

PROPORTIONAL OUTPUT THUMBWHEEL



Knurled Wheel



Paddle Wheel

OTTO's HTWE control is a spring return-to-end, single axis, proportional output thumbwheel. Utilizing non-contact Hall effect technology, the HTWE delivers one million actuations. Electronics are sealed to IP68S. The HTWE is available as an individual control ideal for panel mountings, or may be incorporated into one of OTTO's joysticks.

Features:

- Spring return-to-end single axis actuator
- Knurled & Paddle style actuators
- Wire or pinned termination options
- Variety of button & bezel colors
- 8 output options
- Rocker switch style mounting
- Snaps into 1.47" x 0.710" panel opening
- 1 million cycle rotational life
- Electronics sealed to IP68S
- Excellent EMI/RFI immunity
- RoHS compliant

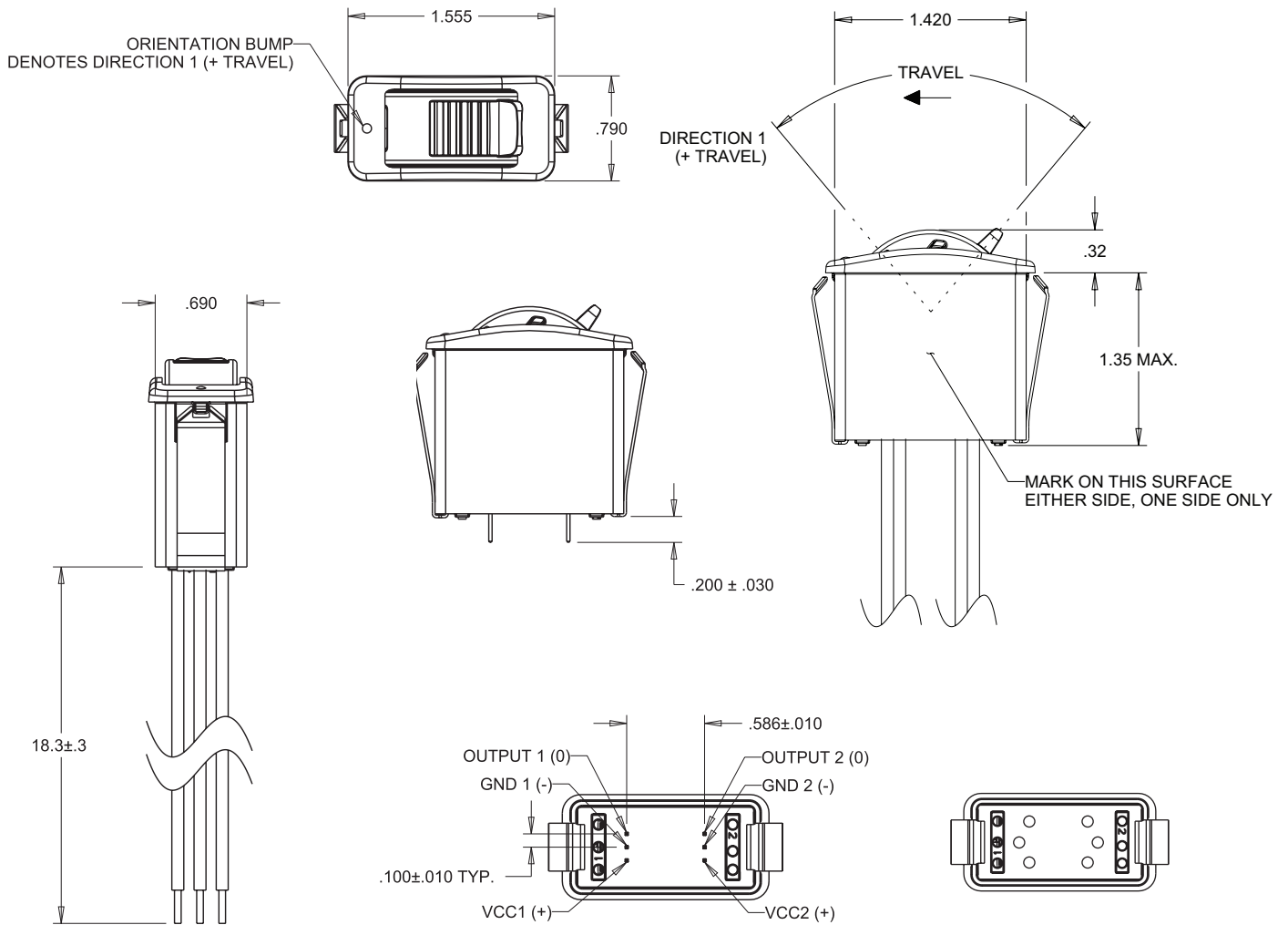
Standard Characteristics/Ratings:				
MECHANICAL:				
Mechanical Life: 1,000,000 full forward to full back				
Max Allowable Radial Load: 30.0 lbs.				
ELECTRICAL RATINGS: Rated 5V @ 25°C Load = 1mA (4.7KΩ)				
Electrical	Units	Min	Typ	Max
Supply Voltage	VDC	4.5	5.0	5.5
Output at Rest	VDC @ 5V Vcc	-0.25	N/A	+0.25
Output at Full Travel	VDC @ 5V Vcc	-0.25	N/A	+0.25
Supply Current Per Sensor	mA	N/A	N/A	10
ELECTRONICS:				
Seal Integrity:		Electronics IP68S		
ENVIRONMENTAL:				
Operating Temp Range: -40°C to +85°C				
Humidity: 96% RH, 70°C, 96 hours				
Vibration: Per MIL-810F minimum integrity				
EMI: Withstand per SAE J1113				
RFI: Withstand per SAE J1113				
MATERIALS:				
Button:		Thermoplastic		
Bezel:		Thermoplastic		
Snap Arms:		Stainless steel		
Wires:		18 AWG		

