No.141209

承　　認　　書

(SPECIFICATION FOR APPROVAL)

CUSTOMER： 肯創

MODEL： IG220053X00085R

DATE： Dec 29, 2014

SUPPLIER：　　CUSTOMER：

研發 2014.12.29 張慶隆

SHA YANG YE

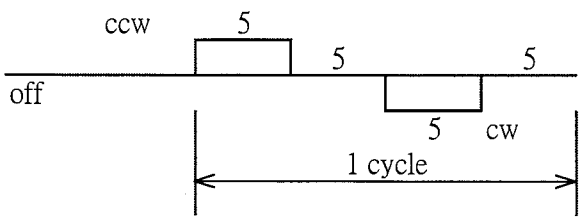
祥儀企業股份有限公司
SHAYANG YE INDUSTRIAL CO.,LTD.

桃園縣桃園市桃鶯路 461 號
TEL:(03)3623452
FAX:(03)3628404
http://www.shayye.com.tw

NO.461,Taoying Rd.,Taoyuan City,
Taoyuan County,Taiwan R.O.C.

E-MAIL:sales@shayye.com.tw

Technical Data

Part Number	IG220053X00085R	
Customer P/N		
ITEM	**Specifications**	**Note**
1. Operation Status		
1.1 Rated Voltage	6V D.C.	Stable power source
1.2 Rated torque	0.69 kgf.cm	6mm from shaft end
1.3 Radial load	8N (0.8kg-f)	
1.4 Axial load	6N (0.6kg-f)	
1.5 Turning direction	Shaft horizontal	
1.6 Reverse direction	CW.CCW	
1.7 Using environment	Temperature -10~60 ℃ Humidity 20~85% RH	
1.8 Preserve environment	Temperature -20~60 ℃ Humidity 20~85% RH	
1.9 Using voltage range	6V (D.C.) ±10%	
2.Electrical Characteristics		
2.1 No Load current	220 mA max.	
2.2 No Load speed	150 rpm ±15%	
2.3 Rated current	480 mA	
2.4 Rated speed	125 rpm ±15%	
2.5 Stall current	1.8 A	
2.6 Stall torque	4.1 kgf.cm	
2.7 Insulation	D.C. 500V meg. 1.0 MΩ min	Motor terminal shell
2.8 Durable voltage	100V (A.C.)， 1 minute min	Motor terminal shell
2.9 Coil resistance	3.33Ω	Reference
2.10 Torque constant	2.27 kgf.cm/A	Reference
2.11 Voltage constant	21.67 mV/r/min	Reference
3.Mechanical characteristic		
3.1 Reduction ratio	1/52.734	
3.2 Thrust play of shaft	0.2 mm max.	
3.3 Radial play of shaft	0.05 mm max.	
3.4 Back lash	3° max.	
3.5 Outside Appearance	No scratch defective....	By visual judgment
2.Life Cycle	72000 cycles min.  	After the rated life cycle test current @ rated load must stay within ±30% of the initial value and r.p.m. @ rated load must stay within ±20% of the initial value. However change of mechanical noise level was not considered as part of the testing

ASSEMBLY, MAINTENANCE, OPERATION

1. Install: To avoid internal geared motor touched by overlong screws and caused defective. Please check screw size and length on external dimension drawing when installing geared motor into construction.

2. Reprocess: Heavy impact and vibration during reprocessing output shaft may cause loose screws and lead to unbalance gear operation. Please avoid reprocessing output shaft.
Must to prevent overheat when weld wires into terminal and cause breakdown due to burnt internal geared motor parts.
Please do not overload the radial load limitation of output shaft when using belt pulley or chain pulley as power transmission. Please do not overload the axial load limitation of output shaft when pressing parts upon it as well.

3. Environment: The parts of geared motors or itself may corroded or damaged easier when using or maintaining in out of range environment. Must to pay close attention that gears may corroded even under an allowed environment in long term.

4. Impact: Must prevent geared motor from falling and impact, or the parts will get damaged, the screws will be loosed, and the gear operation will unbalance etc...

5. Locked out: Please well prepared current transmitting protection in case of burnt motor coil easy and damaged gear from locked out geared motor.

