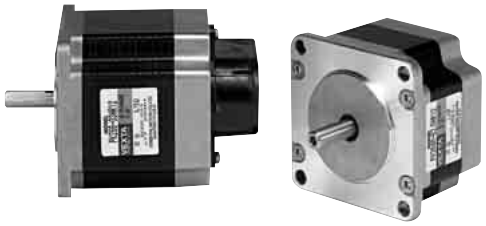
□ 2.22 in. (□ 56.4 mm)

PK Series Standard Type with Encoder



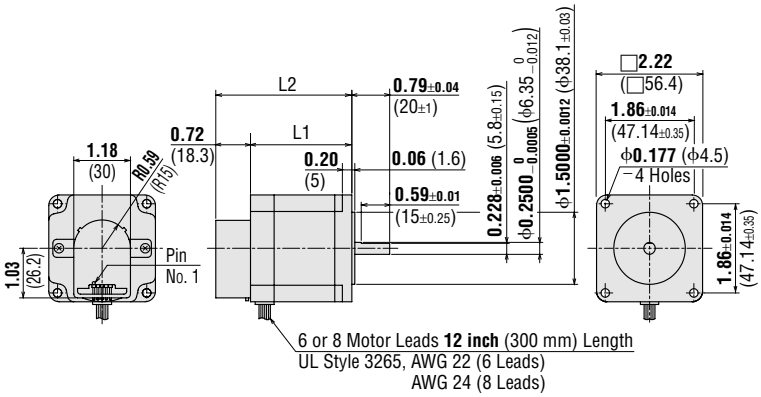
Specifications

Model Single Shaft	Basic Step Angle	Connection Type	Holding Torque oz-in	 N·m	Current per Phase A/phase	Voltage VDC	Resistance per Phase Ω/phase	Inductance mH/phase	Rotor Inertia J oz-in²	 kg·m²	Lead Wires
PK264-01AR11	1.8 °	Bipolar (Series)	68	0.48	0.71	8.1	11.4	21.6	0.66	120×10^{-7}	6
PK264-01AR12		Unipolar	55	0.39	1	5.7	5.7	5.4			
PK264-02AR11	1.8 °	Bipolar (Series)	68	0.48	1.4	3.9	2.8	5.6	0.66	120×10^{-7}	6
PK264-02AR12		Unipolar	55	0.39	2	2.8	1.4	1.4			
PK264-03AR11	1.8 °	Bipolar (Series)	68	0.48	2.1	2.6	1.26	2.4	0.66	120×10^{-7}	6
PK264-03AR12		Unipolar	55	0.39	3	1.9	0.63	0.6			
PK264-E2.0AR11	1.8 °	Bipolar (Parallel)	68	0.48	2.8	1.96	0.7	1.4	0.66	120×10^{-7}	8
PK264-E2.0AR12		Bipolar (Series)	68	0.48	1.4	3.9	2.8	5.6			
		Unipolar	55	0.39	2	2.8	1.4	1.4			
PK266-01AR11	1.8 °	Bipolar (Series)	166	1.17	0.71	11	14.8	40	1.64	300×10^{-7}	6
PK266-01AR12		Unipolar	127	0.9	1	7.4	7.4	10			
PK266-02AR11	1.8 °	Bipolar (Series)	166	1.17	1.4	5	3.6	10	1.64	300×10^{-7}	6
PK266-02AR12		Unipolar	127	0.9	2	3.6	1.8	2.5			
PK266-03AR11	1.8 °	Bipolar (Series)	166	1.17	2.1	3.2	1.5	4.4	1.64	300×10^{-7}	6
PK266-03AR12		Unipolar	127	0.9	3	2.3	0.75	1.1			
PK266-E2.0AR11	1.8 °	Bipolar (Parallel)	166	1.17	2.8	2.52	0.9	2.5	1.64	300×10^{-7}	8
PK266-E2.0AR12		Bipolar (Series)	166	1.17	1.4	5	3.6	10			
		Unipolar	127	0.9	2	3.6	1.8	2.5			

How to Read Specifications →Page C-9
Motor Wiring Diagrams →Page C-189

Dimensions

Scale 1/4, Unit = **inch** (mm)



Model	L1 inch (mm)	L2 inch (mm)	Weight lb. (kg)	DXF
PK264-0□AR11 **PK264-0□AR12**	1.54 (39)	2.26 (57.3)	1.03 (0.47)	B808U
PK264-E2.0AR11 **PK264-E2.0AR12**				
PK266-0□AR11 **PK266-0□AR12**	2.13 (54)	2.85 (72.3)	1.58 (0.72)	B809U
PK266-E2.0AR11 **PK266-E2.0AR12**				

