SIEMENS

# Data sheet for SIMOTICS S-1FK7

**Article No. :** **1FK7060-5AF71-1EG3**



Figure similar

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) | 4.7 Nm |
| Rated current | 3.7 A |
| Static torque (60 K) | 5.00 Nm |
| Static torque (100 K) | 6.00 Nm |
| Stall current (60 K) | 3.70 A |
| Stall current (100 K) | 4.50 A |
| Moment of inertia | 7.950 kgcm² |
| Efficiency | 90.0 % |

| Physical constants | |
|---|---|
| Torque constant | 1.33 Nm/A |
| Voltage constant at 20° C | 84.5 V/1000*min⁻¹ |
| Winding resistance at 20° C | 1.44 Ω |
| Rotating field inductance | 14.7 mH |
| Electrical time constant | 10.20 ms |
| Mechanical time constant | 1.94 ms |
| Thermal time constant | 30 min |
| Shaft torsional stiffness | 42,000 Nm/rad |
| Net weight of the motor | 7.0 kg |

| Mechanical data | |
|---|---|
| Motor type | Permanent-magnet synchronous motor |
| Motor type | Compact |
| Shaft height | 63 |
| Cooling | Natural cooling |
| Radial runout tolerance | 0.040 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 | Plain shaft |
| Encoder system | Encoder AM2048S/R: absolute encoder 2048 S/R, 4096 revolutions multi-turn, with EnDat interface |

| Optimum operating point | |
|---|---|
| Optimum speed | 3,000 rpm |
| Optimum power | 1.5 kW |

| Limiting data | |
|---|---|
| Max. permissible speed (mech.) | 7,200 rpm |
| Max. permissible speed (inverter) | 6,800 rpm |
| Maximum torque | 18.0 Nm |
| Maximum current | 15.0 A |

| Recommended Motor Module | |
|---|---|
| Rated inverter current | 5 A |
| Maximum inverter current | 10 A |
| Maximum torque | 13.20 Nm |

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