



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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TW series

Hall effect thumbwheels

Distinctive features and specifications



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

MECHANICAL (FOR X, Y AXIS)

- 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

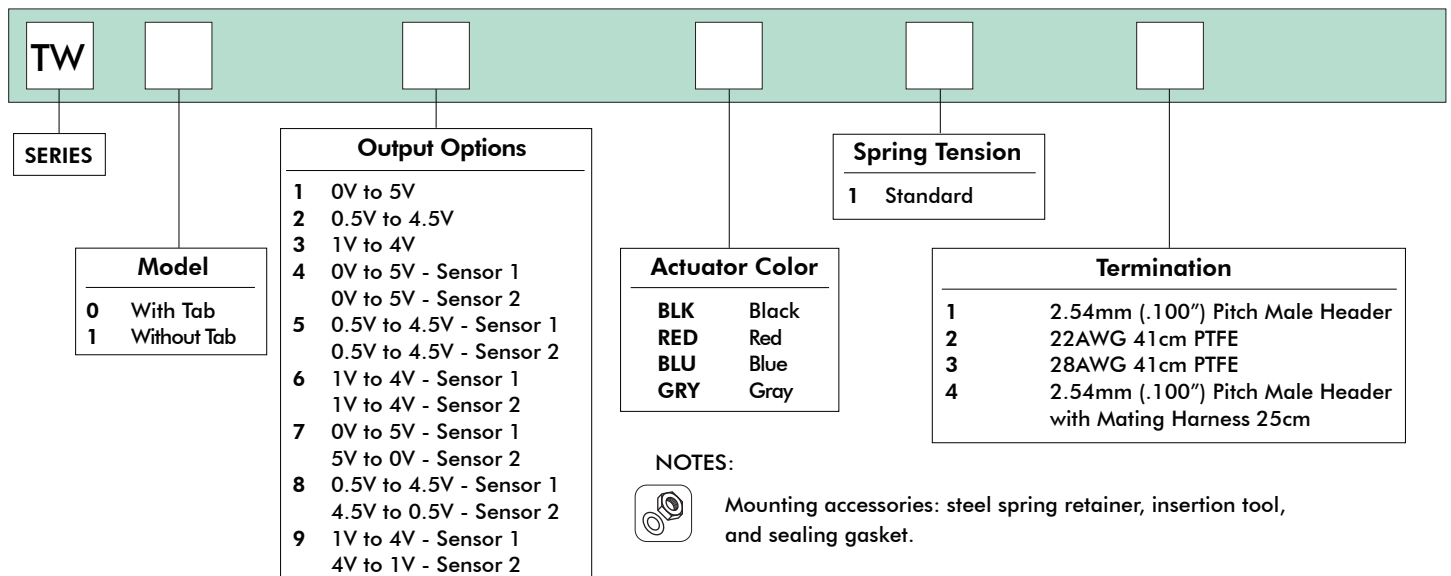
- Sensor: Hall effect
- Resolution: 1.22mV
- Supply Voltage Range: 5V ± .250V
- Reverse Polarity Max: -10V
- Overvoltage Max: 20V
- Output Impedance: 2Ω
- Return to Center Voltage (No Load): ±200mV
- Error Signal: 1.0%

NOTES:

* Electronics sealed to IP67.

Exact specifications are subject to configuration.

All values are nominal.

