# General Specifications

## Series CW

### CWSA

#### Electrical Capacity
- **Power Level:** For Resistive Load 6A @ 250V AC

#### Other Ratings
- **Contact Resistance:** 20 milliohms maximum
- **Insulation Resistance:** 500 megohms minimum @ 500V DC
- **Dielectric Strength:** 1,500V AC minimum between contacts for 1 minute minimum
- **3,000V AC minimum between contacts & case for 1 minute minimum**
- **Mechanical Life:** 30,000 operations minimum
- **Nominal Operating Force:** 2.50N
- **Angle of Throw:** 30°

#### Operating Temperature Range:
- -10°C ~ +70°C (+14°F ~ +158°F)

#### Materials & Finishes
- **Rocker:** Polycarbonate
- **Stationary Contacts:** Silver alloy
- **Housing:** Polyamide
- **Contact Terminals:** Copper with silver plating
- **Movable Contactor:** Brass with silver alloy plating
- **Common Terminals:** Brass with silver plating

### CWSB

#### Electrical Capacity
- **Power Level:** For Resistive Load 6A @ 250V AC

#### Other Ratings
- **Contact Resistance:** 20 milliohms maximum
- **Insulation Resistance:** 500 megohms minimum @ 500V DC
- **Dielectric Strength:** 1,500V AC minimum between contacts for 1 minute minimum
- **Mechanical Life:** 30,000 operations minimum
- **Nominal Operating Force:** 6.50N for single pole models; 10.0N for double pole models
- **Angle of Throw:** 30°

#### Operating Temperature Range:
- -10°C ~ +70°C (+14°F ~ +158°F)

#### Materials & Finishes
- **Rocker:** Glass fiber reinforced polyamide
- **Stationary Contacts:** Silver alloy
- **Housing:** Polyamide
- **Contact Terminals:** Brass + silver with silver plating
- **Movable Contactor:** Beryllium copper w/silver alloy plating
- **Common Terminals:** Brass with silver plating

### CWT

#### Electrical Capacity
- **Power Level:** For Resistive Load 6A @ 125V AC; 3A @ 250V AC; 4A @ 30V DC

#### Other Ratings
- **Contact Resistance:** 20 milliohms maximum
- **Insulation Resistance:** 1,000 megohms minimum @ 500V DC
- **Dielectric Strength:** 1,000V AC minimum between contacts for 1 minute minimum
- **1,500V AC minimum between contacts & case for 1 minute minimum**
- **Mechanical Life:** 50,000 operations minimum
- **Electrical Life:** 25,000 operations minimum
- **Nominal Operating Force:** 2.0N
- **Angle of Throw:** 30°

#### Operating Temperature Range:
- -25°C ~ +70°C (~13°F ~ +158°F)

#### Materials & Finishes
- **Rocker:** Glass fiber reinforced polyamide
- **Stationary Contacts:** Silver alloy
- **Housing:** Polyamide
- **Contact Terminals:** Brass + silver with silver plating
- **Movable Contactor:** Phosphor bronze w/silver plating
- **Common Terminals:** Brass with silver plating
Miniature Power Rockers

Series CW

Distinctive Characteristics

CWSA

Low cost molded rocker.

See-saw contact mechanism

Stable stationary contact construction for high reliability.

Easily installed with snap-in mounting.

Large terminal hole dimensioned .067” x .098” (1.7mm x 2.5mm) simplifies wiring and soldering.

Wave Soldering (PC version): See Profile A in Supplement section.

Manual Soldering: See Profile A in Supplement section.

CWSB

Low cost molded rocker.

Snap-acting contact mechanism gives smooth actuation and audible feedback.

Stable stationary contact construction for high reliability.

Front panel, snap-in mounting for labor-saving installation.

Solder lug/quick connect terminals can be used with connectors.


CWT

Low cost molded rocker in compact, slim design.

See-saw contact mechanism

Outstanding insulation resistance and dielectric strength.

Dust proof construction protects contact area.

Stable stationary contact construction for high reliability.

Front panel, snap-in mounting for labor-saving installation.

Terminals are molded in and epoxy sealed to lock out flux, dust, and other contaminants.

Manual Soldering: See Profile A in Supplement section.
### STANDARDS & CERTIFICATIONS

#### CWSA

Specific CWSA models listed below are qualified for Underwriters Laboratories Inc. recognition and Canadian Standards Association certification. cULus marking on case is standard as noted in following table.

<table>
<thead>
<tr>
<th>Model</th>
<th>Ratings @ AC</th>
<th>cULus File No.</th>
<th>Marking on Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>CWSA11</td>
<td>6A @ 250V</td>
<td>E44145</td>
<td>Standard</td>
</tr>
<tr>
<td>CWSA12</td>
<td>6A @ 250V</td>
<td>E44145</td>
<td>Standard</td>
</tr>
</tbody>
</table>

#### CWSB

Specific CWSB models listed below are qualified for Underwriters Laboratories Inc. recognition and Canadian Standards Association certification. cULus marking on case is standard as noted in following table.

<table>
<thead>
<tr>
<th>Model</th>
<th>Ratings @ AC</th>
<th>cULus File No.</th>
<th>Marking on Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>CWSB11</td>
<td>6A @ 250V</td>
<td>E44145</td>
<td>Standard</td>
</tr>
<tr>
<td>CWSB21</td>
<td>6A @ 250V</td>
<td>E44145</td>
<td>Standard</td>
</tr>
</tbody>
</table>

#### CWT

Specific CWT model listed below is qualified for Underwriters Laboratories Inc. recognition and Canadian Standards Association certification. cULus marking on case is standard as noted in following table.

