



| Test Report  |                                 |           |                  | Date of issue: 4.6.2014                            |                                  |  |                    |       |       |
|--|---------------------------------|-----------|------------------|--|----------------------------------|--|--------------------|-------|-------|
|  |                                 |           |                  | Serial No.: 3GF11094437                            |                                  |  |                    |       |       |
|  |                                 |           |                  | Type: M3KP 160MLA 8 IMB3/IM1001                    |                                  |  |                    |       |       |
|  |                                 |           |                  | Product Code: 3GKP164410-ADH                       |                                  |  |                    |       |       |
|  |                                 |           |                  | Protection type: Ex de IIB T4 Gb                   |                                  |  |                    |       |       |
|  |                                 |           |                  | Cert. No.: LCIE 11 ATEX 3087X / IECEx LCI 09.0008X |                                  |  |                    |       |       |
| Rating:  |                                 |           |                  |  |                                  |  |                    |       |       |
|  | V                               | Hz        | kW               | r/min  | A                                | cos φ  | Duty               |       |       |
| 3~Motor  | 690                             | Y 50      | 4                | 722  | 5,4                              | 0,71   | S1                 |       |       |
| Insul.cl.F   | 400                             | D 50      | 4                | 722  | 9,3                              | 0,71   | S1                 |       |       |
| IP55   | 415                             | D 50      | 4                | 724  | 9,1                              | 0,70   | S1                 |       |       |
| Resistance   |                                 |           | Ambient: 22,0 °C |  | Insulation resistance at 31,5 °C |  | Overload           |       |       |
| Line   | U <sub>1</sub> - V <sub>1</sub> |           | 1,94900 Ω        |  | 46000 MΩ 1000 V                  |  | Torque 160 % 15s   |       |       |
|  | U <sub>1</sub> - W <sub>1</sub> |           | 1,94900 Ω        |  |                                  |  |                    |       |       |
|  | V <sub>1</sub> - W <sub>1</sub> |           | 1,94800 Ω        |  |                                  |  |                    |       |       |
|  |                                 |           |                  | High-voltage test winding 2900 V                   |                                  | 1 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   |                                 | 400,1 D   | 50               | 5,60   | 0,28                             |  | 748                | 0,07  |       |
| Locked rotor test  |                                 | 127,9 D   | 50               | 9,29   | 0,80                             |  | 0                  | 0,39  |       |
| Thermal test (100% load)   | 52,9                            | 400,0 D   | 50               | 10,3   | 4,91                             | 4,00   | 705                | 0,69  | 81,4  |
| Partial load points:   |                                 |           |                  |  |                                  |  |                    |       |       |
| ~75% load  | 39,6                            | 400,0 D   | 50               | 8,43   | 3,62                             | 3,00   | 719                | 0,62  | 82,9  |
| ~50% load  | 26,3                            | 400,0 D   | 50               | 6,96   | 2,43                             | 2,00   | 731                | 0,50  | 82,3  |
| ~25% load  | 13,1                            | 400,0 D   | 50               | 5,93   | 1,32                             | 1,00   | 741                | 0,32  | 75,7  |
| Temperature rise at rated load.  |                                 |           | [°C]             | [K]  | Method                           |  | Measurement method |       |       |
| Stator winding :   |                                 |           | 44,5             | 1  | 1                                |  | 1 Resistance       |       |       |
| Frame :  |                                 |           | 27,7             | 2  | 2                                |  | 2 Thermometer      |       |       |
| Bearing D-end :  |                                 |           | 26,5             | 2  | 2                                |  | 3 Thermocouples    |       |       |
| Rotor :  |                                 |           | 49,2             | 3  | 3                                |  |                    |       |       |
| Ambient Temperature :  |                                 |           | 25,0             | 2  | 2                                |  |                    |       |       |
| Manufactured and tested in accordance with rules of IEC 60034-1 and IEC 60034-2-1.<br>PLL determined from residual loss. |                                 |           |                  |  |                                  |  |                    |       |       |
| On behalf of customer  |                                 |           |                  |  |                                  |  |                    |       |       |
| On behalf of manufacturer  |                                 |           | Date of test     |  | 30.3.2012                        |  |                    |       |       |
| Tested by ABB Oy, Motors and Generators, Vaasa, Finland  |                                 |           |                  |  |                                  | Telephone +358 10 2211<br>Telefax +358 10 22 47372 |                    |       |       |

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