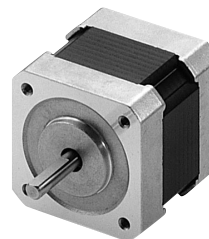


# 1.65 in. (42 mm)

## Step Angle 1.8°

### PK Series Standard Type



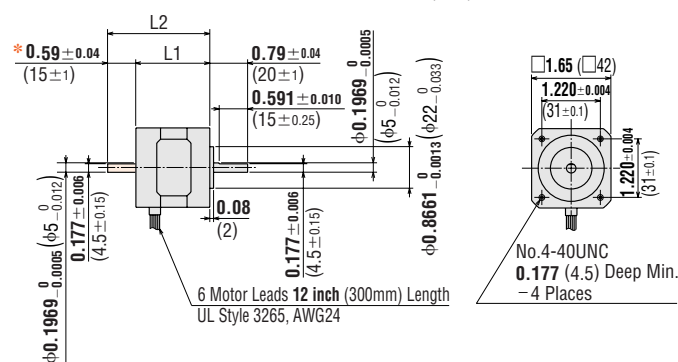
## Specifications

Model	Connection Type	Holding Torque		Current per Phase A/phase	Voltage VDC	Resistance per Phase Ω/phase	Inductance mH/phase	Rotor Inertia J		Lead Wires	Corresponding AC/DC-Input Motor & Driver Package
		oz-in	N·m					oz-in <sup>2</sup>	kg·m <sup>2</sup>		
<b>PK243-01AA</b>	Bipolar (Series)	28	0.2	0.67	5.6	8.4	10	0.191	35×10 <sup>-7</sup>	6	<b>UMK243□A/CSK243-□TA</b>
<b>PK243-01BA</b>	Unipolar	22	0.16	0.95	4	4.2	2.5				
<b>PK243-02AA</b>	Bipolar (Series)	28	0.2	0.28	13	48	60	0.191	35×10 <sup>-7</sup>	6	—
<b>PK243-02BA</b>	Unipolar	22	0.16	0.4	9.6	24	15				
<b>PK243-03AA</b>	Bipolar (Series)	28	0.2	0.22	17	77	84	0.191	35×10 <sup>-7</sup>	6	—
<b>PK243-03BA</b>	Unipolar	22	0.16	0.31	12	38.5	21				
<b>PK244-01AA</b>	Bipolar (Series)	46	0.33	0.85	5.6	6.6	12.8	0.3	54×10 <sup>-7</sup>	6	<b>UMK244□A/CSK244-□TA</b>
<b>PK244-01BA</b>	Unipolar	36	0.26	1.2	4	3.3	3.2				
<b>PK244-02AA</b>	Bipolar (Series)	46	0.33	0.57	8.6	15	26.8	0.3	54×10 <sup>-7</sup>	6	—
<b>PK244-02BA</b>	Unipolar	36	0.26	0.8	6	7.5	6.7				
<b>PK244-03AA</b>	Bipolar (Series)	46	0.33	0.28	17	60	120	0.3	54×10 <sup>-7</sup>	6	—
<b>PK244-03BA</b>	Unipolar	36	0.26	0.4	12	30	30				
<b>PK244-04AA</b>	Bipolar (Series)	46	0.33	0.14	34	240	428	0.3	54×10 <sup>-7</sup>	6	—
<b>PK244-04BA</b>	Unipolar	36	0.26	0.2	24	120	107				
<b>PK245-01AA</b>	Bipolar (Series)	61	0.43	0.85	5.6	6.6	11.2	0.37	68×10 <sup>-7</sup>	6	<b>UMK245□A/CSK245-□TA</b>
<b>PK245-01BA</b>	Unipolar	45	0.32	1.2	4	3.3	2.8				
<b>PK245-02AA</b>	Bipolar (Series)	61	0.43	0.57	8.6	15	28.4	0.37	68×10 <sup>-7</sup>	6	—
<b>PK245-02BA</b>	Unipolar	45	0.32	0.8	6	7.5	7.1				
<b>PK245-03AA</b>	Bipolar (Series)	61	0.43	0.28	17	60	100	0.37	68×10 <sup>-7</sup>	6	—
<b>PK245-03BA</b>	Unipolar	45	0.32	0.4	12	30	25				

How to Read Specifications → Page C-9

Motor Wiring Diagrams → Page C-189

## Dimensions Scale 1/4, Unit = inch (mm)



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

Model	L1 inch (mm)	L2 inch (mm)	Weight lb. (kg)	DXF
<b>PK243-0□AA</b>	1.30 (33)	—	0.46 (0.21)	B081U
<b>PK243-0□BA</b>		1.89 (48)		
<b>PK244-0□AA</b>	1.54 (39)	—	0.59 (0.27)	B082U
<b>PK244-0□BA</b>		2.13 (54)		
<b>PK245-0□AA</b>	1.85 (47)	—	0.77 (0.35)	B083U
<b>PK245-0□BA</b>		2.44 (62)		

