

TYPE TEST REPORT

Report No. : IE3-80M2-2 1.1KW 15042201

Product Type Name	IE3-80M2-2 Three Phase Asynchronous Motor			Ser.No.	
Rated Output	1.1 kW	Rated Voltage	400 V	Rated Current	2.3 A
Rated Speed	2890 r/min	Rated Frequency	50Hz	Insulation Class	F
Duty	S1	Protection Class	IP55	Connection	Y
Product Standard	IEC60034-1	Testing Standard	IEC60034-2-1	Production Date	
Test Item		Test Value		Test Result	
1. Stator resistance at 20°C	Ω	9.6826			
2. No load current	A	1.30			
3. No load current deviation	%	2.0			
4. No load input power	W	106.4			
5. Locked rotor current	A	17.99			
6. Locked current/Rated current		7.69			
7. Locked torque	N.m	10.36			
8. Locked torque/Rated torque		2.86			
9. Full load current	A	2.34			
10. Rated torque	N.m	3.63			
11. Max. torque	N.m	11.13			
12. Max. torque/Rated torque		3.07			
13. Full load speed ratio	r/min	2894.9			
14. Iron loss(at Rated voltage)	W	51.6			
15. Mechanical loss(at Rated speed)	W	28.2			
16. Stator winding loss	W	94.7			
17. Rotor winding loss	W	44.3			
18. Other loss	W	8.3			
19. Total loss	W	229.6			
20. Output power	W	1100			

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Test Ite		Test Value	Test Result
21. Input power	W	1329.61	
22. Full load efficiency	%	82.73	
23. Full Load power factor		0.822	
24. Stator winding temp.rise	K	46.3	
25. Bearing temperature	°C		
26. Coolant temperature	°C	18.6	
27. Insulation resistance warmly to frame	MΩ		
28. High voltage test	V min	Pass	Passed
29. Vibration	mm/s		
30. Noise	dB(A)		
31. Rotation Direction		Right	Passed
32. H.V. inpulse test between winding	V	Pass	Passed
33. Over speed test 2min 1.2n		No abnormal	Passed
34. Over Torque test 15s 2.2Tn		No abnormal	Passed
35. Over current test 2min 1.5In		No abnormal	Passed
Testing Conclusion			
Remark			
Tested by		Checked by	
		Formed	

three-phase induction motor type test report

Amb Temp: 19.26°C report NO.: IE3-80M2-2 1.1KW 15042201 test time:

Modle: IE3-80M2-2	Rated U: 400V	Rated η : 82.70%	InsClass: F
NO.:	Rated I: 2.3A	Cos ϕ : 0.83	Connect: Y
Rated f: 50Hz	Rated P: 1.1kW	Rated speed: 2890r/min	Poles: 2

Resistance test

Rac (Ω): 9.6220 Rbc (Ω): 9.6530 Rab (Ω): 9.6360

Ravg (Ω): 9.6370	Shell Temp ($^{\circ}$ C): 18.8
115 $^{\circ}$ C R (Ω): 13.3013	Amb Temp ($^{\circ}$ C): 18.58
25 $^{\circ}$ C R (Ω): 9.8810	

