



2-phase stepping motor

# 86mm cir.( 3.39inch cir. )

103H822  
CE marking  
1.8 °/step

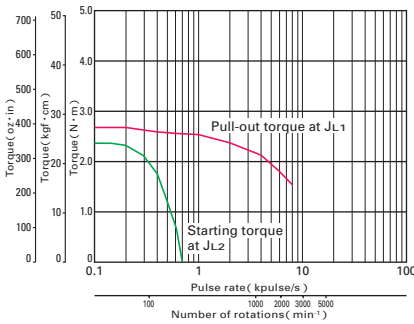


Bipolar winding

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	/phase	mH/phase	[ $\times 10^{-4}$ 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 )

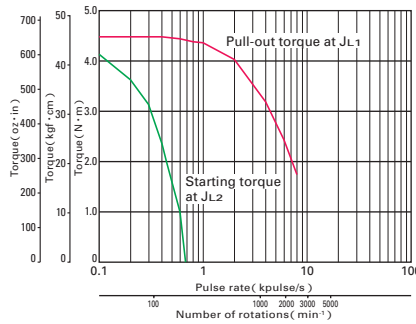
## Pulse rate-torque characteristics

103H8221-62



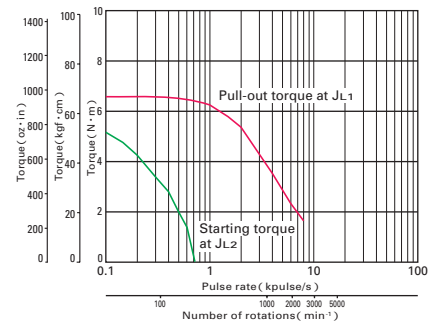
Constant current circuit  
Source voltage : AC100V · operating current : 6A/phase,  
2-phase energization ( full-step )  
 $J_{L1}$  = [ 7.4x10<sup>-4</sup>kg · m<sup>2</sup> ( 40.46 oz · in<sup>2</sup> ) use the rubber coupling ]  
 $J_{L2}$  = [ 7.4x10<sup>-4</sup>kg · m<sup>2</sup> ( 40.46 oz · in<sup>2</sup> ) use the direct coupling ]

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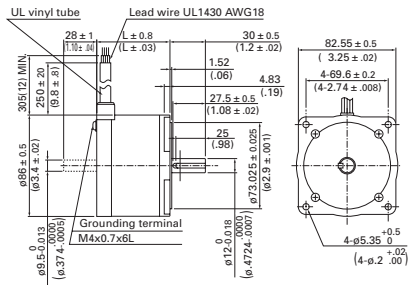
Constant current circuit  
Source voltage : AC100V · operating current : 6A/phase,  
2-phase energization ( full-step )  
 $J_{L1}$  = [ 15.3x10<sup>-4</sup>kg · m<sup>2</sup> ( 83.65 oz · in<sup>2</sup> ) use the rubber coupling ]  
 $J_{L2}$  = [ 15.3x10<sup>-4</sup>kg · m<sup>2</sup> ( 83.65 oz · in<sup>2</sup> ) use the direct coupling ]

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Constant current circuit  
Source voltage : AC100V · operating current : 6A/phase,  
2-phase energization ( full-step )  
 $J_{L1}$  = [ 43x10<sup>-4</sup>kg · m<sup>2</sup> ( 235.10 oz · in<sup>2</sup> ) use the rubber coupling ]  
 $J_{L2}$  = [ 43x10<sup>-4</sup>kg · m<sup>2</sup> ( 235.10 oz · in<sup>2</sup> ) use the direct coupling ]

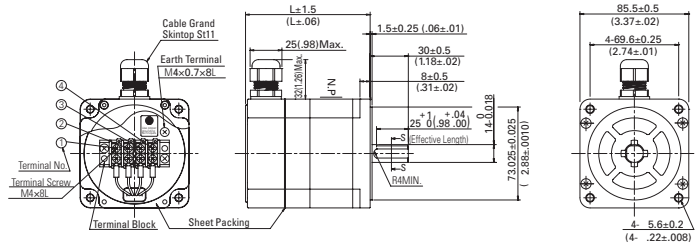
## 86mm( 3.39inch )



Lead wire type

	Set part number	Motor model number	Motor length : mm ( inch )	Cable type
Bipolar	—	103H8221-62 0	62( 3.31 )	Lead wire( CE )
	—	103H8222-63 0	92.2( 5.51 )	Lead wire( CE )
	—	103H8223-63 0	125.9( 7.72 )	Lead wire( CE )

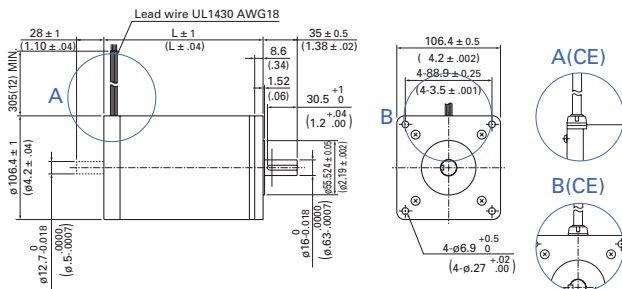
## 86mm( 3.39inch )



Terminal block type

	Set part number	Motor model number	Motor length : mm ( inch )	Cable type
Terminal block	—	SM2861-5066	97.9( 3.9 )	Terminal block
	—	SM2861-5166	97.9( 3.9 )	Terminal block
	—	SM2861-5266	97.9( 3.9 )	Terminal block
	—	SM2862-5066	128.4( 5.1 )	Terminal block
	—	SM2862-5166	128.4( 5.1 )	Terminal block
	—	SM2862-5266	128.4( 5.1 )	Terminal block
	—	SM2863-5066	158.8( 6.3 )	Terminal block
	—	SM2863-5166	158.8( 6.3 )	Terminal block

## 106mm( 4.17inch )



Lead wire type

CE type

	Set part number	Motor model number	Motor length : mm ( inch )	Cable type
Unipolar	—	103H89222-09 1	163.3( 6.4 )	Lead wire
	—	103H89223-09 1	221.3( 8.7 )	Lead wire
Bipolar	—	103H89222-52 1	163.3( 6.4 )	Lead wire
	—	103H89223-52 1	221.3( 8.7 )	Lead wire( CE )
	—	103H89222-63 1	163.3( 6.4 )	Lead wire( CE )

## : Motor shaft specification code

Motor shaft spec	Set type code	Motor type code
Single shaft	S	4
Double shafts	D	1

## : Motor shaft specification code

Motor shaft spec	Set type code	Motor type code
Single shaft	S	7
Double shafts	D	3