

High-Torque Stepper Motor

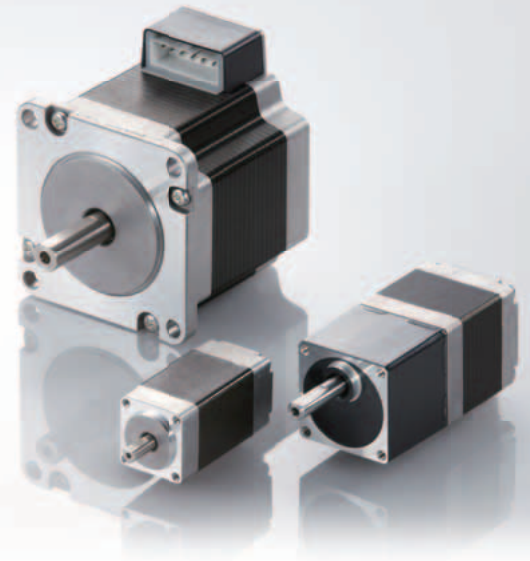
PKP Series

1.8° or 0.9° stepper motors,
available in 6 frame sizes from 20 mm (0.79 in.) to 85 mm (3.35 in.).
Includes encoder or electromagnetic brake options and the improved **SH** geared type.



High-Torque Stepper Motor PKP Series

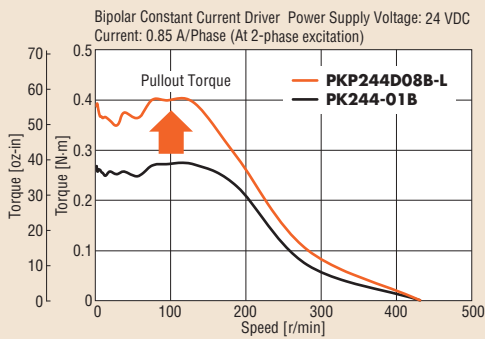
In addition to offering high torque, the **PKP** Series stepper motors offer more variety of electrical specifications, more frame sizes, encoders, electromagnetic brakes and geared type motors for the optimum stepper motor solutions.



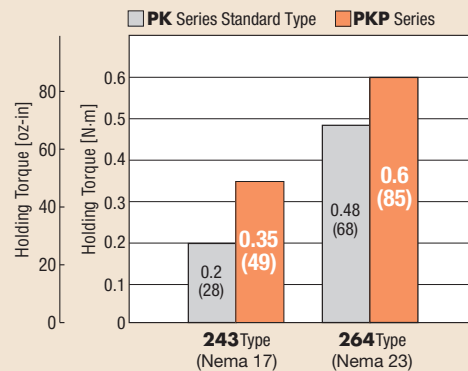
High Torque Achieved

By using a high-torque motor, a torque increase of 1.2 to 1.7 times the **PK** Series standard type of the same size (max. holding torque) has been achieved.

Speed – Torque Characteristics Comparison of the Same Size



Max. Holding Torque Comparison

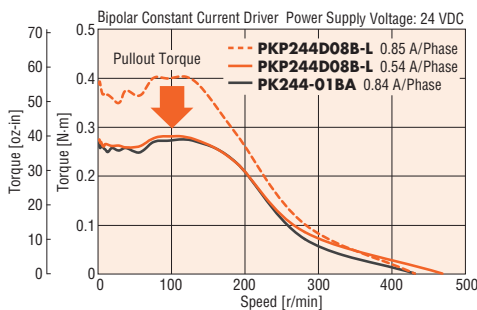


The Advantages of Using a High-Torque Motor

Reduced Power Consumption and Heat Output

If the running current of a **PKP** Series motor is decreased and the motor is operated at the same torque as the **PK** Series standard type, current consumption and heat output can be reduced.

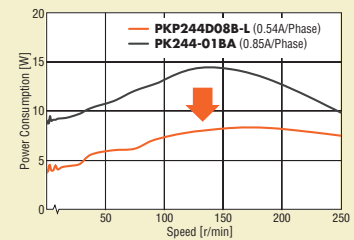
Characteristics Diagrams of Decreased Running Current in PKP Series Motors



Power consumption can be reduced

Comparison of driver power consumption when low-speed torque is tailored to the **PK** Series standard type

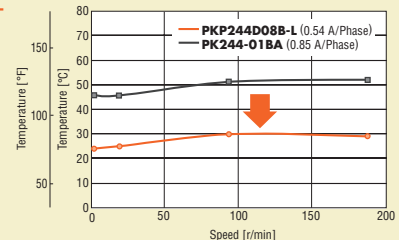
Power consumption reduced by **20%** (at low speed)



Heat Output can be reduced

Comparison of motor surface heat output when low-speed torque is tailored to the **PK** Series standard type

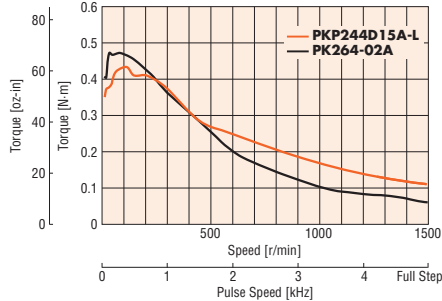
Temperature increases of **10°C (18°F)** and more are suppressed



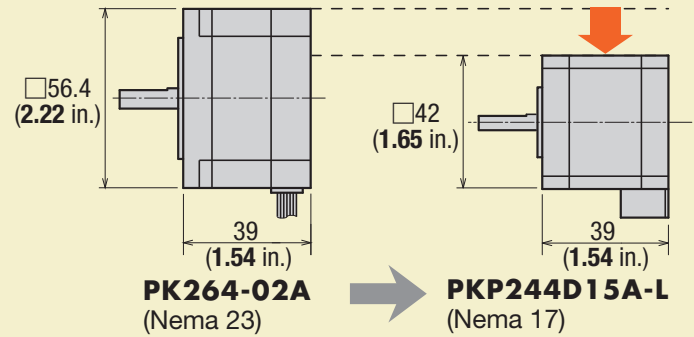
Downsizing

The **PKP** Series provides torque equivalent to a motor of the next larger frame size, contributing to downsizing of equipment.

Torque Characteristics Comparison of PKP244D15A-L and PK264-02A



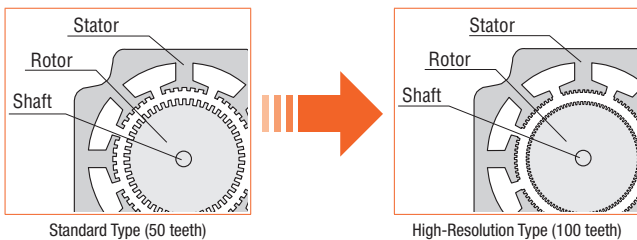
Provides torque equivalent to the next larger frame size!



0.9° Stepper Motor: High Resolution Type

● Increased Resolution (Compared to Standard Type)

The number of rotor teeth has doubled to 100 compared to 50 with the standard type. As a result, the basic step angle becomes 0.9°/step, which is half that of the standard type.



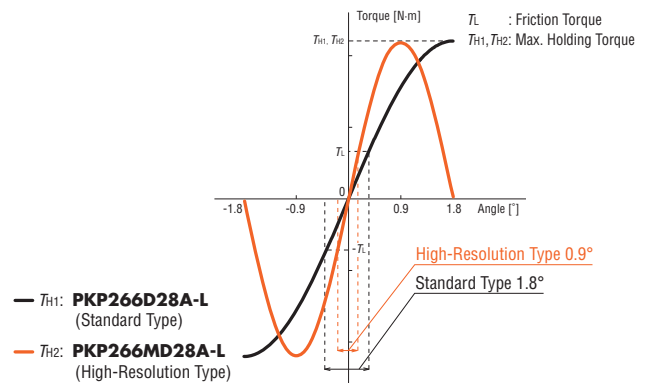
● Avoidance of Resonance Regions

If the pulse speed is within a resonance region, vibration may increase. Resonance regions can be avoided by switching to a 0.9° high-resolution type stepper motor.

● Improved Stopping Accuracy (Compared to Standard Type)

The stopping accuracy improves as the torque increases while minimizing the negative effect of the frictional load.

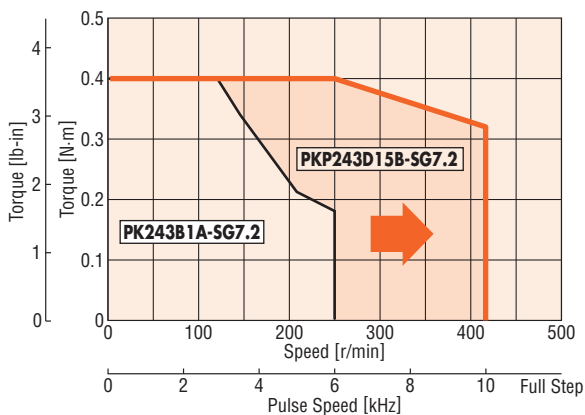
Comparison of Angle – Torque Characteristics



Features of SH Geared Type

The **SH** geared type is effective for reducing speed, increasing torque, achieving higher resolution and reducing vibration. Now offering a 60% wider speed range.

● Broader Permissible Speed Range than Conventional Models



● Backlash Accuracy Guaranteed

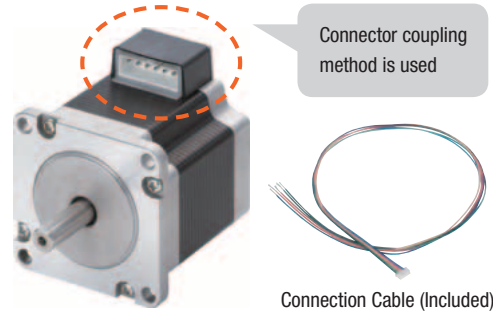
Backlash, which was a reference value in conventional models, is now a specification value.

		Unit = arc min (degrees)					
Gear Ratio		3.6	7.2	9	10	18	36
Frame Size	28 mm (1.10 in.)	—			90 (1.5°)		
	42 mm (1.65 in.)	90 (1.5°)			60 (1°)		
	60 mm (2.36 in.)	70 (1.17°)			45 (0.75°)		

Motor Connection*1 / Configuration

Motor Connector

Motor lead wire connector can be inserted*1 and the locking mechanism prevents accidental removal*2.



Wiring Configuration Options

Bipolar – 4 lead wires

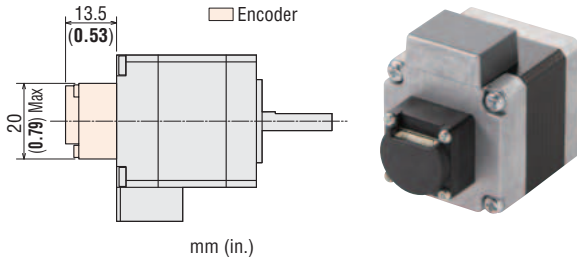
Unipolar – 6 lead wires*1

*1 Except for motor frame size of 20 mm (0.79 in.)

*2 Only motor frame sizes of 35 mm (1.38 in.), 42 mm (1.65 in.), 56.4 mm (2.22 in.) and 60 mm (2.36 in.)

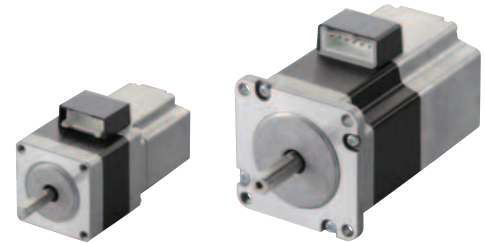
Encoder Option

An Incremental Encoder (Voltage or Line Driver type) is offered as a standard product. 200 or 400 line, 3-channel models.














Electromagnetic Brake Option

Built-in power off activated electromagnetic brakes. Hold the load when power is off or accidentally cut off due to a blackout or other unexpected events.



Product Line

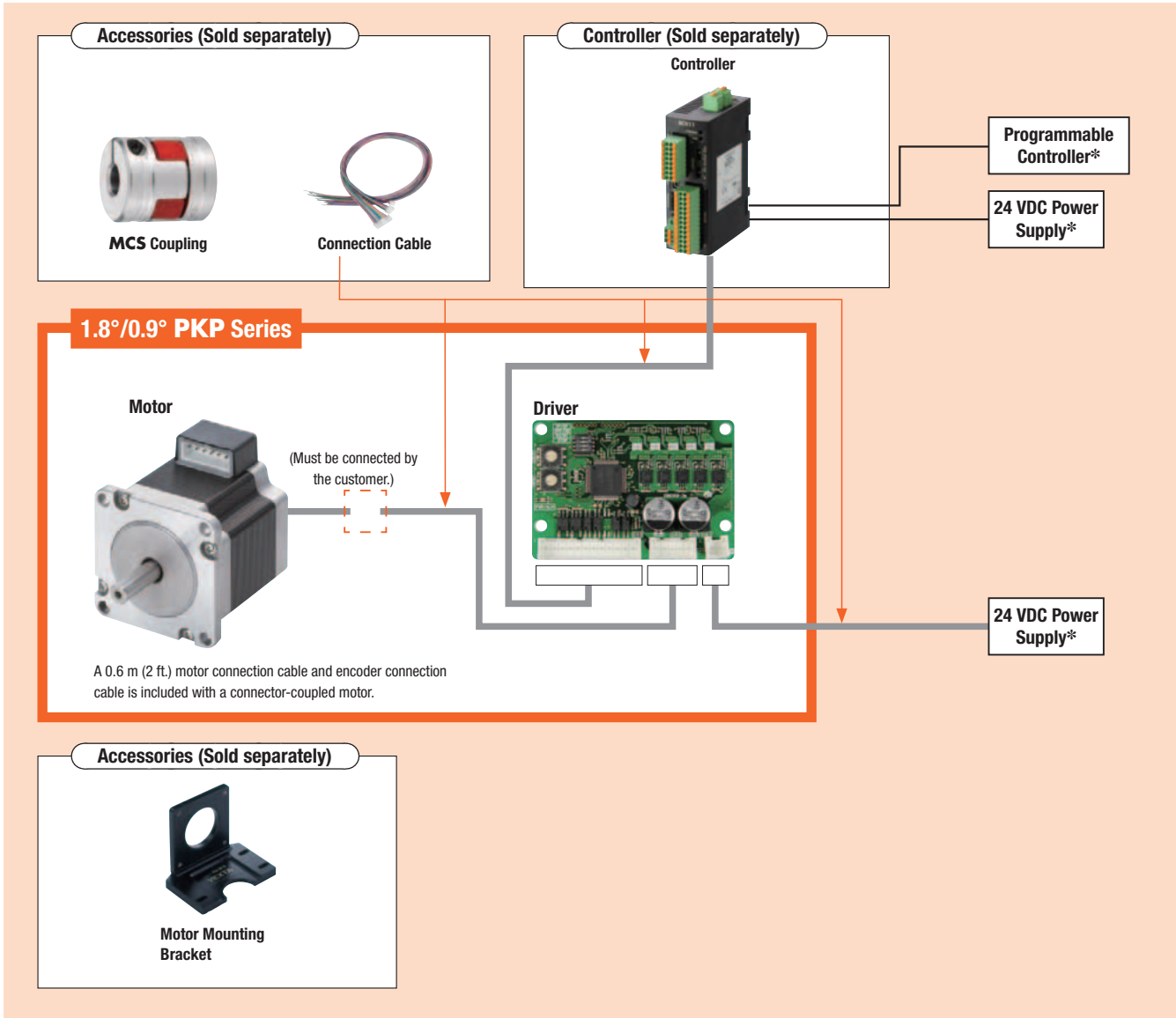
A wide range of frame sizes are available from 20 mm (0.79 in.) up to 85 mm (3.35 in.). A new **SH** geared type is also available. An Encoder or Electromagnetic Brake option is offered as a standard product.

Type	Frame Size					
	20 mm (0.79 in.)	28 mm (1.10 in.)	35 mm (1.38 in.)	42 mm (1.65 in.)	56.4/60 mm (2.22/2.36 in.)	85 mm (3.35 in.)
1.8° High-Torque	 Encoder	 Encoder Brake	 Encoder Brake	 Encoder Brake	 Encoder Brake	 Encoder Brake
0.9° High-Torque				 Encoder Brake	 Encoder Brake	
SH Geared Type						

System Configuration

An example of a system configuration with the CVD microstepping driver and **SCX11** controller shown below.

