

TYPE TEST REPORT

Report No. : IE3-80M1-2 0.75KW 15042102

Product Type Name	IE3-80M1-2 Three Phase Asynchronous Motor			Ser.No.	
Rated Output	0.75 kW	Rated Voltage	400 V	Rated Current	1.64 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	Eligibility Value		Test Value	Test Result	
	Standard	Tolerance			
1. Stator resistance at 20°C	Ω		13.9800		
2. No load current	A		0.89		
3. No load current deviation	%		1.6		
4. No load input power	W		78.0		
5. Locked rotor current	A		13.03		
6. Locked current/Rated current			7.90		
7. Locked torque	N.m		7.39		
8. Locked torque/Rated torque			3.00		
9. Full load current	A		1.65		
10. Rated torque	N.m		2.47		
11. Max. torque	N.m		7.62		
12. Max. torque/Rated torque			3.09		
13. Full load speed ratio	r/min		2904.2		
14. Iron loss(at Rated voltage)	W		34.7		
15. Mechanical loss(at Rated speed)	W		25.7		
16. Stator winding loss	W		66.0		
17. Rotor winding loss	W		27.8		
18. Other loss	W		23.3		
19. Total loss	W		177.6		
20. Output power	W		750		

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Test Item	Eligibility Value		Test Value	Test Result	
	Standard	Tolerance			
21. Input power	W		927.63		
22. Full load efficiency	%		80.85		
23. Full Load power factor			0.809		
24. Stator winding temp.rise	K		32.5		
25. Bearing temperature	°C				
26. Coolant temperature	°C		19.6		
27. Insulation resistance warmly to frame	MΩ				
28. High voltage test	V min	1760	Pass	Passed	
29. Vibration	mm/s				
30. Noise	dB(A)				
31. Rotation Direction		Clockwise	Right	Passed	
32. H.V. impulse test between winding	V	2600	Pass	Passed	
33. Over speed test 2min 1.2n		No abnormal	No abnormal	Passed	
34. Over Torque test 15s 2.2Tn		No abnormal	No abnormal	Passed	
35. Over current test 2min 1.5In		No abnormal	No abnormal	Passed	
Testing Conclusion					
Remark					
Tested by		Checked by		Formed	

three-phase induction motor type test report

Amb Temp: 19.79°C report NO.: IE3-80M1-2 0.75KW 15042102 test time:

Modle: IE3-80M1-2	Rated U: 400V	Rated η : 80.70%	InsClass: F
NO.:	Rated I: 1.64A	Cos ϕ : 0.82	Connect: Y
Rated f: 50Hz	Rated P: 0.75kW	Rated speed: 2890r/min	Poles: 2

