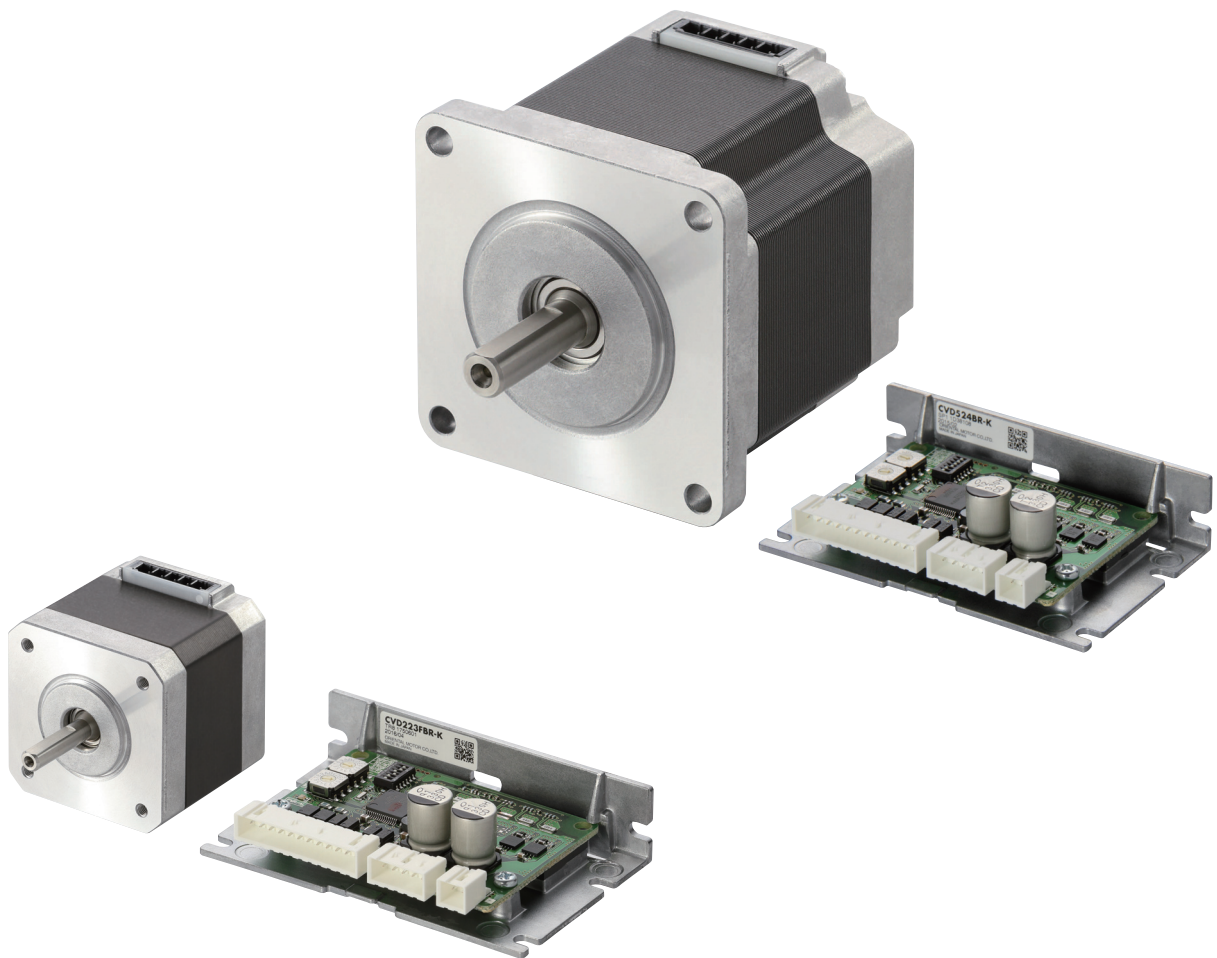


Orientalmotor

Stepping Motor
CVK Series

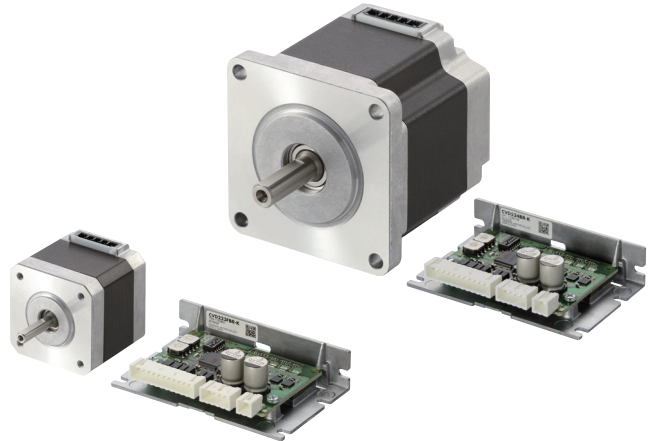


Flexible choice of 2-Phase and 5-Phase stepping motors.

Enhanced compatibility while utilizing both 2-Phase and 5-Phase characteristics.

Most suitable motor selection according to intended use.

Now offered at affordable prices.



Features

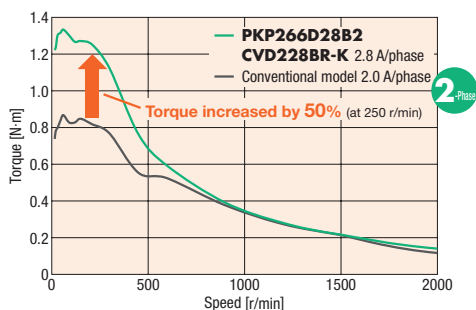
2-Phase/5-Phase CVK Series with improved basic performance

● 2-Phase Motor with Higher Torque and Less Vibration in Low Speed Regions

High current are now possible by revised motor winding design and the highly efficient design of the drive circuit, significantly increasing the torque in low speed regions. Especially the torque at around 250 r/min is higher by 50% than that of the conventional product. In addition, this product causes lesser vibration and noise than typical 2-Phase stepping motors. This 2-Phase stepping motor and bipolar driver feature improved overall basic performance.

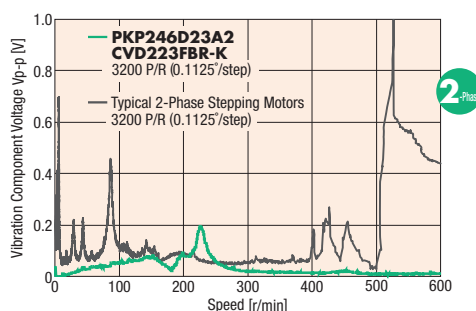
◇ Higher Torque in Low Speed Regions

The excitation maximum holding torque has increased by bipolar wire connection.



◇ Low Vibration

The vibration characteristic has been largely improved in all the speed regions with the fully digitally controlled full-time micro-step driver.

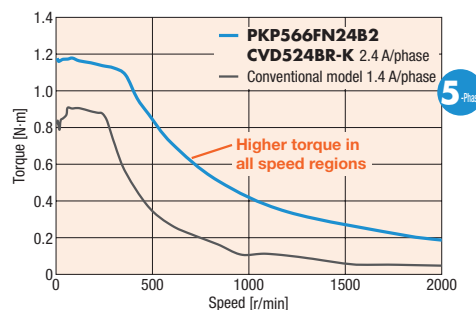


● 5-Phase Motor with Higher Torque and Low Vibration/ Noise in All Speed Regions

Reviewing the motor winding design and adopting a more efficient drive circuit design has made it possible to deliver maximum 5-Phase motor performance and achieve a large increase in torque. This high-performance 5-Phase stepping motor and bipolar driver feature a full-time microstep driver with full digital control that further reduces vibration and noise compared to conventional models.

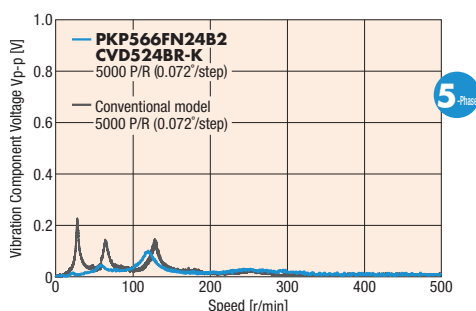
◇ Higher Torque in All Speed Regions

The motor winding has been made suitable for high currents, significantly expanding the area of use.



◇ Lower Vibration and Noise

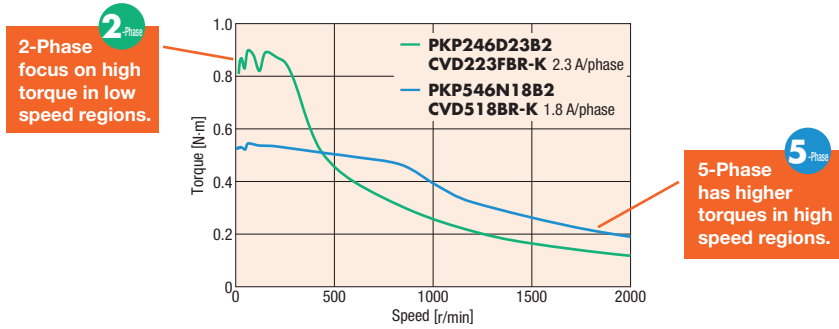
Using the fully digitally controlled full-time micro-step driver has further reduced vibrations and noises.



2-Phase motor focus higher torque with low speed while 5-Phase motor focus on higher accuracy positioning

More Application can be used with the Significant Increase in Torques

With application of high currents, the 2-Phase and 5-Phase **CVK** Series have greatly increased in the excitation maximum holding torque in low speed regions and mainly in high speed regions, respectively. From a wide range of speeds and torques, you can select a motor suitable for your intended use.

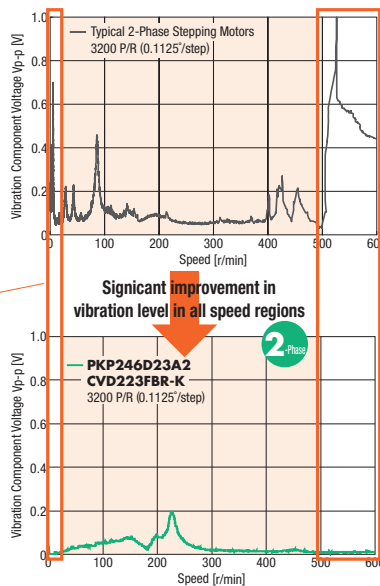


Low Vibration by Full-time Micro-step

The vibration level has been greatly improved by the fully digitally controlled full-time micro-step drive driver, reducing vibrations and noises in all speed regions. The 5-Phase **CVK** Series has further excellent vibration characteristics.

Reduction in step vibration

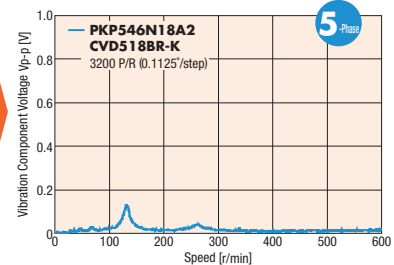
The new smooth drive control with higher resolution of current control allows the basic step angle to be divided by a maximum of 2048. This has greatly reduced the step vibration in low speed regions.



Vibration suppression control

Vibration in medium speed regions, which occurs regardless of the source resultant pulse number and the drive method, have been suppressed. This stabilizes the torque characteristics, allows the motor to operate at high speeds without stepping out.

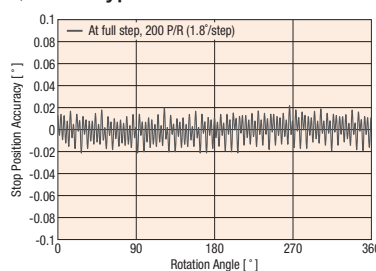
The vibration characteristic has further improved with the 5-Phase **CVK** Series.



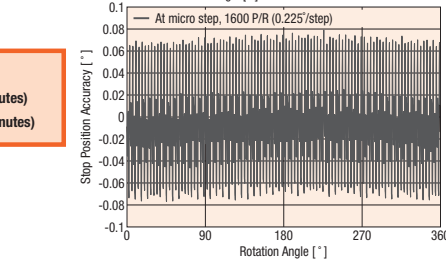
5-Phase Motor for Highly Accurate Positioning

With the micro-step drive, the resolution can be increased up to 125000 P/R. Generally, the stopping accuracy is smaller under micro-step driving than under full-step driving. This is more obvious on the 2-Phase. Under micro-step driving, the 5-Phase **CVK** Series can provide more accurate positioning.

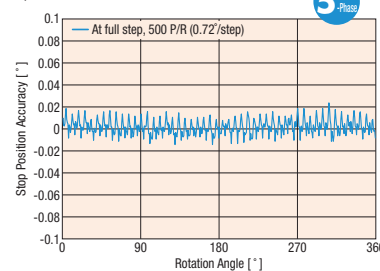
For a Typical 2-Phase Motor



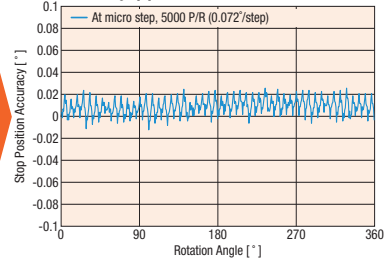
The stop accuracy worsens in the micro-step mode.



For 5-Phase CVK Series



The stop accuracy maintained even in the micro-step mode.



Stopping accuracy

5-Phase Standard type motor	$\pm 0.05^\circ$ (± 3 arcminutes)
5-Phase High resolution type motor	$\pm 0.034^\circ$ (± 2 arcminutes)

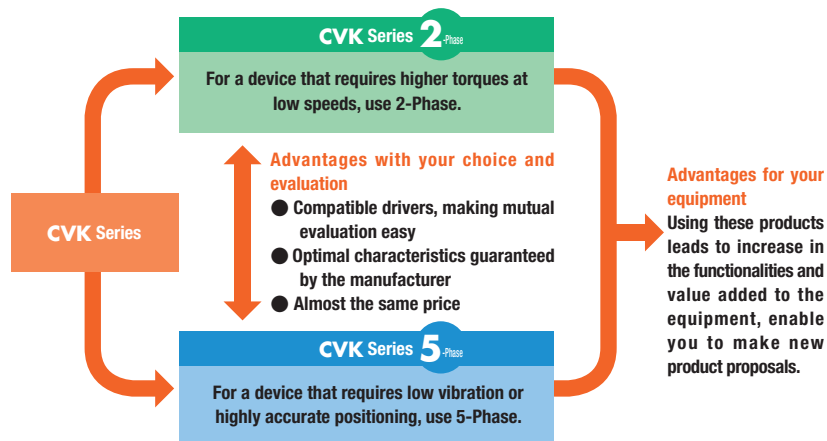
Highly accurate positioning is possible with the 5-Phase **CVK** Series.

Flexibility of choice: 2-Phase or 5-Phase

● Evaluation can be Flexible: 2-Phase → 5-Phase and 5-Phase → 2-Phase

The drivers of the 2-Phase and 5-Phase **CVK Series** are similar in size, installation and I/O connector. This allows you to select 2-Phase or 5-Phase according to your requirement specifications. Both motors provide industry-top-class compactness and lightness.

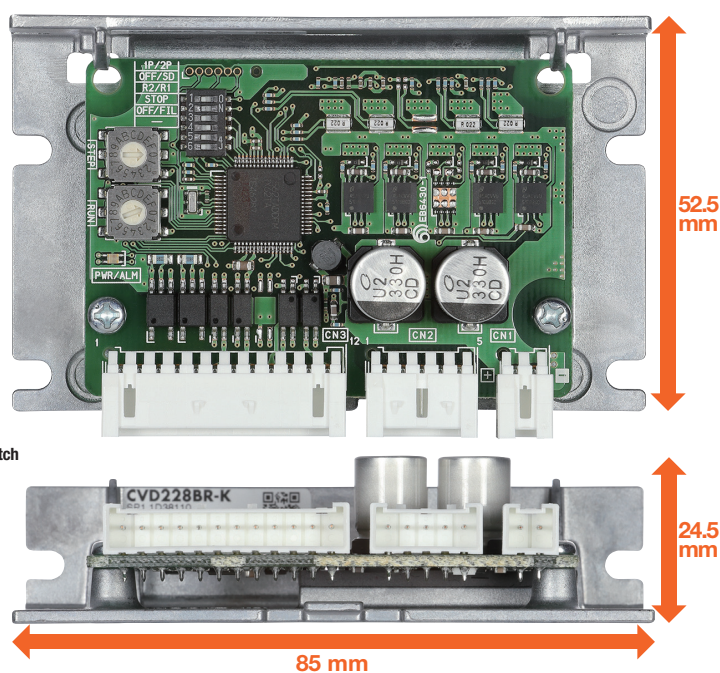
- 2-Phase Motor and 5-Phase Motor both uses respective dedicated drivers.



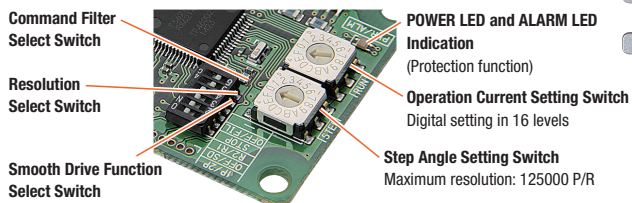
● Industry-top-Class High-performance Driver

- Compact and lightweight driver contributing to space saving
- Protection function that can early detect a problem with the driver
- Smooth drive function for smooth operation
- Operation current can be set with a digital switch

Actual size



● Functions and Names of Driver



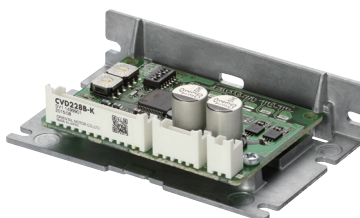
● Lineup of 2 Drive Types

2 types of drivers are available for both the 2-Phase and 5-Phase motor.

- With installation plate Right angle
The connector is laterally oriented.



- With installation plate
The connector is vertically upward oriented.



- The 2-Phase stepping motor driver and 5-Phase stepping motor driver are not the same. Each has its own dedicated driver.
- A driver without installation plate is also available. For details, contact the nearest Oriental Motor sales office or customer service center.

● The Price of 2-Phase and 5-Phase are Almost The Same

In the **CVK Series**, while the performance and functionality of the motors have been significantly increased, the prices have been revised. There is only slight price difference between the 2-Phase and the 5-Phase; Both of them are offered at affordable prices.

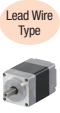













- Comparison between 2-Phase and 5-Phase



Lineup










2-Phase Stepping Motor

—: No lineup

Type	Frame Size							Driver
	20 mm	28 mm	35 mm	42 mm	56.4 mm	60 mm	85 mm	
Standard Type	 Lead Wire Type					—	 Lead Wire Type	
Standard Type With Encoder			—			—	—	
SH Geared Type	—		—		—		—	

5-Phase Stepping Motor

—: No lineup

Type	Frame Size							Driver
	20 mm	28 mm	35 mm	42 mm	56.4 mm	60 mm	85 mm	
Standard Type			—				 Lead Wire Type	
High-Resolution Type	—	—	—		—		—	
Standard Type With Encoder		—	—				—	
TS Geared Type	—	—	—	 NEW	—	 NEW	—	

Motor Type

Standard Type

Easy-to-use basic model.

Some products use small and thin connectors, reducing the protrusion of connector parts. Because the connectors are now connected from the top, there is greater freedom in selecting the cable routing direction.

[Basic Step Angle] 2-Phase: 1.8°/step 5-Phase: 0.72°/step

Standard Type With Encoder

Encoder installed model make it possible to monitor present position and detect the gap. It contributes to carry more reliability to machinery.

[Basic Step Angle] 2-Phase: 1.8°/step 5-Phase: 0.72°/step

[Resolution] 2-Phase: 200 divisions, 400 divisions

5-Phase: 500 divisions

[Output Mode] Line driver

High-Resolution Type (Available for the 5-Phase motor)

This product features a basic motor resolution that is 2x the standard type.

The displacement angle relative to the load torque is smaller, providing high positioning accuracy. Vibration is also reduced.

[Basic Step Angle] 0.36°/step

SH Geared Type (Available for the 2-Phase motor)

Effective for deceleration, increasing torque, increasing resolution, and preventing vibration.

Backlash is smaller than conventional models.

[Basic Step Angle] 0.5~0.05°/step

TS Geared Type (Available for the 5-Phase motor)

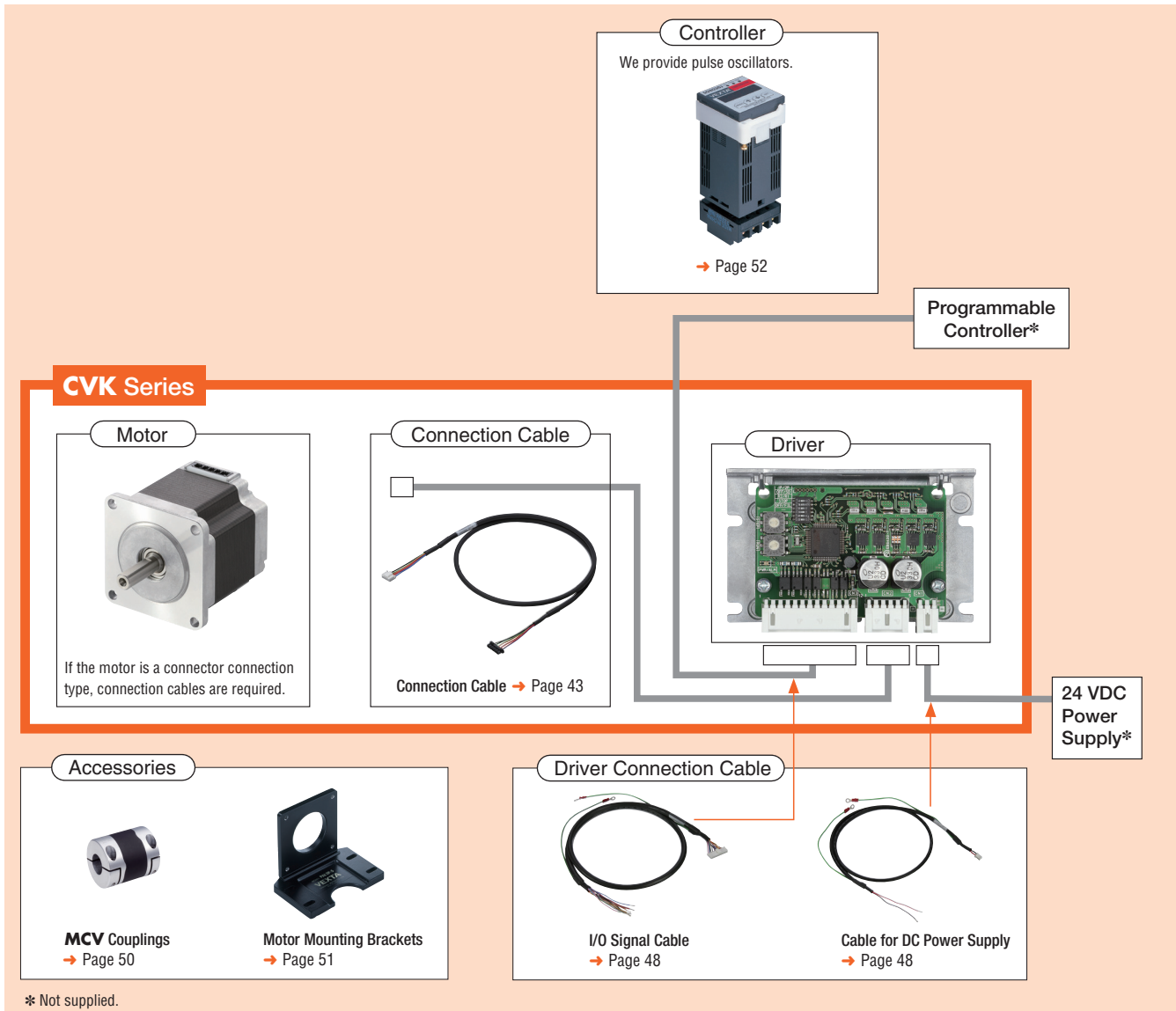
Effective for deceleration, increasing torque, increasing resolution, and preventing vibration.

