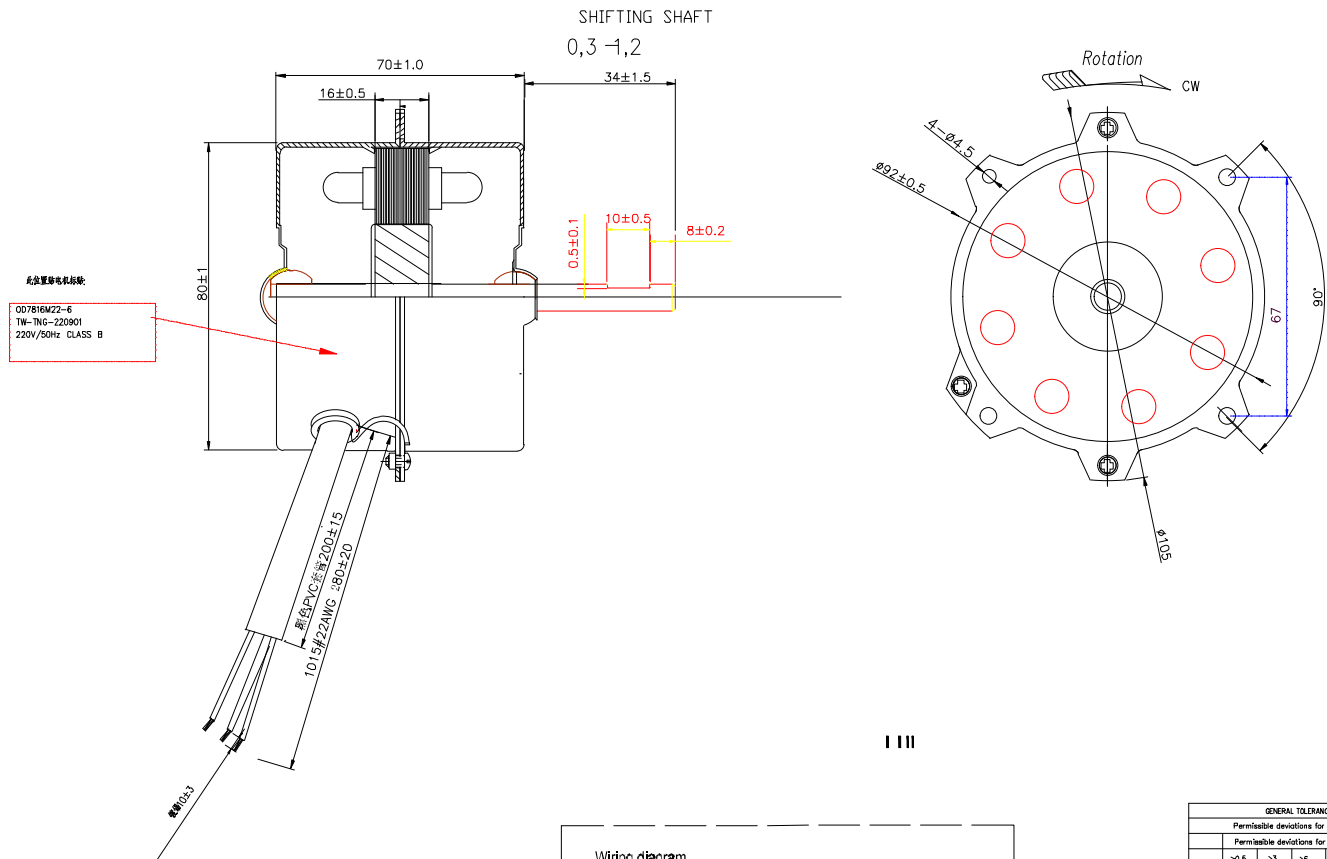


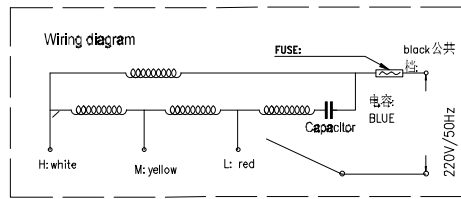
REV	DESCRIPTION	DATE	BY



- REMARK:
- KIND OF MOTOR: SINGLE-PHASE ASYNCHRONOUS MOTOR WITH PERMANENT (4POLES);
 - DIRECTION OF ROTATION: CLOCK WISE (FROM SHAFT END);
 - SOURCE: SINGLE PHASE 220V/50Hz;
 - FUSE: 130° C/2A/250V;
 - CAPACITOR: 1.5uF ±5%/400V
 - LEADER WIRE: 280mm;
 - CLASS OF INSULATION: CLASS B;
 - TEMPERATURE RISE °C : 1.06 TIMES THE VOLTAGE TEST OF II MOTOR GEAR RUNNING TEST AT ROOM TEMPERATURE, AFTER 2 HOURS, RESISTANCE TO TEST TEMPERATURE RISE OF LESS THAN 80K. (No guest standard accessories, temperature rise for reference)
 - ENAMELED WIRE MATERIAL: COPPER
 - PERFORMANCE (ON LOAD) No guest standard accessories
 - The undefined items shall be subject to the confirmation of samples by both parties

consumption:

Voltage: 220V 50Hz	Current A	Power W	Speed rpm
High	±10%	±10%	±10%
Med	±10%	±10%	±10%
Low	±10%	±10%	±10%



GENERAL TOLERANCES ISO 2768-m	
Permissible deviations for linear dimensions	
Permissible deviations for basic size range	
>0.5 ...3	>3 ...6
>6 ...30	>30 ...120
>120 ...400	>400 ...1000
>1000 ...2000	>2000 ...4000
m	±0.1
Permissible deviations for angular dimensions	
Permissible deviations for broken edges (external radii chamfered notches)	
Permissible deviations for ranges of lengths in millimeters of the shorter side of the angle concerned	
>0.5 ...3	>3 ...6
>6 ...10	>10 ...20
>20 ...50	>50 ...100
>100 ...200	>200 ...400
>400 ...1000	>1000 ...2000
>2000 ...4000	>4000 ...8000
m	±1°

DWN. BY:	CHK. BY:	APP. BY :
Date: 2022.09.01	Date: 2022.09.01	Date: 2022.09.01
MATERIAL:		<input checked="" type="checkbox"/> SCALE <input type="checkbox"/> NOT SCALE
FINISH:		
General Tolerance ISO 2768-1 Class m (Unless specified)		TITLE OD7816
ALL DIMENSIONS ARE IN MILLIMETRES		
Teamwork Global Group Ltd		DWG NO. TW-OD7816-220901
		SHEET 1 OF 1 A

天沃环球集团有限公司 (TEAMWORK GLOBAL GROUP LTD)
电机检测-Motor test data (7816)

客户	TN	产品型号	7816	电压	220V/50Hz
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产品图纸	<p>REMARK:</p> <ol style="list-style-type: none"> KIND OF MOTOR: SINGLE-PHASE ASYNCHRONOUS MOTOR WITH PERMANENT(4POLES); DIRECTION OF ROTATION: CLOCK WISE (FROM SHAFT END); SOURCE: SINGLE PHASE 220V/50Hz; FUSE: 130° C/2A/250V; CAPACITOR: 1.5μF±5%/400V LEADER WIRE: 280mm; CLASS OF INSULATION: CLASS B; TEMPERATURE RISE °C : 1.06 TIMES THE VOLTAGE TEST OF H MOTOR GEAR RUNNING TEST AT ROOM TEMPERATURE, AFTER 2 HOURS, RESISTANCE TO TEST TEMPERATURE RISE OF LESS THAN 80K. (No guest standard accessories, temperature rise for reference) ENAMELED WIRE MATERIAL: COPPER PERFORMANCE (ON LOAD) No guest standard accessories The undefined items shall be subject to the confirmation of samples by both parties <p>consumption:</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Voltage: 220V/50Hz</th> <th>Current A</th> <th>Power W</th> <th>Speed rpm</th> </tr> </thead> <tbody> <tr> <td>High</td> <td>±10%</td> <td>±10%</td> <td>±10%</td> </tr> <tr> <td>Med</td> <td>±10%</td> <td>±10%</td> <td>±10%</td> </tr> <tr> <td>Low</td> <td>±10%</td> <td>±10%</td> <td>±10%</td> </tr> </tbody> </table> <p>Wiring diagram: Shows a single-phase motor circuit with a fuse, capacitor, and motor. Parameters: 220V/50Hz, 1.5μF, 130°C.</p> <p>General Tolerance ISO 2768-1 Class m (Unless specified) TITLE 007816 ALL DIMENSIONS ARE IN MILLIMETRES Home Rite Co., Ltd 锦宏电机有限公司 DWG NO. JH*** SHEET 1 OF 1</p>	Voltage: 220V/50Hz	Current A	Power W	Speed rpm	High	±10%	±10%	±10%	Med	±10%	±10%	±10%	Low	±10%	±10%	±10%
Voltage: 220V/50Hz	Current A	Power W	Speed rpm														
High	±10%	±10%	±10%														
Med	±10%	±10%	±10%														
Low	±10%	±10%	±10%														

