

PROPORTIONAL OUTPUT HALL EFFECT MINI THUMBWHEEL



Knurled Wheel



Paddle Wheel

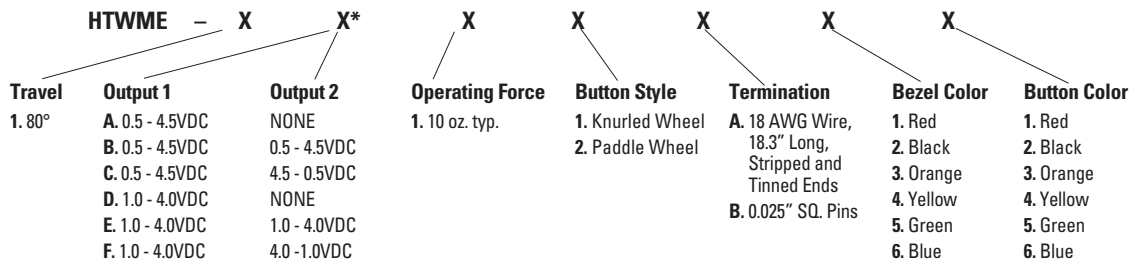
The HTWME offers the same performance as the standard HTWE single axis, proportional output thumbwheel, but has a much shorter behind panel depth. With a panel depth of 0.96" max., the HTWME is ideal for panel or armrest mountings, or can be incorporated into one of OTTO's joysticks. The HTWME provides snap-in style mounting, and also utilizes non-contact Hall effect technology, which accounts for a one million cycle life. It also has excellent EMI/RFI shielding. Configuration options include a choice of six linear voltage outputs.

**Features:**

- Return to end single axis actuator
- Shorter behind panel depth: 0.96"
- Knurled & Paddle style actuators
- Wire or pinned termination options
- Variety of button & bezel colors
- 6 output options
- Easy snap-in mounting
- 1 million cycle rotational life
- Electronics sealed to IP68S
- Excellent EMI/RFI immunity
- RoHS/WEEE/Reach compliant

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

**HTWME RETURN TO END MINIATURE THUMBWHEEL PART NUMBER CODE**



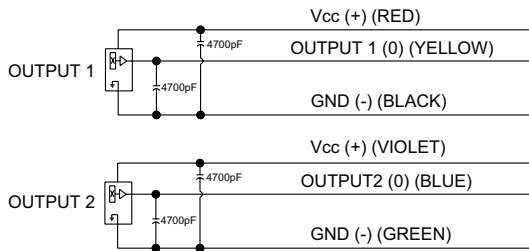
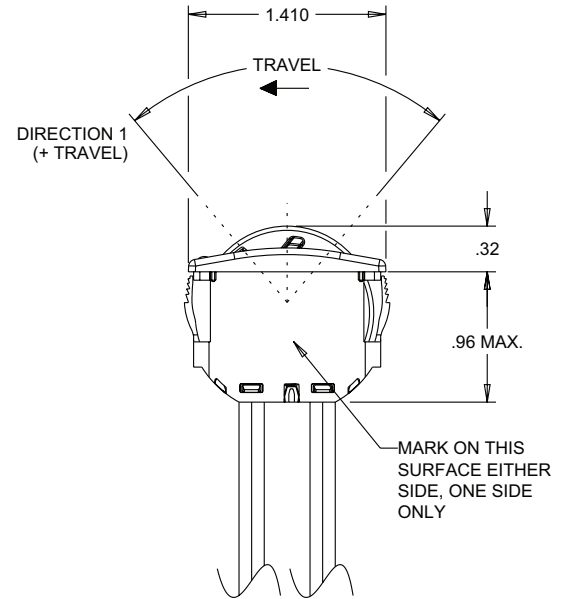
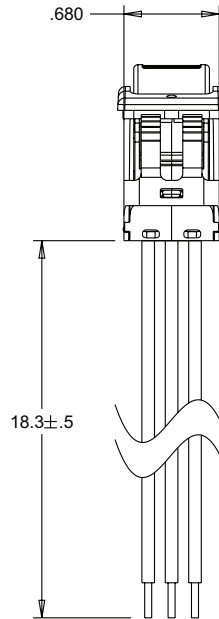
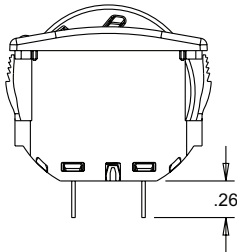
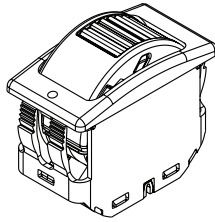
\* Output options B and E provide redundant output 2 which duplicates output 1. Output options C and F provide redundant output 2 which is inverse output 1.