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

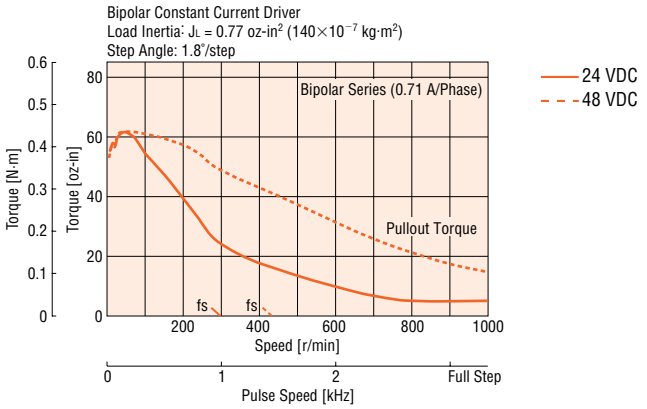
Encoder Specifications

→ Page C-239

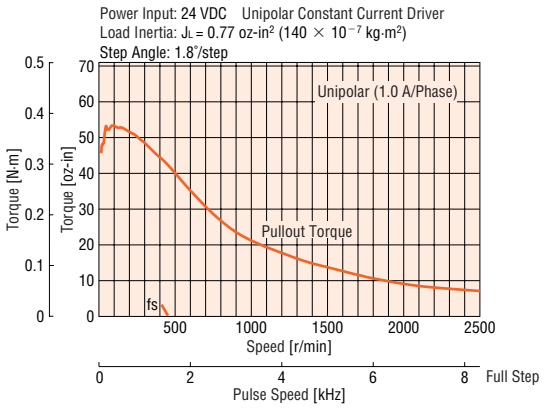
Speed–Torque Characteristics

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

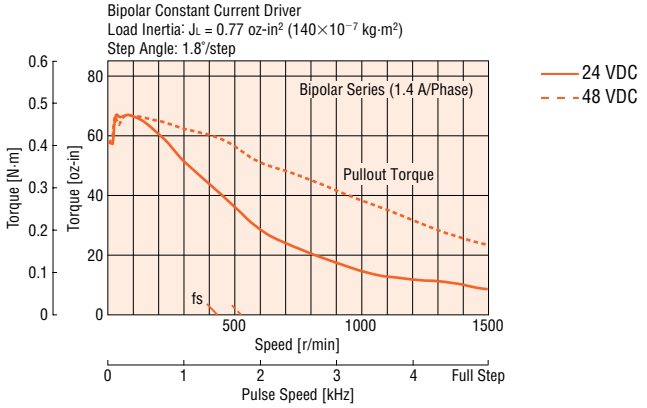
● PK264-01AR11
PK264-01AR12 Bipolar (Series)



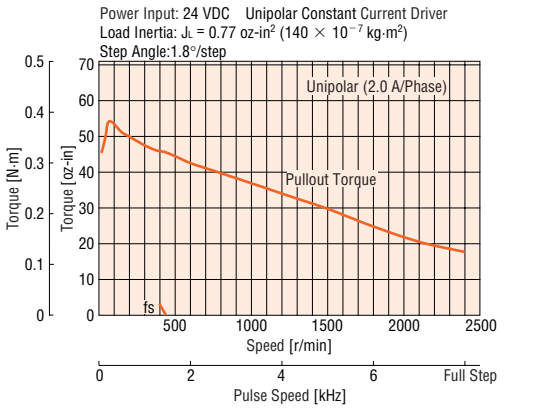
● PK264-01AR11
PK264-01AR12 Unipolar



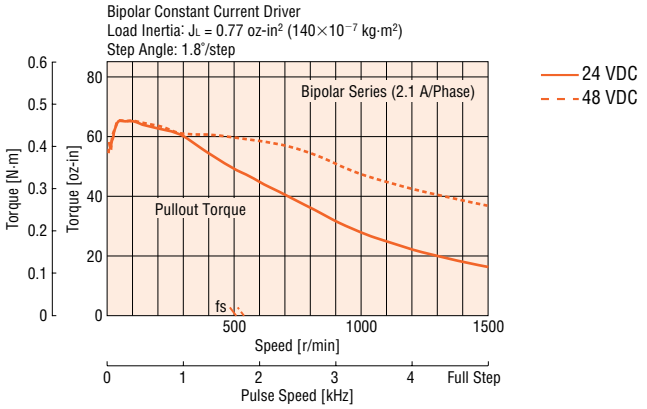
● PK264-02AR11
PK264-02AR12 Bipolar (Series)



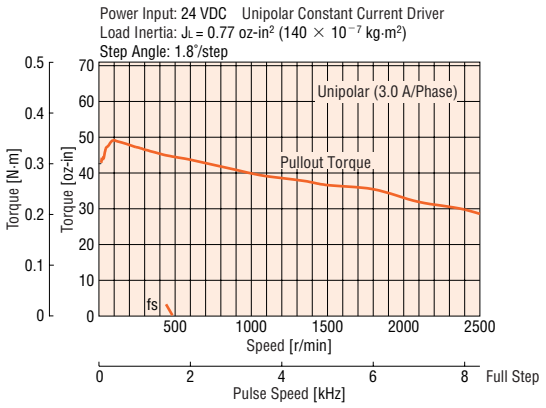
● PK264-02AR11
PK264-02AR12 Unipolar



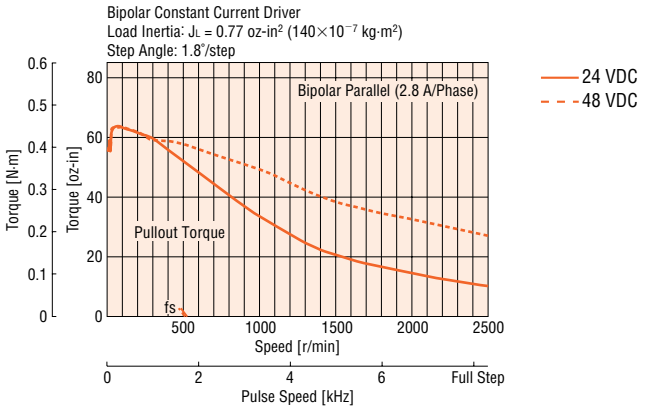
● PK264-03AR11
PK264-03AR12 Bipolar (Series)



