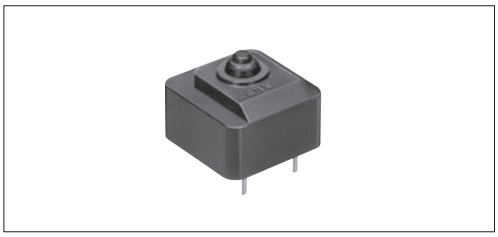
SDKR Water-proof Type (with Built-in Detector Switches)

For power resume in main power auto shut down, compact and composite type suitable for AC and DC



Ratings and Safety Standards

Items	Specifications
AC Switch	1A 125V AC, 0.5A 250V AC (Resistive load)
DC Switch	10mA 5V DC (Resistive load)
Ratings satisfying local electrical appliance and material safety law	1A 125V AC

Product Line

Circuit arrangement	Travel (mm)	Operating force	Mounting method	Minimum order unit (pcs.)		Product No.
				Japan	Export	
SPST	1.5	2.5±1.5N	PC board	150	3,000	**SDKRA10100**

Notes

1. This product is not be used under water. (IP67 dust and water resistance)
2. Depending on the loading conditions, Nitrogen Oxide (NOx) and moisture caused by opening / closing arc may generate nitric acid (HNO3). This can lead to corrosion of the metal inside causing functional failure. Please apply contact protection circuits (arc suppressing circuits)or an OFF stage arc reducing circuit method.

Packing Specifications

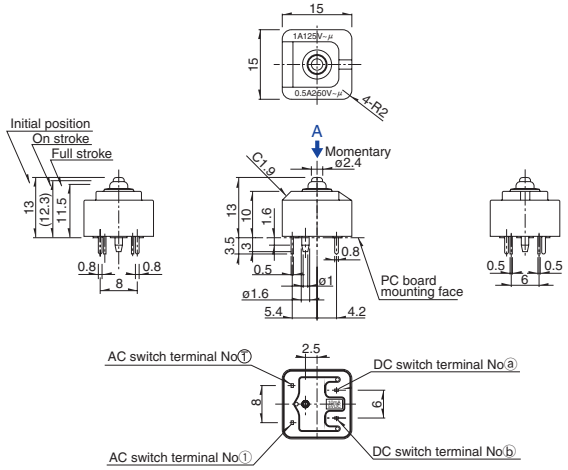
Tray

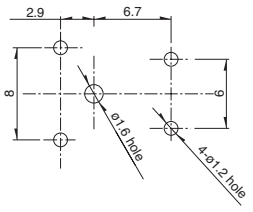
Number of packages (pcs.)		Export package measurements (mm)
1 case /Japan	1 case /export packing	
750	3,000	555×375×223

Dimensions

Unit:mm

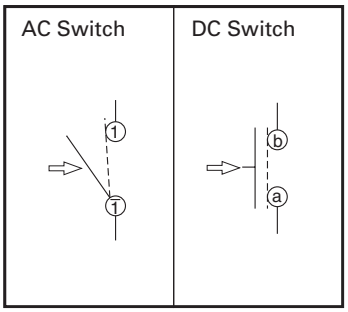
Style	PC board mounting hole dimensions (Viewed from the Direction A)





Circuit Diagram

(Viewed from Direction A)



ALPS

Refer to P.176 for soldering conditions.

Power Switches

List of Varieties

Type			Push			Rocker	
Series			**SDKR**	**SDDH**	**SDKN**	**SDDJE** ※1 ※2	**SDDJF** ※1 ※2
Photo							
Rating			0.5A 250V AC 1A 125V AC 10mA 5V DC	Rating (max.): 4.5A 12V DC (Lamp load: 27W×2) Rating (min.): 10mA 12V DC (Resistive load)	0.25A 250V AC 0.5A 125V AC 5mA 5V DC	10AGP 250V AC 6A / 96A 250V~	16AGP 250V AC 16 (6) / 250~
Operating life			100,000cycles	100,000 cycles	5,200cycles	10,000cycles	
			0.5A 250V AC		0.25A 250V AC	10A 250V AC	16A 250V AC
Travel (mm)			1.5	3.7	9 9.7	3.4	5.2
Features			Water-proof type With signal circuit	Water-proof (IP68 rating)	—	—	—
Operating temperature range			−10℃ to +85℃	−15℃ to+80℃	−20℃ to +60℃	−10℃ to +55℃	
Automotive use			—	●	—	○	○
Life cycle (availability)							
Electrical performance	Contact resistance		100mΩ max. (AC switch) 500mΩ max. (DC switch)	500mΩ max.	100mΩ max.	100mΩ max.	
	Insulation resistance		500MΩ min. 500V DC (AC switch) 100MΩ min. 100V DC (DC switch)	10MΩ min. 500V DC	100MΩ min. 500V DC	500MΩ min. 500V DC	
	Voltage proof		1000V AC for 1minute (AC switch) 100V AC for 1minute (DC switch)	500V AC for 1minute	600V AC for 1minute	2,000V AC for 1minute	
Mechanical performance	Terminal strength		5N for 1minute	Slider pull-out strength: 100N min.	50N for 1minute	50N for 1minute (Lead terminal) 5N for 1minute (Right-angle terminal)	60N for 1minute (Lead terminal) 10N for 1minute (Right-angle terminal)
	Actuator strength	Operating direction	100N	—	20N	25N	
		Perpendicular direction	20N	—	30N	25N	
Environmental performance	Cold		−20℃ 240h	−15℃ 96h	−30℃ 192h	−20℃ 96h	
	Dry heat		85℃ 240h	80℃ 96h	70℃ 192h	85℃ 96h	
	Damp heat		60℃, 90 to 95%RH 1000h	40℃, 90 to 95%RH 192h		40℃, 90 to 95%RH 96h	
Page			160	161	162	164	168

