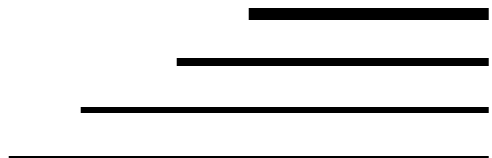


**Tri-Tech
Medical Inc.**

*Manufacturer of
Medical Gas Pipeline Equipment*

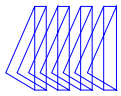
Installation Instructions for Medical Gas Master Alarm Conversion Kits DU DC Series



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This product has been designed to convert an existing master alarm to a Tri-Tech Medical Inc. master alarm. Installation of this kit involves the removal of the existing alarms front panel and power supply. Installation also involves installing a flange, power supply, and alarm front panel and making the necessary electrical connections. All installation and testing should be done in accordance with NFPA 99 or CSA Z305.1.

WARNING: Installation of this product requires the temporary shut down of medical gas master alarm being converted, but should not effect any other master alarm(s) in the facility. It is the responsibility of the installer to obtain approval from the proper facility personal before beginning this conversion.

WARNING: All electrical power should be disconnected prior to beginning this conversion.

WARNING: All alarms for medical gas sources monitored by the alarm to be converted will be shut down until the conversion is complete. Arrangements should be made to monitor these alarms from another master alarm panel and/or manually.

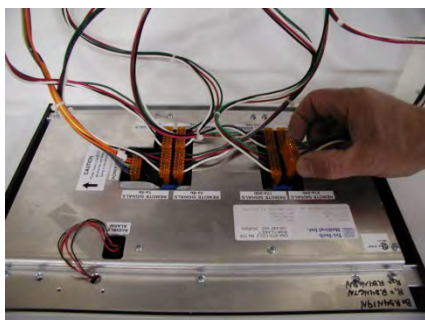
WARNING: This device should only be installed by qualified personnel. Installation should not be attempted by anyone not having general experience with the installation of devices of this nature.



Locate the electrical breaker providing service to the master alarm to be converted. After approval has been granted by the proper facility personnel, shut off the breaker providing 120 VAC electrical service to the master alarm to be converted.

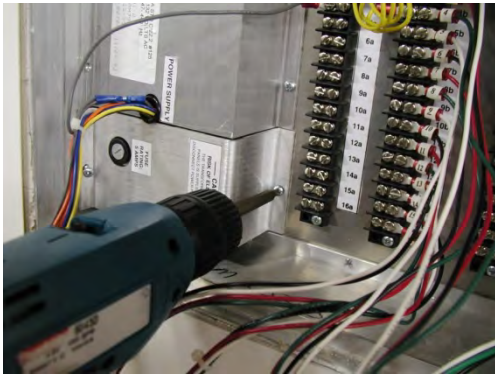
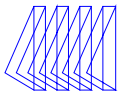


Remove the existing front panel by removing the four screws located on the face of the panel near the four corners. (Note: you will need to support the panel to keep it from falling after the final screw is removed).

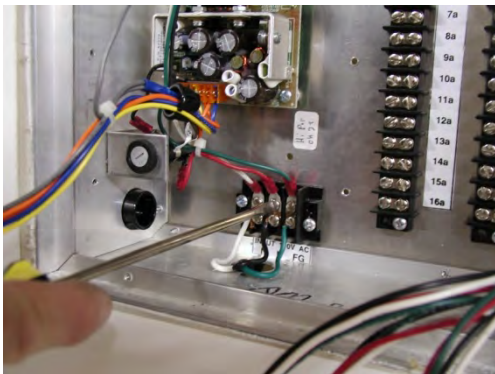


Label each common & signal wire with the name & position of each signal before disconnecting them from the original circuit board.

