

5-Phase Stepper Motors PKP Series

● For detailed information about regulations and standards, please see the Oriental Motor website.



This is a high torque and low vibration stepper motor with a basic step angle of 0.72° (resolution of 500 steps per revolution).

High positioning accuracy is possible through low vibration and reduced noise.

(A separate dedicated driver is required to operate each motor.)



See Full Product Details Online
www.orientalmotor.com

● Manual

● Specifications

● Dimensions

● CAD

● Characteristics

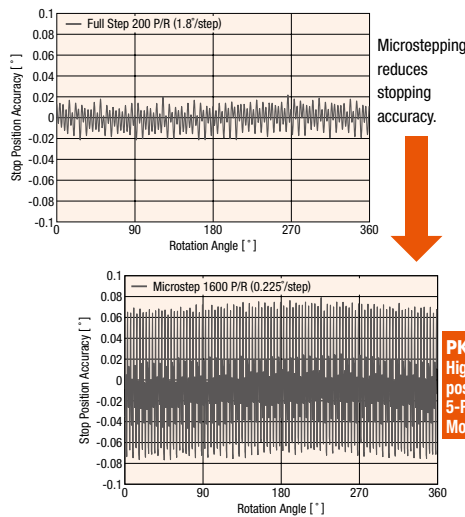
● Connection and Operation

Features

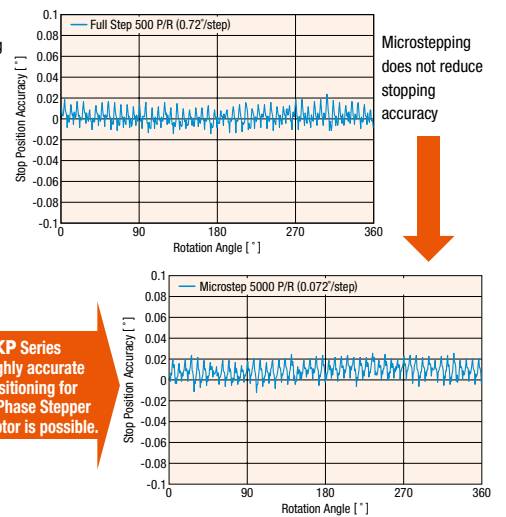
High Accuracy

Since the step angle of the **PKP Series** 5-Phase Stepper Motor is at 0.72° (high-resolution type at 0.36°) and the stopping accuracy is at $\pm 0.05^\circ$, highly accurate positioning is possible. In addition, the stop position accuracy controlled by a microstep driver has almost the same high accuracy as that controlled by a full-step driver.

● General 2-Phase Stepper Motor



● 5-Phase Stepper Motor **PKP Series**
(Driver: **CVD** driver for 5-Phase Stepper Motor)

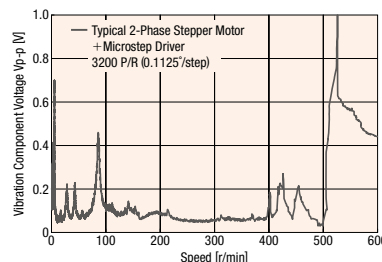


PKP Series
Highly accurate positioning for 5-Phase Stepper Motor is possible.

Low Vibration and Reduced Noise

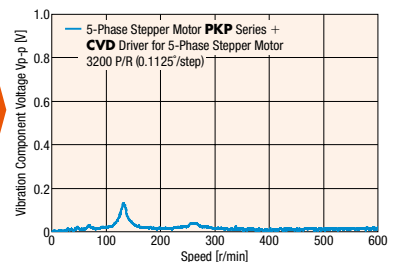
Because the basic step angle is small at 0.72° (0.36° for high-resolution type), the vibrations and noise are lower than the 2-Phase stepper motor. Also, vibrations and noise can be further reduced by an advanced microstep driver.

● Example of 2-Phase Stepper Motor Vibration Characteristics



PKP Series
Vibration characteristics for 5-Phase Stepper Motor have been further improved.