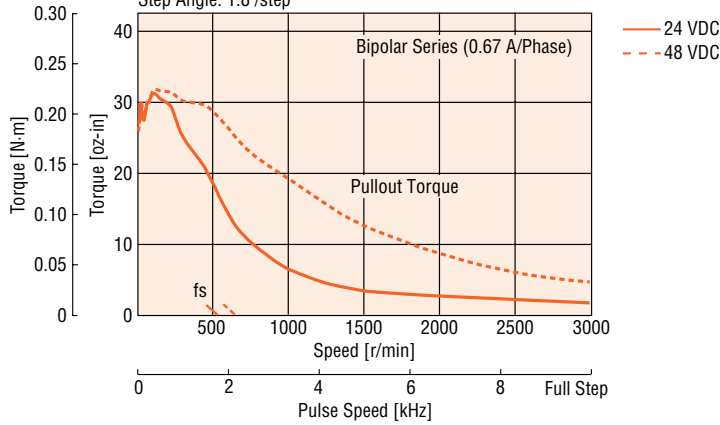
- Enter the winding specification in the box (□) within the model number.

# Speed-Torque Characteristics

How to Read Speed-Torque Characteristics → Page C-10

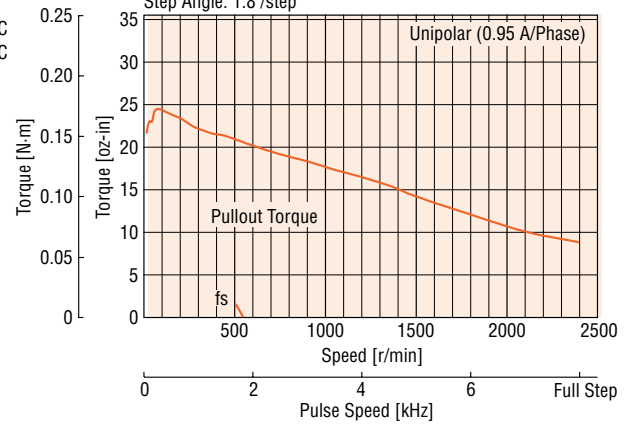
## PK243-01BA Bipolar (Series)

Bipolar Constant Current Driver  
 With Damper **D4CL-5.0F**:  $J_L = 0.186 \text{ oz-in}^2 (34 \times 10^{-7} \text{ kg-m}^2)$   
 Step Angle:  $1.8^\circ/\text{step}$



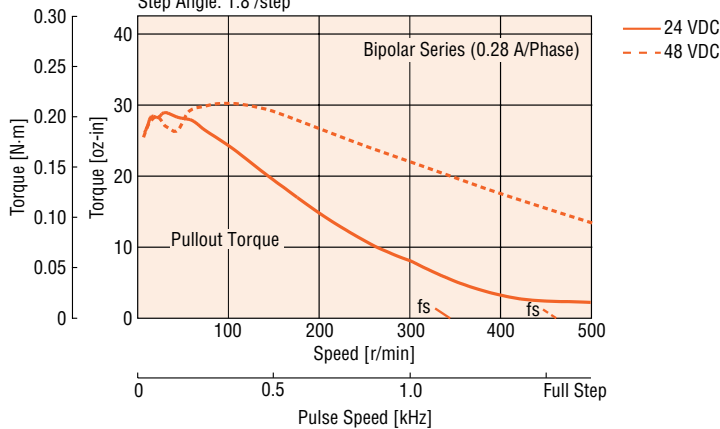
## PK243-01BA Unipolar

Power Input: 24 VDC Unipolar Constant Current Driver  
 With Damper **D4CL-5.0F**:  $J_L = 0.186 \text{ oz-in}^2 (34 \times 10^{-7} \text{ kg-m}^2)$   
 Step Angle:  $1.8^\circ/\text{step}$



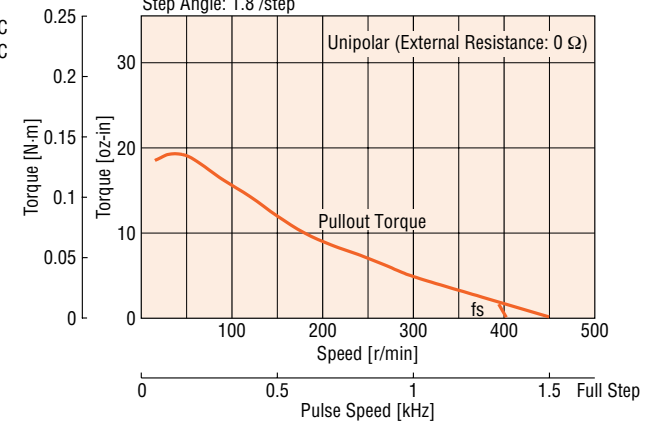
## PK243-02BA Bipolar (Series)

Bipolar Constant Current Driver  
 With Damper **D4CL-5.0F**:  $J_L = 0.186 \text{ oz-in}^2 (34 \times 10^{-7} \text{ kg-m}^2)$   
 Step Angle:  $1.8^\circ/\text{step}$