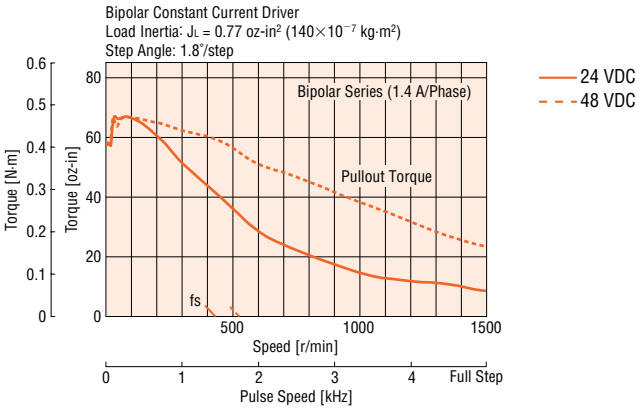
● PK264-03AR11
PK264-03AR12 Unipolar



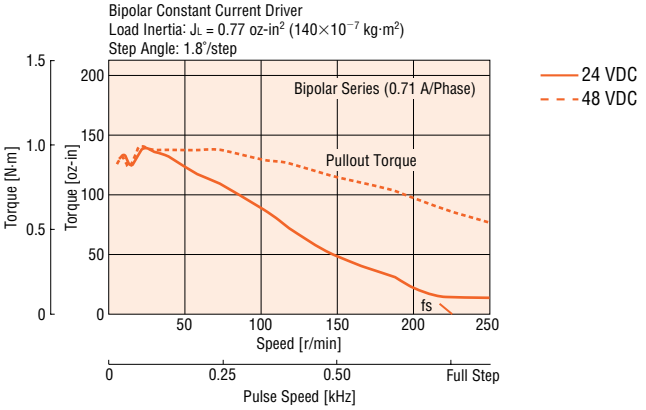
● PK264-E2.0AR11
PK264-E2.0AR12 Bipolar (Parallel)



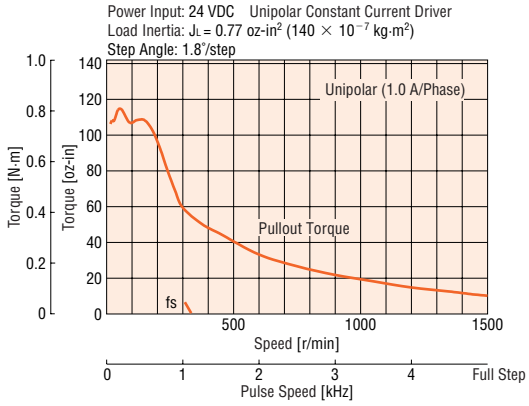
● PK264-E2.0AR11
PK264-E2.0AR12 Bipolar (Series)



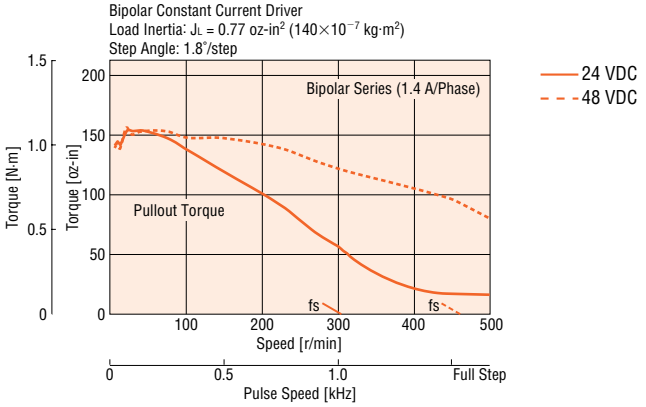
PK266-01AR11
PK266-01AR12 Bipolar (Series)



