

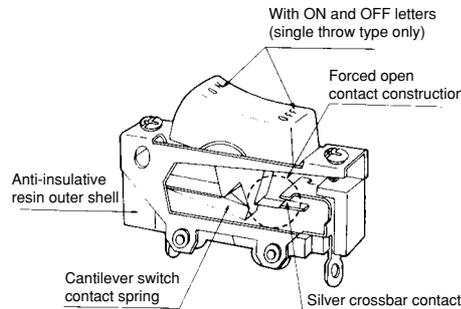
TUMBLER/ROCKER SWITCHES

TUMBLER/ROCKER SWITCHES (WD2/WD3)

FEATURES

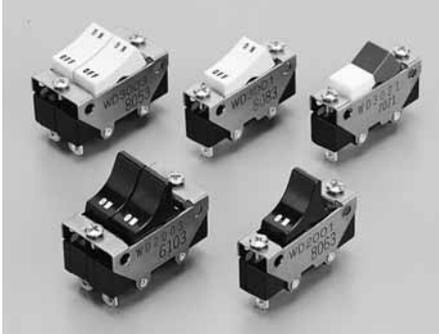
1. Superior anti-weld properties achieved through forced open contact construction.
2. Stable contact achieved through use of AgZnO alloy crossbar contact.
3. Letter display on handle of ON-OFF type
4. Different handles available for different applications.

CONSTRUCTION



PRECAUTIONS WHEN USING CADMIUM-FREE CONTACT TYPE

Models with cadmium-free contacts have been introduced in order to reduce environmentally harmful substances. ("F" is affixed to the end of the part number.) We ask customers who are currently using products with cadmium-containing contacts (no "F" at the end of the part number) to please make the switch to models with cadmium-free contacts. When switching, operating life may differ depending on the load. Please be sure to verify this by conducting an evaluation using actual equipment.



Compliance with RoHS Directive

PRODUCT TYPES

1. Tumbler switch

1) Solder terminal

Type	Kind of operation	Solder terminal	
		Part No.	
1-pole, single throw	ON-OFF	WD2001F	
1-pole, single throw (coupled)	ON-OFF	WD2003F	
1-pole, double throw	ON-ON	WD2101F	
1-pole, double throw (coupled)	ON-ON	WD2103F	
2-pole, single throw	ON-OFF	WD2201F	
2-pole, double throw	ON-ON	WD2301F	

2) Wire lead type

Type	Kind of operation	Wire leads	
		Part No.	
1-pole, single throw	ON-OFF	WD2002F	
1-pole, single throw (coupled)	ON-OFF	WD2004F	
1-pole, double throw	ON-ON	WD2102F	
1-pole, double throw (coupled)	ON-ON	WD2104F	
2-pole, single throw	ON-OFF	WD2202F	
2-pole, double throw	ON-ON	WD2302F	

- Remarks: 1. For UL/C-UL certified products, please add a "9" before the "F" at the end of the part number when ordering.
 2. Handle display is as shown in the figure below.
 3. Please inquire regarding cadmium free models.

2. Rocker switch

1) Solder terminal, 2-color handle and solder terminal

Type	Kind of operation	Solder terminal	2-color handle and solder terminal
		Part No.	Part No.
1-pole, single throw	ON-OFF	WD3001F	WD3021F
1-pole, single throw (coupled)	ON-OFF	WD3003F	WD3023F
1-pole, double throw	ON-ON	WD3101F	WD3121F
1-pole, double throw (coupled)	ON-ON	WD3103F	WD3123F
2-pole, single throw	ON-OFF	WD3201F	WD3221F
2-pole, double throw	ON-ON	WD3301F	WD3321F

2) Wire lead type

Type	Kind of operation	Wire leads
		Part No.
1-pole, single throw	ON-OFF	WD3002F
1-pole, single throw (coupled)	ON-OFF	WD3004F
1-pole, double throw	ON-ON	WD3102F
1-pole, double throw (coupled)	ON-ON	WD3104F
2-pole, single throw	ON-OFF	WD3202F
2-pole, double throw	ON-ON	WD3302F

Remarks: 1. For UL/C-UL certified products, please add a "9" before the "F" at the end of the part number when ordering.
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SPECIFICATIONS

