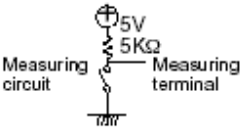
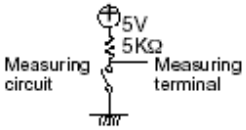
Details

Jog-shuttle

Product No.	Construction	Jog operation	Jog operating angle	Jog output code	Shuttle operation	Shuttle operating angle	Minimum packing unit (pcs.)
SRGPHJ3200	Standard	Detent	360°	10-pulses	Momentary	160°	100

Products Specifications

Operating temperature range	Rating (max.) (Resistive load)	Electrical performance			
		Output voltage		Insulation resistance	Voltage proof
		Shuttle part	Jog part		
-10° C to +60° C	10mA 5V DC	4V min. at 5V DC 1mA (Resistive load) 	4V min. at 5V DC 1mA (Resistive load) 	100MΩ min. 100V DC	100V AC for 1 min.

Mechanical performance					
Rotational torque		Robustness of terminal	Robustness of actuator		
Shuttle part	Jog part		Pushing direction	Pulling direction	Rotational direction
30±20 mN·m	5mN·m max.	5N for 1 min.	100N	100N	0.6N·m

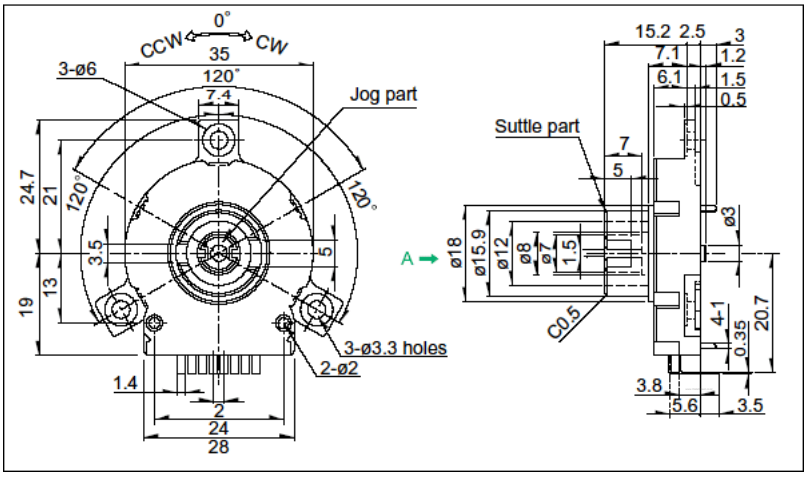
Mechanical performance			
Vibration	Solderability	Resistance to soldering heat	
		Manual soldering	Dip soldering
10 to 55 to 10Hz/min., the amplitude is 1.5mm for all the frequencies, in the 3 direction of X. Y and Z for 2 hours respectively	230±5° C, 3±0.5s	300±10° C, 3(+1,0)s	260± 5° C, 5±1s

Durability				Environmental performance		Mechanical performance
Operating life without load		Operating life with load		Cold	Dry heat	Damp heat
Shuttle part	Jog part	Shuttle part	Jog part			
50,000 cycles	100,000 cycles	50,000 cycles	100,000 cycles	-20±2° C for 96h	85±2° C for 96h	40±2° C, 90 to 95%RH for 96h

1. Please your purchase order in N minimum package units (N: integer).
2. Ask us for the export packaging unit.
3. Additional switches not included in the products list are also available. Contact us for details.
4. Although we are exerting our best efforts to maintain the quality of these switches, we cannot guarantee that they will never cause short circuiting and open circuitry. Therefore, when designing an equipment or device with which the priority is given to the safety, you will please carefully study the influences to the whole equipment of a single function failure of a switch in advance to make out a fail-safe design providing necessary protective circuits.
5. Automotive Electronic Product is for that particular use only. Please always contact us in advance, if you plan to use a product, which is not listed in the product for products used in car equipment, for car use.
6. Specification indicated in this catalog is outline only. When employing the product, use of an officially authorized specification for supply contract is recommended.
7. The external appearance, performances, and other properties of the product may be changed for improvement without prior notice. The product introduced in this catalog may discontinue being produced without prior notice.
8. Names for products and companies and titles of specifications indicated in this catalog are mostly trademarks of registered trademarks of their respective owners.
9. Please contact us for any enquiries and queries on our products and their uses.

