

Important: Read and save these instructions. This guide to be left with equipment.

Condair LINKS 2

**Nortec GSTC/SETC
B+ Models, NHTC,
and NHRS**

Installation Manual Retrofit Instructions

Includes retrofit instructions for B+ models of the Nortec GSTC / SETC, NHTC and NHRS.

Thank you for choosing Condair.

INSTALLATION DATE (MM/DD/YYYY)

MODEL #

SERIAL #

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Introduction



CAUTION: Servicing

- Every person working with the Condair humidifier must read and understand the installation and operating instructions before carrying out any work.
- Disconnect main power before any servicing.
- The control box and hydraulic unit contain high voltage components and wiring. Access should be limited to authorized personnel only.
- Poorly maintained humidifiers can endanger health of building occupants. If the humidifier is not properly maintained microbials may grow in it. If carried by air passing through the humidifier the germs can cause illness.
- The humidifier must be serviced in the intervals described in the maintenance section of this manual. Humidification boxes and mist eliminator media must be replaced after their service life has elapsed.



CAUTION: Electrical

- All electrical work should be done according to local electrical code.
- Electrical connection to be performed by a licensed electrician.



CAUTION: Plumbing

- Plumbing to be performed by a licensed plumber.
- All plumbing work should be done according to local plumbing code.
- Unit damage caused by water quality outside of the specified ranges is not covered under warranty.



CAUTION: Installation

- Do not mount control box or hydraulic unit on hot surfaces
- Do not mount hydraulic unit in area where freezing can occur
- Do not mount control box or hydraulic unit on vibrating surface
- Regardless of selecting On/Off or modulating control method, Condair humidifiers must have a closed circuit across its On/Off security loop control terminal to operate. Condair highly recommends the use of a high limit humidistat and an air proving switch in series for this function.
- Condair does not accept any liability for installations of humidity equipment installed by unqualified personnel or the use of parts/components/equipment that are not authorized or approved by Condair.

Condair Links 2 – Field Retrofit for Nortec SETC-50 Models

Step 1 - Installation

- 1 Mount the Condair Links 2 remote package in a convenient location. Note that the remote package does not need to be mounted in close proximity to the humidifier. However, the CAT5 cable with RJ-45 connection must reach the humidifiers connection on the keypad PCB.

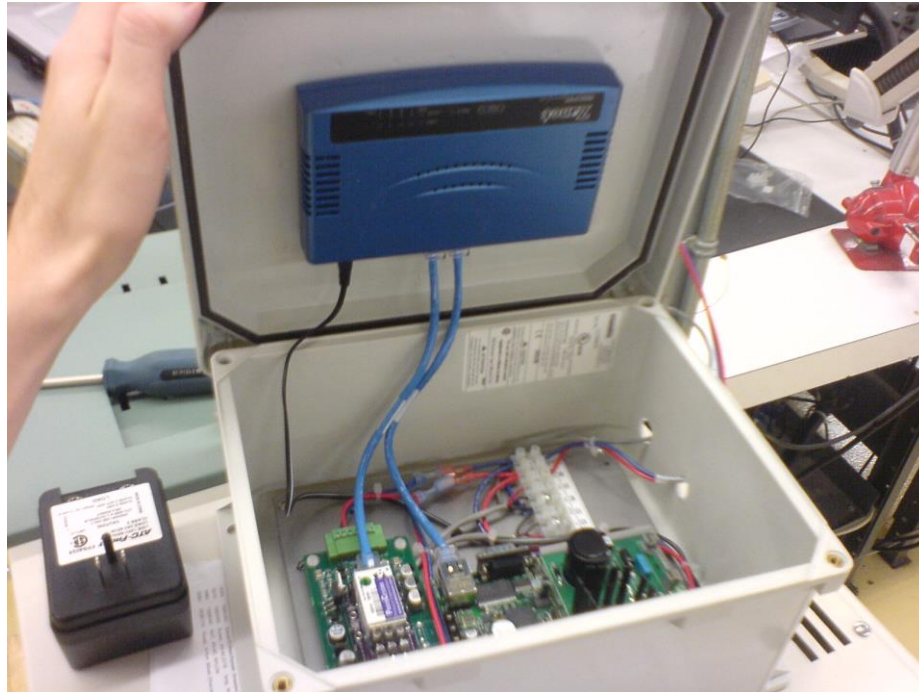


Figure 1: Remote Package



Figure 2: Humidifier Keypad / Front of PCB

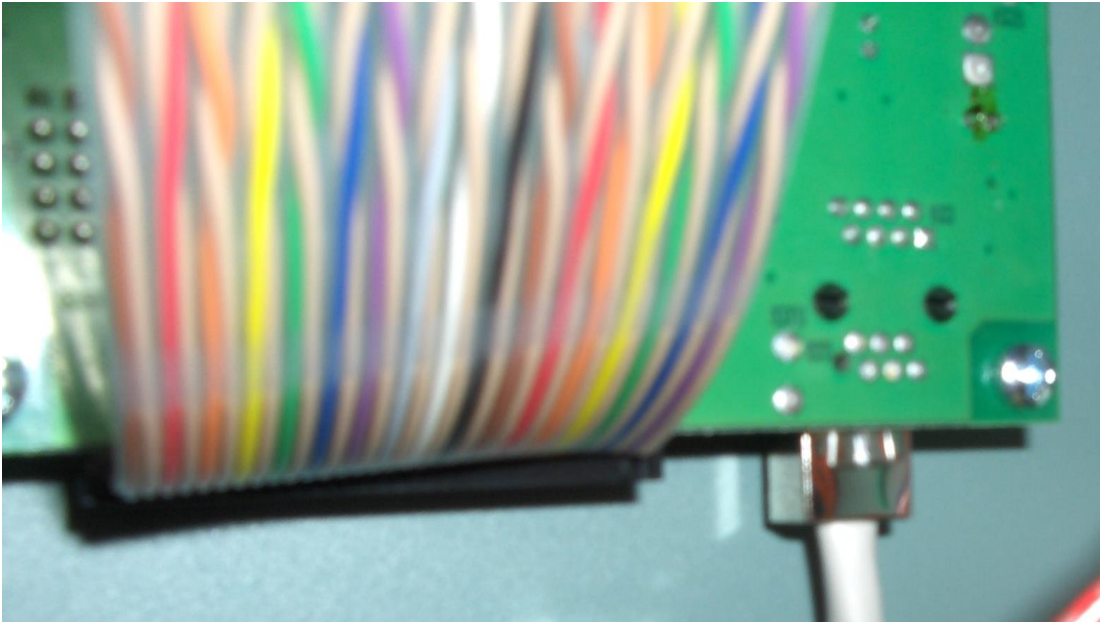


Figure 3: Rear of PCB

- 2** Connect power to the 24VAC and GND terminals of the Condair LINKS 2 terminal strip. This may be done in one of two ways:
 - a** A 120VAC to 24VAC plug-in transformer with screw terminals on the secondary side has been supplied with this kit. Wire the transformer to the 24VAC and GND terminals on the Condair Links 2 terminal strip.
 - b** Connect power from the humidifier terminal strip (see wiring diagram for details). Power to Condair Links 2 module will be lost when the humidifier is switched off.
- 3** Connect the slave humidifiers (if applicable) to the Condair Links Module. A twisted pair cable should be used so that the Net + terminal on the Condair Links module should connect to the first pin (bottom-most pin) of the connector. The Net - terminal on the module should be connected to the second pin of the connector. Refer to the unit's wiring diagram for more information.