Positioning time can be shortened by using the maximum instantaneous torque range.

[Basic Step Angle] 0.2~0.024°/step

System Configuration

This shows a configuration example using a programmable controller (equipped with a pulse oscillator).
The motor, connection cables, and driver need to be purchased separately.



System Configuration Example

CVK Series			+	Controller	Accessories		Driver Connection Cable	
Motor	Connection Cable (5m)	Driver			Motor Mounting Brackets	Flexible Couplings	I/O Signal Cable (1m)	Cable for DC Power Supply (1m)
PKP266D28A2	CCM050V2AEF	CVD228BR-K		SG8030J-U	PAL2P-2	MCV190808	CC12D010-2	CC02D010-2

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

Product Number Code

Motor

◇ 2-Phase Stepping Motor

Standard Type

PKP 2 6 6 D 28 A 2

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

Standard Type With Encoder

PKP 2 4 3 D 15 A 2 - R2E L

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

①	Series Name	PKP: PKP Series
②	2: 2-Phase	
③	Motor Frame Size	1: 20 mm 2: 28 mm 3: 35 mm 4: 42 mm 6: 56.4 mm 9: 85 mm
④	Motor Case Length	
⑤	Number of Leads	D: 4 Leads
⑥	Motor Winding Specifications	
⑦	Configuration	A: Single Shaft B: Double Shaft
⑧	Reference Number	
⑨	Encoder Resolution	R2E: 200P/R R2F: 400P/R
⑩	Encoder Output Circuit Type	L: Line Driver Output*

*A voltage output type for the encoder output circuit is also available.
For details, contact the nearest Oriental Motor sales office.

SH Geared Type

PKP 2 4 3 D 23 B 2 - SG 18

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

①	Series Name	PKP: PKP Series
②	2: 2-Phase	
③	Motor Frame Size	2: 28 mm 4: 42 mm 6: 60 mm
④	Motor Case Length	
⑤	Number of Leads	D: 4 Leads
⑥	Motor Winding Specifications	
⑦	Configuration	A: Single Shaft B: Double Shaft
⑧	Reference Number	
⑨	Gear Type	SG: SH Geared Type
⑩	Gear Ratio	

◇5-Phase Stepping Motor

Frame Size 20 mm, 85 mm

Standard Type

PK 5 1 3 P A

① ② ③ ④ ⑤ ⑧

PK 5 9 6 H N A W

① ② ③ ④ ⑥ ⑦ ⑧ ⑪

Standard Type With Encoder

PK 5 1 3 P A - R2G L

① ② ③ ④ ⑤ ⑧ ⑨ ⑩

①	Series Name	PK: PK Series
②	5: 5-Phase	
③	Motor Frame Size	1: 20 mm 9: 85 mm
④	Motor Case Length	
⑤	Motor Classification	
⑥	Motor Specification	None: Standard Specifications H: High Speed Specification
⑦	Number of Leads	N: 5 Leads
⑧	Configuration	A: Single Shaft B: Double Shaft
⑨	Encoder Resolution	R2G: 500P/R
⑩	Encoder Output Circuit Type	L: Line Driver Output
⑪	Cable Identification	None: Connector Connection Type W: Lead Wire Type

Frame Size 28 mm, 42 mm, 56.4 mm, 60 mm

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

①	Series Name	PKP: PKP Series
②	5: 5-Phase	
③	Motor Frame Size	2: 28 mm 4: 42 mm 6: 56.4 mm (60 mm for the motor classification "F")
④	Motor Case Length	
⑤	Motor Classification	F: Motor Frame Size 60 mm
⑥	Motor Type	None: Standard Type M: High-Resolution Type
⑦	Number of Leads	N: 5 Leads
⑧	Motor Winding Specifications	
⑨	Configuration	A: Single Shaft B: Double Shaft
⑩	Reference Number	
⑪	Encoder Resolution	R2G: 500P/R
⑫	Encoder Output Circuit Type	L: Line Driver Output*

*A voltage output type for the encoder output circuit is also available.
For details, contact the nearest Oriental Motor sales office.

TS Geared Type

PKP 5 4 3 N 18 A 2 - TS 30

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

①	Series Name	PKP: PKP Series
②	5: 5-Phase	
③	Motor Frame Size	4: 42 mm 6: 60 mm
④	Motor Case Length	
⑤	Number of Leads	N: 5 Leads
⑥	Motor Winding Specifications	
⑦	Configuration	A: Single Shaft B: Double Shaft
⑧	Reference Number	
⑨	Gear Type	TS: TS Geared Type
⑩	Gear Ratio	

●Driver

CVD 2 23 F B R - K

① ② ③ ④ ⑤ ⑥ ⑦

①	Driver Type	CVD: CVK Series Driver
②	2: 2-Phase 5: 5-Phase	
③	Rated Current	
④	Driver Classification	
⑤	Driver Shape	B: With Installation Plate*
⑥	Connector Shape	R: Right Angle
⑦	Power Supply Input	K: DC Power Supply

*A type without installation plate is also available.
For details, contact the nearest Oriental Motor sales office.

Product Line

A motor, driver, connection cable need to be purchase separately.

● Motor

◇ 2-Phase Stepping Motor

● Standard Type

Product Name (Single Shaft)	Product Name (Double Shaft)
PKP213D05A	PKP213D05B
PKP214D06A	PKP214D06B
PKP223D15A2	PKP223D15B2
PKP225D15A2	PKP225D15B2
PKP233D23A	PKP233D23B
PKP235D23A	PKP235D23B
PKP243D23A2	PKP243D23B2
PKP244D23A2	PKP244D23B2
PKP245D23A2	PKP245D23B2
PKP246D23A2	PKP246D23B2
PKP264D28A2	PKP264D28B2
PKP266D28A2	PKP266D28B2
PKP268D28A2	PKP268D28B2
PKP296D45A	PKP296D45B
PKP299D45A	PKP299D45B
PKP2913D45A	PKP2913D45B

● SH Geared Type

Product Name (Single Shaft)	Product Name (Double Shaft)
PKP223D15A-SG7.2	PKP223D15B-SG7.2
PKP223D15A-SG9	PKP223D15B-SG9
PKP223D15A-SG10	PKP223D15B-SG10
PKP223D15A-SG18	PKP223D15B-SG18
PKP223D15A-SG36	PKP223D15B-SG36
PKP243D23A2-SG3.6	PKP243D23B2-SG3.6
PKP243D23A2-SG7.2	PKP243D23B2-SG7.2
PKP243D23A2-SG9	PKP243D23B2-SG9
PKP243D23A2-SG10	PKP243D23B2-SG10
PKP243D23A2-SG18	PKP243D23B2-SG18
PKP243D23A2-SG36	PKP243D23B2-SG36
PKP264D28A2-SG3.6	PKP264D28B2-SG3.6
PKP264D28A2-SG7.2	PKP264D28B2-SG7.2
PKP264D28A2-SG9	PKP264D28B2-SG9
PKP264D28A2-SG10	PKP264D28B2-SG10
PKP264D28A2-SG18	PKP264D28B2-SG18
PKP264D28A2-SG36	PKP264D28B2-SG36

● Standard Type With Encoder

Product Name
PKP213D05A-R2EL
PKP214D06A-R2EL
PKP223D15A2-R2EL
PKP225D15A2-R2EL
PKP243D23A2-R2EL
PKP243D23A2-R2FL
PKP244D23A2-R2EL
PKP244D23A2-R2FL
PKP245D23A2-R2EL
PKP245D23A2-R2FL
PKP246D23A2-R2EL
PKP246D23A2-R2FL
PKP264D28A2-R2EL
PKP264D28A2-R2FL
PKP266D28A2-R2EL
PKP266D28A2-R2FL
PKP268D28A2-R2EL
PKP268D28A2-R2FL

◇ 5-Phase Stepping Motor

● Standard Type

Product Name (Single Shaft)	Product Name (Double Shaft)
PK513PA	PK513PB
PKP523N12A	PKP523N12B
PKP525N12A	PKP525N12B
PKP543N18A2	PKP543N18B2
PKP544N18A2	PKP544N18B2
PKP545N18A2	PKP545N18B2
PKP546N18A2	PKP546N18B2
PKP564N28A2	PKP564N28B2
PKP566N28A2	PKP566N28B2
PKP568N28A2	PKP568N28B2
PKP564FN24A2	PKP564FN24B2
PKP564FN38A2	PKP564FN38B2
PKP566FN24A2	PKP566FN24B2
PKP566FN38A2	PKP566FN38B2
PKP569FN24A2	PKP569FN24B2
PKP569FN38A2	PKP569FN38B2
PK596HNAW	PK596HNBW
PK599HNAW	PK599HNBW
PK5913HNAW	PK5913HNBW

● High-Resolution Type

Product Name (Single Shaft)	Product Name (Double Shaft)
PKP544MN18A	PKP544MN18B
PKP546MN18A	PKP546MN18B
PKP564FMN24A	PKP564FMN24B
PKP566FMN24A	PKP566FMN24B
PKP569FMN24A	PKP569FMN24B

● TS Geared Type **NEW**

Product Name (Single Shaft)	Product Name (Double Shaft)
PKP544N18A2-TS3.6	PKP544N18B2-TS3.6
PKP544N18A2-TS7.2	PKP544N18B2-TS7.2
PKP544N18A2-TS10	PKP544N18B2-TS10
PKP543N18A2-TS20	PKP543N18B2-TS20
PKP543N18A2-TS30	PKP543N18B2-TS30
PKP566N28A2-TS3.6	PKP566N28B2-TS3.6
PKP566N28A2-TS7.2	PKP566N28B2-TS7.2
PKP566N28A2-TS10	PKP566N28B2-TS10
PKP564N28A2-TS20	PKP564N28B2-TS20
PKP564N28A2-TS30	PKP564N28B2-TS30

● Bipolar Driver for 2-Phase Stepping Motor

◇ With Installation Plate Right Angle

Product Name
CVD205BR-K
CVD206BR-K
CVD215BR-K
CVD223BR-K
CVD223FBR-K
CVD228BR-K
CVD245BR-K

◇ With Installation Plate

Product Name
CVD205B-K
CVD206B-K
CVD215B-K
CVD223B-K
CVD223FB-K
CVD228B-K
CVD245B-K

● Driver for 5-Phase Stepping Motor

◇ With Installation Plate Right Angle

Product Name
CVD503BR-K
CVD512BR-K
CVD518BR-K
CVD524BR-K
CVD528BR-K
CVD538BR-K

◇ With Installation Plate

Product Name
CVD503B-K
CVD512B-K
CVD518B-K
CVD524B-K
CVD528B-K
CVD538B-K

● Cable

Cables for connecting the motor and driver and cables for connecting the driver and programmable controller are available. For details, see page 43.

● Standard Type With Encoder

Product Name
PK513PA-R2GL
PKP543N18A2-R2GL
PKP544N18A2-R2GL
PKP545N18A2-R2GL
PKP546N18A2-R2GL
PKP564N28A2-R2GL
PKP566N28A2-R2GL
PKP568N28A2-R2GL
PKP564FN24A2-R2GL
PKP564FN38A2-R2GL
PKP566FN24A2-R2GL
PKP566FN38A2-R2GL
PKP569FN24A2-R2GL
PKP569FN38A2-R2GL

Accessories

Motor

Type	Accessories	Parallel Key	Motor Installation Screws	Operating Manual
Standard Type High-Resolution Type SH Geared Type		—	—	1 set
TS Geared Type	Frame Size 42 mm	—	—	
	Frame Size 60 mm	1 pc.	M4×60 P0.7 (4 pcs.)	

● The encoder standard cable is provided with the motor only for **PK513PA-R2GL** (Frame size 20 mm with 5-phase standard type encoder).

Driver

Type	Accessories	Connector	Operating Manual
For All Types		For CN1 (1 pc.) For CN2 (1 pc.) For CN3 (1 pc.)	1 set

CVK Series Driver Variations

The following **CVK** Series driver variations that are not listed in this catalog are available.

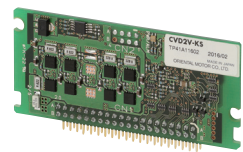
Board Mounting Type Compact Driver

CVK Series S Type

This is the board mounting type driver for the 2-Phase/5-Phase stepping motor.
For details, contact an Oriental Motor sales office.

◇ Product Line

Phases	Product Name			
	I/O Setting		SPI Communication	
	Horizontal Mounting	Vertical Mounting	Horizontal Mounting	Vertical Mounting
2-Phase	CVD2H-K	CVD2V-K	CVD2H-KS	CVD2V-KS
5-Phase	CVD5H-K	CVD5V-K	CVD5H-KS	CVD5V-KS



Speed Control Driver

CVK Series SC Type

This driver can easily control the speed with the feel of a speed-control motor.
It is for 5-Phase stepping motors. For details, either contact an Oriental Motor sales office or refer to the "Stepping Motor **CVK** Series **SC** Type" catalog.

◇ Product Line

● With Installation Plate Right Angle

Phases	Product Name
5-Phase	CVD512BR-KSC
	CVD518BR-KSC
	CVD524BR-KSC

● With Installation Plate

Phases	Product Name
5-Phase	CVD512B-KSC
	CVD518B-KSC
	CVD524B-KSC



2-Phase Stepping Motor Standard Type/Standard Type With Encoder Frame Size 20 mm, 28 mm

Specifications



Motor Product Name	Single Shaft	PKP213D05A	PKP214D06A	PKP223D15A2	PKP225D15A2
	Double Shaft	PKP213D05B	PKP214D06B	PKP223D15B2	PKP225D15B2
	With Encoder	PKP213D05A-R2EL	PKP214D06A-R2EL	PKP223D15A2-R2EL	PKP225D15A2-R2EL
Driver Product Name		CVD205B□-K	CVD206B□-K	CVD215B□-K	CVD215B□-K
Maximum Holding Torque	N·m	0.02	0.036	0.095	0.19
Holding Torque at Motor Standstill	N·m	0.01	0.018	0.047	0.095
Rotor Inertia	J: kg·m ²	1.6 × 10 ⁻⁷ [1.66 × 10 ⁻⁷]	2.9 × 10 ⁻⁷ [2.96 × 10 ⁻⁷]	9 × 10 ⁻⁷	18 × 10 ⁻⁷
Rated Current	A/Phase	0.5	0.6	1.5	
Basic Step Angle		1.8°			
Power Supply Input		24 VDC ±10% 0.5 A		24 VDC ±10% 1.3 A	
Excitation Mode		Microstep			

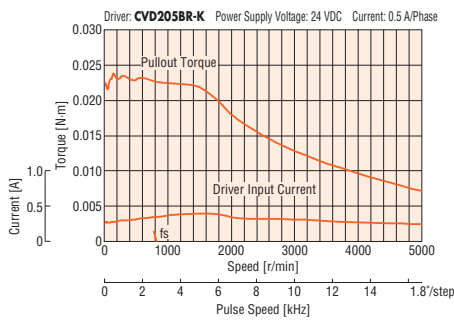
● Encoder specifications → Page 28

● For the right angle with installation plate, **R** (representing right angle) is entered for □ in the driver product name to show the connector shape.

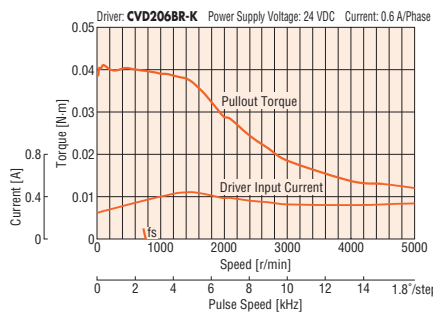
● [] indicates the specifications with encoder.

Speed – Torque Characteristics (Reference values) fs: Maximum Self-starting Frequency

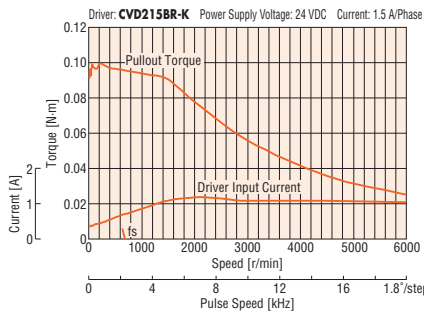
PKP213



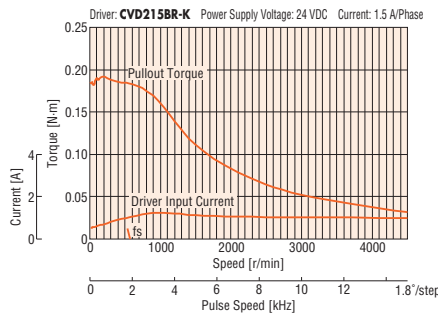
PKP214



PKP223



PKP225



Note

● The Speed – Torque characteristics are the data measured under the Oriental Motor's measurement conditions. The characteristics may vary as the conditions change.

● Depending on the driving conditions, the motor may produce a considerable amount of heat. Be sure to keep the motor case temperature at 100°C or less. If an encoder is included, be sure to keep the motor case temperature at 85°C or less in order to protect the encoder.

Descriptions of the Terms on the Specification Table

Maximum Holding Torque	: The maximum holding torque (holding force) of the motor when power (rated current) is being supplied but the motor shaft is at standstill. (With geared types, the permissible strength of the gear is given consideration for this value.)
Permissible Torque	: The maximum value of the torque that can be continuously applied on the output gear shaft. For the SH geared type, the total torque including acceleration/deceleration torque should not exceed the permissible torque.
Maximum Instantaneous Torque	: This is the maximum torque value that can be applied to the output gear shaft during acceleration/deceleration like when an inertial load is started and stopped.
Holding Torque at Motor Standstill	: Holding torque when the automatic current cutback function is active.

2-Phase Stepping Motor Standard Type Frame Size 35 mm

Specifications

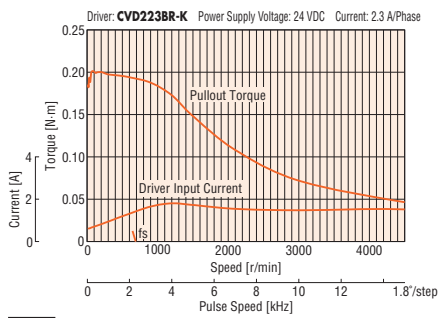


Motor Product Name	Single Shaft	PKP233D23A	PKP235D23A
	Double Shaft	PKP233D23B	PKP235D23B
Driver Product Name		CVD223B□-K	CVD223B□-K
Maximum Holding Torque	N·m	0.2	0.37
Holding Torque at Motor Standstill	N·m	0.1	0.19
Rotor Inertia	J: kg·m ²	24×10 ⁻⁷	50×10 ⁻⁷
Rated Current	A/Phase	2.3	
Basic Step Angle		1.8°	
Power Supply Input		24 VDC ±10% 2.0 A	
Excitation Mode		Microstep	

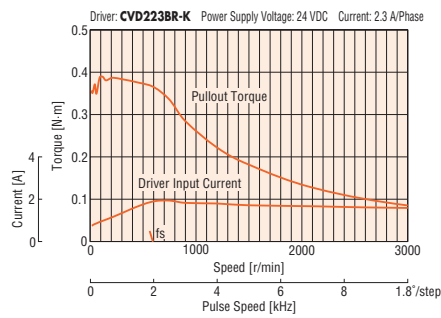
● For the right angle with installation plate, **R** (representing right angle) is entered for □ in the driver product name to show the connector shape.

Speed – Torque Characteristics (Reference values) fs: Maximum Self-starting Frequency

PKP233



PKP235



Note

- The Speed – Torque characteristics are the data measured under the Oriental Motor's measurement conditions. The characteristics may vary as the conditions change.
- Depending on the driving conditions, the motor may produce a considerable amount of heat. Be sure to keep the motor case temperature at 100°C or less.

2-Phase Stepping Motor Standard Type/Standard Type With Encoder Frame Size 42 mm

Specifications



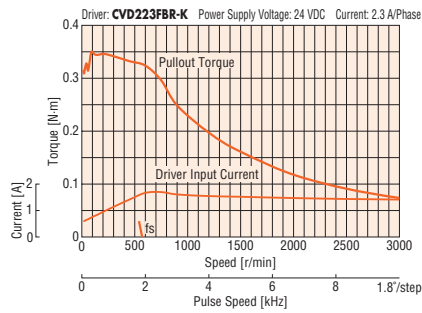
Motor Product Name	Single Shaft	PKP243D23A2	PKP244D23A2	PKP245D23A2	PKP246D23A2
	Double Shaft	PKP243D23B2	PKP244D23B2	PKP245D23B2	PKP246D23B2
	With Encoder	PKP243D23A2-R2EL PKP243D23A2-R2FL	PKP244D23A2-R2EL PKP244D23A2-R2FL	PKP245D23A2-R2EL PKP245D23A2-R2FL	PKP246D23A2-R2EL PKP246D23A2-R2FL
Driver Product Name	CVD223FB□-K		CVD223FB□-K	CVD223FB□-K	CVD223FB□-K
Maximum Holding Torque	N·m	0.35	0.48	0.66	0.99
Holding Torque at Motor Standstill	N·m	0.18	0.24	0.33	0.5
Rotor Inertia	J: kg·m ²	36×10 ⁻⁷	54×10 ⁻⁷	73×10 ⁻⁷	110×10 ⁻⁷
Rated Current	A/Phase	2.3			
Basic Step Angle		1.8°			
Power Supply Input		24 VDC ±10% 2.0 A			
Excitation Mode		Microstep			

● Encoder specifications → Page 28

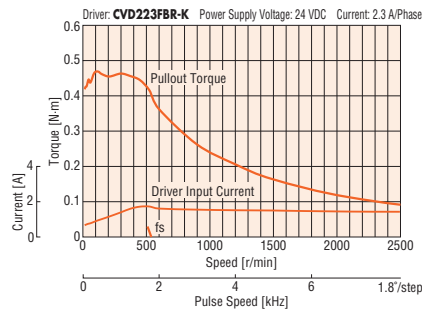
● For the right angle with installation plate, **R** (representing right angle) is entered for □ in the driver product name to show the connector shape.

Speed – Torque Characteristics (Reference values) fs: Maximum Self-starting Frequency

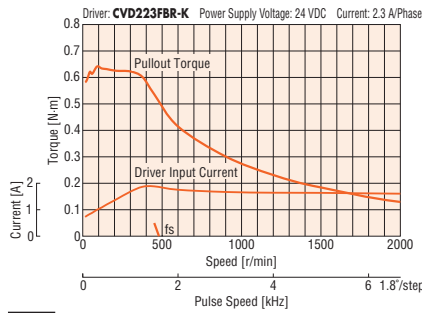
PKP243



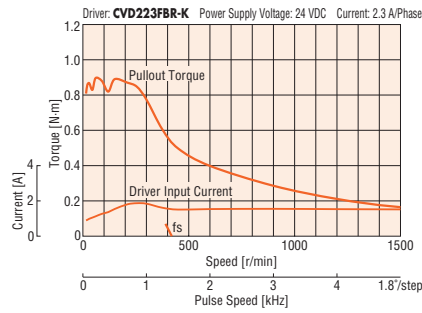
PKP244



PKP245



PKP246



Note

- The Speed – Torque characteristics are the data measured under the Oriental Motor's measurement conditions. The characteristics may vary as the conditions change.
- Depending on the driving conditions, the motor may produce a considerable amount of heat. Be sure to keep the motor case temperature at 100°C or less. If an encoder is included, be sure to keep the motor case temperature at 85°C or less in order to protect the encoder.

