

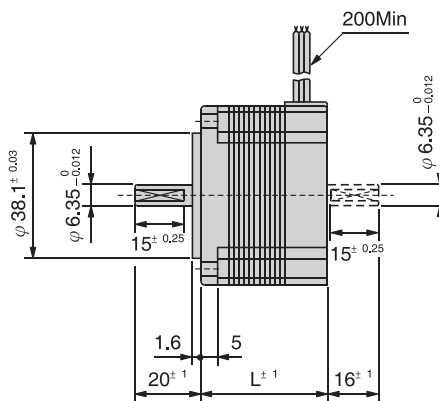
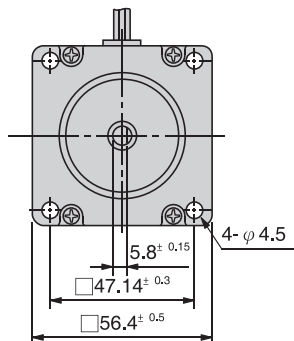
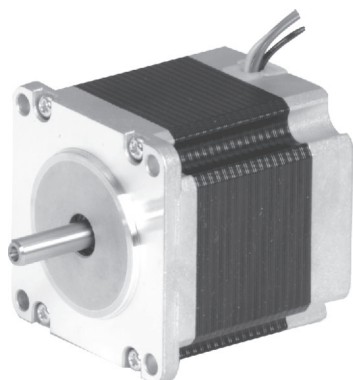


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HB TYPE 高扭力 · 低振動

1.8°

High torque · Low vibration



形式 Type number		基本步級角 Step Angle Deg.	額定電壓 Rated Voltage V/Phase	額定電流 Rated Current A/Phase	線圈阻抗 Winding Resistance Ω/Phase	線圈感抗 Inductance mH/Phase	激磁最大 靜止力矩 Holding Torque N·m(kgf·cm)	馬達長度L Motor Length mm	轉子慣量 Rotor Inertia x10 ⁻³ kg·m ²	質量 Mass kg	結線 Winding Type
單軸 Single Shaft	兩軸 Double Shaft										
TS3653N1E1	TS3653N11E1	1.8	5.2	1	5.2	5.4	0.39(3.9)	39	120	0.45	2
TS3653N1E2	TS3653N11E2	1.8	2.8	2	1.4	1.4	0.39(3.9)	39	120	0.45	2
TS3653N1E3	TS3653N11E3	1.8	1.9	3	0.63	0.6	0.39(3.9)	39	120	0.45	2
TS3653N2E4	TS3653N12E4	1.8	7.2	1	7.2	11	0.9(9)	54	260	0.7	2
TS3653N2E5	TS3653N12E5	1.8	3.6	2	1.8	2.5	0.9(9)	54	260	0.7	2
TS3653N2E6	TS3653N12E6	1.8	2.3	3	0.75	1.2	0.9(9)	54	260	0.7	2
TS3653N3E7	TS3653N13E7	1.8	8.2	1	8.2	14	1.35(13.5)	76	430	1	2
TS3653N3E8	TS3653N13E8	1.8	4.5	2	2.25	3.6	1.35(13.5)	76	430	1	2
TS3653N3E9	TS3653N13E9	1.8	3	3	1	1.6	1.35(13.5)	76	430	1	2
TS3653N4E12	TS3653N14E12	1.8	2.2	5	0.44	1.4	2(20)	84	520	1.3	1
TS3653N84	—	1.8	2.8	4	0.7	1.4	1.8(18)	84	520	1.3	2

- 使用周圍溫度 ———— -20~+50 °C
Operating temperature range
- 絕緣阻抗 ———— 100MΩ Min(at DC500V)
Insulation resistance
- 絕緣耐壓 ———— AC500V(1min)
Dielectric strength
- 軸心平行方向移動量 —0.075mm Max. (With 10N(1kgf)Load)
End play

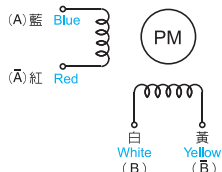
- 軸心垂直方向移動量 — 0.025mm Max. (With 5N(500gf)Load)
Radial play
- 容許溫度上昇 ———— 80deg Max(Rasistance method)
Permissible temperature rise

※注意:馬達表面請保持在90 °C以下

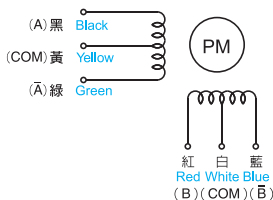
※NOTE: Do not allow the surface temperature of the motor case to rise above 90 °C during operation.

結線圖 WIRING DIAGRAM

TYPE 1 BIPOLAR



TYPE 2 UNIPOLAR



回轉方向: 由出力軸目視之正轉方向
CW rotation from output shaft end.

Step	藍 Blue	白 White	紅 Red	黃 Yellow
0	+	-	-	+
1	+	+	-	-
2	-	+	+	-
3	-	-	+	+
0	+	-	-	+

回轉方向: 由出力軸目視之正轉方向
CW rotation from output shaft end.

Step	黑 Black	紅 Red	綠 Green	藍 Blue	黃 Yellow	白 White
0	ON	ON			COM	COM
1		ON	ON		COM	COM
2			ON	ON	COM	COM
3	ON			ON	COM	COM
0	ON	ON			COM	COM