Step 2 – Configuring the Humidifiers

Note: If the Condair Links 2 remote package was shipped with the humidifiers, this step will have already been performed by the factory.

- 1** Since Condair Links 2 can connect to a maximum of 8 units, it will be necessary to set the unit address for each humidifier. The lead unit can be determined by the presence of the Condair Links 2 module. The slave humidifiers can be given a unit address according to the number the unit will have on the networked chain.
- 2** In order to change the current modbus address, press the Menu button on the keypad. When prompted, enter the code 0335.
- 3** Once the password is set select the modbus address heading and press enter. Use the up and down arrows to change the address setting.
- 4** Determine the desired humidifier ordering on the network. To change the network instance follow step 3 and enter the parameter value of 2 for unit 2, 3 for unit 3 and so on.

Condair Links 2 – Field Retrofit for Nortec GSTC / SETC B+ Models (BACNET, LONWORKS, and N2 Modules)

Step 1 – Mounting the Condair Links 2 Assembly

- 1 Install the bracket assembly using 8-32x 1/2" hex-drive screws. Notice, 4 screws are used for the hinges, and the 5th screw for fastening the bracket in place.

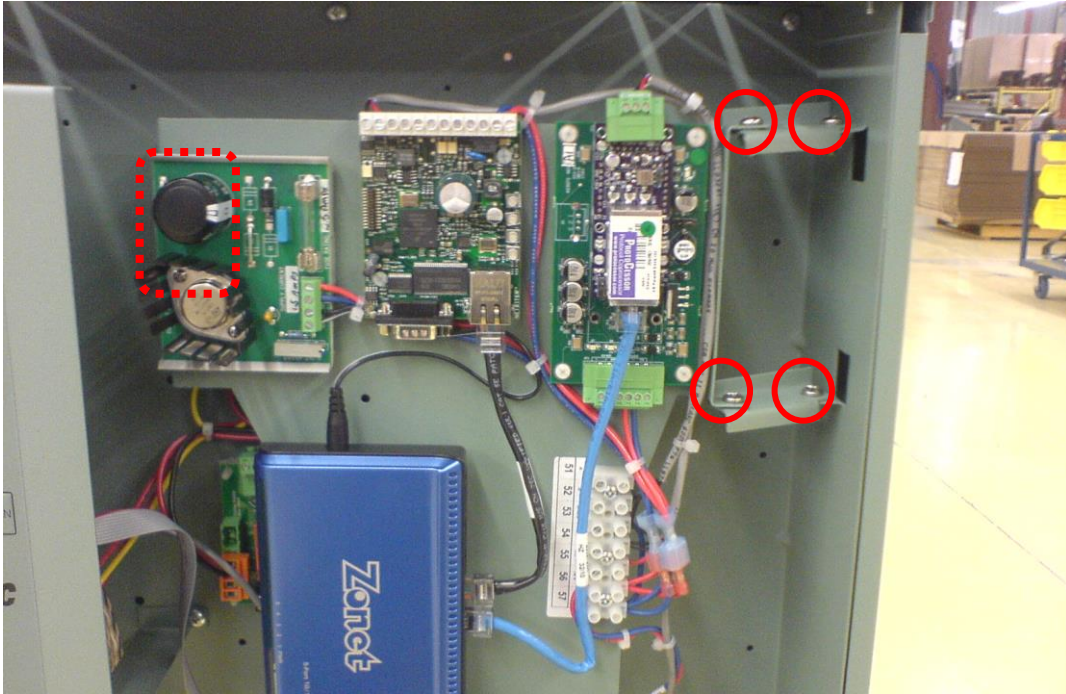


Figure 4: Bracket Placement and Screw Locations

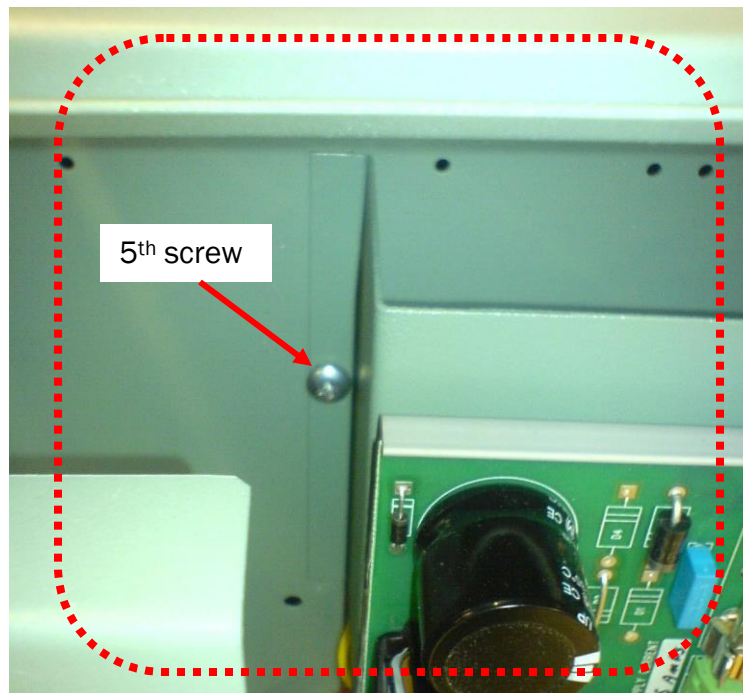


Figure 5: Detailed View of 5th Screw

Step 2 – Wiring the Condair Links 2 Module

- 1** Most of the wiring connections for the new Condair LINKS 2 module will have already been finished at the factory; however, there are a few connections that will need to be made to connect the unit the Nortec GS/SE series humidifier. Refer the Condair LINKs 2 wiring diagram included in the package for details.
- 2** Module Power Connections: There will be a wire harness provided that will consist of a red and blue wire. Both red and blue wires are terminated with a ring terminal.
 - a** The ring terminal of the red wire is to be connected to the power terminal on the 24V side of the transformer located at the bottom, left of the electrical compartment.
 - b** The ring terminal of the blue wire is to be connected to the ground terminal on the 24V side of the transformer.
- 3** Humidifier Communication Connection: On the Condair LINKS 2 assembly there will be a CAT5 cable with RJ45 connector.
 - a** This connector is to be plugged into the jack on the bottom right side of the humidifier main PCB board.