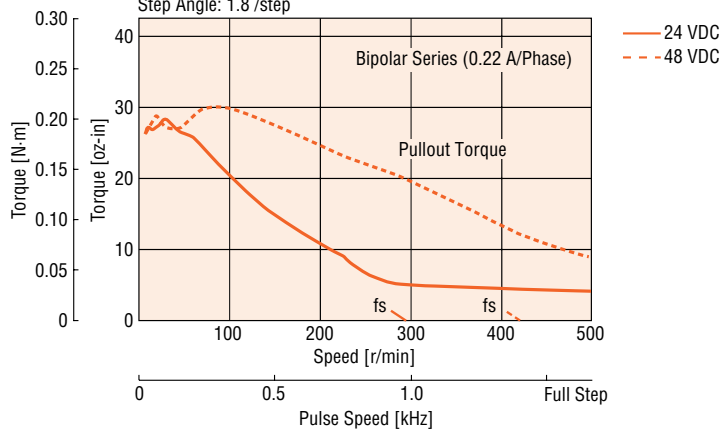
## PK243-02BA Unipolar

Power Input: 11.5 VDC Unipolar Constant Voltage Driver  
 With Damper **D4CL-5.0F**:  $J_L = 0.186 \text{ oz-in}^2 (34 \times 10^{-7} \text{ kg-m}^2)$   
 Step Angle:  $1.8^\circ/\text{step}$



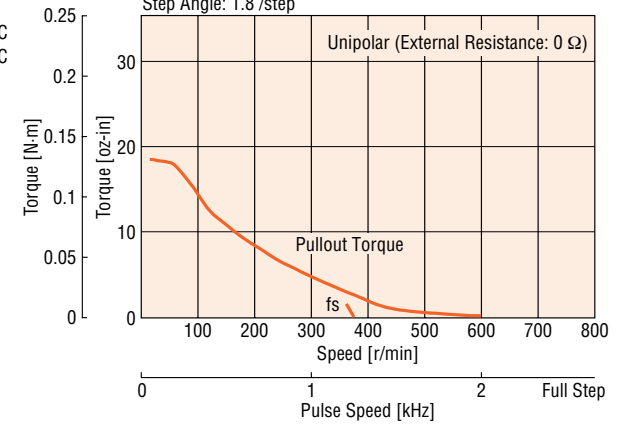
## PK243-03BA Bipolar (Series)

Bipolar Constant Current Driver  
 With Damper **D4CL-5.0F**:  $J_L = 0.186 \text{ oz-in}^2 (34 \times 10^{-7} \text{ kg-m}^2)$   
 Step Angle:  $1.8^\circ/\text{step}$



## PK243-03BA Unipolar

Power Input: 13.6 VDC Unipolar Constant Voltage Driver  
 With Damper **D4CL-5.0F**:  $J_L = 0.186 \text{ oz-in}^2 (34 \times 10^{-7} \text{ kg-m}^2)$   
 Step Angle:  $1.8^\circ/\text{step}$



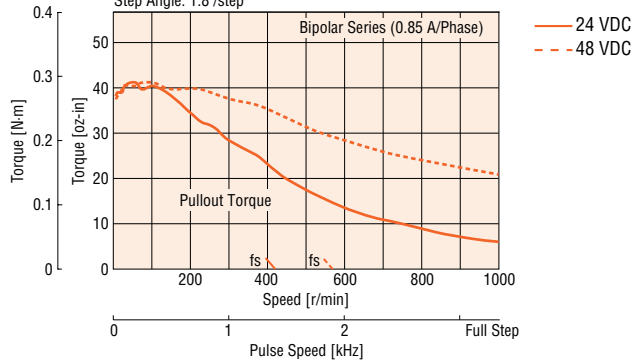
Introduction	AS	AS PLUS	ASC	RK	CFK II	CSK	PMC	UMK	CSK	PK/PV	PK	UI2120G	EMP401	SC8800	SC8800E	SG8030J	SMK	Accessories	Before Using a Stepping Motor
	Closed Loop <i>Q5STEP</i>	AC Input	DC Input	5-Phase Microstep	5-Phase Full/Half	DC Input	AC Input	DC Input	2-Phase Full/Half	Encoder	without Encoder	with Indexer					Low-Speed Synchronous Motors		
	Motor & Driver Packages									2-Phase Stepping Motors	Driver			Controllers					

## Speed-Torque Characteristics

How to Read Speed-Torque Characteristics → Page C-10

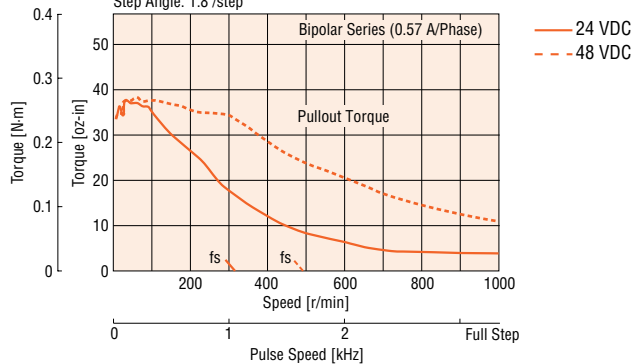
### ● PK244-01BA Bipolar (Series)

Bipolar Constant Current Driver  
With Damper **D4CL-5.0F**:  $J_L = 0.186 \text{ oz-in}^2 (34 \times 10^{-7} \text{ kg-m}^2)$   
Step Angle: 1.8°/step



