

# CW series

Proportional miniature thumb controls • non-contacting Hall effect technology



## DISTINCTIVE FEATURES

- Single axis
- Analog or PWM outputs
- Spring return to center
- Snap-in mounting
- Designed for joysticks, armrests and panel mounting



## ENVIRONMENTAL SPECIFICATIONS

- 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: No sealing
- EMC Immunity Level: EN61000-4-3
- EMC Emissions Level: EN61000-6-3: 2001
- ESD: EN61000-4-2



## ELECTRICAL SPECIFICATIONS

- Supply Voltage Range: 5.00 VDC  $\pm$  0.250 VDC
- Reverse Polarity max: -10 VDC
- Overvoltage max: 16 V
- Output Impedance: 2  $\Omega$
- Return to Center Voltage Tolerance:  $\pm$  200 mV initial
- Minimum load (under Electrical Specs) 1K Ohm



## MECHANICAL SPECIFICATIONS

- Operating Force: 0.7 N (0.15 lbf)
- Maximum Vertical Load: 111 N (25 lbf)
- Maximum Horizontal Load: 67 N (15 lbf)
- Mechanical Angle of Movement:  $\pm$  45°
- Expected Life: 3 million lifecycles
- Mass/weight: 4.2 g  $\pm$  1.0 g (0.15 oz  $\pm$  0.03 oz)
- Lever Action (centering): Spring

U.S. Patent #D767,685 S  
U.S. Patent #D740,886 S

The company reserves the right to change specifications without notice.

4006-022-002



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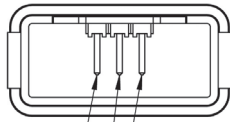
## MATERIALS

- Body: Delrin
- Actuator: Glass filled nylon



## CONNECTIONS

TERMINATION OPTIONS: A AND B



Pin 1 - 5V power (RED)  
Pin 2 - Ground (BLACK)  
Pin 3 - Signal (BLUE)

OPTIONAL MATING HARNESS<sup>1</sup>  
Part number: 505-507

Wire type: 22 AWG 25 cm PTFE

Connector: Molex 0050579503

### WIRING SPECIFICATION

Red: Power (5 V)

Black: Ground

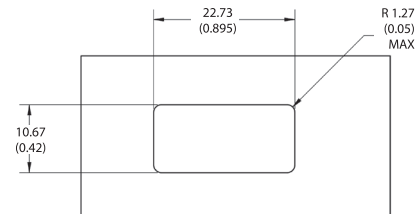
Blue: Signal

<sup>1</sup> - The CW Series is fitted with a three terminal SAMTEC (TLW-103-05-T-S) 2.54 mm header. An optional 22 AWG Mating Harness (PN 505-507) may be specified from the "Terminal" category of the Option Selection Guide.