编号	检查项目	规格尺寸	实际检测记录						测试仪器
			1	2	3	4	5	6	
一. 外形尺寸及重点部件检查									
1.1	测量所有的尺寸根据图纸		OK	OK	OK	OK	OK	OK	游标卡尺
1.2	外观表面不能有刮伤、锈蚀痕迹与严重的毛刺和灰尘, 引线不能损伤。		OK	OK	OK	OK	OK	OK	目视
1.3	规格贴纸印字要清晰, 正确, 不可有漏贴贴纸等问题		OK	OK	OK	OK	OK	OK	目视
1.4	轴芯上要刷防锈油		OK	OK	OK	OK	OK	OK	目视
1.5	电子线1015#22AWG (黑. 红. 白. 蓝. 黄)		OK	OK	OK	OK	OK	OK	目视/卡尺
1.6	股线拉力最小要达到3.0KG以上		OK	OK	OK	OK	OK	OK	拉力计
1.7	温度保险丝 2A 250V 130°C (AUPO&SET)		OK	OK	OK	OK	OK	OK	目视/温度测试仪
1.8	马达前后窜动虚位	0.3-1.2	OK	OK	OK	OK	OK	OK	治具检测/游标卡尺
1.9	定子规格71*78*44*16mm 圆形	鈎钢片	OK	OK	OK	OK	OK	OK	游标卡尺
1.1	漆包线类型	(铜线)	OK	OK	OK	OK	OK	OK	
1.11	铁壳材质	Fe	OK	OK	OK	OK	OK	OK	

二. 电机性能和安规检查（负载无配件没有测试）													
2.1	出轴旋转方向	CW(出轴端)	OK	OK	OK	OK	OK	OK					目视
2.2	空载电流H档	±12%	0.24	0.23	0.24	0.24	0.23	0.23					测试仪器
	空载电流M档	±12%	0.2	0.19	0.2	0.2	0.19	0.2					测试仪器
	空载电流L档	±12%	0.18	0.17	0.17	0.17	0.17	0.17					测试仪器
2.3	空载功率H档	±12%	43	42.2	42.3	42.2	42.2	42.1					测试仪器
	空载功率M档	±12%	38.6	38	38.2	37.9	38	37.7					测试仪器
	空载功率L档	±12%	35.5	35	35.1	34.6	34.9	34.7					测试仪器
2.4	负载电流H档	±10%											测试仪器
	负载电流M档	±10%											测试仪器
	负载电流L档	±10%											测试仪器
2.5	负载功率H档	±10%											测试仪器
	负载功率M档	±10%											测试仪器
	负载功率L档	±10%											测试仪器
2.6	负载转速H档	±10%											转速仪
	负载转速M档	±10%											转速仪
	负载转速L档	±10%											转速仪
2.7	马达噪音	65dB以下负载带风叶距离1M无异音	OK	OK	OK	OK	OK	OK					噪音计
2.8	低压启动	额定电压的60%V以下	OK	OK	OK	OK	OK	OK					测试仪器
2.9	绝缘电阻	≥100MΩ (DC500V)	OK	OK	OK	OK	OK	OK					测试仪器
2.10	电气间隙和爬电距离	电机的零线和火线之间距离应大于3.2mm。漆包线到金属外壳之间的爬电距离和电气间隙应大于1.5mm。										测试仪器	
2.11	超压运行	1.24倍额定电压运行到稳态，电机能够正常运行且无冒烟和烧焦味等现象										测试仪器	
2.12	堵转测试	额定电压下堵转电机，运行到稳态，堵转测试时保险丝能正常断开										测试仪器/热电偶	
2.13	温升测试	220V的1.06倍电压测试，室温马达运转测试2小时后，电阻法测试温升≤80K										温升测试仪/三用表	
2.14	寿命测试	額定電壓(220V)連續運轉 小時以上,無異常現象(待定)										测试仪器	
2.15	成品耐压测试	1500V/1mA/1sec	OK	OK	OK	OK	OK	OK					耐压测试仪
2.16	马达运转时不可有异音，轴承与轴心配合运转要顺畅											治具检测	
2.17	前后支架铆合采用国产纤维油，注油重量3-4g/套											电子称	
2.18	前后支架固定螺丝扭力量要达到12KG以上											扭力计	
备注:	负载测试电流、功率、转速，风速马达须运转1分钟后开始测试（标准配件）（此次样品无负载配件，故没有测试）												

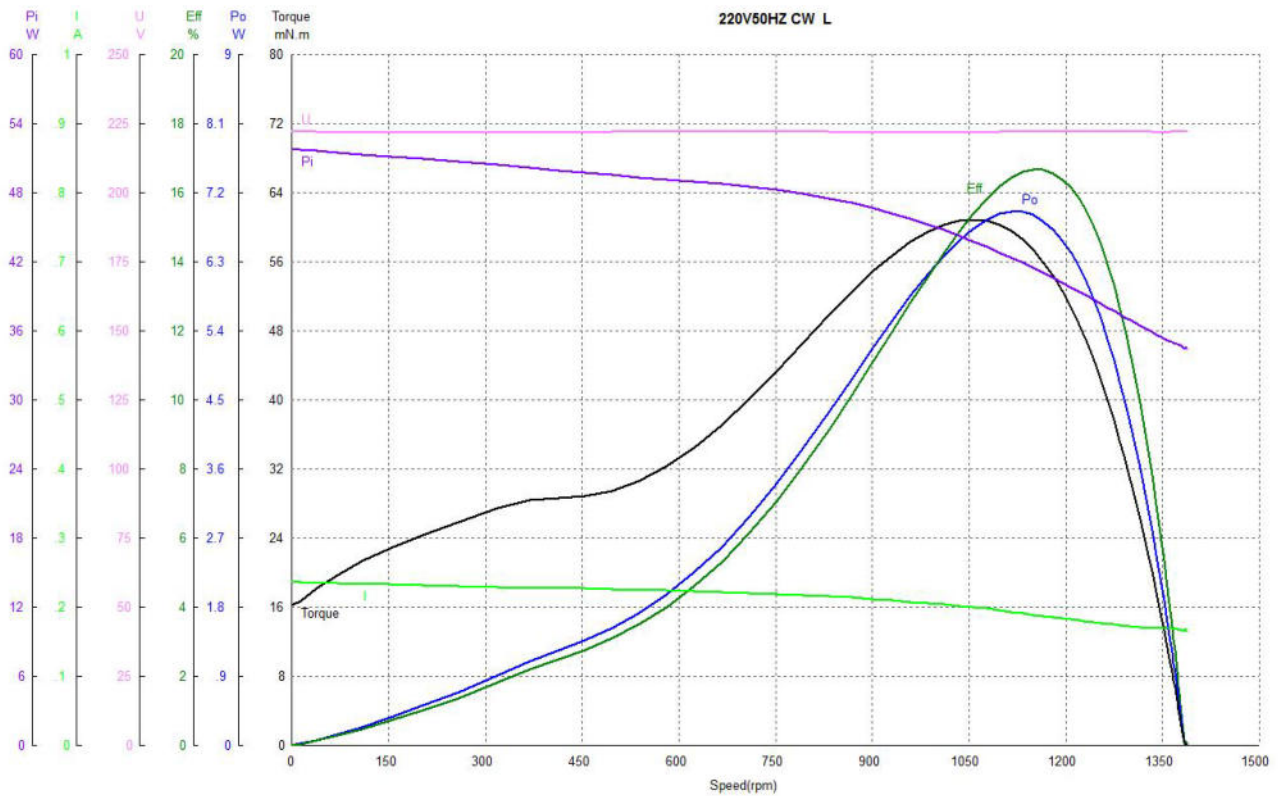
三. 成品外观和包装检查					
3.1	外观	前后支架和股线不能脏污, 规格贴纸要贴整齐, 不可缺角, 字体清晰, 正确, 轴芯不能漏刷防锈油			目视
3.2	马达包装	马达交叉摆放在刀卡上, 摆放时要注意轴心不可碰到线圈, 一层摆放10PCS, 上下放两层, 中间放纸板隔, 一箱装20PCS马达			目视
四. 外箱检查					
4.1	外箱	1. 纸箱材质用五层回收纸箱 2. 纸箱上下封“一”字形			目视/圈尺
4.2	箱唛	正唛 侧唛 正唛 侧唛			
备注:					
结果判断 合格 <input checked="" type="checkbox"/> 不合格 <input type="checkbox"/> 供参考 <input type="checkbox"/>					
审批Approved by: 杨再军 2022.09.01 测试员Tested by: 母贤飞 2022.09.01					