*Not supplied



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

Product Number

Motor Type

PKP 2 6 4 M D 28 A A-L

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

Motor Type with Encoder

PKP 2 4 3 M D 15 A - R2F L - L

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪

Motor Type with Electromagnetic Brake

PKP 2 4 3 M D 15 M - L

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

SH Geared Type

PKP 2 4 3 D 15 B-SG 18-L

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

①	Series	PKP: PKP Series	
②	2: 2-phase		
③	Motor Frame Size	1: 20 mm (0.79 in.) 3: 35 mm (1.38 in.) 6: 56.4 mm (2.22 in.)	2: 28 mm (1.10 in.) 4: 42 mm (1.65 in.) 9: 85 mm (3.35 in.)
④	Motor Case Length		
⑤	Motor Type	M: 0.9°/Step Blank: 1.8°/Step	
⑥	Number of Lead Wires	D: 4 U: 6	
⑦	Winding Specification		
⑧	Shaft Type	A: Single Shaft B: Double Shaft	
⑨	U.S.A. Version	A: Imperial Blank: Metric	
⑩	Connection Cable		

①	Series Name	PKP: PKP Series	
②	2: 2-Phase		
③	Motor Frame Size	1: 20 mm (0.79 in.) 3: 35 mm (1.38 in.) 6: 56.4 mm (2.22 in.)	2: 28 mm (1.10 in.) 4: 42 mm (1.65 in.)
④	Motor Case Length		
⑤	Motor Type	Blank: Standard Type M: High-Resolution Type	
⑥	Number of Lead Wires	D: 4 U: 5 or 6	
⑦	Winding Specification		
⑧	Motor Shaft Configuration	A: Single Shaft A2: 28 mm (1.10 in.)	
⑨	Encoder Resolution	R2E: 200P/R R2F: 400P/R	
⑩	Encoder Output Circuit Type	L: Line Driver Output Blank: Voltage Output	
⑪	Connection Cable		

①	Series	PKP: PKP Series	
②	2: 2-Phase		
③	Motor Frame Size	2: 28 mm (1.10 in.) 4: 42 mm (1.65 in.)	3: 35 mm (1.38 in.) 6: 56.4 mm (2.22 in.)
④	Motor Case Length		
⑤	Motor Type	Blank: Standard Type M: High-Resolution Type	
⑥	Number of Lead Wires	D: 4 U: 6	
⑦	Motor Winding Specification		
⑧	Configuration	M: Electromagnetic Brake Type	
⑨	Connection Cable		

①	Series	PKP: PKP Series	
②	2: 2-phase		
③	Motor Frame Size	2: 28 mm (1.10 in.) 6: 60 mm (2.36 in.)	4: 42 mm (1.65 in.)
④	Motor Case Length		
⑤	Number of Lead Wires	D: 4 U: 6	
⑥	Winding Specification		
⑦	Shaft Type	A: Single Shaft B: Double Shaft	
⑧	Gearhead Type	SG: SH Geared Type	
⑨	Gear Ratio		
⑩	Connection Cable		

Product Line

Bipolar

1.8 PKP Series

Product Name (Single Shaft)	List Price	Product Name (Double Shaft)	List Price	Product Name (Encoder)	List Price	Product Name (Electromagnetic Brake)	List Price
PKP213D05A	\$65.00	PKP213D05B	\$67.00	PKP213D05A-R2E <input type="checkbox"/> -L	\$148.00	—	
PKP214D06A	\$72.00	PKP214D06B	\$74.00	PKP214D06A-R2E <input type="checkbox"/> -L	\$155.00	—	
PKP223D06A-L	\$46.00	PKP223D06B-L	\$48.00	—		—	
PKP223D15A2-L	\$50.00	PKP223D15B2-L	\$52.00	PKP223D15A2-R2E <input type="checkbox"/> -L	\$123.00	PKP223D15M2-L	\$115.00
PKP225D06A-L	\$54.00	PKP225D06B-L	\$56.00	—		—	
PKP225D15A2-L	\$57.00	PKP225D15B2-L	\$59.00	PKP225D15A2-R2E <input type="checkbox"/> -L	\$133.00	PKP225D15M2-L	\$122.00
PKP233D08A-L	\$45.00	PKP233D08B-L	\$47.00	—		—	
PKP233D15A-L	\$48.00	PKP233D15B-L	\$50.00	PKP233D15A-R2E <input type="checkbox"/> -L	\$123.00	PKP233D15M-L	\$148.00
PKP235D08A-L	\$52.00	PKP235D08B-L	\$54.00	—		—	
PKP235D15A-L	\$55.00	PKP235D15B-L	\$57.00	PKP235D15A-R2E <input type="checkbox"/> -L	\$130.00	PKP235D15M-L	\$155.00
PKP243D02A-L	\$46.00	PKP243D02B-L	\$48.00	—		—	
PKP243D04A-L	\$46.00	PKP243D04B-L	\$48.00	—		—	
PKP243D06A-L	\$46.00	PKP243D06B-L	\$48.00	—		—	
PKP243D15A-L	\$48.00	PKP243D15B-L	\$50.00	PKP243D15A-R2E <input type="checkbox"/> -L	\$123.00	PKP243D15M-L	\$148.00
PKP244D02A-L	\$47.00	PKP244D02B-L	\$49.00	—		—	
PKP244D05A-L	\$47.00	PKP244D05B-L	\$49.00	—		—	
PKP244D08A-L	\$47.00	PKP244D08B-L	\$49.00	—		—	
PKP244D15A-L	\$49.00	PKP244D15B-L	\$51.00	PKP244D15A-R2E <input type="checkbox"/> -L	\$124.00	PKP244D15M-L	\$149.00
PKP245D03A-L	\$53.00	PKP245D03B-L	\$55.00	—		—	
PKP245D05A-L	\$53.00	PKP245D05B-L	\$55.00	—		—	
PKP245D08A-L	\$53.00	PKP245D08B-L	\$55.00	—		—	
PKP245D15A-L	\$55.00	PKP245D15B-L	\$57.00	PKP245D15A-R2E <input type="checkbox"/> -L	\$130.00	PKP245D15M-L	\$155.00
PKP246D08A-L	\$55.00	PKP246D08B-L	\$57.00	—		—	
PKP246D15A-L	\$57.00	PKP246D15B-L	\$59.00	PKP246D15A-R2E <input type="checkbox"/> -L	\$132.00	PKP246D15M-L	\$157.00
PKP264D07AA-L	\$56.00	PKP264D07BA-L	\$58.00	—		—	
PKP264D14AA-L	\$56.00	PKP264D14BA-L	\$58.00	—		—	
PKP264D21AA-L	\$56.00	PKP264D21BA-L	\$58.00	—		—	
PKP264D28AA-L	\$56.00	PKP264D28BA-L	\$58.00	PKP264D28A-R2E <input type="checkbox"/> -L	\$131.00	PKP264D28M-L	\$171.00
PKP264D42AA-L	\$56.00	PKP264D42BA-L	\$58.00	—		—	
PKP266D07AA-L	\$62.00	PKP266D07BA-L	\$64.00	—		—	
PKP266D14AA-L	\$62.00	PKP266D14BA-L	\$64.00	—		—	
PKP266D21AA-L	\$62.00	PKP266D21BA-L	\$64.00	—		—	
PKP266D28AA-L	\$62.00	PKP266D28BA-L	\$64.00	PKP266D28A-R2E <input type="checkbox"/> -L	\$137.00	PKP266D28M-L	\$177.00
PKP266D42AA-L	\$62.00	PKP266D42BA-L	\$64.00	—		—	
PKP268D07AA-L	\$78.00	PKP268D07BA-L	\$80.00	—		—	
PKP268D14AA-L	\$78.00	PKP268D14BA-L	\$80.00	—		—	
PKP268D21AA-L	\$78.00	PKP268D21BA-L	\$80.00	—		—	
PKP268D28AA-L	\$78.00	PKP268D28BA-L	\$80.00	PKP268D28A-R2E <input type="checkbox"/> -L	\$153.00	PKP268D28M-L	\$193.00
PKP268D42AA-L	\$78.00	PKP268D42BA-L	\$80.00	—		—	
PKP296D45AA	\$108.00	PKP296D45BA	\$112.00	—		—	
PKP296D63AA	\$108.00	PKP296D63BA	\$112.00	—		—	
PKP299D45AA	\$165.00	PKP299D45BA	\$171.00	—		—	
PKP299D63AA	\$165.00	PKP299D63BA	\$171.00	—		—	
PKP2913D45AA	\$209.00	PKP2913D45BA	\$218.00	—		—	
PKP2913D56AA	\$209.00	PKP2913D56BA	\$218.00	—		—	

0.9 PKP Series

Product Name (Single Shaft)	List Price	Product Name (Double Shaft)	List Price	Product Name (Encoder)	List Price	Product Name (Double Electromagnetic Brake)	List Price
PKP243MD06A-L	\$46.00	PKP243MD06B-L	\$48.00	—		—	
PKP243MD15A-L	\$48.00	PKP243MD15B-L	\$50.00	PKP243MD15A-R2F <input type="checkbox"/> -L	\$133.00	PKP243MD15M-L	\$148.00
PKP244MD08A-L	\$47.00	PKP244MD08B-L	\$49.00	—		—	
PKP244MD15A-L	\$49.00	PKP244MD15B-L	\$51.00	PKP244MD15A-R2F <input type="checkbox"/> -L	\$134.00	PKP244MD15M-L	\$149.00
PKP264MD14AA-L	\$56.00	PKP264MD14BA-L	\$58.00	—		—	
PKP264MD28AA-L	\$56.00	PKP264MD28BA-L	\$58.00	PKP264MD28A-R2F <input type="checkbox"/> -L	\$131.00	PKP264MD28M-L	\$171.00
PKP266MD14AA-L	\$62.00	PKP266MD14BA-L	\$64.00	—		—	
PKP266MD28AA-L	\$62.00	PKP266MD28BA-L	\$64.00	PKP266MD28A-R2F <input type="checkbox"/> -L	\$137.00	PKP266MD28M-L	\$177.00
PKP268MD14AA-L	\$78.00	PKP268MD14BA-L	\$80.00	—		—	
PKP268MD28AA-L	\$78.00	PKP268MD28BA-L	\$80.00	PKP268MD28A-R2F <input type="checkbox"/> -L	\$153.00	PKP268MD28M-L	\$193.00

● Encoder motors, enter **L** for Line Driver output in the box () within the product name, **blank** for Voltage output.

● **SH** Geared Type

Product Name (Single Shaft)	List Price	Product Name (Double Shaft)	List Price
PKP223D06A-SG7.2-L	\$168.00	PKP223D06B-SG7.2-L	\$170.00
PKP223D06A-SG9-L	\$168.00	PKP223D06B-SG9-L	\$170.00
PKP223D06A-SG10-L	\$168.00	PKP223D06B-SG10-L	\$170.00
PKP223D06A-SG18-L	\$182.00	PKP223D06B-SG18-L	\$184.00
PKP223D06A-SG36-L	\$182.00	PKP223D06B-SG36-L	\$184.00
PKP223D15A-SG7.2-L	\$168.00	PKP223D15B-SG7.2-L	\$170.00
PKP223D15A-SG9-L	\$168.00	PKP223D15B-SG9-L	\$170.00
PKP223D15B-SG10-L	\$168.00	PKP223D15B-SG10-L	\$170.00
PKP223D15A-SG18-L	\$182.00	PKP223D15B-SG18-L	\$184.00
PKP223D15A-SG36-L	\$182.00	PKP223D15B-SG36-L	\$184.00
PKP243D06A-SG3.6-L	\$157.00	PKP243D06B-SG3.6-L	\$159.00
PKP243D06A-SG7.2-L	\$157.00	PKP243D06B-SG7.2-L	\$159.00
PKP243D06A-SG9-L	\$157.00	PKP243D06B-SG9-L	\$159.00
PKP243D06A-SG10-L	\$157.00	PKP243D06B-SG10-L	\$159.00
PKP243D06A-SG18-L	\$177.00	PKP243D06B-SG18-L	\$179.00
PKP243D06A-SG36-L	\$177.00	PKP243D06B-SG36-L	\$179.00
PKP243D15A-SG3.6-L	\$157.00	PKP243D15B-SG3.6-L	\$159.00
PKP243D15A-SG7.2-L	\$157.00	PKP243D15B-SG7.2-L	\$159.00
PKP243D15A-SG9-L	\$157.00	PKP243D15B-SG9-L	\$159.00
PKP243D15A-SG10-L	\$157.00	PKP243D15B-SG10-L	\$159.00
PKP243D15A-SG18-L	\$177.00	PKP243D15B-SG18-L	\$179.00
PKP243D15A-SG36-L	\$177.00	PKP243D15B-SG36-L	\$179.00
PKP264D07A-SG3.6-L	\$160.00	PKP264D07B-SG3.6-L	\$163.00
PKP264D07A-SG7.2-L	\$160.00	PKP264D07B-SG7.2-L	\$163.00
PKP264D07A-SG9-L	\$160.00	PKP264D07B-SG9-L	\$163.00
PKP264D07A-SG10-L	\$160.00	PKP264D07B-SG10-L	\$163.00
PKP264D07A-SG18-L	\$169.00	PKP264D07B-SG18-L	\$172.00
PKP264D07A-SG36-L	\$169.00	PKP264D07B-SG36-L	\$172.00
PKP264D14A-SG3.6-L	\$160.00	PKP264D14B-SG3.6-L	\$163.00
PKP264D14A-SG7.2-L	\$160.00	PKP264D14B-SG7.2-L	\$163.00
PKP264D14A-SG9-L	\$160.00	PKP264D14B-SG9-L	\$163.00
PKP264D14A-SG10-L	\$160.00	PKP264D14B-SG10-L	\$163.00
PKP264D14A-SG18-L	\$169.00	PKP264D14B-SG18-L	\$172.00
PKP264D14A-SG36-L	\$169.00	PKP264D14B-SG36-L	\$172.00
PKP264D28A-SG3.6-L	\$160.00	PKP264D28B-SG3.6-L	\$163.00
PKP264D28A-SG7.2-L	\$160.00	PKP264D28B-SG7.2-L	\$163.00
PKP264D28A-SG9-L	\$160.00	PKP264D28B-SG9-L	\$163.00
PKP264D28A-SG10-L	\$160.00	PKP264D28B-SG10-L	\$163.00
PKP264D28A-SG18-L	\$169.00	PKP264D28B-SG18-L	\$172.00
PKP264D28A-SG36-L	\$169.00	PKP264D28B-SG36-L	\$172.00

Unipolar

● 1.8 PKP Series

Product Name (Single Shaft)	List Price	Product Name (Double Shaft)	List Price	Product Name (Encoder)	List Price	Product Name (Electromagnetic Brake)	List Price
PKP213U05A	\$65.00	PKP213U05B	\$67.00	PKP213U05A-R2E <input type="checkbox"/> -L	\$148.00	—	
PKP214U06A	\$72.00	PKP214U06B	\$74.00	PKP214U06A-R2E <input type="checkbox"/> -L	\$155.00	—	
PKP223U09A2-L	\$50.00	PKP223U09B2-L	\$52.00	PKP223U09A2-R2E <input type="checkbox"/> -L	\$123.00	PKP223U09M2-L	\$115.00
PKP225U09A2-L	\$57.00	PKP225U09B2-L	\$59.00	PKP225U09A2-R2E <input type="checkbox"/> -L	\$133.00	PKP225U09M2-L	\$122.00
PKP233U12A-L	\$48.00	PKP233U12B-L	\$50.00	PKP233U12A-R2E <input type="checkbox"/> -L	\$123.00	PKP233U12M-L	\$148.00
PKP235U12A-L	\$55.00	PKP235U12B-L	\$57.00	PKP235U12A-R2E <input type="checkbox"/> -L	\$130.00	PKP235U12M-L	\$155.00
PKP243U04A-L	\$48.00	PKP243U04B-L	\$50.00	—	—	—	—
PKP243U06A-L	\$48.00	PKP243U06B-L	\$50.00	—	—	—	—
PKP243U09A-L	\$48.00	PKP243U09B-L	\$50.00	PKP243U09A-R2E <input type="checkbox"/> -L	\$123.00	PKP243U09M-L	\$148.00
PKP244U04A-L	\$49.00	PKP244U04B-L	\$51.00	—	—	—	—
PKP244U08A-L	\$49.00	PKP244U08B-L	\$51.00	—	—	—	—
PKP244U12A-L	\$49.00	PKP244U12B-L	\$51.00	PKP244U12A-R2E <input type="checkbox"/> -L	\$124.00	PKP244U12M-L	\$149.00
PKP245U05A-L	\$55.00	PKP245U05B-L	\$57.00	—	—	—	—
PKP245U08A-L	\$55.00	PKP245U08B-L	\$57.00	—	—	—	—
PKP245U12A-L	\$55.00	PKP245U12B-L	\$57.00	PKP245U12A-R2E <input type="checkbox"/> -L	\$130.00	PKP245U12M-L	\$155.00
PKP246U12A-L	\$57.00	PKP246U12B-L	\$59.00	PKP246U12A-R2E <input type="checkbox"/> -L	\$132.00	PKP246U12M-L	\$157.00
PKP264U10AA-L	\$56.00	PKP264U10BA-L	\$58.00	—	—	—	—
PKP264U20AA-L	\$56.00	PKP264U20BA-L	\$58.00	PKP264U20A-R2E <input type="checkbox"/> -L	\$131.00	PKP264U20M-L	\$171.00
PKP264U30AA-L	\$56.00	PKP264U30BA-L	\$58.00	—	—	—	—
PKP266U10AA-L	\$62.00	PKP266U10BA-L	\$64.00	PKP266U20A-R2E <input type="checkbox"/> -L	\$137.00	PKP266U20M-L	\$177.00
PKP266U20AA-L	\$62.00	PKP266U20BA-L	\$64.00	—	—	—	—
PKP266U30AA-L	\$62.00	PKP266U30BA-L	\$64.00	—	—	—	—
PKP268U10AA-L	\$78.00	PKP268U10BA-L	\$80.00	—	—	—	—
PKP268U20AA-L	\$78.00	PKP268U20BA-L	\$80.00	PKP268U20A-R2E <input type="checkbox"/> -L	\$153.00	PKP268U20M-L	\$193.00
PKP268U30AA-L	\$78.00	PKP268U30BA-L	\$80.00	—	—	—	—
PKP296U20AA	\$108.00	PKP296U20BA	\$112.00	—	—	—	—
PKP296U30AA	\$108.00	PKP296U30BA	\$112.00	—	—	—	—
PKP296U45AA	\$108.00	PKP296U45BA	\$112.00	—	—	—	—
PKP299U20AA	\$165.00	PKP299U20BA	\$171.00	—	—	—	—
PKP299U30AA	\$165.00	PKP299U30BA	\$171.00	—	—	—	—
PKP299U45AA	\$165.00	PKP299U45BA	\$171.00	—	—	—	—
PKP2913U20AA	\$209.00	PKP2913U20BA	\$218.00	—	—	—	—
PKP2913U40AA	\$209.00	PKP2913U40BA	\$218.00	—	—	—	—

● 0.9 PKP Series

Product Name (Single Shaft)	List Price	Product Name (Double Shaft)	List Price	Product Name (Encoder)	List Price	Product Name (Double Electromagnetic Brake)	List Price
PKP243MU09A-L	\$48.00	PKP243MU09B-L	\$50.00	PKP243MU09A-R2F <input type="checkbox"/> -L	\$133.00	PKP243MU09M-L	\$148.00
PKP244MU12A-L	\$49.00	PKP244MU12B-L	\$51.00	PKP244MU12A-R2F <input type="checkbox"/> -L	\$134.00	PKP244MU12M-L	\$149.00
PKP264MU20AA-L	\$56.00	PKP264MU20BA-L	\$58.00	PKP264MU20A-R2F <input type="checkbox"/> -L	\$131.00	PKP264MU20M-L	\$171.00
PKP266MU20AA-L	\$62.00	PKP266MU20BA-L	\$64.00	PKP266MU20A-R2F <input type="checkbox"/> -L	\$137.00	PKP266MU20M-L	\$177.00
PKP268MU20AA-L	\$78.00	PKP268MU20BA-L	\$80.00	PKP268MU20A-R2F <input type="checkbox"/> -L	\$153.00	PKP268MU20M-L	\$193.00

● SH Geared Type

Product Name (Single Shaft)	List Price	Product Name (Double Shaft)	List Price
PKP223U09A-SG7.2-L	\$168.00	PKP223U09B-SG7.2-L	\$170.00
PKP223U09A-SG9-L	\$168.00	PKP223U09B-SG9-L	\$170.00
PKP223U09A-SG10-L	\$168.00	PKP223U09B-SG10-L	\$170.00
PKP223U09A-SG18-L	\$182.00	PKP223U09B-SG18-L	\$184.00
PKP223U09A-SG36-L	\$182.00	PKP223U09B-SG36-L	\$184.00
PKP243U09A-SG3.6-L	\$157.00	PKP243U09B-SG3.6-L	\$159.00
PKP243U09A-SG7.2-L	\$157.00	PKP243U09B-SG7.2-L	\$159.00
PKP243U09A-SG9-L	\$157.00	PKP243U09B-SG9-L	\$159.00
PKP243U09A-SG10-L	\$157.00	PKP243U09B-SG10-L	\$159.00
PKP243U09A-SG18-L	\$177.00	PKP243U09B-SG18-L	\$179.00
PKP243U09A-SG36-L	\$177.00	PKP243U09B-SG36-L	\$179.00
PKP264U10A-SG3.6-L	\$160.00	PKP264U10B-SG3.6-L	\$163.00
PKP264U10A-SG7.2-L	\$160.00	PKP264U10B-SG7.2-L	\$163.00
PKP264U10A-SG9-L	\$160.00	PKP264U10B-SG9-L	\$163.00
PKP264U10A-SG10-L	\$160.00	PKP264U10B-SG10-L	\$163.00
PKP264U10A-SG18-L	\$169.00	PKP264U10B-SG18-L	\$172.00
PKP264U10A-SG36-L	\$169.00	PKP264U10B-SG36-L	\$172.00
PKP264U20A-SG3.6-L	\$160.00	PKP264U20B-SG3.6-L	\$163.00
PKP264U20A-SG7.2-L	\$160.00	PKP264U20B-SG7.2-L	\$163.00
PKP264U20A-SG9-L	\$160.00	PKP264U20B-SG9-L	\$163.00
PKP264U20A-SG10-L	\$160.00	PKP264U20B-SG10-L	\$163.00
PKP264U20A-SG18-L	\$169.00	PKP264U20B-SG18-L	\$172.00
PKP264U20A-SG36-L	\$169.00	PKP264U20B-SG36-L	\$172.00

● Encoder motors, enter **L** for Line Driver output in the box () within the product name, **blank** for Voltage output.
 ● See Website for Unipolar Stepper Motor Specifications.