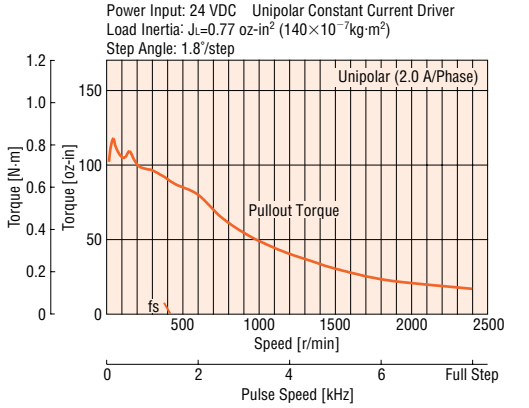
PK266-01AR11
PK266-01AR12 Unipolar



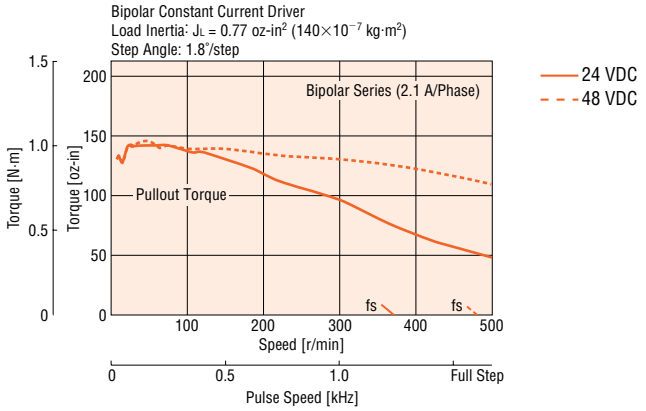
PK266-02AR11
PK266-02AR12 Bipolar (Series)



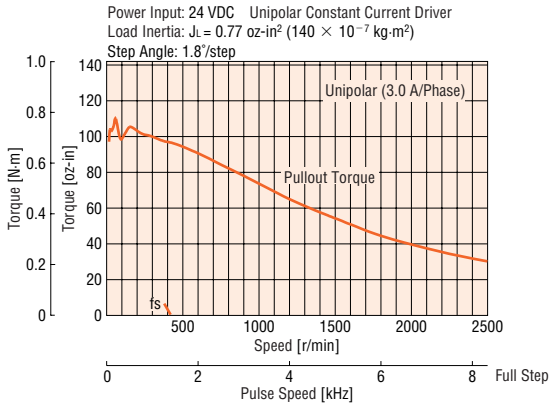
PK266-02AR11
PK266-02AR12 Unipolar



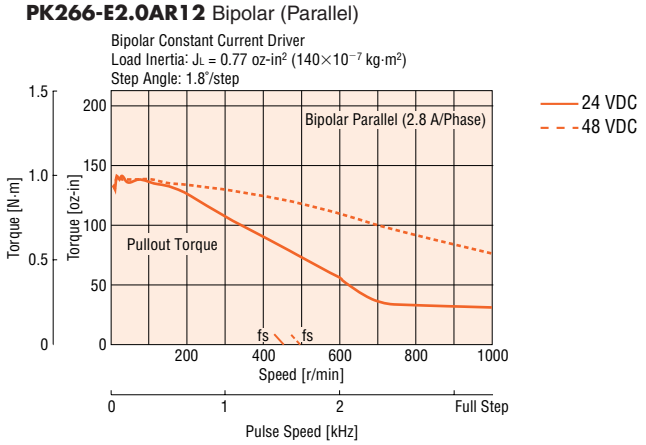
PK266-03AR11
PK266-03AR12 Bipolar (Series)



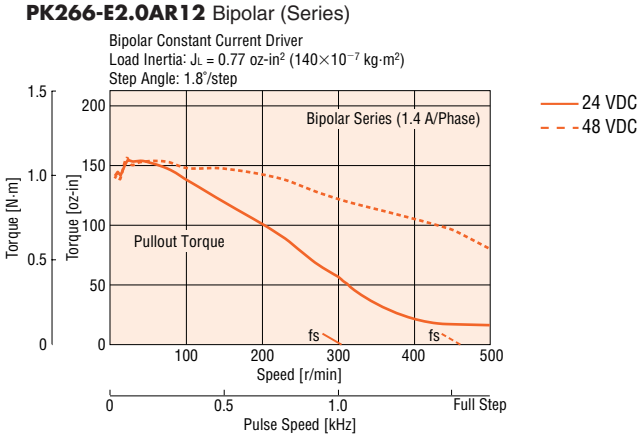
PK266-03AR11
PK266-03AR12 Unipolar



PK266-E2.0AR11
PK266-E2.0AR12 Bipolar (Parallel)



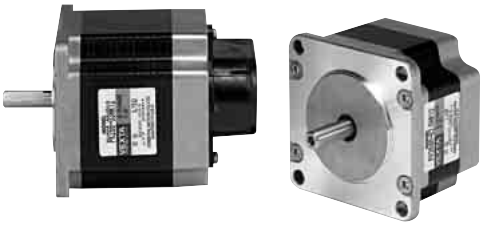
PK266-E2.0AR11
PK266-E2.0AR12 Bipolar (Series)



Connection Diagrams C-189
General Specifications C-240

□ 2.22 in. (□ 56.4 mm)