1. Contact rating

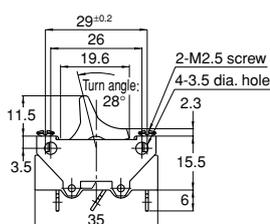
Kind of load	AC	DC
Resistive load	10A 250V	6A 30V, 0.8A 125V, 0.4A 250V
Inductive load	10A 250V (Power factor: 0.6)	4A 30V, 0.4A 125V, 0.2A 250V (Time constant: 7 ms)
Lamp load (incandescent)	300W 100V, 500W 200V, Inrush current: Max. 30 A	—
Motor load	200W 125V, 300W 250V	—

2. Characteristics

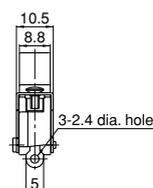
Mechanical expected life	Min. 5×10^4	
Electrical expected life	AC load	Min. 3×10^4 (20 cpm) at rated load
	AC motor load	Min. 10^4 (20 cpm) at rated load
	AC lamp load	Min. 10^4 (10 cpm) at rated load
	DC load	Min. 10^4 (12 cpm) at rated load
	Overload	Min. 50 (5 cpm) (Rated load $\times 1.5$)
Insulation resistance	Min. 100 M Ω (at 500 V DC measured by insulation resistive meter)	
Breakdown voltage	1500 Vrms (at detection current: 10mA)	
Vibration resistance	10 to 55 Hz at double amplitude of 1.5 mm (contact opening: Max. 1 ms)	
Contact resistance	Initial, Max. 10 m Ω (By voltage drop at 1 A, 2 to 4 V DC)	
Ambient temperature	-25°C to +50°C (Not freezing below 0°C)	
Contact material	AgZnO alloy	

DIMENSIONS (mm) (General tolerance: ± 0.5)

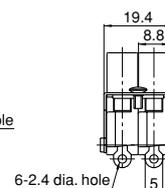
1. Tumbler switch



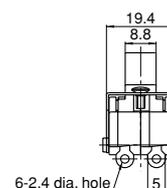
1-pole



1-pole (coupled)



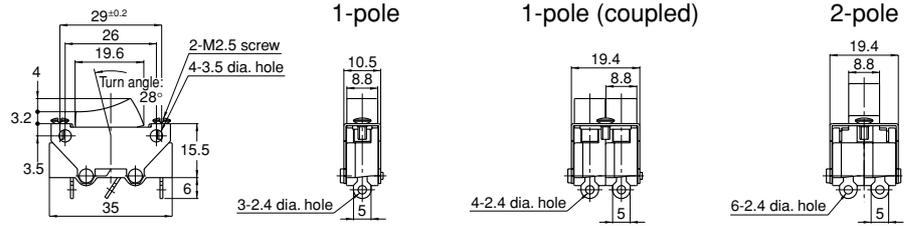
2-pole



Remarks: 1. ON-OFF type does not have a terminal No.2 in the middle.
2. ON-OFF type has an ON-OFF display on the handle.
3. M2.5 screws for Philips screwdriver used for installation.

WD2/WD3

2. Rocker switch

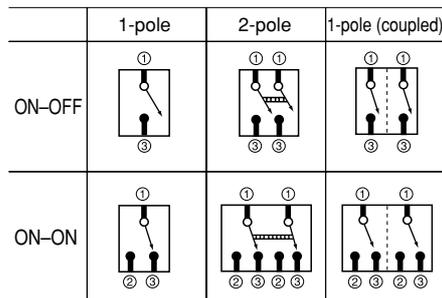


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 2. ON-OFF type has an ON-OFF display on the handle.
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MOUNTING DIMENSIONS

Type	1-pole and 2-pole	1-pole (coupled)
Panel cutout (mm)		
Panel thickness	Tumbler switch: Max. 2.5 mm, Rocker switch: Max. 3.2 mm	

ELECTRICAL CIRCUIT DIAGRAM



- Remarks: 1. The numbers on the electrical circuit diagrams indicate terminal numbers.
 2. The filled bars indicate mechanical coupling by the handle action and that each pole is operating simultaneously.

NOTES

Soldering

When using solder to wire this switch, be careful not to allow solder or flux to enter the inside of the switch from the small openings around the terminals as this can lead to faulty contacting. Bear this in mind, in particular, for the terminal No.2 on the double throw type.