“Precision Voltage Control System”

The PVCS is a driver controller module with many powerful features that can be easily programmed for use with many applications such as speed and directional controls, proportional valves, solenoids, coils, lifts, hoists, attachments and many more.

Designed to work with the JS-500-Pro, JS-series, and Hall Effect joysticks or with just about any +5v variable voltage sensor, the PVCS-DC01 includes 1 signal input, 5 adjustable proportional pulse width modulation (PWM) and/or discrete outputs and 2 proportional analog outputs. The PVCS-DC02 includes 2 signal inputs, 10 adjustable proportional pulse width modulation (PWM) and/or discrete outputs and 4 analog proportional outputs.

PWM and discrete output characteristics include; On/Set/Off, 2D Zone, Zero, 2D Zero and adjustable

CYBER·TECH, INC.

INDUSTRIAL CONTROL SOLUTIONS

Handy-Grips® Ergo-Grips® Joystick Bases

Product Feature Overview:

- Single and dual axis configurations
- Up to 10 proportional pulse width modulation and or switching outputs
- Up to 4 proportional analog outputs
- Custom switching patterns
- Adjustable PWM ramping, deadbands and proportional slopes
- Full time LED diagnostics show activated outputs and direction of movement
- Regulated +5V reference for local command joysticks, potentiometers, halls, etc.
- Sealed IP67, IP69K enclosure w/internal heatsinks
- Compatible with most proportional joysticks and proportional sensors