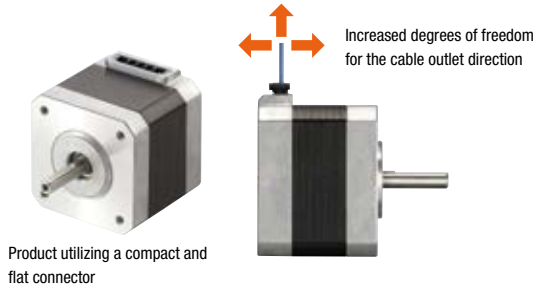
● Example of 5-Phase Stepper Motor Vibration Characteristics



Product Line Utilizing a Compact and Flat Connector

We offer a product line utilizing compact and flat connectors. The motor cable outlet direction points upward, which increases the degrees of freedom for the cable outlet direction.

● The connector configuration differs by motor. For more details, check the motor dimensions.



Product Line

—: Not Offered in This Product Line

Type (Basic step angle)	Features	Frame Size			
		28 mm (1.10 in.)	42 mm (1.65 in.)	56.4 mm (2.22 in.)	60 mm (2.36 in.)
Standard Type (0.72°)	<ul style="list-style-type: none"> Standard model High torque, low vibration 				
High-Resolution Type (0.36°)	<ul style="list-style-type: none"> Double the resolution of the standard type motor High positioning accuracy and reduced vibration 	—		—	
Standard Type with Encoder (0.72°)	<ul style="list-style-type: none"> Encoder resolution 500 P/R, A, B, and Z (3 ch) output signals Utilizes a compact encoder Encoder with superior noise resistance and a line driver (differential) output 	—			

