



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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## General Specifications

Toggles

Rockers

Pushbuttons

Illuminated PB

Programmable

Keylocks

Rotaries

Slides

Tactiles

Tilt

Touch

Indicators

Accessories

Supplement

B	<b>CWSA</b>	<b>Electrical Capacity</b>	<b>Power Level:</b> For Resistive Load 6A @ 250V AC	
		<b>Other Ratings</b>		
		<b>Contact Resistance:</b>	20 milliohms maximum	
		<b>Insulation Resistance:</b>	500 megohms minimum @ 500V DC	
		<b>Dielectric Strength:</b>	1,500V AC minimum between contacts for 1 minute minimum 3,000V AC minimum between contacts & case for 1 minute minimum	
		<b>Mechanical Life:</b>	30,000 operations minimum	
		<b>Electrical Life:</b>	10,000 operations minimum with Resistive Load & 6,000 operations with Inductive Load	
		<b>Nominal Operating Force:</b>	2.50N	
		<b>Angle of Throw:</b>	30°	<b>Operating Temperature Range:</b> -10°C ~ +70°C (+14°F ~ +158°F)
		<b>Materials &amp; Finishes</b>		
	<b>Rocker:</b>	Polycarbonate	<b>Stationary Contacts:</b> Silver alloy	
	<b>Housing:</b>	Polyamide	<b>Base:</b> Laminated thermosetting sheets	
	<b>Movable Contactor:</b>	Brass with silver alloy plating	<b>Contact Terminals:</b> Copper with silver plating	
	<b>Movable Contacts:</b>	Silver alloy	<b>Common Terminals:</b> Brass with silver plating	

C	<b>CWSB</b>	<b>Electrical Capacity</b>	<b>Power Level:</b> For Resistive Load 6A @ 250V AC	
		<b>Other Ratings</b>		
		<b>Contact Resistance:</b>	20 milliohms maximum	
		<b>Insulation Resistance:</b>	500 megohms minimum @ 500V DC	
		<b>Dielectric Strength:</b>	1,500V AC minimum between contacts for 1 minute minimum 3,000V AC minimum between contacts & case for 1 minute minimum	
		<b>Mechanical Life:</b>	30,000 operations minimum	
		<b>Electrical Life:</b>	10,000 operations minimum with Resistive Load & 6,000 operations with Inductive Load	
		<b>Nominal Operating Force:</b>	6.50N for single pole models; 10.0N for double pole models	
		<b>Angle of Throw:</b>	30°	<b>Operating Temperature Range:</b> -10°C ~ +70°C (+14°F ~ +158°F)
		<b>Materials &amp; Finishes</b>		
	<b>Rocker:</b>	Polycarbonate	<b>Stationary Contacts:</b> Silver alloy	
	<b>Housing:</b>	Polyamide	<b>Base:</b> Laminated thermosetting sheets	
	<b>Movable Contactor:</b>	Beryllium copper w/silver alloy plating	<b>Terminals:</b> Brass with silver plating	
	<b>Movable Contacts:</b>	Silver		

C	<b>CWT</b>	<b>Electrical Capacity</b>	<b>Power Level:</b> For Resistive Load 6A @ 125V AC; 3A @ 250V AC; 4A @ 30V DC	
		<b>Other Ratings</b>		
		<b>Contact Resistance:</b>	20 milliohms maximum	
		<b>Insulation Resistance:</b>	1,000 megohms minimum @ 500V DC	
		<b>Dielectric Strength:</b>	1,000V AC minimum between contacts for 1 minute minimum 1,500V AC minimum between contacts & case for 1 minute minimum	
		<b>Mechanical Life:</b>	50,000 operations minimum	
		<b>Electrical Life:</b>	25,000 operations minimum	
		<b>Nominal Operating Force:</b>	2.0N	
		<b>Angle of Throw:</b>	30°	<b>Operating Temperature Range:</b> -25°C ~ +70°C (-13°F ~ +158°F)
		<b>Materials &amp; Finishes</b>		
	<b>Rocker:</b>	Glass fiber reinforced polyamide	<b>Base:</b> LCP (Liquid Crystal Polymer)	
	<b>Housing:</b>	Polyamide	<b>Contact Terminals:</b> Brass + silver with silver plating	
	<b>Movable Contactor:</b>	Phosphor bronze w/silver plating	<b>Common Terminals:</b> Brass with silver plating	
	<b>Movable Contacts:</b>	Silver alloy		