Resistance test

Rac (Ω): 13.9810 Rbc (Ω): 13.9920 Rab (Ω): 13.9340

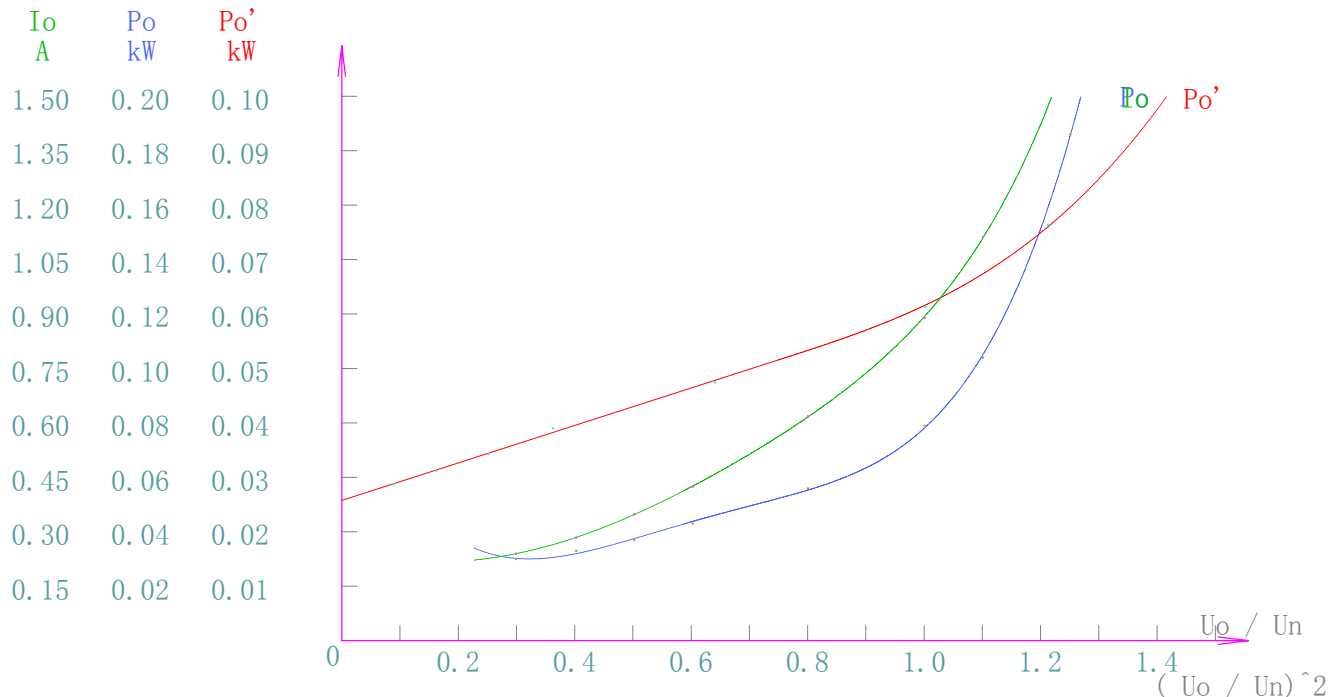
Ravg (Ω): 13.9690	Shell Temp ($^{\circ}$ C): 19.8
115 $^{\circ}$ C R (Ω): 19.2025	Amb Temp ($^{\circ}$ C): 19.61
25 $^{\circ}$ C R (Ω): 14.2647	

No-load test

U*	U (V)	I (A)	Po (kW)	Po' (kW)	Pcu (kW)	WindingT ($^{\circ}$ C)
1.25	500.5	1.64	0.1860	0.1262	0.0598	35.79
1.10	440.5	1.11	0.1040	0.0764	0.0276	35.79
1.00	400.4	0.89	0.0790	0.0613	0.0177	36.29
0.80	320.2	0.62	0.0560	0.0475	0.0085	36.29
0.60	241.0	0.42	0.0430	0.0390	0.0040	36.26
0.50	200.8	0.35	0.0370	0.0343	0.0027	36.26
0.40	161.0	0.28	0.0330	0.0312	0.0018	36.05
0.30	119.6	0.24	0.0300	0.0287	0.0013	36.05

Thermal R (Ω): 14.8810	Shell Temp ($^{\circ}$ C): 29.6
Io (A): 0.89	Io (kW): 0.0780
Pm (kW): 0.0257	Pfe (kW): 0.0347

