

SPG20-SK

STEPPING MOTORS

FEATURES

- With built in sensor-compact stepping motor with gear head
- Provided with connector terminals for easy connection
- RoHS compliant



APPLICATIONS

- Game machines
- Others

PART NUMBER DESIGNATION

SPG20-350SK

Series name

Dash number

LIST OF PART NUMBERS

Gear ratio	Winding resistance	Long axis			Minor axis			
		63 Ω	68 Ω	180 Ω	63 Ω	68 Ω	180 Ω	200 Ω
1/6	Bipolar	SPG20-350SK	/	/	SPG20-345SK	SPG20-253SK	/	SPG20-256SK
	Unipolar	/	SPG20-351SK	SPG20-353SK	/	SPG20-298SK	SPG20-311SK	/
1/18	Unipolar	/	/	SPG20-363SK	/	/	/	/
1/24	Bipolar	/	/	/	/	/	/	SPG20-335SK
	Unipolar	/	SPG20-352SK	SPG20-354SK	/	SPG20-332SK	SPG20-333SK	/
1/36	Bipolar	/	/	/	/	SPG20-254SK	/	SPG20-322SK
	Unipolar	/	/	SPG20-355SK	/	SPG20-308SK	SPG20-290SK	/

※ When ordering, please specify the part number and dash number.

SENSOR CHARACTERISTICS

Maximum rating (Ta = 25 °C)

Item	Rating	Reference
Input voltage	4.5 ~ 18 V	
Output open-circuit voltage	18 V	
Output inflow current	15 mA	
Output saturation voltage	0.4 V	Output L I = 10 mA
Input current	8 mA	Vcc = 12 V

Lot production is required. Please consult us for ordering.

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STANDARD SPECIFICATIONS

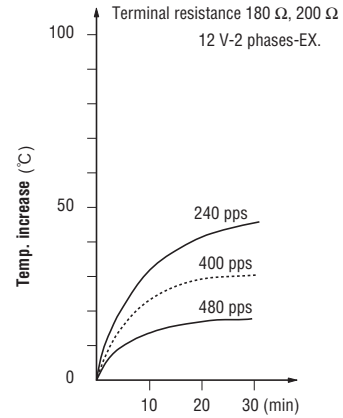
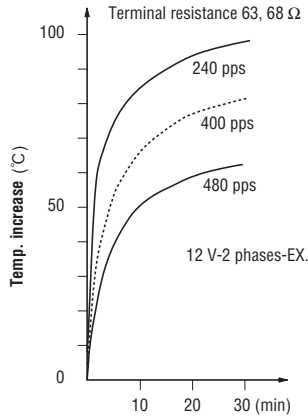
Item	SPG20-SK													
	Long axis													
	350SK						351SK	353SK	363SK	352SK	354SK		355SK	
	Minor axis													
	345SK	253SK	256SK	335SK	254SK	322SK	298SK	311SK		332SK	333SK	308SK	290SK	
Number of phases	2													
Number of poles	10													
Excitation	2 phases bipolar						2 phases unipolar							
Gear ratio	1/6		1/24		1/36		1/6		1/18		1/24		1/36	
Basic step angle	3°		0.75°		0.5°		3°		1°		0.75°		0.5°	
Steps	120		480		720		120		360		480		720	
Winding resistance	63 Ω	68 Ω	200 Ω	200 Ω	68 Ω	200 Ω	68 Ω	180 Ω		68 Ω	180 Ω	68 Ω	180 Ω	
Power	Average power consumption 2 W maximum													
Current	Refer to PERFORMANCE CURVES													
Pull-in torque														
Pull-out torque														
Pull-in pulse rate														
Maximum continuous response frequency														
Temperature rise														Refer to TEMPERATURE CHARACTERISTICS
Insulation resistance	30 MΩ minimum at DC500 V													
Dielectric strength	500 Vrms at AC50 Hz, 1 min													
Operating temperature range	0 ~ 50 °C													
Net weight	Approx. 30 g													
Axial maximum load	Continuous		19.6 mN·m											
	Momentary		98.1 mN·m											
Standard connector terminal	Male connector 04DR-N-E8E or 04DR-N-E6S 4 3 2 1 $\phi 1$ $\phi 1$ $\phi 2$ $\phi 2$						Made by J.S.T. Mfg Co., Ltd		Male connector 06ZR-8M or ZHR-6 6 5 4 3 2 1 $\phi 1$ $\phi 2$ $\phi 1C$ $\phi 2C$ $\phi 1$ $\phi 2$				Made by J.S.T. Mfg Co., Ltd	

※The characteristics were measured using DM-212X and DX-412X.

