

TYPE TEST REPORT

Report No. : IE3-132M2-6 5.5KW 14100901

Product Type Name	IE3-132M2-6 Three Phase Asynchronous Motor			Ser.No.	
Rated Output	5.5 kW	Rated Voltage	415 V	Rated Current	12.0 A
Rated Speed	970 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	Eligibility Value		Test Value	Test Result	
	Standard	Tolerance			
1. Stator resistance at 20°C	Ω		1.3083		
2. No load current	A		6.85		
3. No load current deviation	%		1.5		
4. No load input power	W		287.2		
5. Locked rotor current	A		91.58		
6. Locked current/Rated current			7.57		
7. Locked torque	N.m		153.08		
8. Locked torque/Rated torque			2.83		
9. Full load current	A		12.10		
10. Rated torque	N.m		54.01		
11. Max. torque	N.m		195.64		
12. Max. torque/Rated torque			3.62		
13. Full load speed ratio	r/min		972.5		
14. Iron loss(at Rated voltage)	W		156.6		
15. Mechanical loss(at Rated speed)	W		25.4		
16. Stator winding loss	W		349.2		
17. Rotor winding loss	W		159.0		
18. Other loss	W		58.6		
19. Total loss	W		748.8		
20. Output power	W		5500		

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Test Item	Eligibility Value		Test Value	Test Result	
	Standard	Tolerance			
21. Input power	W		6248.78		
22. Full load efficiency	%		88.02		
23. Full Load power factor			0.746		
24. Stator winding temp.rise	K		46.3		
25. Bearing temperature	°C		64		
26. Coolant temperature	°C		23.7		
27. Insulation resistance warmly to frame	MΩ		500		
28. High voltage test	V min	1760	Pass	Passed	
29. Vibration	mm/s		1.1		
30. Noise	dB(A)		59		
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: 23.7°C

report NO.: IE3-132M2-6 5.5KW 14100901

test time:

Modle: IE3-132M2-6
NO.:
Rated f: 50Hz

Rated U: 415V
Rated I: 12.0A
Rated P: 5.5kW

Rated η : 88.00%
Cos ϕ : 0.75
Rated speed: 970r/min

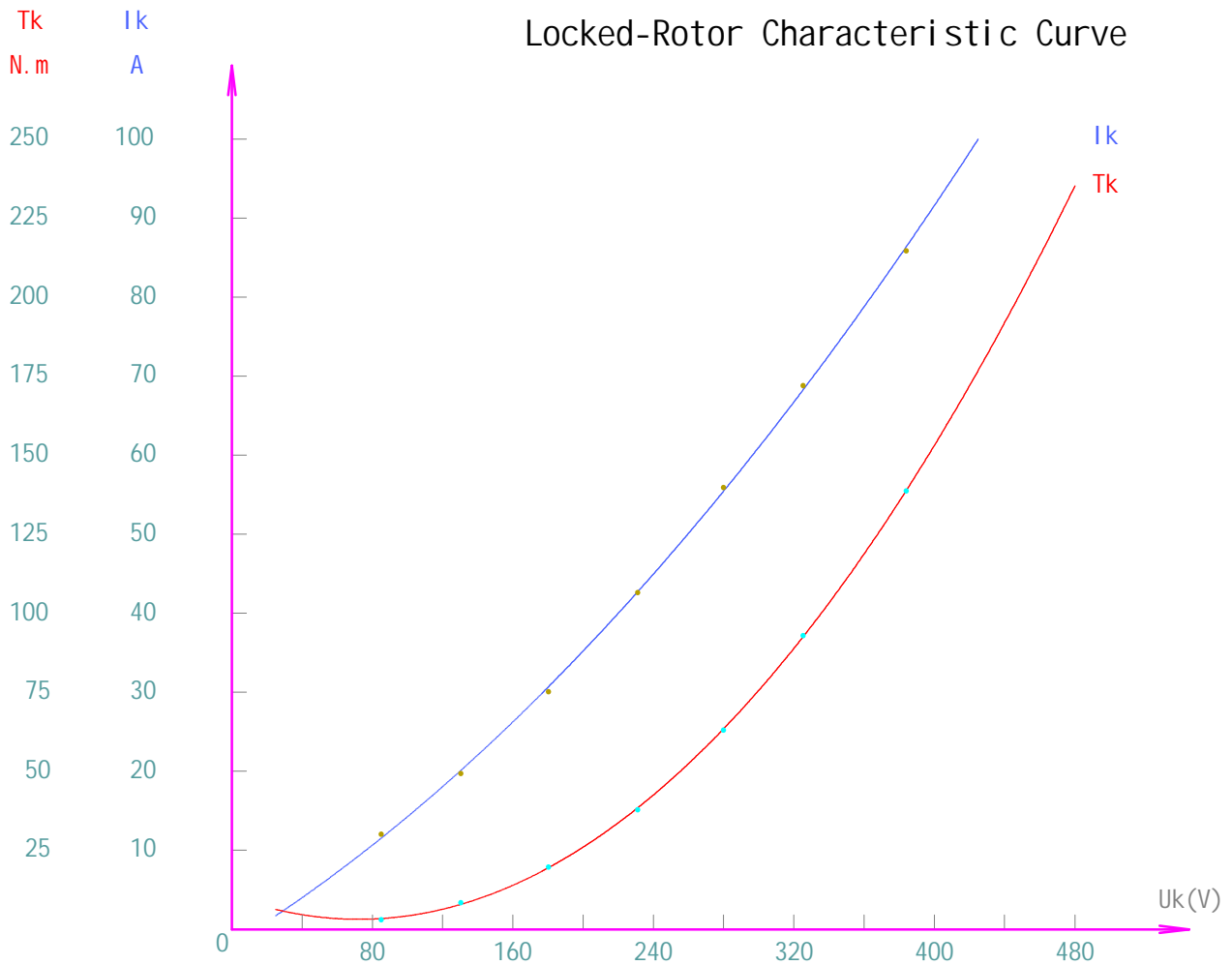
InsClass: F
Connect: Δ
Poles: 6

Locked-rotor Test

U(V)	I(A)	P1(KW)	Tor(N.m)
384.0	85.87	32.3000	138.70
325.2	68.81	20.6600	93.00
280.0	55.93	13.6630	63.10
231.1	42.64	8.0470	37.90
180.1	30.08	4.0510	19.80
130.4	19.74	1.7550	8.50
84.9	12.05	0.6560	3.10

I_k (A): 91.58
T_k(N.m): 153.08
P_k(kW): 33.51

I_k/I_n: 7.57
T_k/T_n: 2.83



test:

check:

three-phase induction motor type test report

Amb Temp: 23.7°C

report NO.: IE3-132M2-6 5.5KW 14100901

test time:

Modle: IE3-132M2-6	Rated U: 415V	Rated η : 88.00%	InsClass: F
NO.:	Rated I: 12.0A	Cos ϕ : 0.75	Connect: Δ
Rated f: 50Hz	Rated P: 5.5kW	Rated speed: 970r/min	Poles: 6

Load Test

P1(kW)	U(V)	I (A)	s(r/min)	Tor (N.m)	windingT(°C)
9.7050	407.0	17.23	956.0	82.600	68.30
7.9250	400.4	14.64	964.0	68.000	69.32
6.4050	400.6	12.36	972.0	54.800	69.85
4.7550	400.1	10.10	980.0	40.400	69.88
3.2400	400.7	8.45	987.0	27.300	69.65
1.7100	400.2	7.23	994.0	13.200	69.07
0.3250	399.6	6.80	1000.0	0.400	67.61
0.2940	400.3	6.85	0.0	0.000	64.26

P2(kW)	Pcu(kW)	Pal (kW)	Ps(kW)	Ss(%)	η (%)	Cos ϕ
8.2865	0.7040	0.3931	0.1394	4.45	85.38	0.799
6.8771	0.5084	0.2631	0.0944	3.62	86.78	0.780
5.6338	0.3623	0.1656	0.0613	2.81	87.96	0.747
4.2103	0.2419	0.0876	0.0333	2.01	88.55	0.679
2.8355	0.1692	0.0381	0.0152	1.31	87.52	0.553
1.3920	0.1239	0.0086	0.0035	0.60	81.40	0.341
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: 0.918