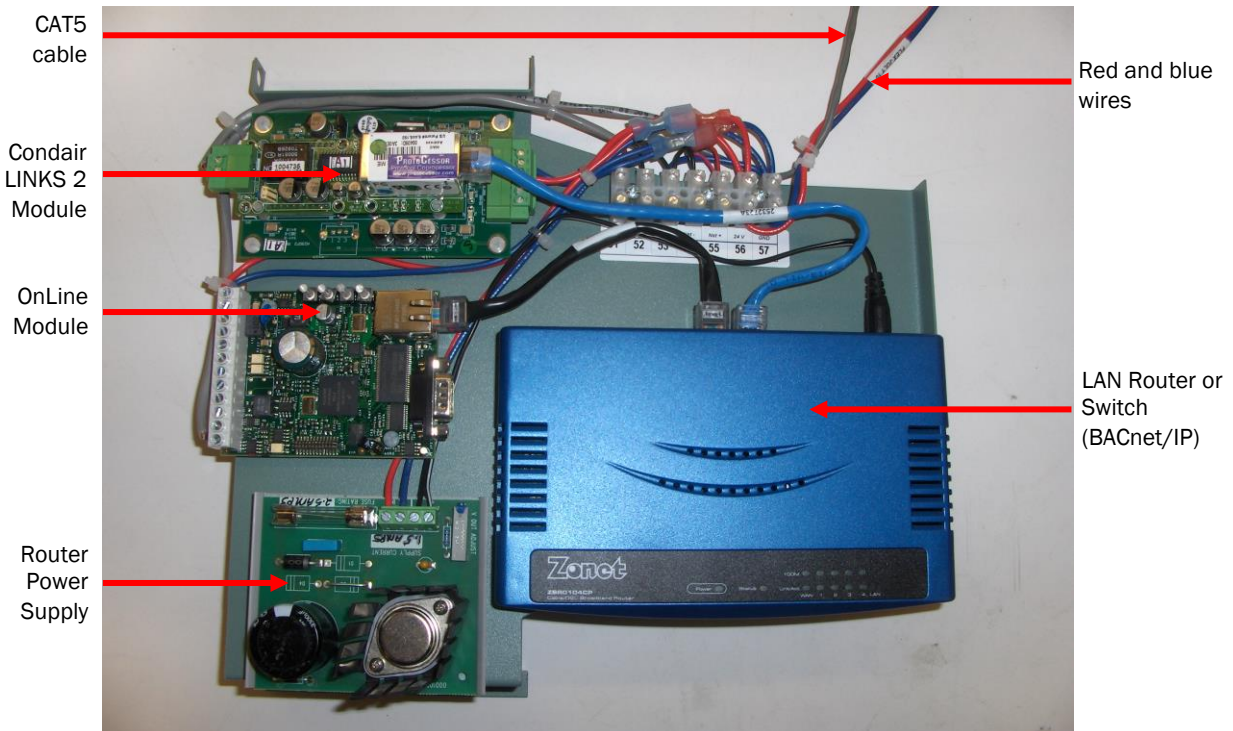
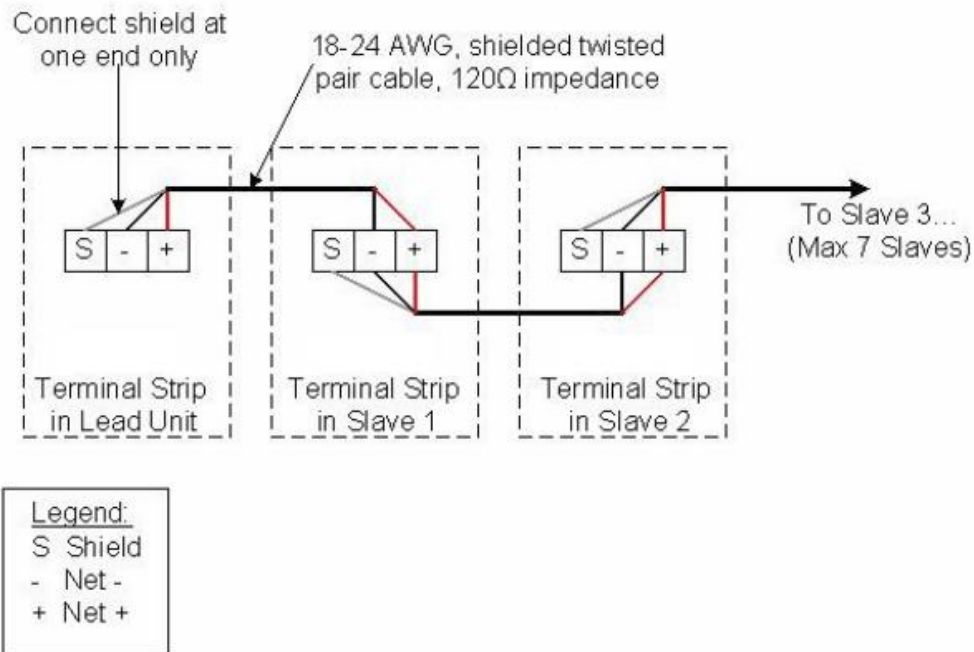


Figure 6: Component Identification

Step 3 – Configuring the Humidifiers

- 1 Since Condair Links 2 can connect to a maximum of 8 units, it will be necessary to set the unit address for each humidifier. The lead unit can be determined by the presence of the Condair Links module. The slave humidifiers can be given a unit address according to the number the unit will have on the networked chain.
- 2 Press the Menu button on the keypad and enter the code 0335.
- 3 Select Control Settings
- 4 Select Modbus Parameters.
- 5 Set the communication parity to None.
- 6 Set the appropriate Modbus address according to the unit ordering
- 7 Place the appropriate Unit Identifier label on each humidifier. These labels should be placed on the unit where the electrical control punch-outs are located at the top of the humidifier.
- 8 Connect the slave humidifiers (if applicable) to the Condair Links Module. A twisted pair cable should be used so that the Net (+) terminal on the Condair Links module should connect to the first pin (bottom-most pin) of the connector. The Net (-) terminal on the module should be connected to the second pin of the connector. Refer to the unit's wiring diagram for more information.
- 9 Ensure shield wiring matches the following pattern if distances between humidifiers is significant:



Note: Wires in diagram rotated for clarity, wires will be "doubled up" in actual terminal strip

Figure 7: Shield Wiring

Condair Links 2 – Field Retrofit for Nortec NHTC Models (BACNET, LONWORKS, and N2 Modules)

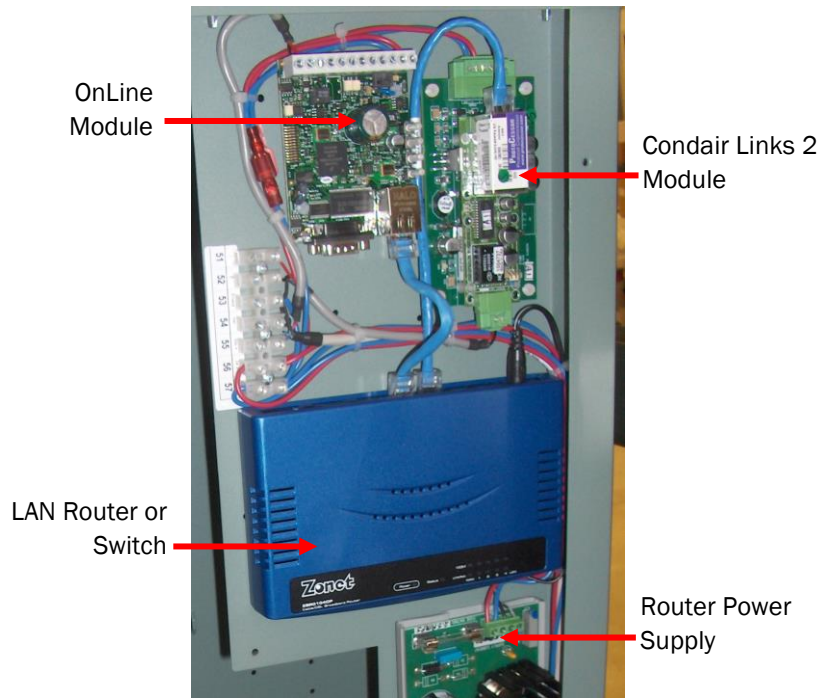


Figure 8: Component Identification

Step 1 – Mount the Condair Links 2 Assembly

- 1 The Condair Links 2 assembly mounts on the top, right corner of the electrical compartment.
- 2 Ensure that the rear, upwards facing hook engages the proper cooling louver at the back of the humidifier cabinet.
 - a Fasten the bracket assembly to the humidifier ‘top’ using the 3 8-32 X 1/2” self-tapping screws provided with the kit.