Step Angle 1.8° Frame Size 20 mm (0.79 in.) Bipolar

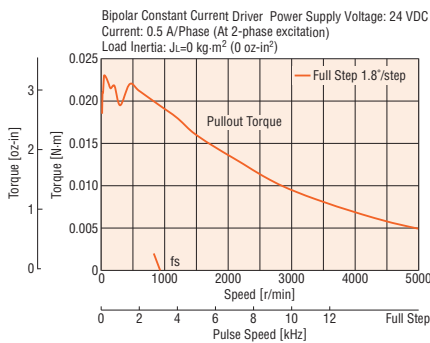
Specifications

Product Name -Single Shaft -Double Shaft -with Encoder	Holding Torque N·m (oz·in)	Rated Current A/phase	Voltage VDC	Resistance Ω/phase	Inductance mH/phase	Rotor Inertia J kg·m ² (oz·in ²)	Lead Wires
PKP213D05A PKP213D05B PKP213D05A-R2E -L	0.02 (2.8)	0.5	4.25	8.5	4.1	1.6×10 ⁻⁷ (0.0088)	4
PKP214D06A PKP214D06B PKP214D06A-R2E -L	0.036 (5.1)	0.6	3.9	6.5	3.5	2.9×10 ⁻⁷ (0.0159)	

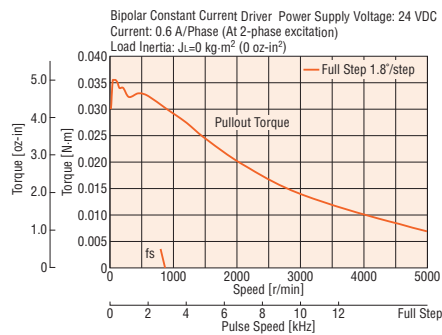
● Enter the encoder type (L for Line Driver output, **blank** for Voltage output) in the box () within the product name.

Speed – Torque Characteristics

PKP213D05



PKP214D06

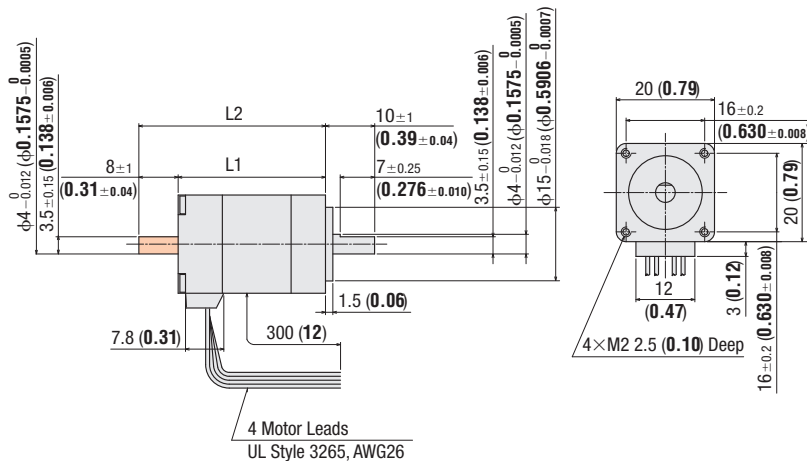


Note

- Data for the speed – torque characteristics is based on Oriental Motor's internal measurement conditions. If the conditions are changed, the characteristics may also change as a result.
- Depending on the driving conditions, a considerable amount of heat may be generated by the motor. Be sure to keep the temperature of the motor case under 100°C (212°F).
- For Encoder motor, to protect the encoder, keep the motor case temperature at 85°C (185°F) max.





Dimensions Unit = mm (in.)

Product Name	L1	L2	Mass kg (lb.)	CAD
PKP213D05A	30	—	0.05	B976
PKP213D05B	(1.18)	38 (1.50)	(0.11)	
PKP214D06A	40	—	0.07	B978
PKP214D06B	(1.57)	48 (1.89)	(0.154)	



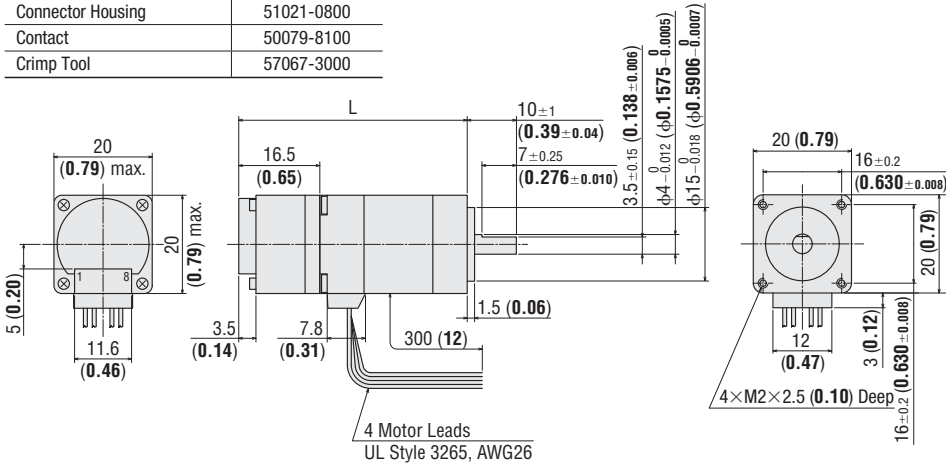
- These dimensions are for double shaft products.
For single shaft products, ignore the areas.
- Back shaft of double shaft products have a flat the whole length.

● Motor with Encoder

Product Name	Motor Product Name	L	Mass kg (lb.)	CAD
PKP213D05A-R2E  -L	PKP213D05A-R2E 	46.5 (1.83)	0.06 (0.132)	B1100
PKP214D06A-R2E  -L	PKP214D06A-R2E 	56.5 (2.22)	0.08 (0.176)	B1101

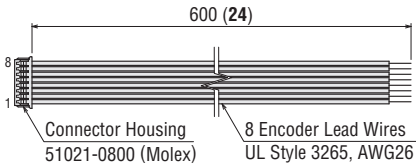
● Applicable Connector (Molex)

	Encoder
Connector Housing	51021-0800
Contact	50079-8100
Crimp Tool	57067-3000



● Included

Connection cable for encoder



Step Angle 1.8° Frame Size 28 mm (1.10 in.) Bipolar

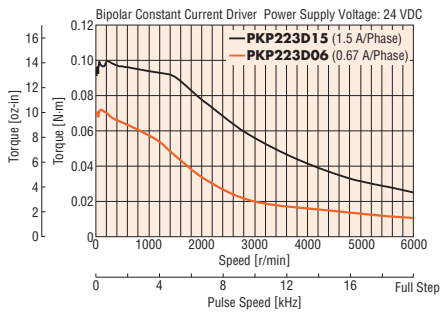
Specifications

Product Name -Single/Double Shaft -with Encoder -with Brake	Holding Torque N·m (oz·in)	Rated Current A/phase	Voltage VDC	Resistance Ω/phase	Inductance mH/phase	Rotor Inertia J kg·m ² (oz·in ²)	Electromagnetic Brake Static Friction Force N·m (oz·in)	Lead Wires
PKP223D06 □-L	0.065 (9.2)	0.67	3.8	5.6	4	9×10 ⁻⁷ (0.049)	—	4
PKP223D15 □2-L PKP223D15A2-R2E □-L	0.095 (13.4)	1.5	1.77	1.8	0.96		—	
PKP223D15M2-L						14×10 ⁻⁷ (0.077)	0.08 (11.33)	
PKP225D06 □-L	0.11 (15.6)	0.67	6.2	9.2	5.6	18×10 ⁻⁷ (0.098)	—	
PKP225D15 □2-L PKP225D15A2-R2E □-L	0.19 (26)	1.5	3	2.05	1.6		—	
PKP225D15M2-L						23×10 ⁻⁷ (0.126)	0.08 (11.33)	

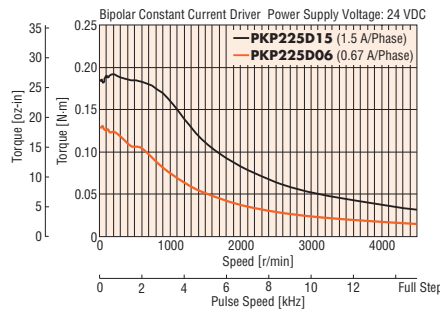
- Enter **A** (single shaft) or **B** (double shaft) in the box (□) within the product name.
- Enter the encoder type (**L** for Line Driver output, **blank** for Voltage output) in the box (□) within the product name.
- A 0.6 m (2 ft.) motor connection cable and encoder cable (if applicable) is included with these products.

Speed – Torque Characteristics

PKP223D



PKP225D



Note

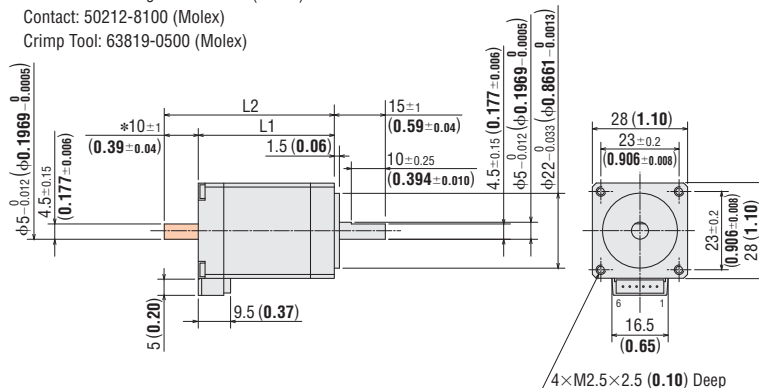
- Data for the speed – torque characteristics is based on Oriental Motor's internal measurement conditions. If the conditions are changed, the characteristics may also change as a result.
- Depending on the driving conditions, a considerable amount of heat may be generated by the motor. Be sure to keep the temperature of the motor case under 100°C (212°F).
- For Encoder motor, to protect the encoder, keep the motor case temperature at 85°C (185°F) max.

Dimensions Unit = mm (in.)

● Motor

Product Name	Motor Product Name	L1	L2	Mass kg (lb.)	CAD
PKP223D06A-L	PKP223D06A	—	—	0.11 (0.24)	B980
PKP223D06B-L	PKP223D06B	32 (1.26)	42 (1.65)		
PKP223D15A2-L	PKP223D15A2	—	—		
PKP223D15B2-L	PKP223D15B2	—	42 (1.65)		
PKP225D06A-L	PKP225D06A	—	—	0.2 (0.44)	B982
PKP225D06B-L	PKP225D06B	51.5 (2.03)	61.5 (2.42)		
PKP225D15A2-L	PKP225D15A2	—	—		
PKP225D15B2-L	PKP225D15B2	—	61.5 (2.42)		

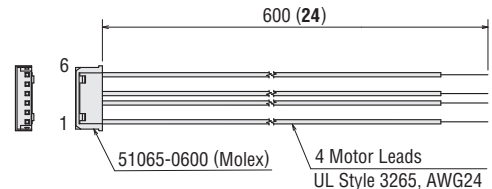
- Motor Applicable Connector
Connector Housing: 51065-0600 (Molex)
Contact: 50212-8100 (Molex)
Crimp Tool: 63819-0500 (Molex)



● Connection Cables (Included)

◇ Cable for Motor

- Bipolar 4 Lead Wires
LC2B06A



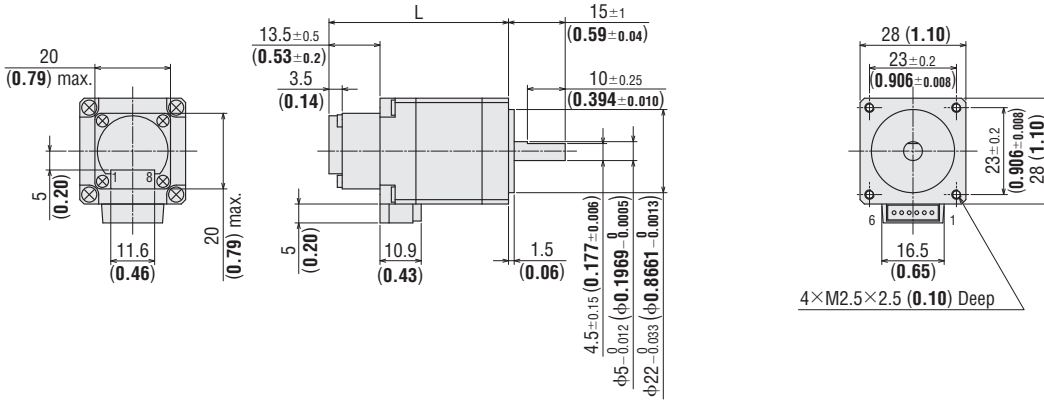
- *The length of machining on the double shaft model is 10±0.25 (0.394±0.010).
- These dimensions are for double shaft products. For single shaft products, ignore the shaded areas.

● Motor with Encoder

Product Name	Motor Product Name	L	Mass kg (lb.)	CAD
PKP223D15A2-R2E-L	PKP223D15A2-R2E	47.5 (1.87)	0.12 (0.26)	B1198
PKP225D15A2-R2E-L	PKP225D15A2-R2E	67 (2.64)	0.21 (0.46)	B1199

● Applicable connector (Molex)

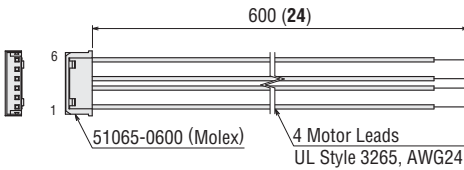
	Motor	Encoder
Connector Housing	51065-0600	51021-0800
Contact	50212-8100	50079-8100
Crimp Tool	57176-5000	57067-3000



● Included

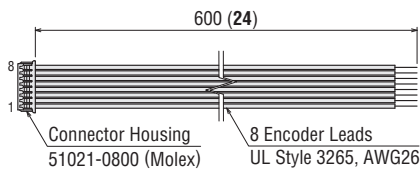
Motor connection cable

Product Name: **LC2B06A**



● Included

Encoder connection cable



● Motor

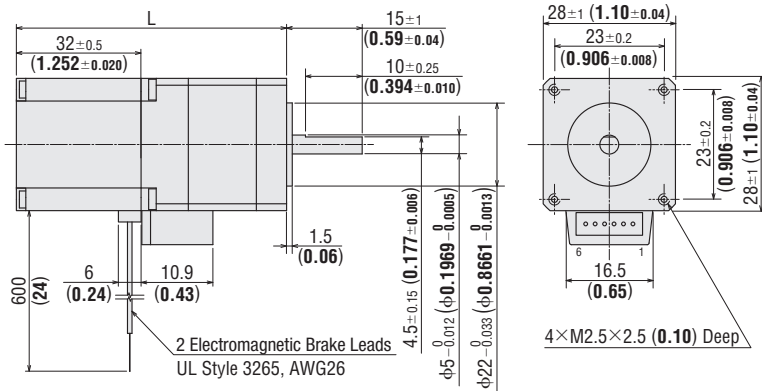
Product Name	Motor Product Name	L	Mass kg (lb.)	CAD
PKP223D15M2-L	PKP223D15M2	65.5 (2.58)	0.17 (0.37)	B1196
PKP225D15M2-L	PKP225D15M2	85 (3.35)	0.26 (0.57)	B1197

● Applicable Connector (Molex)

Connector Housing: 51065-0600

Contact: 50212-8100

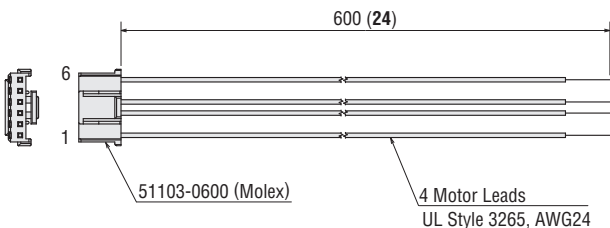
Crimp Tool: 63819-0500



● Included

Connection Cable

Product Name: **LC2B06B**



Step Angle 1.8° Frame Size 35 mm (1.38 in.) Bipolar

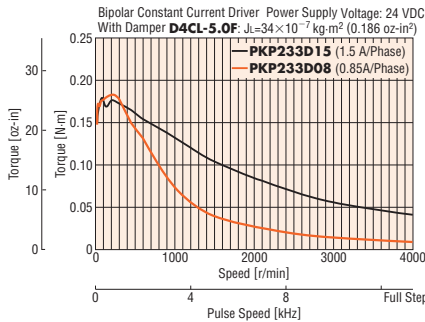
Specifications

Product Name -Single/Double Shaft -with Encoder -with Brake	Holding Torque N·m (oz·in)	Rated Current A/phase	Voltage VDC	Resistance Ω/phase	Inductance mH/phase	Rotor Inertia J kg·m ² (oz·in ²)	Electromagnetic Brake Static Friction Force N·m (oz·in)	Lead Wires
PKP233D08□-L	0.2 (28)	0.85	4.6	5.4	5.6	24×10 ⁻⁷ (0.131)	—	4
PKP233D15□-L		1.5	2.43	1.62	1.5	36×10 ⁻⁷ (0.197)	—	
PKP233D15A-R2E□-L							0.3 (4.2)	
PKP233D15M-L	0.37 (52)	0.85	5.8	6.8	8	50×10 ⁻⁷ (0.27)	—	
PKP235D08□-L		1.5	3.6	2.4	2.6	62×10 ⁻⁷ (0.339)	0.3 (4.2)	
PKP235D15□-L							—	
PKP235D15A-R2E□-L						0.3 (4.2)		
PKP233D15M-L								

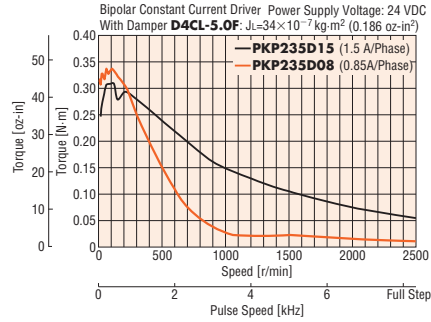
- Enter **A** (single shaft) or **B** (double shaft) in the box (□) within the product name.
- Enter the encoder type (**L** for Line Driver output, **blank** for Voltage output) in the box (□) within the product name.
- A 0.6 m (2 ft.) motor connection cable and encoder cable (if applicable) is included with these products.

