

## Switch Selection

# SWITCH SELECTION

Select suitable switches from wide variations  
according to the applications and shapes



Basic Switches/ Door Interlock Power Switches/ Miniature Detection Switches/ Tactile Switches/ Rocker Switches/  
Pushbutton Switches/ DIP Switches/ Thumbwheel Switches

Miniature switches to be installed in devices and mounted on the PCB.

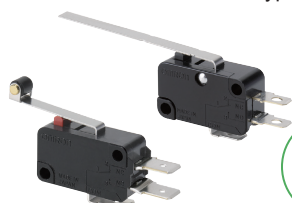
Able to select suitable switches from wide variations according to the applications and shapes.

## Detection Switches Used to detect the positions of objects.



### Basic Switches

- Miniature types (V-size)
- Subminiature types (S-size)
- Ultra subminiature types (J-size)



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### Door Interlock Power Switches

- Door interlock power



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### Miniature Detection Switches

- Detection



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## Manual Switches Used to allow workers to make inputs to equipment.



### Tactile Switches

- Through-hole mounting types
- Illuminated types
- Surface mounting types
- Sealed types

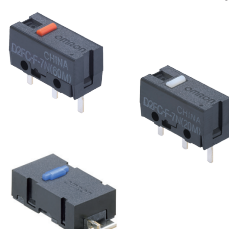


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### Basic Switches for Operation (Long service life)

- Ultra Subminiature Operation



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### Rocker Switches

- Miniature types
- Illuminated types
- Reset function types



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### Pushbutton Switches/Indicators

- Round types
- Square types



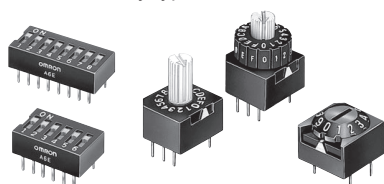
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## Setting Switches Used to set up the operation of equipment.



### DIP Switches

- Slide types
- Piano types
- Rotary types

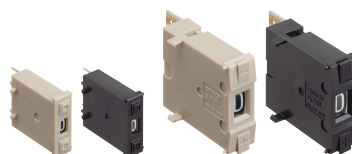


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### Thumbwheel Switches

- Push operation types
- Rotary operation types

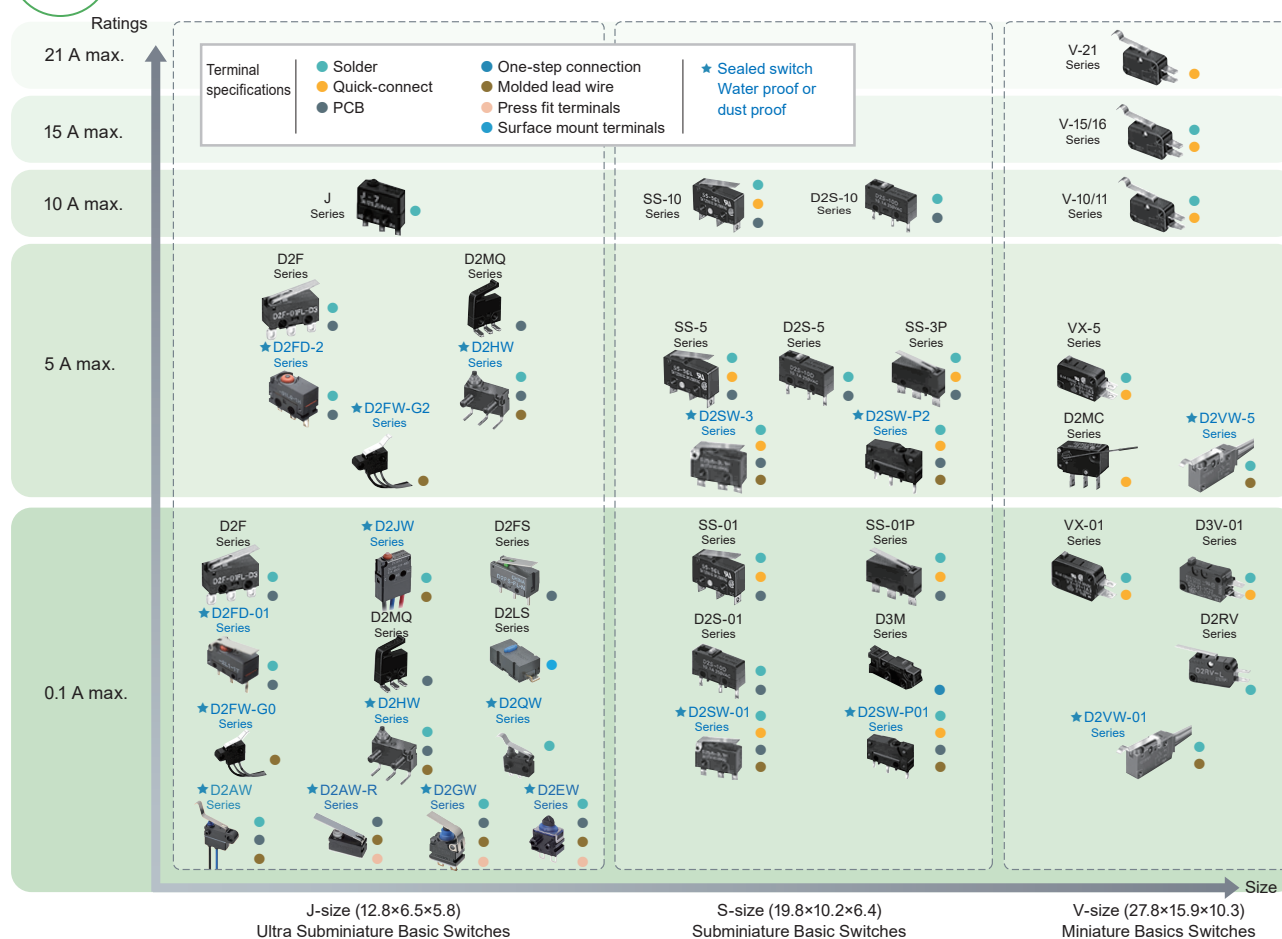


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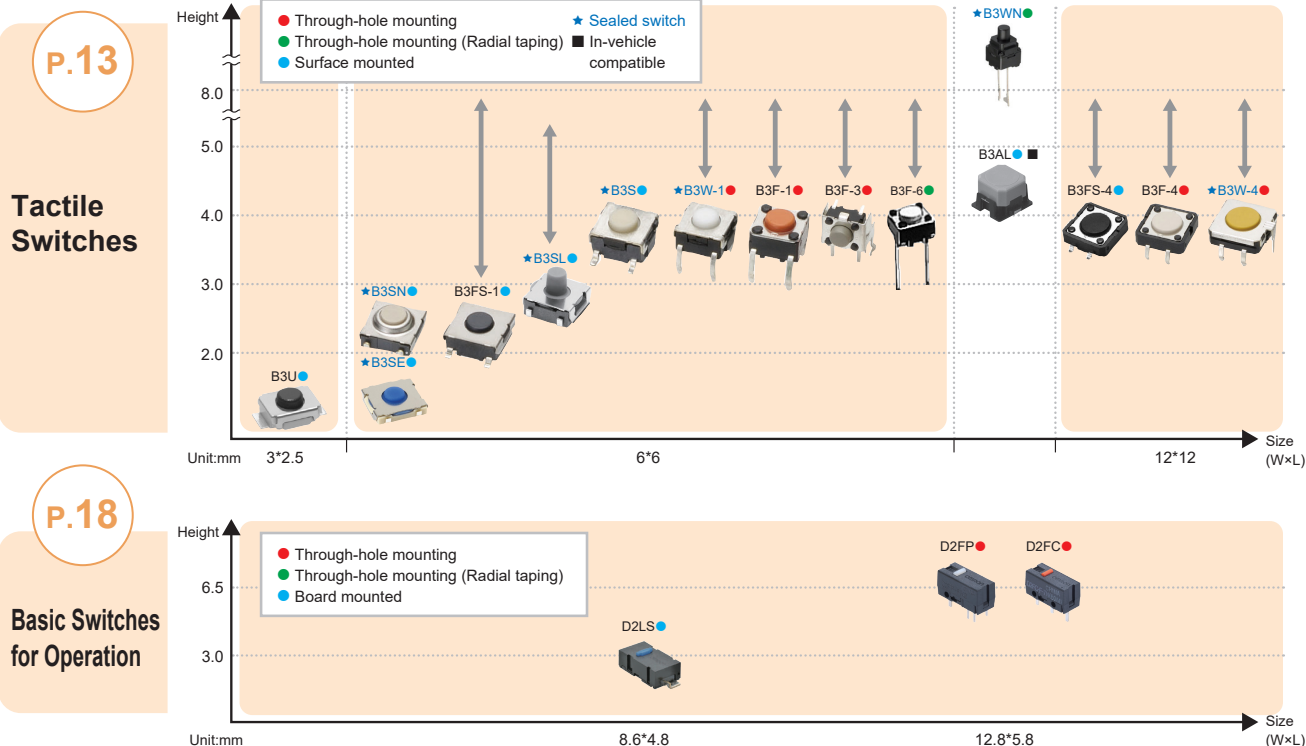
## P.34 Application Examples

- Do you know about OMRON Switches?
- Application Example Details (Smart Building / Smart Home / Entertainment / Factory Automation)

## P.6 Detection Switches Lineup





















## Operation Switches Lineup






## P.24

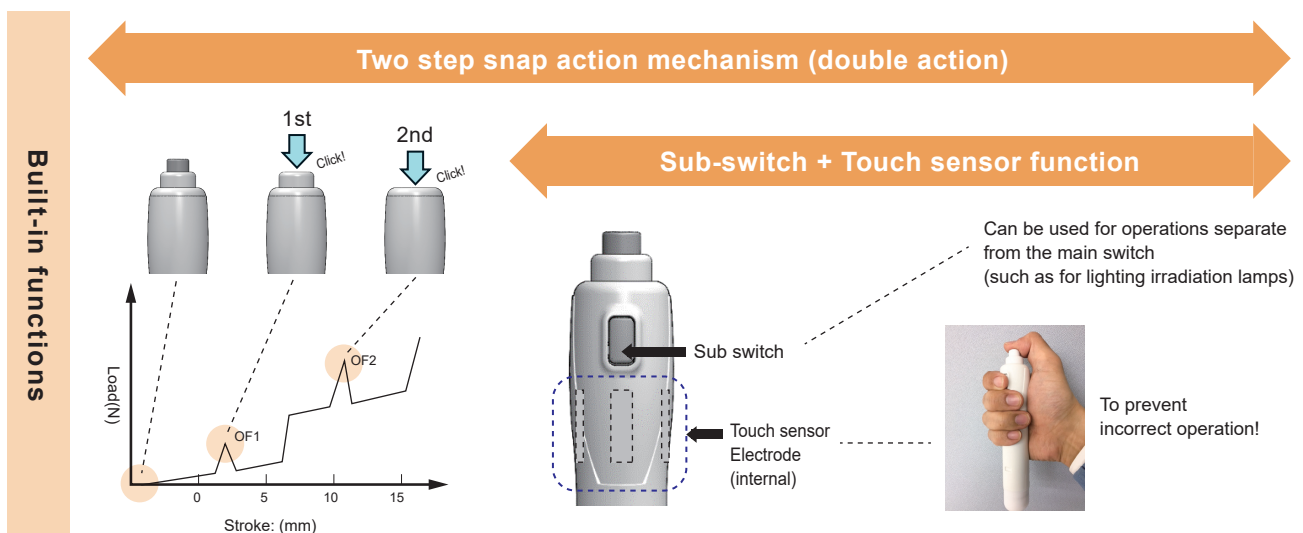
## DIP Switches Line Up

	Slide	Piano	Rotary
Board hole insertion terminals	    Standard types A6T High reliability types A6TN Box types A6E-N Sealed types A6D	   Box types A6FR Thin types A6TR Sealed types A6DR	    Standard types A6R A6RV Sealed types A6A Miniature types/Sealed types A6C A6CV Miniature types A6K A6KV
Board surface mounted terminals	   High reliability types A6SN High solder Heat resistant type A6S-H Half pitch types A6H A6HF	  Thin types A6SR Half pitch types A6HR	  Standard types A6RS Miniature types A6KS A6KSV

## P.22

## Pushbutton Hand Switches Line Up

	Standard types	Type with sub-switch	Wireless type with sub-switch
Product type	 <b>C2U</b>	 <b>C2UW</b>	 <b>C2UW-L</b>





OMRON Electronic Components Business website has been renewed!

## Search

**Want to select an OMRON switch!**

Product Groups  
Series  
More  
Information

### Classification table

## Parametric search

### Cross-reference

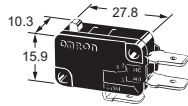
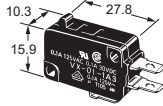
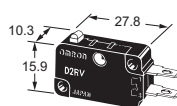
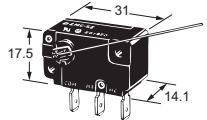


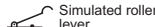



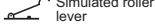
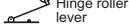


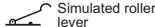


## Need to find the equivalent of another company's part number!

The screenshot shows the OMRON website's navigation structure. The top navigation bar includes 'Products', 'Application by Industries', 'Resources' (highlighted with a red box), 'Buy now', 'About us', and 'Login/Register'. Below this, the 'Resources' section is expanded, showing 'Knowledge Base', 'Technical information' (highlighted with a red box), and 'Download Library'. A red dotted arrow points from 'Resources' to 'Cross Reference', which then points to 'Technical information'. Another red dotted arrow points from 'Technical information' to the 'Search' bar in the 'Model' section. The 'Search' bar contains the text 'Input another company's part number → Search' (highlighted with a red box). Below the search bar, there are instructions and search options: 'Please specify at least two alphanumeric characters to search for a model.', 'Search for models by "matching the start" of the specified model number' (selected), and 'Search for models "including" the specified model number'.