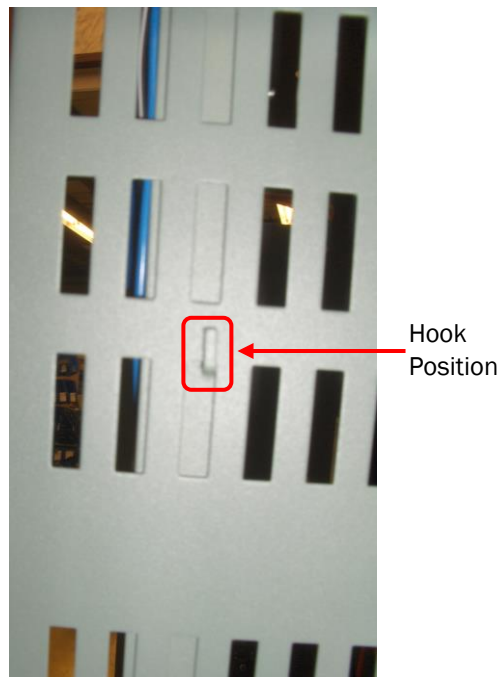


Figure 9: Hook Position

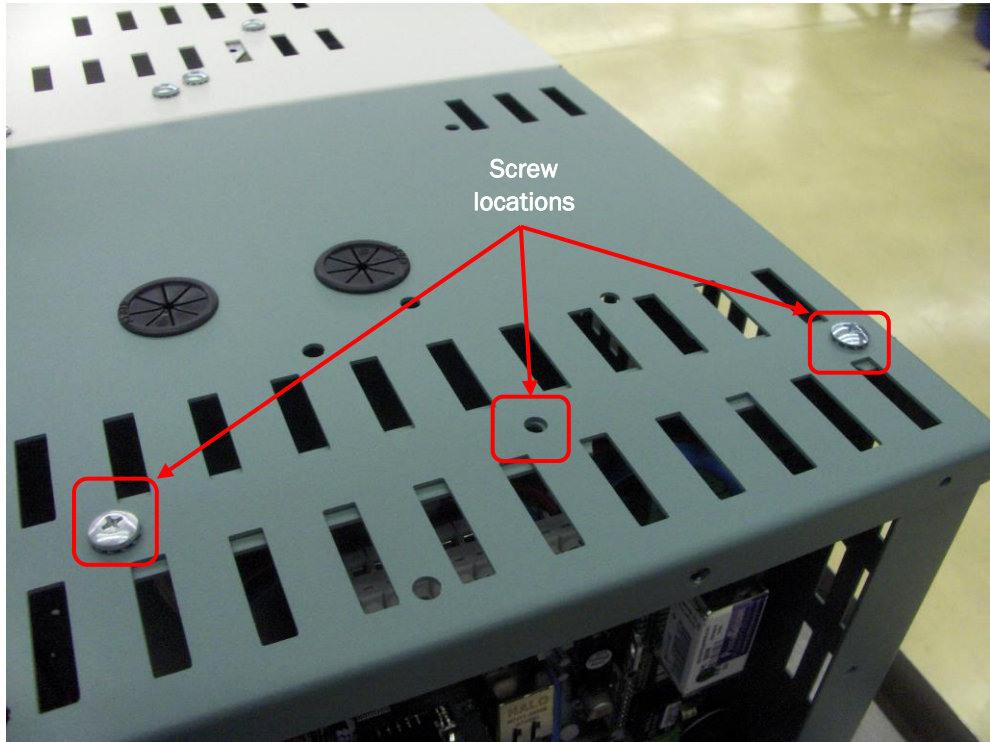


Figure 10: Assembly Mounting Location

Step 2 – Wiring the Condair Links 2 Module

- 1** Most of the wiring connections for the new Condair LINKS 2 module will have already been finished at the factory; however, there are a few connections that will need to be made to connect the unit the Nortec NHTC series humidifier. Refer the Condair LINKs 2 wiring diagram included in the package for details.
- 2** Module Power Connections: There will be a wire harness provided that will consist of a red and blue wire. Both red and blue wires are terminated with a ring terminal.
 - a** The ring terminal of the red wire is to be connected to the 24V side of the transformer located at the bottom, left of the electrical compartment.
 - b** The ring terminal of the blue wire is to be connected to the ground terminal on the 24V side of the transformer
- 3** Humidifier Communication Connection: On the Condair Links 2 assembly there will be a CAT5 cable with RJ45 connector.
 - a** This connector is to be plugged into the jack on the bottom right side of the humidifier mainboard.