OD7816 TNG motor

L

Customer: HJ Voltage: 220V/50Hz
 FileName: 测功记录 Tester: Mu
 Motor Type: 7816 TNG motor Test Date: 2022.9.3
 Number: 1
 Direction of Rotation: CW

Performance Curve



Performance Data Summary

	U	I	Pi	Torque	Speed	Po	Pi-Po	Eff	P.F	Freq
	V	A	W	mN.m	rpm	W	W	%		Hz
No Load Point	222.11	0.166	34.461	0.186	1388.14	0.027	34.434	0.08	0.935	50.00
Max Effcent Point	221.90	0.189	41.431	57.342	1149.72	6.904	34.527	16.66	0.988	50.00
Max Pout Point	221.85	0.193	42.336	59.533	1115.41	6.954	35.382	16.43	0.989	50.00
Max Torque Point	221.78	0.200	43.758	60.841	1056.22	6.729	37.029	15.38	0.987	50.00
Block Point/End Point	221.93	0.237	51.751	16.239	0.00	0.000	51.751	0.00	0.984	50.00

Performance Data

	U	I	Pi	Torque	Speed	Po	Pi-Po	Eff	P.F	Freq	Time
	V	A	W	mN.m	rpm	W	W	%		Hz	s
1	222.11	0.166	34.461	0.186	1388.14	0.027	34.434	0.08	0.935	50.00	0.16
2	222.09	0.166	34.464	0.180	1387.81	0.026	34.438	0.08	0.935	50.00	0.23
3	222.07	0.166	34.465	0.177	1387.59	0.026	34.439	0.08	0.935	50.00	0.31
4	222.06	0.166	34.466	0.178	1387.32	0.026	34.440	0.08	0.935	50.00	0.39
5	222.06	0.166	34.471	0.195	1387.21	0.028	34.443	0.08	0.935	50.00	0.48
6	222.07	0.166	34.478	0.232	1386.97	0.034	34.444	0.10	0.935	50.00	0.56
7	222.08	0.166	34.481	0.239	1386.83	0.035	34.446	0.10	0.935	50.00	0.64
8	222.08	0.166	34.478	0.235	1386.75	0.034	34.444	0.10	0.935	50.00	0.72
9	222.09	0.166	34.486	0.219	1386.54	0.032	34.454	0.09	0.935	50.00	0.80
10	222.09	0.166	34.495	0.246	1386.51	0.036	34.459	0.10	0.936	50.00	0.88
11	222.10	0.166	34.503	0.257	1386.43	0.037	34.466	0.11	0.936	50.00	0.95
12	222.12	0.166	34.513	0.247	1386.31	0.036	34.477	0.10	0.936	50.00	1.03
13	222.15	0.166	34.522	0.230	1386.27	0.033	34.489	0.10	0.936	50.00	1.13
14	222.17	0.167	34.529	0.203	1386.16	0.029	34.500	0.08	0.931	50.00	1.20
15	222.19	0.167	34.541	0.185	1386.12	0.027	34.514	0.08	0.931	50.00	1.28
16	222.23	0.168	34.560	0.174	1386.03	0.025	34.535	0.07	0.926	50.00	1.36
17	222.25	0.168	34.572	0.161	1385.98	0.023	34.549	0.07	0.926	50.00	1.43
18	222.25	0.168	34.570	0.165	1385.98	0.024	34.546	0.07	0.926	50.00	1.51
19	222.25	0.168	34.565	0.159	1385.90	0.023	34.542	0.07	0.926	50.00	1.59
20	222.23	0.168	34.563	0.166	1385.91	0.024	34.539	0.07	0.926	50.00	1.68
21	222.21	0.168	34.559	0.187	1385.90	0.027	34.532	0.08	0.926	50.00	1.76
22	222.18	0.168	34.551	0.167	1385.82	0.024	34.527	0.07	0.926	50.00	1.84
23	222.13	0.168	34.540	0.173	1385.83	0.025	34.515	0.07	0.926	50.00	1.92
24	222.09	0.168	34.526	0.176	1385.78	0.026	34.500	0.08	0.925	50.00	2.00
25	222.07	0.168	34.514	0.171	1385.75	0.025	34.489	0.07	0.925	50.00	2.07
26	222.05	0.168	34.510	0.159	1385.66	0.023	34.487	0.07	0.925	50.00	2.15
27	222.03	0.168	34.509	0.133	1385.54	0.019	34.490	0.06	0.925	50.00	2.23
28	222.00	0.168	34.501	0.120	1385.46	0.017	34.484	0.05	0.925	50.00	2.32
29	221.99	0.168	34.493	0.100	1385.30	0.015	34.478	0.04	0.925	50.00	2.40
30	221.97	0.168	34.486	0.095	1385.23	0.014	34.472	0.04	0.925	50.00	2.48
31	221.96	0.168	34.479	0.103	1385.17	0.015	34.464	0.04	0.925	50.00	2.56
32	221.93	0.168	34.476	0.102	1384.97	0.015	34.461	0.04	0.925	50.00	2.64
33	221.90	0.168	34.474	0.157	1384.81	0.023	34.451	0.07	0.925	50.00	2.72
34	221.87	0.167	34.465	0.193	1384.62	0.028	34.437	0.08	0.930	50.00	2.79
35	221.86	0.166	34.456	0.259	1384.38	0.038	34.418	0.11	0.936	50.00	2.87
36	221.86	0.166	34.460	0.339	1384.22	0.049	34.411	0.14	0.936	50.00	2.97
37	221.86	0.166	34.472	0.433	1383.99	0.063	34.409	0.18	0.936	50.00	3.04
38	221.86	0.166	34.481	0.547	1383.73	0.079	34.402	0.23	0.936	50.00	3.12
39	221.87	0.166	34.488	0.668	1383.36	0.097	34.391	0.28	0.936	50.00	3.20
40	221.87	0.166	34.491	0.805	1383.01	0.117	34.374	0.34	0.936	50.00	3.27
41	221.89	0.166	34.503	0.933	1382.66	0.135	34.368	0.39	0.937	50.00	3.35
42	221.92	0.166	34.530	1.060	1382.30	0.153	34.377	0.44	0.937	50.00	3.43

