



The TW series thumbwheel is a self centering single-axis device developed for thumb-actuated applications requiring proportional output. Utilizing non-contacting Hall effect technology for long life performance, the TW series thumbwheel delivers up to 5 million thumb actuations. Configuration options include choice of linear voltage outputs as well as wheel colors. The TW series thumbwheel is available as a stand-alone device or may be incorporated into one of our custom joysticks.



KEY FEATURES

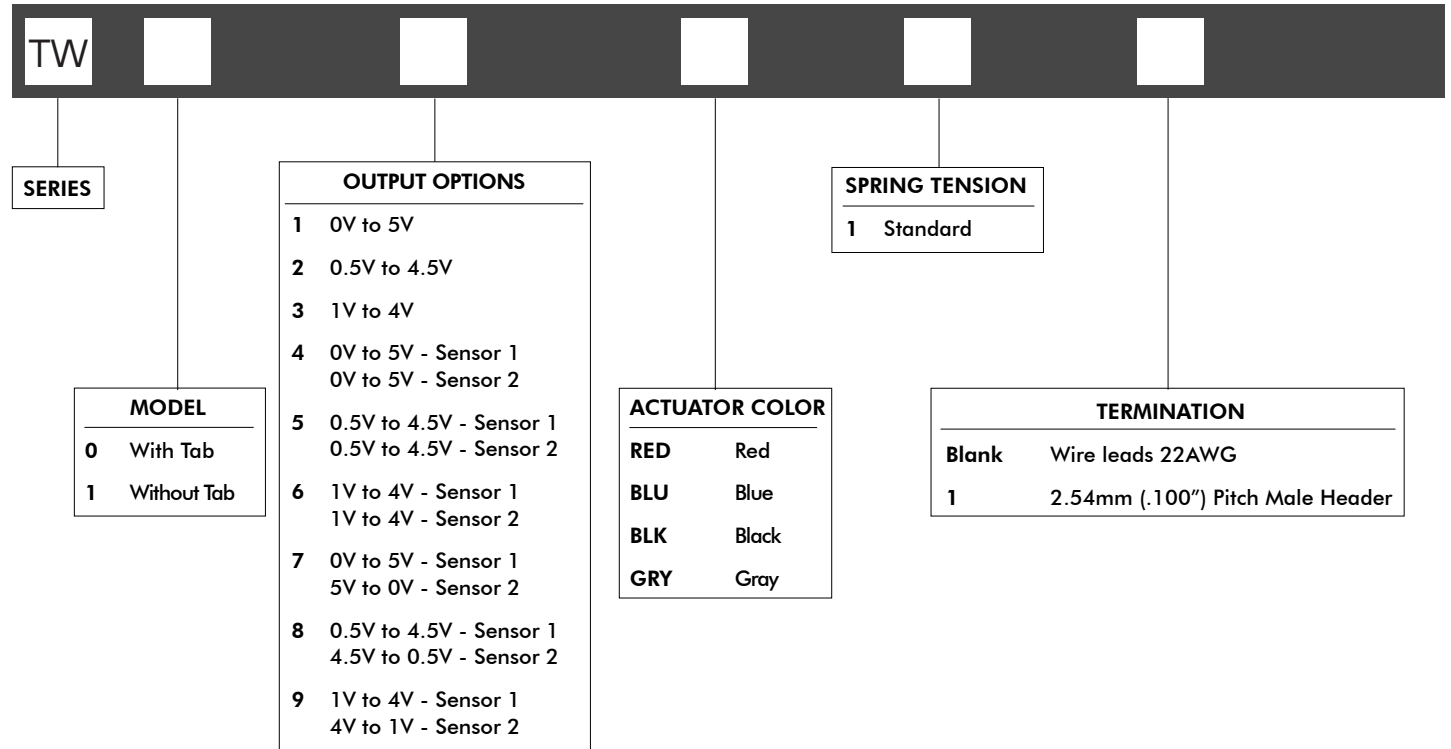
- 5 million cycles**
- Hall effect technology**
- Proportional control**
- Self-centering single-axis design**
- Choice of wheel colors: red, gray, black, or blue**
- Redundant outputs available**



TW series

Hall effect thumbwheels

OPTION SELECTION



NOTES:



Mounting accessories: steel spring retainer, insertion tool, and sealing gasket.

