



Type Test Report

Motor tested in accordance with IEC60034-2-1 & AS/NZS1359.102.3.Efficiency as per IEC60034-2-1
(PLL determined from residual loss)

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Type: TAI 160M1-2
TR Number: 2013030401
Test Lab: Techtop factory

Nameplate:

Type:	TAI 160M1-2		Duty:	S1	IP:	55
Serial No:	201301016001		Ins.Cl:	F	KG:	79
Voltage	Hz	kW	A	cos fi	r/min	Eff.[%]
400/690	50	11	19.7/11.4	0.89	2945	90.5
Brg.DE:	6309 RZ		Brg.NDE:	6209RZ		

No Load Test:

	Voltage [V]	Current [A]	Input [W]	Freq. [Hz]	Speed [min ⁻¹]	Torque [Nm]	Output [W]	Power Factor	Eff. [%]
No load	360	5.69	453	50	3000	0.0	0	0.13	0.0
No load	400	6.71	500	50	3000	0.0	0	0.11	0.0
No load	440	8.77	580	50	3000	0.0	0	0.09	0.0

Load Test:

Load [p.u]	Voltage [V]	Current [A]	Input [W]	Freq. [Hz]	Speed [min ⁻¹]	Torque [Nm]	Output [W]	Power Factor	Eff. [%]
0.25	400	8.16	3294	50	2988	8.8	2750	0.58	83.5
0.5	400	11.45	6163	50	2977	17.6	5500	0.78	89.2
0.75	400	15.34	9111	50	2964	26.6	8250	0.86	90.6
1	400	19.72	12152	50	2950	35.6	11000	0.89	90.5
1.25	400	24.49	15297	50	2936	44.7	13750	0.90	89.9
1.5	400	29.53	18557	50	2920	54.0	16500	0.91	88.9

Full Load At 380V & 420V

	Voltage [V]	Current [A]	Input [W]	Freq. [Hz]	Speed [min ⁻¹]	Torque [Nm]	Output [W]	Power Factor	Eff. [%]
380V	380	20.6	12222	50	2940	35.73	11000	0.90	90.0
420V	420	19.2	12128	50	2955	35.55	11000	0.87	90.7

Locked Rotor Test:

Un (V)	Ik (A)	Pk(W)	Tk (Nm)	cosφ
400/690	172.9	56.41	87.932	0.47

Temperature Rise:

Amb. Temperature:	24.4	[°C]	Winding temperature rise:	57.6	[K]
Cold Resistance:	0.535	[Ω]	Frame:	31	[°C]
Hot Resistance:	0.667	[Ω]	Bearing:	34.1	[°C]

Torque And Current:

Locked Rotor Tor./Rated Tor.:	2.67	Breakdown Torque/Rated Torque:	3.45
Locked Rotor Cur./Rated Cur.:	8.31	Pullup Torque/Rated Torque:	1.52

Check: Zhang Kai	Operator: Li Jian	Test Date: 04-Mar-13
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