

Data sheet for SIMOTICS S-1FK7

Article No. : 1FK7033-4CF21-1CG0



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 | 6 |
| Rated torque (100 K) | 1.2 Nm |
| Rated current | 2.0 A |
| Static torque (60 K) | 1.08 Nm |
| Static torque (100 K) | 1.30 Nm |
| Stall current (60 K) | 1.70 A |
| Stall current (100 K) | 2.10 A |
| Moment of inertia | 0.250 kgcm ² |
| Efficiency | 86.0 % |

Physical constants

| | |
|-----------------------------|-------------------------------|
| Torque constant | 0.62 Nm/A |
| Voltage constant at 20° C | 39.5 V/1000*min ⁻¹ |
| Winding resistance at 20° C | 3.51 Ω |
| Rotating field inductance | 22.0 mH |
| Electrical time constant | 6.30 ms |
| Mechanical time constant | 0.68 ms |
| Thermal time constant | 25 min |
| Shaft torsional stiffness | 7,300 Nm/rad |
| Net weight of the motor | 3.0 kg |

Mechanical data

| | |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Motor type | Permanent-magnet synchronous motor |
| Motor type | High Dynamic |
| 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 AM24DQI: absolute encoder 24 bits (resolution 16777216, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions) |

Optimum operating point

| | |
|---------------|-----------|
| Optimum speed | 3,000 rpm |
| Optimum power | 0.4 kW |

Limiting data

| | |
|-----------------------------------|------------|
| Max. permissible speed (mech.) | 10,000 rpm |
| Max. permissible speed (inverter) | 7,150 rpm |
| Maximum torque | 4.3 Nm |
| Maximum current | 7.6 A |

Recommended Motor Module

| | |
|--------------------------|---------|
| Rated inverter current | 2 A |
| Maximum inverter current | 5 A |
| Maximum torque | 2.70 Nm |

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1FK7033-4CF21-1CG0

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