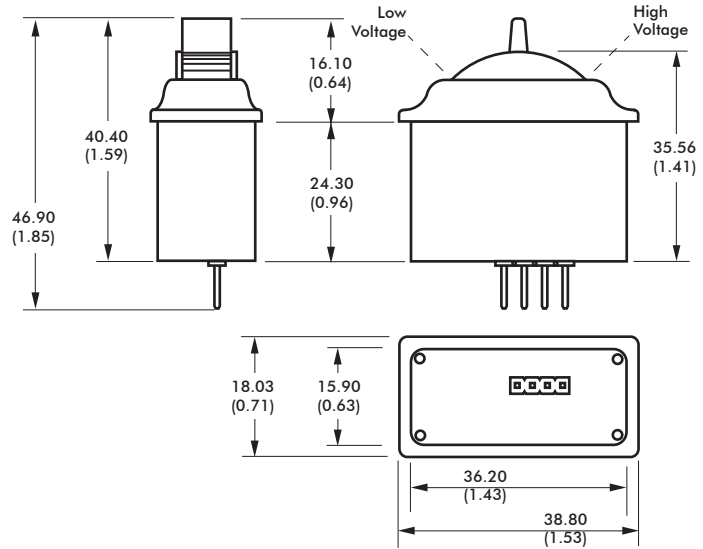


Note: The company reserves the right to change specifications without notice.

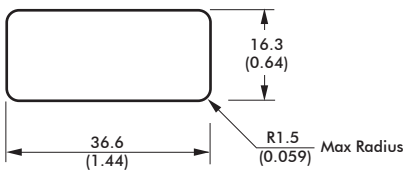
TW series

Hall effect thumbwheels

Overview



MOUNTING OPTIONS



STEEL SPRING RETAINER*



* - used for installation

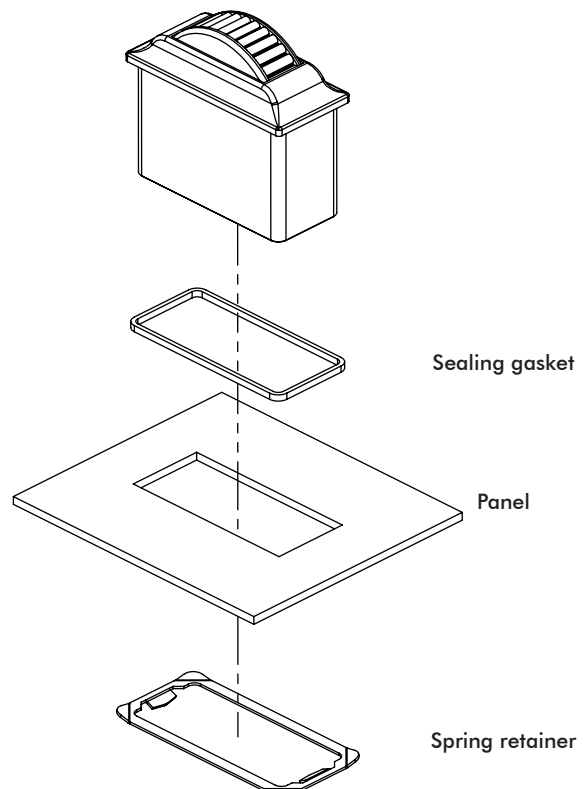
NOTE:

1. Dimensions are in mm/(inch).

EXAMPLE APPLICATION



INSTALLATION



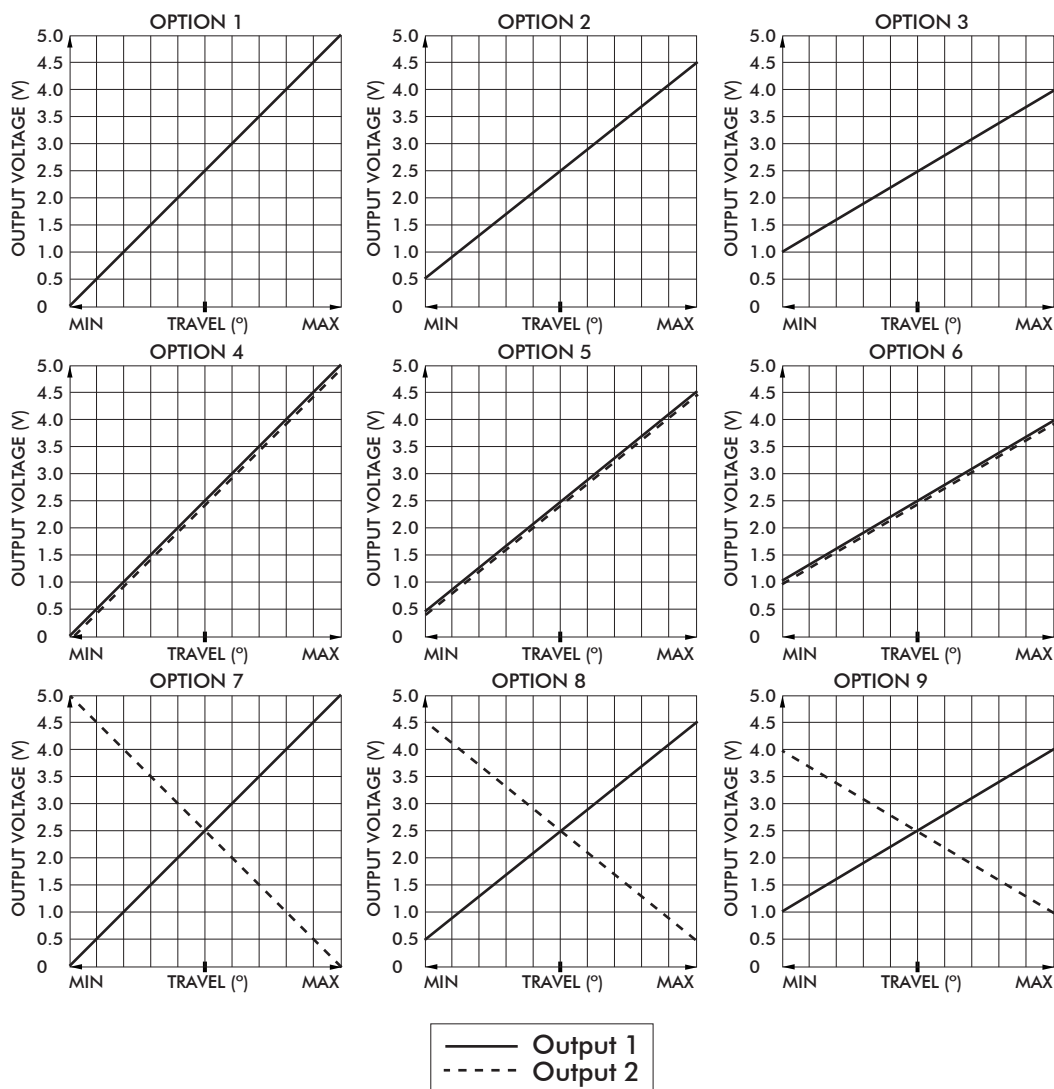
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TW series

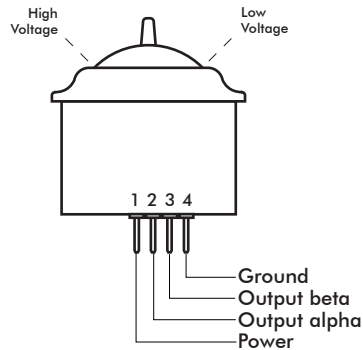
Hall effect thumbwheels

Overview

VOLTAGE OUTPUT OPTIONS



CONNECTOR PINOUT



CONNECTOR TERMINATION OPTION

The TW Series Thumbwheel may be specified with a TE Connectivity 2.54mm pitch male header. When selected from the "Option Selection" guide, both single and dual output configurations feature a four position TE 3-647166-4 connector.

OPTIONAL MATING HARNESS

The TW Series is available with an optional mating harness. The four function harness is part number 505-498.

Wire type: 22AWG 25cm PTFE
 Connector: Molex 0050579504

DEFAULT WIRE COLOR CODE

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

CIRCUIT	WIRE COLOR
PIN 1	BLACK
PIN 2	BLUE/WHITE
PIN 3	BLUE
PIN 4	RED