Stepping Motors

42 mm sq. (1.65 inch sq.)

1.8° /step   RoHS

Bipolar winding, Lead wire type
Unipolar winding, Connector type ▶ p. 61

Customizing
Hollow | Shaft modification
Decelerator | Encoder
Brake

Varies depending on the model number and quantity. Contact us for details.

Bipolar winding, Lead wire type

| Model number		Holding torque at 2-phase energization	Rated current	Wiring resistance	Winding inductance	Rotor inertia	Mass (Weight)	Motor length (L)
Single shaft	Dual shaft	[N·m (oz·in)] min.]	A/phase	Ω/phase	mH/phase	[×10⁻⁴kg·m² (oz·in²)]	[kg (lbs)]	mm (in)
103H5205-5040	103H5205-5010	0.23 (32.57)	0.25	54	78	0.036 (0.20)	0.23 (0.51)	33 (1.25)
103H5205-5140	103H5205-5110	0.25 (35.40)	0.5	13.4	23.4	0.036 (0.20)	0.23 (0.51)	33 (1.25)
103H5205-5240	103H5205-5210	0.265 (37.53)	1	3.4	6.5	0.036 (0.20)	0.23 (0.51)	33 (1.25)
103H5208-5040	103H5208-5010	0.35 (49.56)	0.25	66	116	0.056 (0.31)	0.29 (0.64)	39 (1.54)
103H5208-5140	103H5208-5110	0.38 (53.81)	0.5	16.5	34	0.056 (0.31)	0.29 (0.64)	39 (1.54)
103H5208-5240	103H5208-5210	0.39 (55.23)	1	4.1	9.5	0.056 (0.31)	0.29 (0.64)	39 (1.54)
103H5209-5040	103H5209-5010	0.38 (53.81)	0.25	71.4	133	0.062 (0.34)	0.31 (0.68)	41 (1.61)
103H5209-5140	103H5209-5110	0.41 (58.06)	0.5	18.2	39	0.062 (0.34)	0.31 (0.68)	41 (1.61)
103H5209-5240	103H5209-5210	0.425 (60.18)	1	4.4	11	0.062 (0.34)	0.31 (0.68)	41 (1.61)
103H5210-5040	103H5210-5010	0.465 (65.85)	0.25	80	123.3	0.074 (0.40)	0.37 (0.82)	48 (1.89)
103H5210-5140	103H5210-5110	0.49 (69.39)	0.5	20	35	0.074 (0.40)	0.37 (0.82)	48 (1.89)
103H5210-5240	103H5210-5210	0.51 (72.22)	1	4.8	9.5	0.074 (0.40)	0.37 (0.82)	48 (1.89)

■ Characteristics diagram

103H5205-5040 / 103H5205-5010

Constant current circuit
Source voltage: 24 VDC
Operating current:
0.25 A/phase, 2-phase energization (full-step)
JL=[0.94 × 10⁻⁴kg·m² (5.14 oz·in²) use the rubber coupling]
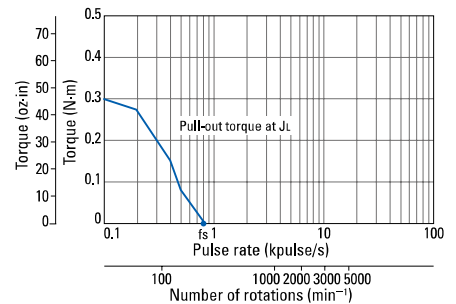fs: Maximum self-start frequency when not loaded
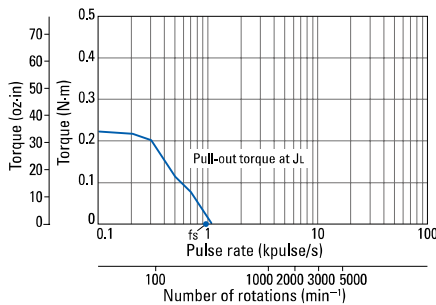
103H5205-5140 / 103H5205-5110

Constant current circuit
Source voltage: 24 VDC
Operating current:
0.5 A/phase, 2-phase energization (full-step)
JL=[0.94 × 10⁻⁴kg·m² (5.14 oz·in²) use the rubber coupling]
fs: Maximum self-start frequency when not loaded
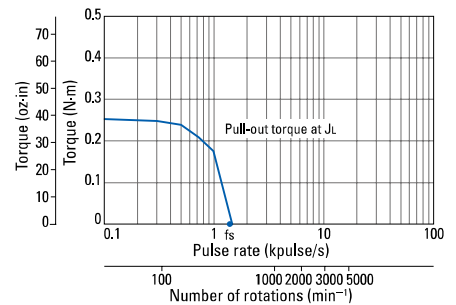
103H5205-5240 / 103H5205-5210

