

TYPE TEST REPORT

Report No. : IE3-80M2-4 0.75KW 15042202

Product Type Name	IE3-80M2-4 Three Phase Asynchronous Motor			Ser.No.	
Rated Output	0.75 kW	Rated Voltage	400 V	Rated Current	1.75 A
Rated Speed	1430 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	12.4109			
2. No load current	A	1.06			
3. No load current deviation	%	4.1			
4. No load input power	W	60.5			
5. Locked rotor current	A	10.56			
6. Locked current/Rated current		5.93			
7. Locked torque	N.m	12.41			
8. Locked torque/Rated torque		2.49			
9. Full load current	A	1.78			
10. Rated torque	N.m	4.98			
11. Max. torque	N.m	13.93			
12. Max. torque/Rated torque		2.80			
13. Full load speed ratio	r/min	1438.3			
14. Iron loss(at Rated voltage)	W	29.3			
15. Mechanical loss(at Rated speed)	W	9.3			
16. Stator winding loss	W	67.5			
17. Rotor winding loss	W	34.6			
18. Other loss	W	15.6			
19. Total loss	W	156.2			
20. Output power	W	750			

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Test Item		Test Value	Test Result			
21. Input power	W	906.23				
22. Full load efficiency	%	82.76				
23. Full Load power factor		0.735				
24. Stator winding temp.rise	K	31.3				
25. Bearing temperature	℃					
26. Coolant temperature	℃	19.9				
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. impulse 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						
Testing Conclusion						
Remark						
Tested by		Checked by		Formed		

three-phase induction motor type test report

Amb Temp: 20.17°C report NO.: IE3-80M2-4 0.75KW 15042202 test time:

Modle: IE3-80M2-4	Rated U: 400V	Rated η : 82.50%	InsClass: F
NO.:	Rated I: 1.75A	Cos ϕ : 0.75	Connect: Y
Rated f: 50Hz	Rated P: 0.75kW	Rated speed: 1430r/min	Poles: 4

Resistance test

Rac (Ω): 12.4180 Rbc (Ω): 12.4550 Rab (Ω): 12.3890

Ravg (Ω): 12.4207 Shell Temp ($^{\circ}$ C): 20.2
 115 $^{\circ}$ C R (Ω): 17.0520 Amb Temp ($^{\circ}$ C): 19.94
 25 $^{\circ}$ C R (Ω): 12.6672