Power Switches Soldering Conditions 176
Power Switches Cautions 176
Power Switches Safety Standard 176

Notes

1. ※1. Dip soldering can be used on SDDJE for PC board terminal and SDDJF right angle terminal types only.
2. ※2. The operating temperature range for automotive applications can be raised upon request. Please contact us for details.
3. ● Indicates applicability to all products in the series, while ○ indicates applicability to some products in the series.

Power Switches Soldering Conditions

Reference for Hand Soldering

Series	Soldering temperature	Soldering time
SDDJE, SDDJF, SDKP, SDDJF1A, SDKZ, SDDE	350±10℃	3+1/0s
SDKR	300±10℃	3±0.5s

Reference for Dip Soldering

(For PC board terminal types and SDDJF right-angle terminal types)

Series	Dip soldering	
	Soldering temperature	Duration of immersion
SDKR, SDDJE, SDDJF, SDKP, SDKZ, SDDE	260±5℃	10±1s

Power Switches Cautions

1. The primary power supply switching is subject to the safety regulations, and the provisions differ by each destination. Consult with us for non-standard use cases.
2. An unstable contact may occur if the switch current is lower than 0.5A. For this case, consult with us.
3. These power switches were produced for alternating current. For direct current, consult with us.
4. Appling load to terminals during soldering under certain conditions may cause deformation and electrical property degradation.
5. Avoid use of water-soluble soldering flux, since it may corrode the switches.
6. When soldering twice, wait until the first soldered portion cools to normal temperature. Continuous heating will deform the external portions, loosen or dislodge terminals, or may deteriorate their electrical characteristics.
7. Before soldering switches with locking mechanism, release the locks. If they are soldered without releasing the locks, the soldering heat may deform the locking mechanism.
8. Be sure to release the locks before removing the knobs. Otherwise, the locking mechanism may be broken.
9. Be sure to use the switch with forced travel positioned as close to the total travel as possible.
10. Tighten the mounting screws by applying the specified torque. Tightening with a larger torque than the specified will result in malfunction or breakage of screws.
11. Corrosive gas if generated by peripheral parts of a set, malfunction such as imperfect contact may occur. Thorough investigation shall be required beforehand.
12. Storage

    Store the products as delivered at normal temperature and humidity, out of direct sunlight and away from corrosive gases. Use them as soon as possible and no later than six months after delivery. Once the seal is broken, use them as soon as possible.

Power Switches Safety Standards

1. Safety Standards Outline

Safety standards are established by a country or an organization representing it to protect general users from electrical shock and fire hazards. It establishes standards for electrical devices and components. For electrical equipment manufacturers, utilizing switches that have been safety-approved ensures the safety of the switch. The use of a safety-approved switch also simplifies at least one part of the process of obtaining certification by safety testing.

2. Major Safety Standards

(1) Electrical Appliance and Material Safety Law

The conventional [Electrical Appliance and Material Control Law] has changed to [Electrical Appliance and Material Safety Law] and has been enforced since April 1, 2001. Electrical appliances are categorized into special electric appliances and parts (formerly Class A) and Electrical appliances other than the special electric appliances (formerly Class B). Special electric appliances are required to receive goodness of fit test at a certified test agency and to store the certificate. Also, penal provisions have been reinforced.

(2) UL (Underwriters Laboratories Inc.)

Underwriters Laboratories Inc. (UL) is the American safety approving organization. Its purpose is to ensure consumer safety and protect them from fire hazards. State law requires that equipment to be exported to the United States utilize UL approved power switches or power switches meeting UL standards and capable of passing UL tests.