

General Specifications

Electrical Capacity (Resistive Load)

Power Level: 15A @ 125/250V AC or 15A @ 30V DC

Other Ratings

Contact Resistance:	10 milliohms maximum for solder lug, screw & quick connect terminal models
Insulation Resistance:	30 milliohms maximum for wire lead terminal models
Dielectric Strength:	200 megohms minimum @ 500V DC
Mechanical Life:	1,250V AC minimum between contacts for 1 minute minimum
Electrical Life:	3,750V AC minimum between contacts & case for 1 minute minimum
Angle of Throw:	30,000 operations minimum
	15,000 operations minimum for circuit 11 and 12 models
	10,000 operations minimum for circuit 13, 15, 18, 19 models

Materials & Finishes

Rocker:	Phenylene oxide
Outer Housing:	Polyamide (UL94V-0)
Inner Case:	Melamine (UL94V-0)
Cover for Wire Lead Models:	Glass fiber reinforced polyamide (UL94V-0)
Flange Gasket:	Nitrile butadiene rubber
Movable Contactor:	Copper with silver plating
Movable Contacts:	Silver alloy plus copper with silver plating
Stationary Contacts:	Silver alloy plus copper with silver plating
Terminals:	Copper with tin plating for solder lug & wire lead
	Brass with silver plating for screw lug
	Brass with tin plating for quick connect
Wire Lead Covers:	Heat resistant polyvinyl chloride (Leads are AWG 14)

Environmental Data

Operating Temp Range:	-25°C through +85°C (-13°F through +185°F)
Humidity:	90 ~ 95% humidity for 96 hours @ 40°C (104°F)
Vibration:	10 ~ 55Hz with peak-to-peak amplitude of 1.5mm traversing the frequency range & returning in 1 minute; 3 right angled directions for 2 hours
Shock:	50G (490m/s ²) acceleration (tested in 6 right angled directions, with 5 shocks in each direction)
Front Panel Seal:	IP67 of IEC60529, dust tight & water protected during temporary immersion for all models
Behind Panel Seal:	IP60 of IEC60529, dust tight but not water protected for solder lug, screw & quick connect models
	IP67 of IEC60529, dust tight & water protected during temporary immersion for wire lead models

Installation

Soldering Time & Temp:	Manual Soldering: See Profile A in Supplement section.
Cleaning:	Hand clean locally using alcohol based solution.

Standards & Certifications

Flammability Standards: UL94V-0 outer housing, inner case, & outer cover on wire lead models

UL: File No. E44145 - Recognized only when ordered with marking on switch.

Add "/U" or "/CUL" to end of part number to order UL recognized switch.

All models approved at 15A @ 125/250V AC & 15A @ 30V DC.

VDE: License No. 126501 - Approved only when ordered with marking on switch.

Add "/V" to end of part number to order VDE approved switch.

All models approved at 15A @ 250V AC (pending for quick connect).

EN: No. 61058-1

WR11 & WR12 models meet European Norm for 3mm contact gap to prevent contact welds.

Wiring Material Standards: UL AWM 1015 Recognized at Flammability VW-1.

Temperature Range -20°C ~ +105°C; Maximum Load 600V; AWG 14.

CSA TEW 105 Certified at Temperature Range -20°C ~ +105°C; Maximum Load 600V.

Distinctive Characteristics

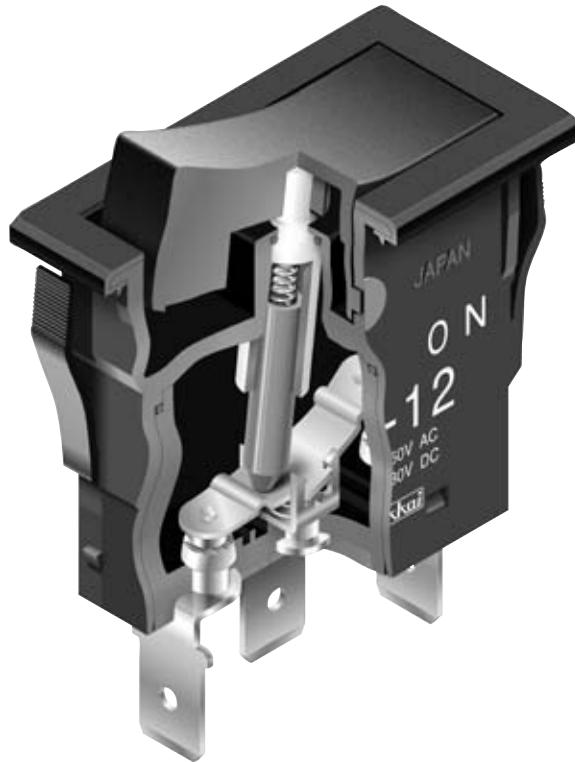
Single unit construction of the flange and outer housing gives added protection from environmental elements.

Specially designed contact mechanism for breaking light welds.