SPECIFICATIONS

MECHANICAL (FOR X, Y AXES)

Break Out Force	-	0.7N (0.15lbf)
Mechanical Angle of Movement	-	80° (±40° from center)
Expected Life	-	5 million cycles
Lever Action (Centering)	-	Spring centering

ENVIRONMENTAL

Operating Temperature	-	-40°C to +85°C (-40°F to +185°F)
Storage Temperature	-	-40°C to +85°C (-40°F to +185°F)
Sealing	-	IP67*
EMC Immunity Level	-	EN61000-4-3 (extended)
EMC Emissions Level	-	EN61000-6-3:2001
ESD	-	EN61000-4-2 (extended)

ELECTRICAL

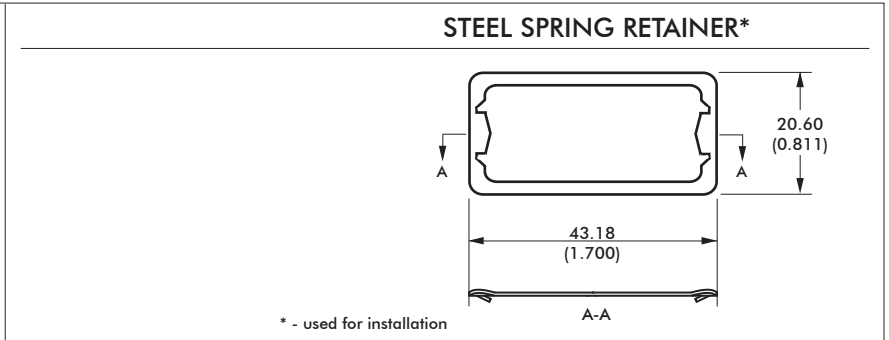
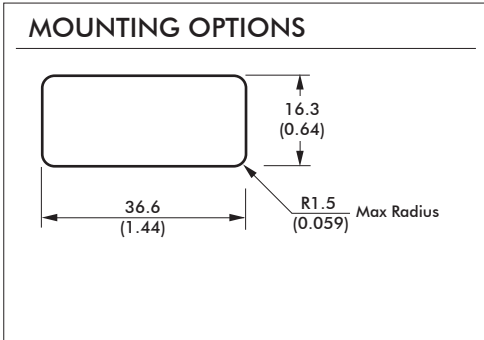
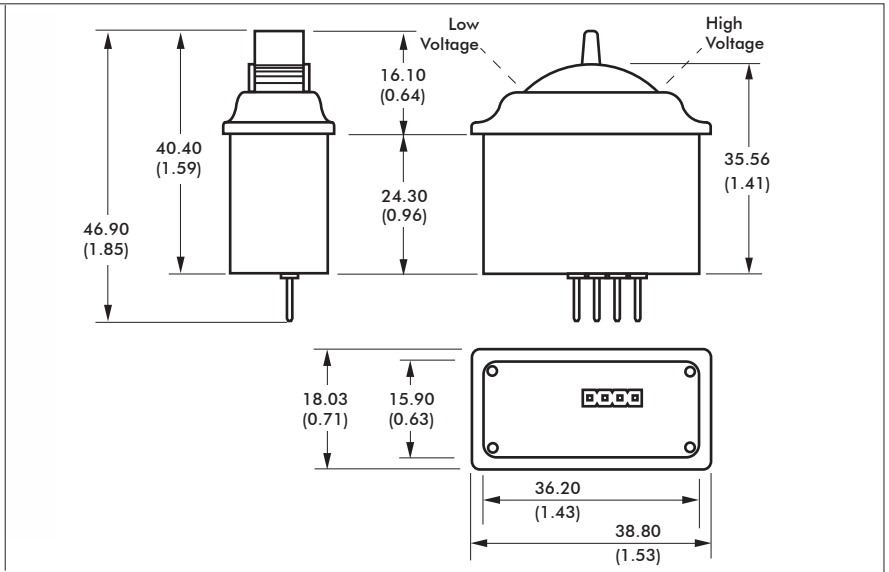
Sensor	-	Hall effect
Resolution	-	1.22mV
Supply Voltage Range	-	5V ± 0.01V
Reverse Polarity Max	-	-10V
Overvoltage Max	-	20V
Output Impedance	-	2Ω
Return to Center Voltage (No Load)	-	±200mV
Error Signal	-	1.0%

NOTES: * Electronics sealed to IP67.
Exact specifications are subject to configuration.
All values are nominal.

