



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 112M-4
TR Number: 2012111601
Test Lab: Techtop factory

Comments: *This test report is also applicable for TCI 112M-4 4kW*

Nameplate:

| | | | | | | |
|------------|---------------|----|-----------|--------|-------|---------|
| Type: | TAI 112M-4 | | Duty: | S1 | IP: | 55 |
| Serial No: | 2012080150121 | | Ins.Cl: | F | KG: | 35.2 |
| Voltage | Hz | kW | A | cos fi | r/min | Eff.[%] |
| 400/690 | 50 | 4 | 8.17/4.74 | 0.81 | 1440 | 87.2 |
| Brg.DE: | 6306ZZ | | Brg.NDE: | 6306ZZ | | |

No Load Test:

| | Voltage [V] | Current [A] | Input [W] | Freq. [Hz] | Speed [min ⁻¹] | Torque [Nm] | Output [W] | Power Factor | Eff. [%] |
|----------------|-------------|-------------|------------|------------|----------------------------|-------------|------------|--------------|------------|
| No load | 360 | 3.36 | 147 | 50 | 1500 | 0.0 | 0 | 0.07 | 0.0 |
| No load | 400 | 4.38 | 201 | 50 | 1500 | 0.0 | 0 | 0.07 | 0.0 |
| No load | 440 | 6.25 | 312 | 50 | 1500 | 0.0 | 0 | 0.07 | 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 | 4.55 | 1225 | 50 | 1488 | 6.4 | 1000 | 0.39 | 81.7 |
| 0.5 | 400 | 5.38 | 2288 | 50 | 1476 | 12.9 | 2000 | 0.61 | 87.4 |
| 0.75 | 400 | 6.58 | 3400 | 50 | 1462 | 19.6 | 3000 | 0.75 | 88.2 |
| 1 | 400 | 8.09 | 4573 | 50 | 1447 | 26.4 | 4000 | 0.82 | 87.5 |
| 1.25 | 400 | 9.87 | 5818 | 50 | 1430 | 33.4 | 5000 | 0.85 | 85.9 |
| 1.5 | 400 | 11.84 | 7147 | 50 | 1412 | 40.6 | 6000 | 0.87 | 84.0 |

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 | 8.24 | 4602 | 50 | 1438 | 26.6 | 4000 | 0.85 | 86.9 |
| 420V | 420 | 8.17 | 4571 | 50 | 1452 | 26.3 | 4000 | 0.77 | 87.5 |

Locked Rotor Test:

| Un (V) | Ik (A) | Pk(W) | Tk (Nm) | cosφ |
|---------|--------|-------|---------|------|
| 400/690 | 63.21 | 26799 | 67.9 | 0.61 |

Temperature Rise:

| | | | | | |
|------------------|-------|------|---------------------------|------|------|
| Amb.Temperature: | 16.6 | [°C] | Winding temperature rise: | 60.8 | [K] |
| Cold Resistance: | 2.098 | [Ω] | Frame: | 52.1 | [°C] |
| Hot Resistance: | 2.628 | [Ω] | Bearing: | 55.4 | [°C] |

Torque And Current:

| | | | |
|-------------------------------|------|--------------------------------|------|
| Locked Rotor Tor./Rated Tor.: | 2.57 | Breakdown Torque/Rated Torque: | 3.35 |
| Locked Rotor Cur./Rated Cur.: | 7.81 | Pullup Torque/Rated Torque: | 2.31 |

| | | |
|------------------|---------------------------|----------------------|
| Check: Zhang Kai | Operator: Chen Zhongliang | Test Date: 16-Nov-12 |
|------------------|---------------------------|----------------------|