



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 180M-4
TR Number: 2013030902
Test Lab: Techtop factory

Nameplate:

Type:	TAI 180M-4		Duty:	S1		IP:	55	
Serial No:	201301016012		Ins.Cl:	F		KG:	119	
Voltage	Hz	kW	A	cos fi	r/min	Eff. [%]		
400/690	50	18.5	33.2/19.2	0.88	1460	91.5		
Brg.DE:	6311 RZ		Brg.NDE:	6211 RZ				

No Load Test:

	Voltage [V]	Current [A]	Input [W]	Freq. [Hz]	Speed [min ⁻¹]	Torque [Nm]	Output [W]	Power Factor	Eff. [%]
No load	350	10.08	452	50	1500	0.0	0	0.07	0.0
No load	400	13.42	618	50	1500	0.0	0	0.07	0.0
No load	450	21.49	961	50	1500	0.0	0	0.06	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	14.86	5300	50	1492	29.6	4625	0.51	87.3
0.5	400	19.91	10126	50	1485	59.5	9250	0.73	91.3
0.75	400	26.14	15091	50	1477	89.7	13875	0.83	91.9
1	400	33.35	20223	50	1468	120.4	18500	0.88	91.5
1.25	400	41.33	25546	50	1458	151.4	23125	0.89	90.5
1.5	400	49.88	31081	50	1448	183.0	27750	0.90	89.3

Full Load At 380V & 420V

	Voltage [V]	Current [A]	Input [kW]	Freq. [Hz]	Speed [min ⁻¹]	Torque [Nm]	Output [kW]	Power Factor	Eff. [%]
380V	380	34.21	20.26	50	1456	121.34	18.5	0.90	91.3
420V	420	32.70	20.22	50	1469	120.27	18.5	0.85	91.5

Locked Rotor Test:

Un (V)	Ik (A)	Pk(W)	Tk (Nm)	cosφ
400/690	258	90525	289	0.51

Temperature Rise:

Amb. Temperature:	28	[°C]	Winding temperature rise:	63.5	[K]
Cold Resistance:	0.327	[Ω]	Frame:	29.9	[°C]
Hot Resistance:	0.408	[Ω]	Bearing:	33.1	[°C]

Torque And Current:

Locked Rotor Tor./Rated Tor.:	2.38	Breakdown Torque/Rated Torque:	2.98
Locked Rotor Cur./Rated Cur.:	7.74	Pullup Torque/Rated Torque:	1.85

Check: Zhang Kai	Operator: Li Jian	Test Date: 09-Mar-13
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