

# VALIADIS S.A.

## ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

						IE:3
Type	K315M-2		Poles	2	Power	132,0 kW
Voltage	400	V	Current	221,3 A	Frequency	50 Hz
Speed	2973	r/min	Duty	S1	Connecti	△
Ins.class	F		Weight	1140 kg	IP55	
MAJOR CONTENTS				TEST VALUE		
95,0 °C PHASE RESISTANCE OF WII				Ω	0,0240	
NO LOAD CURRENT				A	47,838	
NO LOAD INPUT				W	2391,21	
CORE LOSS(Pfe)				W	727,67	
WINDAGE FRICTION LOSS(Pfw)				W	1611,12	
STATOR WINDING LOSS(Pcu1)				W	1175,07	
ROTOR WINDING LOSS(Pcu2)				W	1236,78	
STRAY LOAD LOSS(Ps)				W	2024,60	
LOCKED ROTOR CURRENT				A	1268,222	
LOCKED ROTOR INPUT @ FULL LOAD				W	291270	
LOCKED ROTOR TORQUE				N.m	825,6	
PULL OUT TORQUE				N.m	1106,2	
LOCKED ROTOR CURRENT/RATED CURF				P.U	5,73	
LOCKED ROTOR TORQUE/RATED TORQL				P.U	1,95	
PULL OUT TORQUE/RATED TORQUE				P.U	2,61	
FULL LOAD TORQUE				N.m	424,3	
FULL LOAD CURRENT				A	221,3	
FULL LOAD SLIP				%	0,904	
INPUT @ FULL LOAD				kW	138,781	
FULL LOAD SPEED				r/min	2972,9	
EFFICIENCY @ FULL LOAD				%	95,11	
EFFICIENCY @ 75% LOAD				%	95,36	
POWER FACTOR @ FULL LOAD					0,905	
STATOR WINDING TEMPERATURE RISE				K	68	
D.E. BEARINGS TEMPERATURE BY PT10				°C	51,2	
STATOR WINDING TEMPERATURE				°C	89,4	
High voltage test				V	1800	Imin
Insulation resistance				MΩ	500	
NOISE ( LW)				dB(A)	91	
VIBRATION				mm/s	1,5	

