

Data sheet for SIMOTICS S-1FK7



Figure similar

Article No. : 1FK7061-4CF71-1QB1

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 | 6 |
| Rated torque (100 K) | 5.4 Nm |
| Rated current | 5.3 A |
| Static torque (60 K) | 5.30 Nm |
| Static torque (100 K) | 6.40 Nm |
| Stall current (60 K) | 4.95 A |
| Stall current (100 K) | 6.10 A |
| Moment of inertia | 5.100 kgcm ² |
| Efficiency | 93.0 % |

Physical constants

| | |
|-----------------------------|-------------------------------|
| Torque constant | 1.05 Nm/A |
| Voltage constant at 20° C | 67.5 V/1000*min ⁻¹ |
| Winding resistance at 20° C | 0.71 Ω |
| Rotating field inductance | 22.0 mH |
| Electrical time constant | 31.00 ms |
| Mechanical time constant | 0.79 ms |
| Thermal time constant | 45 min |
| Shaft torsional stiffness | 26,500 Nm/rad |
| Net weight of the motor | 11.0 kg |

Mechanical data

| | |
|--------------------------|---|
| Motor type | Permanent-magnet synchronous motor |
| Motor type | High Dynamic |
| 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 | 1 |
| Degree of protection | IP65 |
| 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 | Feather key |
| Encoder system | Encoder AS20DQI: absolute encoder single-turn 20 bits |

Optimum operating point

| | |
|---------------|-----------|
| Optimum speed | 3,000 rpm |
| Optimum power | 1.7 kW |

Limiting data

| | |
|-----------------------------------|-----------|
| Max. permissible speed (mech.) | 7,500 rpm |
| Max. permissible speed (inverter) | 7,500 rpm |
| Maximum torque | 17.3 Nm |
| Maximum current | 18.5 A |

Holding brake

| | |
|-----------------------|------------------------|
| Holding brake version | Permanent-magnet brake |
| Holding torque | 13.0 Nm |
| Power supply voltage | DC 24 V ± 10 % |
| Coil current | 0.8 A |
| Opening time | 100 ms |
| Closing time | 50 ms |
| Highest braking work | 380 J |

Recommended Motor Module

| | |
|--------------------------|----------|
| Rated inverter current | 9 A |
| Maximum inverter current | 27 A |
| Maximum torque | 17.30 Nm |

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