PK Series High Resolution Type with Encoder

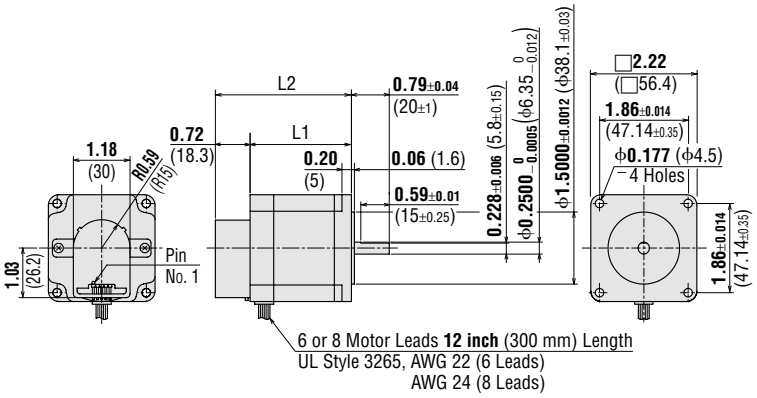


Specifications

Model Single Shaft	Basic Step Angle	Connection Type	Holding Torque oz-in	 N·m	Current per Phase A/phase	Voltage VDC	Resistance per Phase Ω/phase	Inductance mH/phase	Rotor Inertia J oz-in²	 kg·m²	Lead Wires
PK264M-01AR11	0.9 °	Bipolar (Series)	68	0.48	0.71	8.1	11.4	26	0.66	120×10^{-7}	6
PK264M-01AR12		Unipolar	55	0.39	1	5.7	5.7	6.5			
PK264M-02AR11	0.9 °	Bipolar (Series)	68	0.48	1.4	3.9	2.8	6.8	0.66	120×10^{-7}	6
PK264M-02AR12		Unipolar	55	0.39	2	2.8	1.4	1.7			
PK264M-03AR11	0.9 °	Bipolar (Series)	68	0.48	2.1	2.6	1.26	3	0.66	120×10^{-7}	6
PK264M-03AR12		Unipolar	55	0.39	3	1.9	0.63	0.75			
PK264M-E2.0AR11	0.9 °	Bipolar (Parallel)	68	0.48	2.8	1.96	0.7	1.7	0.66	120×10^{-7}	8
PK264M-E2.0AR12		Bipolar (Series)	68	0.48	1.4	3.9	2.8	6.8			
		Unipolar	55	0.39	2	2.8	1.4	1.7			
PK266M-01AR11	0.9 °	Bipolar (Series)	166	1.17	0.71	11	14.8	50.8	1.64	300×10^{-7}	6
PK266M-01AR12		Unipolar	127	0.9	1	7.4	7.4	12.7			
PK266M-02AR11	0.9 °	Bipolar (Series)	166	1.17	1.4	5	3.6	12.8	1.64	300×10^{-7}	6
PK266M-02AR12		Unipolar	127	0.9	2	3.6	1.8	3.2			
PK266M-03AR11	0.9 °	Bipolar (Series)	166	1.17	2.1	3.2	1.5	5.8	1.64	300×10^{-7}	6
PK266M-03AR12		Unipolar	127	0.9	3	2.3	0.75	1.45			
PK266M-E2.0AR11	0.9 °	Bipolar (Parallel)	166	1.17	2.8	2.52	0.9	3.2	1.64	300×10^{-7}	8
PK266M-E2.0AR12		Bipolar (Series)	166	1.17	1.4	5	3.6	12.8			
		Unipolar	127	0.9	2	3.6	1.8	3.2			

How to Read Specifications → Page C-9
Motor Wiring Diagrams → Page C-189

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



Model	L1 inch (mm)	L2 inch (mm)	Weight lb. (kg)	DXF
PK264M-0□AR11 **PK264M-0□AR12**	1.54 (39)	2.26 (57.3)	1.03 (0.47)	B808U
PK264M-E2.0AR11 **PK264M-E2.0AR12**				
PK266M-0□AR11 **PK266M-0□AR12**	2.13 (54)	2.85 (72.3)	1.58 (0.72)	B809U
PK266M-E2.0AR11 **PK266M-E2.0AR12**				

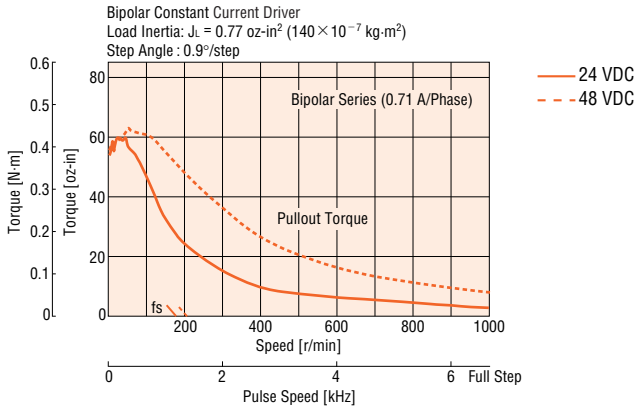
● Enter the winding specification in the box (□) within the model number.

