

TYPE TEST REPORT

Report No. : IE3-132S-6 3KW 14101701

Product Type Name	IE3-132S-6 Three Phase Asynchronous Motor			Ser.No.	
Rated Output	3 kW	Rated Voltage	400 V	Rated Current	6.8 A
Rated Speed	970 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	2.7322			
2. No load current	A	4.22			
3. No load current deviation	%	0.8			
4. No load input power	W	202.8			
5. Locked rotor current	A	48.45			
6. Locked current/Rated current		6.96			
7. Locked torque	N.m	68.96			
8. Locked torque/Rated torque		2.35			
9. Full load current	A	6.96			
10. Rated torque	N.m	29.36			
11. Max. torque	N.m	97.64			
12. Max. torque/Rated torque		3.33			
13. Full load speed ratio	r/min	975.9			
14. Iron loss(at Rated voltage)	W	98.3			
15. Mechanical loss(at Rated speed)	W	22.5			
16. Stator winding loss	W	237.1			
17. Rotor winding loss	W	80.2			
18. Other loss	W	44.6			
19. Total loss	W	485.8			
20. Output power	W	3000			

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Test Item		Test Value	Test Result
21. Input power	W	3485.85	
22. Full load efficiency	%	86.06	
23. Full Load power factor		0.723	
24. Stator winding temp.rise	K	40.1	
25. Bearing temperature	°C	56	
26. Coolant temperature	°C	22.3	
27. Insulation resistance warmly to frame	MΩ	500	
28. High voltage test	V min	Pass	Passed
29. Vibration	mm/s	1.2	
30. Noise	dB(A)	58	
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: 22.78°C

report NO.: IE3-132S-6 3KW 14101701

test time:

Modle: IE3-132S-6
NO.:
Rated f: 50Hz

Rated U: 400V
Rated I: 6.8A
Rated P: 3kW

Rated η : 85.60%
Cos ϕ : 0.74
Rated speed: 970r/min

InsClass: F
Connect: Y
Poles: 6

Resistance test

Rac(Ω): 2.7890

Rbc(Ω): 2.7890

Rab(Ω): 2.7890

Ravg(Ω): 2.7890
115°C R (Ω): 3.7940
25°C R (Ω): 2.8184

Shell Temp(°C): 25.3
Amb Temp(°C): 22.29

No load test

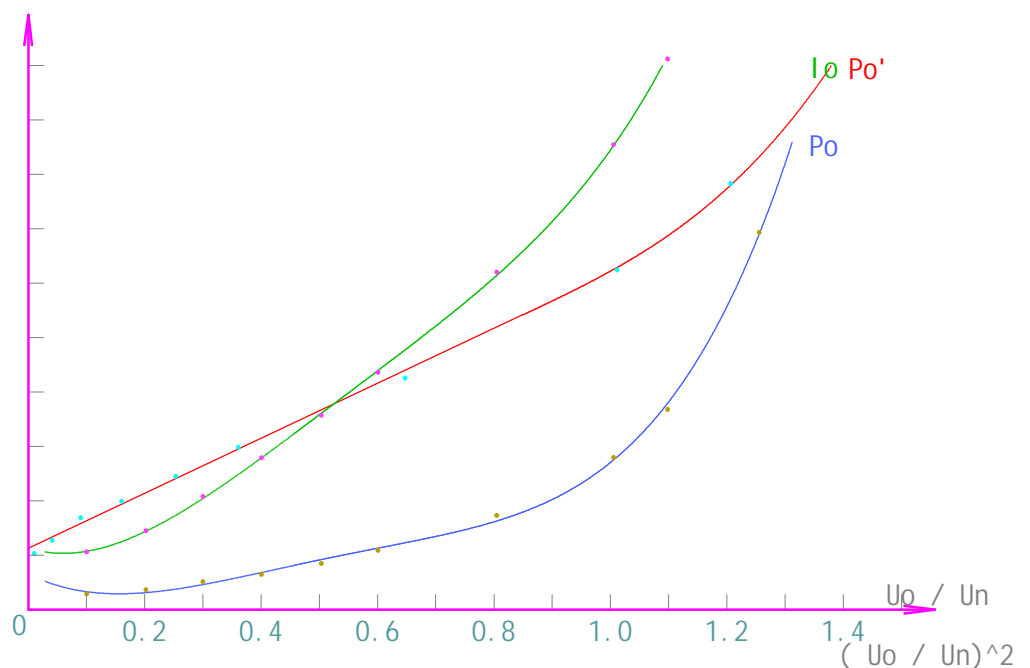
U*	U (V)	I (A)	Po(kW)	Po' (kW)	Pcu(kW)	WindingT(°C)
1.26	502.2	7.19	0.5200	0.2798	0.2402	50.93
1.10	439.4	5.06	0.2760	0.1566	0.1194	51.72
1.01	402.2	4.27	0.2100	0.1249	0.0851	51.75
0.80	321.9	3.10	0.1300	0.0851	0.0449	52.01
0.60	240.4	2.18	0.0820	0.0598	0.0222	52.15
0.50	201.4	1.79	0.0640	0.0491	0.0149	52.15
0.40	160.2	1.40	0.0490	0.0399	0.0091	52.01
0.30	120.1	1.04	0.0390	0.0339	0.0051	52.01
0.20	81.0	0.73	0.0280	0.0256	0.0024	51.15
0.10	40.3	0.53	0.0220	0.0207	0.0013	51.01

