# Type Test Report

Date of issue: 1.9.2015

Serial No.:

Customer:

Customer ref.:

Type: M3AA 225SMA 2

Product Code: 3GAA251210-ADK

Rating:

| | V | | Hz | kW | r/min | A | cos φ | Duty |
|---|---|---|---|---|---|---|---|---|
| 3~Motor | 690 | Y | 50 | 55,0 | 2975 | 54,3 | 0,89 | S1 |
| Insul.cl.F | 400 | D | 50 | 55,0 | 2975 | 93,6 | 0,89 | S1 |
| IP55 | 660 | Y | 50 | 55,0 | 2973 | 56,4 | 0,90 | S1 |
| | 380 | D | 50 | 55,0 | 2973 | 97,9 | 0,90 | S1 |
| | 415 | D | 50 | 55,0 | 2977 | 91,3 | 0,88 | S1 |
| | 460 | D | 60 | 55,0 | 3578 | 81,5 | 0,89 | S1 |

Eff class IE3

50Hz : IE3 - 95,2(100%) - 95,4(75%) - 95,0(50%)

60Hz : IE3 - 94,4(100%)

Resistance

Line Ambient: 23,9 °C

| | |
|---|---|
| $U_1$ - $V_1$ | 0,0430 Ω |
| $U_1$ - $W_1$ | 0,0429 Ω |
| $V_1$ - $W_1$ | 0,0428 Ω |

Insulation resistance at

R > 2000 Mohm 1000 V

Overload

| | | |
|---|---|---|
| Volt. | 130 % | 60s |
| Curr. | 160 % | 120s |
| Speed | 120 % | 120s |

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 | | 399,9 | D | 50 | 25,0 | 1,20 | | 3000 | 0,07 | |
| Locked rotor test | | 60,3 | D | 50 | 101,8 | 3,40 | | | 0,32 | |
| Thermal test ( 100% load ) | 176,5 | 400 | D | 50 | 94,2 | 57,50 | 55,00 | 2975 | 0,88 | 95,70 |
| Partial load points: | | | | | | | | | | |
| ~75% load | 132,1 | 400 | D | 50 | 72,7 | 43,20 | 41,25 | 2982 | 0,86 | 95,60 |
| ~50% load | 87,9 | 400 | D | 50 | 52,7 | 29,00 | 27,50 | 2989 | 0,79 | 94,80 |
| ~25% load | 43,8 | 400 | D | 50 | 35,2 | 15,00 | 13,75 | 2995 | 0,61 | 91,60 |

Temperature rise at rated load.

| | [°C] | [K] | Method |
|---|---|---|---|
| Stator winding : | | 48,4 | 1 |
| Frame : | 44 | | 2 |
| Bearing D-end : | 67 | | 2 |
| Ambient Temperature : | 25 | | 2 |

Measurement method

1 Resistance

2 Thermometer

3 Thermocouples

These tests have been carried out on motor no. 3GV13 11256198 001, on date 2013-09-27 which is identical in electrical design with the above.

Manufactured and tested in accordance with rules of IEC 60034-1 and IEC 60034-2-1.

PLL determined from residual loss.

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

Computer print-out valid without signature.