



|  |  |  |       |  |         |                          |          |                    |       |  |
|--|--|--|-------|--|---------|--------------------------|----------|--------------------|-------|--|
| <b>Test Report</b>   |  |  |       | Date of issue: 19.11.2015  |         |                          |          |                    |       |  |
|  |  |  |       | Type: M3JM 315MLA 2<br>Product Code: 3GJM311410-DK<br>Protection type: Ex d I Mb<br>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  | 160  | 2983    | 155                      | 0,9      | S1                 |       |  |
| Insul.cl.F   |  | 400  | D 50  | 160  | 2983    | 268                      | 0,9      | S1                 |       |  |
| IP66   |  | 660  | Y 50  | 160  | 2980    | 162                      | 0,9      | S1                 |       |  |
|  |  | 380  | D 50  | 160  | 2980    | 282                      | 0,9      | S1                 |       |  |
|  |  | 415  | D 50  | 160  | 2983    | 258                      | 0,9      | S1                 |       |  |
|  |  | 460  | D 60  | 160  | 3584    | 233                      | 0,9      | S1                 |       |  |
|  |  | 50Hz : IE3 - 96.2%(100%)-96.4%(75%)-96.2%(50%) |       |  |         |                          |          |                    |       |  |
| Eff class IE3  |  | 60Hz : IE3 - 95.7%(100%)                       |       |  |         |                          |          |                    |       |  |
| Resistance   |  |  |       | Insulation resistance at 42 °C   |         |                          |          | Overload           |       |  |
| Line   |  | Ambient: 22 °C                                 |       | 2500 MΩ  |         | 1000 V                   |          | Torque 160 % 15s   |       |  |
| U <sub>1</sub> - V <sub>1</sub>  |  | 0,01105 Ω                                      |       |  |         |                          |          |                    |       |  |
| U <sub>1</sub> - W <sub>1</sub>  |  | 0,01107 Ω                                      |       |  |         |                          |          |                    |       |  |
| V <sub>1</sub> - W <sub>1</sub>  |  | 0,01106 Ω                                      |       |  |         |                          |          |                    |       |  |
|  |  |  |       | High-voltage test winding 1900 V   |         |                          |          | 60 s               |       |  |
| Test   |  | Line   |       | Input  |         | Output                   |          |                    |       |  |
|  |  | U[V]   | f[Hz] | I[A]   | P1 [kW] | P2 [kW]                  | n[r/min] | cos φ              | η [%] |  |
| No load test   |  | 400  | D 50  | 61,2   | 1,67    |                          | 3000     | 0,039              |       |  |
| Locked rotor test  |  | 63,2   | D 50  | 266,9  | 7,93    |                          | 0        | 0,272              |       |  |
| Thermal test ( 100% load )   |  | 400,5  | D 50  | 267,8  | 164,8   | 160,0                    | 2983     | 0,89               | 97,1  |  |
| Partial load points:   |  |  |       |  |         |                          |          |                    |       |  |
| ~75% load  |  | 400,7  | D 50  | 203,9  | 123,4   | 120,0                    | 2988     | 0,87               | 97,3  |  |
| ~50% load  |  | 400,7  | D 50  | 144,5  | 82,4    | 80,0                     | 2992     | 0,82               | 97,1  |  |
| ~25% load  |  | 400,9  | D 50  | 92,7   | 41,9    | 40,0                     | 2997     | 0,65               | 95,5  |  |
| Temperature rise at rated load.  |  |  |       | °C   | [K]     | Method                   |          | Measurement method |       |  |
| Stator winding :   |  |  |       | 57   | 1       |                          |          | 1 Resistance       |       |  |
| Frame :  |  |  |       | 28   | 2       |                          |          | 2 Thermocouples    |       |  |
| Bearing D-end :  |  |  |       | 38   | 2       |                          |          | 3 Thermometer      |       |  |
| Ambient Temperature :  |  |  |       | 25   | 2       |                          |          |                    |       |  |
| <p>These tests have been carried out on motor no. 3GP11024287, on date 2011-10-11 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.<br/>PLL determined from residual loss.</p> <p>On behalf of customer</p> <p>On behalf of manufacturer</p> <p>Tested by ABB Oy, Motors and Generators, Vaasa, Finland</p> |  |  |       |  |         |                          |          |                    |       |  |
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