Speed – Torque Characteristics

PKP233D



PKP235D



Note

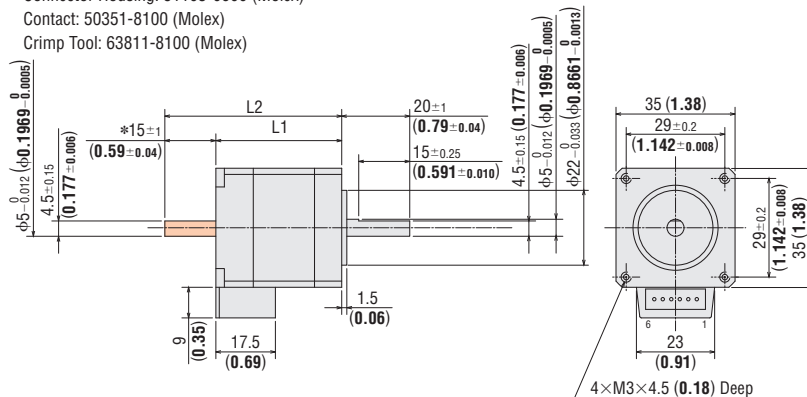
- Data for the speed – torque characteristics is based on Oriental Motor's internal measurement conditions. If the conditions are changed, the characteristics may also change as a result.
- Depending on the driving conditions, a considerable amount of heat may be generated by the motor. Be sure to keep the temperature of the motor case under 100°C (212°F).
- For Encoder motor, to protect the encoder, keep the motor case temperature at 85°C (185°F) max.

Dimensions Unit = mm (in.)

Motor

Product Name	Motor Product Name	L1	L2	Mass kg (lb.)	CAD
PKP233D08A-L	PKP233D08A	37 (1.46)	—	0.18 (0.4)	B983
PKP233D08B-L	PKP233D08B		52 (2.05)		
PKP233D15A-L	PKP233D15A		—		
PKP233D15B-L	PKP233D15B	52 (2.05)	52 (2.05)	0.285 (0.63)	B984
PKP235D08A-L	PKP235D08A		—		
PKP235D08B-L	PKP235D08B		67 (2.67)		
PKP235D15A-L	PKP235D15A	67 (2.67)	—	0.285 (0.63)	B984
PKP235D15B-L	PKP235D15B		67 (2.67)		

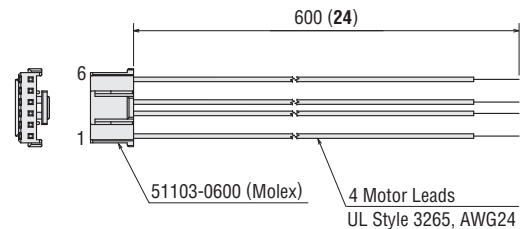
- Motor Applicable Connector
Connector Housing: 51103-0600 (Molex)
Contact: 50351-8100 (Molex)
Crimp Tool: 63811-8100 (Molex)



Connection Cables (Included)

◇ Cable for Motor

- Bipolar 4 Lead Wires
LC2B06A



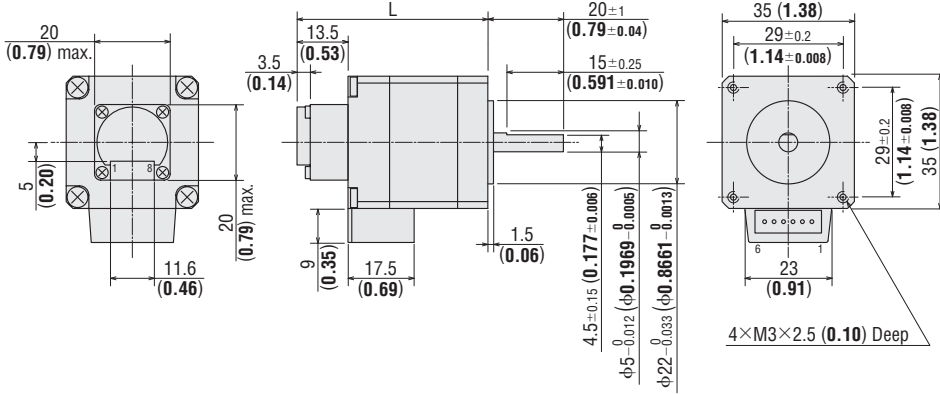
- *The length of machining on the double shaft product is 15±0.25 (0.591±0.010).
- These dimensions are for double shaft products. For single shaft products, ignore the shaded areas.

● Motor with Encoder

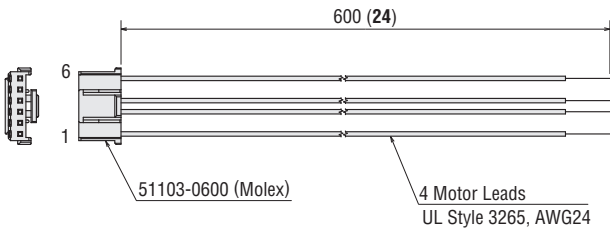
Product Name	Motor Product Name	L	Mass kg (lb.)	CAD
PKP233D15A-R2E-L	PKP233D15A-R2E	50.5 (1.99)	0.19 (0.42)	B1102
PKP235D15A-R2E-L	PKP235D15A-R2E	65.5 (2.57)	0.295 (0.65)	B1103

● Applicable connector (Molex)

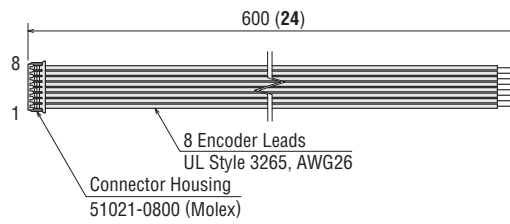
	Motor	Encoder
Connector Housing	51103-0600	51021-0800
Contact	50351-8100	50079-8100
Crimp Tool	57295-5000	57067-3000



● Included
Motor connection cable
Product Name: **LC2B06B**



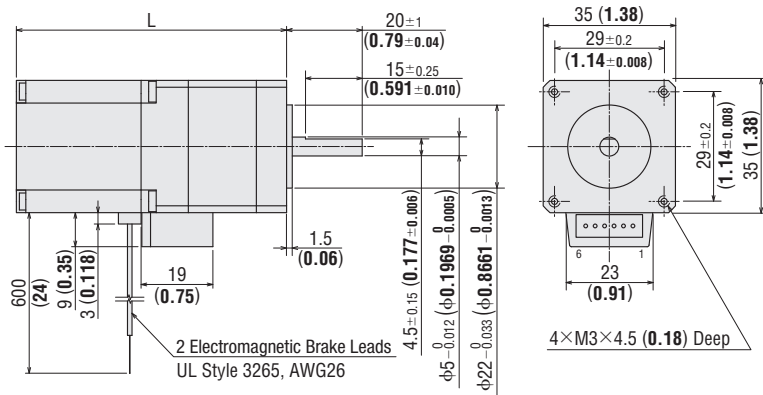
● Included
Encoder connection cable



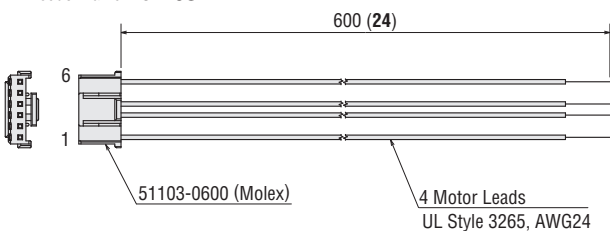
● Electromagnetic Brake Motor

Product Name	Motor Product Name	L	Mass kg (lb.)	CAD
PKP233D15M-L	PKP233D15M	71 (2.79)	0.285 (0.63)	B1134
PKP235D15M-L	PKP235D15M	86 (3.39)	0.39 (0.86)	B1135

● Applicable Connector (Molex)
Connector Housing: 51103-0600
Contact: 50351-8100
Crimp Tool: 57295-5000



● Included
Connection Cable
Product Name: **LC2B06B**



Step Angle 1.8° Frame Size 42 mm (1.65 in.) Bipolar

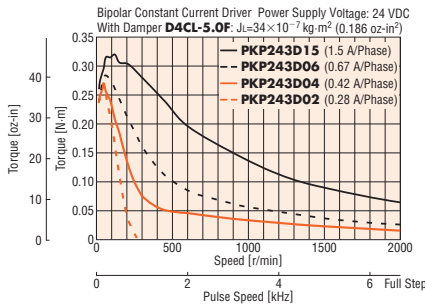
Specifications

Product Name -Single/Double Shaft -with Encoder -with Brake	Holding Torque N·m (oz·in)	Rated Current A/phase	Voltage VDC	Resistance Ω/phase	Inductance mH/phase	Rotor Inertia J kg·m ² (oz·in ²)	Electromagnetic Brake Static Friction Force N·m (oz·in)	Lead Wires	
PKP243D02□-L	0.32 (45)	0.28	16.8	60	132	36×10 ⁻⁷ (0.197)	-	4	
PKP243D04□-L		0.42	9.24	22	49.6				
PKP243D06□-L		0.67	6.3	9.4	20				
PKP243D15□-L PKP243D15A-R2E□-L PKP243D15M-L	0.35 (49)	1.5	2.85	1.9	5	48×10 ⁻⁷ (0.262)	0.3 (42)		
PKP244D02□-L	0.46 (65)	0.28	16.8	60	114.4	57×10 ⁻⁷ (0.31)	-		
PKP244D05□-L	0.48 (68)	0.57	8.21	14.4	30.4				
PKP244D08□-L		0.85	6.8	8	15.6				
PKP244D15□-L PKP244D15A-R2E□-L PKP244D15M-L	0.48 (68)	1.5	3.9	2.6	4.9	69×10 ⁻⁷ (0.377)	0.3 (42)		
PKP245D03□-L		0.58 (82)	0.35	16.8	48	132	83×10 ⁻⁷ (0.45)		-
PKP245D05□-L			0.57	9.12	16	45.2			
PKP245D08□-L	0.85		6.46	7.6	20				
PKP245D15□-L PKP245D15A-R2E□-L PKP245D15M-L	0.58 (82)	1.5	3.6	2.4	6.6	95×10 ⁻⁷ (0.519)	0.3 (42)		
PKP246D08□-L		0.93 (132)	0.85	10	12	26	114×10 ⁻⁷ (0.62)	-	
PKP246D15□-L			1.5	5.8	3.87	8			
PKP246D15A-R2E□-L PKP246D15M-L	126×10 ⁻⁷ (0.69)								0.3 (42)

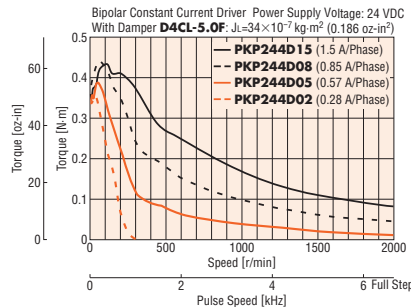
- Enter **A** (single shaft) or **B** (double shaft) in the box (□) within the product name.
- Enter the encoder type (**L** for Line Driver output, **blank** for Voltage output) in the box (□) within the product name.
- A 0.6 m (2 ft.) motor connection cable and encoder cable (if applicable) is included with these products.

Speed – Torque Characteristics

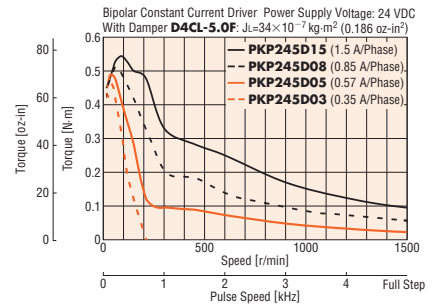
PKP243D



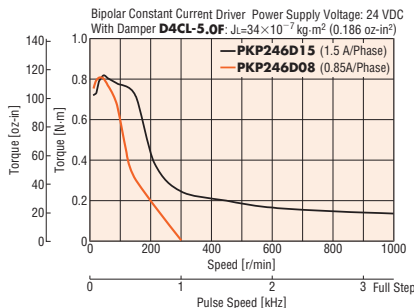
PKP244D



PKP245D



PKP246D



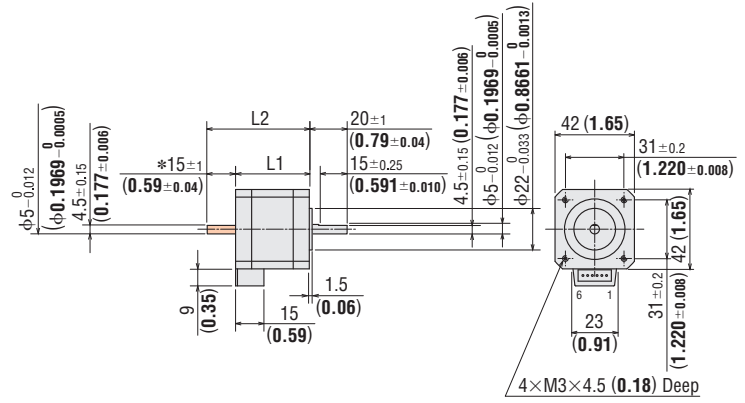
Note

- Data for the speed – torque characteristics is based on Oriental Motor's internal measurement conditions. If the conditions are changed, the characteristics may also change as a result.
- Depending on the driving conditions, a considerable amount of heat may be generated by the motor. Be sure to keep the temperature of the motor case under 100°C (212°F).
- For Encoder motor, to protect the encoder, keep the motor case temperature at 85°C (185°F) max.

Dimensions Unit = mm (in.)

Motor

Product Name	Motor Product Name	L1	L2	Mass kg (lb.)	CAD
PKP243D02A-L	PKP243D02A	33 (1.30)	-	0.25 (0.55)	B968
PKP243D02B-L	PKP243D02B		48 (1.89)		
PKP243D04A-L	PKP243D04A		-		
PKP243D04B-L	PKP243D04B		48 (1.89)		
PKP243D06A-L	PKP243D06A		-		
PKP243D06B-L	PKP243D06B		48 (1.89)		
PKP243D15A-L	PKP243D15A	39 (1.54)	-	0.3 (0.66)	B969
PKP243D15B-L	PKP243D15B		48 (1.89)		
PKP244D02A-L	PKP244D02A		-		
PKP244D02B-L	PKP244D02B		54 (2.13)		
PKP244D05A-L	PKP244D05A		-		
PKP244D05B-L	PKP244D05B		54 (2.13)		
PKP244D08A-L	PKP244D08A	47 (1.85)	-	0.39 (0.86)	B970
PKP244D08B-L	PKP244D08B		54 (2.13)		
PKP244D15A-L	PKP244D15A		-		
PKP244D15B-L	PKP244D15B		54 (2.13)		
PKP245D03A-L	PKP245D03A		-		
PKP245D03B-L	PKP245D03B		62 (2.44)		
PKP245D05A-L	PKP245D05A	59 (2.32)	-	0.5 (1.1)	B971
PKP245D05B-L	PKP245D05B		62 (2.44)		
PKP245D08A-L	PKP245D08A		-		
PKP245D08B-L	PKP245D08B		62 (2.44)		
PKP245D15A-L	PKP245D15A		-		
PKP245D15B-L	PKP245D15B		62 (2.44)		
PKP246D08A-L	PKP246D08A	59 (2.32)	-	0.5 (1.1)	B971
PKP246D08B-L	PKP246D08B		74 (2.91)		
PKP246D15A-L	PKP246D15A		-		
PKP246D15B-L	PKP246D15B	74 (2.91)			



*The length of machining on the double shaft product is 15±0.25 (0.591±0.010).

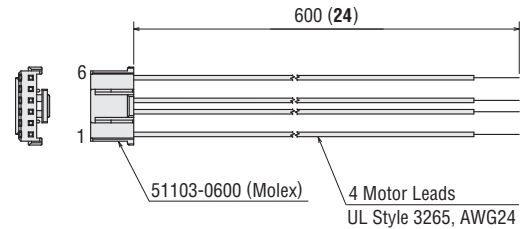
● These dimensions are for double shaft products.
For single shaft products, ignore the areas.

