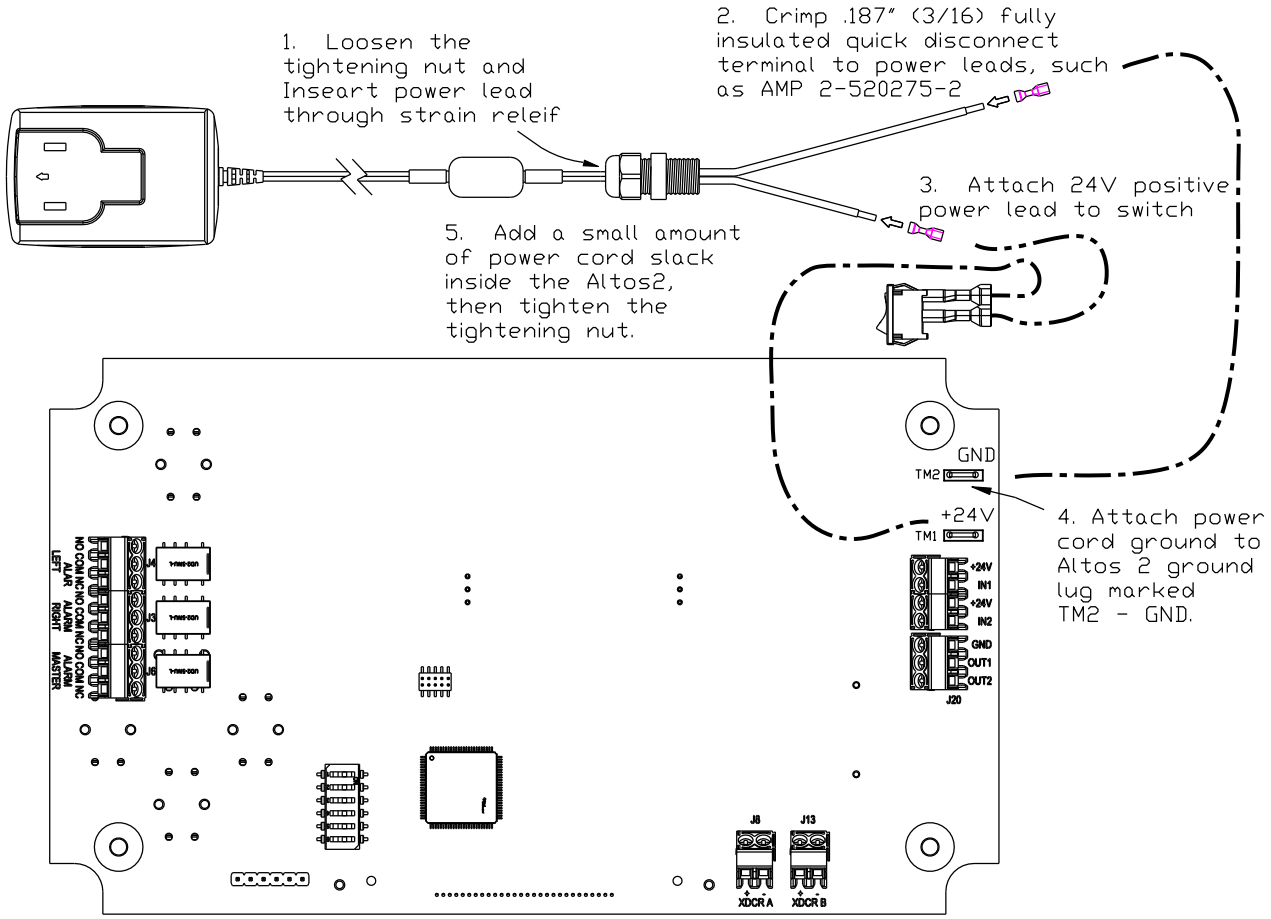
1) Pressing the alarm silence button on the top right hand side of the front panel will temporarily silence the alarm. In this mode, the audible alarm will automatically sound on the next asserted alarm

2) To permanently silence the alarm, power down the unit, open the front cover, and flip SW6-4 off (open) (See Figure 32.).

Wiring Customer Supplied Power

If the customer is supplying their own power adapter, follow these requirements:

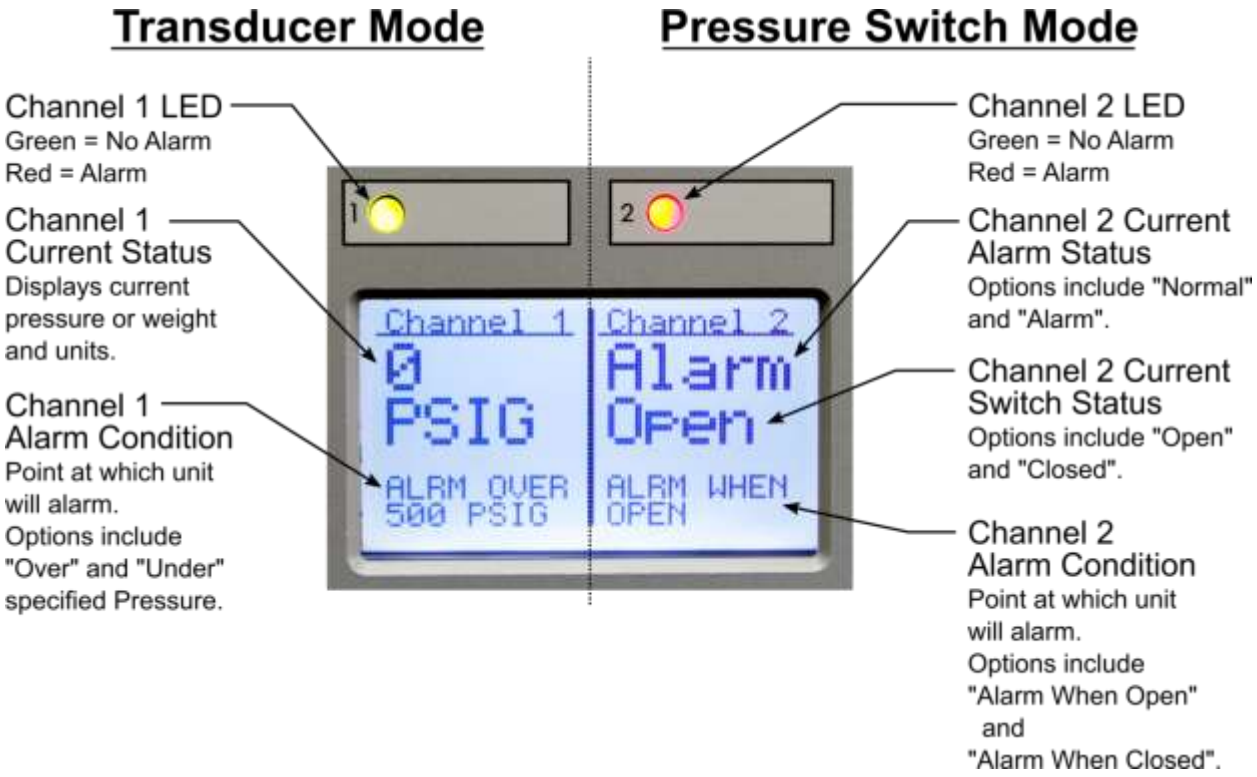
- The Altos2 requires a 24V 19W power source.
- Ground is attached directly to the Altos2 PCB ground plug Terminal TM2. 24V power is attached to the open terminal of the power switch in the Altos2 enclosure. Both connections are made with 3/16" Quick Connect Receptacles, "Ultra-Fast" style, fully insulated.



CONFIGURATION USING THE LCD SCREEN

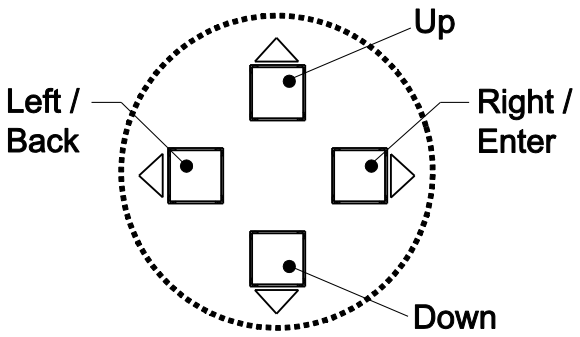
The 24V Altos 2™ is equipped with an LCD screen for displaying system status and configuration of the system. The 24V Altos 2™ LCD screen displays system status by default.

Figure 18



The 24V Altos 2™ Settings Menu is also displayed via the LCD screen. Pressing any navigation button on the front right of the enclosure (Figures 1 + 18) when the status screen is displayed will enter the Settings Menu.

Figure 19



The up and down keys allow the user to navigate the menu selections. To enter a menu selection, press right/enter when the selection is highlighted. To go back a level, press the left/back key. To disable the navigation buttons, power down the unit, open the front cover and flip SW1-4 on (closed) (See Figure 3.). Pressing the navigation buttons when the keypad is locked will cause the 24V Altos 2™ to display a keypad lock out warning for a couple of seconds before returning to the display screen.

SETTINGS MENU

The 24V Altos 2™ Settings Menu is divided into four sections: Channel1, Channel2, Alarm, and System. Pressing right/enter when the selection is highlighted enters the submenu.

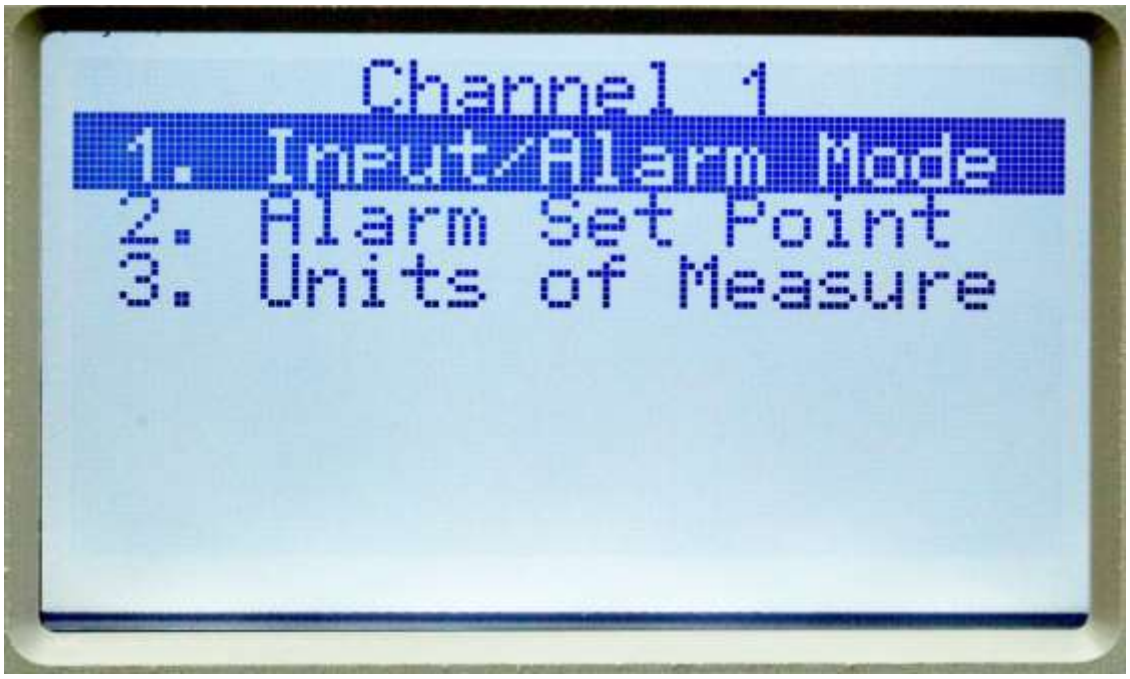
Figure 20

- "Channel 1" and "Channel 2" = Input configuration settings for channels 1 and 2 respectively.
- "Alarm" = Global alarm configuration settings.
- "System" = System configuration settings.