No Load Characteristic Curve



three-phase induction motor type test report

Amb Temp: 19.6°C

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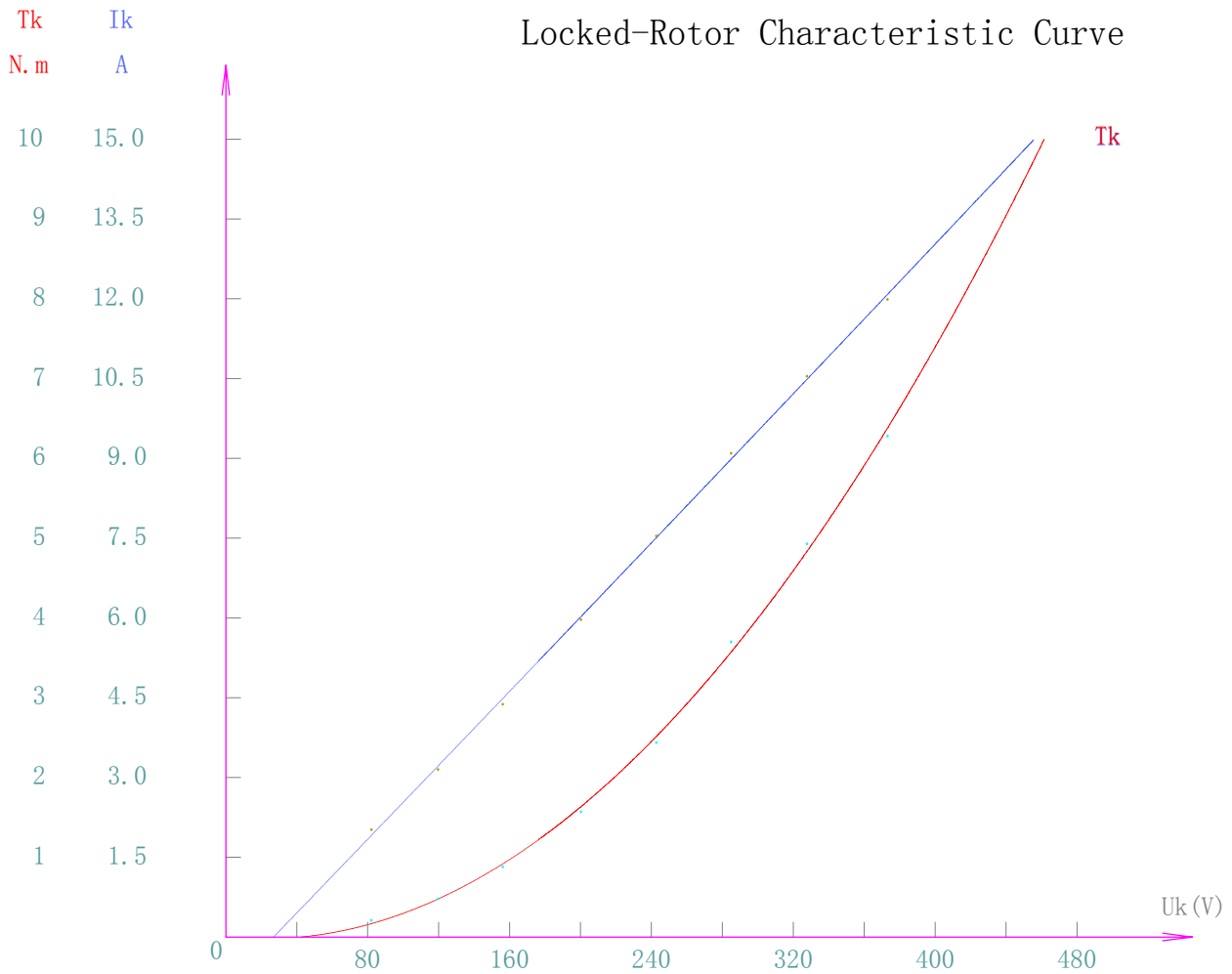
test time:

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Locked-rotor Test

U (V)	I (A)	P1 (KW)	Tor (N. m)
373.1	11.99	5.8600	6.28
327.7	10.55	4.3750	4.93
284.9	9.10	3.1640	3.70
242.8	7.54	2.1540	2.44
200.2	5.97	1.3400	1.57
156.2	4.38	0.7230	0.88
119.7	3.15	0.3760	0.48
82.1	2.02	0.1550	0.21

Ik (A): 13.03	Ik/In: 7.90
Tk (N. m): 7.39	Tk/Tn: 3.00
Pk (kW): 6.66	



test:

check:

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test time:

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NO.:	Rated I: 1.64A	$\cos \phi$: 0.82	Connect: Y
Rated f: 50Hz	Rated P: 0.75kW	Rated speed: 2890r/min	Poles: 2