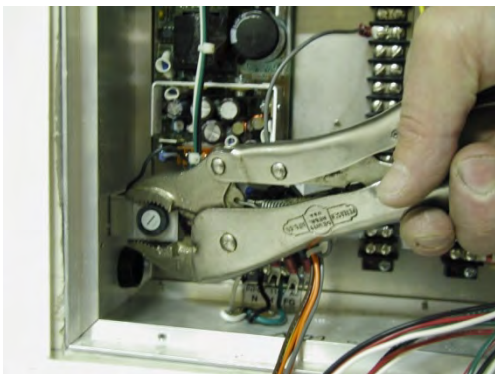
Disconnect all of the common & signal wires from the original front panel.



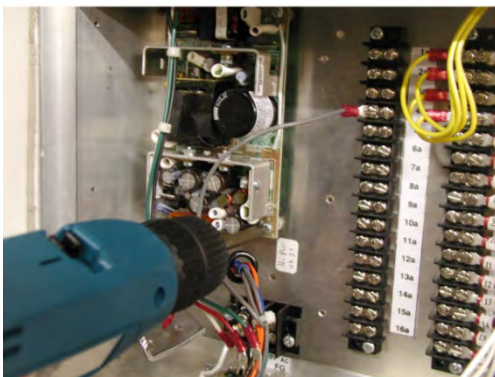
Remove the four power supply cover screws and the two power supply covers.



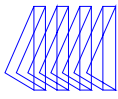
Disconnect the three wires connecting the power supply to the incoming 120 VAC terminal strip.



Remove existing fuse bracket from back box. This is fastened to the back box with rivets. Rocking the bracket with vise grips or pliers will break the rivets.



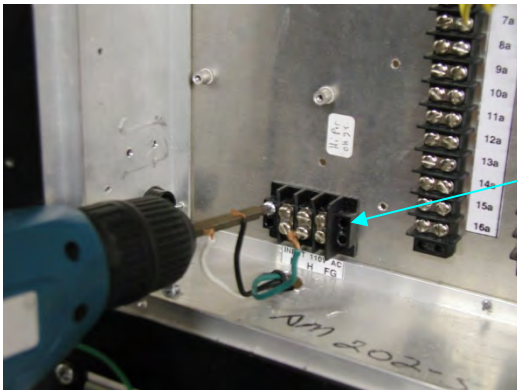
Remove the four screws holding the power supply to the back box. Remove the existing power supply.



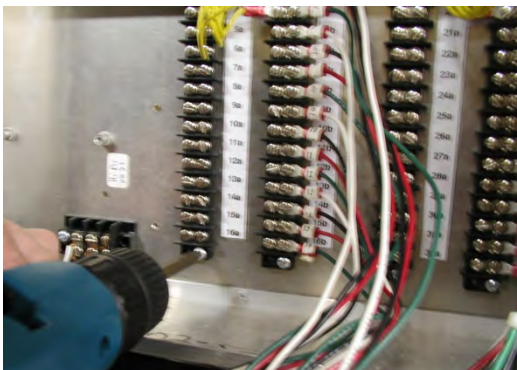
Disconnect the gray common wire connecting the existing power supply to the “A” terminal strip.



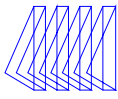
Disconnect the incoming 120 VAC from the power input terminal strip.



Remove the power input terminal strip.



Remove all of the signal & common wire terminal strips from the existing back box. Leave the signal & common wire attached to the terminal strips.



Center the flange with power supply assembly (left to right) over the existing back box with the power supply resting on the bottom of the existing back box.



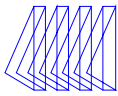
Holding the flange assembly in place, mark the four hole positions on the wall. The four holes are located near the corners of the flange.



Remove the flange with power supply assembly. Drill the four holes positions using a 3/8" bit.



Install molly bolts into the four holes drilled. Tighten screw until snug. **DO NOT OVERTIGHTEN.** Remove screw and washer.