TW series

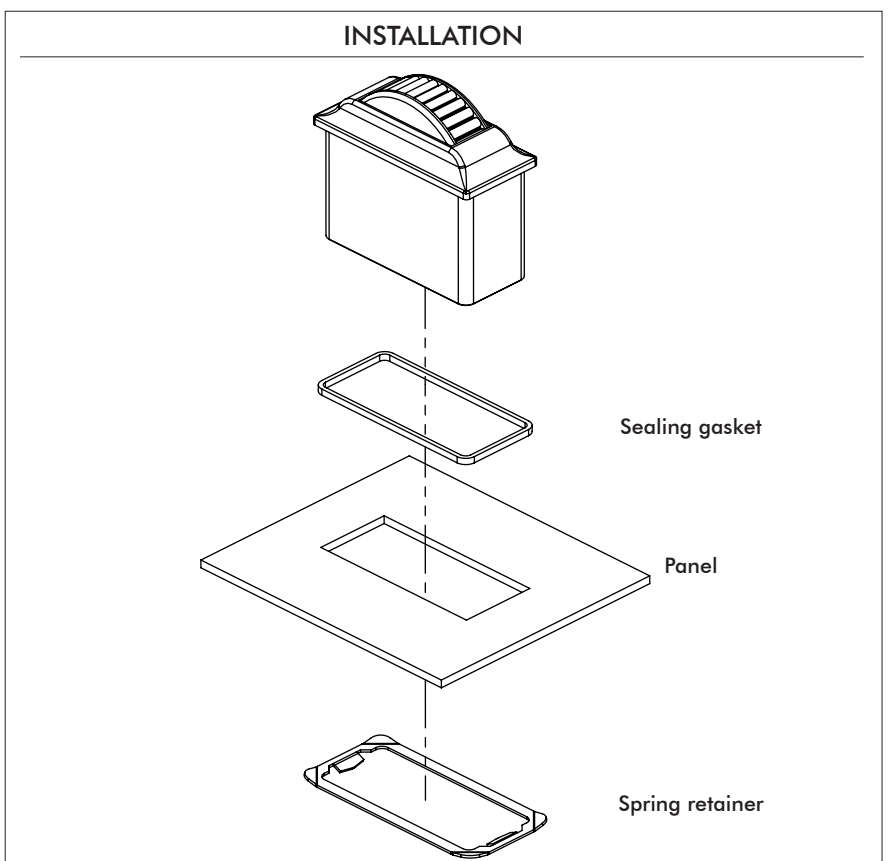
Hall effect thumbwheels

DIMENSIONAL DRAWINGS AND MOUNTING DETAILS



NOTES:

1. Dimensions are in mm/(inch)



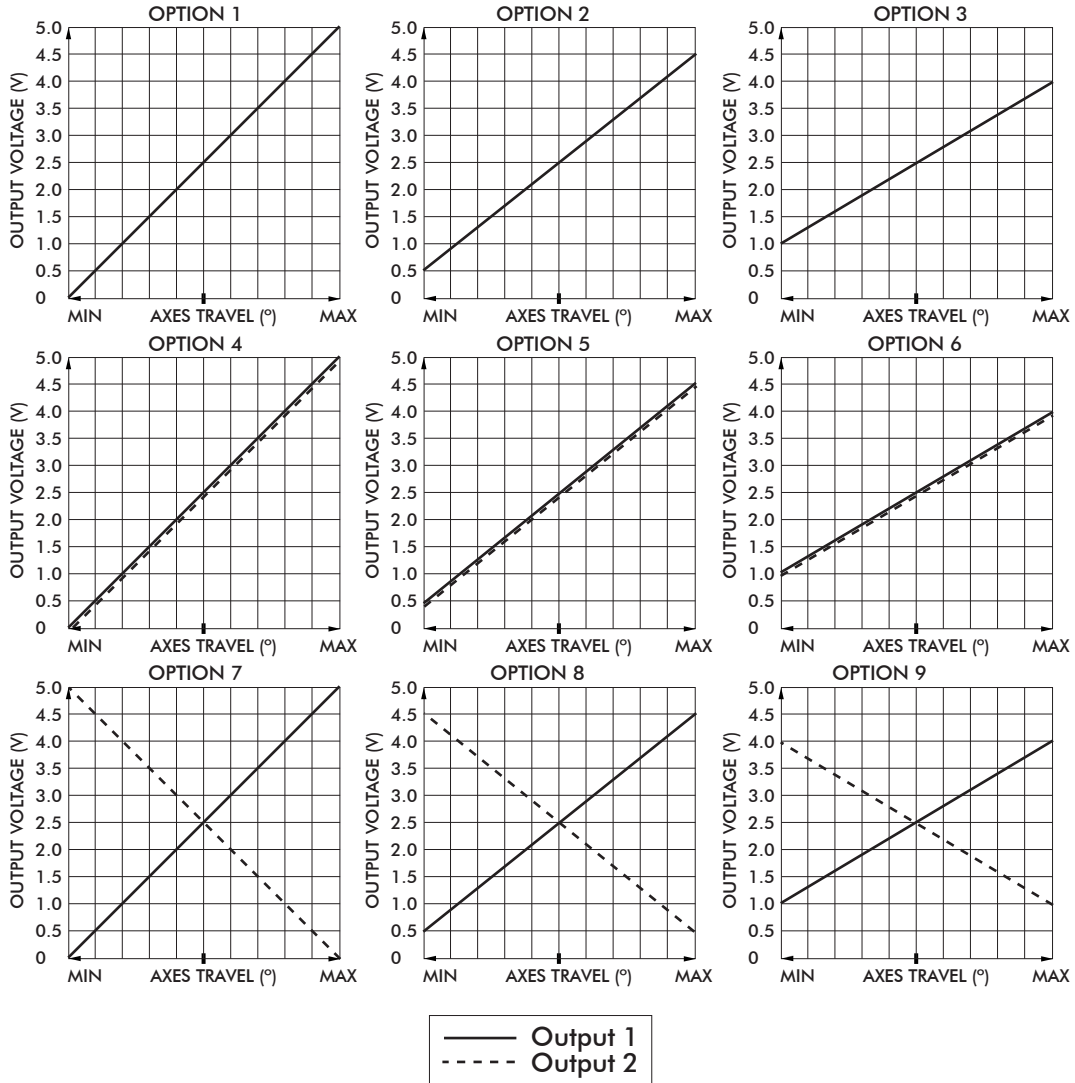
Notes: The company reserves the right to change specifications without notice. Images shown are for illustration purposes only. Dimensions are in mm/(inch).

TW series

Hall effect thumbwheels

CONFIGURATION OPTIONS

LINEAR OUTPUT OPTIONS



CONNECTOR PINOUT	CONNECTOR TERMINATION OPTION
	<ul style="list-style-type: none"> - The TW Series Thumbwheel may be specified with a TE Connectivity 0.100" (2.54mm) pitch header. - Both single and dual output configurations feature 4 position TE 3-647166-4 header connector.

DEFAULT WIRE COLOR CODE		
COLOR	FUNCTION	AWG
RED	+5V	22
BLACK	Ground	
BLUE	Output alpha	
BLUE/WHITE	Output beta	

Notes: The company reserves the right to change specifications without notice. Images shown are for illustration purposes only. Dimensions are in mm/(inch).

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Joysticks](#) category:

Click to view products by [Apem](#) manufacturer:

Other Similar products are found below :

[M11L0A1](#) [C1000C1P](#) [S10L0A1M](#) [G3-A1AM151NNNN](#) [TH500P00D4](#) [C1000C1PMJ0](#) [S10L061J](#) [60C22-M7-4-020S](#) [67A-DF-3C-060C](#)
[60A00-8-050C](#) [60A00-4-050C](#) [60C22-M7-4-040S](#) [G3-0425](#) [S30L081F50](#) [3440SAT6476](#) [60A18-4-090C](#) [S30L081J](#) [M11L001C](#) [M11L0X1P](#)
[USBM31Q081RMJ4S](#) [USBC200051JMJS](#) [TW08BLK12](#) [S30L0M1CSJBLK](#) [HF11R11](#) [HG-44MIS000-2654](#) [HG-44MIS000-U-2655](#)
[4P182F1E55475](#) [TS4A1S00A](#) [BD140D01GR0000](#) [BD150SD4BL1200](#) [3140SAL6475](#) [TW01BLK11](#) [TW01GRY1](#) [ZD4PA203](#)
[HF44S10UMJ0](#) [TS3N2S00A](#) [TS1R1U00A](#) [TS1R1S09A](#) [TS1D2S00A](#) [HFX45S02](#) [HFX10S00](#) [HF11P11](#) [4R28-2S1E-55-00](#)
[BD150A01RE0000](#) [BD150D02BK1200](#) [ZD4PA24](#) [ZD4PA22](#) [ZD4PA12](#) [ZD4PA14](#) [J1-00105-S-G](#)