43	221.95	0.166	34.560	1.208	1381.87	0.175	34.385	0.51	0.938	50.00	3.51
44	221.97	0.166	34.580	1.372	1381.41	0.198	34.382	0.57	0.938	50.00	3.60
45	221.98	0.167	34.599	1.559	1380.92	0.225	34.374	0.65	0.933	50.00	3.68
46	221.99	0.167	34.621	1.773	1380.36	0.256	34.365	0.74	0.934	49.99	3.76
47	222.00	0.167	34.644	2.013	1379.78	0.291	34.353	0.84	0.934	50.00	3.84
48	222.02	0.167	34.676	2.261	1379.18	0.327	34.349	0.94	0.935	50.00	3.91
49	222.02	0.167	34.704	2.534	1378.46	0.366	34.338	1.06	0.936	50.00	3.99
50	222.01	0.167	34.722	2.870	1377.70	0.414	34.308	1.19	0.937	50.01	4.07
51	222.00	0.167	34.741	3.247	1376.94	0.468	34.273	1.35	0.937	50.00	4.15
52	222.00	0.167	34.761	3.662	1375.93	0.528	34.233	1.52	0.938	50.00	4.24
53	221.99	0.167	34.780	4.149	1374.86	0.597	34.183	1.72	0.938	50.00	4.32
54	221.96	0.168	34.800	4.672	1373.71	0.672	34.128	1.93	0.933	50.00	4.40
55	221.94	0.168	34.827	5.226	1372.26	0.751	34.076	2.16	0.934	50.00	4.48
56	221.92	0.168	34.857	5.914	1370.70	0.849	34.008	2.44	0.935	50.00	4.56
57	221.90	0.168	34.891	6.678	1368.95	0.957	33.934	2.74	0.936	50.00	4.63
58	221.87	0.168	34.938	7.525	1366.86	1.077	33.861	3.08	0.937	50.00	4.71
59	221.85	0.169	34.994	8.479	1364.46	1.212	33.782	3.46	0.933	50.00	4.81
60	221.83	0.169	35.058	9.537	1361.86	1.360	33.698	3.88	0.935	50.00	4.88
61	221.81	0.169	35.138	10.675	1358.88	1.519	33.619	4.32	0.937	50.00	4.96
62	221.81	0.169	35.231	11.959	1355.56	1.698	33.533	4.82	0.940	50.00	5.04
63	221.81	0.169	35.335	13.358	1351.93	1.891	33.444	5.35	0.943	50.00	5.12
64	221.80	0.169	35.445	14.861	1347.85	2.098	33.347	5.92	0.946	50.00	5.20
65	221.80	0.169	35.572	16.527	1343.38	2.325	33.247	6.54	0.949	50.00	5.27
66	221.82	0.170	35.715	18.273	1338.47	2.561	33.154	7.17	0.947	50.00	5.35
67	221.84	0.170	35.880	20.130	1333.22	2.810	33.070	7.83	0.951	50.00	5.43
68	221.85	0.170	36.060	22.077	1327.50	3.069	32.991	8.51	0.956	50.00	5.52
69	221.87	0.170	36.251	24.123	1321.32	3.338	32.913	9.21	0.961	50.00	5.60
70	221.88	0.171	36.452	26.246	1314.70	3.613	32.839	9.91	0.961	50.00	5.68
71	221.89	0.171	36.670	28.477	1307.57	3.899	32.771	10.63	0.966	50.00	5.76
72	221.91	0.172	36.908	30.742	1299.98	4.185	32.723	11.34	0.967	50.00	5.84
73	221.91	0.173	37.160	32.997	1291.90	4.464	32.696	12.01	0.968	50.00	5.91
74	221.91	0.174	37.424	35.330	1283.36	4.748	32.676	12.69	0.969	50.00	5.99
75	221.91	0.175	37.702	37.649	1274.27	5.024	32.678	13.33	0.971	50.00	6.08
76	221.91	0.176	38.002	39.953	1264.62	5.291	32.711	13.92	0.973	50.00	6.16
77	221.91	0.177	38.323	42.240	1254.40	5.549	32.774	14.48	0.976	50.00	6.24
78	221.91	0.178	38.659	44.467	1243.71	5.791	32.868	14.98	0.979	50.00	6.32
79	221.90	0.179	39.007	46.623	1232.40	6.017	32.990	15.43	0.982	50.00	6.40
80	221.90	0.181	39.372	48.715	1220.40	6.226	33.146	15.81	0.980	50.00	6.47
81	221.91	0.182	39.757	50.696	1207.74	6.412	33.345	16.13	0.984	50.00	6.55
82	221.92	0.184	40.159	52.571	1194.40	6.575	33.584	16.37	0.984	50.00	6.63
83	221.92	0.186	40.573	54.321	1180.34	6.714	33.859	16.55	0.983	50.00	6.72
84	221.91	0.187	40.996	55.914	1165.43	6.824	34.172	16.65	0.988	50.00	6.80
85	221.90	0.189	41.431	57.342	1149.72	6.904	34.527	16.66	0.988	50.00	6.88
86	221.88	0.191	41.879	58.573	1133.04	6.950	34.929	16.60	0.988	50.00	6.96
87	221.85	0.193	42.336	59.533	1115.41	6.954	35.382	16.43	0.989	50.00	7.04

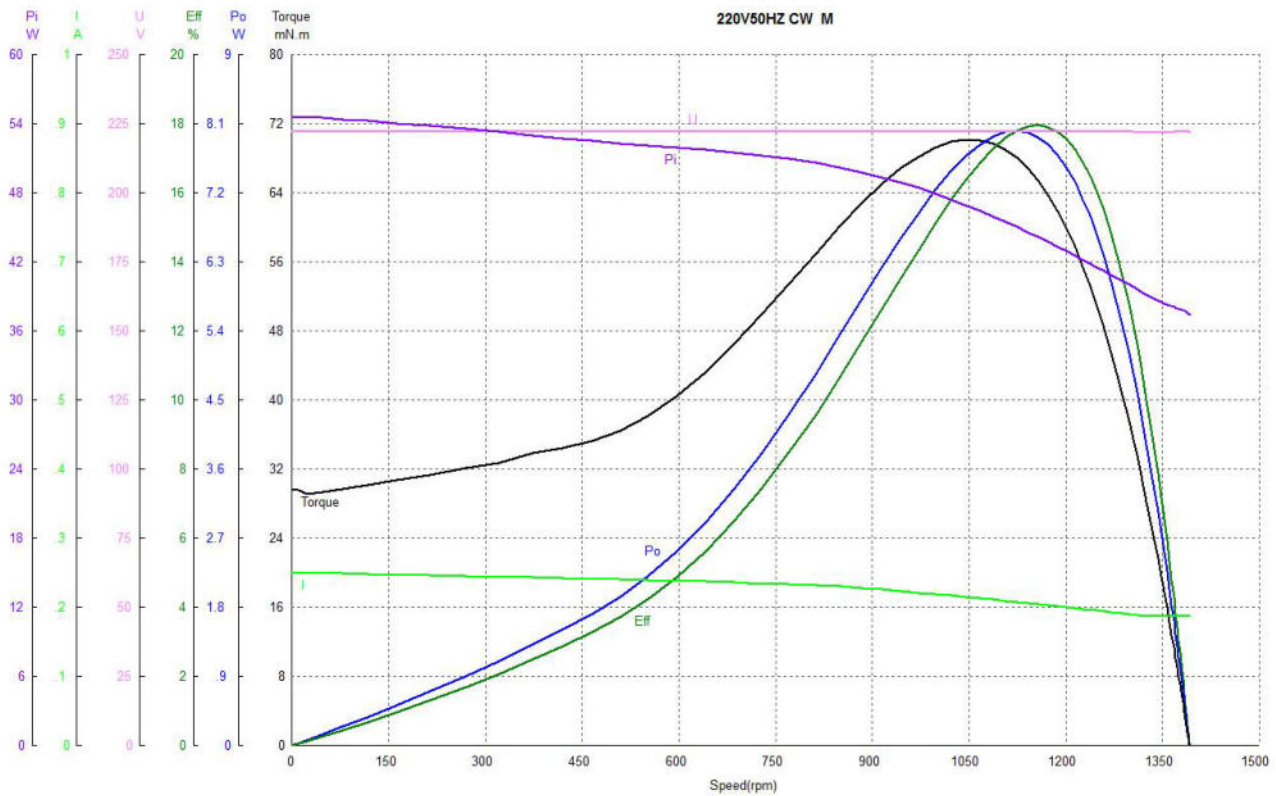
88	221.82	0.195	42.800	60.239	1096.87	6.919	35.881	16.17	0.989	50.00	7.11
89	221.80	0.198	43.273	60.699	1077.11	6.847	36.426	15.82	0.985	50.00	7.19
90	221.78	0.200	43.758	60.841	1056.22	6.729	37.029	15.38	0.987	50.00	7.27
91	221.77	0.202	44.250	60.694	1034.03	6.572	37.678	14.85	0.988	50.00	7.36
92	221.76	0.204	44.736	60.255	1010.60	6.377	38.359	14.26	0.989	50.00	7.44
93	221.76	0.206	45.220	59.444	985.62	6.135	39.085	13.57	0.990	50.00	7.52
94	221.76	0.208	45.700	58.257	958.90	5.850	39.850	12.80	0.991	50.00	7.60
95	221.77	0.210	46.178	56.723	930.40	5.527	40.651	11.97	0.992	50.00	7.68
96	221.80	0.212	46.648	54.789	899.89	5.163	41.485	11.07	0.992	50.00	7.75
97	221.82	0.214	47.087	52.514	867.59	4.771	42.316	10.13	0.992	50.00	7.88
98	221.83	0.216	47.490	49.797	832.19	4.340	43.150	9.14	0.991	50.00	8.00
99	221.84	0.218	47.859	46.650	793.04	3.874	43.985	8.10	0.990	50.00	8.11
100	221.85	0.219	48.198	43.357	751.46	3.412	44.786	7.08	0.992	50.00	8.23
101	221.85	0.221	48.489	40.101	708.72	2.976	45.513	6.14	0.989	50.01	8.36
102	221.86	0.222	48.732	37.097	666.02	2.587	46.145	5.31	0.989	50.00	8.52
103	221.87	0.223	48.946	34.464	623.59	2.251	46.695	4.60	0.989	50.00	8.67
104	221.86	0.224	49.138	32.307	581.08	1.966	47.172	4.00	0.989	50.00	8.83
105	221.84	0.225	49.319	30.568	538.44	1.724	47.595	3.50	0.988	50.00	9.03
106	221.84	0.226	49.503	29.427	496.26	1.529	47.974	3.09	0.987	50.00	9.23
107	221.82	0.227	49.689	28.828	454.72	1.373	48.316	2.76	0.987	50.00	9.44
108	221.79	0.227	49.888	28.585	413.41	1.238	48.650	2.48	0.991	50.00	9.64
109	221.75	0.228	50.115	28.416	369.25	1.099	49.016	2.19	0.991	50.00	9.84
110	221.75	0.229	50.385	27.465	318.61	0.916	49.469	1.82	0.992	50.00	10.03
111	221.74	0.231	50.653	25.798	258.48	0.698	49.955	1.38	0.989	50.00	10.23
112	221.73	0.232	50.892	24.333	203.19	0.518	50.374	1.02	0.989	50.00	10.44
113	221.76	0.233	51.120	22.851	152.93	0.366	50.754	0.72	0.989	50.00	10.64
114	221.78	0.234	51.318	21.294	108.38	0.242	51.076	0.47	0.989	50.00	10.84
115	221.81	0.235	51.485	19.728	70.36	0.145	51.340	0.28	0.988	50.00	11.03
116	221.85	0.235	51.617	18.157	38.09	0.072	51.545	0.14	0.990	50.00	11.23
117	221.90	0.236	51.712	16.738	13.71	0.024	51.688	0.05	0.987	50.00	11.43
118	221.93	0.237	51.751	16.239	0.00	0.000	51.751	0.00	0.984	50.00	11.64

