



## Replacing Allen-Bradley 1747-AIC Link Coupler with a Model 485OPDRI

1. Before beginning the replacement of the Allen-Bradley 1747-AIC with the Model 485OPDRI, the DIP switches must first be toggled to their appropriate positions. These switches can be found on both the bottom and the top of the unit. The DIP switch settings will be consistent for both sides, and should follow the chart below. A switch toggled to the upward position corresponds to OFF. The downward position corresponds to ON.

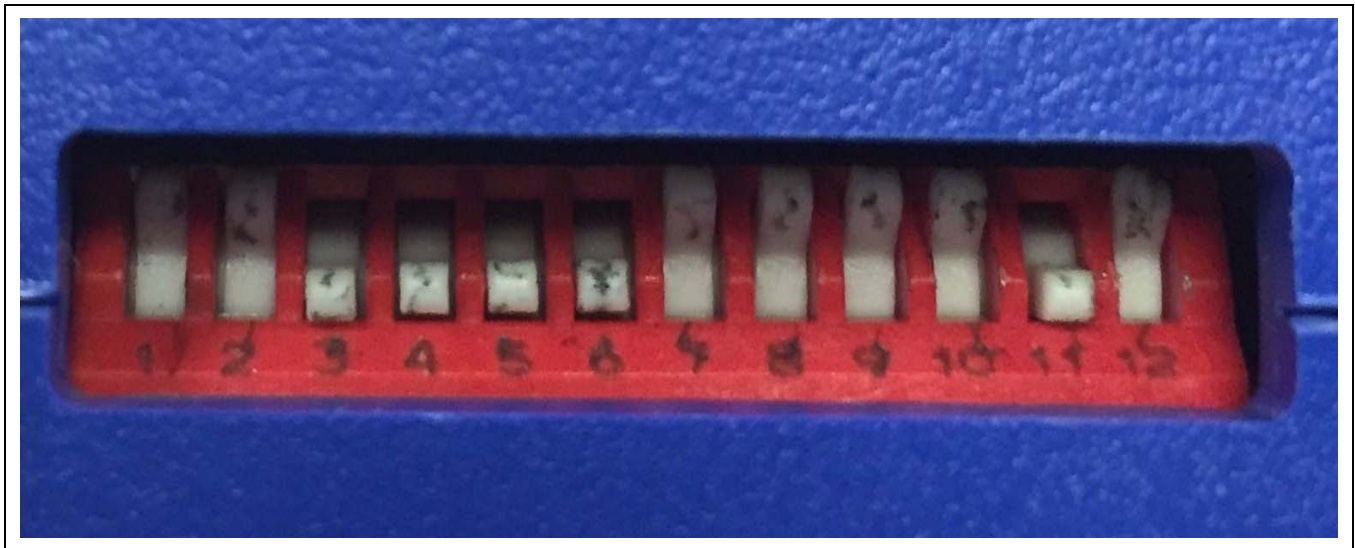
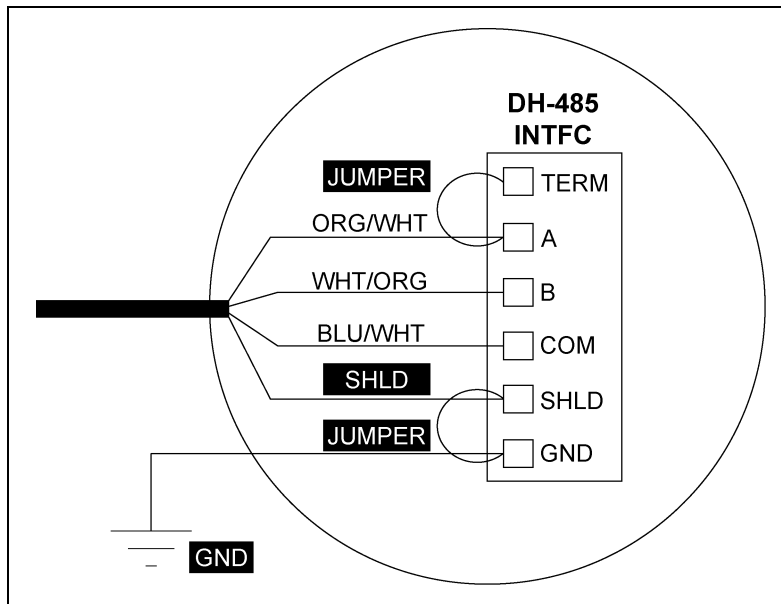