CHANNEL SETTINGS

The Channel Settings Menus “Channel 1 “ and “Channel 2” contain three settings for each channel: Input/Alarm Mode, Alarm Set Point, and Units of Measure

Figure 21



Input/Alarm Mode

Input/Alarm mode configures the specified channel input for the transducer (or other 4-20mA signal) or contact closure, or disables the input.

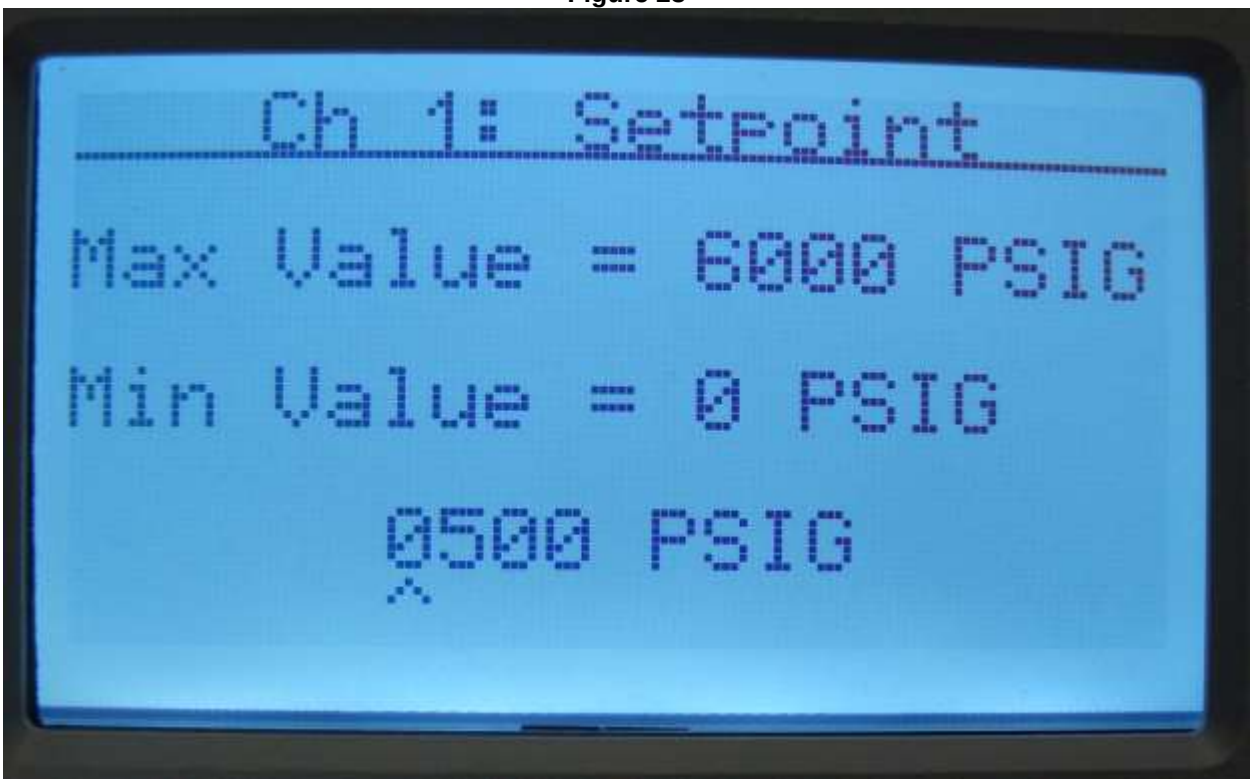
Figure 22

- Transducer/Over - Configures the specified channel to use the transducer or other 4-20mA signal input and causes the channel to alarm when the measured pressure rises above the alarm set point (see Alarm Set Point Section).
- Transducer/Under (DEFAULT) - Configures the specified channel to use the transducer or other 4-20mA signal input and causes the channel to alarm when the measured pressure falls below the alarm set point (see Alarm Set Point section).
- Switch/Closed - Configures the specified channel to use the contact closure input and causes the channel to alarm when the contact closes.
- Switch/Open - Configures the specified channel to use the contact closure input and causes the channel to alarm when the contact opens.
- Input Disabled - Disables the input so that the specified channel will not alarm, the corresponding LED turns off, and the LCD screen displays five dashes.

Alarm Set Point

Alarm Set Point determines the value at which the 24V Altos 2™ will alarm when it is configured for Transducer (or other 4-20mA signal)/Over or Transducer (or other 4-20mA signal)/Under mode.

Figure 23



Pressing up or down on a particular digit will modify only the selected digit. To navigate between digits, press left or right. To save the selected setting, navigate to the far right digit and press right again. The 24V Altos 2™ will not allow the user to select a value outside the maximum and minimum values displayed. The default value for this setting is 500 PSI.

Units of Measure

Units of Measure determines BAR, PSI, kPa, Lb, or Kg. 24V Altos 2™ will display the selection for the specified channel. The default setting is PSI.

