

Data sheet for SIMOTICS S-1FK7



Figure similar

Article No. : 1FK7034-2AF21-1RG0

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) | 1.4 Nm |
| Rated current | 1.8 A |
| Static torque (60 K) | 1.35 Nm |
| Static torque (100 K) | 1.60 Nm |
| Stall current (60 K) | 1.55 A |
| Stall current (100 K) | 1.90 A |
| Moment of inertia | 0.900 kgcm ² |
| Efficiency | 85.0 % |

Physical constants

| | |
|-----------------------------|-------------------------------|
| Torque constant | 0.84 Nm/A |
| Voltage constant at 20° C | 55.0 V/1000*min ⁻¹ |
| Winding resistance at 20° C | 4.46 Ω |
| Rotating field inductance | 17.2 mH |
| Electrical time constant | 3.85 ms |
| Mechanical time constant | 1.71 ms |
| Thermal time constant | 30 min |
| Shaft torsional stiffness | 5,300 Nm/rad |
| Net weight of the motor | 3.5 kg |

Mechanical data

| | |
|--------------------------|---|
| Motor type | Permanent-magnet synchronous motor |
| Motor type | Compact |
| Shaft height | 36 |
| Cooling | Natural cooling |
| Radial runout tolerance | 0.035 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 | Plain shaft |
| Encoder system | Encoder AM20DQI: absolute encoder 20 bits (resolution 1048576, encoder-internal 512 S/R) + 12 bits multi-turn (traversing range 4096 revolutions) |

Optimum operating point

| | |
|---------------|-----------|
| Optimum speed | 3,000 rpm |
| Optimum power | 0.5 kW |

Limiting data

| | |
|-----------------------------------|------------|
| Max. permissible speed (mech.) | 10,000 rpm |
| Max. permissible speed (inverter) | 5,200 rpm |
| Maximum torque | 6.5 Nm |
| Maximum current | 8.0 A |

Recommended Motor Module

| | |
|--------------------------|---------|
| Rated inverter current | 2 A |
| Maximum inverter current | 5 A |
| Maximum torque | 3.90 Nm |

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