Proportional Sensors

JS-500-PRO Joystick

JS-Series Joysticks

Proportional Switches

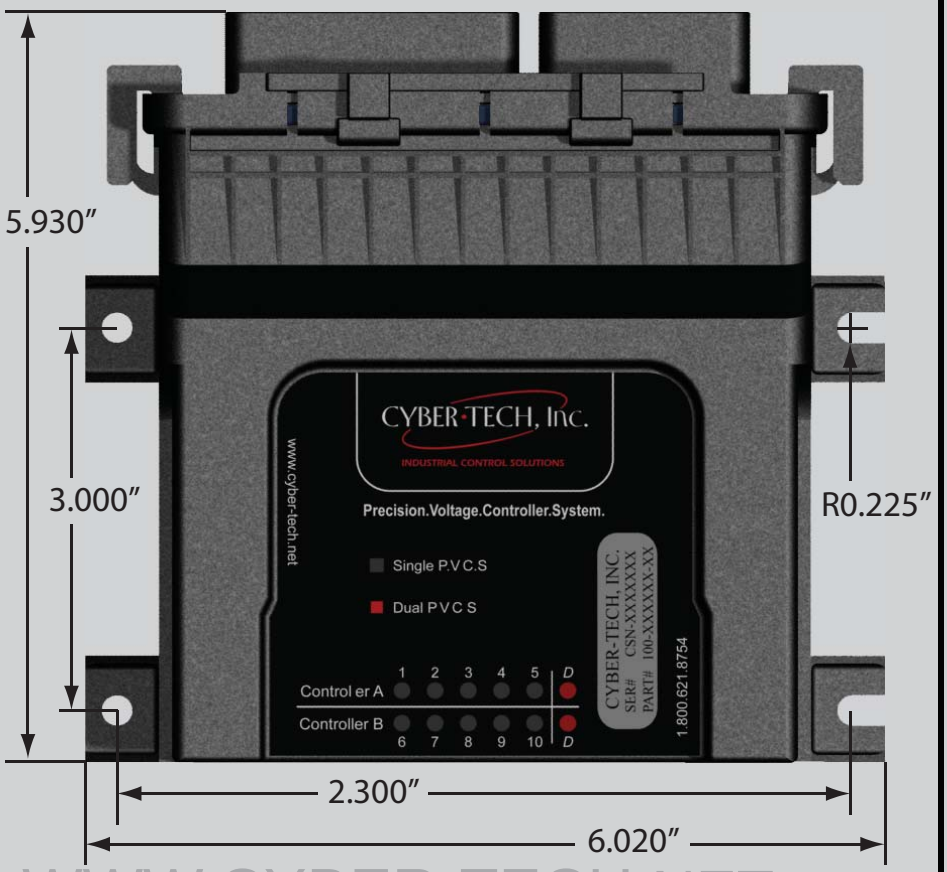
P.V.C.S. Control Module

1.800.621.8754

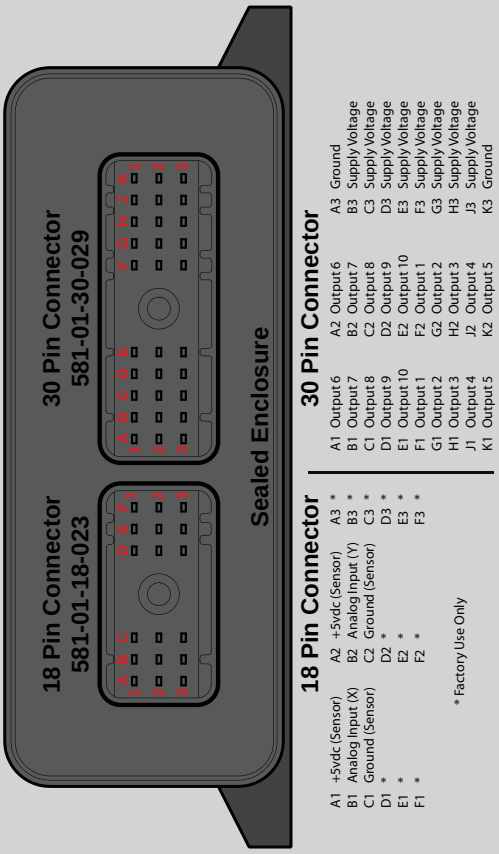
Specifications Single Axis Part#: 100-060088-01	
Power Supply	
Supply Voltage:	7Vdc Min, 30Vdc Max
Input Control Device:	1 Regulated Onboard 5Vdc Output
Control Inputs	
Input Control Device:	1 Analog Proportional Input Per Axis
Interface	
Communication	USB and Com-port Support (Factory Only)
Status Indicator	5 Output Status LEDs, 1 Direction LEDs
High Current Outputs	
Available Characteristics:	Up to 5 Programmable Outputs
Output Current (Switching):	5.0Adc Max (Stackable for higher Amps)
Output Current (PWM):	5.0Adc Max (Stackable for higher Amps)
PWM Duty Cycle:	1 to 99 %
PWM Ramp Time:	0 to 250
PWM Frequency:	244Hz (Factory Adjustable)
Analog Outputs	
Proportional Outputs:	2 Programmable Analog Outputs
Output Voltage:	1-30Vdc programmable maximum voltage.
Analog Output Curent:	0.0Adc Min, 5.0mAdc Max

Specifications Dual Axis Part#: 100-060088-02	
Power Supply	
Supply Voltage:	7Vdc Min, 30Vdc Max
Input Control Device:	2 Regulated Onboard 5Vdc Output
Control Inputs	
Input Control Device:	2 Analog Proportional Input Per Axis
Interface	
Communication	USB and Com-port Support (Factory Only)
Status Indicator	10 Output Status LEDs, 2 Direction LEDs
High Current Outputs	
Available Characteristics:	Up to 10 Programmable Outputs
Output Current (Switching):	5.0Adc Max (Stackable for higher Amps)
Output Current (PWM):	5.0Adc Max (Stackable for higher Amps)
PWM Duty Cycle:	1 to 99 %
PWM Ramp Time:	0 to 250
PWM Frequency:	244Hz (Factory Adjustable)
Analog Outputs	
Proportional Outputs:	4 Programmable Analog Outputs
Output Voltage:	1-30Vdc programmable maximum voltage.
Analog Output Curent:	0.0Adc Min, 5.0mAdc Max

General Dimensions



Pin Configuration



PVCS Control Module

Toll Free: 1.800.621.8754
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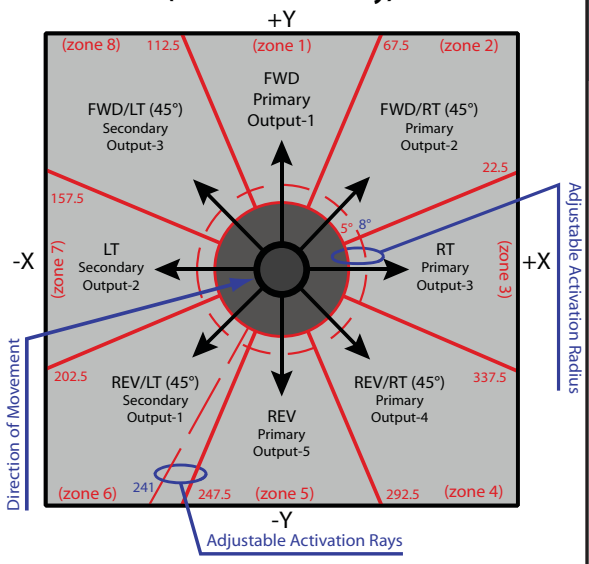
www.cyber-tech.net
sales@cyber-tech.net

