ASPEN COMPRESSOR
Drive Board RS232 Adapter Kit

Special Note

The Aspen Drive Board RS232 Adapter Kit can purchased as an add on component and attached to an existing Aspen compressor drive, or as a complete assembled kit including the drive. If it is to be installed on an existing drive **it is important to be certain that the software on the drive it will be installed on is at Rev. G or later**. Otherwise, it will not behave correctly

What's Included

The add on kit includes the following items:

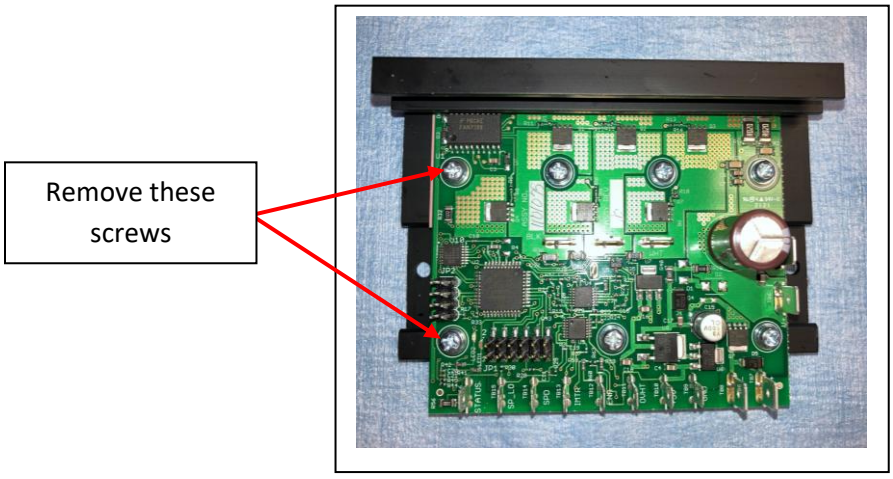
1. RS232 Adapter Board
2. 2 aluminum spacers
3. 2 M3 x 18mm screws

The complete kit with drive comes pre-assembled and includes the above items pre-assembled to the drive board of your choice.

Assembly Instructions

Follow the instructions below to assemble RS232 Adapter Board to your existing Aspen drive board

Step 1 – Remove 2 screws from the drive board as shown below.



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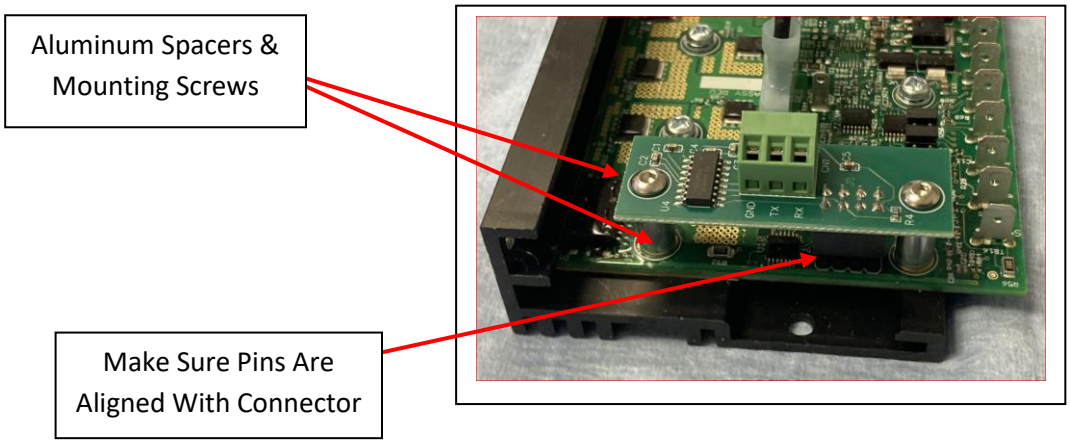
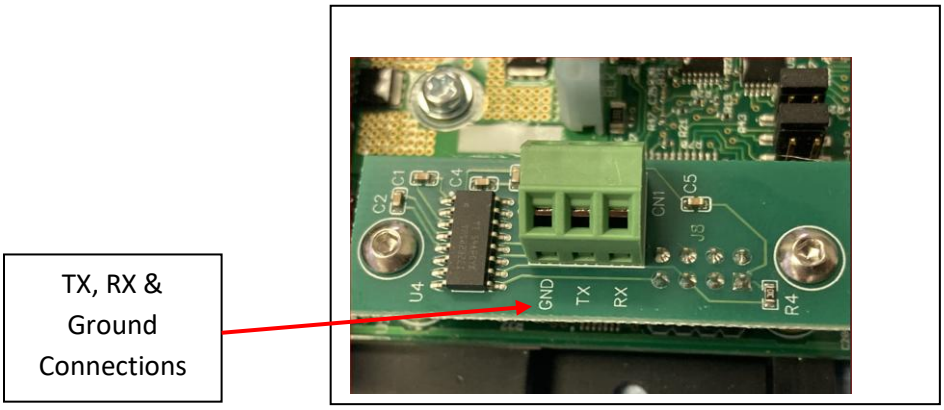
Step 2 – Install the two aluminum spaces and then lower the RS232 adapter board on to the drive board being sure to align the connector with the mating pins on the drive board. Install the 2 M3 x 18mm screws and tighten to 10 in-lbs.