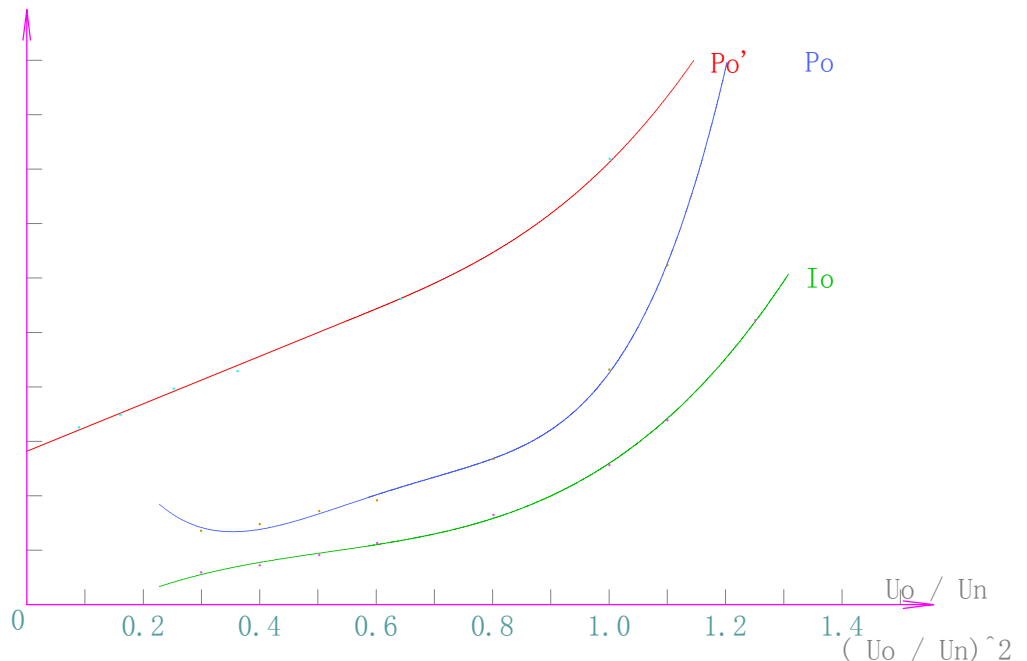
No-load test

U*	U (V)	I (A)	Po (kW)	Po' (kW)	Pcu (kW)	WindingT ($^{\circ}$ C)
1.25	500.4	2.61	0.3130	0.2050	0.1080	42.50
1.10	440.0	1.69	0.1560	0.1105	0.0455	43.05
1.00	400.2	1.28	0.1080	0.0819	0.0261	43.05
0.80	320.6	0.83	0.0670	0.0562	0.0108	43.17
0.60	240.6	0.57	0.0480	0.0429	0.0051	43.17
0.50	200.9	0.46	0.0430	0.0397	0.0033	42.88
0.40	160.1	0.36	0.0370	0.0349	0.0021	42.88
0.30	119.8	0.30	0.0340	0.0326	0.0014	42.00

Thermal R (Ω): 10.5740	Shell Temp ($^{\circ}$ C): 40.7
Io (A): 1.30	Io (kW): 0.1064
Pm (kW): 0.0282	Pfe (kW): 0.0516

No Load Characteristic Curve

Io	Po	Po'
A	kW	kW
5.0	0.250	0.10
4.5	0.225	0.09
4.0	0.200	0.08
3.5	0.175	0.07
3.0	0.150	0.06
2.5	0.125	0.05
2.0	0.100	0.04
1.5	0.075	0.03
1.0	0.050	0.02
0.5	0.025	0.01



test:

check:

three-phase induction motor type test report

Amb Temp: 18.6°C

report NO.: IE3-80M2-2 1.1KW 15042201

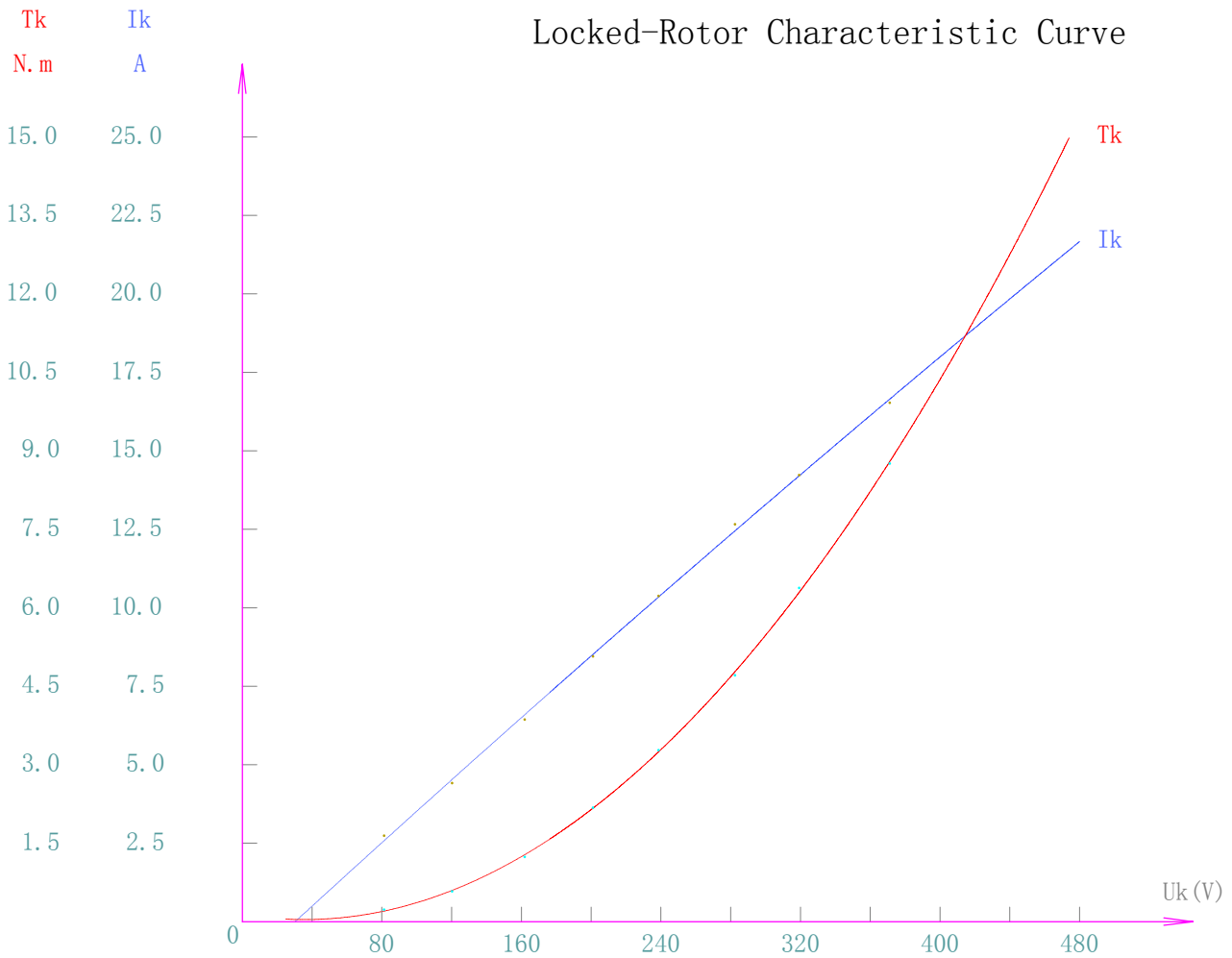
test time:

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Rated f: 50Hz	Rated P: 1.1kW	Rated speed: 2890r/min	Poles: 2

Locked-rotor Test

U (V)	I (A)	P1 (KW)	Tor (N. m)
371.2	16.54	8.1400	8.76
319.2	14.23	5.8050	6.38
282.5	12.66	4.3900	4.71
238.7	10.38	2.9140	3.28
201.0	8.46	1.9120	2.18
161.9	6.44	1.1060	1.24
120.3	4.42	0.5240	0.58
81.3	2.74	0.2050	0.23

Ik (A): 17.99	Ik/In: 7.69
Tk (N. m): 10.36	Tk/Tn: 2.86
Pk (kW): 9.36	



test:

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Amb Temp: 18.6°C

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test time:

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Rated f: 50Hz	Rated P: 1.1kW	Rated speed: 2890r/min	Poles: 2

Load Test

P1 (kW)	U (V)	I (A)	s (r/min)	Tor (N.m)	windingT(°C)
2.1080	400.8	3.54	2818.0	5.630	48.52
1.7400	400.3	2.91	2854.0	4.680	50.17
1.3860	401.2	2.42	2890.0	3.690	50.60
1.0560	401.4	2.03	2920.0	2.770	50.77
0.7380	402.1	1.64	2948.0	1.830	50.37
0.4140	403.2	1.41	2974.0	0.860	49.02
0.1640	399.9	1.28	2993.0	0.100	47.14
0.1100	401.9	1.29	0.0	0.000	43.71

P2 (kW)	Pcu (kW)	Pal (kW)	Ps (kW)	Ss (%)	η (%)	Cos ϕ
1.6672	0.2196	0.1207	0.0207	6.57	79.09	0.857
1.4175	0.1476	0.0807	0.0144	5.24	81.46	0.864
1.1458	0.1028	0.0486	0.0090	3.94	82.67	0.823
0.8723	0.0720	0.0267	0.0051	2.87	82.60	0.748
0.5970	0.0470	0.0119	0.0023	1.87	80.90	0.647
0.2959	0.0346	0.0031	0.0006	0.94	71.48	0.421
0.0000	0.0000	0.0000	0.0000	0.00	0.00	0.000
0.0000	0.0000	0.0000	0.0000	0.00	0.00	0.000

r; 0.914

A: 0.637

B: 11.641

θ_s (°C): 71.3

150% rated power:

I (A): 3.49	P1 (kW): 2.0808	Ss (%): 5.98
Pcu (kW): 0.2426	Pal (kW): 0.1069	Ps (kW): 0.0202
η (%): 79.30	Cos ϕ : 0.861	P2 (kW): 1.65

125% rated power:

I (A): 2.85	P1 (kW): 1.6821	Ss (%): 4.66
Pcu (kW): 0.1615	Pal (kW): 0.0685	Ps (kW): 0.0135
η (%): 81.74	Cos ϕ : 0.853	P2 (kW): 1.38

100% rated power:

I (A): 2.34	P1 (kW): 1.3296	Ss (%): 3.50
Pcu (kW): 0.1089	Pal (kW): 0.0410	Ps (kW): 0.0083
η (%): 82.73	Cos ϕ : 0.822	P2 (kW): 1.10

75% rated power:

I (A): 1.94	P1 (kW): 1.0001	Ss (%): 2.49
Pcu (kW): 0.0748	Pal (kW): 0.0217	Ps (kW): 0.0045
η (%): 82.49	Cos ϕ : 0.745	P2 (kW): 0.83

50% rated power:

I (A): 1.63	P1 (kW): 0.6855	Ss (%): 1.59
Pcu (kW): 0.0527	Pal (kW): 0.0093	Ps (kW): 0.0020
η (%): 80.23	Cos ϕ : 0.609	P2 (kW): 0.55

25% rated power:

I (A): 1.38	P1 (kW): 0.3929	Ss (%): 0.81
Pcu (kW): 0.0380	Pal (kW): 0.0025	Ps (kW): 0.0005
η (%): 70.00	Cos ϕ : 0.411	P2 (kW): 0.28