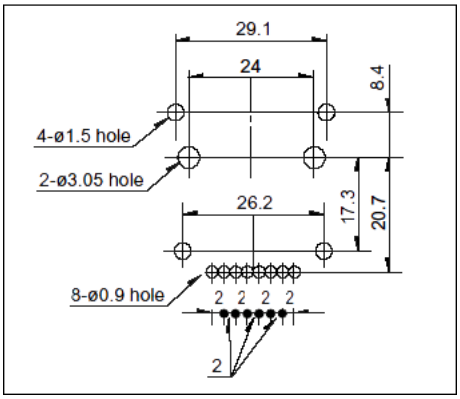
Standard Jog-shuttle
SRGPHJ

Unit : mm



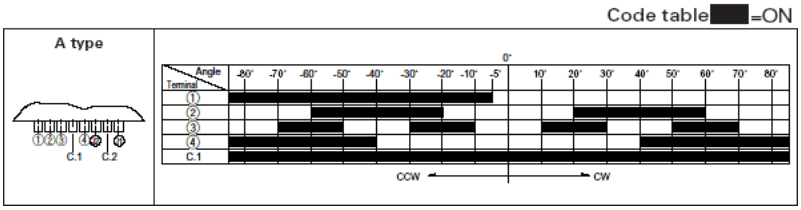
PC board Mounting Hole Dimensions
(Viewed from the Direction A)

Unit : mm



Code position (Viewed from Direction A)

Code table ■=ON



Caution

1. Note that if the load is applied to the terminals during soldering, they might suffer deformation and defects in electrical performance.
2. Use of water-soluble soldering flux shall be avoided because it may cause corrosion of the switch.
3. Verify soldering conditions under actual mass production conditions.
4. 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.
5. Flux from around and above the PC board should not adhere to the switches.
6. If you put the board with the switch in the oven so as to harden adhesive for other parts, consult with us.
7. If you use a through-hole PC board or a PC board thinner or thicker than the recommendation, here may be greater heat stress. Verify the soldering conditions thoroughly before use.
8. Solder the switches with detent at the detent position. Soldering switches fixed at the center of the detent may deform the detent mechanisms.
9. No cleaning.
10. Use care to protect small and thin switches from external forces in the SET mounting process.
11. Tighten the mounting screws by applying the specified torque. Tightening with larger torque than the specified one will result in malfunction or breakage of screws.
12. Use of the switches with voltage below 1V DC or current below 10μ A may make contacts unstable. When using these switches in this way, consult with us beforehand.
13. This product is designed and manufactured assuming that it is to be used with the resistance for direct current. If you use other kinds of resistance [inductive (L) or capacitive (C)], consult with us beforehand.
14. The switch will be brake if you apply a greater stress than that specified. Take great care not to let the switch be subject to greater stress than specified.
15. Insert these switches to the specified mounting surface and mount them horizontally. If not mounted horizontally, these switches will malfunction.
16. Avoid using these switches in a dusty environment. Dust entering through the openings will result in imperfect contact or malfunction. Take this into account for set design.
17. When corrosive gas is generated by peripheral material of a set using the switch, malfunctions such as imperfect contacts can occur. Be mindful of this point thoroughly in advice.
18. Storage methods
    (1) If you do not use the product immediately, store it just as delivered in the following environment: with neither direct sunshine nor corrosive gas and in normal temperatures. However, it is recommended that you should use it as soon as possible or within six months from the date of delivery at the most.
    (2) After you break the seal, you should put the remainder in a plastic bag to shut out outside air, and store it in the same environment mentioned above. You should use it up as soon as possible.
    (3) Do not stack too many switches for safety.

Measurement and Test Methods

[Rotational Torque (Operating Force)]
Measures the torque (operating force) necessary to rotate (move) the shaft (lever) . Unless otherwise specified, measurement shall be made at ambient temperature of 5 to 35° C, the shaft rotational speed shall be 60° per second, and the lever traveling speed shall be 20mm per second.

[Withstand Voltage]
Applies AC voltage to the specified spot for a minute and then checks for arc, burning, dielectric breakdown and other abnormalities. Respective terminals may be tested as a group. The sections described below shall be tested unless otherwise specified. However, if the section concerned is so constructed as to conduct, that particular part shall not be tested.

[Insulation Resistance]
Applies specified voltage to the specified locations and then measures the insulation resistance with a megger. The locations described below shall be tested unless otherwise specified. However, if the section concerned is so constructed as to conduct, that particular part shall not be tested.

[Sections to be Tested for Withstand Voltage and I
- Between terminal and shaft (lever)
- Between terminal and metal cover (lever)

[Shaft (Lever) Strength against Push/Pull Actions]
Applies a specified force in the axial direction of the shaft (lever) for 10 seconds and then checks the operating part and other sections for deformation, breakage, operating condition, etc.