HTWE RETURN TO END STANDARD THUMBWHEEL

HTWE	-	X	X*	X	X	X	X	X
Travel								
1. 80°								
2. 60°								
Output 1								
A. 0.5 - 4.5VDC								
B. 0.5 - 4.5VDC								
C. 0.5 - 4.5VDC								
D. 1.0 - 4.0VDC								
E. 1.0 - 4.0VDC								
F. 1.0 - 4.0VDC								
Output 2								
NONE								
0.5 - 4.5VDC								
4.5 - 0.5VDC								
NONE								
1.0 - 4.0VDC								
1.0 - 4.0VDC								
Operating Force								
1. 10 oz typ								
Button Style								
1. Knurled Wheel								
2. Paddle Wheel								
Termination								
A. 18 AWG Wires, 18.3" Long, Stripped Ends								
B. 0.025" SQ. Pins								
Bezel Color								
1. Red								
2. Black								
3. Orange								
4. Yellow								
5. Green								
6. Blue								
7. Violet								
8. Gray								
9. White								
Button Color								
1. Red								
2. Black								
3. Orange								
4. Yellow								
5. Green								
6. Blue								
7. Violet								
8. Gray								
9. White								

* Output options B and E provide redundant output 2 which duplicates output 1. Output options C and F provide redundant output 2 which is inverse output 1.

PROPORTIONAL OUTPUT THUMBWHEEL



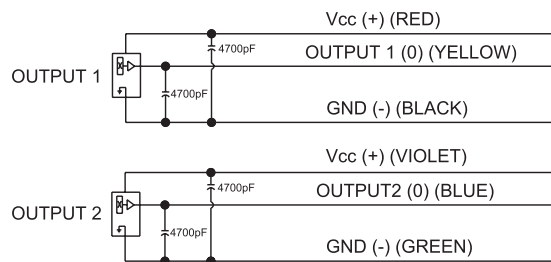
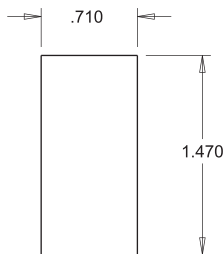
PINNED TERMINATION

NOT ALL PINS ARE PRESENT
IN ALL OUTPUT CONFIGURATIONS

MOUNTING:

RECOMMENDED PANEL THICKNESS: 0.100 OPTIMUM THICKNESS
(0.050 MIN. - 0.120 MAX.)

