

HTWS Thumbwheel

Subminiature Hall Effect Proportional Output Thumbwheel

The HTWS Hall effect proportional output thumbwheel is a spring return-to-center, single axis thumbwheel that provides a linear change in voltage output corresponding to actuator movement in either direction from center.

The HTWS is a smaller version of OTTO's HTW and HTWM, and it easily fits in grips or panels where space is limited. Choose from eight output options, including increasing and decreasing voltage output from the center position to the full travel position and single or dual (*redundant*) outputs.

Product Features

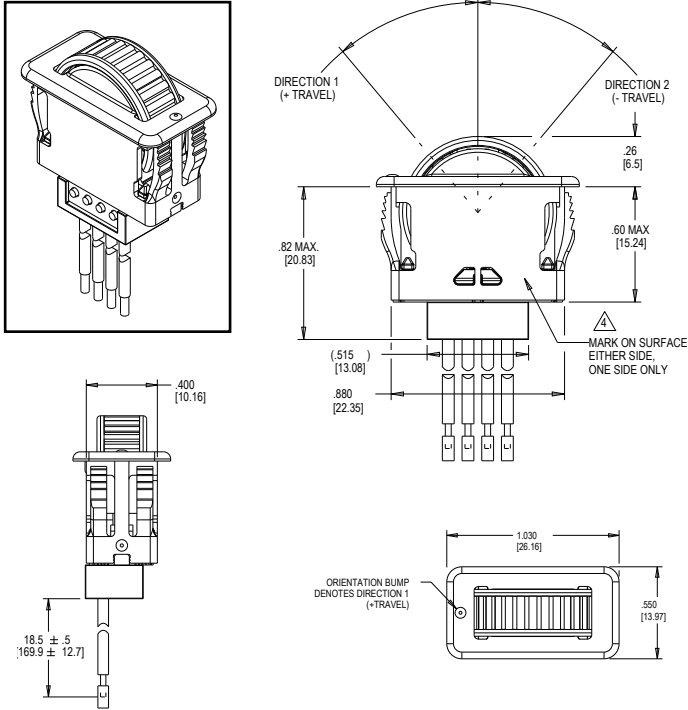
- Spring return-to-center single axis actuator
- Eight output options
- Installs into 0.895" x 0.420" panel opening
- Integrated snap-in retaining feature
- Electronics sealed to IP68S
- Sealing boot option for added protection against dust, sand and water ingress
- Up to 3 million cycle rotational life
- Excellent EMI/RFI immunity
- Flow through design
- Flying wire leads or pin connection
- RoHS compliant



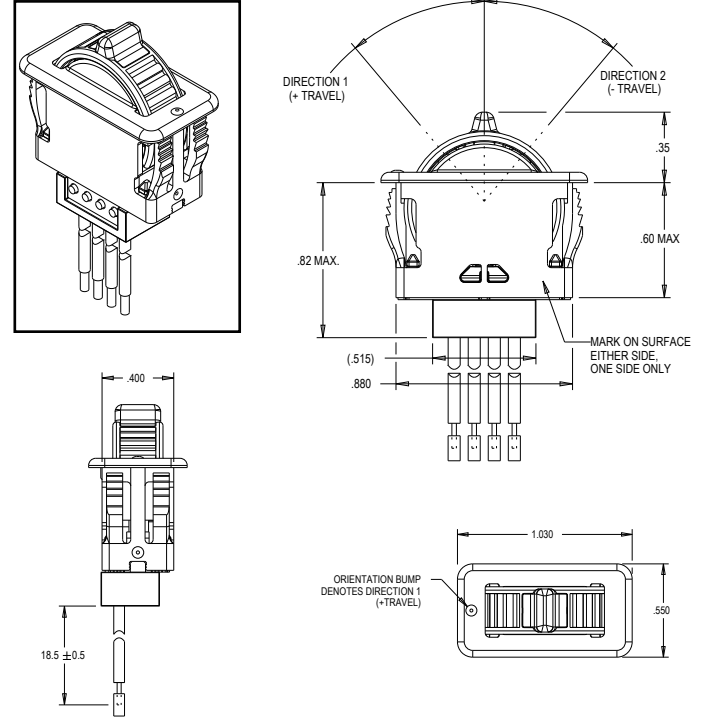
Standard Characteristics/Ratings:

ELECTRICAL RATINGS: Rated at 5V @ 25°C Load = 1mA (4.7KΩ)				
Electrical	Units	Min	Typ	Max
Supply Voltage	VDC	4.5	5.0	5.5
Output Voltage	VDC	-.25	N/A	+.25
Tolerance at Center	@ 5V Vcc			
Output Voltage	VDC	-.25	N/A	+.25
Tolerance Full Travel	@ 5V Vcc			
Supply Current Per Sensor B=0, Vcc=5V, Iout=0	mA	N/A	N/A	20
MECHANICAL:				
Mechanical Life:	3,000,000 full forward to full back (button styles 1, 2) 1,000,000 full forward to full back (button style 3)			
Max Allowable Radial Load:	15.0 lbs. (button styles 1, 2); 10.0 lbs (button style 3)			
ENVIRONMENTAL:				
Operating Temp Range:	-40°C to +85°C			
Humidity:	96% RH, 70°C, 96 hours			
Vibration:	Per MIL-810F minimum integrity			
Electronics Enclosure:	IP58S (button styles 1, 2) IP68S (button style 3)			
Mechanical Enclosure:	Unsealed (button styles 1, 2)			
Mechanical Enclosure:	IP68S (button style 3) (above panel)			
Mechanical Enclosure:	Unsealed (button style 3) (below panel)			
RFI:	ISO 11452-2 & ISO 11452-4 (Single Output) SAE J1113-21 & SAE J1113-22 (Dual Output)			
EMI:	ISO 11452-8 (Single Output) SAE J1113-22 (Dual Output)			
ESD (Powered & Un-Powered):	ISO 10605 (Single Output) SAE J1113-13 (Dual Output)			
MATERIALS:				
Button Top & Bezel:	Thermoplastic			
Wires:	22 AWG			
Boot:	Silicone Rubber, Black			

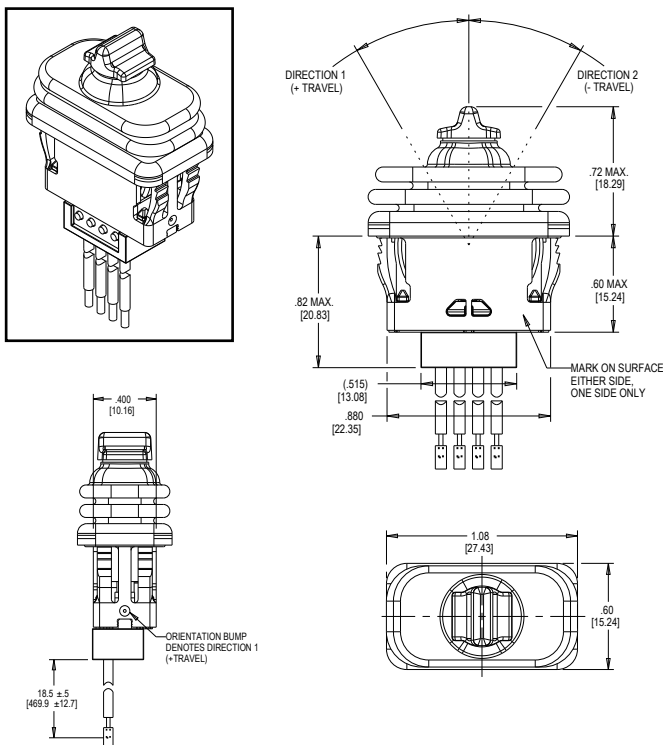
Knurled Wheel Style



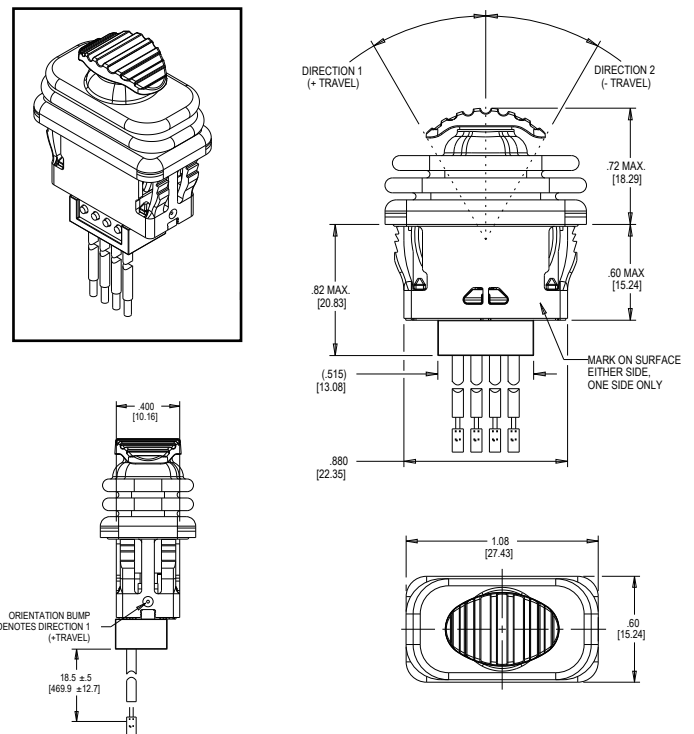
Paddle Wheel Style



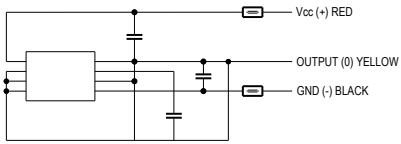
Paddle Wheel with Sealed Boot Style



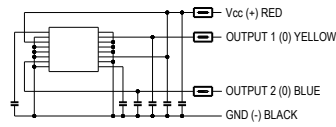
Thumb Paddle Wheel with Sealed Boot Style