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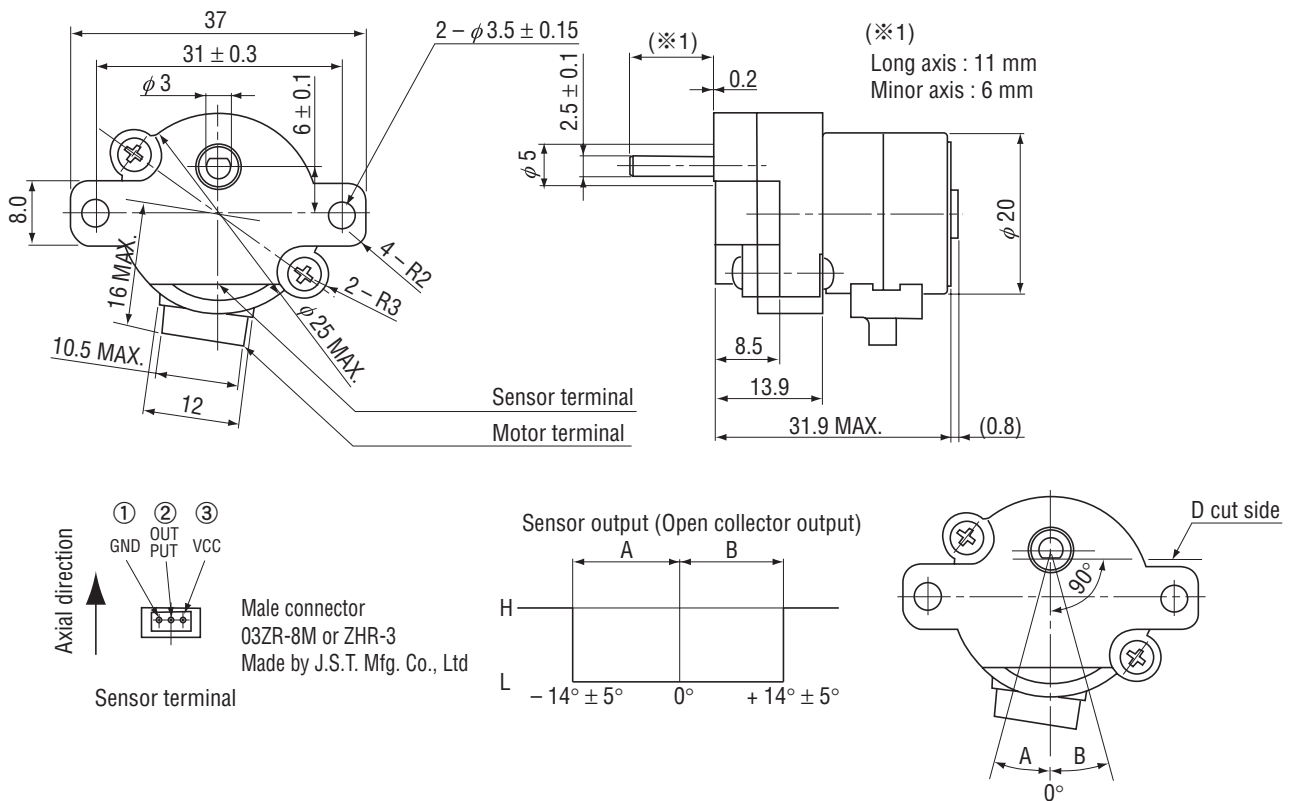
SPG20-SK STEPPING MOTORS

TEMPERATURE CHARACTERISTICS



OUTLINE DIMENSIONS

Unless otherwise specified tolerance: ± 0.5 (Unit: mm)

