



| Test Report | | | | Date of issue: 19.11.2015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------|-----------|-------|--|---------|----------------|----------|--------------------|-------|--|--|---|----|----|-------|---|-------|------|---------|-----|------|----|------|------|------|----|------------|-----|------|----|------|------|------|----|------|-----|------|----|------|------|------|----|--|-----|------|----|------|------|------|----|--|-----|------|----|------|------|------|----|
| | | | | Type: M3JM 225SMA 4 IMB3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | Product code: 3GJM222210_DL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | Protection type: Ex d I Mb | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | Cert. No.: LCIE 10 ATEX 3057X/ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | IECEX LCI 04.0005X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rating: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th></th> <th>V</th> <th>Hz</th> <th>kW</th> <th>r/min</th> <th>A</th> <th>cos φ</th> <th>Duty</th> </tr> </thead> <tbody> <tr> <td>3~Motor</td> <td>690</td> <td>Y 50</td> <td>37</td> <td>1482</td> <td>39,8</td> <td>0,83</td> <td>S1</td> </tr> <tr> <td>Insul.cl.F</td> <td>400</td> <td>D 50</td> <td>37</td> <td>1482</td> <td>68,9</td> <td>0,83</td> <td>S1</td> </tr> <tr> <td>IP66</td> <td>415</td> <td>D 50</td> <td>37</td> <td>1483</td> <td>67,7</td> <td>0,81</td> <td>S1</td> </tr> <tr> <td></td> <td>440</td> <td>D 60</td> <td>37</td> <td>1781</td> <td>61,6</td> <td>0,84</td> <td>S1</td> </tr> <tr> <td></td> <td>460</td> <td>D 60</td> <td>37</td> <td>1783</td> <td>59,3</td> <td>0,83</td> <td>S1</td> </tr> </tbody> </table> | | | | | | | | | | | | V | Hz | kW | r/min | A | cos φ | Duty | 3~Motor | 690 | Y 50 | 37 | 1482 | 39,8 | 0,83 | S1 | Insul.cl.F | 400 | D 50 | 37 | 1482 | 68,9 | 0,83 | S1 | IP66 | 415 | D 50 | 37 | 1483 | 67,7 | 0,81 | S1 | | 440 | D 60 | 37 | 1781 | 61,6 | 0,84 | S1 | | 460 | D 60 | 37 | 1783 | 59,3 | 0,83 | S1 |
| | V | Hz | kW | r/min | A | cos φ | Duty | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3~Motor | 690 | Y 50 | 37 | 1482 | 39,8 | 0,83 | S1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Insul.cl.F | 400 | D 50 | 37 | 1482 | 68,9 | 0,83 | S1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IP66 | 415 | D 50 | 37 | 1483 | 67,7 | 0,81 | S1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 440 | D 60 | 37 | 1781 | 61,6 | 0,84 | S1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 460 | D 60 | 37 | 1783 | 59,3 | 0,83 | S1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50Hz: IE3-93.9%(100%)-94.1%(75%)-93.8%(50%) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 60Hz: IE3-94,5%(100%) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Resistance | | | | Insulation resistance at 40 °C | | | | Overload | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Line | | | | 2300 MΩ | | | | Torque 160% 15s | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ambient: 22 °C | | | | 1000 V | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| U ₁ - V ₁ | | | | 0,09531 Ω | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| U ₁ - W ₁ | | | | 0,09537 Ω | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| V ₁ - W ₁ | | | | 0,09549 Ω | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | High-voltage test winding | | | | 2400 V 60 s | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Test | Torque [Nm] | Line U[V] | f[Hz] | Input I[A] | P1 [kW] | Output P2 [kW] | n[r/min] | cos φ | η [%] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| No load test | | 400,1 D | 50 | 26,6 | 0,84 | | 1498 | 0,05 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Locked rotor test | | 74,3 D | 50 | 67,7 | 3,24 | | 0 | 0,37 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thermal test (100% load) | 238,6 | 400,0 D | 50 | 68,9 | 39,5 | 37,0 | 1482 | 0,83 | 93,7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Partial load points: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ~75% load | 178,9 | 400,0 D | 50 | 54,2 | 29,5 | 27,8 | 1485 | 0,79 | 93,9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ~50% load | 119,2 | 400,0 D | 50 | 41,2 | 19,8 | 18,5 | 1490 | 0,69 | 93,6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ~25% load | 59,5 | 400,0 D | 50 | 31,1 | 10,2 | 9,25 | 1496 | 0,47 | 90,8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Temperature rise at rated load. | | | | [°C] | [K] | Method | | Measurement method | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stator winding : | | | | 75 | 1 | | | 1 Resistance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Frame : | | | | 48 | 2 | | | 2 Thermocouples | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bearing D-end : | | | | 54 | 2 | | | 3 Thermometer | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ambient Temperature : | | | | 25 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>These tests have been carried out on motor no. 3G1P141700187, on date 2014-10-03 which is identical in design with the above.</p> <p>Manufactured and tested in accordance with rules of IEC 60034-1 and IEC 60034-2-1. PLL determined from residual loss.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| On behalf of customer | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| On behalf of manufacturer | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tested by ABB Oy, Motors and Generators, Vaasa, Finland | | | | Telephone +358 10 2211 Telefax +358 10 22 47372 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Computer print-out valid without signature.