

# 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.

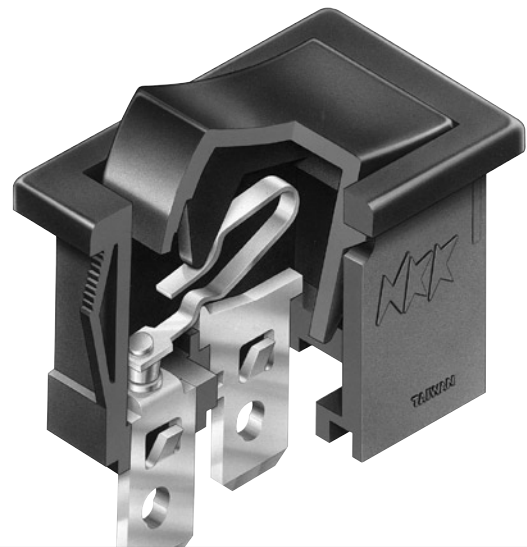
Snap-acting contact mechanism gives smooth actuation and audible feedback.

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.

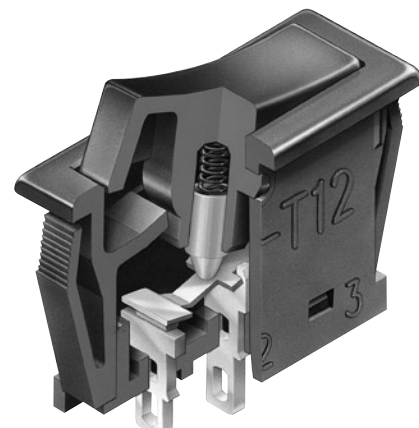
Dust proof construction protects contact area.

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.



# General Specifications

## 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 w/silver alloy plating

**Movable Contacts:** Silver

**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

## STANDARDS & CERTIFICATIONS

### CWSA

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



<u>Model</u>	<u>Ratings @ AC</u>	<u>C-UL File No.</u>	<u>Marking on Case</u>
CWSA11	6A @ 250V	WOYR8.E44145	Standard
CWSA12	6A @ 250V	WOYR8.E44145	Standard

### CWSB

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



<u>Model</u>	<u>Ratings @ AC</u>	<u>C-UL File No.</u>	<u>Marking on Case</u>
CWSB11	6A @ 250V	WOYR8.E44145	Standard
CWSB21	6A @ 250V	WOYR8.E44145	Standard

### CWT

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



<u>Model</u>	<u>Ratings @ AC</u>	<u>C-UL File No.</u>	<u>Marking on Case</u>
CWT12	6A @ 125V 3A @ 250V	WOYR8.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.

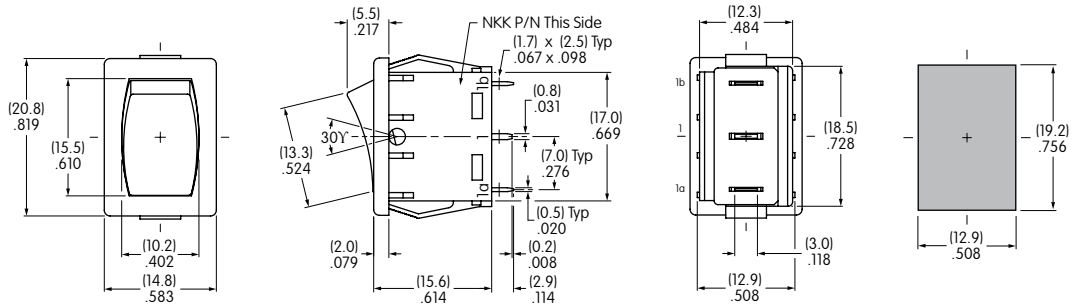


The IEC symbols for On-Off are supplied with Single Throw models only. Orientation of inscription must be selected. Inscription color is white ink on black.

## TYPICAL SWITCH DIMENSIONS FOR CWSA

**Solder Lug**

**Single Pole • No Inscription**



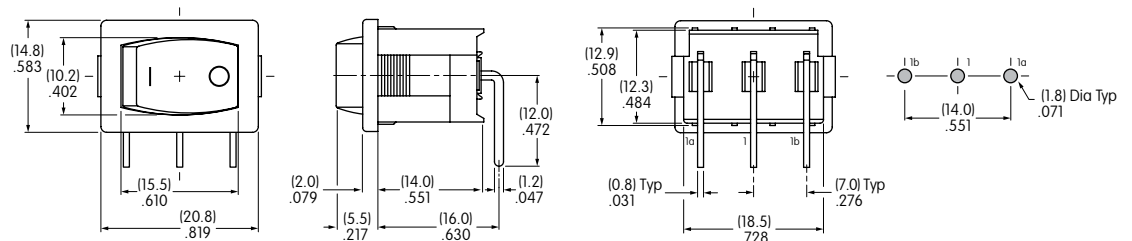
Terminal numbers are on side of switch body

