SIEMENS

## Data sheet for SIMOTICS S-1FK7



Figure similar

**Article No. :** 1FK7083-2AF71-1AA0-Z
**N05**

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

Item no. :
Consignment no. :
Project :

| Engineering data | |
|---|---|
| Rated speed (100 K) | 3,000 rpm |
| Number of poles | 8 |
| Rated torque (100 K) | 10.5 Nm |
| Rated current | 7.2 A |
| Static torque (60 K) | 13.30 Nm |
| Static torque (100 K) | 16.00 Nm |
| Stall current (60 K) | 8.20 A |
| Stall current (100 K) | 10.10 A |
| Moment of inertia | 26.000 kgcm² |
| Efficiency | 93.0 % |

| Physical constants | |
|---|---|
| Torque constant | 1.58 Nm/A |
| Voltage constant at 20° C | 102.5 V/1000*min$^{-1}$ |
| Winding resistance at 20° C | 0.38 Ω |
| Rotating field inductance | 7.0 mH |
| Electrical time constant | 18.60 ms |
| Mechanical time constant | 1.18 ms |
| Thermal time constant | 50 min |
| Shaft torsional stiffness | 101,000 Nm/rad |
| Net weight of the motor | 15.6 kg |

| Mechanical data | |
|---|---|
| Motor type | Permanent-magnet synchronous motor |
| Motor type | Compact |
| Shaft height | 80 |
| 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 | M23 |
| Degree of protection | IP64 |
| 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 | without holding brake |
| Shaft end | Feather key |
| Encoder system | Encoder IC2048S/R: incremental encoder sin/cos 1 Vpp 2048 S/R with C and D track |

| Optimum operating point | |
|---|---|
| Optimum speed | 3,000 rpm |
| Optimum power | 3.3 kW |

| Limiting data | |
|---|---|
| Max. permissible speed (mech.) | 6,000 rpm |
| Max. permissible speed (inverter) | 5,600 rpm |
| Maximum torque | 50.0 Nm |
| Maximum current | 37.0 A |

| Recommended Motor Module | |
|---|---|
| Rated inverter current | 9 A |
| Maximum inverter current | 27 A |
| Maximum torque | 40.00 Nm |

**Special design**

N05 Non-standard shaft end (dimensions as for 1FT5 motors)

Subject to change. Calculated values may differ from nameplate ratings. © Copyright Siemens