

# VALIADIS S.A.

## ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

NAMEPLATE DATA			
K160L-6 <b>FRAME REDUCED</b>	IEC TYPE	15 kW	965 r/min
6 <b>POLE</b>	3 <b>PHASE</b>	400 <b>VOLTS</b>	50 Hz
Valiadis <b>MANUFACTURER</b>	30,0 <b>AMPS</b>	IP55 <b>IP</b>	
	S1 <b>DUTY</b>	F <b>INS.CLASS</b>	Δ <b>CONNECTION</b>

MAJOR CONTENTS	UNIT	TEST VALUE
STATOR RESISTANCE OF PHASE	OHM	0,78041
NO LOAD CURRENT	AMP	13,69
NO LOAD INPUT	W	683,7
CORE LOSS(Pfe)	W	487,4
WINDAGE FRICTION LOSS(Pfw)	W	46,5
STATOR WINDING LOSS(Pcu1)	W	729,9
ROTOR WINDING LOSS(Pcu2)	W	498,1
STRAY LOAD LOSS(Ps)	W	254
FULL LOAD CURRENT	AMP	30,18
LOCKED ROTOR CURRENT	AMP	160,43
LOCKED ROTOR CURRENT/FULL LOAD CURRENT	P.U.	5,35
FULL LOAD TORQUE	N.m	147,90
LOCKED ROTOR TORQUE	N.m	302,62
LOCKED ROTOR TORQUE/FULL LOAD TORQUE	P.U.	2,04
PULL OUT TORQUE	N.m	367,09
PULL OUT TORQUE/FULL LOAD TORQUE	P.U.	2,47
INPUT @ FULL LOAD	kW	16,96
EFFICIENCY @ FULL LOAD	%	88,45
POWER FACTOR @ FULL LOAD		0,81
FULL LOAD SLIP	%	3,153
FULL LOAD SPEED	r/min	968,5
STATOR WINDING TEMPERATURE RISE	K	74
D.E. BEARINGS TEMPERATURE BY PT100	Deg. C	65,7
AMBIENT TEMPERATURE OF TESTING	Deg. C	26,6
HIGH VOLTAGE TEST	V	1800
INSULATION RESISTANCE	MΩ	500
NOISE	dB(A)	73
VIBRATION	mm/s	1,6

The data above is calculated as per IEC 34-2,all data at nominal Volts.

<b>VALIADIS S.A.</b>  <b>K 160L-6</b> <b>15 kW</b> <b>400 VOLTS 50 Hz</b>	<b>SERIAL NO.</b>		
	<b>DATE</b>		<b>REV</b>
	<b>DRAWN</b>		<b>DOCUMENT NO.</b>
	<b>APPRVD</b>		
	<b>CHECKED</b>		

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**VALIADIS S.A.**

	Frame reduced									
Type	K160L-6		Poles	6		Power	15,0		kW	
Voltage	400	V	Current	30	A	Frequency	50		Hz	
Speed	965	r/min	Duty	S1		Connection	△			
Ins.class	F		Weight	0				IP55		

## NO LOAD TEST

VOL	mul.	Hz	I01	I02	I03	mul.	W1	W2	mul.	°C
460,1	1	50	4,498	4,342	4,563	5	-742,9	1044,6	5	103,3
429,9	1	50	3,491	3,375	3,532	5	-555,1	752,5	5	103,4
400,1	1	50	2,758	2,682	2,779	5	-418,1	555,0	5	103,2
385,3	1	50	2,489	2,431	2,503	5	-367,3	483,9	5	102,9
325,7	1	50	1,791	1,786	1,794	5	-230,0	302,7	5	102,6
265,6	1	50	3,424	3,452	3,440	2	-356,8	478,0	2	102,3
199,5	1	50	2,480	2,512	2,492	2	-188,3	267,0	2	101,5
169,2	1	50	2,066	2,090	2,076	2	-128,6	191,7	2	101,2
124,0	1	50	1,507	1,528	1,518	2	-62,5	107,2	2	100,6
93,9	1	50	1,168	1,188	1,177	2	-31,5	66,9	2	100,1

<b>VALIADIS S.A.</b>	Manufacturing Date	Serial No
	Test Date	Report Number

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**VALIADIS S.A.**

<b>Type</b>	K160L-6	<b>Poles</b>	6	<b>Power</b>	15,0	Frame reduced	<b>kW</b>
<b>Voltage</b>	400 V	<b>Current</b>	30 A	<b>Frequency</b>	50,0		<b>Hz</b>
<b>Speed</b>	965 r/min	<b>Duty</b>	S1	<b>Connection</b>	Δ		
<b>Ins.class</b>	F	<b>Weight</b>	0 kg				IP55

## LOCKED ROTOR TEST

VOL	mul.	lk1	lk2	lk3	mul.	W1	W2	mul.	Torqur N.m
393,5	1,0	3,143	3,131	3,144	50,0	-7,3	1178,8	50	291,55
349,3	1,0	2,671	2,665	2,672	50,0	-8,8	888,2	50	216,58
304,9	1,0	2,240	2,236	2,242	50,0	-12,3	647,5	50	159,25
275,3	1,0	1,964	1,959	1,965	50,0	-14,4	510,1	50	125,93
230,7	1,0	3,949	3,942	3,957	20,0	-42,4	848,2	20	84,28
186,1	1,0	3,035	3,030	3,041	20,0	-39,1	518,9	20	51,45
156,4	1,0	2,469	2,463	2,472	20,0	-33,6	351,1	20	34,30
96,4	1,0	1,441	1,438	1,443	20,0	-15,3	123,6	20	11,76

