

General Specifications

Toggles

Rockers

Pushbuttons

Illuminated PB

Programmable

Keylocks

Rotaries

Slides

Tactiles

Tilt

Touch

Indicators

Accessories

Supplement

B

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**Electrical Life:** 10,000 operations minimum with Resistive Load & 6,000 operations with Inductive Load**Nominal Operating Force:** 2.50N**Angle of Throw:** 30°**Operating Temperature Range:** -10°C ~ +70°C (+14°F ~ +158°F)**Materials & Finishes****Rocker:** Polycarbonate**Housing:** Polyamide**Movable Contactor:** Brass with silver alloy plating**Movable Contacts:** Silver alloy**Stationary Contacts:** Silver alloy**Base:** Laminated thermosetting sheets**Contact Terminals:** Copper with silver 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
3,000V AC minimum between contacts & case for 1 minute minimum**Mechanical Life:** 30,000 operations minimum**Electrical Life:** 10,000 operations minimum with Resistive Load & 6,000 operations with Inductive Load**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:** Polycarbonate**Housing:** Polyamide**Movable Contactor:** Beryllium copper w/silver alloy plating**Movable Contacts:** Silver**Stationary Contacts:** Silver alloy**Base:** Laminated thermosetting sheets**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**Housing:** Polyamide**Movable Contactor:** Phosphor bronze w/silver plating**Movable Contacts:** Silver alloy**Base:** LCP (Liquid Crystal Polymer)**Contact Terminals:** Brass + silver with silver plating**Common Terminals:** Brass with silver plating

Distinctive Characteristics

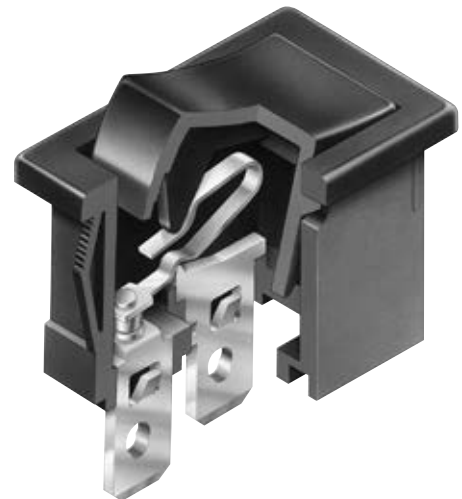
CWSA

- 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.



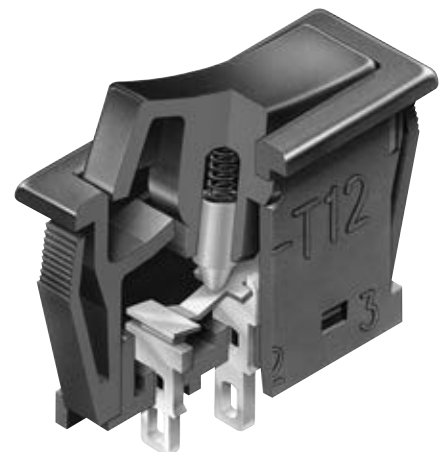
CWSB

- 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.



- B Rockers
- Pushbuttons
- Illuminated PB
- Programmable
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- 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.

Model	Ratings @ AC	cULus File No.	Marking on Case
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.

Model	Ratings @ AC	cULus File No.	Marking on Case
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.

Model	Ratings @ AC	cULus File No.	Marking on Case
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.

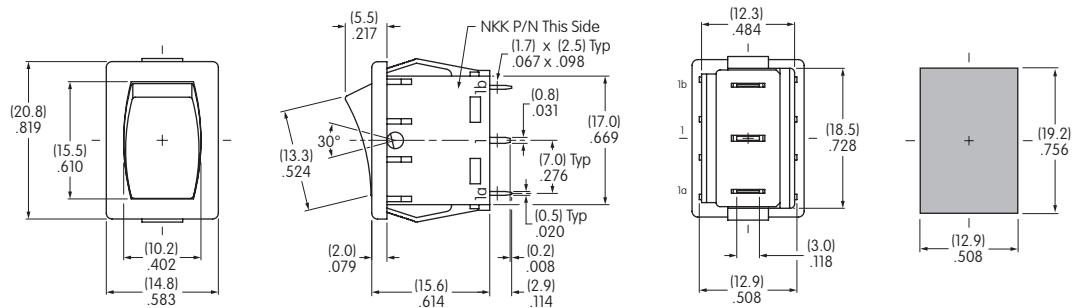


The IEC symbols for On-Off are supplied with Single Throw models only. Orientation of inscription must be selected. Inscription color is white ink on black.

