

(RoHS) RoHS-Compliant
2-Phase Stepping Motor

PK Series

NEW High-Torque • High-Efficiency Type
Motor Frame Size: 1.65 inch

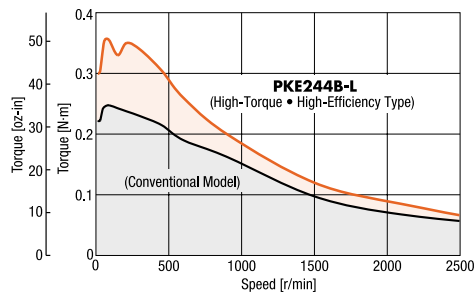


* Motor lead wire/connector assembly included.

■ Features

● High-Torque

Oriental Motor's high-torque motor has approximately 1.3~1.5 times more torque at rated current when compared to a standard 2 phase stepping motor also at rated current. This allows for space saving through downsizing of the motor or the advantage of increased torque without having to increase motor size or length.



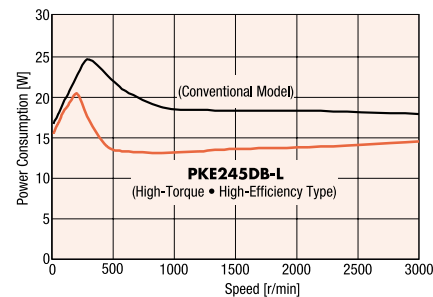
● Energy-Saving

Up to 40% less power is consumed at rated current when compared to conventional stepping motor models also at rated current. This high efficient stepping motor allows for smaller power supplies to be used to power the motor / driver.

CO₂ emission: Up to 15kg (33lb) less than a conventional model

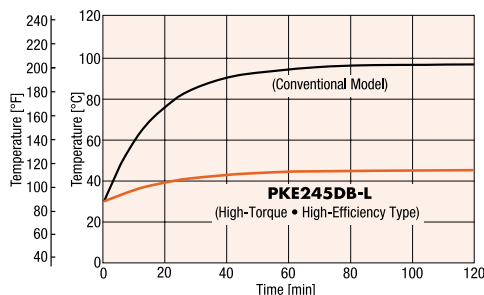
Amount of CO₂:

- Conventional model - 37kg/yr (81lb/yr)
- PKE245DB-L - 22kg/yr (48lb/yr)



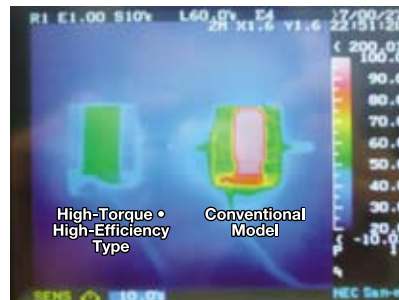
● Lower Heat Generation

Utilizing the latest in motor technology, the High-Torque • High-Efficiency Type stepping motors are able to achieve a significant reduction in the amount of heat generated from the motor.



- Lower cost of ownership through the reduction of cooling needs.
- Increased service life of the motor due to cooler operating temperatures.
- Reduces problems found with thermal expansion.

• Temperature Distribution by Thermography



- This technology allows for up to 78% lower temperature rise (measured in °C) on the motor case when compared to a conventional stepping motor.

visit www.orientalmotor.com

For further information (specifications, dimensions, speed-torque characteristics)

42 mm (1.65 in.)

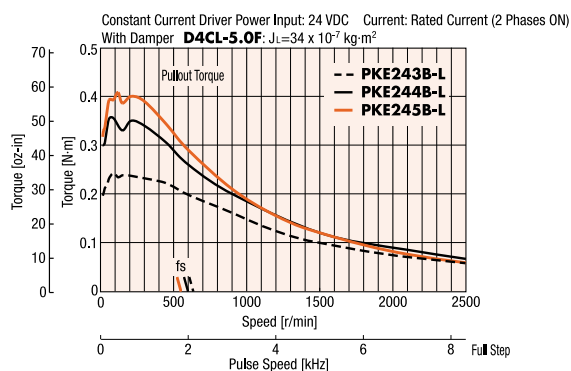
Step Angle 1.8°

Specifications (RoHS)