Minimal contact bounce achieved with specially designed interlocked switching mechanism.

Heat resistant resin used for outer housing, inner case, and cover on wire lead models meets UL94V-0 flammability standard and provides high arc and tracking resistance.

Available with solder lug, screw, quick connect, and wire lead terminations.



Sealed Construction Meets IP60 & IP67 Standards

Solder lug, screw, and quick connect terminal models meet IP67 of IEC60529 Standards at front panel (dust tight and water protected for temporary immersion, patent pending). Behind panel standard is IP60 (dust tight but not water protected).

Wire lead models conform fully to IP67 of IEC60529 Standards at front and behind panel (dust tight and water protected for temporary immersion). Switch base is epoxy sealed and covered by an outer case for further protection from dust and water. (Switches cannot be operated under water. Contact factory for further details regarding operating environment.)

Actual Size



TYPICAL SWITCH ORDERING EXAMPLE

WR	1	2	B	S
Poles				
1	SPST SPDT			
Circuits	1 2 3 5 8 9	ON ON OFF NONE (ON) ON	NONE NONE OFF ON (ON) OFF	OFF ON ON (ON) (ON) (ON)
	() = Momentary			
Rockers	A * B	Black Ivory		
	* Contact Factory for Quick Connect with Ivory Rocker			
Terminals	S SN T TN F FN L	Solder Lug with Epoxy Seal Solder Lug without Epoxy Seal Screw Lug with Epoxy Seal Screw Lug without Epoxy Seal .250" (6.35mm) Quick Connect with Epoxy Seal .250" (6.35mm) Quick Connect without Epoxy Seal Wire Lead		

IMPORTANT:



Switches are supplied without UL, cULus & VDE marking unless specified.
UL, cULus & VDE recognized only when ordered with marking on the switch.
 Specific models, ratings and ordering instructions are noted on the General Specifications page.

DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

WR12BS



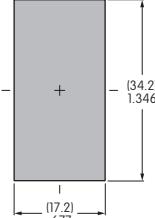
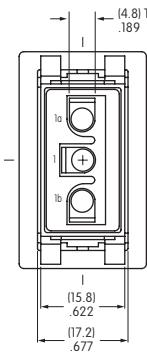
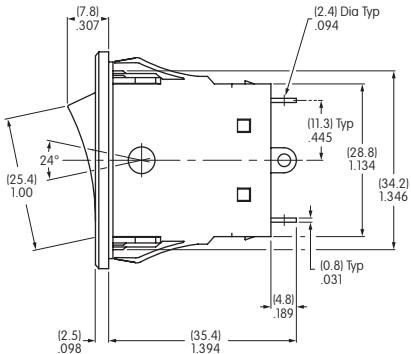
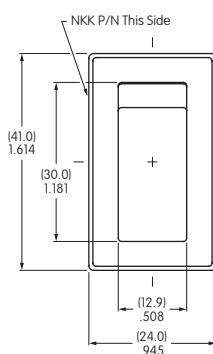
Environmentally Sealed Rockers

POLES & CIRCUITS

		Rocker Position () = Momentary			Connected Terminals			Throw & Schematics	
Pole	Model	Down	Center	Up	Down	Center	Up	Note: Terminal numbers are not actually on wire lead models.	
SP	WR11	ON	NONE	OFF	1a-1b	OPEN	OPEN	SPST	
SP	WR12	ON	NONE	ON					
	WR13	ON	OFF	ON					
	WR15	ON	NONE	(ON)	1-1b	OPEN	1-1a	SPDT	
	WR18	(ON)	OFF	(ON)					
	WR19	ON	OFF	(ON)					

TYPICAL SWITCH DIMENSIONS

Solder Lug Terminals

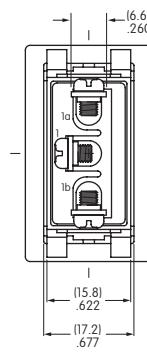
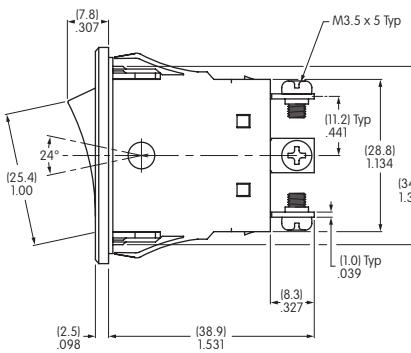
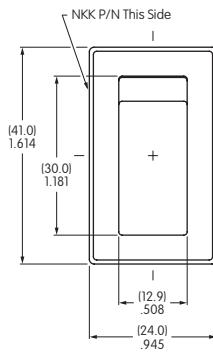


Panel Thickness
.039" ~ .157"
(1.0mm ~ 4.0mm)

WR12AS

WR11 model does not have terminal 1.