Figure 24

ALARM SETTINGS

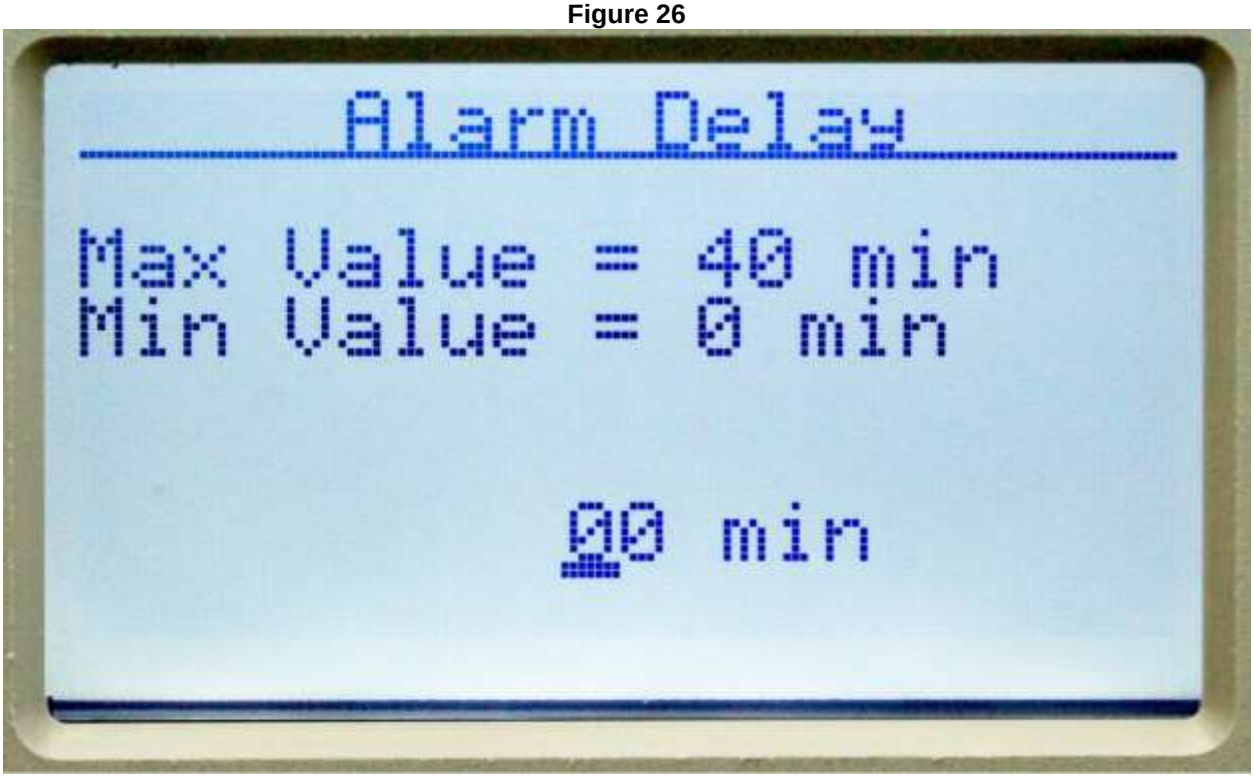
The Alarm Configuration menu contains two global alarm choices: Alarm Delay and Blink.

Figure 25

Alarm Delay

Alarm Delay specifies the number of minutes after an alarm condition is detected for the 24V Altos 2™ to display an alarm condition.

Figure 26



Pressing up or down on a particular digit will modify only the selected digit. To navigate between digits press left or right. To save the selected setting, navigate to the far right digit and press right again. The 24V Altos 2™ will not allow the user to select a value outside the maximum and minimum values displayed. The default value for this setting is 0 minutes.

Blink When Both In Alarm

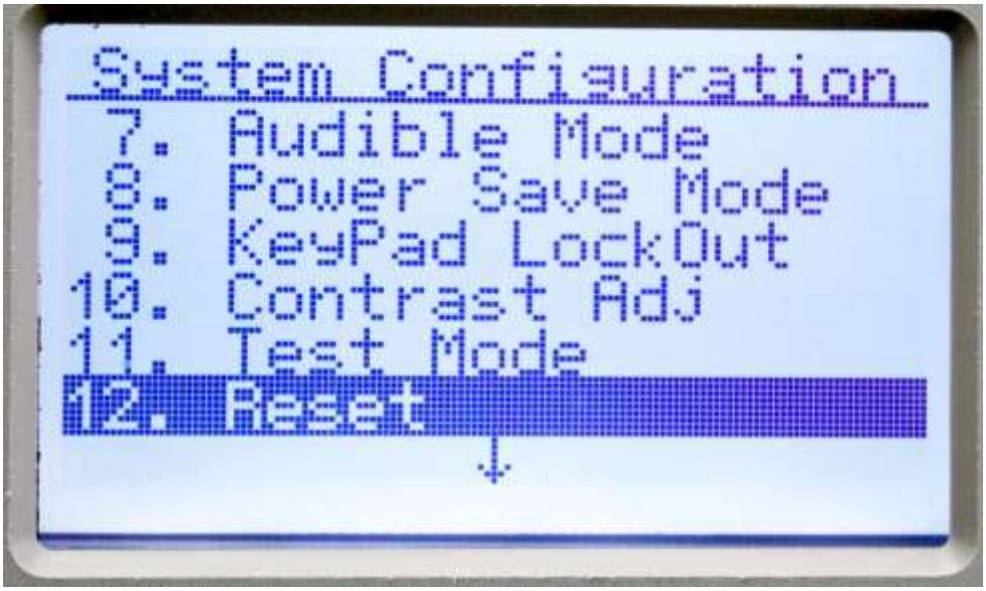
Blink When Both in Alarm causes the red alarm LEDs to blink when both channels are in alarm. The default setting is OFF.