Adjustable Patterns and Output Options

2D Zones

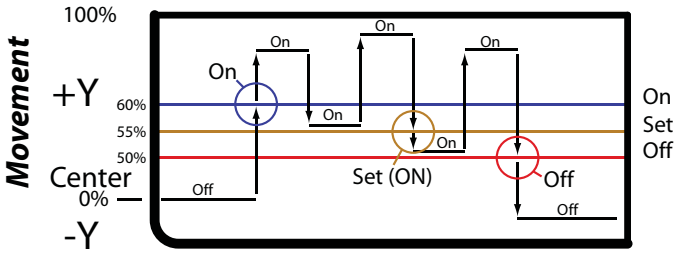
2D Zones use both analog inputs to orientate a position along two axes. The 2D output zones are defined by eight adjustable rays and an adjustable radial activation point, all located from a calibrated 360° center point. Any programmable output can be set to activate in one or more zones. Only one zone pattern can be set per controller. (This feature is most commonly used for directional switching. i.e. Fwd / Rev / Lt / Rt and 45° switches.)

2D Zones Example
(For Dual Axis Only)

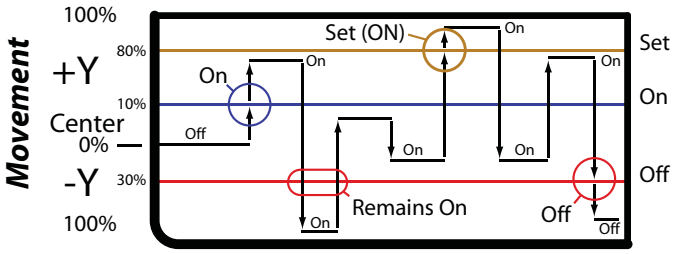


Outputs turn on or off (depending on N.O. or N.C. state) while the joystick / sensors movement is within a grey zone. Multiply zones can be programmed to a single output.

On/Set/Off Example 1
(e.g. Standard Direction Switch, N.O.)



On/Set/Off Example 2
(e.g. locking switch, N.O.)



On/Set/Off

On/Set/Off output option consists of three programmable degrees of movement. (Along a single axis) The first being "On"-The point to which the output activates. Second "Set"-The point once "On" has been engaged to allow the off function to be available) and third "Off"-The point the output deactivate.

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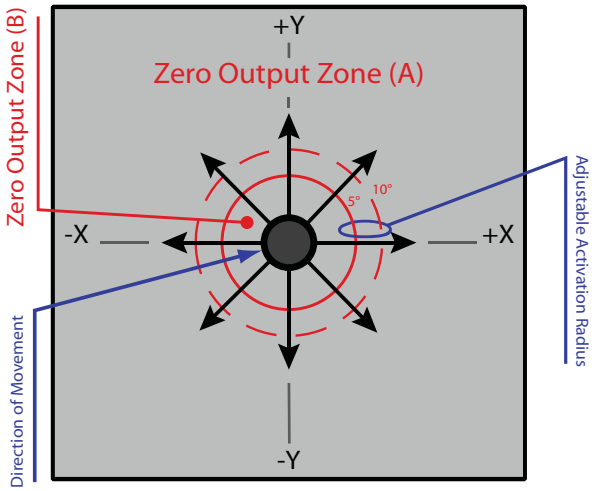
2D Zero

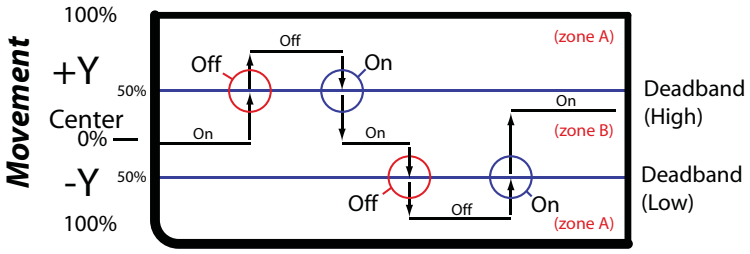
2D Zero uses both analog inputs to orientate a position along two axes. The 2D Zero output zone is defined by an adjustable radial activation point, located from a calibrated 360° center point.