OD7816 TNG motor

M

Customer: HJ Voltage: 220V/50Hz
 FileName: 测功记录 Tester: Mu
 Motor Type: 7816 TNG motor Test Date: 2022.9.3
 Number: 1
 Direction of Rotation: CW

Performance Curve



Performance Data Summary

	U	I	Pi	Torque	Speed	Po	Pi-Po	Eff	P.F	Freq
	V	A	W	mN.m	rpm	W	W	%		Hz
No Load Point	221.96	0.187	37.497	0.122	1392.54	0.018	37.479	0.05	0.903	50.00
Max Effcient Point	221.98	0.204	44.114	65.346	1157.15	7.918	36.196	17.95	0.974	50.00
Max Pout Point	221.96	0.208	44.991	67.987	1124.17	8.004	36.987	17.79	0.975	50.00
Max Torque Point	221.92	0.215	46.887	70.116	1045.28	7.675	39.212	16.37	0.983	50.00
Block Point/End Point	221.83	0.250	54.482	29.605	0.00	0.000	54.482	0.00	0.982	50.00

Performance Data

	U	I	Pi	Torque	Speed	Po	Pi-Po	Eff	P.F	Freq	Time
	V	A	W	mN.m	rpm	W	W	%		Hz	s
1	221.96	0.187	37.497	0.122	1392.54	0.018	37.479	0.05	0.903	50.00	0.14
2	221.94	0.187	37.488	0.109	1392.42	0.016	37.472	0.04	0.903	50.00	0.22
3	221.92	0.187	37.473	0.093	1392.40	0.014	37.459	0.04	0.903	50.00	0.29
4	221.89	0.187	37.458	0.105	1392.42	0.015	37.443	0.04	0.903	50.00	0.37
5	221.86	0.187	37.444	0.122	1392.33	0.018	37.426	0.05	0.903	50.00	0.45
6	221.82	0.187	37.429	0.137	1392.45	0.020	37.409	0.05	0.902	50.00	0.53
7	221.78	0.187	37.413	0.114	1392.30	0.017	37.396	0.05	0.902	50.00	0.62
8	221.75	0.187	37.396	0.130	1392.45	0.019	37.377	0.05	0.902	50.00	0.70
9	221.72	0.187	37.380	0.098	1392.38	0.014	37.366	0.04	0.902	50.00	0.78
10	221.71	0.187	37.372	0.108	1392.37	0.016	37.356	0.04	0.901	50.00	0.86
11	221.71	0.187	37.373	0.136	1392.43	0.020	37.353	0.05	0.901	50.00	0.93
12	221.74	0.187	37.382	0.120	1392.36	0.017	37.365	0.05	0.902	50.00	1.01
13	221.77	0.187	37.387	0.124	1392.48	0.018	37.369	0.05	0.902	50.00	1.09
14	221.79	0.187	37.391	0.117	1392.36	0.017	37.374	0.05	0.902	50.00	1.17
15	221.82	0.187	37.398	0.149	1392.54	0.022	37.376	0.06	0.902	50.00	1.26
16	221.85	0.187	37.408	0.151	1392.50	0.022	37.386	0.06	0.902	50.00	1.34
17	221.88	0.187	37.422	0.186	1392.49	0.027	37.395	0.07	0.902	50.00	1.42
18	221.90	0.187	37.438	0.169	1392.56	0.025	37.413	0.07	0.902	49.99	1.50
19	221.91	0.187	37.448	0.136	1392.46	0.020	37.428	0.05	0.902	49.99	1.57
20	221.90	0.187	37.447	0.146	1392.54	0.021	37.426	0.06	0.902	50.00	1.65
21	221.89	0.187	37.439	0.135	1392.42	0.020	37.419	0.05	0.902	50.00	1.73
22	221.88	0.187	37.435	0.150	1392.55	0.022	37.413	0.06	0.902	50.00	1.81
23	221.88	0.187	37.434	0.136	1392.46	0.020	37.414	0.05	0.902	50.00	1.90
24	221.88	0.187	37.439	0.131	1392.39	0.019	37.420	0.05	0.902	50.00	1.98
25	221.89	0.187	37.443	0.100	1392.44	0.015	37.428	0.04	0.902	50.00	2.06
26	221.88	0.187	37.436	0.097	1392.32	0.014	37.422	0.04	0.902	50.00	2.14
27	221.86	0.187	37.424	0.112	1392.44	0.016	37.408	0.04	0.902	50.00	2.22
28	221.84	0.187	37.412	0.121	1392.34	0.018	37.394	0.05	0.902	50.01	2.29
29	221.81	0.187	37.405	0.124	1392.42	0.018	37.387	0.05	0.902	50.00	2.37
30	221.80	0.187	37.402	0.105	1392.30	0.015	37.387	0.04	0.902	50.00	2.47
31	221.80	0.187	37.403	0.090	1392.19	0.013	37.390	0.04	0.902	50.00	2.54
32	221.80	0.187	37.402	0.127	1392.20	0.019	37.383	0.05	0.902	49.99	2.62
33	221.79	0.187	37.397	0.172	1391.96	0.025	37.372	0.07	0.902	50.00	2.70
34	221.78	0.187	37.396	0.248	1391.97	0.036	37.360	0.10	0.902	50.00	2.77
35	221.78	0.187	37.400	0.299	1391.72	0.044	37.356	0.12	0.902	50.00	2.85
36	221.79	0.187	37.409	0.361	1391.62	0.053	37.356	0.14	0.902	50.00	2.93
37	221.81	0.187	37.423	0.453	1391.42	0.066	37.357	0.18	0.902	50.00	3.01
38	221.83	0.187	37.443	0.568	1391.13	0.083	37.360	0.22	0.903	50.00	3.10
39	221.85	0.187	37.464	0.729	1391.01	0.106	37.358	0.28	0.903	50.00	3.18
40	221.87	0.187	37.481	0.819	1390.63	0.119	37.362	0.32	0.903	50.00	3.26
41	221.89	0.187	37.499	0.946	1390.48	0.138	37.361	0.37	0.904	50.00	3.34
42	221.92	0.187	37.518	1.067	1390.10	0.155	37.363	0.41	0.904	50.00	3.41

