



# 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 631-2

TR Number: 2011062901

Test Lab: Techtop factory

## Nameplate:

Type:	TAI 631-2	Duty:	S1	IP:	55	
Serial No:	201103096003	Ins.Cl:	F	KG:	4	
Voltage	Hz	kW	A	cos fi	r/min	Eff. [%]
230/400	50	0.18	0.95/0.55	0.78	2710	60.7
Brg.DE:	6201 RZ	Brg.NDE:	6201 RZ			

## No Load Test:

	Voltage [V]	Current [A]	Input [W]	Freq. [Hz]	Speed [min <sup>-1</sup> ]	Torque [Nm]	Output [W]	Power Factor	Eff. [%]
No load	380	0.44	62	50	3000	0.0	0	0.21	0.0
<b>No load</b>	<b>400</b>	<b>0.52</b>	<b>81</b>	<b>50</b>	<b>3000</b>	<b>0.0</b>	<b>0</b>	<b>0.23</b>	<b>0.0</b>
No load	420	0.63	110	50	3000	0.0	0	0.24	0.0

## Load Test:

Load [p.u]	Voltage [V]	Current [A]	Input [W]	Freq. [Hz]	Speed [min <sup>-1</sup> ]	Torque [Nm]	Output [W]	Power Factor	Eff. [%]
0.25	400	0.49	129	50	2920	0.147	45	0.38	34.9
0.5	400	0.49	177	50	2876	0.299	90	0.52	51.0
0.75	400	0.50	231	50	2807	0.459	135	0.66	58.6
<b>1</b>	<b>400</b>	<b>0.55</b>	<b>296</b>	<b>50</b>	<b>2713</b>	<b>0.634</b>	<b>180</b>	<b>0.78</b>	<b>60.7</b>
1.25	400	0.64	382	50	2594	0.828	225	0.86	58.9
1.5	400	0.79	500	50	2450	1.053	270	0.91	54.0

## Full Load At 380V & 420V

	Voltage [V]	Current [A]	Input [W]	Freq. [Hz]	Speed [min <sup>-1</sup> ]	Torque [Nm]	Output [W]	Power Factor	Eff. [%]
380V	380	0.55	292.7	50	2701	0.636	180	0.81	61.5
420V	420	0.54	290.8	50	2758	0.623	180	0.74	61.9

## Locked Rotor Test:

Un (V)	Ik (A)	Pk(W)	Tk (Nm)	cosφ
400/230	2.058	1308	1.545	0.92

## Temperature Rise:

Amb. Temperature:	29.7	[°C]	Winding temperature rise:	52.4	[K]
Cold Resistance:	114.8	[Ω]	Frame:	30.9	[°C]
Hot Resistance:	137.1	[Ω]	Bearing:	33.5	[°C]

## Torque And Current:

Locked Rotor Tor./Rated Tor.:	2.44	Breakdown Torque/Rated Torque:	2.36
Locked Rotor Cur./Rated Cur.:	3.75	Pullup Torque/Rated Torque:	2.07

Check: Zhang Kai	Operator: Chen Zhongliang	Test Date: 29/Jun/11
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