Encoder Specifications → Page C-239

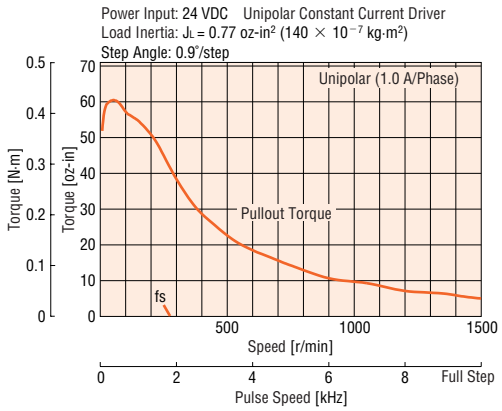
Speed–Torque Characteristics

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

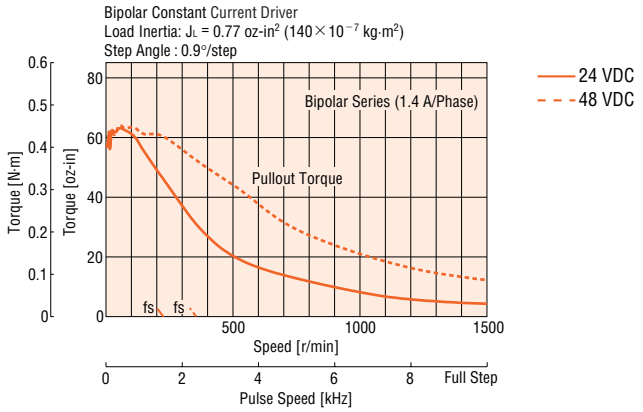
PK264M-01AR11
PK264M-01AR12 Bipolar (Series)



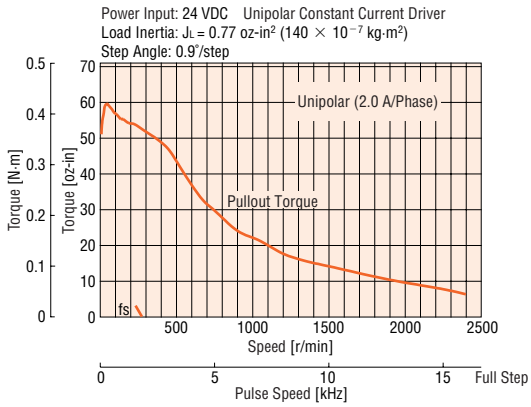
PK264M-01AR11
PK264M-01AR12 Unipolar



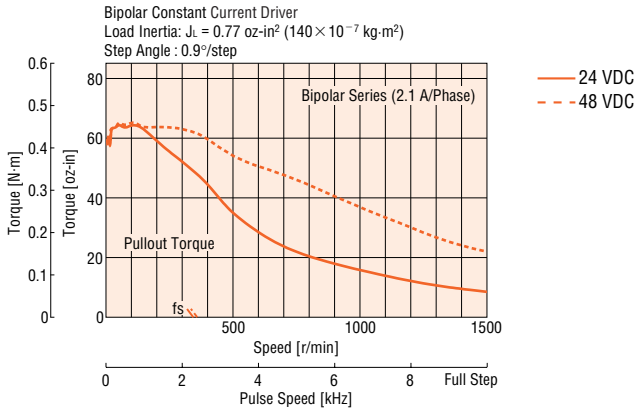
PK264M-02AR11
PK264M-02AR12 Bipolar (Series)



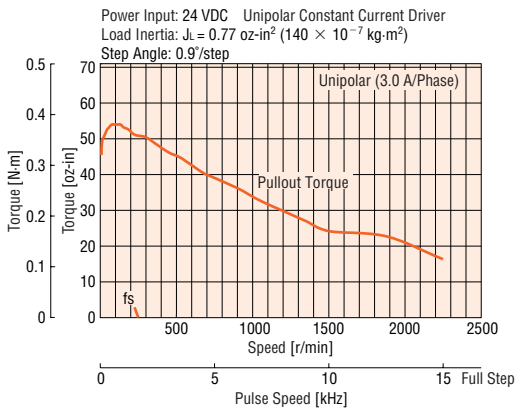
PK264M-02AR11
PK264M-02AR12 Unipolar



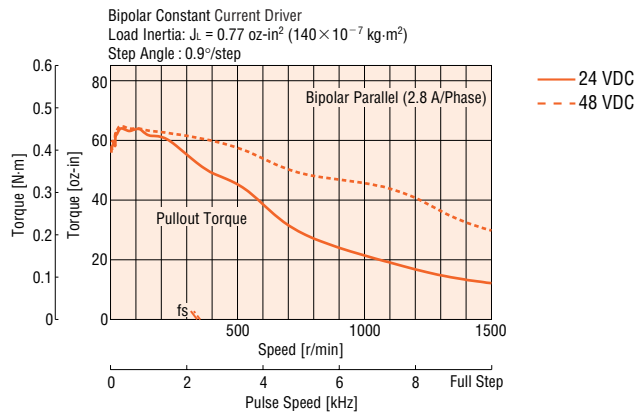
PK264M-03AR11
PK264M-03AR12 Bipolar (Series)



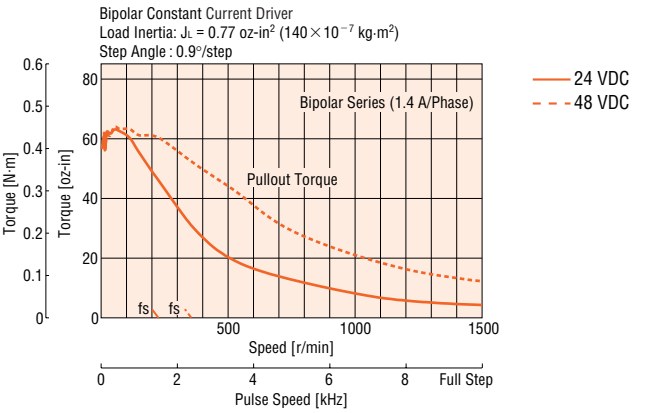
PK264M-03AR11
PK264M-03AR12 Unipolar



PK264M-E2.0AR11
PK264M-E2.0AR12 Bipolar (Parallel)

