



| Test Report   |             |           |       | Date of issue: 19.11.2015                              |         |  |          |                    |       |
|---|-------------|-----------|-------|--|---------|--|----------|--------------------|-------|
|   |             |           |       | Type: M3JM 315SMA 8                                    |         |  |          |                    |       |
|   |             |           |       | Product Code: 3GJM314210-DL                            |         |  |          |                    |       |
|   |             |           |       | 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      | 55    | 742  | 61,7    | 0,80   | S1       |                    |       |
| Insul.cl.F  | 400         | D 50      | 55    | 742  | 106     | 0,80   | S1       |                    |       |
|   | 415         | D 50      | 55    | 743  | 104     | 0,79   | S1       |                    |       |
| IP66  | 440         | D 60      | 55    | 892  | 95,8    | 0,81   | S1       |                    |       |
|   | 460         | D 60      | 55    | 893  | 92,8    | 0,80   | S1       |                    |       |
| Eff class IE3   |             |           |       |  |         |  |          |                    |       |
| 50Hz : IE3-92.5%(100%) - 93.1%(75%) - 92.5%(50%)  |             |           |       |  |         |  |          |                    |       |
| 60Hz : IE2-93.0%(100%)  |             |           |       |  |         |  |          |                    |       |
| Resistance  |             |           |       | Insulation resistance at 43,0 °C                       |         | Overload   |          |                    |       |
| Line Ambient: 20,0 °C   |             |           |       | 21000 MΩ 1000 V  |         | Torque 160 % 15s                                   |          |                    |       |
| U <sub>1</sub> - V <sub>1</sub> 0,06709 Ω   |             |           |       |  |         |  |          |                    |       |
| U <sub>1</sub> - W <sub>1</sub> 0,06722 Ω   |             |           |       |  |         |  |          |                    |       |
| V <sub>1</sub> - W <sub>1</sub> 0,06707 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  |             | 400,0 D   | 50    | 42,7   | 1,38    |  | 750      | 0,05               |       |
| Locked rotor test   |             | 88,1 D    | 50    | 104,1  | 3,64    |  | 0        | 0,23               |       |
| Thermal test (100% load)  | 707,9       | 400,1 D   | 50    | 106,1  | 58,9    | 55,0   | 742      | 0,80               | 93,3  |
| Partial load points:  |             |           |       |  |         |  |          |                    |       |
| ~75% load   | 528,0       | 400,1 D   | 50    | 83,9   | 44,0    | 41,3   | 746      | 0,76               | 93,8  |
| ~50% load   | 350,7       | 400,1 D   | 50    | 64,7   | 29,5    | 27,5   | 748      | 0,66               | 93,3  |
| ~25% load   | 175,0       | 400,1 D   | 50    | 49,7   | 15,3    | 13,8   | 749      | 0,44               | 90,0  |
| Temperature rise at rated load.   |             |           |       | °C   | [K]     | Method   |          | Measurement method |       |
| Stator winding :  |             |           |       | 44   | 1       |  |          | 1 Resistance       |       |
| Frame :   |             |           |       | 26   | 2       |  |          | 2 Thermocouples    |       |
| Bearing D-end :   |             |           |       | 30   | 2       |  |          | 3 Thermometer      |       |
| Ambient Temperature :   |             |           |       | 25   | 2       |  |          |                    |       |
| <p>These tests have been carried out on motor no. 3GF10021103, on date 2010-05-04 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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