A: 0.020

B: 44.418

θ_s (°C): 71.3

150% rated power:

I (A): 17.25
Pcu(kW): 0.8024
 η (%): 85.41

P1(kW): 9.6596
Pal (kW): 0.3818
Cos ϕ : 0.808

Ss (%): 4.39
Ps(kW): 0.1382
P2(kW): 8.25

125% rated power:

I (A): 14.49
Pcu(kW): 0.5663
 η (%): 86.85

P1(kW): 7.9162
Pal (kW): 0.2566
Cos ϕ : 0.789

Ss (%): 3.57
Ps(kW): 0.0939
P2(kW): 6.88

100% rated power:

I (A): 12.10
Pcu(kW): 0.3950
 η (%): 87.98

P1(kW): 6.2511
Pal (kW): 0.1566
Cos ϕ : 0.746

Ss (%): 2.75
Ps(kW): 0.0586
P2(kW): 5.50

75% rated power:

I (A): 10.08
Pcu(kW): 0.2741
 η (%): 88.50

P1(kW): 4.6611
Pal (kW): 0.0830
Cos ϕ : 0.667

Ss (%): 1.96
Ps(kW): 0.0321
P2(kW): 4.13

50% rated power:

I (A): 8.43
Pcu(kW): 0.1917
 η (%): 87.49

P1(kW): 3.1431
Pal (kW): 0.0346
Cos ϕ : 0.538

Ss (%): 1.24
Ps(kW): 0.0139
P2(kW): 2.75

25% rated power:

I (A): 7.15
Pcu(kW): 0.1379
 η (%): 81.17

P1(kW): 1.6940
Pal (kW): 0.0084
Cos ϕ : 0.342

Ss (%): 0.60
Ps(kW): 0.0036
P2(kW): 1.38

three-phase induction motor type test report

Amb Temp: 23.42°C

report NO.: IE3-132M2-6 5.5KW 14100901

test time:

Modle: IE3-132M2-6
NO.:
Rated f: 50Hz

Rated U: 415V
Rated I: 12.0A
Rated P: 5.5kW

Rated η : 88.00%
Cos ϕ : 0.75
Rated speed: 970r/min

InsClass: F
Connect: Δ
Poles: 6

Resistance test

Rac(Ω): 1.3300

Rbc(Ω): 1.3272

Rab(Ω): 1.3308

Ravg(Ω): 1.3293
115°C R (Ω): 1.7984
25°C R (Ω): 1.3360

Shell Temp(°C): 24.1
Amb Temp(°C): 23.71

No load test

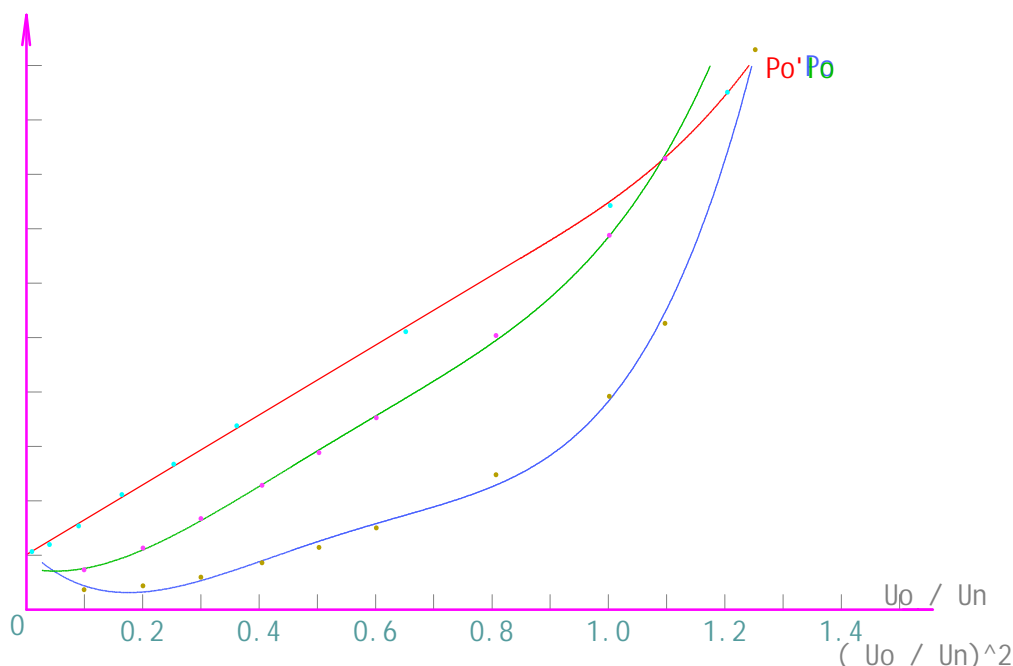
U*	U (V)	I (A)	Po(kW)	Po' (kW)	Pcu(kW)	WindingT(°C)
1.25	500.8	12.14	0.7720	0.4349	0.3371	61.81
1.10	439.0	8.29	0.3950	0.2378	0.1572	61.81
1.00	400.6	6.88	0.2940	0.1857	0.1083	62.27
0.81	322.9	5.04	0.1860	0.1278	0.0582	62.27
0.60	240.5	3.53	0.1130	0.0845	0.0285	62.40
0.50	201.2	2.89	0.0860	0.0669	0.0191	62.40
0.41	162.1	2.29	0.0650	0.0530	0.0120	62.30
0.30	120.1	1.68	0.0450	0.0386	0.0064	62.30
0.20	80.1	1.14	0.0330	0.0300	0.0030	61.77
0.10	39.6	0.73	0.0280	0.0268	0.0012	61.77

Thermal R(Ω): 1.4862
Io(A): 6.85
Pm(kW): 0.0254

Shell Temp(°C): 53.6
Io(kW): 0.2872
Pfe(kW): 0.1566

No Load Characteristic Curve

Io	Po	Po'
A	kW	kW
10	0.750	0.250
9	0.675	0.225
8	0.600	0.200
7	0.525	0.175
6	0.450	0.150
5	0.375	0.125
4	0.300	0.100
3	0.225	0.075
2	0.150	0.050
1	0.075	0.025



test:

check:

CERTIFICATE

of conformity with the following European Directive:

Registrier-Nr./Registered No.:
861631100024001

Electromagnetic Compatibility Directive 2014/30/EU

Reference of applicant	Date of application	File reference	Test report No.	Date of issue
-	08.10.2016	HZP1610001-01	TRHZP1610001-01/01	21.10.2016

It is to certify that the following product(s) comply/complies with the essential requirements (Annex I) of the above mentioned European Directive and the following standard(s):

Applicant: Guanglu Electrical Co., Ltd.
Shanshi Industrial Area, Daxi Town, Wenling City, Zhejiang, China

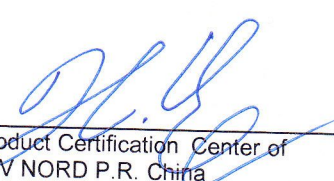
Manufacturer: Guanglu Electrical Co., Ltd.
Shanshi Industrial Area, Daxi Town, Wenling City, Zhejiang, China

Product: Three Phase Induction Motor

Model(s): IE3 series (Details refer to test report No.: TRHZP1610001-01/01)

Standard(s): EN 60034-1:2010

This Certificate of Conformity is based on the evaluation of samples of the product. It does not imply an assessment of the production and it does not permit the use of a mark of conformity or of a safety mark of the TÜV NORD CERT GmbH. The holder of this certificate may use this Certificate together with his EC-Declaration of Conformity.


