



| Type Test Report                                                                                                         |             |                                                                                                                                                                                                                                                                |       | Date of issue: 2011.12.19                              |         |                                                                        |                    |                          |       |    |       |   |       |      |     |   |    |      |      |       |      |    |
|--------------------------------------------------------------------------------------------------------------------------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------------------------------------------------------|---------|------------------------------------------------------------------------|--------------------|--------------------------|-------|----|-------|---|-------|------|-----|---|----|------|------|-------|------|----|
| Customer:                                                                                                                |             |                                                                                                                                                                                                                                                                |       | Serial No.: 3GE080413T7502                             |         |                                                                        |                    |                          |       |    |       |   |       |      |     |   |    |      |      |       |      |    |
|                                                                                                                          |             |                                                                                                                                                                                                                                                                |       | Type: M3AA 132SC 2<br>Product Code: 3GAA131443-_HE     |         |                                                                        |                    |                          |       |    |       |   |       |      |     |   |    |      |      |       |      |    |
| Customer ref.:                                                                                                           |             |                                                                                                                                                                                                                                                                |       |                                                        |         |                                                                        |                    |                          |       |    |       |   |       |      |     |   |    |      |      |       |      |    |
| Rating:                                                                                                                  |             | <table border="1"><thead><tr><th>V</th><th>Hz</th><th>kW</th><th>r/min</th><th>A</th><th>cos φ</th><th>Duty</th></tr></thead><tbody><tr><td>415</td><td>D</td><td>50</td><td>7,50</td><td>2920</td><td>13,20</td><td>0,89</td><td>S1</td></tr></tbody></table> |       |                                                        |         |                                                                        |                    | V                        | Hz    | kW | r/min | A | cos φ | Duty | 415 | D | 50 | 7,50 | 2920 | 13,20 | 0,89 | S1 |
| V                                                                                                                        | Hz          | kW                                                                                                                                                                                                                                                             | r/min | A                                                      | cos φ   | Duty                                                                   |                    |                          |       |    |       |   |       |      |     |   |    |      |      |       |      |    |
| 415                                                                                                                      | D           | 50                                                                                                                                                                                                                                                             | 7,50  | 2920                                                   | 13,20   | 0,89                                                                   | S1                 |                          |       |    |       |   |       |      |     |   |    |      |      |       |      |    |
| 3~Motor<br>Insul.cl.F<br>IP55<br><br>Eff class IE2                                                                       |             | 50Hz : IE2 - 88,2(100%) - 88,4(75%) - 86,9(50%)                                                                                                                                                                                                                |       |                                                        |         |                                                                        |                    |                          |       |    |       |   |       |      |     |   |    |      |      |       |      |    |
| Resistance<br>Line                                                                                                       |             | Ambient: 18,0 °C                                                                                                                                                                                                                                               |       | Insulation resistance at 17 °C<br>R > 2000 Mohm 1000 V |         | Overload<br>Current 150 % 120s<br>Torque 160 % 15s<br>Speed 120 % 120s |                    |                          |       |    |       |   |       |      |     |   |    |      |      |       |      |    |
| U <sub>1</sub> - V <sub>1</sub><br>U <sub>1</sub> - W <sub>1</sub><br>V <sub>1</sub> - W <sub>1</sub>                    |             | 0,99000 Ω<br>0,98600 Ω<br>0,99000 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                                                                                                             |             | 415 D                                                                                                                                                                                                                                                          | 50    | 3,6                                                    | 0,39    |                                                                        | 3000               | 0,15                     |       |    |       |   |       |      |     |   |    |      |      |       |      |    |
| Locked rotor test                                                                                                        |             | 70,7 D                                                                                                                                                                                                                                                         | 50    | 13,3                                                   | 0,65    |                                                                        | 0                  | 0,40                     |       |    |       |   |       |      |     |   |    |      |      |       |      |    |
| Thermal test ( 100% load )                                                                                               | 24,5        | 415 D                                                                                                                                                                                                                                                          | 50    | 13,2                                                   | 8,50    | 7,50                                                                   | 2918               | 0,89                     | 88,20 |    |       |   |       |      |     |   |    |      |      |       |      |    |
| Partial load points:                                                                                                     |             |                                                                                                                                                                                                                                                                |       |                                                        |         |                                                                        |                    |                          |       |    |       |   |       |      |     |   |    |      |      |       |      |    |
| ~75% load                                                                                                                | 18,3        | 415 D                                                                                                                                                                                                                                                          | 50    | 10,1                                                   | 6,36    | 5,63                                                                   | 2938               | 0,87                     | 88,40 |    |       |   |       |      |     |   |    |      |      |       |      |    |
| ~50% load                                                                                                                | 12,1        | 415 D                                                                                                                                                                                                                                                          | 50    | 7,5                                                    | 4,32    | 3,75                                                                   | 2960               | 0,80                     | 86,90 |    |       |   |       |      |     |   |    |      |      |       |      |    |
| ~25% load                                                                                                                | 6,0         | 415 D                                                                                                                                                                                                                                                          | 50    | 5,1                                                    | 2,35    | 1,88                                                                   | 2981               | 0,63                     | 79,80 |    |       |   |       |      |     |   |    |      |      |       |      |    |
| Temperature rise at rated load.                                                                                          |             | [°C]                                                                                                                                                                                                                                                           |       | [K]                                                    | Method  |                                                                        | Measurement method |                          |       |    |       |   |       |      |     |   |    |      |      |       |      |    |
| Stator winding :                                                                                                         |             | 53,2                                                                                                                                                                                                                                                           |       | 3                                                      |         |                                                                        | 1 Resistance       |                          |       |    |       |   |       |      |     |   |    |      |      |       |      |    |
| Frame :                                                                                                                  |             | 16                                                                                                                                                                                                                                                             |       | 3                                                      |         |                                                                        | 2 Thermometer      |                          |       |    |       |   |       |      |     |   |    |      |      |       |      |    |
| Bearing D-end :                                                                                                          |             | 27                                                                                                                                                                                                                                                             |       | 3                                                      |         |                                                                        | 3 Thermocouples    |                          |       |    |       |   |       |      |     |   |    |      |      |       |      |    |
| Ambient Temperature :                                                                                                    |             | 25                                                                                                                                                                                                                                                             |       | 3                                                      |         |                                                                        |                    |                          |       |    |       |   |       |      |     |   |    |      |      |       |      |    |
| 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                                                                                                                                                                                                                                                   |       | 13.2.2008                                              |         |                                                                        |                    |                          |       |    |       |   |       |      |     |   |    |      |      |       |      |    |
| Tested by Asea Brown Boveri, S.A., Fabrica Motores , 08192 Sant Quirze del Valles , Spain                                |             |                                                                                                                                                                                                                                                                |       |                                                        |         | Telephone +34 93 728 85 00                                             |                    | Telefax +34 93 728 85 33 |       |    |       |   |       |      |     |   |    |      |      |       |      |    |

Computer print-out valid without signature.