Constant current circuit
Source voltage: 24 VDC
Operating current:
1 A/phase, 2-phase energization (full-step)
JL=[0.94 × 10⁻⁴kg·m² (5.14 oz·in²) use the rubber coupling]
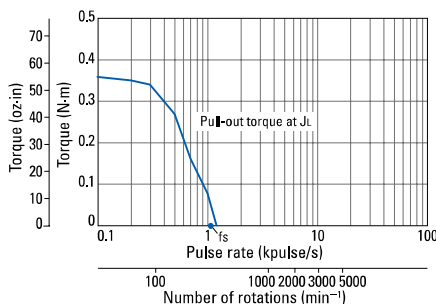fs: Maximum self-start frequency when not loaded
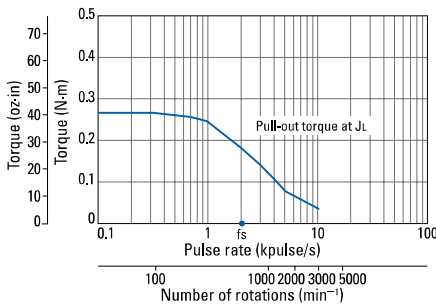
103H5208-5040 / 103H5208-5010

Constant current circuit
Source voltage: 24 VDC
Operating current:
0.25 A/phase, 2-phase energization (full-step)
JL=[0.94 × 10⁻⁴kg·m² (5.14 oz·in²) use the rubber coupling]
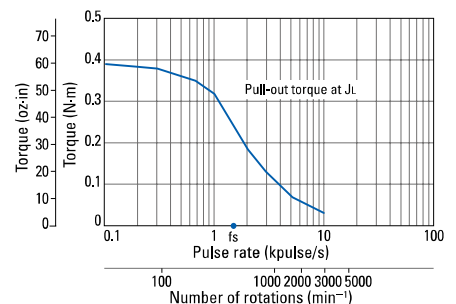fs: Maximum self-start frequency when not loaded

103H5208-5140 / 103H5208-5110

Constant current circuit
Source voltage: 24 VDC
Operating current:
0.5 A/phase, 2-phase energization (full-step)
JL=[0.94 × 10⁻⁴kg·m² (5.14 oz·in²) use the rubber coupling]
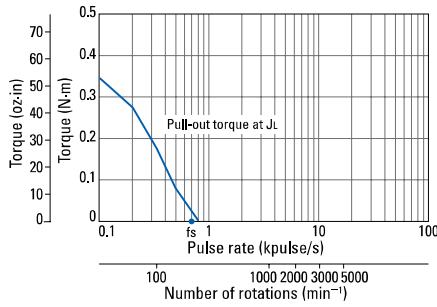fs: Maximum self-start frequency when not loaded

103H5208-5240 / 103H5208-5210

Constant current circuit
Source voltage: 24 VDC
Operating current:
1 A/phase, 2-phase energization (full-step)
JL=[0.94 × 10⁻⁴kg·m² (5.14 oz·in²) use the rubber coupling]
fs: Maximum self-start frequency when not loaded

Data is measured under the trial conditions of SANYO DENKI. Driving torque may vary according to actual machine precision.

AC Input Set Models/ Drivers

DC Input Set Models/ Drivers

Stepping Motors

IP65 Splash and Dust Proof Stepping Motors

Stepping Motors for Vacuum Environments

Synchronous Motors
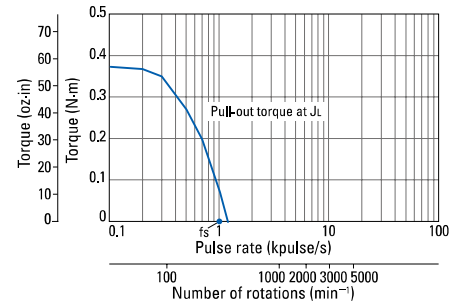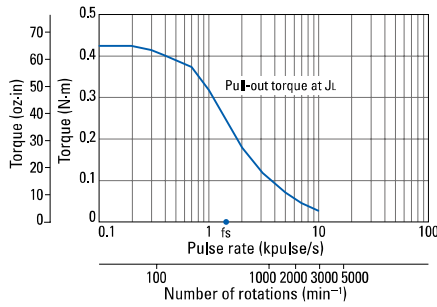
■ Characteristics diagram

103H5209-5040 / 103H5209-5010

Constant current circuit
Source voltage: 24 VDC
Operating current:
0.25 A/phase, 2-phase energization (full-step)
J_L=[0.94 × 10⁻⁴kg·m² (5.14 oz·in²) use the rubber coupling]
fs: Maximum self-start frequency when not loaded

