SIEMENS

## Data sheet for SIMOTICS S-1FK7

**MLFB-Ordering data** **1FK7103-2AC71-1BH0**



Figure similar

Client order no. :
Order no. :
Offer no. :
Remarks :

Item no. :
Consignment no. :
Project :

### Engineering data

| | |
|---|---|
| Rated speed (100 K) | 2000 rpm |
| Number of poles | 8 |
| Rated torque (100 K) | 25.0 Nm |
| Rated current | 11.0 A |
| Static torque (60 K) | 30.00 Nm |
| Static torque (100 K) | 36.00 Nm |
| Stall current (60 K) | 11.60 A |
| Stall current (100 K) | 14.40 A |
| Moment of inertia | 112.000 kgcm² |
| Efficiency | 93.0 % |

### Physical constants

| | |
|---|---|
| Torque constant | 2.45 Nm/A |
| Voltage constant at 20° C | 162.0 V/1000*min⁻¹ |
| Winding resistance at 20° C | 0.29 Ω |
| Rotating field inductance | 7.9 mH |
| Electrical time constant | 27.50 ms |
| Mechanical time constant | 1.43 ms |
| Thermal time constant | 65 min |
| Shaft torsional stiffness | 108000 Nm/rad |
| Net weight of the motor | 33.0 kg |

### Mechanical data

| | |
|---|---|
| Motor type | Permanent-magnet synchronous motor |
| Motor type | Compact |
| Shaft height | 100 |
| Cooling | Natural cooling |
| Radial runout tolerance | 0.050 mm |
| Concentricity tolerance | 0.10 mm |
| Axial runout tolerance | 0.10 mm |
| Vibration severity grade | Grade A |
| Connector size | 1.5 |
| Degree of protection | IP64 |
| Design acc. to Code I | IM B5 (IM V1, IM V3) |
| Temperature monitoring | Pt1000 temperature sensor |
| Electrical connectors | Connectors for signals and power rotatable |
| Color of the housing | Standard (Anthracite RAL 7016) |
| Holding brake | with holding brake |
| Shaft end | Plain shaft |
| Encoder system | Encoder AS24DQI: absolute encoder single-turn 24 bits |

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Figure similar

## Optimum operating point

| | |
|---|---|
| Optimum speed | 2000 rpm |
| Optimum power | 5.2 kW |

## Limiting data

| | |
|---|---|
| Max. permissible speed (mech.) | 5000 rpm |
| Max. permissible speed (inverter) | 3550 rpm |
| Maximum torque | 108.0 Nm |
| Maximum current | 46.5 A |

## Holding brake

| | |
|---|---|
| Holding brake version | Permanent-magnet brake |
| Holding torque | 43.0 Nm |
| Power supply voltage | DC 24 V ± 10 % |
| Coil current | 1.0 A |
| Opening time | 300 ms |
| Closing time | 70 ms |
| Highest braking work | 3380 J |

## Recommended Motor Module

| | |
|---|---|
| Rated inverter current | 18 A |
| Maximum inverter current | 54 A |
| Maximum torque | 108.00 Nm |