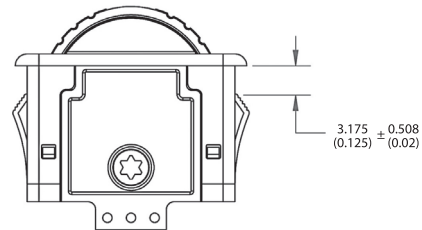


## MOUNTING

### PANEL CUT-OUT



### RECOMMENDED PANEL THICKNESS

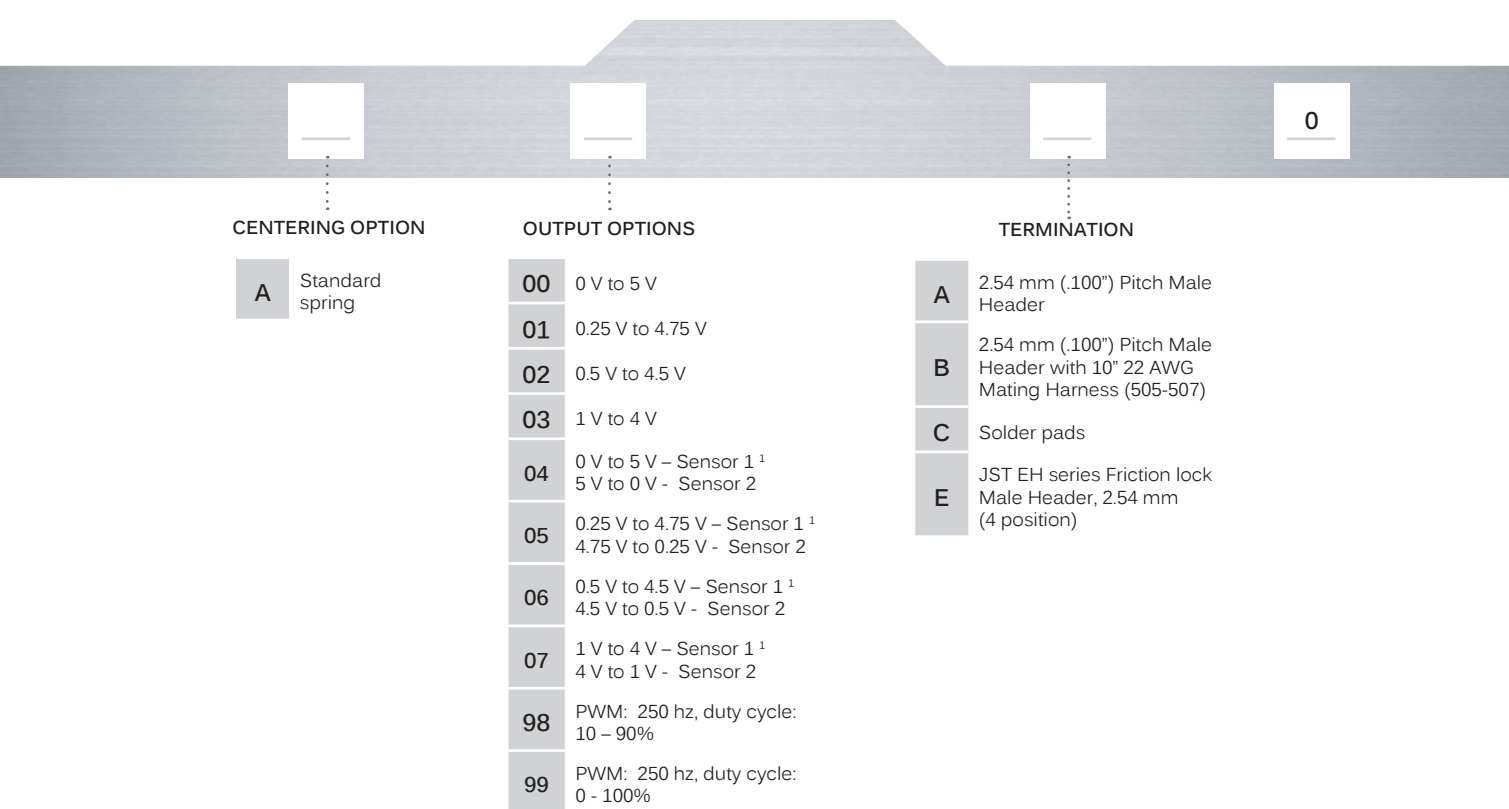
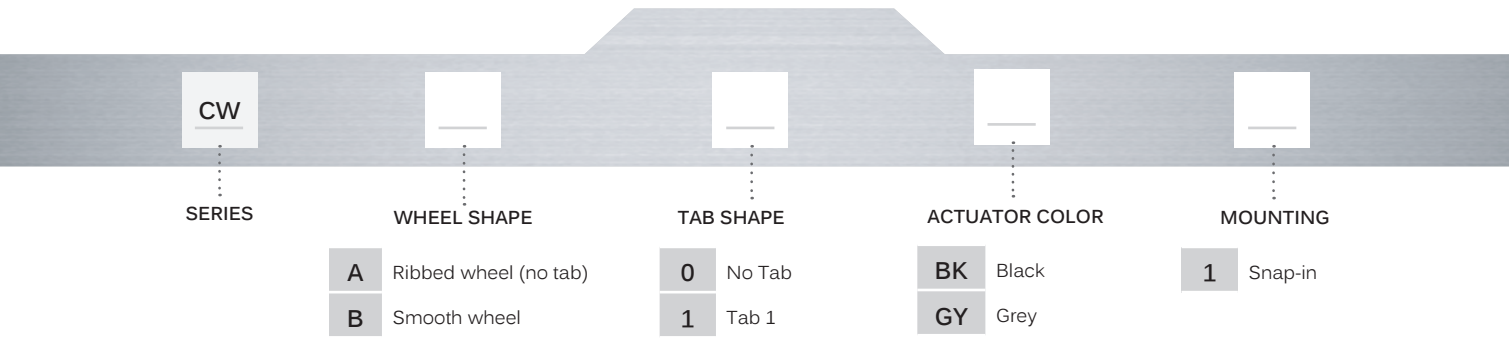


