

VALIADIS S.A.

ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

NAMEPLATE DATA			
K180L-6 FRAME REDUCED	IEC TYPE	18,5 kW	975 r/min
6 POLE	3 PHASE	400 VOLTS	50 Hz
VALIADIS MANUFACTURER	36,5 AMPS	IP55 IP	
	S1 DUTY	F INS.CLASS	Δ CONNECTION
MAJOR CONTENTS		UNIT	TEST VALUE
STATOR RESISTANCE OF PHASE		OHM	0,68221
NO LOAD CURRENT		AMP	14,31
NO LOAD INPUT		W	783,7
CORE LOSS(Pfe)		W	542,5
WINDAGE FRICTION LOSS(Pfw)		W	99,3
STATOR WINDING LOSS(Pcu1)		W	920,0
ROTOR WINDING LOSS(Pcu2)		W	475,5
STRAY LOAD LOSS(Ps)		W	227
FULL LOAD CURRENT		AMP	36,35
LOCKED ROTOR CURRENT		AMP	210,66
LOCKED ROTOR CURRENT/FULL LOAD CURRENT		P.U.	5,77
FULL LOAD TORQUE		N.m	181,12
LOCKED ROTOR TORQUE		N.m	405,09
LOCKED ROTOR TORQUE/FULL LOAD TORQUE		P.U.	2,24
PULL OUT TORQUE		N.m	456,52
PULL OUT TORQUE/FULL LOAD TORQUE		P.U.	2,52
INPUT @ FULL LOAD		kW	20,71
EFFICIENCY @ FULL LOAD		%	89,32
POWER FACTOR @ FULL LOAD			0,82
FULL LOAD SLIP		%	2,464
FULL LOAD SPEED		r/min	975,4
STATOR WINDING TEMPERATURE RISE		K	77
D.E. BEARINGS TEMPERATURE BY PT100		Deg. C	69,9
AMBIENT TEMPERATURE OF TESTING		Deg. C	30,8
HIGH VOLTAGE TEST		V	1800
INSULATION RESISTANCE		MΩ	500
NOISE		dB(A)	76
VIBRATION		mm/s	0,8
The data above is calculated as per IEC 34-2,all data at nominal Volts.			
VALIADIS S.A. K180L-6 18,5 kW 400 VOLTS 50 Hz		SERIAL NO.	
		DATE	
		DRAWN	
		APPRVD	
		CHECKED	
		REV	
		DOCUMENT NO.	

ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

VALIADIS S.A.

Type	K180L-6	Poles	6	Power	18,5 kW
Voltage	400 V	Current	36,5 A	Frequency	50 Hz
Speed	975 r/min	Duty	S1	Connection	Δ
Ins.class	F	Weight	0 kg		IP55

Frame Reduced

NO LOAD TEST

VOL	mul.	Hz	I01	I02	I03	mul.	W1	W2	mul.	°C
459,8	1	50	4,477	4,491	4,481	5	-929,9	1229,4	5	101,1
429,9	1	50	3,505	3,518	3,511	5	-687,2	895,6	5	101,2
400,2	1	50	2,860	2,867	2,867	5	-521,3	678,3	5	100,5
385,3	1	50	2,625	2,633	2,632	5	-460,2	600,0	5	100,1
325,6	1	50	1,998	2,005	2,004	5	-292,8	389,2	5	99,7
265,7	1	50	1,565	1,569	1,569	5	-182,2	252,6	5	99,3
199,6	1	50	2,847	2,909	2,852	2	-242,0	362,9	2	98,7
169,4	1	50	2,397	2,441	2,393	2	-165,0	265,8	2	98,5
124,2	1	50	1,776	1,806	1,768	2	-76,9	154,8	2	98,1
93,7	1	50	1,375	1,403	1,363	2	-34,0	99,0	2	97,6

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Type	K180L-6	Poles	6	Power	18,5	kW
Voltage	400 V	Current	36,5 A	Frequency	50,0	Hz
Speed	975 r/min	Duty	S1	Connection	Δ	
Ins.class	F	Weight	0 kg		IP55	

Frame Reduced

LOCKED ROTOR TEST

VOL	mul.	lk1	lk2	lk3	mul.	W1	W2	mul.	Torque N.m
396,3	1,0	2,082	2,077	2,082	100,0	-16,4	816,7	100	396,41
352,0	1,0	1,772	1,769	1,772	100,0	-12,5	616,6	100	292,04
307,9	1,0	1,482	1,480	1,481	100,0	-11,7	450,2	100	211,19
277,7	1,0	2,598	2,592	2,596	50,0	-26,2	708,1	50	165,13
233,3	1,0	2,088	2,082	2,086	50,0	-26,6	473,2	50	110,25
188,6	1,0	1,604	1,602	1,604	50,0	-23,2	289,4	50	68,21
143,5	1,0	2,908	2,907	2,910	20,0	-44,1	394,0	20	35,77
98,9	1,0	1,934	1,933	1,936	20,0	-22,9	178,1	20	16,17

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ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

VALIADIS S.A.