Thermal R(Ω): 3.0390
Io(A): 4.22
Pm(kW): 0.0225

Shell Temp(°C): 42.5
Io(kW): 0.2028
Pfe(kW): 0.0983

No Load Characteristic Curve

Io	Po	Po'
A	kW	kW
5.0	0.750	0.20
4.5	0.675	0.18
4.0	0.600	0.16
3.5	0.525	0.14
3.0	0.450	0.12
2.5	0.375	0.10
2.0	0.300	0.08
1.5	0.225	0.06
1.0	0.150	0.04
0.5	0.075	0.02



test:

check:

three-phase induction motor type test report

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NO.:
Rated f: 50Hz

Rated U: 400V
Rated I: 6.8A
Rated P: 3kW

Rated η : 85.60%
Cos ϕ : 0.74
Rated speed: 970r/min

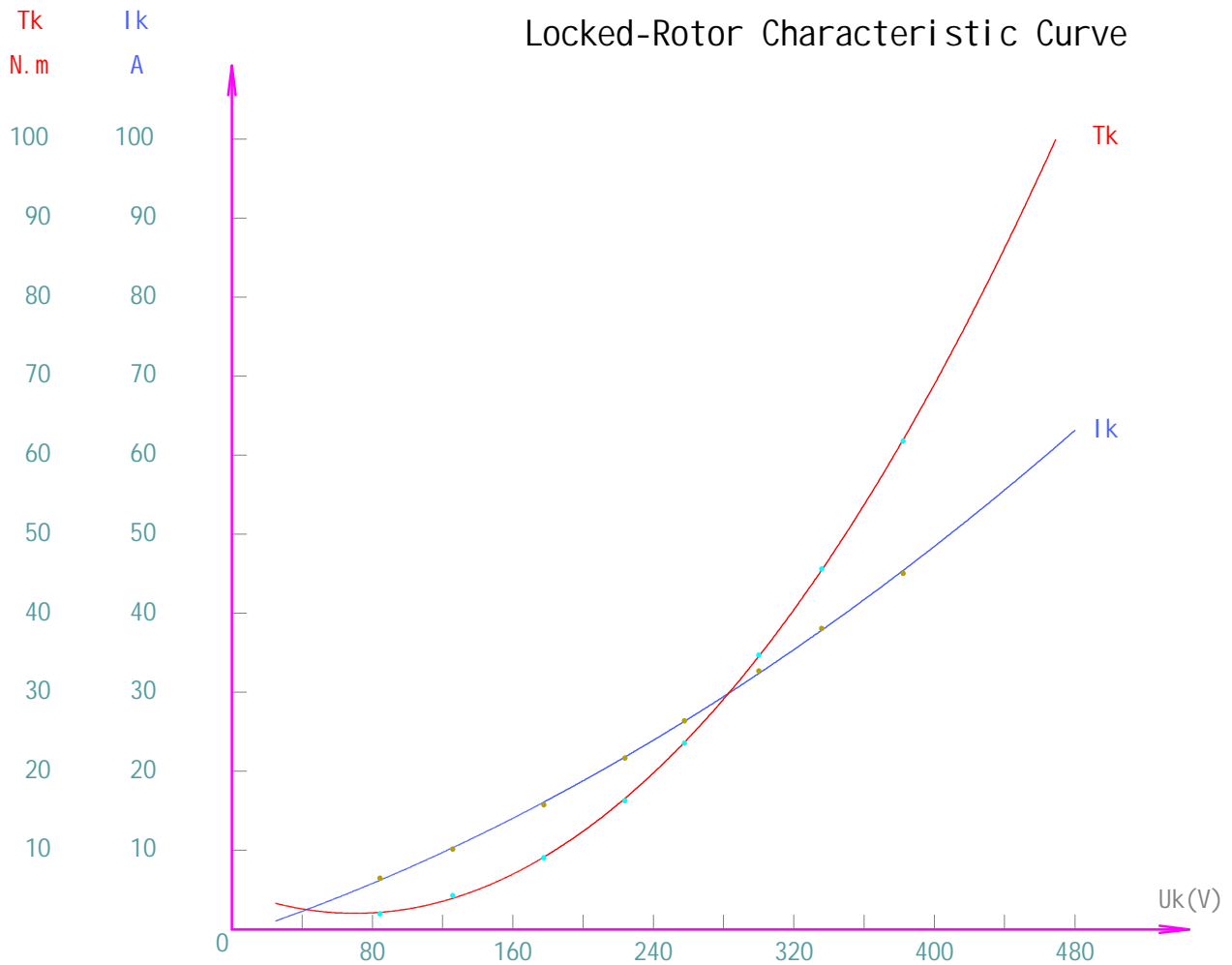
InsClass: F
Connect: Y
Poles: 6

Locked-rotor Test

U(V)	I(A)	P1(KW)	Tor(N.m)
382.1	45.08	16.8800	61.80
335.8	38.08	11.8700	45.60
300.0	32.71	8.6800	34.70
257.7	26.42	5.7060	23.60
223.8	21.68	3.8610	16.30
177.5	15.77	2.0800	9.10
125.8	10.19	0.8880	4.30
84.2	6.49	0.3650	2.00

