



# 60 mm sq. (2.36 inch sq.)

0.9° /step **RoHS**

Unipolar winding, Lead wire type  
Bipolar winding, Lead wire type

### Customizing

- [Hollow](#) [Shaft modification](#)
- [Decelerator](#) [Encoder](#)

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

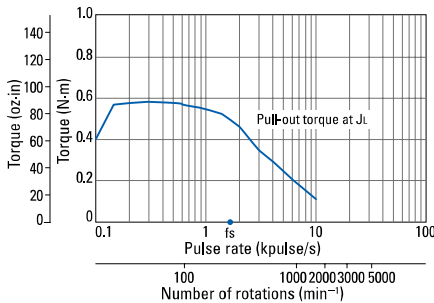
### Unipolar winding, Lead wire type

Model number		Holding torque at 2-phase energization	Rated current	Wiring resistance	Winding inductance	Rotor inertia	Mass (Weight)	Motor length (L)	Shaft diameter (D)
Single shaft	Dual shaft	[N·m (oz·in) min.]	A/phase	Ω/phase	mH/phase	[×10 <sup>-4</sup> kg·m <sup>2</sup> (oz·in <sup>2</sup> )]	[kg (lbs)]	mm (in)	mm (in)
<b>SH1601-0440</b>	<b>SH1601-0410</b>	0.57 (80.71)	2	1.35	2	0.24 (1.312)	0.55 (1.21)	42 (1.65)	0 φ 6.35-0.013 ( φ .25-.0005)
<b>SH1602-0440</b>	<b>SH1602-0410</b>	1.1 (155.77)	2	1.8	3.5	0.4 (2.187)	0.8 (1.76)	54 (2.13)	0 φ 6.35-0.013 ( φ .25-.0005)
<b>SH1603-0440</b>	<b>SH1603-0410</b>	1.7 (240.74)	2	2.3	4.5	0.75 (4.101)	1.2 (2.64)	76 (2.99)	0 φ 8-0.015 ( φ .31-.0006)

## Characteristics diagram

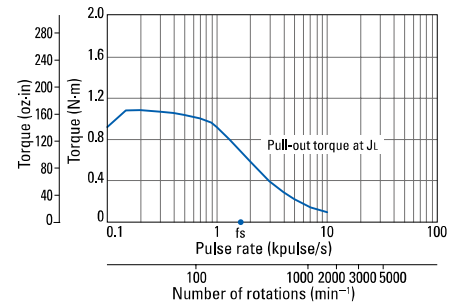
### SH1601-0440 SH1601-0410

Constant current circuit  
Source voltage: 24 VDC  
Operating current: 2 A/phase, 2-phase energization (full-step)  
J<sub>i</sub>=[0.94 × 10<sup>-4</sup>kg·m<sup>2</sup> (5.14 oz·in<sup>2</sup>) use the rubber coupling]  
fs: Maximum self-start frequency when not loaded



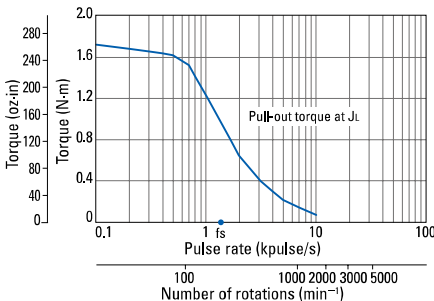
### SH1602-0440 SH1602-0410

Constant current circuit  
Source voltage: 24 VDC  
Operating current: 2 A/phase, 2-phase energization (full-step)  
J<sub>i</sub>=[2.6 × 10<sup>-4</sup>kg·m<sup>2</sup> (14.22 oz·in<sup>2</sup>) use the rubber coupling]  
fs: Maximum self-start frequency when not loaded

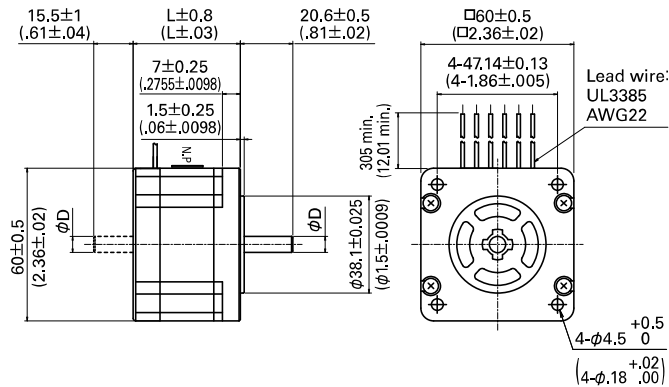


### SH1603-0440 SH1603-0410

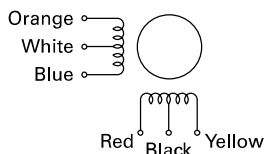
Constant current circuit  
Source voltage: 24 VDC  
Operating current: 2 A/phase, 2-phase energization (full-step)  
J<sub>i</sub>=[7.4 × 10<sup>-4</sup>kg·m<sup>2</sup> (40.46 oz·in<sup>2</sup>) use the rubber coupling]  
fs: Maximum self-start frequency when not loaded



## Dimensions [Unit: mm (inch)]



## Internal wiring



## Compatible drivers

Driver is not included.

If you require assistance finding a driver, contact us for details.