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**VALIADIS S.A.**

<b>Type</b>	K160L-6	<b>Poles</b>	6	<b>Power</b>	15 kW	Frame reduced
<b>Voltage</b>	400 V	<b>Current</b>	30 A	<b>Frequency</b>	50 Hz	
<b>Speed</b>	965 r/min	<b>Duty</b>	S1	<b>Connection</b>	Δ	
<b>Ins.class</b>	F	<b>Weight</b>	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
11:00	400,3	3,037	3,027	3,016	10	517,1	1171,5	10	58,4	—	100,4	—	—	—	—	—	26,0	39,1	66,8	—	24,3
11:30	400,3	3,055	3,048	3,036	10	523,0	1179,9	10	61,1	—	102,6	—	—	—	—	—	26,0	39,6	68,9	—	25,1
12:00	400,2	3,052	3,046	3,031	10	522,7	1178,5	10	62,4	—	104,0	—	—	—	—	—	26,3	40,5	70,3	—	25,7
12:30	400,1	3,054	3,061	3,032	10	522,0	1183,8	10	64,0	—	105,8	—	—	—	—	—	26,8	41,9	72,2	—	26,1
13:00	400,1	3,034	3,044	3,013	10	516,7	1178,0	10	65,0	—	106,4	—	—	—	—	—	28,9	42,8	72,8	—	26,6
13:30	400,0	3,039	3,052	3,018	10	517,7	1180,8	10	65,3	—	106,7	—	—	—	—	—	27,2	42,2	73,2	—	26,3
14:00	400,0	3,045	3,058	3,024	10	519,6	1182,9	10	65,5	—	106,9	—	—	—	—	—	27,9	42,8	73,3	—	26,6
14:30	400,0	3,023	3,037	3,002	10	514,4	1174,7	10	65,7	—	107,0	—	—	—	—	—	27,9	42,8	73,5	—	26,8
Last 3 points average		30,331			A	16967		W	65,7	—	107,0	—	—	—	—	—	27,9	42,8	73,5	—	26,6

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)	37	48	59	69	79	91	102	117
RESISTANC	0,5283	0,5260	0,5242	0,5223	0,5207	0,5189	0,5173	0,5157

**WINDING RESISTANCE(COLD)**

	U1-V1	U1-W1	V1-W1	AVERAGE	MIN	AMBIENT TEM.
	0,4025	0,4025	0,4025	0,40250	0,40250	20,3 °C

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

**VALIADIS S.A.**

<b>Type</b>	K160L-6		<b>Poles</b>	6		<b>Power</b>	15,0		kW	
<b>Voltage</b>	400	V	<b>Current</b>	30	A	<b>Frequency</b>	50,0		Hz	
<b>Speed</b>	965	r/min	<b>Duty</b>	S1		<b>Connection</b>	Δ			
<b>Ins.class</b>	F		<b>Weight</b>	0	kg		IP55			

**LOAD TEST**

V	Hz	I1	I2	I3	mul.	W1	W2	mul.	r/min	Temperature °C	Torque N.m
400,1	50,00	4,264	4,284	4,240	10	783,1	1668,5	10	951,3	106,6	209,9
400,2	50,00	3,779	3,794	3,755	10	688,3	1477,6	10	958,3	106,8	186,2
400,1	50,00	3,025	3,036	3,002	10	516,9	1181,1	10	968,1	107,0	147,1
400,1	50,00	2,919	2,931	2,894	10	490,1	1140,1	10	970,3	107,0	141,1
400,1	50,00	1,847	1,855	1,830	10	166,5	695,6	10	984,5	106,6	73,2
400,11	49,99	2,927	2,848	2,913	5	-17,5	948,2	5	991,6	106,3	37,1

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	22500	46,0	26492,1	1695,1	5,380	1312,2	598,9	406,4	84,77	0,831
125,0	18750	37,6	21575,6	1134,6	4,114	823,8	405,0	415,8	86,91	0,828
100,0	15000	30,2	16959,1	729,9	3,153	498,1	254,1	431,6	88,45	0,811
75,0	11250	24,1	12676,8	465,2	2,166	254,8	140,1	445,9	88,76	0,759
50,0	7500	18,3	8453,4	267,6	1,497	115,6	61,4	459,9	88,63	0,668
25,0	3750	14,3	4476,2	163,9	0,791	30,4	15,1	473,2	83,97	0,452

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**VALIADIS S.A.**

<b>Type</b>	K160L-6	<b>Poles</b>	6	<b>output Power</b>	15,0 kW
<b>Voltage</b>	400 V	<b>Current</b>	30 A	<b>Frequency</b>	50,0 Hz
<b>Speed</b>	965 r/min	<b>Duty</b>	S1	<b>Connection</b>	Δ
<b>Ins.class</b>	F	<b>Weight</b>	0 kg		IP55

Frame Reduced

## LOAD CURVE