# RETURN TO END MINI THUMBWHEEL

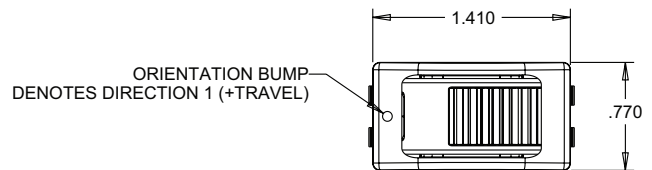
**HTWME**  
MINIATURE  
THUMBWHEEL

SHORTER BEHIND PANEL DEPTH

## HTWM Knurled Wheel Style Thumbwheel Shown



OUTPUT 2 IS NOT PRESENT IN ALL CONFIGURATIONS

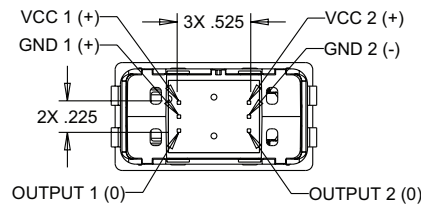
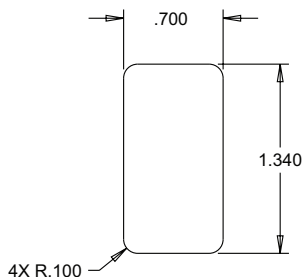


### MOUNTING:

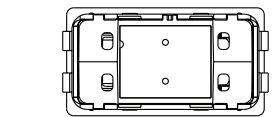
RECOMMENDED PANEL THICKNESS: 0.150 OPTIMUM THICKNESS  
(0.040 MIN. - 0.200 MAX.)

RECOMMENDED PANEL OPENING: 0.700 X 1.340 OPTIMUM  
(0.695/0.705 X 1.335/1.345)

RECOMMENDED PANEL RADII: 0.100 OPTIMUM  
(0.090 - 0.110 MAX.)