Load Test

P1 (kW)	U (V)	I (A)	s (r/min)	Tor (N.m)	windingT(°C)
1.5560	402.8	2.54	2827.0	4.000	40.55
1.2030	400.3	2.04	2872.0	3.110	41.20
0.9730	401.9	1.71	2898.0	2.510	42.38
0.7310	400.4	1.41	2927.0	1.850	42.14
0.5020	399.8	1.15	2953.0	1.200	41.34
0.2960	400.2	0.97	2975.0	0.610	40.79
0.1270	399.8	0.89	2992.0	0.070	39.38
0.0800	400.9	0.89	0.0	0.000	36.76

P2 (kW)	Pcu (kW)	Pal (kW)	Ps (kW)	Ss (%)	η (%)	$\cos \phi$
1.1921	0.1558	0.0838	0.0639	6.13	76.61	0.877
0.9552	0.1000	0.0484	0.0391	4.53	79.40	0.852
0.7848	0.0709	0.0312	0.0258	3.59	80.66	0.815
0.5920	0.0476	0.0167	0.0143	2.57	80.98	0.750
0.3963	0.0318	0.0072	0.0063	1.66	78.95	0.632
0.2088	0.0229	0.0021	0.0018	0.89	70.53	0.438
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; 0.987

A: 3.841

B: 1.311

θ_s (°C): 57.5

150% rated power:

I (A): 2.39	P1 (kW): 1.4520	Ss (%): 5.32
Pcu (kW): 0.1648	Pal (kW): 0.0666	Ps (kW): 0.0562
η (%): 77.48	$\cos \phi$: 0.876	P2 (kW): 1.13

125% rated power:

I (A): 2.00	P1 (kW): 1.1786	Ss (%): 4.19
Pcu (kW): 0.1154	Pal (kW): 0.0431	Ps (kW): 0.0376
η (%): 79.54	$\cos \phi$: 0.850	P2 (kW): 0.94

100% rated power:

I (A): 1.65	P1 (kW): 0.9276	Ss (%): 3.19
Pcu (kW): 0.0789	Pal (kW): 0.0260	Ps (kW): 0.0233
η (%): 80.85	$\cos \phi$: 0.809	P2 (kW): 0.75

75% rated power:

I (A): 1.36	P1 (kW): 0.6954	Ss (%): 2.30
Pcu (kW): 0.0533	Pal (kW): 0.0140	Ps (kW): 0.0129
η (%): 80.89	$\cos \phi$: 0.738	P2 (kW): 0.56

50% rated power:

I (A): 1.13	P1 (kW): 0.4784	Ss (%): 1.49
Pcu (kW): 0.0365	Pal (kW): 0.0061	Ps (kW): 0.0057
η (%): 78.39	$\cos \phi$: 0.613	P2 (kW): 0.38

25% rated power:

I (A): 0.96	P1 (kW): 0.2731	Ss (%): 0.75
Pcu (kW): 0.0265	Pal (kW): 0.0016	Ps (kW): 0.0014
η (%): 68.67	$\cos \phi$: 0.411	P2 (kW): 0.19

Load Characteristic Curve

Report No. : IE3-80M1-2 0.75KW 15042102 When P2 = 0.75 kW ,
 Model : IE3-80M1-2 I1 = 1.65 A
 Rated Output: 0.75 kW P1 = 0.9276 kW
 Ser. No. : Sref = 3.19 %
 η = 80.85 %
 Cos φ = 0.809

cos φ	η	Sref	P1	I1
	%	%	kW	A
1.0	100	5.0	1.50	2.50
0.9	90	4.5	1.35	2.25
0.8	80	4.0	1.20	2.00
0.7	70	3.5	1.05	1.75
0.6	60	3.0	0.90	1.50
0.5	50	2.5	0.75	1.25
0.4	40	2.0	0.60	1.00
0.3	30	1.5	0.45	0.75
0.2	20	1.0	0.30	0.50
0.1	10	0.5	0.15	0.25