2-Phase Stepping Motor Standard Type/Standard Type With Encoder Frame Size 56.4 mm

Specifications



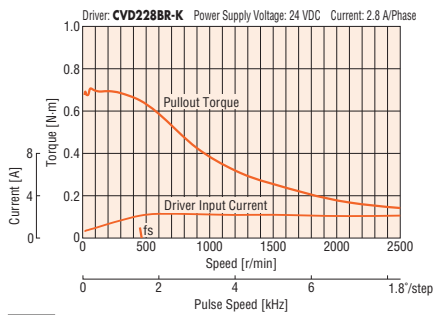
Motor Product Name	Single Shaft	PKP264D28A2	PKP266D28A2	PKP268D28A2
	Double Shaft	PKP264D28B2	PKP266D28B2	PKP268D28B2
	With Encoder	PKP264D28A2-R2EL	PKP266D28A2-R2EL	PKP268D28A2-R2EL
PKP264D28A2-R2FL		PKP266D28A2-R2FL	PKP268D28A2-R2FL	
Driver Product Name		CVD228B□-K	CVD228B□-K	CVD228B□-K
Maximum Holding Torque	N·m	0.74	1.4	2.5
Holding Torque at Motor Standstill	N·m	0.37	0.7	1.3
Rotor Inertia	J: kg·m ²	140×10 ⁻⁷	270×10 ⁻⁷	500×10 ⁻⁷
Rated Current	A/Phase	2.8		
Basic Step Angle		1.8°		
Power Supply Input		24 VDC ±10% 3.0 A		
Excitation Mode		Microstep		

● Encoder specifications → Page 28

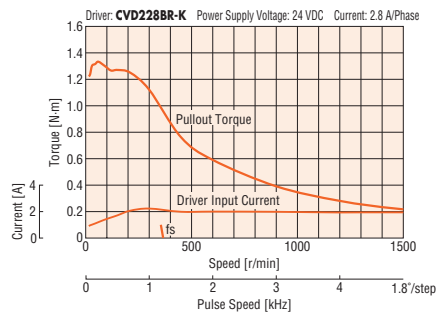
● For the right angle with installation plate, **R** (representing right angle) is entered for □ in the driver product name to show the connector shape.

Speed – Torque Characteristics (Reference values) fs: Maximum Self-starting Frequency

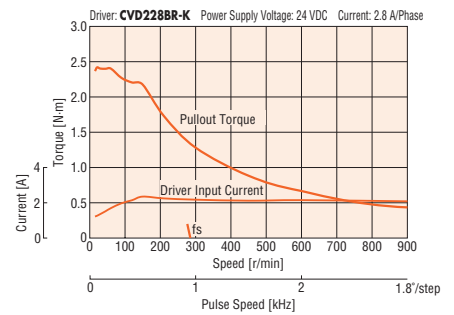
PKP264



PKP266



PKP268



Note

- The Speed – Torque characteristics are the data measured under the Oriental Motor's measurement conditions. The characteristics may vary as the conditions change.
- Depending on the driving conditions, the motor may produce a considerable amount of heat. Be sure to keep the motor case temperature at 100°C or less. If an encoder is included, be sure to keep the motor case temperature at 85°C or less in order to protect the encoder.

2-Phase Stepping Motor Standard Type Frame Size 85 mm

Specifications

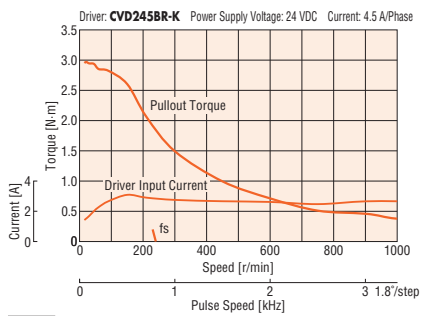


Motor Product Name	Single Shaft	PKP296D45A	PKP299D45A	PKP2913D45A
	Double Shaft	PKP296D45B	PKP299D45B	PKP2913D45B
Driver Product Name		CVD245B□-K	CVD245B□-K	CVD245B□-K
Maximum Holding Torque	N·m	3.3	6.4	9.5
Holding Torque at Motor Standstill	N·m	1.7	3.2	4.8
Rotor Inertia	J: kg·m ²	1100×10 ⁻⁷	2200×10 ⁻⁷	3400×10 ⁻⁷
Rated Current	A/Phase	4.5		
Basic Step Angle	1.8°			
Power Supply Input	24 VDC ±10% 3.9 A			
Excitation Mode	Microstep			

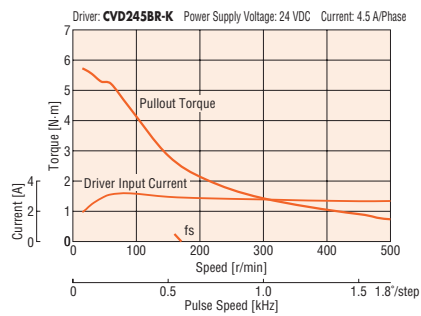
● For the right angle with installation plate, **R** (representing right angle) is entered for □ in the driver product name to show the connector shape.

Speed – Torque Characteristics (Reference values) fs: Maximum Self-starting Frequency

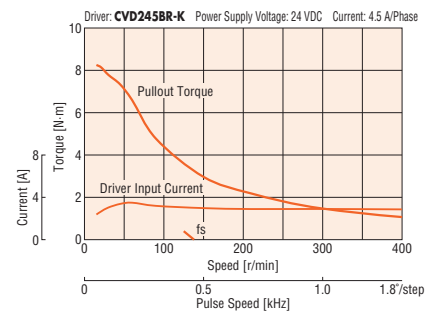
PKP296



PKP299



PKP2913



Note

- The Speed – Torque characteristics are the data measured under the Oriental Motor's measurement conditions. The characteristics may vary as the conditions change.
- Depending on the driving conditions, the motor may produce a considerable amount of heat. Be sure to keep the motor case temperature at 100°C or less.

2-Phase Stepping Motor SH Geared Type Frame Size 28 mm

Specifications

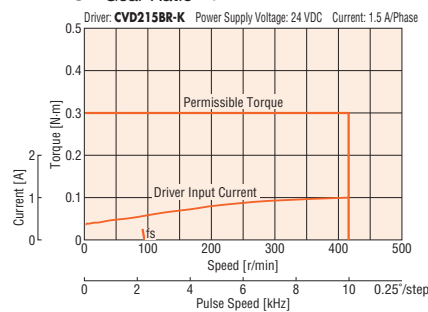


Motor Product Name	Single Shaft	PKP223D15A-SG7.2	PKP223D15A-SG9	PKP223D15A-SG10	PKP223D15A-SG18	PKP223D15A-SG36
	Double Shaft	PKP223D15B-SG7.2	PKP223D15B-SG9	PKP223D15B-SG10	PKP223D15B-SG18	PKP223D15B-SG36
Driver Product Name		CVD215B□-K	CVD215B□-K	CVD215B□-K	CVD215B□-K	CVD215B□-K
Maximum Holding Torque	N·m	0.3	0.3	0.3	0.4	0.4
Rotor Inertia	J: kg·m ²	9×10 ⁻⁷				
Rated Current	A/Phase	1.5				
Basic Step Angle		0.25°	0.2°	0.18°	0.1°	0.05°
Gear Ratio		7.2	9	10	18	36
Permissible Torque	N·m	0.3	0.3	0.3	0.4	0.4
Holding Torque at Motor Standstill	N·m	0.3	0.3	0.3	0.4	0.4
Backlash	arcmin	90 (1.5°)				
Speed Range	r/min	0~416	0~333	0~300	0~166	0~83
Power Supply Input		24 VDC ±10% 1.3 A				
Excitation Mode		Microstep				

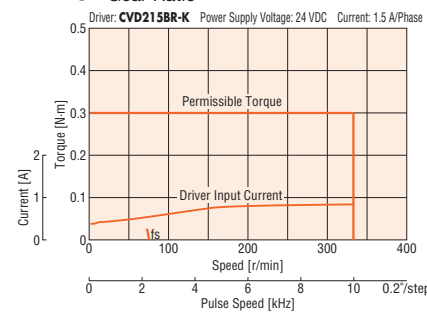
● For the right angle with installation plate, **R** (representing right angle) is entered for □ in the driver product name to show the connector shape.

Speed – Torque Characteristics (Reference values) *f_s*: Maximum Self-starting Frequency

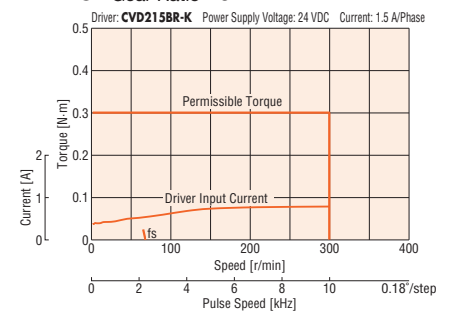
PKP223 Gear Ratio 7.2



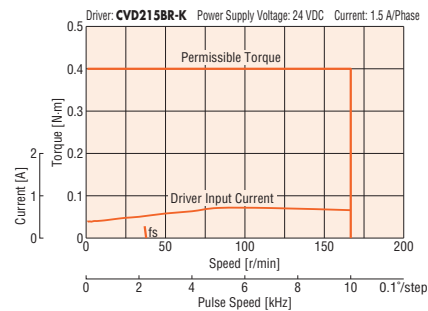
PKP223 Gear Ratio 9



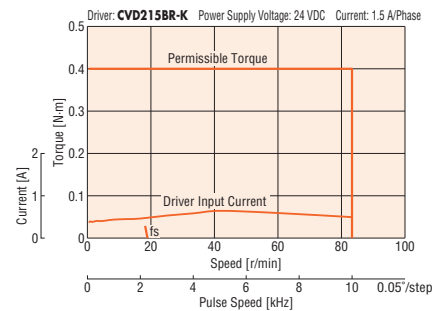
PKP223 Gear Ratio 10



PKP223 Gear Ratio 18



PKP223 Gear Ratio 36



Note

- The Speed – Torque characteristics are the data measured under the Oriental Motor's measurement conditions. The characteristics may vary as the conditions change.
- Depending on the driving conditions, the motor may produce a considerable amount of heat. Be sure to keep the motor case temperature at 100°C or less.

2-Phase Stepping Motor SH Geared Type Frame Size 42 mm

Specifications

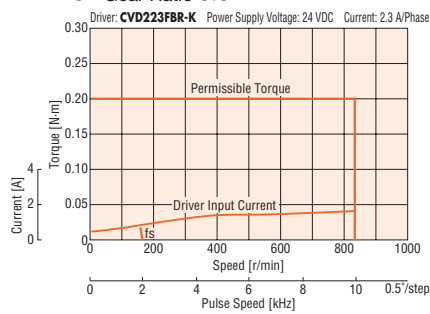


Motor Product Name	Single Shaft	PKP243D23A2-SG3.6	PKP243D23A2-SG7.2	PKP243D23A2-SG9	PKP243D23A2-SG10	PKP243D23A2-SG18	PKP243D23A2-SG36
	Double Shaft	PKP243D23B2-SG3.6	PKP243D23B2-SG7.2	PKP243D23B2-SG9	PKP243D23B2-SG10	PKP243D23B2-SG18	PKP243D23B2-SG36
Driver Product Name		CVD223FB□-K	CVD223FB□-K	CVD223FB□-K	CVD223FB□-K	CVD223FB□-K	CVD223FB□-K
Maximum Holding Torque	N·m	0.2	0.4	0.5	0.56	0.8	0.8
Rotor Inertia	J: kg·m ²	36×10 ⁻⁷					
Rated Current	A/Phase	2.3					
Basic Step Angle		0.5°	0.25°	0.2°	0.18°	0.1°	0.05°
Gear Ratio		3.6	7.2	9	10	18	36
Permissible Torque	N·m	0.2	0.4	0.5	0.56	0.8	0.8
Holding Torque at Motor Standstill	N·m	0.2	0.4	0.5	0.56	0.8	0.8
Backlash	arcmin	90 (1.5°)				60 (1°)	
Speed Range	r/min	0~833	0~416	0~333	0~300	0~166	0~83
Power Supply Input		24 VDC ±10% 2.0 A					
Excitation Mode		Microstep					

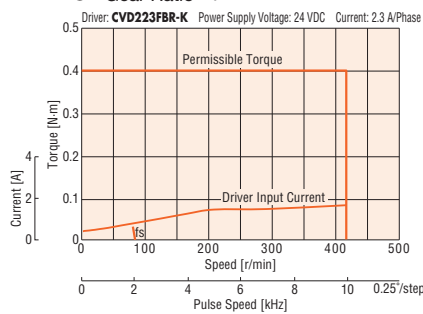
● For the right angle with installation plate, **R** (representing right angle) is entered for □ in the driver product name to show the connector shape.

Speed – Torque Characteristics (Reference values) fs: Maximum Self-starting Frequency

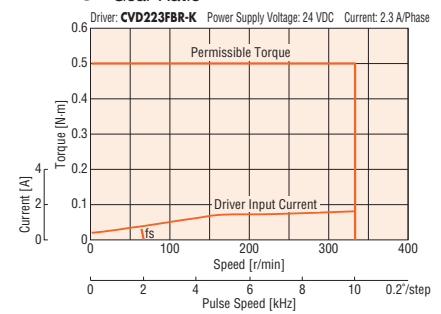
PKP243 Gear Ratio 3.6



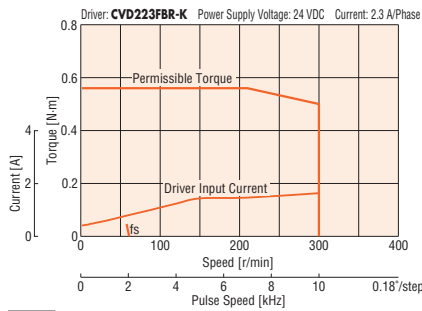
PKP243 Gear Ratio 7.2



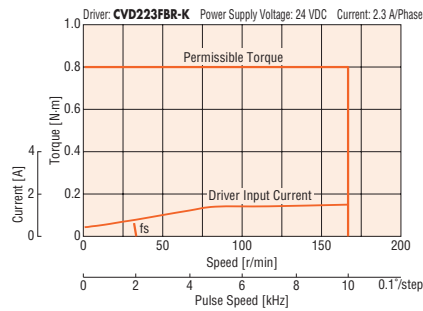
PKP243 Gear Ratio 9



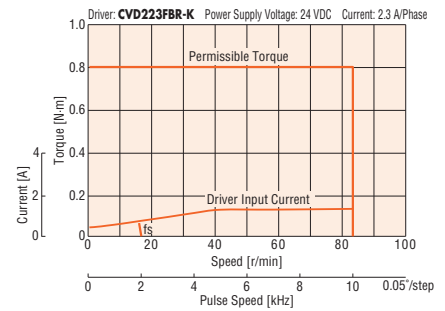
PKP243 Gear Ratio 10



PKP243 Gear Ratio 18



PKP243 Gear Ratio 36



Note

- The Speed – Torque characteristics are the data measured under the Oriental Motor's measurement conditions. The characteristics may vary as the conditions change.
- Depending on the driving conditions, the motor may produce a considerable amount of heat. Be sure to keep the motor case temperature at 100°C or less.

2-Phase Stepping Motor SH Geared Type Frame Size 60 mm

Specifications

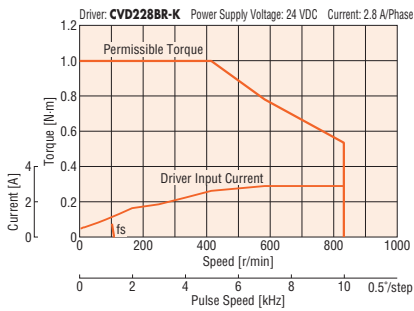


Motor Product Name	Single Shaft	PKP264D28A2-SG3.6	PKP264D28A2-SG7.2	PKP264D28A2-SG9	PKP264D28A2-SG10	PKP264D28A2-SG18	PKP264D28A2-SG36
	Double Shaft	PKP264D28B2-SG3.6	PKP264D28B2-SG7.2	PKP264D28B2-SG9	PKP264D28B2-SG10	PKP264D28B2-SG18	PKP264D28B2-SG36
Driver Product Name		CVD228B□-K	CVD228B□-K	CVD228B□-K	CVD228B□-K	CVD228B□-K	CVD228B□-K
Maximum Holding Torque	N·m	1	2	2.5	2.7	3	4
Rotor Inertia	J: kg·m ²	140 × 10 ⁻⁷					
Rated Current	A/Phase	2.8					
Basic Step Angle		0.5°	0.25°	0.2°	0.18°	0.1°	0.05°
Gear Ratio		3.6	7.2	9	10	18	36
Permissible Torque	N·m	1	2	2.5	2.7	3	4
Holding Torque at Motor Standstill	N·m	1	2	2.5	2.7	3	4
Backlash	arcmin	70 (1.17°)					
Speed Range	r/min	0~833	0~416	0~333	0~300	0~166	0~83
Power Supply Input		24 VDC ±10% 3.0 A					
Excitation Mode		Microstep					

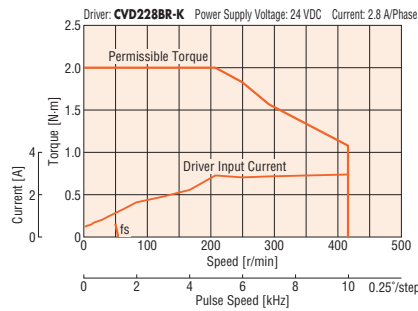
● For the right angle with installation plate, **R** (representing right angle) is entered for □ in the driver product name to show the connector shape.

Speed – Torque Characteristics (Reference values) *fs*: Maximum Self-starting Frequency

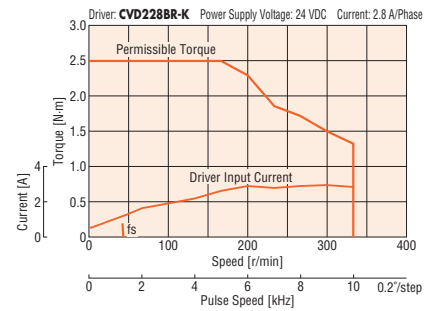
PKP264 Gear Ratio 3.6



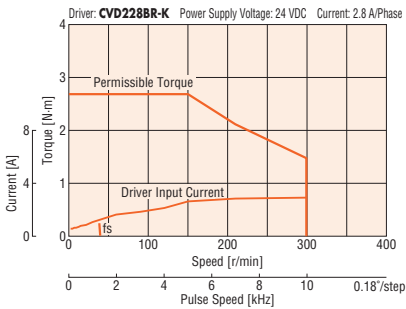
PKP264 Gear Ratio 7.2



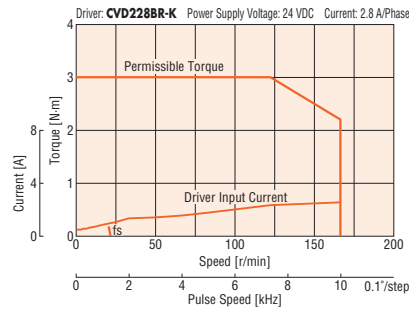
PKP264 Gear Ratio 9



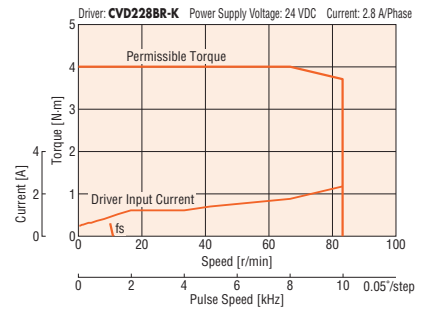
PKP264 Gear Ratio 10



PKP264 Gear Ratio 18



PKP264 Gear Ratio 36



Note

- The Speed – Torque characteristics are the data measured under the Oriental Motor's measurement conditions. The characteristics may vary as the conditions change.
- Depending on the driving conditions, the motor may produce a considerable amount of heat. Be sure to keep the motor case temperature at 100°C or less.

5-Phase Stepping Motor Standard Type/Standard Type With Encoder Frame Size 20 mm, 28 mm

Specifications



Motor Product Name	Single Shaft	PK513PA	PKP523N12A	PKP525N12A
	Double Shaft	PK513PB	PKP523N12B	PKP525N12B
	With Encoder	PK513PA-R2GL	—	—
Driver Product Name		CVD503B□-K	CVD512B□-K	CVD512B□-K
Maximum Holding Torque	N·m	0.0231	0.052	0.091
Holding Torque at Motor Standstill	N·m	0.012	0.026	0.045
Rotor Inertia	J: kg·m ²	1.6×10 ⁻⁷ [1.66×10 ⁻⁷]	9×10 ⁻⁷	18×10 ⁻⁷
Rated Current	A/Phase	0.35	1.2	
Basic Step Angle		0.72°		
Power Supply Input		24 VDC ±10% 0.6 A	24 VDC ±10% 1.7 A	
Excitation Mode		Microstep		

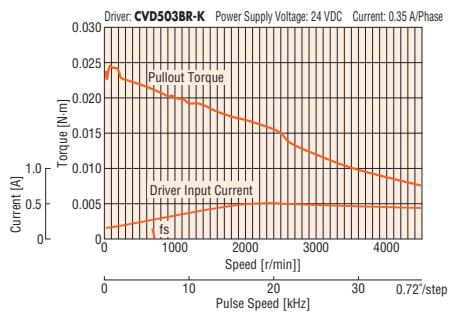
● Encoder specifications → Page 28

● For the right angle with installation plate, **R** (representing right angle) is entered for □ in the driver product name to show the connector shape.

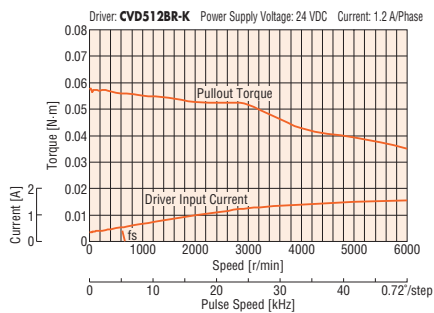
● [] indicates the specifications with encoder.

Speed – Torque Characteristics (Reference values) fs: Maximum Self-starting Frequency

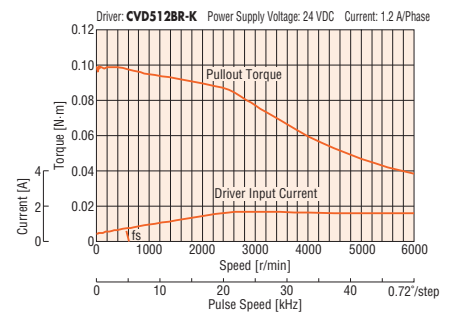
PK513



PKP523



PKP525



Note

● The Speed – Torque characteristics are the data measured under the Oriental Motor's measurement conditions. The characteristics may vary as the conditions change.