<table>
<thead>
<tr>
<th>Model</th>
<th>Ratings @ AC</th>
<th>cULus File No.</th>
<th>Marking on Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>CWT12</td>
<td>6A @ 125V</td>
<td>E44145</td>
<td>Standard</td>
</tr>
<tr>
<td></td>
<td>3A @ 250V</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Miniature Power Rockers

Series CW

TYPICAL SWITCH ORDERING EXAMPLES

**CWSA**

<table>
<thead>
<tr>
<th>Pole</th>
<th>Circuits</th>
<th>Cap Color</th>
<th>Inscription</th>
<th>Terminals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 SPST &amp; SPDT</td>
<td>1 ON NONE OFF</td>
<td>A Black</td>
<td>For SPST &amp; SPDT</td>
<td>S Solder Lug</td>
</tr>
<tr>
<td>2 ON NONE ON</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Housing: A Black

TYPICAL ORDERING EXAMPLE

*CWSA11AANS*

**CWSB**

<table>
<thead>
<tr>
<th>Poles</th>
<th>Circuit</th>
<th>Cap Color</th>
<th>Housing</th>
<th>Inscription</th>
<th>Terminals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 SPST</td>
<td>1 ON NONE OFF</td>
<td>A Black</td>
<td>A Black</td>
<td>For SPST</td>
<td>S Solder Lug</td>
</tr>
<tr>
<td>2 DPST</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

No Code: None

For SPST

<table>
<thead>
<tr>
<th>No Code</th>
<th>Inscription</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horizontal</td>
<td></td>
</tr>
<tr>
<td>Vertical</td>
<td></td>
</tr>
<tr>
<td>Dot Marking</td>
<td></td>
</tr>
</tbody>
</table>

Terminals

<table>
<thead>
<tr>
<th>Terminals</th>
<th>No Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>Quick Connect</td>
</tr>
<tr>
<td>H</td>
<td>Right Angle PC</td>
</tr>
</tbody>
</table>

TYPICAL ORDERING EXAMPLE

*CWSB21AA2F*

**CWT**

<table>
<thead>
<tr>
<th>Pole</th>
<th>Circuit</th>
<th>Housing</th>
<th>Terminals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 SPDT</td>
<td>2 ON NONE ON</td>
<td>A Black</td>
<td>S1 Solder Lug</td>
</tr>
</tbody>
</table>

Cap Color: A Black

TYPICAL ORDERING EXAMPLE

*CWT12AAS1*

www.nkkswitches.com
**INSCRIPTIONS**

<table>
<thead>
<tr>
<th>Code</th>
<th>None</th>
<th>Horizontal Orientation</th>
<th>Vertical Orientation</th>
<th>Dot Marking</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Only On-None-Off models are available with the horizontal inscription.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Only On-None-Off models are available with the vertical inscription.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Only Single Pole On-None-Off models are available with the dot inscription.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The IEC symbols for On-Off are supplied with Single Throw models only. Orientation of inscription must be selected. Inscription color is white ink on black.

**TYPICAL SWITCH DIMENSIONS FOR CWSA**

**Solder Lug**

**Single Pole • No Inscription**

<table>
<thead>
<tr>
<th>Terminal numbers are on side of switch body</th>
<th>Panel Thickness</th>
<th>Terminal numbers are on side of switch body</th>
</tr>
</thead>
<tbody>
<tr>
<td>CWSA12AANS</td>
<td>.030&quot; ~ .079&quot;</td>
<td>.030&quot; ~ .079&quot; (0.75mm ~ 2.0mm)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Single throw model does not have terminal 1b</th>
<th>Single throw model does not have terminal 1b</th>
</tr>
</thead>
<tbody>
<tr>
<td>CWSA11AAN1H</td>
<td>CWSA11AAN1H</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Single Pole • Horizontal On-Off Inscription</th>
<th>Single Pole • Horizontal On-Off Inscription</th>
</tr>
</thead>
<tbody>
<tr>
<td>CWSA12AANS</td>
<td>CWSA12AANS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Single throw model does not have terminal 1b</th>
<th>Single throw model does not have terminal 1b</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terminal numbers are on side of switch body</td>
<td>Terminal numbers are on side of switch body</td>
</tr>
<tr>
<td>CWSA11AAN1H</td>
<td>CWSA11AAN1H</td>
</tr>
</tbody>
</table>

B16

www.nkkswitches.com
**TYPICAL SWITCH DIMENSIONS FOR CWSB**

**Double Pole • Vertical On-Off Inscription**

![Double Pole Switch](image)

**Quick Connect**

**Panel Thickness**

0.030” ~ 0.079” (0.75mm ~ 2.0mm)

**CWSB21AA2F**

**Single Pole • Dot Inscription**

![Single Pole Switch](image)

**Right Angle**

**Footprint SPST**

**CWSB11AA3H**

**Terminal numbers are on bottom of switch**

**TYPICAL SWITCH DIMENSIONS FOR CWT**

**Single Pole • No Inscription**

![Single Pole Switch](image)

**Solder Lug**

**Panel Thickness**

0.030” ~ 0.079” (0.75mm ~ 2.0mm)

**CWT12AAS1**

**Terminal numbers are on side of switch body**

www.nkkswitches.com