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## BUILD YOUR PART NUMBER

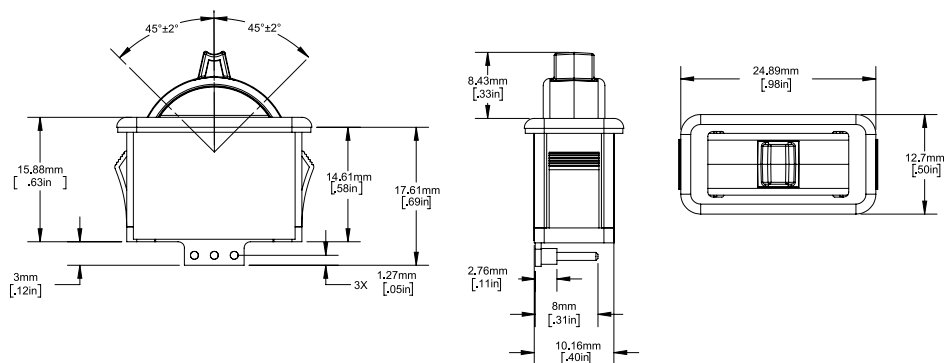


1 - Requires termination option E

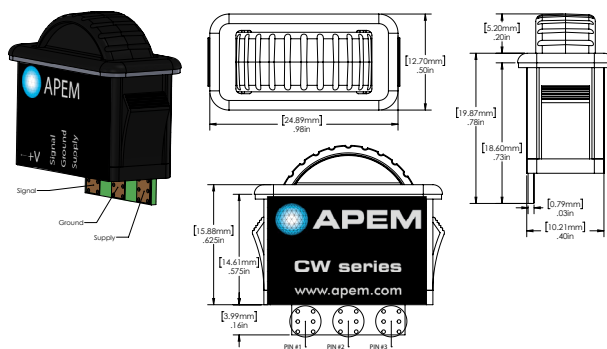
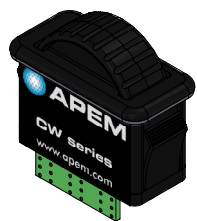
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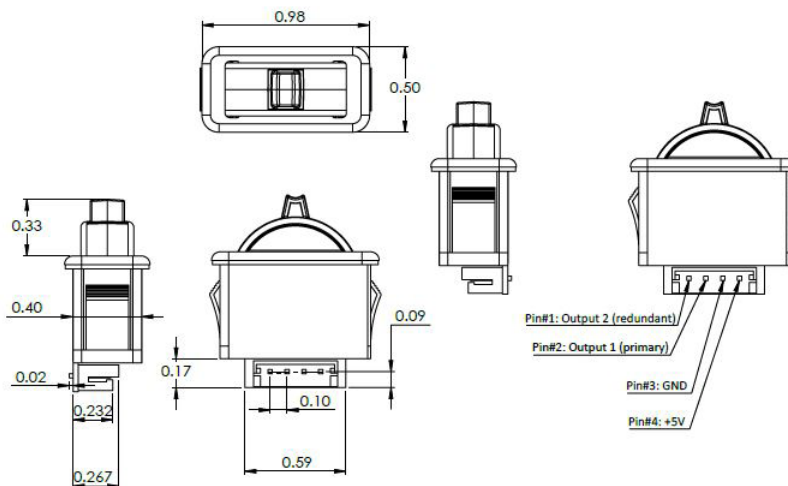
## TERMINATION OPTION A



