How Raven Controls Valves (Wiring Connections and Voltages)

Information

Details The connectors below are found on the main flow / section cables. They are not to be confused with the cable connections that are physically attached to the valves themselves.

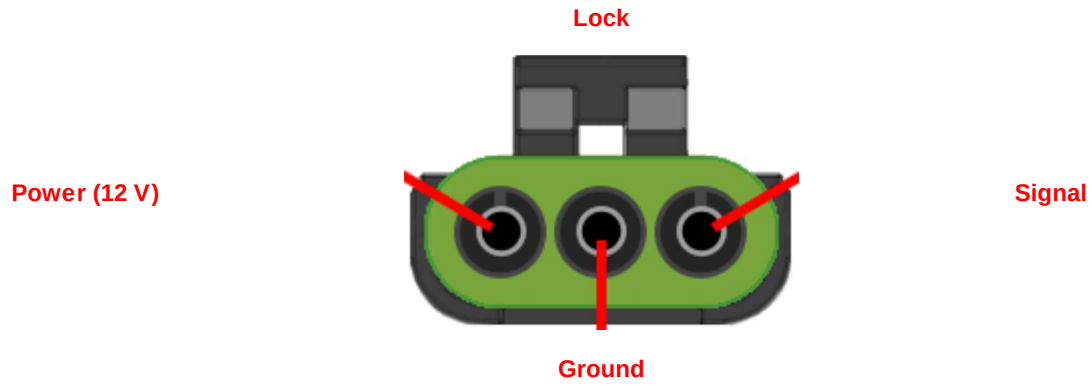
When checking voltages for Raven valves, the voltages in the table below apply.

Valve Type	Voltage
Standard	12 volts only when opening and closing.
Fast	Up to 12 volts, but typically between 3 to 4 volts when adjusting.
Fast Close	Same as Fast Valve, but will apply 12 volts when in a previously applied area, or is told to close.
PWM	Always uses 12 volts. The amount of time that voltage is present compared to the amount of time it is off determines the state of the valve. Must be tested under load. A voltmeter will display the average voltage detected, so a 50% duty cycle will register as 6 volts.
PWM Close	Same as PWM Valve, but voltage is sent to completely close the valve when needed.

Flow Cables

Boom (On/Off) Valves

Common Boom Valves	
Part Number	**Description**
063-0171-926	Single Manifold Boom Valve
063-0171-928	3 Section Manifold Boom Valve



For boom valves, 12 volts on the Signal wire will open the valve while no voltage on the wire will close it.*

* *For planters, this is the opposite.*
No voltage on the Signal wire will open the section, while 12 volts on the wire will close it.

Control Valves

Common Control Valves	
Part Number	**Description**
063-0172-125	1" Butterfly Control Valve (Poly)
063-0172-172	1" Fast Motor Control Valve (3-Way Ball)**
063-0171-843	15 GPM PWM Hydraulic Control Valve

Normally, the green wire is Decrease and the yellow wire is Increase. To control the valve in the opposite direction, these wires have their polarities swapped (green becomes Increase and yellow becomes Decrease).

For PWM control valves, the wires are pulsed. It will be a progressive voltage, meaning that it will always use 12 volts, but the amount of time that voltage is present compared to the amount of time it is off determines the state of the valve. PWM valves must be tested under load. A voltmeter will display the average voltage detected, so a 50% duty cycle will register as 6 volts.

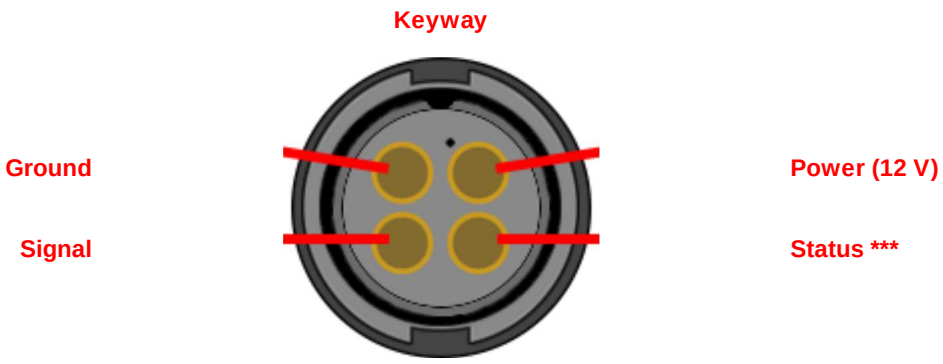
** *In some cases, cables with the connector above may have separate wires for Power and Ground.*

If using a Boost Box, please refer to the article on Boost Box Information.

AccuFlow Systems

Master On/Off and Section Valves

Common AccuFlow On/Off Valves		
Part Number	**Description**	**Commonly Used With**
063-0173-203	1 1/4" On/Off Valve (NH_3)	AccuFlow and AccuFlow HP
063-0173-668	1 1/2" On/Off Valve (NH_3)	AccuFlow Vortex and AccuFlow HP Plus

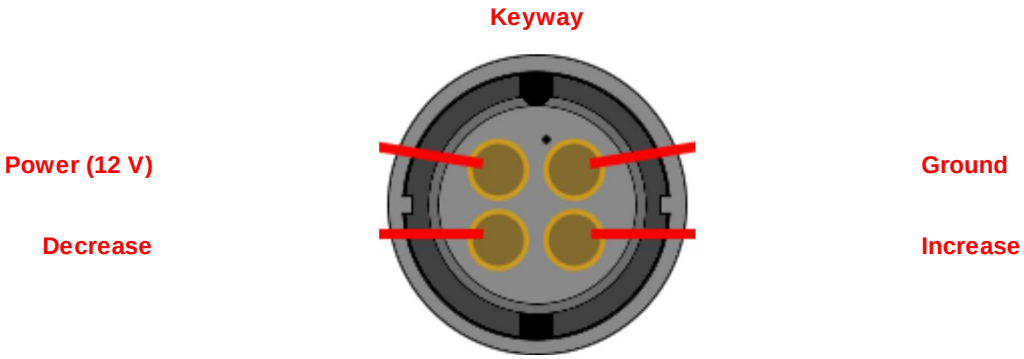


12 volts applied to the Signal wire will open the valve while no voltage on the wire will close it.

*** *The Status pin is not populated in AccuFlow and AccuFlow HP cabling.*

Control Valve

Common AccuFlow Control Valves		
Part Number	**Description**	**Commonly Used With**
063-0172-977	1" Control Valve (NH_3)	AccuFlow and AccuFlow HP
063-0173-667	1 1/2" Control Valve (NH_3)	AccuFlow Vortex and AccuFlow HP Plus



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