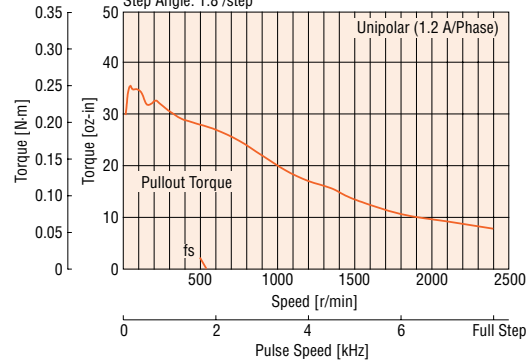
### ● PK244-02BA Bipolar (Series)

Bipolar Constant Current Driver  
With Damper **D4CL-5.0F**:  $J_L = 0.186 \text{ oz-in}^2 (34 \times 10^{-7} \text{ kg-m}^2)$   
Step Angle: 1.8°/step



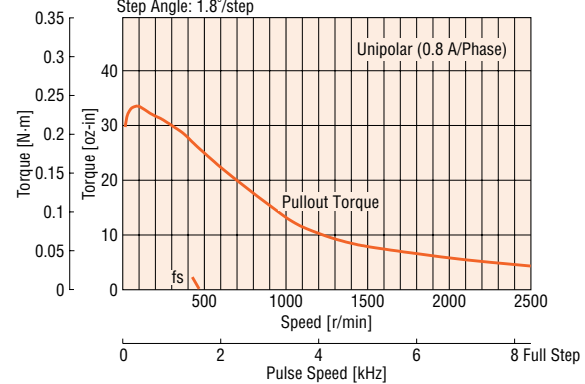
### ● PK244-01BA Unipolar

Power Input: 24 VDC Unipolar Constant Current Driver  
With Damper **D4CL-5.0F**:  $J_L = 0.186 \text{ oz-in}^2 (34 \times 10^{-7} \text{ kg-m}^2)$   
Step Angle: 1.8°/step



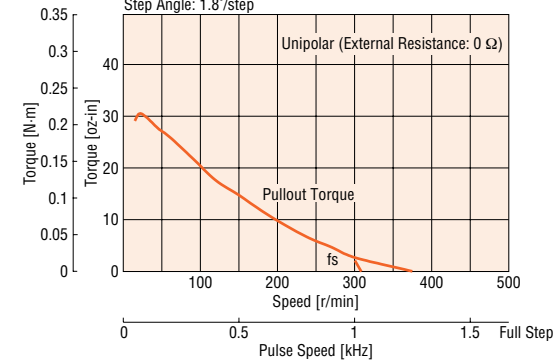
### ● PK244-02BA Unipolar

Power Input: 24 VDC Unipolar Constant Current Driver  
With Damper **D4CL-5.0F**:  $J_L = 0.186 \text{ oz-in}^2 (34 \times 10^{-7} \text{ kg-m}^2)$   
Step Angle: 1.8°/step



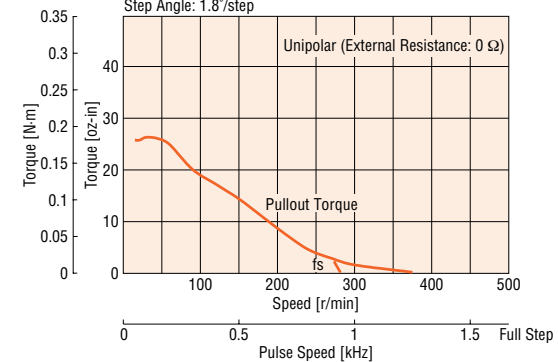
### ● PK244-03BA Unipolar

Power Input: 13.7 VDC Unipolar Constant Voltage Driver  
With Damper **D4CL-5.0F**:  $J_L = 0.186 \text{ oz-in}^2 (34 \times 10^{-7} \text{ kg-m}^2)$   
Step Angle: 1.8°/step



### ● PK244-04BA Unipolar

Power Input: 25.5 VDC Unipolar Constant Voltage Driver  
With Damper **D4CL-5.0F**:  $J_L = 0.186 \text{ oz-in}^2 (34 \times 10^{-7} \text{ kg-m}^2)$   
Step Angle: 1.8°/step