# Distinctive Characteristics

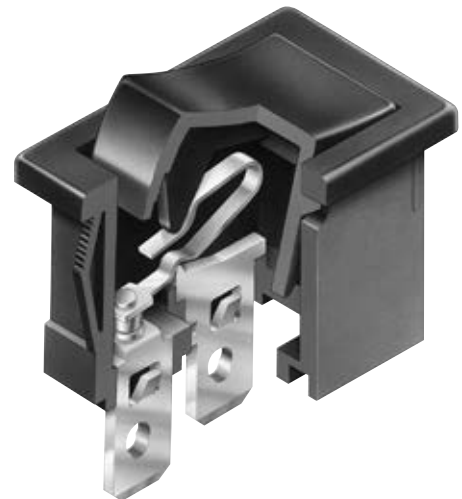
## CWSA

- 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.



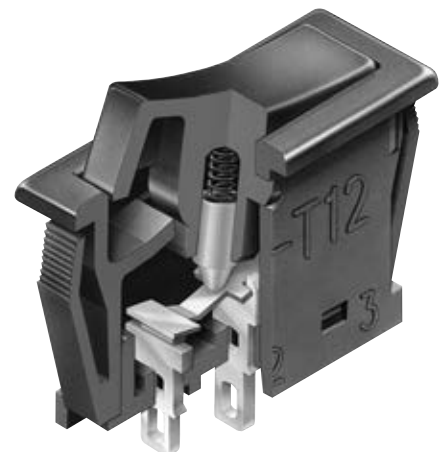
## CWSB

- 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.
- Manual Soldering: See Profile B in Supplement section.



## 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.



- Toggle
- B** Rockers
- Pushbuttons
- Illuminated PB
- Programmable
- Keylocks
- Rotaries
- Slides
- Tactiles
- Tilt
- Touch
- Indicators
- Accessories
- Supplement

### 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.

<u>Model</u>	<u>Ratings @ AC</u>	<u>cULus File No.</u>	<u>Marking on Case</u>
CWSA11	6A @ 250V	E44145	Standard
CWSA12	6A @ 250V	E44145	Standard

#### 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.

<u>Model</u>	<u>Ratings @ AC</u>	<u>cULus File No.</u>	<u>Marking on Case</u>
CWSB11	6A @ 250V	E44145	Standard
CWSB21	6A @ 250V	E44145	Standard

#### 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.

<u>Model</u>	<u>Ratings @ AC</u>	<u>cULus File No.</u>	<u>Marking on Case</u>
CWT12	6A @ 125V 3A @ 250V	E44145	Standard

TYPICAL SWITCH ORDERING EXAMPLES

**CWSA** **1** **1** **A** **A** **N** **S**

Pole	
1	SPST & SPDT

Circuits			
1	ON	NONE	OFF
2	ON	NONE	ON


Cap Color	
A	Black

Housing	
A	Black

Inscription	
For SPST & SPDT	
No Code	None
For SPST	
1	Horizontal
2	Vertical
3	Dot Marking

Terminals	
S	Solder Lug
H	Right Angle PC

**TYPICAL ORDERING EXAMPLE**  
**CWSA11AANS**



**CWSB** **2** **1** **A** **A** **2** **F**

Poles	
1	SPST
2	DPST

Circuit			
1	ON	NONE	OFF


Cap Color	
A	Black

Housing	
A	Black

Inscription	
No Code	None (SPST only)
1	Horizontal
2	Vertical
3	Dot Marking (SPST only)

Terminals	
F	Quick Connect
H	Right Angle PC

**TYPICAL ORDERING EXAMPLE**  
**CWSB21AA2F**



**CWT** **1** **2** **A** **A** **S1**

Pole	
1	SPDT


Circuit			
2	ON	NONE	ON

Cap Color	
A	Black

Housing	
A	Black

Terminals	
S1	Solder Lug

**TYPICAL ORDERING EXAMPLE**  
**CWT12AAS1**



## INSCRIPTIONS

**No Code**

**None**

Not available in double pole.