# VALIADIS S.A.

## ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

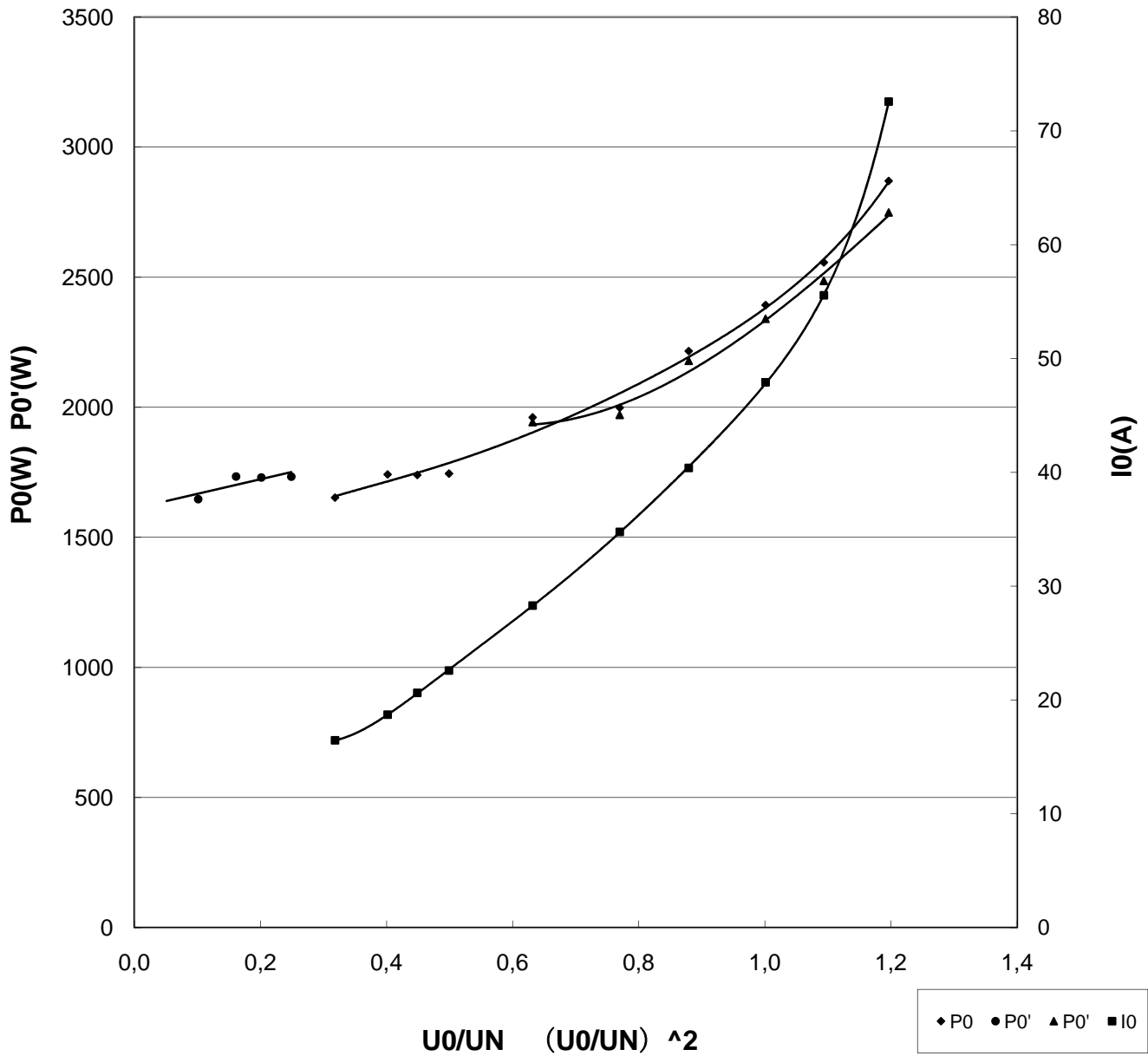
Type	K315M-2		Poles	2		Power	132,0 kW		IE:3		
Voltage	400	V	Current	221,3	A	Frequency	50 Hz				
Speed	2973	r/min	Duty	S1		Connection	△				
Ins.class	F		Weight	1140	kg			IP55			
NO LOAD TEST											
VOL	mul.	HZ	I01	I02	I03	mul.	W1	W2	mul.	°C	Ω
478,5	1	50	3,624	3,690	3,572	20	-701,5	844,99	20	79,7	0,01529
437,4	1	50	2,745	2,856	2,731	20	-478,4	606,24	20	79,6	0,01528
400,4	1	50	2,348	2,483	2,355	20	-369	488,64	20	79,3	0,01527
351,7	1	50	1,973	2,098	1,986	20	-261,3	372,1	20	79,2	0,01526
307,9	1	50	1,688	1,822	1,705	20	-189,8	289,73	20	79,0	0,01525
252,6	1	50	1,366	1,496	1,382	20	-111,6	209,7	20	78,8	0,01524
199,6	1	50	2,245	2,230	2,300	10	-91,5	266,0	10	78,4	0,01522
179,5	1	50	2,048	2,037	2,102	10	-56,6	230,6	10	78,2	0,01521
160,6	1	50	1,858	1,846	1,908	10	-25,2	199,4	10	78,0	0,01520
127,3	1	50	1,634	1,623	1,679	10	11,5	153,8	10	77,8	0,01519
data calculation of no load											
V%	U0/UN	I0	P0	(U0/UN)^2	P0cu1	P0'					
119,6%	1,20	72,576	2869,8	1,431	120,78	2749,06					
109,3%	1,09	55,548	2556,8	1,196	70,73	2486,07					
100,1%	1,00	47,909	2392,8	1,002	52,56	2340,24					
87,9%	0,88	40,385	2215,9	0,773	37,34	2178,58					
77,0%	0,77	34,769	1998,6	0,592	27,66	1970,90					
63,2%	0,63	28,296	1961,3	0,399	18,31	1942,97					
49,9%	0,50	22,586	1745,2	0,249	11,65	1733,51					
44,9%	0,45	20,621	1739,9	0,201	9,70	1730,22					
40,2%	0,40	18,706	1741,9	0,161	7,98	1733,94					
31,8%	0,32	16,456	1652,9	0,101	6,17	1646,75					
RESULTS AT: 400 V											
N.L.AMP	47,84	N.L.LOSS(W)	2391,21	Pw(W)	1611,1	Pe(W)	727,7				