**Want to know information on technical data, environmental compliance, and standards certification right away!**

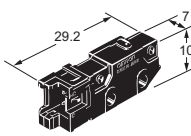
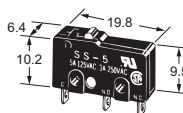








The image shows a screenshot of the Omron website's navigation menu. The menu is located at the top of the page and includes the following items: Products, Application by Industries, and Resources. The Resources item is highlighted with a red box. A red dotted line connects the Resources box to a callout box on the right. The callout box contains the text: "Registered members can download 2D/3D CAD and ECAD from 'Data Download'!". Below this text are two images: a 3D CAD model of a rectangular component and a photograph of the same component, which is a black rectangular module with a silver connector on the side.

## Basic Switches

Classification		Miniature types (V-size)					Miniature types (V-size)				
Model		V			VX		D2RV		D2MC		
Appearance											
		V-21	V-16	V-11	VX-5	VX-01			D2MC-5	D2MC-01	
Features		•Standard miniature basic switch offers high reliability.			•Compact basic switch with low load operation and high contact reliability.		•High reliability for micro load applications, even in adverse atmosphere.		•Rotary-action switch with low torque operation.		
Contact form		SPDT / SPST-NC / SPST-NO			Miniature basic switch with low operating force and high contact reliability		SPST-NO		SPDT		
Contact	Specification	Rivet			Rivet	Crossbar	Reed switches	Rivet	Crossbar		
	Material	Silver alloy			Silver alloy	Gold alloy		Silver alloy	Gold alloy		
	Gap	1 mm			0.5 mm			0.5 mm			
Ratings (resistive load)		21 A at 250 VAC 0.6 A at 125 VDC 0.3 A at 250 VDC	16 A at 250 VAC 0.6 A at 125 VDC 0.3 A at 250 VDC	15 A at 250 VAC 0.6 A at 125 VDC 0.3 A at 250 VDC	5 A at 250 VAC	0.1 A at 125 VAC 0.1 A at 30 VDC	Switching voltage 100 V DC max. Switching current 0.25 ADC max. Contact capacity 10 WDC max.	5 A at 125 VAC 5 A at 250 VAC	0.5 A at 125 VAC 0.5 A at 30 VDC		
Inrush current	NC	50 A max.	40 A max.	36 A max.	15 A max.	---	---	15 A max.	0.5 A max.		
	NO							7 A max.			
Minimum applicable load (reference values)		160 mA at 5 VDC			160 mA at 5 VDC	1 mA at 5 VDC	0.1 mA at 5 VDC	160 mA at 5 VDC	1 mA at 5 VDC		
Contact resistance (initial values)		15 mΩ max.			30 mΩ max.	50 mΩ max.	150 mΩ max.	20 mΩ max.	100 mΩ max.		
Operating force (see note1)		3.92 N max.	1.96 N max. 3.92 N max.	0.98 N max.	0.25 N max. 0.49 N max.		0.25 N max. 0.49 N max. 0.98 N max.	0.5 mN·m max. 0.75 mN·m max. 1.00 mN·m max.			
Durability (see note1)	Mechanical	50,000,000 operations min.			50,000,000 operations min.	10,000,000 operations min.	10,000,000 operations min.	10,000,000 operations min.			
	Electrical	100,000 operations min.		1,000,000 operations min.	500,000 operations min.	1,000,000 operations min.	3,000,000 operations min.	100,000 operations min.			
Degree of protection		IEC IP40			IEC IP40		IEC IP40	IEC IP40			
Ambient operating temperature		-25 to +80°C	-25 to +105°C (Heat resistive: -25 to +150°C)		-25 to +105°C		-10 to +60°C	-25 to +80°C			
Ambient operating humidity		85%RH max. (for +5 to +35°C)			85%RH max. (for +5 to +35°C)		85%RH max. (for +5 to +35°C)	85%RH max. (for +5 to +35°C)			
Actuators		   			   		   	 Rotary action			
Terminals		Quick-connect (#250)	Solder Quick-connect (#187) Quick-connect (#250)		Solder Quick-connect (#187)		Solder	Quick-connect (#205)			
Approved standard		See "Information on Standards certification/conformity" (available on the website) for information on the availability of certified standards.									

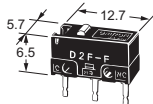
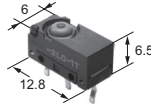


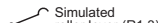
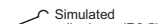




Note 1: For pin plunger type

## Basic Switches

Classification		Subminiature types (S-size)			
Model		D3M	SS		
Appearance					
			SS-10	SS-5	SS-01
Features		·Quick-connect terminals simplify wiring.	·S-size standard basic switch offers high reliability and easy-to-use.		
Contact form		SPST-NC / SPST-NO	SPDT / SPST-NC / SPST-NO		
Contact	Specification	Crossbar	Rivet		Crossbar
	Material	Gold alloy	Silver alloy	Silver	Gold alloy
	Gap	0.5 mm	0.5 mm		0.25 mm
Ratings (resistive load)		0.1A at 30 VDC	10.1 A at 250 VAC	5 A at 125 VAC 3 A at 250 VAC	0.1 A at 125 VAC 0.1 A at 30 VDC
Inrush current	NC	1A max.	20A max.		1 A max.
	NO		15 A max.	10 A max.	
Minimum applicable load (reference values)		1mA at 5 VDC	160mA at 5 VDC		1 mA at 5 VDC
Contact resistance (initial values)		100 mΩ max.	OF 1.47 N : 30 mΩ max.	OF 1.47 N : 30 mΩ max. OF 0.49 N : 50 mΩ max.	OF 1.47 N : 50 mΩ max. OF 0.49 N : 100 mΩ max. OF 0.25 N : 150 mΩ max.
Operating force (see note1)		1.50 N max.	1.47 N max.	0.49 N max. 1.47 N max.	0.25 N max. 0.49 N max. 1.47 N max.
Durability (see note1)	Mechanical	500,000 operations min.	10,000,000 operations min.	30,000,000 operations min.	
	Electrical	200,000 operations min.	50,000 operations min.	200,000 operations min.	
Degree of protection		IEC IP40	IEC IP40		
Ambient operating temperature		-25 to +85°C	-25 to +85°C		
Ambient operating humidity		80%RH max. (for +5 to +35°C)	85%RH max. (for +5 to +35°C)		
Actuators		 Pin plunger  Hinge lever  Simulated roller lever  Hinge roller lever	 Pin plunger  Hinge lever  Simulated roller lever  Hinge roller lever		
Terminals		The terminals connect to JST's XA Connector	Solder Quick-connect (#110) PCB		
Approved standard		See "Information on Standards certification/conformity" (available on the website) for information on the availability of certified standards.			

Note 1: For pin plunger type

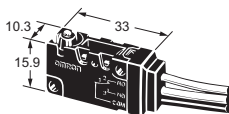
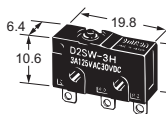
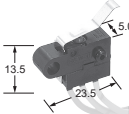
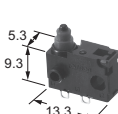














## Basic Switches

Classification		Ultra subminiature types (J-size)					
Model		D2F			D2FD		
Appearance							
		D2F-5	D2F	D2F-01	D2FD-2	D2FD-01	
Features		·Ultra subminiature basic switches with wide variations, which meet a wide range of applications.			·Dust proof basic switch conforms to IP6X.		
Contact form		SPDT			SPDT		
Contact	Specification	Crossbar			Crossbar		
	Material	Silver alloy		Gold alloy	Silver alloy		Gold alloy
	Gap	0.25 mm			0.25 mm		
Ratings (resistive load)		3 A at 125 VAC 5 A at 250 VAC 2 A at 30 VDC	1 A at 125 VAC 0.5 A at 30 VDC	0.1 A at 30 VDC	2 A at 125 VAC 2 A at 30 VDC	0.1 A at 125 VAC 0.1 A at 30 VDC	
Inrush current	NC	---	---	---	---	---	
	NO						
Minimum applicable load (reference values)		100 mA at 5 VDC		1 mA at 5 VDC	100 mA at 5 VDC		1 mA at 5 VDC
Contact resistance (initial values)		30 mΩ max.	50 mΩ max.	100 mΩ max.	30 mΩ max.		100 mΩ max.
Operating force (see note1)		1.47 N max.	0.74 N max.	0.74 N max. 1.47 N max.	2.0 N max.		
Durability (see note1)	Mechanical	1,000,000 operations min.			300,000 operations min.		
	Electrical	30,000 operations min.		100,000 operations min.	30,000 operations min.		100,000 operations min.
Degree of protection		IEC IP40			IEC IP6X		
Ambient operating temperature		-40 to +85°C			-20 to +70°C		
Ambient operating humidity		85%RH max. (for +5 to +35°C)			85%RH max. (for +5 to +35°C)		
Actuators		 Pin plunger  Hinge lever  Simulated roller lever (R1.3)  Simulated roller lever (R2.5)  Hinge roller lever			 Pin plunger  Hinge lever  Simulated roller lever		
Terminals		PCB (straight, right angle, left angle, self-clinching) Solder			Self-clinching PCB Solder		
Approved standard		See “Information on Standards certification/conformity” (available on the website) for information on the availability of certified standards.					

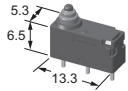

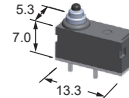







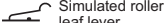




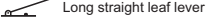

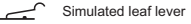


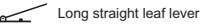





Note 1: For pin plunger type



## Basic Switches (Sealed types)



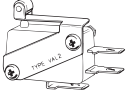
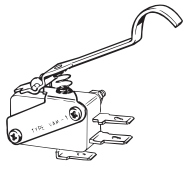
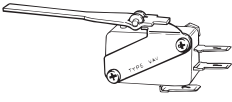
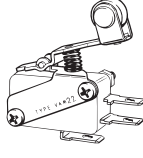
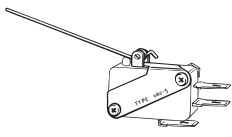
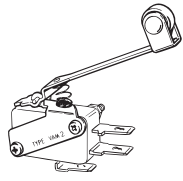
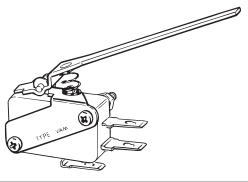
Classification		Sealed types							
Model		D2VW		D2SW		D2FW-G		D2QW	
Appearance									
		D2VW-5	D2VW-01	D2SW-3	D2SW-01	D2FW-G2	D2FW-G0		
Features		•High capacity and robustness •Sealed switch capable of handling inrush currents •Miniature internal structure is succeeded		•Sealed switch capable of handling inrush currents •Subminiature internal structure is succeeded		•M4 mounting sealed basic switch •High dustproof performance, even in severe environmental conditions		•Longest stroke of all seal switches, easy to use even without a lever •High contact reliability due to slide structure	
Contact form		SPDT / SPST-NC / SPST-NO		SPDT / SPST-NC / SPST-NO		SPDT / SPST-NC / SPST-NO		SPST-NC / SPST-NO	
Contact	Specification	Rivet	Crossbar	Rivet	Crossbar	Crossbar		Slide	
	Material	Silver alloy	Gold alloy	Silver	Gold alloy	Silver alloy	Gold alloy	Gold plated / Silver plated	
	Gap	0.5 mm		0.5 mm		0.25 mm		---	
Ratings (resistive load)		5 A at 125 VAC 5 A at 250 VAC 5 A at 30 VDC	0.1 A at 125 VAC 0.1 A at 30 VDC	3 A at 125 VAC 2 A at 250 VAC 3 A at 30 VDC	0.1 A at 125 VAC 0.1 A at 30 VDC	1 A at 30 VDC	0.1 A at 30 VDC	0.1 A at 30 VDC 10 mA at 14 VDC	
Inrush current	NC	15 A max.	---	20 A max.	1 A max.	---		---	
	NO			10 A max.					
Minimum applicable load (reference values)		160 mA at 5 VDC	1 mA at 5 VDC	160 mA at 5 VDC	1 mA at 5 VDC	100 mA at 5 VDC	1 mA at 5 VDC	1 mA at 5 VDC	
Contact resistance (initial values)		Terminal model : 50 mΩ max. Molded lead wire 300 mm : 100 mΩ max. Molded lead wire 1,000 mm : 200 mΩ max.		Terminal model: 30 mΩ max. Molded lead wire : 50 mΩ max.	Terminal model : 50 mΩ max. Molded lead wire : 70 mΩ max.	100 mΩ max.	150 mΩ max.	Terminal model : 100 mΩ max. Molded lead wire : 150 mΩ max.	
Operating force (see note1)		1.96 N max.		1.77 N max.		Leaf lever : 2.45 N Long leaf lever : 2.94 N		1.5 N max.	
Durability (see note1)	Mechanical	10,000,000 operations min.		5,000,000 operations min.		300,000 operations min.		500,000 operations min.	
	Electrical	100,000 operations min.	1,000,000 operations min.	200,000 operations min.		30,000 operations min.	100,000 operations min.	0.1 A at 30 VDC : 200,000 operations min. 10 mA at 14 VDC : 500,000 operations min.	
Degree of protection		IEC IP67 (Excluding the terminals on terminal model)		IEC IP67 (Excluding the terminals on terminal model)		IEC IP67 (Excluding the terminals on terminal model)		IEC IP67 (Excluding the terminals on terminal model)	
Ambient operating temperature		-40 to +85°C		-40 to +85°C		-40 to +85°C		-40 to +85°C	
Ambient operating humidity		95%RH max. (for +5 to +35°C)		95%RH max. (for +5 to +35°C)		95%RH max. (for +5 to +35°C)		95%RH max. (for +5 to +35°C)	
Actuators		 Pin plunger  Hinge lever  Simulated roller lever  Hinge roller lever		 Pin plunger  Hinge lever  Simulated roller lever  Hinge roller lever		 Leaf lever  Long leaf lever		 Pin plunger  Simulated leaf lever  Leaf lever  Bent leaf lever	
Terminals		Molded lead wire Solder		Molded lead wire Solder Quick-connect (#110) PCB		Molded lead wire		Molded lead wire Solder PCB	
Approved standard		See “Information on Standards certification/conformity” (available on the website) for information on the availability of certified standards.							

