

## 2-Phase - 1.8° Step motor tubular model HB



### Features

- The step motor is designed with tubular shaft with M3 inner threads at both ends for effective vacuum kit connection for rotation alignment and pickup and placement operations to save mechanic space and refine machine design.

### Applicable industries:

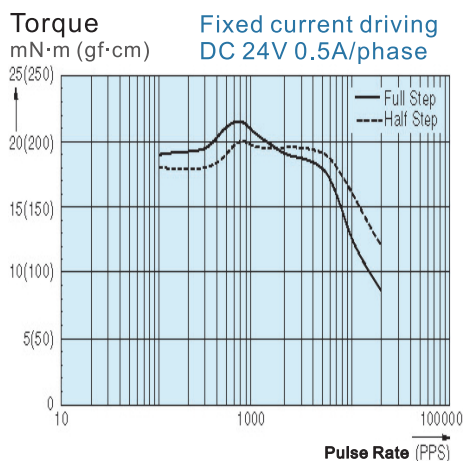
- The rotation alignment of  $\theta$  axis and pickup and placement of semiconductor, LED, lens, passive components and the like.

### Motor electric features

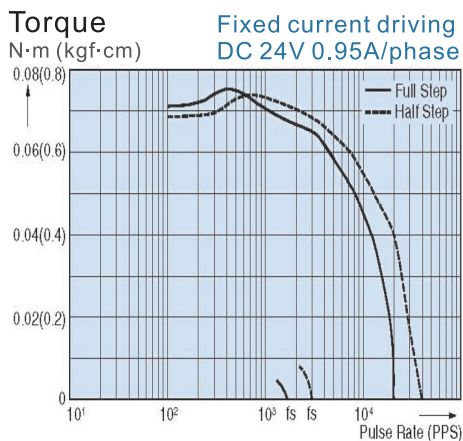
Motor P/N	Step angle	Rated voltage	Rated current	Winding resistance	Holding torque	Motor length (L)	Rotor inertia	Weight
Dual shaft	Deg	V/Phase	A/Phase	$\Omega$ /Phase	Kg-cm	mm	g-cm <sup>2</sup>	g
MS214-05BBH-S01	1.8	4.0	0.5	8.0	0.26	40	4.5	75
MS225-09BH-S00	1.8	4.56	0.95	4.8	0.9	50	18	250
MS245-20BH-S00	1.8	4.0	2.0	1.98	3.2	48	68	310

### Speed-torque relation curve

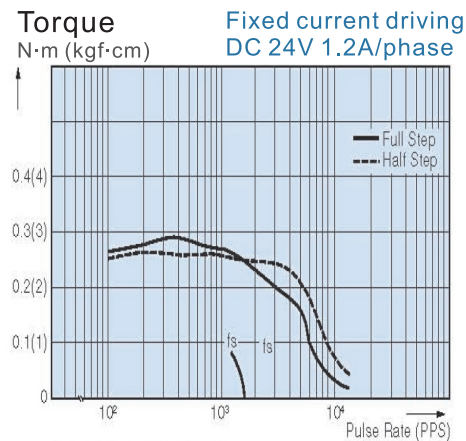
MS214-05BBH



MS225-09BH



MS245-20BH



● Insulation resistance — 100M $\Omega$  Min (at DC500V)

● Dielectric strength — AC 500V (1min)

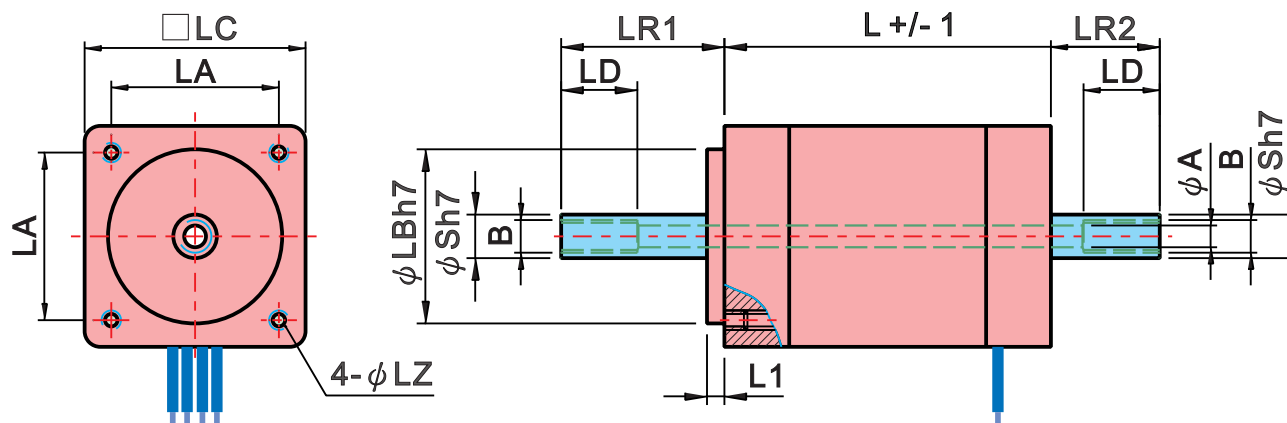
● Radial play — 0.025mm Max. at the load

● Permissible temperature rise — 80 °C Max.  
(Resistance method)

● Operating temperature range — -20~+50 °C

**Note: Do not allow the surface temperature of the motor case to rise above 90°C during operation.**

**Motor dimension diagram** (in unit of mm)



MOTOR SPECIFICATION	$\square$ LC	L	L1	$\phi$ S	LR1	LR2	LD	$\phi$ LB	B	$\phi$ A	$\phi$ LA	$\phi$ LZ	Winding type
MS214-05BBH-S01	20	40	1.6	4	15	10	7	16	M3	2	15.4	M2	4wire
MS225-09BH-S00	28	50	2	5	15	10	7	22	M3	2.4	23	M2.5	6wire
MS245-20BH-S00	42	48	2	5	20	15	7	22	M3	2.4	31	M3	6wire