



PMS 120 – Permanentmagnet Synchronous motor

Applications

- Battery powered application with Voltages from 24 V DC, 36 V DC or 48 V DC (for traction applications; Compressors, Pumps etc.)
- Industrial applications with a DC Bus current of 320 V DC or 560 V DC (Fans; industrial machinery etc.)

| | | |
|---------------------|--|--|
| Rpm | 1500 min-1 to 6000 min-1 | Depending on the windings, adapted to the System Voltage |
| Rated Power | 2,2 kW bis 7,0 kW | Depending on rpm |
| Peak Torque | 40 Nm | Pulse-Peak torque only up to 30 % of rated rpm |
| Motor-Impuls-torque | ~ 50 Nm | Impulstorque for max. 0,5 sec. and rpm < 50 rpm |
| Motorfeedback | Analog Hallsensors (sin/cos); Resolver or Encoders | Depending on controller-specifications |
| Weight | ~ 12,3 kg | Incl. sin/cos Encoder, without break |

Max. rated power in continuous mode (S1) at different System-Voltages and different motor-speed with aircooling at a min. airstream of 5 m/s and a good contact of the mounting surface for best thermal transfer.

| rpm [min-1] | 48 V DC | | 72 V DC | | 96 V DC | | ab 320 V DC | |
|----------------|----------------|---------------|----------------|---------------|----------------|---------------|----------------|---------------|
| | torque [Nm] | Power [kW] | torque [Nm] | Power [kW] | torque [Nm] | Power [kW] | torque [Nm] | Power [kW] |
| 1500 | 20,4 | 3,2 | 20,4 | 3,2 | 20,4 | 3,2 | 20,4 | 3,2 |
| 3000 | 18,5 | 5,8 | 19,1 | 6,0 | 19,1 | 6,0 | 19,1 | 6,0 |
| 4500 | 13,8 | 6,5 | 13,8 | 6,5 | 13,8 | 6,5 | 13,8 | 6,5 |
| 6000 | 10,4 | 6,5 | 11,1 | 7,0 | 11,1 | 7,0 | 11,1 | 7,0 |

Other motor speed, torque and power ratings for customised Applications can be checked by request, as well as a direct mounting of gearings and breaks



General technical specs for the PMS 120

| | |
|---------------------------------------|---|
| Motortype | Permanent excited synchronous-Disc (pancake) motor |
| cooling | aircooling with a min airstream of 5 m/s |
| Operation mode | S1 (continuous) |
| Polpairs | 4 |
| Magnet material | Neodymium-Iron-Bor |
| Insulation Class | Class F according VDE 0530 |
| Electrical strength | VDE 0530 – 2000V / 10s |
| Type of construction | Flange type according IM B14 |
| Electrical connections | Plugs (mating plug not included) or wire |
| Protection class | IP 54 |
| Environmental temperature | -10 °C to + 40 °C |
| Demagnetization temperature | $> 5 \times I_N$ |
| Max. Peak torque at intermittent Duty | 1,5-times of rated torque for about 15 seconds |
| Max. pulse-torque | 3-times of rated torque for max. 0,5 seconds |
| Motorfeedback | Resolver 2-poles, Encoder or Analog Hallsensors with sin/cos output |
| Temperaturesensors | KTY84-130 or PTC (NAT=120°C) |