Figure 1 DIP Switches - Top View

DIP Switch Settings					
1	2	3	4	5	6
OFF	OFF	ON	ON	ON	ON
7	8	9	10	11	12
OFF	OFF	OFF	OFF	ON	OFF

2. The next step is to remove the current unit. In order to do so, two separate cables must be detached. The first is the input connection. This is the series of wires that is connected to the terminal block on top. These input wires will also be used for the replacement part. Remove the block from the device, and detach the connected wires using a screwdriver. The two jumpers on both ends, shield, and GND wire will not be used for the replacement module. The second is the cable connected to the CPU port. Unplug this and the RJ45 connection that it feeds into on the SLC 5/03 CPU. Once these wires are removed, the coupler can be taken off the rail mount.





**Figure 2** Schematic showing used and un-used (highlighted) wires for the replacement part



**Figure 3** SLC 5/03 RJ45 Connection



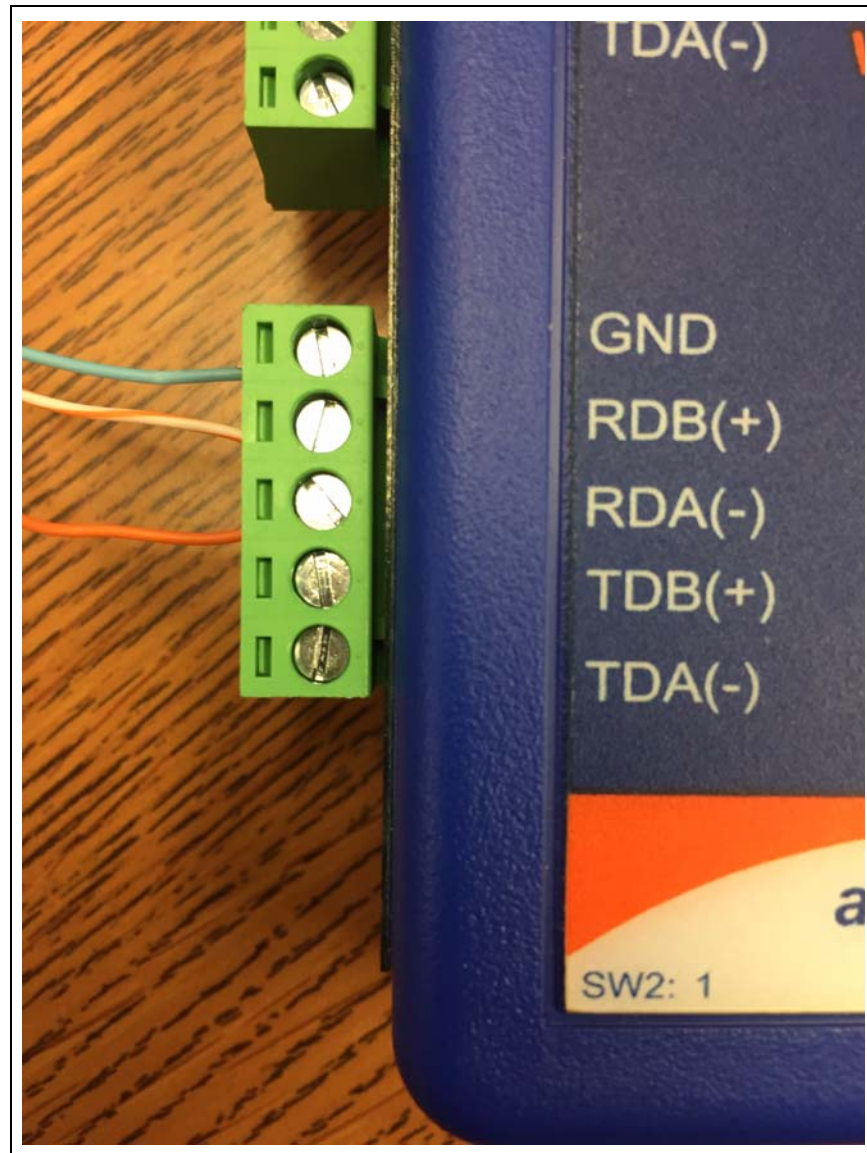
**Figure 4** 1747-AIC Module Connected to SLC 5/03

## AB 1747-AIC (GSI 756-2163-1) Retrofit Instructions

3. The 485OPDRI model can then be mounted onto the original position of the 1747-AIC model. Once this is complete, the input, output, and power connections will need to be established.
4. The 485OPDRI will use the same input cable as the 1747-AIC. However, it will only utilize the orange with white stripe, white with orange stripe, and blue with white stripe wires. The blue wire with a white stripe connects to the GND (top) pin. The white wire with an orange stripe connects to the RDB (+) (second) pin. Lastly, the orange wire with a white stripe connects to the RDA (-) (third) pin. The remaining wires will not be needed.