● Depending on the driving conditions, the motor may produce a considerable amount of heat. Be sure to keep the motor case temperature at 100°C or less. If an encoder is included, be sure to keep the motor case temperature at 85°C or less in order to protect the encoder.

5-Phase Stepping Motor Standard Type/Standard Type With Encoder Frame Size 42 mm

Specifications



Motor Product Name	Single Shaft	PKP543N18A2	PKP544N18A2	PKP545N18A2	PKP546N18A2
	Double Shaft	PKP543N18B2	PKP544N18B2	PKP545N18B2	PKP546N18B2
	With Encoder	PKP543N18A2-R2GL	PKP544N18A2-R2GL	PKP545N18A2-R2GL	PKP546N18A2-R2GL
Driver Product Name		CVD518B□-K	CVD518B□-K	CVD518B□-K	CVD518B□-K
Maximum Holding Torque	N·m	0.22	0.3	0.37	0.5
Holding Torque at Motor Standstill	N·m	0.11	0.15	0.19	0.25
Rotor Inertia	J: kg·m ²	35×10 ⁻⁷	55×10 ⁻⁷	71×10 ⁻⁷	110×10 ⁻⁷
Rated Current	A/Phase	1.8			
Basic Step Angle		0.72°			
Power Supply Input		24 VDC ±10% 2.8 A			
Excitation Mode		Microstep			

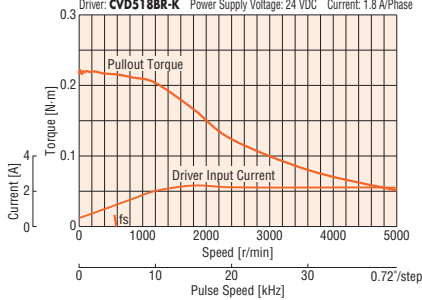
● Encoder specifications → Page 28

● For the right angle with installation plate, **R** (representing right angle) is entered for □ in the driver product name to show the connector shape.

Speed – Torque Characteristics (Reference values) fs: Maximum Self-starting Frequency

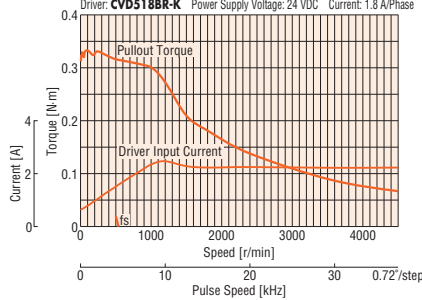
PKP543

Driver: CVD518BR-K Power Supply Voltage: 24 VDC Current: 1.8 A/Phase



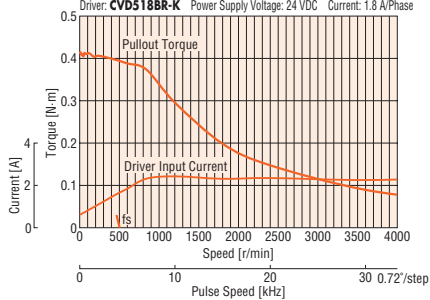
PKP544

Driver: CVD518BR-K Power Supply Voltage: 24 VDC Current: 1.8 A/Phase



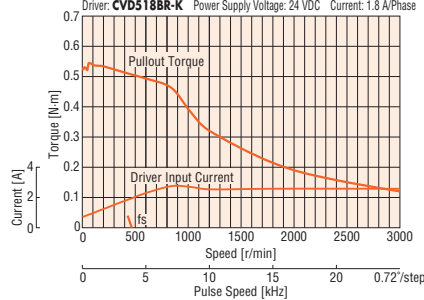
PKP545

Driver: CVD518BR-K Power Supply Voltage: 24 VDC Current: 1.8 A/Phase



PKP546

Driver: CVD518BR-K Power Supply Voltage: 24 VDC Current: 1.8 A/Phase



Note

- The Speed – Torque characteristics are the data measured under the Oriental Motor's measurement conditions. The characteristics may vary as the conditions change.
- Depending on the driving conditions, the motor may produce a considerable amount of heat. Be sure to keep the motor case temperature at 100°C or less. If an encoder is included, be sure to keep the motor case temperature at 85°C or less in order to protect the encoder.

5-Phase Stepping Motor High-Resolution Type Frame Size 42 mm

Specifications

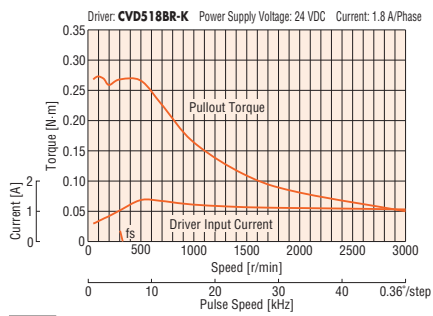


Motor Product Name	Single Shaft	PKP544MN18A	PKP546MN18A
	Double Shaft	PKP544MN18B	PKP546MN18B
Driver Product Name		CVD518B□-K	CVD518B□-K
Maximum Holding Torque	N·m	0.26	0.44
Holding Torque at Motor Standstill	N·m	0.13	0.22
Rotor Inertia	J: kg·m ²	60×10 ⁻⁷	121×10 ⁻⁷
Rated Current	A/Phase	1.8	
Basic Step Angle		0.36°	
Power Supply Input		24 VDC ±10% 2.8 A	
Excitation Mode		Microstep	

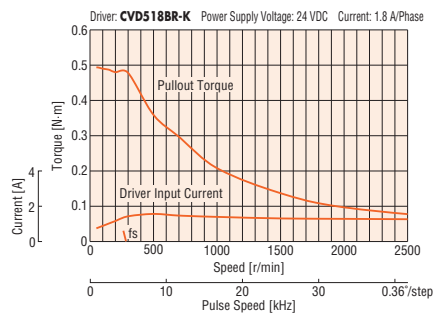
● For the right angle with installation plate, **R** (representing right angle) is entered for □ in the driver product name to show the connector shape.

Speed – Torque Characteristics (Reference values) fs: Maximum Self-starting Frequency

PKP544M



PKP546M



Note

- The Speed – Torque characteristics are the data measured under the Oriental Motor's measurement conditions. The characteristics may vary as the conditions change.
- Depending on the driving conditions, the motor may produce a considerable amount of heat. Be sure to keep the motor case temperature at 100°C or less.

5-Phase Stepping Motor Standard Type/Standard Type With Encoder Frame Size 56.4 mm

Specifications



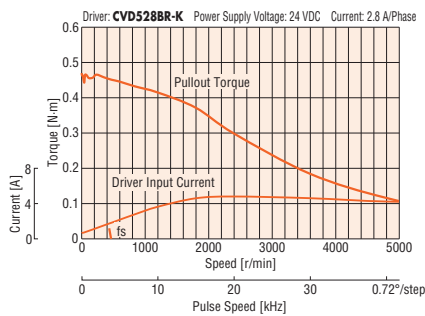
Motor Product Name	Single Shaft	PKP564N28A2	PKP566N28A2	PKP568N28A2
	Double Shaft	PKP564N28B2	PKP566N28B2	PKP568N28B2
	With Encoder	PKP564N28A2-R2GL	PKP566N28A2-R2GL	PKP568N28A2-R2GL
Driver Product Name		CVD528B□-K	CVD528B□-K	CVD528B□-K
Maximum Holding Torque	N·m	0.44	0.81	1.5
Holding Torque at Motor Standstill	N·m	0.22	0.41	0.75
Rotor Inertia	J: kg·m ²	140×10 ⁻⁷	270×10 ⁻⁷	500×10 ⁻⁷
Rated Current	A/Phase	2.8		
Basic Step Angle		0.72°		
Power Supply Input		24 VDC ±10% 4.8 A		
Excitation Mode		Microstep		

● Encoder specifications → Page 28

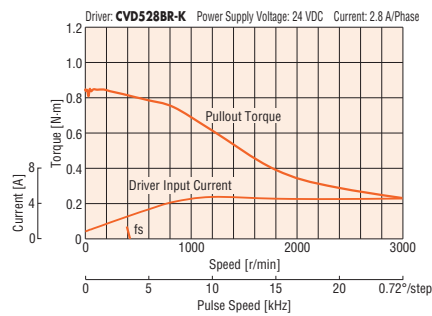
● For the right angle with installation plate, **R** (representing right angle) is entered for □ in the driver product name to show the connector shape.

Speed – Torque Characteristics (Reference values) f_s : Maximum Self-starting Frequency

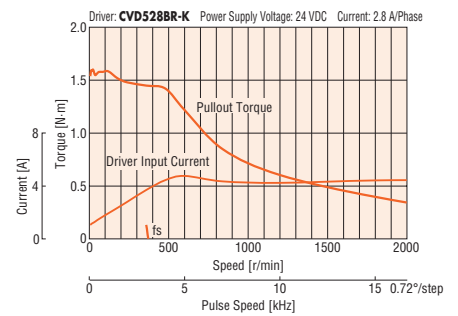
PKP564



PKP566



PKP568



Note

- The Speed – Torque characteristics are the data measured under the Oriental Motor's measurement conditions. The characteristics may vary as the conditions change.
- Depending on the driving conditions, the motor may produce a considerable amount of heat. Be sure to keep the motor case temperature at 100°C or less. If an encoder is included, be sure to keep the motor case temperature at 85°C or less in order to protect the encoder.

5-Phase Stepping Motor Standard Type/Standard Type With Encoder Frame Size 60 mm

Specifications



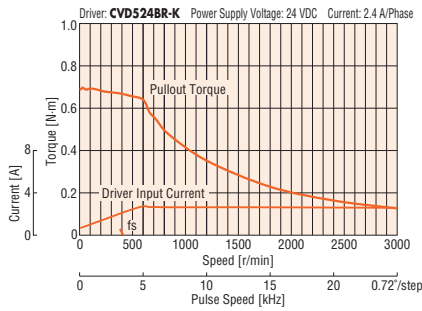
Motor Product Name	Single Shaft	PKP564FN24A2	PKP564FN38A2	PKP566FN24A2	PKP566FN38A2	PKP569FN24A2	PKP569FN38A2
	Double Shaft	PKP564FN24B2	PKP564FN38B2	PKP566FN24B2	PKP566FN38B2	PKP569FN24B2	PKP569FN38B2
	With Encoder	PKP564FN24A2-R2GL	PKP564FN38A2-R2GL	PKP566FN24A2-R2GL	PKP566FN38A2-R2GL	PKP569FN24A2-R2GL	PKP569FN38A2-R2GL
Driver Product Name		CVD524B□-K	CVD538B□-K	CVD524B□-K	CVD538B□-K	CVD524B□-K	CVD538B□-K
Maximum Holding Torque	N·m	0.66		1.15		2.1	
Holding Torque at Motor Standstill	N·m	0.33		0.58		1.1	
Rotor Inertia	J: kg·m ²	160×10 ⁻⁷		290×10 ⁻⁷		540×10 ⁻⁷	
Rated Current	A/Phase	2.4	3.8	2.4	3.8	2.4	3.8
Basic Step Angle		0.72°					
Power Supply Input		24 VDC ±10% 3.0 A	24 VDC ±10% 4.8 A	24 VDC ±10% 3.0 A	24 VDC ±10% 4.8 A	24 VDC ±10% 3.0 A	24 VDC ±10% 4.8 A
Excitation Mode		Microstep					

● Encoder specifications → Page 28

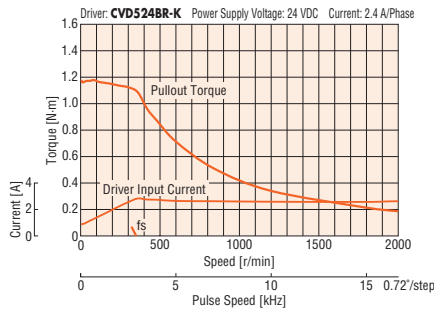
● For the right angle with installation plate, **R** (representing right angle) is entered for □ in the driver product name to show the connector shape.

Speed – Torque Characteristics (Reference values) fs: Maximum Self-starting Frequency

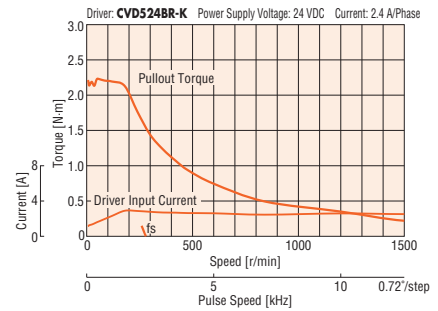
PKP564FN24



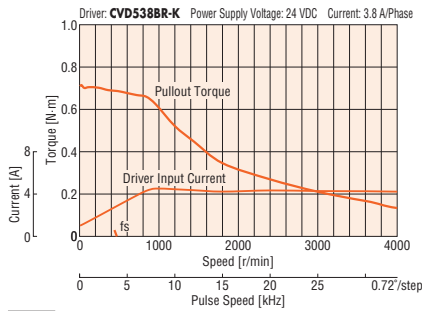
PKP566FN24



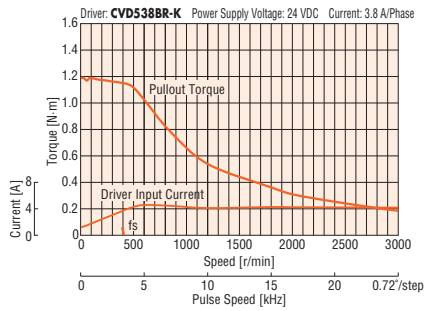
PKP569FN24



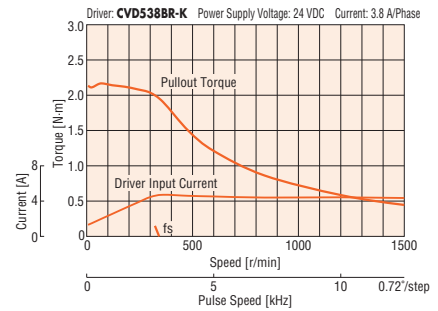
PKP564FN38



PKP566FN38



PKP569FN38



Note

● The Speed – Torque characteristics are the data measured under the Oriental Motor's measurement conditions. The characteristics may vary as the conditions change.

● Depending on the driving conditions, the motor may produce a considerable amount of heat. Be sure to keep the motor case temperature at 100°C or less. If an encoder is included, be sure to keep the motor case temperature at 85°C or less in order to protect the encoder.

5-Phase Stepping Motor High-Resolution Type Frame Size 60 mm

Specifications

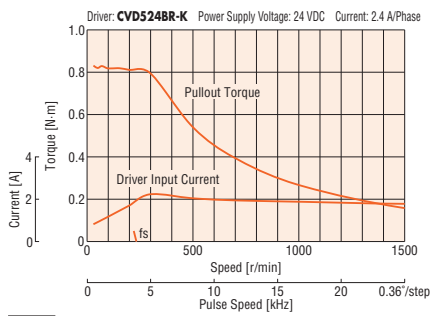


Motor Product Name	Single Shaft	PKP564FMN24A	PKP566FMN24A	PKP569FMN24A
	Double Shaft	PKP564FMN24B	PKP566FMN24B	PKP569FMN24B
Driver Product Name		CVD524B□-K	CVD524B□-K	CVD524B□-K
Maximum Holding Torque	N·m	0.78	1.25	2.3
Holding Torque at Motor Standstill	N·m	0.39	0.63	1.15
Rotor Inertia	J: kg·m ²	310×10 ⁻⁷	490×10 ⁻⁷	970×10 ⁻⁷
Rated Current	A/Phase	2.4		
Basic Step Angle		0.36°		
Power Supply Input		24 VDC ±10% 2.7 A		
Excitation Mode		Microstep		

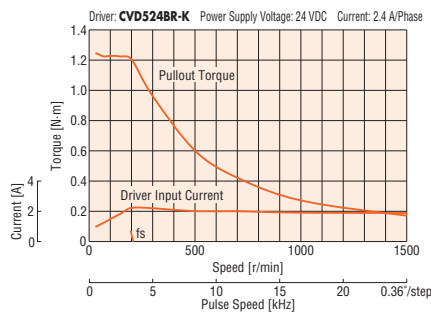
● For the right angle with installation plate, **R** (representing right angle) is entered for □ in the driver product name to show the connector shape.

Speed – Torque Characteristics (Reference values) f_s : Maximum Self-starting Frequency

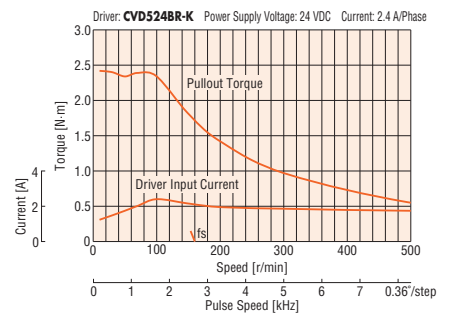
PKP564FMN24



PKP566FMN24



PKP569FMN24



Note

- The Speed – Torque characteristics are the data measured under the Oriental Motor's measurement conditions. The characteristics may vary as the conditions change.
- Depending on the driving conditions, the motor may produce a considerable amount of heat. Be sure to keep the motor case temperature at 100°C or less.

5-Phase Stepping Motor Standard Type Frame Size 85 mm

Specifications

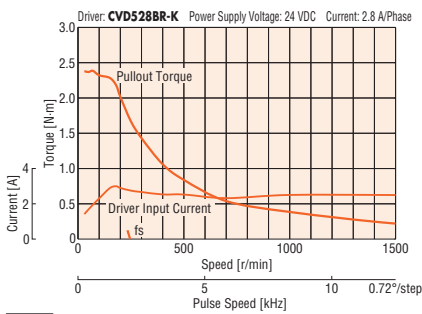


Motor Product Name	Single Shaft	PK596HNAW	PK599HNAW	PK5913HNAW
	Double Shaft	PK596HNBW	PK599HNBW	PK5913HNBW
Driver Product Name		CVD528B□-K	CVD528B□-K	CVD528B□-K
Maximum Holding Torque	N·m	2.1	4.1	6.3
Holding Torque at Motor Standstill	N·m	1.1	2.1	3.2
Rotor Inertia	J: kg·m ²	1400×10 ⁻⁷	2700×10 ⁻⁷	4000×10 ⁻⁷
Rated Current	A/Phase	2.8		
Basic Step Angle	0.72°			
Power Supply Input	24 VDC ±10% 4.8 A			
Excitation Mode	Microstep			

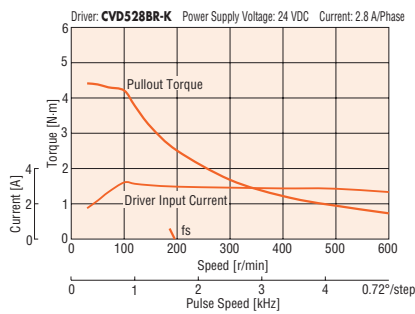
● For the right angle with installation plate, **R** (representing right angle) is entered for □ in the driver product name to show the connector shape.

Speed – Torque Characteristics (Reference values) fs: Maximum Self-starting Frequency

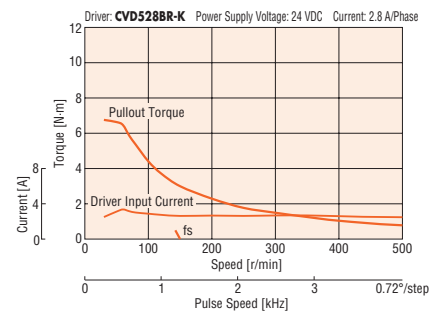
PK596



PK599



PK5913



Note

- The Speed – Torque characteristics are the data measured under the Oriental Motor's measurement conditions. The characteristics may vary as the conditions change.
- Depending on the driving conditions, the motor may produce a considerable amount of heat. Be sure to keep the motor case temperature at 100°C or less.

5-Phase Stepping Motor TS Geared Type NEW Frame Size 42 mm



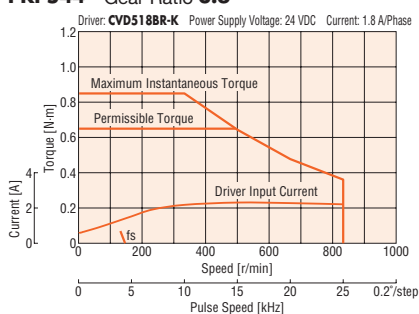
Specifications

Motor Product Name	Single Shaft	PKP544N18A2-TS3.6	PKP544N18A2-TS7.2	PKP544N18A2-TS10	PKP543N18A2-TS20	PKP543N18A2-TS30
	Double Shaft	PKP544N18B2-TS3.6	PKP544N18B2-TS7.2	PKP544N18B2-TS10	PKP543N18B2-TS20	PKP543N18B2-TS30
Driver Product Name		CVD518B□-K	CVD518B□-K	CVD518B□-K	CVD518B□-K	CVD518B□-K
Maximum Holding Torque	N·m	0.65	1.2	1.7	2	2.3
Rotor Inertia	J: kg·m ²	55×10 ⁻⁷	55×10 ⁻⁷	55×10 ⁻⁷	35×10 ⁻⁷	35×10 ⁻⁷
Rated Current	A/Phase	1.8				
Basic Step Angle		0.2°	0.1°	0.072°	0.036°	0.024°
Gear Ratio		3.6	7.2	10	20	30
Permissible Torque	N·m	0.65	1.2	1.7	2	2.3
Maximum Instantaneous Torque	N·m	0.85	1.6	2	3	3
Holding Torque at Motor Standstill	N·m	0.54	1.1	1.5	2	2.3
Backlash	arcmin	45 (0.75°)	25 (0.42°)		15 (0.25°)	
Speed Range	r/min	0~833	0~416	0~300	0~150	0~100
Power Supply Input		24 VDC ±10% 2.8 A				
Excitation Mode		Microstep				

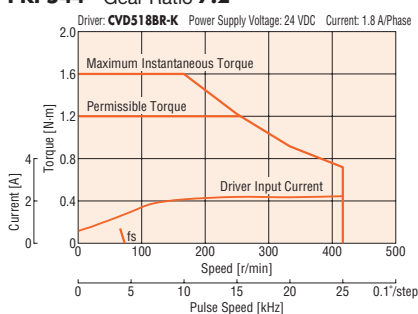
● For the right angle with installation plate, **R** (representing right angle) is entered for □ in the driver product name to show the connector shape.

Speed – Torque Characteristics (Reference values) fs: Maximum Self-starting Frequency

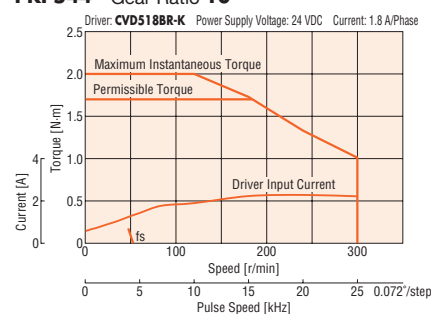
PKP544 Gear Ratio 3.6



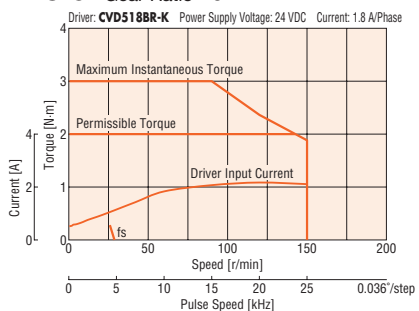
PKP544 Gear Ratio 7.2



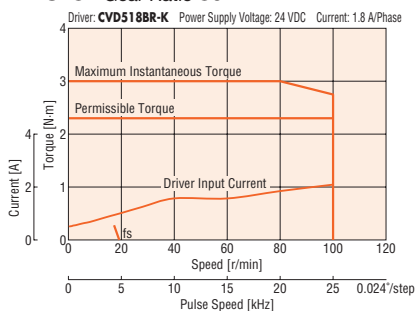
PKP544 Gear Ratio 10



PKP543 Gear Ratio 20



PKP543 Gear Ratio 30



Note

- The Speed – Torque characteristics are the data measured under the Oriental Motor's measurement conditions. The characteristics may vary as the conditions change.
- Depending on the driving conditions, the motor may produce a considerable amount of heat. Be sure to keep the motor case temperature at 100°C or less.

