

Lineup

Set Orders ▶ p. 8–

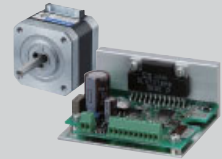
DC Input

Unipolar

We offer orders of a unipolar stepping motor and a DC stepping driver as a set.

Input voltage:
24/36 VDC

Motor size:
28 mm sq., 42 mm sq., 56 mm sq.

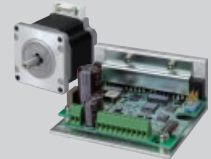


Bipolar

We offer orders of a bipolar stepping motor and a DC stepping driver as a set.

Input voltage:
24/36 VDC

Motor size:
28 mm sq., 42 mm sq., 50 mm sq., 56 mm sq., 60 mm sq.



The unipolar drive allows current to flow in a single direction along the winding. The drive circuit is simpler than that of the bipolar drive. The bipolar drive allows current to flow in both directions along the winding. The drive circuit is more complex, but it offers higher torque.

Stepping Motors (Single Items) ▶ p. 31–

Stepping Motors ▶ p. 36–

These stepping motors feature high torque. Select from among a broad lineup of products from an ultra-compact 14 mm sq. sized motor to a thin-profile motor with a 11.4 mm motor length.

Consult us regarding customization. ▶ p. 34
A driver is required separately.

Motor size:
14 mm sq., 28 mm sq., 35 mm sq., 42 mm sq., 50 mm sq.,
56 mm sq., 60 mm sq., 86 mm sq., ø106 mm



IP65-Rated Stepping Motors Water and dust protection ▶ p. 72–

These IP65-rated motors* have superior water and dust resistance, and can be safely used in water-exposed environments such as in food processing machines.

* Except for the shaft and cable ends.

A driver is required separately.

Motor size:
56 mm sq., 86 mm sq.



In-Vacuum Stepping Motors Custom product ▶ p. 77

We can customize motors for use in low to ultra-high vacuum environments to suit your system requirements.

A driver is required separately.



Synchronous Motors Custom product ▶ p. 77

Synchronous motors rotate at a constant speed in sync with the AC power frequency. Since they can be driven with AC power directly, a driver is not necessary.



Lineup Details

Set Orders ▶ p. 8-

Series	DC input set orders Unipolar	DC input set orders Bipolar
Input voltage	24/36 VDC	24/36 VDC
Microsteps	1, 2, 4, 8, 16	1, 2, 4, 8, 16
Step angle	1.8° full step angle motors	1.8° to 0.1125° /pulse
	0.9° full step angle motors	0.9° to 0.05625° /pulse
Motor size	28 mm sq., 42 mm sq., 56 mm sq.	28 mm sq., 42 mm sq., 50 mm sq., 56 mm sq., 60 mm sq.
Items included in a set	A driver, motor, and motor cable with connectors (Supplied only with connector-type motors)	A driver, motor, and motor cable with connectors (Supplied only with connector-type motors)
Page	p.10 to 29	

Stepping Motors (Single Items) ▶ p. 31-

Stepping Motors ▶ p. 36-

Full step angle	Motor size	Holding torque [N·m]	Model no.	Page
				Specifications/Characteristics/ Dimensions
0.9°	42 mm sq.	0.2 to 0.48	SH142□-□□□1	p. 41 to 42
0.9°	60 mm sq.	0.57 to 2.15	SH160□-□□□0	p. 56 to 57
1.8°	14 mm sq. Ultra-compact	0.0065 to 0.01	SH214□-5□□1	p. 36
1.8°	28 mm sq.	0.055 to 0.145	SH228□-5□□1	p. 37 to 38
1.8°	35 mm sq.	0.12 to 0.32	SH35□□-1□□□0	p. 39 to 40
1.8°	42 mm sq. Thin-profile	0.083 to 0.186	SS242□-50□□□	p. 43
1.8°	42 mm sq.	0.22 to 0.8	SF242□-1□□□1	p. 44 to 45
1.8°	50 mm sq.	0.28 to 0.53	103H670□-□□□0	p. 46 to 48
1.8°	50 mm sq. Thin-profile	0.1 to 0.215	SS250□-80□□0	p. 49
1.8°	56 mm sq. (UL)	0.53 to 2.5	SM256□C□0□□1	p. 50 to 55
1.8°	60 mm sq. *	It is recommended you use a 56 mm sq. motor (SM256□C□0□□1)		p. 55
1.8°	86 mm sq.	2.5 to 9	SH286□-□□□1	p. 58 to 61
1.8°	∅106 mm	10.8 to 19	103H8922□-□□□1	p. 62
1.8°	56 mm sq. (CE/UKCA)	0.39 to 1.27	103H712□-6□□0	p. 63
1.8°	86 mm sq. (CE/UKCA/UL)	2.5 to 9	SM286□-□□□□	p. 64 to 67
1.8°	∅106 mm (CE/UKCA)	13.2 to 19	103H8922□-63□1	p. 68

Note: We provide motor customization services such as motors with an encoder, gear, and brake. For more information, see respective specifications and characteristics pages.

* For 60 mm sq. size: It is recommended you use a 56 mm sq. motor (SM256□C□0□□1) that has equivalent torque as a conventional motor (103H782) with a smaller size. We also offer customization that makes the flange compatible with 60 mm sq. motors for easy replacement.

IP65-Rated Stepping Motors **Water and dust protection** ▶ p. 72-

Full step angle	Motor size	Holding torque [N·m]	Safety standards	Model no.	Page
					Specifications/Characteristics/ Dimensions
1.8°	56 mm sq.	1 to 1.7	CE/UKCA/UL	SP256□-5□□0	p. 73 to 74
1.8°	86 mm sq.	3.3 to 9	CE/UKCA/UL	SP286□-5□□0	p. 75 to 76

In-Vacuum Stepping Motors **Custom product** ▶ p. 77

Motor size
42 mm sq. to ∅106 mm

Synchronous Motors **Custom product** ▶ p. 77

Motor size
56 mm sq. to ∅106 mm