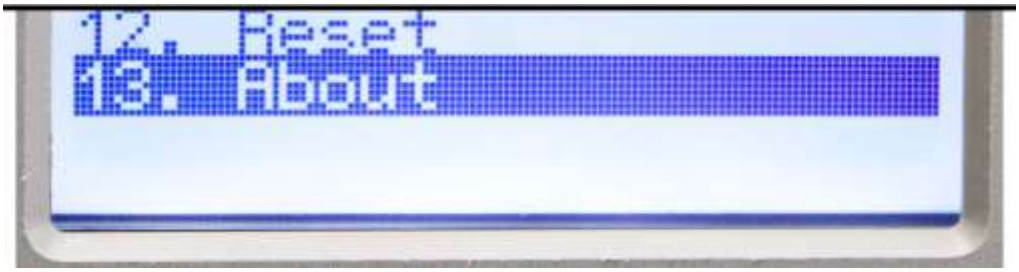
Figure 27

SYSTEM SETTINGS

The System Configuration menus contain twelve settings: Set Ch1 Offset, Set Ch2 Offset, Set Ch1 Max, Set Ch2 Max, Deadband Ch1, Deadband Ch2, Audible Mode, Power Save Mode, Keypad Lockout, Test Mode, Reset, and About.

Figure 28

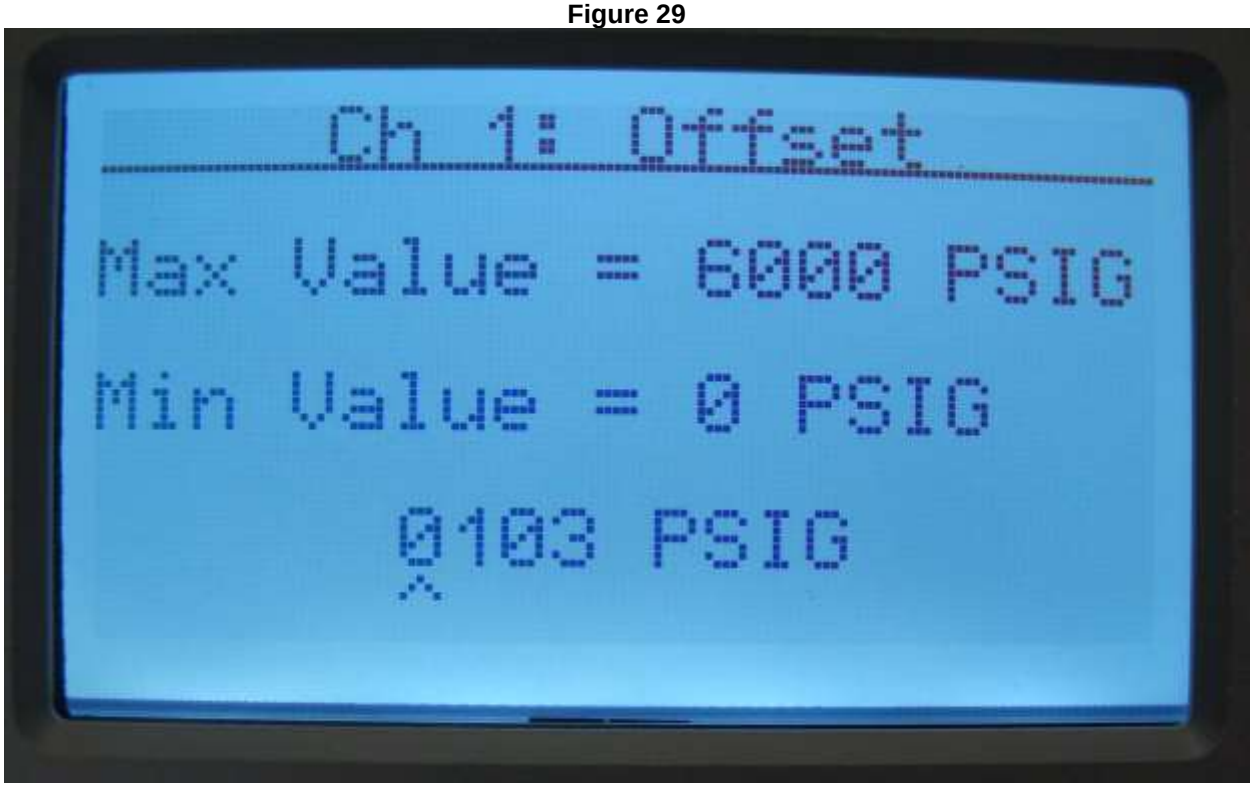




Set Channel Offset

The Offset specified for a channel calibrates the 4-20mA signal for the specified input.

