

VALIADIS S.A.

ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

NAMEPLATE DATA			
K315L-6 FRAME REDUCED	IEC TYPE	160 kW	990 r/min
6 POLE	3 PHASE	400 VOLTS	50 Hz
VALIADIS MANUFACTURER	280,0 AMPS	IP55 IP	
	S1 DUTY	F INS.CLASS	Δ CONNECTION

MAJOR CONTENTS	UNIT	TEST VALUE
STATOR RESISTANCE OF PHASE	OHM	0,02350
NO LOAD CURRENT	AMP	99,90
NO LOAD INPUT	W	3906,0
CORE LOSS(Pfe)	W	2814,0
WINDAGE FRICTION LOSS(Pfw)	W	876,5
STATOR WINDING LOSS(Pcu1)	W	1829,1
ROTOR WINDING LOSS(Pcu2)	W	1346,9
STRAY LOAD LOSS(Ps)	W	2672
FULL LOAD CURRENT	AMP	279,59
LOCKED ROTOR CURRENT	AMP	1865,35
LOCKED ROTOR CURRENT/FULL LOAD CURRENT	P.U.	6,66
FULL LOAD TORQUE	N.m	1540,42
LOCKED ROTOR TORQUE	N.m	3163,65
LOCKED ROTOR TORQUE/FULL LOAD TORQUE	P.U.	2,05
PULL OUT TORQUE	N.m	3889,69
PULL OUT TORQUE/FULL LOAD TORQUE	P.U.	2,52
INPUT @ FULL LOAD	kW	169,47
EFFICIENCY @ FULL LOAD	%	94,41
POWER FACTOR @ FULL LOAD		0,87
FULL LOAD SLIP	%	0,817
FULL LOAD SPEED	r/min	991,8
STATOR WINDING TEMPERATURE RISE	K	65
D.E. BEARINGS TEMPERATURE BY PT100	Deg. C	47,3
AMBIENT TEMPERATURE OF TESTING	Deg. C	7,9
HIGH VOLTAGE TEST	V	1800
INSULATION RESISTANCE	MΩ	500
NOISE	dB(A)	85
VIBRATION	mm/s	1,3

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

VALIADIS S.A. K315L-6 160 kW 400 VOLTS 50 Hz	SERIAL NO.		
	DATE		REV
	DRAWN		DOCUMENT NO.
	APPRVD		
CHECKED			

ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

VALIADIS S.A.

Type	K315L-6	Poles	6			Power	160,0 kW	
Voltage	400 V	Current	280	A		Frequency	50 Hz	
Speed	990 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
464,3	1	50	3,708	3,690	3,775	50	-882,3	1095,2	50	66,7
429,4	1	50	2,635	2,621	2,677	50	-591,4	710,4	50	66,7
400,2	1	50	1,995	1,983	2,026	50	-419,8	498,1	50	66,7
346,5	1	50	1,291	1,280	1,307	50	-234,6	279,0	50	66,6
300,3	1	50	2,494	2,461	2,501	20	-391,5	473,2	20	66,5
246,8	1	50	1,940	1,915	1,945	20	-241,7	310,0	20	66,3
199,4	1	50	1,538	1,520	1,542	20	-147,0	205,1	20	66,2
175,7	1	50	2,716	2,670	2,737	10	-216,7	324,7	10	65,9
139,6	1	50	2,156	2,115	2,171	10	-117,6	219,1	10	65,8
97,2	1	50	1,571	1,527	1,570	10	-33,9	128,3	10	65,7

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VALIADIS S.A.

Type	K315L-6	Poles	6	Power	160,0	kW
Voltage	400 V	Current	280 A	Frequency	50,0	Hz
Speed	990 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
191,5	1,0	3,433	3,426	3,501	200,0	-186,1	475,7	200	433,65
170,2	1,0	2,977	2,970	3,029	200,0	-147,1	364,1	200	327,81
147,8	1,0	2,492	2,485	2,539	200,0	-108,5	263,6	200	257,25
128,1	1,0	2,082	2,078	2,120	200,0	-80,1	189,1	200	181,30
112,1	1,0	1,769	1,759	1,792	200,0	-61,0	139,6	200	122,50
97,0	1,0	2,967	2,950	3,010	100,0	-90,6	201,0	100	76,93
78,4	1,0	2,320	2,303	2,350	100,0	-58,1	126,0	100	42,14

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ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

VALIADIS S.A.