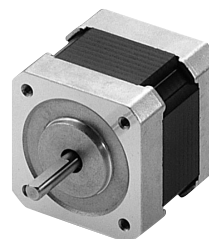




# □ 1.65 in. (□ 42 mm)

## Step Angle 0.9°

### PK Series High Resolution Type



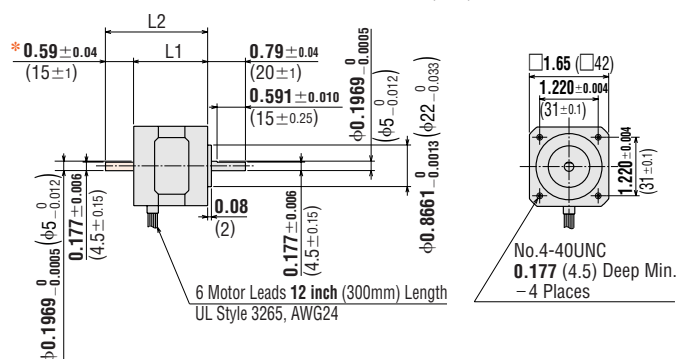
## Specifications

Model	Connection Type	Holding Torque		Current per Phase A/phase	Voltage VDC	Resistance per Phase Ω/phase	Inductance mH/phase	Rotor Inertia J		Lead Wires	Corresponding AC/DC-Input Motor & Driver Package
		oz-in	N·m					oz-in <sup>2</sup>	kg·m <sup>2</sup>		
<b>PK243M-01AA</b>	Bipolar (Series)	28	0.2	0.67	5.6	8.4	15.2	0.191	35×10 <sup>-7</sup>	6	<b>UMK243M□A/ CSK243M-□TA</b>
<b>PK243M-01BA</b>	Unipolar	22	0.16	0.95	4	4.2	3.8				
<b>PK243M-02AA</b>	Bipolar (Series)	28	0.2	0.42	8.4	20	38.8	0.191	35×10 <sup>-7</sup>	6	—
<b>PK243M-02BA</b>	Unipolar	22	0.16	0.6	6	10	9.7				
<b>PK243M-03AA</b>	Bipolar (Series)	28	0.2	0.22	17	77	136	0.191	35×10 <sup>-7</sup>	6	—
<b>PK243M-03BA</b>	Unipolar	22	0.16	0.31	12	38.5	34				
<b>PK244M-01AA</b>	Bipolar (Series)	44	0.31	0.85	5.6	6.6	17.2	0.3	54×10 <sup>-7</sup>	6	<b>UMK244M□A/ CSK244M-□TA</b>
<b>PK244M-01BA</b>	Unipolar	36	0.26	1.2	4	3.3	4.3				
<b>PK244M-02AA</b>	Bipolar (Series)	44	0.31	0.57	8.6	15	38.8	0.3	54×10 <sup>-7</sup>	6	—
<b>PK244M-02BA</b>	Unipolar	36	0.26	0.8	6	7.5	9.7				
<b>PK244M-03AA</b>	Bipolar (Series)	44	0.31	0.28	17	60	152	0.3	54×10 <sup>-7</sup>	6	—
<b>PK244M-03BA</b>	Unipolar	36	0.26	0.4	12	30	38				
<b>PK245M-01AA</b>	Bipolar (Series)	53	0.38	0.85	5.6	6.6	15.6	0.37	68×10 <sup>-7</sup>	6	<b>UMK245M□A/ CSK245M-□TA</b>
<b>PK245M-01BA</b>	Unipolar	45	0.32	1.2	4	3.3	3.9				
<b>PK245M-02AA</b>	Bipolar (Series)	53	0.38	0.57	8.6	15	39.6	0.37	68×10 <sup>-7</sup>	6	—
<b>PK245M-02BA</b>	Unipolar	45	0.32	0.8	6	7.5	9.9				
<b>PK245M-03AA</b>	Bipolar (Series)	53	0.38	0.28	17	60	128	0.37	68×10 <sup>-7</sup>	6	—
<b>PK245M-03BA</b>	Unipolar	45	0.32	0.4	12	30	32				

How to Read Specifications → Page C-9

Motor Wiring Diagrams → Page C-189

## Dimensions Scale 1/4, Unit = inch (mm)



- \* The length of machining on double shaft model is  $0.591 \pm 0.010$  (15 ± 0.25).
- These dimensions are for double shaft models. For single shaft models, ignore the shaded area.

Model	L1 inch (mm)	L2 inch (mm)	Weight lb. (kg)	DXF
<b>PK243M-0□AA</b>	1.30 (33)	—	0.53 (0.24)	B081U
<b>PK243M-0□BA</b>		1.89 (48)		
<b>PK244M-0□AA</b>	1.54 (39)	—	0.66 (0.3)	B082U
<b>PK244M-0□BA</b>		2.13 (54)		
<b>PK245M-0□AA</b>	1.85 (47)	—	0.81 (0.37)	B083U
<b>PK245M-0□BA</b>		2.44 (62)		

- Enter the winding specification in the box (□) within the model number.

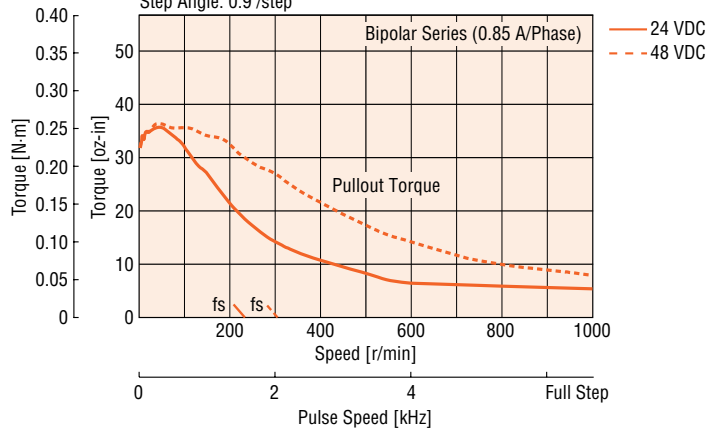


# Speed-Torque Characteristics

How to Read Speed-Torque Characteristics → Page C-10

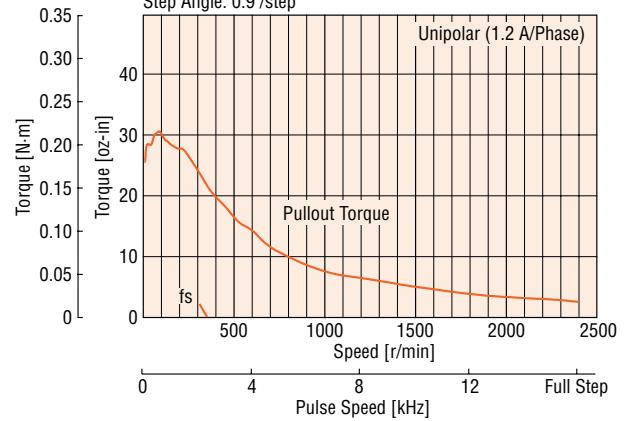
## PK244M-01BA Bipolar (Series)