# VALIADIS S.A.

## ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

Type	K315M-2		Poles	2	Power	132,0	IE:2
Voltage	400	V	Current	221,3	A	Frequency	50,0
Speed	2973	r/min	Duty	S1	Connection	Δ	
Ins.class	F		Weight	1140	kg		IP55

### No Load Curve



# VALIADIS S.A.

## ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

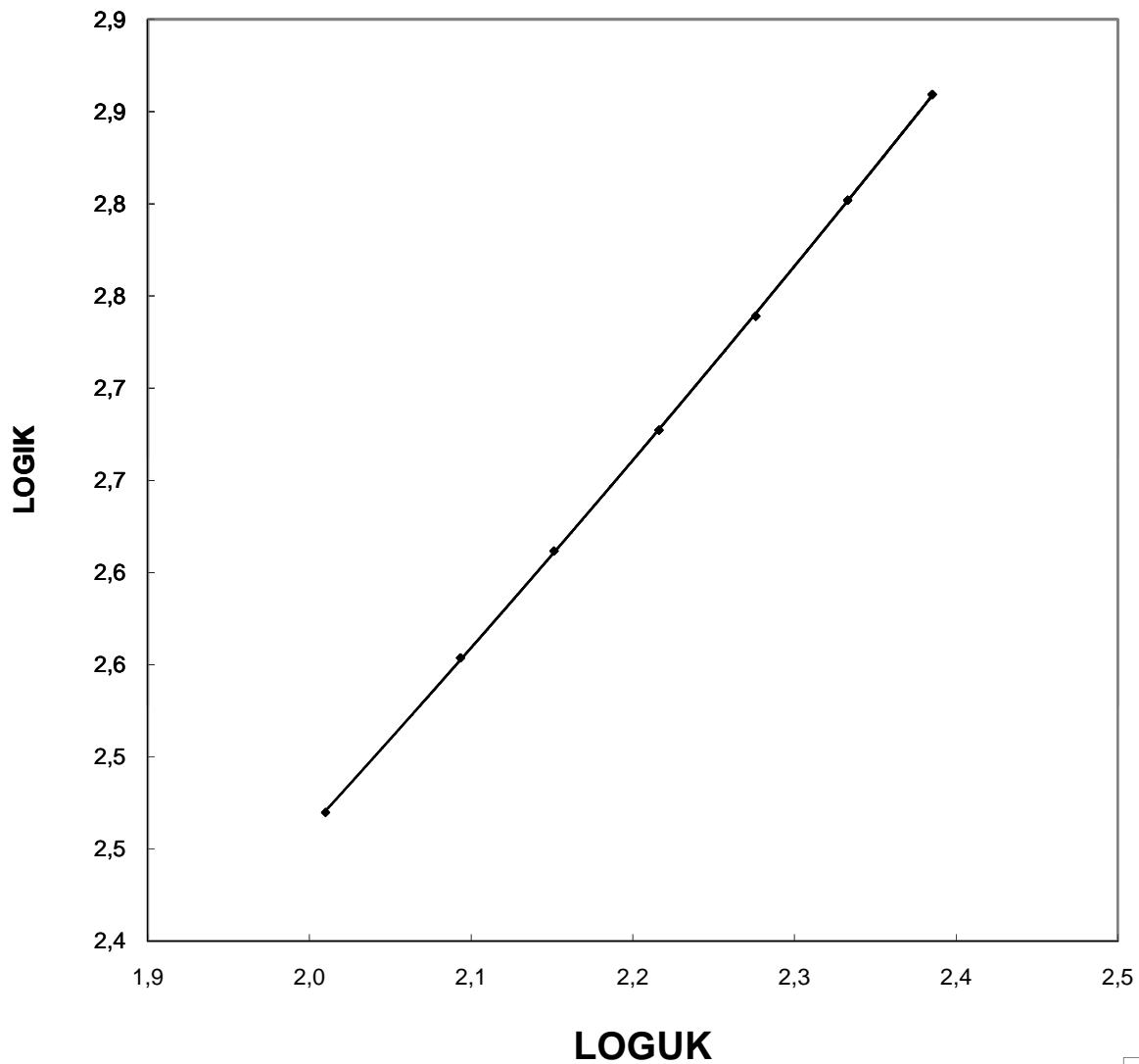
Type	K315M-2		Poles	2		Power	132,0		IE:3	kW
Voltage	400	V	Current	221,3	A	Frequency	50,0		Hz	
Speed	2973	r/min	Duty	S1		Connection	Δ			
Ins.class	F		Weight	1140	kg		IP55			
LOCKED ROTOR TEST										
VOL	mul.	Ik1	Ik2	Ik3	mul.	W1	W2	mul.	Torqu ( kg.m)	
242,8	1,0	3,592	3,622	3,635	200,0	-172,0	671,9	200,0	27,4	
215,3	1,0	3,148	3,175	3,183	200,0	-135,0	521,5	200,0	21,3	
188,8	1,0	2,726	2,747	2,752	200,0	-103,4	395,1	200,0	16,3	
164,5	1,0	2,364	2,384	2,386	200,0	-78,1	298,4	200,0	12,2	
141,7	1,0	2,035	2,050	2,049	200,0	-58,1	221,0	200,0	8,9	