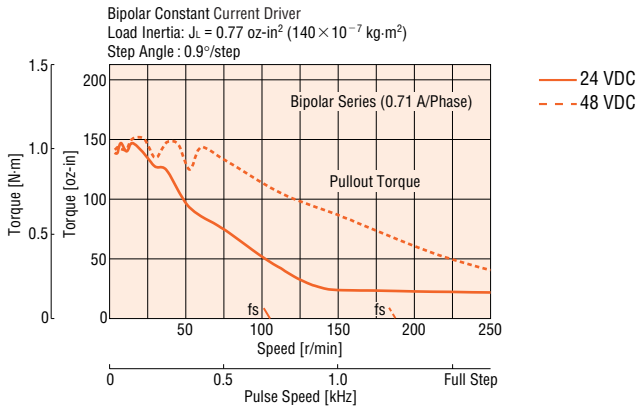


PK264M-E2.0AR11
PK264M-E2.0AR12 Bipolar (Series)

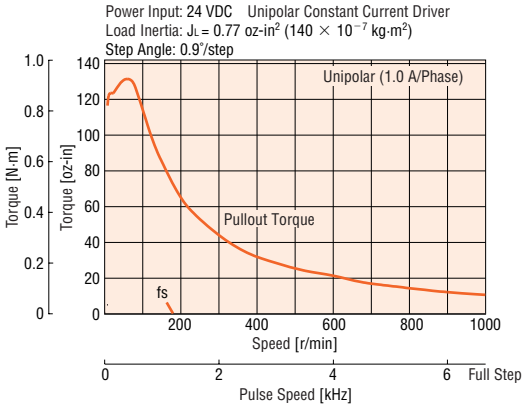


Connection Diagrams C-189 General Specifications C-240

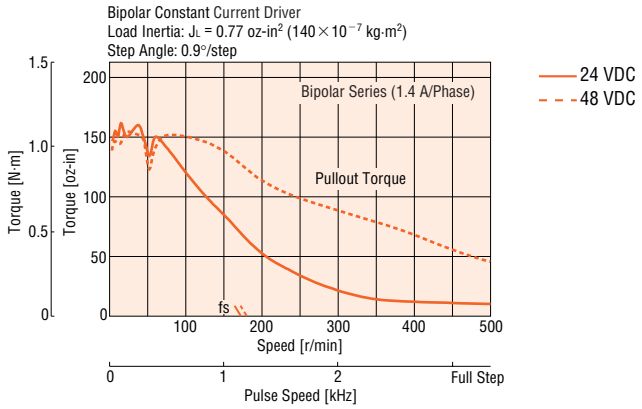
● PK266M-01AR11
PK266M-01AR12 Bipolar (Series)



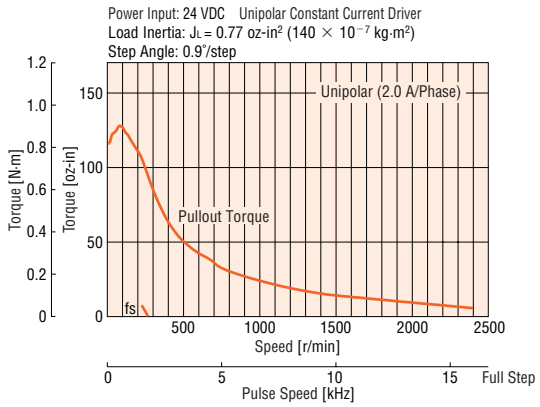
● PK266M-01AR11
PK266M-01AR12 Unipolar



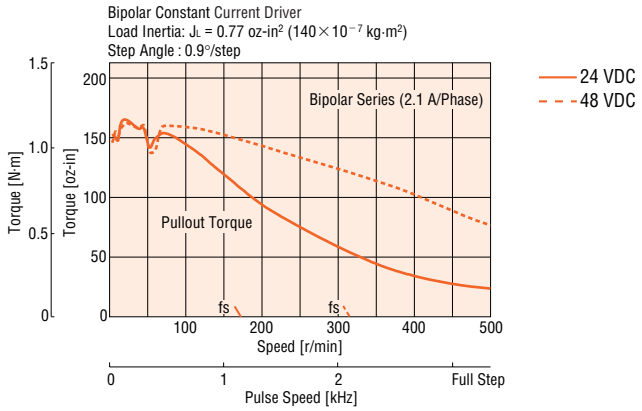
● PK266M-02AR11
PK266M-02AR12 Bipolar (Series)