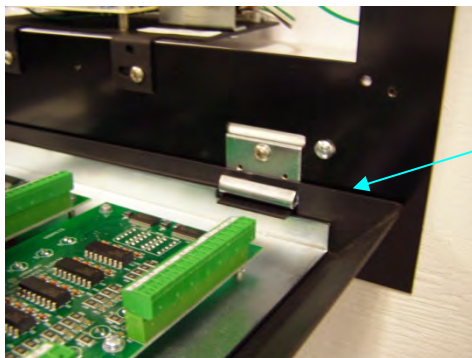


Position the flange power supply so that the four mounting holes align with the mollys. Thread the molly screws with washer thru the flange into the mollys and tighten.

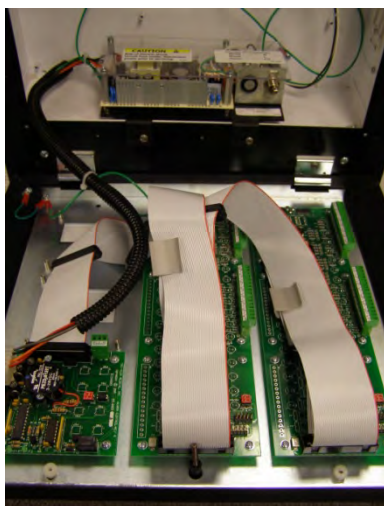
The flange has been machined with four sets of taped holes so the power supply bracket may be mounted on any of the four sides of the flange.



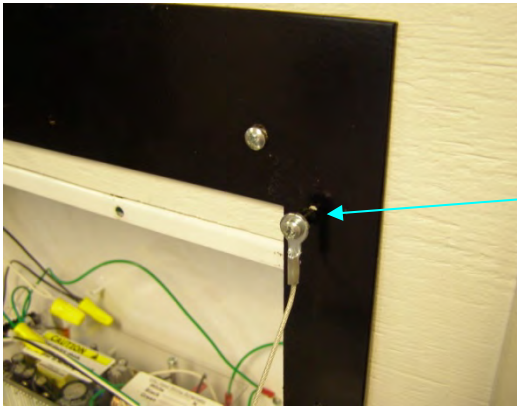
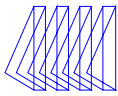
The power supply has been pre-wired for 110 VAC. Connect the three wires from the power supply (Black = Line, White = Neutral & Green = Ground) to the proper incoming 110 VAC wires using wire nuts.



Insert the new Tri-Tech Medical alarm front panel over the two hinges located on the bottom of the flange as shown here.



At this point the installed front will look like this.



Attach the two wire lanyards provided to the screw mounts on the sides of the flange.



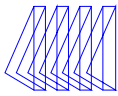
Using the self-taping screw provided, attach the green ground wire harness originating from the ground lug terminal on the alarm front panel and power supply, to an appropriate grounding point in the back box.



Connect the green ground wire from the CPU wiring harness to the ground lug terminal on the alarm panel.



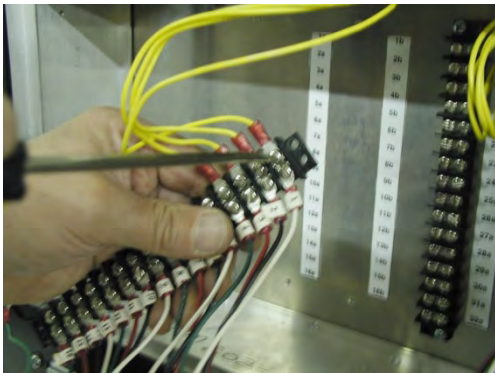
When completed the ground and 120 VAC wiring connections should look like this.