5-Phase Stepping Motor TS Geared Type NEW Frame Size 60 mm

Specifications

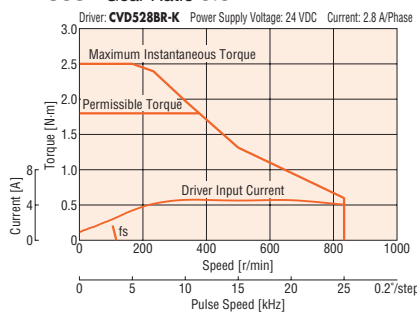


Motor Product Name	Single Shaft	PKP566N28A2-TS3.6	PKP566N28A2-TS7.2	PKP566N28A2-TS10	PKP564N28A2-TS20	PKP564N28A2-TS30
	Double Shaft	PKP566N28B2-TS3.6	PKP566N28B2-TS7.2	PKP566N28B2-TS10	PKP564N28B2-TS20	PKP564N28B2-TS30
Driver Product Name		CVD528B□-K	CVD528B□-K	CVD528B□-K	CVD528B□-K	CVD528B□-K
Maximum Holding Torque	N·m	1.8	3	4	5	6
Rotor Inertia	J: kg·m ²	270×10 ⁻⁷	270×10 ⁻⁷	270×10 ⁻⁷	140×10 ⁻⁷	140×10 ⁻⁷
Rated Current	A/Phase	2.8				
Basic Step Angle		0.2°	0.1°	0.072°	0.036°	0.024°
Gear Ratio		3.6	7.2	10	20	30
Permissible Torque	N·m	1.8	3	4	5	6
Maximum Instantaneous Torque	N·m	2.5	4.5	6	8	10
Holding Torque at Motor Standstill	N·m	1.5	3	4	4.4	6
Backlash	arcmin	35 (0.59°)			10 (0.17°)	
Speed Range	r/min	0~833	0~416	0~300	0~150	0~100
Power Supply Input		24 VDC ±10% 4.8 A				
Excitation Mode		Microstep				

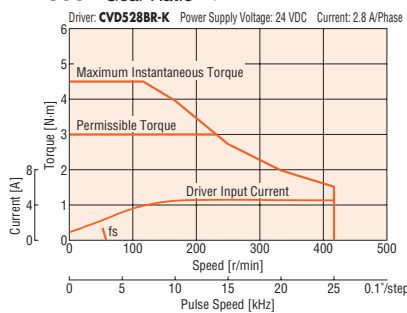
● For the right angle with installation plate, **R** (representing right angle) is entered for □ in the driver product name to show the connector shape.

Speed – Torque Characteristics (Reference values) fs: Maximum Self-starting Frequency

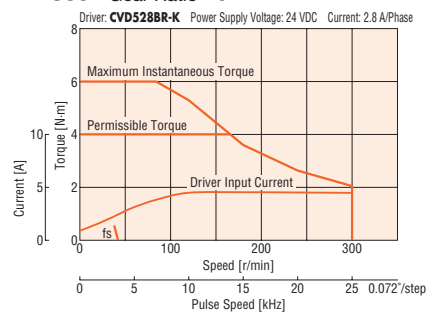
PKP566 Gear Ratio 3.6



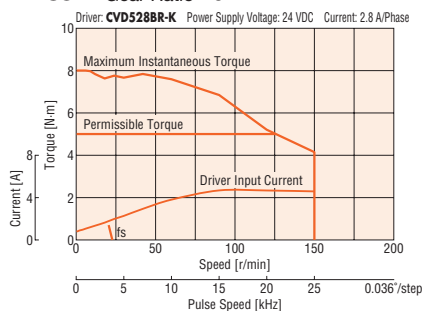
PKP566 Gear Ratio 7.2



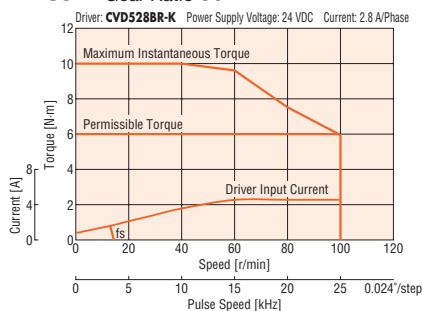
PKP566 Gear Ratio 10



PKP564 Gear Ratio 20



PKP564 Gear Ratio 30



Note

- The Speed – Torque characteristics are the data measured under the Oriental Motor's measurement conditions. The characteristics may vary as the conditions change.
- Depending on the driving conditions, the motor may produce a considerable amount of heat. Be sure to keep the motor case temperature at 100°C or less.

Driver Specifications

Max. Input Pulse Frequency	Line driver output by programmable controller: 1 MHz (When the pulse duty is 50%) Open-collector output by programmable controller: 250 kHz (When the pulse duty is 50%) Negative logic pulse input
Input Signals	· Photocoupler input (CW (PLS), CCW (DIR)) Photocoupler "ON": Input voltage 3~5.25 VDC, Photocoupler "OFF": Input voltage 0~1 VDC (Voltage between terminals) · Photocoupler input (AWO, CS) Photocoupler "ON": Input voltage 4.5~5.25 VDC, Photocoupler "OFF": Input voltage 0~1 VDC (Voltage between terminals)
Output Signals	Photocoupler and Open-collector output (ALM, TIM) External use condition: 30 VDC or less 10 mA or less

General Specifications

	Motor	Driver
Heat-Resistant Class	130 (B)	-
Insulation Resistance	The measured value is 100 MΩ or more when a 500 VDC megger is applied between the windings and the case under normal ambient temperature and humidity.	-
Dielectric Strength Voltage	No abnormality is recognized even by applying voltage between the windings and the case for 1 minute under normal ambient temperature and humidity. · PKP21 □, PKP22 □, PKP23 □, PKP24 □, PK513 , PKP52 □, PKP54 □: 0.5 kVAC 50/60 Hz · PKP26 □, PKP56 □: 1.0 kVAC 50/60 Hz · PKP29 □, PKP56 □ FMN , PK59 □: 1.5 kVAC 50/60 Hz	-
Operating Environment (In operation)	Ambient Temperature	-10~+50°C (Non-freezing)
	Ambient Humidity	85% or less (Non-condensing)
	Atmosphere	Use in an area without corrosive gases and dust. The product should not be exposed to water, oil or other liquids.
Temperature Rise	Winding temperature rise is 80°C or less (Under the Oriental Motor's measurement conditions)	-
Stop Position Accuracy*1	Standard Type: ±3 min. (±0.05°) [PKP21 □, ±5 min. (±0.083°), PK513 ±10 min. (±0.17°)] High-Resolution Type: ±2 min. (±0.034°)	-
Shaft Runout	0.05 T.I.R (mm)*4	-
Radial Play*2	0.025 mm Max. (Load 5 N)	-
Axial Play*3	0.075 mm Max. (Load 10 N) [1 N load for PKP21 □ and PK513 , 2.5 N load for PKP22 □ and PKP52 □]	-
Concentricity of Installation Pilot to the Shaft	0.075 T.I.R (mm)*4	-
Perpendicularity of Installation Surface to the Shaft	0.075 T.I.R (mm)*4	-

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

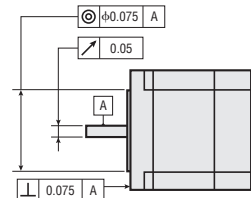
*2 Radial Play: Displacement in shaft position in the radial direction when a 5 N load is applied in the vertical direction to the tip of the motor shaft.

*3 Axial Play: Displacement in shaft position in the axial direction when a 10 N load (1 N for **PKP21**□ and **PK513**, 2.5 N for **PKP22**□ and **PKP52**□) 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

- When measuring insulation resistance or performing a dielectric strength voltage test, be sure to disconnect the motor from the driver beforehand. Do not conduct these tests on the motor encoder.



Encoder Specifications

Encoder Product Name	R2EL	R2FL	R2GL
Resolution	200 P/R	400 P/R	500 P/R
Output Circuit Type	Line driver*		
Output Mode	Incremental		
Output Signals	A-Phase, B-Phase, Z-Phase (3 ch)		
Power Supply Voltage	5 VDC ±10%		
Current	30 mA or less		

● A voltage output type for the encoder output circuit is also available.

For details, contact the nearest Oriental Motor sales office.

*26C31 or equivalent

Rotation Direction

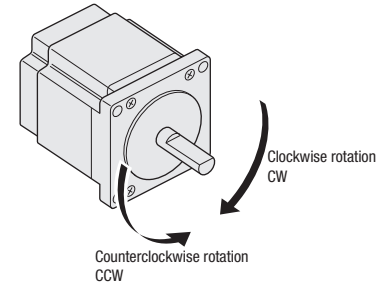
The direction represents when the motor is viewed from the output shaft.

The rotation direction of the gear output shaft, which is seen from the output shaft of a standard type motor, differs depending on the gear type or gear ratio.

Refer to the table below.

Gear Type	Gear Ratio	Rotation Direction seen from the Output Shaft
SH Geared Type Frame Size 28 mm	7.2, 36	Same direction
	9, 10, 18	Reverse direction
SH Geared Type Frame Size 42 mm, 60 mm	3.6, 7.2, 9, 10	Same direction
	18, 36	Reverse direction
TS Geared Type Frame Size 42 mm, 60 mm	3.6, 7.2, 10	Same direction
	20, 30	Reverse direction

Standard type motor



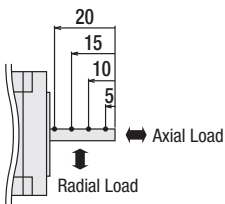
Permissible Radial Load/Permissible Axial Load

Unit: N

Type	Motor Frame Size	Product Name	Gear Ratio	Permissible Radial Load					Permissible Axial Load
				Distance from Shaft End mm					
				0	5	10	15	20	
Standard Type	20 mm	PKP213, PKP214, PK513	—	12	15	—	—	—	3
	28 mm	PKP223, PKP225 PKP523, PKP525	—	25	34	52	—	—	5
	35 mm	PKP233, PKP235	—	20	25	34	52	—	10
	42 mm	PKP243, PKP244, PKP245 PKP246, PKP543, PKP544 PKP545, PKP546	—	35	44	58	85	—	15
	56.4 mm	PKP264, PKP266, PKP268 PKP564, PKP566, PKP568	—	90	100	130	180	270	30
	60 mm	PKP564, PKP566, PKP569	—	90	100	130	180	270	30
High-Resolution Type	42 mm	PKP544, PKP546	—	20	25	34	52	—	10
	60 mm	PKP564, PKP566, PKP569	—	90	100	130	180	270	20
SH Geared Type	28 mm	PKP223	7.2, 9, 10, 18, 36	15	17	20	23	—	10
	42 mm	PKP243	3.6, 7.2, 9, 10, 18, 36	10	15	20	30	—	15
	60 mm	PKP264	3.6, 7.2, 9, 10 18, 36	30	40	50	60	70	30
TS Geared Type	42 mm	PKP544	3.6, 7.2, 10	20	30	40	50	—	15
		PKP543	20, 30	40	50	60	70	—	
	60 mm	PKP566	3.6, 7.2, 10	120	135	150	165	180	40
		PKP564	20, 30	170	185	200	215	230	

Radial Load and Axial Load

Distance from Shaft End [mm]



Dimensions (Unit = mm)

● Motor

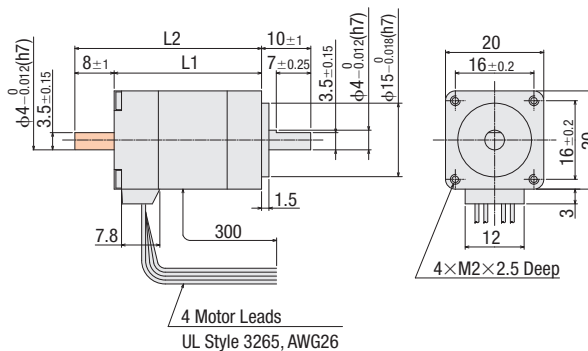
◇ 2-Phase Stepping Motor

● Standard Type

Frame Size 20 mm

2D & 3D CAD

Product Name	L1	L2	Mass kg	2D CAD
PKP213D05A	30	—	0.05	B1143
PKP213D05B		38		
PKP214D06A	40	—	0.07	B978
PKP214D06B		48		



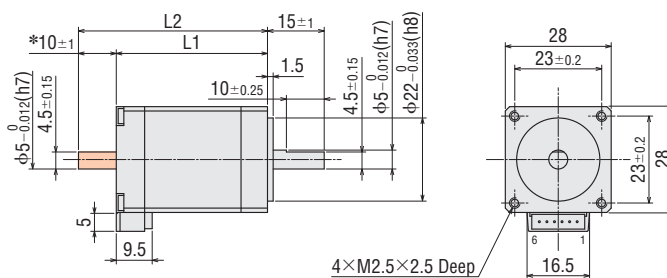
● The back shaft side of all double shaft models is shaft flat.

● Standard Type

Frame Size 28 mm

2D & 3D CAD

Product Name	L1	L2	Mass kg	2D CAD
PKP223D15A2	32	—	0.11	B1144
PKP223D15B2		42		
PKP225D15A2	51.5	—	0.2	B1145
PKP225D15B2		61.5		



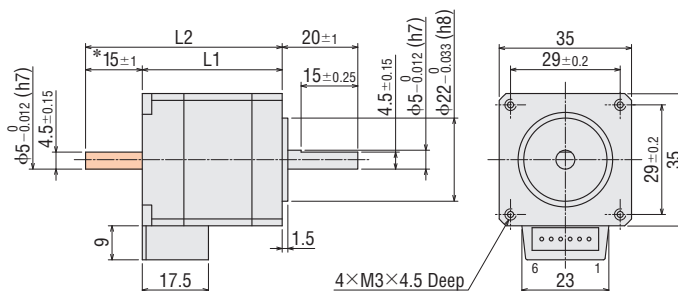
*The length of the shaft flat on the double shaft model is 10±0.25.

● Standard Type

Frame Size 35 mm

2D & 3D CAD

Product Name	L1	L2	Mass kg	2D CAD
PKP233D23A	37	—	0.18	B1111
PKP233D23B		52		
PKP235D23A	52	—	0.285	B1112
PKP235D23B		67		



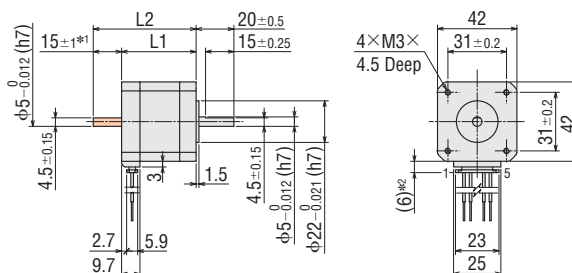
*The length of the shaft flat on the double shaft model is 15±0.25.

● Standard Type

Frame Size 42 mm

2D & 3D CAD

Product Name	L1	L2	Mass kg	2D CAD
PKP243D23A2	33	—	0.23	B1260
PKP243D23B2		48		
PKP244D23A2	39	—	0.3	B1261
PKP244D23B2		54		
PKP245D23A2	47	—	0.37	B1262
PKP245D23B2		62		
PKP246D23A2	59	—	0.5	B1263
PKP246D23B2		74		



*1 The length of the shaft flat on the double shaft model is 15±0.25.

*2 When a connection cable is attached..

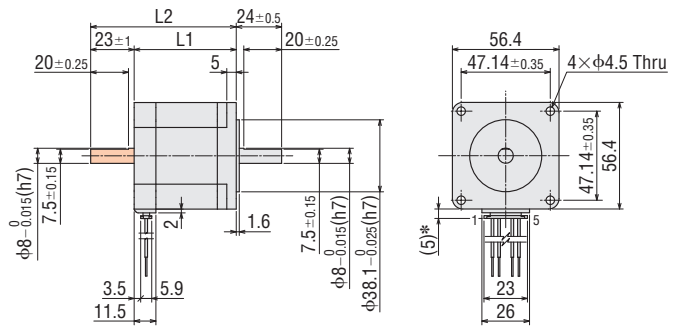
● These dimensions are for double shaft models. For single shaft models, ignore the shaft in the shaded areas.

•Standard Type

Frame Size 56.4 mm

2D & 3D CAD

Product Name	L1	L2	Mass kg	2D CAD
PKP264D28A2	39	—	0.45	B1249
PKP264D28B2		62		
PKP266D28A2	54	—	0.7	B1250
PKP266D28B2		77		
PKP268D28A2	76	—	1.1	B1251
PKP268D28B2		99		



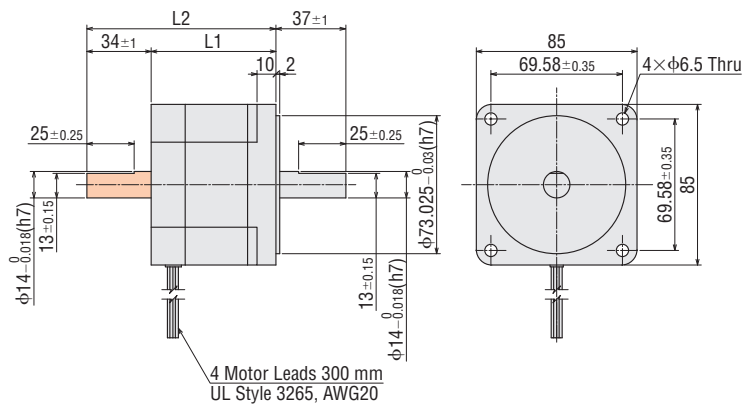
*When a connection cable is attached.

•Standard Type

Frame Size 85 mm

2D & 3D CAD

Product Name	L1	L2	Mass kg	2D CAD
PKP296D45A	66	—	1.8	B1237
PKP296D45B		100		
PKP299D45A	96	—	2.9	B1238
PKP299D45B		130		
PKP2913D45A	126	—	4	B1239
PKP2913D45B		160		

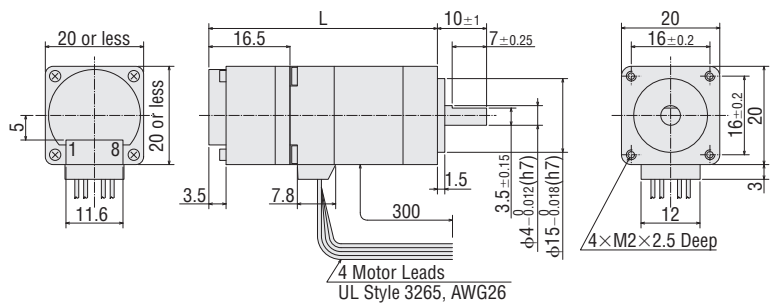


•Standard Type With Encoder

Frame Size 20 mm

2D & 3D CAD

Product Name	L	Mass kg	2D CAD
PKP213D05A-R2EL	46.5	0.06	B1100
PKP214D06A-R2EL	56.5	0.08	B1101



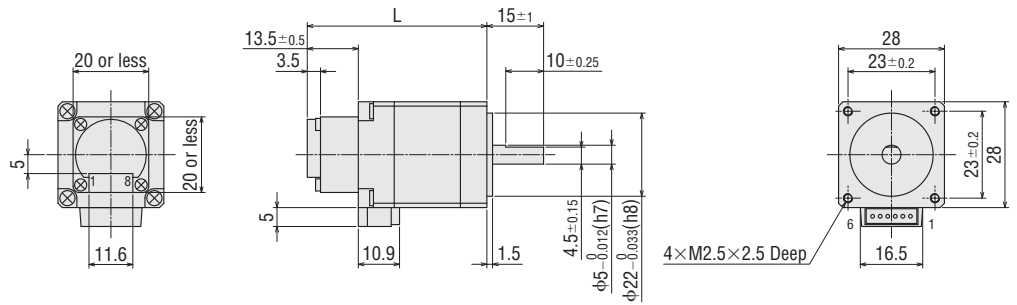
● These dimensions are for double shaft models. For single shaft models, ignore the shaft in the shaded areas.

• Standard Type With Encoder

Frame Size 28 mm

2D & 3D CAD

Product Name	L	Mass kg	2D CAD
PKP223D15A2-R2EL	47.5	0.12	B1198
PKP225D15A2-R2EL	67	0.21	B1199

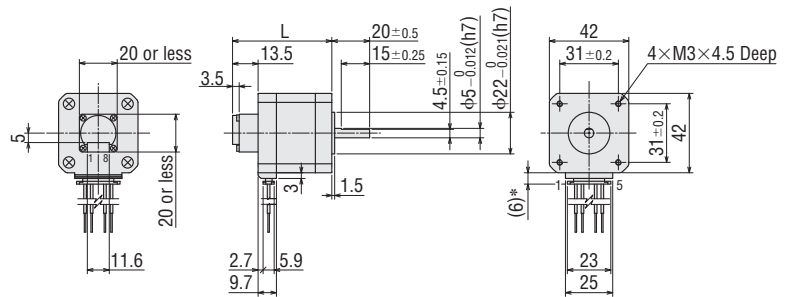


• Standard Type With Encoder

Frame Size 42 mm

2D & 3D CAD

Product Name	L	Mass kg	2D CAD
PKP243D23A2-R2EL	46.5	0.24	B1321
PKP243D23A2-R2FL			
PKP244D23A2-R2EL	52.5	0.31	B1322
PKP244D23A2-R2FL			
PKP245D23A2-R2EL	60.5	0.38	B1323
PKP245D23A2-R2FL			
PKP246D23A2-R2EL	72.5	0.51	B1324
PKP246D23A2-R2FL			



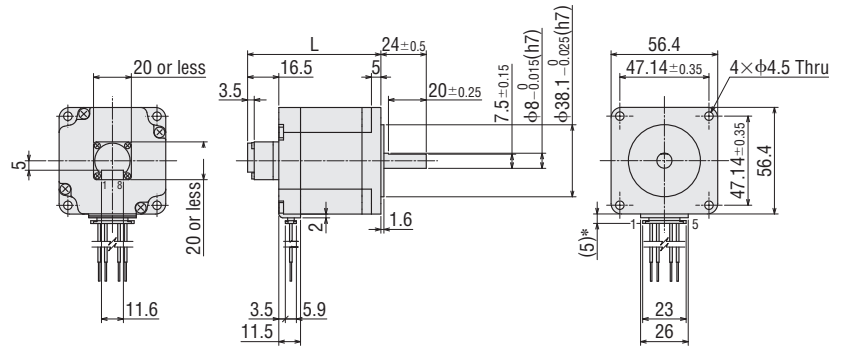
*When a connection cable is attached.

• Standard Type With Encoder

Frame Size 56.4 mm

2D & 3D CAD

Product Name	L	Mass kg	2D CAD
PKP264D28A2-R2EL	55.5	0.45	B1325
PKP264D28A2-R2FL			
PKP266D28A2-R2EL	70.5	0.7	B1326
PKP266D28A2-R2FL			
PKP268D28A2-R2EL	92.5	1.1	B1327
PKP268D28A2-R2FL			



*When a connection cable is attached.