43	221.96	0.187	37.542	1.207	1389.78	0.176	37.366	0.47	0.904	50.00	3.49
44	222.00	0.187	37.568	1.371	1389.42	0.199	37.369	0.53	0.905	50.00	3.57
45	222.03	0.187	37.594	1.519	1388.89	0.221	37.373	0.59	0.905	50.00	3.65
46	222.05	0.187	37.615	1.697	1388.57	0.247	37.368	0.66	0.906	50.00	3.74
47	222.06	0.187	37.629	1.862	1387.98	0.271	37.358	0.72	0.906	50.00	3.82
48	222.06	0.187	37.642	2.115	1387.46	0.307	37.335	0.82	0.906	50.00	3.90
49	222.06	0.187	37.658	2.385	1386.92	0.346	37.312	0.92	0.907	50.00	3.98
50	222.06	0.187	37.676	2.671	1386.23	0.388	37.288	1.03	0.907	50.00	4.06
51	222.05	0.187	37.692	3.056	1385.54	0.443	37.249	1.18	0.908	50.00	4.13
52	222.04	0.187	37.706	3.432	1384.74	0.498	37.208	1.32	0.908	50.00	4.21
53	222.03	0.187	37.719	3.887	1383.84	0.563	37.156	1.49	0.908	50.00	4.29
54	222.02	0.187	37.734	4.389	1382.77	0.636	37.098	1.69	0.909	50.00	4.38
55	222.01	0.187	37.754	4.966	1381.62	0.718	37.036	1.90	0.909	50.00	4.46
56	222.00	0.187	37.783	5.586	1380.26	0.807	36.976	2.14	0.910	50.00	4.54
57	221.98	0.187	37.815	6.289	1378.68	0.908	36.907	2.40	0.911	50.00	4.62
58	221.95	0.187	37.847	7.098	1377.01	1.024	36.823	2.71	0.912	50.00	4.70
59	221.92	0.187	37.883	7.977	1374.91	1.149	36.734	3.03	0.913	50.00	4.77
60	221.90	0.187	37.930	9.011	1372.58	1.295	36.635	3.41	0.914	50.00	4.85
61	221.87	0.187	37.984	10.142	1370.14	1.455	36.529	3.83	0.916	50.00	4.93
62	221.84	0.187	38.048	11.389	1367.23	1.631	36.417	4.29	0.917	50.00	5.02
63	221.81	0.187	38.117	12.785	1363.98	1.826	36.291	4.79	0.919	50.00	5.10
64	221.77	0.187	38.188	14.317	1360.48	2.040	36.148	5.34	0.921	50.00	5.18
65	221.74	0.187	38.271	15.973	1356.56	2.269	36.002	5.93	0.923	50.00	5.25
66	221.72	0.187	38.374	17.754	1352.29	2.514	35.860	6.55	0.926	50.00	5.33
67	221.73	0.187	38.495	19.639	1347.77	2.772	35.723	7.20	0.928	50.00	5.41
68	221.73	0.187	38.632	21.641	1342.80	3.043	35.589	7.88	0.932	50.00	5.49
69	221.73	0.187	38.780	23.735	1337.30	3.324	35.456	8.57	0.935	50.00	5.58
70	221.74	0.187	38.937	25.940	1331.47	3.617	35.320	9.29	0.939	50.00	5.66
71	221.74	0.187	39.111	28.211	1325.29	3.915	35.196	10.01	0.943	50.00	5.74
72	221.77	0.187	39.313	30.570	1318.60	4.221	35.092	10.74	0.948	50.00	5.82
73	221.81	0.188	39.541	33.009	1311.46	4.533	35.008	11.46	0.948	50.00	5.90
74	221.85	0.189	39.782	35.518	1303.92	4.850	34.932	12.19	0.949	50.00	5.97
75	221.88	0.190	40.032	38.053	1295.90	5.164	34.868	12.90	0.950	50.00	6.05
76	221.91	0.191	40.290	40.602	1287.38	5.474	34.816	13.59	0.951	50.00	6.13
77	221.94	0.192	40.563	43.185	1278.54	5.782	34.781	14.25	0.952	50.00	6.22
78	221.98	0.193	40.859	45.738	1269.15	6.079	34.780	14.88	0.954	50.00	6.30
79	222.01	0.194	41.176	48.271	1259.25	6.365	34.811	15.46	0.956	50.00	6.38
80	222.03	0.196	41.497	50.757	1248.80	6.638	34.859	16.00	0.954	50.00	6.46
81	222.04	0.196	41.826	53.178	1237.72	6.893	34.933	16.48	0.961	50.00	6.54
82	222.05	0.197	42.173	55.484	1225.99	7.123	35.050	16.89	0.964	50.00	6.61
83	222.05	0.198	42.534	57.734	1213.69	7.338	35.196	17.25	0.967	50.00	6.69
84	222.04	0.200	42.910	59.872	1200.70	7.528	35.382	17.54	0.966	50.00	6.77
85	222.02	0.201	43.301	61.861	1186.94	7.689	35.612	17.76	0.970	50.00	6.86
86	222.00	0.203	43.702	63.682	1172.38	7.818	35.884	17.89	0.970	50.00	6.94
87	221.98	0.204	44.114	65.346	1157.15	7.918	36.196	17.95	0.974	50.00	7.02

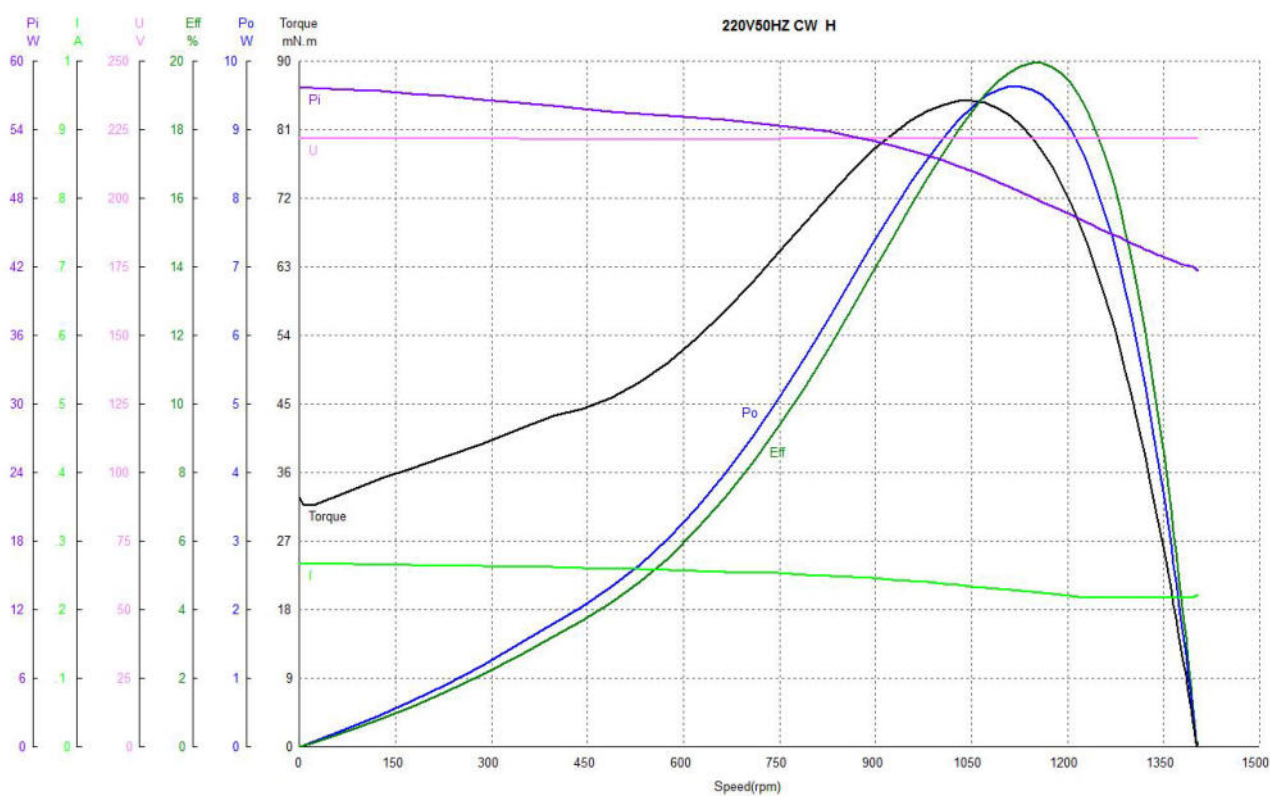
88	221.96	0.206	44.544	66.796	1141.10	7.982	36.562	17.92	0.974	50.00	7.10
89	221.96	0.208	44.991	67.987	1124.17	8.004	36.987	17.79	0.975	50.00	7.18
90	221.95	0.209	45.450	68.965	1106.23	7.989	37.461	17.58	0.980	50.00	7.25
91	221.94	0.211	45.921	69.654	1087.10	7.929	37.992	17.27	0.981	50.00	7.33
92	221.92	0.213	46.400	70.050	1066.82	7.826	38.574	16.87	0.982	50.00	7.41
93	221.92	0.215	46.887	70.116	1045.28	7.675	39.212	16.37	0.983	50.00	7.50
94	221.92	0.217	47.381	69.846	1022.41	7.478	39.903	15.78	0.984	50.00	7.58
95	221.94	0.219	47.881	69.200	997.87	7.231	40.650	15.10	0.985	50.00	7.66
96	221.96	0.221	48.378	68.179	971.82	6.939	41.439	14.34	0.986	50.00	7.73
97	221.96	0.223	48.860	66.817	944.23	6.607	42.253	13.52	0.987	50.00	7.81
98	221.96	0.226	49.318	65.027	914.89	6.230	43.088	12.63	0.983	50.00	7.89
99	221.95	0.228	49.754	62.843	883.88	5.817	43.937	11.69	0.983	50.00	8.02
100	221.96	0.230	50.167	60.142	849.93	5.353	44.814	10.67	0.983	50.00	8.14
101	221.98	0.232	50.558	56.926	811.87	4.840	45.718	9.57	0.982	50.00	8.25
102	221.99	0.233	50.907	53.463	771.26	4.318	46.589	8.48	0.984	50.00	8.38
103	221.99	0.234	51.208	49.920	728.98	3.811	47.397	7.44	0.986	50.00	8.50
104	221.98	0.236	51.455	46.453	685.70	3.336	48.119	6.48	0.982	50.00	8.66
105	221.97	0.237	51.675	43.250	641.78	2.907	48.768	5.63	0.982	50.00	8.81
106	221.97	0.238	51.890	40.448	597.14	2.529	49.361	4.87	0.982	50.00	8.97
107	221.98	0.239	52.087	38.081	552.30	2.202	49.885	4.23	0.982	50.00	9.17
108	221.96	0.240	52.276	36.346	508.12	1.934	50.342	3.70	0.981	50.00	9.38
109	221.94	0.240	52.475	35.235	464.47	1.714	50.761	3.27	0.985	50.00	9.58
110	221.93	0.242	52.705	34.391	419.18	1.510	51.195	2.87	0.981	50.00	9.78
111	221.93	0.243	52.953	33.801	372.95	1.320	51.633	2.49	0.982	50.00	9.98
112	221.94	0.244	53.245	32.672	319.85	1.094	52.151	2.06	0.983	50.00	10.17
113	221.95	0.245	53.530	32.079	269.43	0.905	52.625	1.69	0.984	50.00	10.37
114	221.94	0.246	53.782	31.277	213.66	0.700	53.082	1.30	0.985	50.00	10.57
115	221.94	0.247	54.014	30.754	162.73	0.524	53.490	0.97	0.985	50.00	10.78
116	221.96	0.248	54.214	30.171	117.23	0.370	53.844	0.68	0.985	50.00	10.98
117	221.97	0.249	54.365	29.653	78.57	0.244	54.121	0.45	0.984	50.00	11.17
118	221.95	0.250	54.457	29.331	47.71	0.147	54.310	0.27	0.981	50.00	11.37
119	221.92	0.250	54.507	29.059	23.23	0.071	54.436	0.13	0.982	50.00	11.57
120	221.87	0.250	54.506	29.568	10.56	0.033	54.473	0.06	0.983	50.00	11.78
121	221.83	0.250	54.482	29.605	0.00	0.000	54.482	0.00	0.982	50.00	11.98

