

# WR13AS Datasheet



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DiGi Electronics Part Number	WR13AS-DG
Manufacturer	<a href="#">NKK Switches</a>
Manufacturer Product Number	WR13AS
Description	SWITCH ROCKER SPDT 15A 125V
Detailed Description	Rocker Switch SPDT 15A (AC/DC) 125 V Panel Mount, Snap-In

This model WR13AS is available at DiGi Electronics.

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## Purchase and inquiry

Manufacturer Product Number:

WR13AS

Series:

WR

Mounting Type:

Panel Mount, Snap-In

Switch Function:

On-Off-On

Voltage Rating - AC:

125 V

Actuator Type:

Concave (Curved)

Actuator Marking:

No Marking

Illumination Voltage (Nominal):

-

Ingress Protection:

IP67 - Dust Tight, Waterproof

Panel Cutout Dimensions:

Rectangular - 34.20mm x 17.20mm

Approval Agency:

EN, UL

Electrical Life:

10,000 Cycles

Manufacturer:

NKK Switches

Product Status:

Active

Circuit:

SPDT

Current Rating (Amps):

15A (AC/DC)

Voltage Rating - DC:

30 V

Color - Actuator/Cap:

Black

Illumination Type, Color:

-

Termination Style:

Solder Lug

Features:

Epoxy Sealed Terminals

Operating Temperature:

-25°C ~ 85°C

Mechanical Life:

30,000 Cycles

Base Product Number:

-

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8536.50.9065

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99

# General Specifications

Toggles

Rockers

Pushbuttons

Illuminated PB

Programmable

Keylocks

Rotaries

Slides

Tactiles

Tilt

Touch

Indicators

Accessories

Supplement

## B 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  
30 milliohms maximum for wire lead terminal models

**Insulation Resistance:** 200 megohms minimum @ 500V DC

**Dielectric Strength:** 1,250V AC minimum between contacts for 1 minute minimum  
3,750V AC minimum between contacts & case for 1 minute minimum

**Mechanical Life:** 30,000 operations minimum

**Electrical Life:** 15,000 operations minimum for circuit 11 and 12 models  
10,000 operations minimum for circuit 13, 15, 18, 19 models

**Angle of Throw:** 24°

## 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:** Polychloroprene 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:** Brass with tin plating

**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<sup>2</sup>) 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.

**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.

## Environmentally Sealed Rockers

## Series WR

# Distinctive Characteristics

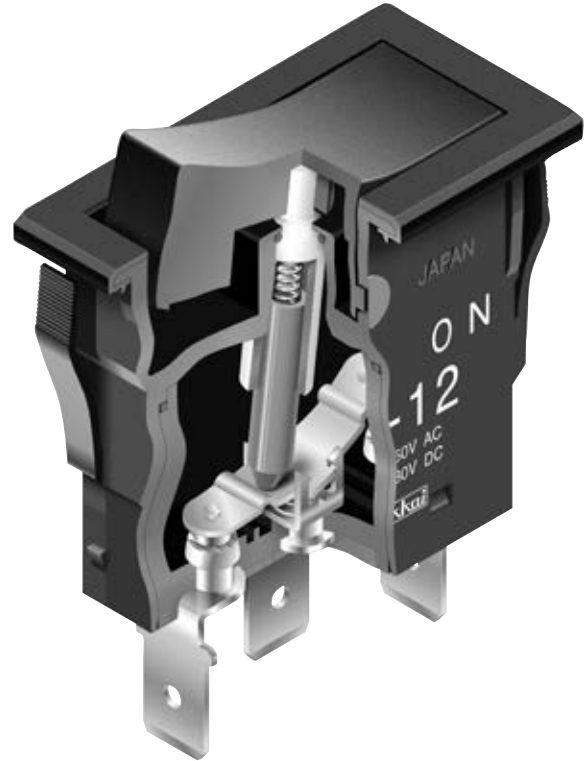
Single unit construction of the flange and outer housing gives added protection from environmental elements.