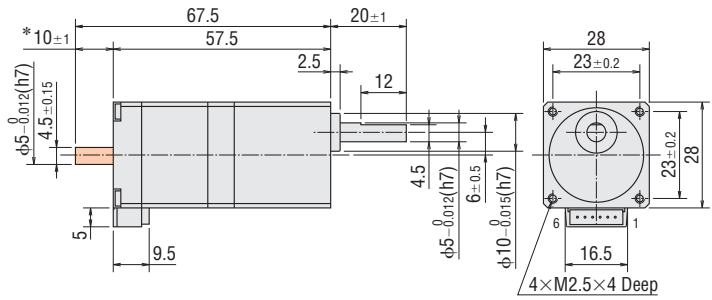
● **SH Geared Type**

Frame Size 28 mm

2D & 3D CAD

Product Name	Gear Ratio	Mass kg	2D CAD
PKP223D15A-SG□	7.2, 9, 10, 18, 36	0.16	B985
PKP223D15B-SG□			

● A number in the box □ in the product name indicates the gear ratio.



*The length of the shaft flat on the double shaft model is 10±0.25.

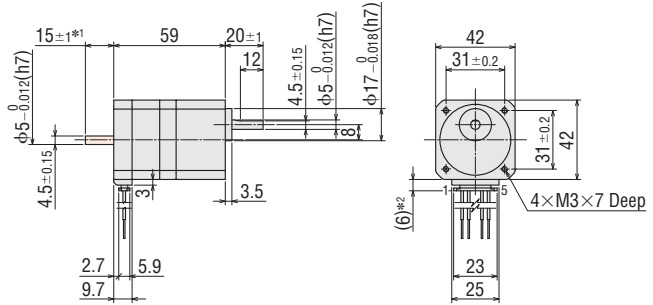
● **SH Geared Type**

Frame Size 42 mm

2D & 3D CAD

Product Name	Gear Ratio	Mass kg	2D CAD
PKP243D23A2-SG□	3.6, 7.2, 9, 10, 18, 36	0.33	B1340
PKP243D23B2-SG□			

● A number in the box □ in the product name indicates the gear ratio.



*1 The length of the shaft flat on the double shaft model is 15±0.25.

*2 When a connection cable is attached.

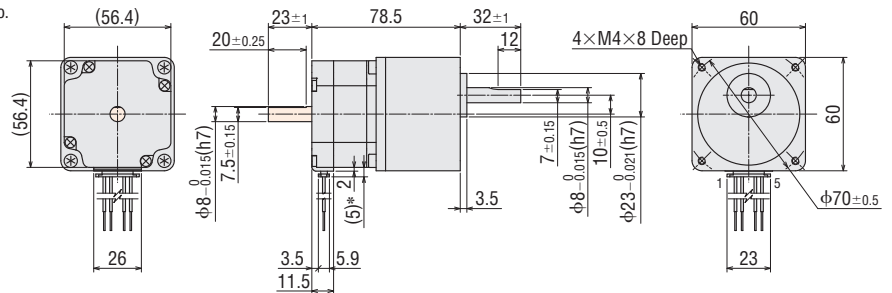
● **SH Geared Type**

Frame Size 60 mm

2D & 3D CAD

Product Name	Gear Ratio	Mass kg	2D CAD
PKP264D28A2-SG□	3.6, 7.2, 9, 10, 18, 36	0.76	B1342
PKP264D28B2-SG□			

● A number in the box □ in the product name indicates the gear ratio.



*When a connection cable is attached.

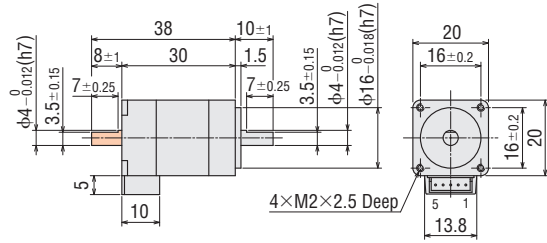
● These dimensions are for double shaft models. For single shaft models, ignore the shaft in the shaded areas.

◇ 5-Phase Stepping Motor

● Standard Type

Frame Size 20 mm **2D & 3D CAD**

Product Name	Mass kg	2D CAD
PK513PA	0.05	B316
PK513PB		

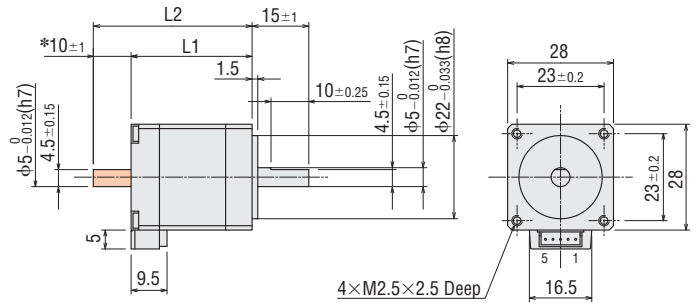


● Standard Type

Frame Size 28 mm

2D & 3D CAD

Product Name	L1	L2	Mass kg	2D CAD
PKP523N12A	32	-	0.11	B1146
PKP523N12B		42		
PKP525N12A	51.5	-	0.2	B1147
PKP525N12B		61.5		



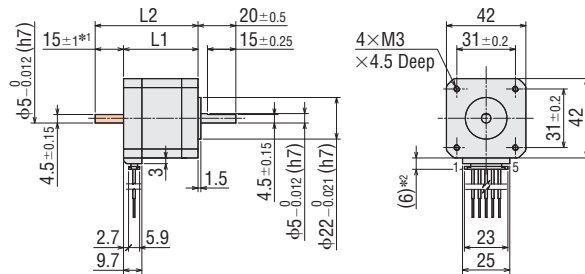
*The length of the shaft flat on the double shaft model is 10±0.25.

● Standard Type

Frame Size 42 mm

2D & 3D CAD

Product Name	L1	L2	Mass kg	2D CAD
PKP543N18A2	33	-	0.23	B1264
PKP543N18B2		48		
PKP544N18A2	39	-	0.29	B1265
PKP544N18B2		54		
PKP545N18A2	47	-	0.37	B1266
PKP545N18B2		62		
PKP546N18A2	59	-	0.49	B1267
PKP546N18B2		74		



*1 The length of the shaft flat on the double shaft model is 15±0.25.

*2 When a connection cable is attached.

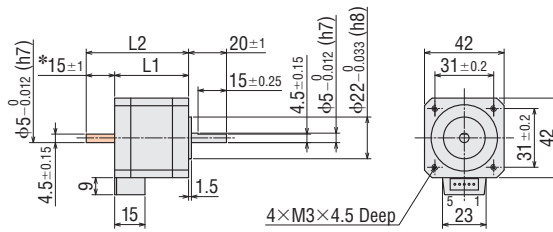
● These dimensions are for double shaft models. For single shaft models, ignore the shaft in the shaded areas.

•High-Resolution Type

Frame Size 42 mm

2D & 3D CAD

Product Name	L1	L2	Mass kg	2D CAD
PKP544MN18A	39	-	0.3	B1120
PKP544MN18B		54		
PKP546MN18A	59	-	0.5	B1121
PKP546MN18B		74		



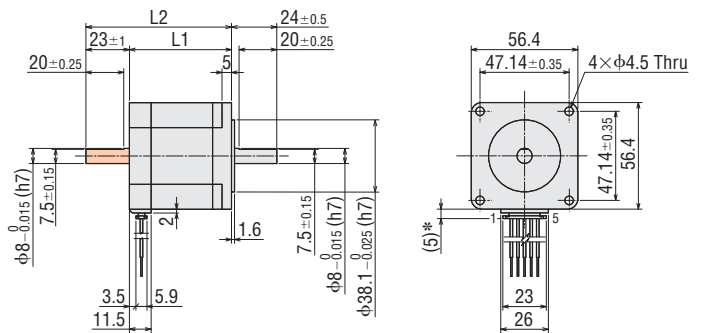
*The length of the shaft flat on the double shaft model is 15±0.25.

•Standard Type

Frame Size 56.4 mm

2D & 3D CAD

Product Name	L1	L2	Mass kg	2D CAD
PKP564N28A2	39	-	0.43	B1257
PKP564N28B2		62		
PKP566N28A2	54	-	0.67	B1258
PKP566N28B2		77		
PKP568N28A2	76	-	1	B1259
PKP568N28B2		99		



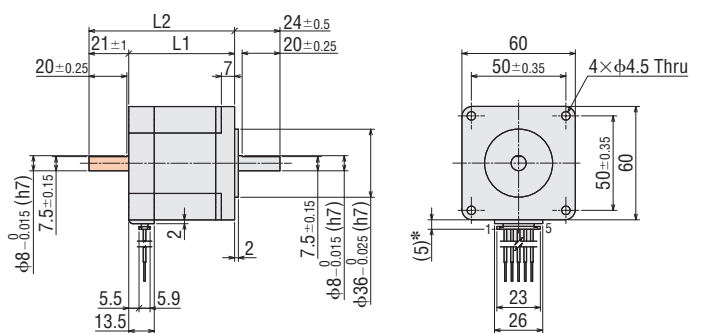
*When a connection cable is attached.

•Standard Type

Frame Size 60 mm

2D & 3D CAD

Product Name	L1	L2	Mass kg	2D CAD
PKP564FN24A2	44	-	0.56	B1252
PKP564FN24B2		65		
PKP564FN38A2		-		
PKP564FN38B2	56	65	0.79	B1253
PKP566FN24A2		-		
PKP566FN24B2		77		
PKP566FN38A2	84.5	77	1.3	B1254
PKP566FN38B2		-		
PKP569FN24A2		-		
PKP569FN24B2	84.5	105.5	1.3	B1254
PKP569FN38A2		-		
PKP569FN38B2	-	105.5		



*When a connection cable is attached.

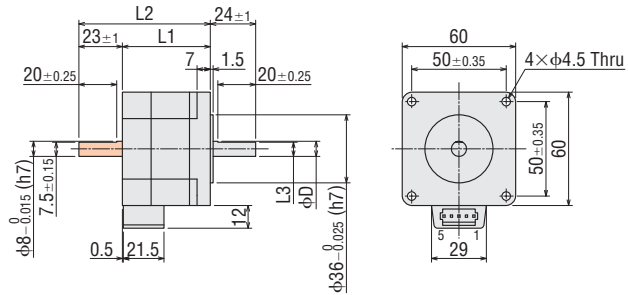
● These dimensions are for double shaft models. For single shaft models, ignore the shaft in the shaded areas.

•High-Resolution Type

Frame Size 60 mm

2D & 3D CAD

Product Name	L1	L2	L3	φD	Mass kg	2D CAD
PKP564FMN24A	46.5	—	7.5±0.15	8 ⁰ _{-0.015}	0.65	B1125
PKP564FMN24B		69.5				
PKP566FMN24A		—				
PKP566FMN24B	56	79			0.87	B1126
PKP569FMN24A	87	—	9.5±0.15	10 ⁰ _{-0.015}	1.5	B1127
PKP569FMN24B		110				

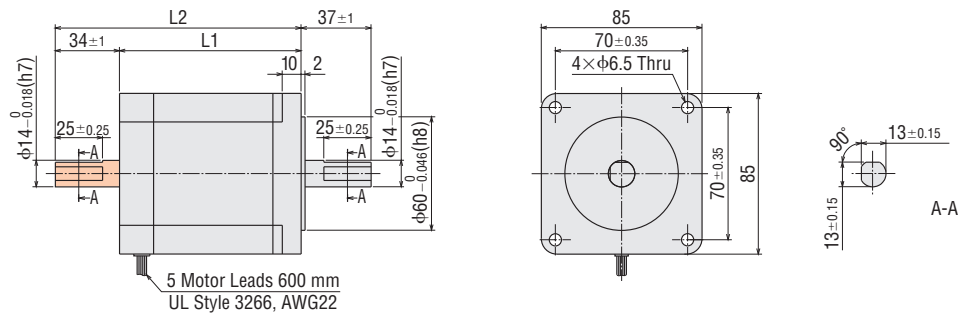


•Standard Type

Frame Size 85 mm

2D & 3D CAD

Product Name	L1	L2	Mass kg	2D CAD
PK596HNAW	66	—	1.7	B155
PK596HNBW		100		
PK599HNAW	96	—	2.8	B156
PK599HNBW		130		
PK5913HNAW	126	—	3.8	B157
PK5913HNBW		160		



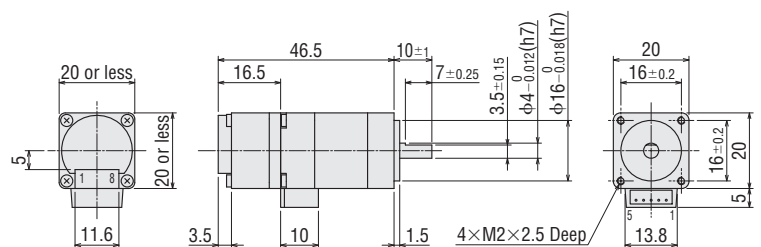
5 Motor Leads 600 mm
UL Style 3266, AWG22

•Standard Type With Encoder

Frame Size 20 mm

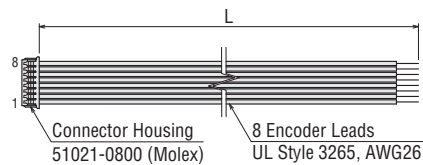
2D & 3D CAD

Product Name	Mass kg	2D CAD
PK513PA-R2GL	0.06	B1069



Encoder Connection Cable (Included)

Product Name	Length L (m)
LCE08A-006	0.6



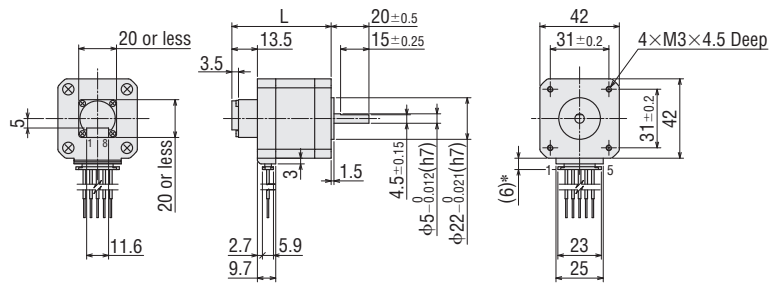
● These dimensions are for double shaft models. For single shaft models, ignore the shaft in the shaded areas.

•Standard Type With Encoder

Frame Size 42 mm

2D & 3D CAD

Product Name	L	Mass kg	2D CAD
PKP543N18A2-R2GL	46.5	0.24	B1343
PKP544N18A2-R2GL	52.5	0.3	B1344
PKP545N18A2-R2GL	60.5	0.38	B1345
PKP546N18A2-R2GL	72.5	0.5	B1346



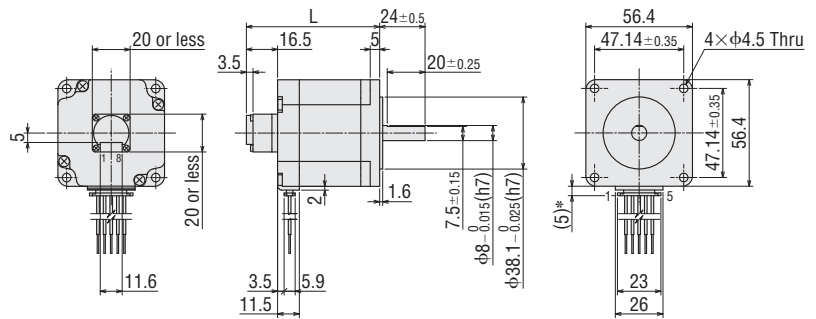
*When a connection cable is attached.

•Standard Type With Encoder

Frame Size 56.4 mm

2D & 3D CAD

Product Name	L	Mass kg	2D CAD
PKP564N28A2-R2GL	55.5	0.43	B1347
PKP566N28A2-R2GL	70.5	0.67	B1348
PKP568N28A2-R2GL	92.5	1	B1349



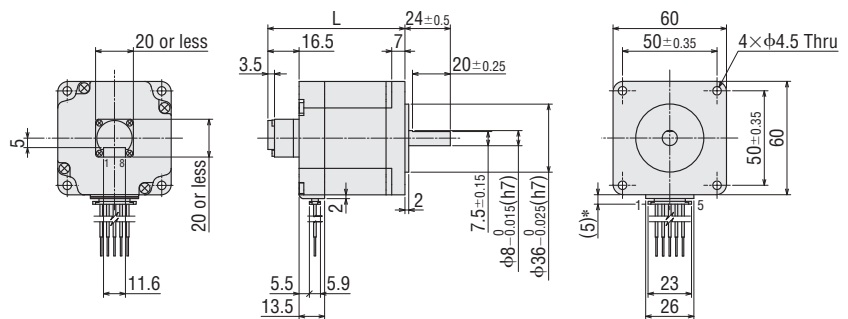
*When a connection cable is attached.

•Standard Type With Encoder

Frame Size 60 mm

2D & 3D CAD

Product Name	L	Mass kg	2D CAD
PKP564FN24A2-R2GL	60.5	0.56	B1350
PKP564FN38A2-R2GL			
PKP566FN24A2-R2GL	72.5	0.79	B1351
PKP566FN38A2-R2GL			
PKP569FN24A2-R2GL	101	1.3	B1352
PKP569FN38A2-R2GL			



*When a connection cable is attached.

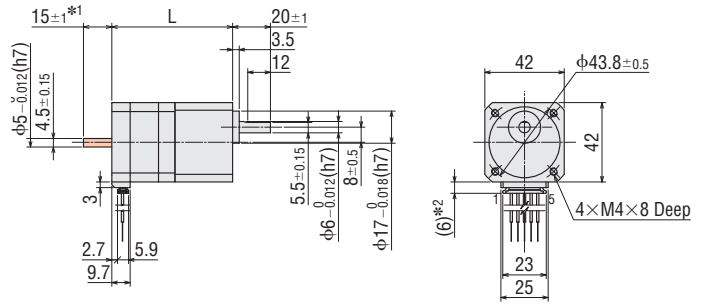
●TS Geared Type

Frame Size 42 mm

2D & 3D CAD

Product Name	Gear Ratio	L	Mass kg	2D CAD
PKP544N18A2-TS□	3.6, 7.2, 10	70.5	0.41	B1362
PKP544N18B2-TS□				
PKP543N18A2-TS□	20, 30	64.5	0.36	B1363
PKP543N18B2-TS□				

● A number in the box □ in the product name indicates the gear ratio.



*1 The length of the shaft flat on the double shaft model is 15±0.25.

*2 When a connection cable is attached.

●TS Geared Type

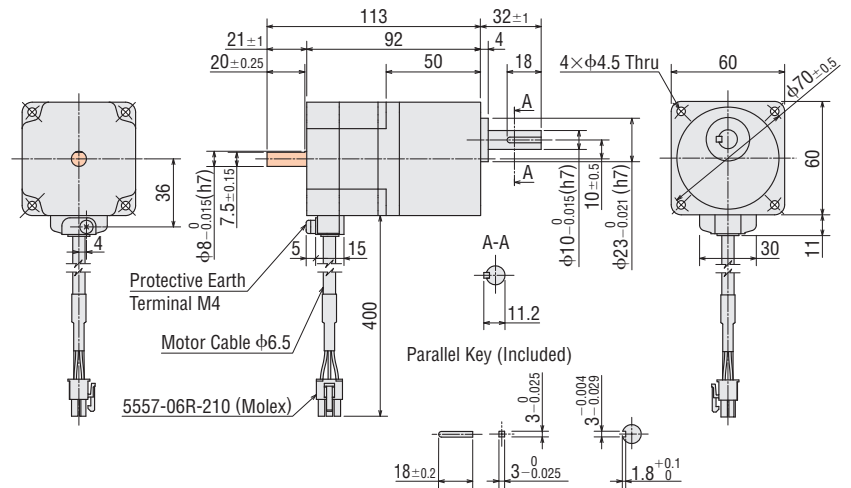
Frame Size 60 mm

2D & 3D CAD

Product Name	Gear Ratio	L	Mass kg	2D CAD
PKP566N28A2-TS□	3.6, 7.2, 10	98	0.99	B1364
PKP566N28B2-TS□				
PKP564N28A2-TS□	20, 30	83	0.78	B1365
PKP564N28B2-TS□				

● A number in the box □ in the product name indicates the gear ratio.

● Installation screws: M4×60 P0.7 (4 pieces included)



*When a connection cable is attached.

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

●Applicable Connector

The following table shows applicable connectors.