103H5209-5140 / 103H5209-5110

Constant current circuit
Source voltage: 24 VDC
Operating current:
0.5 A/phase, 2-phase energization (full-step)
J_L=[0.94 × 10⁻⁴kg·m² (5.14 oz·in²) use the rubber coupling]
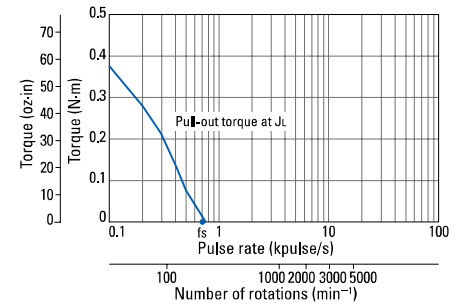fs: Maximum self-start frequency when not loaded

103H5209-5240 / 103H5209-5210

Constant current circuit
Source voltage: 24 VDC
Operating current:
1 A/phase, 2-phase energization (full-step)
J_L=[0.94 × 10⁻⁴kg·m² (5.14 oz·in²) use the rubber coupling]
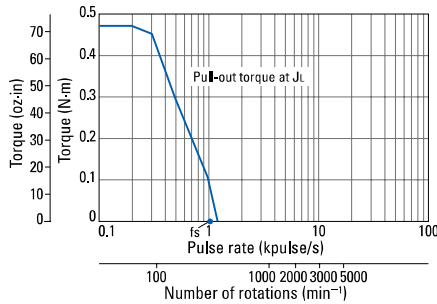fs: Maximum self-start frequency when not loaded

103H5210-5040 / 103H5210-5010

Constant current circuit
Source voltage: 24 VDC
Operating current:
0.25 A/phase, 2-phase energization (full-step)
J_L=[0.94 × 10⁻⁴kg·m² (5.14 oz·in²) use the rubber coupling]
fs: Maximum self-start frequency when not loaded

103H5210-5140 / 103H5210-5110

Constant current circuit
Source voltage: 24 VDC
Operating current:
0.5 A/phase, 2-phase energization (full-step)
J_L=[0.94 × 10⁻⁴kg·m² (5.14 oz·in²) use the rubber coupling]
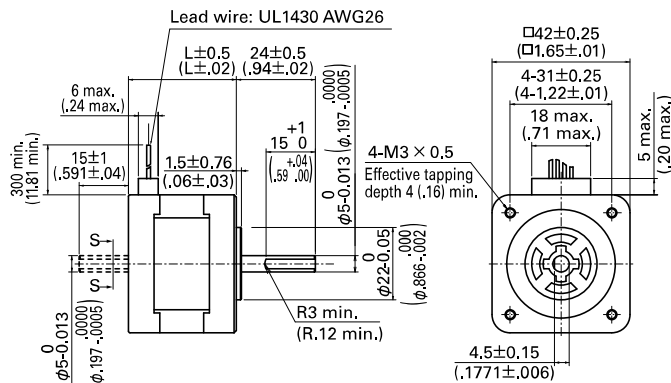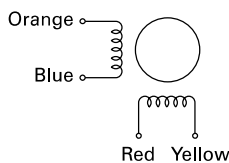fs: Maximum self-start frequency when not loaded

103H5210-5240 / 103H5210-5210

Constant current circuit
Source voltage: 24 VDC
Operating current:
1 A/phase, 2-phase energization (full-step)
J_L=[0.94 × 10⁻⁴kg·m² (5.14 oz·in²) use the rubber coupling]
fs: Maximum self-start frequency when not loaded
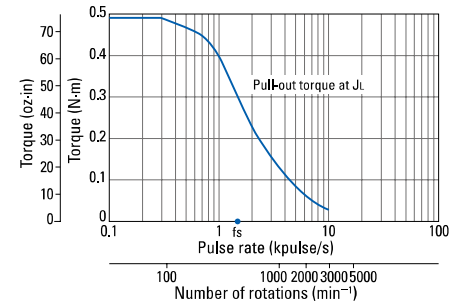
■ Dimensions [Unit: mm (inch)]

■ Internal wiring

■ Compatible drivers

· For motor model number 103H52 □□ -50 □ 0 (0.25 A/ phase), 103H52 □□ -51 □□ (0.5 A/phase)
  Driver is not included.
  If you require assistance finding a driver, contact us for details.
· For model number 103H52 □□ -52 □□ (1 A/phase)
  Model number: BS1D200P10 (DC input)
  Operating current select switch setting: A

The characteristics diagram shown above is from our experimental circuit.

Allowable Load, Rotation Direction ▶ p. 87   General Specifications ▶ p. 88

Data is measured under the trial conditions of SANYO DENKI. Driving torque may vary according to actual machine precision.