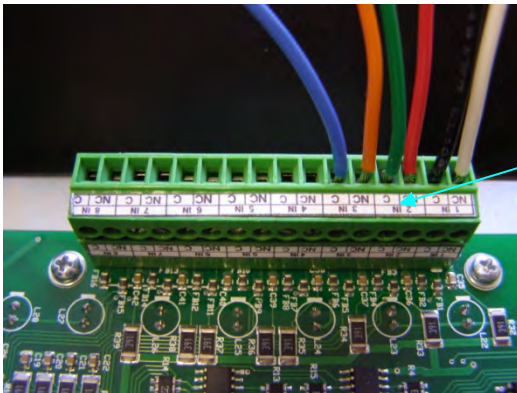
Attach the CPU wiring harness (the one with the black corrugated plastic cover) to the white plug in the connector on the leftmost circuit board. Note it is very important that this connection be made properly, with the pins and holes in proper alignment and the latching mechanisms on the connectors mated properly.



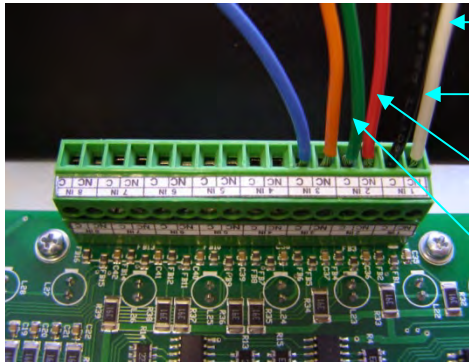
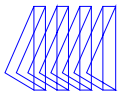
The CPU wiring harness connection will look like this when properly connected.



Disconnect the signal wires (from the old “B” terminal strips) one at a time and relocate them to the remote signal (master) board(s) in the same sequence. This will make it easy to label the new alarms, by using the old alarm label as a guide.



Locate the two banks of 16 terminal connectors on the remote signal (master) board(s). The pairs are labeled P1 thru P16 on the circuit board. There are a total of 32 connection points on each board – two connection points for each remote signal.

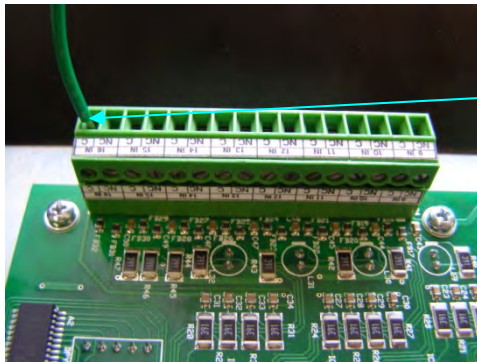


- Remote signal #1 – signal wire (white)
- Remote signal #1 – common wire (black)
- Remote signal #2 – signal wire (red)
- Remote signal #2 – common wire (green)

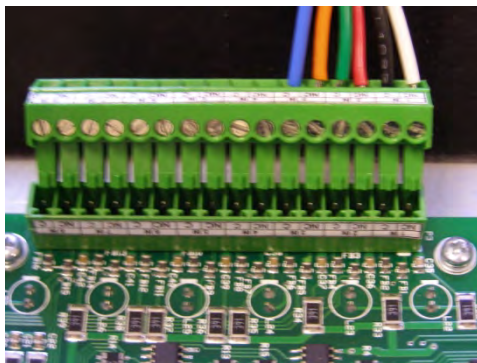
There are two options for landing the common wire(s).

Option #1 – you can land the corresponding common wire on the bottom terminal of each pair of terminal connectors.

This option is recommended for maximum interference suppression.



Option #2 – you can connect all of the common wires together and land just one common wire on the bottom terminal of P16.



For ease of installation, the 16 terminal connectors may be removed (unplugged) from the circuit boards.



The power supply has been provided with both a removable fuse and an on/off switch to provide for ease of any possible future service work to the alarm or changes to the medical gas piping system. Make sure the fuse is installed and the switch is in the on position.

Restore electrical power and medical gases to the converted area alarm. Before the facilities restores this alarm panel to service, it is recommended that it is tested by an independent third party medical gas certification company.

See the Tri-Tech Medical Alarm Manual for complete instructions on testing and operating the new alarm panel.