124,0	1,0	1,781	1,793	1,794	200,0	-44,7	169,4	200,0	6,8	
102,3	1,0	2,936	2,955	2,958	100,0	-60,7	230,0	100,0	4,7	
data calculation of locked rotor										
Uk	IK	PK	TK		LOGUk	LOGIk	LOGPk	LOGTk		
V	A	kW	N.m							
242,84	723,27	99,980	268,52		2,3853	2,8593	1,9999	2,4290		
215,26	633,78	77,300	208,74		2,3330	2,8019	1,8882	2,3196		
188,84	548,34	58,340	159,74		2,2761	2,7390	1,7660	2,2034		
164,53	475,57	44,060	119,56		2,2162	2,6772	1,6440	2,0776		
141,68	408,94	32,580	87,22		2,1513	2,6117	1,5130	1,9406		
124,00	357,83	24,940	66,64		2,0934	2,5537	1,3969	1,8237		
102,32	295,01	16,930	46,06		2,0099	2,4698	1,2287	1,6633		
performance collection of locked rotor										
at rated volts		at rated current		at 2.5 times rated current		at 100V				
VOLTS ( V )	400		78,236		189,6		100,0			
AMPS ( A )	1268,2		221,9		554,8		286,16			
INPUT ( kW )	291,27				59,5		16,019			
TORQUE ( N.m)	825,60									