OD7816 TNG motor

H

Customer: HJ Voltage: 220V/50Hz
 FileName: 测功记录 Tester: Mu
 Motor Type: 7816 TNG motor Test Date: 2022.9.3
 Number: 1
 Direction of Rotation: CW

Performance Curve



Performance Data Summary

	U	I	Pi	Torque	Speed	Po	Pi-Po	Eff	P.F	Freq
	V	A	W	mN.m	rpm	W	W	%		Hz
No Load Point	221.61	0.222	41.657	0.363	1403.27	0.053	41.604	0.13	0.847	50.00
Max Effcient Point	221.57	0.225	47.667	78.153	1160.23	9.496	38.171	19.92	0.956	50.00
Max Pout Point	221.60	0.229	48.936	82.793	1110.56	9.629	39.307	19.68	0.964	50.00
Max Torque Point	221.63	0.234	50.316	84.758	1051.61	9.334	40.982	18.55	0.970	50.00
Block Point/End Point	221.48	0.267	57.620	32.704	0.00	0.000	57.620	0.00	0.974	50.00

Performance Data

	U	I	Pi	Torque	Speed	Po	Pi-Po	Eff	P.F	Freq	Time
	V	A	W	mN.m	rpm	W	W	%		Hz	s
1	221.61	0.222	41.657	0.363	1403.27	0.053	41.604	0.13	0.847	50.00	0.16
2	221.61	0.222	41.658	0.346	1403.32	0.051	41.607	0.12	0.847	50.00	0.23
3	221.61	0.222	41.665	0.371	1403.26	0.055	41.610	0.13	0.847	50.00	0.31
4	221.62	0.222	41.674	0.375	1403.29	0.055	41.619	0.13	0.847	50.00	0.41
5	221.63	0.222	41.687	0.368	1403.22	0.054	41.633	0.13	0.847	50.00	0.48
6	221.64	0.222	41.705	0.360	1403.23	0.053	41.652	0.13	0.848	50.00	0.56
7	221.66	0.222	41.722	0.346	1403.13	0.051	41.671	0.12	0.848	50.00	0.64
8	221.67	0.222	41.733	0.345	1403.14	0.051	41.682	0.12	0.848	50.00	0.72
9	221.67	0.222	41.737	0.325	1403.06	0.048	41.689	0.12	0.848	50.00	0.80
10	221.66	0.222	41.733	0.362	1403.10	0.053	41.680	0.13	0.848	50.00	0.87
11	221.65	0.222	41.729	0.339	1403.02	0.050	41.679	0.12	0.848	50.00	0.97
12	221.64	0.222	41.722	0.340	1403.07	0.050	41.672	0.12	0.848	50.00	1.05
13	221.62	0.222	41.711	0.357	1403.02	0.052	41.659	0.13	0.848	50.00	1.12
14	221.60	0.222	41.698	0.363	1403.08	0.053	41.645	0.13	0.848	50.00	1.20
15	221.58	0.221	41.683	0.357	1403.03	0.052	41.631	0.13	0.851	50.00	1.28
16	221.55	0.221	41.667	0.347	1403.06	0.051	41.616	0.12	0.851	50.00	1.36
17	221.52	0.221	41.655	0.357	1403.02	0.052	41.603	0.13	0.851	50.00	1.44
18	221.51	0.220	41.648	0.367	1403.02	0.054	41.594	0.13	0.855	50.00	1.51
19	221.51	0.220	41.648	0.371	1402.96	0.055	41.593	0.13	0.855	50.00	1.61
20	221.52	0.220	41.659	0.373	1402.93	0.055	41.604	0.13	0.855	50.00	1.69
21	221.53	0.220	41.677	0.393	1402.86	0.058	41.619	0.14	0.855	50.00	1.76
22	221.56	0.220	41.700	0.411	1402.86	0.060	41.640	0.14	0.856	50.00	1.84
23	221.59	0.221	41.723	0.403	1402.83	0.059	41.664	0.14	0.852	50.00	1.92
24	221.63	0.221	41.745	0.390	1402.84	0.057	41.688	0.14	0.852	50.00	2.00
25	221.67	0.221	41.765	0.367	1402.85	0.054	41.711	0.13	0.853	50.00	2.07
26	221.70	0.222	41.782	0.360	1402.85	0.053	41.729	0.13	0.849	50.00	2.15
27	221.71	0.222	41.795	0.352	1402.85	0.052	41.743	0.12	0.849	50.00	2.25
28	221.74	0.222	41.803	0.343	1402.82	0.050	41.753	0.12	0.849	50.00	2.32
29	221.76	0.221	41.806	0.285	1402.83	0.042	41.764	0.10	0.853	50.00	2.40
30	221.77	0.221	41.806	0.258	1402.77	0.038	41.768	0.09	0.853	50.00	2.48
31	221.78	0.221	41.808	0.246	1402.75	0.036	41.772	0.09	0.853	50.00	2.56
32	221.79	0.221	41.815	0.210	1402.64	0.031	41.784	0.07	0.853	50.00	2.64
33	221.80	0.222	41.825	0.188	1402.63	0.028	41.797	0.07	0.849	50.00	2.72
34	221.80	0.222	41.832	0.135	1402.49	0.020	41.812	0.05	0.850	50.00	2.79
35	221.80	0.222	41.833	0.119	1402.45	0.017	41.816	0.04	0.850	50.00	2.89
36	221.79	0.222	41.833	0.127	1402.30	0.019	41.814	0.05	0.850	50.00	2.96
37	221.77	0.222	41.833	0.148	1402.25	0.022	41.811	0.05	0.850	50.00	3.04
38	221.75	0.222	41.825	0.176	1402.04	0.026	41.799	0.06	0.850	50.00	3.12
39	221.72	0.221	41.813	0.229	1401.97	0.034	41.779	0.08	0.853	50.00	3.20
40	221.68	0.221	41.801	0.301	1401.71	0.044	41.757	0.11	0.853	50.00	3.28
41	221.65	0.220	41.791	0.420	1401.58	0.062	41.729	0.15	0.857	50.00	3.35
42	221.65	0.220	41.788	0.546	1401.29	0.080	41.708	0.19	0.857	50.00	3.43