Type	K315L-6	Poles	6	Power	160 kW	Frame Reduced
Voltage	400 V	Current	280 A	Frequency	50 Hz	
Speed	990 r/min	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	
11:00	399,8	2,835	2,832	2,878	100	509,4	1212,6	100	44,5	—	66,7	66,8	—	—	—	—	—	—	—	—	—	7,1
11:30	399,8	2,798	2,796	2,839	100	499,6	1197,6	100	48,2	—	70,3	70,4	—	—	—	—	—	—	—	—	—	7,2
12:00	399,8	2,830	2,825	2,871	100	512,0	1211,2	100	49,5	—	73,4	73,4	—	—	—	—	—	—	—	—	—	7,4
12:30	400,0	2,816	2,814	2,856	100	506,4	1205,2	100	50,2	—	75,5	75,6	—	—	—	—	—	—	—	—	—	7,2
13:00	400,0	2,839	2,835	2,878	100	512,4	1215,4	100	51,0	—	77,1	77,2	—	—	—	—	—	—	—	—	—	7,5
13:30	400,0	2,802	2,800	2,842	100	503,0	1199,6	100	50,6	—	78,4	78,5	—	—	—	—	—	—	—	—	—	7,9
14:00	400,0	2,791	2,787	2,830	100	504,6	1195,6	100	48,0	—	78,6	78,7	—	—	—	—	—	—	—	—	—	7,9
14:30	400,1	2,805	2,800	2,842	100	504,0	1200,2	100	47,3	—	79,2	79,3	—	—	—	—	—	—	—	—	—	7,9

Last 3 points average	281,103	A	170233,3	W	47,3	—	79,2	79,3	—	—	—	—	—	—	—	—	—	—	—	—	7,9
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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)	57	87	132	183	240	291	349	416
RESISTANC	0,01465	0,01460	0,01455	0,01448	0,01442	0,01436	0,01431	0,0142

WINDING RESISTANCE(COLD)

	U1-V1	U1-W1	V1-W1	AVERAGE	MIN	AMBIENT TEM.
	0,01139	0,01145	0,01142	0,01142	0,01139	5,5 °C

VALIADIS S.A.	Manu. Date	Serial No
	Test Date	Report Number

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

VALIADIS S.A.

Type	K315L-6	Poles	6	Power	160,0	kW
Voltage	400 V	Current	280 A	Frequency	50,0	Hz
Speed	990 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	3,340	3,342	3,391	100	634,0	1437,4	100	990,4	75,4	1875,1
400,0	50,01	3,031	3,029	3,079	100	564,2	1302,0	100	991,5	75,8	1688,3
400,1	50,01	2,798	2,798	2,840	100	506,0	1200,2	100	992,4	75,9	1545,6
400,0	50,00	2,219	2,210	2,249	100	345,0	938,7	100	994,4	75,7	1161,3
400,1	50,00	2,175	2,169	2,206	100	330,5	919,9	100	994,6	75,4	1129,9
399,79	50,00	1,672	1,662	1,693	100	162,7	680,7	100	996,4	74,9	751,3
400,32	50,00	2,622	2,620	2,670	50	-17,0	949,3	50	998,0	73,3	397,0

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	240000	410,1	256058,2	3935,0	1,290	3216,7	6070,9	2689,9	93,60	0,901
125,0	200000	344,2	212695,0	2772,6	1,044	2163,4	4195,0	2706,4	94,02	0,892
100,0	160000	279,6	169470,7	1829,1	0,817	1346,9	2672,5	2728,5	94,41	0,875
75,0	120000	220,8	126989,8	1140,9	0,584	718,3	1496,2	2749,8	94,50	0,830
50,0	80000	168,8	85294,0	666,4	0,385	315,4	662,3	2765,1	93,79	0,730
25,0	40000	129,7	44306,4	393,5	0,206	84,6	165,0	2803,44	90,45	0,493

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VALIADIS S.A.

Type	K315L-6		Poles	6		output Power	160,0 kW	Frame Reduced
Voltage	400 V		Current	280 A		Frequency	50,0 Hz	
Speed	990 r/min		Duty	S1		Connection	Δ	
Ins.class	F		Weight	0 kg			IP55	

LOAD CURVE