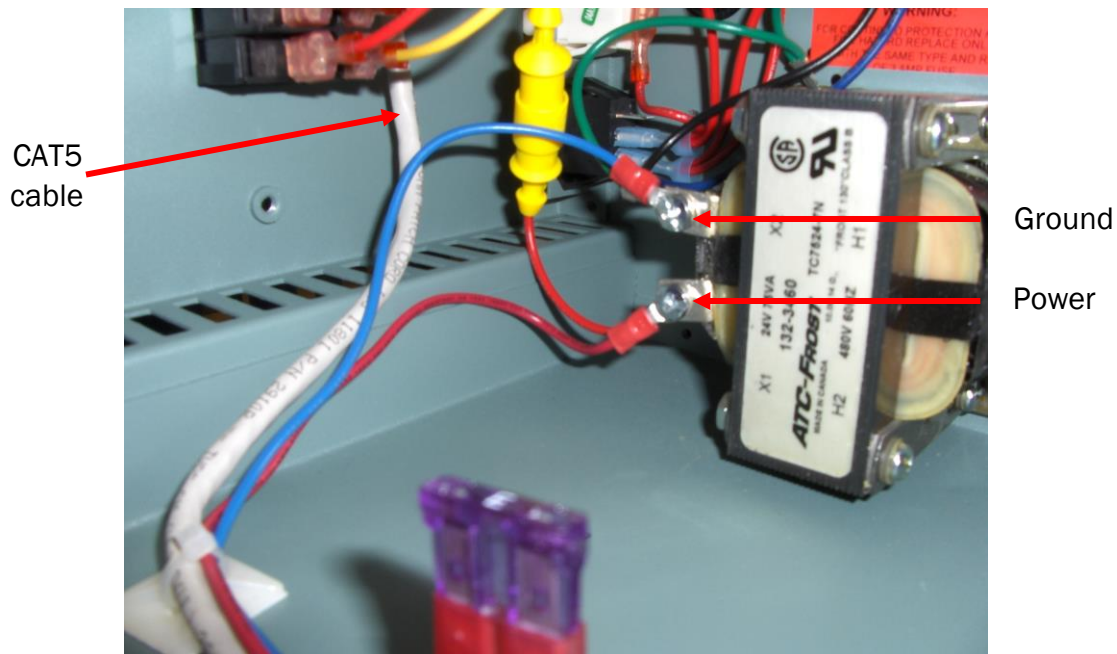
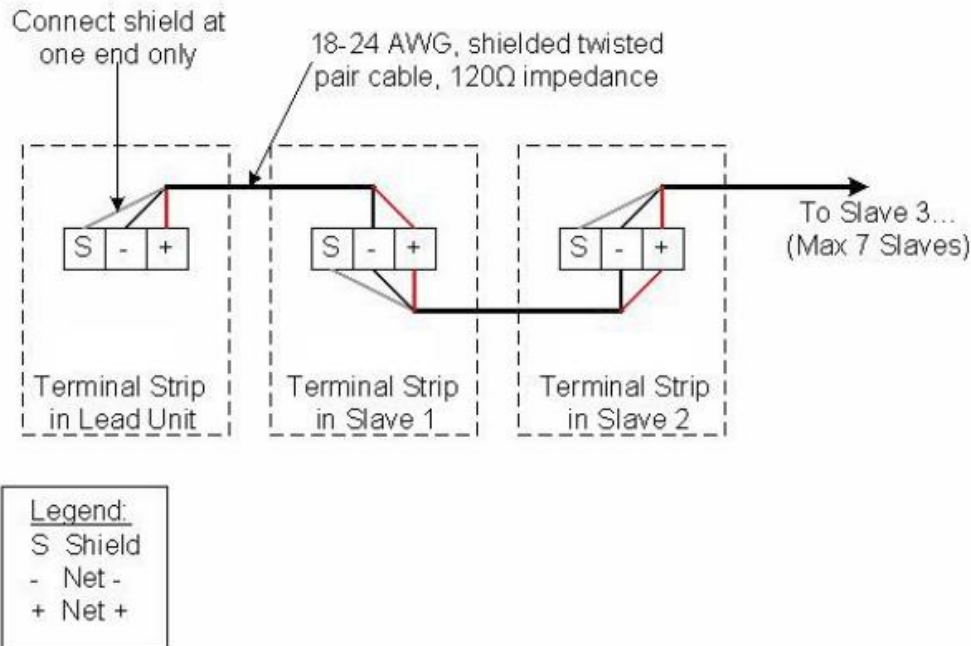


Figure 11: Wiring Points

Step 3 – Configuring the Humidifiers

- 1 Since Condair Links 2 can connect to a maximum of 8 units, it will be necessary to set the unit address for each humidifier. The lead unit can be determined by the presence of the Condair Links module. The slave humidifiers can be given a unit address according to the number the unit will have on the networked chain.
- 2 Press the Menu button on the keypad and enter the password 0459.
- 3 Scroll down and select Factory Settings.
- 4 Scroll down and select Core Parameters.
- 5 Select Modbus Parameters.
- 6 Set the communication parity to Even.
- 7 Set the appropriate Modbus address according to the unit ordering.
- 8 Place the appropriate Unit Identifier label on each humidifier. These labels should be placed on the unit where the electrical control punch-outs are located at the top of the humidifier.
- 9 Connect the slave humidifiers (if applicable) to the Condair Links Module. A twisted pair cable should be used so that the Net (+) terminal on the Condair Links module should connect to the Net (+) terminal on the slave unit (Nortec NHTC). The Net (-) terminal on the module should be connected to the Net (-) terminal on the slave unit. Refer to the Condair Links 2 wiring diagram for more information.
- 10 Ensure shield wiring matches the following pattern if distance between humidifiers is significant:



Note: Wires in diagram rotated for clarity, wires will be "doubled up" in actual terminal strip

Figure 12: Shield Wiring

Condair Links 2 – Field Retrofit for Nortec NHRS Models (BACNET, LONWORKS, and N2 Modules)

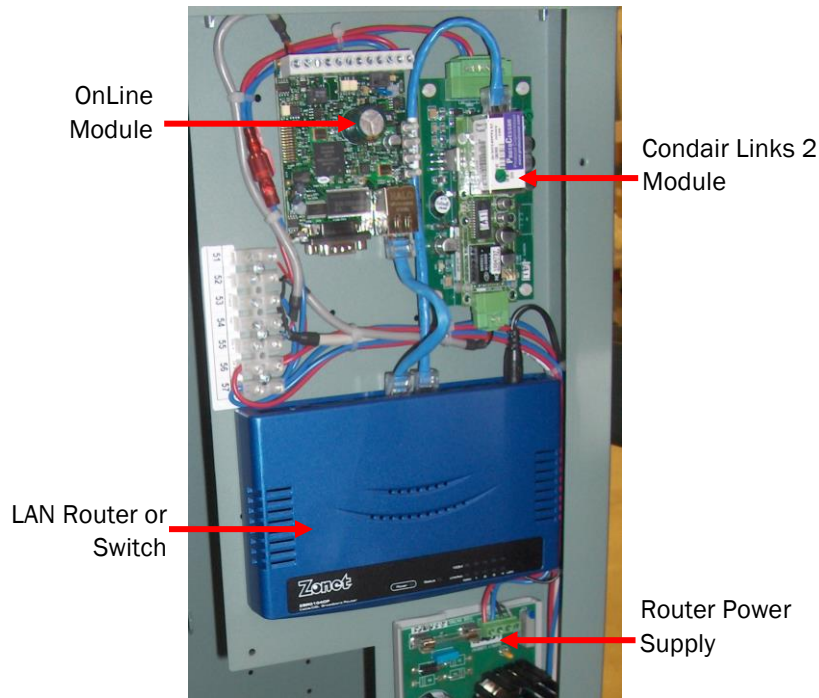


Figure 13: Component Identification

Step 1 – Mounting the Condair Links 2 Assembly

- 1** The Condair Links 2 assembly mounts on the top, right corner of the electrical compartment.
- 2** Ensure that the rear, upwards facing hook engages the proper cooling louver at the back of the humidifier cabinet.
 - a** Fasten the bracket assembly to the humidifier ‘top’ using the 3 8-32 X ½” self-tapping screws provided with the kit.