Bipolar Constant Current Driver  
 With Damper **D4CL-5.0F**:  $J_L = 0.186 \text{ oz-in}^2 (34 \times 10^{-7} \text{ kg-m}^2)$   
 Step Angle:  $0.9^\circ/\text{step}$



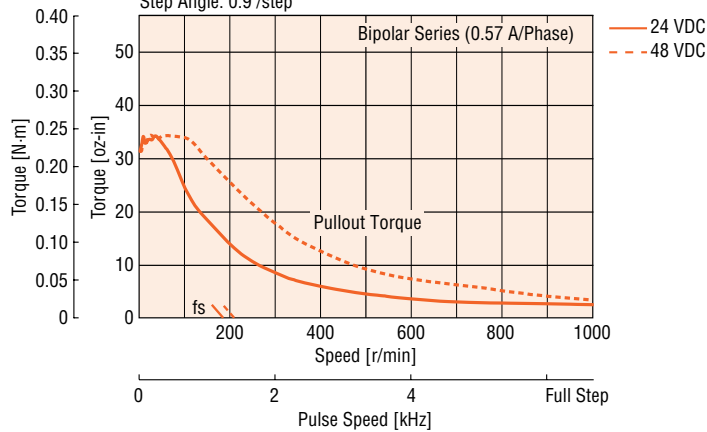
## PK244M-01BA Unipolar

Power Input: 24 VDC Unipolar Constant Current Driver  
 With Damper **D4CL-5.0F**:  $J_L = 0.186 \text{ oz-in}^2 (34 \times 10^{-7} \text{ kg-m}^2)$   
 Step Angle:  $0.9^\circ/\text{step}$



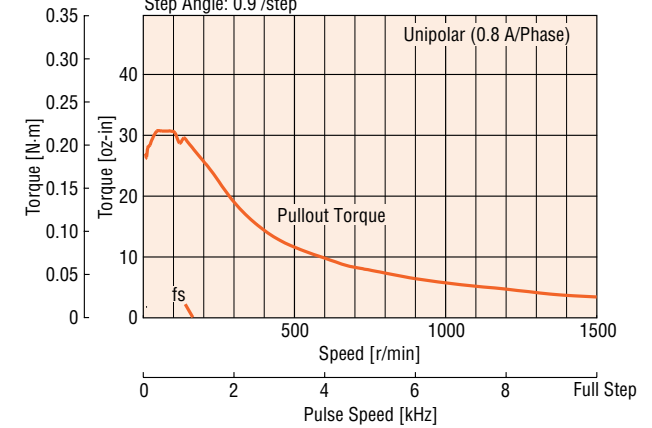
## PK244M-02BA Bipolar (Series)

Bipolar Constant Current Driver  
 With Damper **D4CL-5.0F**:  $J_L = 0.186 \text{ oz-in}^2 (34 \times 10^{-7} \text{ kg-m}^2)$   
 Step Angle:  $0.9^\circ/\text{step}$



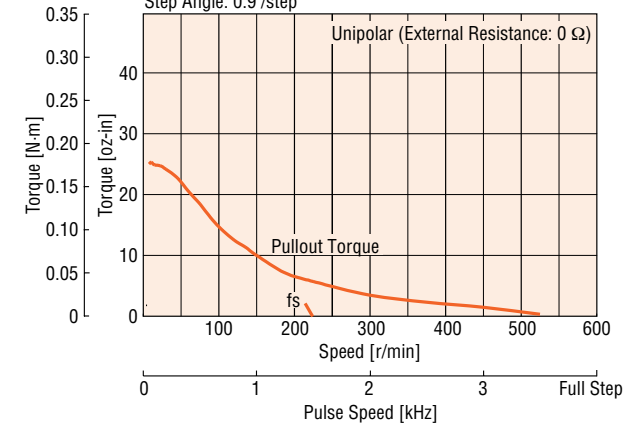
## PK244M-02BA Unipolar

Power Input: 24 VDC Unipolar Constant Current Driver  
 With Damper **D4CL-5.0F**:  $J_L = 0.186 \text{ oz-in}^2 (34 \times 10^{-7} \text{ kg-m}^2)$   
 Step Angle:  $0.9^\circ/\text{step}$



## PK244M-03BA Unipolar

Power Input: 13.5 VDC Unipolar Constant Voltage Driver  
 With Damper **D4CL-5.0F**:  $J_L = 0.186 \text{ oz-in}^2 (34 \times 10^{-7} \text{ kg-m}^2)$   
 Step Angle:  $0.9^\circ/\text{step}$