# VALIADIS S.A.

## ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

Type	K315M-2	Poles	2	Power	132,0	IE:3
Voltage	400 V	Current	221,3 A	Frequency	50,0	kW
Speed	2973 r/min	Duty	S1	Connection	Δ	Hz
Ins.class	F	Weight	1140 kg		IP55	

### LOCKED



◆ LOGIK

# VALIADIS S.A.

## ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

Type	K315M-2		Poles	2		Power	132 kW		IE:3		
Voltage	400	V	Current	221,3	A	Frequency	50	Hz			
Speed	2973	r/min	Duty	S1		Connection	Δ				
Ins.class	F		Weight	1140	kg	IP55					

### TEMPERATURE RISE TEST

TIME (h:min)	V	I1	I2	I3	mul.	W1	W2	mul.	T1 °C	T2 °C	T3 °C	T4 °C	T5 °C	T6 °C	T7 °C	T8 °C	T9 °C	T10 °C	T11 °C	T12 °C	T13 °C	
10,00	400,6	2,217	2,236	2,252	100	508,6	887,1	100	49,7	0,0	83,2	80,7	—	—	—	—	—	—	—	—	—	10,8
10,32	400,5	2,211	2,230	2,247	100	505,9	884,2	100	50,7	—	85,5	82,8	—	—	—	—	—	—	—	—	—	10,9
11,02	400,6	2,208	2,227	2,243	100	505,6	883,4	100	51,4	—	87,4	84,7	—	—	—	—	—	—	—	—	—	10,8
11,35	400,6	2,191	2,209	2,225	100	502,3	876,0	100	51,8	—	88,7	85,9	—	—	—	—	—	—	—	—	—	11,1
11,57	400,6	2,190	2,208	2,225	100	502,4	876,2	100	51,6	—	89,0	86,2	—	—	—	—	—	—	—	—	—	11,1
12,30	400,2	2,223	2,242	2,258	100	508,9	888,7	100	51,2	—	89,4	86,6	—	—	—	—	—	—	—	—	—	11,3
The Average of the last three		221,900		A		138483		W	51,2	—	89,0	86,6	—	—	—	—	—	—	—	—	—	11,2

T1 T2 : DE BEARING TEMPERATURE

T11 : CORE TEMPERATRE

T12: FRAME TEMPERATRE

T3~T10 : DE WINDING TEMPERATURE

T13 : AMBIENT TEMPERATURE

### WINDING RESISTANCE (HOT) AT END OF TEMPERATURE RISE TEST

TIME (S)	53	84	120	154	205	250	311	357		
RESISTANC	0,01528	0,01524	0,01520	0,01517	0,01513	0,01509	0,01505	0,01502		

### WINDING RESISTANCE(COLD)

Δ	U1-V1	U1-W1	V1-W1	AVERAGE	MIN	AMBIENT TEM.
	0,01189	0,0119	0,01187	0,01189	0,01187	9,7 °C
Y	U1-U2	V1-V2	W1-W2	AVERAGE	MIN	AMBIENT TEM.
						°C