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

**CWSA12AANS**

**Right Angle**

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



Single throw model does not have terminal 1b

Terminal numbers are on side of switch body

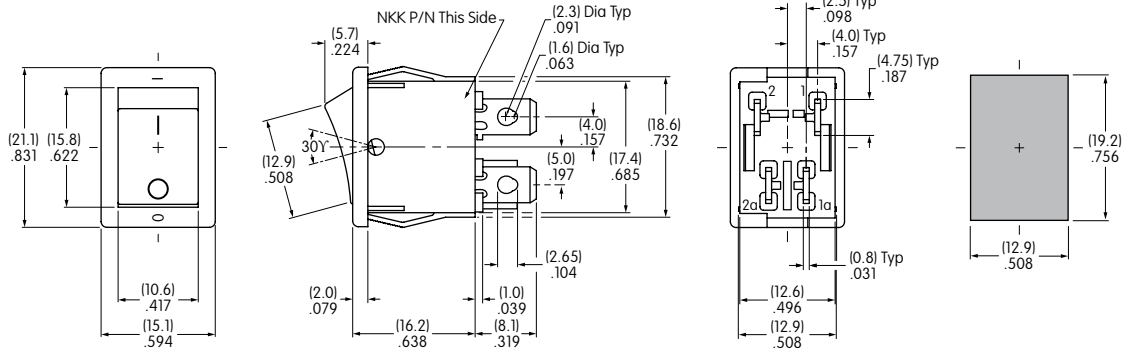
**CWSA11AAN1H**

**NKK Switches**

## TYPICAL SWITCH DIMENSIONS FOR CWSB

Quick Connect

Double Pole • Vertical On-Off Inscription



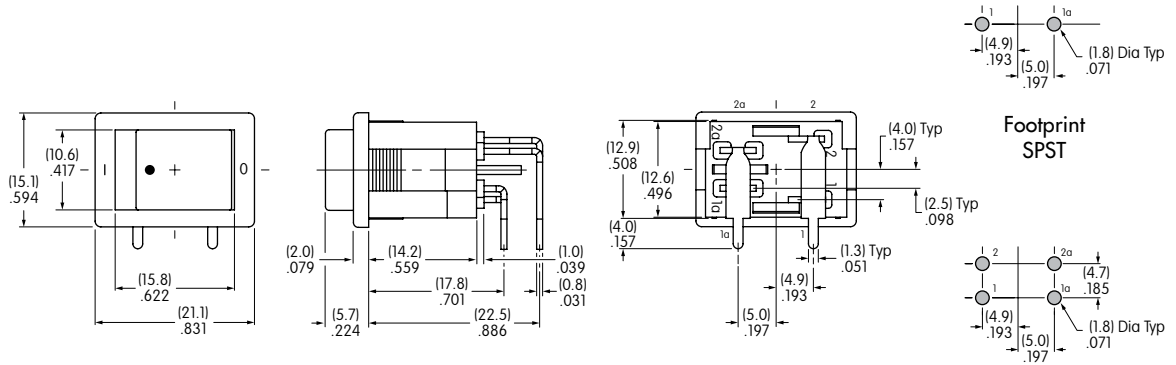
CWSB21AA2F

Terminal numbers are on bottom of switch

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

Right Angle

Single Pole • Dot Inscription



CWSB11AA3H

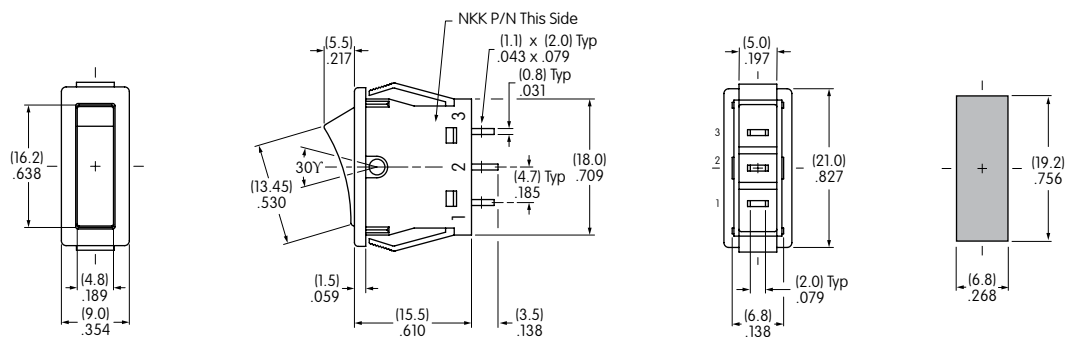
Terminal numbers are on bottom of switch

Footprint  
SPST  
DPST

## TYPICAL SWITCH DIMENSIONS FOR CWT

Solder Lug

Single Pole • No Inscription



CWT12AA51

Terminal numbers are on side of switch body

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