Note 1: For pin plunger type

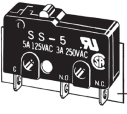
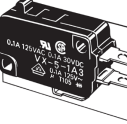
Classification		Sealed types				
Model		D2HW	D2AW	D2AW-R	D2GW	D2EW
Appearance						
Features		<ul style="list-style-type: none"> <li>•Small sealed snap-action switch with a very long stroke for reliable ON/OFF action.</li> <li>•Various mounting, lever, and terminal specifications</li> <li>•Wide rating range from 1 mA to 2 A / 5 V to 42 V</li> </ul>	<ul style="list-style-type: none"> <li>•High contact reliability due to slide structure</li> <li>•Various mounting, lever, and terminal specifications</li> <li>•High insulation resistance</li> </ul>	<ul style="list-style-type: none"> <li>•Sealed Ultra Subminiature Switch with Integrated Resistors. Four states (ON/OFF, short circuit, open circuit) are output.</li> <li>•“Normal/abnormal operation” can be determined by the switch alone</li> </ul>	<ul style="list-style-type: none"> <li>•The industry's smallest class</li> <li>•Leaf lever specification also lined up</li> <li>•High contact reliability due to slide structure</li> </ul>	<ul style="list-style-type: none"> <li>•Supports multi-angle operation without using a lever, increased flexibility in customer unit design</li> <li>•The industry's smallest class</li> <li>•Contributes to energy saving (Minimum applicable load 50 <math>\mu</math>A)</li> </ul>
Contact form		SPDT / SPST-NC / SPST-NO	SPST-NC / SPST-NO	Series circuit / Parallel circuit	SPST-NC / SPST-NO	SPST-NC / SPST-NO
Contact	Specification	Crossbar	Slide	Slide	Slide	Slide
	Material	Gold alloy	Silver plated	Silver plated	Silver plated	Gold plated
	Gap	0.5 mm	---	---	---	---
Ratings (resistive load)		0.1 A at 125 VAC 2 A at 12 VDC 1 A at 24 VDC 0.5 A at 42 VDC	0.1 A at 12 VDC	5 to 14 VDC 0.25 W / 0.5 W	10 mA at 13.5 VDC	0.1 A at 12 VDC
Inrush current	NC	---	---	---	---	---
	NO	---	---	---	---	---
Minimum applicable load (reference values)		1 mA at 5 VDC	1 mA 5 VDC	---	1 mA at 5 VDC	50 $\mu$ A at 5 VDC
Contact resistance (initial values)		Terminal model: 100 m $\Omega$ max. Molded lead wire : 150 m $\Omega$ max.	Terminal model: 100 m $\Omega$ max. Molded lead wire : 150 m $\Omega$ max.	---	Terminal model : 500 m $\Omega$ max. Molded lead wire : 700 m $\Omega$ max.	500 m $\Omega$ max.
Operating force (see note1)		0.75 N max.	1.0 N max.	1.0 N max.	1.2 N max.	1.2 N max.
Durability (see note1)	Mechanical	1,000,000 operations min.	200,000 operations min.	200,000 operations min.	200,000 operations min.	300,000 operations min.
	Electrical	100,000 operations min.	200,000 operations min.	200,000 operations min.	200,000 operations min.	300,000 operations min.
Degree of protection		IEC IP67 (Excluding the terminals on terminal model)	IEC IP67 (Excluding the terminals on terminal model)	IEC IP67 (Excluding the terminals on terminal model)	IEC IP67 (Excluding the terminals on terminal model)	IEC IP67 (Excluding the terminals on terminal model)
Ambient operating temperature		-40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +85°C
Ambient operating humidity		95%RH max. (for +5 to +35°C)	95%RH max. (for +5 to +35°C)	95%RH max. (for +5 to +35°C)	95%RH max. (for +5 to +35°C)	95%RH max. (for +5 to +35°C)
Actuators		 Pin plunger  Hinge lever  Simulated roller hinge lever  Hinge roller lever  Leaf lever  Simulated roller leaf lever  Long hinge lever  Straight leaf lever  Long leaf lever	 Pin plunger  Long straight leaf lever  Leaf lever  Simulated leaf lever  Long leaf lever	 Pin plunger  Long straight leaf lever  Leaf lever	 Pin plunger  Hinge lever  Leaf lever	 Pin plunger
Terminals		Molded lead wire Solder PCB (straight, right angle, left angle)	Molded lead wire Solder PCB	Molded lead wire PCB Press-fit terminals (Right angled, Left angled)	Molded lead wire Solder PCB Press-fit terminals (Right angled, Left angled)	Molded lead wire PCB Solder Press-fit terminals (Fork-shaped)
Approved standard		See “Information on Standards certification/conformity” (available on the website) for information on the availability of certified standards.				

Note 1: For pin plunger type

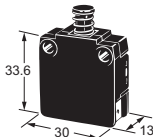

## Actuator (sold separately)

Model	Appearance	Applicable switches	Model	Appearance	Applicable switches
Leaf spring		V D2VW pin plunger type with OF over 1.96N	Reverse Hinge Lever		V D3V-01 VX D2MV D2RV
VAL			VAM21		
Roller Leaf Spring		V D2VW pin plunger type with OF over 1.96N	Reverse Hinge Modified Lever		V D3V-01 VX D2MV D2RV
VAL2 VAL02			VAM-1		
Long Hinge Lever		V D2RV D2VW pin plunger type with OF over 0.98N	Reverse Roller Modified Lever		V D3V-01 VX D2MV D2RV
VAV			VAM22		
Hinge Wire Lever		V D3V-01 VX D2MV D2RV D2VW pin plunger type with OF over 0.25N	Reverse Long Hinge Roller Lever		V D3V-01 VX D2MV D2RV
VAV-5			VAM2		
Reverse Long Hinge Lever		V D3V-01 VX D2MV D2RV			
VAM					

## Separator (sold separately)

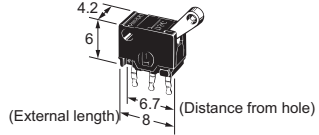

Model	Thickness (mm)	Appearance	Applicable switches
SEPARATOR FOR SS T0.13	0.13	 Separator	SS SS-P D2S D2SW D2SW-P
SEPARATOR FOR V T0.13	0.13	 Separator	V D3V-01 VX D2RV D2VW

## Door Interlock Power Switches

Classification		Door interlock power switches	
Model		D2D	
Appearance			
		Standard	Pull-on lock
Features		·Door interlock power switch with contact gap,3 mm.	
Contact form		DPST-NO/DPST-NO+SPST-NC/SPST-NC/SPST-NO/ SPST-NO+SPST-NC	
Contact	Specification	Rivet	
	Material	Silver	
	Gap	3 mm min.	1 mm
Ratings (resistive load)		16 A at 250 VAC	10 A at 250 VAC
Inrush current	NC	30 A max.	24 A max.
	NO		
Minimum applicable load (reference values)		160 mA at 5 VDC	
Contact resistance (initial values)		50 mΩ max.	
Operating force (see note1)		5.88 N max. 2.94 N max.	19.61 N max. 1.96 N max.
Durability (see note1)	Mechanical	10,000,000 operations min.	
	Electrical	100,000 operations min.	
Degree of protection		IEC IP40	
Ambient operating temperature		-25 to +85°C	
Ambient operating humidity		85%RH max. (for +5 to +35°C)	
Actuators		 Pin plunger	
Terminals		Quick-connect (#250)	
Approved standard		See "Information on Standards certification/conformity" (available on the website) for information on the availability of certified standards.	

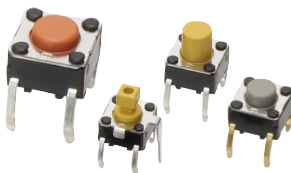

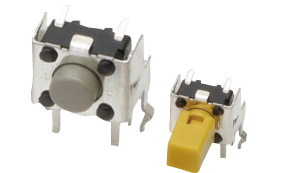
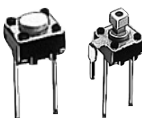
Note 1: For pin plunger type

## Miniature Detection Switches

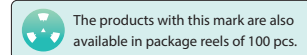
Classification		Ultra-miniature detection switches	
Model		D3C	
Appearance			
		Standard	Low operating force
Features		·Detection switch with lever action.	
Contact form		SPDT	
Contact	Specification	Slide	
	Material	Silver plated	
Ratings (resistive load)		0.1 A at 30 VDC	
Minimum applicable load (reference values)		1 mA at 5 VDC	
Contact resistance (initial values)		50 mΩ max.	
Operating force (see note1)		1.28 N max.	0.39 N max.
Durability (see note1)	Mechanical	---	
	Electrical	50,000 operations min	
Degree of protection		IEC IP00	
Ambient operating temperature		-20 to +80°C	
Ambient operating humidity		85%RH max. (for +5 to +35°C)	
Actuators		 Rotary lever	
Terminals		PCB	
Approved standard		See "Information on Standards certification/conformity" (available on the website) for information on the availability of certified standards.	



## Tactile Switches (Unsealed)

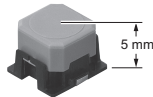
Sealed / unsealed		Unsealed															
Mounting		Through-hole mounting															
Model		B3F															
Size		6×6 mm				12×12 mm				6×6 mm							
Appearance																	
Series		B3F-1000		B3F-1000-G		B3F-4000		B3F-5000		B3F-5001		B3F-3000		B3F-3000-G		B3F-6000	
		Standard		Micro load		Standard		Long durability		High reliability		Side-operate		Side-operate, Micro load		Radial taping	
Features		·Standard tactile switch with through-hole terminals Wide range of models, including 6×6 mm,12×12 mm, side-operated, radial taping packaged, high-force and gold plated types.															
Contact materials		Silver plated			Gold plated	Silver plated		Silver plated	Gold plated	Silver plated			Gold plated	Silver plated			
Ratings (resistive load)		1 to 50 mA, 3 to 24 VDC			100 μA to 50 mA, 3 to 24 VDC		1 to 50 mA, 3 to 24 VDC				1 to 50 mA, 3 to 4 VDC			100 μA to 50 mA, 3 to 24 VDC		1 to 50 mA, 3 to 24 VDC	
Minimum applicable load (reference values)		10 μA at 1 VDC															
Contact resistance (initial values)		100 mΩ max.															
Operating force		0.98 N	1.47 N	2.55 N	1.76 N	1.27 N	2.55 N	1.27 N	1.27 N	0.98 N	1.47 N	2.55 N	1.76 N	0.98 N	1.47 N		
Durability		1,000,000 operations min.	300,000 operations min.	100,000 operations min.	300,000 operations min.	3,000,000 operations min.	1,000,000 operations min.	10,000,000 operations min.	10,000,000 operations min.	1,000,000 operations min.	300,000 operations min.	100,000 operations min.	300,000 operations min.	1,000,000 operations min.	300,000 operations min.		
Plunger	Flat type (height:4.3 mm)	○	○	○	○	○	○	○	○	○	○	○	○	---	○	○	
	Flat type (height:5.0 mm)	○	○	○	○	---	---	---	---	○	○	○	○	○	○	○	
	Flat type (height:9.5 mm)	○	○	○	○	---	---	---	---	---	---	---	---	---	---	---	
	Projected type (height:7.3 mm)	○	○	○	○	○	○	○	○	○	○	○	○	---	○	○	
	Others	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Degree of protection		IEC IP00															
Washing		Not possible															
Ambient operating temperature		-25 to +70℃															
Ambient operating humidity		35 to 85%RH (for +5 to +35℃)															
Packaging		Bag								Bag				Radial taping			
Key top (sold separately)	4×4 mm	○				---				○				○			
	φ6 mm	○				---				○				○			
	D-shaped	○				---				○				○			
	9×9 mm	---				○				---				---			
	12×12 mm	---				○				---				---			
	φ9.5 mm	---				○				---				---			

## Tactile Switches (Unsealed)







Sealed / unsealed		Unsealed						
Mounting		Surface mount						
Model		B3FS				B3U		
Size		6×6 mm		12×12 mm		3×2.5 mm		
Appearance								
Series		B3FS-1000		B3FS-4000		B3U-1000	B3U-3000	
						Top-operated	Side-operated	
Features		•Standard tactile switch with surface mounting terminals.				•Surface mounted ideal for high-density mounting.		
Contact materials		Silver plated				Silver plated		
Ratings (resistive load)		1 to 50 mA, 3 to 24 VDC				1 to 50 mA, 3 to 12 VDC		
Minimum applicable load (reference values)		10 μA at 1 VDC				10 μA at 1 VDC		
Contact resistance (initial values)		100 mΩ max.				100 mΩ max.		
Operating force		0.98 N	1.47 N	2.55 N	1.47 N	2.55 N	1.5 N	1.59 N
Durability		1,000,000 operations min.	300,000 operations min.	100,000 operations min.	3,000,000 operations min.	1,000,000 operations min.	200,000 operations min.	100,000 operations min.
Plunger	Flat type (height:3.1 mm)	○	○	○	---	---	---	---
	Flat type (height:4.3 mm)	○	○	○	○	○	---	---
	Projected type (height:7.3 mm)	○	○	---	○	○	---	---
	Key top integrated type (height:4.9 mm)	---	○	○	---	---	---	---
	Key top integrated type (height:7.0 mm)	---	○	---	○	---	---	---
	Others	---	---	---	---	---	○	○
Degree of protection		IEC IP00 equivalent				IEC IP40		
Washing		Not possible				Not possible		
Ambient operating temperature		-25 to +70°C				-25 to +70°C		
Ambient operating humidity		35 to 85%RH (for +5 to +35°C)				35 to 85%RH (for +5 to +35°C)		
Packaging		Bag/Embossed taping		Embossed taping		Embossed taping		
Key top (sold separately)	4×4 mm	○		---		---		
	φ6 mm	○		---		---		
	D-shaped	○		---		---		
	9×9 mm	---		○		---		
	12×12 mm	---		○		---		
	φ9.5 mm	---		○		---		