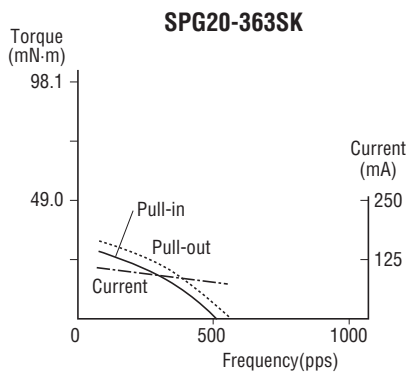
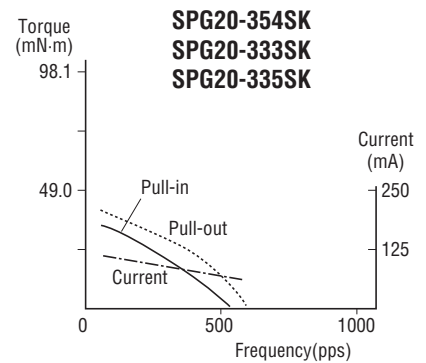
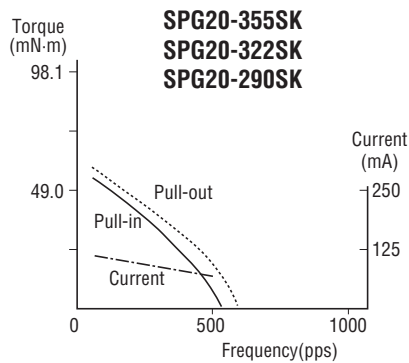
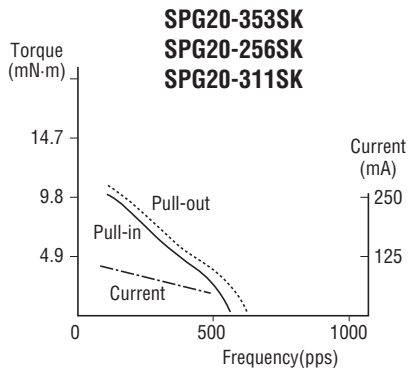
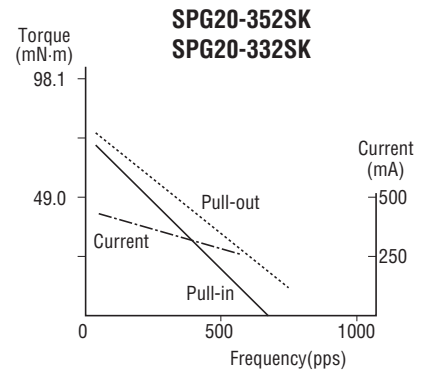
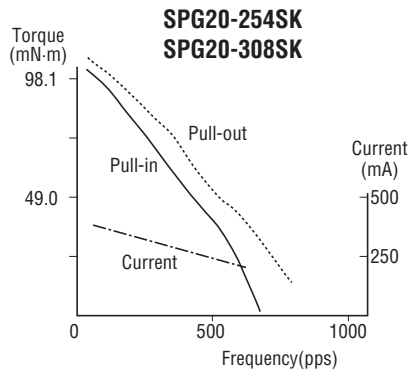
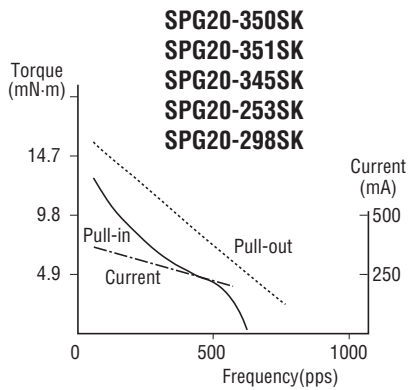


※SPG20-□□□SK has a sensor output which responds to the position of the output shaft. As the above "Sensor output" open collector output turns on, when the D cut part reaches 14° ± 5° to right and left on the basis of the horizontal position at the bottom.

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PERFORMANCE CURVES

12V-2phases-EX.



※ These performance curves show actual value, not guaranteed value.