Type	K180L-6	Poles	6		Power	18,5	kW	Frame Reduced			
Voltage	400	Current	36,5	A	Frequency	50	Hz				
Speed	975	Duty	S1		Connection	Δ					
Ins.class	F	Weight	0	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
10:30	400,1	3,545	3,602	3,544	10	603,0	1414,6	10	58,6	—	95,0	—	—	—	—	—	29,4	44,0	54,4	48,9	28,9
11:00	400,2	3,597	3,643	3,593	10	623,7	1431,8	10	63,6	—	102,5	—	—	—	—	—	30,0	45,5	61,7	52,8	29,7
11:30	400,4	3,613	3,653	3,615	10	633,2	1436,3	10	66,2	—	104,9	—	—	—	—	—	30,4	47,4	63,8	54,3	29,9
12:00	400,3	3,602	3,642	3,601	10	631,6	1432,2	10	67,6	—	107,1	—	—	—	—	—	31,3	49,5	66,3	55,8	30,6
12:30	400,2	3,604	3,646	3,602	10	633,3	1432,9	10	68,5	—	108,1	—	—	—	—	—	31,2	50,1	67,3	56,2	30,8
13:00	400,2	3,595	3,635	3,596	10	632,4	1429,2	10	69,2	—	108,7	—	—	—	—	—	31,4	49,9	68,0	56,5	30,7
13:29	400,1	3,587	3,634	3,584	10	629,3	1428,3	10	69,5	—	109,1	—	—	—	—	—	31,4	50,2	68,6	56,6	30,8
14:00	400,0	3,595	3,654	3,594	10	629,6	1435,5	10	69,9	—	109,3	—	—	—	—	—	31,5	51,2	68,7	56,8	31,0
Last 3 points average	36,082		A		20614,33		W		69,9	—	109,3	—	—	—	—	—	31,5	51,2	68,7	56,8	30,8

T1 T2 : DE BEARING TEMPERATURE T9 : AIR INLET TEMPERATURE T11 : CORE TEMPERATRE T12: FRAME TEMPERATRE
 T3~8 : DE WINDING TEMPERATURE T10 : AIR OUTLET TEMPERATURE T13 : AMBIENT TEMPERATURE

WINDING RESISTANCE (HOT) AT END OF TEMPERATURE RISE TEST

TIME (S)	45	60	72	83	93	105	117	130
RESISTANC	0,46680	0,46520	0,46420	0,46320	0,46230	0,46130	0,46030	0,4596

WINDING RESISTANCE(COLD)

	U1-V1	U1-W1	V1-W1	AVERAGE	MIN	AMBIENT TEM.
	0,3633	0,3634	0,3636	0,36343	0,36330	28,7 °C

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**ELECTRIC MOTOR TEST REPORT -
THREE PHASE INDUCTION MOTOR**

VALIADIS S.A.

Type	K180L-6	Poles	6	Power	18,5	kW	Frame Reduced
Voltage	400 V	Current	36,5 A	Frequency	50,0	Hz	
Speed	975 r/min	Duty	S1	Connection	Δ		
Ins.class	F	Weight	0 kg		IP55		

LOAD TEST

V	Hz	I1	I2	I3	mul.	W1	W2	mul.	r/min	Temperature °C	Torqure N.m
400,1	50,00	4,310	4,364	4,304	10	801,6	1711,4	10	967,7	107,8	217,9
400,2	50,00	4,007	4,060	4,004	10	729,4	1591,6	10	970,8	108,1	201,9
400,1	50,00	3,620	3,681	3,616	10	631,3	1442,3	10	974,8	108,5	180,8
400,1	50,00	3,506	3,562	3,506	10	602,3	1394,8	10	976,5	108,5	174,3
400,0	50,00	2,837	2,904	2,840	10	410,9	1129,6	10	982,5	108,1	134,0
400,21	50,00	2,191	2,249	2,193	10	192,6	848,2	10	988,6	107,2	89,2
400,0	50,00	1,707	1,767	1,713	10	-32,8	589,8	10	994,1	106,6	44,6

Final Resistance of load : 0,00000 Ω ambient temperature 0,0 °C

LOAD %	P2 W	I A	P1 W	Pcu1s W	Ss %	Pcu2s W	Ps W	Pfe W	EFF %	P.F
150,0	27750	53,9	31896,0	2023,9	4,540	1335,1	532,1	462,2	86,53	0,854
125,0	23125	45,1	26279,5	1414,1	3,370	822,0	360,7	477,4	87,96	0,842
100,0	18500	36,4	20712,1	920,0	2,464	475,5	226,5	491,3	89,32	0,822
75,0	13875	28,6	15419,5	570,1	1,719	246,6	125,5	504,1	89,98	0,778
50,0	9250	22,1	10367,5	339,1	1,115	106,1	55,1	517,7	89,20	0,678
25,0	4625	17,2	5499,7	206,5	0,576	27,4	13,6	528,976	84,16	0,461

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VALIADIS S.A.

Type	K180L-6	Poles	6	output Power	18,5 kW
Voltage	400 V	Current	36,5 A	Frequency	50,0 Hz
Speed	975 r/min	Duty	S1	Connection	Δ
Ins.class	F	Weight	0 kg		IP55

LOAD CURVE

