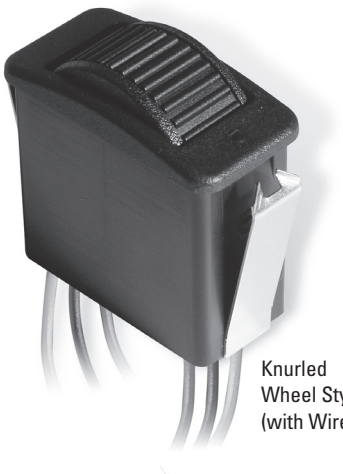
PROPORTIONAL OUTPUT THUMBWHEEL

3 MILLION CYCLE ROTATIONAL LIFE

Paddle
Wheel Style
(with Pins)



Knurled
Wheel Style
(with Wires)

The HTW Hall Effect Proportional Output Thumbwheel is a spring-return-to-center, single axis thumbwheel with an actuator that provides linear change in voltage output in either direction from the center. Available with eight output options, including increasing and decreasing voltage output from the center position to the full travel position and single or dual (redundant) outputs. The HTW snaps into a 1.47" x 0.710" panel opening with rocker switch style mounting. A durable switch providing three million cycle rotational life, sealed to IP68S and excellent EMI immunity per MIL-STD-46 ID/SAE J1113-22, and will withstand RFI of 100V/M 14Hz to 1GHz.

Features:

- **8 output options**
- **Spring-return-to-center single axis actuator**
- **Snaps into 1.47" x 0.710" panel opening**
- **Rocker switch style mounting**
- **3 million cycle rotational life**
- **Electronics sealed to IP68S**
- **Excellent EMI/RFI immunity**
- **Detent options available**
- **RoHS/WEEE/Reach compliant**

Standard Characteristics/Ratings:

MECHANICAL:

Mechanical Life:	3,000,000 full forward to full back
Mechanical Detent Cycle Life Per Detent:	100,000 (detent @ +/- 21°, full travel is +/- 30° max)
Max Allowable Radial Load:	30.0 lbs.

ELECTRICAL RATINGS: Rated at Vcc = 5V @ 25°C Load = 1mA (4.7KΩ)

Electrical	Units	Min	Typ	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 Tolerance at Center (for detent version A only)	VDC @ 5V Vcc	-0.25	N/A	+0.25
Output Voltage Tolerance Full Travel (see graph for output values)	VDC @ 5V Vcc	-0.25	N/A	+0.25
Supply Current Per Sensor	mA	N/A	N/A	10

Reverse Voltage Protection:	-5VDC max

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
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

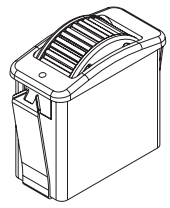
PROPORTIONAL OUTPUT THUMBWHEEL

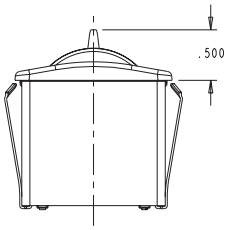
3 MILLION CYCLE ROTATIONAL LIFE

HTW PART NUMBER CODE

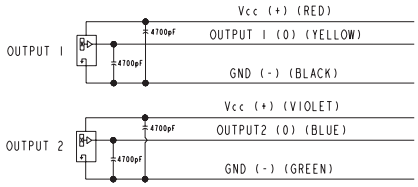
HTW – X X X X X X X X

Travel	Output 1	Output 2	Operating Force	Button Style	Termination	Bezel Color	Button Color	Detent (if required)
1. +/- 40° **2.** +/- 30°	**A.** 2.5 +/- 2.0VDC **B.** 2.5 +/- 2.0VDC **C.** 2.5 +/- 2.0VDC **D.** 2.5 +/- 1.5VDC **E.** 2.5 +/- 1.5VDC **F.** 2.5 +/- 1.5VDC **G.** 1.0 - 4.0VDC **H.** 0.5 - 4.5VDC	NONE 2.5 +/- 2.0VDC 2.5 -/+ 2.0VDC NONE 2.5 +/- 1.5VDC 2.5 -/+ 1.5VDC 1.0 - 4.0VDC 0.5 - 4.5VDC	**1.** 5.0 oz.	**1.** Knurled Wheel **2.** Paddle Wheel	**A.** 18 AWG Wires 18.3" Long, Stripped Ends **B.** 0.025" SQ. Pins	**1.** Red **2.** Black **3.** Orange **4.** Yellow **5.** Green **6.** Blue **7.** Violet **8.** Gray **9.** White	**1.** Red **2.** Black **3.** Orange **4.** Yellow **5.** Green **6.** Blue **7.** Violet **8.** Gray **9.** White	**A.** Spring return center +/- 21°. 12 oz detent at end of travel, both directions* * Only available with Travel option 2.

