



| Test Report   |             |  |       | Date of issue: 19.11.2015                              |         |  |          |                    |       |
|---|-------------|--|-------|--|---------|--|----------|--------------------|-------|
|   |             |  |       | Type: M3JM 315SMD 4                                    |         |  |          |                    |       |
|   |             |  |       | Product Code: 3GJM312240-DK                            |         |  |          |                    |       |
|   |             |  |       | Protection type: Ex d I Mb                             |         |  |          |                    |       |
|   |             |  |       | Cert. No.: LCIE 11 ATEX 3090 X /<br>IECEX LCI 04.0007X |         |  |          |                    |       |
| Rating:   |             |  |       |  |         |  |          |                    |       |
|   |             | V  | Hz    | kW   | r/min   | A  | cos φ    | Duty               |       |
| 3~Motor   |             | 690  | Y 50  | 132  | 1490    | 136  | 0,85     | S1                 |       |
| Insul.cl.F  |             | 400  | D 50  | 132  | 1490    | 234  | 0,85     | S1                 |       |
| IP66  |             | 660  | Y 50  | 132  | 1489    | 139  | 0,86     | S1                 |       |
|   |             | 380  | D 50  | 132  | 1489    | 241  | 0,86     | S1                 |       |
|   |             | 415  | D 50  | 132  | 1491    | 231  | 0,83     | S1                 |       |
|   |             | 460  | D 60  | 132  | 1791    | 206  | 0,84     | S1                 |       |
| Eff class IE3   |             | 50Hz : IE3 - 96.3%(100%)-96.6%(75%)-96.3%(50%) |       |  |         |  |          |                    |       |
|   |             | 60Hz : IE3 - 96.4%(100%)                       |       |  |         |  |          |                    |       |
| Resistance  |             |  |       | Insulation resistance at 54 °C                         |         | Overload   |          |                    |       |
| Line  |             | Ambient: 23 °C                                 |       | 6800 MΩ 1000 V   |         | Torque 160 % 15s                                   |          |                    |       |
| U <sub>1</sub> - V <sub>1</sub>   |             | 0,01450 Ω                                      |       |  |         |  |          |                    |       |
| U <sub>1</sub> - W <sub>1</sub>   |             | 0,01450 Ω                                      |       |  |         |  |          |                    |       |
| V <sub>1</sub> - W <sub>1</sub>   |             | 0,01449 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]                                     | η[r/min] | cos φ              | η [%] |
| No load test  |             | 400,0 D  | 50    | 90,0   | 1,53    |  | 1500     | 0,02               |       |
| Locked rotor test   |             | 59,4 D   | 50    | 232,4  | 6,88    |  | 0        | 0,29               |       |
| Thermal test (100% load)  | 846,0       | 400,1 D  | 50    | 233,5  | 136,2   | 132,0  | 1490     | 0,84               | 96,9  |
| Partial load points:  |             |  |       |  |         |  |          |                    |       |
| ~75% load   | 634,8       | 400,1 D  | 50    | 184,6  | 102,0   | 99,0   | 1493     | 0,80               | 97,1  |
| ~50% load   | 423,3       | 400,1 D  | 50    | 140,8  | 68,2    | 66,0   | 1496     | 0,70               | 96,8  |
| ~25% load   | 213,3       | 400,0 D  | 50    | 106,5  | 34,7    | 33,0   | 1498     | 0,47               | 95,1  |
| Temperature rise at rated load.   |             |  |       | [°C]   | [K]     | Method   |          | Measurement method |       |
| Stator winding :  |             |  |       | 51   | 1       |  |          | 1 Resistance       |       |
| Frame :   |             |  |       | 29   | 2       |  |          | 2 Thermometer      |       |
| Bearing D-end :   |             |  |       | 36   | 2       |  |          | 3 Thermocouples    |       |
| Ambient Temperature :   |             |  |       | 25   | 2       |  |          |                    |       |
| <p>These tests have been carried out on motor no. 3GF11077272, on date 2011-08-13 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<br>Telefax +358 10 22 47372 |          |                    |       |

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