

## 210D0028 MMA80-8-BA1 Data Sheet Version 3.1

Parameter	Unit	Value
		400 V
Power	[kW]	4
Torque (rated @ 100°C*)	[Nm]	21.5
Torque (rated @ 120°C*)	[Nm]	25.5
Torque (max @ 100°C*) (60 sec.) **	[Nm]	41.5
Torque (max @ 120°C*) (30 sec.) **	[Nm]	41.5
Speed (rated)	[rpm]	1500
Speed (max)	[rpm]	1500
Freq.	[Hz]	200
Pole pairs		8
Current (rated) @ rated torque 120°C	[A <sub>RMS</sub> ]	8.1
Current (max) @ max torque	[A <sub>RMS</sub> ]	13.5
Motor voltage (rated phase to phase)	[V <sub>RMS</sub> ]	<b>400</b>
DC-link voltage	[V]	>560
<b>Phase:</b>		
k <sub>E</sub>	[V <sub>RMS</sub> /krpm]	125
R <sub>Ph,20</sub>	[Ohm]	1.63
L <sub>d</sub>	[mH]	7.1
L <sub>q</sub>	[mH]	8.3
<b>Line to line:</b>		
k <sub>E,LL</sub>	[V <sub>RMS</sub> /krpm]	216.5
R <sub>LL,20</sub>	[Ohm]	3.25
L <sub>LL,d</sub>	[mH]	14.1
L <sub>LL,q</sub>	[mH]	16.5
Connection		Y
Moment of inertia	[kgm <sup>2</sup> ]	0.0030
Weight	[kg]	11
Protection class		IP67
Thermal class		H
Thermal protection		PTC (Pt1000 on request)
Cooling type		Water cooled ****
rated flowrate (motor coolant)	[l/min]	6
Pressure drop @ rated flow rate	[bar]	0.014
Coolant		Water/Ethylenglycol 50/50 or hydraulic oil
Max. cooling pressure (motor coolant)	[bar]	3
Coolant max temperature	[°C]	60
Rotational direction***		Clockwise



\* Winding temperature

Performance data were determined with a thermally decoupled motor and a coolant temperature of 60°C at 6 l/min (water/ethylenglycol 50/50)



\*\* Up to base speed @ max torque speed curve



In order to run the motor, a frequency inverter capable of conducting **sensorless control** for permanent magnet motors is needed, because the motor has no own position sensor or encoder.



\*\*\* The rotational direction is defined according to DIN-EN60034-8 (looking on the motor shaft).



\*\*\*\* Technical information about oil cooling on request