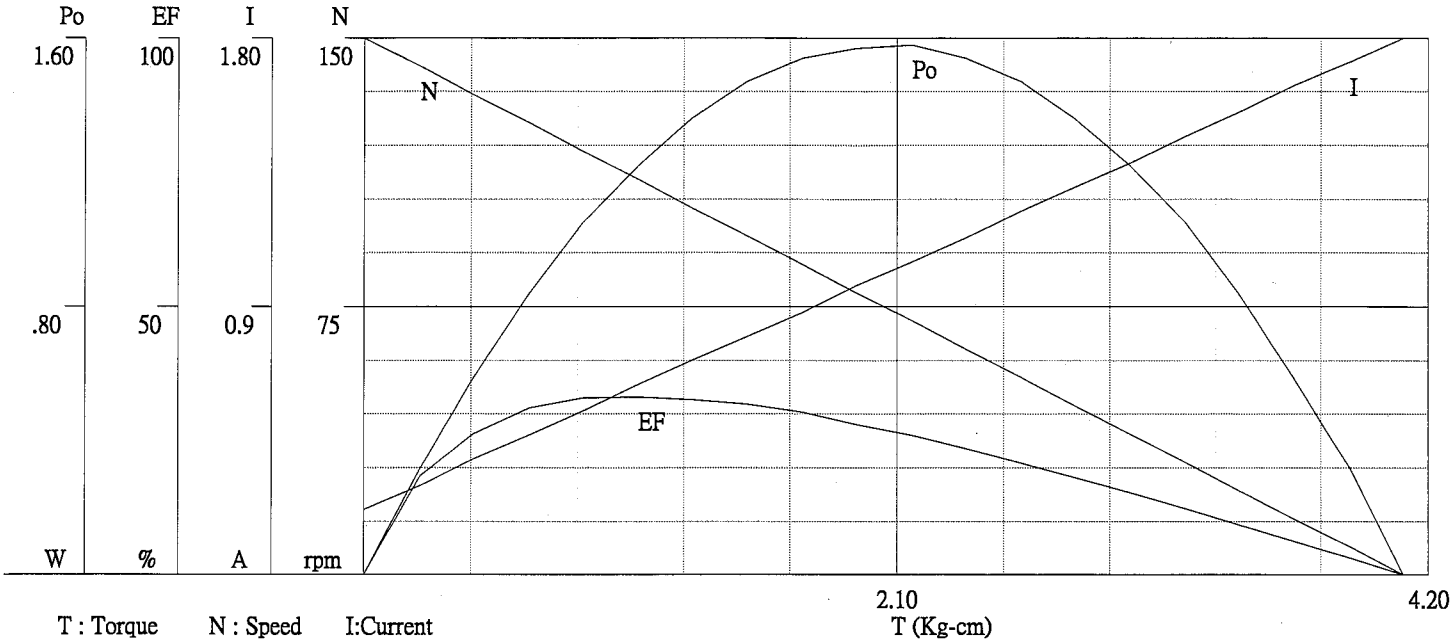
6. Output shaft Turning:
Please note that it is easier to damage gear when directly turning output shaft.

7. PWM controlling:
The graphite brush of motor will be abnormally wore out or the commutator interval will be blocked by carbon powder when using in the condition of D/T under 60%.
Moreover, please pay attention to the motor with capacitor due to there is ineffectual capacity cycle scope.

8. Momentary reverse:
The graphite brush will be abnormally wore out or coil getting aggravated when geared motor is reversed momentary.
Also, the commutator interval will be stuck if switch frequently.

SHAYANG YE INDUSTRIAL CO.,LTD.