## Tactile Switches (Unsealed)

Sealed / unsealed	Unsealed						
Mounting	Surface mount						
Model	B3AL						
Size	6×6.9 mm						
Appearance							
Series	B3AL-1000	B3AL-1001	B3AL-1002	B3AL-1003	B3AL-1006	B3AL-1005	B3AL-1004
Features	•Long-stroke tactile switch with high operating force and high durability.						
Contact materials	Silver plated						
Ratings (resistive load)	1 to 50 mA, 5 to 16 VDC						
Minimum applicable load (reference values)	---						
Contact resistance (initial values)	100 mΩ max.						
Operating force	1.96 N	2.45 N	3.0 N	3.5 N	4.0 N	4.5 N	5.0 N
Durability	1,000,000 operations min.						500,000 operations min.
Plunger	Others	Long-stroke	○	○	○	○	○
		Middle-stroke	---	---	○	---	---
Degree of protection	IEC IP00						
Washing	Not possible						
Ambient operating temperature	-40 to +90°C						
Ambient operating humidity	35 to 85%RH (for +5 to +35°C)						
Packaging	Bag/Embossed taping						

## Tactile Switches (Sealed)

The products with this mark are also available in package reels of 100 pcs.

Sealed / unsealed		Sealed							
Mounting		Through-hole mounting				Surface mount			
Model		B3W				B3S		B3SN	
Size		6×6 mm		12×12 mm		6×6 mm		6×6 mm	
Appearance									
Series		B3W-1000		B3W-4000		B3S-1000			
Features		•Standard sealed tactile switch with through-hole terminals. Sealed construction for highly reliable operation in locations exposed to dust or water.				•Surface mounting tactile switch with sealed structure.		•Surface mounting thin type tactile switch with sealed structure.	
Contact materials		Silver plated				Silver plated		Silver plated	Gold plated
Ratings (resistive load)		1 to 50 mA, 3 to 24 VDC				1 to 50 mA, 3 to 24 VDC		1 to 50 mA, 3 to 24 VDC	
Minimum applicable load (reference values)		10 μA at 1 VDC				10 μA at 1 VDC		10 μA at 1 VDC	
Contact resistance (initial values)		100 mΩ max.				100 mΩ max.		100 mΩ max.	
Operating force		1.57 N max.	2.26 N max.	1.96 N max.	3.43 N max.	1.57 N max.	2.26 N max.	1.57 N	1.76 N
Durability		1,000,000 operations min.	300,000 operations min.	3,000,000 operations min.	1,000,000 operations min.	500,000 operations min.	300,000 operations min.	100,000 operations min.	
Plunger	Flat type (height:3.1 mm)	---	---	---	---	---	---	○	○
	Flat type (height:3.4 mm)	---	---	---	---	---	---	---	---
	Flat type (height:4.3 mm)	○	○	○	○	○	○	---	---
	Flat type (height:5.0 mm)	○	○	---	---	---	---	---	---
	Projected type (height:7.3 mm)	○	○	○	○	---	---	---	---
	Others	---	---	---	---	---	---	---	---
Degree of protection		IEC IP67				IEC IP67 equivalent		IEC IP67	
Washing		Possible				Possible		Possible	
Ambient operating temperature		-25 to +70°C				-25 to+ 70°C		-25 to +70°C	
Ambient operating humidity		35 to 85%RH (for +5 to +35°C)				35 to 85%RH (for +5 to +35°C)		35 to 85%RH (for +5 to +35°C)	
Packaging		Bag				Bag/Embossed taping		Bag/Embossed taping	Embossed taping
Key top (sold separately)	4×4 mm	○		---		---		---	
	φ6 mm	○		---		---		---	
	D-shaped	○		---		---		---	
	9×9 mm	---		○		---		---	
	12×12 mm	---		○		---		---	
	φ9.5 mm	---		○		---		---	



## Tactile Switches (Sealed)



The products with this mark are also available in package reels of 100 pcs.






Sealed / unsealed		Sealed	
Mounting		Surface mount	
Model		B3SL	B3SE
Size		6×6 mm	6×6 mm
Appearance			
Features		• Surface mounting tactile switch with sealed structure and middle stroke.	• 6×6 mm surface mounting tactile switch with high durability, ultra thin, and sealed structure.
Contact materials		Silver plated	Silver plated
Ratings (resistive load)		1 to 50 mA, 3 to 12 VDC	1 to 50 mA at 3 to 12 VDC
Minimum applicable load (reference values)		10 μA at 1 VDC	10 μA at 1 VDC
Contact resistance (initial values)		100 mΩ max.	100 mΩ max.
Operating force		1.96 N      3.5 N	1.96 N
Durability		100,000 operations min.	1,000,000 operations min.
Plunger	Flat type (height: 3.1 mm)	---	---
	Flat type (height: 3.4 mm)	○	○
	Flat type (height: 4.3 mm)	---	---
	Flat type (height: 5.1 mm)	○	○
	Projected type (height: 7.3 mm)	---	---
	Others	---	○ height : 2 mm
Degree of protection		IEC IP67	IEC IP67
Washing		Not possible	Not possible
Ambient operating temperature		-25 to +90°C	-25 to + 70°C
Ambient operating humidity		35 to 85%RH (for +5 to +35°C)	35 to 85%RH (for +5 to +35°C)
Packaging		Embossed taping	Embossed taping

Sealed / unsealed		Sealed	
Mounting		Through-hole mounting	
Model		B3WN	
Size		8×8 mm	
Appearance			
Features		• Top class industrial sealing performance with double seals Compatible with radial taping	
Contact materials		Silver plated	
Ratings (resistive load)		1 to 50 mA, 3 to 12 VDC	
Minimum applicable load (reference values)		10 μA at 1 VDC	
Contact resistance (initial values)		100 mΩ max.	
Operating force		1.96 N	2.55 N
Durability		100,000 operations min.	
Plunger	Flat type (height: 4.3 mm)	---	---
	Flat type (height: 5.0 mm)	---	---
	Flat type (height: 9.5 mm)	---	---
	Projected type (height: 7.3 mm)	---	---
	Others	○ height : 13 mm	○ height : 13 mm
	Others	○ height : 13 mm	○ height : 13 mm
Degree of protection		IEC IP67	
Washing		Possible	
Ambient operating temperature		-25 to + 80°C	
Ambient operating humidity		35 to 85%RH (for +5 to +35°C)	
Packaging		Radial taping	

## Tactile Switch Key Top






Classifications		Key top					
Model		B32					
Applicable type		6×6 mm switches B3F-1000 / -1000-G / -3000 / -3000-G / -6000 / B3W-1000 / B3FS-1000			12×12 mm switches B3F-4000 / -5000 / -5001 / B3W-4000 / B3FS-4000		
Color							
Size		4×4 mm	φ6 mm	D type	9×9 mm	12×12 mm	φ9.5 mm
Ivory		○	○	○	○	○	○
Black		○	○	○	○	○	○
Orange		○	---	---	○	○	○
Yellow		○	---	---	○	○	○
Blue		○	---	---	○	○	---
Green		○	---	---	○	○	---
White		○	---	---	○	○	---
Red		○	---	---	○	○	---

## Basic Switches for Operation (Long service life)

Classification		Ultra subminiature types (J-size)				
Model		D2LS				
Appearance						
		D2LS-10 D2LS-11	D2LS-21	D2LS-11(10M)	D2LS-21(10M)	D2LS-21(20M)
Features		・Surface mount type ・High load capacity and long life				
Contact form		SPDT				
Contact	Specification	Crossbar				
	Material	Silver				
	Gap	0.4 mm				
Ratings (resistive load)		1 mA at 6 VDC				
Inrush current	NC	---				
	NO					
Minimum applicable load (reference values)		1 mA at 5 VDC				
Contact resistance (initial values)		100 mΩ max.				
Operating force *1		1.2±0.4 N	0.6±0.2 N	1.2±0.4 N	0.6±0.2 N	0.6±0.2 N
Durability *1		5,000,000 operations min. (300 times/minute)		10,000,000 operations min. (300 times/minute)		20,000,000 operations min. (300 times/minute)
Degree of protection		IEC IP40				
Ambient operating temperature		-25 to +85°C				
Ambient operating humidity		85%RH max. (for +5 to +35°C)				
Actuators		---				
Terminals		---				

Note: The above values are initial values.

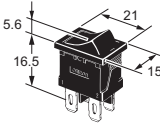
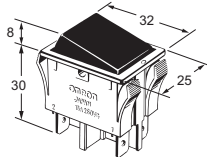


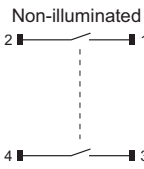
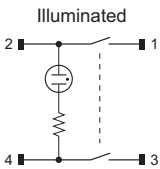
\*1. Contact us for test conditions.

Classification		Ultra subminiature types (J-size)				
Model		D2FC				D2FP
Size		6×6 mm				
Appearance						
		D2FC-7	D2FC-F-7N(20M)	D2FC-F-7N(60M)	D2FC-F-7N(100M)	D2FP-FN2
Features		High reliability and long life				High-speed response High reliability and long life
Contact form		1a				
Contact	Output type	Contact type				Optical type
	Specification	Crossbar				---
	Material	Silver				---
	Gap	0.4 mm				---
Ratings (resistive load)		1 mA at 6 VDC				---
Inrush current	NC	---				---
	NO	---				---
Minimum applicable load (reference values)		1 mA at 5 VDC				---
Contact resistance (initial values)		100 mΩ max.				---
Operating force <sup>*1</sup>		1.0±0.23 N	0.59±0.15 N			0.59±0.15 N
Durability <sup>*1</sup>		5,000,000 operations min.	20,000,000 operations min.	60,000,000 operations min.	100,000,000 operations min.	70,000,000 operations min.
Degree of protection		IEC IP40				
Ambient operating temperature <sup>*2</sup>		-25 to +65℃				+5 to +40℃
Ambient operating humidity <sup>*2</sup>		60%RH max.				
Actuators		Pin plunger				
Terminals		PCB				

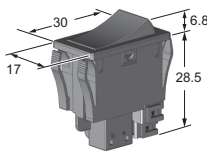












Note: The above values are initial values.

\*1. Contact us for test conditions. \*2. With no condensation or icing

## Rocker Switches









































































Classifications		Miniature Rocker Switches	Illuminated Rocker Switches
Model		A8L	A8A
Appearance			
Features		•Miniature rocker switch for high capacity switching.	
Contact form		SPST	DPST
			
		DPST	
			
Case color		Black	White / Black / Gray
Cap color		Black	Non-illuminated: White/Red/Green/Blue/Yellow/Black Illuminated: Red/Green/Orange
Marking		With / Without	With / Without
Ratings (resistive load)		10 A at 250 VAC 10 A at 125 VAC	16 A at 250 VAC 16 A at 125 VAC
Inrush current		100 A max.	100 A max.
Operating force		SPST : 2.16 N DPST : 3.92 N	19.6 N max.
Durability	Mechanical	50,000 operations min.	40,000 operations min.
	Electrical	10,000 operations min.	20,000 operations min.
Protection of Degree		IEC IP40	IEC IP40
Terminals		Solder / PCB / Quick-connect (#187)	Quick-connect (#250)
Ambient operating temperature		-20 to +55°C	-20 to +50°C
Ambient operating humidity		45 to 85%RH (for +5 to +35°C)	45 to 85%RH (for +5 to +35°C)
Approved standard	UL	●	●
	CSA	●	●
	EN	●	●
Optional accessories (sold separately)		---	A8A-RUBBER CAP

## Rocker Switches




Classifications		Rocker Switches with reset function			
Model		A8GS			
Appearance					
Features		*Small size rocker switch with reset function.			
Contact form		SPST		DPST	
		With reset function	Without reset function	With reset function	Without reset function
		<div>Micro load contact terminal×1</div> <div></div> <div>a — b</div> <div>Power contact terminal×1</div> <div></div> <div>1 — 2</div>	<div>Micro load contact terminal×1</div> <div></div> <div>a — b</div> <div>Power contact terminal×1</div> <div></div> <div>1 — 2</div>	<div>Micro load contact terminal×1</div> <div>Power contact terminal×1</div> <div></div> <div>1 — 2</div> <div></div> <div>a — b</div> <div>Power contact terminal×2</div> <div></div> <div>1 — 2</div> <div></div> <div>3 — 4</div>	<div>Micro load contact terminal×1</div> <div>Power contact terminal×1</div> <div></div> <div>1 — 2</div> <div></div> <div>a — b</div> <div>Power contact terminal×2</div> <div></div> <div>1 — 2</div> <div></div> <div>3 — 4</div>
Case color		Black			
Cap color		Black			
Marking		With / Without			
Ratings (resistive load)		Power contact : 10 A at 250 VAC / 16 A at 125 VAC Micro load contact : 0.2 A at 5 VDC Reset coil : 455 mA at 5 VDC / 300 mA at 3.3 VDC			
Inrush current		117 A max. (Power contact)			
Operating force		Micro load contact SPST : 1.0 N / Power contact SPST : 1.5 N / DPST 2.0 N			
Durability	Mechanical	Switch operation : 30,000 operations min. Coil operation : 10,000 operations min.			
	Electrical	Switch operation : 10,000 operations min.			
Protection of Degree		IEC IP40			
Terminals		Micro load contact terminal : CT connector Power contact terminal : Quick-connect terminals(#187), Solder terminals			
Ambient operating temperature		-10 to +55°C			
Ambient operating humidity		90%RH max. (for +5 to +35°C)			
Approved standard		See “Information on Standards certification/conformity” (available on the website) for information on the availability of certified standards.			