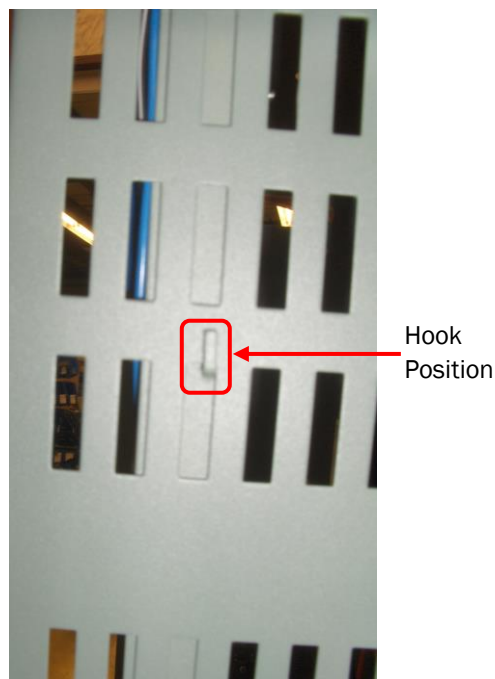


Figure 14: Hook Position

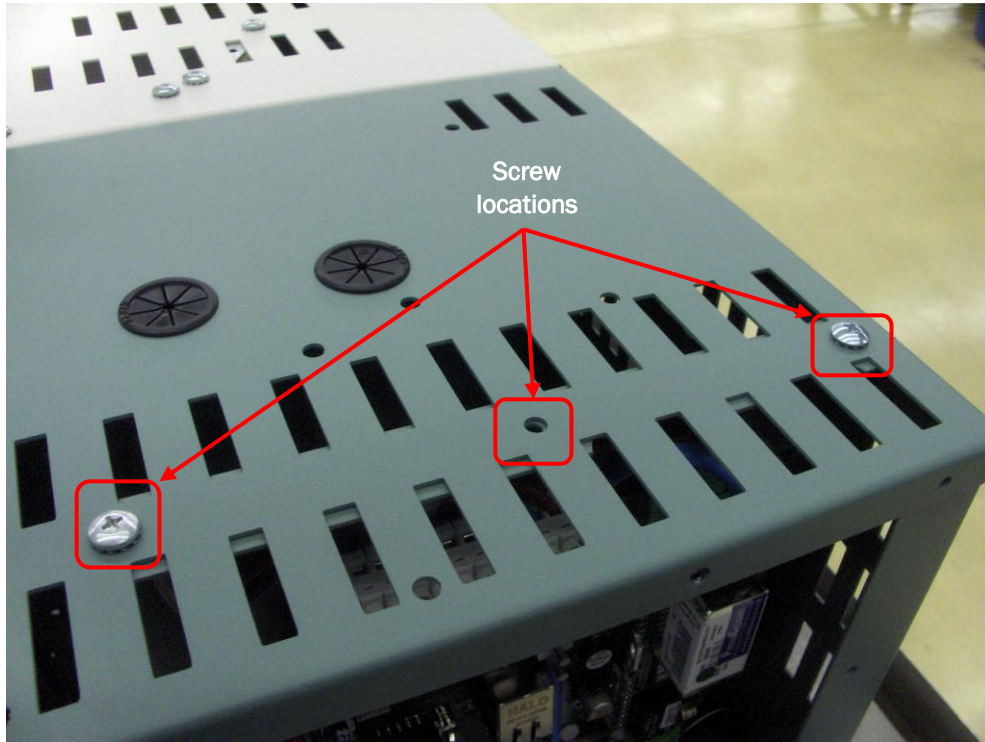


Figure 15: Assembly Mounting Location

Step 2 – Wiring the Condair Links 2 Module

- 1 Most of the wiring connections for the new Condair LINKS 2 module will have already been finished at the factory; however, there is an additional Logic Card that must be installed. Refer the Condair LINKs 2 wiring diagram included in the package for added details.
- 2 Module Power Connections: There will be a wire harness provided that will consist of a red and blue wire. Both red and blue wires are terminated ring terminals. Cut the terminals off and strip off 1/8” insulation on the end.
 - a The red wire is to be connected to the left side of contact #1 (24v) on the main terminal strip. The blue wire is to be connected to the left side of contact #3 (ground) on the main terminal strip.

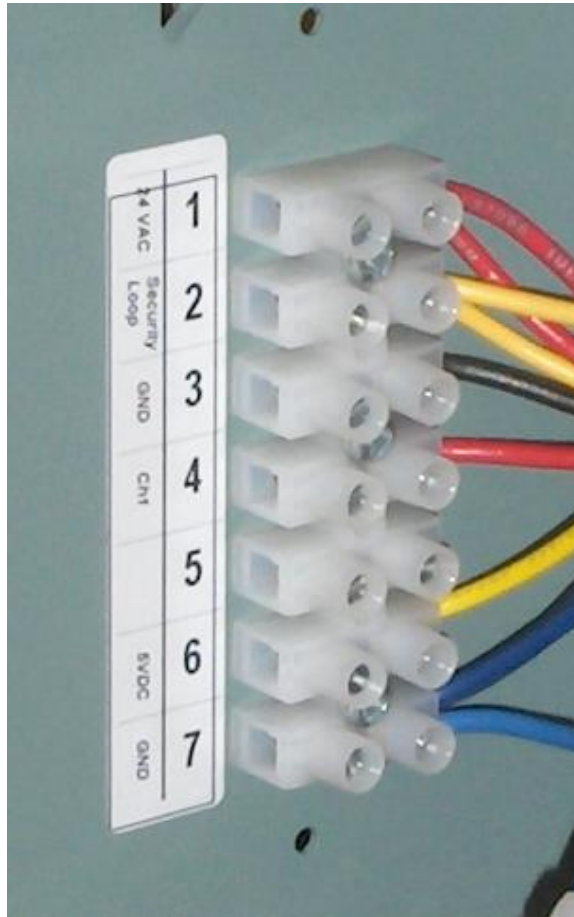


Figure 16: Humidifier Man Terminal Strip

- 3 Humidifier Communication Connection:
 - a Locate the main PCB board inside the humidifier.
 - b Connect the 10 pin end of ribbon cable to the COM port.

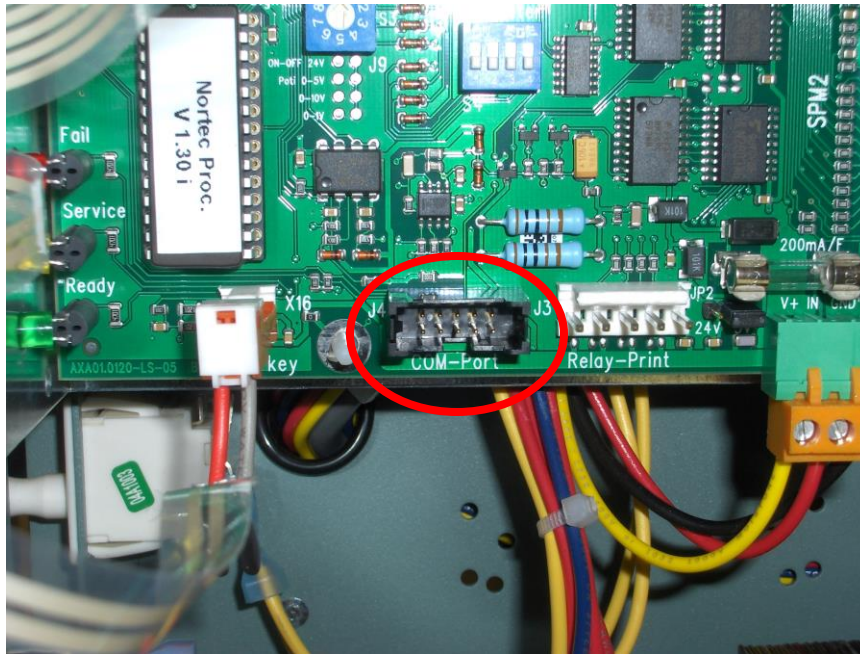


Figure 17: COM Port

- c Route the ribbon cable through the punch out on the humidifiers front electrical panel

