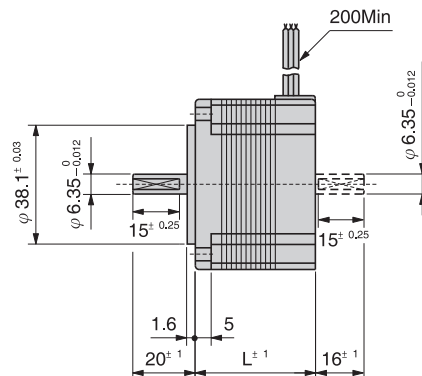
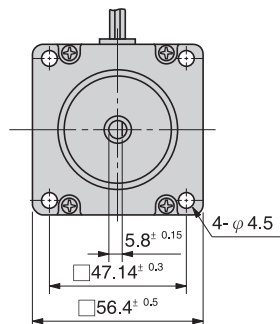
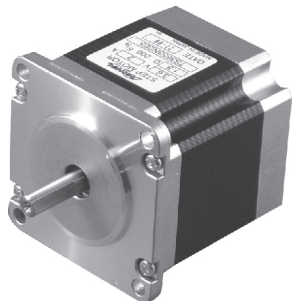




# 56mm

## HB TYPE 高扭力 · 低振動

### 0.9°

**RoHS對應**  
RoHS compliant products.

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 <sup>-7</sup> kg·m <sup>2</sup>	質量 Mass kg
單軸 Single Shaft	兩軸 Double Shaft									
TS3690N1E1	TS3690N11E1	0.9	5.4	1	5.4	9.2	0.45(4.5)	39	145	0.45
TS3690N1E2	TS3690N11E2	0.9	2.8	2	1.4	2.2	0.45(4.5)	39	145	0.45
TS3690N1E3	TS3690N11E3	0.9	1.6	3	0.53	0.53	0.45(4.5)	39	145	0.45
TS3690N2E4	TS3690N12E4	0.9	7.4	1	7.4	21	0.95(9.5)	54	310	0.7
TS3690N2E5	TS3690N12E5	0.9	3.6	2	1.8	5.9	0.95(9.5)	54	310	0.7
TS3690N2E6	TS3690N12E6	0.9	2.3	3	0.75	2.3	0.95(9.5)	54	310	0.7
TS3690N3E7	TS3690N13E7	0.9	8.6	1	8.6	28	1.45(14.5)	76	520	1
TS3690N3E8	TS3690N13E8	0.9	4.5	2	2.25	7.3	1.45(14.5)	76	520	1
TS3690N3E9	TS3690N13E9	0.9	3	3	1	3.5	1.45(14.5)	76	520	1

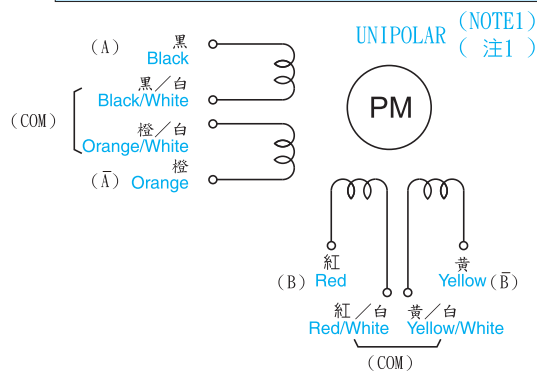
●使用周圍溫度 ———— -20~+50°C  
Operating temperature range●絕緣阻抗 ———— 100MΩ Min(at DC500V)  
Insulation resistance●絕緣耐壓 ———— AC500V(1min)  
Dielectric strength●軸心平行方向移動量 — 0.075mm Max. (With 10N(1kgf)Load)  
End play●軸心垂直方向移動量 — 0.025mm Max. (With 5N(500gf)Load)  
Radial play●容許溫度上昇 ———— 80deg Max(Rasistance 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

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	橙 Orange	黃 Yellow	紅/白和黃/白連接 Red/White & Yellow/White	黑/白和橙/白連接 Black/White & Orange/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

(注1) 黑/白和橙/白連接  
紅/白和黃/白連接Note1) Black/White connects with Orange/White  
Red/White connects with Yellow/White