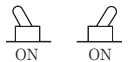

## Pushbutton Switches






Panel cutout		Round (12dia.)		Round (8dia.)		Round (16dia.)	Square
Model		A3C	M2C	A3D	M2D	A16□-P	A3A
Appearance							
Features		•Pushbutton switch (illuminated/non-illuminated) with cylindrical 12dia. body.	•Indicator with cylindrical 12dia. body.	•Pushbutton switch (illuminated) with cylindrical 8dia. body.	•Indicator with cylindrical 8dia. body.	•Pushbutton switch (illuminated/non-illuminated) with cylindrical 16dia. body and PCB terminals.	•Lighted pushbutton switch with square body.
Body		20 mm	20 mm	18 mm	18 mm	21 mm	12.5 mm
Shape of pushbutton		Rectangular Square Round   	Rectangular Square Round   	Rectangular Square Round   	Rectangular Square Round   	Rectangular Square Round   	Square Round  
Color of pushbutton	Illuminated	LED lamp    	LED lamp    	LED lamp    	LED lamp    	LED lamp      	LED lamp      
	Non-Illuminated	     	---	---	---	      	       
Contact form		SPDT	---	SPDT	---	DPDT / SPDT	SPDT / SPST-NO
Action		Momentary Alternate	---	Momentary Alternate	---	Momentary Alternate	Momentary Alternate
Operating force		2.45 N max.	---	2.45 N max.	---	P40 : 4.41 N max. IP66 : 4.91 N max.	2.45 N max.
Ratings (resistive load)	Standard load	0.5 A at 250 VAC 1 A at 125 VAC 1 A at 30 VDC	---	---	---	3 A at 250 VAC 5 A at 125 VAC 3 A at 30 VDC	SPST-NO : 2 A at 250 VAC 6 A at 125 VAC 4 A at 30 VDC SPDT : 3 A at 125 VAC 2 A at 30 VDC
	Micro load	0.1 A at 125 VAC 0.1 A at 30 VDC	---	0.1 A at 30 VDC	---	---	---
Minimum applicable load		1 mA at 5 VDC	---	1 mA at 5 VDC	---	1 mA at 5 VDC	1 mA at 5 VDC
Durability		100,000 operations min.	---	100,000 operations min.	---	100,000 operations min.	50,000 operations min.
Degree of protection		IEC IP40	IEC IP40	IEC IP40	IEC IP40	IEC IP40/66	IEC IP40
Terminals		Solder	Solder	Solder	Solder	PCB	Solder PCB
Ambient operating temperature		-10 to +55°C	-10 to +55°C	-10 to +55°C	-10 to +55°C	-10 to +55°C	-10 to +55°C
Ambient operating humidity		35 to 85%RH	35 to 85%RH	35 to 85%RH	35 to 85%RH	35 to 85%RH	35 to 85%RH
Approved standard		See "Information on Standards certification/conformity" (available on the website) for information on the availability of certified standards.					

## Pushbutton Hand Switches

Model		C2U	C2UW	
Appearance				
Series			C2UW-D	C2UW-L
Features		·Double action hand switch.	·Double action hand switch with a sub switch.	·Wireless ·Double action hand switch with a sub switch.
Body		105 mm	167.3 mm	
Shape of pushbutton		Round	Round	
Color of pushbutton	Illuminated	---	---	
	Non-Illuminated	Non-illuminated	Non-illuminated	
Contact form		DPST	Main switch : DPST Sub switch : SPST-NO	
Action		Momentary	Momentary	
Operating force		1st stage : 4.9 N 2nd stage : 15.69 N	Main switch 1st stage : 4.7 N 2nd stage : 12.6 N Sub switch : 4 N max.	
Ratings (resistive load)	Standard load	2 A at 30 VDC 2 A at 125 VAC	Main switch : 0.1 A at 30 VDC Sub switch : 1 to 50 mA, 3 to 24 VDC	---
	Micro load	---	---	---
Minimum applicable load		---	Main switch : 1 mA at 5 VDC Sub switch : 10 µA at 1 VDC	---
Durability		200,000 operations min.	Main switch : 400,000 operations min. (Load condition : 10 mA at 14 VDC) Sub switch : 400,000 operations min.	Main switch : 400,000 operations min. Sub switch : 400,000 operations min.
Degree of protection		IEC IP00	IEC IP00	IEC IP00
Terminals		Lead wire	Lead wire	Holder Connector
Ambient operating temperature		-10 to +40°C	0 to +40°C	
Ambient operating humidity		75%RH max. (for +5 to +35°C)	90%RH max. (for +5 to +35°C)	
Approved standard		See "Information on Standards certification/conformity" (available on the website) for information on the availability of certified standards.		



## Toggle/Pushbutton Switches



Name	Toggle					
Model	A9TS					
Terminals	DIP Terminal		Right Angle Terminal		Vertical Mount Terminal	
Appearance						
Features	·Ultra-compact push switch of board insertion type, washable					
Contact material	Gold plated					
Contact form	SPDT	DPDT	SPDT	DPDT	SPDT	DPDT
Switching Functions	A9TS11-0011	A9TS21-0011	A9TS11-0012	A9TS21-0012	A9TS11-0013	A9TS21-0013
						
	A9TS12-0011	A9TS22-0011	A9TS12-0012	A9TS22-0012	A9TS12-0013	A9TS22-0013
						
Operating force	4.9 N max.					
Ratings (resistive load)	14 mA at 28 VAC/DC 0.1 μA (minimum current) at 20 mVAC/DC					
Contact resistance (initial values)	80 mΩ max.					
Durability	Mechanical	50,000 operations min.				
	Electrical					
Degree of protection	IEC IP64					
Washing	Possible					
Ambient operating temperature	-20 to +80°C					
Ambient operating humidity	45 to 85%RH (for +5 to +35°C)					

Name		Pushbutton				
Model		A9PS				
Terminals		DIP Terminal		Right Angle Terminal		Vertical Mount Terminal
Appearance						
Features		·Ultra-compact push switch of board insertion type, washable				
Contact material		Gold plated				
Contact form		SPST	DPST	SPST	DPST	SPST
Switching Functions		A9PS16-0011	A9PS26-0011	A9PS16-0012	A9PS26-0012	A9PS16-0013
		 OFF  ON				
Action		Momentary				
Operating force		4.9 N max.				
Ratings (resistive load)		14 mA at 28 VAC/DC 0.1 μA (minimum current) at 20 mAC/DC				
Contact resistance (initial values)		80 mΩ max.				
Durability	Mechanical	50,000 operations min.				
	Electrical					
Degree of protection		IEC IP64				
Washing		Possible				
Ambient operating temperature		-20 to +80°C				
Ambient operating humidity		45 to 85%RH (for +5 to +35°C)				

# Slide DIP Switches

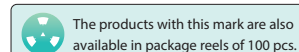
The products with this mark are also available in package reels of 100 pcs.



Mounting		Surface mounting					
Model		A6H					
Terminal pitch		1.27 mm (Half pitch)					
Appearance							
Features		•Slide DIP switch with ultra low profile,1.55 mm and half pitch.					
Actuator types		Flat actuator			Flat actuator with seal tape		
Packaging		Tube	Embossed taping standard reel (4,000 pcs)	Embossed taping small reel (500 pcs)	Tube	Embossed taping standard reel (4,000 pcs)	Embossed taping small reel (500 pcs)
Contact material		Gold plated					
Ratings (resistive load)		25 mA at 24 VDC / 10 μA (minimum current) at 3.5 VDC					
Contact resistance (initial values)		200 mΩ max.					
No. of poles	1	---	---	---	---	---	---
	2	A6H-2101	A6H-2101-P	A6H-2101-PM	A6H-2102	A6H-2102-P	A6H-2102-PM
	3	---	---	---	---	---	---
	4	A6H-4101	A6H-4101-P	A6H-4101-PM	A6H-4102	A6H-4102-P	A6H-4102-PM
	5	---	---	---	---	---	---
	6	A6H-6101	A6H-6101-P	A6H-6101-PM	A6H-6102	A6H-6102-P	A6H-6102-PM
	7	---	---	---	---	---	---
	8	A6H-8101	A6H-8101-P	A6H-8101-PM	A6H-8102	A6H-8102-P	A6H-8102-PM
	9	---	---	---	---	---	---
	10	A6H-0101	A6H-0101-P	A6H-0101-PM	A6H-0102	A6H-0102-P	A6H-0102-PM
Durability		1,000 operations min.					
Washing		Not possible			Possible		
Degree of protection		IEC IP40					
Ambient operating temperature		-20 to +70°C					
Ambient operating humidity		35 to 95%RH (for +5 to +35°C)					



Mounting		Surface mounting					
Model		A6HF			A6S-H		
Terminal pitch		1.27 mm (Half pitch)			2.54 mm (Standard pitch)		
Appearance							
Features		•Slide DIP switches with a height of 2.3 mm and half pitch.			•Standard surface mounting slide DIP switches. Washable, with seal tape available.		
Actuator types		Flat actuator with seal tape			Flat actuator		
Packaging		Tube	Embossed taping standard reel (2,000 pcs)	Embossed taping small reel (500 pcs)	Tube	Embossed taping standard reel (900 pcs)	Embossed taping small reel (400 pcs)
Contact material		Gold plated			Gold plated		
Ratings (resistive load)		25 mA at 24 VDC / 10 $\mu$ A (minimum current) at 3.5 VDC			25 mA at 24 VDC / 10 $\mu$ A (minimum current) at 3.5 VDC		
Contact resistance (initial values)		200 m $\Omega$ max.			200 m $\Omega$ max.		
No. of poles	1	---	---	---	A6S-1101-H	A6S-1101-PH	---
	2	A6HF-2102	A6HF-2102-P	A6HF-2102-PM	A6S-2101-H	A6S-2101-PH	---
	3	---	---	---	A6S-3101-H	A6S-3101-PH	A6S-3101-PMH
	4	A6HF-4102	A6HF-4102-P	A6HF-4102-PM	A6S-4101-H	A6S-4101-PH	A6S-4101-PMH
	5	---	---	---	A6S-5101-H	A6S-5101-PH	---
	6	A6HF-6102	A6HF-6102-P	A6HF-6102-PM	A6S-6101-H	A6S-6101-PH	A6S-6101-PMH
	7	---	---	---	A6S-7101-H	A6S-7101-PH	---
	8	A6HF-8102	A6HF-8102-P	A6HF-8102-PM	A6S-8101-H	A6S-8101-PH	A6S-8101-PMH
	9	---	---	---	A6S-9101-H	---	---
	10	A6HF-0102	A6HF-0102-P	A6HF-0102-PM	A6S-0101-H	---	A6S-0101-PMH
Durability		1,000 operations min.			1,000 operations min.		
Washing		Possible			Not possible		
Degree of protection		IEC IP40			IEC IP40		
Ambient operating temperature		-30 to +85°C			-20 to +70°C		
Ambient operating humidity		35 to 95%RH (for +5 to +35°C)			35 to 95%RH (for +5 to +35°C)		

Note: Default actuator setting is OFF for Slide DIP Switches and Piano DIP Switches.

Be sure to read the Safety precautions common to all DIP Switches for correct use.