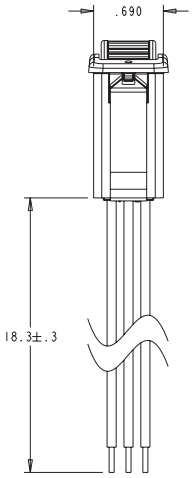


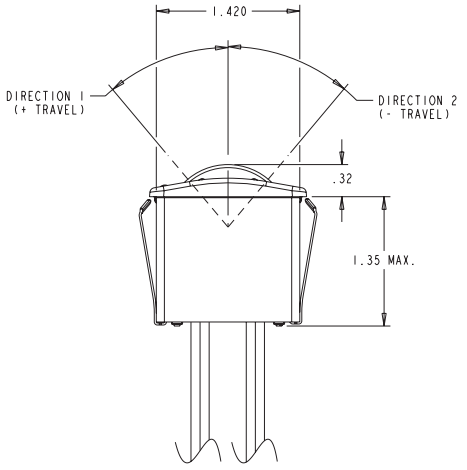


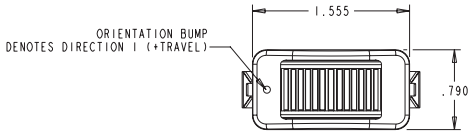
PADDLE WHEEL
BUTTON STYLE



OUTPUT 2 IS NOT PRESENT IN ALL CONFIGURATIONS



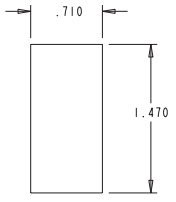


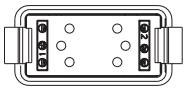


MOUNTING:

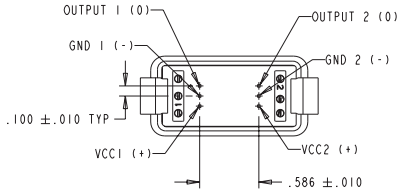
RECOMMENDED PANEL THICKNESS: 0.100 OPTIMUM THICKNESS
(0.050 MIN. - 0.120 MAX.)

RECOMMENDED PANEL OPENING: 0.710 X 1.072 OPTIMUM
(0.710/0.720 -1.460/1.480)





