



<b>Type Test Report</b>				Date of issue: 1.9.2015																																													
Customer:				Serial No.:																																													
Customer ref.:				Type: M3AA 160MLA 4 Product Code: 3GAA162410-ADG																																													
Rating:				<table border="1" style="width:100%; border-collapse: collapse;"> <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>3-Motor</td> <td>690 Y</td> <td>50</td> <td>11,0</td> <td>1466</td> <td>12,1</td> <td>0,84 S1</td> </tr> <tr> <td>Insul.cl.F</td> <td>400 D</td> <td>50</td> <td>11,0</td> <td>1466</td> <td>20,9</td> <td>0,84 S1</td> </tr> <tr> <td>IP55</td> <td>415 D</td> <td>50</td> <td>11,0</td> <td>1470</td> <td>20,3</td> <td>0,83 S1</td> </tr> <tr> <td></td> <td>440 D</td> <td>60</td> <td>11,0</td> <td>1769</td> <td>18,8</td> <td>0,84 S1</td> </tr> <tr> <td></td> <td>460 D</td> <td>60</td> <td>11,0</td> <td>1772</td> <td>18,2</td> <td>0,83 S1</td> </tr> </tbody> </table>				V	Hz	kW	r/min	A	cos φ	Duty	3-Motor	690 Y	50	11,0	1466	12,1	0,84 S1	Insul.cl.F	400 D	50	11,0	1466	20,9	0,84 S1	IP55	415 D	50	11,0	1470	20,3	0,83 S1		440 D	60	11,0	1769	18,8	0,84 S1		460 D	60	11,0	1772	18,2	0,83 S1
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Eff class IE2				50Hz : IE2 - 90,4(100%) - 91,6(75%) - 91,3(50%) 60Hz : IE2 - 91,0(100%)																																													
Resistance				Insulation resistance at 21,7 °C		Overload																																											
Line				R > 2000 Mohm 1000 V		Current 150 % 120s																																											
U <sub>1</sub> - V <sub>1</sub>				Ambient: 25,5 °C		Torque 160 % 15s																																											
U <sub>1</sub> - W <sub>1</sub>				0,57430 Ω		Speed 120 % 120s																																											
V <sub>1</sub> - W <sub>1</sub>				0,56920 Ω																																													
				0,57180 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		401 D	50	7,2	0,34		1500	0,07																																									
Locked rotor test		88 D	50	20,6	1,05		0	0,34																																									
Thermal test ( 100% load )	71,5	400 D	50	21,0	12,16	11,00	1470	0,84	90,49																																								
Partial load points:																																																	
~75% load	53,1	400 D	50	16,2	9,00	8,23	1479	0,80	91,37																																								
~50% load	36,2	400 D	50	12,3	6,18	5,64	1486	0,72	91,22																																								
~25% load	18,1	400 D	50	9,0	3,22	2,83	1493	0,52	87,85																																								
Temperature rise at rated load.				°C	[K]	Method		Measurement method																																									
Stator winding :				56,0	1			1 Resistance																																									
Frame :				30,5	2			2 Thermometer																																									
Bearing D-end :				29,2	2			3 Thermocouples																																									
Ambient Temperature :				22	2																																												
<p>These tests have been carried out on motor no. 3GV1010549191, on date 2010-07-05 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																																												
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