

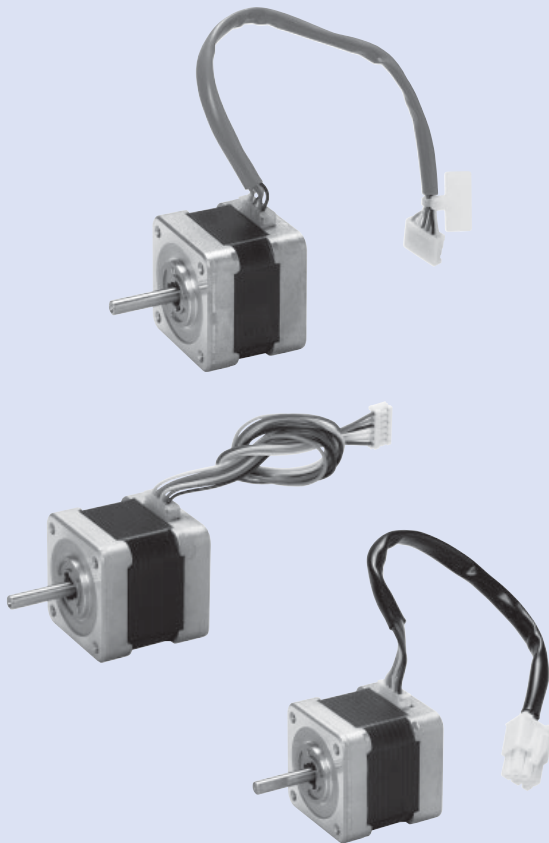
## Customization Services

Custom options availability varies depending on the requested customization and quantity. Contact us for details.

### Custom examples

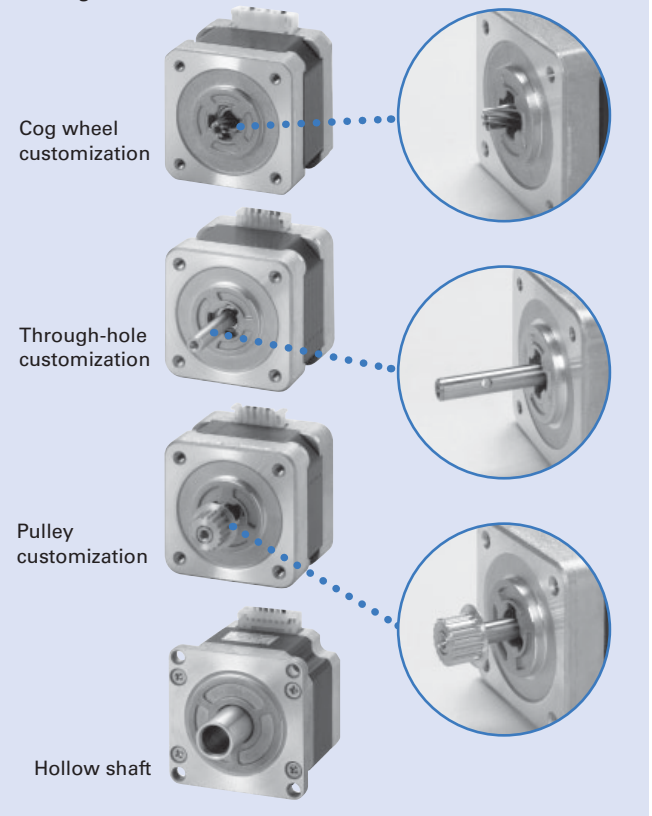
#### Custom harness

Connectors, cable ties, and plastic tubing can be added.



#### Custom shaft

We also offer custom options such as D-shaped shaft, addition of keyway and through-holes, and mounting of gear and pulley. The shaft can be made a hollow shaft for routing cables and air.



#### Rotary damper and surface mount damper

A damper can be added to reduce vibrations when rotating.



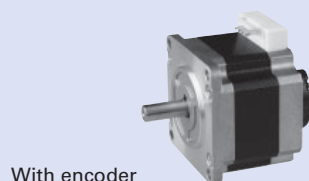
Rotary damper



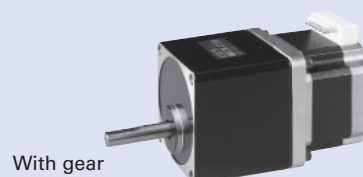
Surface mount damper

#### Gears, encoders, and brake

- A gear can be added for applications where a high load torque is exerted at low speeds.
- An encoder can be added for detecting motor position and speed.
- A brake can be added to hold the motor position at rest.



With encoder



With gear

## Geared Motors Applicable motor size: 56 mm sq. Model: S□2561

### Low backlash gear model

These models feature low-backlash gear.

Allowable torque	N·m	1.25	2.5	3	3.5	4	4
Gear ratio	—	1:3.6	1:7.2	1:10	1:20	1:30	1:36
Backlash	° or less	0.55	0.25	0.25	0.17	0.17	0.17
Allowable speed	min <sup>-1</sup>	500	250	180	90	60	50
Allowable thrust load	N	30	30	30	30	30	30
Allowable radial load*	N	100	100	100	100	100	100

\* Load is exerted on the point 1/3 the shaft length from the shaft end.

Note: The motor and shaft rotate in the same direction for 1:3.6 and 1:7.2 gear ratios and in opposite directions for 1:10, 1:20, 1:30, 1:36 gear ratios.

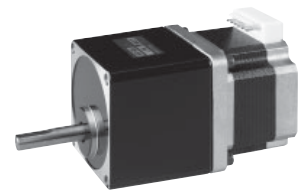
### Harmonic gear model

This model has extremely low backlash and superb positioning precision. The lineup has high gear ratios of up to 1:100 available.

Allowable torque	N·m	5.5	8
Peak torque	N·m	14	20
Gear ratio	—	1:50	1:100
Lost motion	arcmin	0.4 to 3 (at ±0.28 N·m)	0.4 to 1.5 (at ±0.4 N·m)
Allowable speed	min <sup>-1</sup>	70	35
Maximum allowable speed	min <sup>-1</sup>	100	50
Allowable thrust load	N	400	400
Allowable radial load*	N	360	360

\* Load is exerted on the point 1/3 the shaft length from the shaft end.

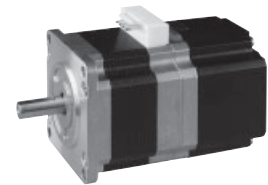
Note: The motor shaft and the gear output shaft rotate in the opposite directions.



## Electromagnetic brake models Compatible motors: 56 mm sq. Model no. SF256□ Note: Non-UL certified

The non-excitation electromagnetic brake holds a workpiece when power is lost, preventing it from falling.

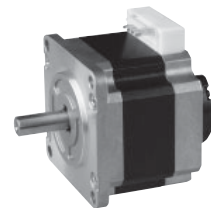
Brake activation type	—	Non-excitation type
Input voltage	—	24 VDC ± 5%
Power consumption	W	6 (at 75° C)
Static friction torque	N·m or more	0.8
Polarity	—	Red: +, black: -



## Models with encoder Compatible motors: 56 mm sq. Model no. SM256□

This model can detect vibration and step-out by monitoring the motor's operation status such as position and speed.

Microsteps	P/R	1000	2000	4000
Number of channels	Ch	3	3	3
Output circuit	—	Line driver (CMOS)		
Maximum response frequency	kHz	55	110	220
Input voltage	—	5 V ±5%	5 V ±5%	5 V ±5%
Current consumption	mA or less	100	100	100



Contact us for information on motors other than 56 mm sq. motors.