

Data sheet for SIMOTICS S-1FK7

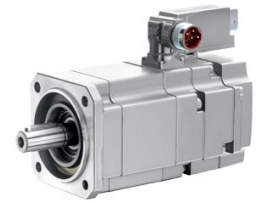


Figure similar

MLFB-Ordering data

1FK7022-5AK21-1PG3

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

| Engineering data | | Mechanical data | | | |
|--|-------------------------|-----------------------------|------------------------------------|------------------------|--|
| Rated speed (100 K) | 6000 rpm | Motor type | Permanent-magnet synchronous motor | | |
| Number of poles | 6 | Motor type | Compact | | |
| Rated torque (100 K) | 0.6 Nm | Shaft height | 28 | | |
| Rated current | 1.4 A | Cooling | Natural cooling | | |
| Static torque (60 K) | 0.70 Nm | Radial runout tolerance | 0.035 mm | | |
| Static torque (100 K) | 0.8 Nm | Concentricity tolerance | 0.08 mm | | |
| Stall current (60 K) | 1.50 A | Axial runout tolerance | 0.08 mm | | |
| Stall current (100 K) | 1.80 A | Vibration severity grade | Grade A | | |
| Moment of inertia | 0.280 kgcm ² | Connector size | 1 | | |
| Efficiency | 86.0 % | Degree of protection | IP64 | | |
| <th colspan="2">Physical constants</th> <td>Design acc. to Code I</td> <td>IM B5 (IM V1, IM V3)</td> | | Physical constants | | Design acc. to Code I | IM B5 (IM V1, IM V3) |
| | | Torque constant | 0.46 Nm/A | Temperature monitoring | Pt1000 temperature sensor |
| | | Voltage constant at 20° C | 29.0 V/1000*min ⁻¹ | Electrical connectors | Connectors for signals and power rotatable |
| | | Winding resistance at 20° C | 4.20 Ω | Color of the housing | Standard (Anthracite RAL 7016) |
| | | Rotating field inductance | 9.1 mH | Holding brake | without holding brake |
| | | Electrical time constant | 2.20 ms | Shaft extension | Plain shaft |
| | | Mechanical time constant | 1.70 ms | Encoder system | Resolver R14DQ: resolver 14 bits (resolution 16384, internal 2-pole) |
| | | Thermal time constant | 18 min | | |
| | | Shaft torsional stiffness | 3000 Nm/rad | | |
| | | Net weight of the motor | 1.8 kg | | |

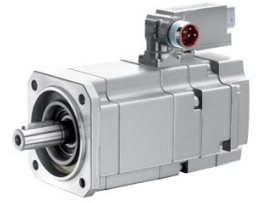


Figure similar

MLFB-Ordering data

1FK7022-5AK21-1PG3

| Optimum operating point | | Recommended Motor Module | |
|-----------------------------------|-----------|--------------------------|---------|
| Optimum speed | 6000 rpm | Rated inverter current | 2 A |
| Optimum power | 0.4 kW | Maximum inverter current | 5 A |
| Limiting data | | Maximum torque | 2.00 Nm |
| Max. permissible speed (mech.) | 10000 rpm | | |
| Max. permissible speed (inverter) | 9990 rpm | | |
| Maximum torque | 3.4 Nm | | |
| Maximum current | 8.0 A | | |