Figure 29

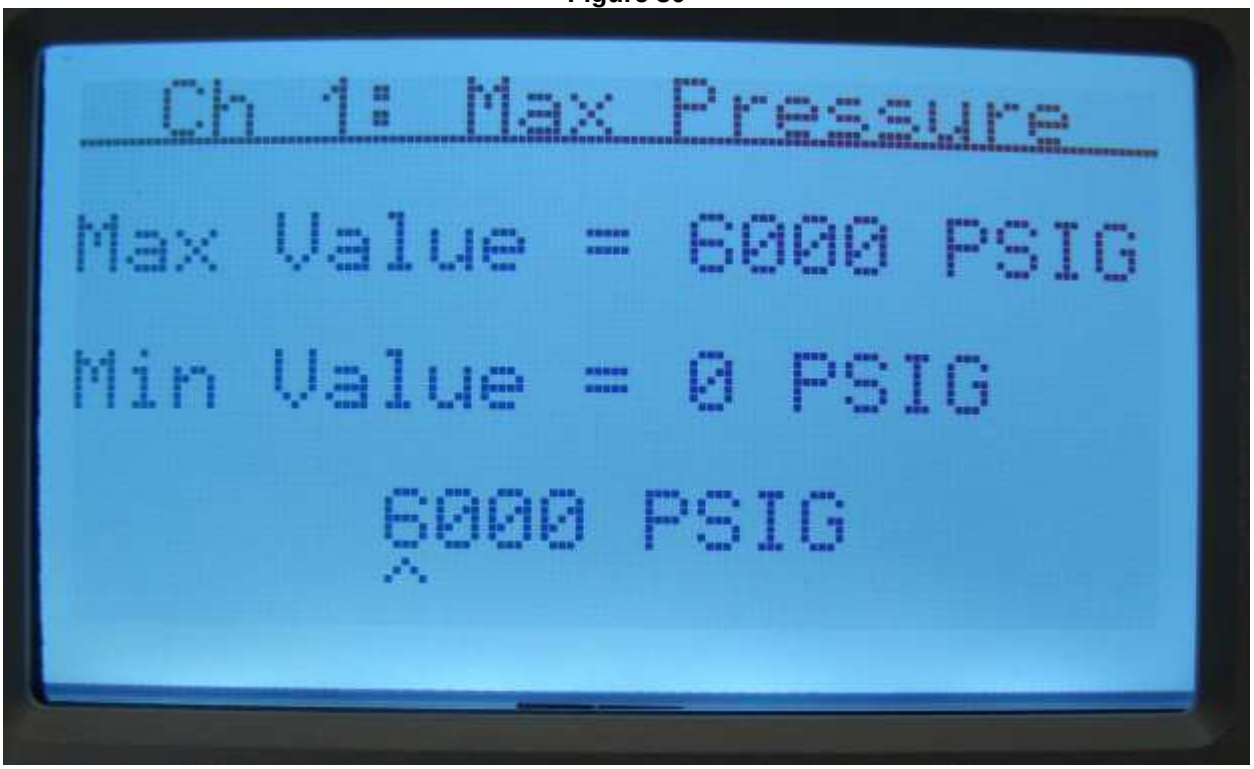


To calibrate the transducer or other 4-20mA signal, apply a pressure or weight greater than zero but less than the maximum sensor rating. Pressing up or down on a particular digit will modify only the selected digit. To navigate between digits, press left or right. To save the selected setting, navigate to the far right digit and press right again. The 24V Altos 2™ will not allow the user to select a value outside the maximum and minimum values displayed.
The default value for this setting is 0.

Set Channel Max

The Max Pressure Setting specified for a channel configures the maximum pressure rating for the specified pressure transducer or other 4-20mA signal.

Figure 30



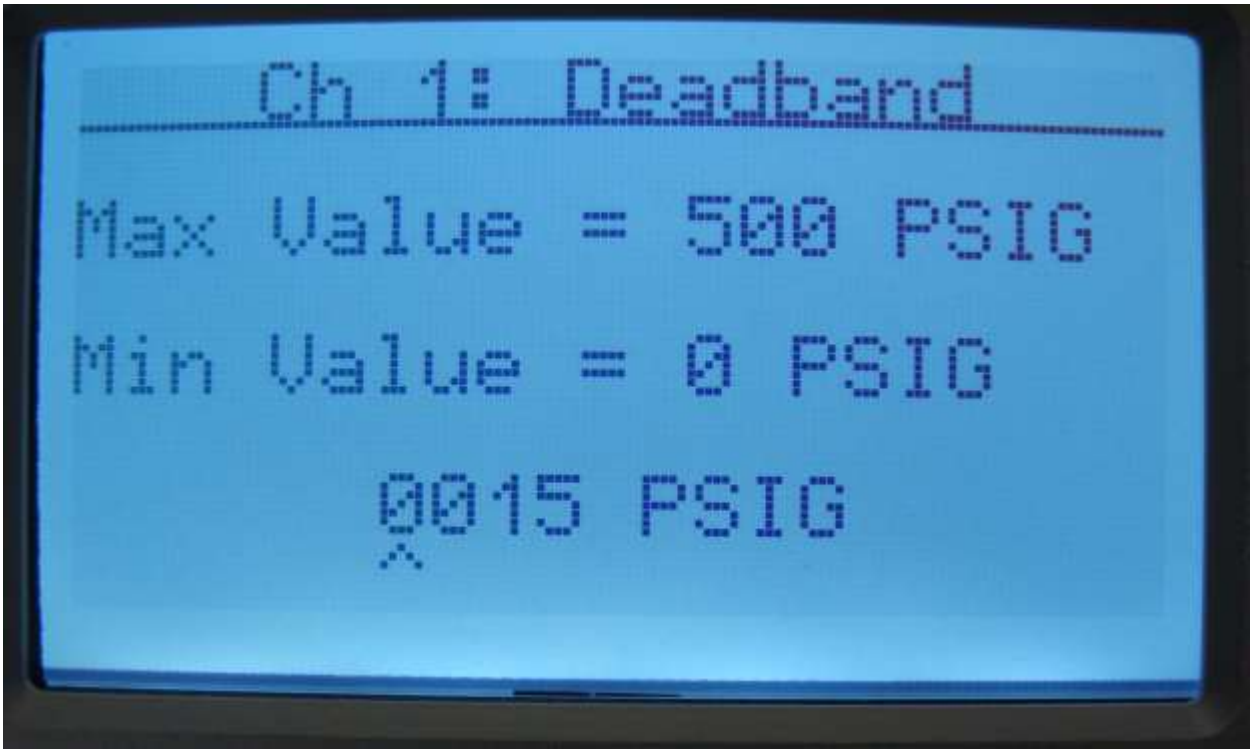
Pressing up or down on a particular digit will modify only the selected digit. To navigate between digits, press left or right. To save the selected setting, navigate to the far right digit and press right again. The default value for this setting is 6000 PSI.