43	221.65	0.219	41.790	0.689	1401.13	0.101	41.689	0.24	0.861	50.00	3.53
44	221.64	0.219	41.790	0.814	1400.80	0.119	41.671	0.29	0.861	50.00	3.60
45	221.65	0.219	41.796	1.002	1400.58	0.147	41.649	0.35	0.861	50.00	3.68
46	221.66	0.219	41.810	1.153	1400.24	0.169	41.641	0.40	0.861	50.00	3.76
47	221.68	0.219	41.830	1.329	1399.93	0.195	41.635	0.47	0.862	50.00	3.84
48	221.71	0.219	41.852	1.510	1399.62	0.221	41.631	0.53	0.862	50.00	3.92
49	221.74	0.219	41.872	1.679	1399.25	0.246	41.626	0.59	0.862	50.00	3.99
50	221.76	0.219	41.888	1.862	1398.90	0.273	41.615	0.65	0.862	50.00	4.09
51	221.77	0.219	41.903	2.070	1398.38	0.303	41.600	0.72	0.863	50.00	4.17
52	221.77	0.219	41.916	2.315	1398.05	0.339	41.577	0.81	0.863	50.00	4.24
53	221.77	0.219	41.930	2.568	1397.42	0.376	41.554	0.90	0.863	50.00	4.32
54	221.77	0.219	41.946	2.880	1396.95	0.421	41.525	1.00	0.864	50.00	4.40
55	221.78	0.218	41.964	3.185	1396.18	0.466	41.498	1.11	0.868	50.00	4.48
56	221.78	0.218	41.982	3.594	1395.55	0.525	41.457	1.25	0.868	50.00	4.56
57	221.78	0.217	41.996	4.036	1394.64	0.589	41.407	1.40	0.873	50.00	4.63
58	221.75	0.217	42.006	4.541	1393.72	0.663	41.343	1.58	0.873	50.00	4.73
59	221.73	0.217	42.014	5.103	1392.74	0.744	41.270	1.77	0.873	50.00	4.81
60	221.73	0.217	42.027	5.746	1391.42	0.837	41.190	1.99	0.873	50.00	4.88
61	221.72	0.217	42.040	6.478	1390.10	0.943	41.097	2.24	0.874	50.00	4.96
62	221.71	0.217	42.054	7.294	1388.44	1.061	40.993	2.52	0.874	50.00	5.04
63	221.69	0.217	42.076	8.275	1386.66	1.202	40.874	2.86	0.875	50.00	5.12
64	221.67	0.217	42.101	9.347	1384.53	1.355	40.746	3.22	0.875	50.00	5.20
65	221.66	0.217	42.142	10.570	1382.18	1.530	40.612	3.63	0.876	50.00	5.27
66	221.66	0.217	42.196	11.916	1379.50	1.721	40.475	4.08	0.877	50.00	5.37
67	221.67	0.217	42.260	13.406	1376.53	1.932	40.328	4.57	0.879	50.00	5.45
68	221.67	0.217	42.332	15.020	1373.30	2.160	40.172	5.10	0.880	50.00	5.52
69	221.68	0.217	42.413	16.778	1369.60	2.406	40.007	5.67	0.882	50.00	5.60
70	221.68	0.217	42.502	18.678	1365.64	2.671	39.831	6.28	0.884	50.00	5.68
71	221.68	0.217	42.592	20.704	1361.38	2.952	39.640	6.93	0.885	50.00	5.76
72	221.67	0.217	42.688	22.836	1356.71	3.244	39.444	7.60	0.887	50.00	5.83
73	221.66	0.217	42.791	25.109	1351.72	3.554	39.237	8.31	0.890	50.00	5.91
74	221.65	0.217	42.911	27.498	1346.32	3.877	39.034	9.04	0.892	50.00	6.01
75	221.66	0.217	43.046	29.999	1340.51	4.211	38.835	9.78	0.895	50.00	6.08
76	221.66	0.217	43.191	32.596	1334.38	4.555	38.636	10.55	0.898	50.00	6.16
77	221.67	0.217	43.343	35.270	1327.94	4.905	38.438	11.32	0.901	50.00	6.24
78	221.68	0.217	43.503	38.038	1321.01	5.262	38.241	12.10	0.904	50.00	6.32
79	221.69	0.217	43.679	40.861	1313.74	5.621	38.058	12.87	0.908	50.00	6.40
80	221.72	0.217	43.879	43.740	1306.07	5.982	37.897	13.63	0.912	50.00	6.48
81	221.75	0.217	44.096	46.625	1297.98	6.337	37.759	14.37	0.916	50.00	6.55
82	221.77	0.217	44.319	49.543	1289.50	6.690	37.629	15.10	0.921	50.00	6.65
83	221.76	0.217	44.549	52.447	1280.51	7.033	37.516	15.79	0.926	50.00	6.73
84	221.75	0.217	44.789	55.367	1271.07	7.370	37.419	16.46	0.931	50.00	6.80
85	221.74	0.217	45.042	58.254	1261.11	7.693	37.349	17.08	0.936	50.00	6.88
86	221.72	0.217	45.314	61.090	1250.66	8.001	37.313	17.66	0.942	50.00	6.96
87	221.70	0.217	45.605	63.848	1239.56	8.288	37.317	18.17	0.948	50.00	7.04

88	221.66	0.218	45.909	66.538	1227.91	8.556	37.353	18.64	0.950	50.00	7.11
89	221.62	0.219	46.221	69.142	1215.69	8.802	37.419	19.04	0.952	50.00	7.19
90	221.59	0.220	46.548	71.636	1202.93	9.024	37.524	19.39	0.955	50.00	7.29
91	221.57	0.222	46.898	73.983	1189.44	9.215	37.683	19.65	0.953	50.00	7.36
92	221.57	0.223	47.273	76.155	1175.21	9.372	37.901	19.83	0.957	50.00	7.44
93	221.57	0.225	47.667	78.153	1160.23	9.496	38.171	19.92	0.956	50.00	7.52
94	221.57	0.226	48.077	79.908	1144.47	9.577	38.500	19.92	0.960	50.00	7.60
95	221.58	0.227	48.500	81.461	1127.97	9.622	38.878	19.84	0.964	50.00	7.68
96	221.60	0.229	48.936	82.793	1110.56	9.629	39.307	19.68	0.964	50.00	7.75
97	221.61	0.230	49.385	83.760	1092.07	9.579	39.806	19.40	0.969	50.00	7.85
98	221.62	0.232	49.848	84.432	1072.38	9.482	40.366	19.02	0.970	50.00	7.92
99	221.63	0.234	50.316	84.758	1051.61	9.334	40.982	18.55	0.970	50.00	8.00
100	221.65	0.236	50.785	84.716	1029.66	9.135	41.650	17.99	0.971	50.00	8.08
101	221.65	0.238	51.249	84.282	1006.17	8.880	42.369	17.33	0.972	50.00	8.16
102	221.64	0.240	51.712	83.480	981.18	8.578	43.134	16.59	0.972	50.00	8.24
103	221.62	0.242	52.162	82.177	954.38	8.213	43.949	15.75	0.973	50.00	8.31
104	221.59	0.244	52.594	80.352	925.73	7.789	44.805	14.81	0.973	50.00	8.39
105	221.56	0.246	53.010	78.173	895.38	7.330	45.680	13.83	0.973	50.00	8.49
106	221.54	0.248	53.399	75.590	863.62	6.836	46.563	12.80	0.972	50.00	8.60
107	221.52	0.250	53.759	72.486	828.86	6.292	47.467	11.70	0.971	50.00	8.72
108	221.49	0.251	54.079	68.832	790.15	5.695	48.384	10.53	0.973	50.00	8.85
109	221.46	0.253	54.361	64.895	749.05	5.090	49.271	9.36	0.970	50.00	8.96
110	221.44	0.254	54.600	60.912	706.70	4.508	50.092	8.26	0.971	50.00	9.08
111	221.43	0.255	54.813	57.117	663.70	3.970	50.843	7.24	0.971	50.00	9.24
112	221.42	0.257	54.998	53.621	620.29	3.483	51.515	6.33	0.966	50.00	9.41
113	221.41	0.258	55.176	50.494	576.05	3.046	52.130	5.52	0.966	50.00	9.56
114	221.40	0.259	55.353	47.791	530.99	2.657	52.696	4.80	0.965	50.00	9.77
115	221.41	0.259	55.544	45.741	486.02	2.328	53.216	4.19	0.969	50.00	9.95
116	221.43	0.261	55.771	44.351	441.66	2.051	53.720	3.68	0.965	50.00	10.16
117	221.45	0.262	56.028	43.372	395.99	1.799	54.229	3.21	0.966	50.00	10.36
118	221.47	0.263	56.314	41.762	343.39	1.502	54.812	2.67	0.967	50.00	10.56
119	221.49	0.264	56.617	39.758	286.10	1.191	55.426	2.10	0.968	50.00	10.76
120	221.53	0.264	56.898	38.058	227.54	0.907	55.991	1.59	0.973	50.00	10.97
121	221.54	0.265	57.132	36.573	174.39	0.668	56.464	1.17	0.973	50.00	11.15
122	221.53	0.265	57.325	35.158	126.49	0.466	56.859	0.81	0.976	50.00	11.36
123	221.50	0.266	57.466	33.816	84.67	0.300	57.166	0.52	0.975	50.00	11.56
124	221.47	0.266	57.557	32.651	49.49	0.169	57.388	0.29	0.977	50.00	11.76
125	221.47	0.267	57.617	31.711	21.76	0.072	57.545	0.13	0.974	50.00	11.97
126	221.48	0.267	57.636	31.842	6.09	0.020	57.616	0.04	0.975	50.00	12.15
127	221.48	0.267	57.620	32.704	0.00	0.000	57.620	0.00	0.974	50.00	12.36