◇ Motor

	Type	Frame Size	Connector Housing	Contact	Crimp Tool	Manufacturer
2-Phase Stepping Motor	Standard Type	28 mm	51065-0600	50212-8100	57176-5000	Molex
	Standard Type With Encoder	35 mm	51103-0600	50351-8100	57295-5000	Molex
	SH Geared Type	42 mm, 56.4 mm, 60 mm	MDF97-5S-3.5C	MDF97-22SC	HT801/MDF97-22S	HIROSE ELECTRIC Co., Ltd.
5-Phase Stepping Motor	Standard Type	20 mm, 28 mm	51065-0500	50212-8100	57176-5000	Molex
	Standard Type With Encoder	42 mm, 56.4 mm, 60 mm	MDF97-5S-3.5C	MDF97-22SC	HT801/MDF97-22S	HIROSE ELECTRIC Co., Ltd.
	High-Resolution Type	42 mm	51103-0500	50351-8100	57295-5000	Molex
		60 mm	51144-0500	50539-8100	57189-5000	Molex

◇ Encoder (Molex)

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

● Driver

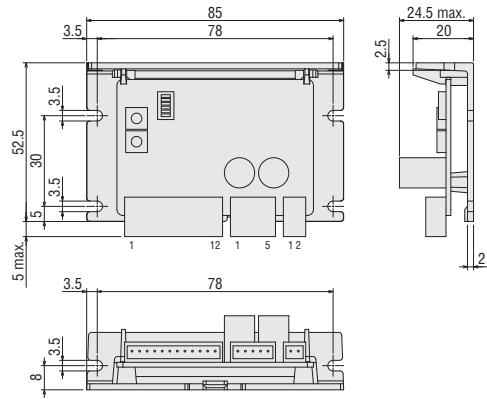
◇ With Installation Plate Right Angle

2D & 3D CAD

	Product Name	Mass kg	2D CAD
For 2-Phase Stepping Motor	CVD205BR-K	0.06	B1210
	CVD206BR-K		
	CVD215BR-K		
	CVD223BR-K		
	CVD223FBR-K		
For 5-Phase Stepping Motor	CVD228BR-K		
	CVD503BR-K		
	CVD512BR-K		
	CVD518BR-K		
	CVD524BR-K		

● Accessories

Connector Housing: 51103-0200 (Molex)
 51103-0500 (Molex)
 51103-1200 (Molex)
 Contact: 50351-8100 (Molex)

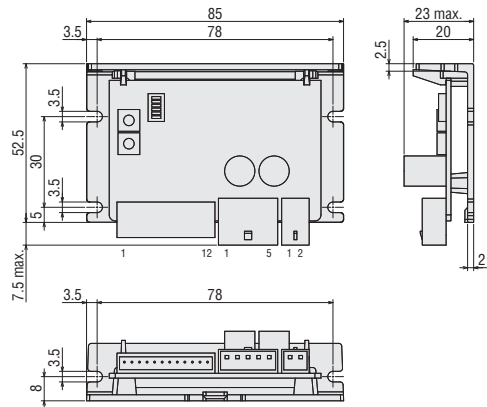


2D & 3D CAD

	Product Name	Mass kg	2D CAD
For 2-Phase Stepping Motor	CVD245BR-K	0.07	B1211
For 5-Phase Stepping Motor	CVD528BR-K		
	CVD538BR-K		

● Accessories

Connector Housing: 51067-0200 (Molex)
 51067-0500 (Molex)
 51103-1200 (Molex)
 Contact: 50217-9101 (Molex)
 50351-8100 (Molex)



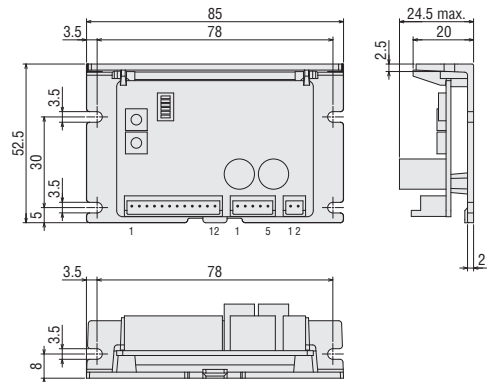
◇ With Installation Plate

2D & 3D CAD

	Product Name	Mass kg	2D CAD
For 2-Phase Stepping Motor	CVD205B-K	0.06	B1255
	CVD206B-K		
	CVD215B-K		
	CVD223B-K		
	CVD223FB-K		
For 5-Phase Stepping Motor	CVD228B-K		
	CVD503B-K		
	CVD512B-K		
	CVD518B-K		
	CVD524B-K		

● Accessories

Connector Housing: 51103-0200 (Molex)
 51103-0500 (Molex)
 51103-1200 (Molex)
 Contact: 50351-8100 (Molex)

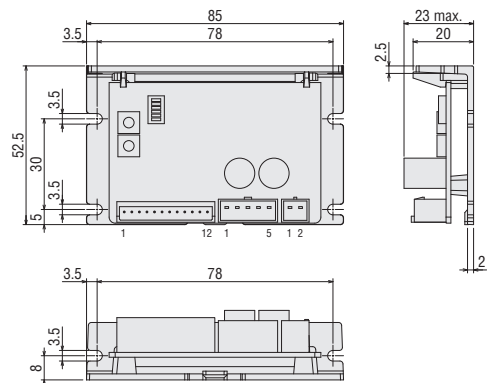


2D & 3D CAD

	Product Name	Mass kg	2D CAD
For 2-Phase Stepping Motor	CVD245B-K	0.07	B1256
For 5-Phase Stepping Motor	CVD528B-K		
	CVD538B-K		

● Accessories

Connector Housing: 51067-0200 (Molex)
 51067-0500 (Molex)
 51103-1200 (Molex)
 Contact: 50217-9101 (Molex)
 50351-8100 (Molex)



Connection and Operation

Names and Functions of Driver Parts

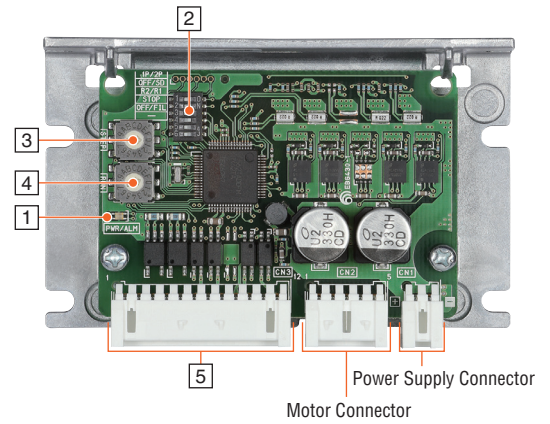
1 Signal Monitor Indication

◇ LED Indicators

Indication	Color	Function	Lighting Condition
PWR/ALM	Green	Power Supply Indication	When power is applied
	Red	Alarm Indication	When a protective function is activated (blinking)

◇ Alarm Details

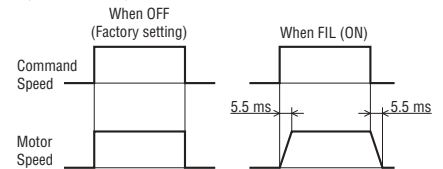
Blink Count	Function	Operating Condition
2	Overheat Protection	When the board temperature of the driver reaches 85°C
3	Overvoltage Protection	When the power supply voltage exceeds the permissible value When a large inertial load is suddenly stopped When a large load is lifted or lowered
5	Overcurrent Protection	When an excessive current flows through the motor output circuit
9	EEPROM Error	When the saved data for the driver is damaged
Lighting	CPU Error	When the driver's CPU malfunctions



2 Function Setting Switch

Indication	No.	Function
1P/2P	1	Switches the pulse input mode between 1-pulse input mode and 2-pulse input mode.
OFF/SD	2	Switches the smooth drive function between enabled and disabled.
R2/R1	3	Sets the step angle in combination with step angle setting switch.
STOP	4	Switches the motor's standstill current to 25% or 50%.
OFF/FIL	5	Switches the command filter between enabled and disabled.
-	6	Not used.

● Difference in motor's responsiveness by the command filter (OFF/FIL switch)



3 Step Angle Setting Switch

Indication	Function
STEP	Sets the motor's step angle in combination with R2/R1 Switch.

Step Angle Setting Switch (STEP) Scale	R2/R1 Switch: ON Side (R1)		R2/R1 Switch: OFF Side (R2)	
	Resolution (P/R)	Step Angle	Resolution (P/R)	Step Angle
0	500	0.72°	200	1.8°
1	1000	0.36°	400	0.9°
2	1250	0.288°	800	0.45°
3	2000	0.18°	1000	0.36°
4	2500	0.144°	1600	0.225°
5	4000	0.09°	2000	0.18°
6	5000	0.072°	3200	0.1125°
7	10000	0.036°	5000	0.072°
8	12500	0.0288°	6400	0.05625°
9	20000	0.018°	10000	0.036°
A	25000	0.0144°	12800	0.028125°
B	40000	0.009°	20000	0.018°
C	50000	0.0072°	25000	0.0144°
D	62500	0.00576°	25600	0.0140625°
E	100000	0.0036°	50000	0.0072°
F	125000	0.00288°	51200	0.00703125°

● The high-resolution type is twice the resolution and a half the step angle than the standard type.

Example: When the R2/R1 switch is ON (R1) and STEP switch is "0"
Resolution of high-resolution type: $500 \times 2 = 1000$
Step angle of high-resolution type: $0.72^\circ / 2 = 0.36^\circ$

● When using a geared type, the actual step angle is step angle/gear ratio.

4 Operating Current Setting Switch

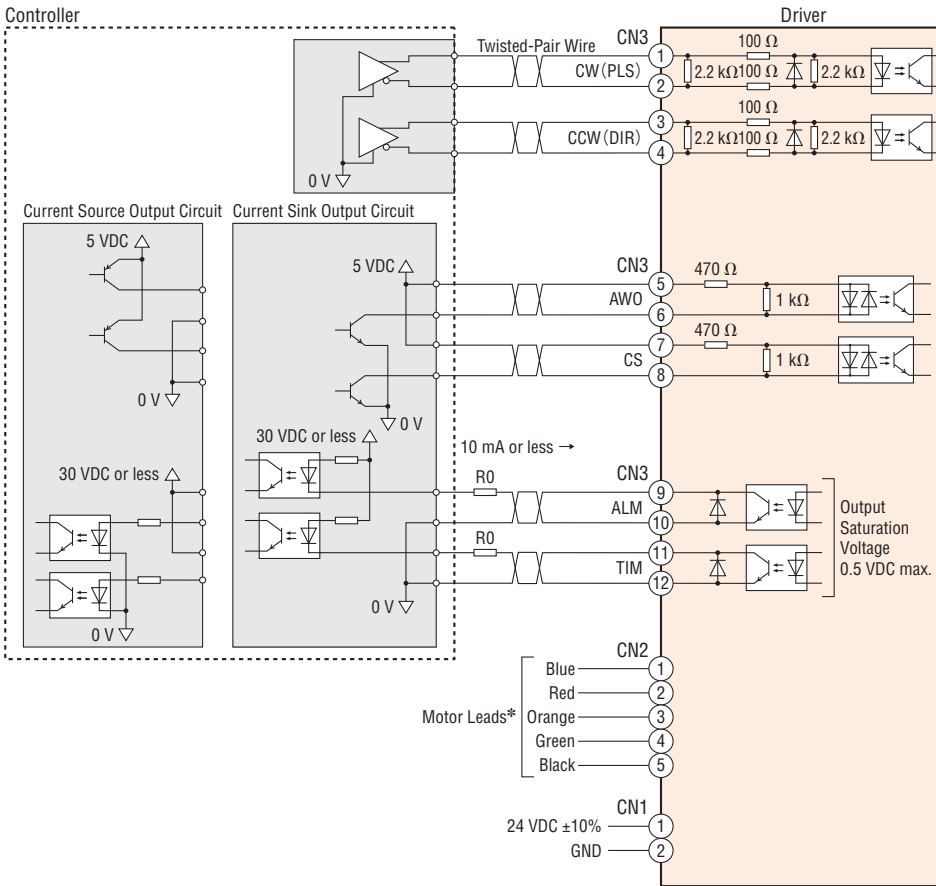
Indication	Function
RUN	Sets the motor's operating current.

5 I/O Signals Connector

Indication	Pin No.	I/O	Signal Name	Function
CN3	1	Input	CW+ (PLS+)	The motor will rotate in the CW direction. (Operation command pulse signal when in 1-pulse input mode)
	2		CW- (PLS-)	
	3		CCW+ (DIR+)	The motor will rotate in the CCW direction. (Rotation direction signal when in 1-pulse input mode)
	4		CCW- (DIR-)	
	5	AWO+	Stops motor excitation.	
	6	AWO-		
	7	CS+	Switches the step angle.	
	8	CS-		
	9	ALM+	Outputs the alarm status of the driver (Normal close).	
	10	ALM-		
	11	TIM+	Output when the motor's excitation state is in the Step "0".	
	12	TIM-		

Connection Diagram

- When the Input Signal Voltage is 5 VDC
- ◇ When the Pulse Input is the Line Driver



*The connector pin layout may be different depending on the motor. For details, see the connection table below.

◇ Connection Table for 2-Phase Motor and Driver

Driver CN2 Pin No.	Model A		Model B		Model C
	Pin No.	Color	Pin No.	Color	Color
1	4	Blue	1	Blue	Blue
2	5	Red	3	Red	Red
3	-	-	-	-	-
4	2	Green	6	Green	Green
5	1	Black	4	Black	Black

● "Color" in the table indicates the lead wire color of the optional connection cable.

Note

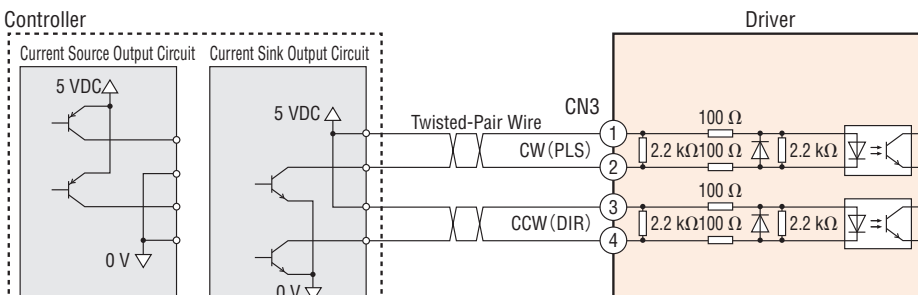
● The pin layout is different for the Model A and Model B motors. If the connections are not correct, the motor will not operate correctly.

◇ Connection Table for 5-Phase Motor and Driver

Driver CN2 Pin No.	Model A		Model B		Model C
	Pin No.	Color	Pin No.	Color	Color
1	5	Blue	1	Blue	Blue
2	4	Red	2	Red	Red
3	3	Orange	3	Orange	Orange
4	2	Green	4	Green	Green
5	1	Black	5	Black	Black

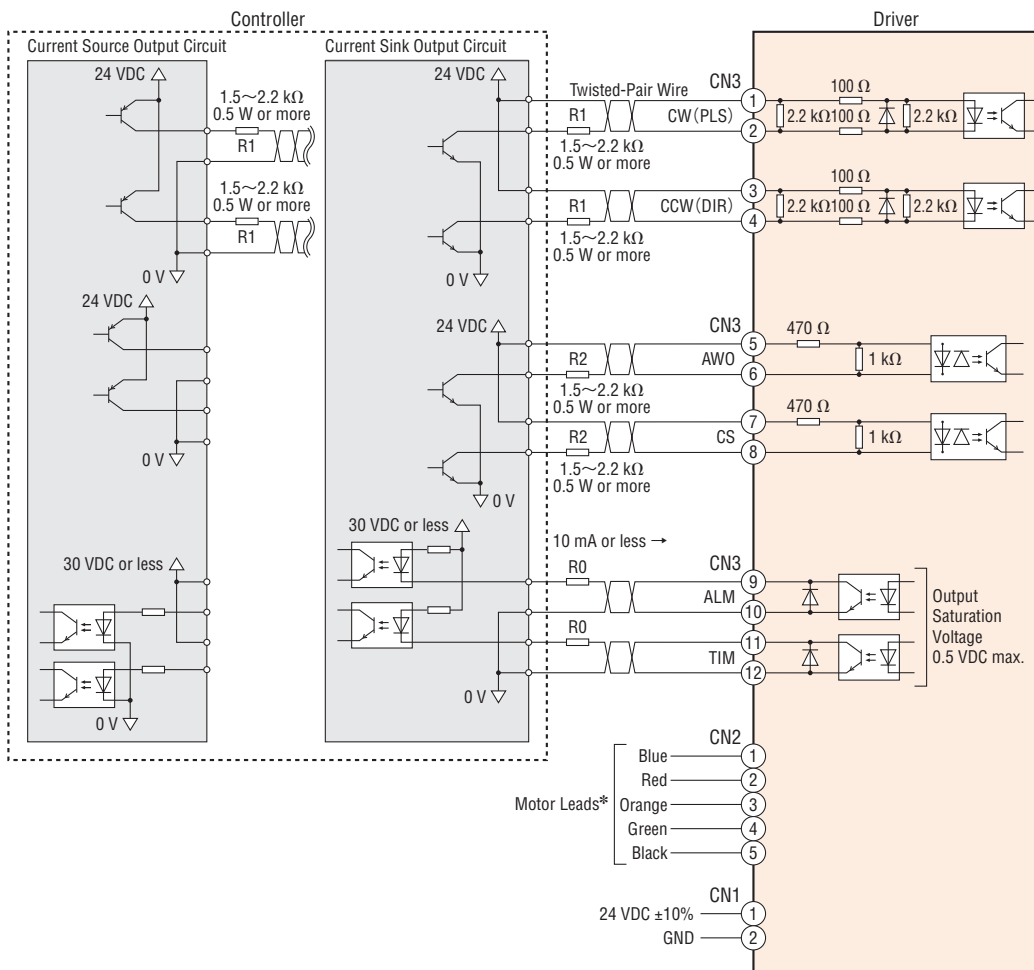
● "Color" in the table indicates the lead wire color of the optional connection cable.

◇ When the Pulse Input is Open Collector



● When the Input Signal Voltage is 24 VDC

◇ When the Pulse Input is Open Collector



*The connector pin layout may be different depending on the motor. For details, see the connection table on page 41.

[Notes on Wiring]

◇ I/O Signal Connection

● Input signals

- CW input and CCW input use 5 VDC specifications. When the voltage exceeds 5 VDC, connect the external resistor R1 to keep the input current in the range of 7~20 mA. Example: When connecting a 24 VDC source, the R1 must be 1.5~2.2 kΩ, 0.5 W or more.
- AWO input and CS input use 5 VDC specifications. When the voltage exceeds 5 VDC, connect the external resistor R2 to keep the input current in the range of 5~15 mA. Example: When connecting a 24 VDC source, the R2 must be 1.5~2.2 kΩ, 0.5 W or more.

● Output signals

- Use 30 VDC, 10 mA or less for output signal. When the current value exceeds 10 mA, connect the external resistor R0.
- Use a twisted-pair wire AWG24~22 (0.2~0.3 mm²).
- Since the maximum transmissible frequency drops as the pulse line becomes longer, keep the wiring length as short as possible (within 2 m).
- Provide a distance of 100 mm or longer between the I/O signal lines and power lines (power supply lines, motor lines, etc.).

◇ Power Supply Connection

- Use wires of AWG22 (0.3 mm²). For **CVD245**, **CVD528**, and **CVD538**, use AWG20~18 (0.5~0.8 mm²) wires.
- Incorrect polarities of the DC power supply input will lead to driver damage. Make sure that the polarity is correct before turning the power on.

◇ Extension of Motor Cable

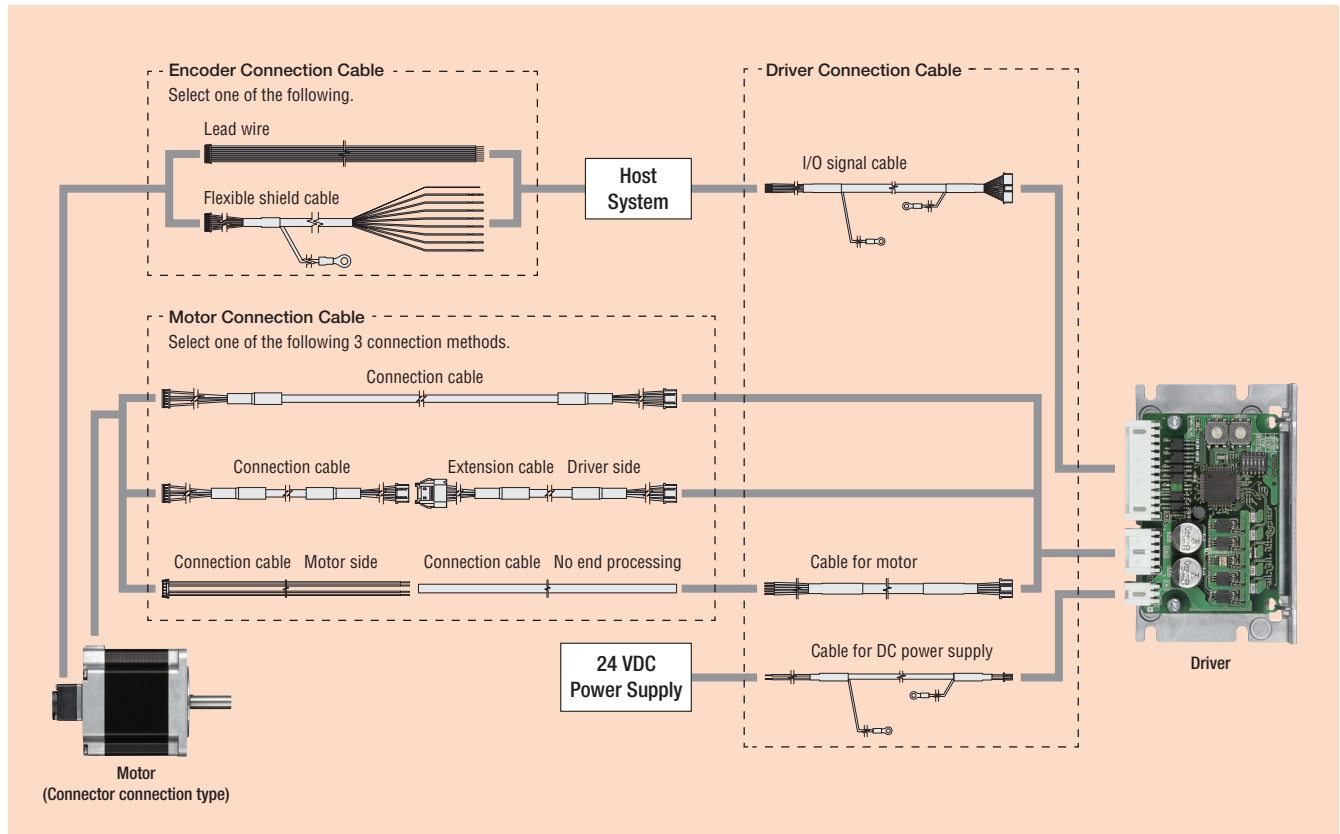
- Use AWG22 (0.3 mm²) or thicker wires. For **CVD245**, **CVD528**, and **CVD538**, use AWG20 (0.5 mm²) or larger wires. Only up to 3 cables can be used to connect the motor and driver. (Excluding **CVD245**, **CVD528**, and **CVD538**)
- The maximum extension length is 10 m.

◇ General

- A separate hand crimp tool is required to crimp the included connector and lead wire. The optional connection cable comes with all lead wires already crimped.
- If noise generated by the motor cable or power supply cable causes a problem with the specific wiring or layout, shield the cable or use ferrite cores.

Cable

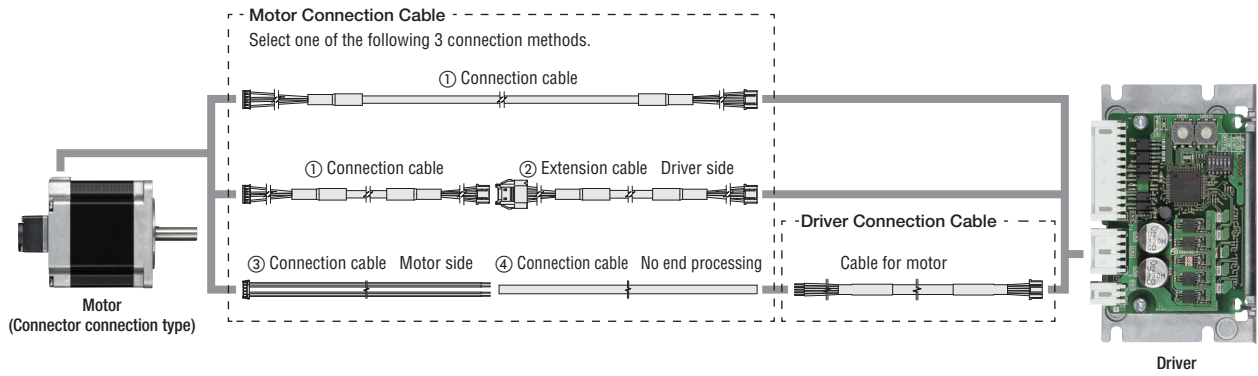
Cable System Configuration Example



Note

- The maximum number of cables that can be used for connecting the motor and driver is 3.
- The maximum extension length between the motor and driver is 10 m.

Motor Connection Cable



① Connection Cable

This cable directly connects the connector connection type motor and driver. Because it has connectors on both ends, it can connect the motor and driver directly.



Notes Concerning Applicable Products

At present no connection cable is available that can be used with the following "Connector connection type motor" and "Lead wire motor".

