SIEMENS

# Data sheet for SIMOTICS S-1FK7

**MLFB-Ordering data** **1FK7040-2AK71-1UA0**



Figure similar

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

Item no. :
Consignment no. :
Project :

## Engineering data

| | |
|---|---|
| Rated speed (100 K) | 6000 rpm |
| Number of poles | 8 |
| Rated torque (100 K) | 1.1 Nm |
| Rated current | 1.9 A |
| Static torque (60 K) | 1.30 Nm |
| Static torque (100 K) | 1.60 Nm |
| Stall current (60 K) | 1.90 A |
| Stall current (100 K) | 2.35 A |
| Moment of inertia | 1.600 kgcm² |
| Efficiency | 88.0 % |

## Physical constants

| | |
|---|---|
| Torque constant | 0.68 Nm/A |
| Voltage constant at 20° C | 43.4 V/1000*min⁻¹ |
| Winding resistance at 20° C | 2.87 Ω |
| Rotating field inductance | 16.5 mH |
| Electrical time constant | 5.70 ms |
| Mechanical time constant | 3.00 ms |
| Thermal time constant | 25 min |
| Shaft torsional stiffness | 18700 Nm/rad |
| Net weight of the motor | 3.2 kg |

## Mechanical data

| | |
|---|---|
| Motor type | Permanent-magnet synchronous motor |
| Motor type | Compact |
| Shaft height | 48 |
| Cooling | Natural cooling |
| Radial runout tolerance | 0.040 mm |
| Concentricity tolerance | 0.08 mm |
| Axial runout tolerance | 0.08 mm |
| Vibration severity grade | Grade A |
| Connector size | 1 |
| 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 | without holding brake |
| Shaft end | Feather key |
| Encoder system | Resolver R15DQ: resolver 15 bits (resolution 32768, internal multi-pole) |

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Figure similar

## Optimum operating point

| | |
|---|---|
| Optimum speed | 6000 rpm |
| Optimum power | 0.7 kW |

## Limiting data

| | |
|---|---|
| Max. permissible speed (mech.) | 9000 rpm |
| Max. permissible speed (inverter) | 9000 rpm |
| Maximum torque | 5.1 Nm |
| Maximum current | 7.7 A |

## Recommended Motor Module

| | |
|---|---|
| Rated inverter current | 3 A |
| Maximum inverter current | 9 A |
| Maximum torque | 5.10 Nm |