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



# Series WR

## Environmentally Sealed Rockers

Toggle

Rockers  
B

Pushbuttons

Illuminated PB

Programmable

Keylocks

Rotaries

Slides

Tactiles

Tilt

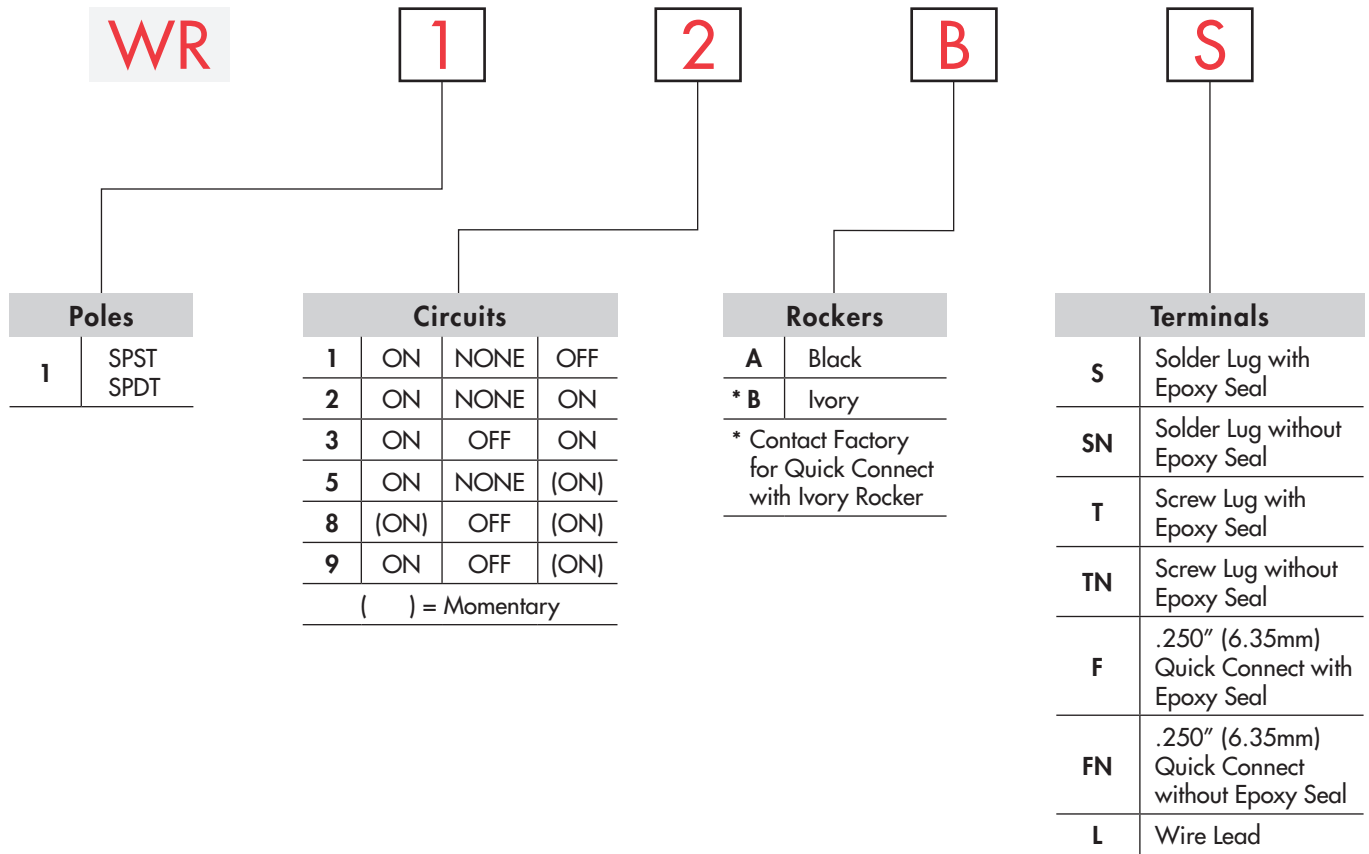
Touch

Indicators

Accessories

Supplement

### TYPICAL SWITCH ORDERING EXAMPLE



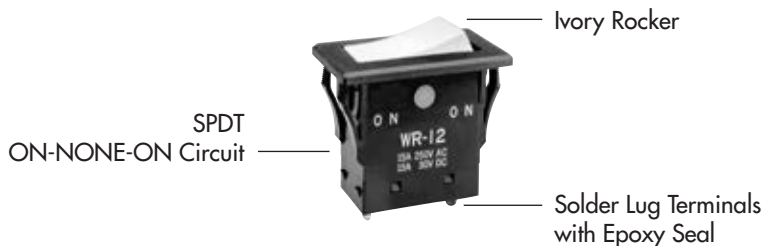
#### IMPORTANT:



Switches are supplied without UL & cULus marking unless specified.  
**UL & cULus 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

# Series WR

## POLES & CIRCUITS

Pole	Model	Rocker Position ( ) = Momentary			Connected Terminals			Throw & Schematics
		Down	Center	Up	Down	Center	Up	
SP	WR11	ON	NONE	OFF	1a-1b	OPEN	OPEN	SPST
SP	WR12 WR13 WR15 WR18 WR19	ON ON ON (ON) ON	NONE OFF NONE OFF OFF	ON ON (ON) (ON) (ON)	1-1b	OPEN	1-1a	SPDT

## TYPICAL SWITCH DIMENSIONS

Technical drawings for WR11 showing dimensions: Top view (41.0, 30.0, 12.9, 24.0, 9.45), Side view (7.8, 25.4, 24°, 30.7, 2.4 Dia Typ, 11.2 Typ, 28.8, 34.2, 0.8 Typ, 4.8 Typ), Front view (4.8 Typ, 17.2 Typ, 15.8, 17.2).