Motor	Frame Size	Type
2-Phase	35 mm	Standard Type
	42 mm	High-Resolution Type
5-Phase	56.4 mm	Standard Type
		Standard Type With Encoder
5-Phase	60 mm	Standard Type*
		Standard Type With Encoder*
		High-Resolution Type

*Motor combining **CVD538BR-K** and **CVD538B-K**

2-Phase Frame Size 28 mm

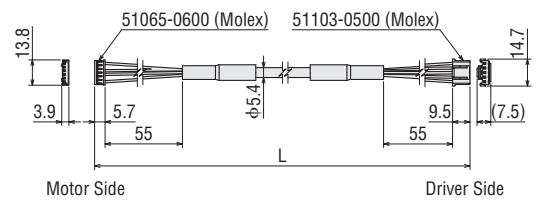
Applicable Product

Motor		Driver
Frame Size	Type	
28 mm	Standard Type	CVD215BR-K CVD215B-K
	Standard Type With Encoder	
	SH Geared Type	

Product Line

Product Name	Length L (m)
CCM005V2AAF	0.5
CCM010V2AAF	1
CCM015V2AAF	1.5
CCM020V2AAF	2
CCM025V2AAF	2.5
CCM030V2AAF	3
CCM040V2AAF	4
CCM050V2AAF	5

Dimensions (Unit = mm)



For the "Extension cable Driver side (**CCM□□□V5ADFT**)" that is connected to the connection cable, see page 45.

2-Phase Frame Size 42/56.4/60 mm

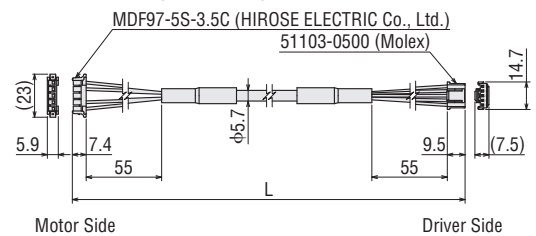
Applicable Product

Motor		Driver
Frame Size	Type	
42 mm	Standard Type	CVD223FBR-K CVD223FB-K
	Standard Type With Encoder	
	SH Geared Type	
56.4 mm	Standard Type	CVD228BR-K CVD228B-K
Standard Type With Encoder		
60 mm	SH Geared Type	

Product Line

Product Name	Length L (m)
CCM005V2AEF	0.5
CCM010V2AEF	1
CCM015V2AEF	1.5
CCM020V2AEF	2
CCM025V2AEF	2.5
CCM030V2AEF	3
CCM040V2AEF	4
CCM050V2AEF	5

Dimensions (Unit = mm)



For the "Extension cable Driver side (**CCM□□□V5ADFT**)" that is connected to the connection cable, see page 45.

● 5-Phase Frame Size 20/28 mm

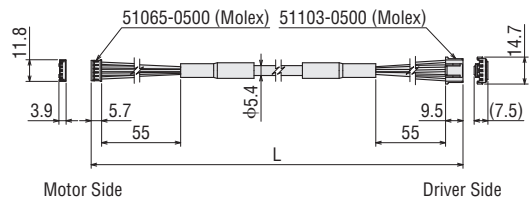
● Applicable Product

Frame Size	Motor		Driver
	Type		
20 mm	Standard Type		CVD503BR-K CVD503B-K
	Standard Type	With Encoder	
28 mm	Standard Type		CVD512BR-K CVD512B-K CVD512-K
	Standard Type	With Encoder	

● Product Line

Product Name	Length L (m)
CCM005V5AAF	0.5
CCM010V5AAF	1
CCM015V5AAF	1.5
CCM020V5AAF	2
CCM025V5AAF	2.5
CCM030V5AAF	3
CCM040V5AAF	4
CCM050V5AAF	5

● Dimensions (Unit = mm)



● For the "Extension cable Driver side (CCM□□□V5ADFT)" that is connected to the connection cable, see below.

● 5-Phase Frame Size 42/60 mm

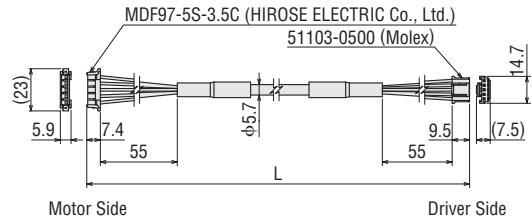
● Applicable Product

Frame Size	Motor		Driver
	Type		
42 mm	Standard Type		CVD518BR-K CVD518B-K
	Standard Type	With Encoder	
	TS Geared Type		
60 mm	Standard Type		CVD524BR-K CVD524B-K
	Standard Type	With Encoder	

● Product Line

Product Name	Length L (m)
CCM005V5AEF	0.5
CCM010V5AEF	1
CCM015V5AEF	1.5
CCM020V5AEF	2
CCM025V5AEF	2.5
CCM030V5AEF	3
CCM040V5AEF	4
CCM050V5AEF	5

● Dimensions (Unit = mm)



● For the "Extension cable Driver side (CCM□□□V5ADFT)" that is connected to the connection cable, see below.

② Extension Cable Driver Side

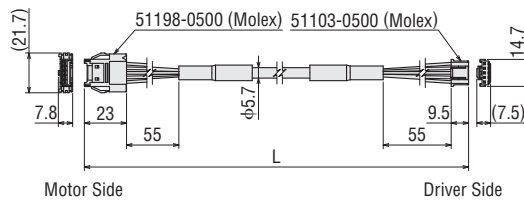
This is the cable that is connected to the "Connection cable". It can be used to connect the connection cable and driver.



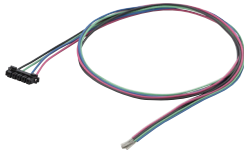
● Product Line

Product Name	Length L (m)
CCM005V5ADFT	0.5
CCM010V5ADFT	1
CCM015V5ADFT	1.5
CCM020V5ADFT	2
CCM025V5ADFT	2.5
CCM030V5ADFT	3
CCM040V5ADFT	4
CCM050V5ADFT	5

● Dimensions (Unit = mm)



③ Connection Cable Motor Side



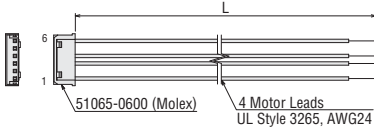
This is the connection cable that has a connector on the motor side.

•Product Line

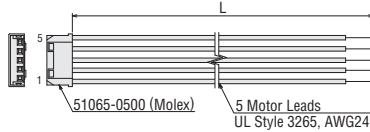
Applicable Motor		Connection Cable Motor Side		
Type	Frame Size	Product Name	Length L (m)	
2-Phase	28 mm	LC2B06A	0.6	
		LC2B10A	1	
	35 mm	LC2B06B	0.6	
		LC2B10B	1	
	42 mm 56.4 mm 60 mm	LC2B06E	0.6	
5-Phase	20 mm 28 mm	LC5N06A	0.6	
		LC5N10A	1	
	42 mm 56.4 mm 60 mm	LC5N06E	0.6	
	High-Resolution Type	42 mm	LC5N06B	0.6
			LC5N10B	1
		60 mm	LC5N06C	0.6
			LC5N10C	1

•Dimensions

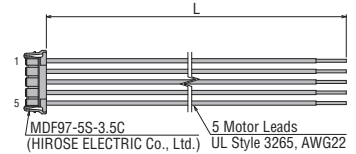
Product Name: **LC2B06A/LC2B10A**



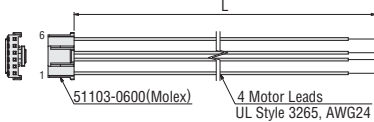
Product Name: **LC5N06A/LC5N10A**



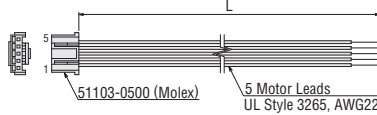
Product Name: **LC5N06E**



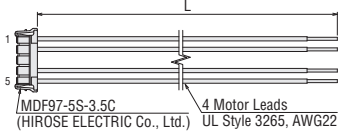
Product Name: **LC2B06B/LC2B10B**



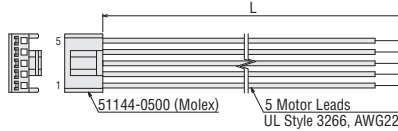
Product Name: **LC5N06B/LC5N10B**



Product Name: **LC2B06E**



Product Name: **LC5N06C/LC5N10C**



④ Connection Cable No End Processing



This is the connection cable that extends the connection between either the 5-Phase motor or 2-Phase bipolar motor and the driver. Keep the wiring distance between the motor and driver to 10 m or less.

•Product Line

Product Name	Cable Type	Length L (m)	Conductor AWG	Finished Outer Diameter (mm)
CC05PK5	For Standard Motor Connection Cable	5	22 (0.3 mm ²)	φ7.2
CC10PK5		10		
CC05PK5R	For Standard Motor Flexible Connection Cable	5	22 (0.3 mm ²)	φ5.8
CC10PK5R		10		

● Line core configuration: 5 cores (Blue, red, orange, green, black)

● Cable rating: 105°C

● Outer sheath: oil resistant, heat resistant, non-migratory vinyl

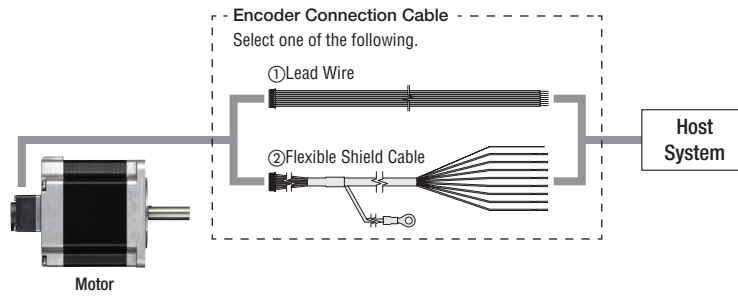
● Applicable product:

The 2-Phase stepping motors can be used with products that have a motor rated current of 2.8 A or less.

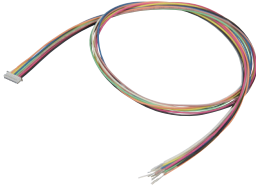
The 5-Phase stepping motors can be used with products that have a motor rated current of 2.4 A or less.

● The flexible connection cable can be used only with 5-phase stepping motors.

Encoder Connection Cable



① Lead Wire



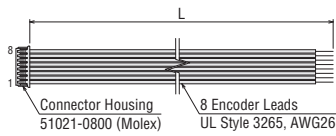
This is the encoder connection cable that has a connector on the motor side.

• Product Line

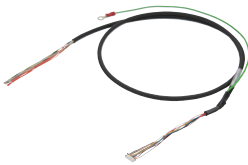
Product Name	Applicable Motor	Length L (m)	Conductor AWG
LCE08A-006	2-Phase/5-Phase Motor with Encoder	0.6	26 (0.13 mm ²)

● A voltage output type cable is also available. For details contact the nearest Oriental Motor sales office.

• Dimensions



② Flexible Shield Cable



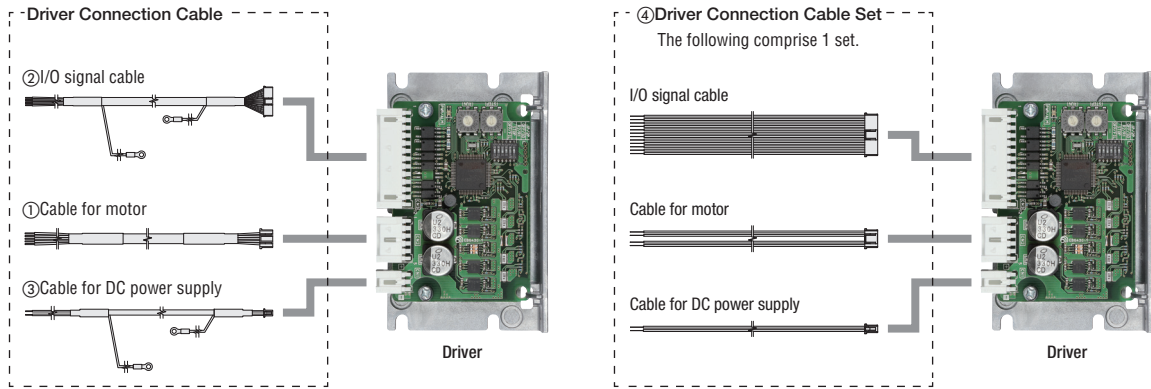
This is the flexible shield cable with crimped connector that is used to connect the encoder and controller. It includes a shielded ground line that can be grounded easily.

• Product Line

Product Name	Applicable Motor	Length L (m)	Conductor AWG
CC010E1R	2-Phase/5-Phase Motor with Encoder	1	26 (0.13 mm ²)
CC020E1R		2	
CC030E1R		3	

● For the dimensions, check the Oriental Motor website.

Driver Connection Cable



① Cable for Motor



This cable connects the motor and driver. It has a connector on the driver side.

- A product for a bipolar driver (example product name: **CVD2~**) used with a 2-Phase stepping motor is not available. It is available as a driver connection cable set containing the lead wire type I/O signal cable, motor cable, and DC power supply cable (→ page 49).

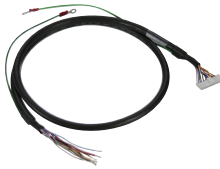
• Product Line

Product Name	Applicable Driver	Length L (m)	Type	Conductor AWG
CC005N1	Driver for 5-Phase Stepping Motor* (Example Product Name: CVD5~)	0.5	Fixed	22 (0.3 mm ²)
CC010N1		1		
CC005N1R		0.5	Flexible	22 (0.3 mm ²)
CC010N1R		1		

*Excluding **CVD528**, **CVD538**

- For the dimensions, check the Oriental Motor website.

② I/O Signal Cable



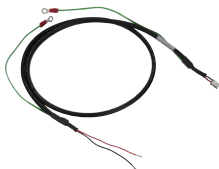
This cable connects the host system and driver. A shielded cable is used, and there are easily connectible ground wires on both ends of the cable.

• Product Line

Product Name	Applicable Driver	Length L (m)	Conductor AWG
CC12D005-2	Driver for 2-Phase Stepping Motor (Example Product Name: CVD2~) Driver for 5-Phase Stepping Motor (Example Product Name: CVD5~)	0.5	24 (0.2 mm ²)
CC12D010-2		1	
CC12D015-2		1.5	
CC12D020-2		2	

- For the dimensions, check the Oriental Motor website.

③ Cable for DC Power Supply



This cable connects the power supply and driver. A shielded cable is used, and there are ground wires for easy grounding on both ends of the cable.

• Product Line

Product Name	Applicable Driver	Length L (m)	Conductor AWG
CC02D005-2	Driver for 2-Phase Stepping Motor*1 (Example Product Name: CVD2~) Driver for 5-Phase Stepping Motor*2 (Example Product Name: CVD5~)	0.5	22 (0.3 mm ²)
CC02D010-2		1	
CC02D015-2		1.5	
CC02D020-2		2	

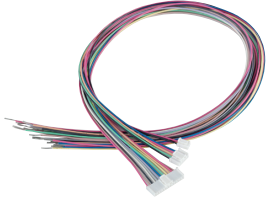
*1 Excluding **CVD245**

*2 Excluding **CVD528**, **CVD538**

- For the dimensions, check the Oriental Motor website.

④ Driver Connection Cable Set

This set contains the cables for connecting the driver to the motor, I/O signal, and DC power supply. The cables have connectors on the driver side.

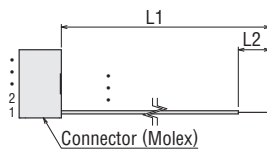


● Product Line

Product Name	Applicable Driver	Connector Name	Connector Product Name	Length L1	Length L2	Conductor AWG
LCS01CVK2	CVD205, CVD206 CVD215, CVD223 CVD228	For motor	51103-0500	0.6 m	10 mm	22 (0.3 mm ²)
		For power supply	51103-0200			
		For I/O signals	51103-1200			
LCS02CVK2	CVD245	For motor	51067-0500			
		For power supply	51067-0200			
		For I/O signals	51103-1200			
LCS04SD5	CVD503, CVD512 CVD518, CVD524	For motor	51103-0500			
		For power supply	51103-0200			
		For I/O signals	51103-1200			
LCS05SD5	CVD528, CVD538	For motor	51067-0500			
		For power supply	51067-0200			
		For I/O signals	51103-1200			

● The product names of the applicable drivers are described with text by which the product name can be identified.

● Dimensions



● Connector Layout

◇ For Motor

● LCS0□CVK2

Pin No.	Wire Color
1	Blue
2	Red
3	—
4	Green
5	Black

● LCS0□SD5

Pin No.	Wire Color
1	Blue
2	Red
3	Orange
4	Green
5	Black

◇ For Power Supply

● Common to All Cables

Pin No.	Wire Color
1	Red
2	Black

◇ For I/O Signals

● Common to All Cables

Pin No.	Wire Color
1	Brown
2	Red
3	Orange
4	Yellow
5	Green
6	Blue
7	Purple
8	Gray
9	White
10	Black
11	Brown
12	Red

Accessories (Sold separately)

For details, check the Oriental Motor website or contact the Oriental Motor sales office. <http://www.orientalmotor.com.sg/>

Flexible Couplings

A flexible coupling ideal for **CVK** series is available.

Once you have decided on a type and/or applications of motor, you can select the recommended size of coupling easily.

All motor shaft diameters of stepping motor packages are available.

MCV Couplings

This one-piece coupling is made with anti-vibration rubber molded between aluminum alloy hubs.

- For standard type, high-resolution type



Product Line

Product Name
MCV15 <input type="checkbox"/>
MCV19 <input type="checkbox"/>
MCV25 <input type="checkbox"/>
MCV30 <input type="checkbox"/>
MCV34 <input type="checkbox"/>
MCV39 <input type="checkbox"/>

- A number indicating the coupling inner diameter is entered in the box located within the product name.

MC Couplings

This is a slit-type one-piece coupling.

- For standard type, high-resolution type



Set Screw Type



Clamp Type

Product Line

◇ Set Screw Type

Product Name
MC12 <input type="checkbox"/> S
MC16 <input type="checkbox"/> S
MC20 <input type="checkbox"/> S
MC25 <input type="checkbox"/> S
MC32 <input type="checkbox"/> S
MC40 <input type="checkbox"/> S

◇ Clamp Type

Product Name
MC12 <input type="checkbox"/> C2
MC16 <input type="checkbox"/> C2
MC20 <input type="checkbox"/> C2
MC25 <input type="checkbox"/> C2
MC32 <input type="checkbox"/> C2
MC40 <input type="checkbox"/> C2

- A number indicating the coupling inner diameter is entered in the box located within the product name.

MCS Couplings

This three-piece coupling adopts an aluminum alloy hub and a resin spider.

- For **SH** geared type, **TS** geared type



Product Line

Product Name
MCS14 <input type="checkbox"/>
MCS20 <input type="checkbox"/>
MCS30 <input type="checkbox"/>
MCS40 <input type="checkbox"/>

- A number indicating the coupling inner diameter is entered in the box located within the product name.

Motor Mounting Brackets

The mounting bracket base is built with holes large enough to allow for adjustments of belt tension after a motor is installed.



Product Line

◇ For Standard Type, High-Resolution Type

Material: Aluminum alloy (SPCC)*

Product Name	Motor Frame Size	Applicable Product
PFB28A	28 mm	PKP22 □, PKP52 □
PAFOP PALOP	42 mm	PKP24 □ PKP54 □
PAL2P-2	56.4 mm	PKP26 □, PKP56 □
PAL2P-5	60 mm	PKP56 □ F
PAL4P-2	85 mm	PKP29 □
PAL4P-5	85 mm	PK59 □

*() indicate specifications for **PFB28A**.

- The product names of the applicable ones are described with text by which the product name can be identified.
- These installation brackets can be perfectly fitted to the pilot of the stepping motors. (excluding **PALOP**)

◇ For SH Geared Type

Material: Aluminum alloy (SPCC)*

Product Name	Motor Frame Size	Applicable Product
PFB28A	28 mm	PKP223
SOL0A	42 mm	PKP243
SOL2A	60 mm	PKP264

*() indicate specifications for **PFB28A**.

- The product names of the applicable ones are described with text by which the product name can be identified.

◇ For TS Geared Type

Material: Aluminum alloy

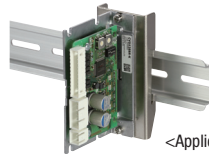
Product Name	Motor Frame Size	Applicable Product
SOL0B	42 mm	PKP54 □
SOL2M4	60 mm	PKP56 □

- The product names of the applicable ones are described with text by which the product name can be identified.

Circuit Product Mounting Bracket

Mounts the DIN rails for the driver with installation plate.

- Metal build delivers solid mounting.
- No side slips even without an end plate.



<Application example>

Product Line

Material: SPCC Surface treatment: Electroless nickel plating

Product Name	Applicable Driver
MADP07	With Installation Plate Right Angle With Installation Plate

Motor Connector Sets

A set of connector housings and contacts are for use with a connector-coupled motor.

In addition to the set included in the product, use these extra sets as needed.

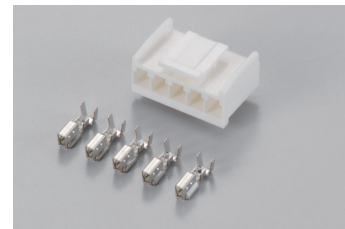
Product Line

Product Name	Applicable Product
CS2U30A	PKP223, PKP225
CS2U30B	PKP233, PKP235
CS5N30A	PK513, PKP523, PKP525
CS5N30B	PKP544M, PKP546M
CS5N30C	PKP564FM, PKP566FM, PKP569FM

- The product names of the applicable ones are described with text by which the product name can be identified.
- Each package contains enough housings and contacts for 30 motors. Please specify the number of packages when ordering.
The price is for one package.

Note

- The crimp tool is not included. Please provide them separately.



This photograph shows **CS5N30B**.

Circuit Product Cover

Protects drivers and prevents unwanted contact.

Use for right angle drivers with installation plates.

Product Line

Material: Resin

Product Name	Applicable Driver	
	For 5-Phase Stepping Motor Driver	For 2-Phase Stepping Motor Bipolar Driver
PADC-CVD	CVD503BR-K, CVD512BR-K CVD518BR-K, CVD524BR-K CVD528BR-K, CVD538BR-K	CVD205BR-K, CVD206BR-K CVD215BR-K, CVD223BR-K CVD223FBR-K, CVD228BR-K CVD245BR-K



<Application example>

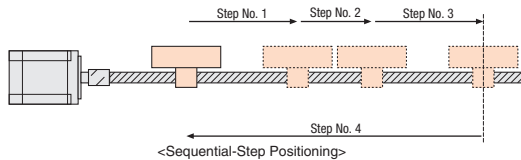
Controller

Stored-Data Type Controller

SG8030J

All operations including data setting can easily be performed using the 4 touch pads on the panel. In addition, the number of signal lines is reduced to a minimum for easy operation and connection.

- Jerk limiting control function for suppressing vibration of the motor
- Sequential-step positioning operation/external signal operation possible
- Maximum oscillation frequency 200 kHz
- 1-pulse output/2-pulse output mode select possible



DIN Rail Installation Model



Recessed Installation Model

Product Line

Product Line	Product Name
DIN Rail Installation Model	SG8030J-D
Recessed Installation Model	SG8030J-U

Safety Precautions

- To ensure correct operation, carefully read the Operating Manual before using it.
- The products listed in this catalogue are for industrial use and for built-in component. Do not use for any other applications.

- The factories which manufacture the products listed in this catalogue have obtained Quality Management Systems ISO9001 and Environment Management Systems ISO14001.
- The content listed in this catalogue such as performance and specifications of the products are subject to change without notice for improvements.
- The price of all products listed in this catalogue does not include the consumption tax etc.
- For details of the products, please contact the nearest dealer, sales office or the following "Order Support Center" or "Customer Support Center".
- **Orientalmotor** is registered trademark or trademark of Oriental Motor in Japan and other countries.

Orientalmotor

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