

TYPE TEST REPORT

Report No. : IE3-132S-4 5.5KW 15052101

Product Type Name	IE3-132S-4 Three Phase Asynchronous Motor			Ser.No.	
Rated Output	5.5 kW	Rated Voltage	400 V	Rated Current	10.7 A
Rated Speed	1470 r/min	Rated Frequency	50Hz	Insulation Class	F
Duty	S1	Protection Class	IP55	Connection	△
Product Standard	IEC60034-1	Testing Standard	IEC60034-2-1	Production Date	
Test Item		Test Value		Test Result	
1. Stator resistance at 20°C	Ω	1.1305			
2. No load current	A	4.10			
3. No load current deviation	%	3.1			
4. No load input power	W	229.2			
5. Locked rotor current	A	80.84			
6. Locked current/Rated current		7.57			
7. Locked torque	N.m	80.32			
8. Locked torque/Rated torque		2.24			
9. Full load current	A	10.68			
10. Rated torque	N.m	35.93			
11. Max. torque	N.m	123.43			
12. Max. torque/Rated torque		3.44			
13. Full load speed ratio	r/min	1461.9			
14. Iron loss(at Rated voltage)	W	150.0			
15. Mechanical loss(at Rated speed)	W	49.5			
16. Stator winding loss	W	230.4			
17. Rotor winding loss	W	142.9			
18. Other loss	W	59.0			
19. Total loss	W	631.7			
20. Output power	W	5500			

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Test Item		Test Value	Test Result
21. Input power	W	6131.72	
22. Full load efficiency	%	89.70	
23. Full Load power factor		0.829	
24. Stator winding temp.rise	K	44.7	
25. Bearing temperature	°C		
26. Coolant temperature	°C	20.9	
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		No abnormal	Passed
Testing Conclusion			
Remark			
Tested by		Checked by	
		Formed	

three-phase induction motor type test report

Amb Temp: 22.29°C

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test time:

Modle: IE3-132S-4
NO.:
Rated f: 50Hz

Rated U: 400V
Rated I: 10.7A
Rated P: 5.5kW

Rated η : 89.60%
Cos ϕ : 0.83
Rated speed: 1470r/min

InsClass: F
Connect: Δ
Poles: 4

Resistance test

Rac (Ω): 1.1375

Rbc (Ω): 1.1378

Rab (Ω): 1.1374

Ravg (Ω): 1.1376
115°C R (Ω): 1.5560
25°C R (Ω): 1.1559

Shell Temp (°C): 21.6
Amb Temp (°C): 20.88

Noload test

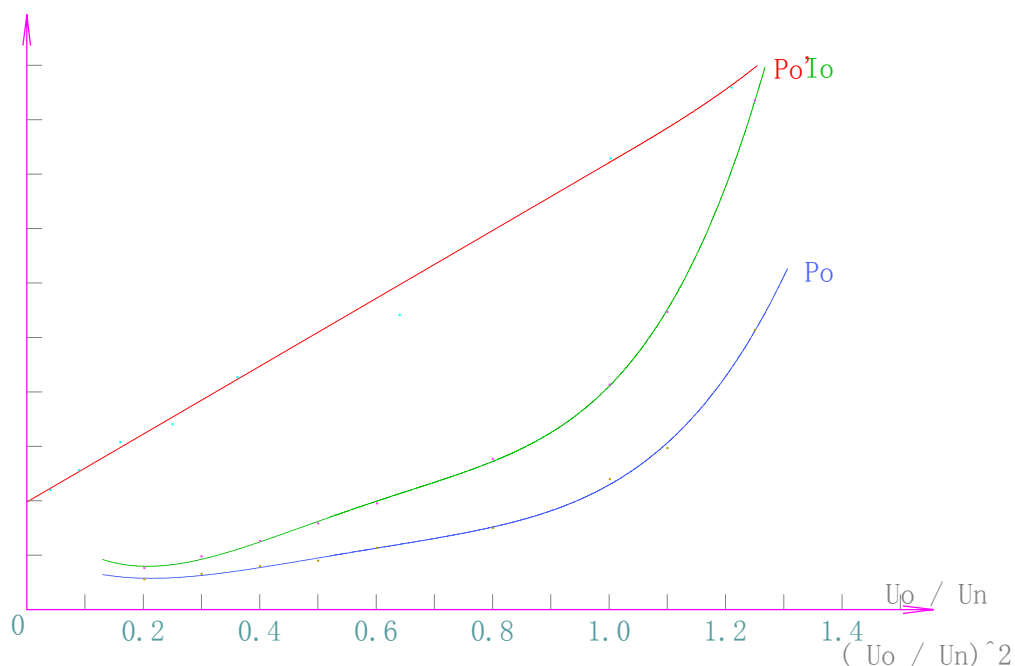
U*	U (V)	I (A)	Po (kW)	Po' (kW)	Pcu (kW)	WindingT (°C)
1.25	500.2	9.36	0.5140	0.3463	0.1677	52.08
1.10	440.1	5.47	0.2970	0.2398	0.0572	51.71
1.00	400.5	4.14	0.2400	0.2073	0.0327	51.71
0.80	320.1	2.77	0.1500	0.1353	0.0147	51.45
0.60	240.6	1.95	0.1140	0.1067	0.0073	51.45
0.50	200.1	1.59	0.0900	0.0852	0.0048	50.80
0.40	160.4	1.27	0.0800	0.0769	0.0031	50.80
0.30	120.0	0.98	0.0660	0.0642	0.0018	49.74
0.20	80.8	0.77	0.0560	0.0549	0.0011	49.74