I_k (A): 48.45
T_k(N.m): 68.96
P_k(kW): 17.57

I_k/I_n: 6.96
T_k/T_n: 2.35



test:

check:

three-phase induction motor type test report

Amb Temp: 22.3°C

report NO.: IE3-132S-6 3KW 14101701

test time:

Modle: IE3-132S-6	Rated U: 400V	Rated η : 85.60%	InsClass: F
NO.:	Rated I: 6.8A	Cos ϕ : 0.74	Connect: Y
Rated f: 50Hz	Rated P: 3kW	Rated speed: 970r/min	Poles: 6

Load Test

P1(kW)	U(V)	I (A)	s(r/min)	Tor (N.m)	windingT(°C)
5.3720	400.2	9.75	960.0	44.800	46.57
4.4020	401.9	8.26	968.0	37.100	48.46
3.4820	401.4	6.98	976.0	29.500	49.84
2.6180	402.7	5.90	983.0	22.000	50.25
1.7700	401.0	5.02	989.0	14.500	50.14
0.9960	401.9	4.49	994.0	7.200	49.78
0.2360	401.8	4.29	1000.0	0.200	48.34
0.2050	400.1	4.26	0.0	0.000	45.49

P2(kW)	Pcu(kW)	Pal (kW)	Ps(kW)	Ss(%)	η (%)	Cos ϕ
4.4791	0.4639	0.2055	0.1027	4.27	83.38	0.795
3.7429	0.3330	0.1348	0.0705	3.39	85.03	0.765
2.9994	0.2375	0.0797	0.0446	2.53	86.14	0.718
2.2602	0.1700	0.0421	0.0249	1.79	86.33	0.636
1.4973	0.1231	0.0180	0.0108	1.16	84.59	0.507
0.7690	0.0984	0.0051	0.0027	0.63	77.21	0.319
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: 0.972

A: 0.051

B: 0.648

θ s(°C): 65.1

150% rated power:

I (A): 9.81	P1(kW): 5.3958	Ss (%): 4.03
Pcu(kW): 0.5474	Pal (kW): 0.1914	Ps(kW): 0.1037
η (%): 83.40	Cos ϕ : 0.794	P2(kW): 4.50

125% rated power:

I (A): 8.27	P1(kW): 4.4169	Ss (%): 3.19
Pcu(kW): 0.3889	Pal (kW): 0.1255	Ps(kW): 0.0708
η (%): 84.90	Cos ϕ : 0.771	P2(kW): 3.75

100% rated power:

I (A): 6.96	P1(kW): 3.4859	Ss (%): 2.41
Pcu(kW): 0.2758	Pal (kW): 0.0750	Ps(kW): 0.0446
η (%): 86.06	Cos ϕ : 0.723	P2(kW): 3.00

75% rated power:

I (A): 5.89	P1(kW): 2.6028	Ss (%): 1.70
Pcu(kW): 0.1976	Pal (kW): 0.0392	Ps(kW): 0.0247
η (%): 86.45	Cos ϕ : 0.638	P2(kW): 2.25

50% rated power:

I (A): 5.06	P1(kW): 1.7677	Ss (%): 1.09
Pcu(kW): 0.1456	Pal (kW): 0.0166	Ps(kW): 0.0108
η (%): 84.86	Cos ϕ : 0.504	P2(kW): 1.50

25% rated power:

I (A): 4.46	P1(kW): 0.9806	Ss (%): 0.59
Pcu(kW): 0.1132	Pal (kW): 0.0046	Ps(kW): 0.0026
η (%): 76.49	Cos ϕ : 0.317	P2(kW): 0.75

Load Characteristic Curve

Report No. : IE3-132S-6 3KW 14101701
 Model : IE3-132S-6
 Rated Output: 3 kW
 Ser.No. :

When P2 = 3 kW ,
 I1 = 6.96 A
 P1 = 3.4859 kW
 Sref = 2.41 %
 η = 86.06 %
 Cos ϕ = 0.723

cos ϕ	η	Sref	P1	I1
	%	%	kW	A
1.0	100	5.0	5.0	10
0.9	90	4.5	4.5	9
0.8	80	4.0	4.0	8
0.7	70	3.5	3.5	7
0.6	60	3.0	3.0	6
0.5	50	2.5	2.5	5
0.4	40	2.0	2.0	4
0.3	30	1.5	1.5	3
0.2	20	1.0	1.0	2
0.1	10	0.5	0.5	1