**PINNED  
TERMINATION**  
NOT ALL PINS ARE PRESENT  
IN ALL OUTPUT CONFIGURATIONS

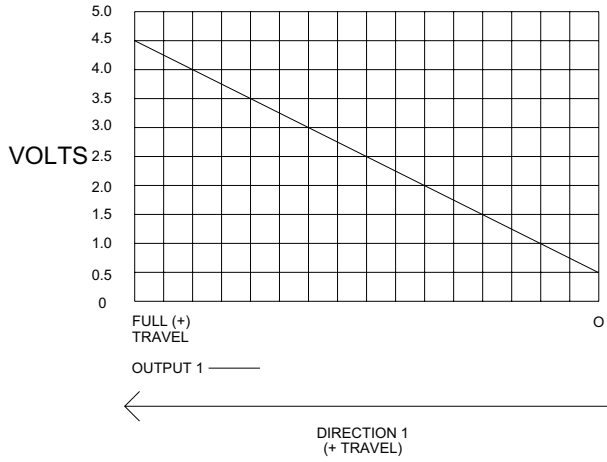


NOT ALL WIRES ARE PRESENT  
IN ALL OUTPUT CONFIGURATIONS

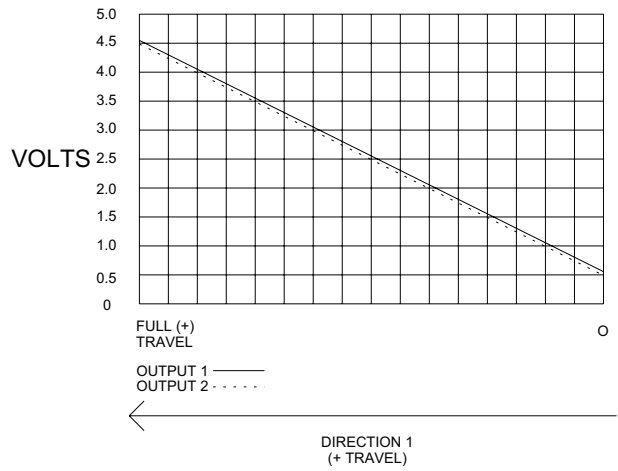
HALL EFFECT

SHORTER BEHIND PANEL DEPTH

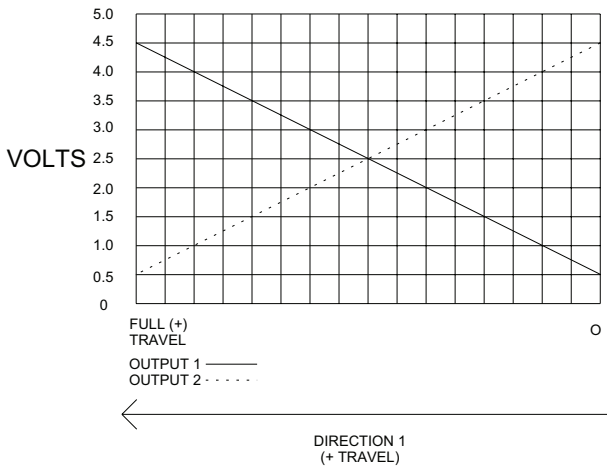
**OPTION A**



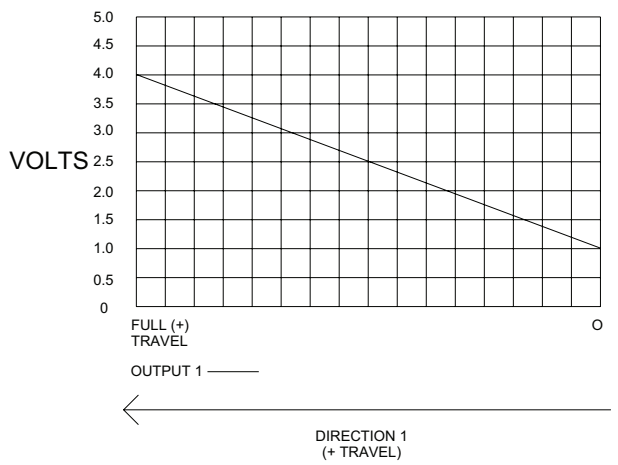
**OPTION B**



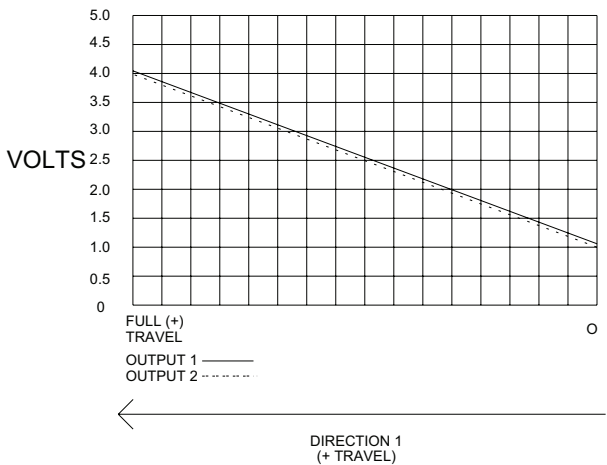
**OPTION C**



**OPTION D**



**OPTION E**



**OPTION F**

