



High Country Tek, Inc.

# Single Channel PWM Controller - PTD-24-V

Electronic Controller Solutions for Mobile, Industrial & Marine Applications.

## Application Information:

- 24V @ 1.5amp General purpose open loop single coil valve driver
- Uni directional open loop pump stroker or valve controller
- DIN 43650 footprint for mobile or industrial products
- Accepts industry standard 0 - 10V command signal

## Product Feature Overview:

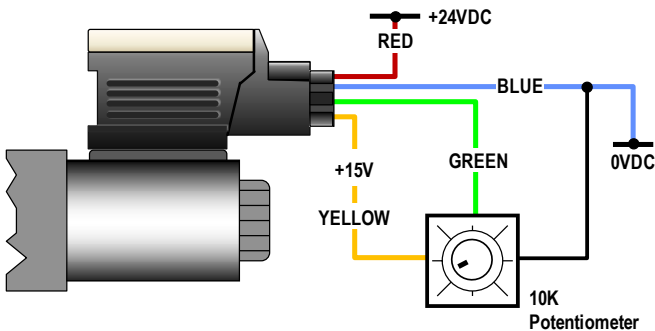
- Single PWM output for any make of proportional valve or pump control
- Linear Input to output curve to give best control resolution
- ALL settings by potentiometer under unit translucent lid
- Separate ramp UP and Down adjustments for smooth control
- Pre-connected 3m/10 foot color coded cable for easy connections
- LED diagnostics show full controller operation at all times
- Meets latest CE latest test standards & Sealed to meet NEMA 6P or IP 67



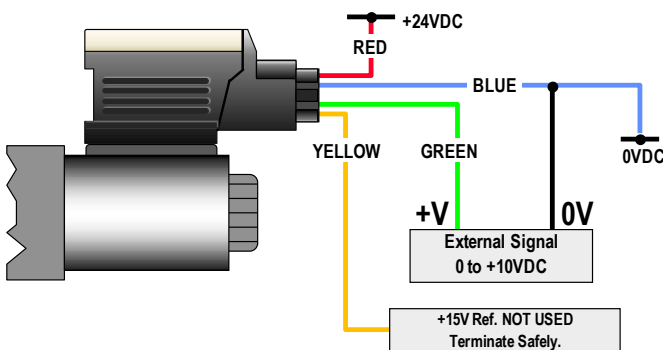
Order **PTD-24-V** for this unit

## Electrical Connection Diagrams:

Internal +15VDC reference can be used to power local 10 KΩ potentiometer or joystick for easy installation.



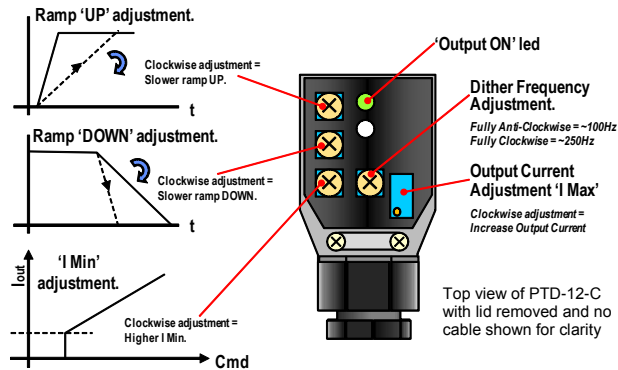
Ensure external signal source 0V is connected to same GND at this



