



■ Ratings and Safety Standards

Items	Specifications
Maximum rating (Power)	16(6)A 250V AC 14(6)A 250V AC
Maximum rating (Encoder)	0.1A 12V DC
Contact resistance (Encoder) Initial / after life test	1Ω max. / 1Ω max.
Operating (Power)	10,000 cycles
Operating life (Encoder)	30,000 cycles

■ Product Line

Circuit arrangement	Torque		Operating direction	Positions	Mounting method	Terminal Configuration	Minimum order unit (pcs.)		Product No.	Drawing No.
	From 'OFF' position to 'ON' position	Other positions					Japan	Min		
DPST	14±3N	10±3N	Vertical	15	PC board	Straight	288	288	SDKZ1F0200	1
	12±3N	6±3N		16					SDKZ1G0200	
	14±3N	7.5±3N		19					SDKZ1K0200	
		10±3N		21					SDKZ1M0200	
		7.5±3N		24					SDKZ1Q0200	
		10±3N		25					SDKZ1R0200	2

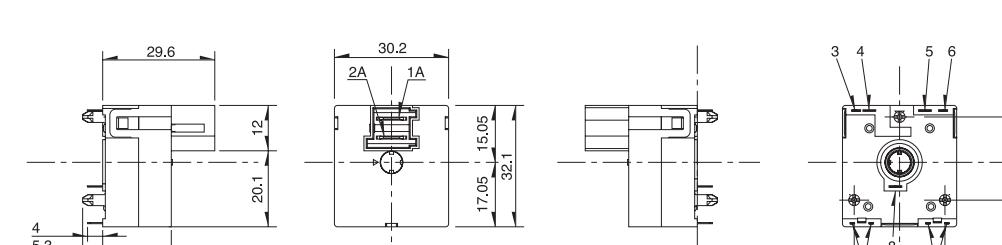
■ Packing Specifications

Tray

Number of packages (pcs.)		Export package measurements (mm)
1 case /Japan	1 case /export packing	
288	288	411×311×217

■ Dimensions

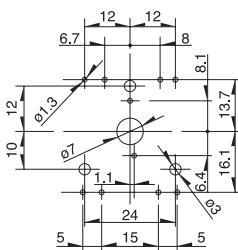
Unit:mm

No.	Style
1	 <p>PC board mounting hole dimensions</p>

PC board mounting hole dimensions

Technical drawing showing a top-down view of a mechanical assembly and its component parts. The top part is a cross-sectional view of a housing with internal dimensions: top width 12, top height 6.7, top thickness 8, side height 10, side thickness 1.3, bottom height 16.1, bottom thickness 13.7, and a central hole diameter of 24. The bottom part shows the assembly's footprint with a total width of 29.6 and a height of 20.1. The central component has a width of 30.2 and a height of 17.05. The bottom-most part is a cross-sectional view of a connector with a total width of 32.1 and a height of 15.05. Labels 1 through 8 point to specific features: 1 and 2 are on the bottom-most part; 3, 4, 5, and 6 are on the central component; 7 is on the top-most part; and 8 is on the right side of the top-most part. A vertical dimension of 12 is also indicated on the right side of the top-most part.

PC board mounting hole dimensions



Type		Rocker	Slide	Rotary	
Series		SDDJF1A	SDKP	SDKZ	SDDE
Photo					
Rating		8A / 128A 250V~ 10 (6) / 250~	5RA 250V AC	PS: 16 (6) A 250V AC 14 (6) A 250V AC	AC Switch: 1A / 16A 250V ~ DC Switch: 20mA 12V DC
				DC: 0.1A 12V DC	Encoders: 0.1A 12V DC
Operating life		10,000cycles	100cycles	10,000cycles (Power) 30,000cycles (Encoder)	AC Switch: 10,000 cycles DC Switch: 10,000 cycles
				10A 250V AC Without load	Encoder 30,000 cycles
Travel (mm)		4.6	6	Endless	Push Switches: 1.85mm Encoders: 360° (360° Rotation)
Features		—	—	With Encoders circuit	AC Switch, DC Switch, With Encoder
Operating temperature range		−10°C to +55°C	−10°C to +60°C	−10°C to +70°C	0°C to +85°C
Automotive use		—	—	—	—
Life cycle (availability)					
Electrical performance	Contact resistance		100mΩ max.	100mΩ max. (Power)	AC Switch: 100mΩ max. DC Switch: 500mΩ max. Encoder: 1Ω max.
	Insulation resistance			1Ω max. (Encoder)	
	Voltage proof		500MΩ min. 500V DC	500MΩ min. 500V DC (Power) 100MΩ min. 100V DC (Encoder)	AC Switch: 100MΩ min. 500V DC DC Switch: 100MΩ min. 100V DC Encoder: 100MΩ min. 100V DC
Mechanical performance	Terminal strength		2,000V AC for 1minute	2,000V AC for 1minute (Power)	AC Switch: 2,000V AC for 1 minute DC Switch: 100V AC for 1 minute Encoder: 100V AC for 1 minute
	Actuator strength			100V AC for 1minute (Encoder)	
	Operating direction	25N	50N	20N (Power)	AC Switch: 5N for 1 minute DC Switch: 5N for 30s Encoder: 5N for 1 minute
		25N	50N	5N (Encoder)	
Environmental performance	Cold		−20°C 96h		−40°C 240h
	Dry heat		85°C 96h		85°C 240h
	Damp heat		40°C, 90 to 95%RH 96h		40°C, 90 to 95%RH 240h
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Detector	Slide	Push	Rotary	Power	Dual-in-line Type

Power Switches Soldering Conditions

■ Reference for Hand Soldering

Series	Soldering temperature	Soldering time
SDDJE, SDDJF, SDKP, SDDJF1A, SDKZ, SDDE	$350 \pm 10^\circ\text{C}$	$3+1/0\text{s}$
SDKR	$300 \pm 10^\circ\text{C}$	$3 \pm 0.5\text{s}$

■ 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	$260 \pm 5^\circ\text{C}$	$10 \pm 1\text{s}$

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. Applying 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.

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