



2-phase stepping motor

# 86mm sq. (3.39inch sq.)

SH286 □ /SM286 □

1.8° /step

Unipolar winding • Lead wire type

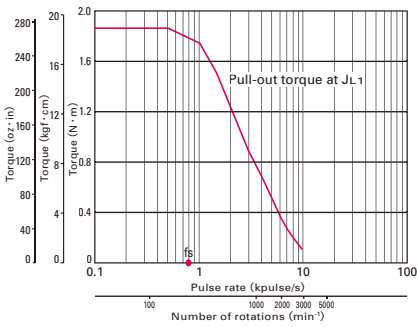
Model		Holding torque at 2-phase energization [N · m (oz · in) MIN.]	Rated current A/phase	Wiring resistance Ω /phase	Winding inductance mH/phase	Rotor inertia [×10 <sup>-4</sup> kg · m <sup>2</sup> (oz · in <sup>2</sup> )]	Mass (Weight) [kg (lbs) ]
Single shaft	Double shafts						
<b>SH2861-0441</b>	<b>-0411</b>	2.5 (354)	2	2.3	8.0	1.48 (8.09)	1.75 (3.92)
<b>SH2862-0441</b>	<b>-0911</b>	4.8 (679.7)	2	3.2	13.0	3 (16.4)	2.9 (6.5)
<b>SH2863-0441</b>	<b>-0411</b>	6.6 (934.6)	2	4.0	17	4.5 (24.6)	4.0 (8.96)

Bipolar winding • Lead wire type

Model		Holding torque at 2-phase energization [N · m (oz · in) MIN.]	Rated current A/phase	Wiring resistance Ω /phase	Winding inductance mH/phase	Rotor inertia [×10 <sup>-4</sup> kg · m <sup>2</sup> (oz · in <sup>2</sup> )]	Mass (Weight) [kg (lbs) ]
Single shaft	Double shafts						
<b>SM2861-5051</b>	<b>-5021</b>	3.3 (467.3)	2	2.2	15	1.48 (8.09)	1.75 (3.92)
<b>SM2861-5151</b>	<b>-5121</b>	3.3 (467.3)	4	0.56	3.7	1.48 (8.09)	1.75 (3.92)
<b>SM2861-5251</b>	<b>-5221</b>	3.3 (467.3)	6	0.29	1.7	1.48 (8.09)	1.75 (3.92)
<b>SM2862-5051</b>	<b>-5021</b>	6.4 (906.3)	2	3.2	25	3.0 (16.4)	2.9 (6.5)
<b>SM2862-5151</b>	<b>-5121</b>	6.4 (906.3)	4	0.83	6.4	3.0 (16.4)	2.9 (6.5)
<b>SM2862-5251</b>	<b>-5221</b>	6.4 (906.3)	6	0.36	2.8	3.0 (16.4)	2.9 (6.5)
<b>SM2863-5051</b>	<b>-5021</b>	9 (1274.4)	2	4.0	32	4.5 (24.6)	4.0 (8.96)
<b>SM2863-5151</b>	<b>-5121</b>	9 (1274.4)	4	1.0	7.9	4.5 (24.6)	4.0 (8.96)
<b>SM2863-5251</b>	<b>-5221</b>	9 (1274.4)	6	0.46	3.8	4.5 (24.6)	4.0 (8.96)

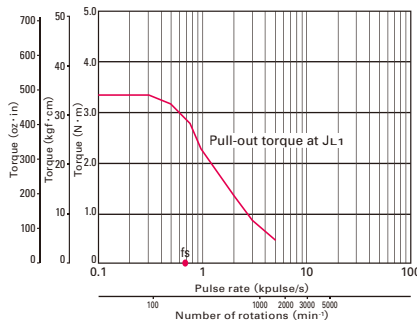
## Pulse rate-torque characteristics

### SH2861-04



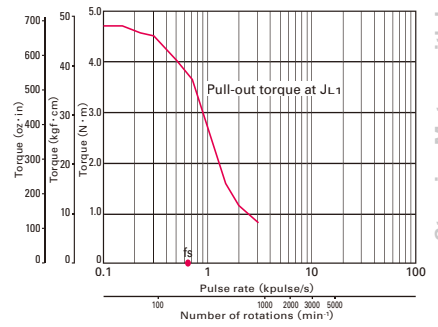
Constant current circuit  
Source voltage : DC100V · operating current : 4A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [15.3 \times 10^{-4} \text{kg} \cdot \text{m}^2 (83.65 \text{oz} \cdot \text{in}^2)]$  use the rubber coupling]

### SH2862-04



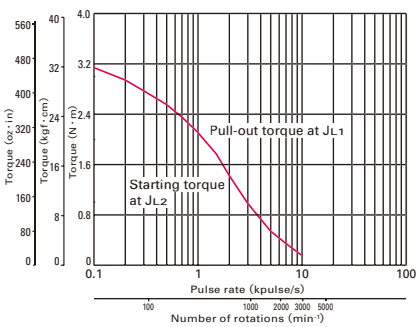
Constant current circuit  
Source voltage : DC100V · operating current : 2A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [15.3 \times 10^{-4} \text{kg} \cdot \text{m}^2 (83.65 \text{oz} \cdot \text{in}^2)]$  use the rubber coupling]