# 1.65 in. (42 mm)

## PK Series SH Geared Type



### Specifications

#### Motor Specifications

Model	Connection Type	Current per Phase	Voltage	Resistance per Phase	Inductance	Rotor Inertia J		Lead Wires	Corresponding DC-Input Motor & Driver Package
						A/phase	VDC		
<b>PK243A1A-SG</b>	Bipolar (Series)	0.67	5.6	8.4	10	0.191	$35 \times 10^{-7}$	6	<b>CSK243</b>
<b>PK243B1A-SG</b>	Unipolar	0.95	4.0	4.2	2.5				
<b>PK243A2A-SG</b>	Bipolar (Series)	0.28	13	48	60	0.191	$35 \times 10^{-7}$	6	—
<b>PK243B2A-SG</b>	Unipolar	0.4	9.6	24	15				

How to Read Specifications → Page C-9

Motor Wiring Diagrams → Page C-189

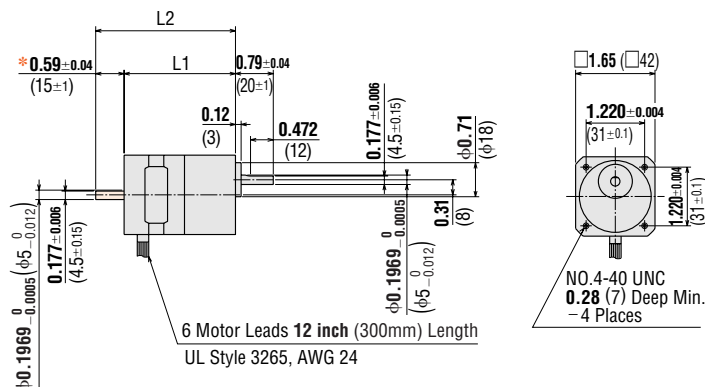
Enter the gear ratio in the box (□) within the model number.

#### Gearmotor Specifications

Model	Gear Ratio	Holding Torque*		Step Angle	Permissible Speed
		lb-in	N-m		
<b>PK243A1A-SG3.6, PK243A2A-SG3.6</b> <b>PK243B1A-SG3.6, PK243B2A-SG3.6</b>	3.6:1	1.77	0.2	0.5°	500
<b>PK243A1A-SG7.2, PK243A2A-SG7.2</b> <b>PK243B1A-SG7.2, PK243B2A-SG7.2</b>	7.2:1	3.5	0.4	0.25°	250
<b>PK243A1A-SG9, PK243A2A-SG9</b> <b>PK243B1A-SG9, PK243B2A-SG9</b>	9:1	4.4	0.5	0.2°	200
<b>PK243A1A-SG10, PK243A2A-SG10</b> <b>PK243B1A-SG10, PK243B2A-SG10</b>	10:1	4.9	0.56	0.18°	180
<b>PK243A1A-SG18, PK243A2A-SG18</b> <b>PK243B1A-SG18, PK243B2A-SG18</b>	18:1	7.0	0.8	0.1°	100
<b>PK243A1A-SG36, PK243A2A-SG36</b> <b>PK243B1A-SG36, PK243B2A-SG36</b>	36:1	7.0	0.8	0.05°	50

\* Holding torque is the same regardless of the connection type, due to the permissible torque limit of the gearhead.

### Dimensions Scale 1/4, Unit = inch (mm)



\* The length of machining on double shaft model is  $0.591 \pm 0.010$  (15 ± 0.25).

These dimensions are for double shaft models. For single shaft models, ignore the shaded area.

Model	L1 inch (mm)	L2 inch (mm)	Weight lb. (kg)	DXF
<b>PK243A</b> □ <b>A-SG</b> □	2.32 (59)	—	0.77 (0.35)	B091U
<b>PK243B</b> □ <b>A-SG</b> □		2.91 (74)		

Enter the winding specification in the box (□) within the model number.

Enter the gear ratio in the box (□) within the model number.

#### Mounting Screws (included)

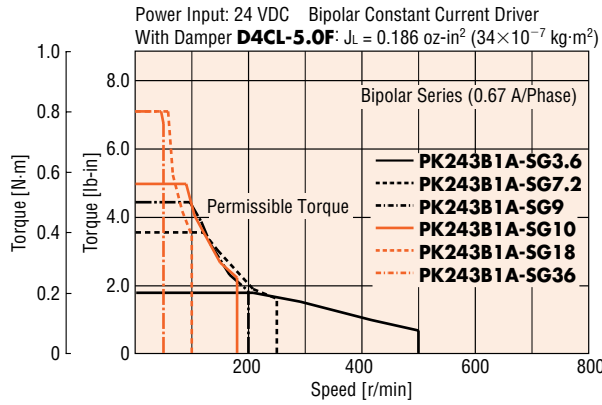
No.4-40 UNC 0.39 in. (10 mm)

