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

- Technology: Hall effect sensor
- Supply Voltage Range: 5.00 VDC ± 0.01 VDC
- Ratiometric output options: See options
- Reverse Polarity max: -10 VDC
- Transient overvoltage max: 16V
- Overvoltage max: 16 V
- Output Impedance: 2 Ω
- Return to Center Voltage Tolerance: ± 200 mV initial

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: ± 45°
- Expected Life: 3 million lifecycles
- Mass/weight: 4.2 g ± 1.0 g (0.15 oz ± 0.03 oz)
- Lever Action (centering): Spring

The company reserves the right to change specifications without notice.

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

Proportional miniature thumb controls • non-contacting Hall effect technology

MATERIALS

- Body: Delrin
- Actuator: Glass filled nylon

CONNECTIONS

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

OPTIONAL MATING HARNESS
Part number: 505-507
Wire type: 22 AWG 25 cm PTFE
Connector: Molex 0050579503

WIRING SPECIFICATION
- Red: Power (5 V)
- Black: Ground
- Blue: Signal

1 - 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.
BUILD YOUR PART NUMBER

**CW series**

Proportional miniature thumb controls • non-contacting Hall effect technology

## Series

- **CW**

## Wheel Shape

- **A0** Ribbed wheel (no tab)
- **B1** Smooth wheel (with tab)

## Actuator Color

- **BK** Black
- **GY** Grey

## Mounting

- **1** Snap-in

## Centering Option

- **A** Standard spring

## Output Options

- **00** 0 V to 5 V
- **01** 0.25 V to 4.75 V
- **02** 0.5 V to 4.5 V
- **03** 1 V to 4 V
- **99** PWM¹

## Termination

- **A** 2.54 mm (.100”) Pitch Male Header
- **B** 2.54 mm (.100”) Pitch Male Header with 10’ 22 AWG Mating Harness (505-507)

¹ - Contact factory for PWM configuration.
CW series

Proportional miniature thumb controls • non-contacting Hall effect technology

DIMENSIONS

VOLTAGE OUTPUT OPTIONS