## TERMINATION OPTION C



## TERMINATION OPTION E

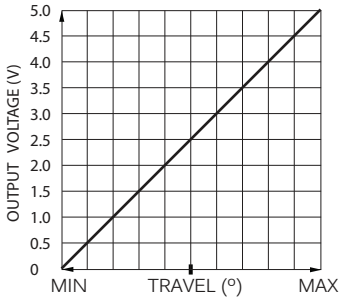


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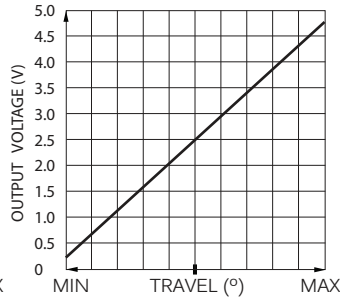
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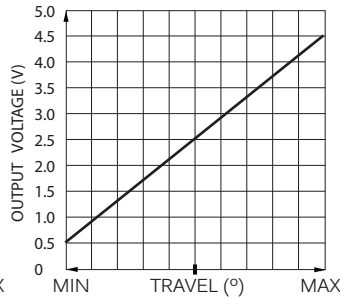
## VOLTAGE OUTPUT OPTIONS



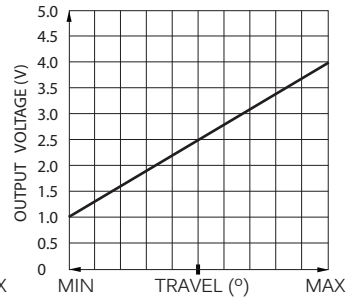
Option 00



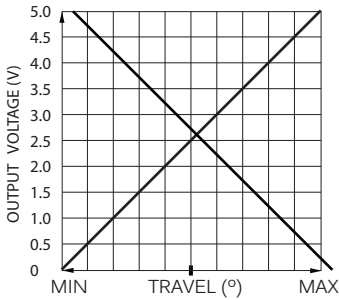
Option 01



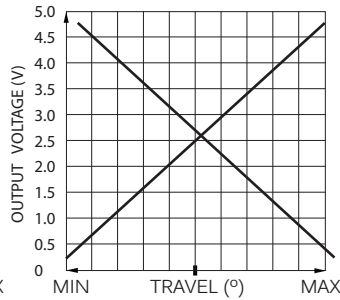
Option 02



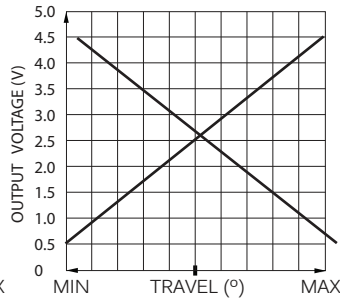
Option 03



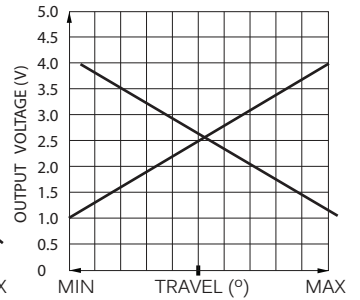
Option 04



Option 05



Option 06



Option 07