FRICTION HOLD ACTUATION STYLE THUMBWHEEL



The HTWF Friction Hold Thumbwheel offers a maintained position, single axis thumbwheel actuator that provides a linear change in voltage output in either direction from center. Options include increasing or decreasing voltage output from the center position to the full travel position, and single or dual (redundant) outputs per axis. The HTWF Thumbwheel has a rocker style snap-in mounting feature to accommodate a 1.47" x 0.710" panel opening. The HTWF provides 250,000 cycle life, full forward/ full backward, is sealed to IP68S and offers excellent EMI/RFI immunity and a flow through design. Ideal for heavy equipment, industrial machines or remote control applications.

Features:

- 250,000 cycle life, full forward/full backward with center detent
- Maintained control positioning, no return to center
- Hall effect contactless sensing technology
- Number of output options
- Choice of bezel & button colors
- Snaps into 1.47" x 0.710" panel opening
- **Electronics sealed to IP68S**
- **Excellent EMI/RFI immunity**
- **RoHS/WEEE/Reach compliant**

Standard Characteristics/Ratings:								
MECHANICAL:								
Mechanical Life: 250,000 full forward to full back with center detent								
Initial Operating Force at Top of Roller: 2 oz min to 6 oz max @ 25°C								
Max Allowable Radial Load: 30.0 lbs.								
ELECTRICAL RATINGS: Rated at Vcc = 5V @ 25°C Load = 1mA (4.7KΩ)								
Electrical		Units	Min	Тур	Max			
Supply Voltage		VDC	4.5	5	5.5			
Output Voltage Tolerance at Center (see graph for output values)		VDC @ 5V Vcc	-0.15	N/A	+0.15			
Output Voltage Tolerand Full Travel (see graph for	VDC @ 5V Vcc	-0.25	N/A	+0.25				
Supply Current Per Sensor		mA	N/A	N/A	10			
ELECTRONICS:								
Seal Integrity:	Electronics watertight per IP68S, 1 meter							
ENVIRONMENTAL:								
Operating Temp Range:	-40°C to +8	5°C						
Humidity:	96% RH, 70°C, 96 hours							
Vibration:	Per MIL-81	Per MIL-810F minimum integrity						
Sand/Dust:	Per SAE J1455							
EMI:	Withstand per MIL-STD-461D/SAE J1113-22							
RFI:	Withstand 100V/M 14Hz to 1GHz							
MATERIALS:								
Button:	Thermoplastic							
Bezel:	Thermoplastic							
Snap Arms:	Stainless steel							
Wires:	18 AWG							

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Travel	Output 1	Output 2	Operating Force	Button Style	Termination	Bezel Color	Button Color	Detent (if required)
1. +/- 30°	A. 2.5 +/- 2.0VDC	NONE	1. 4.0 oz.	1. Knurled Wheel	A. 18 AWG Wires, 18.3" Long, Stripped Ends B. 0.025" SQ. Pins	1. Red	1 . Red	A. Detent 2 oz increase out of center in both directions* * Output options A–F do not have a tolerance on the center outputs unless a center detent is selected.
	B . 2.5 +/- 2.0VDC	2.5 +/- 2.0VDC		2. Paddle Wheel		2. Black	2. Black	
	C. 2.5 +/- 2.0VDC	2.5 -/+ 2.0VDC		В		3. Orange	3. Orange	
	D . 2.5 +/- 1.5VDC	NONE				4. Yellow	4. Yellow	
	E. 2.5 +/- 1.5VDC	2.5 +/- 1.5VDC				5 . Green	5. Green	
	F. 2.5 +/- 1.5VDC	2.5 -/+ 1.5VDC				6 . Blue	6. Blue	
	G. 1.0 - 4.0VDC	1.0 - 4.0VDC				7. Violet	7. Violet	
	H . 0.5 - 4.5VDC	0.5 - 4.5VDC				8. Gray	8. Gray	Output options G and H

9. White

9. White

center detent.

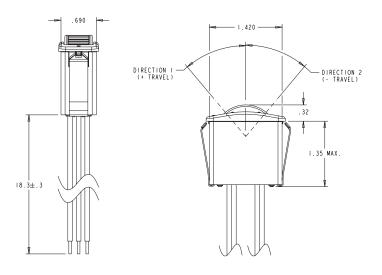
are only available with

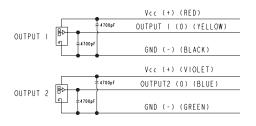
PROPORTIONAL OUTPUT THUMBWHEEL

FRICTION HOLD ACTUATION STYLE THUMBWHEEL

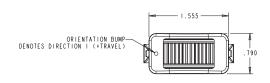








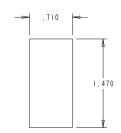


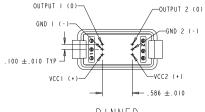




RECOMMENDED PANEL THICKNESS: 0.100 OPTIMUM THICKNESS (0.050 MIN. - 0.120 MAX.)

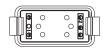
RECOMMENDED PANEL OPENING: 0.710 X 1.470 OPTIMUM (0.710/0.720 -1.460/1.480)





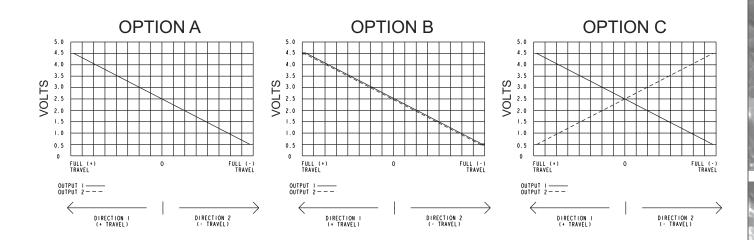
PINNED TERMINATION

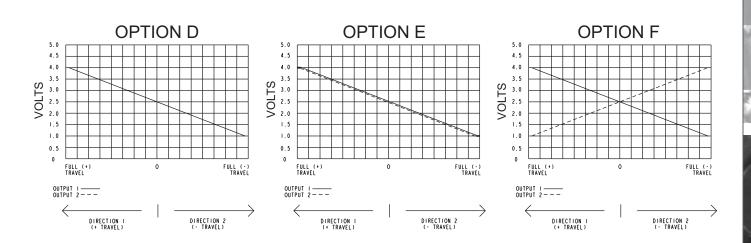
NOT ALL PINS ARE PRESENT
IN ALL OUTPUT CONFIGURATIONS

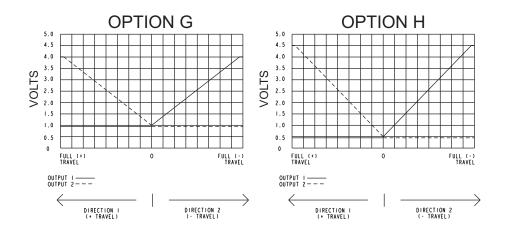


NOT ALL WIRES ARE PRESENT IN ALL OUTPUT CONFIGURATIONS

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