● Applicable Connector
Connector Housing: 51103-0600 (Molex)
Contact: 50351-8100 (Molex)
Crimp Tool: 63811-8100 (Molex)

Connection Cables (Included)

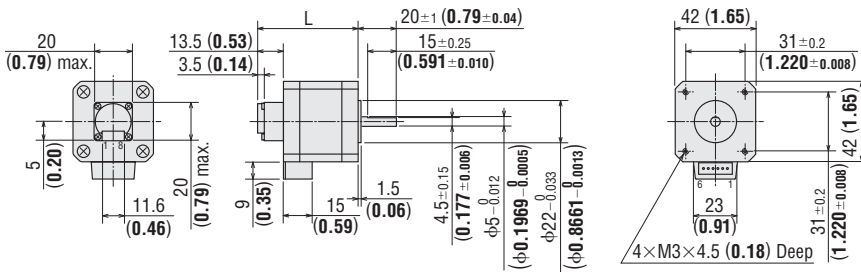
◇ Cable for Motor

- Bipolar 4 Lead Wires
LC2B06B

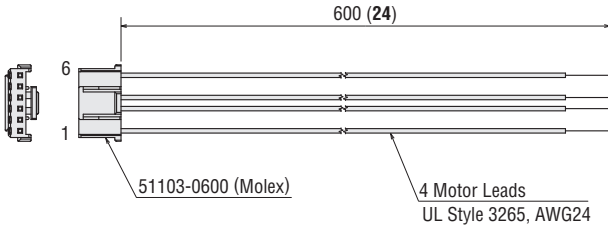


Motor with Encoder

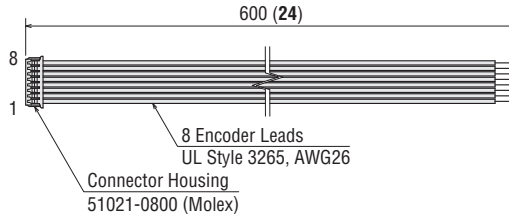
Product Name	Motor Product Name	L	Mass kg (lb.)	CAD
PKP243D15A-R2E-L	PKP243D15A-R2E	46.5 (1.83)	0.26 (0.57)	B1104
PKP244D15A-R2E-L	PKP244D15A-R2E	52.5 (2.07)	0.31 (0.68)	B1105
PKP245D15A-R2E-L	PKP245D15A-R2E	60.5 (2.38)	0.40 (0.88)	B1106
PKP246D15A-R2E-L	PKP246D15A-R2E	72.5 (2.85)	0.51 (1.12)	B1107



● Included Motor connection cable Product Name: **LC2B06B**



● Included Encoder connection cable

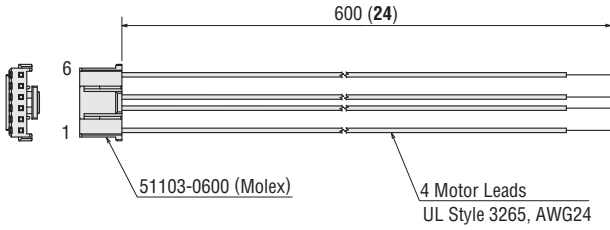
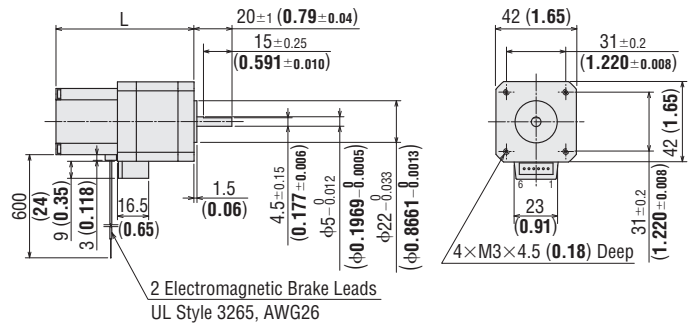


● Motor with Electromagnetic Brake

Product Name	Motor Product Name	L	Mass kg (lb.)	CAD
PKP243D15M-L	PKP243D15M	67 (2.64)	0.36 (0.79)	B1136
PKP244D15M-L	PKP244D15M	73 (2.87)	0.41 (0.9)	B1137
PKP245D15M-L	PKP245D15M	81 (3.19)	0.5 (1.10)	B1138
PKP246D15M-L	PKP246D15M	93 (3.66)	0.61 (1.34)	B1139

- Applicable Connector (Molex)
Connector Housing: 51103-0600
Contact: 50351-8100
Crimp Tool: 57295-5000

- Included
Connection Cable
Product Name: **LC2B06B**



Step Angle 1.8° Frame Size 56.4 mm (2.22 in.) Bipolar

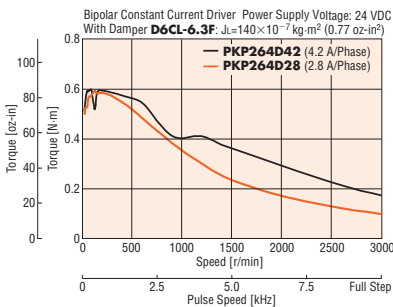
Specifications

Product Name -Single/Double Shaft -with Encoder -with Brake	Holding Torque N·m (oz·in)	Rated Current A/phase	Voltage VDC	Resistance Ω/phase	Inductance mH/phase	Rotor Inertia J kg·m ² (oz·in ²)	Electromagnetic Brake Static Friction Force N·m (oz·in)	Lead Wires
PKP264D07□A-L	0.6 (85)	0.71	8.31	11.7	28.8	120×10 ⁻⁷ (0.66)	-	4
PKP264D14□A-L		1.4	4.06	2.9	7.2			
PKP264D21□A-L		2.1	2.73	1.3	3.2			
PKP264D28□A-L		2.8	2	0.73	1.8	270×10 ⁻⁷ (1.47)		
PKP264D28A-R2E□-L						120×10 ⁻⁷ (0.66)		
PKP264D28M-L	270×10 ⁻⁷ (1.47)							
PKP264D42□A-L	1.4 (198)	4.2	1.38	0.33	0.8	120×10 ⁻⁷ (0.66)	-	
PKP266D07□A-L		0.71	11.5	16.2	46.4	290×10 ⁻⁷ (1.59)	-	
PKP266D14□A-L		1.4	5.6	4	11.6			
PKP266D21□A-L		2.1	3.86	1.84	5.32			
PKP266D28□A-L		2.8	2.8	1	2.9	440×10 ⁻⁷ (2.41)		
PKP266D28A-R2E□-L	290×10 ⁻⁷ (1.59)							
PKP266D28M-L	440×10 ⁻⁷ (2.41)							
PKP266D42□A-L	2.3 (320)	4.2	1.84	0.44	1.3	290×10 ⁻⁷ (1.59)	-	
PKP268D07□A-L		0.71	13.2	18.6	70.4	490×10 ⁻⁷ (2.7)	-	
PKP268D14□A-L		1.4	6.86	4.9	17.6			
PKP268D21□A-L		2.1	4.41	2.1	7.84			
PKP268D28□A-L		2.8	3.4	1.23	4.4	640×10 ⁻⁷ (3.5)		
PKP268D28A-R2E□-L	490×10 ⁻⁷ (2.7)							
PKP268D28AM-L	640×10 ⁻⁷ (3.5)							
PKP268D42□A-L	490×10 ⁻⁷ (2.7)							

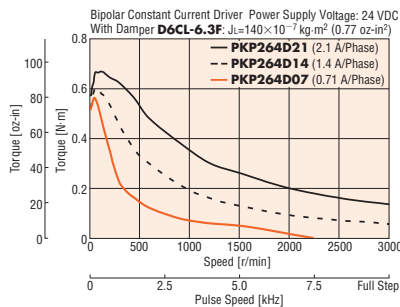
- Enter **A** (single shaft) or **B** (double shaft) in the box (□) within the product name.
- Enter the encoder type (**L** for Line Driver output, **blank** for Voltage output) in the box (□) within the product name.
- A 0.6 m (2 ft.) motor connection cable and encoder cable (if applicable) is included with these products.

Speed – Torque Characteristics

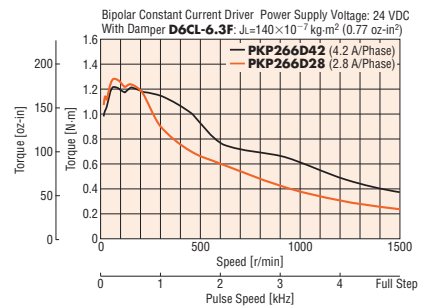
PKP264D



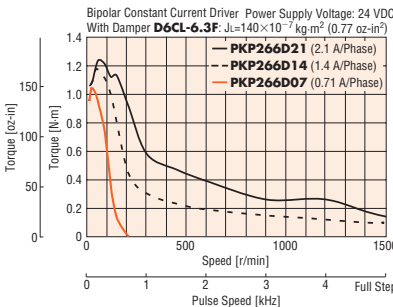
PKP264D



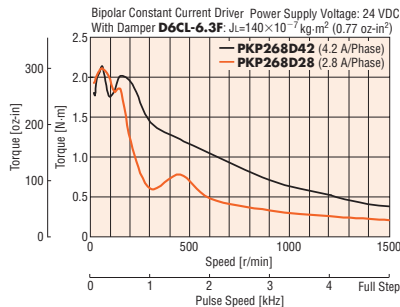
PKP266D



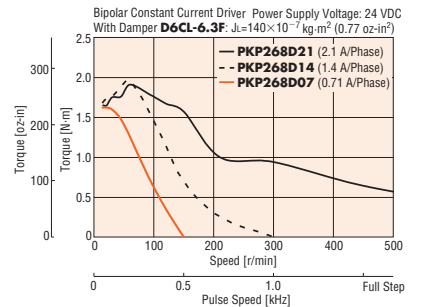
PKP266D



PKP268D



PKP268D



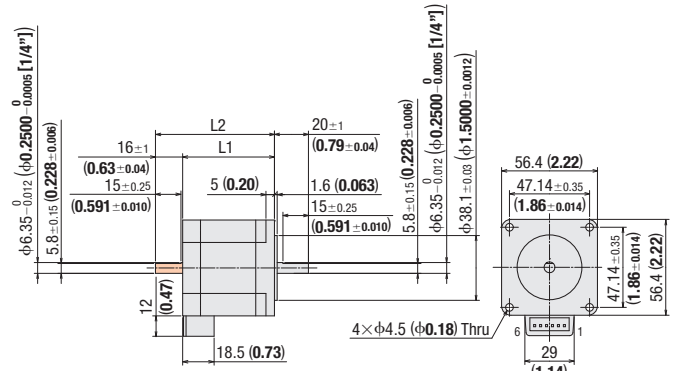
Note

- Data for the speed – torque characteristics is based on Oriental Motor's internal measurement conditions. If the conditions are changed, the characteristics may also change as a result.
- Depending on the driving conditions, a considerable amount of heat may be generated by the motor. Be sure to keep the temperature of the motor case under 100°C (212°F).
- For Encoder motor, to protect the encoder, keep the motor case temperature at 85°C (185°F) max.

Dimensions Unit = mm (in.)

● Motor

Product Name	Motor Product Name	L1	L2	Mass kg (lb.)	CAD
PKP264D07AA-L	PKP264D07AA	39 (1.54)	-	0.46 (1.01)	B1028
PKP264D07BA-L	PKP264D07BA		55 (2.17)		
PKP264D14AA-L	PKP264D14AA		-		
PKP264D14BA-L	PKP264D14BA		55 (2.17)		
PKP264D21AA-L	PKP264D21AA		-		
PKP264D21BA-L	PKP264D21BA		55 (2.17)		
PKP264D28AA-L	PKP264D28AA		-		
PKP264D28BA-L	PKP264D28BA		55 (2.17)		
PKP264D42AA-L	PKP264D42AA		-		
PKP264D42BA-L	PKP264D42BA		55 (2.17)		
PKP266D07AA-L	PKP266D07AA	54 (2.13)	-	0.73 (1.61)	B1029
PKP266D07BA-L	PKP266D07BA		70 (2.76)		
PKP266D14AA-L	PKP266D14AA		-		
PKP266D14BA-L	PKP266D14BA		70 (2.76)		
PKP266D21AA-L	PKP266D21AA		-		
PKP266D21BA-L	PKP266D21BA		70 (2.76)		
PKP266D28AA-L	PKP266D28AA		-		
PKP266D28BA-L	PKP266D28BA		70 (2.76)		
PKP266D42AA-L	PKP266D42AA		-		
PKP266D42BA-L	PKP266D42BA		70 (2.76)		
PKP268D07AA-L	PKP268D07AA	76 (2.99)	-	1.1 (2.40)	B1030
PKP268D07BA-L	PKP268D07BA		92 (3.62)		
PKP268D14AA-L	PKP268D14AA		-		
PKP268D14BA-L	PKP268D14BA		92 (3.62)		
PKP268D21AA-L	PKP268D21AA		-		
PKP268D21BA-L	PKP268D21BA		92 (3.62)		
PKP268D28AA-L	PKP268D28AA		-		
PKP268D28BA-L	PKP268D28BA		92 (3.62)		
PKP268D42AA-L	PKP268D42AA		-		
PKP268D42BA-L	PKP268D42BA		92 (3.62)		

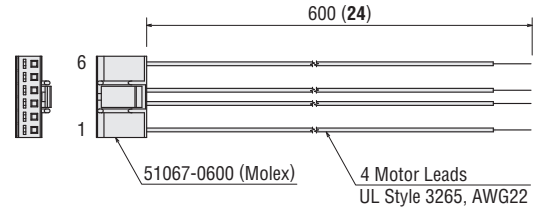


● These dimensions are for double shaft products. For single shaft products, ignore the shaded areas.

● Connection Cables (Included)

◇ Cable for Motor

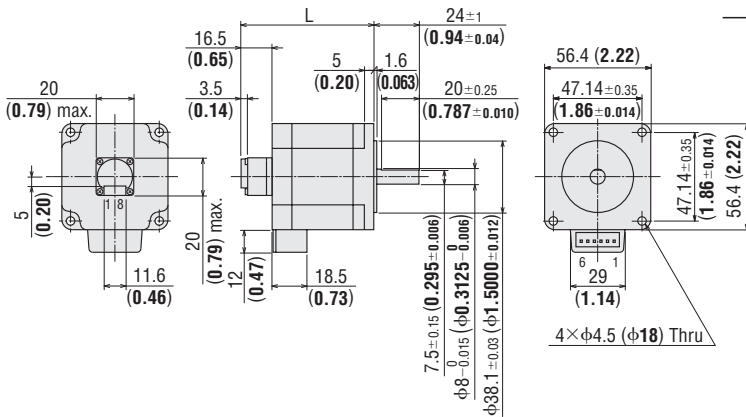
- Bipolar 4 Lead Wires
- LC2B06C



- Applicable Connector
- Connector Housing: 51067-0600 (Molex)
- Contact: 50217-9101 (Molex)
- Crimp Tool: 63811-8300 (Molex)

● Motor with Encoder

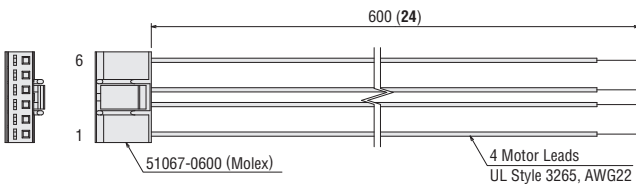
Product Name	Motor Product Name	L	Mass kg (lb.)	CAD
PKP264D28A-R2E-L	PKP264D28A-R2E	55.5 (2.19)	0.47 (1.04)	B1108
PKP266D28A-R2E-L	PKP266D28A-R2E	70.5 (2.78)	0.74 (1.63)	B1109
PKP268D28A-R2E-L	PKP268D28A-R2E	92.5 (3.64)	1.11 (2.45)	B1110



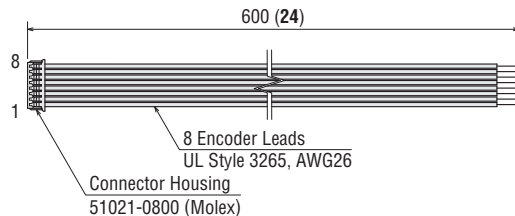
- Applicable connector (Molex)

	Motor	Encoder
Connector Housing	51067-0600	51021-0800
Contact	50217-9101	50079-8100
Crimp Tool	57189-5000 57190-5000	57067-3000

- Included
- Motor connection cable
- Product Name: **LC2B06C**



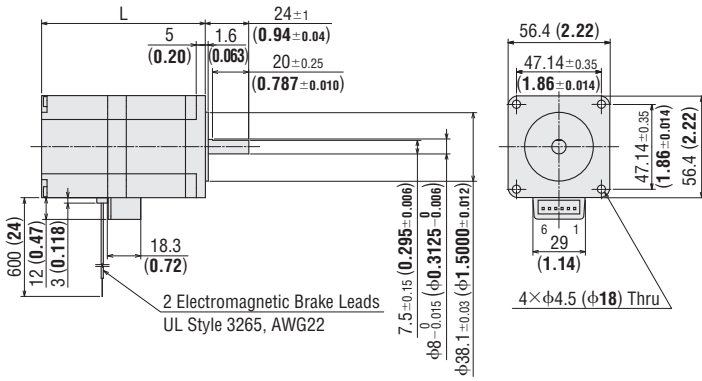
- Included
- Encoder connection cable



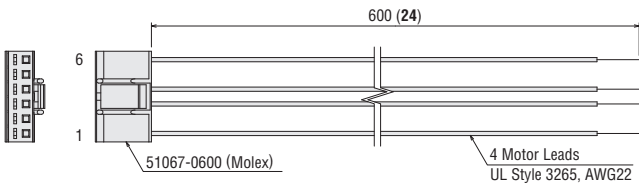
● Motor with Electromagnetic Brake

Product Name	Motor Product Name	L	Mass kg (lb.)	CAD
PKP264D28M-L	PKP264D28M	75.5 (2.97)	0.76 (1.68)	B1140
PKP266D28M-L	PKP266D28M	90.5 (3.56)	1.03 (2.27)	B1141
PKP268D28M-L	PKP268D28M	112.5 (4.43)	1.4 (3.08)	B1142

- Applicable Connector (Molex)
 Connector Housing: 51067-0600
 Contact: 50217-9101
 Crimp Tool: 57189-5000
 57190-5000



- Included
 Connection Cable
 Product Name: **LC2B06C**



Step Angle 1.8° Frame Size 85 mm (3.35 in.) Bipolar

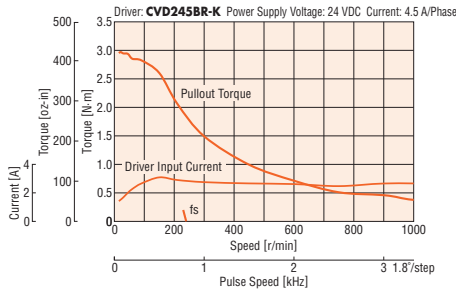
Specifications

Product Name	Holding Torque N·m (oz·in)	Rated Current A/Phase	Voltage VDC	Winding Resistance Ω/Phase	Inductance mH/Phase	Rotor Inertia J: kg·m ² (oz·in ²)	Lead Wires
PKP296D45□A	3.3	4.5	1.9	0.42	3.1	1100×10 ⁻⁷ (6.0)	4
PKP296D63□A	(467)	6.3	1.4	0.23	1.6		
PKP299D45□A	6.4	4.5	2.7	0.6	5.4	2200×10 ⁻⁷ (12)	
PKP299D63□A	(906)	6.3	2	0.32	2.6		
PKP2913D45□A	9.5	4.5	3.5	0.78	6.9	3400×10 ⁻⁷ (18.6)	
PKP2913D56□A	(1345)	5.6	2.6	0.47	4.4		

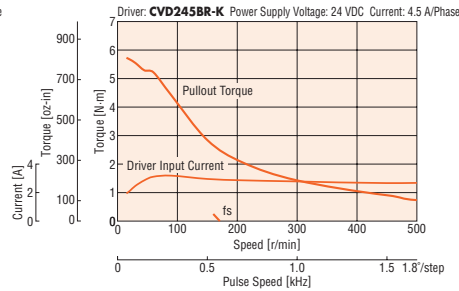
● Either **A** (Single Shaft) or **B** (Double Shaft) indicating the configuration is specified where the box □ is located in the product name.