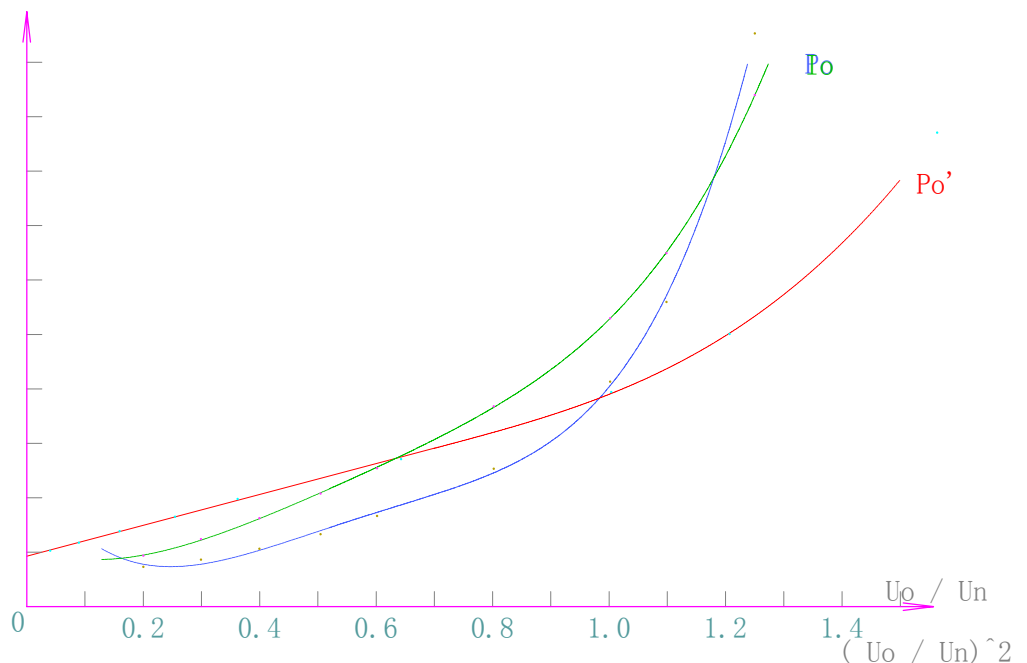
Noload test

U*	U (V)	I (A)	Po (kW)	Po' (kW)	Pcu (kW)	WindingT ($^{\circ}$ C)
1.25	500.1	1.88	0.1580	0.0871	0.0709	39.50
1.10	439.4	1.30	0.0840	0.0501	0.0339	39.73
1.00	400.7	1.06	0.0620	0.0394	0.0226	39.73
0.80	320.7	0.74	0.0380	0.0271	0.0109	39.73
0.60	240.7	0.51	0.0250	0.0198	0.0052	39.73
0.50	201.8	0.42	0.0200	0.0165	0.0035	39.55
0.40	159.7	0.33	0.0160	0.0139	0.0021	39.55
0.30	119.7	0.25	0.0130	0.0118	0.0012	38.85
0.20	80.2	0.19	0.0110	0.0103	0.0007	38.73

Thermal R (Ω): 13.4300 Shell Temp ($^{\circ}$ C): 34.0
 Io (A): 1.06 Io (kW): 0.0605
 Pm (kW): 0.0093 Pfe (kW): 0.0293

No Load Characteristic Curve

Io	Po	Po'
A	kW	kW
2.0	0.150	0.10
1.8	0.135	0.09
1.6	0.120	0.08
1.4	0.105	0.07
1.2	0.090	0.06
1.0	0.075	0.05
0.8	0.060	0.04
0.6	0.045	0.03
0.4	0.030	0.02
0.2	0.015	0.01



test:

check:

three-phase induction motor type test report

Amb Temp: 19.9°C

report NO.: IE3-80M2-4 0.75KW 15042202

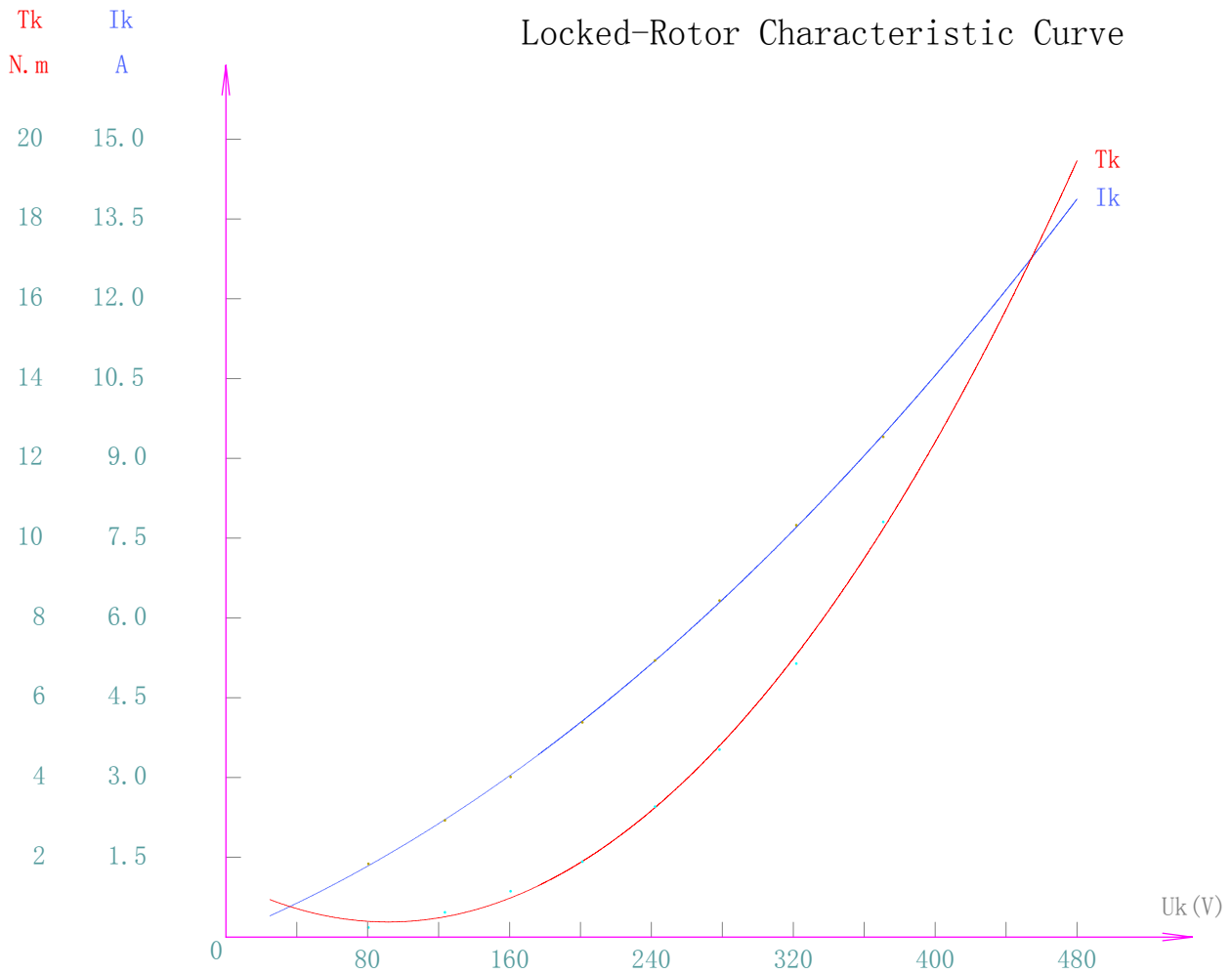
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Locked-rotor Test