Step 3 – Connect the appropriate communication wires the adapter board. The board will interpret commands sent to the RX connection and provide information on the TX connection.



Operation

Settings: 9600 baud, 8 bits, no parity, 1 stop bit.

When using the RS232 adapter board, the drive can be operated in two modes. The modes are "**local**" and "**remote**". Once the board is place in "**remote**" mode, it will stay there until it is commanded to go in to "**local**" mode or the power is reset. The command for switching from local to remote mode is listed in the table below.

When operating in "**local**" mode, the board will respond to queries for information, but control of the compressor speed, as well as on and off, will be determined by the inputs from the external wiring. Additionally, the control of the FAN power tabs is automatic, switching on ~ 10 seconds after the compressor starts.

When operating in "**remote**" mode the drive will respond to queries for information in addition to control commands to turn the compressor on and off, control the speed of the compressor as well as the function of the FAN power tabs on the board. FAN power tabs will no longer turn on automatically after compressor starts.

The tables on the following pages show a list of RS232 Queries and Commands the board will respond to.

Queries	
Command String	**Response**
E?	This will return E=”X” whereas “X” is the fault condition present 0= No Error 1= Compressor Stall / Lock Rotor 2= Supply Voltage Too High 4= Supply Voltage Too Low 8= Board Overheat 16 = Compressor Overheat 32 = Multiple Compressor Stall Over Time
I?	This will return the following 5 numeral string X,X,X,X,X, Character One = Remote/Local status whereas 1 = Remote 0=Local Character(s) Two = compressor speed Character Three = Compressor Motor Current *10 Character Four = Error Mode (see below) 0= No Error 1= Compressor Stall / Lock Rotor 2= Supply Voltage Too High 4= Supply Voltage Too Low 8= Board Overheat 16 = Compressor Overheat32 = Multiple Compressor Stall Over Time Character Five = Compressor Model 5=12v 15 amp Q-series 6=24v 10 amp Q-series 7=24v 15 amp Q-series 8=24v 15 amp T or H-series 9=48v 8 amp Q-series 10=48v 10 amp T28 or H28 11=48v 10 amp T38 or H38
S?	This will return the present value of the compressor speed

Commands	
Command String	**Response**
E=0	This will clear errors if there are any present
G=1	When in “remote” mode this will turn the FAN power connection on.
G=0	When in “remote” mode this will turn the FAN power connection off.
R=1	This puts the board in “remote” mode. The board will only respond to remote commands. It will ignore speed input voltages if they are present. Control of the FAN outputs on the board are manually controlled as well.
R=0	This puts the board in local mode and it will behave as it typically does without RS232 control.
S=”XXXX”	This starts the compressor at the speed represented by “XXXX” . S=2500 will start the compressor and control its speed to 2500 rpm. S=0 will turn the compressor off. Max speed of the compressor is 6500 rpm. Min speed of the compressor is 1400 rpm for single cylinder models and 1200 rpm for twin cylinder models

*****Note – Regardles of which mode the drive is operating in, the enable wire must always be connected to ground in order for the compressor to run.*******