***WARNING**: Changing this value to a value that does not match the actual range of the transducer used will result in invalid pressure readings.*

Deadband

The Deadband specified for a channel configures the value that the specified channel units must rise above or fall below the alarm set point to clear the channel alarm (depending on the Input/Alarm Condition).

Figure 31

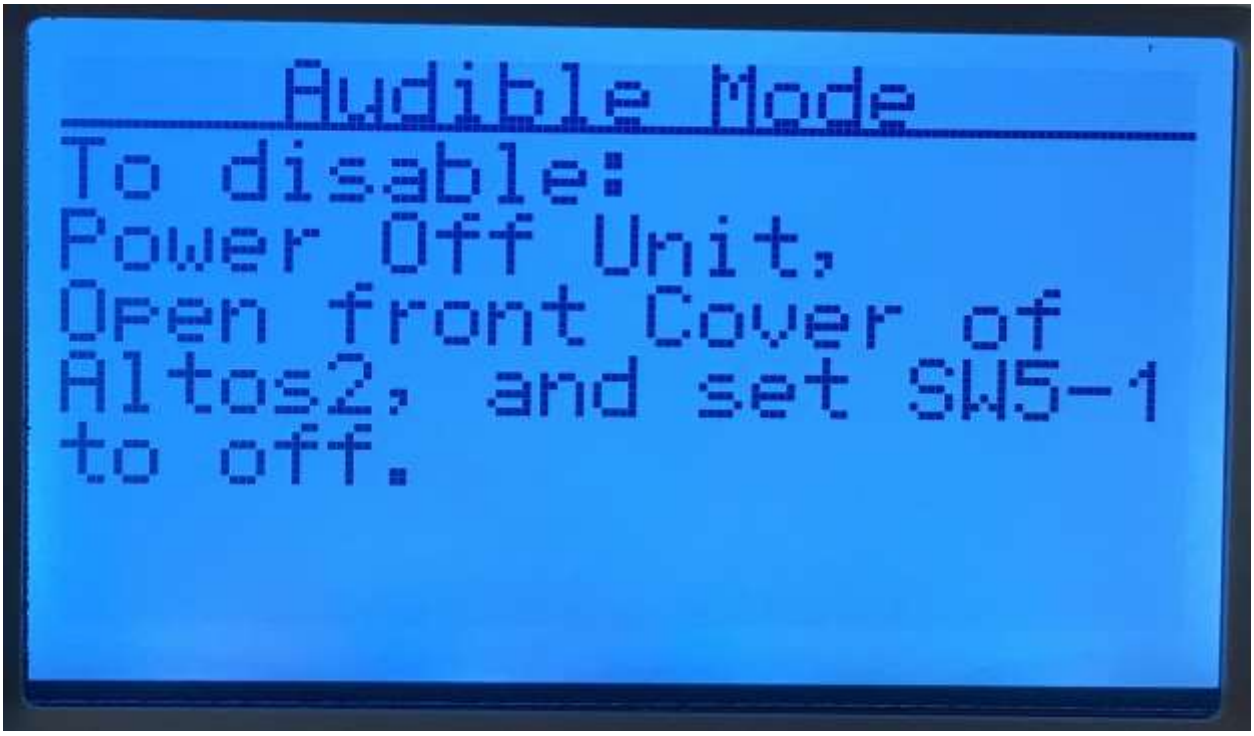


Pressing up or down on a particular digit will modify only the selected digit. To navigate between digits, press left or right. To save the selected setting, navigate to the far right digit and press right again. The 24V Altos 2™ will not allow the user to select a value outside the maximum and minimum values displayed. The default value for this setting is 15 PSI.

Audible Mode

Audible Mode provides instructions on how to change the audible mode. Default is ON.

Figure 32



***WARNING**: If audible mode is enabled, each navigational button press results in a chirping sound. If audible mode is disabled the speaker is completely silent.*

Power Save Mode

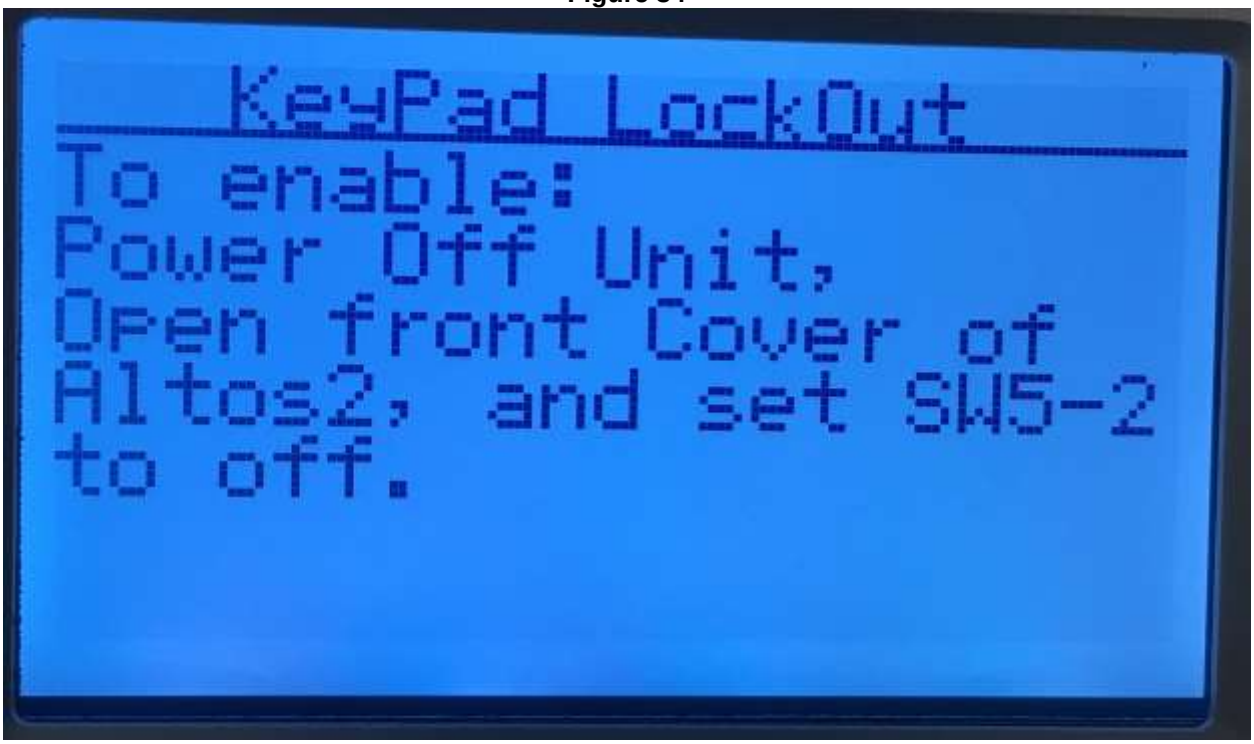
Power Save Mode, when enabled, turns off the LCD screen after fifteen minutes of inactivity. (When the screen is off the unit will still alarm as normal.) Pressing any button on the front cover will wake the unit up when in power save. Default Mode is OFF.

