

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7033-4CK71-1TH2

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Engineering data

| | |
|-----------------------|-------------------------|
| Rated speed (100 K) | 6000 rpm |
| Number of poles | 6 |
| Rated torque (100 K) | 0.9 Nm |
| Rated current | 1.6 A |
| Static torque (60 K) | 1.08 Nm |
| Static torque (100 K) | 1.3 Nm |
| Stall current (60 K) | 1.70 A |
| Stall current (100 K) | 2.10 A |
| Moment of inertia | 0.350 kgcm ² |
| Efficiency | 88.0 % |

Physical constants

| | |
|-----------------------------|-------------------------------|
| Torque constant | 0.62 Nm/A |
| Voltage constant at 20° C | 39.5 V/1000*min ⁻¹ |
| Winding resistance at 20° C | 3.51 Ω |
| Rotating field inductance | 22.0 mH |
| Electrical time constant | 6.30 ms |
| Mechanical time constant | 0.68 ms |
| Thermal time constant | 25 min |
| Shaft torsional stiffness | 4700 Nm/rad |
| Net weight of the motor | 3.4 kg |

Mechanical data

| | |
|--------------------------|--|
| Motor type | Permanent-magnet synchronous motor |
| Motor type | High Dynamic |
| Shaft height | 36 |
| Cooling | Natural cooling |
| Radial runout tolerance | 0.035 mm |
| Concentricity tolerance | 0.08 mm |
| Axial runout tolerance | 0.08 mm |
| Vibration severity grade | Grade A |
| Connector size | 1 |
| Degree of protection | IP65 and DE flange IP67 |
| Design acc. to Code I | IM B5 (IM V1, IM V3) |
| Temperature monitoring | KTY84 temperature sensor in the stator winding |
| Electrical connectors | Connectors for signals and power rotatable |
| Color of the housing | Standard (Anthracite RAL 7016) |
| Holding brake | with holding brake |
| Shaft extension | Plain shaft |
| Encoder system | Resolver 2-pole |



Figure similar

MLFB-Ordering data

1FK7033-4CK71-1TH2

Optimum operating point

| | |
|---------------|----------|
| Optimum speed | 6000 rpm |
| Optimum power | 0.6 kW |

Limiting data

| | |
|-----------------------------------|-----------|
| Max. permissible speed (mech.) | 10000 rpm |
| Max. permissible speed (inverter) | 10000 rpm |
| Maximum torque | 4.3 Nm |
| Maximum current | 7.6 A |

Holding brake

| | |
|-----------------------|------------------------|
| Holding brake version | Permanent-magnet brake |
| Holding torque | 1.9 Nm |
| Power supply voltage | DC 24 V \pm 10 % |
| Coil current | 0.3 A |
| Opening time | 50 ms |
| Closing time | 30 ms |
| Highest braking work | 40 J |

Recommended Motor Module

| | |
|--------------------------|---------|
| Rated inverter current | 3 A |
| Maximum inverter current | 9 A |
| Maximum torque | 4.30 Nm |