**NOTE:** *The orange wire with a white stripe might instead be a solid orange wire depending on which unit is being used.*

5. The output connections must then be attached to the new unit. The 485OPDRI model will, unlike the Allen-Bradley version, use a modified Ethernet cable for its output. This will consist of an Ethernet cable with an intact connector on one end and a split end, exposing the wires, on the other end. Only 3 of the 8 Cat 5 wires will be used. These are the solid blue, orange striped, and solid orange wires. The blue wire connects to the GND (top) pin. The orange and white striped wire connects to the RDB (+) (second) pin. The solid orange wire connects to the RDA (-) (third) pin.

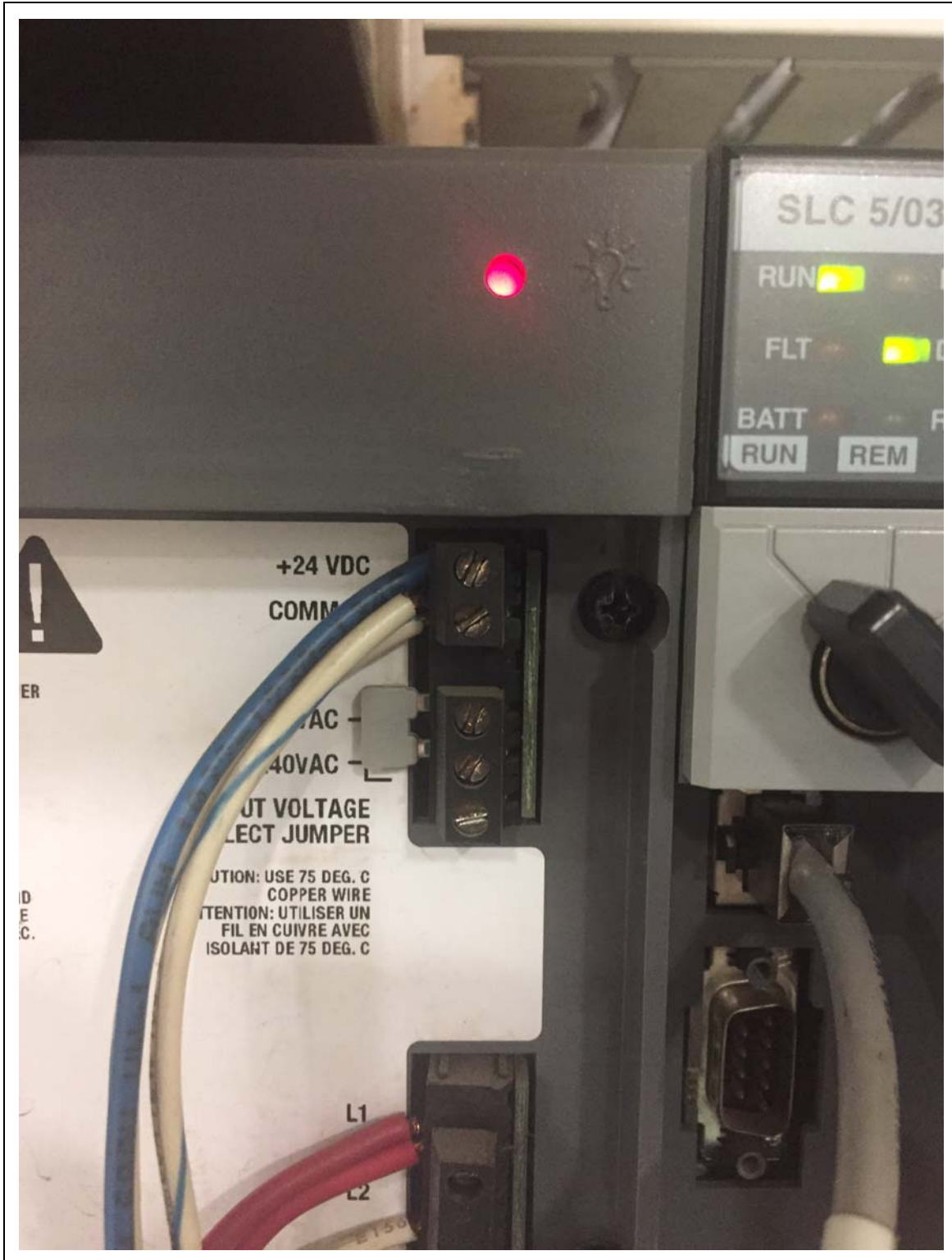


**Figure 5** Replacement Output Connections

## AB 1747-AIC (GSI 756-2163-1) Retrofit Instructions

- The last part of installation of the coupler involves supplying power to the unit. This is done by connecting the positive and negative terminals, located on top of the coupler, to the SLC Power Supply. The solid blue wire corresponds to the positive terminal, and the striped wire corresponds to the negative terminal.