### Solder Lug Terminals

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

**WR12AS**

WR11 model does not have terminal 1.

Technical drawings for WR12AT showing dimensions: Top view (41.0, 30.0, 12.9, 24.0, 9.45), Side view (7.8, 25.4, 24°, 30.7, M3.5 x 5 Typ, 11.2 Typ, 28.8, 34.2, 1.0 Typ, 8.3, 32.7), Front view (6.6 Typ, 17.2 Typ, 15.8, 17.2).

### Screw Lug Terminals

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

**WR12AT**

WR11 model does not have terminal 1.

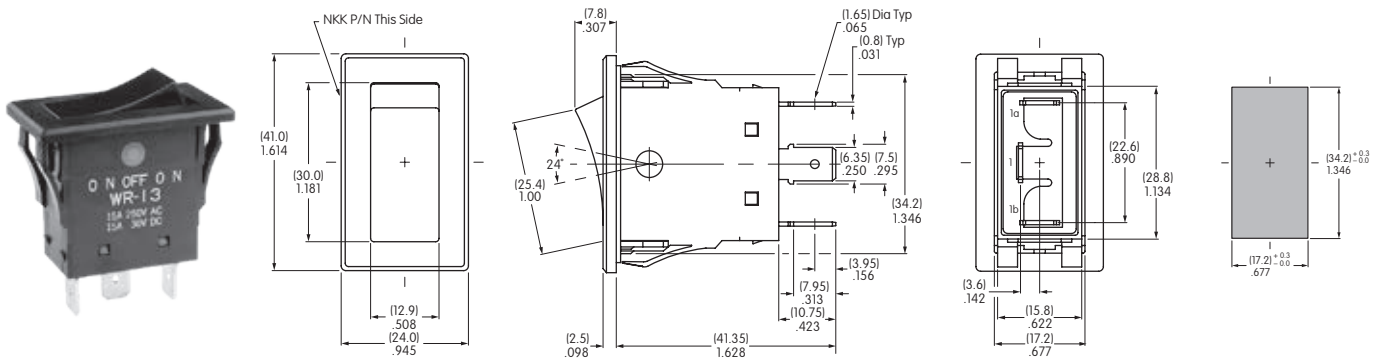
Toggles  
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# Series WR

## Environmentally Sealed Rockers

### TYPICAL SWITCH DIMENSIONS

#### .250" (6.35mm) Quick Connect Terminals

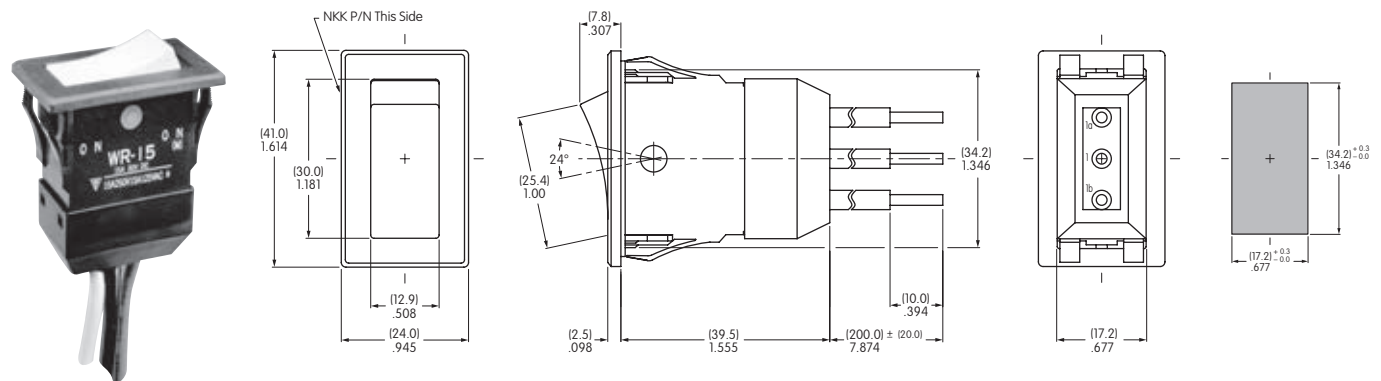


**WR13AF**

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

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