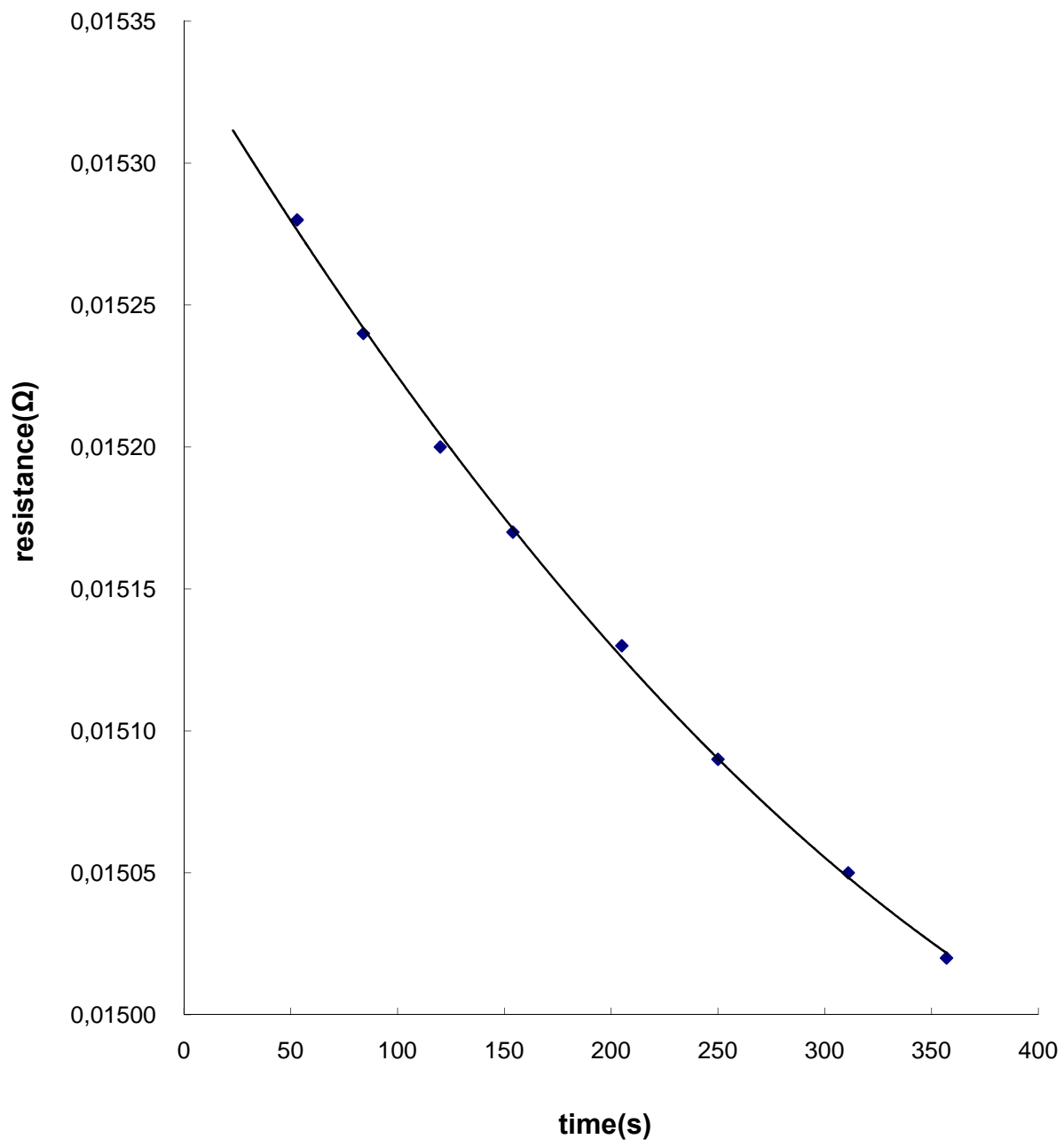
resistance value at 0 sec ( Ω )	0,015340	calculation value of temp.rising	70,07 K
90 S ( Ω )	0,015235	calculation value of temp.rising	67,90 K
full load curent	221,31 A	modify value of temp. rising	67,54 K

# VALIADIS S.A.

## ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

Type	K-315M-2	Poles	2	output Power	132,0	IE:3
Voltage	400 V	Current	221,3 A	Frequency	50,0	kW
Speed	2973 r/min	Duty	S1	Connection	Δ	Hz
Ins.class	F	Weight	1140 kg		IP55	

### RESISTANCE CURVE







# VALIADIS S.A.

## ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

Type	K315M-2		Poles	2	output Power	132,0	IE:3
Voltage	400	V	Current	221,3	A	Frequency	50,0
Speed	2973	r/min	Duty	S1	Connection	Δ	
Ins.class	F		Weight	1140	kg		IP55

### LOAD CURVE