NO.4-40 UNC  
0.28 (7) Deep Min.  
- 4 Places

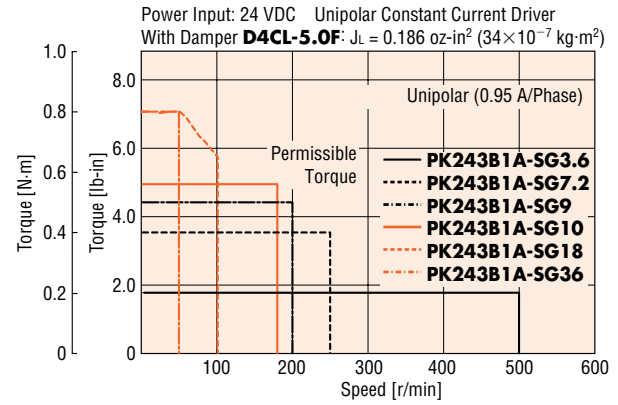
# Speed-Torque Characteristics

How to Read Speed-Torque Characteristics → Page C-10

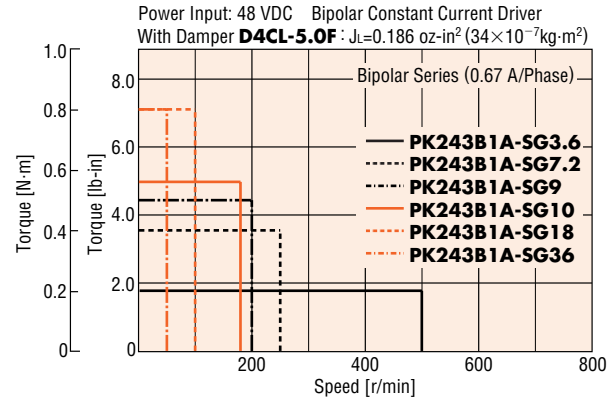
## ● PK243B1A-SG □ Bipolar (Series) 24 VDC



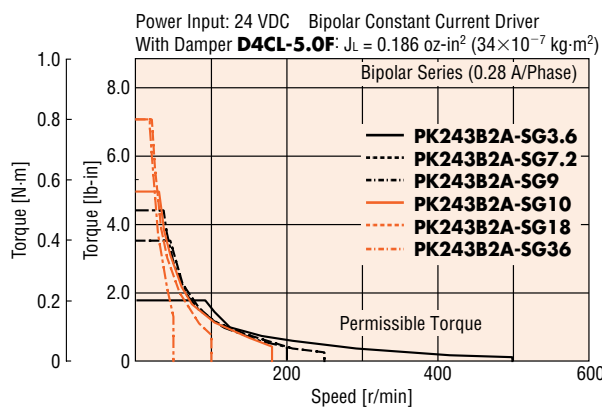
## ● PK243B1A-SG □ Unipolar



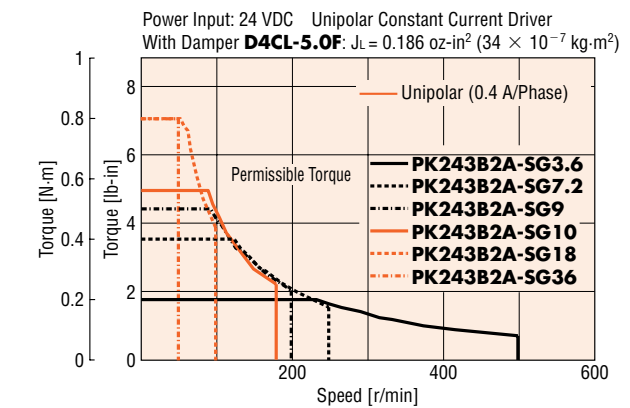
## ● PK243B1A-SG □ Bipolar (Series) 48 VDC



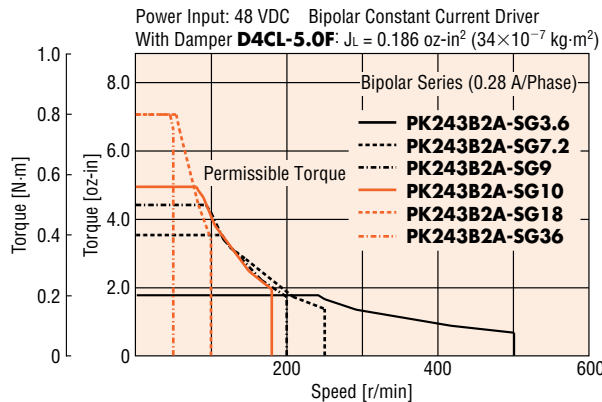
## ● PK243B2A-SG □ Bipolar (Series) 24 VDC



## ● PK243B2A-SG □ Unipolar



## ● PK243B2A-SG □ Bipolar (Series) 48 VDC



Introduction	AS	Closed Loop <i>Q57EP</i>	Motor & Driver Packages
	AS PLUS	AC Input	
AS	ASC	DC Input	5-Phase Microstep
	RK	AC Input	5-Phase Full/Half
CFK II	CSK	DC Input	2-Phase Full/Half
	PMK	AC Input	2-Phase Full/Half
UMK	CSK	DC Input	2-Phase Stepping Motors
	PK/PV	Encoder	without Encoder
UI2120G	PK	Encoder	with Indexer
	EMP401	Encoder	with Indexer
SMK	EMP402	Encoder	Controllers
	SC8800	Encoder	
	SG8030J	Encoder	
Accessories	SMK	Encoder	Low-Speed Synchronous Motors
		Encoder	Before Using a Stepping Motor