Figure 33

Keypad Lockout

Keypad Lockout provides instructions for changing the Keypad Lockout mode. Default Mode is OFF.

Figure 34



Contrast

Contrast adjustment allows the screen contrast to be adjusted on the 24V Altos 2™ alarm display. Pressing the up or down buttons will increase or decrease the contrast ratio of the screen. The default factory value is 45. The value can be adjusted between 30 (the lightest) and 58 (the darkest). To save the selected ratio, press the right button.

Figure 35

Test Mode

Test Mode provides instructions for enabling Test Mode. Test Mode toggles all LED's, speakers and relays as well as displays the 24V Altos logo to test proper operation of the unit. When Test Mode completes ten iterations, the unit returns to the status screen.

Figure 37

Reset

Activating Reset restores all parameters to the factory default state and resets the device.

Figure 38

About

The about screen displays the system part number as well as the installed software version.

Figure 38

TROUBLESHOOTING

Symptom	Possible Cause	Possible Solution
No display or status lights.	• No power to the system. • Check that the power source is live. • Power connections came loose from electronic control board.	• Restore power. • Restore power connections to electronic control board • Replace electronic control board.
The pressure readings are incorrect on the system display.	• Transducer is not properly calibrated • Transducer connection came loose from the electronic control board • Transducer cable is damaged • Transducer is not working properly	• Recalibrate the transducer using the Ch Offset option under the System menu • Restore transducer connections to electronic control board • Replace transducer cable • Replace transducer • Replace electronic control board
There pressure switch status is not displaying properly	• Pressure switch connection came loose • Pressure switch is damaged	• Restore pressure switch connections • Replace pressure switch • Replace electronic control board
Output relays not functioning	• Remote monitoring system is not powered. • Wiring between the 24V Altos 2™ output relays and the remote monitoring system is not correct.	• Check that the remote system is powered on • Check wiring between 24V Altos 2™ output relays and remote monitoring system.

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This equipment is sold by CONTROLS CORPORATION OF AMERICA under the warranties set forth in the following paragraphs. Such warranties are extended only with respect to the purchase of this equipment directly from CONTROLS CORPORATION OF AMERICA or its Authorized Distributors as new merchandise and are extended to the first Buyer thereof other than for the purpose of resale.

For a period of one (1) year from the date of original delivery (90 days in corrosive service) to Buyer or to Buyer's order, this equipment is warrantied to be free from functional defects in materials and workmanship and to conform to the description of this equipment contained in this manual and any accompanying labels and/or inserts, provided that the same is properly operated under conditions of normal use and that regular periodic maintenance and service is performed or replacements made in accordance with the instructions provided. The foregoing warranties shall not apply if the equipment has been repaired: other than by CONTROLS CORPORATION OF AMERICA or a designated service facility in accordance with written instructions provided by CONTROLS CORPORATION OF AMERICA; or altered by anyone other than CONTROLS CORPORATION OF AMERICA; or if the equipment has been operated under improper conditions or outside published specifications; or if the equipment has been damaged or does not function due to improper installation, improper supply of required utilities, accident, abuse, misuse, natural disaster, insufficient or excessive electrical supply, abnormal mechanical or environmental conditions, or debris or particles in the gas or liquid source of supply.

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CE Approved models of the CONCOA 24V Altos 2™ remote alarm will have the “CE” mark on the product nameplate. They are covered by the following CE Declaration of Conformity:

CONCOA
PRECISION GAS CONTROLS

Controls Corporation of America
1501 Harpers Road
Virginia Beach, VA. 23454

CE DECLARATION OF CONFORMITY

In accordance with ISO/IEC 17050

The *Altos 2 System Monitor* is compliant with the CE directives and standards listed below:

Directives:

- **Electromagnetic Compatibility (89/336/EC)**
- **Low-Voltage (2006/95/EC)**
- **RoHS (2002/95/EC)**

Standards:

- **EMC: EN61000-6-2:2001**
- **EMC: EN61000-6-4:2001**
- **Safety: EN 61010-1**

John Boone
QUALITY MANAGER

Form: QA-170 Rev: 0

Certified ISO 9001

Certified ISO 9001

Controls Corporation of America
1501 Harpers Road Virginia Beach, VA 23454
Telephone 1-800-225-0473 or 757-422-8330 • Fax 757-422-3125
www.concoa.com