



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 90S-2
TR Number: 2012071601
Test Lab: Techtop factory

Comments: *This test report is also applicable for TCI 90S-2 1.5kW*

Nameplate:

Type:	TAI 90S-2		Duty:	S1	IP:	55
Serial No:	201204078041		Ins.Cl:	F	KG:	13.5
Voltage	Hz	kW	A	cos fi	r/min	Eff.[%]
230/400	50	1.5	5.55/3.19	0.82	2880	82.8
Brg.DE:	6205ZZ		Brg.NDE:	6205ZZ		

No Load Test:

	Voltage [V]	Current [A]	Input [W]	Freq. [Hz]	Speed [min ⁻¹]	Torque [Nm]	Output [W]	Power Factor	Eff. [%]
No load	380	1.54	106	50	3000	0.0	0	0.10	0.0
No load	400	1.95	135	50	3000	0.0	0	0.10	0.0
No load	420	2.47	179	50	3000	0.0	0	0.10	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	1.98	521	50	2973	1.2	375	0.38	72.0
0.5	400	2.21	923	50	2948	2.4	750	0.60	81.3
0.75	400	2.60	1348	50	2920	3.7	1125	0.75	83.5
1	400	3.14	1804	50	2886	5.0	1500	0.83	83.1
1.25	400	3.80	2297	50	2848	6.3	1875	0.87	81.6
1.5	400	4.56	2835	50	2806	7.7	2250	0.90	79.4

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	3.13	1805	50	2868	5.0	1500	0.88	83.1
420V	420	3.28	1826	50	2898	4.9	1500	0.77	82.1

Locked Rotor Test:

Un (V)	Ik (A)	Pk(W)	Tk (Nm)	cosφ
400/230	21.69	11748	13.75	0.78

Temperature Rise:

Amb.Temperature:	26.8	[°C]	Winding temperature rise:	63.8	[K]
Cold Resistance:	8.369	[Ω]	Frame:	48.5	[°C]
Hot Resistance:	10.533	[Ω]	Bearing:	51.4	[°C]

Torque And Current:

Locked Rotor Tor./Rated Tor.:	2.76	Breakdown Torque/Rated Torque:	3.08
Locked Rotor Cur./Rated Cur.:	6.90	Pullup Torque/Rated Torque:	1.87

Check: Zhang Kai	Operator: Chen Zhongliang	Test Date: 16/Jul/12
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