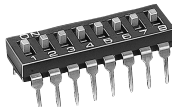


Mounting		Surface mounting					
Model		A6S-H					
Terminal pitch		2.54 mm (Standard pitch)					
Appearance							
Features		*Standard surface mounting slide DIP switches. Washable, with seal tape available.					
Actuator types		Flat actuator with seal tape			Raised actuator		
Packaging		Tube	Embossed taping standard reel (800/900 pcs)	Embossed taping small reel (400 pcs)	Tube	Embossed taping standard reel (700/800 pcs)	Embossed taping small reel (400 pcs)
Contact material		Gold plated					
Ratings (resistive load)		25 mA at 24 VDC / 10 μA (minimum current) at 3.5 VDC					
Contact resistance (initial values)		200 mΩ max.					
No. of poles	1	A6S-1102-H	A6S-1102-PH	---	A6S-1104-H	A6S-1104-PH	---
	2	A6S-2102-H	A6S-2102-PH	A6S-2102-PMH	A6S-2104-H	A6S-2104-PH	---
	3	A6S-3102-H	A6S-3102-PH	---	A6S-3104-H	A6S-3104-PH	---
	4	A6S-4102-H	A6S-4102-PH	A6S-4102-PMH	A6S-4104-H	A6S-4104-PH	A6S-4104-PMH
	5	A6S-5102-H	A6S-5102-PH	---	A6S-5104-H	A6S-5104-PH	---
	6	A6S-6102-H	A6S-6102-PH	A6S-6102-PMH	A6S-6104-H	A6S-6104-PH	A6S-6104-PMH
	7	A6S-7102-H	A6S-7102-PH	---	A6S-7104-H	A6S-7104-PH	---
	8	A6S-8102-H	A6S-8102-PH	A6S-8102-PMH	A6S-8104-H	A6S-8104-PH	A6S-8104-PMH
	9	A6S-9102-H	A6S-9102-PH	---	A6S-9104-H	A6S-9104-PH	---
	10	A6S-0102-H	A6S-0102-PH	A6S-0102-PMH	A6S-0104-H	A6S-0104-PH	A6S-0104-PMH
Durability		1,000 operations min.					
Washing		Possible			Not possible		
Degree of protection		IEC IP40					
Ambient operating temperature		-20 to +70°C					
Ambient operating humidity		35 to 95%RH (for +5 to +35°C)					

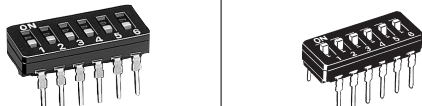

Mounting		Surface mounting				
Model		A6SN				
Terminal pitch		2.54 mm (Standard pitch)				
Appearance						
Features		*Surface mounting slide DIP switch with high contact reliability. Washable, even without seal tape available.				
Actuator types		Flat actuator			Raised actuator	
Packaging		Tube	Embossed taping standard reel (750 pcs)		Tube	Embossed taping standard reel (700 pcs)
			Without seal tape	With seal tape		
Contact material		Gold plated				
Ratings (resistive load)		25 mA at 24 VDC / 10 μA (minimum current) at 3.5 VDC				
Contact resistance (initial values)		200 mΩ max.				
No. of poles	1	A6SN-1101	---	---	A6SN-1104	---
	2	A6SN-2101	A6SN-2101-P	A6SN-2102-P	A6SN-2104	A6SN-2104-P
	3	A6SN-3101	A6SN-3101-P	A6SN-3102-P	A6SN-3104	A6SN-3104-P
	4	A6SN-4101	A6SN-4101-P	A6SN-4102-P	A6SN-4104	A6SN-4104-P
	5	A6SN-5101	A6SN-5101-P	A6SN-5102-P	A6SN-5104	A6SN-5104-P
	6	A6SN-6101	A6SN-6101-P	A6SN-6102-P	A6SN-6104	A6SN-6104-P
	7	A6SN-7101	A6SN-7101-P	A6SN-7102-P	A6SN-7104	A6SN-7104-P
	8	A6SN-8101	A6SN-8101-P	A6SN-8102-P	A6SN-8104	A6SN-8104-P
	9	A6SN-9101	A6SN-9101-P	A6SN-9102-P	A6SN-9104	A6SN-9104-P
	10	A6SN-0101	A6SN-0101-P	A6SN-0102-P	A6SN-0104	A6SN-0104-P
Durability		1,000 operations min.				
Washing		Possible				
Degree of protection		IEC IP40				
Ambient operating temperature		-30 to +85°C				
Ambient operating humidity		35 to 95%RH (for +5 to +35°C)				

Note: Default actuator setting is OFF for Slide DIP Switches and Piano DIP Switches.

Be sure to read the Safety precautions common to all DIP Switches for correct use.

## Slide DIP Switches

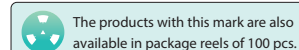
Mounting		Through-hole mounting					
Model		A6T			A6TN		
Terminal pitch		2.54 mm (Standard pitch)			2.54 mm (Standard pitch)		
Appearance							
Features		•Standard through-hole mounting slide DIP switch. Washable, with seal tape available.			•Through-hole mounting slide DIP switch with high contact reliability.Washable, even without seal tape available.		
Actuator types		Flat actuator		Flat actuator with seal tape	Raised actuator		
Packaging		Tube			Tube		
Contact material		Gold plated			Gold plated		
Ratings (resistive load)		25 mA at 24 VDC / 10 μA (minimum current) at 3.5 VDC			25 mA at 24 VDC / 10 μA (minimum current) at 3.5 VDC		
Contact resistance (initial values)		200 mΩ max.			200 mΩ max.		
No. of poles	1	A6T-1101	A6T-1102	A6T-1104	A6TN-1101	A6TN-1104	
	2	A6T-2101	A6T-2102	A6T-2104	A6TN-2101	A6TN-2104	
	3	A6T-3101	A6T-3102	A6T-3104	A6TN-3101	A6TN-3104	
	4	A6T-4101	A6T-4102	A6T-4104	A6TN-4101	A6TN-4104	
	5	A6T-5101	A6T-5102	A6T-5104	A6TN-5101	A6TN-5104	
	6	A6T-6101	A6T-6102	A6T-6104	A6TN-6101	A6TN-6104	
	7	A6T-7101	A6T-7102	A6T-7104	A6TN-7101	A6TN-7104	
	8	A6T-8101	A6T-8102	A6T-8104	A6TN-8101	A6TN-8104	
	9	A6T-9101	A6T-9102	A6T-9104	A6TN-9101	A6TN-9104	
	10	A6T-0101	A6T-0102	A6T-0104	A6TN-0101	A6TN-0104	
Durability		1,000 operations min.			1,000 operations min.		
Washing		Not possible		Possible	Not possible		
Degree of protection		IEC IP40			IEC IP40		
Ambient operating temperature		-20 to +70°C			-30 to +85°C		
Ambient operating humidity		35 to 95%RH (for +5 to +35°C)			35 to 95%RH (for +5 to +35°C)		




Mounting	Through-hole mounting			
Model	A6D		A6E-N	
Terminal pitch	2.54 mm (Standard pitch)		2.54 mm (Standard pitch)	
Appearance				
Features	•Through-hole mounting slide DIP switch with high environmental resistance by sealed construction.		•Box type through-hole mounting slide DIP switches.	
Actuator types	Flat actuator	Raised actuator	Flat actuator	Raised actuator
Packaging	Tube		Tube	
Contact material	Gold plated		Gold plated	
Ratings (resistive load)	30 mA at 30 VDC / 10 $\mu$ A (minimum current) at 3.5 VDC		25 mA at 24 VDC / 10 $\mu$ A (minimum current) at 3.5 VDC	
Contact resistance (initial values)	100 m $\Omega$ max.		200 m $\Omega$ max.	
No. of poles	1	---	---	---
	2	A6D-2100	A6D-2103	A6E-2101-N
	3	A6D-3100	A6D-3103	A6E-3101-N
	4	A6D-4100	A6D-4103	A6E-4101-N
	5	A6D-5100	A6D-5103	A6E-5101-N
	6	A6D-6100	A6D-6103	A6E-6101-N
	7	A6D-7100	A6D-7103	A6E-7101-N
	8	A6D-8100	A6D-8103	A6E-8101-N
	9	A6D-9100	A6D-9103	A6E-9101-N
	10	A6D-0100	A6D-0103	A6E-0101-N
Durability	2,000 operations min.		1,000 operations min.	
Washing	Possible		Not possible	
Degree of protection	Internally sealed (IEC IP64 equivalency)		IEC IP40	
Ambient operating temperature	-20 to +70°C		-20 to +70°C	
Ambient operating humidity	35 to 95%RH (for +5 to +35°C)		35 to 95%RH (for +5 to +35°C)	


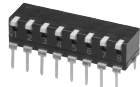
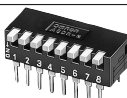


Note: Default actuator setting is OFF for Slide DIP Switches and Piano DIP Switches.

Be sure to read the Safety precautions common to all DIP Switches for correct use.

## Piano DIP Switches



Mounting		Surface mounting						
Model		A6HR			A6SR			
Terminal pitch		1.27 mm (Half pitch)			2.54 mm (Standard pitch)			
Appearance								
Features		•Miniature piano DIP switch with half pitch terminals.			•Piano DIP switch with surface mounting terminals.			
Actuator types		Long actuator			Short actuator		Long actuator	
Packaging		Tube	Embossed taping standard reel (1,000 pcs)	Embossed taping small reel (500 pcs)	Tube	Embossed taping standard reel	Tube	Embossed taping standard reel
Contact material		Gold plated			Gold plated			
Ratings (resistive load)		25 mA at 24 VDC / 10 µA (minimum current) at 3.5 VDC			25 mA at 24 VDC / 10 µA (minimum current) at 3.5 VDC			
Contact resistance (initial values)		200 mΩ max.			200 mΩ max.			
No. of poles	1	---	---	---	---	---	---	---
	2	A6HR-2104	A6HR-2104-P	A6HR-2104-PM	A6SR-2101	A6SR-2101-P	A6SR-2104	A6SR-2104-P
	3	---	---	---	---	---	---	---
	4	A6HR-4104	A6HR-4104-P	A6HR-4104-PM	A6SR-4101	A6SR-4101-P	A6SR-4104	A6SR-4104-P
	5	---	---	---	---	---	---	---
	6	A6HR-6104	A6HR-6104-P	A6HR-6104-PM	A6SR-6101	A6SR-6101-P	A6SR-6104	A6SR-6104-P
	7	---	---	---	---	---	---	---
	8	A6HR-8104	A6HR-8104-P	A6HR-8104-PM	A6SR-8101	A6SR-8101-P	A6SR-8104	A6SR-8104-P
	9	---	---	---	---	---	---	---
		A6HR-0104	A6HR-0104-P	A6HR-0104-PM	A6SR-0101	A6SR-0101-P	A6SR-0104	A6SR-0104-P
Durability		1,000 operations min.			1,000 operations min.			
Washing		Not possible			Not possible			
Degree of protection		IEC IP40			IEC IP40			
Ambient operating temperature		-30 to +85°C			-20 to +70°C			
Ambient operating humidity		35 to 95%RH (for +5 to +35°C)			35 to 95%RH (for +5 to +35°C)			




Mounting		Through-hole mounting					
Model		A6TR		A6DR	A6FR		
Terminal pitch		2.54 mm (Standard pitch)		2.54 mm (Standard pitch)	2.54 mm (Standard pitch)		
Appearance							
Features		•Low profile piano DIP switch with through-hole terminals.		•Through-hole mounting piano DIP switch with high environmental resistance by sealed construction.	•Box type through-hole mounting piano DIP switch.		
Actuator types		Short actuator	Long actuator	Long actuator	Short actuator	Long actuator	
Packaging		Tube		Box	Tube		
Contact material		Gold plated		Gold plated	Gold plated		
Ratings (resistive load)		25 mA at 24 VDC / 10 $\mu$ A (minimum current) at 3.5 VDC		30 mA at 30 VDC / 10 $\mu$ A (minimum current) at 3.5 VDC	25 mA at 24 VDC / 10 $\mu$ A (minimum current) at 3.5 VDC		
Contact resistance (initial values)		200 m $\Omega$ max.		100 m $\Omega$ max.	200 m $\Omega$ max.		
No. of poles	1	---	---	---	---	---	
	2	A6TR-2101	A6TR-2104	A6DR-2100	A6FR-2101	A6FR-2104	
	3	---	---	---	A6FR-3101	A6FR-3104	
	4	A6TR-4101	A6TR-4104	A6DR-4100	A6FR-4101	A6FR-4104	
	5	---	---	---	A6FR-5101	A6FR-5104	
	6	A6TR-6101	A6TR-6104	A6DR-6100	A6FR-6101	A6FR-6104	
	7	---	---	---	A6FR-7101	A6FR-7104	
	8	A6TR-8101	A6TR-8104	A6DR-8100	A6FR-8101	A6FR-8104	
	9	---	---	---	A6FR-9101	A6FR-9104	
	10	A6TR-0101	A6TR-0104	A6DR-0100	A6FR-0101	A6FR-0104	
Durability		1,000 operations min.		2,000 operations min.	1,000 operations min.		
Washing		Not possible		Possible	Not possible		
Degree of protection		IEC IP40		Internally sealed (IEC IP64 equivalency)	IEC IP40		
Ambient operating temperature		-20 to +70°C		-20 to +70°C	-20 to +70°C		
Ambient operating humidity		35 to 95%RH (for +5 to +35°C)		35 to 95%RH (for +5 to +35°C)	35 to 95%RH (for +5 to +35°C)		




Note: Default actuator setting is OFF for Slide DIP Switches and Piano DIP Switches.

Be sure to read the Safety precautions common to all DIP Switches for correct use.

# Rotary DIP Switches

The products with this mark are also available in package reels of 100 pcs.