U (V)	I (A)	P1 (KW)	Tor (N. m)
370.7	9.41	3.4420	10.41
321.7	7.74	2.3360	6.86
278.4	6.33	1.5680	4.70
242.1	5.20	1.0740	3.27
201.0	4.04	0.6560	1.89
160.6	3.01	0.3700	1.15
123.5	2.19	0.1990	0.62
80.5	1.38	0.0780	0.24

Ik (A): 10.56	Ik/In: 5.93
Tk (N. m): 12.41	Tk/Tn: 2.49
Pk (kW): 3.83	



test:

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Load Test

P1 (kW)	U (V)	I (A)	s (r/min)	Tor (N.m)	windingT(°C)
1.4380	400.9	2.59	1391.0	7.720	43.05
1.1700	402.8	2.16	1416.0	6.370	44.00
0.9120	401.6	1.79	1438.0	5.000	44.20
0.6600	401.4	1.47	1457.0	3.580	44.05
0.4670	401.6	1.27	1471.0	2.440	43.54
0.2560	401.9	1.11	1486.0	1.160	43.08
0.0820	407.7	1.10	1498.0	0.080	41.97
0.0630	403.2	1.07	0.0	0.000	40.29

P2 (kW)	Pcu (kW)	Pal (kW)	Ps (kW)	Ss (%)	η (%)	Cos ϕ
1.1218	0.1436	0.0965	0.0375	7.63	78.01	0.798
0.9450	0.0999	0.0610	0.0256	5.86	80.77	0.775
0.7538	0.0686	0.0352	0.0158	4.32	82.66	0.731
0.5499	0.0459	0.0175	0.0081	3.00	83.31	0.648
0.3823	0.0342	0.0082	0.0038	2.03	81.85	0.531
0.1880	0.0265	0.0020	0.0009	0.98	73.45	0.330
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; 0.996

A: 0.623

B: 2.198

θ_s (°C): 56.3

150% rated power:

I (A): 2.60	P1 (kW): 1.4427	Ss (%): 7.30
Pcu (kW): 0.1729	Pal (kW): 0.0906	Ps (kW): 0.0377
η (%): 77.98	Cos ϕ : 0.801	P2 (kW): 1.13

125% rated power:

I (A): 2.15	P1 (kW): 1.1603	Ss (%): 5.54
Pcu (kW): 0.1185	Pal (kW): 0.0561	Ps (kW): 0.0252
η (%): 80.80	Cos ϕ : 0.778	P2 (kW): 0.94

100% rated power:

I (A): 1.78	P1 (kW): 0.9062	Ss (%): 4.11
Pcu (kW): 0.0811	Pal (kW): 0.0327	Ps (kW): 0.0156
η (%): 82.76	Cos ϕ : 0.735	P2 (kW): 0.75

75% rated power:

I (A): 1.48	P1 (kW): 0.6747	Ss (%): 2.93
Pcu (kW): 0.0563	Pal (kW): 0.0173	Ps (kW): 0.0085
η (%): 83.37	Cos ϕ : 0.657	P2 (kW): 0.56

50% rated power:

I (A): 1.26	P1 (kW): 0.4596	Ss (%): 1.90
Pcu (kW): 0.0407	Pal (kW): 0.0074	Ps (kW): 0.0037
η (%): 81.59	Cos ϕ : 0.526	P2 (kW): 0.38

25% rated power:

I (A): 1.11	P1 (kW): 0.2552	Ss (%): 0.93
Pcu (kW): 0.0317	Pal (kW): 0.0018	Ps (kW): 0.0009
η (%): 73.48	Cos ϕ : 0.331	P2 (kW): 0.19