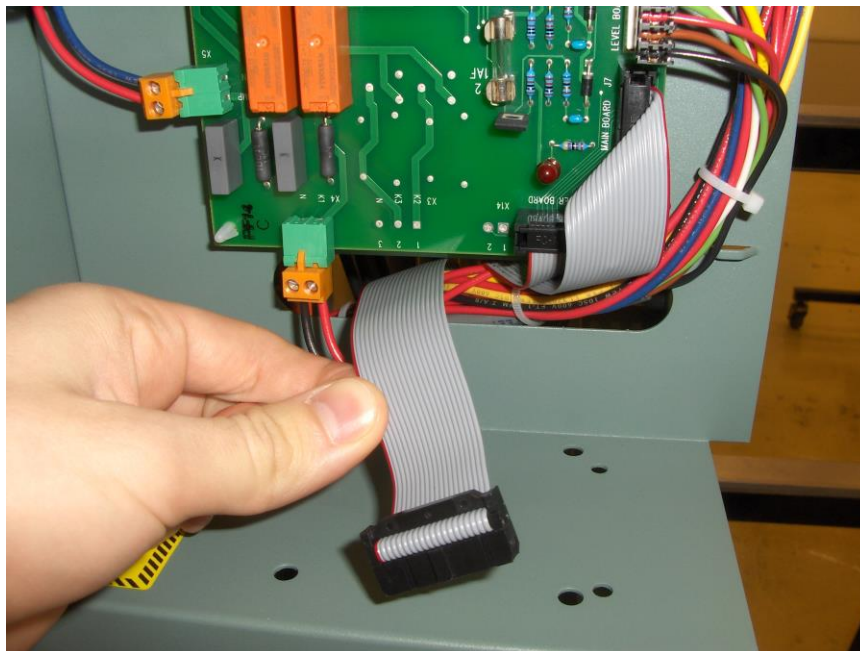


Figure 18: Route Ribbon Cable

d Connect the ribbon cable 20 pin side to the Logic Card.

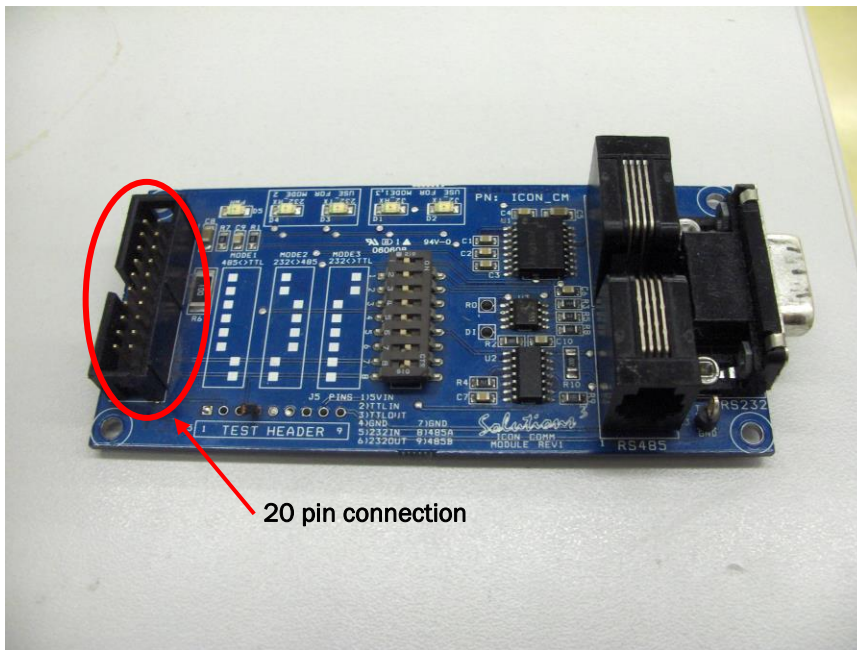


Figure 19: 20 Pin Connection for Ribbon Cable

e Configured dipswitch settings according to MODE1 printed on card (485<>TTL).

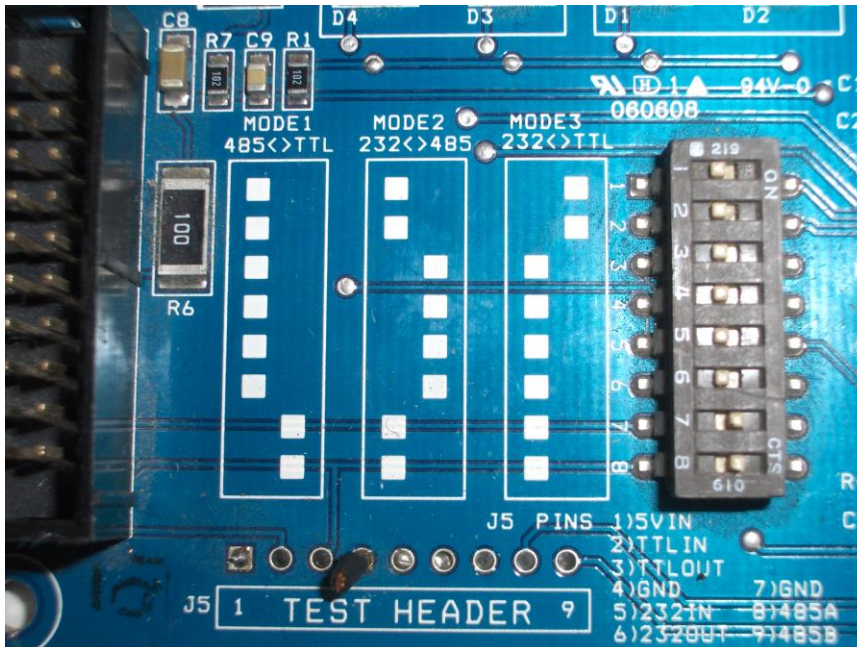


Figure 20: Dipswitch Settings for Logic Card

- f Route the RJ-11 cable through the same punch out as the ribbon cable and connect it to the corresponding jack on the logic card.