### SH2863-04



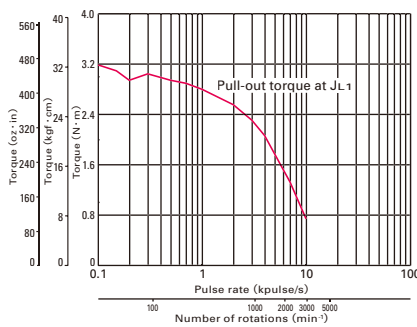
Constant current circuit  
Source voltage : DC100V · operating current : 4A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [15.3 \times 10^{-4} \text{kg} \cdot \text{m}^2 (83.65 \text{oz} \cdot \text{in}^2)]$  use the rubber coupling]

### SM2861-50



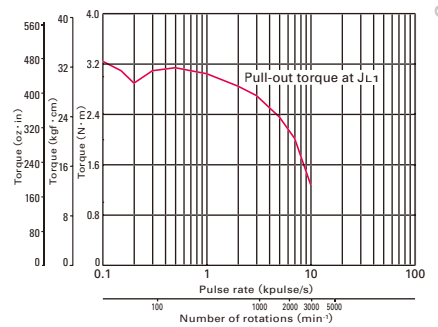
Constant current circuit  
Source voltage : DC100V · operating current : 2A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [7.4 \times 10^{-4} \text{kg} \cdot \text{m}^2 (40.46 \text{oz} \cdot \text{in}^2)]$  use the rubber coupling]

### SM2861-51



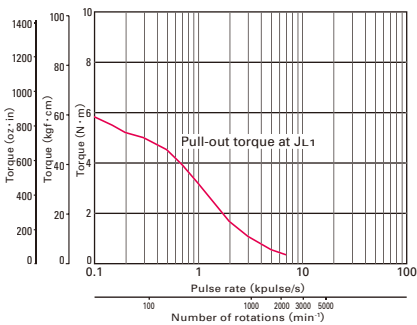
Constant current circuit  
Source voltage : DC100V · operating current : 4A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [7.4 \times 10^{-4} \text{kg} \cdot \text{m}^2 (40.46 \text{oz} \cdot \text{in}^2)]$  use the rubber coupling]

### SM2861-52



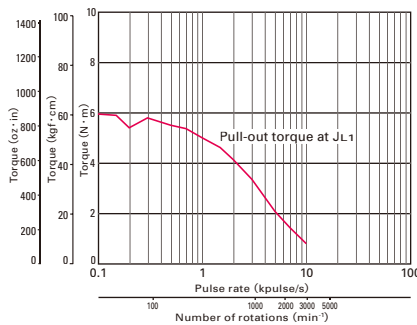
Constant current circuit  
Source voltage : DC100V · operating current : 6A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [15.3 \times 10^{-4} \text{kg} \cdot \text{m}^2 (83.65 \text{oz} \cdot \text{in}^2)]$  use the rubber coupling]

### SM2862-50



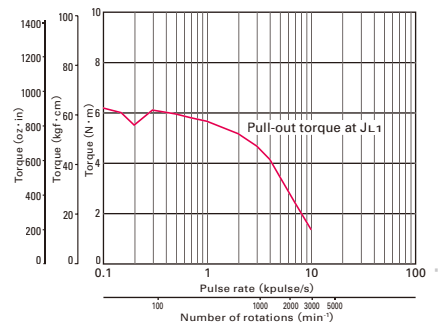
Constant current circuit  
Source voltage : DC100V · operating current : 2A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [15.3 \times 10^{-4} \text{kg} \cdot \text{m}^2 (83.65 \text{oz} \cdot \text{in}^2)]$  use the rubber coupling]

### SM2862-51



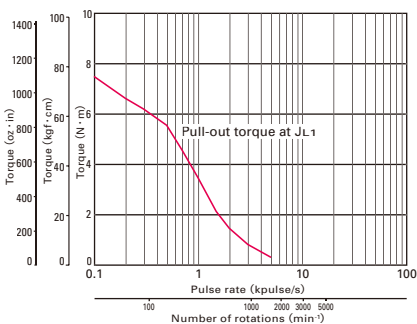
Constant current circuit  
Source voltage : DC100V · operating current : 4A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [15.3 \times 10^{-4} \text{kg} \cdot \text{m}^2 (83.65 \text{oz} \cdot \text{in}^2)]$  use the rubber coupling]

### SM2862-52



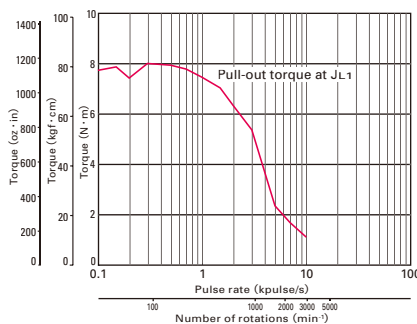
Constant current circuit  
Source voltage : DC100V · operating current : 6A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [15.3 \times 10^{-4} \text{kg} \cdot \text{m}^2 (83.65 \text{oz} \cdot \text{in}^2)]$  use the rubber coupling]

