SIEMENS

# Data sheet for SIMOTICS S-1FK7

**Article No. :** 1FK7015-5AK71-1JA3



Figure similar

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

Item no. :
Consignment no. :
Project :

| Engineering data | |
|---|---|
| Rated speed (100 K) | 6,000 rpm |
| Number of poles | 8 |
| Rated torque (100 K) | 0.2 Nm |
| Rated current | 0.8 A |
| Static torque (60 K) | 0.29 Nm |
| Static torque (100 K) | 0.35 Nm |
| Stall current (60 K) | 1.20 A |
| Stall current (100 K) | 1.50 A |
| Moment of inertia | 0.083 kgcm² |
| Efficiency | 68.0 % |

| Physical constants | |
|---|---|
| Torque constant | 0.24 Nm/A |
| Voltage constant at 20° C | 16.0 V/1000*min⁻¹ |
| Winding resistance at 20° C | 4.30 Ω |
| Rotating field inductance | 8.4 mH |
| Electrical time constant | 2.00 ms |
| Mechanical time constant | 1.90 ms |
| Thermal time constant | 16 min |
| Shaft torsional stiffness | 1,300 Nm/rad |
| Net weight of the motor | 1.1 kg |

| Mechanical data | |
|---|---|
| Motor type | Permanent-magnet synchronous motor |
| Motor type | Compact |
| Shaft height | 20 |
| Cooling | Natural cooling |
| Radial runout tolerance | 0.000 mm |
| Concentricity tolerance | 0.00 mm |
| Axial runout tolerance | 0.00 mm |
| Vibration severity grade | Grade A |
| Connector size | M17 |
| Degree of protection | IP54 |
| 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 AM16S/R: absolute encoder 16 S/R, 4096 revolutions multi-turn, with EnDat interface |

| Optimum operating point | |
|---|---|
| Optimum speed | 5,000 rpm |
| Optimum power | 0.1 kW |

| Limiting data | |
|---|---|
| Max. permissible speed (mech.) | 8,000 rpm |
| Max. permissible speed (inverter) | 8,000 rpm |
| Maximum torque | 1.0 Nm |
| Maximum current | 4.2 A |

| Recommended Motor Module | |
|---|---|
| Rated inverter current | 3 A |
| Maximum inverter current | 6 A |
| Maximum torque | 1.00 Nm |

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