



| Type Test Report | | | | Date of issue: 2011-10-05 | | | | | | | |
|--|-------------|-----------|--------------|--|------------|----------------|-----------|----------------------|------------------|------|------------------------------|
| Customer: | | | | Serial No.: 3GE070909T1504 | | | | | | | |
| | | | | Customer ref.: | | | | Type: M2AA 90L 4 | | | Product Code: 3GAA092002-_DE |
| Rating: | | | | V | Hz | kW | r/min | A | cos φ | Duty | |
| 3-Motor | | | | 690 | Y 50 | 1,50 | 1420 | 2,00 | 0,75 | S1 | |
| Insul.cl.F | | | | 400 | D 50 | 1,50 | 1420 | 3,50 | 0,75 | S1 | |
| IP55 | | | | 460 | D 60 | 1,50 | 1735 | 3,00 | 0,73 | S1 | |
| Eff class IE1 | | | | 50Hz : IE1 - 81,3(100%) - 81,9(75%) - 80,1(50%) 60Hz : IE1 - 83,6(100%) | | | | | | | |
| Resistance | | | | Insulation resistance at 22 °C | | | | Overload | | | |
| Line | | | | Ambient: 22,0 °C | | | | R > 2000 Mohm 1000 V | | | |
| U ₁ - V ₁ | | | | 8,21000 Ω | | | | Current 150% 120s | | | |
| U ₁ - W ₁ | | | | 8,21000 Ω | | | | Torque 160% 15s | | | |
| V ₁ - W ₁ | | | | 8,20000 Ω | | | | 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 | | 400 D | 50 | 2,3 | 0,15 | | 1500 | 0,09 | | | |
| Locked rotor test | | 81,6 D | 50 | 3,5 | 0,34 | | 0 | 0,69 | | | |
| Thermal test (100% load) | 10,1 | 400 D | 50 | 3,5 | 1,85 | 1,50 | 1420 | 0,75 | 81,30 | | |
| Partial load points: | | | | | | | | | | | |
| ~75% load | 7,4 | 400 D | 50 | 2,9 | 1,37 | 1,13 | 1443 | 0,66 | 81,90 | | |
| ~50% load | 4,9 | 400 D | 50 | 2,6 | 0,94 | 0,75 | 1465 | 0,52 | 80,10 | | |
| ~25% load | 2,4 | 400 D | 50 | 2,3 | 0,53 | 0,38 | 1483 | 0,33 | 70,80 | | |
| Temperature rise at rated load. | | | | °C | [K] | Method | | Measurement method | | | |
| Stator winding : | | | | 54,6 | 3 | | | 1 Resistance | | | |
| Frame : | | | | 25 | 3 | | | 2 Thermometer | | | |
| Bearing D-end : | | | | 30 | 3 | | | 3 Thermocouples | | | |
| Ambient Temperature : | | | | 25 | 3 | | | | | | |
| 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 | | 2007-03-20 | | | | | | |
| Tested by Asea Brown Boveri, S.A., Fabrica Motores , 08192 Sant Quirze del Valles , Spain | | | | | | | Telephone | | +34 93 728 85 00 | | |
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