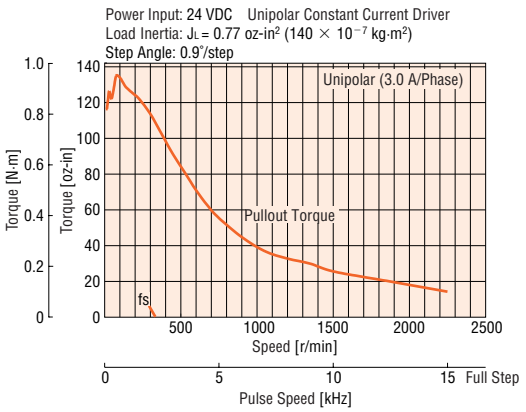
● PK266M-02AR11
PK266M-02AR12 Unipolar



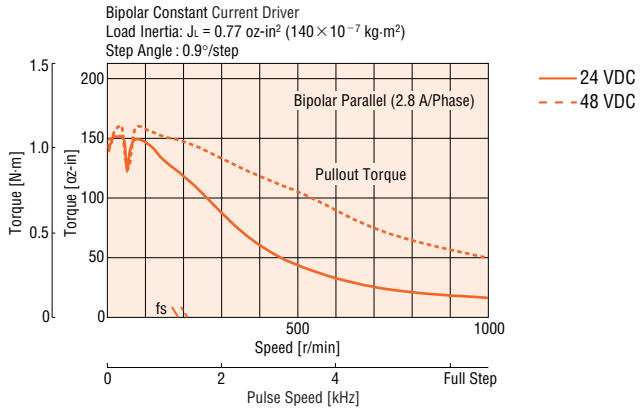
● PK266M-03AR11
PK266M-03AR12 Bipolar (Series)



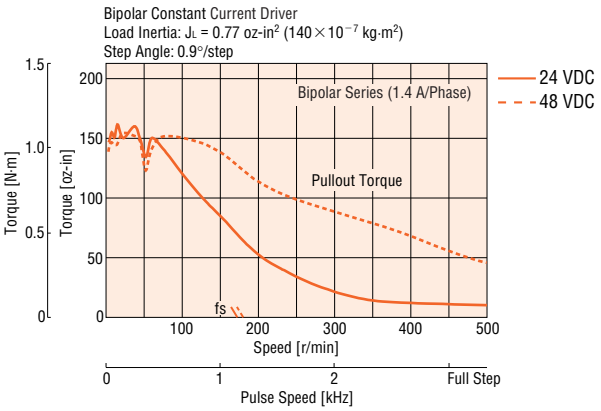
● PK266M-03AR11
PK266M-03AR12 Unipolar



● PK266M-E2.0AR11
PK266M-E2.0AR12 Bipolar (Parallel)



● PK266M-E2.0AR11
PK266M-E2.0AR12 Bipolar (Series)



Encoder Specifications

Note:
- Use the motor within the encoder specifications.
  HEDS-5600 series encoders by Agilent Technologies, Inc. are used.

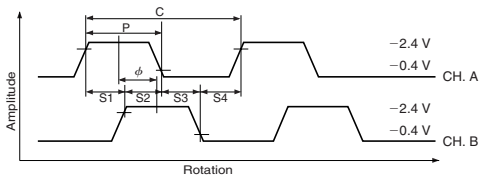
Recommended Operating Ranges

Item	Symbol	Min	TYP.	MAX.	Note
Supplied Voltage	Vcc	4.5 V	5.0 V	5.5 V	Ripple<100 mVp-p
Load Capacity	Cl	—	—	100 pF	2.7 Ω, pull-up
Response Frequency	f	—	—	100 kHz	Rotating speed (r/min)×(N/60)

N=Encoder Resolution

Note:
- The encoder specifications are designed to guarantee operation based on a response frequency of 100 kHz. However, the encoder can be operated at a minimum response frequency of 100 kHz.

Output Waveform



Encoder Characteristics

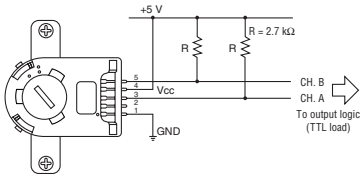
Unless otherwise specified, the following characteristics assume that the encoder is installed within the allowable ranges of error and operated under the recommended operating conditions. Each characteristic value indicates the worst value within one rotation of the code wheel.

Item	Symbol	TYP.*	Max.
Pulse-width error	ΔP	7°e	45°e
Logic-width error	ΔS	5°e	45°e
Phase error	Δϕ	2°e	20°e
Position error	Δθ	10 arc min.	40 arc min.
Cycle error	ΔC	3°e	5.5°e

* TYP values are based on Vcc = 5.0 V and TA = 77°F (25°C).

Encoder Electrical Interface

We recommend that the CH.A and CH.B outputs be pulled up with a resistance of 2.7 kΩ (±10%) in order to shorten the rise time of the output pulse. Install the pull-up resistor near the encoder [within 6.6 feet (1m)].



Pull-up of Encoder Output

Applicable Connectors

Manufacturer	Model Numbers
AMP®	103975-4
	640442-5
DUPONT®	65039-032 (housing)
	4825X-000 (contact)
Agilent Technologies®	HEDS-8902 (for 2 channels: 4 lead wires)
MOLEX®	2695 series (housing)
	2759 series (contact)