### SM2863-50



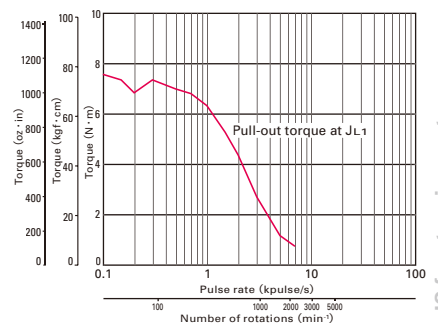
Constant current circuit  
Source voltage : DC100V · operating current : 2A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [43 \times 10^{-4} \text{kg} \cdot \text{m}^2 (235.10 \text{oz} \cdot \text{in}^2)]$  use the rubber coupling]

### SM2863-51



Constant current circuit  
Source voltage : DC100V · operating current : 4A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [43 \times 10^{-4} \text{kg} \cdot \text{m}^2 (235.10 \text{oz} \cdot \text{in}^2)]$  use the rubber coupling]

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Constant current circuit  
Source voltage : DC100V · operating current : 6A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [43 \times 10^{-4} \text{kg} \cdot \text{m}^2 (235.10 \text{oz} \cdot \text{in}^2)]$  use the rubber coupling]



2-phase stepping motor

# 86mm cir. (3.39inch cir.)

103H822 □  
CE marking  
1.8° /step

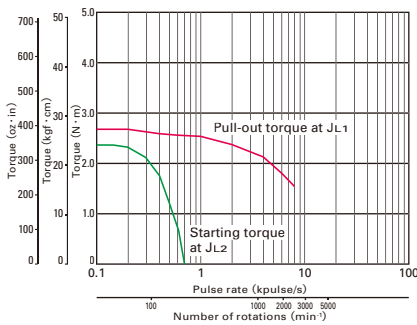


Bipolar winding

Model		Holding torque at 2-phase energization	Rated current	Wiring resistance	Winding inductance	Rotor inertia	Mass (Weight)
Single shaft	Double shafts	[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) ]
<b>103H8221-6240</b>	<b>-6210</b>	2.74 (388.0)	6	0.3	1.65	1.45 (7.93)	1.5 (3.31)
<b>103H8222-6340</b>	<b>-6310</b>	5.09 (720.8)	6	0.35	2.7	2.9 (15.86)	2.5 (5.51)
<b>103H8223-6340</b>	<b>-6310</b>	7.44 (1053.6)	6	0.45	3.4	4.4 (24.06)	3.5 (7.72)

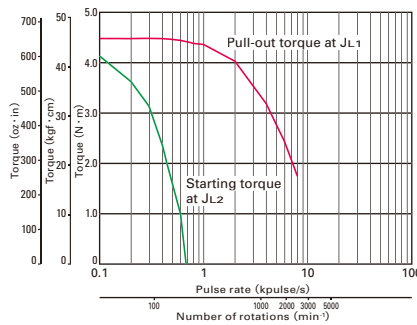
## Pulse rate-torque characteristics

● 103H8221-62 □□



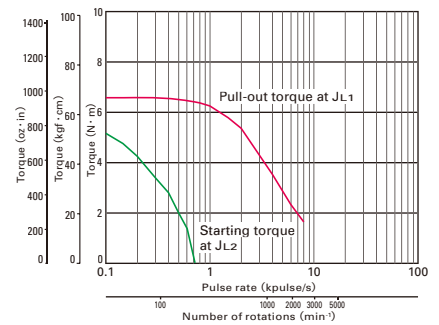
Constant current circuit  
Source voltage : AC100V · operating current : 6A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [7.4 \times 10^{-4} \text{kg} \cdot \text{m}^2 (40.46 \text{oz} \cdot \text{in}^2)]$  use the rubber coupling]  
 $J_{L2} = [7.4 \times 10^{-4} \text{kg} \cdot \text{m}^2 (40.46 \text{oz} \cdot \text{in}^2)]$  use the direct coupling]

● 103H8222-63 □□



Constant current circuit  
Source voltage : AC100V · operating current : 6A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [15.3 \times 10^{-4} \text{kg} \cdot \text{m}^2 (83.65 \text{oz} \cdot \text{in}^2)]$  use the rubber coupling]  
 $J_{L2} = [15.3 \times 10^{-4} \text{kg} \cdot \text{m}^2 (83.65 \text{oz} \cdot \text{in}^2)]$  use the direct coupling]

● 103H8223-63 □□



Constant current circuit  
Source voltage : AC100V · operating current : 6A/phase,  
2-phase energization (full-step)  
 $J_{L1} = [43 \times 10^{-4} \text{kg} \cdot \text{m}^2 (235.10 \text{oz} \cdot \text{in}^2)]$  use the rubber coupling]  
 $J_{L2} = [43 \times 10^{-4} \text{kg} \cdot \text{m}^2 (235.10 \text{oz} \cdot \text{in}^2)]$  use the direct coupling]