**1**

**Horizontal Orientation**

Only On-None-Off models are available with the horizontal inscription.

**2**

**Vertical Orientation**

Only On-None-Off models are available with the vertical inscription.

**3**

**Dot Marking**

Only Single Pole On-None-Off models are available with the dot inscription.

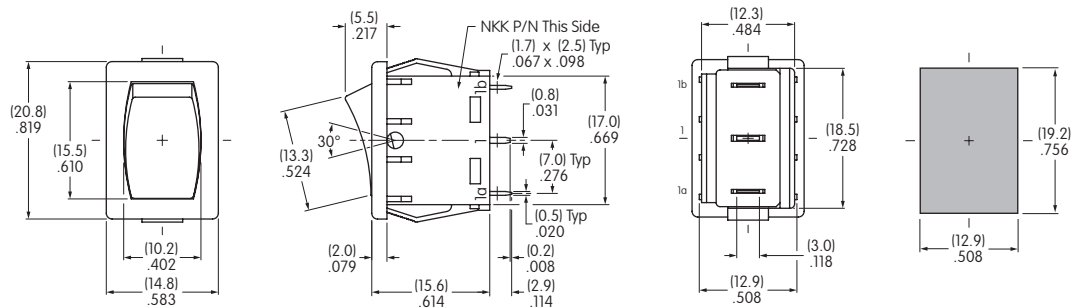


The IEC symbols for On-Off are supplied with Single Throw models only. Orientation of inscription must be selected. Inscription color is white ink on black.

## TYPICAL SWITCH DIMENSIONS FOR CWSA

**Solder Lug**

**Single Pole • No Inscription**



**CWSA12AANS**

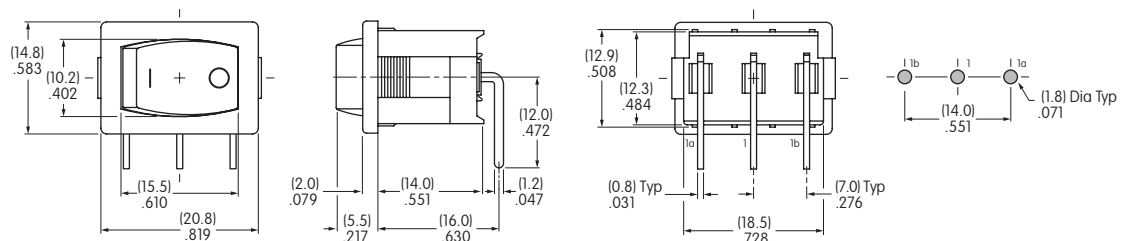
Single throw model does not have terminal 1b

Terminal numbers are on side of switch body

Panel Thickness .030" ~ .079" (0.75mm ~ 2.0mm)

**Right Angle**

**Single Pole • Horizontal On-Off Inscription**



**CWSA11AAN1H**

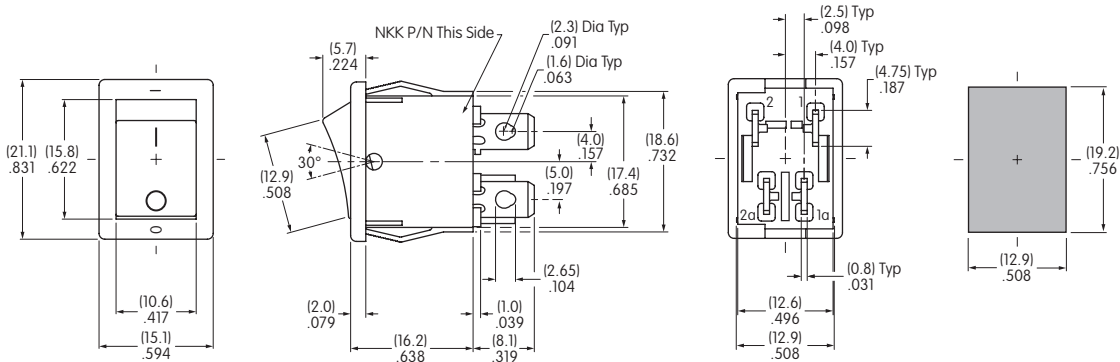
Single throw model does not have terminal 1b