2D Zero Example
(For Dual Axis Only)

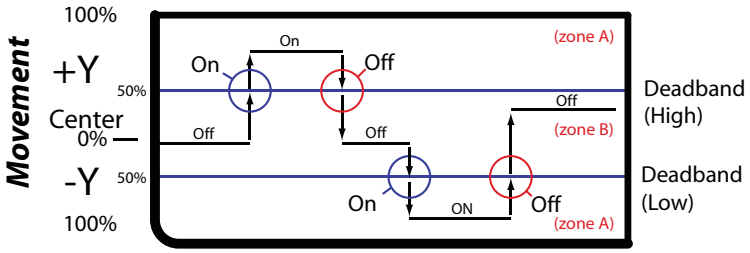


Outputs turn on or off (depending on N.O. or N.C. state) while the joystick / sensors movement is within a grey zone.

(e.g. Zero Deadband Switch, N.O.)



Zero Example 2
(e.g. Zero Deadband Switch, N.C.)



2D Zero

2D Zero uses both analog inputs to orientate a position along two axes. The 2D Zero output zone is defined by an adjustable radial activation point, located from a calibrated 360° center point.

PVCS Driver Card

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Programmable Proportional Output

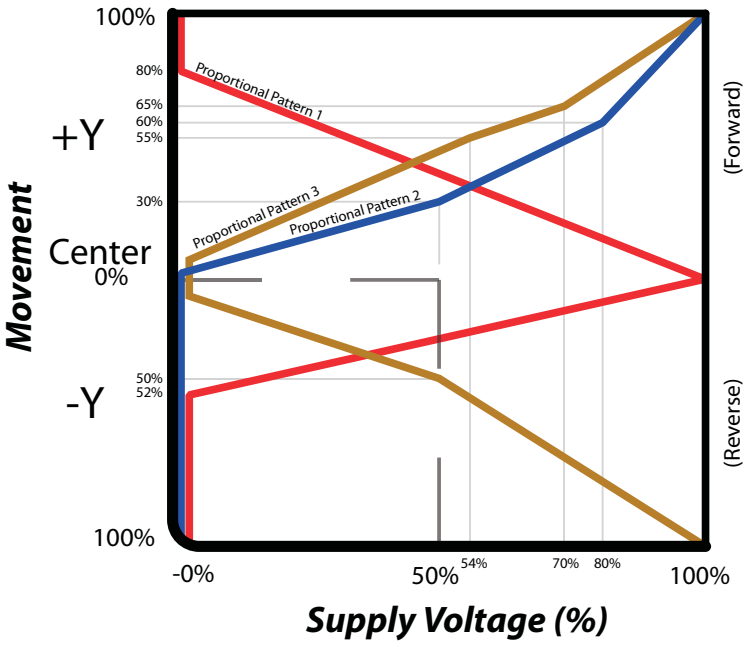
PWM

The PWM patterns can be adjusted via seven programmable points which distribute the percentage of voltage to the degree of movement. The PWMs Ramp can also be adjusted.

Analog

Analog output functions similar to the PWM output. The proportional analog patterns can be adjusted via seven programmable points which scale the voltage to the degree of movement.

Proportional Movement Examples
(along Y axis)



Proportional Pattern 1
Supply Power: +20 volts.

+Y@80-100%	= 0V
Centered Y	= +18V
-Y@52-100%	= 0V

Proportional Pattern 2
Supply Power: +12 volts.

+Y@100%	= +12V
+Y@60%	= +9.6V
+Y@25%	= +6V
Centered Y	= 0V
-Y@0-100%	= 0V

Proportional Pattern 3
Supply Power: +12 volts.

+Y@100%	= +12V
+Y@65%	= +8.4V
+Y@55%	= +6.48V
+Y@5%	= 0.5V
-Y@5%	= 0.5V
-Y@50%	= +6.0V
-Y@100%	= +12.0V