Screw Lug Terminals



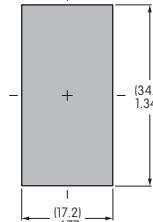
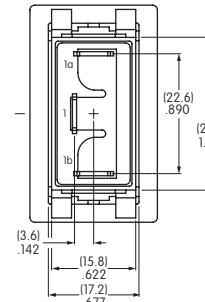
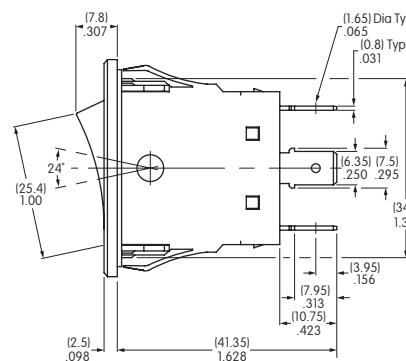
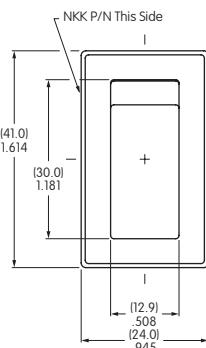
Panel Thickness
.039" ~ .157"
(1.0mm ~ 4.0mm)

WR12AT

WR11 model does not have terminal 1.

TYPICAL SWITCH DIMENSIONS

.250" (6.35mm) Quick Connect Terminals

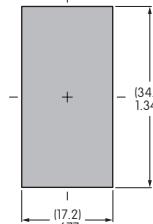
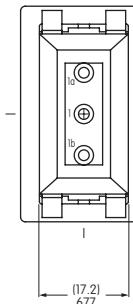
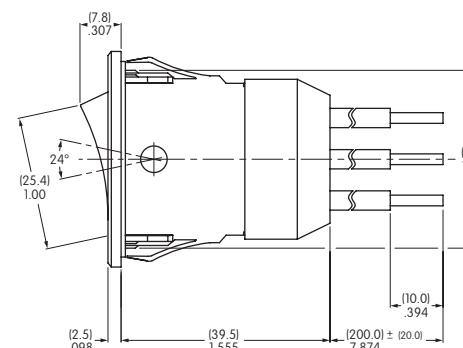
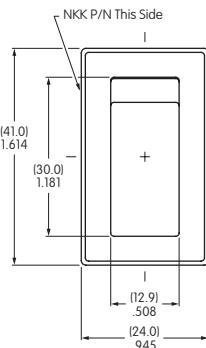


WR13AF

WR11 model does not have terminal 1.

Panel Thickness
.039" ~ .157"
(1.0mm ~ 4.0mm)

Wire Lead Terminals



WR15BL

WR11 model does not have terminal 1.

Panel Thickness
.039" ~ .157"
(1.0mm ~ 4.0mm)

STANDARD WIRE COLOR SCHEME

Wire leads are covered with heat resistant vinyl in accordance with UL 1015 and CSA TEW 105 Standards for Appliance Wiring Material (AWM).

Terminal Numbers & Wire Colors

	1a	1	1b
WR11	Black		White
WR12-19	White	Black	Red

Notes

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

NKK Switches:

[WR12AT-RO](#) [WR13AL-RO](#) [WR18AS](#) [WR11AS](#) [WR15AT](#) [WR11AT](#) [WR12AS](#) [WR11BL/U](#) [WR12AFN](#) [WR15AFN](#)
[WR18AFN](#) [WR18AL-RO](#) [WR11AL-RO](#) [WR19ASN](#) [WR11ASN](#) [WR13AL/CUL](#) [WR15AT/CUL](#) [WR18AF/CUL](#)
[WR19AF/CUL](#) [WR19AL/CUL](#) [WR18AL/CUL](#) [WR13AF/CUL](#) [WR15AL/CUL](#) [WR11ATN](#) [WR11BS](#) [WR12ASN](#)
[WR12BT](#) [WR13ATN](#) [WR13BS](#) [WR13BT](#) [WR15AL](#) [WR18ATN](#) [WR18BS](#) [WR18BT](#) [WR19AS](#) [WR19AT](#) [WR13AF](#)
[WR12AF](#) [WR11AF](#) [WR11AFN](#) [WR13AFN](#) [WR15AF](#) [WR18AF](#) [WR19AF](#) [WR19AFN](#) [WR12BF](#) [WR11AL/CUL](#)
[WR11AT/CUL](#) [WR19AT/CUL](#) [WR13AT/CUL](#) [WR15AF/CUL](#) [WR12AT/CUL](#) [WR18AT/CUL](#) [WR11AF/CUL](#)
[WR12AL/CUL](#) [WR12AF/CUL](#) [WR12BL](#) [WR11BL](#) [WR11BT](#) [WR13AL](#) [WR13AS](#) [WR12AL](#) [WR18AL](#) [WR15AS](#)
[WR11AL](#) [WR13BL](#) [WR19AL](#) [WR18AT](#) [WR12BS](#) [WR13AT](#) [WR12AT](#)