



| Test Report  |   |           |       | Date of issue: 25.5.2015               |         |                              |                    |                            |       |
|--|---|-----------|-------|--|---------|------------------------------|--------------------|----------------------------|-------|
| Customer:  |   |           |       | Serial No.:                            |         |                              |                    |                            |       |
| Customer ref.:   |   |           |       | Order No.:                             |         |                              |                    |                            |       |
|  |   |           |       | Type: M3JP 160MLC 2                    |         |                              |                    |                            |       |
|  |   |           |       | Product Code: 3GJP161430-ADK           |         |                              |                    |                            |       |
|  |   |           |       | Protection type: Ex d IIB T4 Gb        |         |                              |                    |                            |       |
|  |   |           |       | Cert. No.: LCIE 11 ATEX 3087 X / IECEx |         |                              |                    |                            |       |
|  |   |           |       | LCIE 09.0008X                          |         |                              |                    |                            |       |
| Rating:  |   |           |       |  |         |                              |                    |                            |       |
|  | V   | Hz        | kW    | r/min                                  | A       | cos φ                        | Duty               |                            |       |
| 3-Motor  | 690                                       | Y 50      | 18,5  | 2942                                   | 17,9    | 0,93                         | S1                 |                            |       |
| Insul.cl.F   | 400                                       | D 50      | 18,5  | 2942                                   | 30,8    | 0,93                         | S1                 |                            |       |
| IP55   | 660                                       | Y 50      | 18,5  | 2935                                   | 18,9    | 0,93                         | S1                 |                            |       |
|  | 380                                       | D 50      | 18,5  | 2935                                   | 32,6    | 0,93                         | S1                 |                            |       |
|  | 415                                       | D 50      | 18,5  | 2948                                   | 30,0    | 0,92                         | S1                 |                            |       |
|  | 460                                       | D 60      | 18,5  | 3551                                   | 26,8    | 0,93                         | S1                 |                            |       |
| Eff class IE3  | 50Hz : IE3-93,1(100%)-93,9(75%)-93,9(50%) |           |       |  |         |                              |                    |                            |       |
|  | 60Hz : IE3-92,9(100%)                     |           |       |  |         |                              |                    |                            |       |
| Resistance   |   |           |       | Insulation resistance at 22,1 °C       |         | Overload                     |                    |                            |       |
| Line   | Ambient: 20,6 °C                          |           |       | R > 2000 Mohm 1000 V                   |         | Current 150 % 120s           |                    |                            |       |
| U <sub>1</sub> - V <sub>1</sub>  | 0,2242 Ω                                  |           |       |  |         | Torque 160 % 15s             |                    |                            |       |
| U <sub>1</sub> - W <sub>1</sub>  | 0,2234 Ω                                  |           |       |  |         | Speed 120 % 120s             |                    |                            |       |
| V <sub>1</sub> - W <sub>1</sub>  | 0,2238 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   |   | 399 D     | 50    | 8,1                                    | 0,41    |                              | 3000               | 0,07                       |       |
| Locked rotor test  |   | 60 D      | 50    | 32,9                                   | 1,34    |                              | 0                  | 0,39                       |       |
| Thermal test ( 100% load )   | 60,0                                      | 400 D     | 50    | 31,6                                   | 19,91   | 18,50                        | 2947               | 0,91                       | 92,90 |
| Partial load points:   |   |           |       |  |         |                              |                    |                            |       |
| ~75% load  | 44,3                                      | 400 D     | 50    | 23,9                                   | 14,70   | 13,75                        | 2962               | 0,89                       | 93,50 |
| ~50% load  | 28,2                                      | 400 D     | 50    | 16,7                                   | 9,44    | 8,80                         | 2976               | 0,81                       | 93,27 |
| ~25% load  | 13,9                                      | 400 D     | 50    | 11,1                                   | 4,81    | 4,34                         | 2989               | 0,62                       | 90,22 |
| Temperature rise at rated load.  |   |           |       | °C                                     | [K]     | Method                       | Measurement method |                            |       |
| Stator winding :   |   |           |       | 49,5                                   | 1       | 1 Resistance                 |                    |                            |       |
| Frame :  |   |           |       | 27,8                                   | 2       | 2 Thermometer                |                    |                            |       |
| Bearing D-end :  |   |           |       | 31,4                                   | 2       | 3 Thermocouples              |                    |                            |       |
| Ambient Temperature :  |   |           |       | 22                                     | 2       |                              |                    |                            |       |
| <p>These tests have been carried out on motor no. 3GV12108464070004, on date 2012-01-18 which is identical in electrical 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  |   |           |       | Date of test                           |         |                              |                    |                            |       |
| Tested by ABB AB, LV Motors, 721 70 Västerås, Sweden   |   |           |       |  |         | Telephone +46 (0)21 32 90 00 |                    | Telefax +46 (0)21 32 90 22 |       |

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