Product Certification Center of
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Technical report No. TRHZP1610001-01/01
File-No.: HZP1610001-01



Technical report
No. TRHZP1610001/01
about the test of a technical equipment

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Applicant: Guanglu Electrical Co., Ltd.
Shanshi Industrial Area, Daxi Town, Wenling City, Zhejiang,
China

Order No.: QTHZP10001/16-01

This report contains 3 text pages

Evaluated: 21.10.2016 by: Yuan Chao

Technic certified: 21.10.2016 by: Carol Zheng



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Applicant:	Guanglu Electrical Co., Ltd. Shanshi Industrial Area, Daxi Town, Wenling City, Zhejiang, China
Manufacturer:	Guanglu Electrical Co., Ltd. Shanshi Industrial Area, Daxi Town, Wenling City, Zhejiang, China
Equipment under test:	Three Phase Induction Motor Model No.: IE3 series(Detailed refer to next page)
Ratings:	Rated Voltage: 400 V Rated Frequency: 50 Hz Rated Output Power: Refer to next page
Type of examination:	Conformity testing to EMC Directive
Test regulations:	EN 60034-1:2010
Test location:	TÜV NORD (Hangzhou) Co., Ltd. No.50, Jiu Huan Road, 5th floor, Jiang Gan District, Hangzhou, China
Test result:	The referenced units are in compliance with above requirements.
Remark:	<p>After a careful examination of the circuit diagram, mode of operation and physical characteristics of the approving three phase induction motors showing that these motors do not have any EMC active electronic components. These motors are squirrel cage induction motors (motor without brushes), where the emission are always so low that emission testing is not needed according to the requirement of clause 13.5.1 of EN 60034-1:2010.</p> <p>Therefore it is concluded that the emission levels of the above mentioned three phase induction motors are far below the limits of the relevant EMC standards and relevant emission tests can be omitted.</p>

Remark to be continued:

The approving three phase induction motors do not have any electronic control circuitry or EMC sensitive components. Motors not incorporating electronic circuits are not sensitive to electromagnetic emissions under normal service conditions and therefore no immunity tests are required according to the requirement of clause 13.2.1 of EN 60034-1:2010.

Model No. and parameters:

Model No.	Rated output power (kW)	Model No.	Rated output power (kW)	Model No.	Rated output power (kW)
IE3-80M1-2	0.75	IE3-80M2-4	0.75	IE3-90S-6	0.75
IE3-80M2-2	1.1	IE3-90S-4	1.1	IE3-90L-6	1.1
IE3-90S-2	1.5	IE3-90L-4	1.5	IE3-100L1-6	1.5
IE3-90L-2	2.2	IE3-100L1-4	2.2	IE3-112M-6	2.2
IE3-100L1-2	3	IE3-100L2-4	3	IE3-132S-6	3
IE3-112M-2	4	IE3-112M-4	4	IE3-132M1-6	4
IE3-132S1-2	5.5	IE3-132S-4	5.5	IE3-132M2-6	5.5
IE3-132S2-2	7.5	IE3-132M-4	7.5	IE3-160M-6	7.5
IE3-160M1-2	11	IE3-160M-4	11	IE3-160L-6	11
IE3-160M2-2	15	IE3-160L-4	15	IE3-180L-6	15
IE3-160L-2	18.5	IE3-180M-4	18.5	IE3-200L1-6	18.5
IE3-180M-2	22	IE3-180L-4	22	IE3-200L2-6	22
IE3-200L1-2	30	IE3-200L-4	30	IE3-225M-6	30
IE3-200L2-2	37	IE3-225S-4	37	IE3-250M-6	37
IE3-225M-2	45	IE3-225M-4	45	IE3-280S-6	45
IE3-250M-2	55	IE3-250M-4	55	IE3-280M-6	55
IE3-280S-2	75	IE3-280S-4	75	IE3-315S-6	75
IE3-280M-2	90	IE3-280M-4	90	IE3-315M-6	90
IE3-315S-2	110	IE3-315S-4	110	IE3-315L1-6	110
IE3-315M-2	132	IE3-315M-4	132	IE3-315L2-6	132
IE3-315L1-2	160	IE3-315L1-4	160	IE3-355M1-6	160
IE3-315L2-2	200	IE3-315L2-4	200	IE3-355M2-6	200
IE3-355M-2	250	IE3-355M-4	250	IE3-355L-6	250
IE3-355L-2	315	IE3-355L1-4	280	/	/
/	/	IE3-355L2-4	315	/	/
/	/	IE3-355L3-4	355	/	/