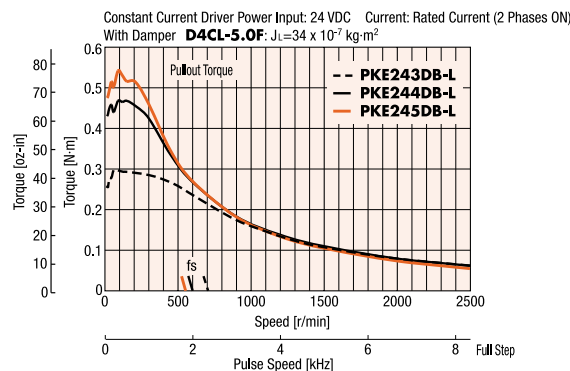
Model		Connection Type	Holding Torque		Rated Current	Voltage	Resistance	Inductance	Rotor Inertia J		Lead Wires
Single Shaft	Double Shaft		N•m	oz-in	A/phase	VDC	Ω/phase	mH/phase	kg•m ²	oz-in ²	
PKE243A-L	PKE243B-L	Unipolar	0.24	34	0.95	3.14	3.3	4.7	36×10 ⁻⁷	0.197	6
PKE243DA-L	PKE243DB-L	Bipolar	0.3	42	1.5	1.93	1.29	3.7	36×10 ⁻⁷	0.197	4
PKE244A-L	PKE244B-L	Unipolar	0.39	55.3	1.2	4.8	4	4.85	57×10 ⁻⁷	0.312	6
PKE244DA-L	PKE244DB-L	Bipolar	0.48	68	1.5	3.9	2.6	6.25	57×10 ⁻⁷	0.312	4
PKE245A-L	PKE245B-L	Unipolar	0.44	62	1.2	3.24	2.7	4.8	83×10 ⁻⁷	0.45	6
PKE245DA-L	PKE245DB-L	Bipolar	0.55	78	1.5	2.9	1.94	7	83×10 ⁻⁷	0.45	4

Speed-Torque Characteristics fs: Maximum Starting Frequency

Unipolar 6 leads

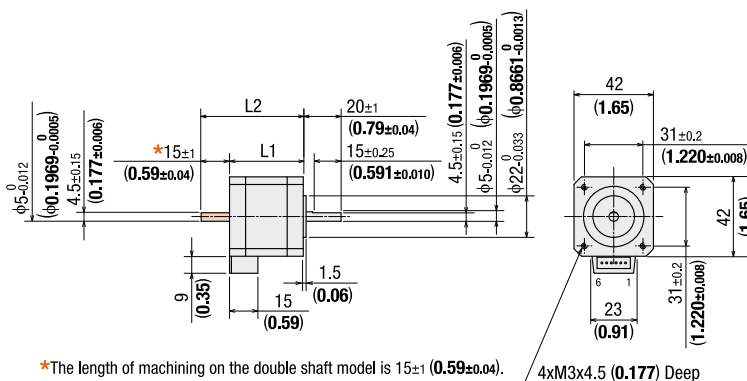


Bipolar 4 leads



Dimensions Unit = mm (in.)

Model	L1	L2	Mass kg (lb.)
PKE243A-L	33 (1.3)	-	0.27 (0.59)
PKE243B-L		48 (1.89)	
PKE243DA-L		-	
PKE243DB-L	39 (1.54)	48 (1.89)	0.32 (0.70)
PKE244A-L		-	
PKE244B-L		54 (2.13)	
PKE244DA-L	47 (1.85)	54 (2.13)	0.41 (0.90)
PKE244DB-L		-	
PKE245A-L		62 (2.44)	
PKE245B-L	47 (1.85)	-	0.41 (0.90)
PKE245DA-L		62 (2.44)	
PKE245DB-L			



*The length of machining on the double shaft model is 15±1 (0.59±0.04).

● Motor lead wire/connector cable assembly of 0.6m (2ft.) is included.

● This dimension is for the double shaft models.

For single shaft models, ignore the shaded () areas.

● Applicable Connector

Connector housing: 51103-0600 (MOLEX)

Contact: 50351-8100 (MOLEX)

Microstep Driver Options

Bipolar, 4-Leads (20~40VDC)



RBD215A-K

Unipolar, 6-Leads (24VDC)



CMD2109P (PK243-L)

CMD2112P (PK244-L / PK245-L)

Enter A (Single Shaft) or B (Double Shaft) in the box ().

ORIENTAL MOTOR U.S.A. CORP.

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