Thermal R (Ω): 1.2627
Io (A): 4.10
Pm (kW): 0.0495

Shell Temp (°C): 37.7
Io (kW): 0.2292
Pfe (kW): 0.1500

No Load Characteristic Curve

Io	Po	Po'
A	kW	kW
10	1.0	0.250
9	0.9	0.225
8	0.8	0.200
7	0.7	0.175
6	0.6	0.150
5	0.5	0.125
4	0.4	0.100
3	0.3	0.075
2	0.2	0.050
1	0.1	0.025



test:

check:

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Amb Temp: 20.9°C

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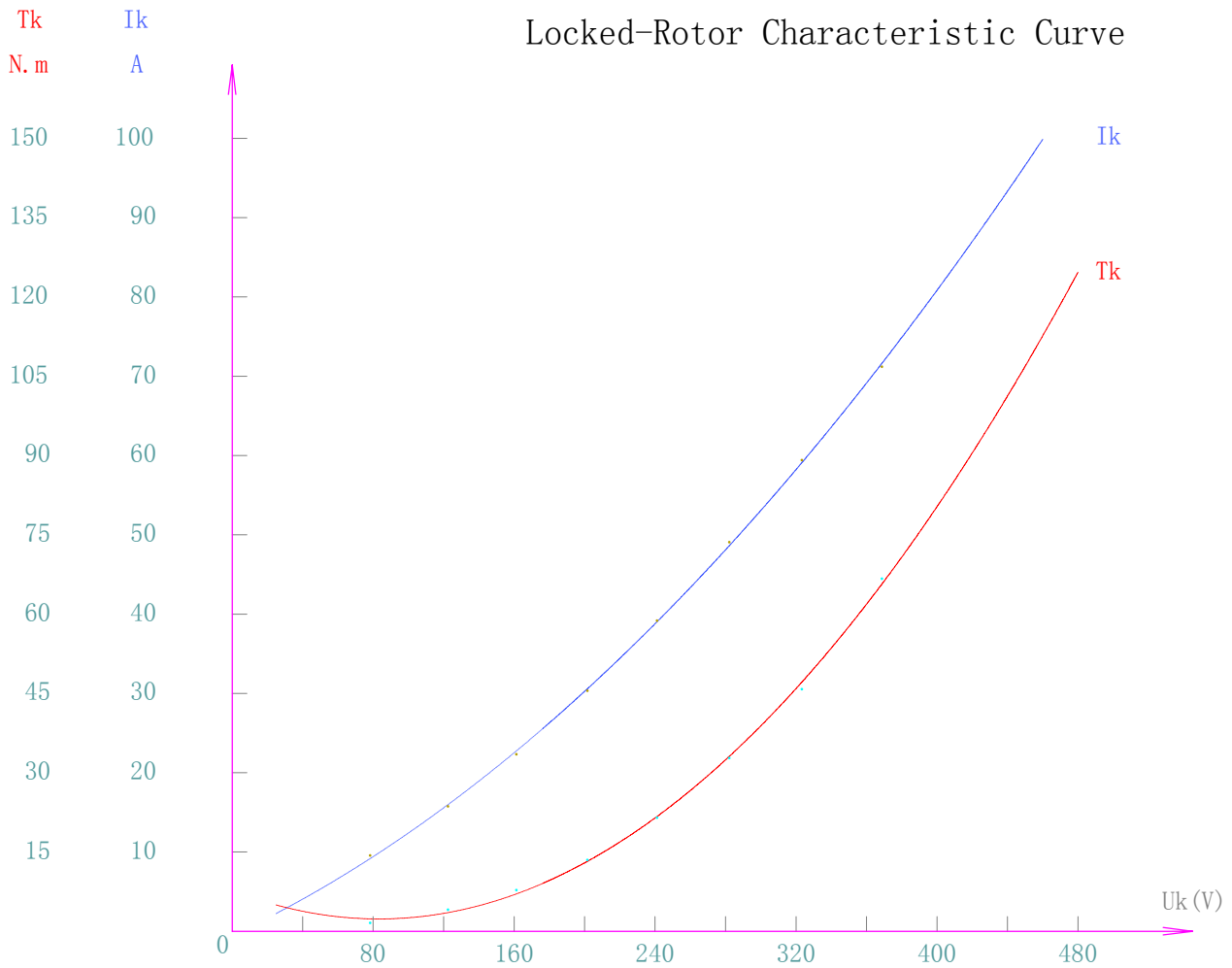
test time:

Modle: IE3-132S-4	Rated U: 400V	Rated η : 89.60%	InsClass: F
NO.:	Rated I: 10.7A	Cos ϕ : 0.83	Connect: Δ
Rated f: 50Hz	Rated P: 5.5kW	Rated speed: 1470r/min	Poles: 4

Locked-rotor Test

U (V)	I (A)	P1 (KW)	Tor (N. m)
368.7	71.20	21.7660	66.70
323.3	59.42	15.2300	45.80
282.1	49.08	10.4680	32.80
241.1	39.18	6.7860	21.50
201.6	30.34	4.1480	13.50
161.3	22.33	2.2780	7.80
122.5	15.75	1.1470	4.10
78.3	9.56	0.4280	1.60

Ik (A): 80.84	Ik/In: 7.57
Tk (N. m): 80.32	Tk/Tn: 2.24
Pk (kW): 24.54	



test:

check:

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test time:

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NO.:	Rated I: 10.7A	Cos ϕ : 0.83	Connect: Δ
Rated f: 50Hz	Rated P: 5.5kW	Rated speed: 1470r/min	Poles: 4

Load Test

P1 (kW)	U (V)	I (A)	s (r/min)	Tor (N.m)	windingT(°C)
9.7450	401.6	16.77	1410.0	55.800	57.85
7.8450	401.2	13.58	1449.0	45.500	58.77
6.3650	400.6	10.91	1458.0	36.700	58.77
4.6900	401.5	8.57	1466.0	27.100	57.94
3.1900	401.0	6.43	1478.0	17.900	57.31
1.6650	400.5	4.81	1489.0	8.800	56.57
0.2880	399.9	4.10	1499.0	0.800	55.26
0.2410	400.2	4.12	0.0	0.000	52.29

P2 (kW)	Pcu (kW)	Pal (kW)	Ps (kW)	Ss (%)	η (%)	Cos ϕ
8.2627	0.5713	0.5641	0.1474	6.25	84.79	0.836
6.9144	0.3750	0.2585	0.0976	3.53	88.14	0.831
5.6868	0.2419	0.1737	0.0632	2.91	89.34	0.841
4.2034	0.1493	0.1037	0.0341	2.36	89.62	0.787
2.8466	0.0841	0.0453	0.0146	1.53	89.23	0.714
1.4040	0.0470	0.0113	0.0033	0.77	84.32	0.499
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; 0.904

A: 0.048

B: 137.314

θ_s (°C): 69.7

150% rated power:

I (A): 16.74	P1 (kW): 9.7184	Ss (%): 5.89
Pcu (kW): 0.6544	Pal (kW): 0.5250	Ps (kW): 0.1468
η (%): 84.89	Cos ϕ : 0.838	P2 (kW): 8.25

125% rated power:

I (A): 13.43	P1 (kW): 7.8176	Ss (%): 3.61
Pcu (kW): 0.4210	Pal (kW): 0.2614	Ps (kW): 0.0965
η (%): 87.94	Cos ϕ : 0.840	P2 (kW): 6.88

100% rated power:

I (A): 10.68	P1 (kW): 6.1317	Ss (%): 2.54
Pcu (kW): 0.2661	Pal (kW): 0.1451	Ps (kW): 0.0590
η (%): 89.70	Cos ϕ : 0.829	P2 (kW): 5.50

75% rated power:

I (A): 8.34	P1 (kW): 4.5870	Ss (%): 2.09
Pcu (kW): 0.1624	Pal (kW): 0.0892	Ps (kW): 0.0322
η (%): 89.93	Cos ϕ : 0.794	P2 (kW): 4.13

50% rated power:

I (A): 6.36	P1 (kW): 3.1098	Ss (%): 1.65
Pcu (kW): 0.0944	Pal (kW): 0.0473	Ps (kW): 0.0142
η (%): 88.43	Cos ϕ : 0.706	P2 (kW): 2.75

25% rated power:

I (A): 4.77	P1 (kW): 1.6261	Ss (%): 0.63
Pcu (kW): 0.0531	Pal (kW): 0.0090	Ps (kW): 0.0030
η (%): 84.56	Cos ϕ : 0.492	P2 (kW): 1.38