Overview

Motor & Driver

5-Phase RKII

Driver

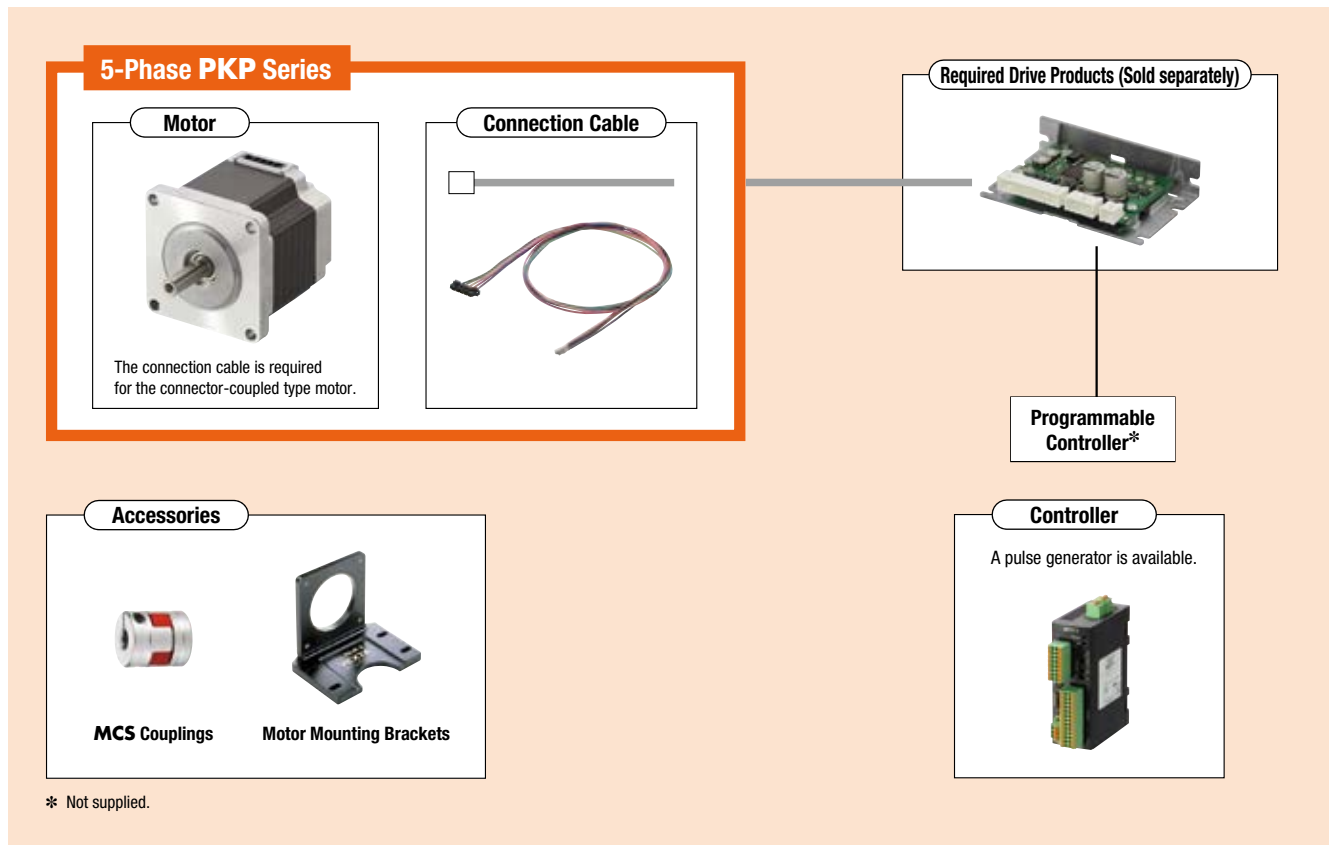
Motor

2-Phase PKP

5-Phase PKP

System Configuration

These accessories allow 5-Phase stepper motors in the **PKP** Series to be used for various operations. Motors and connection cables must be ordered individually.



● The system configuration shown above is an example. Other combinations are also available.

Product Number

Motor

Standard Type, High-Resolution Type

PKP 5 6 6 F N 24 A 2

① ② ③ ④ ⑤ ⑦ ⑧ ⑨ ⑩

PKP 5 4 4 M N 18 A

① ② ③ ④ ⑥ ⑦ ⑧ ⑨

Standard Type with Encoder

PKP 5 6 6 F N 24 A 2 - R2G L

① ② ③ ④ ⑤ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫

Connection Cable

Connection Cable for Motor

LC 5 N 06 E

① ② ③ ④ ⑤

Connection Cable for Encoder

LC E 08 A - 006

① ② ③ ④ ⑤

①	Series Name	PKP: PKP Series
②	5: 5-Phase	
③	Motor Frame Size	2: 28 mm (1.10 in.) 4: 42 mm (1.65 in.) 6: 56.4 mm (2.22 in.) [60 mm (2.36 in.) when the motor classification is "F"]
④	Motor Case Length	
⑤	Motor Classification	F: Motor Frame Size of 60 mm (2.36 in.)
⑥	Motor Type	Blank: Standard Type M: High-Resolution Type
⑦	Number of Lead Wires	N: 5 Leads
⑧	Motor Winding Specifications	
⑨	Configuration	A: Single Shaft B: Double Shaft
⑩	Reference Number	
⑪	Encoder Resolution	R2G: 500 P/R
⑫	Encoder Output Circuit Type	Blank: Voltage Output L: Line Driver Output

①	Cables	LC: Connector-Type Leads
②	5: 5-Phase	
③	Cable Type	N: For 5-Phase Stepper Motor
④	Cable Length	06: 0.6 m (2 ft.) 10: 1 m (3.3 ft.)
⑤	Reference Number	

①	Cables	LC: Connector-Type Leads
②	Cable Type	E: For Encoder
③	Applicable Models	05: For Voltage Output 08: For Line Driver Output
④	Reference Number	
⑤	Cable Length	006: 0.6 m (2 ft.)