Speed – Torque Characteristics

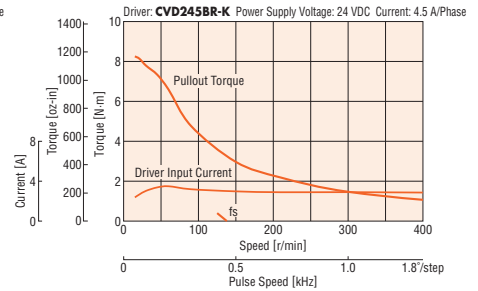
PKP296D45



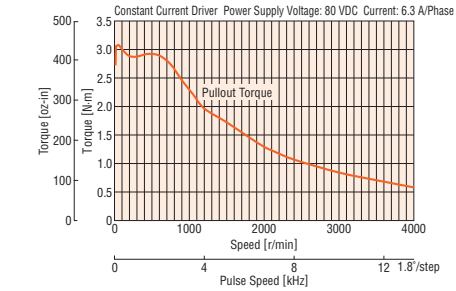
PKP299D45



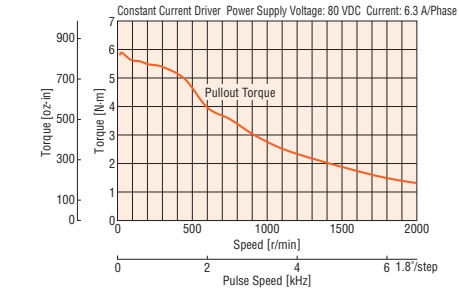
PKP2913D45



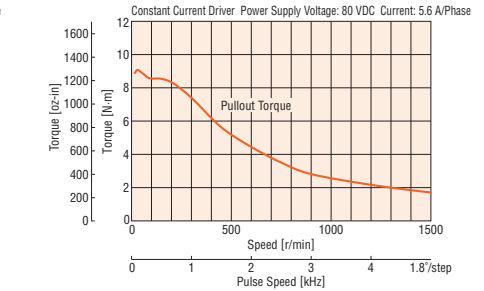
PKP296D63



PKP299D63



PKP2913D56



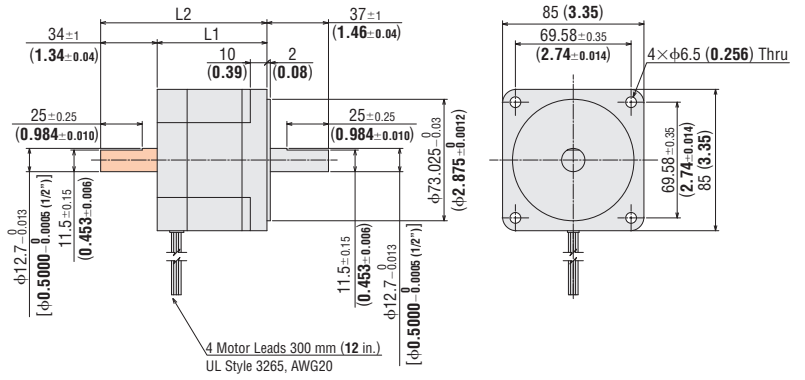
Note

- Data for the speed – torque characteristics is based on Oriental Motor's internal measurement conditions. If the conditions are changed, the characteristics may also change as a result.
- Depending on the driving conditions, a considerable amount of heat may be generated by the motor. Be sure to keep the motor case temperature at 100°C (212°F) or less.

Dimensions Unit = mm (in.)

Motor

Product Name	L1	L2	Mass kg (lb.)
PKP296D45AA	66 (2.60)	-	1.8 (3.97)
PKP296D45BA		100 (3.94)	
PKP296D63AA		-	
PKP296D63BA		100 (3.94)	
PKP299D45AA	96 (3.78)	-	2.9 (6.39)
PKP299D45BA		130 (5.12)	
PKP299D63AA		-	
PKP299D63BA		130 (5.12)	
PKP2913D45AA	126 (4.96)	-	4 (8.82)
PKP2913D45BA		160 (6.30)	
PKP2913D56AA		-	
PKP2913D56BA		160 (6.30)	



- These dimensions are for double shaft motors.
For single shaft motors, ignore the shaded areas.

Step Angle 0.9° Frame Size 42 mm (1.65 in.)

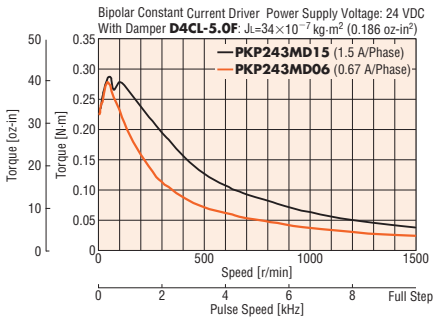
Specifications

Product Name -Single/Double Shaft -with Encoder -with Brake	Holding Torque N·m (oz·in)	Rated Current A/phase	Voltage VDC	Resistance Ω/phase	Inductance mH/phase	Rotor Inertia J kg·m ² (oz·in ²)	Electromagnetic Brake Static Friction Force N·m (oz·in)	Lead Wires
PKP243MD06 □-L PKP243MD15 □-L PKP243MD15A-R2F □-L	0.3 (42)	0.67	6.3	9.4	26.4	36×10 ⁻⁷ (0.197)	—	4
PKP243MD15M-L		1.5	2.85	1.9	6.6	48×10 ⁻⁷ (0.262)	0.3 (42)	
PKP244MD08 □-L PKP244MD15 □-L PKP244MD15A-R2F □-L	0.42 (59)	0.85	6.8	8	24	57×10 ⁻⁷ (0.31)	—	
PKP244MD15M-L		1.5	3.9	2.6	7.6	69×10 ⁻⁷ (0.377)	0.3 (42)	

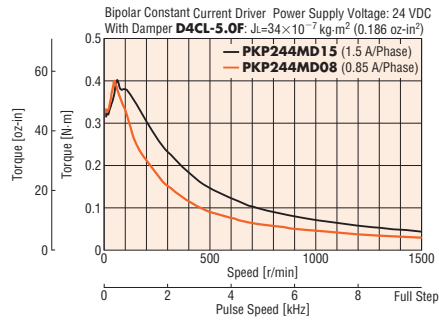
- Enter **A** (single shaft) or **B** (double shaft) in the box (□) within the product name.
- Enter the encoder type (**L** for Line Driver output, **blank** for Voltage output) in the box (□) within the product name.
- A 0.6 m (2 ft.) motor connection cable and encoder cable (if applicable) is included with these products.

Speed – Torque Characteristics

PKP243MD



PKP244MD



Note

- Data for the speed – torque characteristics is based on Oriental Motor's internal measurement conditions. If the conditions are changed, the characteristics may also change as a result.
- Depending on the driving conditions, a considerable amount of heat may be generated by the motor. Be sure to keep the temperature of the motor case under 100°C (212°F).
- For Encoder motor, to protect the encoder, keep the motor case temperature at 85°C (185°F) max.

Dimensions Unit = mm (in.)

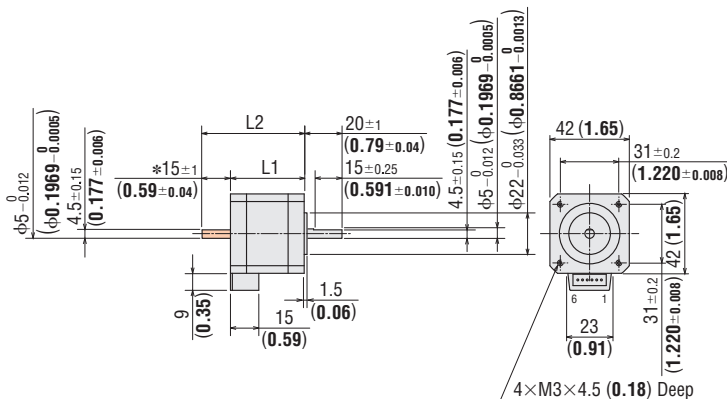
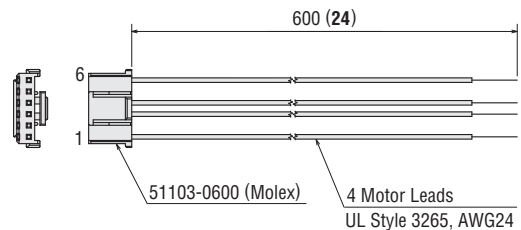
● Motor

Product Name	Motor Product Name	L1	L2	Mass kg (lb.)	CAD
PKP243MD06A-L	PKP243MD06A	—	—	0.25 (0.55)	B968
PKP243MD06B-L	PKP243MD06B	33 (1.30)	48 (1.89)		
PKP243MD15A-L	PKP243MD15A	—	—		
PKP243MD15B-L	PKP243MD15B	—	48 (1.89)	0.3 (0.66)	B969
PKP244MD08A-L	PKP244MD08A	—	—		
PKP244MD08B-L	PKP244MD08B	39 (1.54)	54 (2.13)		
PKP244MD15A-L	PKP244MD15A	—	—	0.3 (0.66)	B969
PKP244MD15B-L	PKP244MD15B	—	54 (2.13)		

● Connection Cables (Included)

◇ Cable for Motor

- Bipolar 4 Lead Wires
LC2B06B



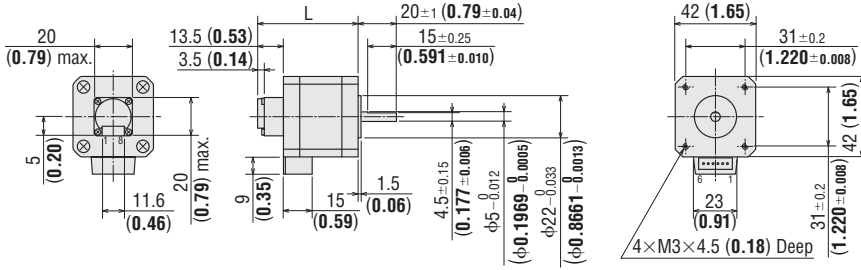
- *The length of machining on the double shaft product is 15±0.25 (0.591±0.010).
- These dimensions are for double shaft products.
For single shaft products, ignore the shaded areas.
- Applicable Connector
Connector Housing: 51103-0600 (Molex)
Contact: 50351-8100 (Molex)
Crimp Tool: 63811-8100 (Molex)

● Motor with Encoder

Product Name	Motor Product Name	L	Mass kg (lb.)	CAD
PKP243MD15A-R2F-L	PKP243MD15A-R2F	46.5 (1.83)	0.26 (0.57)	B1104
PKP244MD15A-R2F-L	PKP244MD15A-R2F	52.5 (2.07)	0.31 (0.68)	B1105

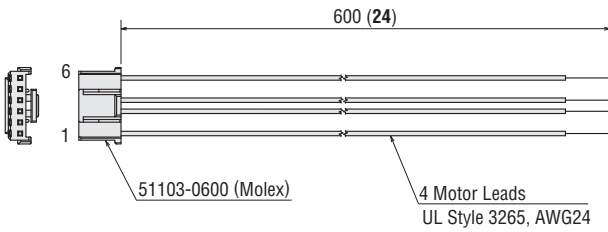
● Applicable connector (Molex)

	Motor	Encoder
Connector Housing	51103-0600	51021-0800
Contact	50351-8100	50079-8100
Crimp Tool	57295-5000	57067-3000



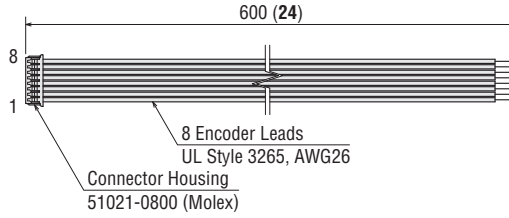
● Included

Motor connection cable
Product Name: **LC2B06B**



● Included

Encoder connection cable

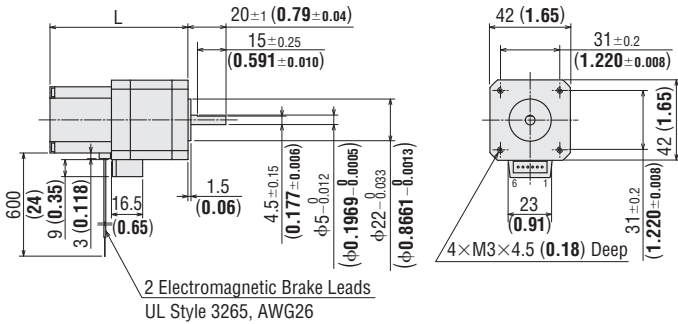


● Motor with Electromagnetic Brake

Product Name	Motor Product Name	L	Mass kg (lb.)	CAD
PKP243MD15M-L	PKP243MD15M	67 (2.64)	0.36 (0.79)	B1136
PKP244MD15M-L	PKP244MD15M	73 (2.87)	0.41 (0.9)	B1137

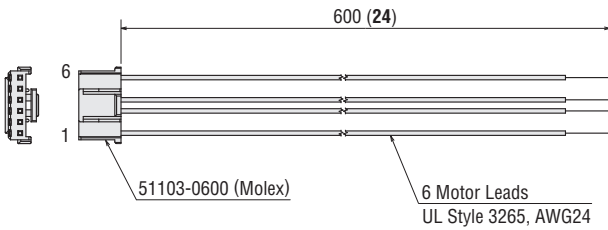
● Applicable Connector (Molex)

Connector Housing: 51103-0600
Contact: 50351-8100
Crimp Tool: 57295-5000



● Included

Connection Cable
Product Name: **LC2B06B**



Step Angle 0.9° Frame Size 56.4 mm (2.22 in.) Bipolar

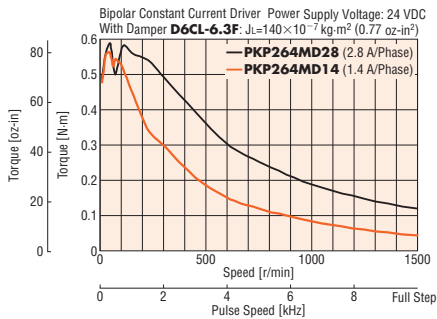
Specifications

Product Name -Single/Double Shaft -with Encoder -with Brake	Holding Torque N·m (oz·in)	Rated Current A/phase	Voltage VDC	Resistance Ω/phase	Inductance mH/phase	Rotor Inertia J kg·m ² (oz·in ²)	Electromagnetic Brake Static Friction Force N·m (oz·in)	Lead Wires
PKP264MD14 □ A-L PKP264MD28 □ A-L PKP264MD28A-R2F □ L	0.6 (85)	1.4	4.06	2.9	8.4	120×10 ⁻⁷ (0.66)	—	4
PKP264MD28M-L		2.8	2	0.73	2.1	270×10 ⁻⁷ (1.47)	1.5 (212)	
PKP266MD14 □ A-L PKP266MD28 □ A-L PKP266MD28A-R2F □ L	1.32 (187)	1.4	5.6	4	15.6	290×10 ⁻⁷ (1.59)	—	
PKP266MD28M-L		2.8	2.8	1	3.9	440×10 ⁻⁷ (2.41)	1.5 (212)	
PKP268MD14 □ A-L PKP268MD28 □ A-L PKP268MD28A-R2F □ L	2.23 (325)	1.4	6.86	4.9	22.4	490×10 ⁻⁷ (2.7)	—	
PKP268MD28M-L		2.8	3.4	1.23	5.6	640×10 ⁻⁷ (3.5)	1.5 (212)	

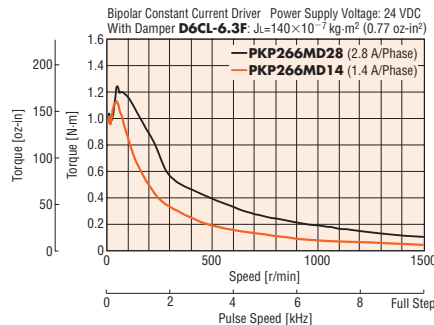
- Enter **A** (single shaft) or **B** (double shaft) in the box (□) within the product name.
- Enter the encoder type (**L** for Line Driver output, **blank** for Voltage output) in the box (□) within the product name.
- A 0.6 m (2 ft.) motor connection cable and encoder cable (if applicable) is included with these products.

Speed – Torque Characteristics

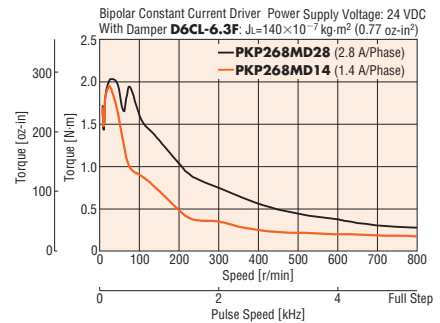
PKP264MD



PKP266MD



PKP268MD



Note

- Data for the speed – torque characteristics is based on Oriental Motor's internal measurement conditions. If the conditions are changed, the characteristics may also change as a result.
- Depending on the driving conditions, a considerable amount of heat may be generated by the motor. Be sure to keep the temperature of the motor case under 100°C (212°F).
- For Encoder motor, to protect the encoder, keep the motor case temperature at 85°C (185°F) max.

Dimensions Unit = mm (in.)