Terminal numbers are on side of switch body

TYPICAL SWITCH DIMENSIONS FOR CWSB

Double Pole • Vertical On-Off Inscription

Quick Connect



Terminal numbers are on bottom of switch

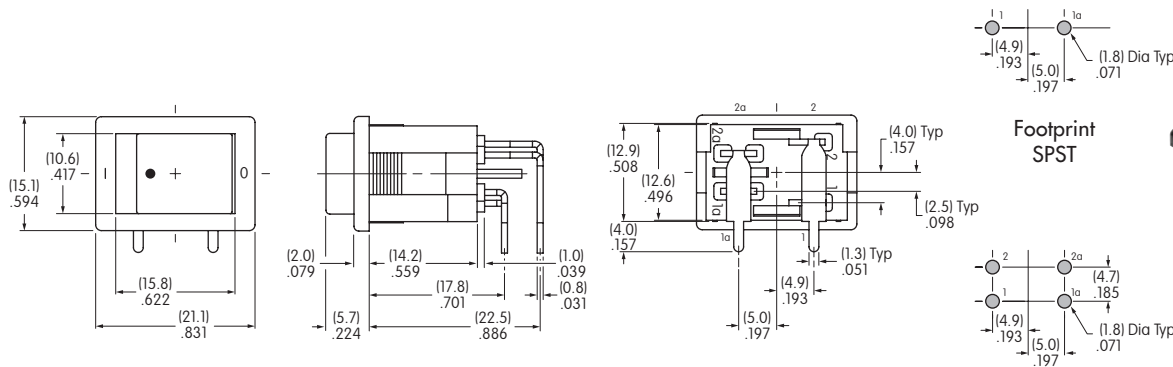
Panel Thickness  
.030" ~ .079"  
(0.75mm ~ 2.0mm)

CWSB21AA2F



Single Pole • Dot Inscription

Right Angle



Terminal numbers are on bottom of switch

Footprint  
SPST

Footprint  
DPST

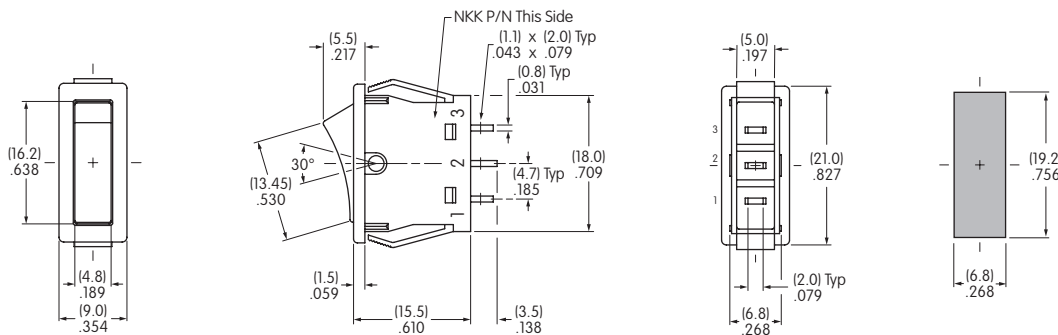
CWSB11AA3H



TYPICAL SWITCH DIMENSIONS FOR CWT

Single Pole • No Inscription

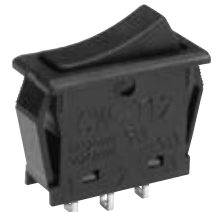
Solder Lug



Terminal numbers are on side of switch body

Panel Thickness  
.030" ~ .079"  
(0.75mm ~ 2.0mm)

CWT12AAS1



Toggle

**B** Rockers

Pushbuttons

Illuminated PB

Programmable

Keylocks

Rotaries

Slides

Tactiles

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