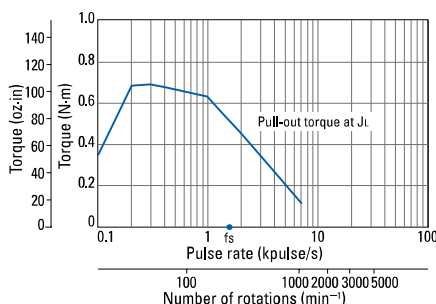
**Bipolar winding, Lead wire type**

Model number		Holding torque at 2-phase energization	Rated current	Wiring resistance	Winding inductance	Rotor inertia	Mass (Weight)	Motor length (L)	Shaft diameter (D)	
Single shaft	Dual shaft	[N·m (oz·in) min.]	A/phase	Ω/phase	mH/phase	[×10 <sup>-4</sup> kg·m <sup>2</sup> (oz·in <sup>2</sup> )]	[kg (lbs)]	mm (in)	mm (in)	
<b>SH1601-5240</b>	<b>SH1601-5210</b>	0.69 (97.7)	2	1.2	3.5	0.24 (1.31)	0.55 (1.21)	42 (1.65)	$\begin{matrix} 0 \\ \phi 6.35-0.013 \end{matrix} \left( \begin{matrix} .0000 \\ \phi .25-.0005 \end{matrix} \right)$	
<b>SH1602-5240</b>	<b>SH1602-5210</b>	1.28 (181.2)	2	1.65	6.1	0.4 (2.19)	0.8 (1.76)	54 (2.13)	$\begin{matrix} 0 \\ \phi 6.35-0.013 \end{matrix} \left( \begin{matrix} .0000 \\ \phi .25-.0005 \end{matrix} \right)$	
<b>SH1603-5240</b>	<b>SH1603-5210</b>	2.15 (304.4)	2	2.3	8.8	0.75 (4.10)	1.2 (2.65)	76 (2.99)	$\begin{matrix} 0 \\ \phi 8-0.015 \end{matrix} \left( \begin{matrix} .0000 \\ \phi .31-.0006 \end{matrix} \right)$	

**Characteristics diagram**

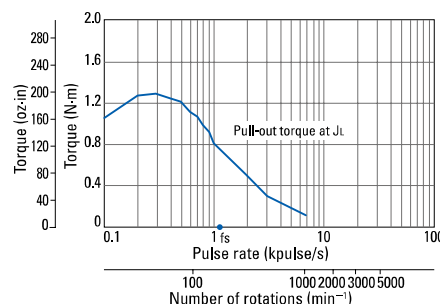
**SH1601-5240  
SH1601-5210**

Constant current circuit  
Source voltage: 24 VDC  
Operating current:  
2 A/phase, 2-phase  
energization (full-step)  
J<sub>r</sub>=[0.94 × 10<sup>-4</sup>kg·m<sup>2</sup> (5.14  
oz·in<sup>2</sup>) use the rubber  
coupling]  
fs: Maximum self-start  
frequency when not  
loaded



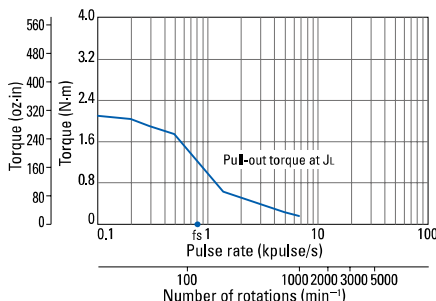
**SH1602-5240  
SH1602-5210**

Constant current circuit  
Source voltage: 24 VDC  
Operating current:  
2 A/phase, 2-phase  
energization (full-step)  
J<sub>r</sub>=[2.6 × 10<sup>-4</sup>kg·m<sup>2</sup> (14.22  
oz·in<sup>2</sup>) use the rubber  
coupling]  
fs: Maximum self-start  
frequency when not  
loaded

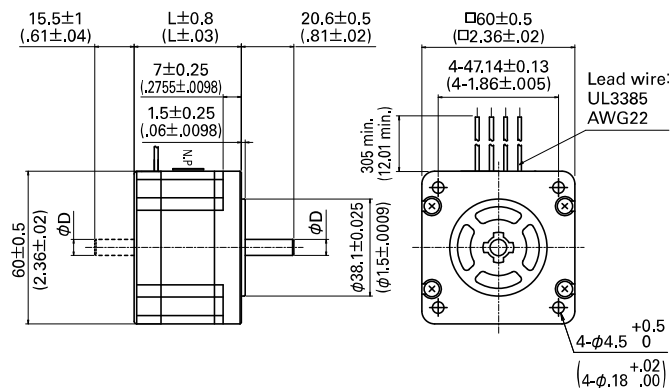


**SH1603-5240  
SH1603-5210**

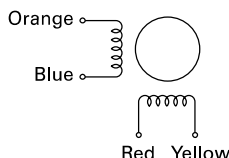
Constant current circuit  
Source voltage: 24 VDC  
Operating current:  
2 A/phase, 2-phase  
energization (full-step)  
J<sub>r</sub>=[7.4 × 10<sup>-4</sup>kg·m<sup>2</sup> (40.46  
oz·in<sup>2</sup>) use the rubber  
coupling]  
fs: Maximum self-start  
frequency when not  
loaded



**Dimensions [Unit: mm (inch)]**



**Internal wiring**



**Compatible drivers**

Model number: BS1D200P10 (DC input)  
Operating current select switch setting: 0  
*The characteristics diagram shown above is from our experimental circuit.*