Overview

Motor & Driver

5-Phase
RKII

Driver

Motor

2-Phase
PKP

5-Phase
PKP

Product Line

Motor

Standard Type

Product Name (Single Shaft)	List Price	Product Name (Double Shaft)	List Price
PKP523N12A	\$64.00	PKP523N12B	\$66.00
PKP525N12A	\$74.00	PKP525N12B	\$76.00
PKP543N18A2	\$52.00	PKP543N18B2	\$54.00
PKP544N18A2	\$54.00	PKP544N18B2	\$56.00
PKP545N18A2	\$61.00	PKP545N18B2	\$64.00
PKP546N18A2	\$63.00	PKP546N18B2	\$66.00
PKP564N28AA2	\$63.00	PKP564N28BA2	\$66.00
PKP566N28AA2	\$69.00	PKP566N28BA2	\$72.00
PKP568N28AA2	\$86.00	PKP568N28BA2	\$90.00
PKP564FN24A2	\$69.00	PKP564FN24B2	\$72.00
PKP564FN38A2	\$69.00	PKP564FN38B2	\$72.00
PKP566FN24A2	\$75.00	PKP566FN24B2	\$78.00
PKP566FN38A2	\$75.00	PKP566FN38B2	\$78.00
PKP569FN24A2	\$92.00	PKP569FN24B2	\$95.00
PKP569FN38A2	\$92.00	PKP569FN38B2	\$95.00

High-Resolution Type

Product Name (Single Shaft)	List Price	Product Name (Double Shaft)	List Price
PKP544MN18A	\$54.00	PKP544MN18B	\$56.00
PKP546MN18A	\$62.00	PKP546MN18B	\$64.00
PKP564FMN24A	\$61.00	PKP564FMN24B	\$63.00
PKP566FMN24A	\$67.00	PKP566FMN24B	\$69.00
PKP569FMN24A	\$90.00	PKP569FMN24B	\$93.00

Connection Cable for Motor

Product Name	Length	List Price
LC5N06A	0.6 m (2 ft.)	\$5.00
LC5N10A	1 m (3.3 ft.)	\$7.00
LC5N06B	0.6 m (2 ft.)	\$7.00
LC5N10B	1 m (3.3 ft.)	\$10.00
LC5N06C	0.6 m (2 ft.)	\$10.00
LC5N10C	1 m (3.3 ft.)	\$13.00
LC5N06E	0.6 m (2 ft.)	\$6.00

Connection Cable for Encoder

Product Name	Length	List Price
LCE05A-006	0.6 m (2 ft.)	\$11.00
LCE08A-006	0.6 m (2 ft.)	\$11.00

Included

Type	Operating Manual
Common to All Types	1 Copy

Standard Type with Encoder

Product Name (Voltage Output)	List Price	Product Name (Line Driver Output)	List Price
PKP543N18A2-R2G	\$109.00	PKP543N18A2-R2GL	\$109.00
PKP544N18A2-R2G	\$112.00	PKP544N18A2-R2GL	\$112.00
PKP545N18A2-R2G	\$118.00	PKP545N18A2-R2GL	\$118.00
PKP546N18A2-R2G	\$121.00	PKP546N18A2-R2GL	\$121.00
PKP564N28A2-R2G	\$121.00	PKP564N28A2-R2GL	\$121.00
PKP566N28A2-R2G	\$127.00	PKP566N28A2-R2GL	\$127.00
PKP568N28A2-R2G	\$144.00	PKP568N28A2-R2GL	\$144.00
PKP564FN24A2-R2G	\$127.00	PKP564FN24A2-R2GL	\$127.00
PKP564FN38A2-R2G	\$127.00	PKP564FN38A2-R2GL	\$127.00
PKP566FN24A2-R2G	\$132.00	PKP566FN24A2-R2GL	\$132.00
PKP566FN38A2-R2G	\$132.00	PKP566FN38A2-R2GL	\$132.00
PKP569FN24A2-R2G	\$150.00	PKP569FN24A2-R2GL	\$150.00
PKP569FN38A2-R2G	\$150.00	PKP569FN38A2-R2GL	\$150.00

For details (specifications, characteristics, dimensions and more) on these products, please either refer to our website or contact technical support or your nearest Oriental Motor sales office.

www.orientalmotor.com



Overview

Motor &
Driver

5-Phase
RKI

Driver

Motor

2-Phase
PKP

5-Phase
PKP