HTWS Outputs

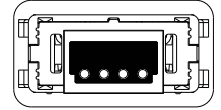
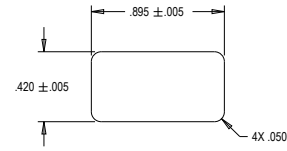


SINGLE OUTPUT SCHEMATIC



DUAL OUTPUT
COMMON POWER & GROUND
SCHEMATIC

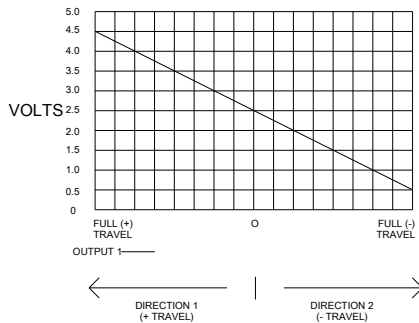
MOUNTING:
RECOMMENDED PANEL THICKNESS:
0.150 OPTIMUM THICKNESS



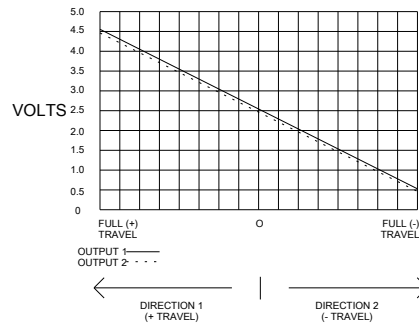
NOT ALL WIRES ARE PRESENT
IN ALL OUTPUT CONFIGURATIONS

HTWS Proportional Output Thumbwheel

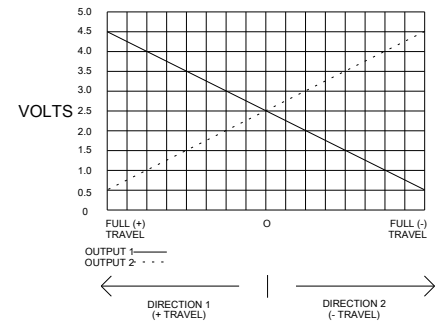
OPTION A



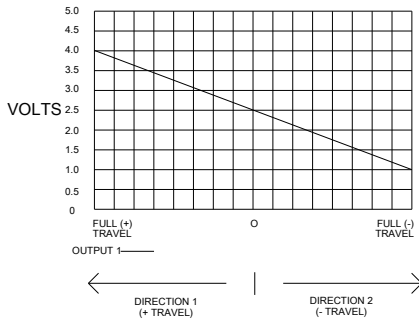
OPTION B



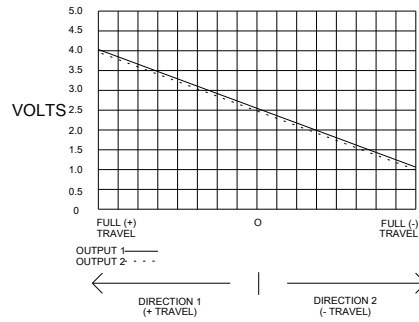
OPTION C



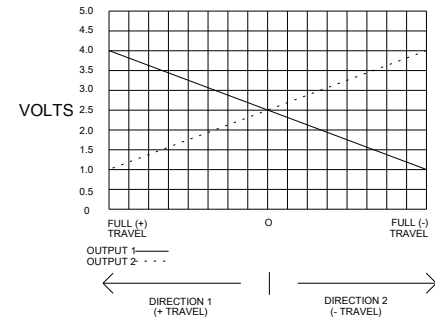
OPTION D



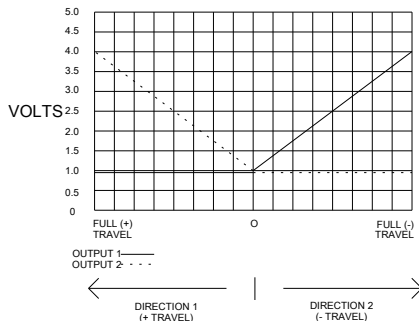
OPTION E



OPTION F



OPTION G



OPTION H