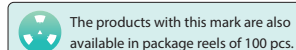
Mounting					Surface mounting			
Model					A6KS			
Size					7.2×7.2 mm			
Appearance					<div></div>			
Features					•Top actuated miniature (7.2×7.2 mm) rotary DIP switch with surface mounting terminals.			
Packaging					Tube		Embossed taping standard reel	
Contact materials					Gold plated			
Ratings (resistive load)					25 mA at 24 VDC / 10 μA (minimum current) at 3.5 VDC			
Contact resistance (initial values)					200 mΩ max.			
Position					10	16	10	16
Types	Flat	Real code	Top actuated	4×1 Terminals	---	---	---	---
				3×3 Terminals	A6KS-102RF	A6KS-162RF	A6KS-102RF-P	A6KS-162RF-P
				5×2 Terminals	A6KS-104RF	A6KS-164RF	A6KS-104RF-P	A6KS-164RF-P
			Side actuated	4×1 Terminals	---	---	---	---
				3×3 Terminals	---	---	---	---
				5×2 Terminals	---	---	---	---
	Extended actuator	Real code	Top actuated	4×1 Terminals	---	---	---	---
				3×3 Terminals	A6KS-102RS	A6KS-162RS	A6KS-102RS-P	A6KS-162RS-P
				5×2 Terminals	A6KS-104RS	A6KS-164RS	A6KS-104RS-P	A6KS-164RS-P
			Side actuated	4×1 Terminals	---	---	---	---
				3×3 Terminals	---	---	---	---
				5×2 Terminals	---	---	---	---
Durability					20,000 steps min.			
Washing					Not possible			
Degree of protection					IEC IP60			
Ambient operating temperature					-30 to +80°C			
Ambient operating humidity					35 to 95%RH (for +5 to +35°C)			



Mounting					Surface mounting			
Model					A6KSV			
Size					7.2×7.2 mm			
Appearance					<div></div>			
Features					•Side actuated miniature (7.2×7.2 mm) rotary DIP switch with surface mounting terminals.			
Packaging					Tube		Embossed taping standard reel	
Contact materials					Gold plated			
Ratings (resistive load)					25 mA at 24 VDC / 10 µA (minimum current) at 3.5 VDC			
Contact resistance (initial values)					200 mΩ max.			
Position					10	16	10	16
Types	Flat	Real code	Top actuated	4×1 Terminals	---	---	---	---
				3×3 Terminals	---	---	---	---
				5×2 Terminals	---	---	---	---
			Side actuated	4×1 Terminals	---	---	---	---
				3×3 Terminals	---	---	---	---
				5×2 Terminals	A6KSV-104RF	A6KSV-164RF	A6KSV-104RF-P	A6KSV-164RF-P
	Extended actuator	Real code	Top actuated	4×1 Terminals	---	---	---	---
				3×3 Terminals	---	---	---	---
				5×2 Terminals	---	---	---	---
			Side actuated	4×1 Terminals	---	---	---	---
				3×3 Terminals	---	---	---	---
				5×2 Terminals	A6KSV-104RS	A6KSV-164RS	A6KSV-104RS-P	A6KSV-164RS-P
Durability					20,000 steps min.			
Washing					Not possible			
Degree of protection					IEC IP60			
Ambient operating temperature					-30 to +80°C			
Ambient operating humidity					35 to 95%RH (for +5 to +35°C)			



Note: Default rotor setting is 0 for Rotary DIP Switches.

Be sure to read the Safety precautions common to all DIP Switches for correct use.









Mounting					Surface mounting			
Model					A6RS			
Size					9.8×9.9 mm			
Appearance					<div></div>			
Features					•Surface mounting rotary DIP switch.			
Packaging					Tube		Embossed taping standard reel	
Contact materials					Gold plated			
Ratings (resistive load)					25 mA at 24 VDC / 10 µA (minimum current) at 3.5 VDC			
Contact resistance (initial values)					200 mΩ max.			
Position					10	16	10	16
Types	Flat	Real code	Top actuated	4×1 Terminals	A6RS-101RF	A6RS-161RF	A6RS-101RF-P	A6RS-161RF-P
				3×3 Terminals	A6RS-102RF	A6RS-162RF	A6RS-102RF-P	A6RS-162RF-P
				5×2 Terminals	---	---	---	---
			Side actuated	4×1 Terminals	---	---	---	---
				3×3 Terminals	---	---	---	---
				5×2 Terminals	---	---	---	---
	Extended actuator	Real code	Top actuated	4×1 Terminals	A6RS-101RS	A6RS-161RS	A6RS-101RS-P	A6RS-161RS-P
				3×3 Terminals	A6RS-102RS	A6RS-162RS	A6RS-102RS-P	A6RS-162RS-P
				5×2 Terminals	---	---	---	---
			Side actuated	4×1 Terminals	---	---	---	---
				3×3 Terminals	---	---	---	---
				5×2 Terminals	---	---	---	---
Durability					5,000 steps min.			
Washing					Not possible			
Degree of protection					IEC IP60			
Ambient operating temperature					-25 to +80°C			
Ambient operating humidity					35 to 95%RH (for +5 to +35°C)			

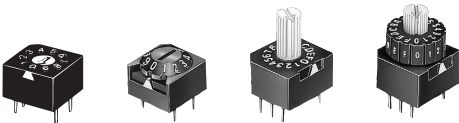
Mounting					Through-hole mounting			
Model					A6K		A6KV	
Size					7.2×7.2 mm			
Appearance								
Features					•Miniature (7.2×7.2 mm) rotary DIP switch with through-hole terminals.			
Packaging					Tube			
Contact materials					Gold plated			
Ratings (resistive load)					25 mA at 24 VDC / 10 μA (minimum current) at 3.5 VDC			
Contact resistance (initial values)					200 mΩ max.			
Position					10	16	10	16
Types	Flat	Real code	Top actuated	4×1 Terminals	---	---	---	---
				3×3 Terminals	A6K-102RF	A6K-162RF	---	---
				5×2 Terminals	A6K-104RF	A6K-164RF	---	---
			Side actuated	4×1 Terminals	---	---	---	---
				3×3 Terminals	---	---	A6KV-102RF	A6KV-162RF
				5×2 Terminals	---	---	A6KV-104RF	A6KV-164RF
	Extended actuator	Real code	Top actuated	4×1 Terminals	---	---	---	---
				3×3 Terminals	A6K-102RS	A6K-162RS	---	---
				5×2 Terminals	A6K-104RS	A6K-164RS	---	---
			Side actuated	4×1 Terminals	---	---	---	---
				3×3 Terminals	---	---	A6KV-102RS	A6KV-162RS
				5×2 Terminals	---	---	A6KV-104RS	A6KV-164RS
Durability					20,000 steps min.			
Washing					Not possible			
Degree of protection					IEC IP60			
Ambient operating temperature					-30 to +80°C			
Ambient operating humidity					35 to 95%RH (for +5 to +35°C)			

Note: Default rotor setting is 0 for Rotary DIP Switches.

Be sure to read the Safety precautions common to all DIP Switches for correct use.



## Rotary DIP Switches

Mounting					Through-hole mounting			
Model					A6R		A6RV	
Size					9.8×9.9 mm			
Appearance					 		 	
Features					•Through-hole mounting rotary DIP switch.			
Packaging					Tube			
Contact materials					Gold plated			
Ratings (resistive load)					25 mA at 24 VDC / 10 μA (minimum current) at 3.5 VDC			
Contact resistance (initial values)					200 mΩ max.			
Position					10	16	10	16
Types	Flat	Real code	Top actuated	4×1 Terminals	A6R-101RF	A6R-161RF	---	---
				3×3 Terminals	A6R-102RF	A6R-162RF	---	---
				5×2 Terminals	---	---	---	---
			Side actuated	4×1 Terminals	---	---	A6RV-101RF	A6RV-161RF
				3×3 Terminals	---	---	A6RV-102RF	A6RV-162RF
				5×2 Terminals	---	---	---	---
	Extended actuator	Real code	Top actuated	4×1 Terminals	A6R-101RS	A6R-161RS	---	---
				3×3 Terminals	A6R-102RS	A6R-162RS	---	---
				5×2 Terminals	---	---	---	---
			Side actuated	4×1 Terminals	---	---	A6RV-101RS	A6RV-161RS
				3×3 Terminals	---	---	A6RV-102RS	A6RV-162RS
				5×2 Terminals	---	---	---	---
Durability					5,000 steps min.			
Washing					Not possible			
Degree of protection					IEC IP60			
Ambient operating temperature					-25 to +80°C			
Ambient operating humidity					35 to 95%RH (for +5 to +35°C)			

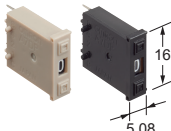
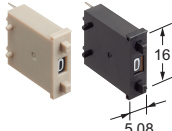
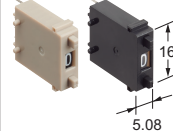
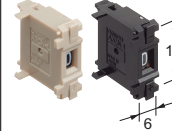
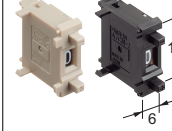
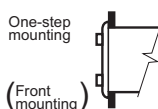
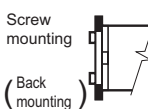
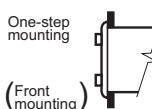
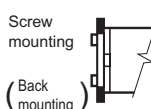


Mounting			Through-hole mounting	
Model			A6A	
Size			10×10 mm	
Appearance				
Features			•Sealed rotary DIP switch with various selections for code setting.	
Packaging			Box	
Contact materials			Gold plated	
Ratings (resistive load)			0.1 A at 28 VDC / 1 mA (minimum current) at 5 VDC	
Contact resistance (initial values)			200 mΩ max.	
Position			10	16
Types	Cone	Real code	A6A-10R	A6A-16R
		Complementary code	A6A-10C	A6A-16C
	Flat	Real code	A6A-10RF	A6A-16RF
		Complementary code	A6A-10CF	A6A-16CF
	Extended actuator	Real code	A6A-10RS	A6A-16RS
		Complementary code	A6A-10CS	A6A-16CS
	Wheel	Real code	A6A-10RW	A6A-16RW
		Complementary code	A6A-10CW	A6A-16CW
Durability			2,000 steps min.	
Washing			Possible	
Degree of protection			Internally sealed (IEC IP64 equivalency)	
Ambient operating temperature			-10 to +70°C	
Ambient operating humidity			45 to 85%RH (for +5 to +35°C)	

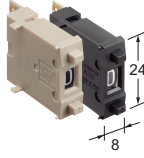
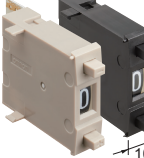

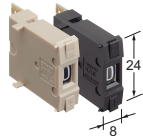
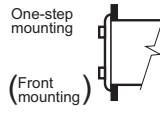
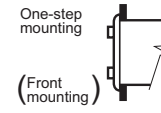




Note: Default rotor setting is 0 for Rotary DIP Switches.

Be sure to read the Safety precautions common to all DIP Switches for correct use.

Mounting				Through-hole mounting			
Model				A6C		A6CV	
Size				9×6.6 mm		9×7.1 mm	
Appearance							
Features				·Internally sealed DIL-IC top actuated type DIP switch.		·Internally sealed DIL-IC side actuated type rotary DIP switch.	
Packaging				Tube		Box	
Contact materials				Gold plated		Gold plated	
Ratings (resistive load)				0.1 A at 30 VDC / 10 μA (minimum current) at 3.5 VDC		0.1 A at 30 VDC / 10 μA (minimum current) at 3.5 VDC	
Contact resistance (initial values)				200 mΩ max.		200 mΩ max.	
Position				10	16	10	16
Types	Flat	Real code	Top actuated	A6C-10R(N)	A6C-16R(N)	---	---
			Side actuated	---	---	A6CV-10R	A6CV-16R
Durability				2,000 steps min.		2,000 steps min.	
Washing				Possible		Possible	
Degree of protection				Internally sealed (IEC IP64 equivalency)		Internally sealed (IEC IP64 equivalency)	
Ambient operating temperature				-20 to +70°C		-20 to +70°C	
Ambient operating humidity				35 to 95%RH (for +5 to +35°C)		35 to 95%RH (for +5 to +35°C)	

## Thumbwheel Switches Line up

Operation Method		Push Operation										
Model		A7DP-2		A7D-2		A7D-1		A7CN-L2		A7CN-2		A7CN-1
Shape (mm)	Push-operated Switches	 (Character height: 3.2 mm)		 (Character height: 3.2 mm)		 (Character height: 3.2 mm)		Locking Switches		 (Character height: 3.4 mm)		 (Character height: 3.4 mm)
Features		・3.3 to 30 VDC ・Saves space ・Misoperation prevention function enabled ・Can be manufactured with stoppers						・3.3 to 28V DC ・Saves space ・Misoperation prevention function enabled				
Installation method												
Terminals												
Dust resistance		Yes (IP50)						Yes (IP50)				
Case color		Light gray	Black	Light gray	Black	Light gray	Black	Light gray	Black	Light gray	Black	Black
Switch units according to output codes	03 (decimal code)	---		---		---		---		---		---
	06 (binary code decimal)	A7DP-206	A7DP-206-1	A7D-206	A7D-206-1	A7D-106	A7D-106-1	A7CN-L206	A7CN-L206-1	A7CN-206	A7CN-206-1	A7CN-106-1
	07 (binary coded decimal, with component-adding provision)	---		---		---		---		---		---
	19 (decimal code, with component-adding provision)	---		---		---		---		---		---
	54 (binary coded hexadecimal)	---		---		---		---		---		---
	55 (binary coded decimal, with component-adding provision)	---		---		---		---		---		---
End caps		A7D-2M	A7D-2M-1	A7D-2M	A7D-2M-1	A7D-1M	A7D-1M-1	A7CN-2M	A7CN-2M-1	A7CN-2M	A7CN-2M-1	A7CN-1M-1
Spare unit		A7D-2PA	A7D-2PA-1	A7D-2PA	A7D-2PA-1	A7D-1PA	A7D-1PA-1	A7CN-2PA	A7CN-2PA-1	A7CN-2PA	A7CN-2PA-1	A7CN-1PA-1
Connector	Solder terminals	---						---				
	PCB terminals	---						---				