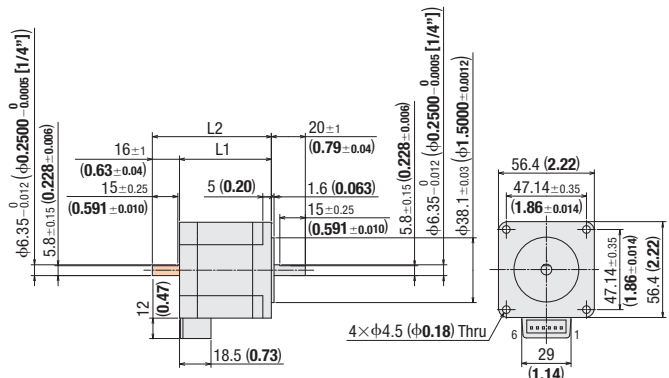
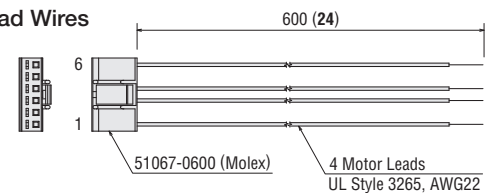
● Motor

Product Name	Motor Product Name	L1	L2	Mass kg (lb.)	CAD
PKP264MD14AA-L	PKP264MD14AA	—	—	—	—
PKP264MD14BA-L	PKP264MD14BA	39 (1.54)	55 (2.17)	0.46 (1.01)	B1028
PKP264MD28AA-L	PKP264MD28AA	—	—	—	—
PKP264MD28BA-L	PKP264MD28BA	—	55 (2.17)	—	—
PKP266MD14AA-L	PKP266MD14AA	—	—	—	—
PKP266MD14BA-L	PKP266MD14BA	54 (2.13)	70 (2.76)	0.73 (1.61)	B1029
PKP266MD28AA-L	PKP266MD28AA	—	—	—	—
PKP266MD28BA-L	PKP266MD28BA	—	70 (2.76)	—	—
PKP268MD14AA-L	PKP268MD14AA	—	—	—	—
PKP268MD14BA-L	PKP268MD14BA	76 (2.99)	92 (3.62)	1.1 (2.40)	B1030
PKP268MD28AA-L	PKP268MD28AA	—	—	—	—
PKP268MD28BA-L	PKP268MD28BA	—	92 (3.62)	—	—

● Connection Cables (Included)

◇ Cable for Motor

- Bipolar 4 Lead Wires
LC2B06C



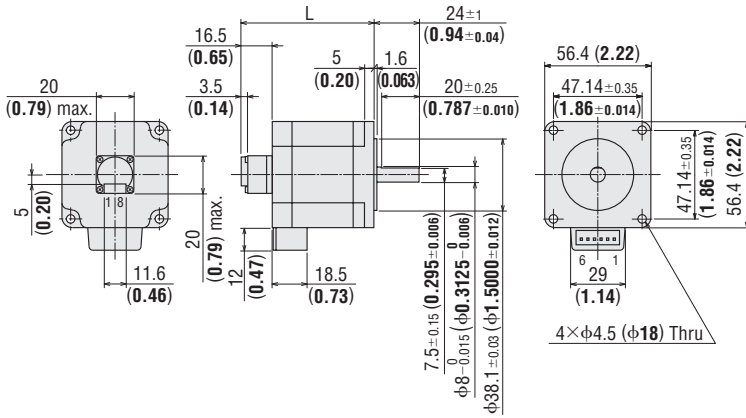
● These dimensions are for double shaft products. For single shaft products, ignore the shaded areas.

Encoder Motor

Product Name	Motor Product Name	L	Mass kg (lb.)	CAD
PKP264MD28A-R2F-L	PKP264MD28A-R2F	55.5 (2.18)	0.47 (1.04)	B1108
PKP266MD28A-R2F-L	PKP266MD28A-R2F	70.5 (2.78)	0.74 (1.63)	B1109
PKP268MD28A-R2F-L	PKP268MD28A-R2F	92.5 (3.64)	1.11 (2.45)	B1110

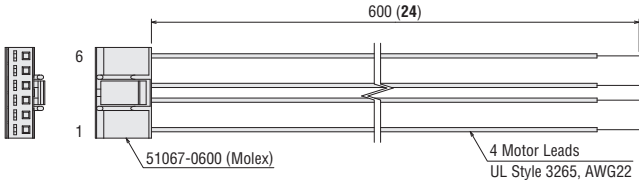
Applicable connector (Molex)

	Motor	Encoder
Connector Housing	51067-0600	51021-0800
Contact	50217-9101	50079-8100
Crimp Tool	57189-5000 57190-5000	57067-3000



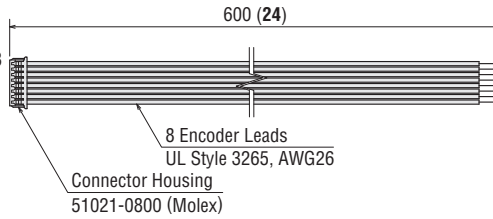
Included

Motor connection cable
Product Name: **LC2B06C**



Included

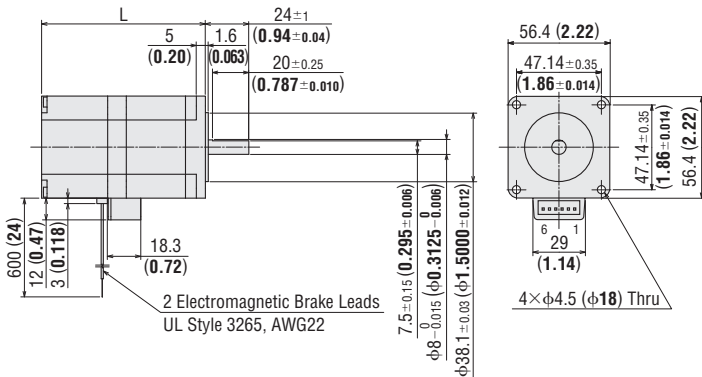
Encoder connection cable



Electromagnetic Brake Motor

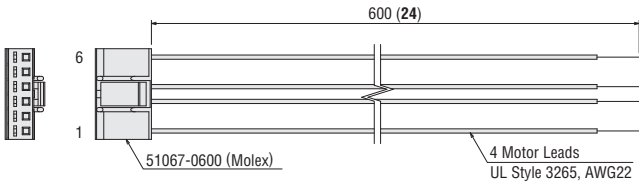
Product Name	Motor Product Name	L	Mass kg (lb.)	CAD
PKP264MD28M-L	PKP264MD28M	75.5 (2.97)	0.76 (1.68)	B1140
PKP266MD28M-L	PKP266MD28M	90.5 (3.56)	1.03 (2.27)	B1141
PKP268MD28M-L	PKP268MD28M	112.5 (4.43)	1.4 (3.08)	B1142

Applicable Connector (Molex)
Connector Housing: 51067-0600
Contact: 50217-9101
Crimp Tool: 57189-5000
57190-5000



Included

Connection Cable
Product Name: **LC2B06C**



SH Geared Type Frame Size 28 mm (1.10 in.) Bipolar

Specifications

Product Name -Single Shaft -Double Shaft	Holding Torque N·m (oz·in)	Rated Current A/phase	Voltage VDC	Resistance Ω /phase	Inductance mH/phase	Rotor Inertia J kg·m ² (oz·in ²)	Gear Ratio	Step Angle	Backlash arc Minutes (degrees)	Permissible Speed Range r/min	Lead Wires
PKP223D06A-SG7.2-L PKP223D06B-SG7.2-L PKP223D15A-SG7.2-L PKP223D15B-SG7.2-L	0.3 (42)	0.67	3.8	5.6	4	9×10^{-7} (0.049)	7.2	0.25°	90 (1.5°)	0~416	4
PKP223D06A-SG9-L PKP223D06B-SG9-L PKP223D15A-SG9-L PKP223D15B-SG9-L		0.67	3.8	5.6	4						
PKP223D06A-SG10-L PKP223D06B-SG10-L PKP223D15A-SG10-L PKP223D15B-SG10-L		0.67	3.8	5.6	4		10	0.18°		0~300	
PKP223D06A-SG18-L PKP223D06B-SG18-L PKP223D15A-SG18-L PKP223D15B-SG18-L		0.67	3.8	5.6	4						
PKP223D06A-SG36-L PKP223D06B-SG36-L PKP223D15A-SG36-L PKP223D15B-SG36-L	0.67	3.8	5.6	4	36		0.05°	0~83			
PKP223D15A-SG36-L PKP223D15B-SG36-L	1.5	1.8	1.2	0.74							

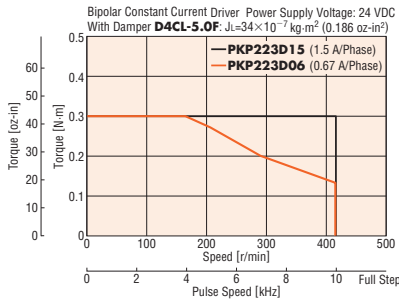
● A 0.6 m (2 ft.) motor connection cable is included with these products.

Note

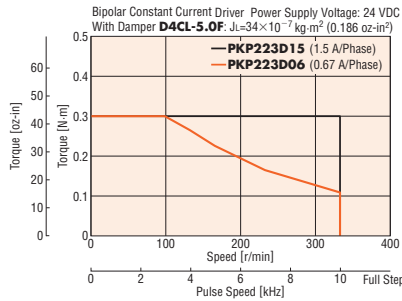
● The rotation direction of the motor and that of the gear output shaft are the same for the gear ratios 7.2 and 36. It is the opposite for the 9, 10 and 18 gear ratios.

Speed – Torque Characteristics

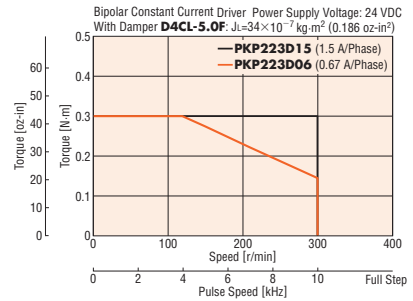
PKP223D--SG7.2



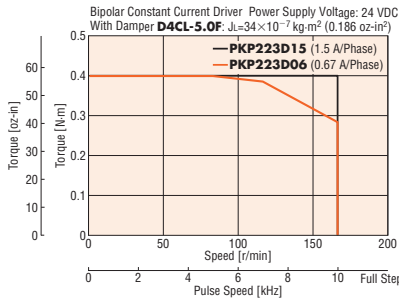
PKP223D--SG9



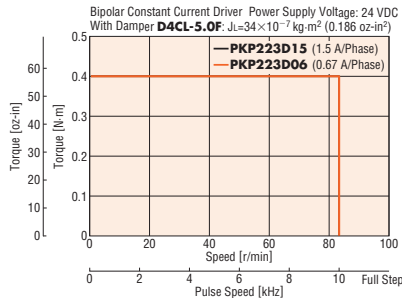
PKP223D--SG10



PKP223D--SG18



PKP223D--SG36



● Enter the current in the box () , enter **A** (single shaft) or **B** (double shaft) into the box () .

Note

● Depending on the driving conditions, a considerable amount of heat may be generated by the motor. Be sure to keep the temperature of the motor case under 100°C (212°F).

Dimensions Unit = mm (in.)

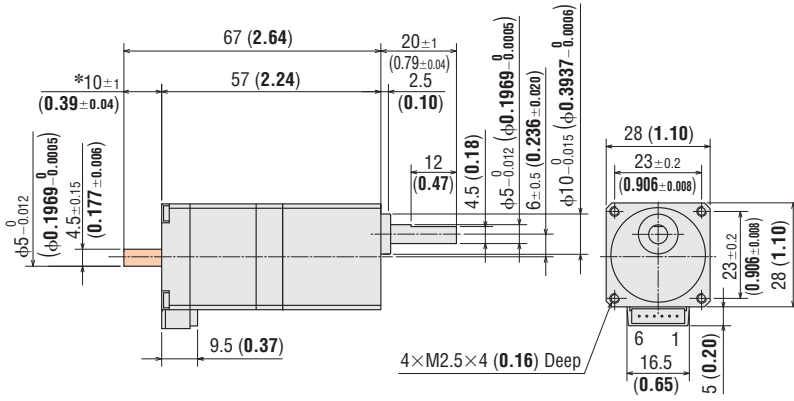
● Gearmotor

Product Name	Motor Product Name	Gear Ratio	Mass kg (lb.)	CAD
PKP223D06A-SG <input type="checkbox"/> -L	PKP223D06A-SG <input type="checkbox"/>	7.2, 9, 10, 18, 36	0.16 (0.35)	B985
PKP223D06B-SG <input type="checkbox"/> -L	PKP223D06B-SG <input type="checkbox"/>			
PKP223D15A-SG <input type="checkbox"/> -L	PKP223D15A-SG <input type="checkbox"/>			
PKP223D15B-SG <input type="checkbox"/> -L	PKP223D15B-SG <input type="checkbox"/>			

● Enter the gear ratio in the box within the product name.

● Applicable Connector

Connector Housing: 51065-0600 (Molex)
 Contact: 50212-8100 (Molex)
 Crimp Tool: 63819-0500 (Molex)



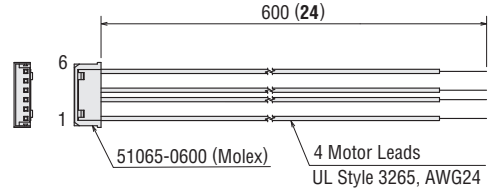
*The length of machining on the double shaft product is $10_{\pm 0.25}$ (0.394 ± 0.010).

● These dimensions are for double shaft products.
 For single shaft products, ignore the areas.

● Connection Cables (Included)

◇ Cable for Motor

- Bipolar 4 Lead Wires
- LC2B06A



SH Geared Type Frame Size 42 mm (1.65 in.) Bipolar

Specifications

Product Name -Single Shaft -Double Shaft	Holding Torque N·m (lb-in)	Rated Current A/phase	Voltage VDC	Resistance Ω /phase	Inductance mH/phase	Rotor Inertia J kg·m ² (oz-in ²)	Gear Ratio	Step Angle	Backlash arc Minutes (degrees)	Permissible Speed Range r/min	Lead Wires
PKP243D06A-SG3.6-L PKP243D06B-SG3.6-L PKP243D15A-SG3.6-L PKP243D15B-SG3.6-L	0.2 (1.77)	0.67	2.95	4.4	9.2	36×10^{-7} (0.197)	3.6	0.5°	90 (1.5°)	0~833	4
PKP243D06A-SG7.2-L PKP243D06B-SG7.2-L PKP243D15A-SG7.2-L PKP243D15B-SG7.2-L		1.5	0.87	0.58	1.1						
PKP243D06A-SG9-L PKP243D06B-SG9-L PKP243D15A-SG9-L PKP243D15B-SG9-L	0.5 (4.4)	0.67	2.95	4.4	9.2		9	0.2°	0~333		
PKP243D06A-SG10-L PKP243D06B-SG10-L PKP243D15A-SG10-L PKP243D15B-SG10-L		0.56 (4.9)	0.67	2.95	4.4					9.2	
PKP243D06A-SG18-L PKP243D06B-SG18-L PKP243D15A-SG18-L PKP243D15B-SG18-L	0.8 (7.0)		0.67	2.95	4.4		9.2	18	0.1°	0~166	
PKP243D06A-SG36-L PKP243D06B-SG36-L PKP243D15A-SG36-L PKP243D15B-SG36-L		0.67	2.95	4.4	9.2		36				
		1.5	0.87	0.58	1.1						

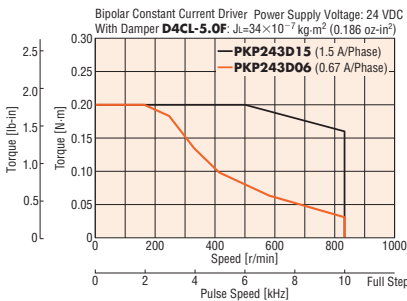
● A 0.6 m (2 ft.) motor connection cable is included with these products.

Note

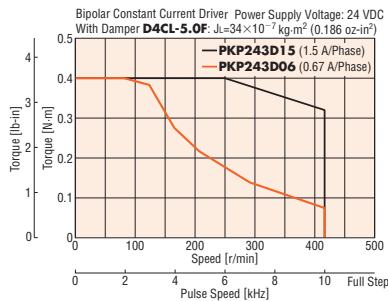
● The rotation direction of the motor and that of the gear output shaft are the same for the gear ratios 3.6, 7.2, 9 and 10. It is the opposite for the 18 and 36 gear ratios.

Speed – Torque Characteristics

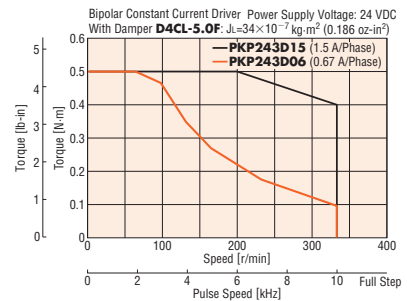
PKP243D SG3.6



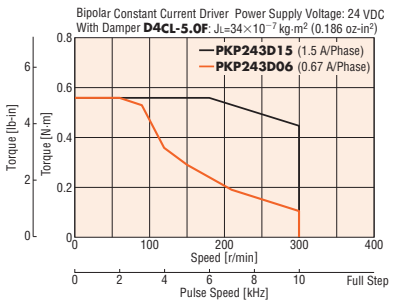
PKP243D SG7.2



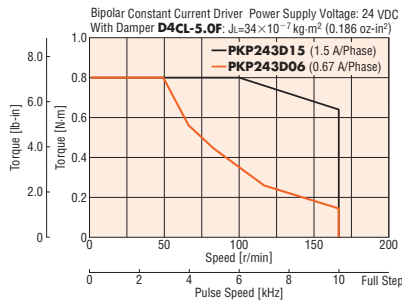
PKP243D SG9



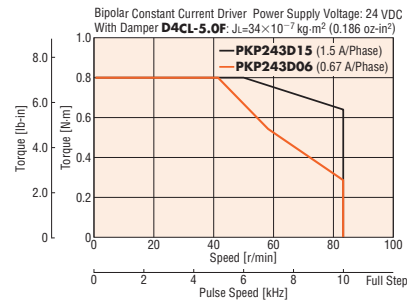
PKP243D SG10



PKP243D SG18



PKP243D SG36



● Enter the current in the box (), enter **A** (single shaft) or **B** (double shaft) into the box ().

Note

● Depending on the driving conditions, a considerable amount of heat may be generated by the motor. Be sure to keep the temperature of the motor case under 100°C (212°F).

Dimensions Unit = mm (in.)