**NOTE:** No more than two wires should be placed at each connection.



**Figure 6** SLC 5/03 24 Volt Power Source

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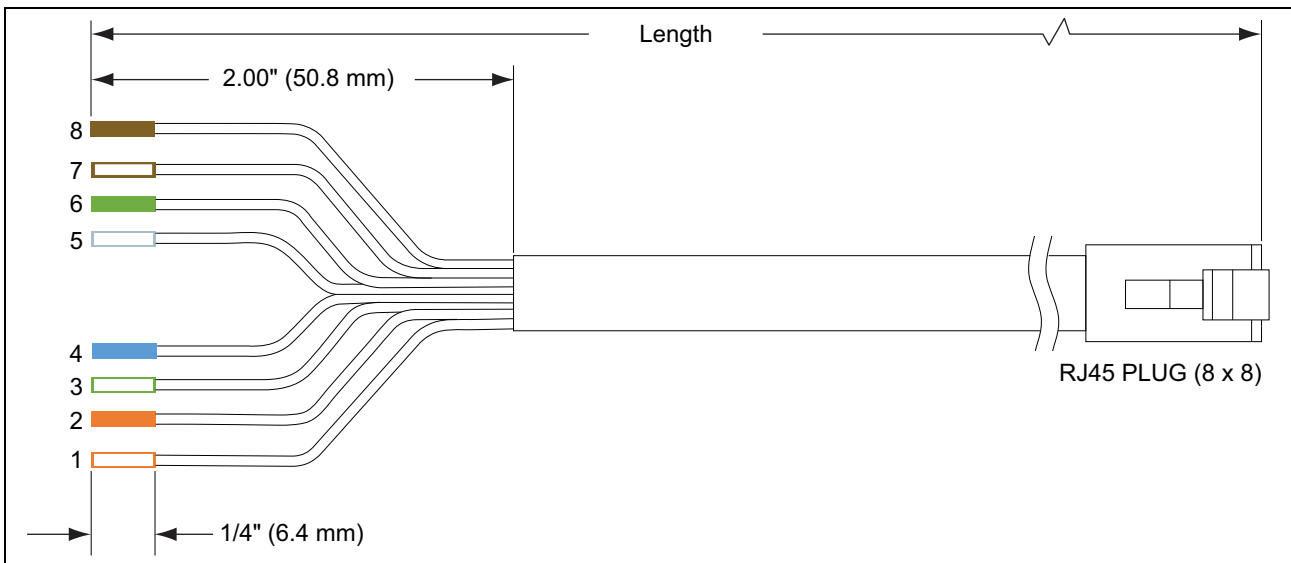
7. After the power supply is connected, the dryer should be operational. Switch the power ON, and observe the LED's on the repeater. A red, solid light on the Power LED indicates the power wiring is correct. Pulsing lights on the Data in and Data out LEDs indicate that these wires are connected correctly.



**Figure 7** Data In



**Figure 8** Data Out and Power LED's



**Figure 9**

### Modified Ethernet Cable (Crossover Assumed for Colors)

RJ45 Pin Number	Color	Pin Location
1	Orange Striped	RDB (+) (Pin G)
2	Orange	RDA (-) (Pin H)
3	Green Striped	Not Used
4	Blue	Ground (Pin F)
5	Blue Striped	Not Used
6	Green	Not Used
7	Brown Striped	Not Used
8	Brown	Not Used