Operation Method		Push Operation										Rotary Operation
Model		A7BL		A7BS		A7BS-20□-S		A7PS		A7PH		A7MD
Shape (mm)		Locking Switches				Switches with External Stoppers				Long-life Switches		
				(Character heights: Decimal: 4.8 mm, Hexadecimal: 3.2 mm)		(Character height: 4.8 mm)		(Character heights: Decimal: 6.8 mm, Hexadecimal: 4.0 mm)		(Character heights: Decimal: 6.8 mm, Hexadecimal: 4.0 mm)		(Character height: 2.8 mm)
Features		・50 VAC or 3.3 to 28 VDC ・With misoperation prevention function ・Can be manufactured with stoppers		・50 VAC or 3.3 to 28 VDC ・Can be manufactured with stoppers		・50 VAC or 3.3 to 28 VDC ・Stopper can be changed as desired		・50 VAC or 3.3 to 28 VDC ・Easier to see and operate ・Can be manufactured with stoppers		・125 VAC or 3.3 to 28 VDC ・Easier to see and operate ・High mechanical durability 2,000,000 operations min. ・Can be manufactured with stoppers		・3.3 to 28 VDC ・Rotary Operation
Installation method												
Terminals												
Dust resistance		Yes (IP50)						Yes (IP50)				Yes (simple dust resistance)
Case color		Light gray	Black	Light gray	Black	Light gray	Black	Light gray	Black	Light gray	Black	Black
Switch units according to output codes	03 (decimal code)	---		---		---		A7PS-203	A7PS-203-1	A7PH-203	A7PH-203-1	---
	06 (binary code decimal)	A7BL-206	A7BL-206-1	A7BS-206	A7BS-206-1	A7BS-206-S	A7BS-206-S-1	A7PS-206	A7PS-206-1	A7PH-206	A7PH-206-1	A7MD-106-P-09
	07 (binary coded decimal, with component-adding provision)	A7BL-207	A7BL-207-1	A7BS-207	A7BS-207-1	A7BS-207-S	A7BS-207-S-1	A7PS-207	A7PS-207-1	A7PH-207	A7PH-207-1	---
	19 (decimal code, with component-adding provision)	---		---		---		A7PS-219	A7PS-219-1	---		---
	54 (binary coded hexadecimal)	---		A7BS-254	A7BS-254-1	---		A7PS-254	A7PS-254-1	A7PH-254	A7PH-254-1	---
	55 (binary coded decimal, with component-adding provision)	---		A7BS-255	A7BS-255-1	---		A7PS-255	A7PS-255-1	---		---
End caps		A7B-M	A7B-M-1	A7B-M	A7B-M-1	A7B-M	A7B-M-1	A7P-M	A7P-M-1	A7P-M	A7P-M-1	A7MD-1M
Spare unit		A7B-PA	A7B-PA-1	A7B-PA	A7B-PA-1	A7B-PA	A7B-PA-1	A7P-PA	A7P-PA-1	A7P-PA	A7P-PA-1	A7MD-PA
Connector	Solder terminals	A7B-C						NRT-C/NRT-CN				---
	PCB terminals	A7B-CP						NRT-CP				---

# Do you know about OMRON Switches?

OMRON switches have a proven track record in many of our familiar applications. Our customers appreciate their “click feeling,” “durability,” and “ease of design.”



## Three reasons why customers choose OMRON switches

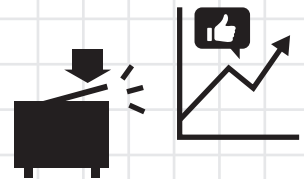
# 1

### Good Feeling

#### A Satisfying Click

OMRON has established a technology to create an “**exquisite operational feeling**” by adding several parameters in addition to load and stroke.

The wide variation of the feeling **improves the operability of the customer's equipment**.



# 2

### Long Life

#### Strong durability and long life switching

OMRON has achieved “**strong durability**” through its proprietary switch production technologies accumulated over more than 80 years, as well as through its technologies for properly adjusting and managing these technologies. Please consider OMRON products for **applications that require long-life switching**.

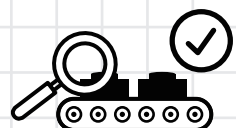


# 3

### Easy Design

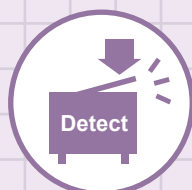
#### Less variation, easy equipment design

Over the years, OMRON has refined its technology for adjusting changes in characteristics of each process from raw materials to finished products by feeding back to the previous process, thereby making switches with “**negligible variation between individuals or lots**.” We help our customers to **design their devices more easily**.



## Types of switches by application

01



### Detection Switches

Detects presence or absence of objects and their positions

#### Basic Switches



P.6

#### Ultra-miniature detection switches



P.12

02



### Operation Switches

Electrically connected by human operation

#### Tactile Switches

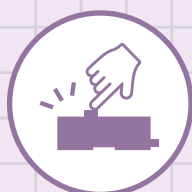
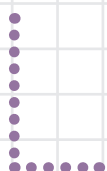


P.13

#### Pushbutton Switches/Indicators



P.21



### Long Life Switches

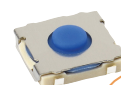
Specialized in click-sensitive applications with long life

#### Basic Switches for Operation (Long service life)



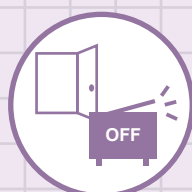
P.18

#### Tactile Switches



P.13

03



### Interlock Switches

Enables safe disconnection to prevent excessive current flow to the user

#### Door switches



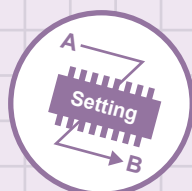
P.12

#### Basic Switches



P.6

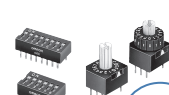
04



### Setting switch

Changes the mode of the device

#### DIP Switches



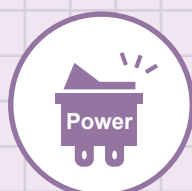
P.24

#### Thumbwheel Switches



P.32

05



### Power Switch

Turns equipment power ON and OFF

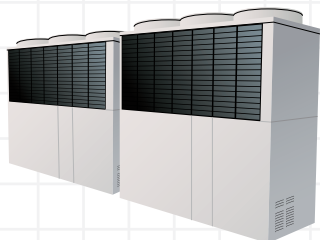
#### Rocker Switches



P.19

## Application Example

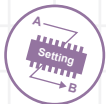
### Commercial Air Conditioning



Cover open/close detection



**D3DC**



Board mode switching



**A6S-H**

▶ P.24

**A6SN**

▶ P.25



Mechanism position detection



**D3M**

▶ P.7

### Elevator



Operation buttons



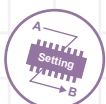
**D2LS**

▶ P.18



**B3SL**

▶ P.17



Board setting switch



**A6E-N**

▶ P.26



Power ON/OFF



**A8L**

▶ P.19

### Toilet



Cover open/close detection



**Waterproof**  
**D2SW-P**



Bidet toilet/Operation buttons



IEC IP67 equivalent

**B3S**

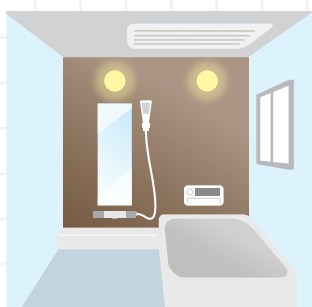
▶ P.16



**B3W-1**

▶ P.16

### Bathroom



Bathroom dryer cover open/close detection



**Waterproof**  
**D2SW-P**



For bathroom operation panel



IEC IP67 equivalent

**B3S**

▶ P.16



**B3W-1**

▶ P.16



## Smart Building

Supports comfortable operation of smart buildings and safety of equipment.

### Electric Locks



Door open/close detection



**D2F** ▶ P.8



**D3C** ▶ P.12

### Automatic Doors and Gates



Door position detection



**V** ▶ P.6



**D3V**



**SS** ▶ P.7

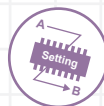
### Security Devices



Cover open/close detection



**D2F** ▶ P.8



For setting



**A6S-H** ▶ P.24



**A6SN** ▶ P.25



Operation button for reset (gold-plated)



**B3SN** ▶ P.16

### Air purifiers



Cartridge tank open/close detection



**D2SW-P**



Mode setting operation button



**B3W-1** ▶ P.16

### Smart Switches for Lighting



**D2LS** ▶ P.18



**B3FS-1** ▶ P.14



IEC IP67 equivalent

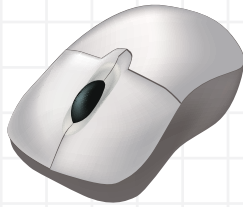
**B3S** ▶ P.16

## Smart Home

Continuing to support daily life invisibly.

## Application Example

### Mouse



For control buttons



**D2LS** ▶ P.18



**D2FC** ▶ P.18  
**D2FP** ▶ P.18



**B3F-1** ▶ P.13

### Arcade Controllers



For control buttons



**D2LS** ▶ P.18



For operation levers and position detection



**V** ▶ P.6

### Transceiver



For long-press operation buttons



**D2LS** ▶ P.18



**D2FC** ▶ P.18  
**D2FP** ▶ P.18

### Industrial Robots



Operation buttons for teaching pendants



**B3FS-1** ▶ P.14



For teaching pendant long-press operation buttons



**D2FC** ▶ P.18  
**D2FP** ▶ P.18



**D2LS** ▶ P.18



**A16P** ▶ P.21

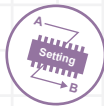
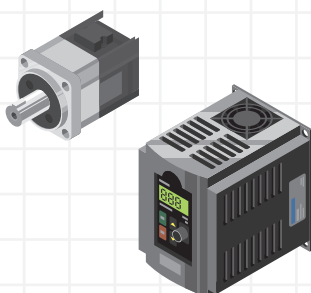


For power supply



**A8L** ▶ P.19

### Servo Inverter



For mode setting



**B3SN** ▶ P.16



**B3FS-1** ▶ P.14



**B3SE** ▶ P.17



IEC IP67 equivalent  
**A6DR** ▶ P.27



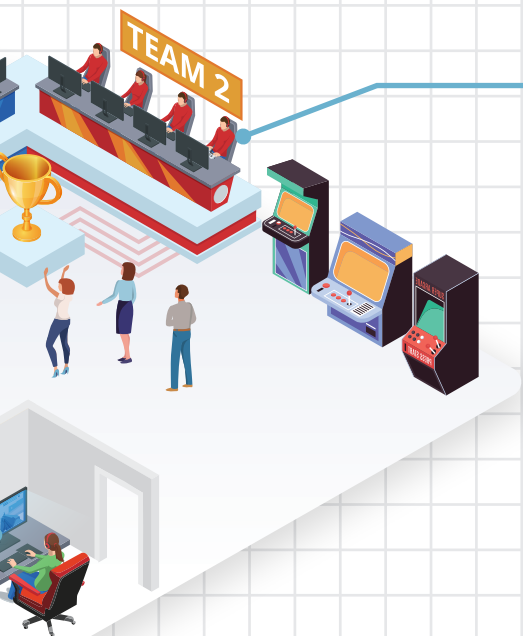
**A6FR** ▶ P.27



**A6S-H** ▶ P.24

## Entertainment

Contributing to the entertainment industry with high reliability and comfortable operation.



### Gaming controllers



For control buttons



**D2LS** ▶ P.18



**D2FC  
D2FP** ▶ P.18

### Machine Tools



For control buttons



**B3FS-1** ▶ P.14



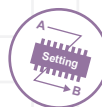
**B3FS-4** ▶ P.14



**B3W-1** ▶ P.16



**D2LS** ▶ P.18



For mode setting



**A6FR** ▶ P.27



Cover open/close interlock



**D2D** ▶ P.12



Mechanism position detection



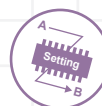
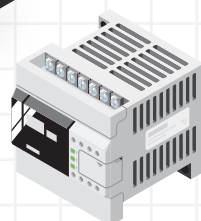
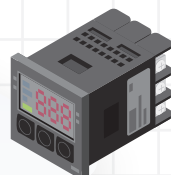
**V** ▶ P.6

## Factory Automation

Used in a variety of applications in safety-first factories.



### Temperature Controllers and PLCs



Mode setting for temperature controllers



**A6S-H** ▶ P.24



**A6T** ▶ P.26



Operation button for temperature controllers



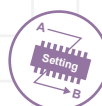
**B3F-1** ▶ P.13



**B3FS-1** ▶ P.14



**D2LS** ▶ P.18



Mode setting for PLC



**A6C** ▶ P.31

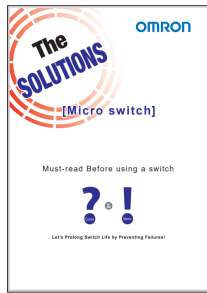


**A6CV** ▶ P.31



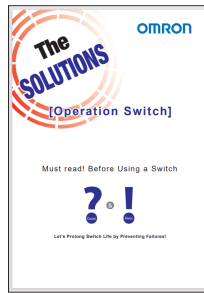
**A7** ▶ P.32

## Information of Related Products



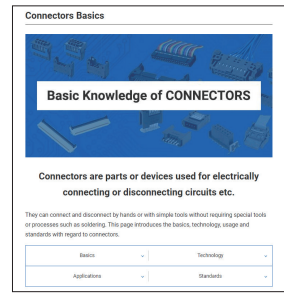
The Solution  
[Micro switches]

Cat. No.  
B146-E1

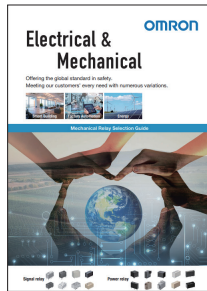


The Solution  
[Manual  
Switches]

Cat. No.  
A306-E1

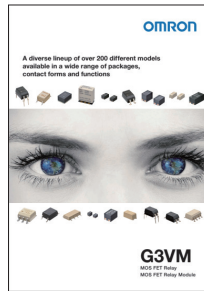


Basic  
Knowledge  
of  
SWITCHES



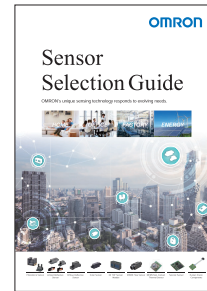
Mechanical Relay  
Selection Guide

Cat. No.  
Y225-E1



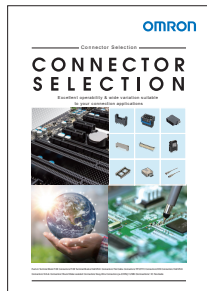
MOS FET Relays  
SELECTION  
GUIDE

Cat. No.  
Y112-E1



Sensor Selection  
Guide

Cat. No.  
Y232-E1



Connector  
Selection Guide

Cat. No.  
Y271-E1

Omron's  
Microswitch Solution



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