



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)

SHANGHAI TOP MOTOR CO., LTD

No.303 Kangliu Road
Kang Qiao Industrial Area
Pudong, Shanghai, China

Ph: 86 15000088129
zk@techtopy.net.cn
www.techtopy.com

Type: TAI 90S-4
TR Number: 2012071701
Test Lab: Techtop factory

Comments: *This test report is also applicable for TCI 90S-4 1.1kW*

Nameplate:

Type:	TAI 90S-4		Duty:	S1	IP:	55
Serial No:	201204078043		Ins.Cl:	F	KG:	14.3
Voltage	Hz	kW	A	cos fi	r/min	Eff.[%]
230/400	50	1.1	4.67/2.57	0.75	1420	82.4
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	1.36	73	50	1500	0.0	0	0.08	0.0
No load	400	1.55	85	50	1500	0.0	0	0.08	0.0
No load	420	1.82	103	50	1500	0.0	0	0.08	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	1.58	368	50	1483	1.8	275	0.34	74.7
0.5	400	1.79	666	50	1467	3.6	550	0.54	82.5
0.75	400	2.11	985	50	1448	5.4	825	0.67	83.8
1	400	2.54	1329	50	1425	7.4	1100	0.75	82.8
1.25	400	3.09	1707	50	1399	9.4	1375	0.80	80.5
1.5	400	3.74	2128	50	1370	11.5	1650	0.82	77.5

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	2.58	1339	50	1413	7.4	1100	0.79	82.2
420V	420	2.58	1325	50	1434	7.3	1100	0.71	83.0

Locked Rotor Test:

Un (V)	Ik (A)	Pk(W)	Tk (Nm)	cosφ
400/230	15.71	7183	21.83	0.66

Temperature Rise:

Amb.Temperature:	31.8	[°C]	Winding temperature rise:	49.5	[K]
Cold Resistance:	9.431	[Ω]	Frame:	55	[°C]
Hot Resistance:	11.201	[Ω]	Bearing:	58.2	[°C]

Torque And Current:

Locked Rotor Tor./Rated Tor.:	2.96	Breakdown Torque/Rated Torque:	2.97
Locked Rotor Cur./Rated Cur.:	6.18	Pullup Torque/Rated Torque:	2.47

Check: Zhang Kai	Operator: Chen Zhongliang	Test Date: 17/Jul/12
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