● Gearmotor

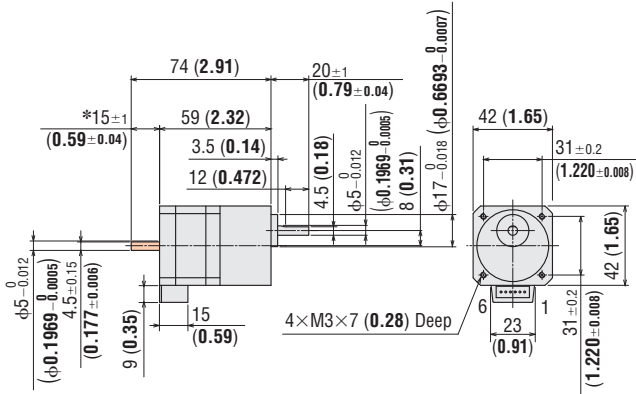
Product Name	Motor Product Name	Gear Ratio	Mass kg (lb.)	CAD
PKP243D06A-SG <input type="checkbox"/> -L	PKP243D06A-SG <input type="checkbox"/>	3.6, 7.2, 9, 10, 18, 36	0.35 (0.77)	B986
PKP243D06B-SG <input type="checkbox"/> -L	PKP243D06B-SG <input type="checkbox"/>			
PKP243D15A-SG <input type="checkbox"/> -L	PKP243D15A-SG <input type="checkbox"/>			
PKP243D15B-SG <input type="checkbox"/> -L	PKP243D15B-SG <input type="checkbox"/>			

● Enter the gear ratio in the box within the product name.

● Applicable Connector


Connector Housing: 51103-0600 (Molex)
Contact: 50351-8100 (Molex)
Crimp Tool: 63811-8100 (Molex)

● Motor



*The length of machining on the double shaft product is 15±0.25 (0.591±0.010).

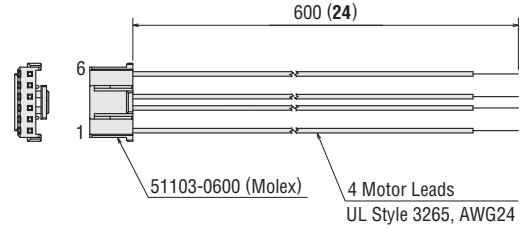
● These dimensions are for double shaft products.

For single shaft products, ignore the  areas.

● Connection Cables (Included)

◇ Cable for Motor

- Bipolar 4 Lead Wires
LC2B06B



SH Geared Type Frame Size 60 mm (2.36 in.) Bipolar

Specifications

Product Name -Single Shaft -Double Shaft	Holding Torque N·m (lb-in)	Rated Current A/phase	Voltage VDC	Resistance Ω/phase	Inductance mH/phase	Rotor Inertia J kg·m ² (oz-in ²)	Gear Ratio	Step Angle	Backlash arc Minutes (degrees)	Permissible Speed Range r/min	Lead Wires
PKP264D07A-SG3.6-L PKP264D07B-SG3.6-L	1 (8.8)	0.71	8.31	11.7	28.8	120×10 ⁻⁷ (0.66)	3.6	0.5°	70 (1.17°)	0~833	4
PKP264D14A-SG3.6-L PKP264D14B-SG3.6-L		1.4	3.08	2.2	4.5						
PKP264D28A-SG3.6-L PKP264D28B-SG3.6-L		2.8	0.92	0.33	0.8						
PKP264D07A-SG7.2-L PKP264D07B-SG7.2-L	2 (17.7)	0.71	8.31	11.7	28.8		7.2	0.25°		0~416	
PKP264D14A-SG7.2-L PKP264D14B-SG7.2-L		1.4	3.08	2.2	4.5						
PKP264D28A-SG7.2-L PKP264D28B-SG7.2-L		2.8	0.92	0.33	0.8						
PKP264D07A-SG9-L PKP264D07B-SG9-L	2.5 (22)	0.71	8.31	11.7	28.8		9	0.2°		0~333	
PKP264D14A-SG9-L PKP264D14B-SG9-L		1.4	3.08	2.2	4.5						
PKP264D28A-SG9-L PKP264D28B-SG9-L		2.8	0.92	0.33	0.8						
PKP264D07A-SG10-L PKP264D07B-SG10-L	2.7 (23)	0.71	8.31	11.7	28.8		10	0.18°	45 (0.75°)	0~300	
PKP264D14A-SG10-L PKP264D14B-SG10-L		1.4	3.08	2.2	4.5						
PKP264D28A-SG10-L PKP264D28B-SG10-L		2.8	0.92	0.33	0.8						
PKP264D07A-SG18-L PKP264D07B-SG18-L	3 (26)	0.71	8.31	11.7	28.8	18	0.1°		0~166		
PKP264D14A-SG18-L PKP264D14B-SG18-L		1.4	3.08	2.2	4.5						
PKP264D28A-SG18-L PKP264D28B-SG18-L		2.8	0.92	0.33	0.8						
PKP264D07A-SG36-L PKP264D07B-SG36-L	4 (35)	0.71	8.31	11.7	28.8	36	0.05°		0~83		
PKP264D14A-SG36-L PKP264D14B-SG36-L		1.4	3.08	2.2	4.5						
PKP264D28A-SG36-L PKP264D28B-SG36-L		2.8	0.92	0.33	0.8						

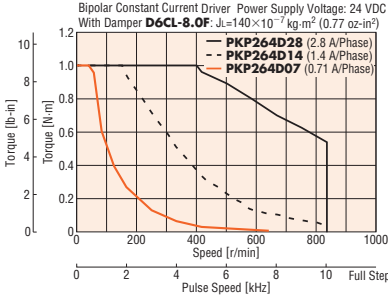
● A 0.6 m (2 ft.) motor connection cable is included with these products.

Note

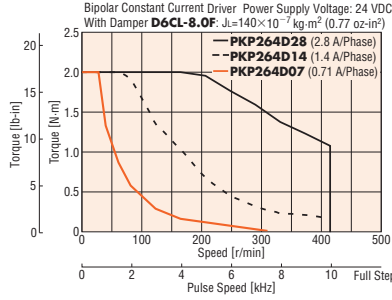
● The rotation direction of the motor and that of the gear output shaft are the same for the gear ratios 3.6, 7.2, 9 and 10. It is the opposite for the 18 and 36 gear ratios.

Speed – Torque Characteristics

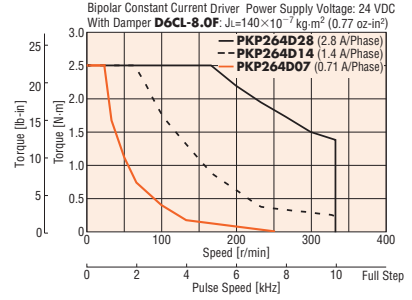
PKP264D-SG3.6



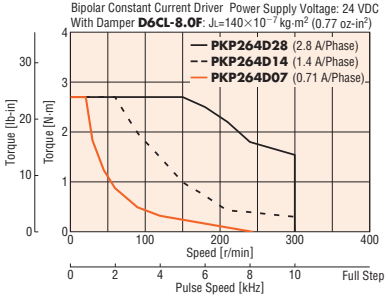
PKP264D-SG7.2



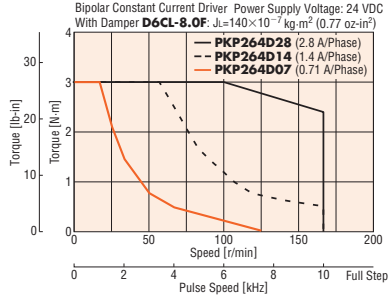
PKP264D-SG9



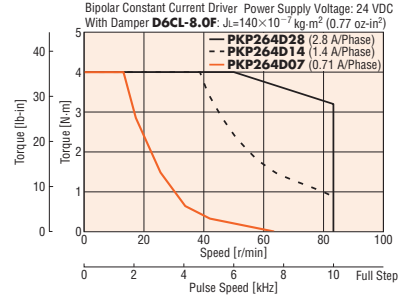
PKP264D-SG10



PKP264D-SG18



PKP264D-SG36



● Enter the current in the box (□), enter **A** (single shaft) or **B** (double shaft) into the box (■).

Note

● Depending on the driving conditions, a considerable amount of heat may be generated by the motor. Be sure to keep the temperature of the motor case under 100°C (212°F).

Dimensions Unit = mm (in.)

● Gearmotor

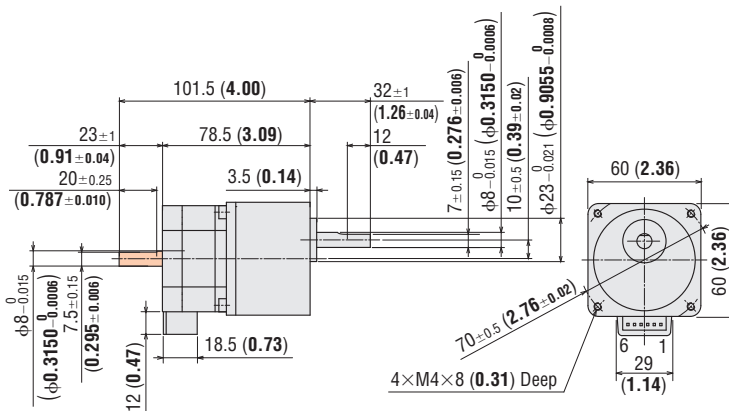
Product Name	Motor Product Name	Gear Ratio	Mass kg (lb.)	CAD
PKP264D07A-SG□-L	PKP264D07A-SG□	3.6, 7.2, 9, 10, 18, 36	0.76 (1.67)	B987
PKP264D07B-SG□-L	PKP264D07B-SG□			
PKP264D14A-SG□-L	PKP264D14A-SG□			
PKP264D14B-SG□-L	PKP264D14B-SG□			
PKP264D28A-SG□-L	PKP264D28A-SG□			
PKP264D28B-SG□-L	PKP264D28B-SG□			

● Enter the gear ratio in the box □ within the product name.

● Applicable Connector

Connector Housing: 51067-0600 (Molex)
Contact: 50217-9101 (Molex)
Crimp Tool: 63811-8300 (Molex)

● Motor

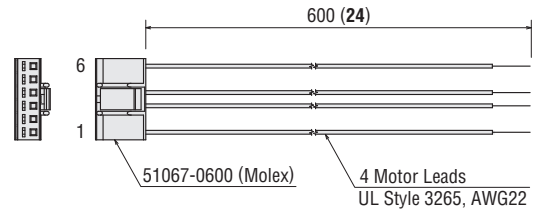


● These dimensions are for double shaft products. For single shaft products, ignore the shaded areas.

● Connection Cables (Included)

◇ Cable for Motor

- Bipolar 4 Lead Wires
- LC2B06C



General Specifications

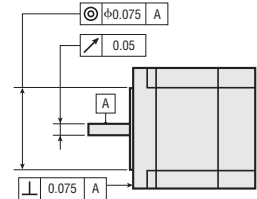
Item	Specification	
Heat-Resistant Class	130 (B)	
Insulation Resistance	100 MΩ or more when 500 VDC megger is applied between the windings and the case under normal ambient temperature and humidity.	
Dielectric Strength	No abnormalities are observed, even when applying voltage between the windings and the case for 1 minute under normal ambient temperature and humidity with the following conditions. • PKP29 □, PK29 □: 1.5 kVAC 50/60 Hz	
Operating Environment (In operation)	Ambient Temperature	-10~+50°C (+14~+122°F) (non-freezing)
	Ambient Humidity	85% max. (non-condensing)
	Atmosphere	No corrosive gases or dust. The product should not be exposed to water, oil or other liquids.
Temperature Rise	Winding temperature rise 80°C (176°F) max. (Based on Oriental Motor's internal measurement conditions)	
Stop Position Accuracy*1	±3 arcmin (±0.05°) [PKP21 □: ±5 arcmin (±0.083°)]	
Shaft Runout	0.05 mm (0.002 in.) T.I.R.*4	
Radial Play*2	0.025 mm (0.001 in.) maximum (load 5 N (1.12 lb.))	
Axial Play*3	0.075 mm (0.003 in.) maximum (load 10 N (2.2 lb.)) [PKP21 □ is 1 N (0.225 lb.) PKP22 □ is 2.5 N (0.563 lb.) load]	
Concentricity of Installing Pilot to the Shaft	0.075 mm (0.003 in.) T.I.R.*4	
Perpendicularity of Installation Surface to the Shaft	0.075 mm (0.003 in.) T.I.R.*4	

*1 This value is for full step under no load. (The value changes with the size of the load.)

*2 Radial Play: Displacement in shaft position in the radial direction when a 5 N (1.12 lb.) load is applied in the vertical direction to the tip of the motor shaft.

*3 Axial Play: Displacement in shaft position in the axial direction when a 10 N (2.2 lb.) [**PKP21**□ is 1 N (0.225 lb.), **PKP22**□ is 2.5 N (0.563 lb.)] load is applied to the motor shaft in the axial direction.

*4 T. I. R. (Total Indicator Reading): The total dial gauge reading when the measurement section is rotated one revolution centered on the reference axis center.



Note

- Do not measure insulation resistance or perform the dielectric strength test while the motor and driver are connected. Also, do not conduct these tests on the motor encoder section.
- For Radial load and Permissible Axial load, see 2015-2016 General Catalog, page A-262.

Encoder Specifications

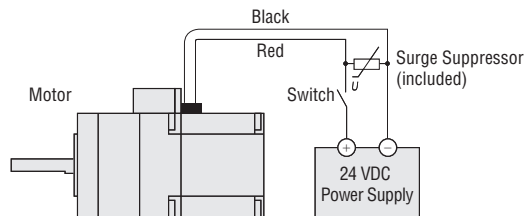
Encoder Product Name	R2EL	R2FL	R2E	R2F
Resolution	200 P/R	400 P/R	200 P/R	400 P/R
Output Circuit Type	Line Driver		Voltage Output	
Output Mode	Incremental			
Output Signal	A-phase, B-phase, Z-phase (3ch)			
Power Supply Voltage	5 VDC ± 10%			
Output circuit				
Current	30 mA max.		45 mA max.	

Electromagnetic Brake Part Specifications

Product Name	PKP22	PKP23 · PKP24	PKP26
Type	Power Off Activated Type		
Power Supply Voltage	24 VDC ± 5%		
Power Supply Current	A 0.05	0.07	0.23
Static Friction Torque	N·m (oz·in) 0.08 (11)	0.3 (42)	1.5 (212)
Brake Operating Time	ms 20		
Brake Release Time	ms 50		
Time Rating	Continuous		

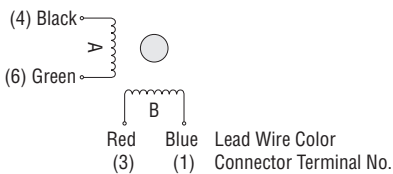
For product names, product name-identifying characters are used.

Connecting the Electromagnetic Brake



Inner Wiring Diagram of Motors

Bipolar 4 Lead Wires



Bipolar microstepping drivers, 24 VDC

With Mounting Plate or Board Type

With Mounting Plate

Product Name	List Price
CVD205BR-K	\$135.00
CVD206BR-K	\$135.00
CVD215BR-K	\$135.00
CVD228BR-K	\$135.00
CVD242BR-K	\$150.00
CVD245BR-K	\$150.00

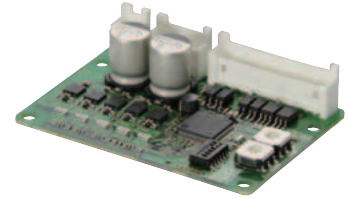
Board Only

Product Name	List Price	Rated Current
CVD205-K	\$130.00	0.13 A~0.5 A
CVD206-K	\$130.00	0.15 A~0.6 A
CVD215-K	\$130.00	0.38 A~1.5 A
CVD228-K	\$130.00	0.70 A~2.8 A
-	-	1.05 A~4.2 A
-	-	1.125 A~4.5 A



With Mounting Plate

Vertical or horizontal mounting plate with microstepping driver for 1.8°/0.9° **PKP** Stepper Motors with parallel connectors.



Board Only

Mount directly board only type microstepping driver for 1.8°/0.9° **PKP** Stepper Motors with right angle connectors.

Motor Mounting Brackets

Product Line

Standard Type

Material: Aluminum alloy

Frame Size	Applicable Product		Product Name	List Price
	Applicable Motor			
42 mm (1.65 in.)	PKP243, PKP244		PAFOP	\$13.00
	PKP245, PKP246		PALOP	\$16.00
56.4 mm (2.22 in.)	PKP264, PKP266, PKP268		PAL2P-2	\$17.00
85 mm (3.35 in.)	PKP296, PKP299, PKP2913		PAL4P-2	\$19.00

- The applicable motor products are listed such that the bracket can be determined.
- The mounting bracket base is built with holes large enough to allow for adjustments of belt tension after a motor is installed.
- These mounting brackets can fit to the pilot of the stepper motors. (Excluding **PALOP**)

SH Geared Type

Material: Aluminum alloy



Frame Size	Applicable Product		Product Name	List Price
	Applicable Motor			
42 mm (1.65 in.)	PKP243-SG		SOLOA-A	\$23.00
60 mm (2.36 in.)	PKP264-SG		SOL2A-A	\$27.00

- The applicable motor products are listed such that the bracket can be determined.
- When installing **SOL2A-A**, use the included screws.
Since mounting screws are not included with **SOLOA-A**, prepare appropriate screws separately.

AC Input Stepper Motor and Driver

RKII Series: 0.72°

Accepts 1.8° input pulse signals

High: Performance & Reliability

Easy: Connection & System

Save: Price & Energy






Built-in Controller
Starting From
\$461.00



Pulse Input
Starting From
\$461.00

● List of Drivers and Motors

Driver Type	Motor Type	Frame Size	Electromagnetic Brake	Power Supply Input
Built-in Controller Type  	Standard Type	42 mm (1.65 in.) 60 mm (2.36 in.) 85 mm (3.35 in.)	●	Single Phase 100-120 VAC Single Phase 200-240 VAC
	Standard Type with Encoder	42 mm (1.65 in.) 60 mm (2.36 in.) 85 mm (3.35 in.)	—	
	TS Geared Type PS Geared Type Harmonic Geared Type	42 mm (1.65 in.) 60 mm (2.36 in.) 90 mm (3.54 in.)	●	

Driver Type	Motor Type	Frame Size	Electromagnetic Brake	Power Supply Input
Pulse Input Type 	Standard Type	42 mm (1.65 in.) 60 mm (2.36 in.) 85 mm (3.35 in.)	●	Single Phase 100-120 VAC Single Phase 200-240 VAC
	TS Geared Type PS Geared Type Harmonic Geared Type	42 mm (1.65 in.) 60 mm (2.36 in.) 90 mm (3.54 in.)	●	

Specifications are subject to change without notice. This catalog was published in September, 2016.

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