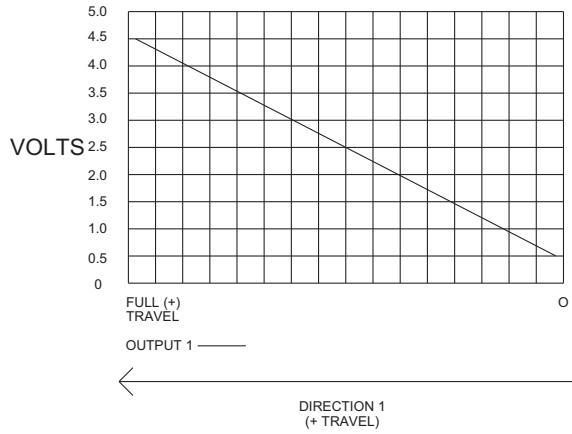
RECOMMENDED PANEL OPENING: 0.710 X 1.470 OPTIMUM
(0.710/0.720 - 1.460/1.480)



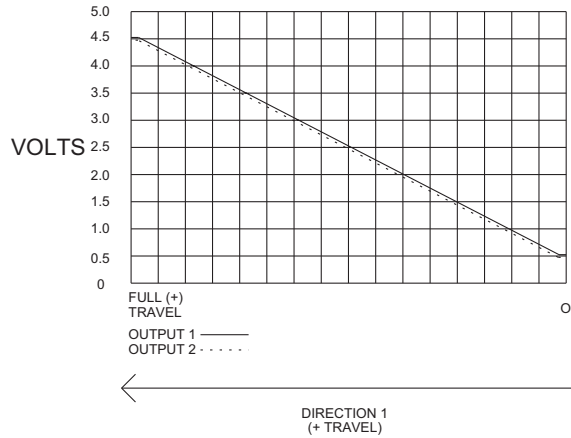
OUTPUT 2 IS NOT PRESENT IN ALL CONFIGURATIONS

PROPORTIONAL OUTPUT THUMBWHEEL

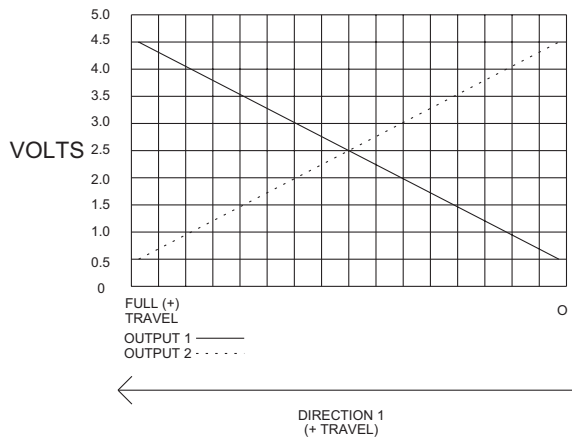
OPTION A



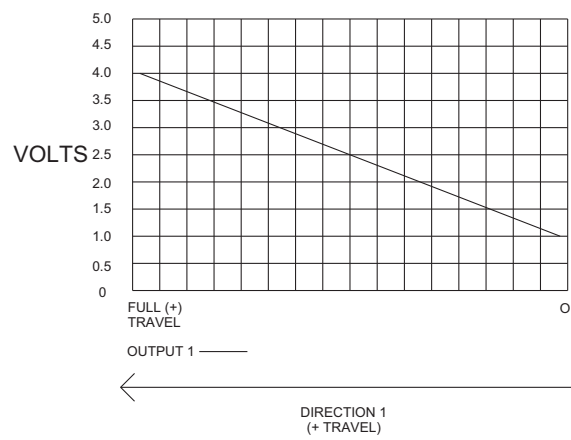
OPTION B



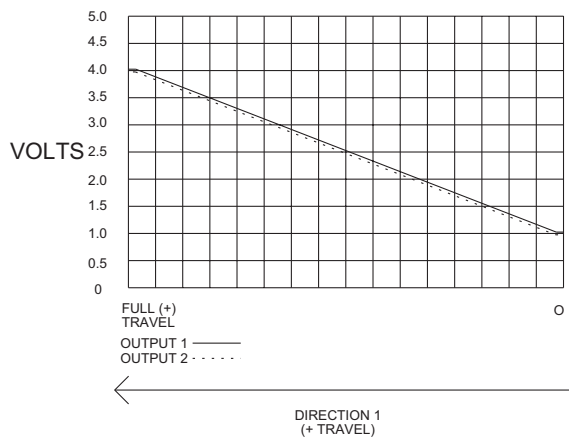
OPTION C



OPTION D



OPTION E



OPTION F

