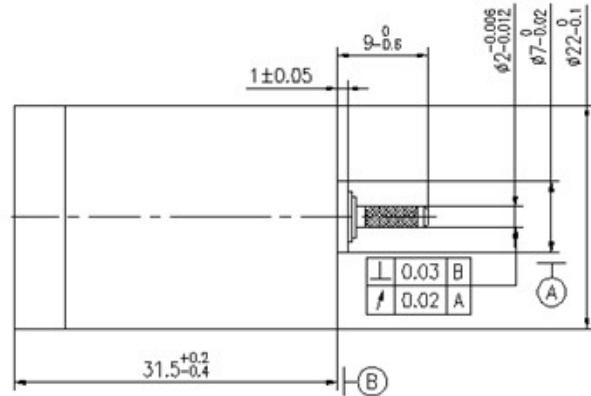


# DC coreless motor 22mm/直流空心杯馬達 22mm

Ø22mm, precious metal brushes/Ø22mm, 貴金屬電刷

Typical Applications Survey Instrument, Coreless Power Tools  
 Medical Equipment,  
 典型應用 測繪工具, 電動工具, 醫療設備



2230 Series / 2230系列	Model/型號	001	002	003	004	005	006	007
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Motor data (25°C)/ 運行參數 (25°C)								
1 Assigned power/標稱功率	W	2.0	2.0	2.8	3.4	3.6	2.6	
2 Nominal voltage/額定電壓	Volt	3	6	9	12	15	18	
3 Terminal resistance/端電阻	$\pm 15\%$ Ohm	0.381	1.87	4.3	6.78	9.9	19.9	
4 No-Load speed/空載轉速	$\pm 12\%$ rpm	8,500	8,030	8,200	8,160	8,400	8,170	
5 No-Load current/空載電流	$\leq 150\%$ mA	75.0	26.2	19.5	14.1	12.10	9.10	
6 Speed constant/速度常數	rpm/V	2,833	1,338	911	680	560	454	
7 Torque constant/轉矩常數	mNm/A	3.34	7.08	10.39	13.94	16.92	20.84	
8 Starting current/啟動電流	mA	7,874	3,209	2,093	1,770	1,509	905	
9 Stall torque/堵轉轉矩	mNm	26.30	22.72	21.74	24.67	25.54	18.85	
10 Mechanical time constant/機械時間常數	ms	18	11	19	16	15	14	
11 Rotor inertia/轉動慣量	gcm <sup>2</sup>	5.370	3.020	4.870	4.470	4.270	2.970	
12 Max. efficiency/最大效率	%	81	83	82	83	83	81	

Limits for continuous operating/電機連續運行區域上限								
1 Max. continuous current/最大連續工作電流	mA	742	381	391	354	305	181	
2 Max. continuous torque/最大連續工作轉矩	mNm	2.48	2.70	4.06	4.93	5.16	3.77	
3 Nominal speed/最大連續工作電流下的轉速	rpm	7,699	7,076	6,668	6,528	6,702	6,535	
4 Max. continuous power/最大連續輸出功率	W	2.00	1.998	2.83	3.371	3.621	2.580	

## Additional information/其它相關信息

- Axial play (measured at 4N axial force)/軸向間隙 (沿軸向施加4N力時的間隙) 0.05~0.15 mm
- Max. sleeve bearing loads/滑動軸承最大載荷
  - Axial (dynamic)/軸向(動態) 1.0N
  - Radial (4 mm from jamming ring)/徑向 (卡簧外4mm) 2.7N
  - Force for press-fits (static)/最大允許安裝力(靜態) 80N
- Max. radial play sleeve bearing/滑動軸承最大徑向間隙 0.02 mm
- Ambient temperature range/環境溫度範圍 -20~+65°C
- Max. rotor temperature/轉子承受最高溫度 +85°C
- Weight of motor/電機重量 48g
- Options: gearbox and ball bearings/其它可選項: 減速器和滾動軸承



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