

## Converting the Rockwell 1746-OV16/OVP16 to the Spectrum Controls 5069-OV16F-SC

Component requirement: Quantity 1 Rockwell 1492-CM1746-M03 I/O Conversion System

This conversion module may be used to connect signals from 1746 modules to 5069 modules.

The conversion module is an 18 point removable terminal block which connects directly to the 5069 modules.

The other end is a female removable connector to connect directly to the 1746 removable terminal block.



Figure 1

### Reference Documents:

- Rockwell document [1492-in138 Installation Instructions](#) for information on the 1492-CM1746-M03
- Rockwell document [1492-sg010 IO Conversion System Selection Guide](#) for information on the entire bulletin 1492 line of 1746 to 5069 IO Conversion System products

### 1746-OV16/OVP16 Wiring 24V DC Transistor Sinking

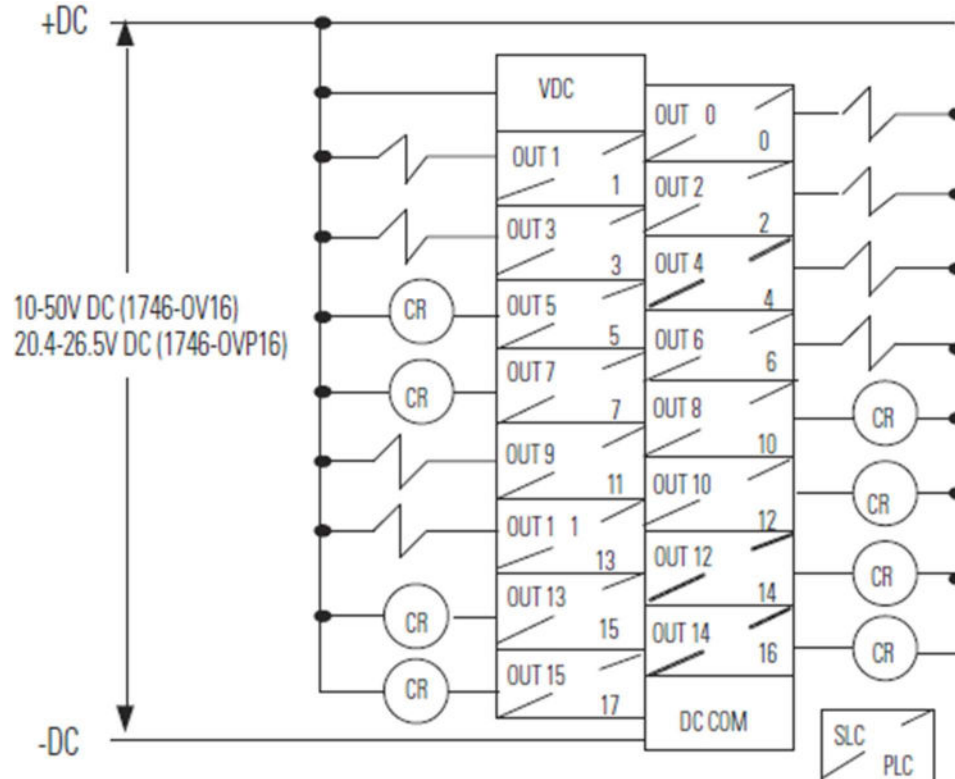


Figure 2

**5069-OV16F-SC**  
**16 HIGH-SPEED DISCRETE OUTPUTS (SINKING)**

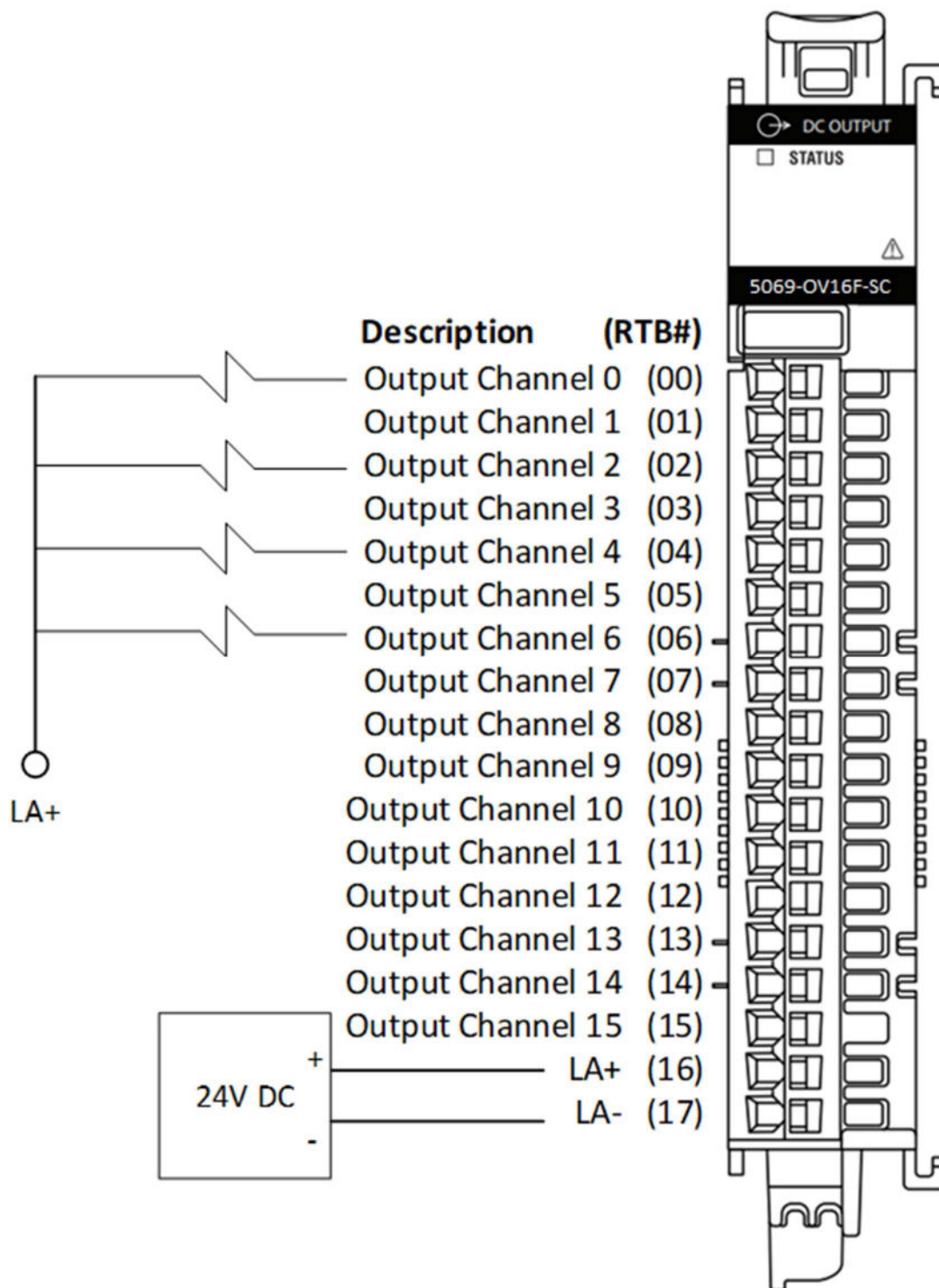


Figure 3

Figure 4 is Rockwell's Graphic connection flow for the Conversion module 1492-CM1746-M03:

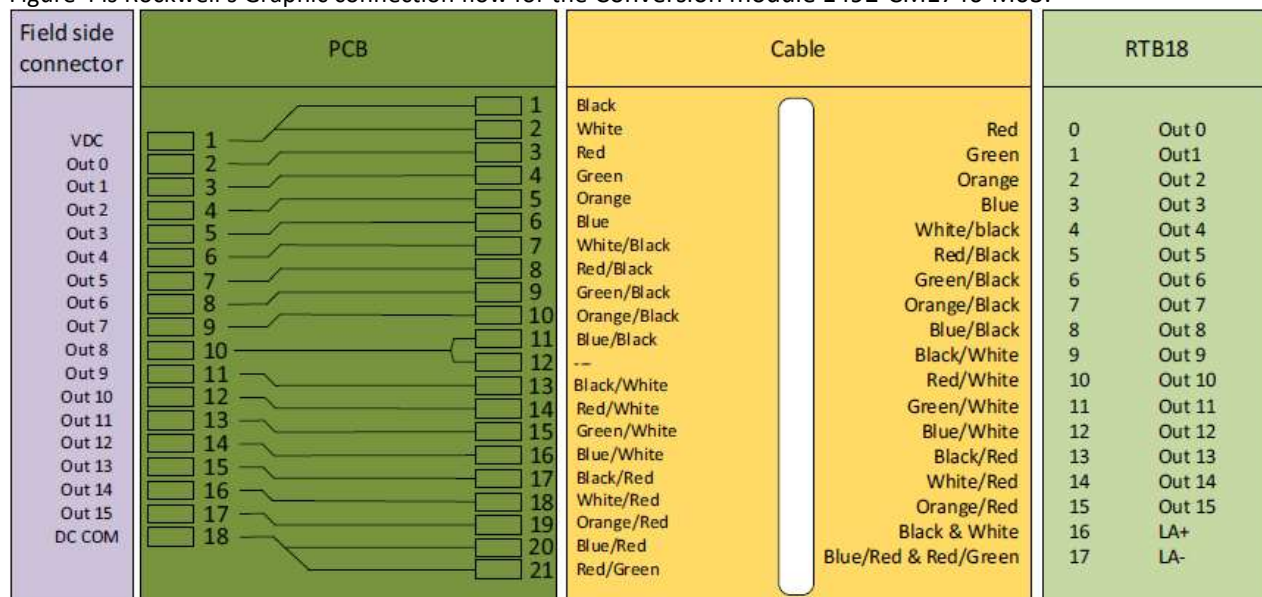


Figure 4

The 18 pin Field Side Connector on the 1746 side converts to a PCB inside the housing where the ends of a 21 conductor cable get soldered. The 18 required conductors on the 5069 side then get routed to the correct terminals on the 5069-RTB18 removeable terminal block. The VDC and DC COM terminals on the 1746 Field Side Connector terminate on the 5069 side to the LA+ and LA- terminals.

Figure 5 is a view of the Conversion module 18 pin Field Side Connector on the 1746 side. The sockets and hold down fasteners are visible as is the PCB inside the housing. The 18 pin removeable terminal block on the 1746 module plugs directly into the Field Side Connector.

In this view, Field Side Connector terminal for input 0 is on the upper row all the way to the left (circled in green), and connects to the terminal for input 0 on the 5069-RTB18 with the red wire. The terminal for input 1 is on the lower row just to the right.

The Field Side Connector terminal for input 15 (circled in green) is on the lower row on the right, and connects to terminal 15 on the 5069-RTB18 with the orange/red wire. The terminal for input 14 is on the upper row just to the left.

The graphic in Figure 2 shows that the VDC and DC COM terminals are at opposite ends of the terminal block (circled in red).



Figure 5

Figure 6 is a view of the Conversion module 18 pin connector on the 5069 side. The wires going to terminals 16 & 17 do not show up well in Rockwell's image of the 1492-CM1746-M03 module, but the 1746 side 24VDC power supply connects to the LA+ & LA- through those terminals. No rewiring of any kind is required to use the Rockwell 1492-CM1746-M03 to convert a 1746-OV16/OTV16 to the Spectrum Controls 5069-OV16F-SC.



Figure 6