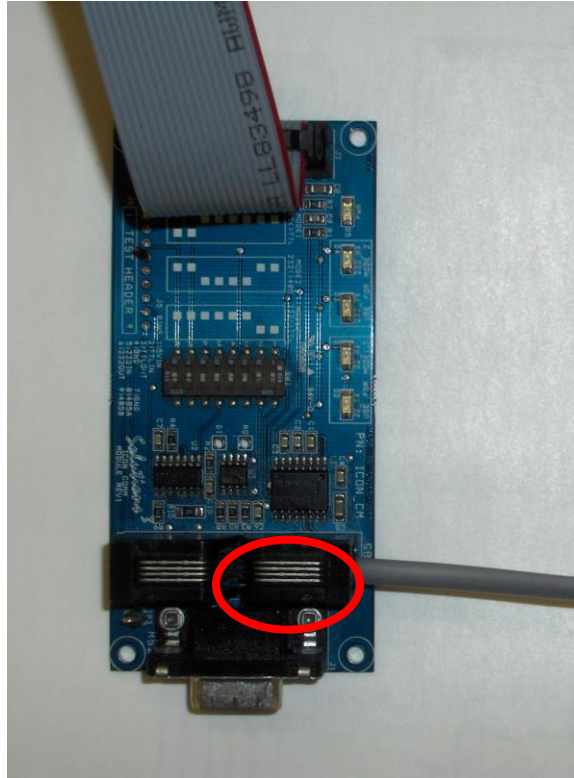


Figure 21: RJ-11 Jack Location on Logic Card

- g Mount logic card with nylon standoffs and screws to humidifier using the 4 pre-drilled holes

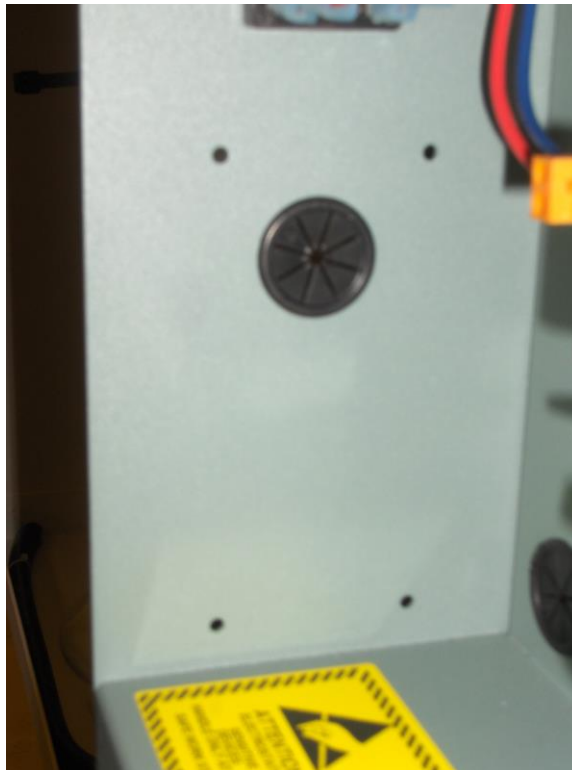
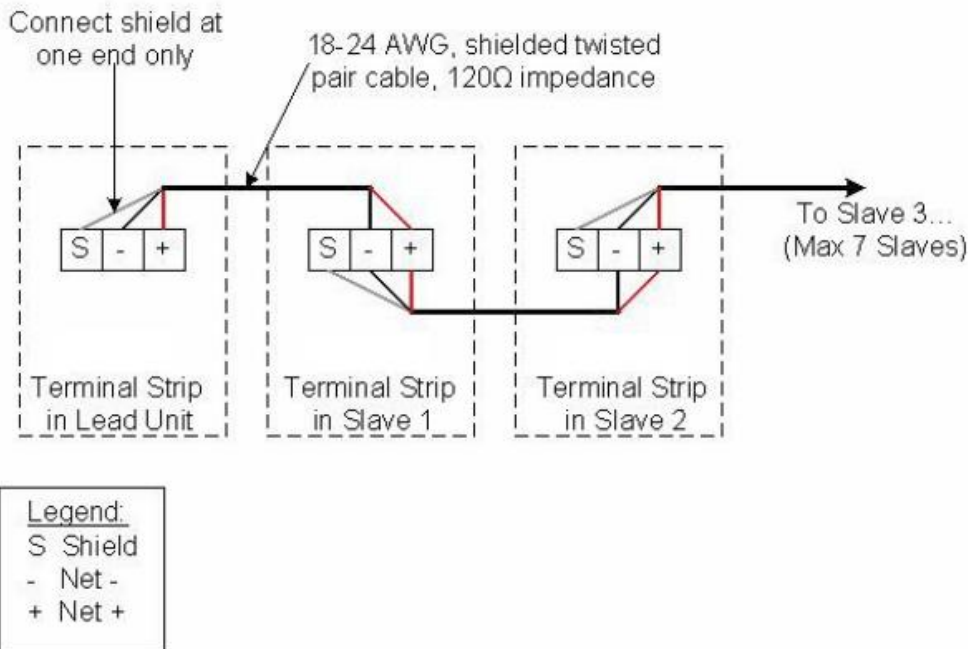


Figure 22: Pre Drilled Holes for Logic Card

Step 3 – Configuring The Humidifiers

- 1 Since Condair Links 2 can connect to a maximum of 8 units, it will be necessary to set the unit address for each humidifier. The lead unit can be determined by the presence of the Condair Links module. The slave humidifiers can be given a unit address according to the number the unit will have on the networked chain.
- 2 To access the menu settings, press the Up and Down arrows at the same time
- 3 Scroll up or down to find the Modbus heading
- 4 Set the appropriate Modbus address according to the unit ordering.
- 5 Place the appropriate Unit Identifier label on each humidifier. These labels should be placed on the unit where the electrical control punch-outs are located at the top of the humidifier.
- 6 Connect the slave humidifiers (if applicable) to the Condair Links Module. A twisted pair cable should be used so that the Net (+) terminal on the Condair Links 2 module should connect to the Net (+) terminal on the slave unit. The Net (-) terminal on the module should be connected to the Net (-) terminal on the slave unit. Refer to the Condair Links 2 wiring diagram for more information.
- 7 Ensure shield wiring matches the following pattern if distance between humidifiers is significant:



Note: Wires in diagram rotated for clarity, wires will be "doubled up" in actual terminal strip

Figure 23: Shield Wiring

Warranty

Condair Ltd. (hereinafter collectively referred to as THE COMPANY), warrant for a period of two years after installation or 30 months from manufacturer's ship date, whichever date is earlier, that THE COMPANY's manufactured and assembled products, not otherwise expressly warranted are free from defects in material and workmanship. No warranty is made against corrosion, deterioration, or suitability of substituted materials used as a result of compliance with government regulations.

THE COMPANY's obligations and liabilities under this warranty are limited to furnishing replacement parts to the customer, F.O.B. THE COMPANY's factory, providing the defective part(s) is returned freight prepaid by the customer. Parts used for repairs are warranted for the balance of the term of the warranty on the original humidifier or 90 days, whichever is longer.

The warranties set forth herein are in lieu of all other warranties expressed or implied by law. No liability whatsoever shall be attached to THE COMPANY until said products have been paid for in full and then said liability shall be limited to the original purchase price for the product. Any further warranty must be in writing, signed by an officer of THE COMPANY.

THE COMPANY's limited warranty on accessories, not of the companies manufacture, such as controls, humidistats, pumps, etc. is limited to the warranty of the original equipment manufacturer from date of original shipment of humidifier.

THE COMPANY makes no warranty and assumes no liability unless the equipment is installed in strict accordance with a copy of the catalog and installation manual in effect at the date of purchase and by a contractor approved by THE COMPANY to install such equipment.

THE COMPANY makes no warranty and assumes no liability whatsoever for consequential damage or damage resulting directly from misapplication, incorrect sizing or lack of proper maintenance of the equipment.

THE COMPANY makes no warranty and assumes no liability whatsoever for damage resulting from freezing of the humidifier, supply lines, or drain lines.

THE COMPANY retains the right to change the design, specification and performance criteria of its products without notice or obligation.

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