

## 210D0027 MMA 80-8-90-C-...-W2 Data Sheet Version 4.0

| Parameter                             | Unit                     | Value   |            |
|---------------------------------------|--------------------------|---|------------|
|                                       |                          | 400 V   | 230 V      |
| Power                                 | [kW]                     | 7.9   | 4          |
| Torque (rated @ 100°C*)               | [Nm]                     | 21.5  | 21.5       |
| Torque (rated @ 120°C*)               | [Nm]                     | 25  | 25.5       |
| Torque (max @ 100°C*) (60 sec.) **    | [Nm]                     | 41.5  | 41.5       |
| Torque (max @ 120°C*) (30 sec.) **    | [Nm]                     | 41.5  | 41.5       |
| Speed (rated)                         | [rpm]                    | 3000  | 1500       |
| Speed (max)                           | [rpm]                    | 3000  | 1500       |
| Freq.                                 | [Hz]                     | 400   | 200        |
| Pole pairs                            |                          | 8   | 8          |
| Current (rated) @ rated torque 120°C  | [A <sub>RMS</sub> ]      | 14.0  | 13.8       |
| Current (max) @ max torque            | [A <sub>RMS</sub> ]      | 23.8  | 23.3       |
| Motor voltage (rated phase to phase)  | [V <sub>RMS</sub> ]      | <b>400</b>                                    | <b>230</b> |
| DC-link voltage                       | [V]                      | >560  | ≥ 325      |
| <b>Phase:</b>                         |                          |   |            |
| k <sub>E</sub>                        | [V <sub>RMS</sub> /krpm] | 72  |            |
| R <sub>Ph,20</sub>                    | [Ohm]                    | 0.55  |            |
| L <sub>d</sub>                        | [mH]                     | 2.35  |            |
| L <sub>q</sub>                        | [mH]                     | 2.75  |            |
| <b>Line to line:</b>                  |                          |   |            |
| k <sub>E,LL</sub>                     | [V <sub>RMS</sub> /krpm] | 125   |            |
| R <sub>LL,20</sub>                    | [Ohm]                    | 1.10  |            |
| L <sub>LL,d</sub>                     | [mH]                     | 4.7   |            |
| L <sub>LL,q</sub>                     | [mH]                     | 5.5   |            |
| 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<br>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