Mode: IG220053X00085R S/N: 001 Voltage : 6 V Date: 20141229



T : Torque N : Speed I:Current

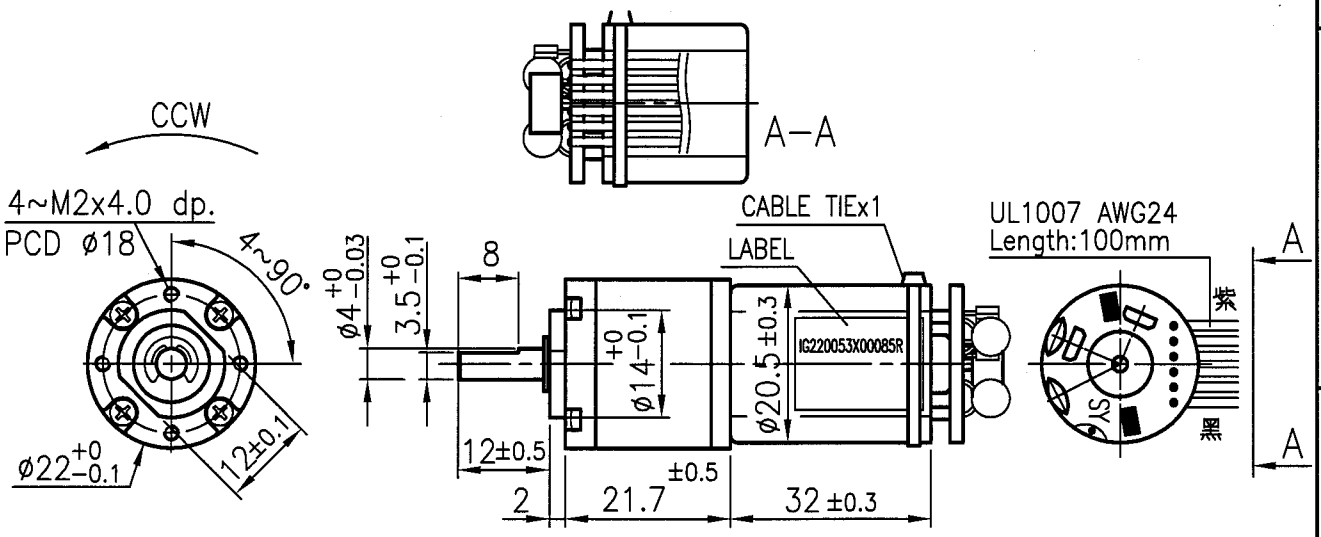
Po : Output Power EF : Efficieney

	T(N/m)	[Kg/cm]	N(rpm)	I(A)	Po(W)	EF(%)
No Load	0	0.00	150.00	.22	0	0
	.02	.22	142.04	.30	.32	18.56
	.06	.65	126.32	.47	.84	31.18
	.08	.86	118.41	.55	1.05	32.99
	.13	1.29	102.59	.72	1.36	32.75
	.15	1.51	94.82	.80	1.47	31.89
	.17	1.73	86.78	.88	1.54	30.4
	.19	1.94	78.98	.97	1.57	28.1
	.23	2.37	63.21	1.13	1.54	23.62
	.25	2.59	55.27	1.22	1.47	20.87
	.27	2.80	47.38	1.30	1.36	18.18
	.3	3.02	39.46	1.38	1.22	15.39
	.32	3.24	31.56	1.47	1.05	12.4
	.34	3.45	23.70	1.55	.84	9.4
	.38	3.89	7.90	1.72	.32	3.18
Stall	.4	4.10	0.00	1.80	0	0
Po...(max)	.21	2.16	71.09	1.05	1.58	26.06
EF...(max)	.11	1.08	110.51	.64	1.22	33.23

參考 REF.	
估價 EVALUATE	
試作 INITAL	
製作 MASS	

Connections :
1. Black : −MOTOR
2. Red : +MOTOR
3. Brown : HALL SENSOR Vcc
4. Green : HALL SENSOR GND
5. Blue : HALL SENSOR A Vout
6. Purple : HALL SENSOR B Vout

JST PHR-6
P=2.0-6P



REDUCTION RATIO: 1/52.734
OUTPUT SHAFT: STEEL
MOTOR SPECIFICATION: 6V 8000RPM
OUTPUT−150RPM/ ≦ 220mA WITH NO LOAD

核准 APPROVED BY	一般公差表	軸徑 −0 孔徑 +− 0 長度，角度 ± − − 指定等級區分之數值公差							
		區分 / 等級	1~6	6~18	18~50	50~120	120~250	250~500	500~1000	角度
		1級	0.1	0.2	0.3	0.4	0.5	0.6	0.8	1°
		2級	0.2	0.4	0.6	0.8	1.2	1.6	2.0	2°
		未標示孔徑距公差	±0.1			±0.2				

研發 2014.12.29 張慶隆

	1	新出圖		
設變單號 ECN.		設變單號 ECN.		

核對 CHECKED BY	熱處理 HEAT TREATMENT		件名 PART NAME	GEARMOTOR	單位 UNITS	mm
	表面處理 SURFACE		圖號 DWG.	IG220053X00069R	比例 SCALE	9/10
	材質 MATERIAL		祥儀企業股份有限公司 SHA YANG YE INDUSTRIAL CO., LTD.			
繪圖 DRAWIN BY	重量 WEIGHT	克(g)	頁次 SHEET	1/1		

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