NOT ALL WIRES ARE PRESENT
IN ALL OUTPUT CONFIGURATIONS

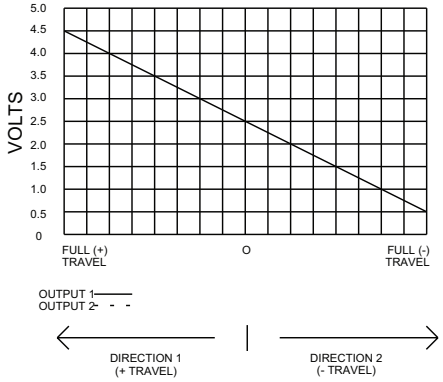


PINNED
TERMINATION
NOT ALL PINS ARE PRESENT
IN ALL OUTPUT CONFIGURATIONS

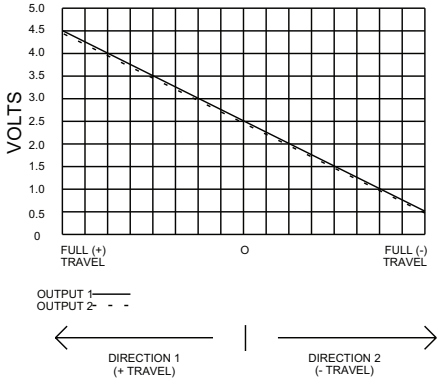
PROPORTIONAL OUTPUT THUMBWHEEL

3 MILLION CYCLE ROTATIONAL LIFE

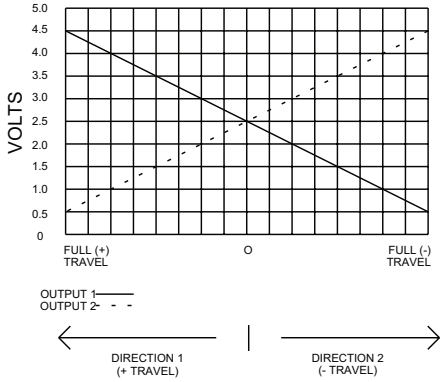
OPTION A



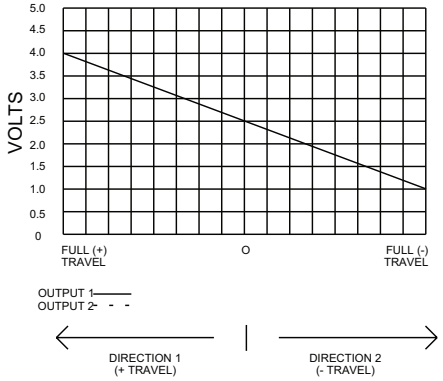
OPTION B



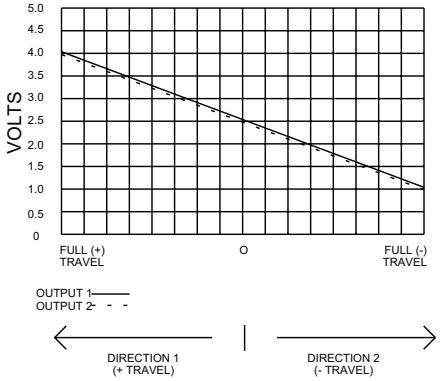
OPTION C



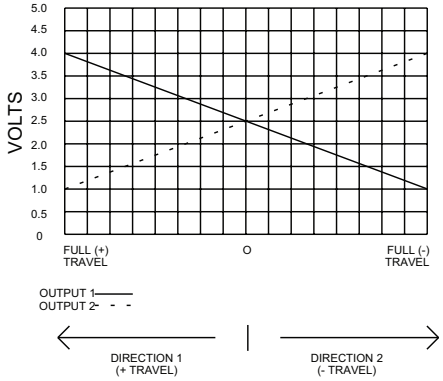
OPTION D



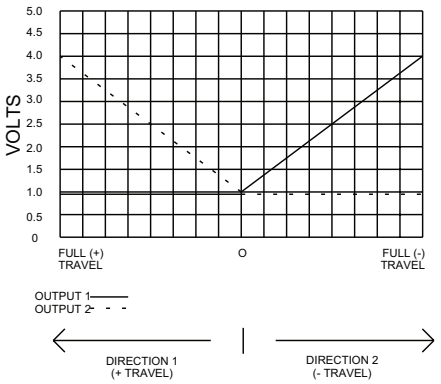
OPTION E



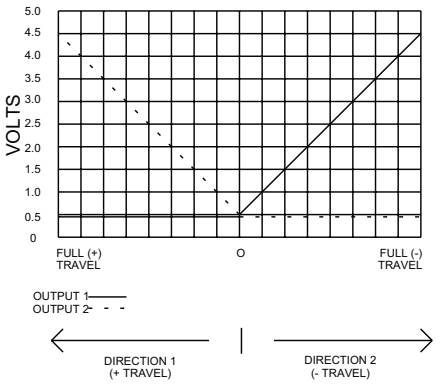
OPTION F



OPTION G



OPTION H



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

OTTO:

HTW-1G12A22 HTW-2B12A22A HTW-1H11A24 HTW-2D11A22 HTW-2H11A22 HTW-2H12B28A HTW-1C11A22 HTW-1G11A22 HTW-1C12A26 HTW-1A12B22 HTW-2H11B22A HTW-2F11A21 HTW-2A12A25A HTW-1D11A22 HTW-1H12A21 HTW-1E11A22 HTW-1H11B22 HTW-1C12B26 HTW-2A11A22 HTW-2C11A22 HTW-1G12B22 HTW-1B12A22 HTW-2B12A21 HTW-1H12A28 HTW-2A12A22A HTW-1B11A22 HTW-2A12A11A HTW-1H12B22 HTW-2A12A21A HTW-2D12A22 HTW-1D12A28 HTW-1B12B22 HTW-1H12A22 HTW-2A11A22A HTW-1H11A22 HTW-2C12A22A HTW-1A12A21 HTW-1C11A28 HTW-2H12A22 HTW-2F11A22A HTW-2A12A22 HTW-1D12A22 HTW-1A12A88 HTW-1A12A28 HTW-2A12A21 HTW-1A11A22 HTW-0000048