TYPICAL SWITCH DIMENSIONS FOR CWSA

Solder Lug

Single Pole • No Inscription



CWSA12AANS

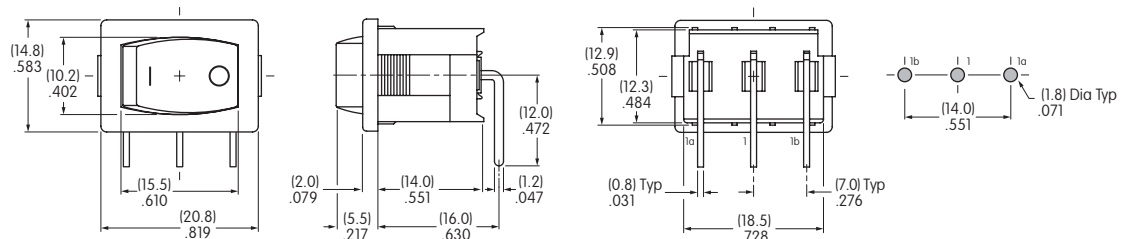
Single throw model does not have terminal 1b

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

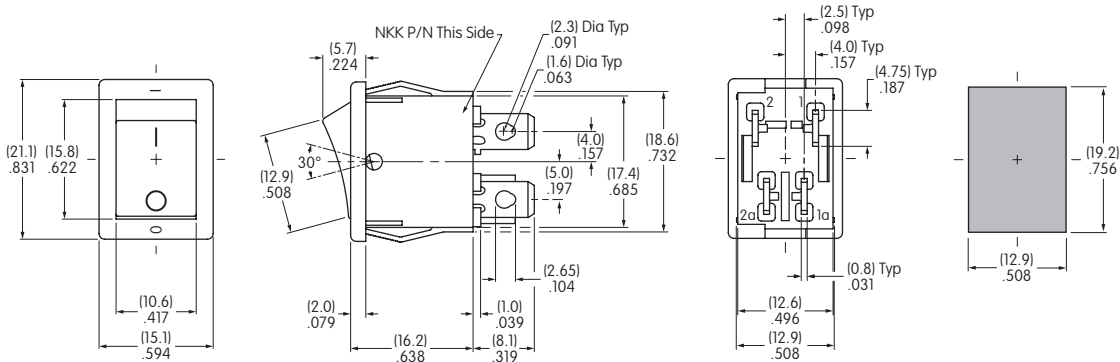
Single throw model does not have terminal 1b

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

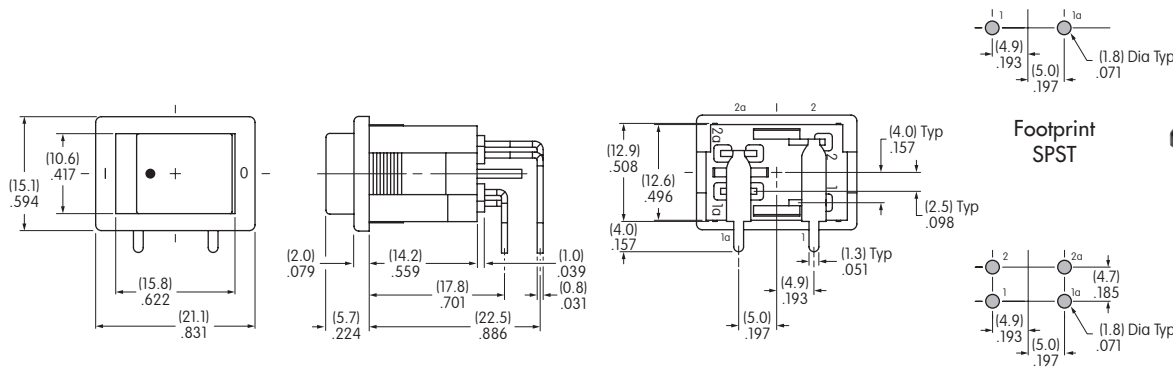
Panel Thickness
.030" ~ .079"
(0.75mm ~ 2.0mm)

CWSB21AA2F



Single Pole • Dot Inscription

Right Angle



Terminal numbers are on bottom of switch

Footprint
SPST

Footprint
DPST

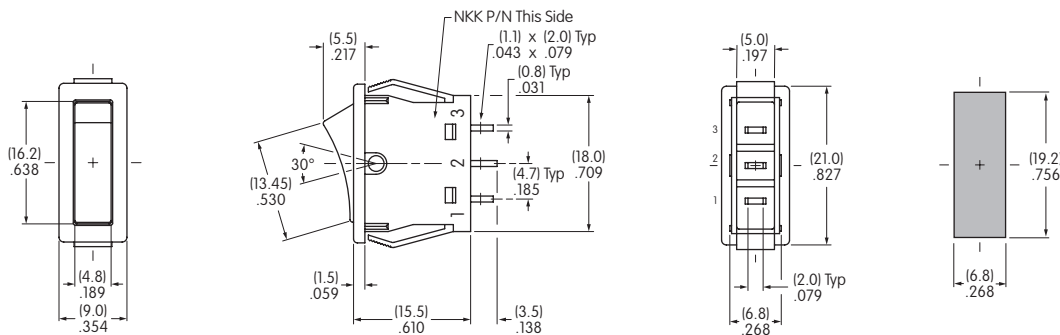
CWSB11AA3H



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



Mouser Electronics

Authorized Distributor

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[NKK Switches:](#)

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[CWSB11AA1F](#) [CWSB11AA3F](#) [CWSB11AA2F](#) [CWSB21AA2F](#) [CWSB21CACF](#) [CWSB21AA1F](#) [CWSB21FAFF](#)
[CWSB21DADF](#) [CWSA11AANH](#) [CWSA11AAN1H](#) [CWSA11AAN2H](#) [CWSA12AANH](#) [CWSB11AAH](#) [CWSB11AA1H](#)
[CWSB11AA3H](#) [CWSB21AA1H](#) [CWT12AAS1/U](#) [CWT12AAS1/UC](#) [CWSB21AA2H](#) [CWSB21AA3F](#)