## Controller Specification Overview:

<b>Housing Type:-</b>	HCT unique 'encapsulated' block.
<b>Input Supply Voltage:</b>	24VDC ±20% ( Absolute Maximum )
<b>Input Supply Current:</b>	Valve Current Setting + 200mA Quiescent (Max)
<b>Output Current:</b>	1.5 amps typical ( 36W max )
<b>Command Input Type:</b>	Voltage only
<b>Command Input Value:</b>	0 to +Vref or external Industry standard 0 - 10VDC max
<b>User reference:</b>	Vref = +15VDC ( ±5% ) @ 5mA max
<b>Ramp Times:</b>	300mS to ~8 Secs ( with I max at 100% ) Separate UP and Down settings
<b>Dither Frequency :</b>	Adjustable, ~100 to ~250Hz ( ± 20% )
<b>Housing Material:-</b>	High Impact resistance ABS.
<b>Wire Connections:-</b>	3M/10' pre-connected color coded cable
<b>Encapsulation:-</b>	Flameproof epoxy resin filled
<b>Mounting:-</b>	DIN 43650 connector footprint
<b>Temperature range:-</b>	-20 to +70 °C ( operational )
<b>NEMA/IP Rating:</b>	NEMA 6 / IP65 when assembled and mounted to coil correctly

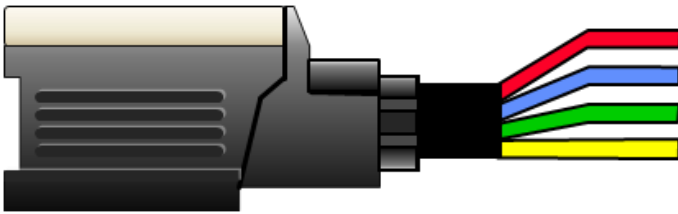
## Adjustment Guide:



## Connection Details:

Controller comes pre-wired with 3Meters / 10 feet of color coded cable that is selected for harsh environments and meets:

**4 core, 16/02 with PVC outer protection to Def Standard 16-12 Part 5 ( Screened ) 2.5 Amps/core @ 70°C Max Operating Temp.**



**RED** - +V Supply Input  
**BLUE** - GND (0V) Supply Input  
**GREEN** - Voltage Command Input  
**YELLOW** - +15VDC Reference Out-

### IMPORTANT NOTE:

**DO NOT SHORT +15V REF. TO +24V OR GND (0V) AS PERMANENT DAMAGE TO AN INTERNAL VOLTAGE REGULATOR WILL RESULT !!**

## Need More Information ?

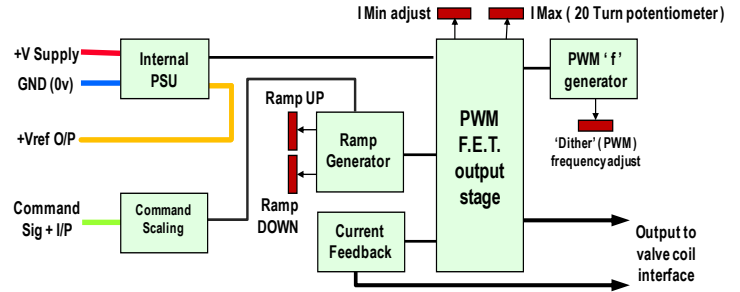
For customer service, pricing, order placement and application support, contact us through E-mail at:

[www.hctcontrols.com](http://www.hctcontrols.com)



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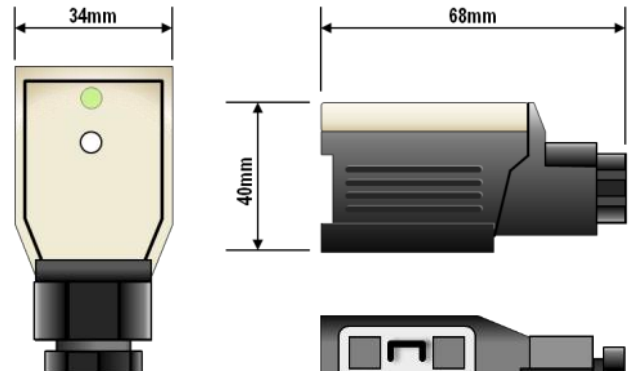
## Block Diagram:



- IMax potentiometer is 20 turn with end travel clutch
- All other potentiometers are single turn variety - adjust with care
- ALL potentiometers are clockwise to increase respective value
- Unit is fully encapsulated in flame resistant black epoxy resin
- Controller M3 x 40 mounting screw and gasket supplied

## Dimensional Data:

Pre-wired cable removed for clarity



Controller interfaces with industry standard DIN 43650 - 3 pin connector as shown



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